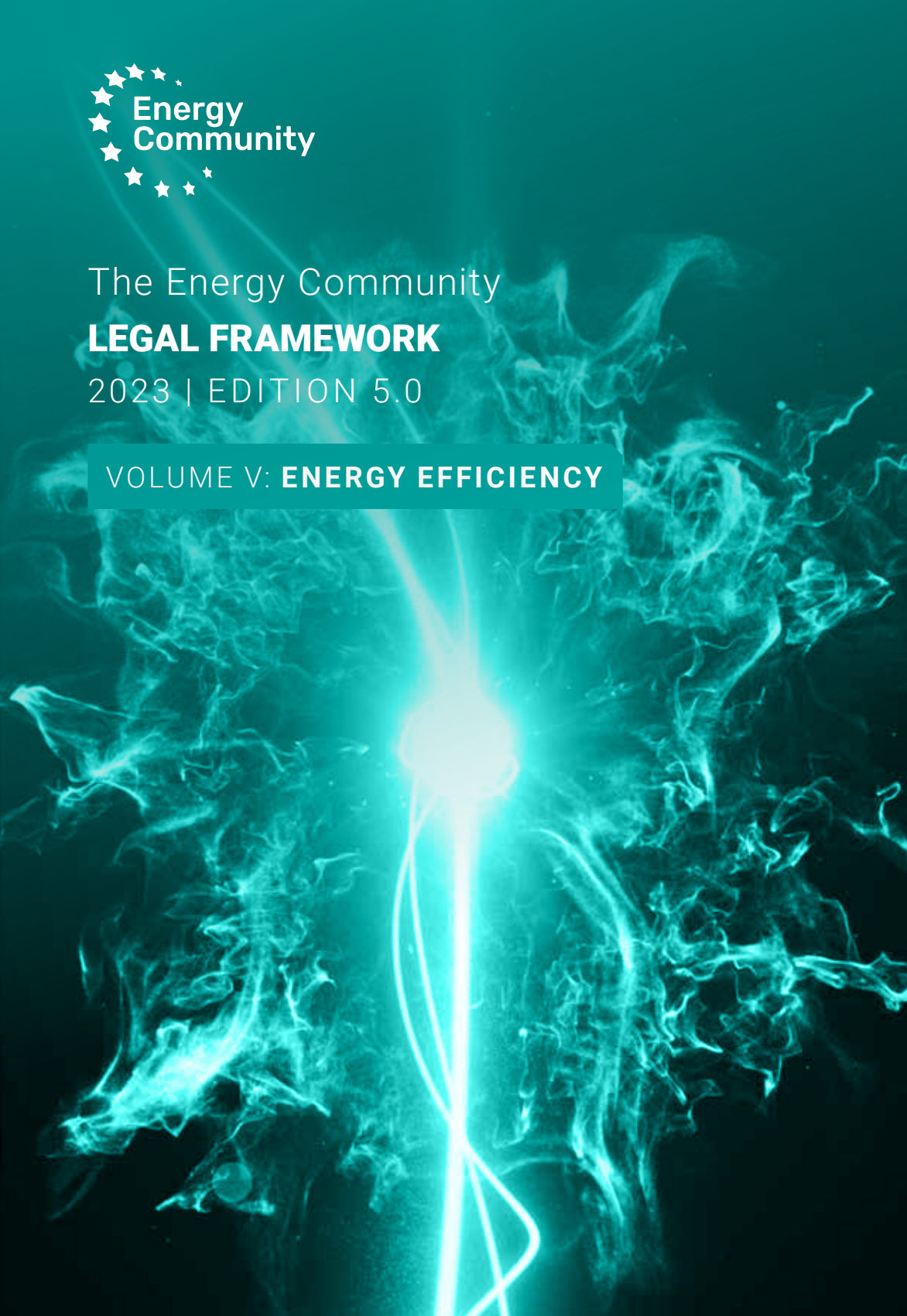
Energy Community

The Energy Community

LEGAL FRAMEWORK

2023 | EDITION 5.0

VOLUME V: **ENERGY EFFICIENCY**



Energy Community Secretariat
Am Hof 4, 1010 Vienna, Austria
Tel: + 431 535 2222
www.energy-community.org
Ener_Community
energy-community
contact@energy-community.org

Published in October 2023, last update in March 2025
Editors: Dr. Marie-Therese Richter-Kuhnert and Dr. Heli Annika Lesjak
Layout: Medium d.o.o.

The Energy Community

LEGAL FRAMEWORK

2023 | EDITION 5.0

VOLUME I: FUNDAMENTS

VOLUME II: ELECTRICITY

VOLUME III: OIL AND GAS

VOLUME IV: RENEWABLE ENERGY AND CLIMATE

VOLUME V: ENERGY EFFICIENCY

VOLUME VI: ENVIRONMENT

VOLUME VII: REMIT, INFRASTRUCTURE AND STATISTICS

VOLUME VI: **ENERGY EFFICIENCY**

Table of Contents

I. PART: ENERGY EFFICIENCY ACQUIS 7

DIRECTIVE 2012/27/EU of 25 October 2012 on energy efficiency, as amended by Directive (EU) 2018/2002 9

DIRECTIVE 2010/31/EU of 19 May 2010 on the energy performance of buildings 69

REGULATION (EU) 2017/1369 of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU 93

II. PART: ENERGY EFFICIENCY DELEGATED LABELLING REGULATIONS . . . 107

DELEGATED REGULATION (EU) 2017/254 of 30 November 2016 amending Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 626/2011, (EU) 392/2012, (EU) 874/2012, EU) 665/2013, (EU) 811/2013, (EU) 812/2013, (EU) 65/2014, (EU) 1254/2014, (EU) 2015/1094, (EU) 2015/1186 and (EU) 2015/1187 with regard to the use of tolerances in verification procedures 109

DELEGATED REGULATION (EU) 2019/2013 of 11 March 2019 supplementing Regulation (EU) 2017/13691 with regard to energy labelling of electronic displays . . 143

DELEGATED REGULATION (EU) 2019/2014 of 11 March 2019 supplementing Regulation (EU) 2017/13691 with regard to energy labelling of household washing machines and household washer-dryers 175

DELEGATED REGULATION (EU) 2019/2015 of 11 March 2019 supplementing Regulation (EU) 2017/13691 with regard to energy labelling of light sources 217

DELEGATED REGULATION (EU) 2019/2016 of 11 March 2019 supplementing Regulation (EU) 2017/13691 with regard to energy labelling of refrigerating appliances 253

DELEGATED REGULATION (EU) 2019/2017 of 11 March 2019 supplementing Regulation (EU) 2017/13691 with regard to energy labelling of household dishwashers 287

DELEGATED REGULATION (EU) 2015/1094 of 5 May 2015 supplementing Directive 2010/30/EU with regard to the energy labelling of professional refrigerated storage cabinets 309

DELEGATED REGULATION (EU) 2015/1186 of 24 April 2015 supplementing Directive 2010/30/EU with regard to the energy labelling of local space heaters 329

DELEGATED REGULATION (EU) 2015/1187 of 27 April 2015 supplementing Directive 2010/30/EU with regard to energy labelling of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices 355

DELEGATED REGULATION (EU) 518/2014 of 5 March 2014 amending Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 626/2011, (EU) 392/2012, (EU) 874/2012, (EU) 665/2013, (EU) 811/2013 and (EU) 812/2013 with regard to labelling of energy-related products on the internet 389

DELEGATED REGULATION (EU) 665/2013 with regard to energy labelling of vacuum cleaners 419

DELEGATED REGULATION (EU) 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device 421

DELEGATED REGULATION (EU) 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device 475

DELEGATED REGULATION (EU) 392/2012 of 1 March 2012 supplementing Directive 2010/30/EU with regard to energy labelling of household tumble driers . . 567

DELEGATED REGULATION (EU) 626/2011 of 4 May 2011 supplementing Directive 2010/30/EU with regard to energy labelling of air conditioners 597

I. PART

ENERGY EFFICIENCY ACQUIS

DIRECTIVE 2012/27/EU of 25 October 2012 on energy efficiency, as amended by Directive (EU) 2018/2002

Incorporated and adapted by:

Ministerial Council Decision 2015/08/MC-EnC on the implementation of the Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC,

Ministerial Council Decision 2021/14/MC-EnC on amending Article 20 and Annex I to the Treaty establishing the Energy Community and incorporating Directive (EU) 2018/2001, Directive (EU) 2018/2002, Regulation (EU) 2018/1999, Delegated Regulation (EU) 2020/1044, and Implementing Regulation (EU) 2020/1208 in the Energy Community acquis communautaire, and

Ministerial Council Decision 2022/02/MC-EnC on amending Ministerial Council Decision No 2021/14/MC-EnC amending Annex I to the Treaty Establishing the Energy Community and incorporating Directive (EU) 2018/2001, Directive (EU) 2018/2002, Regulation (EU) 2018/1999, Delegated Regulation (EU) 2020/1044, and Implementing Regulation (EU) 2020/1208 in the Energy Community acquis communautaire.

The adaptations made by Ministerial Council Decision 2015/08/MC-EnC, Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC are highlighted in ***bold and blue****.*

CHAPTER I
SUBJECT MATTER, SCOPE, DEFINITIONS AND ENERGY EFFICIENCY TARGETS

Article 1

Subject matter and scope

1. **This Directive establishes a common framework of measures to promote energy efficiency within the Energy Community, in order to ensure that the Energy Community 2020 headline target for energy efficiency and the Energy Community 2030 headline target for energy efficiency, as defined in Annex XIV are met.**[1]

The Directive lays down rules designed to remove barriers in the energy market and overcome market failures that impede efficiency in the supply and use of energy, and provides for the establishment of indicative national energy efficiency targets and contributions for 2020 and 2030.

This Directive contributes to the implementation of the "energy efficiency first principle".

2. The requirements laid down in this Directive are minimum requirements and shall not prevent any **Contracting Party** from maintaining or introducing more stringent measures. Such measures shall be compatible with **Energy Community** law. Where national legislation provides for more stringent measures, the **Contracting Party** shall notify such legislation to the **Energy Community Secretariat.**

1 There is a clerical error in the Ministerial Council Decision 2021/14/MC-EnC

Article 2

Definitions

For the purposes of this Directive, the following definitions shall apply:

(1) 'energy' means all forms of energy products, combustible fuels, heat, renewable energy, electricity, or any other form of energy, as defined in Article 2(d) of Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics, **as adapted and adopted by Ministerial Council Decision 2012/02/MC-EnC and Decision of the Permanent High Level Group No 2022/01/PHLG-EnC**;

(2) 'primary energy consumption' means gross inland consumption, excluding non-energy uses;

(3) 'final energy consumption' means all energy supplied to industry, transport, households, services and agriculture. It excludes deliveries to the energy transformation sector and the energy industries themselves;

(4) 'energy efficiency' means the ratio of output of performance, service, goods or energy, to input of energy;

(5) 'energy savings' means an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure, whilst ensuring normalisation for external conditions that affect energy consumption;

(6) 'energy efficiency improvement' means an increase in energy efficiency as a result of technological, behavioural and/or economic changes;

(7) 'energy service' means the physical benefit, utility or good derived from a combination of energy with energy-efficient technology or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to result in verifiable and measurable or estimable energy efficiency improvement or primary energy savings;

(8) 'public bodies' means 'contracting authorities' as defined in Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts;

(9) 'central government' means all administrative departments whose competence extends over the whole territory of a **Contracting Party;**

(10) 'total useful floor area' means the floor area of a building or part of a building, where energy is used to condition the indoor climate;

(11) 'energy management system' means a set of interrelated or interacting elements of a plan which sets an energy efficiency objective and a strategy to achieve that objective;

(12) 'European standard' means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications Standards Institute and made available for public use;

(13) 'international standard' means a standard adopted by the International Standardisation Organisation and made available to the public;

(14) 'obligated party' means an energy distributor or retail energy sales company that is bound by the national energy efficiency obligation schemes referred to in Article 7;

(15) 'entrusted party' means a legal entity with delegated power from a government or other public body to develop, manage or operate a financing scheme on behalf of the government or other public body;

(16) 'participating party' means an enterprise or public body that has committed itself to reaching certain objectives under a voluntary agreement, or is covered by a national regulatory policy instrument;

(17) 'implementing public authority' means a body governed by public law which is responsible for the carrying out or monitoring of energy or carbon taxation, financial schemes and instruments, fiscal incentives, standards and norms, energy labelling schemes, training or education;

(18) 'policy measure' means a regulatory, financial, fiscal, voluntary or information provision instrument formally established and implemented in a **Contracting Party** to create a supportive framework, requirement or incentive for market actors to provide and purchase energy services and to undertake other energy efficiency improvement measures;

(19) 'individual action' means an action that leads to verifiable, and measurable or estimable, energy efficiency improvements and is undertaken as a result of a policy measure;

(20) 'energy distributor' means a natural or legal person, including a distribution system operator, responsible for transporting energy with a view to its delivery to final customers or to distribution stations that sell energy to final customers;

(21) **'distribution system operator' means 'distribution system operator' as defined in Directives (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and and 2011/02/MC-EnC respectively**;

(22) 'retail energy sales company' means a natural or legal person who sells energy to final customers;

(23) 'final customer' means a natural or legal person who purchases energy for own end use;

(24) 'energy service provider' means a natural or legal person who delivers energy services or other energy efficiency improvement measures in a final customer's facility or premises;

(25) 'energy audit' means a systematic procedure with the purpose of obtaining adequate knowledge of the existing energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying cost-effective energy savings opportunities, and reporting the findings;

(26) 'small and medium-sized enterprises' or 'SMEs' means enterprises as defined in Title I of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises; the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million;

(27) 'energy performance contracting' means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings;

(28) 'smart metering system' or 'intelligent metering system' means an electronic system that can measure energy consumption, providing more information than a conventional meter, and can transmit and receive data using a form of electronic communication;

(29) '**transmission system operator' means 'transmission system operator' as defined in Directives (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and and 2011/02/MC-EnC respectively;**

(30) 'cogeneration' means the simultaneous generation in one process of thermal energy and electrical or mechanical energy;

(31) 'economically justifiable demand' means demand that does not exceed the needs for heating or cooling and which would otherwise be satisfied at market conditions by energy generation processes other than cogeneration;

(32) 'useful heat' means heat produced in a cogeneration process to satisfy economically justifiable demand for heating or cooling;

(33) 'electricity from cogeneration' means electricity generated in a process linked to the production of useful heat and calculated in accordance with the methodology laid down in Annex I;

(34) 'high-efficiency cogeneration' means cogeneration meeting the criteria laid down in Annex II;

(35) 'overall efficiency' means the annual sum of electricity and mechanical energy production and useful heat output divided by the fuel input used for heat produced in a cogeneration process and gross electricity and mechanical energy production;

(36) 'power-to-heat ratio' means the ratio of electricity from cogeneration to useful heat when operating in full cogeneration mode using operational data of the specific unit;

(37) 'cogeneration unit' means a unit that is able to operate in cogeneration mode;

(38) 'small-scale cogeneration unit' means a cogeneration unit with installed capacity below 1 MW_e;

(39) 'micro-cogeneration unit' means a cogeneration unit with a maximum capacity below 50 kW_e;

(40) 'plot ratio' means the ratio of the building floor area to the land area in a given territory;

(41) 'efficient district heating and cooling' means a district heating or cooling system using at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat;

(42) 'efficient heating and cooling' means a heating and cooling option that, compared to a baseline scenario reflecting a business-as-usual situation, measurably reduces the input of primary energy needed to supply one unit of delivered energy within a relevant system boundary in a cost-effective way, as assessed in the cost-benefit analysis referred to in this Directive, taking into account the energy required for extraction, conversion, transport and distribution;

(43) 'efficient individual heating and cooling' means an individual heating and cooling supply option that, compared to efficient district heating and cooling, measurably reduces the input of non-renewable primary energy needed to supply one unit of delivered energy within a relevant system boundary or requires the same input of non-renewable primary energy but at a lower cost, taking into account the energy required for extraction, conversion, transport and distribution;

(44) 'substantial refurbishment' means a refurbishment whose cost exceeds 50 % of the investment cost for a new comparable unit;

(45) 'aggregator' means a demand service provider that combines multiple short-duration consumer loads for sale or auction in organised energy markets.

Article 3

Energy efficiency targets

1. Each **Contracting Party** shall set an indicative national energy efficiency target, based on either primary or final energy consumption, primary or final energy savings, or energy intensity. **Contracting Parties** shall notify those targets to the **Energy Community Secretariat** in accordance with Article 24(1). When doing so, they shall also express those targets in terms of an absolute level of primary energy consumption and final energy consumption in 2020 and shall explain how, and on the basis of which data, this has been calculated.

When setting those targets, **Contracting Parties** shall take into account:

(a) that the **Energy Community's 2020 energy consumption has to be no more than 187 Mtoe of primary energy or no more than 133 Mtoe of final energy**;

(b) the measures provided for in this Directive;

(c) the measures adopted to reach the national energy saving targets adopted pursuant to Article 4(1) of Directive 2006/32/EC, **as adapted and adopted by Ministerial Council Decision 2009/05/MC-EnC;** and

(d) other measures to promote energy efficiency within **Contracting Parties**, and at the **Energy Community** level.

When setting those targets, **Contracting Parties** may also take into account national circumstances affecting primary energy consumption, such as:

(a) remaining cost-effective energy-saving potential;

(b) GDP evolution and forecast;

(c) changes of energy imports and exports;

(d) development of all sources of renewable energies, nuclear energy, carbon capture and storage; and

(e) early action.

2. **By 30 June 2018, the Energy Community Secretariat shall assess progress achieved and whether the Energy Community is likely to achieve energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020**.

3. In carrying out the review referred to in paragraph 2, the **Energy Community Secretariat** shall:

(a) sum the national indicative energy efficiency targets reported by **Contracting Parties;**

(b) assess whether the sum of those targets can be considered a reliable guide to whether the **Energy Community** as a whole is on track, taking into account the evaluation of the first annual report in accordance with Article 24(1), and the evaluation of the National Energy Efficiency Action Plans in accordance with Article 24(2);

(c) take into account complementary analysis arising from:

(i) an assessment of progress in energy consumption, and in energy consumption in relation to economic activity, at **Energy Community** level, including progress in the efficiency of energy supply in **Contracting Parties** that have based their national indicative targets on final energy consumption or final energy savings, including progress due to these **Contracting Parties'** compliance with Chapter III of this Directive;

(ii) results from modelling exercises in relation to future trends in energy consumption at **Energy Community** level;

(d) **compare the results under points (a) to (c) with the Energy Community´s energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020.**

4. **By 31 October 2022, the Secretariat shall assess whether the Energy Community has achieved its 2020 headline targets on energy efficiency.**

5. **Each Contracting Party shall set indicative national energy efficiency contributions towards the Energy Community 2030 headline target for energy efficiency set in Article 1(1) of this Directive in accordance with Articles 4 and 6 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC. When setting those contributions, Contracting Parties shall take into account the Energy Community's energy consumption in 2030 in primary energy and/or final energy as decided by the Ministerial Council on the basis of the relevant study(ies) to this effect. Those contributions shall not be higher than the national benchmarks included in Annex XIV to this Directive. The Contracting Parties shall notify those contributions to the Energy Community Secretariat as part of their integrated national energy and climate plans as referred to in, and in accordance with, Articles 3 and 7 to 12 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC.**

6. **<…>**

CHAPTER II
EFFICIENCY IN ENERGY USE

Article 4

<…>

Article 5

Exemplary role of public bodies' buildings

1. Without prejudice to Article 7 of Directive 2010/31/EU**, as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**, each **Contracting Party** shall ensure that, as from **1 December 2017**, **1%**, and **from 1 January 2024 on, 3%** of the total floor area of heated and/or cooled buildings owned and occupied by its central government is renovated each year to meet at least the minimum energy performance requirements that it has set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

The **1%** rate shall be calculated on the total floor area of buildings with a total useful floor area over 500 m^2 owned and occupied by the central government of the Contracting Party concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of

Article 4 of Directive 2010/31/EU**, as adapted and adopted by the Ministerial Council Decision 2010/02/MC-EnC.** That threshold shall be lowered to 250 m^2 as of **1 January 2019.**

From 1 January 2024 on, the rate of 3% shall be calculated on the total floor area of buildings with a total useful floor area over 250 m2 owned and occupied by the central government of the Contracting Party concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.

Where a **Contracting Party** requires that the obligation to renovate each year **1%** of the total floor area extends to floor area owned and occupied by administrative departments at a level below central government, **the 1** %, and **respectively 3%** rate shall be calculated on the total floor area of buildings with a total useful floor area over 500m^2 and, as of **1 January 2019, respectively as of 1 January 2024**, over 250 m^2 owned and occupied by central government and by these administrative departments of the **Contracting Party** concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

When implementing measures for the comprehensive renovation of central government buildings in accordance with the first subparagraph, **Contracting Parties** may choose to consider the building as a whole, including the building envelope, equipment, operation and maintenance.

Contracting Parties shall require that central government buildings with the poorest energy performance be a priority for energy efficiency measures, where cost-effective and technically feasible.

2. **Contracting Parties** may decide not to set or apply the requirements referred to in paragraph 1 to the following categories of buildings:

(a) buildings officially protected as part of a designated environment, or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;

(b) buildings owned by the armed forces or central government and serving national defence purposes, apart from single living quarters or office buildings for the armed forces and other staff employed by national defence authorities;

(c) buildings used as places of worship and for religious activities.

3. If a **Contracting Party** renovates more than **1% from 1 December 2017, and respectively 3% as of 1 January 2024,** of the total floor area of central government buildings in a given year, it may count the excess towards the annual renovation rate of any of the three previous or following years.

4. **Contracting Parties** may count towards the annual renovation rate of central government buildings new buildings occupied and owned as replacements for specific central government buildings demolished in any of the two previous years, or buildings that have been sold, demolished or taken out of use in any of the two previous years due to more intensive use of other buildings.

5. For the purposes of paragraph 1, by **1 January 2017, Contracting Parties** shall establish and make publicly available an inventory of heated and/or cooled central government buildings with a total useful floor area over 500 m^2 and, as of **1 January 2019**, over 250 m^2, excluding buildings exempted on the basis of paragraph 2. The inventory shall contain the following data:

(a) the floor area in m^2; and

(b) the energy performance of each building or relevant energy data.

6. Without prejudice to Article 7 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC, Contracting Parties** may opt for an alternative approach to paragraphs 1 to 5 of this Article, whereby they take other cost-effective measures, including deep renovations and measures for behavioural change of occupants, to achieve, by 2020, an amount of energy savings in eligible buildings owned and occupied by their central government that is at least equivalent to that required in paragraph 1, reported on an annual basis.

For the purpose of the alternative approach, **Contracting Parties** may estimate the energy savings that paragraphs 1 to 4 would generate by using appropriate standard values for the energy consumption of reference central government buildings before and after renovation and according to estimates of the surface of their stock. The categories of reference central government buildings shall be representative of the stock of such buildings.

Contracting Parties opting for the alternative approach shall notify to the **Energy Community Secretariat,** by **1 January 2017**, **respectively 1 January 2024** the alternative measures that they plan to adopt, showing how they would achieve an equivalent improvement in the energy performance of the buildings within the central government estate.

7. **Contracting Parties** shall encourage public bodies, including at regional and local level, and social housing bodies governed by public law, with due regard for their respective competences and administrative set-up, to:

(a) adopt an energy efficiency plan, freestanding or as part of a broader climate or environmental plan, containing specific energy saving and efficiency objectives and actions, with a view to following the exemplary role of central government buildings laid down in paragraphs 1, 5 and 6;

(b) put in place an energy management system, including energy audits, as part of the implementation of their plan;

(c) use, where appropriate, energy service companies, and energy performance contracting to finance renovations and implement plans to maintain or improve energy efficiency in the long term.

Article 6

Purchasing by public bodies

1. **Contracting Parties** shall ensure that central governments purchase only products, services and buildings with high energy-efficiency performance, insofar as that is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, as referred to in Annex III.

The obligation set out in the first subparagraph shall apply to contracts for the purchase of products, services and buildings by public bodies in so far as such contracts have a value equal to or greater than the thresholds laid in each Contracting Party's national legislation. Each Contracting Party shall submit its national thresholds to the Energy Community Secretariat, by 15 October 2017.

2. The obligation referred to in paragraph 1 shall apply to the contracts of the armed forces only to the

extent that its application does not cause any conflict with the nature and primary aim of the activities of the armed forces.

<…>

3. **Contracting Parties** shall encourage public bodies, including at regional and local levels, with due regard to their respective competences and administrative set-up, to follow the exemplary role of their central governments to purchase only products, services and buildings with high energy-efficiency performance. **Contracting Parties** shall encourage public bodies, when tendering service contracts with significant energy content, to assess the possibility of concluding long- term energy performance contracts that provide long-term energy savings.

4. Without prejudice to paragraph 1, when purchasing a product package covered as a whole by a delegated act adopted under Directive 2010/30/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC, Contracting Parties** may require that the aggregate energy efficiency shall take priority over the energy efficiency of individual products within that package, by purchasing the product package that complies with the criterion of belonging to the highest energy efficiency class.

Article 7

Energy savings obligation

1. **Contracting Parties shall achieve cumulative end-use energy savings at least equivalent to:**

a) new savings each year from 1 January 2014 to 31 December 2020 of 0.7 % of annual energy sales to final customers by volume, averaged over the most recent three-year period prior to 1 January 2016. Sales of energy, by volume, used in transport may be excluded, in whole or in part, from that calculation;

(b) new savings each year from 1 January 2024 to 31 December 2030 of 0,8 % of annual final energy consumption, averaged over the most recent three-year period prior to 1 January 2022.

Contracting Parties may request that this rate for energy savings is evaluated annually for a possible revision by the Energy Community Ministerial Council based on the economic analysis provided by the ongoing studies carried out to this effect.

Contracting Parties may count energy savings that stem from policy measures, whether introduced by 31 December 2020 or after that date, provided that those measures result in new individual actions that are carried out after 31 December 2020.

Contracting Parties shall continue to achieve new annual savings in accordance with point (b) of the first subparagraph for ten-year periods after 2030.

Contracting Parties shall decide how to phase the calculated quantity of new savings over each period referred to in points (a) and (b) of the first subparagraph, provided that the required total cumulative end-use energy savings have been achieved by the end of each obligation period.

2. **Provided that Contracting Parties achieve at least their cumulative end-use energy savings obligation referred to in point (b) of the first subparagraph of paragraph 1, they may calculate the required amount of energy savings by one or more of the following means:**

(a) **applying an annual savings rate on energy sales to final customers or on final energy consumption, averaged over the most recent three-year period prior to 1 January 2022;**

(b) **excluding, in whole or in part, energy used in transport from the calculation baseline;**

(c) **making use of any of the options set out in paragraph 4.**

3. **Where Contracting Parties make use of the possibilities provided for in point (a), (b) or (c) of paragraph 2, they shall establish:**

(a) **their own annual savings rate that will be applied in the calculation of their cumulative end-use energy savings, which shall ensure that the final amount of their net energy savings is no lower than those required under point (b) of the first subparagraph of paragraph 1; and**

(b) **Energy savings which can be measured and verified, granted after 2024, resulting from implementation of new policy measures and individual actions after 31 December 2020 and which have effects in 2024 and beyond, can be included in the advised cumulative energy savings for the period referred to in point (6) of the first paragraph for the Contracting Parties.**

their own calculation baseline, which may exclude, in whole or in part, energy used in transport.

4. **Subject to paragraph 5, each Contracting Party may:**

(a) **carry out the calculation required under point (a) of the first subparagraph of paragraph 1 using values of 0,5% in 2017 and 2018; 0,7 % in 2019 and 2020;**

exclude from the calculation all or part of the sales of energy used, by volume, with respect to the obligation period referred to in point (a) of the first subparagraph of paragraph 1, or final energy consumed, with respect to the obligation period referred to in point (b) of that subparagraph, by industrial activities listed in Annex I to Directive 2003/87/EC;

(b) count towards the amount of required energy savings, energy savings achieved in the energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure, as a result of implementing the requirements set out in Article 14(4), point (b) of Article 14(5), and Article 15(1) to (6) and (9). Contracting Parties shall inform the Energy Community Secretariat about their intended policy measures under this point for the period from 1 January 2024 to 31 December 2030 as part of their integrated national energy and climate plans. The impact of those measures shall be calculated in accordance with Annex V and included in those plans;

(c) count towards the amount of required energy savings, energy savings resulting from individual actions newly implemented since 31 December 2008 that continue to have an impact in 2020 with respect to the obligation period referred to in point (a) of the first subparagraph of paragraph 1 and beyond 2020 with respect to the period referred to in point (b) of the first subparagraph of paragraph 1, and which can be measured and verified;

(d) count towards the amount of required energy savings, energy savings that stem from policy measures, provided that it can be demonstrated that those measures result in individual actions carried out from 1 January 2018 to 31 December 2020 for the first obligation period referred to in point (a) of the first subparagraph of paragraph 1, and beyond 2020 with repsect to the period referred to in point (b) of the first subparagraph 1, and which can be measured and verified;

(e) count towards the amount of required energy savings, energy savings that stem from policy measures, provided that it can be demonstrated that those measures result in individual actions carried out from 1 January 2018 to 31 December 2020 which deliver savings after

31 December 2020;

(f) exclude from the calculation of the amount of required energy savings, 30 % of the verifiable amount of energy generated on or in buildings for own use as a result of policy measures promoting new installation of renewable energy technologies;

(g) count towards the amount of required energy savings, energy savings that exceed the energy savings required for the obligation period from 1 January 2018 to 31 December 2020, respectively from 2021 to 2030 provided that those savings result from individual actions carried out under policy measures referred to in Articles 7a and 7b, notified by Contracting Parties in their National Energy Efficiency Action Plans and reported in their progress reports in accordance with Article 24.

5. **Contracting Parties shall apply and calculate the effect of the options chosen under paragraph 4 for the periods referred to in points (a) and (b) of the first subparagraph of paragraph 1 separately:**

(a) **for the calculation of the amount of energy savings required for the obligation period referred to in point (a) of the first subparagraph of paragraph 1, Contracting Parties may make use of points (a) to (d) of paragraph 4. All the options chosen under paragraph 4 taken together shall amount to no more than 25% of the amount of energy savings referred to in point (a) of the first subparagraph of paragraph 1;**

(b) **for the calculation of the amount of energy savings required for the obligation period referred to in point (b) of the first subparagraph of paragraph 1, Contracting Parties may make use of points (b) to (g) of paragraph 4, provided individual actions referred to in point (d) of paragraph 4 continue to have a verifiable and measurable impact after 31 December 2020. All the options chosen under paragraph 4 taken together shall not lead to a reduction of more than 35% of the amount of energy savings calculated in accordance with paragraphs 2 and 3.**

Regardless of whether Contracting Parties exclude, in whole or in part, energy used in transport from their calculation baseline or make use of any of the options listed in paragraph 4, they shall ensure that the calculated net amount of new savings to be achieved in final energy consumption during the obligation period from 1 January 2024 to 31 December 2030 is not lower than the amount resulting from applying the annual savings rate referred to in point (b) of the first subparagraph of paragraph 1.

6. **Contracting Parties shall describe in their integrated national energy and climate plans in accordance with Annex III to Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC, the calculation of the amount of energy savings to be achieved over the period from 1 January 2024 to 31 December 2030 referred to in point (b) of the first subparagraph of paragraph 1 of this Article and shall, if relevant, explain how the annual savings rate and the calculation baseline were established, and how and to what extent the options referred to in paragraph 4 of this Article were applied.**

7. **Energy savings achieved after 31 December 2020 shall not count towards the amount of required energy savings for the period from 1 January 2014 to 31 December 2020.**

8. **<...>**

9. **Contracting Parties shall ensure that savings resulting from policy measures referred to in**

Articles 7a and 7b and Article 20(6) are calculated in accordance with Annex V.

10. **Contracting Parties shall achieve the amount of energy savings required under paragraph 1 of this Article either by establishing an energy efficiency obligation scheme referred to in Article 7a or by adopting alternative policy measures referred to in Article 7b. Contracting Parties may combine an energy efficiency obligation scheme with alternative policy measures.**

11. **In designing policy measures to fulfil their obligations to achieve energy savings, Contracting Parties shall take into account the need to alleviate energy poverty in accordance with criteria established by them, taking into consideration their available practices in the field, by requiring, to the extent appropriate, a share of energy efficiency measures under their national energy efficiency obligation schemes, alternative policy measures, or programmes or measures financed under an Energy Efficiency National Fund, to be implemented as a priority among vulnerable households, including those affected by energy poverty and, where appropriate, in social housing.**

Contracting Parties shall include information about the outcome of measures to alleviate energy poverty in the context of this Directive in the integrated national energy and climate progress reports in accordance with Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC.

12. **Contracting Parties shall demonstrate that where there is an overlap in the impact of policy measures or individual actions, there is no double counting of energy savings.**

Article 7a

Energy efficiency obligation schemes

1. **Where Contracting Parties decide to fulfil their obligations to achieve the amount of savings required under Article 7(1) by way of an energy efficiency obligation scheme, they shall ensure that obligated parties as referred to in paragraph 2 of this Article operating in each Contracting Party's territory achieve, without prejudice to Article 7(4) and (5), their cumulative end-use energy savings requirement as set out in Article 7(1).**

Where applicable, Contracting Parties may decide that obligated parties fulfil those savings, in whole or in part, as a contribution to the Energy Efficiency National Fund in accordance with Article 20(6).

2. **Contracting Parties shall designate, on the basis of objective and non-discriminatory criteria, obligated parties among energy distributors, retail energy sales companies and transport fuel distributors or transport fuel retailers operating in their territory. The amount of energy savings needed to fulfil the obligation shall be achieved by the obligated parties among final customers, designated by the Contracting Party, independently of the calculation made pursuant to Article 7(1) or, if Contracting Parties so decide, through certified savings stemming from other parties as described in point (a) of paragraph 6 of this Article.**

3. **Where retail energy sales companies are designated as obligated parties under paragraph 2, Contracting Parties shall ensure that, in fulfilling their obligation, retail energy sales companies do not create any barriers that impede consumers from switching from one supplier to another.**

4. **Contracting Parties shall express the amount of energy savings required of each obligated party in terms of either final or primary energy consumption. The method chosen to express the amount of energy savings required shall also be used to calculate the savings claimed by obligated parties. The conversion factors set out in Annex IV shall apply.**

5. **Contracting Parties shall put in place measurement, control and verification systems under which documented verification is carried out on at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the obligated parties. The measurement, control and verification shall be carried out independently of the obligated parties.**

6. **Within the energy efficiency obligation scheme, Contracting Parties may do one or both of the following:**

(a) **permit obligated parties to count towards their obligation certified energy savings achieved by energy service providers or other third parties, including when obligated parties promote measures through other State- approved bodies or through public authorities that may involve formal partnerships and may be in combination with other sources of finance. Where Contracting Parties so permit, they shall ensure that the certification of energy savings follows an approval process that is put in place in the Contracting Parties, that is clear, transparent, and open to all market participants, and that aims to minimise the costs of certification;**

(b) **allow obligated parties to count savings obtained in a given year as if they had instead been obtained in any of the four previous or three following years as long as this is not beyond the end of the obligation periods set out in Article 7(1).**

Contracting Parties shall assess and, if appropriate, take measures to minimise the impact of the direct and indirect costs of energy efficiency obligation schemes on the competitiveness of energy-intensive industries exposed to international competition.

7. **Contracting Parties shall, on an annual basis, publish the energy savings achieved by each obligated party, or each sub-category of obligated party, and in total under the scheme.**

Article 7b

Alternative policy measures

1. **Where Contracting Parties decide to fulfil their obligations to achieve the savings required under Article 7(1) by way of alternative policy measures, they shall ensure, without prejudice to Article 7(4) and (5), that the energy savings required under Article 7(1) are achieved among final customers.**

2. **For all measures other than those relating to taxation, Contracting Parties shall put in place measurement, control and verification systems under which documented verification is carried out on at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the participating or entrusted parties. The measurement, control and verification shall be carried out independently of the participating or entrusted parties;**

Article 8

Energy audits and energy management systems

1. **Contracting Parties** shall promote the availability to all final customers of high quality energy audits which are cost-effective and:

(a) carried out in an independent manner by qualified and/or accredited experts according to qualification criteria; or

(b) implemented and supervised by independent authorities under national legislation.

The energy audits referred to in the first subparagraph may be carried out by in-house experts or energy auditors provided that the **Contracting Party** concerned has put in place a scheme to assure and check their quality, including, if appropriate, an annual random selection of at least a statistically significant percentage of all the energy audits they carry out.

For the purpose of guaranteeing the high quality of the energy audits and energy management systems, **Contracting Parties** shall establish transparent and non-discriminatory minimum criteria for energy audits based on Annex VI.

Energy audits shall not include clauses preventing the findings of the audit from being transferred to any qualified/accredited energy service provider, on condition that the customer does not object.

2. **Contracting Parties** shall develop programmes to encourage SMEs to undergo energy audits and the subsequent implementation of the recommendations from these audits.

On the basis of transparent and non-discriminatory criteria and without prejudice to Union State aid law, **Contracting Parties** may set up support schemes for SMEs, including if they have concluded voluntary agreements, to cover costs of an energy audit and of the implementation of highly cost-effective recommendations from the energy audits, if the proposed measures are implemented.

Contracting Parties shall bring to the attention of SMEs, including through their respective representative intermediary organisations, concrete examples of how energy management systems could help their businesses. The **Energy Community Secretariat** shall assist **Contracting Parties** by supporting the exchange of best practices in this domain.

3. **Contracting Parties** shall also develop programmes to raise awareness among households about the benefits of such audits through appropriate advice services.

Contracting Parties shall encourage training programmes for the qualification of energy auditors in order to facilitate sufficient availability of experts.

4. **Contracting Parties** shall ensure that enterprises that are not SMEs are subject to an energy audit carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented and supervised by independent authorities under national legislation by **5 November 2018** and at least every four years from the date of the previous energy audit.

5. Energy audits shall be considered as fulfilling the requirements of paragraph 4 when they are carried out in an independent manner, on the basis of minimum criteria based on Annex VI, and implemented under voluntary agreements concluded between organisations of stakeholders and an appointed body and supervised by the **Contracting Party** concerned, or other bodies to which the competent authorities have delegated the responsibility concerned, or by the **Energy Community Secretariat**.

Access of market participants offering energy services shall be based on transparent and non-discriminatory criteria.

6. Enterprises that are not SMEs and that are implementing an energy or environmental management system - certified by an independent body according to the relevant European or International Standards - shall be exempted from the requirements of paragraph 4, provided that **Contracting Parties** ensure that the management system concerned includes an energy audit on the basis of the minimum criteria based on Annex VI.

7. Energy audits may stand alone or be part of a broader environmental audit. **Contracting Parties** may require that an assessment of the technical and economic feasibility of connection to an existing or planned district heating or cooling network shall be part of the energy audit.

Without prejudice to Union State aid law, **Contracting Parties** may implement incentive and support schemes for the implementation of recommendations from energy audits and similar measures.

Article 9

Metering for gas and electricity

1. **Contracting Parties shall ensure that, in so far as it is technically possible, financially reasonable and proportionate in relation to the potential energy savings, for electricity and natural gas final customers are provided with competitively priced individual meters that accurately reflect their actual energy consumption and that provide information on the actual time of use.**

Such a competitively priced individual meter shall always be provided when:

(a) an existing meter is replaced, unless this is technically impossible or not cost-effective in relation to the estimated potential savings in the long term;

(b) a new connection is made in a new building or a building undergoes major renovations, as set out in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

2. Where, and to the extent that, **Contracting Parties** implement intelligent metering systems and roll out smart meters for natural gas and/or electricity in accordance with **Directives (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and and 2011/02/MC-EnC respectively**:

(a) they shall ensure that the metering systems provide to final customers information on actual time of use and that the objectives of energy efficiency and benefits for final customers are fully taken into account when establishing the minimum functionalities of the meters and the obligations imposed on market participants;

(b) they shall ensure the security of the smart meters and data communication, and the privacy of final customers, in compliance with relevant Union data protection and privacy legislation;

(c) in the case of electricity and at the request of the final customer, they shall require meter operators to ensure that the meter or meters can account for electricity put into the grid from the final customer's premises;

(d) they shall ensure that if final customers request it, metering data on their electricity input and off-take is made available to them or to a third party acting on behalf of the final customer in an easily understandable

format that they can use to compare deals on a like-for-like basis;

(e) they shall require that appropriate advice and information be given to customers at the time of installation of smart meters, in particular about their full potential with regard to meter reading management and the monitoring of energy consumption.

3. **<...>**

Article 9a

Metering for heating, cooling and domestic hot water

1. **Contracting Parties shall ensure that, for district heating, district cooling and domestic hot water, final customers are provided with competitively priced meters that accurately reflect their actual energy consumption.**

2. **Where heating, cooling or domestic hot water is supplied to a building from a central source that services multiple buildings or from a district heating or district cooling system, a meter shall be installed at the heat exchanger or point of delivery.**

Article 9b

Sub-metering and cost allocation for heating, cooling and domestic hot water

1. **In multi-apartment and multi-purpose buildings with a central heating or central cooling source or supplied from a district heating or district cooling system, individual meters shall be installed to measure the consumption of heating, cooling or domestic hot water for each building unit, where technically feasible and cost effective in terms of being proportionate in relation to the potential energy savings.**

Where the use of individual meters is not technically feasible or where it is not cost-efficient to measure heat consumption in each building unit, individual heat cost allocators shall be used to measure heat consumption at each radiator unless it is shown by the Contracting Party in question that the installation of such heat cost allocators would not be cost-efficient. In those cases, alternative cost-efficient methods of heat consumption measurement may be considered. The general criteria, methodologies and/or procedures to determine technical non-feasibility and non-cost effectiveness shall be clearly set out and published by each Contracting Party.

2. **In new multi-apartment buildings and in residential parts of new multi-purpose buildings that are equipped with a central heating source for domestic hot water or are supplied from district heating systems, individual meters shall, notwithstanding the first subparagraph of paragraph 1, be provided for domestic hot water.**

3. **Where multi-apartment or multi-purpose buildings are supplied from district heating or district cooling, or where own common heating or cooling systems for such buildings are prevalent, Contracting Parties shall ensure they have in place transparent, publicly available national rules on the allocation of the cost of heating, cooling and domestic hot water consumption in such buildings to ensure transparency and accuracy of accounting for individual consumption. Where appropriate, such rules shall include guidelines on the manner in which**

to allocate cost for energy that is used as follows:

(a) **domestic hot water;**

(b) **heat radiated from the building installation and for the purpose of heating the common areas, where staircases and corridors are equipped with radiators;**

(c) **for the purpose of heating or cooling apartments.**

Article 9c

Remote reading requirement

1. **For the purposes of Articles 9a and 9b, meters and heat cost allocators installed after 30 October 2023 shall be remotely readable devices. The conditions of technical feasibility and cost effectiveness set out in Article 9b(1) shall continue to apply.**

2. **Meters and heat cost allocators which are not remotely readable but which have already been installed shall be rendered remotely readable or replaced with remotely readable devices by 1 January 2030, save where the Contracting Party in question shows that this is not cost-efficient.'**

Article 10

Billing information for gas and electricity

1. **Where final customers do not have smart meters as referred to in Directives (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and and 2011/02/MC-EnC respectively, Contracting Parties shall ensure, by 30 November 2017, that billing information is reliable, accurate and based on actual consumption, in accordance with point 1.1 of Annex VII, for electricity and gas, where that is technically possible and economically justified;**

This obligation may be fulfilled by a system of regular self-reading by the final customers whereby they communicate readings from their meter to the energy supplier. Only when the final customer has not provided a meter reading for a given billing interval shall billing be based on estimated consumption or a flat rate.

2. Meters installed in accordance with **Directives (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and 2011/02/MC-EnC respectively** shall enable accurate billing information based on actual consumption. **Contracting Parties** shall ensure that final customers have the possibility of easy access to complementary information on historical consumption allowing detailed self-checks.

Complementary information on historical consumption shall include:

(a) cumulative data for at least the three previous years or the period since the start of the supply contract if this is shorter. The data shall correspond to the intervals for which frequent billing information has been produced; and

(b) detailed data according to the time of use for any day, week, month and year. These data shall be made

available to the final customer via the internet or the meter interface for the period of at least the previous 24 months or the period since the start of the supply contract if this is shorter.

3. Independently of whether smart meters have been installed or not, **Contracting Parties**:

(a) shall require that, to the extent that information on the energy billing and historical consumption of final customers is available, it be made available, at the request of the final customer, to an energy service provider designated by the final customer;

(b) shall ensure that final customers are offered the option of electronic billing information and bills and that they receive, on request, a clear and understandable explanation of how their bill was derived, especially where bills are not based on actual consumption;

(c) shall ensure that appropriate information is made available with the bill to provide final customers with a comprehensive account of current energy costs, in accordance with Annex VII;

(d) may lay down that, at the request of the final customer, the information contained in these bills shall not be considered to constitute a request for payment. In such cases, **Contracting Parties** shall ensure that suppliers of energy sources offer flexible arrangements for actual payments;

(e) shall require that information and estimates for energy costs are provided to consumers on demand in a timely manner and in an easily understandable format enabling consumers to compare deals on a like-for-like basis

'Article 10a

Billing and consumption information for heating, cooling and domestic hot water

1. **Where meters or heat cost allocators are installed, Contracting Parties shall ensure that billing and consumption information is reliable, accurate and based on actual consumption or heat cost allocator readings, in accordance with points 1 and 2 of Annex VII a for all final users, namely for natural or legal persons purchasing heating, cooling or domestic hot water for their own end-use, or natural or legal persons occupying an individual building or a unit in a multi-apartment or multi-purpose building supplied with heating, cooling or domestic hot water from a central source who has no direct or individual contract with the energy supplier.**

This obligation may, where a Contracting Party so provides, save in the case of sub-metered consumption based on heat cost allocators under Article 9b, be fulfilled by a system of regular self-reading by the final customer or final user whereby they communicate readings from their meter. Only where the final customer or final user has not provided a meter reading for a given billing interval shall billing be based on estimated consumption or a flat rate.

2. **Contracting Parties shall:**

(a) **require that, if information on the energy billing and historical consumption or heat cost allocator readings of final users is available, it be made available upon request by the final user, to an energy service provider designated by the final user;**

(b) **ensure that final customers are offered the option of electronic billing information and bills;**

(c) **ensure that clear and comprehensible information is provided with the bill to all final users in accordance with point 3 of Annex VIIa; and**

(d) **promote cybersecurity and ensure the privacy and data protection of final users in accordance with applicable Union law.**

Contracting Parties may provide that, at the request of the final customer, the provision of billing information shall not be considered to constitute a request for payment. In such cases, Contracting Parties shall ensure that flexible arrangements for actual payment are offered.

3. **Contracting Parties shall decide who is to be responsible for providing the information referred to in paragraphs 1 and 2 to final users without a direct or individual contract with an energy supplier.**

Article 11

Cost of access to metering and billing information for electricity and gas

Contracting Parties shall ensure that final customers receive all their bills and billing information for energy consumption free of charge and that final customers have access to their consumption data in an appropriate way and free of charge.

Article 11a

Cost of access to metering and billing and consumption information for heating, cooling and domestic hot water

1. **Contracting Parties shall ensure that final users receive all their bills and billing information for energy consumption free of charge and that final users have access to their consumption data in an appropriate way and free of charge.**

2. Notwithstanding paragraph 1 of this Article, the distribution of costs of billing information for the individual consumption of heating, cooling and domestic hot water in multi-apartment and multi-purpose buildings pursuant to Article 9b shall be carried out on a non-profit basis. Costs resulting from the assignment of that task to a third party, such as a service provider or the local energy supplier, covering the measuring, allocation and accounting for actual individual consumption in such buildings, may be passed onto the final users to the extent that such costs are reasonable.

3. In order to ensure reasonable costs for sub-metering services as referred to in paragraph 2, Contracting Parties may stimulate competition in that service sector by taking appropriate measures, such as recommending or otherwise promoting the use of tendering and/or the use of interoperable devices and systems facilitating switching between service providers'.

Article 12

Consumer information and empowering programme

1. **Contracting Parties** shall take appropriate measures to promote and facilitate an efficient use of en-

ergy by small energy customers, including domestic customers. These measures may be part of a national strategy.

2. For the purposes of paragraph 1, these measures shall include one or more of the elements listed under point (a) or (b):

(a) a range of instruments and policies to promote behavioural change which may include:

(i) fiscal incentives;

(ii) access to finance, grants or subsidies;

(iii) information provision;

(iv) exemplary projects;

(v) workplace activities;

(b) ways and means to engage consumers and consumer organisations during the possible roll-out of smart meters through communication of:

(i) cost-effective and easy-to-achieve changes in energy use;

(ii) information on energy efficiency measures.

Article 13

Penalties

Contracting Parties shall lay down the rules on penalties applicable in case of non-compliance with the national provisions adopted pursuant to Articles 7 to 11 and Article 18(3) and shall take the necessary measures to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. **Contracting Parties** shall notify those provisions the **Energy Community Secretariat** by **15 October 2017** and shall notify it without delay of any subsequent amendment affecting them.

CHAPTER III
EFFICIENCY IN ENERGY SUPPLY

Article 14

Promotion of efficiency in heating and cooling

1. **By 30 November 2018, Contracting Parties** shall carry out and notify to the **Energy Community Secretariat** a comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling, containing the information set out in Annex VIII. If they have already carried out an equivalent assessment, they shall notify it to the **Energy Community Secretariat.**

<…>

At the request of the **Energy Community Secretariat**, the assessment shall be updated and notified to the **Energy Community Secretariat** every five years. The **Energy Community Secretariat** shall make

any such request at least one year before the due date.

2. **Contracting Parties** shall adopt policies which encourage the due taking into account at local and regional levels of the potential of using efficient heating and cooling systems, in particular those using high-efficiency cogeneration. Account shall be taken of the potential for developing local and regional heat markets.

3. For the purpose of the assessment referred to in paragraph 1, **Contracting Parties** shall carry out a cost-benefit analysis covering their territory based on climate conditions, economic feasibility and technical suitability in accordance with Part 1 of Annex IX. The cost-benefit analysis shall be capable of facilitating the identification of the most resource-and cost-efficient solutions to meeting heating and cooling needs. That cost-benefit analysis may be part of an environmental assessment under Directive 2001/42/EC **as adapted and adopted by Ministerial Council Decision 2016/13/MC-EnC**.

4. Where the assessment referred to in paragraph 1 and the analysis referred to in paragraph 3 identify a potential for the application of high-efficiency cogeneration and/or efficient district heating and cooling whose benefits exceed the costs, **Contracting Parties** shall take adequate measures for efficient district heating and cooling infrastructure to be developed and/or to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources in accordance with paragraphs 1, 5, and 7.

Where the assessment referred to in paragraph 1 and the analysis referred to in paragraph 3 do not identify a potential whose benefits exceed the costs, including the administrative costs of carrying out the cost-benefit analysis referred to in paragraph 5, the **Contracting Party** concerned may exempt installations from the requirements laid down in that paragraph.

5. **Contracting Parties** shall ensure that a cost-benefit analysis in accordance with Part 2 of Annex IX is carried out when, after **15 October 2017:**

(a) a new thermal electricity generation installation with a total thermal input exceeding 20 MW is planned, in order to assess the cost and benefits of providing for the operation of the installation as a high-efficiency cogeneration installation;

(b) an existing thermal electricity generation installation with a total thermal input exceeding 20 MW is substantially refurbished, in order to assess the cost and benefits of converting it to high-efficiency cogeneration;

(c) an industrial installation with a total thermal input exceeding 20 MW generating waste heat at a useful temperature level is planned or substantially refurbished, in order to assess the cost and benefits of utilising the waste heat to satisfy economically justified demand, including through cogeneration, and of the connection of that installation to a district heating and cooling network;

(d) a new district heating and cooling network is planned or in an existing district heating or cooling network a new energy production installation with a total thermal input exceeding 20 MW is planned or an existing such installation is to be substantially refurbished, in order to assess the cost and benefits of utilising the waste heat from nearby industrial installations.

The fitting of equipment to capture carbon dioxide produced by a combustion installation with a view to its being geologically stored as provided for in Directive 2009/31/EC shall not be considered as refurbishment for the purpose of points (b), (c) and (d) of this paragraph.

Contracting Parties may require the cost-benefit analysis referred to in points (c) and (d) to be carried

out in cooperation with the companies responsible for the operation of the district heating and cooling networks.

6. **Contracting Parties** may exempt from paragraph 5:

(a) those peak load and back-up electricity generating installations which are planned to operate under 1500 operating hours per year as a rolling average over a period of five years, based on a verification procedure established by the **Contracting Parties** ensuring that this exemption criterion is met;

(b) nuclear power installations;

(c) installations that need to be located close to a geological storage site approved under Directive 2009/31/EC.

Contracting Parties may also lay down thresholds, expressed in terms of the amount of available useful waste heat, the demand for heat or the distances between industrial installations and district heating networks, for exempting individual installations from the provisions of points (c) and (d) of paragraph 5.

Contracting Parties shall notify exemptions adopted under this paragraph to the **Energy Community Secretariat** by **15 October 2017** and any subsequent changes to them thereafter.

7. **Contracting Parties** shall adopt authorisation criteria as referred to in **Article 8 of Directive (EU) 2019/944/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC** or equivalent permit criteria, to:

(a) take into account the outcome of the comprehensive assessment referred to in paragraph 1;

(b) ensure that the requirements of paragraph 5 are fulfilled; and

(c) take into account the outcome of cost-benefit analysis referred to in paragraph 5.

8. **Contracting Parties** may exempt individual installations from being required, by the authorisation and permit criteria referred to in paragraph 7, to implement options whose benefits exceed their costs, if there are imperative reasons of law, ownership or finance for so doing. In these cases the **Contracting Party** concerned shall submit a reasoned notification of its decision to the **Energy Community Secretariat** within three months of the date of taking it.

9. Paragraphs 5, 6, 7 and 8 of this Article shall apply to installations covered by Directive 2010/75/EU, **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC** without prejudice to the requirements of that Directive.

10. On the basis of the harmonised efficiency reference values referred to in point (f) of Annex II, **Contracting Parties** shall ensure that the origin of electricity produced from high-efficiency cogeneration can be guaranteed according to objective, transparent and non-discriminatory criteria laid down by each **Contracting Party.** They shall ensure that this guarantee of origin complies with the requirements and contains at least the information specified in Annex X. **Contracting Parties** shall mutually recognise their guarantees of origin, exclusively as proof of the information referred to in this paragraph. Any refusal to recognise a guarantee of origin as such proof, in particular for reasons relating to the prevention of fraud, must be based on objective, transparent and non-discriminatory criteria. **Contracting Parties** shall notify the **Energy Community Secretariat** of such refusal and its justification. In the event of refusal to recognise a guarantee of origin, the **Energy Community Secretariat** may adopt a decision to compel the refusing party to recognise it, in particular with regard to objective, transparent and non-discriminatory criteria on which such recognition is based.

The Commission shall be empowered to review, by means of delegated acts in accordance with Article 23 of this Directive, the harmonised efficiency reference values laid down in Commission Implementing Decision 2011/877/EU on the basis of Directive 2004/8/EC by 31 December 2014.

11. **Contracting Parties** shall ensure that any available support for cogeneration is subject to the electricity produced originating from high-efficiency cogeneration and the waste heat being effectively used to achieve primary energy savings. Public support to cogeneration and district heating generation and networks shall be subject to State aid rules, where applicable.

Article 15

Energy transformation, transmission and distribution

1. **Contracting Parties** shall ensure that national energy regulatory authorities pay due regard to energy efficiency in carrying out the regulatory tasks specified in **Directives (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and 2011/02/MC-EnC respectively** regarding their decisions on the operation of the gas and electricity infrastructure.

Contracting Parties shall in particular ensure that national energy regulatory authorities, through the development of network tariffs and regulations, within the framework of **Electricity Directive 2019/944** as **adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC** and taking into account the costs and benefits of each measure, provide incentives for grid operators to make available system services to network users permitting them to implement energy efficiency improvement measures in the context of the continuing deployment of smart grids.

Such systems services may be determined by the system operator and shall not adversely impact the security of the system.

For electricity, **Contracting Parties** shall ensure that network regulation and network tariffs fulfil the criteria in Annex XI, taking into account guidelines and codes developed pursuant to **Regulation (EU) 2019/943**, **as adapted and adopted by Ministerial Council Decision 2022/03/MC-EnC.**

2. **Contracting Parties** shall ensure, by 15 October 2018, that:

(a) concrete measures and investments are identified for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a timetable for their introduction, following the common methodology prepared by the European Commission in order to encourage network operators to reduce losses, implement a cost – efficient and energy –efficient infrastructure investment programme and properly account for the energy efficiency and flexibility of the grid.

(b) concrete measures and investments are identified for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a timetable for their introduction.

3. **Contracting Parties** may permit components of schemes and tariff structures with a social aim for net-bound energy transmission and distribution, provided that any disruptive effects on the transmission and distribution system are kept to the minimum necessary and are not disproportionate to the social aim.

4. **Contracting Parties** shall ensure the removal of those incentives in transmission and distribution tariffs that are detrimental to the overall efficiency (including energy efficiency) of the generation, transmission, distribution and supply of electricity or those that might hamper participation of demand response, in

balancing markets and ancillary services procurement. **Contracting Parties** shall ensure that network operators are incentivised to improve efficiency in infrastructure design and operation, and, within the framework of **Electricity Directive 2019/944 as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC**, that tariffs allow suppliers to improve consumer participation in system efficiency, including demand response, depending on national circumstances.

5. Without prejudice to **Article 20 of Directive (EU) 2018/2001 as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Decision 2022/02/MC-EnC** and taking into account Article 15 of Directive 2009/72/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC and the need to ensure continuity in heat supply, **Contracting Parties** shall ensure that, subject to requirements relating to the maintenance of the reliability and safety of the grid, based on transparent and non-discriminatory criteria set by the competent national authorities, transmission system operators and distribution system operators when they are in charge of dispatching the generating installations in their territory:

(a) guarantee the transmission and distribution of electricity from high-efficiency cogeneration;

(b) provide priority or guaranteed access to the grid of electricity from high-efficiency cogeneration;

(c) when dispatching electricity generating installations, provide priority dispatch of electricity from high-efficiency cogeneration in so far as the secure operation of the national electricity system permits.

Contracting Parties shall ensure that rules relating to the ranking of the different access and dispatch priorities granted in their electricity systems are clearly explained in detail and published. When providing priority access or dispatch for high-efficiency cogeneration, **Contracting Parties** may set rankings as between, and within different types of, renewable energy and high-efficiency cogeneration and shall in any case ensure that priority access or dispatch for energy from variable renewable energy sources is not hampered.

In addition to the obligations laid down by the first subparagraph, transmission system operators and distribution system operators shall comply with the requirements set out in Annex XII.

Contracting Parties may particularly facilitate the connection to the grid system of electricity produced from high-efficiency cogeneration from small-scale and micro-cogeneration units. **Contracting Parties** shall, where appropriate, take steps to encourage network operators to adopt a simple notification 'install and inform' process for the installation of micro-cogeneration units to simplify and shorten authorisation procedures for individual citizens and installers.

6. Subject to the requirements relating to the maintenance of the reliability and safety of the grid, **Contracting Parties** shall take the appropriate steps to ensure that, where this is technically and economically feasible with the mode of operation of the high-efficiency cogeneration installation, high-efficiency cogeneration operators can offer balancing services and other operational services at the level of transmission system operators or distribution system operators. Transmission system operators and distribution system operators shall ensure that such services are part of a services bidding process which is transparent, non-discriminatory and open to scrutiny.

Where appropriate, **Contracting Parties** may require transmission system operators and distribution system operators to encourage high-efficiency cogeneration to be sited close to areas of demand by reducing the connection and use-of-system charges.

7. **Contracting Parties** may allow producers of electricity from high-efficiency cogeneration wishing to

be connected to the grid to issue a call for tender for the connection work.

8. **Contracting Parties** shall ensure that national energy regulatory authorities encourage demand side resources, such as demand response, to participate alongside supply in wholesale and retail markets.

Subject to technical constraints inherent in managing networks, **Contracting Parties** shall ensure that transmission system operators and distribution system operators, in meeting requirements for balancing and ancillary services, treat demand response providers, including aggregators, in a non-discriminatory manner, on the basis of their technical capabilities.

Subject to technical constraints inherent in managing networks, **Contracting Parties** shall promote access to and participation of demand response in balancing, reserve and other system services markets, inter alia by requiring national energy regulatory authorities or, where their national regulatory systems so require, transmission system operators and distribution system operators in close cooperation with demand service providers and consumers, to define technical modalities for participation in these markets on the basis of the technical requirements of these markets and the capabilities of demand response. Such specifications shall include the participation of aggregators.

9. When reporting under Directive 2010/75/EU, **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC**, and without prejudice to Article 9(2) of that Directive, **Contracting Parties** shall consider including information on energy efficiency levels of installations undertaking the combustion of fuels with total rated thermal input of 50 MW or more in the light of the relevant best available techniques developed in accordance with Directive 2010/75/EU, **as adapted and adopted by the Ministerial Council Decision 2013/06/MC-EnC**, and Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control.

Contracting Parties may encourage operators of installations referred to in the first subparagraph to improve their annual average net operational rates.

CHAPTER IV
HORIZONTAL PROVISIONS

Article 16

Availability of qualification, accreditation and certification schemes

1. Where a **Contracting Party** considers that the national level of technical competence, objectivity and reliability is insufficient, it shall ensure that**, by 31 December 2017**, certification and/or accreditation schemes and/or equivalent qualification schemes, including, where necessary, suitable training programmes, become or are available for providers of energy services, energy audits, energy managers and installers of energy-related building elements as defined in Article 2(9) of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

2. **Contracting Parties** shall ensure that the schemes referred to in paragraph 1 provide transparency to consumers, are reliable and contribute to national energy efficiency objectives.

3. **Contracting Parties** shall make publicly available the certification and/or accreditation schemes or equivalent qualification schemes referred to in paragraph 1 and shall cooperate among themselves and

with the **Energy Community Secretariat** on comparisons between, and recognition of, the schemes.

Contracting Parties shall take appropriate measures to make consumers aware of the availability of qualification and/or certification schemes in accordance with Article 18(1).

Article 17

Information and training

1. **Contracting Parties** shall ensure that information on available energy efficiency mechanisms and financial and legal frameworks is transparent and widely disseminated to all relevant market actors, such as consumers, builders, architects, engineers, environmental and energy auditors, and installers of building elements as defined in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

Contracting Parties shall encourage the provision of information to banks and other financial institutions on possibilities of participating, including through the creation of public/private partnerships, in the financing of energy efficiency improvement measures.

2. **Contracting Parties** shall establish appropriate conditions for market operators to provide adequate and targeted information and advice to energy consumers on energy efficiency.

3. The Commission shall review the impact of its measures to support the development of platforms, involving, inter alia, the European social dialogue bodies in fostering training programmes for energy efficiency, and shall bring forward further measures if appropriate. The Commission shall encourage European social partners in their discussions on energy efficiency.

4. **Contracting Parties** shall, with the participation of stakeholders, including local and regional authorities, promote suitable information, awareness-raising and training initiatives to inform citizens of the benefits and practicalities of taking energy efficiency improvement measures.

5. The **Energy Community Secretariat** shall encourage the exchange and wide dissemination of information on best energy efficiency practices in **Contracting Parties.**

Article 18

Energy services

1. **Contracting Parties** shall promote the energy services market and access for SMEs to this market by:

(a) disseminating clear and easily accessible information on:

(i) available energy service contracts and clauses that should be included in such contracts to guarantee energy savings and final customers' rights;

(ii) financial instruments, incentives, grants and loans to support energy efficiency service projects;

(b) encouraging the development of quality labels, inter alia, by trade associations;

(c) making publicly available and regularly updating a list of available energy service providers who are qualified and/or certified and their qualifications and/or certifications in accordance with Article 16, or providing an interface where energy service providers can provide information;

(d) supporting the public sector in taking up energy service offers, in particular for building refurbishment, by:

(i) providing model contracts for energy performance contracting which include at least the items listed in Annex XIII;

(ii) providing information on best practices for energy performance contracting, including, if available, cost-benefit analysis using a life-cycle approach;

(e) **<…>**

2. **Contracting Parties** shall support the proper functioning of the energy services market, where appropriate, by:

(a) identifying and publicising point(s) of contact where final customers can obtain the information referred to in paragraph 1;

(b) taking, if necessary, measures to remove the regulatory and non-regulatory barriers that impede the uptake of energy performance contracting and other energy efficiency service models for the identification and/or implementation of energy saving measures;

(c) considering putting in place or assigning the role of an independent mechanism, such as an ombudsman, to ensure the efficient handling of complaints and out-of-court settlement of disputes arising from energy service contracts;

(d) enabling independent market intermediaries to play a role in stimulating market development on the demand and supply sides.

3. **Contracting Parties** shall ensure that energy distributors, distribution system operators and retail energy sales companies refrain from any activities that may impede the demand for and delivery of energy services or other energy efficiency improvement measures, or hinder the development of markets for such services or measures, including foreclosing the market for competitors or abusing dominant positions.

Article 19

Other measures to promote energy efficiency

1. **Contracting Parties** shall evaluate and if necessary take appropriate measures to remove regulatory and non-regulatory barriers to energy efficiency, without prejudice to the basic principles of the property and tenancy law of the **Contracting Parties**, in particular as regards:

(a) the split of incentives between the owner and the tenant of a building or among owners, with a view to ensuring that these parties are not deterred from making efficiency-improving investments that they would otherwise have made by the fact that they will not individually obtain the full benefits or by the absence of rules for dividing the costs and benefits between them, including national rules and measures regulating decision- making processes in multi-owner properties;

(b) legal and regulatory provisions, and administrative practices, regarding public purchasing and annual budgeting and accounting, with a view to ensuring that individual public bodies are not deterred from making investments in improving energy efficiency and minimising expected life-cycle costs and from using energy performance contracting and other third-party financing mechanisms on a long-term contractual basis.

Such measures to remove barriers may include providing incentives, repealing or amending legal or regulatory provisions, or adopting guidelines and interpretative communications, or simplifying administrative procedures. The measures may be combined with the provision of education, training and specific information and technical assistance on energy efficiency.

2. The evaluation of barriers and measures referred to in paragraph 1 shall be notified to **the Energy Community Secretariat** in the first National Energy Efficiency Action Plan referred to in Article 24(2). The **Energy Community Secretariat** shall encourage the sharing of national best practices in this regard.

Article 20

Energy Efficiency National Fund, Financing and Technical Support

1. Without prejudice to **Articles 18 and 19 of the Energy Community Treaty**, **Contracting Parties** shall facilitate the establishment of financing facilities, or use of existing ones, for energy efficiency improvement measures to maximise the benefits of multiple streams of financing.

2. The **Energy Community Secretariat** shall, where appropriate, directly or via the European financial institutions, assist **Contracting Parties** in setting up financing facilities and technical support schemes with the aim of increasing energy efficiency in different sectors.

3. The **the Energy Community Secretariat** shall facilitate the exchange of best practice between the competent national or regional authorities or bodies, e.g. through annual meetings of the regulatory bodies, public databases with information on the implementation of measures by **Contracting Parties,** and country comparison.

3(a). In order to mobilise private financing for energy efficiency measures and energy renovation, in accordance with Directive 2010/31/EU, the Secretariat shall conduct a dialogue with both public and private financial institutions in order to map out possible actions it can take.

3(b). The actions referred to in paragraph 3a shall include the following:

(i) **mobilising capital investment into energy efficiency by considering the wider impacts of energy savings for financial risk management;**

(ii) **ensuring better energy and finance performance data by:**

(iii) **examining further how energy efficiency investments improve underlying asset values;**

(iv) **supporting studies to assess the monetisation of the non-energy benefits of energy efficiency investments.**

3(c). For the purpose of mobilising private financing of energy efficiency measures and energy renovation, Contracting Parties shall, when implementing this Directive:

(i) **consider ways to make better use of energy audits under Article 8 to influence decision-making;**

(ii) **make optimal use of the possibilities and tools proposed in the smart finance for smart buildings initiative.**

3(d). By 1 January 2023, the Energy Community Secretariat shall provide guidance for Contracting Parties on how to unlock private investment.

4. **Contracting Parties** may set up an Energy Efficiency National Fund. The purpose of this fund shall be to support national energy efficiency initiatives.

5. **Contracting Parties** may allow for the obligations set out in Article 5(1) to be fulfilled by annual contributions to the Energy Efficiency National Fund of an amount equal to the investments required to achieve those obligations.

6. **Contracting Parties** may provide that obligated parties can fulfil their obligations set out in Article 7(1) by contributing annually to the Energy Efficiency National Fund an amount equal to the investments required to achieve those obligations.

7. **Contracting Parties** may use their revenues from annual emission allocations under Decision No 406/2009/EC for the development of innovative financing mechanisms to give practical effect to the objective in Article 5 of improving the energy performance of buildings.

Article 21

Conversion factors

For the purpose of comparison of energy savings and conversion to a comparable unit, the conversion factors set out in Annex IV shall apply unless the use of other conversion factors can be justified.

CHAPTER V
FINAL PROVISIONS

Article 22

Delegated acts

<…>

Article 23

Exercise of the delegation

<…>

Article 24

Review and monitoring of implementation

1. **<…>**

2. **<…>**

3. **<…>**

4. **By 30 June 2018 the Energy Community Secretariat shall submit the assessment referred to in Article 3(2) to the Ministerial Council of the Energy Community, accompanied, if necessary,**

by proposals for further measures.

5. **The Energy Community Secretariat shall review the effectiveness of the implementation of Article 6 by 5 November 2018 and shall submit a report to the Ministerial Council of the Energy Community. That report shall be accompanied, if appropriate, by proposals for further measures.**

6. **By 30 May 2019, the Energy Community Secretariat shall submit a report to the Ministerial Council of the Energy Community on the implementation of Article 7. That report shall be accompanied, if appropriate, by a legislative proposal for one or more of the following purposes**:

(a) to change the final date laid down in Article 7(1); 7.

(b) to review the requirements laid down in Article 7(1), (2) and (3); 8.

(c) to establish additional common requirements, in particular as regards the matters referred to in Article 7(7).

10. By **30 September 2020,** the Energy Community Secretariat shall assess the progress made by **Contracting Parties** in removing the regulatory and non-regulatory barriers referred to in Article 19(1). This assessment shall be followed, if appropriate, by proposals for further measures.

11. **<...>**

Article 25

Online platform

The **Energy Community Secretariat** shall establish an online platform in order to foster the practical implementation of this Directive at national, regional and local levels. That platform shall support the exchange of experiences on practices, benchmarking, networking activities, as well as innovative practices.

Article 26

Committee procedure

<...>

Article 27

Amendments and repeals

1. **Article 1 of the Ministerial Council Decision 2009/05/MC-EnC is repealed from 15 October 2017. By way of exception, Article 4(1) to (4) of Directive 2006/32/EC as incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC thereof and Annexes I, III and IV thereto, shall continue to apply, without prejudice to the obligations of the Contracting Parties relating to the time-limit for its transposition into national law. Article 4(1) to (4) of, and Annexes I, III and IV of Directive 2006/32/EC as incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC, shall cease to apply with effect from 1 January 2020. References to Directive 2006/32/EC shall be construed as references to this Directive and shall be read in**

accordance with the correlation table set out in Annex XV.

2. **Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/01/MC-EnC shall cease to apply from 15 October 2017.**

Article 28

Transposition

1. **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by **31 December 2022**.

However, each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 9 to 11a, and Annexes VII and VIIa of this Directive by 30 June 2023.

Notwithstanding the first subparagraph, **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with Article 4, the first subparagraph of Article 5(1), Article 5(5), Article 5(6), the last subparagraph of Article 7(9), Article 14(6), Article 19(2), Article 24(1) and Article 24(2) and point (4) of Annex V by the dates specified therein.

They shall forthwith communicate to the **Energy Community Secretariat** the text of those provisions.

When **Contracting Parties** adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. **Contracting Parties** shall determine how such reference is to be made.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 29

Transitional provisions

Article 1(1) and 3(5) of Directive (EU) 2018/2002 shall not be implemented until the Ministerial Council of the Energy Community will adopt the 2030 headline targets on energy efficiency for the Energy Community and Annex XX with the national benchmarks.

Until adoption by the Ministerial Council of the Energy Community 2030 targets, including the energy efficiency headline target, and/or the targets for energy and climate of each Contracting Party, as appropriate, this Directive shall be applied on the basis of Contracting Parties' National Domestic Contributions or targets or any other more ambitious contributions or targets that they have undertaken under any national or international legal and/or policy text.

Article 29 (bis)

Entry into force

This Directive shall enter into force on the date of its adoption by the Ministerial Council.

ANNEX I

GENERAL PRINCIPLES FOR THE CALCULATION OF ELECTRICITY FROM CO-GENERATION

PART I

General principles

Values used for calculation of electricity from cogeneration shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use. For micro- cogeneration units the calculation may be based on certified values.

(a) Electricity production from cogeneration shall be considered equal to total annual electricity production of the unit measured at the outlet of the main generators;

(i) in cogeneration units of types (b), (d), (e), (f), (g) and (h) referred to in Part II with an annual overall efficiency set by **Contracting Parties** at a level of at least 75 %, and

(ii) in cogeneration units of types (a) and (c) referred to in Part II with an annual overall efficiency set by **Contracting Parties** at a level of at least 80 %.

(b) In cogeneration units with an annual overall efficiency below the value referred to in point (i) of point (a) (cogeneration units of types (b), (d), (e), (f), (g), and (h) referred to in Part II) or with an annual overall efficiency below the value referred to in point (ii) of point (a) (cogeneration units of types (a) and (c) referred to in Part II) cogeneration is calculated according to the following formula:

$$E_{CHP}=H_{CHP}*C$$

where:

E_{CHP} is the amount of electricity from cogeneration;

C is the power-to-heat ratio;

H_{CHP} is the amount of useful heat from cogeneration (calculated for this purpose as total heat production minus any heat produced in separate boilers or by live steam extraction from the steam generator before the turbine).

The calculation of electricity from cogeneration must be based on the actual power-to-heat ratio. If the actual power-to-heat ratio of a cogeneration unit is not known, the following default values may be used, in particular for statistical purposes, for units of types (a), (b), (c), (d) and (e) referred to in Part II provided that the calculated cogeneration electricity is less or equal to total electricity production of the unit:

Type of the unit	Default power to heat ratio, C
Combined cycle gas turbine with heat recovery	0,95
Steam back pressure turbine	0,45
Steam condensing extraction turbine	0,45
Gas turbine with heat recovery	0,55
Internal combustion engine	0,75

If **Contracting Parties** introduce default values for power-to-heat ratios for units of types (f), (g), (h), (i), (j) and (k) referred to in Part II, such default values shall be published and shall be notified to the **Energy**

Community Secretariat.

(c) If a share of the energy content of the fuel input to the cogeneration process is recovered in chemicals and recycled this share can be subtracted from the fuel input before calculating the overall efficiency used in points (a) and (b).

(d) **Contracting Parties** may determine the power-to-heat ratio as the ratio of electricity to useful heat when operating in cogeneration mode at a lower capacity using operational data of the specific unit.

(e) **Contracting Parties** may use other reporting periods than one year for the purpose of the calculations according to points (a) and (b).

PART II

Cogeneration technologies covered by this Directive

(a) Combined cycle gas turbine with heat recovery

(b) Steam back pressure turbine

(c) Steam condensing extraction turbine

(d) Gas turbine with heat recovery

(e) Internal combustion engine

(f) Microturbines

(g) Stirling engines

(h) Fuel cells

(i) Steam engines

(j) Organic Rankine cycles

(k) Any other type of technology or combination thereof falling under the definition laid down in Article 2(30).

When implementing and applying the general principles for the calculation of electricity from cogeneration, **Contracting Parties** shall use the detailed Guidelines established by Commission Decision 2008/952/EC of 19 November 2008 establishing detailed guidelines for the implementation and application of Annex II to Directive 2004/8/EC of the European Parliament and of the Council.

ANNEX II

METHODOLOGY FOR DETERMINING THE EFFICIENCY OF THE COGENERATION PROCESS

Values used for calculation of efficiency of cogeneration and primary energy savings shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use.

(a) High-efficiency cogeneration

For the purpose of this Directive high-efficiency cogeneration shall fulfil the following criteria:

— cogeneration production from cogeneration units shall provide primary energy savings calculated according to point (b) of at least 10 % compared with the references for separate production of heat and electricity,

— production from small-scale and micro-cogeneration units providing primary energy savings may qualify as high-efficiency cogeneration.

(b) Calculation of primary energy savings

The amount of primary energy savings provided by cogeneration production defined in accordance with Annex I shall be calculated on the basis of the following formula:

$$PES = \left(1 - \frac{1}{\frac{CHP\ H\eta}{Ref\ H\eta} + \frac{CHP\ E\eta}{Ref\ E\eta}}\right) \times 100\,\%$$

Where:

PES is primary energy savings.

CHP Hη is the heat efficiency of the cogeneration production defined as annual useful heat output divided by the fuel input used to produce the sum of useful heat output and electricity from cogeneration.

Ref Hη is the efficiency reference value for separate heat production.

CHP Eη is the electrical efficiency of the cogeneration production defined as annual electricity from cogeneration divided by the fuel input used to produce the sum of useful heat output and electricity from cogeneration. Where a cogeneration unit generates mechanical energy, the annual electricity from cogeneration may be increased by an additional element representing the amount of electricity which is equivalent to that of mechanical energy. This additional element does not create a right to issue guarantees of origin in accordance with Article 14(10).

Ref Eη is the efficiency reference value for separate electricity production. (c) Calculations of energy savings using alternative calculation

Contracting Parties may calculate primary energy savings from a production of heat and electricity and mechanical energy as indicated below without applying Annex I to exclude the non-cogenerated heat and electricity parts of the same process. Such a production can be regarded as high-efficiency cogeneration provided it fulfils the efficiency criteria in point (a) of this Annex and, for cogeneration units with an electrical capacity larger than 25 MW, the overall efficiency is above 70 %. However, specification of the quantity of electricity from cogeneration produced in such a production, for issuing a guarantee of origin and for statistical purposes, shall be determined in accordance with Annex I.

If primary energy savings for a process are calculated using alternative calculation as indicated above the

primary energy savings shall be calculated using the formula in point (b) of this Annex replacing:

'CHP Hη' with 'Hη' and 'CHP Eη' with 'Eη', where:

Hη shall mean the heat efficiency of the process, defined as the annual heat output divided by the fuel input used to produce the sum of heat output and electricity output.

Eη shall mean the electricity efficiency of the process, defined as the annual electricity output divided by the fuel input used to produce the sum of heat output and electricity output. Where a cogeneration unit generates mechanical energy, the annual electricity from cogeneration may be increased by an additional element representing the amount of electricity which is equivalent to that of mechanical energy. This additional element will not create a right to issue guarantees of origin in accordance with Article 14(10).

(d) **Contracting Parties** may use other reporting periods than one year for the purpose of the calculations according to points (b) and (c) of this Annex.

(e) For micro-cogeneration units the calculation of primary energy savings may be based on certified data.

(f) Efficiency reference values for separate production of heat and electricity

The harmonised efficiency reference values shall consist of a matrix of values differentiated by relevant factors, including year of construction and types of fuel, and must be based on a well-documented analysis taking, inter alia, into account data from operational use under realistic conditions, fuel mix and climate conditions as well as applied cogeneration technologies.

The efficiency reference values for separate production of heat and electricity in accordance with the formula set out in point (b) shall establish the operating efficiency of the separate heat and electricity production that cogeneration is intended to substitute.

The efficiency reference values shall be calculated according to the following principles:

1. For cogeneration units the comparison with separate electricity production shall be based on the principle that the same fuel categories are compared.

2. Each cogeneration unit shall be compared with the best available and economically justifiable technology for separate production of heat and electricity on the market in the year of construction of the cogeneration unit.

3. The efficiency reference values for cogeneration units older than 10 years of age shall be fixed on the reference values of units of 10 years of age.

4. The efficiency reference values for separate electricity production and heat production shall reflect the climatic differences between **Contracting Parties**.

ANNEX III

ENERGY EFFICIENCY REQUIREMENTS FOR PURCHASING PRODUCTS, SERVICES AND BUILDINGS BY CENTRAL GOVERNMENT

Central governments that purchase products, services or buildings, insofar as this is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, shall:

(a) where a product is covered by a delegated act adopted under Directive 2010/30/EU **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** or by a related Commission implementing directive, purchase only the products that comply with the criterion of belonging to the highest energy efficiency class possible in the light of the need to ensure sufficient competition;

(b) <…>

(c) <…>

(d) <…>

(e) require in their tenders for service contracts that service providers use, for the purposes of providing the services in question, only products that comply with the requirements referred to in points (a) to (d), when providing the services in question. This requirement shall apply only to new products purchased by service providers partially or wholly for the purpose of providing the service in question;

(f) purchase, or make new rental agreements for, only buildings that comply at least with the minimum energy performance requirements referred to in Article 5(1) unless the purpose of the purchase is:

(i) to undertake deep renovation or demolition;

(ii) in the case of public bodies, to re-sell the building without using it for public body's own purposes; or

(iii) to preserve it as a building officially protected as part of a designated environment, or because of its special architectural or historical merit. Compliance with these requirements shall be verified by means of the energy performance certificates referred to in Article 11 of Directive 2010/31/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC.**

ANNEX IV

ENERGY CONTENT OF SELECTED FUELS FOR END USE – CONVERSION TABLE[1]

Energy commodity	kJ (NCV)	kgoe (NCV)	kWh (NCV)
1 kg coke	28 500	0,676	7,917
1 kg hard coal	17 200 — 30 700	0,411 — 0,733	4,778 — 8,528
1 kg brown coal briquettes	20 000	0,478	5,556
1 kg black lignite	10 500 — 21 000	0,251 — 0,502	2,917 — 5,833
1 kg brown coal	5 600 — 10 500	0,134 — 0,251	1,556 — 2,917
1 kg oil shale	8 000 — 9 000	0,191 — 0,215	2,222 — 2,500
1 kg peat	7 800 — 13 800	0,186 — 0,330	2,167 — 3,833
1 kg peat briquettes	16 000 — 16 800	0,382 — 0,401	4,444 — 4,667
1 kg residual fuel oil (heavy oil)	40 000	0,955	11,111
1 kg light fuel oil	42 300	1,010	11,750
1 kg motor spirit (petrol)	44 000	1,051	12,222
1 kg paraffin	40 000	0,955	11,111
1 kg liquefied petroleum gas	46 000	1,099	12,778
1 kg natural gas [2]	47 200	1,126	13,10
1 kg liquefied natural gas	45 190	1,079	12,553
1 kg wood (25 % humidity) [3]	13 800	0,330	3,833
1 kg pellets/wood bricks	16 800	0,401	4,667
1 kg waste	7 400 — 10 700	0,177 — 0,256	2,056 — 2,972
1 MJ derived heat	1 000	0,024	0,278
1 kWh electrical energy	3 600	0,086	1 [4]
Source: Eurostat.			

[1] **Contracting Parties** may apply different conversion factors if these can be justified.

[2] 93 % methane.

[3] **Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity, Contracting Parties shall apply a coefficient established through a transparent methodology on the basis of national circumstances affecting primary energy consumption, in order to ensure a precise calculation of real savings. Those circumstances shall be substantiated, verifiable and based on objective and non-discriminatory criteria. For savings in kWh electricity, Contracting Parties may apply a default coefficient of 2,1 or use the discretion to define a different coefficient, provided that they can justify it. When doing so, Contracting Parties shall take into account the energy mix included in their integrated national energy and climate plans to be notified to the Energy Community Secretariat in accordance with Regulation (EU) 2018/1999. By 25 December 2022 and every four years thereafter, the Energy Community Secretariat shall revise the default coefficient on the basis of observed data. That revision shall be carried out taking into account its effects on other Energy Community law such as Directive 2009/125/EC and Regulation (EU) 2017/1369 setting a framework for energy labelling and repealing Directive 2010/30/EU as adopted and adapted by the Ministerial Council Decision D/2018/3/MC-EnC.**

[4] Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity **Contracting Parties** may apply a default coefficient of 2,5. **Contracting Parties** may apply a different coefficient provided they can justify it.

ANNEX V

Common methods and principles for calculating the impact of energy efficiency obligation schemes or other policy measures under Articles 7, 7a and 7b and Article 20 (6)

1. Methods for calculating energy savings other than those arising from taxation measures for the purposes of Articles 7, 7a and 7b and Article 20(6).

Obligated, participating or entrusted parties, or implementing public authorities, may use the following methods for calculating energy savings:

(a) deemed savings, by reference to the results of previous independently monitored energy improvements in similar installations. The generic approach is termed "ex ante";

(b) metered savings, whereby the savings from the installation of a measure, or package of measures, are determined by recording the actual reduction in energy use, taking due account of factors such as additionality, occupancy, production levels and the weather which may affect consumption. The generic approach is termed "ex post";

(c) scaled savings, whereby engineering estimates of savings are used. This approach may be used only where establishing robust measured data for a specific installation is difficult or disproportionately expensive, e.g. replacing a compressor or electric motor with a different kWh rating from that for which independent information about savings has been measured, or where those estimates are carried out on the basis of nationally established methodologies and benchmarks by qualified or accredited experts that are independent of the obligated, participating or entrusted parties involved;

(d) surveyed savings, where consumers' response to advice, information campaigns, labelling or certification schemes or smart metering is determined. This approach may be used only for savings resulting from changes in consumer behaviour. It shall not be used for savings resulting from the installation of physical measures.

2. In determining the energy savings for an energy efficiency measure for the purposes of Articles 7, 7a and 7b and Article 20(6), the following principles apply:

(a) The savings shall be shown to be additional to those that would have occurred in any event without the activity of the obligated, participating or entrusted parties, or implementing public authorities. To determine the savings that can be claimed as additional, Contracting Parties shall have regard to how energy use and demand would evolve in the absence of the policy measure in question by taking into account at least the following factors: energy consumption trends, changes in consumer behaviour, technological progress and changes caused by other measures implemented at Union and national level.

(b) Savings resulting from the implementation of mandatory Union law shall be considered to be savings that would have occurred in any event, and thus shall not be claimed as energy savings for the purpose of Article 7(1). By way of derogation from that requirement, savings related to the renovation of existing buildings may be claimed as energy savings for the purpose of Article 7(1), provided that the materiality criterion referred to in point 3(h) of this Annex is ensured. Savings resulting from the implementation of national minimum requirements established for new buildings prior to the transposition of Directive 2010/31/EU can be claimed as energy savings for the purpose of point (a) of Article 7(1), provided that the materiality criterion referred to in point 3(h) of this Annex is ensured and those savings have been notified

by Contracting Parties in their National Energy Efficiency Action Plans in accordance with Article 24(2).

(c) Credit may be given only for savings exceeding the following levels:

(i) Union emission performance standards for new passenger cars and new light commercial vehicles following the implementation of Regulations (EC) No 443/2009 (*) and (EU) No 510/2011 of the European Parliament and of the Council (**);

(ii) Union requirements relating to the removal from the market of certain energy related products following the implementation of implementing measures under Directive 2009/125/EC.

(d) Policies with the purpose of encouraging higher levels of energy efficiency of products, equipment, transport systems, vehicles and fuels, buildings and building elements, processes or markets shall be permitted.

(e) Measures promoting the installation of small-scale renewable energy technologies on or in buildings may be eligible to be taken into account for the fulfilment of energy savings required under Article 7(1), provided that they result in verifiable, and measurable or estimable, energy savings. The calculation of energy savings shall comply with the requirements of this Annex.

(f) For policies that accelerate the uptake of more efficient products and vehicles, full credit may be claimed, provided that it is shown that such uptake takes place before expiry of the average expected lifetime of the product or vehicle, or before the product or vehicle would usually be replaced, and the savings are claimed only for the period until end of the average expected lifetime of the product or vehicle to be replaced.

(g) In promoting the uptake of energy efficiency measures, Contracting Parties shall, where relevant, ensure that quality standards for products, services and installation of measures are maintained or introduced where such standards do not exist.

(h) To account for climatic variations between regions, Contracting Parties may choose to adjust the savings to a standard value or to accord different energy savings in accordance with temperature variations between regions.

(i) The calculation of energy savings shall take into account the lifetime of the measures and the rate at which the savings decline over time. That calculation shall count the savings each individual action will achieve during the period from its date of implementation to 31 December 2020 or 31 December 2030 as appropriate. Alternatively, Contracting Parties may adopt another method that is estimated to achieve at least the same total quantity of savings. When using another method, Contracting Parties shall ensure that the total amount of energy savings calculated using that method does not exceed the amount of energy savings that would have been the result of their calculation when counting the savings each individual action will achieve during the period from its date of implementation to 31 December 2020 or 31 December 2030 as appropriate. Contracting Parties shall describe in detail in their integrated national energy and climate plans under Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC the other method and the provisions made to ensure that the binding calculation requirement is met.

3. Contracting Parties shall ensure that the following requirements for policy measures taken pursuant to Article 7b and Article 20(6) are met:

(a) policy measures and individual actions produce verifiable end-use energy savings;

(b) the responsibility of each participating party, entrusted party or implementing public authority, as relevant, is clearly defined;

(c) the energy savings that are achieved or are to be achieved are determined in a transparent manner;

(d) the amount of energy savings required or to be achieved by the policy measure is expressed in either final or primary energy consumption, using the conversion factors set out in Annex IV;

(e) an annual report on the energy savings achieved by entrusted parties, participating parties and implementing public authorities be provided and made publicly available, as well as data on the annual trend of energy savings;

(f) monitoring of the results and taking appropriate measures if progress is not satisfactory;

(g) the energy savings from an individual action are not claimed by more than one party;

(h) the activities of the participating party, entrusted party or implementing public authority are shown to be material to the achievement of the energy savings claimed.

4. In determining the energy saving from taxation related policy measures introduced under Article 7b, the following principles shall apply:

(a) credit shall be given only for energy savings from taxation measures exceeding the minimum levels of taxation applicable to fuels as required in Council Directive 2003/96/EC (***) or 2006/112/EC (****);

(b) price elasticities for the calculation of the impact of the (energy) taxation measures shall represent the responsiveness of energy demand to price changes, and shall be estimated on the basis of recent and representative official data sources;

(c) the energy savings from accompanying taxation policy instruments, including fiscal incentives or payment to a fund, shall be accounted separately.

5. Notification of methodology

Contracting Parties shall in accordance with Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC and Ministerial Council Decision 2022/02/MC-EnC notify to the Secretariat their proposed detailed methodology for the operation of the energy efficiency obligation schemes and alternative measures referred to in Articles 7a and 7b, and Article 20(6). Except in the case of taxation, such notification shall include details of:

(a) the level of the energy savings required under point (b) of the first subparagraph of Article 7(1) or savings expected to be achieved over the whole period from 1 January 2021 to 31 December 2030;

(b) the obligated, participating or entrusted parties, or implementing public authorities;

(c) target sectors;

(d) policy measures and individual actions, including the expected total amount of cumulative energy savings for each measure;

(e) the duration of the obligation period for the energy efficiency obligation scheme;

(f) the actions provided for by the policy measure;

(g) the calculation methodology, including how additionality and materiality have been determined and which methodologies and benchmarks are used for deemed and scaled savings;

(h) the lifetimes of measures, and how they are calculated or what they are based upon;

(i) the approach taken to address climatic variations within the Member State;

(j) the monitoring and verification systems for measures under Articles 7a and 7b and how their independence from the obligated, participating or entrusted parties is ensured;

(k) in the case of taxation:

(i) the target sectors and segment of taxpayers;

(ii) the implementing public authority;

(iii) the savings expected to be achieved;

(iv) the duration of the taxation measure; and

(v) the calculation methodology, including the price elasticities used and how they have been established.

(*) Regulation (EC) No 443/2009 of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO2 emissions from light-duty vehicles

(**) Regulation (EU) No 510/2011 of 11 May 2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO2 emissions from light-duty vehicles

(***) Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity

(****) Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax

ANNEX VI

Minimum criteria for energy audits including those carried out as part of energy management systems

The energy audits referred to in Article 8 shall be based on the following guidelines:

(a) be based on up-to-date, measured, traceable operational data on energy consumption and (for electricity) load profiles;

(b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;

(c) build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP) in order to take account of long-term savings, residual values of long-term investments and discount rates;

(d) be proportionate, and sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities for improvement.

Energy audits shall allow detailed and validated calculations for the proposed measures so as to provide clear information on potential savings.

The data used in energy audits shall be storable for historical analysis and tracking performance.

ANNEX VII

Minimum requirements for billing and billing information based on actual consumption of electricity and gas

1. Minimum requirements for billing

1.1. Billing based on actual consumption

In order to enable final customers to regulate their own energy consumption, billing should take place on the basis of actual consumption at least once a year, and billing information should be made available at least quarterly, on request or where the consumers have opted to receive electronic billing or else twice yearly. Gas used only for cooking purposes may be exempted from this requirement.

1.2. Minimum information contained in the bill

Contracting Parties shall ensure that, where appropriate, the following information is made available to final customers in clear and understandable terms in or with their bills, contracts, transactions, and receipts at distribution stations:

(a) current actual prices and actual consumption of energy;

(b) comparisons of the final customer's current energy consumption with consumption for the same period in the previous year, preferably in graphic form;

(c) contact information for final customers' organisations, energy agencies or similar bodies, including website addresses, from which information may be obtained on available energy efficiency improvement measures, comparative end-user profiles and objective technical specifications for energy-using equipment.

In addition, wherever possible and useful, **Contracting Parties** shall ensure that comparisons with an average normalised or benchmarked final customer in the same user category are made available to final customers in clear and understandable terms, in, with or signposted to within, their bills, contracts, transactions, and receipts at distribution stations.

1.3. Advice on energy efficiency accompanying bills and other feedback to final customers

When sending contracts and contract changes, and in the bills customers receive or through websites addressing individual customers, energy distributors, distribution system operators and retail energy sales companies shall inform their customers in a clear and understandable manner of contact information for independent consumer advice centres, energy agencies or similar institutions, including their internet addresses, where they can obtain advice on available energy efficiency measures, benchmark profiles for their energy consumption and technical specifications of energy using appliances that can serve to reduce the consumption of these appliances.

ANNEX VIIa

Minimum requirements for billing and consumption information for heating, cooling and domestic hot water

1. **Billing based on actual consumption or heat cost allocator readings**

In order to enable final users to regulate their own energy consumption, billing shall take place on the basis of actual consumption or heat cost allocator readings at least once per year.

2. **Minimum frequency of billing or consumption information**

From 30 October 2023 where remotely readable meters or heat cost allocators have been installed, billing or consumption information based on actual consumption or heat cost allocator readings shall be provided to final users at least quarterly upon request or where final customers have opted to receive electronic billing, or else twice a year.

From 1 January 2025, where remotely readable meters or heat cost allocators have been installed, billing or consumption information based on actual consumption or heat cost allocator readings shall be provided to final users at least monthly. It may also be made available via the internet and be updated as frequently as allowed by the measurement devices and systems used. Heating and cooling may be exempted from that requirement outside the heating/cooling seasons.

3. **Minimum information contained in the bill**

Contracting Parties shall ensure that the following information is made available to final users in clear and comprehensible terms in or with their bills where those are based on actual consumption or heat cost allocator readings:

(a) **current actual prices and actual consumption of energy or total heat cost and heat cost allocator readings;**

(b) **information about the fuel mix used and the related annual greenhouse gas emissions, including for final users supplied by district heating or district cooling, and a description of the different taxes, levies and tariffs applied. Contracting Parties may limit the scope of the requirement to provide information about greenhouse gas emissions to include only supplies from district heating systems with a total rated thermal input exceeding 20 MW;**

(c) **comparisons of the final users current energy consumption with consumption for the same period in the previous year, in graphic form, climate corrected for heating and cooling;**

(d) **contact information for final customers' organisations, energy agencies or similar bodies, including website addresses, from which information on available energy efficiency improvement measures, comparative end-user profiles and objective technical specifications for energy-using equipment may be obtained;**

(e) **information about related complaints procedures, ombudsman services or alternative dispute resolution mechanisms, as applicable in the Contracting Parties;**

(f) **comparisons with an average normalised or benchmarked final user in the same user category. In the case of electronic bills, such comparisons may instead be made available online and signposted to within the bills.**

Bills that are not based on actual consumption or heat cost allocator readings shall contain a clear and

comprehensible explanation of how the amount set out in the bill was calculated, and at least the information referred to in points (d) and (e).

ANNEX VIII
Potential for efficiency in heating and cooling

1. The comprehensive assessment of national heating and cooling potentials referred to in Article 14(1) shall include:

(a) a description of heating and cooling demand;

(b) a forecast of how this demand will change in the next 10 years, taking into account in particular the evolution of demand in buildings and the different sectors of industry;

(c)) a map of the national territory, identifying, while preserving commercially sensitive information:

(i) heating and cooling demand points, including:

— municipalities and conurbations with a plot ratio of at least 0,3, and

— industrial zones with a total annual heating and cooling consumption of more than 20 GWh;

(ii) existing and planned district heating and cooling infrastructure;

(iii) potential heating and cooling supply points, including:

— electricity generation installations with a total annual electricity production of more than 20 GWh, and

— waste incineration plants,

— existing and planned cogeneration installations using technologies referred to in Part II of Annex I, and district heating installations;

(d) identification of the heating and cooling demand that could be satisfied by high-efficiency cogeneration, including residential micro-cogeneration, and by district heating and cooling;

(e) identification of the potential for additional high-efficiency cogeneration, including from the refurbishment of existing and the construction of new generation and industrial installations or other facilities generating waste heat;

(f) identification of energy efficiency potentials of district heating and cooling infrastructure;

(g) strategies, policies and measures that may be adopted up to 2020 and up to 2030 to realise the potential in point (e) in order to meet the demand in point (d), including, where appropriate, proposals to:

(i) increase the share of cogeneration in heating and cooling production and in electricity production;

(ii) develop efficient district heating and cooling infrastructure to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources;

(iii) encourage new thermal electricity generation installations and industrial plants producing waste heat to be located in sites where a maximum amount of the available waste heat will be recovered to meet existing or forecasted heat and cooling demand;

(iv) encourage new residential zones or new industrial plants which consume heat in their production processes to be located where available waste heat, as identified in the comprehensive assessment, can contribute to meeting their heat and cooling demands. This could include proposals that support the clustering of a number of individual installations in the same location with a view to ensuring an

optimal matching between demand and supply for heat and cooling;

(v) encourage thermal electricity generating installations, industrial plants producing waste heat, waste incineration plants and other waste-to-energy plants to be connected to the local district heating or cooling network;

(vi) encourage residential zones and industrial plants which consume heat in their production processes to be connected to the local district heating or cooling network;

(h) the share of high-efficiency cogeneration and the potential established and progress achieved under Directive 2004/8/EC;

(i) an estimate of the primary energy to be saved;

(j) an estimate of public support measures to heating and cooling, if any, with the annual budget and identification of the potential aid element. This does not prejudge a separate notification of the public support schemes for a State aid assessment.

2. To the extent appropriate, the comprehensive assessment may be made up of an assembly of regional or local plans and strategies.

ANNEX IX
COST-BENEFIT ANALYSIS

PART I
General principles of the cost-benefit analysis

The purpose of preparing cost-benefit analyses in relation to measures for promoting efficiency in heating and cooling as referred to in Article 14(3) is to provide a decision base for qualified prioritisation of limited resources at society level.

The cost-benefit analysis may either cover a project assessment or a group of projects for a broader local, regional or national assessment in order to establish the most cost-effective and beneficial heating or cooling option for a given geographical area for the purpose of heat planning.

Cost-benefit analyses for the purposes of Article 14(3) shall include an economic analysis covering socio-economic and environmental factors.

The cost-benefit analyses shall include the following steps and considerations:

(a) Establishing a system boundary and geographical boundary

The scope of the cost-benefit analyses in question determines the relevant energy system. The geographical boundary shall cover a suitable well-defined geographical area, e.g. a given region or metropolitan area, to avoid selecting sub-optimised solutions on a project by project basis.

(b) Integrated approach to demand and supply options

The cost-benefit analysis shall take into account all relevant supply resources available within the system and geographical boundary, using the data available, including waste heat from electricity generation and industrial installations and renewable energy, and the characteristics of, and trends in heat and cooling demand.

(c) Constructing a baseline

The purpose of the baseline is to serve as a reference point, to which the alternative scenarios are evaluated.

(d) Identifying alternative scenarios

All relevant alternatives to the baseline shall be considered. Scenarios that are not feasible due to technical reasons, financial reasons, national regulation or time constraints may be excluded at an early stage of the cost-benefit analysis if justified based on careful, explicit and well-documented considerations.

Only high-efficiency cogeneration, efficient district heating and cooling or efficient individual heating and cooling supply options should be taken into account in the cost-benefit analysis as alternative scenarios compared to the baseline.

(e) Method for the calculation of cost-benefit surplus

(i) The total long-term costs and benefits of heat or cooling supply options shall be assessed and compared.

(ii) The criterion for evaluation shall be the net present value (NPV) criterion.

(iii) The time horizon shall be chosen such that all relevant costs and benefits of the scenarios are included. For example, for a gas-fired power plant an appropriate time horizon could be 25 years, for a district heating system, 30 years, or for heating equipment such as boilers 20 years.

(f) Calculation and forecast of prices and other assumptions for the economic analysis

(i) **Contracting Parties** shall provide assumptions, for the purpose of the cost-benefit analyses, on the prices of major input and output factors and the discount rate.

(ii) The discount rate used in the economic analysis for the calculation of net present value shall be chosen according to European or national guidelines [1].

(iii) **Contracting Parties** shall use national, European or international energy price development forecasts if appropriate in their national and/or regional/local context.

(iv) The prices used in the economic analysis shall reflect the true socio economic costs and benefits and should include external costs, such as environmental and health effects, to the extent possible, i.e. when a market price exists or when it is already included in European or national regulation.

(g) Economic analysis: Inventory of effects

The economic analyses shall take into account all relevant economic effects.

Contracting Parties may assess and take into account in decision making costs and energy savings from the increased flexibility in energy supply and from a more optimal operation of the electricity networks, including avoided costs and savings from reduced infrastructure investment, in the analysed scenarios.

The costs and benefits taken into account shall include at least the following:

(i) Benefits

— Value of output to the consumer (heat and electricity)

— External benefits such as environmental, greenhouse gas emissions and health and safety benefits, to the extent possible

— Labor market effects, energy security and competitiveness, to the extend possible

(ii) Costs

— Capital costs of plants and equipment

— Capital costs of the associated energy networks

— Variable and fixed operating costs

— Energy costs

— Environmental, and health and safety costs, to the extent possible. Labor market costs, energy security and competitiveness, to the extend possible.

(h) Sensitivity analysis:

A sensitivity analysis shall be included to assess the costs and benefits of a project or group of projects based on different energy prices, discount rates and other variable factors having a significant impact on the outcome of the calculations.

The **Contracting Parties** shall designate the competent authorities responsible for carrying out the cost-benefit analyses under Article 14. **Contracting Parties** may require competent local, regional and national authorities or operators of individual installations to carry out the economic and financial analysis. They shall provide the detailed methodologies and assumptions in accordance with this Annex and establish and make public the procedures for the economic analysis.

[1] The national discount rate chosen for the purpose of economic analysis should take into account data provided by the European Central Bank.

PART II

Principles for the purpose of Article 14(5) and (7)

The cost-benefit analyses shall provide information for the purpose of the measures in Article 14(5) and (7):

If an electricity-only installation or an installation without heat recovery is planned, a comparison shall be made between the planned installations or the planned refurbishment and an equivalent installation producing the same amount of electricity or process heat, but recovering the waste heat and supplying heat through high-efficiency cogeneration and/or district heating and cooling networks.

Within a given geographical boundary the assessment shall take into account the planned installation and any appropriate existing or potential heat demand points that could be supplied from it, taking into account rational possibilities (for example, technical feasibility and distance).

The system boundary shall be set to include the planned installation and the heat loads, such as building(s) and industrial process. Within this system boundary the total cost of providing heat and power shall be determined for both cases and compared.

Heat loads shall include existing heat loads, such as an industrial installation or an existing district heating system, and also, in urban areas, the heat load and costs that would exist if a group of buildings or part of a city were provided with and/or connected into a new district heating network.

The cost-benefit analysis shall be based on a description of the planned installation and the comparison installation(s), covering electrical and thermal capacity, as applicable, fuel type, planned usage and the number of planned operating hours annually, location and electricity and thermal demand.

For the purpose of the comparison, the thermal energy demand and the types of heating and cooling used by the nearby heat demand points shall be taken into account. The comparison shall cover infrastructure related costs for the planned and comparison installation.

Cost-benefit analyses for the purposes of Article 14(5) shall include an economic analysis covering a financial analysis reflecting actual cash flow transactions from investing in and operating individual installations.

Projects with positive cost-benefit outcome are those where the sum of discounted benefits in the economic and financial analysis exceeds the sum of discounted costs (cost-benefit surplus).

Contracting Parties shall set guiding principles for the methodology, assumptions and time horizon for the economic analysis.

Contracting Parties may require that the companies responsible for the operation of thermal electric generation installations, industrial companies, district heating and cooling networks, or other parties influenced by the defined system boundary and geographical boundary, contribute data for use in assessing the costs and benefits of an individual installation.

ANNEX X

Guarantee of origin for electricity produced from high-efficiency cogeneration

(a) **Contracting Parties** shall take measures to ensure that:

(i) the guarantee of origin of the electricity produced from high-efficiency cogeneration:

— enable producers to demonstrate that the electricity they sell is produced from high-efficiency cogeneration and is issued to this effect in response to a request from the producer,

— is accurate, reliable and fraud-resistant,

— is issued, transferred and cancelled electronically;

(ii) the same unit of energy from high-efficiency cogeneration is taken into account only once.

(b) The guarantee of origin referred to in Article 14(10) shall contain at least the following information:

(i) the identity, location, type and capacity (thermal and electrical) of the installation where the energy was produced;

(ii) the dates and places of production;

(iii) the lower calorific value of the fuel source from which the electricity was produced;

(iv) the quantity and the use of the heat generated together with the electricity;

(v) the quantity of electricity from high-efficiency cogeneration in accordance with Annex II that the guarantee represents;

(vi) the primary energy savings calculated in accordance with Annex II based on the harmonised efficiency reference values indicated in point (f) of Annex II;

(vii) the nominal electric and thermal efficiency of the plant;

(viii) whether and to what extent the installation has benefited from investment support;

(ix) whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;

(x) the date on which the installation became operational; and

(xi) the date and country of issue and a unique identification number. The guarantee of origin shall be of the standard size of 1 MWh. It shall relate to the net electricity output measured at the station boundary and exported to the grid.

ANNEX XI

Energy efficiency criteria for energy network regulation and for electricity network tariffs

1. Network tariffs shall be cost-reflective of cost-savings in networks achieved from demand-side and demand- response measures and distributed generation, including savings from lowering the cost of delivery or of network investment and a more optimal operation of the network.

2. Network regulation and tariffs shall not prevent network operators or energy retailers making available system services for demand response measures, demand management and distributed generation on organised electricity markets, in particular:

(a) the shifting of the load from peak to off-peak times by final customers taking into account the availability of renewable energy, energy from cogeneration and distributed generation;

(b) energy savings from demand response of distributed consumers by energy aggregators;

(c) demand reduction from energy efficiency measures undertaken by energy service providers, including energy service companies;

(d) the connection and dispatch of generation sources at lower voltage levels;

(e) the connection of generation sources from closer location to the consumption; and

(f) the storage of energy. For the purposes of this provision the term 'organised electricity markets' shall include over-the-counter markets and electricity exchanges for trading energy, capacity, balancing and ancillary services in all timeframes, including forward, day-ahead and intra-day markets.

3. Network or retail tariffs may support dynamic pricing for demand response measures by final customers, such as:

(a) time-of-use tariffs;

(b) critical peak pricing;

(c) real time pricing; and

(d) peak time rebates.

ANNEX XII

ENERGY EFFICIENCY REQUIREMENTS FOR TRANSMISSION SYSTEM OPERATORS AND DISTRIBUTION SYSTEM OPERATORS

Transmission system operators and distribution system operators shall:

(a) **set up and make public their standard rules relating to the bearing and sharing of costs of technical adaptations, such as grid connections, grid reinforcements and the introduction of new grids, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes, which are necessary in order to integrate new producers feeding electricity produced from high-efficiency cogeneration into the interconnected grid;**

(b) provide any new producer of electricity produced from high-efficiency cogeneration wishing to be connected to the system with the comprehensive and necessary information required, including:

(i) a comprehensive and detailed estimate of the costs associated with the connection;

(ii) a reasonable and precise timetable for receiving and processing the request for grid connection;

(iii) a reasonable indicative timetable for any proposed grid connection. The overall process to become connected to the grid should be no longer than 24 months, bearing in mind what is reasonably practicable and non-discriminatory;

(c) provide standardised and simplified procedures for the connection of distributed high-efficiency cogeneration producers to facilitate their connection to the grid.

The standard rules referred to in point (a) shall be based on objective, transparent and non-discriminatory criteria taking particular account of all the costs and benefits associated with the connection of those producers to the grid. They may provide for different types of connection.

ANNEX XIII

Minimum items to be included in energy performance contracts with the public sector or in the associated tender specifications

— Clear and transparent list of the efficiency measures to be implemented or the efficiency results to be obtained.

— Guaranteed savings to be achieved by implementing the measures of the contract.

— Duration and milestones of the contract, terms and period of notice.

— Clear and transparent list of the obligations of each **Contracting Party**.

— Reference date(s) to establish achieved savings.

— Clear and transparent list of steps to be performed to implement a measure or package of measures and, where relevant, associated costs.

— Obligation to fully implement the measures in the contract and documentation of all changes made during the project.

— Regulations specifying the inclusion of equivalent requirements in any subcontracting with third parties.

— Clear and transparent display of financial implications of the project and distribution of the share of both parties in the monetary savings achieved (i.e. remuneration of the service provider).

— Clear and transparent provisions on measurement and verification of the guaranteed savings achieved, quality checks and guarantees.

— Provisions clarifying the procedure to deal with changing framework conditions that affect the content and the outcome of the contract (i.e. changing energy prices, use intensity of an installation).

— Detailed information on the obligations of each of the **Contracting Party** and of the penalties for their breach.

ANNEX XIV

National energy efficiency contributions in 2020 and 2030

	Primary Energy Consumption, 2020	Final Energy Consumption, 2020	Primary Energy Consumption, 2030	Final Energy Consumption, 2030
Albania	2,15 Mtoe	1,86 Mtoe	2,60 Mtoe	2,40 Mtoe
Bosnia and Herzegovina	7,00 Mtoe	4,34 Mtoe	6,50 Mtoe	4,34 Mtoe
Georgia	4,70 Mtoe	4,25 Mtoe	5,45 Mtoe	5,00 Mtoe
Kosovo*	2,61 Mtoe	1,53 Mtoe	2,70 Mtoe	1,80 Mtoe
Moldova	2,69 Mtoe	2,55 Mtoe	3,00 Mtoe	2,80 Mtoe
Montenegro	0,99 Mtoe	0,70 Mtoe	0,92 Mtoe	0,73 Mtoe
North Macedonia	2,54 Mtoe	1,83 Mtoe	2,30 Mtoe	2,00 Mtoe
Serbia	15,18 Mtoe	9,08 Mtoe	14,94 Mtoe	9,54 Mtoe
Ukraine	82,80 Mtoe	46,78 Mtoe	91,47 Mtoe	50,45 Mtoe
Energy Community	120,69 Mtoe	72,93 Mtoe	129,88 Mtoe	79,06 Mtoe

ANNEX XV
Correlation table

Directive 2004/8/EC	This Directive

<...>[2]

Directive 2006/32/EC	This Directive
Article 1	Article 1(1)
Article 2	Article 1(1)
Article 3, point (a)	Article 2, point (1)
Article 3, point (b)	Article 2, point (4)
Article 3, point (c)	Article 2, point (6)
Article 3, point (d)	Article 2, point (5)
—	Article 2, points (2) and (3)
Article 3, point (e)	Article 2, point (7)
Article 3, points (f), (g), (h) and (i)	—
—	Article 2, points (8) to (19)
Article 3, point (j)	Article 2, point (27)
—	Article 2, point (28)
Article 3, point (k)	—
Article 3, point (l)	Article 2, point (25)
—	Article 2, point (26)
Article 3, point (m)	—
Article 3, point (n)	Article 2, point (23)
Article 3, point (o)	Article 2, point (20)
Article 3, point (p)	Article 2, point (21)
Article 3, point (q)	Article 2, point (22)
Article 3, points (r) and (s)	—
—	Article 2, points (24), (29), (44) and (45)
—	Article 3
—	Article 4
Article 4	—
Article 5	Articles 5 and 6
Article 6(1)(a)	Article 7(8), points (a) and (b)
Article 6(1)(b)	Article 18(3)
Article 6(2)	Article 7(1), (5), (6), (7), (9), (10), (11) and (12)
—	Article 7(2) and (3)

2 In Annex XV, the correlation table rows relating to Directive 2004/8/EC shall not be applicable

Article 6(3)	Article 18(2), points (b) and (c)
Article 6(5)	—
Article 7	Article 17
Article 8	Article 16(1)
—	Article 16(2) and (3)
Article 9(1)	Article 19
Article 9(2)	Article 18(1), point (d), subpoint (i)
—	Article 18(1), points (a), (b), (c), (d), subpoint (ii), and (e)
Article 10(1)	Article 15(4)
Article 10(2)	Article 15(3)
—	Article 15(7), (8) and (9)
Article 11	Article 20
Article 12(1)	Article 8(1)
Article 12(2)	—
—	Article 8(2), (3), (4), (5), (6) and (7)
Article 12(3)	—
Article 13(1)	Article 9
Article 13(2)	Article 10 and Annex VII, point 1.1
Article 13(3)	Annex VII, points 1.2 and 1.3
—	Article 11
—	Article 12
—	Article 13
—	Article 15(1) and (2)
—	Article 18(2), points (a) and (d)
—	Article 21
Article 14(1) and (2)	Article 24(1) and (2)
Article 14(3)	—
Article 14(4) and (5)	Article 24(3)
—	Article 24(4) and (7) to (11)
—	Article 22(1)
Article 15(1)	Article 22(2)
Article 15(2), (3) and (4)	—
—	Article 23
—	Article 25
Article 16	Article 26
Article 17	Article 27
Article 18	Article 28

Article 19	Article 29
Article 20	Article 30
Annex I	—
Annex II	Annex IV
Annex III	—
Annex IV	—
Annex V	—
Annex VI	Annex III
—	Annex V
—	Annex VI
—	Annex VII
—	Annex XI
—	Annex XII
—	Annex XIII
—	Annex XIV
—	Annex XV

DIRECTIVE 2010/31/EU of 19 May 2010 on the energy performance of buildings

Incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency, and amended by the Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021.

The adaptations made by Ministerial Council Decisions 2021/14/MC-EnC and 2010/02/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter

1. This Directive promotes the improvement of the energy performance of buildings within the **Energy Community**, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness.

2. This Directive lays down requirements as regards:

(a) the common general framework for a methodology for calculating the integrated energy performance of buildings and building units;

(b) the application of minimum requirements to the energy performance of new buildings and new building units;

(c) the application of minimum requirements to the energy performance of:

(i) existing buildings, building units and building elements that are subject to major renovation;

(ii) building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are retrofitted or replaced; and

(iii) technical building systems whenever they are installed, replaced or upgraded;

(d) national plans for increasing the number of nearly zero-energy buildings;

(e) energy certification of buildings or building units;

(f) regular inspection of heating and air-conditioning systems in buildings; and

(g) independent control systems for energy performance certificates and inspection reports.

3. The requirements laid down in this Directive are minimum requirements and shall not prevent any **Contracting Party** from maintaining or introducing more stringent measures. Such measures shall be compatible with the Treaty on the Functioning of the European Union. They shall be notified to the **Secretariat**.

Article 2

Definitions

For the purpose of this Directive, the following definitions shall apply:

1. "building" means a roofed construction having walls, for which energy is used to condition the indoor

climate;

2. "nearly zero-energy building" means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby;

3. "technical building system" means technical equipment for the heating, cooling, ventilation, hot water, lighting or for a combination thereof, of a building or building unit;

4. "energy performance of a building" means the calculated or measured amount of energy needed to meet the energy demand associated with a typical use of the building, which includes, *inter alia*, energy used for heating, cooling, ventilation, hot water and lighting;

5. "primary energy" means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process;

6. "energy from renewable sources" means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases;

7. "building envelope" means the integrated elements of a building which separate its interior from the outdoor environment;

8. "building unit" means a section, floor or apartment within a building which is designed or altered to be used separately;

9. "building element" means a technical building system or an element of the building envelope;

10. "major renovation" means the renovation of a building where:

(a) the total cost of the renovation relating to the building envelope or the technical building systems is higher than 25% of the value of the building, excluding the value of the land upon which the building is situated; or

(b) more than 25% of the surface of the building envelope undergoes renovation; **Contracting Parties** may choose to apply option (a) or (b).

11. "European standard" means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications Standards Institute and made available for public use;

12. "energy performance certificate" means a certificate recognised by a **Contracting Party** or by a legal person designated by it, which indicates the energy performance of a building or building unit, calculated according to a methodology adopted in accordance with Article 3;

13. "cogeneration" means simultaneous generation in one process of thermal energy and electrical and/or mechanical energy;

14. "cost-optimal level" means the energy performance level which leads to the lowest cost during the estimated economic lifecycle, where:

(a) the lowest cost is determined taking into account energy-related investment costs, maintenance and operating costs (including energy costs and savings, the category of building concerned, earnings from energy produced), where applicable, and disposal costs, where applicable; and

(b) the estimated economic lifecycle is determined by each **Contracting Party**. It refers to the remaining

estimated economic lifecycle of a building where energy performance requirements are set for the building as a whole, or to the estimated economic lifecycle of a building element where energy performance requirements are set for building elements.

The cost-optimal level shall lie within the range of performance levels where the cost benefit analysis calculated over the estimated economic lifecycle is positive;

15. "air-conditioning system" means a combination of the components required to provide a form of indoor air treatment, by which temperature is controlled or can be lowered;

16. "boiler" means the combined boiler body-burner unit, designed to transmit to fluids the heat released from burning;

17. "effective rated output" means the maximum calorific output, expressed in kW, specified and guaranteed by the manufacturer as being deliverable during continuous operation while complying with the useful efficiency indicated by the manufacturer;

18. "heat pump" means a machine, a device or installation that transfers heat from natural surroundings such as air, water or ground to buildings or industrial applications by reversing the natural flow of heat such that it flows from a lower to a higher temperature. For reversible heat pumps, it may also move heat from the building to the natural surroundings;

19. "district heating" or "district cooling" means the distribution of thermal energy in the form of steam, hot water or chilled liquids, from a central source of production through a network to multiple buildings or sites, for the use of space or process heating or cooling.

Article 2a[1]

Long-term renovation strategy

1. Each Contracting Party shall establish a long-term renovation strategy to support the renovation of the national stock of residential and non-residential buildings, both public and private, into a highly energy efficient and decarbonised building stock by 2050, facilitating the cost-effective transformation of existing buildings into nearly zero-energy buildings. Each long-term renovation strategy shall encompass:

(a) an overview of the national building stock, based, as appropriate, on statistical sampling and expected share of renovated buildings in 2020;

(b) the identification of cost-effective approaches to renovation relevant to the building type and climatic zone, considering potential relevant trigger points, where applicable, in the life-cycle of the building;

(c) policies and actions to stimulate cost-effective deep renovation of buildings, including staged deep renovation, and to support targeted cost-effective measures and renovation for example by introducing an optional scheme for building renovation passports;

(d) an overview of policies and actions to target the worst performing segments of the national building stock, split-incentive dilemmas and market failures, and an outline of relevant

1 The text displayed here corresponds to Article 53(1) of Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

national actions that contribute to the alleviation of energy poverty;

(e) policies and actions to target all public buildings;

(f) an overview of national initiatives to promote smart technologies and well-connected buildings and communities, as well as skills and education in the construction and energy efficiency sectors; and

(g) an evidence-based estimate of expected energy savings and wider benefits, such as those related to health, safety and air quality.

2. In its long-term renovation strategy, each Contracting Party shall set out a roadmap with measures and domestically established measurable progress indicators, with a view to the long-term 2050 goal of reducing greenhouse gas emissions in the Energy Community by 80-95 % compared to 1990, in order to ensure a highly energy efficient and decarbonised national building stock and in order to facilitate the cost-effective transformation of existing buildings into nearly zero-energy buildings. The roadmap shall include indicative milestones for 2030, 2040 and 2050, and specify how they contribute to achieving the Energy Community's energy efficiency targets in accordance with Directive 2012/27/EU, as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC, 2021/14/MC-EnC and 2022/02/MC-EnC.

3. To support the mobilisation of investments into the renovation needed to achieve the goals referred to in paragraph 1, Contracting Parties shall facilitate access to appropriate mechanisms for:

(a) the aggregation of projects, including by investment platforms or groups, and by consortia of small and medium-sized enterprises, to enable investor access as well as packaged solutions for potential clients;

(b) the reduction of the perceived risk of energy efficiency operations for investors and the private sector;

(c) the use of public funding to leverage additional private-sector investment or address specific market failures;

(d) guiding investments into an energy efficient public building stock, in line with Eurostat guidance; and

(e) accessible and transparent advisory tools, such as one-stop-shops for consumers and energy advisory services, on relevant energy efficiency renovations and financing instruments.

4. The Energy Community Secretariat shall collect and disseminate, at least to public authorities, best practices on successful public and private financing schemes for energy efficiency renovation as well as information on schemes for the aggregation of small-scale energy efficiency renovation projects. The Energy Community Secretariat shall identify and disseminate best practices on financial incentives to renovate from a consumer perspective taking into account cost-efficiency differences between Contracting Parties.

5. To support the development of its long-term renovation strategy, each Contracting Party shall carry out a public consultation on its long-term renovation strategy prior to submitting it to the Energy Community Secretariat. Each Contracting Party shall annex a summary of the results of its public consultation to its long-term renovation strategy.

Each Contracting Party shall establish the modalities for consultation in an inclusive way

during the implementation of its long-term renovation strategy.

6. Each Contracting Party shall annex the details of the implementation of its most recent long-term renovation strategy to its long-term renovation strategy, including on the planned policies and actions.

7. Each Contracting Party may use its long-term renovation strategy to address fire safety and risks related to intense seismic activity affecting energy efficiency renovations and the lifetime of buildings.

8. Each Contracting Party's long-term renovation strategy shall be submitted to the Energy Community Secretariat as part of its final integrated national energy and climate plan referred to in Article 3 of Regulation (EU) 2018/1999, as incorporated in the Energy Community. As a derogation from Article 3(1) of that Regulation, the first long-term renovation strategy under paragraph 1 of this Article shall be submitted to the Secretariat by 10 March 2023.

Article 3

Adoption of a methodology for calculating the energy performance of buildings

Contracting Parties shall apply a methodology for calculating the energy performance of buildings in accordance with the common general framework set out in Annex I.

This methodology shall be adopted at national or regional level.

Article 4

Setting of minimum energy performance requirements

1. **Contracting Parties** shall take the necessary measures to ensure that minimum energy performance requirements for buildings or building units are set with a view to achieving cost-optimal levels. The energy performance shall be calculated in accordance with the methodology referred to in Article 3. Cost-optimal levels shall be calculated in accordance with the comparative methodology framework referred to in Article 5 once the framework is in place.

Contracting Parties shall take the necessary measures to ensure that minimum energy performance requirements are set for building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are replaced or retrofitted, with a view to achieving cost-optimal levels.

When setting requirements, **Contracting Parties** may differentiate between new and existing buildings and between different categories of buildings.

These requirements shall take account of general indoor climate conditions, in order to avoid possible negative effects such as inadequate ventilation, as well as local conditions and the designated function and the age of the building.

A **Contracting Party** shall not be required to set minimum energy performance requirements which are not cost-effective over the estimated economic lifecycle.

Minimum energy performance requirements shall be reviewed at regular intervals which shall not be longer than five years and, if necessary, shall be updated in order to reflect technical progress in the building sector.

2. **Contracting Parties** may decide not to set or apply the requirements referred to in paragraph 1 to the following categories of buildings:

(a) buildings officially protected as part of a designated environment or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;

(b) buildings used as places of worship and for religious activities;

(c) temporary buildings with a time of use of two years or less, industrial sites, workshops and non-residential agricultural buildings with low energy demand and non-residential agricultural buildings which are in use by a sector covered by a national sectoral agreement on energy performance;

(d) residential buildings which are used or intended to be used for either less than four months of the year or, alternatively, for a limited annual time of use and with an expected energy consumption of less than 25% of what would be the result of all-year use;

(e) stand-alone buildings with a total useful floor area of less than 50 m^2.

Article 5

Calculation of cost-optimal levels of minimum energy performance requirements

1. The Commission shall establish by means of delegated acts in accordance with Articles 23, 24 and 25 by 30 June 2011 a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements for buildings and building elements.

The comparative methodology framework shall be established in accordance with Annex III and shall differentiate between new and existing buildings and between different categories of buildings.

2. **Contracting Parties** shall calculate cost-optimal levels of minimum energy performance requirements using the comparative methodology framework established in accordance with paragraph 1 and relevant parameters, such as climatic conditions and the practical accessibility of energy infrastructure, and compare the results of this calculation with the minimum energy performance requirements in force.

Contracting Parties shall report to the **Secretariat** all input data and assumptions used for those calculations and the results of those calculations **<...>**[2]. **Contracting Parties** shall submit those reports to the **Secretariat** at regular intervals, which shall not be longer than five years. The first report shall be submitted by **30 June 2013**.

3. If the result of the comparison performed in accordance with paragraph 2 shows that the minimum energy performance requirements in force are significantly less energy efficient than cost-optimal levels of minimum energy performance requirements, the **Contracting Party** concerned shall justify this difference in writing to the **Secretariat** in the report referred to in paragraph 2, accompanied, to the extent that the gap cannot be justified, by a plan outlining appropriate steps to significantly reduce the gap by the next review of the energy performance requirements as referred to in Article 4(1).

2 Not applicable according to Article 53(2) of Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

4. The **Secretariat** shall publish a report on the progress of the **Contracting Parties** in reaching cost-optimal levels of minimum energy performance requirements.

Article 6

New buildings

1. **Contracting Parties** shall take the necessary measures to ensure that new buildings meet the minimum energy performance requirements set in accordance with Article 4.

For new buildings, **Contracting Parties** shall ensure that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems such as those listed below, if available, is considered and taken into account:

(a) decentralised energy supply systems based on energy from renewable sources;

(b) cogeneration;

(c) district or block heating or cooling, particularly where it is based entirely or partially on energy from renewable sources;

(d) heat pumps.

2. **Contracting Parties** shall ensure that the analysis of alternative systems referred to in paragraph 1 is documented and available for verification purposes.

3. That analysis of alternative systems may be carried out for individual buildings or for groups of similar buildings or for common typologies of buildings in the same area. As far as collective heating and cooling systems are concerned, the analysis may be carried out for all buildings connected to the system in the same area.

Article 7

Existing buildings

Contracting Parties shall take the necessary measures to ensure that when buildings undergo major renovation, the energy performance of the building or the renovated part thereof is upgraded in order to meet minimum energy performance requirements set in accordance with Article 4 in so far as this is technically, functionally and economically feasible.

Those requirements shall be applied to the renovated building or building unit as a whole. Additionally or alternatively, requirements may be applied to the renovated building elements.

Contracting Parties shall in addition take the necessary measures to ensure that when a building element that forms part of the building envelope and has a significant impact on the energy performance of the building envelope, is retrofitted or replaced, the energy performance of the building element meets minimum energy performance requirements in so far as this is technically, functionally and economically feasible.

Contracting Parties shall determine these minimum energy performance requirements in accordance with Article 4.

Contracting Parties shall encourage, in relation to buildings undergoing major renovation, the consideration and taking into account of high-efficiency alternative systems, as referred to in Article 6(1), in so far as this is technically, functionally and economically feasible.

Article 8

Technical building systems

1. **Contracting Parties** shall, for the purpose of optimising the energy use of technical building systems, set system requirements in respect of the overall energy performance, the proper installation, and the appropriate dimensioning, adjustment and control of the technical building systems which are installed in existing buildings. **Contracting Parties** may also apply these system requirements to new buildings.

System requirements shall be set for new, replacement and upgrading of technical building systems and shall be applied in so far as they are technically, economically and functionally feasible.

The system requirements shall cover at least the following:

(a) heating systems;

(b) hot water systems;

(c) air-conditioning systems;

(d) large ventilation systems;

or a combination of such systems.

2. **Contracting Parties** shall encourage the introduction of intelligent metering systems whenever a building is constructed or undergoes major renovation, whilst ensuring that this encouragement is in line with point 2 of Annex I to Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity. **Contracting Parties** may furthermore encourage, where appropriate, the installation of active control systems such as automation, control and monitoring systems that aim to save energy.

Article 9

Nearly zero-energy buildings

1. **Contracting Parties** shall ensure that:

(a) by **30 June 2021**, all new buildings are nearly zero-energy buildings; and

(b) after **30 June 2019**, new buildings occupied and owned by public authorities are nearly zero-energy buildings.

Contracting Parties shall draw up national plans for increasing the number of nearly zero-energy buildings. These national plans may include targets differentiated according to the category of building.

2. **Contracting Parties** shall furthermore, following the leading example of the public sector, develop policies and take measures such as the setting of targets in order to stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings, and inform the **Secretariat** thereof in their national plans referred to in paragraph 1.

3. The national plans shall include, *inter alia*, the following elements:

(a) the **Contracting Party**'s detailed application in practice of the definition of nearly zero-energy buildings, reflecting their national, regional or local conditions, and including a numerical indicator of primary energy use expressed in kWh/m^2 per year. Primary energy factors used for the determination of the primary energy use may be based on national or regional yearly average values and may take into account relevant European standards;

(b) intermediate targets for improving the energy performance of new buildings, by 2015, with a view to preparing the implementation of paragraph 1;

(c) information on the policies and financial or other measures adopted in the context of paragraphs 1 and 2 for the promotion of nearly zero-energy buildings, including details of national requirements and measures concerning the use of energy from renewable sources in new buildings and existing buildings undergoing major renovation in the context of Article 13(4) of Directive 2009/28/EC and Articles 6 and 7 of this Directive.

4. The **Secretariat** shall evaluate the national plans referred to in paragraph 1, notably the adequacy of the measures envisaged by the **Contracting Party** in relation to the objectives of this Directive. The **Secretariat**, taking due account of the principle of subsidiarity, may request further specific information regarding the requirements set out in paragraphs 1, 2 and 3. In that case, the **Contracting Party** concerned shall submit the requested information or propose amendments within nine months following the request from the Secretariat. **Following its evaluation, the Secretariat may propose a recommendation to the Ministerial Council.**

5. As part of its annual Implementation Report, the Secretariat shall report every four years to the Ministerial Council on the progress of Contracting Parties in increasing the number of nearly zero-energy buildings. On the basis of this reported information the Secretariat shall, where necessary, develop an action plan and propose recommendations and measures in accordance with Article 34 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC to increase the number of those buildings and encourage best practices as regards the cost-effective transformation of existing buildings into nearly zero-energy buildings.';[3]

6. **Contracting Parties** may decide not to apply the requirements set out in points (a) and (b) of paragraph 1 in specific and justifiable cases where the cost-benefit analysis over the economic lifecycle of the building in question is negative. **Contracting Parties** shall inform the **Secretariat** of the principles of the relevant legislative regimes.

Article 10

Financial incentives and market barriers

1. In view of the importance of providing appropriate financing and other instruments to catalyse the energy performance of buildings and the transition to nearly zero-energy buildings, **Contracting Parties** shall take appropriate steps to consider the most relevant such instruments in the light of national circumstances.

3 The text displayed here corresponds to Article 53(3) of Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

<...>[4]

4. The **Secretariat** shall, where appropriate, assist upon request **Contracting Parties** in setting up national or regional financial support programmes with the aim of increasing energy efficiency in buildings, especially of existing buildings, by supporting the exchange of best practice between the responsible national or regional authorities or bodies.

5. In order to improve financing in support of the implementation of this Directive and taking due account of the principle of subsidiarity, the Commission shall, preferably by 2011, present an analysis on, in particular:

(a) the effectiveness, the appropriateness of the level, and the actual amount used, of structural funds and framework programmes that were used for increasing energy efficiency in buildings, especially in housing;

(b) the effectiveness of the use of funds from the EIB and other public finance institutions;

(c) the coordination of Union and national funding and other forms of support that can act as a leverage for stimulating investments in energy efficiency and the adequacy of such funds for achieving Union objectives.

On the basis of that analysis, and in accordance with the multiannual financial framework, the Commission may subsequently submit, if it considers this appropriate, proposals with respect to Union instruments to the European Parliament and the Council.

6. **Contracting Parties** shall take account of the cost-optimal levels of energy performance when providing incentives for the construction or major renovation of buildings.

7. The provisions of this Directive shall not prevent **Contracting Parties** from providing incentives for new buildings, renovations or building elements which go beyond the cost-optimal levels.

Article 11

Energy performance certificates

1. **Contracting Parties** shall lay down the necessary measures to establish a system of certification of the energy performance of buildings. The energy performance certificate shall include the energy performance of a building and reference values such as minimum energy performance requirements in order to make it possible for owners or tenants of the building or building unit to compare and assess its energy performance.

The energy performance certificate may include additional information such as the annual energy consumption for non-residential buildings and the percentage of energy from renewable sources in the total energy consumption.

2. The energy performance certificate shall include recommendations for the cost-optimal or cost-effective improvement of the energy performance of a building or building unit, unless there is no reasonable potential for such improvement compared to the energy performance requirements in force.

The recommendations included in the energy performance certificate shall cover:

(a) measures carried out in connection with a major renovation of the building envelope or technical building system(s); and

(b) measures for individual building elements independent of a major renovation of the building envelope

4 Not applicable according to Article 53(4) of Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

or technical building system(s).

3. The recommendations included in the energy performance certificate shall be technically feasible for the specific building and may provide an estimate for the range of payback periods or cost-benefits over its economic lifecycle.

4. The energy performance certificate shall provide an indication as to where the owner or tenant can receive more detailed information, including as regards the cost-effectiveness of the recommendations made in the energy performance certificate. The evaluation of cost effectiveness shall be based on a set of standard conditions, such as the assessment of energy savings and underlying energy prices and a preliminary cost forecast. In addition, it shall contain information on the steps to be taken to implement the recommendations. Other information on related topics, such as energy audits or incentives of a financial or other nature and financing possibilities may also be provided to the owner or tenant.

5. Subject to national rules, **Contracting Parties** shall encourage public authorities to take into account the leading role which they should play in the field of energy performance of buildings, *inter alia*, by implementing the recommendations included in the energy performance certificate issued for buildings owned by them within its validity period.

6. Certification for building units may be based:

(a) on a common certification of the whole building; or

(b) on the assessment of another representative building unit with the same energy-relevant characteristics in the same building.

7. Certification for single-family houses may be based on the assessment of another representative building of similar design and size with a similar actual energy performance quality if such correspondence can be guaranteed by the expert issuing the energy performance certificate.

8. The validity of the energy performance certificate shall not exceed 10 years.

9. The Commission shall, by 2011, in consultation with the relevant sectors, adopt a voluntary common European Union certification scheme for the energy performance of non-residential buildings. That measure shall be adopted in accordance with the advisory procedure referred to in Article 26(2). **Contracting Parties** are encouraged to recognise or use the scheme, or use part thereof by adapting it to national circumstances.

Article 12

Issue of energy performance certificates

1. **Contracting Parties** shall ensure that an energy performance certificate is issued for:

(a) buildings or building units which are constructed, sold or rented out to a new tenant; and

(b) buildings where a total useful floor area over 500 m^2 is occupied by a public authority and frequently visited by the public. On **30 September 2015**, this threshold of 500 m^2 shall be lowered to 250 m^2.

The requirement to issue an energy performance certificate does not apply where a certificate, issued in accordance with either Directive 2002/91/EC or this Directive, for the building or building unit concerned is available and valid.

2. **Contracting Parties** shall require that, when buildings or building units are constructed, sold or rented out, the energy performance certificate or a copy thereof is shown to the prospective new tenant or buyer and handed over to the buyer or new tenant.

3. Where a building is sold or rented out in advance of construction, **Contracting Parties** may require the seller to provide an assessment of its future energy performance, as a derogation from paragraphs 1 and 2; in this case, the energy performance certificate shall be issued at the latest once the building has been constructed.

4. **Contracting Parties** shall require that when:

- buildings having an energy performance certificate,

- building units in a building having an energy performance certificate, and

- building units having an energy performance certificate,

are offered for sale or for rent, the energy performance indicator of the energy performance certificate of the building or the building unit, as applicable, is stated in the advertisements in commercial media.

5. The provisions of this Article shall be implemented in accordance with applicable national rules on joint ownership or common property.

6. **Contracting Parties** may exclude the categories of buildings referred to in Article 4(2) from the application of paragraphs 1, 2, 4 and 5 of this Article.

7. The possible effects of energy performance certificates in terms of legal proceedings, if any, shall be decided in accordance with national rules.

Article 13

Display of energy performance certificates

1. **Contracting Parties** shall take measures to ensure that where a total useful floor area over 500 m^2 of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is occupied by public authorities and frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.

On **30 September 2015**, this threshold of 500 m^2 shall be lowered to 250 m^2.

2. **Contracting Parties** shall require that where a total useful floor area over 500 m^2 of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.

3. The provisions of this Article do not include an obligation to display the recommendations included in the energy performance certificate.

Article 14

Inspection of heating systems

1. **Contracting Parties** shall lay down the necessary measures to establish a regular inspection of the accessible parts of systems used for heating buildings, such as the heat generator, control system and

circulation pump(s), with boilers of an effective rated output for space heating purposes of more than 20 kW. That inspection shall include an assessment of the boiler efficiency and the boiler sizing compared with the heating requirements of the building. The assessment of the boiler sizing does not have to be repeated as long as no changes were made to the heating system or as regards the heating requirements of the building in the meantime.

Contracting Parties may reduce the frequency of such inspections or lighten them as appropriate, where an electronic monitoring and control system is in place.

2. **Contracting Parties** may set different inspection frequencies depending on the type and effective rated output of the heating system whilst taking into account the costs of the inspection of the heating system and the estimated energy cost savings that may result from the inspection.

3. Heating systems with boilers of an effective rated output of more than 100 kW shall be inspected at least every two years.

For gas boilers, this period may be extended to four years.

4. As an alternative to paragraphs 1, 2 and 3 **Contracting Parties** may opt to take measures to ensure the provision of advice to users concerning the replacement of boilers, other modifications to the heating system and alternative solutions to assess the efficiency and appropriate size of the boiler. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where **Contracting Parties** choose to apply the measures referred to in the first subparagraph, they shall submit to the **Secretariat** a report on the equivalence of those measures to measures referred to in paragraphs 1, 2 and 3 of this Article by **30 June 2013** at the latest. **Contracting Parties** shall submit these reports to the **Secretariat** every three years.

Such a report shall be submitted to the Secretariat as part of the Contracting Parties' integrated national energy and climate plans referred to in Article 3 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC.[5]

5. After receiving the national report from a **Contracting Party** about the application of the option as described in paragraph 4, the **Secretariat** may request further specific information regarding the requirements and equivalence of the measures set out in that paragraph. In that case, the **Contracting Party** concerned shall present the requested information or propose amendments within nine months.

Article 15

Inspection of air-conditioning systems

1. **Contracting Parties** shall lay down the necessary measures to establish a regular inspection of the accessible parts of air-conditioning systems of an effective rated output of more than 12 kW. The inspection shall include an assessment of the air-conditioning efficiency and the sizing compared to the cooling requirements of the building. The assessment of the sizing does not have to be repeated as long as no changes were made to this air-conditioning system or as regards the cooling requirements of the building in the meantime.

Contracting Parties may reduce the frequency of such inspections or lighten them, as appropriate, where

5 The text displayed here corresponds to Article 53(5) of Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

an electronic monitoring and control system is in place.

2. The **Contracting Parties** may set different inspection frequencies depending on the type and effective rated output of the air-conditioning system, whilst taking into account the costs of the inspection of the air-conditioning system and the estimated energy cost savings that may result from the inspection.

3. In laying down the measures referred to in paragraphs 1 and 2 of this Article, **Contracting Parties** shall, as far as is economically and technically feasible, ensure that inspections are carried out in accordance with the inspection of heating systems and other technical systems referred to in Article 14 of this Directive and the inspection of leakages referred to in Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases.

4. As an alternative to paragraphs 1, 2 and 3 **Contracting Parties** may opt to take measures to ensure the provision of advice to users on the replacement of air-conditioning systems or on other modifications to the air-conditioning system which may include inspections to assess the efficiency and appropriate size of the air-conditioning system. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where **Contracting Parties** apply the measures referred to in the first subparagraph, they shall, by **30 June 2013** at the latest, submit to the Secretariat a report on the equivalence of those measures to the measures referred to in paragraphs 1, 2 and 3 of this Article. **Contracting Parties** shall submit these reports to the Secretariat every three years.

Such a report shall be submitted to the Secretariat as part of the Contracting Parties' integrated national energy and climate plans referred to in Article 3 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC.[6]

5. After receiving the national report from a **Contracting Party** about the application of the option as described in paragraph 4, the **Secretariat** may request further specific information regarding the requirements and equivalence of the measures set in that paragraph. In this case, the **Contracting Party** concerned shall present the requested information or propose amendments within nine months.

Article 16

Reports on the inspection of heating and air-conditioning systems

1. An inspection report shall be issued after each inspection of a heating or air-conditioning system. The inspection report shall contain the result of the inspection performed in accordance with Article 14 or 15 and include recommendations for the cost-effective improvement of the energy performance of the inspected system.

The recommendations may be based on a comparison of the energy performance of the system inspected with that of the best available feasible system and a system of similar type for which all relevant components achieve the level of energy performance required by the applicable legislation.

2. The inspection report shall be handed over to the owner or tenant of the building.

6 The text displayed here corresponds to Article 53(6) of Regulation (EU) 2018/1999 as adapted and adopted by Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

Article 17

Independent experts

Contracting Parties shall ensure that the energy performance certification of buildings and the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating in a self-employed capacity or employed by public bodies or private enterprises.

Experts shall be accredited taking into account their competence.

Contracting Parties shall make available to the public information on training and accreditations. **Contracting Parties** shall ensure that either regularly updated lists of qualified and/or accredited experts or regularly updated lists of accredited companies which offer the services of such experts are made available to the public.

Article 18

Independent control system

1. **Contracting Parties** shall ensure that independent control systems for energy performance certificates and reports on the inspection of heating and air-conditioning systems are established in accordance with Annex II. **Contracting Parties** may establish separate systems for the control of energy performance certificates and for the control of reports on the inspection of heating and air-conditioning systems.

2. The **Contracting Parties** may delegate the responsibilities for implementing the independent control systems.

Where the **Contracting Parties** decide to do so, they shall ensure that the independent control systems are implemented in compliance with Annex II.

3. **Contracting Parties** shall require the energy performance certificates and the inspection reports referred to in paragraph 1 to be made available to the competent authorities or bodies on request.

Article 19

Review

The Commission, assisted by the Committee established by Article 26, shall evaluate this Directive by 1 January 2017 at the latest, in the light of the experience gained and progress made during its application, and, if necessary, make proposals.

Article 20

Information

1. **Contracting Parties** shall take the necessary measures to inform the owners or tenants of buildings or building units of the different methods and practices that serve to enhance energy performance.

2. **Contracting Parties** shall in particular provide information to the owners or tenants of buildings on

energy performance certificates and inspection reports, their purpose and objectives, on cost-effective ways to improve the energy performance of the building and, where appropriate, on financial instruments available to improve the energy performance of the building.

At the request of the **Contracting Parties**, the **Secretariat s**hall assist **Contracting Parties** in staging information campaigns for the purposes of paragraph 1 and the first subparagraph of this paragraph, which may be dealt with in Union programmes.

3. **Contracting Parties** shall ensure that guidance and training are made available for those responsible for implementing this Directive. Such guidance and training shall address the importance of improving energy performance, and shall enable consideration of the optimal combination of improvements in energy efficiency, use of energy from renewable sources and use of district heating and cooling when planning, designing, building and renovating industrial or residential areas.

4. The Commission is invited to continuously improve its information services, in particular the website that has been set up as a European portal for energy efficiency in buildings directed towards citizens, professionals and authorities, in order to assist **Contracting Parties** in their information and awareness-raising efforts. Information displayed on this website might include links to relevant European Union and national, regional and local legislation, links to Europa websites that display the National Energy Efficiency Action Plans, links to available financial instruments, as well as best practice examples at national, regional and local level. In the context of the European Regional Development Fund, the Commission shall continue and further intensify its information services with the aim of facilitating the use of available funds by providing assistance and information to interested stakeholders, including national, regional and local authorities, on funding possibilities, taking into account the latest changes in the regulatory framework.

Article 21

Consultation

In order to facilitate the effective implementation of the Directive, **Contracting Parties** shall consult the stakeholders involved, including local and regional authorities, in accordance with the national legislation applicable and as relevant. Such consultation is of particular importance for the application of Articles 9 and 20.

Article 22

Adaptation of Annex I to technical progress

The Commission shall adapt points 3 and 4 of Annex I to technical progress by means of delegated acts in accordance with Articles 23, 24 and 25.

Article 23

Exercise of delegation

1. The powers to adopt the delegated acts referred to in Article 22 shall be conferred on the Commission for a period of five years beginning on 8 July 2010. The Commission shall make a report in respect of the delegated powers not later than six months before the end of the five-year period. The delegation of powers shall be automatically extended for periods of an identical duration, unless the European Parliament or the Council revokes it in accordance with Article 24.

2. Without prejudice to the deadline referred to in Article 5(1), the powers to adopt the delegated acts referred to in Article 5 shall be conferred on the Commission until 30 June 2012.

3. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the **Ministerial Council, who shall put it on the agenda of its next meeting.**

4. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles 24 and 25.

Article 24

Revocation of the delegation

The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community The Ministerial Council shall state the reasons for objecting to the delegated act

Article 25

Objections to delegated acts

1. The European Parliament or the Council may object to a delegated act within a period of two months from the date of notification.

At the initiative of the European Parliament or the Council that period shall be extended by two months.

2. If, on expiry of that period, neither the European Parliament nor the Council has objected to the delegated act it shall be published in the Official Journal of the European Union and shall enter into force on the date stated therein.

The delegated act may be published in the Official Journal of the European Union and enter into force before the expiry of that period, if the European Parliament and the Council have both informed the Commission of their intention not to raise objections.

3. If the European Parliament or the Council objects to a delegated act, it shall not enter into force. The institution which objects shall state the reasons for objecting to the delegated act.

Article 26

Committee procedure

1. The Commission shall be assisted by a Committee.

2. Where reference is made to this paragraph, Articles 3 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

Article 27

Penalties

Contracting Parties shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. **Contracting Parties** shall communicate those provisions to the **Secretariat** by **31 March 2013** at the latest and shall notify it without delay of any subsequent amendment affecting them.

Article 28

Transposition

1. **Contracting Parties** shall adopt and publish, by **30 September 2012**[7] at the latest, the laws, regulations and administrative provisions necessary to comply with Articles 2 to 18, and with Articles 20 and 27.

They shall apply those provisions as far as Articles 2, 3, 9, 11, 12, 13, 17, 18, 20 and 27 are concerned, from **31 March 2013** at the latest.

They shall apply those provisions as far as Articles 4, 5, 6, 7, 8, 14, 15 and 16 are concerned, to buildings occupied by the public authorities from **31 March 2013** at the latest and to other buildings from **30 September 2013** at the latest.

They may defer the application of Article 12(1) and (2) to single building units that are rented out, until **31 March 2016**. This shall however not result in fewer certificates being issued than would have been the case under the application of the Directive 2002/91/EC in the **Contracting Party** concerned.

When **Contracting Parties** adopt measures, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to Directive 2002/91/EC shall be construed as references to this Directive. **Contracting Parties** shall determine how such reference is to be made and how that statement is to be formulated.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

7 In accordance with the Accession Protocol, the corresponding date for Georgia is 30 June 2019.

Article 29

Repeal

Directive 2002/91/EC, as amended by the Regulation indicated in Annex IV, Part A, is hereby repealed with effect from 1 February 2012, without prejudice to the obligations of the **Contracting Parties** relating to the time limit for transposition into national law and application of the Directive set out in Annex IV, Part B.

References to Directive 2002/91/EC shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex V.

Articles 30 and 31

Entry into force and Addressees[8]

This Decision [2010/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

The Secretariat shall monitor and review the implementation of Directive 2010/31/EU in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 31 March 2013.[9]

8 The text displayed here corresponds to Article 3 of Decision 2010/02/MC-EnC.
9 The text displayed here corresponds to Article 1(4) of Decision 2010/02/MC-EnC.

ANNEX I

Common general framework for the calculation of energy performance of buildings (referred to in Article 3)

1. The energy performance of a building shall be determined on the basis of the calculated or actual annual energy that is consumed in order to meet the different needs associated with its typical use and shall reflect the heating energy needs and cooling energy needs (energy needed to avoid overheating) to maintain the envisaged temperature conditions of the building, and domestic hot water needs.

2. The energy performance of a building shall be expressed in a transparent manner and shall include an energy performance indicator and a numeric indicator of primary energy use, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or a specific value for on-site production.

The methodology for calculating the energy performance of buildings should take into account European standards and shall be consistent with relevant Union legislation, including Directive 2009/28/ EC.

3. The methodology shall be laid down taking into consideration at least the following aspects:

(a) the following actual thermal characteristics of the building including its internal partitions:

(i) thermal capacity;

(ii) insulation;

(iii) passive heating;

(iv) cooling elements; and

(v) thermal bridges;

(b) heating installation and hot water supply, including their insulation characteristics;

(c) air-conditioning installations;

(d) natural and mechanical ventilation which may include air-tightness;

(e) built-in lighting installation (mainly in the non-residential sector);

(f) the design, positioning and orientation of the building, including outdoor climate;

(g) passive solar systems and solar protection;

(h) indoor climatic conditions, including the designed indoor climate;

(i) internal loads.

4. The positive influence of the following aspects shall, where relevant in the calculation, be taken into account:

(a) local solar exposure conditions, active solar systems and other heating and electricity systems based on energy from renewable sources;

(b) electricity produced by cogeneration;

(c) district or block heating and cooling systems;

(d) natural lighting.

5. For the purpose of the calculation buildings should be adequately classified into the following categories:

(a) single-family houses of different types;

(b) apartment blocks;

(c) offices;

(d) educational buildings;

(e) hospitals;

(f) hotels and restaurants;

(g) sports facilities;

(h) wholesale and retail trade services buildings;

(i) other types of energy-consuming buildings.

ANNEX II

Independent control systems for energy performance certificates and inspection reports

1. The competent authorities or bodies to which the competent authorities have delegated the responsibility for implementing the independent control system shall make a random selection of at least a statistically significant percentage of all the energy performance certificates issued annually and subject those certificates to verification.

The verification shall be based on the options indicated below or on equivalent measures:

(a) validity check of the input data of the building used to issue the energy performance certificate and the results stated in the certificate;

(b) check of the input data and verification of the results of the energy performance certificate, including the recommendations made;

(c) full check of the input data of the building used to issue the energy performance certificate, full verification of the results stated in the certificate, including the recommendations made, and on-site visit of the building, if possible, to check correspondence between specifications given in the energy performance certificate and the building certified.

2. The competent authorities or bodies to which the competent authorities have delegated the responsibility for implementing the independent control system shall make a random selection of at least a statistically significant percentage of all the inspection reports issued annually and subject those reports to verification.

ANNEX III

Comparative methodology framework to identify cost-optimal levels of energy performance requirements for buildings and building elements

The comparative methodology framework shall enable **Contracting Parties** to determine the energy performance of buildings and building elements and the economic aspects of measures relating to the energy performance, and to link them with a view to identifying the cost-optimal level.

The comparative methodology framework shall be accompanied by guidelines outlining how to apply this framework in the calculation of cost-optimal performance levels.

The comparative methodology framework shall allow for taking into account use patterns, outdoor climate conditions, investment costs, building category, maintenance and operating costs (including energy costs and savings), earnings from energy produced, where applicable, and disposal costs, where applicable. It should be based on relevant European standards relating to this Directive.

The Commission shall also provide:

- guidelines to accompany the comparative methodology framework; these guidelines will serve to enable the **Contracting Parties** to undertake the steps listed below,

- information on estimated long-term energy price developments.

For the application of the comparative methodology framework by **Contracting Parties**, general conditions, expressed by parameters, shall be laid down at **Contracting Party** level.

The comparative methodology framework shall require **Contracting Parties** to:

- define reference buildings that are characterised by and representative of their functionality and geographic location, including indoor and outdoor climate conditions. The reference buildings shall cover residential and non-residential buildings, both new and existing ones,

- define energy efficiency measures to be assessed for the reference buildings. These may be measures for individual buildings as a whole, for individual building elements, or for a combination of building elements,

- assess the final and primary energy need of the reference buildings and the reference buildings with the defined energy efficiency measures applied,

- calculate the costs (i.e. the net present value) of the energy efficiency measures (as referred to in the second indent) during the expected economic lifecycle applied to the reference buildings (as referred to in the first indent) by applying the comparative methodology framework principles.

By calculating the costs of the energy efficiency measures during the expected economic lifecycle, the cost-effectiveness of different levels of minimum energy performance requirements is assessed by the **Contracting Parties**. This will allow the determination of cost-optimal levels of energy performance requirements.

REGULATION (EU) 2017/1369 of 4 July 2017 setting a framework for energy labelling

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject-matter and scope

1. This Regulation lays down a framework that applies to energy-related products ('products') placed on the market or put into service. It provides for the labelling of those products and the provision of standard product information regarding energy efficiency, the consumption of energy and of other resources by products during use and supplementary information concerning products, thereby enabling customers to choose more efficient products in order to reduce their energy consumption.

2. This Regulation does not apply to:

(a) second-hand products, unless they are imported from a third country;

(b) means of transport for persons or goods.

Article 2

Definitions

For the purposes of this Regulation the following definitions apply:

(1) 'energy-related product' or 'product' means a good or system with an impact on energy consumption during use which is placed on the market or put into service, including parts with an impact on energy consumption during use which are placed on the market or put into service for customers and that are intended to be incorporated into products;

(2) 'product group' means a group of products which have the same main functionality;

(3) 'system' means a combination of several goods which when put together perform a specific function in an expected environment and of which the energy efficiency can then be determined as a single entity;

(4) 'model' means a version of a product of which all units share the same technical characteristics relevant for the label and the product information sheet and the same model identifier;

(5) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trade mark or the same supplier's name;

(6) 'equivalent model' means a model which has the same technical characteristics relevant for the label and the same product information sheet, but which is placed on the market or put into service by the

same supplier as another model with a different model identifier;

(7) 'making available on the market' means the supply of a product for distribution or use on the **markets of the Contracting Parties** in the course of a commercial activity, whether in return for payment or free of charge;

(8) 'placing on the market' means the first making available of a product on the **markets of the Contracting Parties**;

(9) 'putting into service' means the first use of a product for its intended purpose on the **markets of the Contracting Parties**;

(10) 'manufacturer' means a natural or legal person who manufactures a product or has a product designed or manufactured, and markets that product under its name or trademark;

(11) 'authorised representative' means a natural or legal person established in the **Energy Community** who has received a written mandate from the manufacturer to act on its behalf in relation to specified tasks;

(12) 'importer' means a natural or legal person established in the **Energy Community** who places a product from a third country on the markets of the **Contracting Parties**;

(13) 'dealer' means a retailer or other natural or legal person who offers for sale, hire, or hire purchase, or displays products to customers or installers in the course of a commercial activity, whether or not in return for payment;

(14) 'supplier' means a manufacturer established in the **Energy Community**, the authorised representative of a manufacturer who is not established in the **Energy Community**, or an importer, who places a product on the **markets of the Contracting Parties**;

(15) 'distance selling' means the offer for sale, hire or hire purchase by mail order, catalogue, internet, telemarketing or by any other method by which the potential customer cannot be expected to see the product displayed;

(16) 'customer' means a natural or legal person who buys, hires or receives a product for own use whether or not acting for purposes which are outside its trade, business, craft or profession;

(17) 'energy efficiency' means the ratio of output of performance, service, goods or energy to input of energy;

(18) 'harmonised standard' means standard as defined in point (c) of Article 2(1) of Regulation (EU) No 1025/2012 of the European Parliament and of the Council;

(19) 'label' means a graphic diagram, either in printed or electronic form, including a closed scale using only letters from A to G, each letter representing a class and each class corresponding to energy savings, in seven different colours from dark green to red, in order to inform customers about energy efficiency and energy consumption; it includes rescaled labels and labels with fewer classes and colours in accordance with Article 11(10) and (11);

(20) 'rescaling' means an exercise making the requirements for achieving the energy class on a label for a particular product group more stringent;

(21) 'rescaled label' means a label for a particular product group that has undergone rescaling and is distinguishable from labels before rescaling while preserving a visual and perceptible coherence of all labels;

(22) 'product information sheet' means a standard document containing information relating to a product, in printed or electronic form;

(23) 'technical documentation' means documentation sufficient to enable market surveillance authorities to assess the accuracy of the label and the product information sheet of a product, including test reports or similar technical evidence;

(24) 'supplementary information' means information, as specified in a delegated act, on the functional and environmental performance of a product;

(25) **<...>**

(26) 'verification tolerance' means the maximum admissible deviation of the measurement and calculation results of the verification tests performed by, or on behalf of, market surveillance authorities, compared to the values of the declared or published parameters, reflecting deviation arising from interlaboratory variation.

Article 3

General obligations of suppliers

1. The supplier shall ensure that products that are placed on the market are accompanied, for each individual unit, free of charge, with accurate printed labels and with product information sheets in accordance with this Regulation and the relevant delegated acts.

<...>

Delegated acts may provide that the label is printed on the packaging of the product.

2. **The supplier shall deliver printed label, including any rescaled labels, and product information sheets, to the dealer free of charge, promptly and in any event within five working days upon the dealer's request.**

3. The supplier shall ensure the accuracy of the labels and product information sheets that it provides and shall produce technical documentation sufficient to enable the accuracy to be assessed.

4. Once a unit of a model is in service, the supplier shall request explicit consent from the customer regarding any changes intended to be introduced to the unit by means of updates that would be detrimental to the parameters of the energy efficiency label for that unit, as set out in the relevant delegated act. The supplier shall inform the customer of the objective of the update and of the changes in the parameters, including any change in the label class. For a period proportionate to the average lifespan of the product, the supplier shall give the customer the option of refusing the update without avoidable loss of functionality.

5. The supplier shall not place on the market products that have been designed so that a model's performance is automatically altered in test conditions with the objective of reaching a more favourable level for any of the parameters specified in the relevant delegated act or included in any of the documentation provided with the product.

6. **After the final unit of a model has been placed on the market, the supplier shall keep the information concerning that model for a period of 15 years. Where appropriate in relation to the average life span of a product, a shorter retention period may be provided for by relevant delegated acts.**

Article 4

<...>

Article 5

Obligations of dealers

1. The dealer shall:

(a) display, in a visible manner, including for online distance selling, the label provided by the supplier or made available in accordance with paragraph 2 for units of a model covered by the relevant delegated act; and,

(b) make available to customers the product information sheet, including, upon request, in physical form at the point of sale.

2. Where, notwithstanding Article 3(1), the dealer does not have a label, it shall request one from the supplier in accordance with Article 3(2).

3. Where, notwithstanding Article 3(1), the dealer does not have a product information sheet, it shall request one from the supplier in accordance with Article 3(2); or, if it chooses to do so, print or download one for electronic display from the product database, if those functions are available for the relevant product.

Article 6

Other obligations of suppliers and dealers

The supplier and the dealer shall:

(a) make reference to the energy efficiency class of the product and the range of the efficiency classes available on the label in visual advertisements or technical promotional material for a specific model in accordance with the relevant delegated act;

(b) cooperate with market surveillance authorities and take immediate action to remedy any case of non-compliance with the requirements set out in this Regulation and the relevant delegated acts, which falls under their responsibility, at their own initiative or when required to do so by market surveillance authorities;

(c) for products covered by delegated acts, not provide or display other labels, marks, symbols or inscriptions which do not comply with the requirements of this Regulation and the relevant delegated acts, if doing so would be likely to mislead or confuse customers with respect to the consumption of energy or other resources during use;

(d) for products not covered by delegated acts, not supply or display labels which mimic the labels provided for under this Regulation and the relevant delegated acts;

(e) for non-energy related products, not supply or display labels which mimic the labels provided for in this Regulation or in delegated acts.

Point (d) in the first subparagraph shall not affect labels provided for in national law, unless those labels are provided for in delegated acts.

Article 7

Obligations of Contracting Parties

1. **Contracting Parties** shall not impede the placing on the market or putting into service, within their territories, of products which comply with this Regulation and the relevant delegated acts.

2. Where **Contracting Parties** provide incentives for a product specified in a delegated act, those incentives shall aim at the highest two significantly populated classes of energy efficiency, or at higher classes as laid down in that delegated act.

3. **Contracting Parties** shall ensure that the introduction of labels and rescaling of labels is accompanied by educational and promotional information campaigns on energy labelling, if appropriate in cooperation with suppliers and dealers. The **Secretariat** shall support cooperation and the exchange of best practices in relation to those campaigns, including through the recommendation of common key messages.

4. **Contracting Parties** shall lay down the rules on penalties and enforcement mechanisms applicable to infringements of this Regulation and the delegated acts, and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. Rules which fulfil the requirements of Article 15 of **Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, shall be considered to fulfil the requirements of this paragraph as regards penalties.

Contracting Parties shall, by 1 January 2020, notify the **Secretariat** of the rules referred to in the first subparagraph that have not previously been notified to the **Secretariat**, and shall notify the **Secretariat**, without delay, of any subsequent amendment affecting them.

Article 8

Market surveillance and control of products entering the markets of Contracting Parties

1. The Secretariat shall encourage and support cooperation and the exchange of information on market surveillance relating to the labelling of products between national authorities of the Contracting Parties that are responsible for market surveillance or in charge of the control of products entering the Contracting Parties' markets, and between them and the Secretariat, *inter alia*.

Such exchanges of information shall also be conducted when test results indicate that the product complies with this Regulation and the relevant delegated act.

2. Contracting Parties' general market surveillance programmes or sector specific programmes, where applicable, shall include actions to ensure the effective enforcement of this Regulation.

3. For the purposes of the preceding paragraphs, national market surveillance authorities and the Secretariat shall take into account guidelines for the enforcement of this Regulation, in particular as regards best practices for product testing and the sharing of information, developed under Article 8(4) of Regulation (EU) 2017/1369 in the European Union.

4. Market surveillance authorities shall have the right to recover from the supplier the costs of document inspection and physical product testing in case of non-compliance with this

Regulation or the relevant delegated acts.

Article 9

Procedure at national level for dealing with products presenting a risk

1. Where the market surveillance authorities of one **Contracting Party** have sufficient reason to believe that a product covered by this Regulation presents a risk to aspects of public interest protection covered by this Regulation, such as environmental and consumer protection aspects, they shall carry out an evaluation in relation to the product concerned covering all energy labelling requirements relevant to the risk and laid down in this Regulation or in the relevant delegated act. Suppliers and dealers shall cooperate as necessary with the market surveillance authorities for the purpose of that evaluation.

2. Where, in the course of the evaluation referred to in paragraph 1, the market surveillance authorities find that the product does not comply with the requirements laid down in this Regulation or in the relevant delegated act, they shall without delay require the supplier, or where appropriate, the dealer, to take all appropriate corrective action to bring the product into compliance with those requirements, where appropriate to withdraw the product from the market, or where appropriate, to recall it within a reasonable period, commensurate with the nature of the risk as they may prescribe.

<...>

3. Where the market surveillance authorities consider that a case of non-compliance as referred to in paragraph 2 is not restricted to their national territory, they shall inform the **Secretariat** and the other **Contracting Parties** of the results of the evaluation and of the action which they have required the supplier or dealer to take.

4. The supplier or, where appropriate, the dealer shall ensure that all appropriate corrective or restrictive action in accordance with paragraph 2 is taken in respect of all the products concerned that it has made available on the market throughout the **Energy Community**.

5. Where the supplier or, where appropriate, the dealer does not take adequate corrective action within the period referred to in paragraph 2, the market surveillance authorities shall take all appropriate provisional measures to prohibit or restrict the availability of the product on their national market, to withdraw the product from that market, or to recall it.

6. The market surveillance authorities shall inform the **Secretariat** and the other **Contracting Parties** without delay of the measures taken pursuant to paragraph 5. That information shall include all available details, in particular:

(a) the data necessary for the identification of the non-compliant product;

(b) the origin of the product;

(c) the nature of the non-compliance alleged and the risk involved;

(d) the nature and duration of the national measures taken and the arguments put forward by the supplier or, where appropriate, the dealer.

In particular, the market surveillance authorities shall indicate whether the non-compliance is due to either failure of the product to meet requirements relating to aspects of public interest protection laid down in this Regulation or shortcomings in the harmonised standards referred to in Article 13 conferring

a presumption of conformity.

7. **Contracting Parties** other than the **Contracting Party** initiating the procedure shall without delay inform the **Secretariat** and the other **Contracting Parties** of any measures adopted and of any additional information at their disposal relating to the non-compliance of the product concerned, and, in the event of disagreement with the notified national measure, of their objections.

8. Where, within 60 days of receipt of the information referred to in paragraph 6, no objection has been raised by either a **Contracting Party**, or the **Secretariat** in respect of a provisional measure taken by a **Contracting Party**, that measure shall be deemed to be justified.

9. **Contracting Parties** shall ensure that appropriate restrictive measures, such as withdrawal of the product from their market, are taken in respect of the product concerned, without delay.

Article 10

Energy Community safeguard procedure

1. Where, on completion of the procedure set out in Article 9(4) and (5), objections are raised against a measure taken by a Contracting Party, or where the Secretariat considers a national measure to be contrary to Energy Community law, the Secretariat shall, without delay, consult the Contracting Party, and the supplier or, where appropriate, the dealer and shall evaluate the national measure.

On the basis of the results of that evaluation, the Secretariat shall decide whether the national measure is justified or not and may suggest an appropriate alternative measure. The Secretariat shall seek consent from the European Commission before taking such decision.

2. The **Secretariat** shall address its decision to all **Contracting Parties** and shall immediately communicate it to them and to the supplier or dealer concerned.

3. If the national measure is considered to be justified, all **Contracting Parties** shall take the measures necessary to ensure that the non-compliant product is withdrawn from their market, and shall inform the **Secretariat** and Commission accordingly. If the national measure is considered to be unjustified, the **Contracting Party** concerned shall withdraw the measure.

4. Where the national measure is considered to be justified and the non-compliance of the product is attributed to shortcomings in the harmonised standards referred to in Article 9(6) of this Regulation, the Secretariat shall inform the Commission thereof.

5. Corrective or restrictive measures pursuant to Article 9(2), (4), (5) or (9), or Article 10(3) shall be extended to all units of a non-compliant model and of its equivalent models, except those units for which the supplier demonstrates that they are compliant.

Article 11

Use of rescaled labels

<...>

13. **Where, pursuant to Article 11(1) or (3) of Regulation (EU) 2017/1369 in the European Union, a label has been rescaled:**

(a) the supplier shall, when placing a product on the market, provide both the existing and the rescaled labels and the product information sheets to the dealer for a period beginning four months before the date specified in the relevant delegated act for starting the display of the rescaled label.

By way of derogation from the first subparagraph of this point, if the existing and the rescaled label require different testing of the model, the supplier may choose not to supply the existing label with units of models placed on the market or put into service during the four-month period before the date specified in the relevant delegated act for starting the display of the rescaled label if no units belonging to the same model or equivalent models were placed on the market or put into service before the start of the four-month period. In that case, the dealer shall not offer those units for sale before that date. The supplier shall notify the dealer concerned of that consequence as soon as possible, including when it includes such units in its offers to dealers.

(b) the supplier shall, for products placed on the market or put into service before the four-month period, deliver the rescaled label on request from the dealer in accordance with Article 3(2) as from the start of that period. For such products, the dealer shall obtain a rescaled label in accordance with Article 5(2).

By way of derogation from the first subparagraph of this point:

(i) a dealer who is unable to obtain a rescaled label in accordance with the first subparagraph of this point for units already in its stock because the supplier has ceased its activities shall be permitted to sell those units exclusively with the non-rescaled label until nine months after the date specified in the relevant delegated act for starting the display of the rescaled label; or

(ii) if the non-rescaled and the rescaled label require different testing of the model, the supplier is exempt from the obligation to supply a rescaled label for units placed on the market or put into service before the four month period, if no units belonging to same model or equivalent models are placed on the market or put into service after the start of the four-month period. In that case, the dealer shall be permitted to sell those units exclusively with the non-rescaled label until nine months after the date specified in the relevant delegated act for starting the display of the rescaled label.

(c) the dealer shall replace the existing labels on products on display, both in shops and online, with the rescaled labels within 14 working days after the date specified in the relevant delegated act for starting the display of the rescaled label. The dealer shall not display the rescaled labels before that date.

By way of derogation from points (a), (b) and (c) of this paragraph, relevant delegated acts may provide for specific rules for energy labels printed on the packaging.

Article 12

Product database

<...>

Article 13

Harmonised standards

Where harmonised standards referred to in Article 13 of Regulation (EU) 2017/1369 in the European Union are applied during the conformity assessment of a product, the model shall be presumed to be in conformity with the relevant measurement and calculation requirements of the delegated act.

Article 14

Consultation Forum

<...>

Article 15

Working plan

<...>

Article 16

Relevant delegated acts

1. The European Commission may propose to the Ministerial Council the incorporation of relevant delegated acts supplementing Regulation (EU) 2017/1369 in the Energy Community.

2. The Ministerial Council shall decide upon the incorporation and adaptation of these relevant delegated acts at the meeting following the proposal. Upon adoption of a relevant Decision, relevant delegated acts shall be transposed and implemented by all Contracting Parties.

Article 17

Exercise of the delegation

<...>

Article 18

Committee procedure

<...>

Article 19

Evaluation and report

By 2 August 2025, the Secretariat shall assess the implementation of this Regulation and submit a report to the Ministerial Council.

Article 20

Repeal and transitional measures

1. **Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, is repealed with effect from 1 **January 2020**.

2. References to the repealed Directive shall be construed as references to this Regulation and shall be read in accordance with the correlation table set out in Annex II.

3. For models, the units of which were placed on the market or put into service in accordance with **Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, before **1 January 2020**, the supplier shall, for a period ending five years after the final unit was manufactured, make an electronic version of the technical documentation available for inspection within 10 days of a request received from **Contracting Parties** or the **Secretariat**.

4. Delegated acts adopted pursuant to Article 10 of Directive 2010/30/EU and Directive 96/60/EC, as incorporated and adapted by the Ministerial Council, shall remain in force until they are repealed by a Decision adopted by the Ministerial Council taken under Article 16 of this Regulation.

Obligations under this Regulation shall apply in relation to product groups covered by delegated acts adopted pursuant to Article 10 of **Directive 2010/30/EU and by Directive 96/60/EC, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC.**

5. With regard to product groups already covered by relevant delegated acts adopted pursuant to Directive 2010/30/EU as incorporated and adapted by the Ministerial Council, or to Directive 96/60/EC as incorporated and adapted by the Ministerial Council, the energy efficiency classification established by Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC, may continue to apply until the date on which the delegated acts introducing rescaled labels become applicable.

Article 21

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I

INFORMATION TO BE ENTERED IN THE PRODUCT DATABASE AND FUNCTIONAL CRITERIA FOR THE PUBLIC PART OF THE DATABASE

<...>

ANNEX II
CORRELATION TABLE

Directive 2010/30/EU	This Regulation
Article 1(1)	Article 1(1)
Article 1(2)	–
Article 1(3)(a) and (b)	Article 1(2)(a) and (b)
Article 1(3)(c)	–
Article 2	Article 2
Article 2(a)	Article 2, point 1
Article 2(b)	Article 2, point 22
Article 2(c)	–
Article 2(d)	–
Article 2(e)	–
Article 2(f)	–
Article 2(g)	Article 2, point 13
Article 2(h)	Article 2, point 14
Article 2(i)	Article 2, point 8
Article 2(j)	Article 2, point 9
Article 2(k)	–
Article 3	Article 7
Article 3(1)(a)	Article 7(3)
Article 3(1)(b)	Article 6(c)
Article 3(1)(c)	Article 7(3)
Article 3(1)(d)	Article 8(2)
Article 3(2)	Article 6(b) and Article 9
Article 3(3)	Article 8(1)
Article 3(4)	–
Article 4(a)	Article 5
Article 4(b)	–
Article 4(c)	Article 6(a)
Article 4(d)	Article 6(a)
Article 5	Article 3(1) and Article 6
Article 5(a)	Article 3(1)(a)
Article 5(b), points (i), (ii), (iii) and (iv)	Article 4(6) and Annex I
Article 5(c)	Article 4(6)
Article 5(d)	Article 3(1)

Article 5(d), second subparagraph	Article 3(1)
Article 5(e)	Article 3(1)
Article 5(f)	–
Article 5(g)	Article 3(1)
Article 5(h)	–
Article 6	Article 5(1) and Article 6
Article 6(a)	Article 5(1)(a)
Article 6(b)	Article 5(1)(a)
Article 7	Article 16(3)(e) and (g)
Article 8(1)	Article 7(1)
Article 8(2)	–
Article 9(3)	Article 7(2)
Article 9(4)	–
Article 10(1)	Article 16
Article 10(1), second paragraph	Article 16(2)
Article 10(1), third paragraph	–
Article 10(1), fourth paragraph	Article 16(3)(c)
Article 10(2)(a)	Article 16(2)(a)
Article 10(2)(b)	Article 16(2)(b)
Article 10(2)(c)	–
Article 10(3)(a)	–
Article 10(3)(b)	–
Article 10(3)(c)	Article 14
Article 10(3)(d)	–
Article 10(4)(a)	Article 16(3)(a)
Article 10(4)(b)	Article 16(3)(k)
Article 10(4)(c)	Article 16(3)(h)
Article 10(4)(d)	Article 16(3)(b)
Article 10(4)(d), second paragraph	–
Article 10(4)(d), third paragraph	Article 16(3)(b)
Article 10(4)(d), fourth paragraph	Article 11(3)
Article 10(4)(d), fifth paragraph	Article 11
Article 10(4)(e)	Article 16(3)(e)
Article 10(4)(f)	Article 16(3)(h)
Article 10(4)(g)	Article 16(3)(j)
Article 10(4)(h)	Article 11(3)
Article 10(4)(i)	Article 16(3)(i)

Article 10(4)(j)	Article 16(3)(o)
Article 11(1)	Article 17(2)
Article 11(2)	Article 17(5)
Article 11(3)	Article 17(1)
Article 12(1)	Article 17(3)
Article 12(2)	–
Article 12(3)	Article 17(3)
Article 13	Article 17(6)
Article 14	Article 19
Article 15	Article 7(4)
Article 16	–
Article 17	Article 20
Article 18	Article 21
Article 19	Article 21
Annex I	–
–	Annex I
Annex II	Annex II

II. PART

ENERGY EFFICIENCY DELEGATED LABELLING REGULATIONS

DELEGATED REGULATION (EU) 2017/254 of 30 November 2016 on the use of tolerances in verification procedures

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Amendments to Delegated Regulation (EU) No 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V to Delegated Regulation (EU) No 1059/2010, a**s incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex I to this Delegated Regulation.

Article 2

Amendments to Delegated Regulation (EU) No 1060/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VII to Delegated Regulation (EU) No 1060/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex II to this Delegated Regulation.

Article 3

Amendments to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V to Delegated Regulation (EU) No 1061/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex III to this Delegated Regulation.

Article 4

Amendments to Delegated Regulation (EU) No 1062/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annexes VII and VIII to Delegated Regulation (EU) No 1062/2010, **as incorporated and adapted by**

the Ministerial Council Decision 2011/03/MC-EnC, are amended in accordance with Annex IV to this Delegated Regulation.

Article 5

Amendments to Delegated Regulation (EU) No 626/2011, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VIII to Delegated Regulation (EU) No 626/2011, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex V to this Delegated Regulation.

Article 6

Amendments to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V to Delegated Regulation (EU) No 392/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex VI to this Delegated Regulation.

Article 7

Amendments to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V to Delegated Regulation (EU) No 874/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex VII to this Delegated Regulation.

Article 8

Amendments to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VII to Delegated Regulation (EU) No 665/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex VIII to this Delegated Regulation.

Article 9

Amendments to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VIII to Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex IX to this Delegated Regulation.

Article 10

Amendments to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex IX to Delegated Regulation (EU) No 812/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex X to this Delegated Regulation.

Article 11

Amendments to Delegated Regulation (EU) No 65/2014, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VIII to Delegated Regulation (EU) No 65/2014, a**s incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex XI to this Delegated Regulation.

Article 12

Amendments to Delegated Regulation (EU) No 1254/2014

Annex IX to Delegated Regulation (EU) No 1254/2014 is amended in accordance with Annex XII to this Delegated Regulation.

Article 13

Amendments to Delegated Regulation (EU) 2015/1094

Annex X to Delegated Regulation (EU) 2015/1094 is amended in accordance with Annex XIII to this Delegated Regulation.

Article 14

Amendments to Delegated Regulation (EU) 2015/1186

Annex IX to Delegated Regulation (EU) 2015/1186 is amended in accordance with Annex XIV to this Delegated Regulation.

Article 15

Amendments to Delegated Regulation (EU) 2015/1187

Annex X to Delegated Regulation (EU) 2015/1187 is amended in accordance with Annex XV to this Delegated Regulation.

Article 16

Entry into force and application

This Regulation shall enter into force on the date of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I

Amendments to Annex V to Delegated Regulation (EU) No 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Parties** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if, for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in ***a dedicated section of the website of the Energy Community.*** The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Annual energy consumption (AE_C)	The determined value shall not exceed the declared value of AE_C by more than 10 %.
Water consumption (W_t)	The determined value shall not exceed the declared value of W_t by more than 10 %.
Drying efficiency index (I_D)	The determined value shall not be less than the declared value of I_D by more than 19 %.
Energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 10 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of E_t by more than 6 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined value of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared value of P_o and P_l by more than 0,10 W.
Duration of left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The determined value shall meet the declared value.'

ANNEX II

Amendments to Annex VII to Delegated Regulation (EU) No 1060/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**

Annex VII is replaced by the following:

'ANNEX VII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annexes VI and VIII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	**Verification tolerances**
Gross volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value.
Storage volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value. Where the volumes of the cellar compartment and the fresh food storage compartment can be adjusted, relative to one another, by the user, the volume shall be tested when the cellar compartment is adjusted to its minimum volume.
Freezing capacity	The determined value shall not be less than the declared value by more than 10 %.
Energy consumption	The determined value shall not exceed the declared value (E_{24h}) by more than 10 %.
Humidity of wine storage appliances	The determined value for the relative humidity observed in testing shall not exceed the declared range by more than 10 % in any direction.
Airborne acoustical noise emissions	The determined value shall meet the declared value.'

ANNEX III

Amendments to Annex V to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household washing machine models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as

equivalent household washing machine models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in the ***a dedicated section of the website of the Energy Community.*** The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1: **Verification tolerances**

Parameters	**Verification tolerances**
Annual energy consumption (AE_C)	The determined value shall not exceed the declared value of AE_C by more than 10 %.
Energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 10 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of E_t by more than 6 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 10 %.
Water consumption (W_t)	The determined value shall not exceed the declared value of W_t by more than 10 %.
Remaining moisture content (D)	The determined value shall not exceed the declared value of D by more than 10 %.
Spin speed	The determined value shall not be less than the declared value by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	Determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined values of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The determined value shall meet the declared value.'

ANNEX IV

Amendments to Annexes VII and VIII to Delegated Regulation (EU) No 1062/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**

(1) Annex VII is amended as follows:

(a) In part 2, subparagraph (iv) of paragraph (a) is deleted.

(b) Part 3 is deleted.

(c) In part 4, the title is replaced by the following:

'4. **Measurements of peak luminance ratio referred to in Table 2 of Annex VIII'.**

(2) Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 2.

(3) If the result referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 2.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 2 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 2: **Verification tolerances**

Parameters	**Verification tolerances**
On-mode power consumption	The determined value shall not exceed the declared value by more than 7 %.
Off-mode/standby power consumption	The determined value shall not exceed the declared value by more than 0,10 W.
Peak luminance ratio	The determined value shall not be lower than 60 % of the peak luminance of the brightest on-mode condition provided by the television.'

ANNEX V

Amendments to Annex VIII to Delegated Regulation (EU) No 626/2011, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other

Contracting Parties and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1: **Verification tolerances**

Parameters	**Verification tolerances**
Seasonal energy efficiency ratio (SEER)	The determined value shall not be lower than the declared value by more than 8 %.
Seasonal coefficient of performance (SCOP)	The determined value shall not be lower than the declared value by more than 8 %.
Power consumption in off mode	The determined value shall not exceed the declared value by more than 10 %.
Power consumption in standby mode	The determined value shall not exceed the declared value by more than 10 %.
Energy efficiency ratio (EER_{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Coefficient of performance (COP_{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).'

ANNEX VI

Amendments to Annex V to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in ***a dedicated section of the website of the Energy Community.*** The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1: **Verification tolerances**

Parameters	**Verification tolerances**
Weighted annual energy consumption (AE_C)	The determined value shall not exceed the declared value of AE_C by more than 6 %.
Weighted energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 6 %.
Weighted condensation efficiency (C_t)	The determined value shall not be less than the declared value of C_t by more than 6 %.
Weighted programme time (T_t)	The determined value shall not exceed the declared value of T_t by more than 6 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 6 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 6 %.
Sound power level, L_{WA}	The determined value shall not exceed the declared value of L_{WA}.'

ANNEX VII

Amendments to Annex V to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

1. VERIFICATION PROCEDURE FOR ELECTRICAL LAMPS AND LED MODULES MARKETED AS INDIVIDUAL PRODUCTS

(1) The **Contracting Party** authorities shall verify a sample batch of a minimum of 20 lamps of the same model from the same supplier, where possible obtained in equal proportions from four randomly selected sources.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when testing the units of model, the arithmetical mean of the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) is within the respective tolerance of 10 %.

(3) If the results referred to in points 2(a), (b) or (c) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to point 3.

The **Contracting Party** authorities shall use measurement procedures that reflect generally recognised, current best practice and are reliable, accurate and reproducible, including methods set out in documents whose reference numbers have been published for that purpose in ***a dedicated section of the web-site of the Energy Community.*** The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerance of 10 % and shall only use the procedure described in points 1 to 4 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

2. VERIFICATION PROCEDURE FOR LUMINAIRES INTENDED TO BE MARKETED OR MARKETED TO THE END-USER

The luminaire shall be considered to comply with the requirements laid down in this Regulation if it is accompanied by the required product information, if it is claimed to be compatible with all the lamp energy efficiency classes it is compatible with, and if, when applying state-of-the-art methods and criteria for assessing compatibility, it is found to be compatible with the lamp energy efficiency classes with which it is claimed to be compatible pursuant to points (2)(IV)(a) and (b) of part 2 of Annex I.'

ANNEX VIII

Amendments to Annex VII to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VII is replaced by the following:

'ANNEX VII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 4.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent vacuum cleaner models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent vacuum cleaner in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 4.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent vacuum cleaner models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VI.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 4 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 4

Verification tolerances

Parameters	**Verification tolerances**
Annual energy consumption	The determined value shall not exceed the declared value by more than 10 %.
Dust pick-up on carpet	The determined value shall not be lower than the declared value by more than 0,03.
Dust pick-up on hard floor	The determined value shall not be lower than the declared value by more than 0,03.
Dust re-emission	The determined value shall not exceed the declared value by more than 15 %.
Sound power level	The determined value shall not exceed the declared value.'

ANNEX IX

Amendments to Annex VIII to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 16.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 16.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 16 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 16

Verification tolerances

Parameters	**Verification tolerances**
Space-heating energy efficiency, η_s	The determined value shall not be lower than the declared value by more than 8 %.
Water-heating energy efficiency, η_{wh}	The determined value shall not be lower than the declared value by more than 8 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).
Class of the temperature control	The class of the temperature controls corresponds to the declared class of the unit.
Collector efficiency, η_{col}	The determined value shall not be lower than the declared value by more than 5 %.
Standing loss, *S*	The determined value shall not exceed the declared value by more than 5 %.
Auxiliary electricity consumption, Q_{aux}	The determined value shall not exceed the declared value by more than 5 %.'

ANNEX X

Amendments to Annex IX to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex IX is replaced by the following:

'ANNEX IX

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 9.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 9.

(6) If the result referred to in point 5 is not achieved, the model and all other equivalent water heater

models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII and Annex VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 9 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 9

Verification tolerances

Parameters	**Verification tolerances**
Daily electricity consumption, Q_{elec}	The determined value shall not exceed the declared value by more than 5 %.
Sound power level, L_{WA}, indoors and/or outdoors	The determined value shall not exceed the declared value by more than 2 dB.
Daily fuel consumption, Q_{fuel}	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption with smart controls, $Q_{fuel,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption with smart controls, $Q_{elec,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption without smart controls, $Q_{fuel,week}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption without smart controls, $Q_{elec,week}$	The determined value shall not exceed the declared value by more than 5 %.
Storage volume, V	The determined value shall not be lower than the declared value by more than 2 %.
Collector aperture area, A_{sol}	The determined value shall not be lower than the declared value by more than 2 %.
Pump power consumption, $_{solpump}$	The determined value shall not exceed the declared value by more than 3 %.
Standby power consumption, $_{solstandby}$	The determined value shall not exceed the declared value by more than 5 %.
Standing loss, *S*	The determined value shall not exceed the declared value by more than 5 %.’

ANNEX XI

Amendments to Annex VIII to Delegated Regulation (EU) No 65/2014, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretaria**t without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex II.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6

Verification tolerances

Parameters	**Verification tolerances**
Mass of the oven, *M*	The determined value shall not exceed the declared value of $_M$ by more than 5 %.
Volume of the cavity of the oven, *V*	The determined value shall not be lower than the declared value of $_V$ by more than 5 %.
$EC_{electric\ cavity}$, $EC_{gas\ cavity}$	The determined values shall not exceed the declared values of $EC_{electric}$ cavity and EC_{gas} cavity by more than 5 %.
W_{BEP}, W_L	The determined values shall not exceed the declared values of W_{BEP} and W_L by more than 5 %.
Q_{BEP}, P_{BEP}	The determined values shall not be lower than the declared values of Q_{BEP}, and P_{BEP} by more than 5 %.
Q_{max}	The determined value shall not exceed the declared value of Qmax by more than 8 %.
E_{middle}	The determined value shall not be lower than the declared value of E_{middle} by more than 5 %.
GFE_{hood}	The determined value shall not be lower than the declared value of GFE_{hood} by more than 5 %.
P_o, P_s	The determined values of power consumption P_o and P_s shall not exceed the declared values of P_o and P_s by more than 10 %. The determined values of power consumption P_o and P_s of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_s by more than 0,10 W.
Sound power level, L_{WA}	The determined value shall not exceed the declared value of L_{WA}.'

ANNEX XII
Amendments to Annex IX to Delegated Regulation (EU) No 1254/2014

Annex IX is replaced by the following:

'ANNEX IX
Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent models shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all other equivalent models shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-com-

pliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VIII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	**Verification tolerances**
SPI	The determined value shall be no more than 1,07 times the declared value.
Thermal efficiency RVU	The determined value shall be no less than 0,93 times the declared value.
Sound power level	The determined value shall be no more than the declared value plus 2 dB.'

ANNEX XIII
Amendments to Annex X to Delegated Regulation (EU) 2015/1094

Annex X is replaced by the following:

'ANNEX X
Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 4.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 4.

(6) If the result referred to in point 5 is not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annexes VIII and IX.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 4 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 4

Verification tolerances

Parameters	**Verification tolerances**
Net volume	The determined value shall not be lower than the declared value by more than 3 %.
Energy consumption (E_{24h})	The determined value shall not exceed the declared value by more than 10 %.'

ANNEX XIV
Amendments to Annex IX to Delegated Regulation (EU) 2015/1186

Annex IX is replaced by the following:

'ANNEX IX
Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform the measurements described in Annex VIII.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VIII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6

Verification tolerances

Parameters	**Verification tolerances**
Energy efficiency index	The determined value shall not be lower than the declared value by more than 8 %.'

ANNEX XV
Amendments to Annex X to Delegated Regulation (EU) 2015/1187

Annex X is replaced by the following:

'ANNEX X
Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 5. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform measurements according to Annex VIII.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective verification tolerances given in Table 5.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VIII and IX.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 5 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 5

Verification tolerances

Parameters	**Verification tolerances**
Energy efficiency index	The determined value shall not be lower than the declared value by more than 6 %.'

DELEGATED REGULATION (EU) 2019/2013 of 11 March 2019 supplementing Regulation (EU) 2017/1369 with regard to energy labelling of electronic displays

Incorporated and adapted by Ministerial Council Decision 2022/04/MC-EnC of 15 December 2022 on adapting and incorporating certain Delegated Regulations on energy-related products, introducing rescaled labels in Energy Community acquis communautaire and repealing Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 874/2012, and Directive 96/60/EC

The adaptations made by Ministerial Council Decision 2022/04/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on electronic displays, including televisions, monitors and digital signage displays.

2. This Regulation shall not apply to the following:

(a) any electronic display with a screen area smaller than or equal to 100 square centimetres;

(b) projectors;

(c) all-in-one video conference systems;

(d) medical displays;

(e) virtual reality headsets;

(f) displays integrated or to be integrated into products listed in points 3(a) and 4 of Article 2 of Directive 2012/19/EU of the European Parliament and of the Council;

(g) electronic displays that are components or sub-assemblies as defined in point 2 of Article 2 of Directive 2009/125/EC;

(h) broadcast displays;

(i) security displays;

(j) digital interactive whiteboards;

(k) digital photo frames;

(l) digital signage displays which meet any of the following characteristics:

(1) designed and constructed as a display module to be integrated as a partial image area of a larger display screen area and not intended for use as a standalone display device;

(2) distributed self-contained in an enclosure for permanent outdoor use;

(3) distributed self-contained in an enclosure with a screen area less than 30 dm^2 or greater than 130 dm^2;

(4) the display has a pixel density less than 230 pixels/cm^2 or more than 3 025 pixels/cm^2;

(5) a peak white luminance in standard dynamic range (SDR) operating mode of greater than or equal to 1 000 cd/m^2;

(6) no video signal input interface and display drive allowing the correct display of a standardised dynamic video test sequence for power measurement purposes;

(m) status displays;

(n) control panels.

Article 2

Definitions

For the purpose of this Regulation the following definitions shall apply:

(1) '*electronic display*' means a display screen and associated electronics that, as its primary function, displays visual information from wired or wireless sources;

(2) '*television*' means an electronic display designed primarily for the display and reception of audiovisual signals and which consists of an electronic display and one or more tuners/receivers;

(3) '*tuner/receiver*' means an electronic circuit that detects television broadcast signal, such as terrestrial digital or satellite, but not internet unicast, and facilitates the selection of a TV channel from a group of broadcast channels;

(4) *'monitor' or 'computer monitor'* or *'computer display'* means an electronic display intended for one person for close viewing such as in a desk based environment;

(5) '*digital photo frame*' means an electronic display that displays exclusively still visual information;

(6) '*projector*' means an optical device for processing analogue or digital video image information, in any format, to modulate a light source and project the resulting image onto an external surface;

(7) '*status display*' means a display used to show simple but changing information such as selected channel, time or power consumption. A simple light indicator is not considered a status display;

(8) *'control panel'* means an electronic display whose main function is to display images associated with product operational status; it may provide user interaction by touch or other means to control the product operation. It may be integrated into products or specifically designed and marketed to be used exclusively with the product;

(9) *'all-in-one video conference system'* means a dedicated system designed for video conferencing and collaboration, integrated within a single enclosure, whose specifications shall include all of the following features:

(a) support for specific videoconference protocol ITU-T H.323 or IETF SIP as delivered by the manufacturer;

(b) camera(s), display and processing capabilities for two-way real-time video including packet loss resilience;

(c) loudspeaker and audio processing capabilities for two-way real-time hands-free audio including echo cancellation;

(d) an encryption function;

(e) HiNA;

(10) '*HiNA*' means High Network Availability as defined in Article 2 of Commission Regulation (EC) No 1275/2008;

(11) '*broadcast display*' means an electronic display designed and marketed for professional use by broadcasters and video production houses for video content creation. Its specifications shall include all of the following features:

(a) colour calibration function;

(b) input signal analysis function for input signal monitoring and error detection, such as wave-form monitor/vector scope, RGB cut off, facility to check the video signal status at actual pixel resolution, interlace mode and screen marker;

(c) Serial Digital Interface (SDI) or Video over internet Protocol (VoIP) integrated with the product;

(d) not intended for use in public areas;

(12) *'digital interactive whiteboard'* means an electronic display which allows direct user interaction with the displayed image. The digital interactive whiteboard is designed primarily to provide presentations, lessons or remote collaboration, including the transmission of audio and video signals. Its specification shall include all of the following features:

(a) primarily designed to be installed hanging, mounted on a ground stand, set on a shelf or desktop or fixed to a physical structure for viewing by multiple people;

(b) be necessarily used with computer software with specific functionalities to manage content and interaction;

(c) integrated or designed to be specifically used with a computer for running the software in point (b);

(d) a display screen area greater than 40 dm^2;

(e) user interaction by finger or pen touch or other means such as hand, arm gesture or voice;

(13) '*security display*' means an electronic display whose specification shall include all of the following features:

(a) self-monitoring function capable of communicating at least one of the following information to a remote server:

— power status;

— internal temperature from anti-overload thermal sensing;

— video source;

— audio source and audio status (volume/mute);

— model and firmware version;

(b) user-specified specialist form factor facilitating the installation of the display into professional housings or consoles;

(14) *'digital signage display'* means an electronic display that is designed primarily to be viewed by multiple people in non-desktop based and non-domestic environments. Its specifications shall include all of the following features:

(a) unique identifier to enable addressing a specific display screen;

(b) a function disabling unauthorised access to the display settings and displayed image;

(c) network connection (encompassing a hard-wired or wireless interface) for controlling, monitoring or receiving the information to display from remote unicast or multicast but not broadcast sources;

(d) designed to be installed hanging, mounted or fixed to a physical structure for viewing by multiple people and not placed on the market with a ground stand;

(e) does not integrate a tuner to display broadcast signals;

(15) *'integrated',* referring to a display which is part of another product as a functional component, means electronic displays that are not able to be operated independently from the product and that depend on it for providing their functions, including power;

(16) *'medical display'* means an electronic display covered by the scope of:

(a) Council Directive 93/42/EEC concerning medical devices; or

(b) Regulation (EU) 2017/745 of the European Parliament and of the Council on medical devices; or

(c) Council Directive 90/385/EEC on the approximation of the laws of the Member States relating to active implantable medical devices; or

(d) Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices; or

(e) Regulation (EU) 2017/746 of the European Parliament and of the Council on in vitro diagnostic medical devices;

(18) '*screen area*' means the viewable area of the electronic display calculated by multiplying the maximum viewable image width by the maximum viewable image height along the surface of the panel (both flat or curved);

(19) *'virtual reality headset'* means a head-wearable device that provides immersive virtual reality for the wearer by displaying stereoscopic images for each eye with head motion tracking functions;

(20) *'point of sale'* means a location where electronic displays are displayed or offered for sale, hire or hire-purchase.

Article 3

Obligations of suppliers

1. Suppliers shall ensure that:

(a) each electronic display is supplied with a label in printed form in the format and containing the information set out in Annex III;

(b) **the product information sheet, as set out in Annex V, is made available free of charge, in electronic format**;

(c) **if specifically requested by the dealer, the product information sheet shall be made available in printed form, free of charge;**

(d) **the content of the technical documentation, as set out in Annex VI, is made available at the request of the market surveillance authorities of the Contracting Parties;**

(e) any visual advertisement for a specific model of electronic display, including on the internet, contains the energy efficiency class and the range of efficiency classes available on the label in accordance with Annex VII and Annex VIII;

(f) any technical promotional material concerning a specific model of electronic display, including on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of efficiency classes available on the label, in accordance with Annex VII;

(g) **an electronic label, in the format and containing the information as set out in Annex III, shall be made available to dealers for each electronic display model registered in the EU product database; for the electronic display models placed only on the markets of the Contracting Parties which are not registered in the EU product database, the label shall be generated without the EU logo, and the QR code shall be linked to the website with model's information maintained by the manufacturer;**

(h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each electronic display model;

(i) in addition to point (a), the label shall be printed on the packaging or stuck on it.

2. The energy efficiency class shall be based on the energy efficiency index calculated in accordance with Annex II.

Article 4

Obligations of dealers

Dealers shall ensure that:

(a) each electronic display, at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with point 1(a) of Article 3 displayed on the front of the appliance or hung on it or placed in such a way as to be clearly visible and unequivocally associated to the specific model; provided that the electronic display is kept in on-mode when visible to customers for sale, the electronic label in accordance with point 1(g) of Article 3 displayed on the screen may replace the printed label;

(b) where an electronic display model is displayed in a point of sale without any unit displayed out of the box, the label printed on the box or stuck on it shall be visible;

(c) in the event of distance selling or telemarketing, the label and product information sheet are provided in accordance with Annexes VII and VIII;

(d) any visual advertisement for a specific model of electronic display, including on the internet, contains the energy efficiency class and the range of efficiency classes available on the label, in accordance with Annex VII;

(e) any technical promotional material concerning a specific model of electronic display, including technical promotional material on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of efficiency classes available on the label, in accordance with Annex VII.

Article 5

Obligations of service provider on internet hosting platforms

Where a hosting service provider **<…>** allows the selling of electronic displays through its internet website, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

Article 6

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation methods set out in Annex IV.

Article 7

Verification procedure for market surveillance purposes

Contracting Parties shall apply the verification procedure laid down in Annex IX when performing the market surveillance checks referred to in paragraph 3 of Article 8 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC**.

Article 8

Review

<…>

Article 9

Repeal

<…>

Article 10

Transitional measures

<…>

Article 11

Entry into force and application

This Regulation enters into force on the day of the adoption of Ministerial Council Decision 2022/04/MC-EnC and is addressed to the Contracting Parties and the institutions of the Energy Community.

The Delegated Regulation 2019/2013 shall be transposed, implemented and applicable in all Contracting Parties by 31 December 2023. However, Article 3 paragraph 1 point (a) shall apply latest as of 31 August 2023.

ANNEX I
Definitions for the purposes of the Annexes

The following definitions shall apply:

(1) *'energy efficiency index' (EEI)* means an index number for the relative energy efficiency of an electronic display, as set out in point B of Annex II;

(2) *'High Dynamic Range (HDR)'* means a method to increase the contrast ratio of the image of an electronic display by using metadata generated during the creation of the video material and that the display management circuitry interprets to produce a contrast ratio and colour rendering perceived by the human eye as more realistic than that achieved by non HDR-compatible displays;

(3) *'contrast ratio'* means the difference between the peak brightness and black level in an image;

(4) '*luminance*' means the photometric measure of the luminous intensity per unit area of light traveling in a given direction, expressed in units of candelas per square meter (cd/m^2). The term brightness is often used to 'subjectively' qualify the luminance of an electronic display;

(5) '*Automatic Brightness Control (ABC)*' means the automatic mechanism that, when enabled, controls the brightness of an electronic display as a function of the ambient light level illuminating the front of the display;

(6) '*default*', referring to a specific feature or setting, means the value of a specific feature as set at the factory and available when the customer uses the product for the first time and after performing a 'reset to factory settings' action, if allowed by the product;

(7) '*pixel (picture element)*' means the area of the smallest element of a picture that can be distinguished from its neighbouring elements;

(8) '*on mode*' or '*active mode*' means a condition in which the electronic display is connected to a power source, has been activated and is providing one or more of its display functions;

(9) '*forced menu*' means a specific menu, appearing upon initial start-up of the electronic display or upon a reset to factory settings, offering a set of display settings, pre-defined by the supplier;

(10) '*normal configuration*' means a display setting which is recommended to the end-user by the supplier from the initial set up menu or the factory setting that the electronic display has for the intended product use. It must deliver the optimal quality for the end user in the intended environment and for the intended use. The normal configuration is the condition in which the values for off, standby, networked standby and on mode are measured;

(11) '*brightest on mode configuration*' means the configuration of the electronic display, pre-set by the supplier, which provides an acceptable picture with the highest measured luminance;

(12) '*shop configuration*' means the configuration of the electronic display for use specifically in the context of demonstrating the electronic display, for example in high illumination (retail) conditions and not involving an auto power-off if no user action or presence is detected;

(13) *'room presence sensor'* or *'gesture detection sensor' or 'occupancy sensor'* means a sensor monitoring and reacting to movements in the space around the product whose signal can trigger the switching to on mode. Lack of movement detection for a predetermined time can be used to switch into standby mode or networked standby mode;

(14) *'off mode'* means a condition in which the electronic display is connected to the mains power source and is not providing any function: the following shall also be considered as off mode:

(1) conditions providing only an indication of off mode condition;

(2) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2014/30/EU of the European Parliament and of the Council ([8]);

([8]) Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (OJ L 96, 29.3.2014, p. 79).

(15) '*standby mode*' means a condition where the electronic display is connected to the mains or DC power source, depends on energy input from that source to work as intended and provides only the following functions, which may persist for an indefinite time:

— reactivation function, or reactivation function and only an indication of enabled reactivation function; and/or

— information or status display;

(16) '*reactivation function*' means a function that via a remote switch, a remote control unit, an internal sensor, a timer or, for networked displays in networked standby mode, the network, provides a switch from standby mode or networked standby mode to a mode, other than off-mode, providing additional functions;

(17) *'display mechanism'* means any screen, including tactile screen or other visual technology used for displaying internet content to users;

(18) *'nested display'* means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(19) *'tactile screen'* means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(20) *'alternative text'* means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications;

(21) '*External Power Supply (EPS)*' means a device as defined in Commission Regulation (EU) 2019/1782 ([9]);

(22) '*standardised EPS*' means an external power supply designed to provide power to various devices and that is complies with a standard issued by an international standardization organization;

(23) *'Quick Response (QR) code'* means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the **EU product database**;

(24) *'network'* means a communication infrastructure with a topology of links and an architecture that includes the physical components, organisational principles and communication procedures and formats (protocols);

(25) '*network interface*' (or '*network port*') means a wired or wireless physical interface, providing network connection, through which functions of the electronic display can be remotely activated and data received or sent. Interfaces to input data such as video and audio signals, but not originating from a network source and using a network address, are not considered to be a network interface;

(26) *'network availability'* means the capability of an electronic display to activate functions after a remotely initiated trigger has been detected by a network interface;

(27) *'networked display'* means an electronic display that can connect to a network using one of its network interfaces, if enabled;

(28) '*networked standby mode*' means a condition in which the electronic display is able to resume a function by way of a remotely initiated trigger from a network interface;

([9]) Commission Regulation (EU) 2019/1782 of 1 October 2019 laying down ecodesign requirements for external power supplies pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulation (EC) No 278/2009 (OJ L 272, 25.10.2019, p. 95).

(29) *'declared values'* means the values provided by the supplier for the stated, calculated or measured technical parameters, pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Article 3(1)(d) and Annex VI of this Regulation, for the verification of compliance by the **Contracting Party** authorities;

(30) '*guarantee*' means any undertaking by the retailer or supplier to the consumer to:

(a) reimburse the price paid; or

(b) replace, repair or handle the electronic displays in any way if they do not meet the specifications set out in the guarantee statement or in the relevant advertising.

ANNEX II

A. Energy efficiency classes

The energy efficiency class of an electronic display shall be determined on the basis of its energy efficiency index for labelling (EEI_{label}) as set out in Table 1. The EEI_{label} of an electronic display shall be determined in accordance with part B of this Annex.

Table 1

Energy efficiency classes of electronic displays

Energy Efficiency Class	Energy Efficiency Index (EEI_{label})
A	$EEI_{label} < 0{,}30$
B	$0{,}30 \leq EEI_{label} < 0{,}40$
C	$0{,}40 \leq EEI_{label} < 0{,}50$
D	$0{,}50 \leq EEI_{label} < 0{,}60$
E	$0{,}60 \leq EEI_{label} < 0{,}75$
F	$0{,}75 \leq EEI_{label} < 0{,}90$
G	$0{,}90 \leq EEI_{label}$

B. Energy Efficiency Index (EEI_{label})

$$EEI_{label} = \frac{(P_{measured} + 1)}{(3 \times [90 \times tanh(0{,}025 + 0{,}0035 \times (A - 11)) + 4] + 3) + corr_l}$$ g the following equation:

where:

A represents the viewing surface area in dm^2;

$P_{measured}$ is the measured power in on mode in Watts in the normal configuration and set as indicated in Table 2;

$corr_l$ is a correction factor set as indicated in Table 3.

Table 2

Measurement of $P_{measured}$

Dynamic Range level	$P_{measured}$
Standard Dynamic Range (SDR): $Pmeasured_{SDR}$	Power demand in Watts (W) in on mode, measured when displaying standardised test sequences of moving picture from dynamic broadcast content. Where allowances are applicable according to part C of this Annex, they should be deducted from $P_{measured}$.
High Dynamic Range (HDR) $Pmeasured_{HDR}$	Power demand in Watts (W) in on mode, measured as for $Pmeasured_{SDR}$ but with the HDR functionality activated by metadata in the standardised HDR test sequences. Where allowances are applicable according to part C of this Annex, they should be deducted from $P_{measured}$.

Table 3

***corr*$_l$ value**

Electronic Display type	***corr*$_l$ value**
Television	0,0
Monitor	0,0
Digital signage	0,00062 *(lum-500)*A *where 'lum' is the peak white luminance, in cd/m², of the brightest* on mode *configuration of the electronic display and A is the screen area in dm²*

The declared values of the on mode power ($P_{measured}$) and viewing surface area (A) as listed in Table 5 of Annex VI shall be used for the EEI calculation.

C. Allowances and adjustments for the purpose of the EEI_{label} calculation

Electronic displays with automatic brightness control (ABC) shall qualify for a 10 % reduction in $P_{measured}$ if they meet all of the following requirements:

(a) ABC is enabled in the normal configuration of the electronic display and persists in any other standard dynamic range configuration available to the end user;

(b) the value of $P_{measured}$, in the normal configuration, is measured, with ABC disabled or if ABC cannot be disabled, in an ambient light condition of 100 lux measured at the ABC sensor;

(c) if applicable, the value of $P_{measured}$ with ABC disabled shall be equal to or greater than the on mode power measured with ABC enabled in an ambient light condition of 100 lux measured at the ABC sensor;

(d) with ABC enabled, the measured value of the on mode power must decrease by 20 % or more when the ambient light condition, measured at the ABC sensor, is reduced from 100 lux to 12 lux;

(e) the ABC control of the display screen luminance meets all of the following characteristics when the ambient light condition measured at the ABC sensor changes:

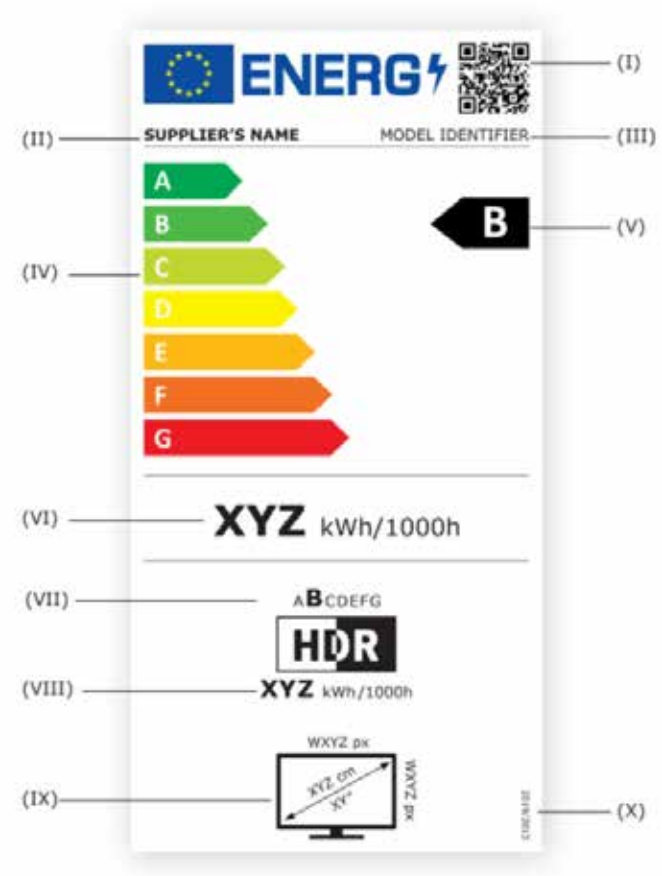
— the measured screen luminance at 60 lux is between 65 % and 95 % of the screen luminance measured at 100 lux;

— the measured screen luminance at 35 lux is between 50 % and 80 % of the screen luminance measured at 100 lux;

— the measured screen luminance at 12 lux is between 35 % and 70 % of the screen luminance measured at 100 lux.

ANNEX III
Label for electronic displays

1. LABEL



The following information shall be included in the label for electronic displays:

I. QR code;

II. supplier's name or trade mark;

III. supplier's model identifier;

IV. scale of energy efficiency classes from A to G;

V. the energy efficiency class determined in accordance with point B of Annex II when using $Pmeasured_{SDR}$;

VI. on mode energy consumption in kWh per 1 000 h, when playing SDR content, rounded to the nearest integer;

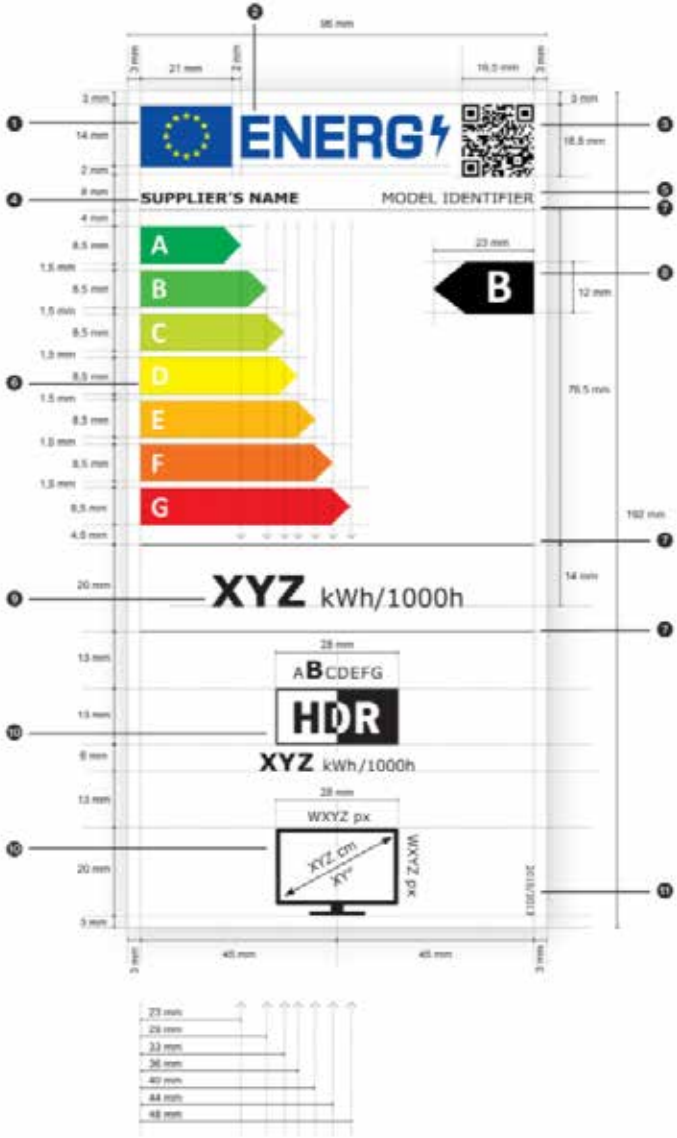
VII. the energy efficiency class determined in accordance with point B of Annex II when using $Pmeasured_{HDR}$;

VIII. the on mode energy consumption in kWh per 1 000 h, when playing HDR content, rounded to the nearest integer;

IX. visible screen diagonal in centimetres and inches and horizontal and vertical resolution in pixels;

X. the number of this Regulation, that is '2019/2013'.

2. LABEL DESIGN



Whereby:

(a) The label shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above. For electronic displays with a size of the diagonal of the visible area less than 127 cm (50 inches), the label can be printed scaled down, but not less than 60 % of its normal size; its content shall nevertheless be proportionate to the specifications above and the QR code still readable by a commonly available QR reader, such as those integrated in a smartphone.

(b) The background of the label shall be 100 % white.

(c) The typefaces shall be Verdana and Calibri.

(d) The dimensions and specifications of the elements constituting the label shall be as indicated in the label design.

(e) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(f) The label shall fulfil all the following requirements (numbers refer to the figure above):

1 the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

2 the colour of the energy logo shall be: 100,80,0,0;

3 the QR code shall be 100 % black;

4 the supplier's name shall be 100 % black and in Verdana Bold 9 pt;

5 the model identifier shall be 100 % black and in Verdana Regular 9 pt;

6 the A to G scale shall be as follows:

— the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4,5 mm from the left side of the arrows;

— the colours of the A to G scale arrows shall be as follows:

— A-class: 100,0,100,0;

— B-class: 70,0,100,0;

— C-class: 30,0,100,0;

— D-class: 0,0,100,0;

— E-class: 0,30,100,0;

— F-class: 0,70,100,0;

— G-class: 0,100,100,0;

7 the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

8 the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 33 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

9 the energy consumption value in SDR shall be in Verdana Bold 28 pt; 'kWh/1 000 h' shall be in Verdana

Regular 16 pt. The text shall be centred and in 100 % black;

10 the HDR and the screen pictograms shall be 100 % black and as shown as in the label design; the texts (numbers and units) shall be 100 % black, and as follows:

— above the HDR pictogram, the letters of energy efficiency classes (A to G) shall be centred, with the letter of the applicable energy efficiency class in Verdana Bold 16 pt and the other letters in Verdana Regular 10 pt; under the HDR pictogram, the energy consumption value in HDR shall be centred, in Verdana Bold 16 pt with 'kWh/1 000 h' in Verdana Regular 10 pt;

— the texts of the screen pictogram shall be in Verdana Regular 9 pt and placed as in the label design;

If the electronic display does not support HDR, the HDR pictogram and the letters of energy efficiency classes are not displayed. The screen pictogram, indicating screen size and resolution, shall be vertically centred in the area below the indication of the energy consumption.

11 the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.

ANNEX IV
Measurement methods and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards, the reference numbers of which have been published in the *Official Journal of the European Union* or using other reliable, accurate and reproducible methods which take into account the generally recognised state-of-the-art. They shall be in line with the provisions set out in this Annex.

In the absence of existing relevant standards and until the publication of the references of the relevant harmonised standards in the Official Journal, the transitional testing methods set out in Annex IIIa to Commission Regulation (EU) 2019/2021 laying down ecodesign requirements for electronic displays, or other reliable, accurate and reproducible methods, which take into account the generally recognised state-of-the-art, shall be used.

Measurements and calculations shall meet the technical definitions, conditions, equations and parameters set out in this Annex. Electronic displays which can operate in both 2D and 3D modes shall be tested when they operate in 2D mode.

An electronic display which is split into two or more physically separate units, but placed on the market in a single package, shall, for checking the conformity with the requirements of this Annex, be treated as a single electronic display. Where multiple electronic displays that can be placed on the market separately are combined in a single system, the individual electronic displays shall be treated as single displays.

1. MEASUREMENTS OF ON MODE POWER DEMAND

Measurements of the on mode power demand shall fulfil all of the following general conditions:

(a) electronic displays shall be measured in the normal configuration;

(b) measurements shall be made at an ambient temperature of 23 °C +/- 5 °C;

(c) measurements shall be made using a dynamic broadcast video signal test loops representing typical broadcast content for electronic displays in standard dynamic range (SDR). For the HDR measurement the electronic display must automatically and correctly respond to the HDR metadata in the test loop. The measurement shall be the average power consumed over 10 consecutive minutes;

(d) measurements shall be made after the electronic display has been in the off-mode or, if an off-mode is not available, in standby mode for a minimum of 1 hour immediately followed by a minimum of 1 hour in the on mode and shall be completed before a maximum of 3 hours in on-mode. The relevant video signal shall be displayed during the entire on mode duration. For electronic displays that are known to stabilise within 1 hour, these durations may be reduced if the resulting measurement can be shown to be within 2 % of the results that would otherwise be achieved using the durations described here;

(e) where ABC is available, measurements shall be made with it switched off. If ABC cannot be switched off, then the measurements shall be performed in an ambient light condition of 100 lux measured at the ABC sensor.

2. MEASUREMENTS OF PEAK WHITE LUMINANCE

Measurements of the peak white luminance shall be made:

(a) with a luminance meter, detecting that portion of the screen exhibiting a full (100 %) white image, which is part of a 'full screen test' pattern not exceeding the average picture level (APL) point where any power limiting or other irregularity occurs;

(b) without disturbing the luminance meter's detection point on the electronic display whilst switching between the normal configuration and the brightest on mode configuration.

Measurements of Standard Dynamic Range, High Dynamic Range, screen luminance for Automatic Brightness Control, Peak White luminance ratio and other luminance measurements shall be made as detailed in Annex III, Table 3a of Commission Regulation (EU) 2019/2021.

ANNEX V
Product information sheet

<…>

Table 4

Information, order and format of the product information sheet

	Parameter	Parameter value and precision	Unit	Notes
1.	Supplier's name or trade mark.		TEXT	
	Supplier's address.			<…>
2.	Model identifier		TEXT	
3.	Energy efficiency class for standard Dynamic Range (SDR)	[A/B/C/D/E/F/G]		
4.	On mode power demand in Standard Dynamic Range (SDR)	X,X	W	Rounded to the first decimal place for power values below 100 W and rounded to the first integer for power values equal or above 100 W.
5.	Energy efficiency class (HDR)	[A/B/C/D/E/F/G] or n.a.		**<…>** Value set to 'n.a.' (not applicable) if HDR not implemented.
6.	On mode power demand in High Dynamic Range (HDR), if implemented	X,X	W	Rounded to the first decimal place for power values below 100 W, and rounded to the integer for power values from 100 W (value set to 0 (zero) if 'not applicable').
7.	Off mode, power demand, if applicable	X,X	W	
8.	Standby mode power demand, if applicable	X,X	W	
9.	Networked standby mode power demand, if applicable	X,X	W	

10.	Electronic display category	[television/monitor/signage/other]				Select one.
11.	Size ratio	X	:	Y	integer	E.g. 16:9, 21:9, etc.
12.	Screen resolution	X	×	Y	pixels	Horizontal and vertical pixels
13.	Screen diagonal	X,X			cm	Rounded to one decimal place.
14.	Screen diagonal	X			inches	Optional, in inches rounded to the nearest integer.
15.	Visible screen area	X,X			dm^2	Rounded to one decimal place
16.	Panel technology used	TEXT				E.g. LCD/LED LCD/QLED LCD/OLED/MicroLED/QDLED/SED/FED/EPD, etc.
17.	Automatic Brightness Control (ABC) available	[YES/NO]				Must be activated as default (if YES).
18.	Voice recognition sensor available	[YES/NO]				
19.	Room presence sensor available	[YES/NO]				Must be activated as default (if YES).
20.	Image refresh frequency rate (default)	X			Hz	
21.	Minimum guaranteed availability of software and firmware updates (from the date of end of the placement on the market	X			Years	As set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021
22.	Minimum guaranteed availability of spare parts (from the date of end of the placement on the market)	X			Years	As set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021
23.	Minimum guaranteed product support	X			Years	As set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021

	Minimum duration of the general guarantee offered by the supplier		X	Years	
24.	Power supply type		Internal/External/Standardised external		Select one.
25.	External power supply (non-standardised and included in the product box)				
	i			TEXT	Description
	ii	Input voltage	X	V	
	iii	Output voltage	X,X	V	
26.	External standardised power supply (or suitable one if not included in the product box)				
	i	Supported standard name or list		TEXT	
	ii	Required output voltage	X,X	V	
	iii	Required delivered current (minimum)	X,X	A	
	iv	Required current frequency	XX	Hz	

ANNEX VI
Technical documentation

The technical documentation referred to in point 1(d) of Article 3 shall include:

(1) a general description of the model allowing it to be unequivocally and easily identified;

(2) references to the harmonised standards applied or other measurement standards used;

(3) specific precautions to be taken when the model is assembled, installed, maintained or tested;

(4) the values for the technical parameters set out in Table 5; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

(5) the details and the results of calculations performed in accordance with Annex IV;

Table 5

Technical parameters of the model and declared values

	Parameter	**Parameter value and precision**	**Unit**	**Declared value**
General				
1	Supplier's name or trade mark	TEXT		
2	Model identifier	TEXT		
3	Energy efficiency class for Standard Dynamic Range (SDR)	[A/B/C/D/E/F/G]	A – G	
4	On mode power demand in Standard Dynamic Range (SDR)	XXX,X	W	
5	Energy efficiency class for High Dynamic Range (HDR), if implemented	[A/B/C/D/E/F/G] or n.a.	A – G	
6	On mode power demand in High Dynamic Range (HDR)	XXX,X	W	
7	Off mode, power demand	X,X	W	
8	Standby mode power demand	X,X	W	
9	Networked standby mode power demand	X,X	W	
10	Electronic display category	[television/monitor/ signage/other]	TEXT	
11	Size ratio	XX : XX		
12	Screen resolution (pixels)	X × X		
13	Screen diagonal	XXX,X	cm	
14	Screen diagonal	XX	inches	
15	Visible screen area	XXX,X	dm^2	
16	Panel technology used	TEXT		
17	Automatic Brightness Control (ABC) available	[YES/NO]		

18	Voice recognition sensor available	[YES/NO]		
19	Room presence sensor available	[YES/NO]		
20	Image refresh frequency rate (normal configuration)	XXX	Hz	
21	Minimum guaranteed availability of software and firmware updates (from the date of end of the placement on the market (as set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021):	XX	Years	
22	Minimum guaranteed availability of spare parts (from the date of end of the placement on the market, as set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021):	XX	Years	
23	Minimum guaranteed product support (from the date of end of the placement on the market, as set out Annex II E, point 1 of Commission Regulation (EU) 2019/2021):	XX	Years	
	Minimum duration of the general guarantee offered by the supplier	XX	Years	
For On-mode				
24	Peak white luminance of the brightest on mode configuration	XXXX	cd/m^2	
25	Peak white luminance of the normal configuration	XXXX	cd/m^2	
26	Peak white luminance ratio (calculated as value of 'Peak white luminance of the normal configuration' divided by value of 'Peak white luminance of the brightest on mode configuration' multiplied by 100)	XX,X	%	
For Auto Power Down (APD)				
27	Length of time in on mode before the electronic display automatically switches to standby, off mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode.	XX:XX	mm:ss	
28	For televisions: the length of time, following the last user interaction, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode or standby-mode;	XX:XX	mm:ss	

29	For televisions equipped with room presence sensor: the length of time, when no presence is detected, before the television automatically switches to stand-by, off-mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode;	XX:XX	mm:ss	
30	For electronic displays other than televisions and broadcast displays: the length of time, when no input is detected, before the electronic display automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode or standby mode;	XX:XX	mm:ss	
For ABC If available and activated by default				
31	Percentage of power reduction due to ABC action between the 100 lux and 12 lux ambient light conditions.	XX,X	%	
32	On mode power at 100 lux ambient light at the ABC sensor	XXX,X	W	
33	On mode power at 12 lux ambient light at the ABC sensor	XXX,X	W	
34	Screen luminance at 100 lux ambient light at the ABC sensor ([1])	XXX	cd/m^2	
35	Screen luminance at 60 lux ambient light at the ABC sensor ([1])	XXX	cd/m^2	
36	Screen luminance at 35 lux ambient light at the ABC sensor ([1])	XXX	cd/m^2	
37	Screen luminance at 12 lux ambient light at the ABC sensor ([1])	XXX	cd/m^2	
For Power Supply				
38	Power supply type	Internal/External		
39	Standard references (if relevant)		TEXT	
40	Input voltage	XXX,X	V	
41	Output voltage	XXX,X	V	
42	Input current (max)	XXX,X	A	
43	Output current (min)	XXX,X	A	
([1]) the values of ABC luminance-related parameters are indicative, and the verification is against the applicable ABC-related requirements.				

(6) testing conditions if not described sufficiently in point (2);

(7) equivalent models, if any, including model identifiers;

<...>

(9) Additional information requirements:

(a) input terminal for the audio and video test signals used for testing;

(b) information and documentation on the instrumentation, set-up and circuits used for electrical testing;

(c) any other testing condition not described or determined in point (b);

(d) for on mode:

(i) the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content; for the HDR dynamic broadcast content video signal the electronic display must be automatically switched to HDR mode by the HDR metadata of that signal;

(ii) the sequence of steps for achieving a stable condition with respect to power demand level; and

(iii) the picture settings used for the brightest peak white luminance measurement and the test pattern for the video signal used for the measurement.

(e) For standby and off mode:

(i) the measurement method used;

(ii) description of how the mode was selected or programmed including any enhanced reactivation functions; and

(iii) sequence of events to reach the condition where the electronic display automatically changes mode.

(f) For electronic displays with a designated computer signal interface:

(i) confirmation that the electronic display prioritises the computer display power management protocols set out in point 6.2.3 of Annex II of Commission Regulation (EU) No 617/2013. Any deviation from the protocols should be reported;

(g) For the networked electronic displays only:

(i) number and type of network interfaces and, except for wireless network interfaces, their position in the electronic display;

(ii) whether the electronic display qualifies as electronic display with HiNA functionality; if no information is provided the electronic display is considered not to be HiNA display or display with HiNA functionality; and

(iii) information whether networked electronic display provides functionality allowing the power management function and/or the end-user to switch the electronic display being in a condition providing networked standby into standby mode, or off mode or another condition which does not exceed the applicable power demand requirements for off mode and/or standby mode including enhanced reactivation function power allowance where applicable.

(h) For each type of network port:

(i) the default time (mm:ss) after which the power management function, switches the display into a condition providing networked standby; and

(ii) the trigger to be used to reactivate the electronic display.

(10) where the information included in the technical documentation file for a particular electronic display model has been obtained:

(a) from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different manufacturer or

(b) by calculation on the basis of design or by extrapolation from another model of the same or of a different supplier, or both;

the technical documentation shall include, as appropriate, the details of such calculation, the assessment undertaken by suppliers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different suppliers; and

(11) the contact details of the person empowered to bind the supplier **<…>**, shall be made available, on request, to market surveillance authorities or to the Commission for carrying out their tasks under this Regulation.

ANNEX VII

Information to be provided in visual advertisements, in technical promotional material in distance selling and in telemarketing, except distance selling on the internet

1. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in point 1(e) of Article 3 and point (d) of Article 4, the energy efficiency class and the range of efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

2. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in point 1(f) of Article 3 and point (e) Article 4 the energy class and the range of efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

3. Any paper-based distance selling must show the energy class and the range of efficiency classes available on the label as set out in point 4 of this Annex.

4. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:

(a) an arrow, containing the letter of the energy efficiency class in 100 % white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;

(b) the colour of the arrow matching the colour of the energy efficiency class;

(c) the range of available energy efficiency classes in 100 % black; and,

(d) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the energy efficiency class.

By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

Figure 1

Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated



5. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the label and the product information sheet **<…>** by requesting a printed copy.

6. For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to obtain, on request, a printed copy of the label and the product information sheet.

ANNEX VIII

Information to be provided in the case of distance selling through the internet

1. The appropriate label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2(a) of Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If a nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

2. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

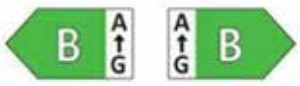
(b) indicate the energy efficiency class of the product on the arrow in 100 % white, Calibri Bold and in a font size equivalent to that of the price;

(c) have the range of available energy efficiency classes in 100 % black; and,

(d) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a visible border in 100 % black placed around the arrow and the letter of the energy efficiency class:

Figure 2

Coloured left/right arrow, with range of energy efficiency classes indicated



3. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 2 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label set out in Annex III;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism; and

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

4. The appropriate product information sheet made available by suppliers in accordance with point 1(h) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size

shall be such that the product information sheet is clearly visible and legible. The product information sheet may be displayed using a nested display **<…>** in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If a nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX IX
Verification procedure for market surveillance purposes

The verification tolerances defined in this Annex relate only to the verification by **Contracting Party** authorities of the declared values and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognizing the test conditions or test cycle) and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

As part of verifying the compliance of a product model with the requirements laid down in this Regulation, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to point 3 of Article 3 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** (declared values) and, where applicable, the values used to calculate these values are not more favourable for the supplier than the corresponding values given in the test reports;

(b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be one or more equivalent models.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

(6) If the result referred to in point 5 is not achieved, the model and all equivalent models shall be consid-

ered not to comply with this Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Energy Community Secretariat** without delay after a decision is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex IV.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method shall be applied.

Table 6

Verification tolerances

Parameter	**Verification tolerances**
On mode power demand ($P_{measured}$, Watts)	The determined value (*2) shall not exceed the declared value by more than 7 %.
Off mode, standby, and networked standby mode power demand in Watts, as applicable.	The determined value (*2) shall not exceed the declared value by more than 0,10 Watt if the declared value is 1,00 Watt or less, or by more than 10 % if the declared value is more than 1,00 Watt.
Visible screen area	The determined value (*1) shall not be lower than the declared value by more than 1 % or 0,1 dm^2, whichever is smaller.
Visible screen diagonal in centimetres	The determined value (*1) shall not be different from the declared value by more than 1 cm.
The screen resolution in horizontal and vertical pixels	The determined value (*1) shall not deviate from the declared value.
Peak white luminance	The determined value (*2) shall not be lower than the declared value by more than 8 %.
Length of time in on mode before the electronic display automatically switches to standby, off mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode	The determined value (*1) shall not exceed the declared value by more than 5 seconds.
For televisions: the length of time, following the last user interaction, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode or standby-mode	The determined value (*1) shall not exceed the declared value by more than 5 seconds.

For televisions equipped with room presence sensor: the length of time, when no presence is detected, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode	The determined value (*1) shall not exceed the declared value by more than 5 seconds.
For electronic displays other than televisions and broadcast displays: the length of time, when no input is detected, before the electronic display automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode or standby mode	The determined value (*1) shall not exceed the declared value by more than 5 seconds.

(*1) In the case that the determined value for a single unit does not comply, the model and all equivalent models shall be considered not to comply with this Regulation.

(*2) In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetic mean of the values determined for these three additional units.

DELEGATED REGULATION (EU) 2019/2014 of 11 March 2019 supplementing Regulation (EU) 2017/1369 with regard to energy labelling of household washing machines and household washer-dryers

Incorporated and adapted by Ministerial Council Decision 2022/04/MC-EnC of 15 December 2022 on adapting and incorporating certain Delegated Regulations on energy-related products, introducing rescaled labels in the Energy Community acquis communautaire and repealing Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 874/2012, and Directive 96/60/EC

The adaptations made by Ministerial Council Decision 2022/04/MC-EnC are highlighted in ***bold and blue****.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, electric mains-operated household washing machines and electric mains-operated household washer-dryers including those which can also be powered by batteries, and including built-in household washing machines and built-in household washer-dryers.

2. This Regulation shall not apply to

(a) washing machines and washer-dryers in the scope of Directive 2006/42/EC;

(b) battery-operated household washing machines and battery-operated household washer-dryers that can be connected to the mains through an AC/DC converter purchased separately;

(c) household washing machines with a rated capacity lower than 2 kg and household washer-dryers with a rated washing capacity lower than or equal to 2 kg.

Article 2

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(1) 'mains' or 'electric mains' means the electricity supply from the grid of 230 (±10 %) volts of alternating current at 50 Hz;

(2) 'automatic washing machine' means a washing machine where the load is fully treated by the washing machine without the need for user intervention at any point during the programme;

(3) 'household washing machine' means an automatic washing machine which cleans and rinses household laundry by using water, chemical, mechanical and thermal means, which also has a spin extraction function, and which is declared by the manufacturer in the Declaration of Conformity as complying with Directive 2014/35/EU of the European Parliament and of the Council or with Directive 2014/53/EU of the European Parliament and of the Council;

(4) 'household washer-dryer' means a household washing machine which, in addition to the functions of an automatic washing machine, in the same drum includes a means for drying the textiles by heating and tumbling, and which is declared by the manufacturer in the Declaration of Conformity as complying with Directive 2014/35/EU or with Directive 2014/53/EU;

(5) 'built-in household washing machine' means a household washing machine that is designed, tested and marketed exclusively:

(a) to be installed in cabinetry or encased (top and/or bottom, and sides) by panels;

(b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and

(c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel;

(6) 'built-in household washer-dryer' means a household washer-dryer that is designed, tested and marketed exclusively:

(a) to be installed in cabinetry or encased (top and/or bottom, and sides) by panels;

(b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and

(c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel;

(7) 'multi-drum household washing machine' means a household washing machine equipped with more than one drum, whether in separate units or in the same casing;

(8) 'multi-drum household washer-dryer' means a household washer-dryer equipped with more than one drum, whether in separate units or in the same casing;

(9) 'point of sale' means a location where household washing machines or household washer-dryers, or both, are displayed or offered for sale, hire or hire-purchase.

For the purposes of the annexes, additional definitions are set out in Annex I.

Article 3

Obligations of suppliers

1. Suppliers shall ensure that:

(a) each household washing machine and household washer-dryer is supplied with a printed label in the format as set out in Annex III and, for a multi-drum household washing machine or a multi-drum household washer-dryer, in accordance with Annex X;

(b) **the product information sheet, as set out in Annex V, is made available free of charge, in electronic format;**

(c) **if specifically requested by the dealer of household washing machines and household washer-dryers, the product information sheet shall be made available in printed form, free of charge;**

(d) **the content of the technical documentation, as set out in Annex VI, is made available at the request of the market surveillance authorities of the Contracting Parties;**

(e) any visual advertisement for a specific model of household washing machine or household washer-dryer contains the energy efficiency class and the range of energy efficiency classes available on the label in accordance with Annex VII and Annex VIII;

(f) any technical promotional material concerning a specific model of household washing machine or household washer-dryer, including on the internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(g) **an electronic label in the format and containing the information as set out in Annex III is made available to dealers for each model of household washing machine and of household washer-dryer registered in the EU product database; for the models placed only on the markets of the Contracting Parties which are not registered in the EU product database, the label shall be generated without the EU logo, and the QR code shall be linked to the website with model's information maintained by the manufacturer**;

(h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each model of household washing machine and of household washer-dryer.

2. The energy efficiency class and the acoustic airborne noise emission class are defined in Annex II and shall be calculated in accordance with Annex IV.

Article 4

Obligations of dealers

Dealers shall ensure that:

(a) each household washing machine or household washer-dryer, at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label being displayed for built-in appliances in such a way as to be clearly visible, and for all other appliances in such a way as to be clearly visible on the outside on the front or top of the household washing machine or household washer-dryer;

(b) in the case of distance selling and sale through the internet, the label and product information sheet are provided in accordance with Annexes VII and VIII;

(c) any visual advertisement for a specific model of household washing machine or household washer-dryer contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(d) any technical promotional material concerning a specific model of household washing machine or household washer-dryer, including on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII.

Article 5

Obligations of internet hosting platforms

Where a hosting service provider **<…>** allows the direct selling of household washing machines or household washer-dryers through its internet website, the service provider shall enable the showing of the elec-

tronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

Article 6

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation methods set out in Annex IV.

Article 7

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex IX when performing the market surveillance checks referred to in paragraph 3 of Article 8 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC**.

Article 8

Review

<…>

Article 9

Repeal

<…>

Article 10

Transitional measures

<…>

Article 11

Entry into force and application

This Regulation enters into force on the day of the adoption of Ministerial Council Decision 2022/04/MC-EnC and is addressed to the Contracting Parties and the institutions of the Energy Community.

The Delegated Regulation 2019/2014 shall be transposed, implemented and applicable in all Contracting Parties by 31 December 2023. However, Article 3 paragraph 1 points (a) and (b) shall apply by 31 August 2023 at the latest.

ANNEX I
Definitions applicable for the annexes

The following definitions shall apply:

(1) 'Energy Efficiency Index' (EEI) means the ratio of the weighted energy consumption to the standard cycle energy consumption;

(2) 'programme' means a series of operations that are pre-defined and which are declared by the supplier as suitable for washing, drying or continuously washing and drying certain types of textile;

(3) 'washing cycle' means a complete washing process as defined by a selected programme, consisting of a series of different operations including washing, rinsing, and spinning;

(4) 'drying cycle' means a complete drying process as defined by the required programme, consisting of a series of different operations including heating and tumbling;

(5) 'complete cycle' means a washing and drying process, consisting of a washing cycle and a drying cycle;

(6) 'continuous cycle' means a complete cycle without interruption of the process and with no need for user intervention at any point during the programme;

(7) 'quick response' (QR) code means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the **EU product database**;

(8) 'rated capacity' means the maximum mass in kilogram stated by the supplier at 0,5 kg intervals of dry textiles of a particular type, which can be treated in one washing cycle of a household washing machine, or in one complete cycle of a household washer-dryer respectively, on the selected programme, when loaded in accordance with the supplier's instructions;

(9) 'rated washing capacity' means the maximum mass in kilogram stated by the supplier at 0,5 kg intervals of dry textiles of a particular type, which can be treated in one washing cycle of a household washing machine, or in one washing cycle of a household washer-dryer respectively, on the selected programme, when loaded in accordance with the supplier's instructions;

(10) 'rated drying capacity' means the maximum mass in kilogram stated by the supplier at 0,5 kg intervals of dry textiles of a particular type, which can be treated in one drying cycle of a household washer-dryer on the selected programme, when loaded in accordance with the supplier's instructions;

(11) 'eco 40-60' means the name of the programme declared by the supplier as able to clean normally soiled cotton laundry declared to be washable at 40 °C or 60 °C, together in the same washing cycle, and to which the information on the energy label and in the product information sheet relates;

(12) 'rinsing effectiveness' means the concentration of the residual content of linear alkylbenzene sulfonate (LAS) in the treated textiles after the washing cycle of a household washing machine or household washer-dryer (I_R) or the complete cycle of a household washer-dryer (J_R), expressed in gram per kilogram of dry textile;

(13) 'weighted energy consumption (E_W)' means the weighted average of the energy consumption of the washing cycle of a household washing machine or a household washer-dryer for the eco 40-60 programme at rated washing capacity, and at half and at a quarter of the rated washing capacity, expressed in kilowatt hour per cycle;

(14) 'weighted energy consumption (E_{WD})' means the weighted average of the energy consumption of

the household washer-dryer for the wash and dry cycle at rated capacity and at half of the rated capacity, expressed in kilowatt hour per cycle;

(15) 'standard cycle energy consumption' (SCE) means the energy consumption taken as a reference, as a function of the rated capacity of a household washing machine or of a household washer-dryer, expressed in kilowatt hour per cycle;

(16) 'weighted water consumption (W_W)' means the weighted average of the water consumption of a the washing cycle of a household washing machine or of a household washer-dryer for the eco 40-60 programme at rated washing capacity, and at half and at a quarter of the rated washing capacity, expressed in litre per cycle;

(17) 'weighted water consumption (W_{WD})' means the weighted average of the water consumption of a household washer-dryer for the wash and dry cycle at rated capacity and at half of the rated capacity, expressed in litre per cycle;

(18) 'remaining moisture content' means for household washing machines and for the washing cycle of household washer-dryers, the amount of moisture contained in the load at the end of the washing cycle;

(19) 'final moisture content' means for household washer-dryers the amount of moisture contained in the load at the end of the drying cycle;

(20) 'cupboard dry' means the status of treated textiles dried in a drying cycle to a final moisture content of 0 %;

(21) 'programme duration' (t_W) means the length of time beginning with the initiation of the programme selected, excluding any user programmed delay, until the end of the programme is indicated and the user has access to the load.

(22) 'cycle duration' (t_{WD}) means, for the complete cycle of a household washer-dryer, the length of time beginning with the initiation of the programme selected for the washing cycle, excluding any user programmed delay, until the end of the drying cycle is indicated and the user has access to the load;

(23) off mode' means a condition in which the household washing machine or the household washer-dryer is connected to the mains and is not providing any function; the following shall also be considered as off mode:

(a) a condition providing only an indication of off mode;

(b) a condition providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2014/30/EU of the European Parliament and of the Council ([3]);

(24) 'standby mode' means a condition where the household washing machine or the household washer-dryer is connected to the mains and provides only the following functions, which may persist for an indefinite time:

(a) reactivation function or reactivation function and a mere indication of enabled reactivation function, and/or

(b) reactivation function through a connection to a network; and/or

(c) information or status display, and/or

(d) detection function for emergency measures;

(25) 'network' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);

(26) 'wrinkle guard function' means an operation of the household washing machine or of the household washer-dryer after completion of a programme to prevent excessive wrinkle building in the laundry;

(27) 'delay start' means a condition where the user has selected a specified delay to the beginning or end of the cycle of the selected programme;

(28) guarantee' means any undertaking by the retailer or supplier to the consumer to:

(a) reimburse the price paid; or

(b) replace, repair or handle the household washing machine and the household washer-dryer in any way if they do not meet the specifications set out in the guarantee statement or in the relevant advertising;

(29) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(30) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(31) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(32) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications;

(33) 'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters, pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC**, and in accordance with Article 3(1)(d) and Annex VI of this Regulation, for the verification of compliance by the **Contracting Party** authorities.

ANNEX II

A. Energy efficiency classes

The energy efficiency class of a household washing machine and of the washing cycle of a household washer-dryer shall be determined on the basis of its Energy Efficiency Index (EEI_W) as set out in Table 1.

The EEI_W of a household washing machine and of the washing cycle of a household washer-dryer shall be calculated in accordance with Annex IV.

Table 1

Energy efficiency classes of household washing machines and of the washing cycle of household washer-dryers

Energy Efficiency Class	Energy Efficiency Index (EEI_W)
A	$\mathbf{EEI_W} \leq 52$
B	$52 < \mathbf{EEI_W} \leq 60$
C	$60 < \mathbf{EEI_W} \leq 69$
D	$69 < \mathbf{EEI_W} \leq 80$
E	$80 < \mathbf{EEI_W} \leq 91$
F	$91 < \mathbf{EEI_W} \leq 102$
G	$\mathbf{EEI_W} > 102$

The energy efficiency class of the complete cycle of a household washer-dryer shall be determined on the basis of its Energy Efficiency Index (EEI_{WD}) as set out in Table 2.

The EEI_{WD} of the complete cycle of a household washer-dryer shall be calculated in accordance with Annex IV.

Table 2

Energy efficiency classes of the complete cycle of a household washer-dryer

Energy Efficiency Class	Energy Efficiency Index (EEI_{WD})
A	$\mathbf{EEI_{WD}} \leq 37$
B	$37 < \mathbf{EEI_{WD}} \leq 45$
C	$45 < \mathbf{EEI_{WD}} \leq 55$
D	$55 < \mathbf{EEI_{WD}} \leq 67$
E	$67 < \mathbf{EEI_{WD}} \leq 82$
F	$82 < \mathbf{EEI_{WD}} \leq 100$
G	$\mathbf{EEI_{WD}} > 100$

B. Spin-drying efficiency classes

The spin-drying efficiency class of a household washing machine and of the washing cycle of a household washer-dryer shall be determined on the basis of the remaining moisture content (D) as set out in Table 3.

The D of a household washing machine and of the washing cycle of a household washer-dryer shall be calculated in accordance with Annex IV.

Table 3

Spin-drying efficiency classes

Spin-drying efficiency class	Remaining moisture content (D) (%)
A	$D < 45$
B	$45 \leq D < 54$
C	$54 \leq D < 63$
D	$63 \leq D < 72$
E	$72 \leq D < 81$
F	$81 \leq D < 90$
G	$D \geq 90$

C. Acoustic airborne noise emission classes

The acoustic airborne noise emission class of a household washing machine and of a washing cycle of a household washer-dryer shall be determined on the basis of the acoustic airborne noise emissions as set out in Table 4.

Table 4

Acoustic airborne noise emission classes

Phase	Acoustic airborne noise emission class	Noise (dB)
Spinning	A	$n < 73$
	B	$73 \leq n < 77$
	C	$77 \leq n < 81$
	D	$n \geq 81$

ANNEX III

A. Label for household washing machines

1. LABEL FOR HOUSEHOLD WASHING MACHINES

1.1. Label

1.2. The following information shall be included in the label:

I. QR code;

II. supplier's name or trade mark;

III. supplier's model identifier;

IV. scale of energy efficiency classes from A to G;

V. the energy efficiency class determined in accordance with Annex II;

VI. weighted energy consumption per 100 cycles in kWh, rounded to the nearest integer in accordance with Annex IV;

VII. rated capacity, in kg, for the eco 40-60 programme;

VIII. weighted water consumption per cycle in litres, rounded to the nearest integer in accordance with Annex IV:

IX. duration of the eco 40-60 programme at rated capacity in h:min rounded to the nearest minute;

X. Spin-drying efficiency class, determined in accordance with point B of Annex II;

XI. airborne acoustic noise emissions of the spinning phase, expressed in dB(A) re 1 pW and rounded to the nearest integer, and airborne acoustic noise emission class, determined in accordance with point C of Annex II;

XII. the number of this Regulation, that is '2019/2014'.

2. LABEL DESIGN FOR HOUSEHOLD WASHING MACHINES

The design of the label shall be as in the figure below.

Whereby:

(a) The label shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be 100 % white.

(c) The typefaces shall be Verdana and Calibri.

(d) The dimensions and specifications of the elements constituting the label shall be as indicated in the label design for household washing machines.

(e) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(f) The label shall fulfil all the following requirements (numbers refer to the figure above):

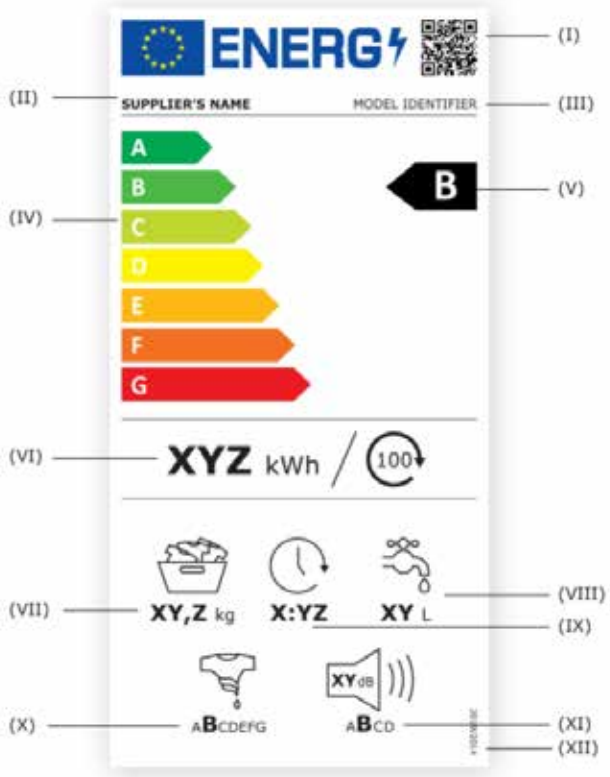
1 the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

2 the colour of the energy logo shall be: 100,80,0,0;

3 the QR code shall be 100 % black;



4 the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;

5 the model identifier shall be 100 % black and in Verdana Regular 9 pt;

6 the A to G scale shall be as follows:

— the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4,5 mm from the left side of the arrows;

— the colours of the A to G scale arrows shall be as follows:

— A-class: 100,0,100,0;

— B-class: 70,0,100,0;

— C-class: 30,0,100,0;

— D-class: 0,0,100,0;

— E-class: 0,30,100,0;

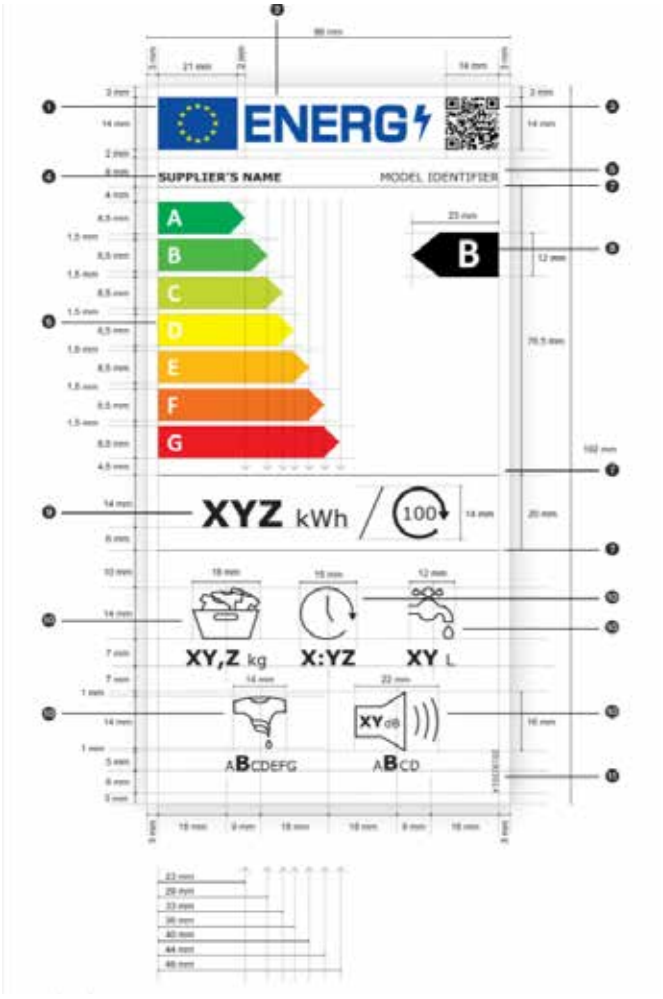
— F-class: 0,70,100,0;

— G-class: 0,100,100,0;

7 the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

8 the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 33 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

9 the value of the weighted energy consumption per 100 cycles shall be in Verdana Bold font 28 pt; 'kWh' shall be in Verdana Regular font, 18 pt; the number '100' in the icon representing 100 cycles shall be in Verdana Regular 14 pt. The value and unit shall be centred and 100 % black;



10 the pictograms shall be as shown as in the label design and as follows:

— the pictograms' lines shall have a weight of 1,2 pt and they and the texts (numbers and units) shall be 100 % black;

— the texts under the 3 top pictograms shall be in Verdana Bold 16 pt with the units in Verdana Regular 12 pt, they shall be centred under the pictograms;

— the spin-drying energy efficiency pictogram: the range of spin-drying energy efficiency classes (A to G) shall be centred under the pictogram, with the letter of the applicable spin-drying energy efficiency class in Verdana Bold 16 pt and the other letters of the spin-drying energy efficiency classes in Verdana Regular 10 pt;

— the airborne acoustical noise emission pictogram: the number of decibels in the loudspeaker shall be in Verdana Bold 12 pt, with the unit 'dB' in Verdana Regular 9 pt; the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;

the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.

B. Label for household washer-dryer

1. LABEL FOR HOUSEHOLD WASHER-DRYERS

1.1. Label:

1.2. The following information shall be included in the label:

I. QR code;

II. supplier's name or trade mark;

III. supplier's model identifier;

IV. scales of energy efficiency classes from A to G for the complete cycle (on the left side) and for the washing cycle (on the right side);

V. the energy efficiency class for the complete cycle (on the left side) determined in accordance with Annex II; and for the washing cycle (on the right side) determined in accordance with Annex II;

VI. weighted energy consumption per 100 cycles in kWh, rounded to the nearest integer in accordance with Annex IV, for the complete cycle (on the left side);

VII. weighted energy consumption per 100 cycles in kWh, rounded to the nearest integer in accordance with Annex IV for the washing cycle (on the right side);

VIII. rated capacity for the complete cycle (on the left side) and for the washing cycle (on the right side);

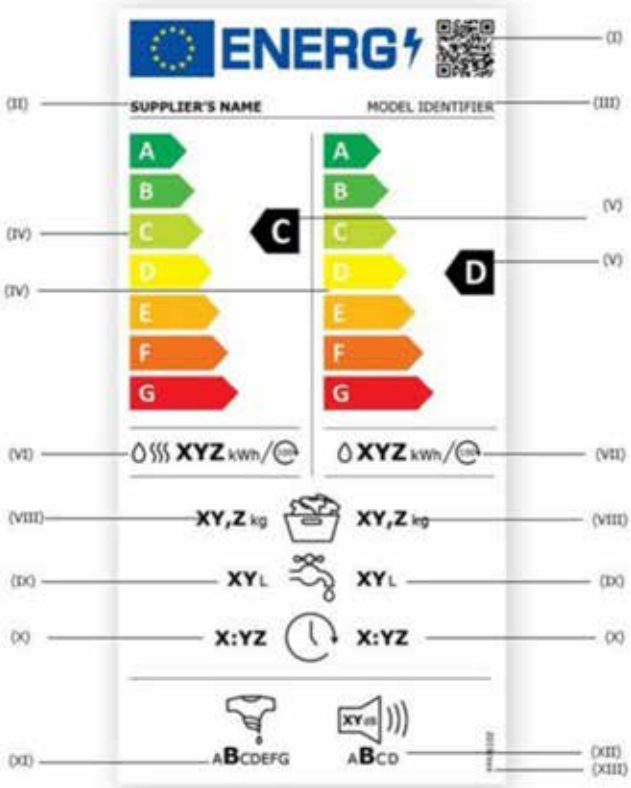
IX. weighted water consumption per cycle in litre, rounded to the nearest integer in accordance with Annex IV for the complete cycle (on the left side) and for the washing cycle (on the right side);

X. cycle duration at rated capacity for the complete cycle (on the left side) and for the washing cycle (on the right side);

XI. Spin-drying efficiency class, determined in accordance with point B of Annex II;

XII. airborne acoustic noise emission class of the spinning phase of the eco 40-60 programme and value in dB(A) re 1 pW and rounded to the nearest integer;

XIII. the number of this Regulation, that is '2019/2014'.



2. LABEL DESIGN FOR HOUSEHOLD WASHER-DRYERS

Whereby:

(a) The label shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be 100 % white.

(c) The typefaces shall be Verdana and Calibri.

(d) The dimensions and specifications of the elements constituting the label shall be as indicated in the label design for household washer dryers.

(e) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(f) The label shall fulfil all the following requirements (numbers refer to the figure above):

1 the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

2 the colour of the energy logo shall be: 100,80,0,0;

3 the QR code shall be 100 % black;

4 the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;

5 the model identifier shall be 100 % black and in Verdana Regular 9 pt;

6 the A to G scales shall be as follows:

— the letters of the energy efficiency scales shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4 mm from the left side of the arrows;

— the colours of the A to G scale arrows shall be as follows:

— A-class: 100,0,100,0;

— B-class: 70,0,100,0;

— C-class: 30,0,100,0;

— D-class: 0,0,100,0;

— E-class: 0,30,100,0;

— F-class: 0,70,100,0;

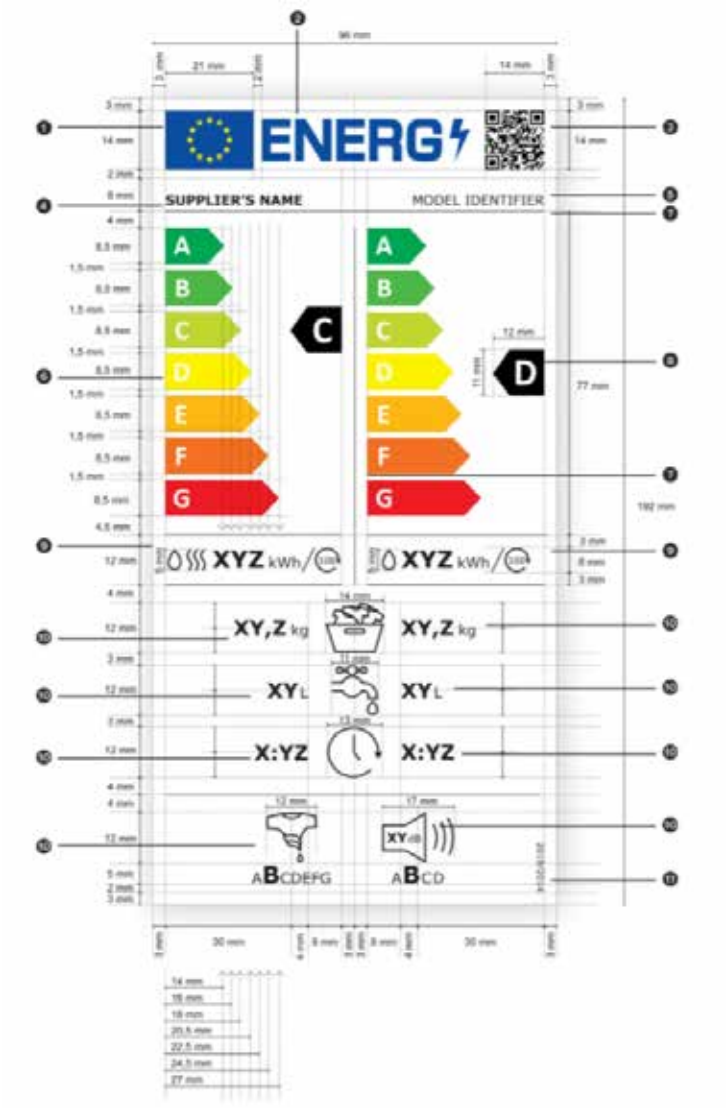
— G-class: 0,100,100,0;

7 the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

8 the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 26 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

9 the value of the weighted energy consumption per 100 cycles shall be in Verdana Bold 16 pt; 'kWh' shall be in Verdana Regular 10 pt; the number '100' in the pictogram representing 100 cycles shall be in

Verdana Regular 6 pt. The text shall be centred and 100 % black;



10 the pictograms shall be as shown as in the label designs and as follows:

— the pictograms' lines shall have a weight of 1,2 pt and they and the texts (numbers and units) shall be 100 % black;

— the texts at the right and left of the pictograms shall be in Verdana Bold 14 pt with the unit in Verdana Regular 10 pt;

— the spin-drying energy efficiency pictogram: the range of spin-drying energy efficiency classes (A

to G) shall be centred under the pictogram, with the letter of the applicable spin-drying energy efficiency class in Verdana Bold 16 pt and the other letters of the spin-drying energy efficiency classes in Verdana Regular 10 pt;

— the airborne acoustical noise emission pictogram: the number of decibels in the loudspeaker shall be in Verdana Bold 9 pt, with the unit 'dB' in Verdana Regular 7 pt; the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;

11 the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.

ANNEX IV
Measurement methods and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or other reliable, accurate and reproducible methods, which takes into account the generally recognised state-of-the-art, and in line with the following provisions.

Where a parameter is declared pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Annex VI Table 7 for household washing machines or Annex VI Table 8 for household washer-dryers, its declared value shall be used by the supplier for the calculations in this Annex.

The eco 40-60 programme shall be used for the measurement and calculation of the energy consumption, Energy Efficiency Index (EEI_W), maximum temperature, water consumption, remaining moisture content, programme duration, washing efficiency, rinsing effectiveness, spin-drying efficiency and airborne acoustical noise emissions in the spinning phase for household washing machines and the washing cycle of household washer-dryers. The energy consumption, maximum temperature, water consumption, remaining moisture content, programme duration, washing efficiency and rinsing effectiveness shall be measured concurrently.

The wash and dry cycle shall be used for the measurement and calculation of the energy consumption, Energy Efficiency Index (EEI_{WD}), maximum temperature in the washing phase, water consumption, final moisture content, cycle duration, washing efficiency and rinsing effectiveness for household washer-dryers. The energy consumption, maximum temperature, water consumption, final moisture content, cycle duration, washing efficiency and rinsing effectiveness shall be measured concurrently.

When measuring the parameters of this annex for the eco 40-60 programme and for the wash and dry cycle, the highest spin speed option for the eco 40-60 programme shall be used at rated capacity, at half of the rated capacity and, where relevant, at a quarter of the rated capacity.

For household washing machines with a rated capacity lower than or equal to 3 kg and for household washer-dryers with a rated washing capacity lower than or equal to 3 kg, the parameters for the eco 40-60 programme and for the wash and dry cycle shall be measured at rated capacity only.

The duration of the eco 40-60 programme (t_W) at rated washing capacity, at half of the rated washing capacity and at a quarter of the rated washing capacity, and the duration of the wash and dry cycle (t_{WD}) at rated capacity and at half of the rated capacity, are expressed in hours and minutes and rounded to the nearest minute.

Airborne acoustical noise emissions are measured in dB(A) with respect to 1 pW and rounded to the nearest integer.

1. RATED CAPACITY OF HOUSEHOLD WASHER-DRYERS

The rated capacity of household washer-dryers is the rated capacity of the wash and dry cycle.

If the household washer-dryer provides a continuous cycle, the rated capacity of the wash and dry cycle shall be the rated capacity for this cycle.

If the household washer-dryer does not provide a continuous cycle, the rated capacity of the wash and dry cycle shall be the lower value of the rated washing capacity of the eco 40-60 programme and the rated drying capacity of the drying cycle achieving cupboard dry status.

2. ENERGY EFFICIENCY INDEX

2.1. Energy Efficiency Index (EEI_W) of household washing machines and the washing cycle of household washer-dryers

For the calculation of the EEI_W, the weighted energy consumption of the eco 40-60 programme at the rated washing capacity, half of the rated washing capacity and a quarter of the rated washing capacity is compared to its standard energy consumption.

(a) The EEI_W is calculated as follows, and is rounded to one decimal place:

$$\mathbf{EEI_W = (E_W/SCE_W) \times 100}$$

where:

E_W is the weighted energy consumption of the household washing machine or the washing cycle of the household washer-dryer;

SCE_W is the standard cycle energy consumption of the household washing machine or the washing cycle of the household washer-dryer.

(b) The SCE_W is calculated in kWh per cycle and rounded to three decimal places as follows:

$$\mathbf{SCE_W = -0{,}0025 \times c^2 + 0{,}0846 \times c + 0{,}3920}$$

where c is the rated capacity of the household washing machine or the rated washing capacity of the household washer-dryer for the eco 40-60 programme.

(c) The E_W is calculated in kWh per cycle as follows and rounded to three decimal places:

$$E_W = A \times E_{W,full} + B \times E_{W,\frac{1}{2}} + C \times E_{W,\frac{1}{4}}$$

where:

$E_{W,full}$ is the energy consumption of the household washing machine or of the washing cycle of the household washer-dryer for the eco 40-60 programme at the rated washing capacity and rounded to three decimal places;

$E_{W,½}$ is the energy consumption of the household washing machine or of the washing cycle of the household washer-dryer for the eco 40-60 programme at half of the rated washing capacity and rounded to three decimal places;

$E_{W,1/4}$ is the energy consumption of the household washing machine or of the washing cycle of the household washer-dryer for the eco 40-60 programme at a quarter of the rated washing capacity and rounded to three decimal places;

A is the weighting factor for rated washing capacity and rounded to three decimal places;

B is the weighting factor for half of the rated washing capacity and rounded to three decimal places;

C is the weighting factor for a quarter of the rated washing capacity and rounded to three decimal places.

For household washing machines with a rated capacity lower than or equal to 3 kg and for household

washer-dryers with a rated washing capacity lower than or equal to 3 kg, A shall be equal to 1; B and C shall be equal to 0.

For other household washing machines and household washer-dryers, the values of the weighting factors depend on the rated capacity according to the following equations:

$A = -0{,}0391 \times c + 0{,}6918$

$B = -0{,}0109 \times c + 0{,}3582$

$C = 1 - (A + B)$

where c is the rated capacity of the household washing machine or the rated washing capacity of the household washer dryer.

(d) The weighted energy consumption per 100 cycles of the household washing machine or of the washing cycle of the household washer-dryer is calculated as follows and rounded to the nearest integer:

$E_W \times 100$

2.2. Energy Efficiency Index (EEI_{WD}) of the complete cycle of household washer-dryers

For the calculation of the EEI_{WD} of a household washer-dryer model, the weighted energy consumption of the wash and dry cycle at the rated capacity and half of the rated capacity is compared to its standard cycle energy consumption.

(a) The EEI_{WD} is calculated as follows, and is rounded to one decimal place:

$$\mathbf{EEI_{WD} = (E_{WD}/SCE_{WD}) \times 100}$$

where:

E_{WD} is the weighted energy consumption of the complete cycle of the household washer-dryer;

SCE_{WD} is the standard cycle energy consumption of the complete cycle of the household washer-dryer.

(b) The SCE_{WD} is calculated in kWh per cycle and rounded to three decimal places as follows:

$SCE_{WD} = -0{,}0502 \times d^2 + 1{,}1742 \times d - 0{,}644$

where d is the rated capacity of the household washer-dryer for the wash and dry cycle.

(c) For household washer-dryers with a rated washing capacity lower than or equal to 3 kg, the E_{WD} is the energy consumption at rated capacity and rounded to three decimal places.

For other household washer-dryers, the E_{WD} is calculated in kWh per cycle as follows and rounded to three decimal places:

$$E_{WD} = \frac{[3 \times E_{WD,full} + 2 \times E_{WD,\frac{1}{2}}]}{5}$$

where:

$E_{WD,full}$ is the energy consumption of the household washer-dryer for the wash and dry cycle at rated capacity and rounded to three decimal places;

$E_{WD,½}$ is the energy consumption of the household washer-dryer for the wash and dry cycle at half the rated capacity and rounded to three decimal places.

(d) The weighted energy consumption per 100 cycles of the complete cycle of the washer-dryer is calculated as follows and rounded to the nearest integer:

$E_{WD} \times 100$

3. WASHING EFFICIENCY INDEX

The washing efficiency index of household washing machines and of the washing cycle of household washer-dryers (I_W) and the washing efficiency index of the complete cycle of household washer-dryers (J_W) shall be calculated using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or other reliable, accurate and reproducible methods, which take into account the generally recognised state-of-the-art, and rounded to three decimal places.

For household washing machines with a rated capacity higher than 3 kg and for the washing cycle of household washer-dryers with a rated capacity higher than 3 kg, the I_W indicated on the Product Information Sheet shall be the lowest value between the washing efficiency index at rated washing capacity, half of the rated washing capacity, and quarter of the rated washing capacity.

For household washing machines with a rated capacity lower than or equal to 3 kg and for the washing cycle of household washer-dryers with a rated capacity lower than or equal to 3 kg, the I_W indicated on the Product Information Sheet shall be the washing efficiency index at rated washing capacity.

For household washer-dryers with a rated capacity higher than 3 kg, the J_W indicated on the Product Information Sheet shall be the lower value between the washing efficiency index at rated capacity and half of the rated capacity.

For household washer-dryers with a rated capacity lower than or equal to 3 kg, the J_W indicated on the Product Information Sheet shall be the washing efficiency index at rated capacity.

4. RINSING EFFECTIVENESS

The rinsing effectiveness of household washing machines and of the washing cycle of household washer-dryers (I_R) and the rinsing effectiveness of the complete cycle of household washer-dryers (J_R) shall be calculated using harmonised standards, the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or other reliable, accurate and reproducible method based on the detection of the linear alkylbenzene sulfonate (LAS) marker, and rounded to one decimal place.

For household washing machines with a rated capacity higher than 3 kg and for the washing cycle of household washer-dryers with a rated capacity higher than 3 kg, the I_R indicated on the Product Information Sheet shall be the highest value between the rinsing effectiveness at rated washing capacity, half of the rated washing capacity, and quarter of the rated washing capacity.

For household washing machines with a rated capacity lower than, or equal to 3 kg and for the washing cycle of household washer-dryers with a rated capacity lower than, or equal to 3 kg, no value shall be indicated for I_R on the Product Information Sheet.

For household washer-dryers with a rated capacity higher than 3 kg, the J_R indicated on the Product Information Sheet shall be the higher value between the rinsing effectiveness at rated capacity and half of the rated capacity.

For household washer-dryers with a rated capacity lower than, or equal to 3 kg, no value shall be indicated for J_R on the Product Information Sheet.

5. MAXIMUM TEMPERATURE

The maximum temperature reached for 5 minutes inside the laundry being treated in household washing machines and in the washing cycle of household washer-dryers shall be determined using harmonised standards the reference numbers of which have been published for this purpose in the , or other reliable, accurate and reproducible method, and rounded to the nearest integer.

6. WEIGHTED WATER CONSUMPTION

(1) The weighted water consumption (W_W) of a household washing machine or the washing cycle of a household washer-dryer is calculated in litres and rounded to the nearest integer:

$$\mathbf{W_W = (A \times W_{W,full} + B \times W_{W,1/2} + C \times W_{W,1/4})}$$

where:

$W_{W,full}$ is the water consumption of the household washing machine or of the washing cycle of a household washer-dryer for the eco 40-60 programme at rated washing capacity, in litres and rounded to one decimal place;

$W_{W,½}$ is the water consumption of the household washing machine or of the washing cycle of a household washer-dryer for the eco 40-60 programme at half of the rated washing capacity, in litres and rounded to one decimal place;

$W_{W,1/4}$ is the water consumption of the household washing machine or of the washing cycle of a household washer-dryer for the eco 40-60 programme at a quarter of the rated washing capacity, in litres and rounded to one decimal place;

A, B and C are the weighting factors as described in point 2.1(c).

(2) For household washer-dryers with a rated washing capacity lower than or equal to 3 kg, the weighted water consumption of the wash and dry cycle is the water consumption at rated capacity and rounded to the nearest integer.

For other household washer-dryers, the weighted water consumption (W_{WD}) of the wash and dry cycle of a household washer-dryer is calculated as follows and rounded to the nearest integer:

$$W_{WD} = \frac{[3 \times W_{WD,full} + 2 \times W_{WD,\frac{1}{2}}]}{5}$$

where:

$W_{WD,full}$ is the water consumption of the wash and dry cycle of a household washer-dryer at rated capacity, in litres and rounded to one decimal place;

$W_{WD,½}$ is the water consumption of the wash and dry cycle of a household washer-dryer at half of the rated capacity, in litres and rounded to one decimal place.

7. REMAINING MOISTURE CONTENT

The weighted remaining moisture content after washing (D) of a household washing machine and of the washing cycle of a household washer-dryer is calculated in percentage as follows and rounded to one decimal place:

$$D = \left[A \times D_{full} + B \times D_{\frac{1}{2}} + C \times D_{\frac{1}{4}}\right]$$

where:

D_{full} is the remaining moisture content for the eco 40-60 programme at rated washing capacity, in percentage and rounded to two decimal places;

$D_{1/2}$ is the remaining moisture content for the eco 40-60 programme at half of the rated washing capacity in percentage and rounded to two decimal places;

$D_{1/4}$ is the remaining moisture content for the eco 40-60 programme at a quarter of the rated washing capacity in percentage and rounded to two decimal places;

A, B and C are the weighting factors as described in point 2.1(c).

8. FINAL MOISTURE CONTENT

For the drying cycle of a household washer-dryer, cupboard dry status corresponds to 0 % final moisture content, which is the thermodynamic equilibrium of the load with the ambient air conditions of temperature (tested at 20 ± 2 °C) and relative humidity (tested at 65 ± 5 %).

The final moisture content is calculated in accordance with the harmonised standards the reference numbers of which have been published for this purpose in the and rounded to one decimal place.

9. LOW POWER MODES

Where applicable, the power consumption of the off mode (P_o), standby mode (P_{sm}) and delay start (P_{ds}) are measured, expressed in W, and rounded to two decimal places.

During measurements of the power consumption in low power modes, the following shall be checked and recorded:

— the display or not of information,

— the activation or not of a network connection.

If a household washing machine or a household washer-dryer provides for a wrinkle guard function, this operation shall be interrupted by opening the household washing machine or household washer-dryer door, or any other appropriate intervention 15 minutes before the measurement of the power consumption.

10. ACOUSTIC AIRBORNE NOISE EMISSION

The acoustic airborne noise emission of the spinning phase of household washing machines and household washer-dryers shall be calculated for the eco 40-60 programme at rated washing capacity, using harmonised standards the reference numbers of which have been published for this purpose in the , or other reliable, accurate and reproducible methods, which take into account the generally recognised state-of-the-art,

and rounded to the nearest integer.

11. SPIN SPEED

The spin speed of a household washing machine and of the washing cycle of a household washer-dryer shall be measured or calculated at the highest spin speed option for the eco 40-60 programme using harmonised standards the reference numbers of which have been published for this purpose in the , or other reliable, accurate and reproducible methods, which take into account the generally recognised state-of-the-art, and rounded to the nearest integer.

ANNEX V
Product information sheet

1. Household washing machines

<...>

Table 5

Content, order and format of the product information sheet

Supplier's name or trade mark:					
Supplier's address:					
Model identifier:					
General product parameters:					
Parameter	Value		Parameter	Value	
Rated capacity [b] (kg)	x,x		Dimensions in cm	Height	x
			Width	x	
			Depth	x	
Energy efficiency index [b] (EEI_W)	x,x		Energy efficiency class [b]	[A/B/C/D/E/F/G]	
Washing efficiency index [b]	x,xxx		Rinsing effectiveness (g/kg) [b]	x,x	
Energy consumption in kWh per cycle, based on the eco 40-60 programme at a combination of full and partial loads. Actual energy consumption will depend on how the appliance is used.	x,xxx		Water consumption in litre per cycle, based on the eco 40-60 programme at a combination of full and partial loads. Actual water consumption will depend on how the appliance is used and on the hardness of the water.	x	
Maximum temperature inside the treated textile [b] (°C)	Rated capacity	x	Weighted remaining moisture content [b] (%)	x,x	
	Half	x			
	Quarter	x			
Spin speed [b] (rpm)	Rated capacity	x	Spin-drying efficiency class [b]	[A/B/C/D/E/F/G]	
	Half	x			
	Quarter	x			
Programme duration [b] (h:min)	Rated capacity	x:xx	Type	[built-in/free-standing]	
	Half	x:xx			
	Quarter	x:xx			

Airborne acoustical noise emissions in the spinning phase [b] (dB(A) re 1 pW)	x	Airborne acoustical noise emission class [b] (spinning phase)	[A/B/C/D]
Off-mode (W) (if applicable)	x,xx	Standby mode (W) (if applicable)	x,xx
Delay start (W) (if applicable)	x,xx	Networked standby (W) (if applicable)	x,xx
Minimum duration of the guarantee offered by the supplier:			
This product has been designed to release silver ions during the washing cycle		[YES/NO]	
Additional information:			
Weblink to the supplier's website.			
[a] **<…>** [b] for the eco 40-60 programme. [c] **<…>** [d] **<…>**			

2. Household washer-dryers

<…>

Table 6

Content, order and format of the product information sheet

Supplier's name or trade mark:					
Supplier's address:					
Model identifier:					
General product parameters:					
Parameter	Value		Parameter	Value	
Rated capacity (kg)	Rated capacity [c]	x,x	Dimensions in cm	Height	x
	Rated washing capacity [b]	x,x		Width	x
				Depth	x
Energy Efficiency Index	EEI_W [b]	x,x	Energy efficiency class	EEI_W [b]	[A/B/C/D/E/F/G]
	EEI_{WD} [c]	x,x		EEI_{WD} [c]	[A/B/C/D/E/F/G]
Washing efficiency index	I_W [b]	x,xxx	Rinsing effectiveness (g/kg dry textile)	I_R [b]	x,x
	J_W [c]	x,xxx		J_R [c]	x,x

<table>
<tr><td>Energy consumption in kWh per cycle, for the washing cycle of the household washer-dryer, using the eco 40-60 programme at a combination of full and partial loads. Actual energy consumption will depend on how the appliance is used</td><td colspan="2">x,xxx</td><td>Energy consumption in kWh per cycle, for the wash and dry cycle of the household washer-dryer at a combination of full and half loads. Actual energy consumption will depend on how the appliance is used</td><td colspan="2">x,xxx</td></tr>
<tr><td>Water consumption in litre per cycle, for the eco 40-60 programme at a combination of full and partial loads. Actual water consumption will depend on how the appliance is used and on the hardness of the water</td><td colspan="2">x</td><td>Water consumption in litre per cycle, for the wash and dry cycle of the household washer-dryer at a combination of full and half loads. Actual water consumption will depend on how the appliance is used and on the hardness of the water</td><td colspan="2">x</td></tr>
<tr><td rowspan="3">Maximum temperature inside the treated textile (°C) for the washing cycle of the household washer-dryer, using the eco 40-60 programme</td><td>Rated washing capacity</td><td>x</td><td rowspan="3">Maximum temperature inside the treated textile (°C) for the washing cycle of the household washer-dryer, using the wash and dry cycle</td><td>Rated capacity</td><td>x</td></tr>
<tr><td>Half</td><td>x</td><td rowspan="2">Half</td><td rowspan="2">x</td></tr>
<tr><td>Quarter</td><td>x</td></tr>
<tr><td rowspan="3">Spin speed (rpm) [b]</td><td>Rated washing capacity</td><td>x</td><td rowspan="3">Weighted remaining moisture content (%) [c]</td><td colspan="2" rowspan="3">x,x</td></tr>
<tr><td>Half</td><td>x</td></tr>
<tr><td>Quarter</td><td>x</td></tr>
<tr><td rowspan="3">Eco 40-60 programme duration (h:min)</td><td>Rated washing capacity</td><td>x:xx</td><td rowspan="3">Spin-drying efficiency class [b]</td><td colspan="2" rowspan="3">[A/B/C/D/E/F/G]</td></tr>
<tr><td>Half</td><td>x:xx</td></tr>
<tr><td>Quarter</td><td>x:xx</td></tr>
<tr><td rowspan="2">Airborne acoustical noise emissions during the spinning phase for the eco 40-60 washing cycle at rated washing capacity (dB(A) re 1 pW)</td><td colspan="2" rowspan="2">x</td><td>wash and dry cycle duration (h:min)</td><td>Rated capacity</td><td>x:xx</td></tr>
<tr><td>Half</td><td>x:xx</td><td></td></tr>
</table>

Type	[built-in/free-standing]	Airborne acoustical noise emission class for the spinning phase for the eco 40-60 programme at rated washing capacity	[A/B/C/D]
Off-mode (W) (if applicable)	x,xx	Standby mode (W) (if applicable)	x,xx
Delay start (W) (if applicable)	x,xx	Networked standby (W) (if applicable)	x,xx
Minimum duration of the guarantee offered by the supplier:			
This product has been designed to release silver ions during the washing cycle		[YES/NO]	
Additional information:			
Weblink to the supplier's website:			
([a]) **<...>** ([b]) for the eco 40-60 programme. ([c]) for the wash and dry cycle. ([d]) **<...>** ([e]) **<...>**			

ANNEX VI
Technical documentation

1. For household washing machines, the technical documentation referred to in point 1(d) of Article 3 shall include the following elements:

(a) a general description of the model allowing it to be unequivocally and easily identified;

(b) references to the harmonised standards applied or other measurement standards used;

(c) specific precautions to be taken when the model is assembled, installed, maintained or tested;

(d) the values for the technical parameters set out in Table 7; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

(e) the details and the results of calculations performed in accordance with Annex IV;

(f) testing conditions if not described sufficiently in point (b);

(g) equivalent models, if any, including model identifiers.

<...>

Table 7

Technical parameters of the model and their declared values for household washing machines

PARAMETER	DECLARED VALUE	UNIT
Rated capacity for the eco 40-60 programme, at 0,5 kg intervals (c)	X,X	kg
Energy consumption of the eco 40-60 programme at rated capacity ($E_{W,full}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at half rated capacity ($E_{W,½}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at quarter rated capacity ($E_{W,¼}$)	X,XXX	kWh/cycle
Weighted energy consumption of the eco 40-60 programme (E_W)	X,XXX	kWh/cycle
Standard energy consumption of the eco 40-60 programme (SCE_W)	X,XXX	kWh/cycle
Energy Efficiency Index (EEI_W)	X,X	—
Water consumption of the eco 40-60 programme at rated capacity ($W_{W,full}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at half rated capacity ($W_{W,½}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at quarter rated capacity ($W_{W,¼}$)	X,X	L/cycle
Weighted water consumption (W_W)	X	L/cycle
Washing efficiency index of the eco 40-60 programme at rated capacity (I_w)	X,XXX	—
Washing efficiency index of the eco 40-60 programme at half rated capacity (I_w)	X,XXX	—

Washing efficiency index of the eco 40-60 programme at quarter rated capacity (I_W)	X,XXX	—
Rinsing effectiveness of the eco 40-60 programme at rated capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at half rated capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at quarter rated capacity (I_R)	X,X	g/kg
Programme duration of the eco 40-60 programme at rated capacity (t_W)	X:XX	h:min
Programme duration of the eco 40-60 programme at half rated capacity (t_W)	X:XX	h:min
Programme duration of the eco 40-60 programme at quarter rated capacity (t_W)	X:XX	h:min
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at rated capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at half rated capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at quarter rated capacity (T)	X	°C
Spin speed in the spinning phase of the eco 40-60 programme at rated capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at half rated capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at quarter rated capacity (S)	X	rpm
Weighted remaining moisture content (D)	X,X	%
Airborne acoustical noise emissions during eco 40-60 programme (spinning phase)	X	dB(A) re 1 pW
Power consumption in 'off mode' (P_o) (if applicable)	X,XX	W
Power consumption in 'standby mode' (P_{sm}) (if applicable)	X,XX	W
Does 'standby mode' include the display of information?	Yes/No	—
Power consumption in 'standby mode' (P_{sm}) in condition of networked stand-by (if applicable)	X,XX	W
Power consumption in 'delay start' (P_{ds}) (if applicable)	X,XX	W

2. For household washer-dryers, the technical documentation referred to in point 1(d) of Article 3 shall include the following elements:

(a) a general description of the model allowing it to be unequivocally and easily identified;

(b) references to the harmonised standards applied or other measurement standards used;

(c) specific precautions to be taken when the model is assembled, installed, maintained or tested;

(d) the values for the technical parameters set out in Table 8; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

(e) the details and the results of calculations performed in accordance with Annex IV;

(f) testing conditions if not described sufficiently in point (b);

(g) equivalent models, if any, including model identifiers;

<...>

Table 8

Technical parameters of the model and their declared values for household washer-dryers

PARAMETER	**DECLARED VALUE**	**UNIT**
Rated capacity for the washing cycle, at 0,5 kg intervals (c)	X,X	kg
Rated capacity for the wash and dry cycle, at 0,5 kg intervals (d)	X,X	kg
Energy consumption of the eco 40-60 programme at rated washing capacity ($E_{W,full}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at half of the rated washing capacity ($E_{W,½}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at a quarter of the rated washing capacity ($E_{W,¼}$)	X,XXX	kWh/cycle
Weighted energy consumption of the eco 40-60 programme (E_W)	X,XXX	kWh/cycle
Standard energy consumption of the eco 40-60 programme (SCE_W)	X,XXX	kWh/cycle
Energy Efficiency Index of the washing cycle (EEI_W)	X,X	—
Energy consumption of the wash and dry cycle at rated capacity ($E_{WD,full}$)	X,XXX	kWh/cycle
Energy consumption of the wash and dry cycle at half rated capacity ($E_{WD,½}$)	X,XXX	kWh/cycle
Weighted energy consumption of the wash and dry cycle (E_{WD})	X,XXX	kWh/cycle
Standard energy consumption of the wash and dry cycle (SCE_{WD})	X,XXX	kWh/cycle
Energy Efficiency Index of the wash and dry cycle (EEI_{WD})	X,X	—
Water consumption of the eco 40-60 programme at rated washing capacity ($W_{W,full}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at half of the rated washing capacity ($W_{W,½}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at a quarter of the rated washing capacity ($W_{W,1/4}$)	X,X	L/cycle
Weighted water consumption of the washing cycle (W_W)	X	L/cycle
Water consumption of the wash and dry cycle at rated capacity ($W_{WD,full}$)	X,X	L/cycle
Water consumption of the wash and dry cycle at half rated capacity ($W_{WD,½}$)	X,X	L/cycle
Weighted water consumption of the wash and dry cycle (W_{WD})	X	L/cycle
Washing efficiency index of the eco 40-60 programme at rated washing capacity (I_w)	X,XXX	—
Washing efficiency index of the eco 40-60 programme at half rated washing capacity (I_w)	X,XXX	—

Washing efficiency index of the eco 40-60 programme at quarter rated washing capacity (I_w)	X,XXX	—
Washing efficiency index of the wash and dry cycle at rated capacity (J_w)	X,XXX	—
Washing efficiency index of the wash and dry cycle at half rated capacity (J_w)	X,XXX	—
Rinsing effectiveness of the eco 40-60 programme at rated washing capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at half rated washing capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at quarter rated washing capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the wash and dry cycle at rated capacity (J_R)	X,X	g/kg
Rinsing effectiveness of the wash and dry cycle at half rated capacity (J_R)	X,X	g/kg
Programme duration of the eco 40-60 programme at rated washing capacity (t_w)	X:XX	h:min
Programme duration of the eco 40-60 programme at half rated washing capacity (t_w)	X:XX	h:min
Programme duration of the eco 40-60 programme at quarter rated washing capacity (t_w)	X:XX	h:min
Cycle duration of the wash and dry cycle at rated capacity (t_{WD})	X:XX	h:min
Cycle duration of the wash and dry cycle at half rated capacity (t_{WD})	X:XX	h:min
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at rated washing capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at half rated washing capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at quarter rated washing capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load in the washing cycle during wash and dry cycle at rated capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load in the washing cycle during wash and dry cycle at half rated capacity (T)	X	°C
Spin speed in the spinning phase of the eco 40-60 programme at rated washing capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at half rated washing capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at quarter rated washing capacity (S)	X	rpm
Weighted remaining moisture content after washing (D)	X,X	%
Final moisture content after drying	X,X	%
Airborne acoustical noise emissions during eco 40-60 programme (spinning phase)	X	dB(A) re 1 pW

Power consumption in 'off mode' (P_o) (if applicable)	X,XX	W
Power consumption in 'standby mode' (P_{sm}) (if applicable)	X,XX	W
Does 'standby mode' include the display of information?	Yes/No	—
Power consumption in 'standby mode' (P_{sm}) in condition of networked standby (if applicable)	X,XX	W
Power consumption in 'delay start' (P_{ds}) (if applicable)	X,XX	W

3. Where the information included in the technical documentation for a particular household washing machine or household washer-dryer model has been obtained by any of the following methods, or both:

— from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different supplier,

— by calculation on the basis of design or extrapolation from another model of the same or a different supplier,

the technical documentation shall include the details of such calculation, the assessment undertaken by suppliers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different suppliers.

ANNEX VII

Information to be provided in visual advertisements, in technical promotional material in distance selling and in telemarketing, except distance selling on the internet

1. In visual advertisements for household washing machines or household washer-dryers, for the purposes of ensuring conformity with the requirements laid down in point 1(e) of Article 3 and point (c) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

2. In technical promotional material for household washing machines or household washer-dryers, for the purposes of ensuring conformity with the requirements laid down in point 1(f) of Article 3 and point (d) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

3. Any paper-based distance selling of household washing machines or household washer-dryers must show the energy efficiency class and the range of energy efficiency classes available on the label as set out in point 4 of this Annex.

4. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:

(a) for household washing machines: an arrow, containing the letter of the energy efficiency class in 100 % white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;

(b) for household washer-dryers: an arrow, containing the letter of the energy efficiency class for the complete cycle in 100 % white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;

(c) the colour of the arrow matching the colour of the energy efficiency class;

(d) the range of available energy efficiency classes in 100 % black; and,

(e) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the energy efficiency class.

By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

Figure 1

Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated



5. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency classes of the product and of the range of energy efficiency classes available on the label, and that the customer

can access the label and the product information sheet **<…>** by requesting a printed copy.

6. For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to obtain, on request, a printed copy of the label and the product information sheet.

ANNEX VIII

Information to be provided in the case of distance selling through the internet

1. The appropriate label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 2 of this Annex. If a nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

2. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall:

(a) for household washing machines: be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) for household washer-dryers: be an arrow in the colour corresponding to the energy efficiency class of the complete cycle on the label;

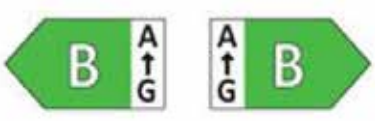
(c) indicate the energy efficiency class of the product on the arrow in 100 % white, Calibri Bold and in a font size equivalent to that of the price;

(d) have the range of available energy efficiency classes in 100 % black; and,

(e) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a visible border in 100 % black placed around the arrow and the letter of the energy efficiency class:

Figure 2

Coloured left/right arrow, with range of energy efficiency classes indicated



3. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the images referred to in point 2 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the images shall link to the label set out in Annex III;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency classes of the product in a font size equivalent to that of the price.

4. The electronic product information sheet made available by suppliers in accordance with point 1(h) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product information sheet is clearly visible and legible. The product information sheet may be displayed using a nested display **<…>**, in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If a nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX IX
Verification procedure for market surveillance purposes

The verification tolerances defined in this Annex relate only to the verification by **Contracting Party** authorities of the declared values and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

As part of verifying the compliance of a product model with the requirements laid down in this Regulation, the authorities of **Contracting Parties** shall apply the following procedure:

1. The **Contracting Party** authorities shall verify one single unit of the model.

2. The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports; and

(b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class, the airborne acoustical noise emission class and the spin drying efficiency class are not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 9.

3. If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

4. If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more equivalent models.

5. The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 9.

6. If the result referred to in point 5 is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

7. The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Energy Community Secretariat** without delay after a decision is taken

on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex IV.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 9 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. For the parameters in Table 9, no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 9

Verification tolerances

Parameter	**Verification tolerances**
EW,full, EW,½, EW,1/4, EWD,-full, EWD,½	The determined value (*) shall not exceed the declared value of $E_{W,full}$, $E_{W,½}$, $E_{W,1/4}$, $E_{WD,full}$ and $E_{WD,½}$, respectively, by more than 10 %.
Weighted energy consumption (E_W and EWD)	The determined value (*) shall not exceed the declared value of E_W, respectively E_{WD}, by more than 10 %.
WW,full, WW,½ WW,1/4, WWD,full, WWD,½	The determined value (*) shall not exceed the declared value of $W_{W,full}$, $W_{W,½}$ $W_{W,1/4,}$ $W_{WD,full}$ and $W_{WD,½}$, respectively, by more than 10 %.
Weighted water consumption (W_W and W_{WD})	The determined value (*) shall not exceed the declared value of W_W, respectively W_{WD}, by more than 10 %.
Washing efficiency index (I_W and J_W)	The determined value (*) shall not be less than the declared value of I_W, respectively J_W, by more than 8 %.
Rinsing effectiveness (I_R and J_R)	The determined value (*) shall not exceed the declared value of I_R, respectively J_R, by more than 1,0 g/kg.
programme or cycle duration	The determined value (*) of the programme or cycle duration shall not exceed the declared value by more than 5 % or by more than 10 minutes, whichever is smaller.
Maximum temperature inside the laundry (T)	The determined value (*) shall not be less than the declared values of T by more than 5K and it shall not exceed the declared value of T by more than 5K.
Dfull, D½, D1/4	The determined value (*) shall not exceed the declared value of D_{full}, $D_{½}$ and $D_{1/4}$, respectively, by more than 10 %.
Remaining moisture content after washing (D)	The determined value (*) shall not exceed the declared value of D by more than 10 %.
Final moisture content after drying	The determined value (*) shall not exceed 3,0 %.
Spin speed (S)	The determined value (*) shall not be less than the declared value of S by more than 10 %.
Power consumption in off mode (P_o)	The determined value (*) of power consumption P_o shall not exceed the declared value by more than 0,10 W.

Power consumption in standby mode (P_{sm})	The determined value (*) of power consumption P_{sm} shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Power consumption in delay start (P_{ds})	The determined value (*) of power consumption P_{ds} shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Airborne acoustical noise emissions	The determined value (*) shall not exceed the declared value by more than 2 dB re 1 pW.

(*) In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.

ANNEX X

Multi-drum household washing machines and multi-drum household washer-dryers

The provisions of Annexes II and III, following the measurement and calculation methods set out in Annex IV, shall apply to any drum with a rated capacity higher than or equal to 2 kg of multi-drum household washing machines and to any drum with a rated washing capacity higher than or equal to 2 kg of multi-drum household washer-dryers.

The provisions of Annexes II and III shall apply to each of the drums independently, except when the drums are built in the same casing and can, in the eco 40-60 programme or in the wash and dry cycle, only operate simultaneously. In the latter case, these provisions shall apply to the multi-drum household washing machine or to the multi-drum household washer-dryer as a whole, as follows:

(a) the rated washing capacity is the sum of the rated washing capacities of each drum; for multi-drum household washer-dryers, the rated capacity is the sum of the rated capacities of each drum;

(b) the energy and water consumption of the multi-drum household washing machine and of the washing cycle of the multi-drum household washer-dryer is the sum of the energy consumption, or water consumption, of each drum;

(c) the energy and water consumption of the complete cycle of the multi-drum household washer-dryer is the sum of the energy consumption, or water consumption, of each drum;

(d) the Energy Efficiency Index (EEI_W) is calculated using the rated washing capacity and energy consumption; for multi-drum household washer-dryers, the Energy Efficiency Index (EEI_{WD}) is calculated using the rated capacity and energy consumption;

(e) the duration is the duration of the longest eco 40-60 programme, or wash and dry cycle, operating in each drum;

(f) the remaining moisture content after washing is calculated as the weighted average, according to each drum's rated capacity;

(g) for household multi-drum washer-dryers, the final moisture content after drying is measured individually for each drum;

(h) the measurement of low power modes, of the acoustic airborne noise emissions and the acoustic airborne noise emissions class apply to the whole household washing machine.

The product information sheet and the technical documentation shall include and present jointly the information required under Annex V and Annex VI, respectively, for all the drums to which the provisions of this annex apply.

The provisions of Annexes VII and VIII apply to each of the drums to which the provisions of this annex apply.

The verification procedure set out in Annex IX applies to the multi-drum household washing machine and to the multi-drum household washer-dryer as a whole, with the verification tolerances applying to each of the parameters determined in application of this annex.

DELEGATED REGULATION (EU) 2019/2015 of 11 March 2019 supplementing Regulation (EU) 2017/1369 with regard to energy labelling of light sources

Incorporated and adapted by Ministerial Council Decision 2022/04/MC-EnC of 15 December 2022 on adapting and incorporating certain Delegated Regulations on energy-related products, introducing rescaled labels in Energy Community acquis communautaire and repealing Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 874/2012, and Directive 96/60/EC

The adaptations made by Ministerial Council Decision 2022/04/MC-EnC are highlighted in ***bold and blue****.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, light sources with or without integrated control gear. The requirements also apply to light sources placed on the market in a containing product.

2. This Regulation shall not apply to light sources specified in points 1 and 2 of Annex IV.

3. Light sources specified in point 3 of Annex IV shall comply only with the requirements in point 4 of Annex V.

Article 2

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(1) 'light source' means an electrically operated product intended to emit, or, in the case of a non-incandescent light source, intended to be possibly tuned to emit, light, or both, with all of the following optical characteristics:

(a) chromaticity coordinates x and y in the range:

$0{,}270 < x < 0{,}530$; and

$-\ 2{,}3172\ x^2 + 2{,}3653\ x - 0{,}2199 < y < -\ 2{,}3172\ x^2 + 2{,}3653\ x - 0{,}1595$;

(b) a luminous flux < 500 lumen per mm^2 of projected light-emitting surface area as defined in Annex I;

(c) a luminous flux between 60 and 82 000 lumen;

(d) a colour rendering index (CRI) > 0;

using incandescence, fluorescence, high-intensity discharge, inorganic light emitting diodes (LED) or organic light emitting diodes (OLED), or their combinations as lighting technology, and that can be verified as a light source according to the procedure of Annex IX.

High-pressure sodium (HPS) light sources that do not fulfil condition (a) are considered light sources for the purposes of this Regulation.

Light sources do not include:

(a) LED dies or LED chips;

(b) LED packages;

(c) products containing light source(s) from which these light source(s) can be removed for verification;

(d) light-emitting parts contained in a light source from which these parts cannot be removed for verification as a light source.

(2) 'control gear' means one or more devices that may or may not be physically integrated in a light source, intended to prepare the mains for the electric format required by one or more specific light sources within boundary conditions set by electric safety and electromagnetic compatibility. It may include transforming the supply and starting voltage, limiting operational and preheating current, preventing cold starting, correcting the power factor and/or reducing radio interference

The term 'control gear' does not include power supplies within the scope of Commission Regulation (EC) No 278/2009 ([1]). The term also does not include lighting control parts and non-lighting parts (as defined in Annex I), although such parts may be physically integrated with a control gear or marketed together as a single product.

A Power over Ethernet (PoE) switch is not a control gear in the sense of this Regulation. 'Power-over-Ethernet switch' or 'PoE switch' means equipment for power-supply and data-handling that is installed between the mains and office equipment and/or light sources for the purpose of data transfer and power supply;

(3) 'containing product' means a product containing one or more light sources, or separate control gears, or both, including, but not limited to, luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s);

(4) 'light' means electromagnetic radiation with a wavelength between 380 nm and 780 nm;

(5) 'mains' or 'mains voltage' (MV) means the electricity supply of 230 (± 10 %) volt of alternating current at 50 Hz;

(6) 'LED die' or 'LED chip' means a small block of light-emitting semiconducting material on which a functional LED circuit is fabricated;

(7) 'LED package' means a single electric part comprising principally at least one LED die. It does not include a control gear or parts of it, a cap or active electronic components and is not connected directly to the mains voltage. It can include one or more of the following: optical elements, light converters (phosphors), thermal, mechanical and electric interfaces or parts to address electrostatic discharge concerns. Any similar light-emitting devices that are intended to be used directly in an LED luminaire, are considered to be light sources;

(8) 'chromaticity' means the property of a colour stimulus defined by its chromaticity coordinates (x and y);

(9) 'luminous flux' or 'flux' (Φ), expressed in lumen (lm), means the quantity derived from radiant flux (radiant power) by evaluating the electromagnetic radiation in accordance with the spectral sensitivity of the human eye. It refers to the total flux emitted by a light source in a solid angle of 4π steradians under conditions (e.g. current, voltage, temperature) specified in applicable standards. It refers to the initial flux for the undimmed light source after a short operating period, unless it is clearly specified that the flux in a dimmed condition or the flux after a given period of operation is intended. For light sources that can be

tuned to emit different light spectra and/or different maximum light intensities, it refers to the flux in the 'reference control settings' as defined in Annex I;

(10) 'colour rendering index' (CRI) means a metric quantifying the effect of an illuminant on the colour appearance of objects by conscious or subconscious comparison with their colour appearance under the reference illuminant and is the average Ra of the colour rendering for the first 8 test colours (R1-R8) defined in standards;

(11) 'incandescence' means the phenomenon where light is produced from heat, in light sources typically produced through a threadlike conductor ('filament') which is heated by the passage of an electric current;

(12) 'halogen light source' means an incandescent light source with a threadlike conductor made from tungsten surrounded by gas containing halogens or halogen compounds;

(13) 'fluorescence' or 'fluorescent light source' (FL) means the phenomenon or a light source using an electric gas discharge of the low-pressure mercury type in which most of the light is emitted by one or more layers of phosphors excited by the ultraviolet radiation from the discharge. Fluorescent light sources may have one ('single-capped') or two ('double-capped') connections ('caps') to their electricity supply. For the purposes of this Regulation, magnetic induction light sources are also considered as fluorescent light sources;

(14) 'high intensity discharge' (HID) means an electric gas discharge in which the light- producing arc is stabilised by wall temperature and the arc chamber has a bulb wall loading in excess of 3 watts per square centimetre. HID light sources are limited to metal halide, high-pressure sodium and mercury vapour types as defined in Annex I;

(15) 'gas discharge' means a phenomenon where light is produced, directly or indirectly, by an electric discharge through a gas, plasma, metal vapour or mixture of gases and vapours;

(16) 'inorganic light emitting diode' (LED) means a technology in which light is produced from a solid state device embodying a p-n junction of inorganic material. The junction emits optical radiation when excited by an electric current;

(17) 'organic light emitting diode' (OLED) means a technology in which light is produced from a solid state device embodying a p-n junction of organic material. The junction emits optical radiation when excited by an electric current;

(18) 'high-pressure sodium light source' (HPS) means a high intensity discharge light source in which the light is produced mainly by radiation from sodium vapour operating at a partial pressure of the order of 10 kilopascals. HPS light sources may have one ('single-ended') or two ('double-ended') connectors to their electricity supply;

(19) 'point of sale' means a physical location where the product is displayed or offered for sale, hire or hire-purchase to the customer.

For the purposes of the Annexes, additional definitions are set out in Annex I.

Article 3

Obligations of suppliers

1. Suppliers of light sources shall ensure that:

(a) each light source which is placed on the market as an independent product (i.e. not in a containing product) and in packaging, is supplied with a label, printed on the packaging, in the format as set out in Annex III;

(b) **the product information sheet, as set out in Annex V, is made available free of charge, in electronic format;**

(c) **if specifically requested by the dealer, the product information sheet shall be made available in printed form, free of charge**;

(d) **the content of the technical documentation, as set out in Annex VI, is made available at the request of the market surveillance authorities of the Contracting Parties**;

(e) any visual advertisement for a specific model of light source contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII and Annex VIII;

(f) any technical promotional material concerning a specific model of light source, including technical promotional material on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(g) **an electronic label in the format and containing the information, as set out in Annex III, is made available to dealers for each light source model registered in the EU product database; for the models placed only on the markets of the Contracting Parties which are not registered in the EU product database, the label shall be generated without the EU logo, and the QR code shall be linked to the website with model's information maintained by the manufacturer;**

(h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each light source model;

(i) by way of derogation from Article 11(13)(b) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC**, upon request by dealers and in accordance with Article 4(e), printed labels to rescale products are provided as a sticker, of the same size as the one which already exists.

1a. **<...>**

2. Suppliers of containing products shall:

(a) provide information on the contained light source(s), as specified in point 2 of Annex V;

(b) upon request by market surveillance authorities, provide information on how light sources can be removed for verification without permanent damage to the light source.

3. The energy efficiency class shall be calculated in accordance with Annex II.

Article 4

Obligations of dealers

Dealers shall ensure that:

(a) At the point of sale, each light source which is not in a containing product bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label or the energy class being displayed in such a way as to be clearly visible, in accordance with Annex III;

(b) in the event of distance selling, the label and product information sheet are provided, in accordance with Annexes VII and VIII;

(c) any visual advertisement for a specific model of light source, including on the internet, contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(d) any technical promotional material concerning a specific model of light source, including technical promotional material on the internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(e) **<…>.**

Article 5

Obligations of internet hosting platforms

Where a hosting service provider **<…>** allows the selling of light sources through its internet site, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

Article 6

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation method, as set out in Annex II.

Article 7

Verification procedure for market surveillance purposes

Contracting Parties shall apply the verification procedure laid down in Annex IX when performing the market surveillance checks referred to in paragraph 3 of Article 8 of Regulation (EU) 2017/1369 **as adapted**

and adopted by Ministerial Council Decision 2018/03/MC-EnC.

Article 8

Review

<…>

Article 9

Repeal

<…>

Article 10

Entry into force and application

This Regulation enters into force on the day of the adoption of Ministerial Council Decision 2022/04/MC-EnC and is addressed to the Contracting Parties and the institutions of the Energy Community.

The Delegated Regulation 2019/2015 shall be transposed, implemented and applicable in all Contracting Parties by 31 December 2023. However, Article 3 paragraph 1 point (b) shall apply latest as of 31 August 2023, and Article 3 paragraph 2 point (a) shall apply as of 30 June 2024.

ANNEX I
Definitions applicable for the Annexes

The following definitions shall apply:

(1) 'mains light source' (MLS) means a light source that can be operated directly on the mains electricity supply. Light sources that operate directly on the mains, and can also operate indirectly on the mains using a separate control gear, shall be considered to be mains light sources;

(2) 'non-mains light source' (NMLS) means a light source that requires a separate control gear to operate on the mains;

(3) 'separate control gear' means a control gear that is not physically integrated with a light source and is placed on the market as a separate product or as part of a containing product;

(4) 'directional light source' (DLS) means a light source having at least 80 % of total luminous flux within a solid angle of π sr (corresponding to a cone with angle of 120°);

(5) 'non-directional light source' (NDLS) means a light source that is not a directional light source;

(6) 'connected light source' (CLS) means a light source including data-connection parts that are physically or functionally inseparable from the light emitting parts to maintain the 'reference control settings'. The light source can have physically integrated data-connection parts in a single inseparable housing, or the light source can be combined with physically separate data-connection parts placed on the market together with the light source as a single product;

(7) 'data-connection parts' means parts that perform any one of the following functions:

(a) reception or transmission of wired or wireless data signals and the processing thereof (used to control the light emission function and possibly otherwise);

(b) sensing and processing of the sensed signals (used to control the light emission function and possibly otherwise);

(c) a combination of these;

(8) 'colour-tuneable light source' (CTLS) means a light source that can be set to emit light with a large variety of colours outside the range defined in Article 2 but can also be set to emit white light inside the range defined in Article 2 for which the light source is within the scope of this Regulation.

Tuneable-white light sources that can only be set to emit light with different correlated colour temperatures, within the range defined in Article 2, and dim-to-warm light sources that shift their white light output to lower correlated colour temperature when dimmed, simulating the behaviour of incandescent light sources, are not considered CTLS;

(9) 'excitation purity' means a percentage computed for a CTLS set to emit light of a certain colour, using a procedure further defined in standards, by drawing a straight line on an (x and y) colour space graph from a point with colour coordinates x = 0,333 and y = 0,333 (achromatic stimulus; point (1), going through the point representing the (x and y) colour coordinates of the light source (point (2), and ending on the outer border of the colour space (locus; point (3). The excitation purity is computed as the distance between points 1 and 2 divided by the distance between points 1 and 3. The full length of the line represents 100 % colour purity (point on the locus). The achromatic stimulus point represents 0 % colour purity (white light);

(10) 'high-luminance light source' (HLLS) means a LED light source with an average luminance greater than

30 cd/mm^2 in the direction of peak intensity;

(11) 'luminance' (in a given direction, at a given point of a real or imaginary surface) means the luminous flux transmitted by an elementary beam passing through the given point and propagating in the solid angle containing the given direction divided by the area of a section of that beam containing the given point (cd/m^2);

(12) 'average luminance' (Luminance-HLLS) for a LED light source means the average luminance over a light-emitting area where the luminance is more than 50 % of the peak luminance (cd/mm^2);

(13) 'lighting control parts' means parts that are integrated in a light source, or physically separated but marketed together with a light source as a single product, that are not strictly necessary for the light source to emit light at full-load, but that enable manual — or automatic-, direct- or remote-, control of luminous intensity, chromaticity, correlated colour temperature, light spectrum and/or beam angle. Dimmers shall also be considered as lighting control parts.

The term also includes data-connection parts, but the term does not include devices within the scope of Commission Regulation (EC) No 1275/2008;

(14) 'non-lighting parts' means parts that are integrated in a light source, or physically separated but marketed together with a light source as a single product, that are not necessary for the light source to emit light at full-load, and that are not 'lighting control parts'. Examples include, but are not limited to: speakers (audio), cameras, repeaters for communication signals to extend the range (e.g. WiFi), parts supporting grid balance (switching to own internal batteries when necessary), battery charging, visual notification of events (mail arriving, door bell ringing, alert), use of Light Fidelity (Li-Fi, a bidirectional, high-speed and fully networked wireless communication technology).

The term also includes data-connection parts used for other functions than to control the light emission function;

(15) 'useful luminous flux' (Φ_{use}) means the part of the luminous flux of a light source that is considered when determining its energy efficiency:

— for non-directional light sources it is the total flux emitted in a solid angle of 4π sr (corresponding to a 360° sphere);

— for directional light sources with beam angle ≥ 90° it is the flux emitted in a solid angle of π sr (corresponding to a cone with angle of 120°);

— for directional light sources with beam angle < 90° it is the flux emitted in a solid angle of 0,586 π sr (corresponding to a cone with angle of 90°);

(16) 'beam angle' of a directional light source means the angle between two imaginary lines in a plane through the optical beam axis, such that these lines pass through the centre of the front face of the light source and through points at which the luminous intensity is 50 % of the centre beam intensity, where the centre beam intensity is the value of luminous intensity measured on the optical beam axis.

For light sources that have different beam angles in different planes, the largest beam angle shall be the one taken into account;

For light sources with user-controllable beam angle, the beam angle corresponding to the 'reference control setting' shall be the one taken into account;

(17) 'full-load' means the condition of a light source, within the declared operating conditions, in which

it emits the maximum (undimmed) luminous flux;

(18) 'standby mode' means the condition of a light source, where it is connected to the power supply but the light source is intentionally not emitting light, and the light source is awaiting a control signal to return to a state with light emission. Lighting control parts enabling the standby function shall be in their control mode. Non-lighting parts shall be disconnected or switched off or their power consumption shall be minimised following manufacturer's instructions;

(19) 'networked standby mode' means the condition of a CLS where it is connected to the power supply but the light source is intentionally not emitting light and is awaiting a remotely initiated trigger to return to a state with light emission. Lighting control parts shall be in their control mode. Non-lighting parts shall be disconnected or switched off or their power consumption shall be minimised following the manufacturer's instructions;

(20) 'control mode' means the condition of lighting control parts where they are connected to the light source and performing their functions in such a way that a control signal can be internally generated or a remotely initiated trigger can be received, by wire or wireless, and processed to lead to a change in the light emission of the light source;

(21) 'remotely initiated trigger' means a signal that comes from outside the light source via a network;

(22) 'control signal' means an analogue or digital signal transmitted to the light source wirelessly or wired either via voltage modulation in separate control cables or via a modulated signal in the supply voltage. The signal transmission is not through a network but e.g. from an internal source or from a remote control delivered with the product;

(23) 'network' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);

(24) 'on-mode power' (P_{on}) expressed in watt, means the electric power consumption of a light source in full-load with all lighting control parts and non-lighting parts disconnected. If these parts cannot be disconnected they shall be switched off or their power consumption shall be minimised following the manufacturer's instructions. In case of a NMLS that requires a separate control gear to operate, P_{on} can be measured directly on the input to the light source, or P_{on} is determined using a control gear with known efficiency, whose electric power consumption is subsequently subtracted from the measured mains power input value;

(25) 'standby power' (P_{sb}) expressed in watt, is the electric power consumption of a light source in standby mode;

(26) 'networked standby power' (P_{net}) expressed in watt, is the electric power consumption of a CLS in networked standby mode;

(27) 'reference control settings' (RCS) means a control setting or a combination of control settings that is used to verify compliance of a light source with this Regulation. These settings are relevant for light sources that allow the end-user to control, manually or automatically, directly or remotely, the luminous intensity, colour, correlated colour temperature, spectrum, and/or beam angle of the emitted light.

In principle, the reference control settings shall be those predefined by the manufacturer as factory default values, and encountered by the user at first installation (out-of-the-box values). If the installation procedure provides for an automatic software update during first installation, or if the user has the option to perform such an update, the resulting change in settings (if any) shall be taken into account.

If the out-of-the-box value is deliberately set differently to the reference control setting (e.g. at low power for safety purposes), the manufacturer shall indicate in the technical documentation how to recall the reference control settings for compliance verification and provide a technical justification why the out-of-the-box value is set differently to the reference control setting.

The light source manufacturer shall define the reference control settings such that:

— the light source is within the scope of this Regulation according to Article 1 and none of the conditions for exemption applies;

— lighting control parts and non-lighting parts are disconnected or switched-off, or, in case this is not possible, the power consumption of these parts is minimal;

— the full-load condition is obtained;

— when the end-user opts to reset factory defaults, the reference control settings are obtained.

For light sources that allow the manufacturer of a containing product to make implementation choices that influence light source characteristics (e.g. definition of the operating current(s); thermal design), and that cannot be controlled by the end-user, the reference control settings need not be defined. In that case the nominal test conditions as defined by the light source manufacturer apply;

(28) 'high-pressure mercury light source' means a high intensity discharge light source in which the major portion of light is produced, directly or indirectly, by radiation from predominantly vaporised mercury operating at a partial pressure in excess of 100 kilopascals;

(29) 'metal halide light source' (MH) means a high intensity discharge light source in which the light is produced by radiation from a mixture of metallic vapour, metal halides and the products of the dissociation of metal halides. MH light sources may have one ('single-ended') or two ('double-ended') connectors to their electricity supply. The material for the arc tube of MH light sources can be quartz (QMH) or ceramic (CMH);

(30) 'compact fluorescent light source' (CFL) means a single-capped fluorescent light source with a bent-tube construction designed to fit in small spaces. CFLs may be primarily spiral-shaped (i.e. curly forms) or primarily shaped as connected multiple parallel tubes, with or without a second bulb-like envelope. CFLs are available with (CFLi) or without (CFLni) physically integrated control gear;

(31) 'T2', 'T5', 'T8', 'T9' and 'T12' means a tubular light source with diameter of approximately 7, 16, 26, 29 and 38 mm respectively, as defined in standards. The tube can be straight (linear) or bent (e.g. U-shaped, circular);

(32) 'LFL T5-HE' means a high-efficiency linear fluorescent T5 light source with driving current lower than 0,2 A;

(33) 'LFL T5-HO' means a high-output linear fluorescent T5 light source with driving current higher than or equal to 0,2 A;

(34) 'HL R7s' means a mains-voltage, double-capped, linear halogen light source with a cap diameter of 7 mm;

(35) 'battery-operated' means a product that operates only on direct current (DC) supplied from a source contained in the same product, without being connected directly or indirectly to the mains electricity supply;

(36) 'second envelope' means a second outer envelope on a HID light source that is not required for the production of light, such as an external sleeve for preventing mercury and glass release into the environment in case of lamp breakage. In determining the presence of a second envelope, the HID arc tubes shall

not count as an envelope;

(37) 'non-clear envelope' for a HID light source means a non-transparent outer envelope or outer tube in which the light producing arc tube is not visible;

(38) 'anti-glare shield' means a mechanical or optical reflective or non-reflective impervious baffle designed to block direct visible radiation emitted from the light emitter in a directional light source, in order to avoid temporary partial blindness (disability glare) if viewed directly by an observer. It does not include surface coating of the light emitter in the directional light source;

(39) 'flicker' means the perception of visual unsteadiness induced by a light stimulus, the luminance or spectral distribution of which fluctuates with time, for a static observer in a static environment. The fluctuations can be periodic and non-periodic and may be induced by the light source itself, the power source or other influencing factors.

The metric for flicker used in this Regulation is the parameter 'Pst LM', where 'st' stands for short term and 'LM' for light flickermeter method, as defined in standards. A value Pst LM = 1 means that the average observer has a 50 % probability of detecting flicker;

(40) 'stroboscopic effect' means a change in motion perception induced by a light stimulus the luminance or spectral distribution of which fluctuates with time, for a static observer in a non-static environment. The fluctuations can be periodic and non-periodic and may be induced by the light source itself, the power source or other influencing factors.

The metric for the stroboscopic effect used in this Regulation is 'SVM' (stroboscopic visibility measure), as defined in standards. SVM = 1 represents the visibility threshold for an average observer;

(41) 'R9' means the colour rendering index for a red coloured object as defined in standards;

(42) 'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters, pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Article 3(1)(d) and Annex VI of this Regulation, for the verification of compliance by the **Contracting Party** authorities;

(43) 'luminous intensity' (candela or cd) means the quotient of the luminous flux leaving the source and propagated in the element of solid angle containing a given direction, by the element of solid angle;

(44) 'correlated colour temperature' (CCT [K]) means the temperature of a Planckian (black body) radiator whose perceived colour most closely resembles that of a given stimulus at the same brightness and under specified viewing conditions;

(45) 'colour consistency' means the maximum deviation of the initial (after a short period of time), spatially averaged chromaticity coordinates (x and y) of a single light source from the chromaticity centre point (cx and cy) declared by the manufacturer or the importer, expressed as the size (in steps) of the MacAdam ellipse formed around the chromaticity centre point (cx and cy);

(46) 'displacement factor (cos $\varphi 1$)' means the cosine of the phase angle $\varphi 1$ between the fundamental harmonic of the mains supply voltage and the fundamental harmonic of the mains current. It is used for mains light sources using LED- or OLED-technology. The displacement factor is measured at full-load, for the reference control settings where applicable, with any lighting control parts in control mode and non-lighting parts disconnected, switched off or set to minimum power consumption according to the manufacturer's instructions;

(47) 'lumen maintenance factor' (X_{LMF}) means the ratio of the luminous flux emitted by a light source at a

given time in its life to the initial luminous flux;

(48) 'survival factor' (SF) means the defined fraction of the total number of light sources that continue to operate at a given time under defined conditions and switching frequency;

(49) 'lifetime' for LED and OLED light sources means the time in hours between the start of their use and the moment when for 50 % of a population of light sources the light output has gradually degraded to a value below 70 % of the initial luminous flux. This is also referred to as the $L_{70}B_{50}$ lifetime;

(50) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(51) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(52) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

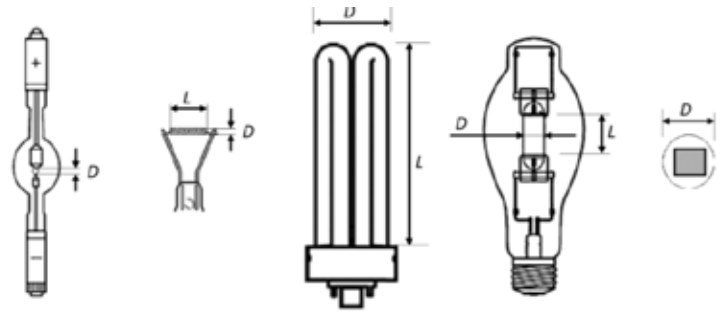
(53) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non- graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications;

(54) 'projected light-emitting surface area' (A) is the surface area in mm^2 (square millimetres) of the view in an orthographic projection of the light-emitting surface from the direction with the highest light intensity, where the light-emitting surface area is the surface area of the light source that emits light with the declared optical characteristics, such as the approximately spherical surface of an arc (a), cylindrical surface of a filament coil (b) or a gas discharge lamp (c, d), flat or semi-spherical envelope of a light-emitting diode (e).

For light sources with a non-clear envelope or with anti-glare shield, the light-emitting surface area is the entire area through which light leaves the light source.

For light sources containing more than one light emitter, the projection of the smallest gross volume enveloping all emitters shall be taken as the light-emitting surface.

For HID light sources definition (a) applies, unless the dimensions defined in (d) apply with L>D, where L is the distance between the electrode tips and D the inner diameter of the arc tube.



(55) 'quick response' (QR) code means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the **EU product database**.

ANNEX II

Energy efficiency classes and calculation method

The energy efficiency class of light sources shall be determined as set out in Table 1, on the basis of the total mains efficacy η_{TM}, which is calculated by dividing the declared useful luminous flux Φ_{use} (expressed in *lm*) by the declared on-mode power consumption P_{on} (expressed in *W*) and multiplying by the applicable factor F_{TM} of Table 2, as follows:

$\eta_{TM} = (\Phi_{use}/P_{on}) \times F_{TM}$ (*lm/W*).

Table 1

Energy efficiency classes of light sources

Energy efficiency class	**Total mains efficacy η_{TM} (lm/W)**
A	$210 \leq \eta_{TM}$
B	$185 \leq \eta_{TM} < 210$
C	$160 \leq \eta_{TM} < 185$
D	$135 \leq \eta_{TM} < 160$
E	$110 \leq \eta_{TM} < 135$
F	$85 \leq \eta_{TM} < 110$
G	$\eta_{TM} < 85$

Table 2

Factors F_{TM} by light source type

Light source type	**Factor F_{TM}**
Non-directional (NDLS) operating on mains (MLS)	1,000
Non-directional (NDLS) not operating on mains (NMLS)	0,926
Directional (DLS) operating on mains (MLS)	1,176
Directional (DLS) not operating on mains (NMLS)	1,089

ANNEX III
Label for light sources

1. LABEL

If the light source is intended to be marketed through a point of sale, a label produced in the format and containing information as set out in this Annex is printed on the individual packaging.

Suppliers shall choose a label format between point 1.1 and point 1.2 of this Annex.

The label shall be:

— for the standard-sized label, at least 36 mm wide and 72 mm high,

— for the small-sized label (width less than 36 mm), at least 20 mm wide and 54 mm high.

The packaging shall not be smaller than 20 mm wide and 54 mm high.

Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above. The small-sized label shall not be used on packaging with a width of 36 mm or more.

The label and the arrow indicating the energy efficiency class may be printed in monochrome as specified in points 1.1 and 1.2, only if all other information, including graphics, on the packaging is printed in monochrome.

If the label is not printed on the part of the packaging meant to face the prospective customer, an arrow containing the letter of the energy efficiency class shall be displayed as hereafter, with the colour of the arrow matching the letter and the colour of the energy class. The size shall be such that the label is clearly visible and legible. The letter in the energy efficiency class arrow shall be Calibri Bold and positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the efficiency class.

Figure 1

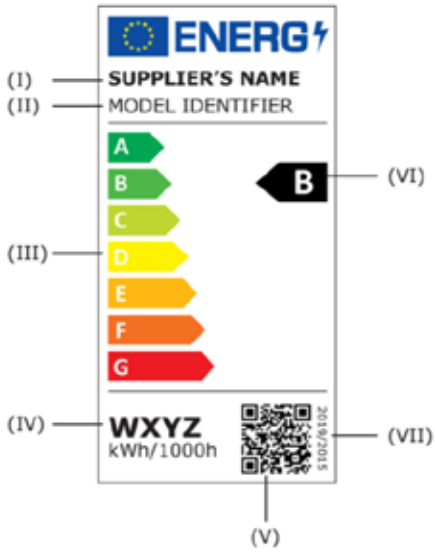
Coloured/monochrome left/right arrow for the part of the packaging facing the prospective customer

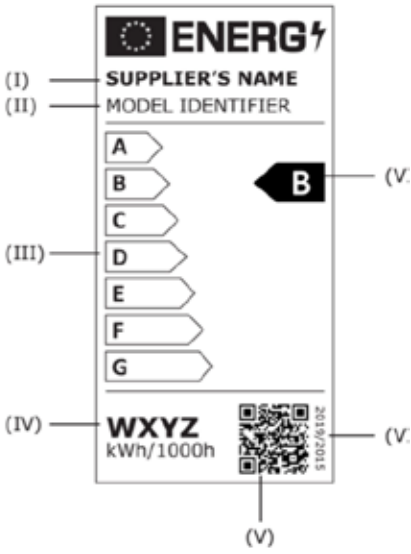


In the case referred to in point (e) of Article 4 the rescaled label shall have a format and size that permits it to cover and adhere to the old label.

1.1. ***Standard-sized label:***

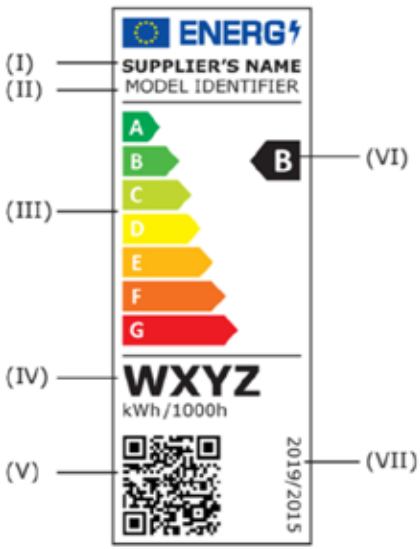
The label shall be:

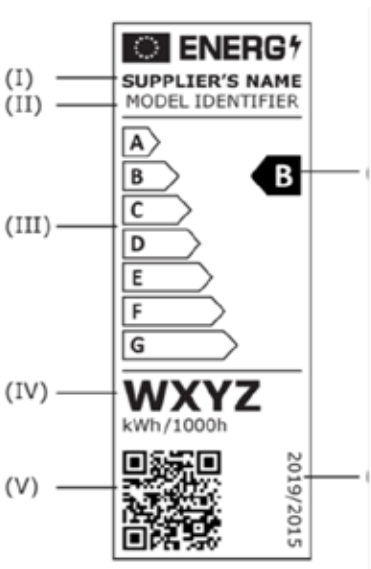




1.2. ***Small-sized label:***

The label shall be:





1.3. ***The following information shall be included in the label for light sources:***

I. supplier's name or trade mark;

II. supplier's model identifier;

III. scale of energy efficiency classes from A to G;

IV. the energy consumption, expressed in kWh of electricity consumption per 1 000 hours, of the light source in on-mode;

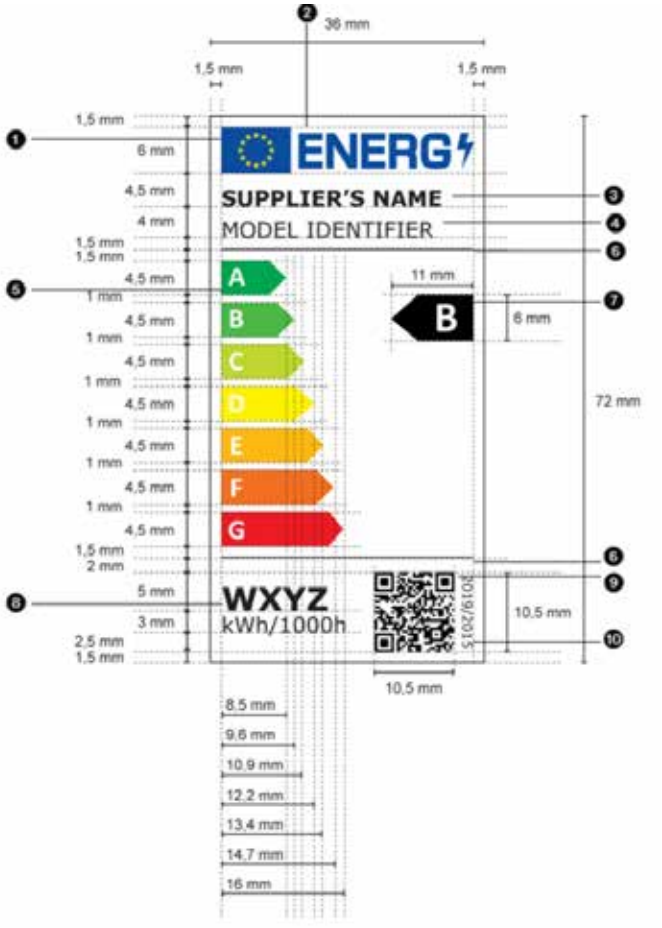
V. QR-code;

VI. the energy efficiency class in accordance with Annex II;

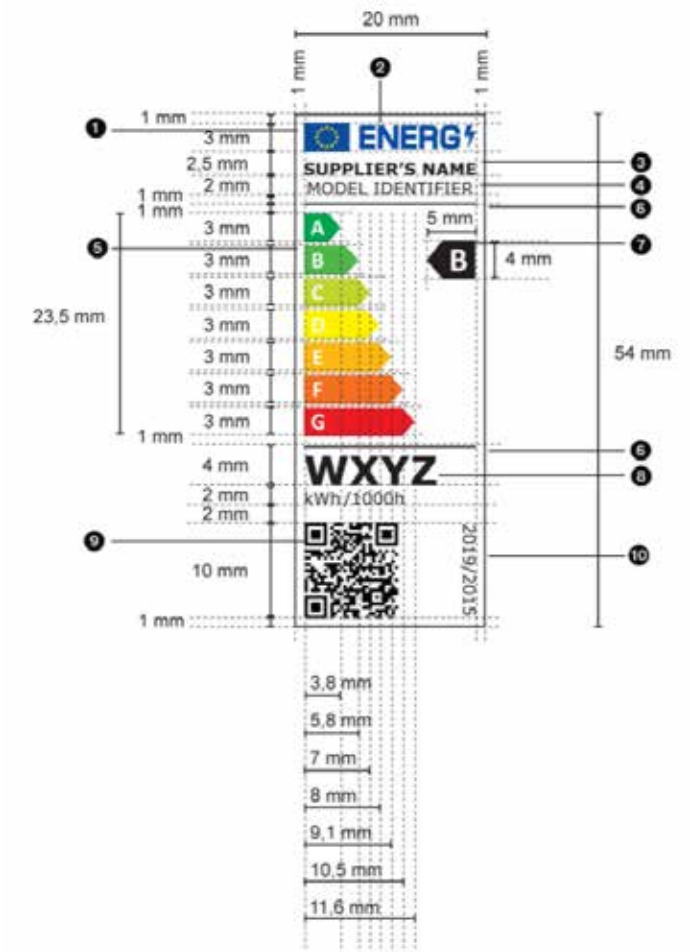
VII. the number of this Regulation that is '2019/2015'.

2. LABEL DESIGNS

2.1. ***Standard-sized label:***



2.2. ***Small-sized label:***



2.3. ***Whereby:***

(a) The dimensions and specifications of the elements constituting the labels shall be as indicated in paragraph 1 of Annex III and in the label designs for standard-sized and small sized labels for light sources.

(b) The background of the label shall be 100 % white.

(c) The typefaces shall be Verdana and Calibri.

(d) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0-70-100-0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(e) The labels shall fulfil all the following requirements (numbers refer to the figures above):

1 the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

2 the colour of the energy logo shall be: 100,80,0,0;

3 the supplier's name shall be 100 % black and in Verdana Bold 8 pt – 5 pt (standard-sized – small-sized label);

4 the model identifier shall be 100 % black and in Verdana Regular 8 pt – 5 pt (standard-sized – small-sized label);

5 the A to G scale shall be as follows:

— the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 10,5 pt – 7 pt (standard-sized – small-sized label); the letters shall be centred on an axis at 2 mm - 1,5 mm (standard-sized – small-sized label) from the left side of the arrows;

— the colours of A to G scale arrows shall be as follows:

— A-class: 100,0,100,0;

— B-class: 70,0,100,0;

— C-class: 30,0,100,0;

— D-class: 0,0,100,0;

— E-class: 0,30,100,0;

— F-class: 0,70,100,0;

— G-class: 0,100,100,0;

6 the rectangular border of the label and the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

7 the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 16 pt – 10 pt (standard-sized – small-sized label). The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

8 the energy consumption value shall be in Verdana Bold 12 pt; 'kWh/1 000 h' shall be in Verdana Regular 8 pt – 5 pt (standard-sized – small-sized label), 100 % black;

9 the QR code shall be 100 % black;

10 the number of the regulation shall be 100 % black and in Verdana Regular 5 pt.

ANNEX IV
Exemptions

1. This Regulation shall not apply to light sources specifically tested and approved to operate:

(a) in radiological and nuclear medicine installations that are subject to radiation safety standards as set out in Council Directive 2013/59/Euratom ([3]);

(b) for emergency use;

(c) in or on military or civil defence establishments, equipment, ground vehicles, marine equipment or aircraft as set out in **Contracting Parties**' regulations **<...>**;

(d) in or on motor vehicles, their trailers and systems, interchangeable towed equipment, components and separate technical units, as set out in Regulation (EC) No 661/2009 of the European Parliament and of the Council ([4]), Regulation (EU) No 167/2013 of the European Parliament and of the Council ([5]) and Regulation (EU) No 168/2013 of the European Parliament and of the Council ([6]);

(e) in or on non-road mobile machinery as set out in Regulation (EU) 2016/1628 of the European Parliament and of the Council ([7]) and in or on their trailers;

(f) in or on interchangeable equipment as set out in Directive 2006/42/EC of the European Parliament and of the Council ([8]) intended to be towed or to be mounted and fully raised from the ground or that cannot articulate around a vertical axis when the vehicle to which it is attached is in use on a road by vehicles as set out in Regulation (EU) No 167/2013;

(g) in or on civil aviation aircraft as set out in Commission Regulation (EU) No 748/2012 ([9]);

(h) in railway vehicle lighting as set out in Directive 2008/57/EC of the European Parliament and of the Council ([10]);

(i) in marine equipment as set out in Directive 2014/90/EU of the European Parliament and of the Council ([11]);

(j) in medical devices as set out in Council Directive 93/42/EEC ([12]) or Regulation (EU) 2017/745 of the European Parliament and of the Council ([13]) and in vitro medical devices as set out in Directive 98/79/EC of the European Parliament and of the Council ([14]).

For the purpose of this point, 'specifically tested and approved' means that the light source:

— has been specifically tested for the mentioned operating condition or application, according to the European legislation mentioned or related implementing measures, or relevant European or international standards or, in the absence of these, according to relevant **Contracting Parties** legislation; and

— is accompanied by evidence, to be included in the technical documentation, in the form of a certificate, a type approval mark, a test report, that the product has been specifically approved for the mentioned operating condition or application; and

— is placed on the market specifically for the mentioned operating condition or application, as evidenced at least by the technical documentation, and except for point (d), information on the packaging and any advertising or marketing materials.

2. In addition, this Regulation shall not apply to:

(a) electronic displays (e.g. televisions, computer monitors, notebooks, tablets, mobile phones, e-readers,

game consoles), including but not limited to displays within the scope of Commission Regulation (EU) 2019/2021 ([15]) and of Commission Regulation (EU) No 617/2013 ([16]);

(b) light sources in range hoods within the scope of Commission Delegated Regulation (EU) No 65/2014, **as adapted and adopted by Ministerial Council Decision 2014/02/MC-EnC** ([17]);

(c) light sources in battery-operated products, including but not limited to e.g. torches, mobile phones with an integrated torch light, toys including light sources, desk lamps operating only on batteries, armband lamps for cyclists, solar-powered garden lamps;

(d) light sources on bicycles and other non-motorised vehicles;

(e) light sources for spectroscopy and photometric applications, such as for example UV-VIS spectroscopy, molecular spectroscopy, atomic absorption spectroscopy, nondispersive infrared (NDIR), fourier-transform infrared (FTIR), medical analysis, ellipsometry, layer thickness measurement, process monitoring or environmental monitoring.

3. Any light source within the scope of this Delegated Regulation shall be exempt from the requirements of this Regulation, with the exception of the requirements set out in point 4 of Annex V, if it is specifically designed and marketed for its intended use in at least one of the following applications:

(a) signalling (including, but not limited to, road-, railway-, marine- or air traffic- signalling, traffic control or airfield lamps);

(b) image capture and image projection (including, but not limited to, photocopying, printing (directly or in pre-processing), lithography, film and video projection, holography);

(c) light sources with specific effective ultraviolet power > 2 mW/klm and intended for use in applications requiring high UV-content;

(d) light sources with a peak radiation around 253,7 nm and intended for germicidal use (destruction of DNA);

(e) light sources emitting 5 % or more of total radiation power of the range 250-800 nm in the range of 250-315 nm and/or 20 % or more of total radiation power of the range 250-800 nm in the range of 315-400 nm, and intended for disinfection or fly trapping;

(f) light sources having the primary purpose to emit radiation around 185,1 nm and intended to be used for the generation of ozone;

(g) light sources emitting 40 % or more of total radiation power of the range 250-800 nm in the range of 400-480 nm, and intended for coral zooxanthellae symbioses;

(h) FL light sources emitting 80 % or more of total radiation power of the range 250-800 nm in the range of 250-400 nm, and intended for sun-tanning;

(i) HID light sources emitting 40 % or more of total radiation power of the range 250-800 nm in the range of 250-400 nm, and intended for sun-tanning;

(j) light sources with a photosynthetic efficacy > 1,2 µmol/J, and/or emitting 25 % or more of total radiation power of the range 250-800 nm in the range of 700-800 nm, and intended for use in horticulture;

(k) LED or OLED light sources, complying with the definition of 'original works of art' as defined in Directive 2001/84/EC of the European Parliament and of the Council ([18]), made by the artist him/herself in a limited number below 10 pieces;

(l) Incandescent light sources with blade contact-, metal lug-, cable-, litz wire-, metric thread-, pin base- or

non-standard customised electrical interface, encasing made from quartz-glass tubes, specifically designed and exclusively marketed for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, photovoltaic and electronic manufacturing processes, drying or hardening of adhesives, inks, paints or coatings).

4. Light sources specifically designed and exclusively marketed for products in the scope of Commission Regulations (EU) 2019/2023, (EU) 2019/2022, (EU) No 932/2012 and (EU) 2019/2019, shall be exempt from the requirements of points 1(e)(7b), 1(e)(7c) and 1(e)(7d) of Annex VI to this Regulation.

([1]) Commission Regulation (EC) No 278/2009 of 6 April 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies (OJ L 93, 7.4.2009, p. 3).

([2]) Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment (OJ L 339, 18.12.2008, p. 45).

([3]) Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation (OJ L 13, 17.1.2014, p. 1).

([4]) Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 200, 31.7.2009, p. 1).

([5]) Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles (OJ L 60, 2.3.2013, p. 1).

([6]) Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles (OJ L 60, 2.3.2013, p. 52).

([7]) Regulation (EU) 2016/1628 of the European Parliament and of the Council of 14 September 2016 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC (OJ L 252, 16.9.2016, p. 53).

([8]) Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) (OJ L 157, 9.6.2006, p. 24).

([9]) Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 224, 21.8.2012, p. 1).

([10]) Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (Recast) (OJ L 191, 18.7.2008, p. 1).

([11]) Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 on marine equipment and repealing Council Directive 96/98/EC (OJ L 257, 28.8.2014, p. 146).

([12]) Council Directive 93/42/EEC of 14 June 1993 concerning medical devices (OJ L 169, 12.7.1993, p. 1).

([13]) Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC (OJ L 117, 5.5.2017, p. 1).

([14]) Directive 98/79/EC of the European Parliament and of the Council of 27 October 1998 on in vitro diagnostic medical devices (OJ L 331, 7.12.1998, p. 1).

([15]) Commission Regulation (EU) 2019/2021 of 1 October 2019 laying down ecodesign requirements for electronic displays pursuant to Directive 2009/125/EC of the European Parliament and of the Council, amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EC) 642/2009 (OJ L 315, 5.12.2019, p. 241).

([16]) Commission Regulation (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers (OJ L 175, 27.6.2013, p. 13).

([17]) Commission Delegated Regulation (EU) No 65/2014 **as adapted and adopted by Ministerial Council Decision 2014/02/MC-EnC** of 1 October 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of domestic ovens and range hoods.

([18]) Directive 2001/84/EC of the European Parliament and of the Council of 27 September 2001 on the resale right for the benefit of the author of an original work of art (OJ L 272, 13.10.2001, p. 32).

ANNEX V
Product information

1. Product information sheet

<…>

Table 3

Product information sheet

Supplier's name or trade mark (c):			
Supplier's address (c):			
Model identifier (c):			
Type of light source:			
Lighting technology used:	[HL/LFL T5 HE/LFL T5 HO/CFLni/other FL/ HPS/MH/other HID/ LED/OLED/mixed/other]	Non-directional or directional:	[NDLS/DLS]
Light source cap-type (or other electric interface)	[free text]		
Mains or non-mains:	[MLS/NMLS]	Connected light source (CLS):	[yes/no]
Colour-tuneable light source:	[yes/no]	Envelope:	[no/second/ non-clear]
High luminance light source:	[yes/no]		
Anti-glare shield:	[yes/no]	Dimmable:	[yes/only with specific dimmers/no]
Product parameters			
Parameter	Value	Parameter	Value
General product parameters:			
Energy consumption in on-mode (kWh/1 000 h), **rounded up to the nearest integer**	x	Energy efficiency class	[A/B/C/D/E/ F/G] (l)
Useful luminous flux (Φuse), indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°)	x in [sphere/wide cone/ narrow cone]	Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded to the nearest 100 K, that can be set	[x/x…x/x or x (or x…)]

On-mode power (P_{on}), expressed in W		x,x	Standby power (P_{sb}), expressed in W and rounded to the second decimal	x,xx
Networked standby power (P_{net}) for CLS, expressed in W and rounded to the second decimal		x,xx	Colour rendering index, rounded to the nearest integer, or the range of CRI-values that can be set	[x/x…x]
Outer dimensions (c) without separate control gear, lighting control parts and non-lighting control parts, if any (millimetre)	Height	x	Spectral power distribution in the range 250 nm to 800 nm, at full-load	[graphic]
	Width	x		
	Depth	x		
Claim of equivalent power (c)		[yes/-]	If yes, equivalent power (W)	x
			Chromaticity coordinates (x and y)	0,xxx 0,xxx
Parameters for directional light sources:				
Peak luminous intensity (cd)		x	Beam angle in degrees, or the range of beam angles that can be set	[x/x…x]
Parameters for LED and OLED light sources:				
R9 colour rendering index value		x	Survival factor	x,xx
the lumen maintenance factor		x,xx		
Parameters for LED and OLED mains light sources:				
displacement factor (cos φ1)		x,xx	Colour consistency in McAdam ellipses	x
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage.		[yes/-] (d)	If yes then replacement claim (W)	x
Flicker metric (Pst LM)		x,x	Stroboscopic effect metric (SVM)	x,x

(a) **<...>**

(b) **<...>**

(c) '-': not applicable;

'yes': an equivalence claim involving the power of a replaced light source type may be given only:

— for directional light sources, if the light source type is listed in Table 4 and if the luminous flux of the light source in a 90° cone (Φ90°) is not lower than the corresponding reference luminous flux in Table 4. The reference luminous flux shall be multiplied by the correction factor in Table 5. For LED light sources, it shall be in addition multiplied by the correction factor in Table 6,

— for non-directional light sources, the claimed equivalent incandescent light source power (in watt, rounded to the integer) shall be that corresponding in Table 7 to the luminous flux of the light source.

The intermediate values of both the luminous flux and the claimed equivalent light source power (in watt, rounded to the integer) shall be calculated by linear interpolation between the two adjacent values.

(d) '-': not applicable;

'yes': Claim that a LED light source replaces a fluorescent light source without integrated ballast of a particular wattage. This claim may be made only if:

— the luminous intensity in any direction around the tube axis does not deviate by more than 25 % from the average luminous intensity around the tube,and

— the luminous flux of the LED light source is not lower than the luminous flux of the fluorescent light source of the claimed wattage. The luminous flux of the fluorescent light source shall be obtained by multiplying the claimed wattage with the minimum luminous efficacy value corresponding to the fluorescent light source in Table 8, and

— the wattage of the LED light source is not higher than the wattage of the fluorescent light source it is claimed to replace.

The technical documentation file shall provide the data to support such claims.

(e) **<...>**

Table 4

Reference luminous flux for equivalence claims

Extra-low voltage reflector type		
Type	**Power (W)**	**Reference $\Phi_{90°}$ (lm)**
MR11 GU4	20	160
	35	300
MR16 GU 5.3	20	180
	35	300
	50	540
AR111	35	250
	50	390
	75	640
	100	785
Mains-voltage blown glass reflector type		
Type	**Power (W)**	**Reference $\Phi_{90°}$ (lm)**
R50/NR50	25	90
	40	170
R63/NR63	40	180
	60	300
R80/NR80	60	300

	75	350
	100	580
R95/NR95	75	350
	100	540
R125	100	580
	150	1 000
Mains-voltage pressed glass reflector type		
Type	**Power (W)**	**Reference $\Phi_{90°}$ (lm)**
PAR16	20	90
	25	125
	35	200
	50	300
PAR20	35	200
	50	300
	75	500
PAR25	50	350
	75	550
PAR30S	50	350
	75	550
	100	750
PAR36	50	350
	75	550
	100	720
PAR38	60	400
	75	555
	80	600
	100	760
	120	900

Table 5

Multiplication factors for lumen maintenance

Light source type	Luminous flux multiplication factor
Halogen light sources	1
Fluorescent light sources	1,08
LED light sources	1 + 0,5 × (1 - LLMF) where LLMF is the lumen maintenance factor at the end of the declared lifetime

Table 6

Multiplication factors for LED light sources

LED light source beam angle	Luminous flux multiplication factor
20° ≤ beam angle	1
15° ≤ beam angle < 20°	0,9
10° ≤ beam angle < 15°	0,85
beam angle < 10°	0,80

Table 7

Equivalence claims for non-directional light sources

Light source luminous flux Φ (lm)	Claimed equivalent incandescent light source power (W)
136	15
249	25
470	40
806	60
1 055	75
1 521	100
2 452	150
3 452	200

Table 8

Minimum efficacy values for T8 and T5 light sources

T8 (26 mm Ø)		T5 (16 mm Ø) High Efficiency		T5 (16 mm Ø) High Output	
Claimed equivalent power (W)	**Minimum luminous efficacy (lm/W)**	**Claimed equivalent power (W)**	**Minimum luminous efficacy (lm/W)**	**Claimed equivalent power (W)**	**Minimum luminous efficacy (lm/W)**
15	63	14	86	24	73
18	75	21	90	39	79
25	76	28	93	49	88
30	80	35	94	54	82
36	93			80	77
38	87				
58	90				
70	89				

For light sources that can be tuned to emit light at full-load with different characteristics, the values of parameters that vary with these characteristics shall be reported at the reference control settings.

<...>

2. Information to be displayed in the documentation for a containing product

If a light source is placed on the market as a part in a containing product, the technical documentation for the containing product shall clearly identify the contained light source(s), including the energy efficiency class.

If a light source is placed on the market as a part in a containing product, the following text shall be displayed, clearly legible, in the user manual or booklet of instructions:

'This product contains a light source of energy efficiency class <X>',

where <X> shall be replaced by the energy efficiency class of the contained light source.

If the product contains more than one light source, the sentence can be in the plural, or repeated per light source, as suitable.

3. Information to be displayed on the supplier's free access website:

(a) The reference control settings, and instructions on how they can be implemented, where applicable;

(b) Instructions on how to remove lighting control parts and/or non-lighting parts, if any, or how to switch them off or minimize their power consumption;

(c) If the light source is dimmable: a list of dimmers it is compatible with, and the light source — dimmer compatibility standard(s) it is compliant with, if any;

(d) If the light source contains mercury: instructions on how to clean up the debris in case of accidental breakage;

(e) Recommendations on how to dispose of the light source at the end of its life in line with Directive

2012/19/EU of the European Parliament and of the Council ([19]).

4. Information for products specified in point 3 of Annex IV

For the light sources specified in point 3 of Annex IV, their intended use shall be stated on all forms of packaging, product information and advertisement, together with a clear indication that the light source is not intended for use in other applications.

The technical documentation file drawn up for the purposes of conformity assessment, in accordance with paragraph 3 of Article 3 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** shall list the technical parameters that make the product design specific to qualify for the exemption.

([19]) Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (OJ L 197, 24.7.2012, p. 38).

ANNEX VI
Technical documentation

1. The technical documentation referred to in point 1(d) of Article 3 shall include:

(a) the name and address of the supplier;

(b) supplier's model identifier;

(c) the model identifier of all equivalent models already placed on the market;

(d) identification and signature of the person empowered to bind the supplier;

(e) the declared values for the following technical parameters; these values are considered as the declared values for the purpose of the verification procedure in Annex IX:

(1) useful luminous flux (Φ_{use}) in lm;

(2) colour rendering index (CRI);

(3) on-mode power (P_{on}) in W;

(4) beam angle in degrees for directional light sources (DLS);

(4a) peak luminous intensity in cd for directional light sources (DLS);

(5) correlated colour temperature (CCT) in K;

(6) standby power (P_{sb}) in W, including when it is zero;

(7) networked standby power (P_{net}) in W for connected light sources (CLS);

(7a) R9 colour rendering index value for LED and OLED light sources;

(7b) survival factor for LED and OLED light sources;

(7c) lumen maintenance factor for LED and OLED light sources;

(7d) indicative lifetime L70B50 for LED and OLED light sources;

(8) displacement factor (cos φ1) for LED and OLED mains light sources;

(9) colour consistency in MacAdam ellipse steps for LED and OLED light sources;

(10) luminance-HLLS in cd/mm^2 (only for HLLS)

(11) flicker metric (PstLM) for LED and OLED light sources;

(12) stroboscopic effect metric (SVM) for LED and OLED light sources;

(13) excitation purity, only for CTLS, for the following colours and dominant wavelength within the given range:

Colour	Dominant wave-length range
Blue	440 nm – 490 nm
Green	520 nm – 570 nm
Red	610 nm – 670 nm;

(f) the calculations performed with the parameters, including the determination of the energy efficiency class;

(g) references to the harmonised standards applied or other standards used;

(h) testing conditions if not described sufficiently in point (g);

(i) the reference control settings, and instructions on how they can be implemented, where applicable;

(j) instructions on how to remove lighting control parts and/or non-lighting parts, if any, or how to switch them off or minimise their power consumption during light source testing;

(k) specific precautions that shall be taken when the model is assembled, installed, maintained or tested.

2. **<...>.**

ANNEX VII

Information to be provided in visual advertisements, in technical promotional material and in distance selling, except distance selling on the internet

1. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in point 1(e) of Article 3 and point 1(c) of Article 4, the energy class and the range of efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

2. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in point 1(f) of Article 3 and point 1(d) of Article 4, the energy class and the range of efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

3. Any paper-based distance selling must show the energy class and the range of efficiency classes available on the label as set out in point 4 of this Annex.

4. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 2, with:

(a) an arrow, containing the letter of the energy efficiency class in 100 % white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;

(b) the colour of the arrow matching the colour of the energy efficiency class;

(c) the range of available energy efficiency classes in 100 % black; and,

(d) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the energy efficiency class.

By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

Figure 2

Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated



5. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the full label and the product information sheet through a free access website, or by requesting a printed copy.

6. For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to access the label and the product information sheet **<…>** to request a printed copy.

ANNEX VIII

Information to be provided in the case of distance selling on the internet

1. The appropriate label made available by suppliers in accordance with point 1(g) Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified for the standard label in Annex III.

The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

2. The image used for accessing the label in the case of nested display, as indicated in Figure 3, shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

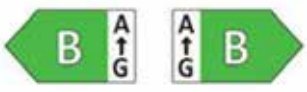
(b) indicate the energy efficiency class of the product on the arrow in 100 % white, Calibri Bold and in a font size equivalent to that of the price;

(c) have the range of available energy efficiency classes in 100 % black; and,

(d) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a visible border in 100 % black placed around the arrow and the letter of the energy efficiency class:

Figure 3

Coloured left/right arrow, with range of energy efficiency classes indicated



3. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 2 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label set out in Annex III;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard-closing mechanism;

(g) the alternative text for the graphic, to be displayed upon failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

4. The appropriate product information sheet made available by suppliers in accordance with point 1(h) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product information sheet is clearly visible and legible. The product information

sheet may be displayed using a nested display **<…>**, in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX IX

Verification procedure for market surveillance purposes

The verification tolerances defined in this Annex relate only to the verification by **Contracting Party** authorities of the declared values and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

As part of verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, the authorities of the **Contracting Parties** shall apply the following procedure:

1. The **Contracting Party** authorities shall verify one single unit of the model for points 2(a) and 2(b) of this Annex.

The **Contracting Party** authorities shall verify 10 units of the light source model for point 2(c) of this Annex. The verification tolerances are laid down in Table 9 of this Annex.

2. The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to point 3 of Article 3 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports; and

(b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the units of the model, the determined values comply with the respective verification tolerances as given in Table 9, where 'determined value' means the arithmetical mean over the tested units of the measured values for a given parameter or the arithmetical mean of parameter values calculated from other measured values.

3. If the results referred to in point 2(a), (b) or (c) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

4. The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Energy Community Secretariat** without delay after a decision is taken on the non-compliance of the model in accordance with point 3 of this Annex.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 9 and shall use only the procedure described in this Annex. For the parameters in Table 9, no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 9

Verification tolerances

Parameter	**Sample size**	**Verification tolerances**
Full-load on-mode power P_{on} [W]:		
$P_{on} \leq 2W$	10	The determined value shall not exceed the declared value by more than 0,20 W.
$2W < P_{on} \leq 5W$	10	The determined value shall not exceed the declared value by more than 10 %.
$5W < P_{on} \leq 25W$	10	The determined value shall not exceed the declared value by more than 5 %.
$25W < P_{on} \leq 100W$	10	The determined value shall not exceed the declared value by more than 5 %.
$100W < P_{on}$	10	The determined value shall not exceed the declared value by more than 2,5 %.
Displacement factor [0-1]	10	The determined value shall not be less than the declared value minus 0,1 units.
Useful luminous flux Φ_{use} [lm]	10	The determined value shall not be less than the declared value minus 10 %.
Standby power P_{sb} and networked standby power P_{net} [W]	10	The determined value shall not exceed the declared value by more than 0,10 W.
CRI and R9 [0-100]	10	The determined value shall not be less than the declared value by more than 2,0 units.
Flicker [Pst LM] and stroboscopic effect [SVM]	10	The determined value shall not exceed the declared value by more than 0,1 or by more than 10 % if the declared value is more than 1,0
Colour consistency [MacAdam ellips steps]	10	The determined number of steps shall not exceed the declared number of steps. The centre of the MacAdam ellipse shall be the centre declared by the supplier with a tolerance of 0,005 units.
Beam angle (degrees)	10	The determined value shall not deviate from the declared value by more than 25 %.
Total mains efficacy η_{TM} [lm/W]	10	The determined value (quotient) shall not be less than the declared value minus 5 %.
Lumen maintenance factor (for LED and OLED)	10	The determined X_{LMF}% of the sample shall not be less than $X_{LMF, MIN}$% according to the text in Annex V of Commission Regulation (EU) 2019/2020.

Survival factor **(for LED and OLED)**	10	At least 9 light sources of the test sample must be operational after completing the endurance test in Annex V of Regulation (EU) 2019/2020.
Excitation purity [%]	10	The determined value shall not be less than the declared value minus 5 %.
Correlated colour temperature [K]	10	The determined value shall not deviate from the declared value by more than 10 %.
Peak luminous intensity [cd]	10	The determined value shall not deviate from the declared value by more than 25 %.
(1) <...>		

For light sources with linear geometry which are scalable but of very long length, such as LED strips or strings, verification testing of market surveillance authorities shall consider a length of 50 cm, or, if the light source is not scalable there, the nearest value to 50 cm. The light source supplier shall indicate which control gear is suitable for this length.

When verifying if a product is a light source, market surveillance authorities shall compare the measured values for chromaticity coordinates (x and y), luminous flux, luminous flux density, and colour rendering index directly with the limit values set out in the definition for light source of Article 2 of this Regulation, without applying any tolerances. If any of the 10 units in the sample satisfies the conditions for being a light source, the product model shall be considered to be a light source.

Light sources that allow the end-user to control, manually or automatically, directly or remotely, the luminous intensity, colour, correlated colour temperature, spectrum, and/or beam angle of the emitted light shall be evaluated using the reference control setting.

DELEGATED REGULATION (EU) 2019/2016 of 11 March 2019 supplementing Regulation (EU) 2017/1369 with regard to energy labelling of refrigerating appliances

Incorporated and adapted by Ministerial Council Decision 2022/04/MC-EnC of 15 December 2022 on adapting and incorporating certain Delegated Regulations on energy-related products, introducing rescaled labels in Energy Community acquis communautaire and repealing Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 874/2012, and Directive 96/60/EC

The adaptations made by Ministerial Council Decision 2022/04/MC-EnC are highlighted in ***bold and blue****.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, electric mains-operated refrigerating appliances with a volume of more than 10 litres and of less than or equal to 1 500 litres.

2. This Regulation does not apply to:

(a) professional refrigerated storage cabinets and blast cabinets, with the exception of professional chest freezers;

(b) refrigerating appliances with a direct sales function;

(c) mobile refrigerating appliances;

(d) appliances where the primary function is not the storage of foodstuffs through refrigeration.

Article 2

Definitions

or the purpose of this Regulation, the following definitions shall apply:

(1) 'mains' or 'electric mains' means the electricity supply from the grid of 230 (± 10 %) volt of alternating current at 50 Hz;

(2) 'refrigerating appliance' means an insulated cabinet with one or more compartments that are controlled at specific temperatures, cooled by natural or forced convection whereby the cooling is obtained by one or more energy consuming means;

(3) 'compartment' means an enclosed space within a refrigerating appliance, separated from other compartment(s) by a partition, container, or similar construction, which is directly accessible through one or more external doors and may itself be divided into sub-compartments. For the purpose of this Regulation, unless specified otherwise, compartment refers to both compartments and sub-compartments;

(4) 'external door' is the part of a cabinet that can be moved or removed to at least allow the load to be

moved from the exterior to the interior or from the interior to the exterior of the cabinet;

(5) 'sub-compartment' means an enclosed space in a compartment having a different operating temperature range from the compartment in which it is located;

(6) 'total volume' (*V*) means the volume of the space within the inside liner of the refrigerating appliance, equal to the sum of the compartment volumes, expressed in dm^3 or litres;

(7) 'compartment volume' (V_c) means the volume of the space within the inside liner of the compartment, expressed in dm^3 or litres;

(8) 'professional refrigerated storage cabinet' means an insulated refrigerating appliance integrating one or more compartments accessible via one or more doors or drawers, capable of continuously maintaining the temperature of foodstuffs within prescribed limits at chilled or frozen operating temperature, using a vapour compression cycle, and used for the storage of foodstuffs in non-household environments but not for the display to or access by customers, as defined in Commission Regulation (EU) 2015/1095 ([1]);

(9) 'blast cabinet' means an insulated refrigerating appliance primarily intended to rapidly cool hot foodstuffs to below 10 °C in the case of chilling and below - 18 °C in the case of freezing, as defined in Regulation (EU) 2015/1095;

(10) 'professional chest freezer' means a freezer in which the compartment(s) is accessible from the top of the appliance or which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment(s) exceeds 75 % of the total gross volume of the appliance, used for the storage of foodstuffs in non-household environments;

(11) 'freezer' means a refrigerating appliance with only 4-star compartments;

(12) 'freezer compartment' or '4-star compartment' means a frozen compartment with a target temperature and storage conditions of - 18 °C and which fulfils the requirements for the freezing capacity;

(13) 'frozen compartment' means a compartment type with a target temperature equal to or below 0 °C; that is a 0-star, 1-star, 2-star, 3-star or 4-star compartment, as set out in Annex IV, Table 3;

(14) 'compartment type' means the declared compartment type in accordance with the refrigerating performance parameters T_{min}, T_{max}, T_c and others set out in Annex IV, Table 3;

(15) 'target temperature' (T_c) means the reference temperature inside a compartment during testing, as set out in Annex IV, Table 3, and is the temperature for testing energy consumption expressed as the average over time and over a set of sensors;

(16) 'minimum temperature' (T_{min}) means the minimum temperature inside a compartment during storage testing, as set out in Annex IV, Table 3;

(17) 'maximum temperature' (T_{max}) means the maximum temperature inside a compartment during storage testing, as set out in Annex IV, Table 3;

(18) '0-star compartment' and 'ice-making compartment' means a frozen compartment with a target temperature and storage conditions of 0 °C, as set out in Annex IV, Table 3;

(19) '1-star compartment' means a frozen compartment with a target temperature and storage conditions of - 6 °C, as set out in Annex IV, Table 3;

---

1 Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers (OJ L 177, 8.7.2015, p. 19).

(20) '2-star compartment' means a frozen compartment with a target temperature and storage conditions of - 12 °C, as set out in Annex IV, Table 3;

(21) '3-star compartment' means a frozen compartment with a target temperature and storage conditions of - 18 °C, as set out in Annex IV, Table 3;

(22) 'refrigerating appliance with a direct sales function' means a refrigerating appliance used for the functions of displaying and selling items at specified temperatures below the ambient temperature to customers, accessible directly through open sides or via one or more doors, or drawers, or both, including also cabinets with areas used for storage or assisted serving of items not accessible by the customers and excluding minibars and wine storage appliances, as defined in Commission Regulation (EU) 2019/2024 ([2]);

(23) 'minibar' means a refrigerating appliance with a total volume of maximum 60 litres, which is primary intended for the storage and sales of foodstuffs in hotel rooms and similar premises;

(24) 'wine storage appliance' means a dedicated refrigerating appliance for the storage of wine, with precision temperature control for the storage conditions and target temperature of a wine storage compartment, as defined in Annex IV, Table 3, and equipped with anti-vibration measures;

(25) 'dedicated refrigerating appliance' means a refrigerating appliance with only one type of compartment;

(26) 'wine storage compartment' means an unfrozen compartment with a target temperature of 12 °C, an internal humidity range from 50 % to 80 % and storage conditions ranging from 5 °C to 20 °C, as defined in Annex IV, Table 3;

(27) 'unfrozen compartment' means a compartment type with a target temperature equal to or above 4 °C; that is a pantry, wine storage, cellar or fresh food compartment with storage conditions and target temperatures, as set out in Annex IV, Table 3;

(28) 'pantry compartment' means an unfrozen compartment with a target temperature of 17 °C and storage conditions ranging from 14 °C to 20 °C, as set out in Annex IV, Table 3;

(29) 'cellar compartment' means an unfrozen compartment with a target temperature of 12 °C and storage conditions ranging from 2 °C to 14 °C, as set out in Annex IV, Table 3;

(30) 'fresh food compartment' means an unfrozen compartment with a target temperature of 4 °C and storage conditions ranging from 0 °C and 8 °C, as set out in Annex IV, Table 3;

(31) 'mobile refrigerating appliance' means a refrigerating appliance that can be used where there is no access to the mains electricity grid and that uses extra low-voltage electricity (< 120 V DC) or fuel or both as the energy source for the refrigeration functionality, including a refrigerating appliance that, in addition to extra low voltage electricity or fuel, or both, can be electric mains operated via an external AC/DC converter to be purchased separately. An appliance placed on the market with an AC/DC converter is not a mobile refrigerating appliance;

(32) 'foodstuffs' means food, ingredients, beverages, including wine, and other items primarily used for consumption which require refrigeration at specified temperatures;

(33) 'point of sale' means a location where refrigerating appliances are displayed or offered for sale, hire or hire-purchase;

(34) 'built-in appliance' means a refrigerating appliance that is designed, tested and marketed exclusively:

2 Commission Regulation (EU) 2019/2024 of 1 October 2019 laying down ecodesign requirements for refrigerating appliances with a direct sales function pursuant to Directive 2009/125/EC of the European Parliament and of the Council (see page 313 of this Official Journal).

(a) to be installed in cabinetry or encased (top, bottom and sides) by panels;

(b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and

(c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel;

(35) 'energy efficiency index' (EEI) means an index number for the relative energy efficiency of a refrigeration appliance, expressed in percentage, as set out in point 5 of Annex IV.

For the purposes of the Annexes, additional definitions are set out in Annex I.

Article 3

Obligations of suppliers

1. Suppliers shall ensure that:

(a) each refrigerating appliance is supplied with a printed label in the format as set out in Annex III;

(b) **the product information sheet, as set out in Annex V, is made available free of charge, in electronic format;**

(c) **if specifically requested by the dealer, the product information sheet shall be made available in printed form, free of charge;**

(d) **the content of the technical documentation, as set out in Annex VI, is made available at the request of the market surveillance authorities of the Contracting Parties;**

(e) any visual advertisement for a specific model of refrigerating appliances contains the energy efficiency class and the range of energy efficiency classes available on the label in accordance with Annex VII and Annex VIII;

(f) any technical promotional material concerning a specific model of refrigerating appliances, including technical promotional material on the internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(g) **an electronic label in the format and containing the information, as set out in Annex III, is made available to dealers for each refrigerating appliance model registered in the EU product database; for the models placed only on the markets of the Contracting Parties which are not registered in the EU product database, the label shall be generated without the EU logo, and the QR code shall be linked to the website with model's information maintained by the manufacturer;**

(h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each refrigerating appliance model.

2. The energy efficiency class shall be based on the energy efficiency index calculated in accordance with Annex II.

Article 4

Obligations of dealers

Dealers shall ensure that:

(a) each refrigerating appliance, at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label being displayed for built-in appliances in such a way as to be clearly visible, and for all other refrigerating appliances in such a way as to be clearly visible on the outside of the front or top of the refrigerating appliance;

(b) in the event of distance selling, the label and product information sheet are provided in accordance with Annexes VII and VIII;

(c) any visual advertisement for a specific model of refrigerating appliance, including on the internet, contains the energy efficiency class and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(d) any technical promotional material concerning a specific model of refrigerating appliance, including technical promotional material on the internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII.

Article 5

Obligations of internet hosting platforms

Where a hosting service provider **<…>** allows the direct selling of refrigerating appliances through its internet site, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

Article 6

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation methods set out in Annex IV.

Article 7

Verification procedure for market surveillance purposes

Contracting Parties shall apply the verification procedure laid down in Annex IX when performing the market surveillance checks referred to in **paragraph 2** of Article 8 of Regulation (EU) 2017/1369 **as**

adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC.

Article 8

Review

<…>

Article 9

Repeal

<…>

Article 10

Transitional measures

<…>

Article 11

Entry into force and application

This Regulation enters into force on the day of the adoption of Ministerial Council Decision 2022/04/MC-EnC and is addressed to the Contracting Parties and the institutions of the Energy Community.

The Delegated Regulation 2019/2016 shall be transposed, implemented and applicable in all Contracting Parties by 31 December 2023. However, Article 3 paragraph 1 points (a), (b) and (c) shall apply latest as of 31 August 2023.

ANNEX I
Definitions applicable for the Annexes

The following definitions shall apply:

(1) 'quick response (QR) code' means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the **EU product database**;

(2) 'annual energy consumption' (*AE*) means the average daily energy consumption multiplied by 365 (days per year), expressed in kilowatt hour per year (kWh/a), as calculated in accordance with point 3 of Annex IV;

(3) 'daily energy consumption' (E_{daily}) means the electricity used by a refrigerating appliance over 24 hours at reference conditions, expressed in kilowatt hour per 24 hours (kWh/24h), calculated in accordance with point 3 of Annex IV;

(4) 'freezing capacity' means the amount of fresh foodstuffs that can be frozen in a freezer compartment in 24 h; it shall not be lower than 4,5 kg per 24 h per 100 litres of volume of the freezer compartment, with a minimum of 2,0 kg/24h;

(5) 'chill compartment' means a compartment which is able to control its average temperature within a certain range without user-adjustments of its control, with a target temperature equal to 2 °C, and storage conditions ranging from - 3 °C to 3 °C, as set out in Annex IV, Table 3;

(6) 'airborne acoustical noise emission' means the sound power level of a refrigerating appliance, expressed in dB(A) re 1 pW (A-weighted);

(7) 'anti-condensation heater' means a heater which prevents condensation on the refrigeration appliance;

(8) 'ambient controlled anti-condensation heater' means an anti-condensation heater where the heating capacity depends on either the ambient temperature or the ambient humidity or both;

(9) 'auxiliary energy' (E_{aux}) means the energy used by an ambient controlled anti-condensation heater, expressed in kilowatt hour per annum (kWh/a);

(10) 'dispenser' means a device that dispenses chilled or frozen load on demand from a refrigerating appliance, such as ice-cube dispensers or chilled water dispensers;

(11) 'variable temperature compartment' means a compartment intended for use as two (or more) alternative compartment types (for example a compartment that can be either a fresh food compartment or freezer compartment) and which is capable of being set by a user to continuously maintain the operating temperature range applicable for each declared compartment type. A compartment intended for use as a single compartment type that can also meet storage conditions of other compartment types (for example a chill compartment that may also fulfil 0-star requirements) is not a variable temperature compartment;

(12) 'network' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);

(13) '2-star section' means part of a 3-star or 4-star compartment which does not have its own individual access door or lid and with target temperature and storage conditions of - 12 °C;

(14) 'climate class' means the range of ambient temperatures, as set out in point 1(j) of Annex IV, in which the refrigerating appliances are intended to be used, and for which the required storage conditions specified in Annex IV, Table 3 are met simultaneously in all compartment(s);

(15) 'defrost and recovery period' means the period from the initiation of a defrost control cycle until stable operating conditions are re-established;

(16) 'auto-defrost' means a feature by which compartments are defrosted without user intervention to initiate the removal of frost accumulation at all temperature-control settings or to restore normal operation, and the disposal of the defrost water is automatic;

(17) 'defrosting type' means the method to remove frost accumulation on the evaporator(s) of a refrigerating appliance; that is auto-defrost or manual defrost;

(18) 'manual defrost' means not having an auto-defrost function;

(19) 'low noise refrigerating appliance' means a refrigerating appliance without vapour compression and with an airborne acoustical noise emission lower than 27 A-weighted decibel referred to 1 pico watt (dB(A) re 1 pW);

(20) 'steady-state power consumption' (P_{ss}) means the average power consumption in steady-state conditions, expressed in watt (W);

(21) 'incremental defrost and recovery energy consumption' ($\Delta E_{d\text{-}f}$) means the extra average energy consumption for a defrost and recovery operation expressed in watt hour (Wh);

(22) 'defrost interval' ($t_{d\text{-}f}$) means the representative average interval, expressed in hour (h), between one time of activation of the defrost heater and the next in two subsequent defrost and recovery cycle; or if there is no defrost heater one time of deactivation of the compressor and the next in two subsequent defrost and recovery cycles;

(23) 'load factor' (*L*) means a factor accounting for the extra (beyond what is already anticipated through the higher average ambient temperature for testing) cooling load from introducing warm foodstuffs, with values as set out in point 3(a) of Annex IV;

(24) 'standard annual energy consumption' (*SAE*) means the reference annual energy consumption of a refrigerating appliance, expressed in kilowatt hour per year (kWh/a), as calculated in accordance with point 4 of Annex IV;

(25) 'combi parameter' (*C*) means a modelling parameter that takes into account the synergy effect when different compartment types are combined in one appliance, with values as set out in Annex IV, Table 4;

(26) 'door heat loss factor' (*D*) means a compensation factor for combi appliances according to the number of different temperature compartments or the number of external doors, whichever is lower and as set out in Annex IV, Table 5. For this factor, 'compartment' does not refer to sub-compartment;

(27) 'combi appliance' means a refrigerating appliance that has more than one compartment type of which at least one unfrozen compartment;

(28) 'defrost factor' (A_c) means a compensation factor that takes into account whether the refrigerating appliance has an auto-defrost or a manual defrost, with values as set out in Annex IV, Table 5;

(29) 'built-in factor' (B_c) means a compensation factor that takes into account whether the refrigerating appliance is built-in or freestanding, with values as set out in Annex IV, Table 5;

(30) 'freestanding appliance' means a refrigerating appliance that is not a built-in appliance;

(31) 'M_c' and 'N_c' means modelling parameters that take into account the volume-dependence of the energy use, with values as set out in Annex IV, Table 4;

(32) 'thermodynamic parameter' (r_c) means a modelling parameter which corrects the standard annual

energy consumption to an ambient temperature of 24 °C, with values as set out in Annex IV, Table 4;

(33) 'overall dimensions' means the space taken up by the refrigerating appliance (height, width and depth) with doors or lids closed, expressed in millimetres (mm);

(34) 'temperature rise time' means the time taken, after the operation of the refrigerated system has been interrupted, for the temperature in a 3- or 4-star compartment to increase from -18 to - 9 °C expressed in hours (h);

(35) 'winter setting' means a control feature for a combi appliance with one compressor and one thermostat, which according to the supplier's instructions can be used in ambient temperatures below +16 °C, consisting of a switching device or function that guarantees, even if it would not be required for the compartment where the thermostat is located, that the compressor keeps on working to maintain the proper storage temperatures in the other compartments;

(36) 'fast freeze' means a feature that can be activated by the end-user according to the supplier's instructions, which decreases the storage temperature of the freezer compartment(s) to achieve a faster freezing of unfrozen foodstuffs;

(37) 'freezer compartment' or '4-star compartment' means a frozen compartment with a target temperature and storage conditions of - 18 °C and which fulfils the requirements for the freezing capacity;

(38) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(39) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(40) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(41) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non- graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications;

(42) 'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters, pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Article 3(1)(d) and Annex VI of this Regulation, for the verification of compliance by the **Contracting Party** authorities.

ANNEX II

Energy efficiency classes and airborne acoustical emission classes

The energy efficiency class of refrigerating appliances shall be determined on the basis of the energy efficiency index (EEI) as set out in Table 1.

Table 1

Energy efficiency classes of refrigerating appliances

Energy efficiency class	Energy efficiency index (EEI)
A	EEI ≤ 41
B	41 < EEI ≤ 51
C	51 < EEI ≤ 64
D	64 < EEI ≤ 80
E	80 < EEI ≤ 100
F	100 < EEI ≤ 125
G	EEI > 125

The EEI of a refrigerating appliance shall be determined in accordance with point 5 of Annex IV.

Table 2

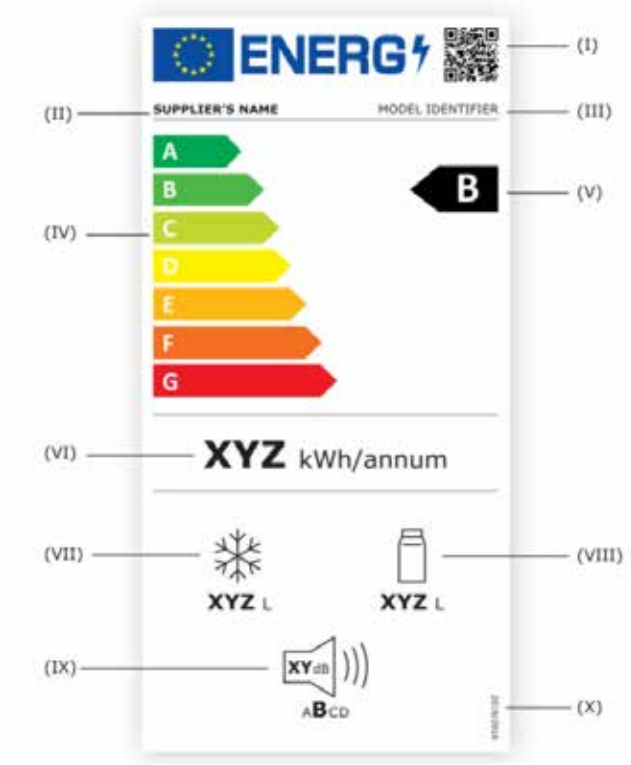
Airborne acoustical noise emission classes

Airborne acoustical noise emission	Airborne acoustical noise emission class
< 30 dB(A) re 1 pW	A
≥ 30 dB(A) re 1 pW and < 36 dB(A) re 1 pW	B
≥ 36 dB(A) re 1 pW and < 42 dB(A) re 1 pW	C
≥ 42 dB(A) re 1 pW	D

ANNEX III
Label for refrigerating appliances

1. LABEL FOR REFRIGERATING APPLIANCES, EXCEPT FOR WINE STORAGE APPLIANCES

1.1. ***Label:***



1.2. ***The following information shall be included in the label:***

I. the QR code;

II. supplier's name or trade mark;

III. supplier's model identifier;

IV. scale of energy efficiency classes from A to G;

V. the energy efficiency class determined in accordance with Annex II;

VI. annual energy consumption (*AE*), expressed in kWh per year and rounded to the nearest integer;

VII.

— the sum of the volumes of the frozen compartment(s), expressed in litres and rounded to the

nearest integer;

— if the refrigerating appliance does not contain frozen compartment(s) the pictogram and the value in litres in VII shall be omitted;

VIII.

— the sum of the volumes of the chill compartment(s) and the unfrozen compartment(s), expressed in litres and rounded to the nearest integer;

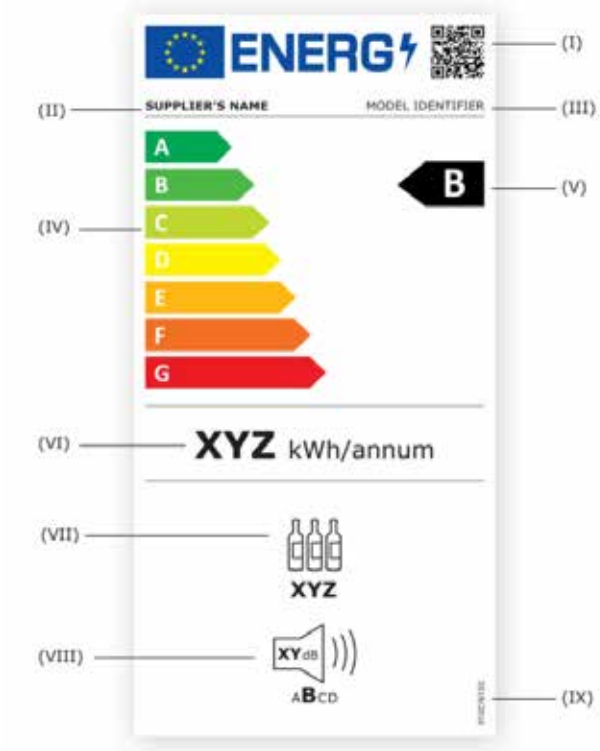
— if the refrigerating appliance does not contain unfrozen compartment(s) and chill compartment(s) the pictogram and the value in litres in VIII shall be omitted;

IX. airborne acoustical noise emissions, expressed in dB(A) re 1 pW and rounded to the nearest integer. The airborne acoustical noise emission class, as set out in Table 2;

X. the number of this Regulation, that is '2019/2016'.

2. LABEL FOR WINE STORAGE APPLIANCES

2.1. ***Label:***



2.2. ***The following information shall be included in the label:***

I. QR code;

II. supplier's name or trade mark;

III. supplier's model identifier;

IV. scale of energy efficiency classes from A to G;

V. the energy efficiency class determined in accordance with Annex II;

VI. *AE*, expressed in kWh per year and rounded to the nearest integer;

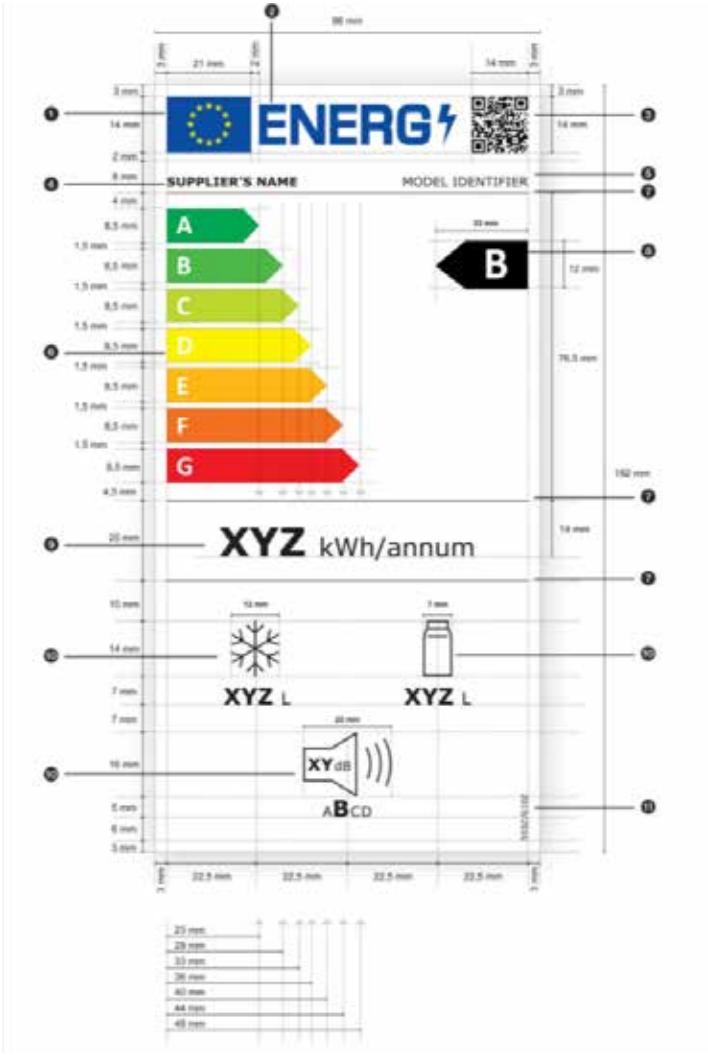
VII. the number of standard wine bottles that can be stored in the wine storage appliance;

VIII. airborne acoustical noise emissions, expressed in dB(A) re 1 pW and rounded to the nearest integer. The airborne acoustical noise emission class, as set out in Table 2;

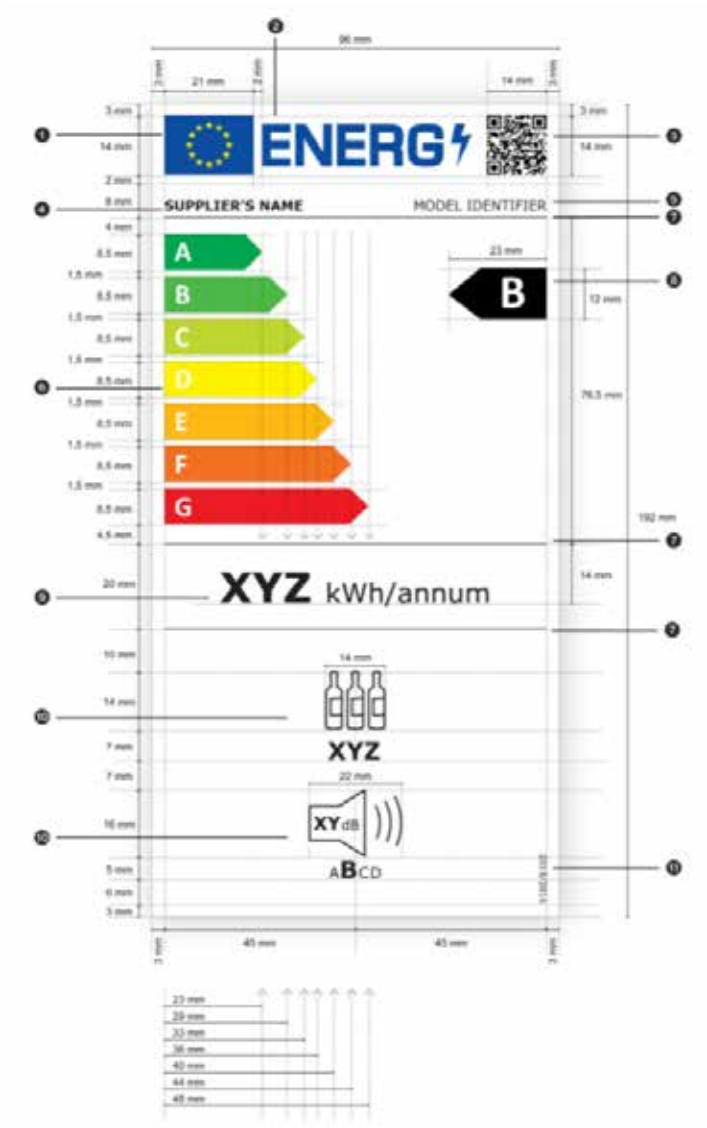
IX. the number of this Regulation that is '2019/2016'.

3. LABEL DESIGNS

3.1. ***Label design for refrigerating appliances, except for wine storage appliances***



3.2. ***Label design for wine storage appliances***



3.3. ***Whereby:***

(a) The labels shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be 100 % white.

(c) The typefaces shall be Verdana and Calibri.

(d) The dimensions and specifications of the elements constituting the label shall be as indicated in the label designs for refrigerating appliances and for wine storage appliances.

(e) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(f) The label shall fulfil all the following requirements (numbers refer to the figures above):

1 the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

2 the colour of the energy logo shall be: 100,80,0,0;

3 the QR code shall be 100 % black;

4 the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;

5 the model identifier shall be 100 % black and in Verdana Regular 9 pt;

6 the A to G scale shall be as follows:

— the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4,5 mm from the left side of the arrows;

— the colours of the A to G scale arrows shall be as follows:

— A-class: 100,0,100,0;

— B-class: 70,0,100,0;

— C-class: 30,0,100,0;

— D-class: 0,0,100,0;

— E-class: 0,30,100,0;

— F-class: 0,70,100,0;

— G-class: 0,100,100,0;

7 the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

8 the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 33 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

9 the annual energy consumption value shall be in Verdana Bold 28 pt; 'kWh/annum' shall be in Verdana Regular 18 pt. The value and unit shall be centred and 100 % black;

10 the pictograms shall be as shown as in the label designs and as follows:

— the pictograms' lines shall have a weight of 1,2 pt and they and the texts (numbers and units) shall be 100 % black;

— the text under the pictogram(s) shall be in Verdana Bold 16 pt with the unit in Verdana Regular 12 pt, and it shall be centred under the pictogram;

— for refrigerating appliances, except wine storage appliances: if the appliance contains only frozen compartment(s) or only unfrozen compartment(s), only the relevant pictogram in the top row, as set out in point 1.2 VII and VIII, shall be shown and centred between the two vertical borders of the

energy label;

— the airborne acoustical noise emission pictogram: the number of decibels in the loudspeaker shall be in Verdana Bold 12 pt, with the unit 'dB' in Verdana Regular 9 pt; the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;

11 the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.

ANNEX IV
Measurement methods and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards, or other reliable, accurate and reproducible methods, which takes into account the generally recognised state-of-the-art methods and are in line with the provisions set out below. The reference numbers of these harmonised standards have been published for this purpose in the *Official Journal of the European Union*:

1. General conditions for testing:

(a) for refrigerating appliances with anti-condensation heaters that can be switched on and off by the end-user, the anti-condensation heaters shall be switched on and — if adjustable — set at maximum heating and included in the annual energy consumption (*AE*) as daily energy consumption (E_{daily});

Where a parameter is declared pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Table 7 of Annex VI, its declared value shall be used by the supplier for the calculations in this Annex.

(b) for refrigerating appliances with ambient controlled anti-condensation heaters, the ambient controlled electric anti-condensation heaters shall be switched off or otherwise disabled, where possible, during the measurement of energy consumption;

(c) for refrigerating appliances with dispensers that can be switched on and off by the end-user, the dispensers shall be switched on during the energy consumption test but not operating;

(d) for the measurement of energy consumption, variable temperature compartments shall operate at the lowest temperature that can be set by the end-user to continuously maintain the temperature range, as set out in Table 3, of the compartment type which has the lowest temperature;

(e) for refrigerating appliances that can be connected to a network, the communication module shall be activated but there is no need to have a specific type of communication or data exchange or both during the energy consumption test. During the energy consumption test it has to be ensured that the unit is connected to a network;

(f) for the performance of chill compartments:

(1) for a variable temperature compartment rated as a fresh food and/or chill compartment, the energy efficiency index (EEI) shall be determined for each temperature condition and the highest value shall be applied;

(2) a chill compartment shall be able to control its average temperature within a certain range without user-adjustments of its control, this can be verified during the energy consumption tests at 16 °C and 32 °C ambient temperature;

(g) for adjustable volume compartments, when the volumes of two compartments are adjustable relative to one another by the end-user, the energy consumption and the volume shall be tested when the volume of the compartment with the higher target temperature is adjusted to its minimum volume;

(h) the freezing capacity of a compartment is calculated as 24 times the light load weight of that compartment, divided by the freezing time to bring the temperature of the light load from +25 to – 18 °C at an ambient temperature of 25 °C expressed in kg/24h and rounded to one decimal place;

(i) for 4-star compartments, the freezing time to bring the temperature of the light load from +25 to – 18

°C at an ambient temperature of 25 °C shall be such that the resulting freezing capacity complies with the requirement in Annex I, point 4;

(j) for the determination of the climate classes, the acronym for the ambient temperature range, that is SN, N, ST or T:

(1) the extended temperate (SN) has a temperature range from 10 °C to 32 °C;

(2) the temperate (N) has a temperature range from 16 °C to 32 °C;

(3) the subtropical (ST) has a temperature range from 16 °C to 38 °C; and

(4) the tropical (T) has a temperature range from 16 °C to 43 °C;

(k) the light load weight for each 4-star compartment shall be:

— 3,5 kg/100 l of the volume of the 4-star compartment evaluated, rounded up to the nearest 0,5 kg, and

— 2 kg for a 4-star compartment with a volume for which 3,5 kg/100 l leads to a value lower than 2 kg;

in the case that the refrigerating appliance includes a combination of 3- and 4-star compartments, the sum of the light load weights shall be increased so that the sum of the light load weights for all the 4-star compartments shall be:

— 3,5 kg/100 l of the total volume of all 4- and 3-star compartments, rounded up to the nearest 0,5 kg, and

— 2 kg for a total volume of all 4- and 3-star compartments for which 3,5 kg/100 l leads to a value lower than 2 kg.

2. Storage conditions and target temperatures per compartment type:

Table 3 sets out the storage conditions and target temperature per compartment type.

3. Determination of the AE:

(a) For all refrigerating appliances, except for low noise refrigerating appliances:

The energy consumption shall be determined by testing at an ambient temperature of 16 °C and 32 °C.

To determine the energy consumption, the average air temperatures in each compartment shall be equal to or below the target temperatures specified in Table 3 for each compartment type claimed by the supplier. Values above and below target temperatures may be used to estimate the energy consumption at the target temperature for each relevant compartment by interpolation, as appropriate.

The main components of energy consumption to be determined are:

— a set of steady state power consumption values (P_{ss}) in W and rounded to one decimal place, each at a specific ambient temperature and at a set of compartment temperatures, which are not necessarily the target temperatures;

— the representative incremental defrost and recovery energy consumption ($\Delta E_{d\text{-}f}$), in Wh and rounded to one decimal place, for products with one or more auto-defrost systems (each with its own defrost control cycle) measured at an ambient temperature of 16 °C ($\Delta E_{d\text{-}f16}$) and 32 °C ($\Delta E_{d\text{-}f32}$);

— defrost interval ($t_{d\text{-}f}$), expressed in h and rounded to three decimal places, for products with one or more defrost systems (each with its own defrost control cycle) measured at an ambient temperature of 16 °C ($t_{d\text{-}f16}$) and 32 °C ($t_{d\text{-}f32}$). $t_{d\text{-}f}$ shall be determined for each system under a certain range of conditions;

— for each test performed the P_{ss} and $\Delta E^{d\text{-}f}$ are added together to form a daily energy consumption at a certain ambient temperature $E_T = 0{,}001 \times 24 \times (P_{ss} + \Delta E_{d\text{-}f} / t_{d\text{-}f})$, expressed in kWh/24h, specific to the

settings applied;

— E_{aux} , expressed in kWh/a and rounded to three decimal places. E_{aux} is limited to the ambient controlled anti-condensation heater and is determined from the heater's power consumption at a number of ambient temperature and humidity conditions, multiplied with the probability that this ambient temperature and humidity condition occurs and summed; this result is subsequently multiplied with a loss factor to account for heat leakage into the compartment and its subsequent removal by the refrigeration system.

Table 3

Storage conditions and target temperature per compartment type

Group	**Compartment type**	**Note**	**Storage conditions**		T_c
			Tmin	*Tmax*	
Name	Name	no.	°C	°C	°C
Unfrozen compartments	Pantry	(1)	+14	+20	+17
	Wine storage	(2) (6)	+5	+20	+12
	Cellar	(1)	+2	+14	+12
	Fresh food	(1)	0	+8	+4
Chill compartment	Chill	(3)	-3	+3	+2
Frozen compartments	0-star & ice-making	(4)	n.a.	0	0
	1-star	(4)	n.a.	-6	-6
	2-star	(4) (5)	n.a.	-12	-12
	3-star	(4) (5)	n.a.	-18	-18
	freezer (4-star)	(4) (5)	n.a.	-18	-18

(1) $\boldsymbol{T_{min}}$ and $\boldsymbol{T_{max}}$ are the average values measured over the test period (average over time and over a set of sensors).

(2) The average temperature variation over the test period for each sensor shall be no more than ± 0,5 kelvin (K). During a defrost and recovery period the average of all sensors is not permitted to rise more than 1,5 K above the average value of the compartment.

(3) $\boldsymbol{T_{min}}$ and $\boldsymbol{T_{max}}$ are instantaneous values during the test period.

(4) $\boldsymbol{T_{max}}$ is the maximum value measured over the test period (maximum over time and over a set of sensors).

(5) If the compartment is of the auto-defrosting type, the temperature (defined as the maximum of all sensors) is not permitted to rise more than 3,0 K during a defrost and recovery period.

(6) $\boldsymbol{T_{min}}$ and $\boldsymbol{T_{max}}$ are the average values measured over the test period (average over time for each sensor) and define the maximum allowed temperature operating range

n.a.=not applicable

Each of these parameters shall be determined through a separate test or set of tests. Measurement data is averaged over a test period which is taken after the appliance has been in operation for a certain time. To improve the efficiency and accuracy of testing, the length of the test period shall not be fixed; it shall be such that the appliance is in steady state condition during this test period. This is validated by examining all data within this test period against a set of stability criteria and whether enough data could be collected in this steady state.

AE, expressed in kWh/a and rounded to two decimal places, shall be calculated as follows:

$$AE = 365 \times E_{daily} / L + E_{aux}$$

with

— the load factor L = 0,9 for refrigerating appliances with only frozen compartments and L = 1,0 for all other appliances; and

— with $E_{daily,}$ expressed in kWh/24h and rounded to three decimal places calculated from E_T at an ambient temperature of 16 °C (E_{16}) and at an ambient temperature of 32 °C (E_{32}) as follows:

$$E_{daily} = 0{,}5 \times (E_{16} + E_{32})$$

where E_{16} and E_{32} are derived by interpolation of the energy test at the target temperatures set out in Table 3.

(b) For low noise refrigerating appliances:

The energy consumption shall be determined as provided for in point 3(a), but at an ambient temperature of 25 °C instead of at 16 °C and 32 °C.

E_{daily} , expressed in kWh/24h and rounded to three decimal places for the calculation of the *AE* is then as follows:

$$E_{daily} = E_{25}$$

where E_{25} is E_T at an ambient temperature of 25 °C and derived by interpolation of the energy tests at the target temperatures listed in Table 3.

4. Determination of the standard annual energy consumption (*SAE*):

(a) For all refrigerating appliances:

SAE, expressed in kWh/a, and rounded to two decimal places, is calculated as follows:

$$SAE = C \times D \times c\Sigma{=}1\ A_c \times B_c \times [V_c V] \times (N_c + V \times r_c \times M_c)$$

where

— c is the index number for a compartment type ranging from 1 to n, with n the total number of compartment types;

— V_c , expressed in dm^3 or litres and rounded to the first decimal place is the compartment volume;

— *V,* expressed in dm^3 or litres and rounded to the nearest integer is the volume with

$$V \leq \sum_{c=1}^{n} V_c$$

— r_c, N_c, M_c and *C* are modelling parameters specific to each compartment with values as set out in Table 4; and

— A_c, B_c and *D* are the compensation factors with values as set out in Table 5.

When carrying out the calculations above, for the variable temperature compartments, the compartment type with the lowest target temperature for which it is declared suitable is chosen.

(b) Modelling parameters per compartment type for the calculation of *SAE:*

The modelling parameters are set out in Table 4.

Table 4

The values of the modelling parameters per compartment type

Compartment type	**r_c** [(a)]	**N_c**	**M_c**	**C**
Pantry	0,35	75	0,12	between 1,15 and 1,56 for combi appliances with 3-or 4-star compartments [(b)], 1,15 for other combi appliances, 1,00 for other refrigerating appliances
Wine storage	0,60			
Cellar	0,60			
Fresh food	1,00			
Chill	1,10	138	0,12	
0-star & ice-making	1,20	138	0,15	
1-star	1,50			
2-star	1,80			
3-star	2,10			
Freezer (4-star)	2,10			

(a) $r_c = (T_a - T_c)/20$; with T_a = 24 °C and T_c with values as set out in Table 3.

(b) C for combi appliances with 3-or 4-star compartments is determined as follows:

where *frzf* is the 3- or 4-star compartment volume V_{fr} as a fraction of V with $frzf = V_{fr}/V$:

— if $frzf \leq 0{,}3$ then $C = 1{,}3 + 0{,}87 \times frzf$;

— else if $0{,}3 < frzf < 0{,}7$ then $C = 1{,}87 - 1{,}0275 \times frzf$;

— else C =1,15 .

(c) Compensation factors per compartment type in the calculation of *SAE:*

The compensation factors are set out in Table 5.

Table 5

The values of the compensation factors per compartment type

Compartment type	**A_c**		**B_c**		**D**			
	Manual defrost	**Auto-defrost**	**Free-standing appliance**	**Built-in appliance**	**≤ 2** [(a)]	**3** [(a)]	**4** [(a)]	**> 4** [(a)]
Pantry	1,00		1,00 1,03	1,02	1,00	1,02	1,035	1,05
Wine storage								
Cellar								
Fresh food								
Chill								
0-star & ice-making	1,00	1,10		1,05				
1-star								
2-star								
3-star								
Freezer (4-star)								
(a) number of external doors or compartments, whichever is lowest.								

5. Determination of the EEI:

EEI, expressed in % and rounded to the first decimal place, calculated as:

EEI = *AE/SAE*.

ANNEX V
Product information sheet

<...> If the refrigerating appliance contains multiple compartments of the same type, the lines for these compartments shall be repeated. If a certain compartment type is not present, the compartment parameters and values shall be '-'.

compartment parameters and values shall be '-'.

Table 6

Product information sheet

Supplier's name or trade mark:				
Supplier's address:				
Model identifier:				
Type of refrigerating appliance:				
Low-noise appliance:		[yes/no]	Design type:	[built-in/freestanding]
Wine storage appliance:		[yes/no]	Other refrigerating appliance:	[yes/no]
General product parameters:				
Parameter		Value	Parameter	Value
Overall dimensions (millimetre)	Height	x	Total volume (dm^3 or l)	x
	Width	x		
	Depth	x		
EEI		x	Energy efficiency class	[A/B/C/D/E/F/G]
Airborne acoustical noise emissions (dB(A) re 1 pW)		x	Airborne acoustical noise emission class	[A/B/C/D]
Annual energy consumption (kWh/a)		x	Climate class:	[extended temperate/ temperate/subtropical/tropical]
Minimum ambient temperature (°C), for which the refrigerating appliance is suitable		x^c	Maximum ambient temperature (°C), for which the refrigerating appliance is suitable	x
Winter setting		[yes/no]		
Compartment Parameters:				

Compartment type		Compartment parameters and values			
		Compartment Volume (dm^3 or l)	Recommended temperature setting for optimised food storage (°C) These settings shall not contradict the storage conditions set out in Annex IV, Table 3	Freezing capacity (kg/24 h)	Defrosting type (auto-defrost = A, manual defrost = M)
Pantry	[yes/no]	x,x	x	-	[A/M]
Wine storage	[yes/no]	x,x	x	-	[A/M]
Cellar	[yes/no]	x,x	x	-	[A/M]
Fresh food	[yes/no]	x,x	x	-	[A/M]
Chill	[yes/no]	x,x	x	-	[A/M]
0-star or ice- making	[yes/no]	x,x	x	-	[A/M]
1-star	[yes/no]	x,x	x	-	[A/M]
2-star	[yes/no]	x,x	x	-	[A/M]
3-star	[yes/no]	x,x	x	-	[A/M]
4-star	[yes/no]	x,x	x	x,x	[A/M]
2-star section	[yes/no]	x,x	x	-	[A/M]
Variable temperature compartment	compartment types	x,x	x	x,x (for 4-star compartments) or -	[A/M]
For 4-star compartments					
Fast freeze facility			[yes/no]		
For wine storage appliances					
Number of standard wine bottles			x		
Light source parameters [a]:					
Type of light source			[Lighting technology]		
Energy efficiency class			[A/B/C/D/E/F/G]		
Minimum duration of the guarantee offered by the manufacturer:					
Additional information:					
Weblink to the supplier's website:					

[a] as determined in accordance with Commission Delegated Regulation (EU) 2019/2015 **as adapted and adopted by Ministerial Council Decision 2022/04/MC-EnC**.

[b] **<…>**

[c] **<…>**

[d] **<…>**

ANNEX VI
Technical documentation

1. The technical documentation referred to in point 1(d) of Article 3 shall include the following elements:

(a) a general description of the model allowing it to be unequivocally and easily identified;

(b) references to the harmonised standards applied or other measurement standards used;

(c) specific precautions to be taken when the model is assembled, installed, maintained or tested;

(d) he values for the technical parameters set out in Table 7; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

(e) the details and the results of calculations performed in accordance with Annex IV;

(f) testing conditions if not described sufficiently in point (b);

(g) equivalent models, if any, including model identifiers.

<...>

Table 7

Technical parameters of the model and their declared values for refrigerating appliances

A general description of the refrigerating appliance model, sufficient for it to be unequivocally and easily identified:			
Product specifications:			
General product specifications:			
Parameter	Value	Parameter	Value
Annual energy consumption (kWh/a)	x,xx	EEI (%)	x,x
Standard annual energy consumption (kWh/a)	x,xx	Combi parameter	x,xx
Temperature rise time (h)	x,xx	Load factor	x,x
Door heat loss factor	x,xxx	Climate class	[extended temperate/temperate/subtropical/tropical]
Anti-condensation heater type	[manual on-off/ambient/other/none]	Airborne acoustical noise emissions (dB(A) re 1 pW)	x

Additional product specifications for refrigerating appliances, except for low noise refrigerating appliances:			
Parameter	Value		
Daily energy consumption at 32 °C (kWh/24h)	x,xxx		
Additional product specifications for low noise refrigerating appliances:			
Parameter	Value		
Daily energy consumption at 25 °C (kWh/24h)	x,xxx		
Additional product specifications for wine storage appliances			
Parameter	Value	Parameter	Value
Internal humidity (%)	[range]	Number of bottles	X

If the refrigerating appliance contains multiple compartments of the same type, the lines for these compartments shall be repeated. If a certain compartment type is not present, the compartment parameters' values shall be '-'.

Compartment specifications:								
	Compartment parameters and values							
Compartment type	Target temperature (°C)	Compartment volume (dm^3 or l)	Freezing capacity (kg/24 h)	Thermodynamic parameter (r_c)	N_c	M_c	Defrost factor (A_c)	Built-in factor (B_c)
Pantry	+17	x,x	-	0,35	75	0,12	1,00	x,xx
Wine storage	+12	x,x	-	0,60	75	0,12	1,00	x,xx
Cellar	+12	x,x	-	0,60	75	0,12	1,00	x,xx
Fresh food	+4	x,x	-	1,00	75	0,12	1,00	x,xx
Chill	+2	x,x	-	1,10	138	0,12	1,00	x,xx
0-star or ice making	0	x,x	-	1,20	138	0,15	x,xx	x,xx
1-star	-6	x,x	-	1,50	138	0,15	x,xx	x,xx
2-star	-12	x,x	-	1,80	138	0,15	x,xx	x,xx
3-star	-18	x,x	-	2,10	138	0,15	x,xx	x,xx
4-star	-18	x,x	x,x	2,10	138	0,15	x,xx	x,xx
2-star section	-12	x,x	-	2,10	138	0,15	x,xx	x,xx
Variable temperature compartment	X	x,x	x,x (for 4-star compartments) or -	x,xx	x	x,xx	x,xx	x,xx

The sum of the volumes of the chill compartment(s) and the unfrozen compartment(s) [l or dm^3]		x						
The sum of the volumes of the frozen compartment(s) [l or dm^3]		x						

2. Where the information included in the technical documentation for a particular model has been obtained:

(a) from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different manufacturer; or

(b) by calculation on the basis of design or extrapolation from another model of the same or a different manufacturer; or both.

The technical documentation shall include the details of such calculation, the assessment undertaken by the manufacturer to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different manufacturers.

ANNEX VII

Information to be provided in visual advertisements, in technical promotional material, in distance selling, except distance selling on the internet

1. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in point 1(e) of Article 3 and point 1(c) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

2. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in point 1(f) of Article 3 and point 1(d) of Article 4 the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this Annex.

3. Any paper-based distance selling must show the energy efficiency class and the range of energy efficiency classes available on the label as set out in point 4 of this Annex.

4. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:

(a) an arrow, containing the letter of the energy efficiency class in 100 % white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;

(b) the colour of the arrow matching the colour of the energy efficiency class;

(c) the range of available energy efficiency classes in 100 % black; and,

(d) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the energy efficiency class.

By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

Figure 1

Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated



5. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the full label and the product information sheet through a free access website, or by requesting a printed copy.

6. For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to obtain, on request, a printed copy of the label and the product information sheet.

ANNEX VIII

Information to be provided in the case of distance selling through the internet

1. The appropriate label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3(1) and 3(2) of Annex III for refrigerating appliances. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

2. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

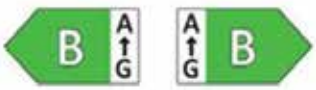
(b) indicate the energy efficiency class of the product on the arrow in 100 % white, Calibri Bold and in a font size equivalent to that of the price;

(c) have the range of available energy efficiency classes in 100 % black; and,

(d) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a visible border in 100 % black placed around the arrow and the letter of the energy efficiency class:

Figure 2

Coloured left/right arrow, with range of energy efficiency classes indicated



3. In the case of a nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 2 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label set out in Annex III;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

4. The electronic product information sheet made available by suppliers in accordance with point 1(b) of

Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product information sheet is clearly visible and legible. The product information sheet may be displayed using a nested display or by referring to the product **<…>**, in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If a nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX IX

Verification procedure for market surveillance purposes

The verification tolerances defined in this Annex relate only to the verification by **Contracting Party** authorities of the declared values and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

As part of verifying the compliance of a product model with the requirements laid down in this Regulation, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports; and

(b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class and the airborne acoustical noise emission class are not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (that is the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 8.

(3) If the results referred to in points 2(a) and (b) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more equivalent models.

(5) The model shall be considered to comply with the applicable requirements if for these three units the arithmetic mean of the determined values complies with the respective tolerances given in Table 8.

(6) If the result referred to in point 5 is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Energy Community Secretariat** without delay after a decision is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex IV.

The **Contracting Party** authorities shall only apply the verification tolerances set out in Table 8 and shall only use the procedure set out in points 1 to 7 for the requirements referred to in this Annex. For the parameters in Table 8, no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 8

Verification tolerances for measured parameters

Parameters	**Verification tolerances**
Total volume and compartment volume	The determined value (a) shall not be more than 3 % or 1 litre lower – whichever is the greater value – than the declared value.
Freezing capacity	The determined value (a) shall not be more than 10 % lower than the declared value.
E_{32}	The determined value (a) shall not be more than 10 % higher than the declared value.
Annual energy consumption	The determined value (a) shall not be more than 10 % higher than the declared value.
Internal humidity of wine storage appliances (%)	The determined value (a) shall not differ from the declared range by more than 10 %.
Airborne acoustical noise emissions	The determined value (a) shall not be more than 2 dB(A) re 1 pW more than the declared value.
Temperature rise time	The determined value (a) shall not be more than 15 % lower than the declared value.
(a) In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.	

DELEGATED REGULATION (EU) 2019/2017 of 11 March 2019 supplementing Regulation (EU) 2017/1369 with regard to energy labelling of household dishwashers

Incorporated and adapted by Ministerial Council Decision 2022/04/MC-EnC of 15 December 2022 on adapting and incorporating certain Delegated Regulations on energy-related products, introducing rescaled labels in Energy Community acquis communautaire and repealing Delegated Regulations (EU) 1059/2010, (EU) 1060/2010, (EU) 1061/2010, (EU) 1062/2010, (EU) 874/2012, and Directive 96/60/EC

The adaptations made by Ministerial Council Decision 2022/04/MC-EnC are highlighted in ***bold and blue****.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, electric mains-operated household dishwashers, including built-in household dishwashers and electric mains-operated household dishwashers that can also be powered by batteries.

2. This Regulation shall not apply to:

(a) dishwashers in the scope of Directive 2006/42/EC;

(b) battery-operated household dishwashers that can be connected to the mains through an AC/DC converter purchased separately.

Article 2

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(1) 'mains' or 'electric mains' means the electricity supply from the grid of 230 (± 10 %) volts of alternating current at 50 Hz;

(2) 'household dishwasher' means a machine which cleans and rinses tableware, and which is declared by the manufacturer in the Declaration of Conformity to comply with Directive 2014/35/EU of the European Parliament and of the Council or with Directive 2014/53/EU of the European Parliament and of the Council;

(3) 'built-in household dishwasher' means a household dishwasher that is designed, tested and marketed exclusively:

(a) to be installed in cabinetry or encased (top, bottom and sides) by panels;

(b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and

(c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel.

(4) 'point of sale' means a location where household dishwashers are displayed or offered for sale, hire or hire-purchase. For the purposes of the annexes, additional definitions are set out in Annex I.

Article 3

Obligations of suppliers

1. Suppliers shall ensure that:

(a) each household dishwasher is supplied with a printed label in the format as set out in Annex III;

(b) **the product information sheet, as set out in Annex V, is made available free of charge, in electronic format;**

(c) **if specifically requested by the dealer, the product information sheet shall be made available in printed form, free of charge;**

(d) **the content of the technical documentation, set out in Annex VI, is made available at the request of the market surveillance authorities of the Contracting Parties;**

(e) any visual advertisement for a specific model of household dishwasher contains the energy efficiency class and the range of energy efficiency classes available on the label in accordance with Annex VII and Annex VIII;

(f) any technical promotional material concerning a specific model of household dishwasher, including on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(g) **an electronic label in the format and containing the information, as set out in Annex III, is made available to dealers for each household dishwasher model registered in the EU product database; for the models placed only on the markets of the Contracting Parties which are not registered in the EU product database, the label shall be generated without the EU logo, and the QR code shall be linked to the website with model's information maintained by the manufacturer;**

(h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each household dishwasher model.

2. The energy efficiency class and the acoustic airborne noise emission class are defined in Annex II and shall be calculated in accordance with Annex IV.

Article 4

Obligations of dealers

Dealers shall ensure that:

(a) each household dishwasher, at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label being displayed for built-in household dishwashers in such a way as to be clearly visible, and for all other household dishwashers in such a way as to be clearly visible on the outside of the front or top of the household dishwasher;

(b) in the event of distance selling, the label and product information sheet are provided in accordance with Annexes VII and VIII;

(c) any visual advertisement for a specific model of household dishwasher contains the energy efficiency class

of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(d) any technical promotional material concerning a specific model of household dishwasher, including on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII.

Article 5

Obligations of internet hosting platforms

Where a hosting service provider **<…>** allows the direct selling of household dishwashers through its internet website, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

Article 6

Measurement methods

Information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation methods set out in Annex IV.

Article 7

Verification procedure for market surveillance purposes

Contracting Parties shall apply the verification procedure laid down in Annex IX to this Regulation when performing the market surveillance checks referred to in **paragraph 2** of Article 8 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC**.

Article 8

Review

<…>

Article 9

Repeal

<…>

Article 10

Transitional measures

<…>

Article 11

Entry into force and application

This Regulation enters into force on the day of the adoption of Ministerial Council Decision 2022/04/MC-EnC and is addressed to the Contracting Parties and the institutions of the Energy Community.

The Delegated Regulation 2019/2017 shall be transposed, implemented and applicable in all Contracting Parties by 31 December 2023. However, Article 3 paragraph 1 points (a), (b) and (c) shall apply latest as of 31 August 2023.

ANNEX I
Definitions applicable for the annexes

The following definitions shall apply:

(1) 'Energy Efficiency Index' (EEI) means the ratio of the eco programme energy consumption to the standard programme energy consumption;

(2) 'eco programme energy consumption' (EPEC) means the energy consumption of a household dishwasher for the eco programme, expressed in kilowatt hour per cycle;

(3) 'standard programme energy consumption' (SPEC) means the energy consumption taken as a reference as a function of the rated capacity of the household dishwasher, expressed in kilowatt hour per cycle;

(4) 'programme' means a series of operations that are pre-defined and are declared by the supplier as suitable for specified levels of soil or types of load, or both;

(5) 'cycle' means a complete cleaning, rinsing, and drying process, as defined by the programme selected, consisting of a series of operations until all activity ceases;

(6) 'quick response' (QR) code means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the **EU product database**;

(7) 'place setting' (ps) means a set of tableware for use by one person, not including serving pieces;

(8) 'serving pieces' means items for the preparation and serving of food which can include pots, serving bowls, serving cutlery and a platter;

(9) 'rated capacity' means the maximum number of place settings together with the serving pieces, which can be cleaned, rinsed and dried in a household dishwasher in one cycle when loaded in accordance with the supplier's instructions;

(10) 'eco programme water consumption' (EPWC) means the water consumption of a household dishwasher for the eco programme, expressed in litres per cycle;

(11) 'cleaning performance index' (I_C) means the ratio of the cleaning performance of a household dishwasher to the cleaning performance of a reference household dishwasher;

(12) 'drying performance index' (I_D) means the ratio of the drying performance of a household dishwasher to the drying performance of a reference household dishwasher;

(13) 'programme duration' (T_t) means the length of time beginning with the initiation of the programme selected, excluding any user programmed delay, until the end of the programme is indicated and the user has access to the load;

(14) 'eco' means the name of the programme of a household dishwasher declared by the manufacturer as suitable to clean normally soiled tableware, and to which the information on the energy label and the product information sheet relates;

(15 'off mode' means a condition in which the household dishwasher is connected to the mains and is not providing any function; the following shall also be considered as off mode:

(a) conditions providing only an indication of off mode;

(b) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to

Directive 2014/30/EU of the European Parliament and of the Council [1];

(16) 'standby mode' means a condition where the household dishwasher is connected to the mains and provides only the following functions, which may persist for an indefinite time:

(a) reactivation function, or reactivation function and a mere indication of enabled reactivation function, and/or

(b) reactivation function through a connection to a network; and/or

(c) information or status display, and/or

(d) detection function for emergency measures;

(17) 'network' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);

(18) 'delay start' means a condition where the user has selected a specified delay to the beginning of the cycle of the selected programme;

(19) 'guarantee' means any undertaking by the retailer or supplier to the consumer to:

(a) reimburse the price paid; or

(b) replace, repair or handle the household dishwashers in any way if they do not meet the specifications set out in the guarantee statement or in the relevant advertising;

(20) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(21) 'nested display' means any visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(22) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(23) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(24) 'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters, pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Article 3(1)(d) and Annex VI of this Regulation, for the verification of compliance by the **Contracting Party** authorities.

1 Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (OJ L 96, 29.3.2014, p. 79).

ANNEX II

A. Energy efficiency classes of household dishwashers

The energy efficiency class of a household dishwasher shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The EEI of a household dishwasher shall be calculated in accordance with Annex IV.

Table 1

Energy efficiency classes of household dishwashers

Energy efficiency class	Energy Efficiency Index
A	EEI < 32
B	32 ≤ EEI < 38
C	38 ≤ EEI < 44
D	44 ≤ EEI < 50
E	50 ≤ EEI < 56
F	56 ≤ EEI < 62
G	EEI ≥ 62

B. Acoustic airborne noise emission classes

The acoustic airborne noise emission class of a household dishwasher shall be determined on the basis of the acoustic airborne noise emissions as set out in Table 2.

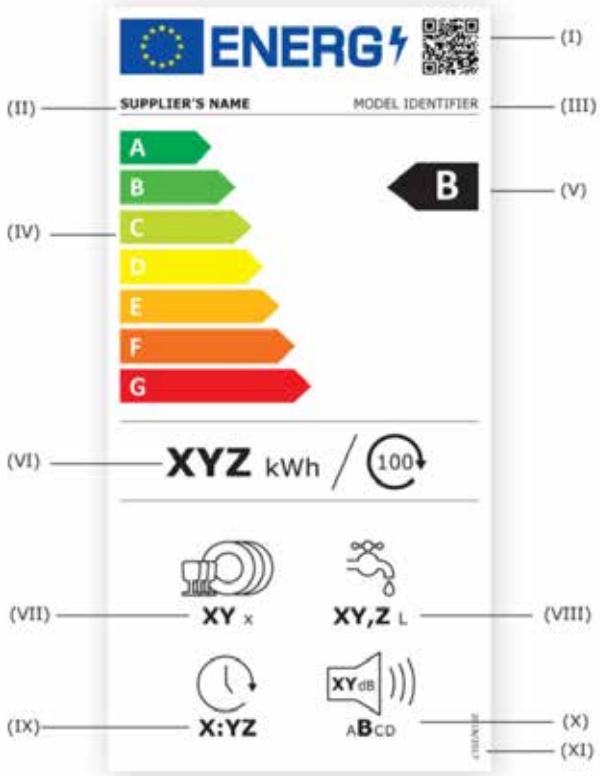
Table 2

Acoustic airborne noise emission classes

Acoustic airborne noise emission class	Noise (dB(A)
A	n < 39
B	39 ≤ n < 45
C	45 ≤ n < 51
D	51 ≤ n

ANNEX III
Label

1. LABEL



The following information shall be included in the label:

I. QR code;

II. supplier's name or trade mark;

III. supplier's model identifier;

IV. scale of energy efficiency classes from A to G;

V. the energy efficiency class determined in accordance with point A of Annex II;

VI. eco programme energy consumption (EPEC) in kWh per 100 cycles, rounded to the nearest integer;

VII. rated capacity in standard place settings, for the eco programme;

VIII. eco programme water consumption (EPWC) in litres per cycle, rounded to one decimal place;

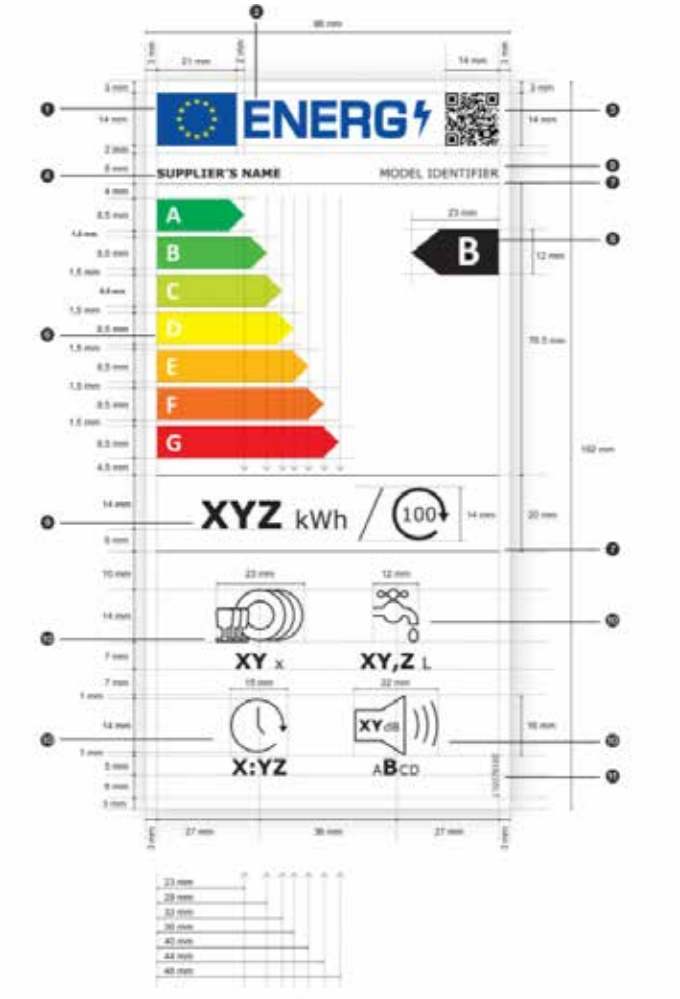
IX. duration of the eco programme in h:min rounded to the nearest minute;

X. airborne acoustic noise emissions expressed in dB(A) with respect to 1 pW and rounded to the nearest integer, and airborne acoustic noise emission class, determined in accordance with point B of Annex II;

XI. the number of this Regulation, that is '2019/2017'.

2. LABEL DESIGN

The design of the label shall be as in the figure below.



Whereby:

(a) the label shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above;

(b) the background of the label shall be 100 % white;

(c) the typefaces shall be Verdana and Calibri;

(d) the dimensions and specifications of the elements constituting the label shall be as indicated in the label design for household dishwashers;

(e) colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

(f) the label shall fulfil all the following requirements (numbers refer to the figure above):

1 the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

2 the colour of the energy logo shall be: 100,80,0,0;

3 the QR code shall be 100 % black;

4 the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;

5 the model identifier shall be 100 % black and in Verdana Regular 9 pt;

6 the A to G scale shall be as follows:

— the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4,5 mm from the left side of the arrows;

— the colours of the A to G scale arrows shall be as follows:

— A-class: 100,0,100,0;

— B-class: 70,0,100,0;

— C-class: 30,0,100,0;

— D-class: 0,0,100,0;

— E-class: 0,30,100,0;

— F-class: 0,70,100,0;

— G-class: 0,100,100,0;

7 the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

8 the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 33 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

9 the value of the eco programme energy consumption per 100 cycles shall be in Verdana Bold 28 pt; 'kWh' shall be in Verdana Regular 18 pt; the number '100' in the pictogram representing 100 cycles shall be in Verdana Regular 14 pt The value and unit shall be centred and 100 % black;

10 the pictograms shall be as shown as in the label designs and as follows:

— the pictograms' lines shall have a weight of 1,2 pt and they and the texts (numbers and units) shall be 100 % black;

— the texts under the pictograms shall be in Verdana Bold 16 pt with the unit in Verdana Regular 12

pt, and they shall be centred under the pictograms;

— the airborne acoustical noise emission pictogram: the number of decibels in the loudspeaker shall be in Verdana Bold 12 pt, with the unit 'dB' in Verdana Regular 9 pt; the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;

11 the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.

ANNEX IV
Measurement methods and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or other reliable, accurate and reproducible methods, which takes into account the generally recognised state-of-the-art, and in line with the following provisions.

Where a parameter is declared pursuant to Article 3(3) of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** and in accordance with Table 4 of Annex VI, its declared value shall be used by the supplier for the calculations in this Annex.

The energy consumption, EEI, water consumption, programme duration, cleaning and drying performance, and airborne acoustical noise emissions of a household dishwasher model shall be measured and/or calculated using the eco programme with the household dishwasher loaded at rated capacity. The energy consumption, water consumption, programme duration, cleaning and drying performance shall be measured concurrently.

The EPWC is expressed in litres per cycle and rounded to one decimal place.

The duration of the eco programme (T_t) is expressed in hours and minutes and rounded to the nearest minute.

Airborne acoustical noise emission is measured in dB(A) with respect to 1 pW and rounded to the nearest integer.

1. ENERGY EFFICIENCY INDEX

For the calculation of the EEI of a household dishwasher model, the EPEC of the household dishwasher is compared to its SPEC.

(a) The EEI is calculated as follows and rounded to one decimal place:

EEI = (EPEC/SPEC) × 100

where:

EPEC is the eco programme energy consumption of the household dishwasher, measured in kWh/cycle and rounded to three decimal places;

SPEC is the standard programme energy consumption of the household dishwasher.

(b) The SPEC is calculated in kWh/cycle and rounded to three decimal places as follows:

(1) for household dishwashers with rated capacity ps ≥ 10 and width > 50 cm:

SPEC = 0,025 × ps + 1,350

(2) for household dishwashers with rated capacity ps ≤ 9 or width ≤ 50 cm:

SPEC = 0,090 × ps + 0,450

where ps is the number of place settings.

2. CLEANING PERFORMANCE INDEX

For the calculation of the cleaning performance index (I_C) of a household dishwasher model, the cleaning performance of the eco programme is compared to the cleaning performance of a reference dishwasher.

The I_C is calculated as follows and rounded to three decimal places:

$$\mathbf{I_C = \exp (\ln I_C)}$$

and

$$\mathbf{\ln I_C = (1/n) \times \Sigma^{n}_{i=1} \ln (C_{T,i}/C_{R,i})}$$

where:

$C_{T,i}$ is the cleaning performance of the eco programme of the household dishwasher under test for one test run (i), rounded to three decimal places;

$C_{R,i}$ is the cleaning performance of the reference dishwasher for one test run (i), rounded to three decimal places;

n is the number of test runs.

3. DRYING PERFORMANCE INDEX

For the calculation of the drying performance index (I_D) of a household dishwasher model, the drying performance of the eco programme is compared to the drying performance of the reference dishwasher.

The I_D is calculated as follows and rounded to three decimal places:

$$\mathbf{I_D = \exp (\ln I_D)}$$

and

$$\mathbf{\ln I_D = (1/n) \times \Sigma^{n}_{i=1} \ln(I_{D,i})}$$

where:

$I_{D,i}$ is the drying performance index of the eco programme of the household dishwasher under test for one test run (i);

n is the number of combined cleaning and drying test runs.

The $I_{D,i}$ is calculated as follows and rounded to three decimal places:

$$\mathbf{\ln I_{D,i} = \ln (D_{T,i}/D_{R,t})}$$

where:

$D_{T,i}$ is the average drying performance score of the eco programme of the household dishwasher under test for one test run (i), rounded to three decimal places;

$D_{R,t}$ is the target drying score of the reference dishwasher, rounded to three decimal places.

4. LOW POWER MODES

Where applicable, the power consumption of the off mode (P_o), standby mode (P_{sm}) and delay start (P_{ds}) are measured, expressed in W, and rounded to two decimal places.

During measurements of the power consumption in low power modes, the following shall be checked and recorded:

— the display or not of information,

— the activation or not of a network connection.

ANNEX V
Product information sheet

<…>

Table 3

Content, order and format of the product information sheet

Supplier's name or trade mark:				
Supplier's address:				
Model identifier :				
General product parameters:				
Parameter	Value	Parameter	Value	
Rated capacity [b] (ps)	X	Dimensions in cm	Height	x
			Width	x
			Depth	x
EEI [b]	x,x	Energy efficiency class [b]	[A/B/C/D/E/F/G]	
Cleaning performance index [b]	x,xxx	Drying performance index [b]	x,xxx	
Energy consumption in kWh [per cycle], based on the eco programme using cold water fill. Actual energy consumption will depend on how the appliance is used.	x,xxx	Water consumption in litres [per cycle], based on the eco programme. Actual water consumption will depend on how the appliance is used and on the hardness of the water.	x,x	
Programme duration [b] (h:min)	x:xx	Type	[built-in/free-standing]	
Airborne acoustical noise emissions [b] (dB(A) re 1 pW)	X	Airborne acoustical noise emission class [b]	[A/B/C/D]	
Off-mode (W) (if applicable)	x,xx	Standby mode (W) (if applicable)	x,xx	
Delay start (W) (if applicable)	x,xx	Networked standby (W) (if applicable)	x,xx	
Minimum duration of the guarantee offered by the supplier:				
Additional information:				
Weblink to the supplier's website:				
[a] **<…>** [b] for the eco programme. [c] **<…>** [d] **<…>**				

ANNEX VI
Technical documentation

1. The technical documentation referred to in point 1(d) of Article 3 shall include the following elements:

(a) a general description of the model allowing it to be unequivocally and easily identified;

(b) references to the harmonised standards applied or other measurement standards used;

(c) specific precautions to be taken when the model is assembled, installed, maintained or tested;

(d) the values for the technical parameters set out in Table 4; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

(e) the details and the results of calculations performed in accordance with Annex IV;

(f) testing conditions if not described sufficiently in point (b);

(g) equivalent models, if any, including model identifiers.

<...>

Table 4

Technical parameters of the model and their declared values for household dishwashers

PARAMETER	DECLARED VALUE	UNIT
Rated capacity in place settings	X	—
Eco programme energy consumption (EPEC) rounded to three decimal places	X,XXX	kWh/cycle
Standard programme energy consumption (SPEC) rounded to three decimal places	X,XXX	kWh/cycle
Energy Efficiency Index (EEI)	X,X	—
Eco programme water consumption (EPWC) rounded to one decimal place	X,X	l/cycle
Cleaning performance index (I_C)	X,XXX	—
Drying performance index (I_D)	X,XXX	—
Duration of the eco programme (T_t) rounded to the nearest minute	X:XX	h:min
Power consumption in off-mode (P_o) rounded to two decimal places (if applicable)	X,XX	W
Power consumption in standby mode (P_{sm}) rounded to two decimal places (if applicable)	X,XX	W
Does standby mode include the display of information?	Yes/No	—
Power consumption in standby mode (P_{sm}) in condition of networked standby (if applicable), rounded to two decimal places	X,XX	W
Power consumption in delay start (P_{ds}) (if applicable) rounded to two decimal places	X,XX	W
Airborne acoustical noise emissions	X	dB(A) re 1 pW

2. Where the information included in the technical documentation for a particular household dishwasher model has been obtained by any of the following methods, or both:

— from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different supplier;

— by calculation on the basis of design or extrapolation from another model of the same or a different supplier,

the technical documentation shall include the details of such calculation, the assessment undertaken by suppliers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different suppliers.

ANNEX VII

Information to be provided in visual advertisements, in technical promotional material in distance selling and in telemarketing, except distance selling on the internet

1. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in point 1(e) of Article 3 and point (c) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this annex.

2. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in point 1(f) of Article 3 and point (d) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this annex.

3. Any paper-based distance selling must show the energy efficiency class and the range of energy efficiency classes available on the label as set out in point 4 of this annex.

4. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:

(a) an arrow, containing the letter of the energy efficiency class in 100 % white, Calibri Bold, and in a font size at least equivalent to that of the price, when the price is shown;

(b) the colour of the arrow matching the colour of the energy efficiency class;

(c) the range of available energy efficiency classes in 100 % black; and,

(d) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the energy efficiency class.

By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

Figure 1

Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated



5. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the label and the product information sheet **<…>** by requesting a printed copy.

6. For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to obtain, on request, a printed copy of the label and the product information sheet.

ANNEX VIII

Information to be provided in the case of distance selling through the internet

1. The electronic label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 2 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

2. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

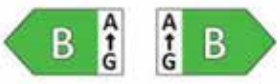
(b) indicate the energy efficiency class of the product on the arrow in 100 % white, Calibri Bold and in a font size equivalent to that of the price;

(c) have the range of available energy efficiency classes in 100 % black; and,

(d) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a visible border in 100 % black placed around the arrow and the letter of the energy efficiency class:

Figure 2

Coloured left/right arrow, with range of energy efficiency classes indicated



3. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 2 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label set out in Annex III;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

4. The electronic product information sheet made available by suppliers in accordance with point 1(h) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall

be such that the product information sheet is clearly visible and legible. The product information sheet may be displayed using a nested display **<…>**, in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If a nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX IX
Verification procedure for market surveillance purposes

The verification tolerances defined in this Annex relate only to the verification by **Contracting Party** authorities of the declared values and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

As part of verifying the compliance of a product model with the requirements laid down in this Regulation, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to point 3 of Article 3 of Regulation (EU) 2017/1369 **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports; and

(b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class and the airborne acoustical noise emission class are not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 5.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more equivalent models.

(5) The model shall be considered to comply with the applicable requirements if for these three units the arithmetical mean of the determined values complies with the respective tolerances given in Table 5.

(6) If the result referred to in point 5 is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Party** and to the **Energy Community Secretariat** without delay after a decision is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex IV.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 5 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. For the parameters in Table 5, no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 5

Verification tolerances

Parameter	**Verification tolerances**
Eco programme energy consumption (EPEC)	The determined value (*) shall not exceed the declared value of EPEC by more than 5 %.
Eco programme water consumption (EPWC)	The determined value (*) shall not exceed the declared value of EPWC by more than 5 %.
Cleaning performance index (I_C)	The determined value (*) shall not be less than the declared value of I_C by more than 14 %.
Drying performance index (I_D)	The determined value (*) shall not be less than the declared value of I_D by more than 12 %.
Programme duration (T_t)	The determined value (*) shall not exceed the declared values T_t by more than 5 % or 10 minutes, whichever is the longer.
Power consumption in off mode (P_o)	The determined value (*) of power consumption P_o shall not exceed the declared value by more than 0,10 W.
Power consumption in standby mode (P_{sm})	The determined value (*) of power consumption P_{sm} shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Power consumption in delay start (P_{ds})	The determined value (*) of power consumption P_{ds} shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Airborne acoustic noise emissions	The determined value (*) shall not exceed the declared value by more than 2 dB(A) re 1pW.
(*) In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.	

DELEGATED REGULATION (EU) 2015/1094 of 5 May 2015 supplementing Directive 2010/30/EU with regard to the energy labelling of professional refrigerated storage cabinets

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, professional refrigerated storage cabinets.

2. This Regulation shall apply to electric mains-operated professional refrigerated storage cabinets, including those sold for the refrigeration of foodstuffs and animal feed.

3. This Regulation shall not apply to the following products:

(a) professional refrigerated storage cabinets that are primarily powered by energy sources other than electricity;

(b) professional refrigerated storage cabinets operating with a remote condensing unit;

(c) open cabinets, where their openness is a fundamental requirement for their primary functionality;

(d) cabinets specifically designed for food processing, where the mere presence of one compartment, with a net volume equivalent to less than 20% of the cabinet's total net volume and specifically designed for food processing, is not sufficient for exemption;

(e) cabinets specifically designed only for the purpose of thawing frozen foodstuffs in a controlled manner, where the mere presence of one compartment specifically designed for thawing frozen foodstuffs in a controlled manner is not sufficient for exemption;

(f) saladettes;

(g) serve-over counters and other similar forms of cabinet primarily intended for display and sale of foodstuffs in addition to refrigeration and storage;

(h) cabinets that do not use a vapour compression refrigeration cycle;

(i) custom-made professional refrigerated storage cabinets, made on a one-off basis according to individual customer specification and not equivalent to other professional refrigerated storage cabinets as described in definition 9 of Annex I;

(j) refrigerator-freezers;

(k) static-air cabinets;

(l) built-in cabinets;

(m) roll-in and pass-through cabinets;

(n) chest freezers.

Article 2

Definitions

The following definitions shall apply for the purpose of this Regulation:

(a) 'professional refrigerated storage cabinet' means an insulated refrigerating appliance integrating one or more compartments accessible via one or more doors or drawers, capable of continuously maintaining the temperature of foodstuffs within prescribed limits at chilled or frozen operating temperature, using a vapour compression cycle, and intended for the storage of foodstuffs in non-household environments but not for the display to or access by customers;

(b) 'foodstuffs' means food, ingredients, beverages, including wine, and other items primarily intended for consumption which require refrigeration at specified temperatures;

(c) 'built-in cabinet' means a fixed insulated refrigerating appliance intended to be installed in a cabinet, in a prepared recess in a wall or similar location, and requiring furniture finishing;

(d) 'roll-in cabinet' means a professional refrigerated storage cabinet including one unique compartment that allows wheeled racks of product to be wheeled in;

(e) 'pass-through cabinet' means a professional refrigerated storage cabinet accessible from both sides;

(f) 'static-air cabinet' means a professional refrigerated storage cabinet without internal forced-air circulation, specifically designed to store temperature-sensitive foodstuffs or to avoid a drying effect on foodstuffs stored without a sealed enclosure, where a single static air compartment within the cabinet is not sufficient to designate the cabinet as a static air cabinet;

(g) 'open cabinet' means a professional refrigerated storage cabinet whose refrigerated enclosure can be reached from the outside without opening a door or a drawer, where the mere presence of one compartment which can be reached from the outside without opening a door or a drawer, with a net volume equivalent to less than 20% of the professional refrigerated storage cabinet's total volume, is not sufficient to qualify it as such;

(h) 'saladette' means a professional refrigerated storage cabinet with one or more doors or drawer fronts in the vertical plane that has cut-outs in the top surface into which temporary storage bins can be inserted for easy-access storage of foodstuffs such as, but not limited to, pizza toppings or salad items;

(i) 'combined cabinet' means a professional refrigerated storage cabinet including two or more compartments with different temperatures for the refrigeration and storage of foodstuffs;

(j) 'refrigerator-freezer' means a type of combined cabinet including at least one compartment exclusively intended for chilled operating temperature and one compartment exclusively intended for frozen operating temperature;

(k) 'chest freezer' means a food freezer in which the compartment(s) is accessible from the top of the appliance or which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment(s) exceeds 75% of the total gross volume of the appliance.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2020**, suppliers placing professional refrigerated storage cabinets on the market or putting them into service shall ensure that the following requirements are met:

(a) a printed label in the format and containing the information set out in Annex III shall be provided for each professional refrigerated storage cabinet;

(b) an electronic label in the format and containing the information set out in Annex III shall be made available to dealers for each professional refrigerated storage cabinet model;

(c) a product fiche, as set out in Annex IV, shall be made available;

(d) an electronic product fiche, as set out in Annex IV, shall be made available to dealers for each professional refrigerated storage cabinet model;

(e) technical documentation, as set out in Annex V, shall be provided on request to the authorities of the **Contracting Parties**;

(f) any advertisement relating to a specific professional refrigerated storage cabinet model and containing energy-related or price information shall include a reference to the energy efficiency class of that model;

(g) any technical promotional material concerning a specific professional refrigerated storage cabinet model and describing its specific technical parameters shall include a reference to the energy efficiency class of that model.

2. The labels in Annex III shall accompany professional refrigerated storage cabinets placed on the market according to the following timetable:

- **<...>**[1]

- from **1 January 2020**: label 2.

Article 4

Responsibilities of dealers

Dealers of professional refrigerated storage cabinets shall ensure that the following requirements are met:

(a) at the point of sale, each professional refrigerated storage cabinet shall bear the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the appliance, so that it is clearly visible;

(b) professional refrigerated storage cabinets offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, shall be marketed with the information provided by the suppliers in accordance with Annex VI, except where the offer is made on the internet, in whi

(c) any advertisement relating to a specific professional refrigerated storage cabinet model and containing energy-related or price information shall include a reference to the energy efficiency class of that model;

(d) any technical promotional material concerning a specific professional refrigerated storage cabinet

1 The first indent in Article 3(2) shall not be applicable in accordance with Article 3(4)(a) of Decision 2018/03/MC-EnC

model and describing its specific technical parameters shall include a reference to the energy efficiency class of that model.

Article 5

Measurement and calculation

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation procedures based on recognised state-of-the-art methods, as set out in Annex IX.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex X when assessing the conformity of the declared energy efficiency class, annual energy consumption and volumes.

Article 7

Review

<...>[2]

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

2 Not applicable in accordance with Article 3(4)(a) of Decision 2018/03/MC-EnC

ANNEX I
Definitions applicable for Annexes II to X

For the purposes of Annexes II to X, the following definitions shall apply:

(1) 'net volume' means the volume containing foodstuffs within the load limit;

(2) 'chilled operating temperature' means that the temperature of foodstuffs stored in the cabinet is continuously maintained at a temperature between – 1 °C and 5 °C;

(3) 'frozen operating temperature' means that the temperature of foodstuffs stored in the cabinet is continuously maintained at a temperature lower than – 15 °C, which is understood as the highest temperature of the warmest package test;

(4) 'multi-use cabinet' means that a professional refrigerated storage cabinet or separate compartment of the same cabinet may be set at different temperatures for chilled or frozen foodstuffs;

(5) 'vertical cabinet' means a professional refrigerated storage cabinet of overall height equal to or higher than 1050 mm with one or more front doors or drawers accessing the same compartment;

(6) 'counter cabinet' means a professional refrigerated storage cabinet of overall height lower than 1050 mm with one or more front doors or drawers accessing the same compartment;

(7) 'light-duty cabinet', also known as 'semi-professional cabinet', means a professional refrigerated storage cabinet only capable of continuously maintaining chilled or frozen operating temperature in all its compartment(s) in ambient conditions corresponding to climate class 3, as detailed in Table 3 of Annex IX; if the cabinet is able to maintain temperature in ambient conditions corresponding to climate class 4, it shall not be considered a light-duty cabinet;

(8) 'heavy-duty cabinet' means a professional refrigerated storage cabinet capable of continuously maintaining chilled or frozen operating temperature in all its compartment(s) in ambient conditions corresponding to climate class 5, as detailed in Table 3 in Annex IX;

(9) 'equivalent professional refrigerated storage cabinet' means a professional refrigerated storage cabinet model placed on the market with the same net volume, same technical, efficiency and performance characteristics, and same compartment types and volumes as another professional refrigerated storage cabinet model placed on the market under a different commercial code number by the same manufacturer.

ANNEX II
Energy efficiency classes

The energy efficiency class of a professional refrigerated storage cabinet shall be determined on the basis of its energy efficiency index (EEI), as set out in Table 1.

Table 1

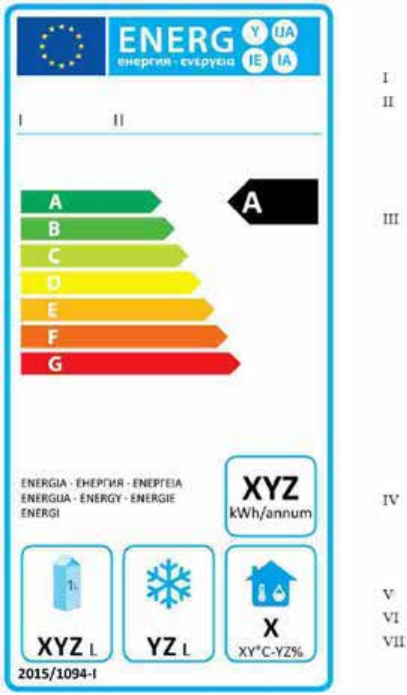
Energy efficiency classes of professional refrigerated storage cabinets

Energy efficiency class	**EEI**
A^{+++}	EEI < 5
A^{++}	5 ≤ EEI < 10
A^{+}	10 ≤ EEI < 15
A	15 ≤ EEI < 25
B	25 ≤ EEI < 35
C	35 ≤ EEI < 50
D	50 ≤ EEI < 75
E	75 ≤ EEI < 85
F	85 ≤ EEI < 95
G	95 ≤ EEI < 115

The EEI shall be calculated as detailed in Annex VIII.

ANNEX III
Labels

1. Label 1 – Professional refrigerated storage cabinets in energy efficiency classes A to G



The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class shall be placed at the same height as that for the relevant energy efficiency class;

IV. the annual electricity consumption in kWh in terms of final energy consumption per year, calculated in accordance with Annex IX and rounded to the nearest integer;

V. the sum of the net volumes, expressed in litres, of all chilled compartments functioning at chilled operating temperature; where no compartments functioning at chilled operating temperature are present, the supplier shall declare '- L' instead of a value;

VI. the sum of the net volumes, expressed in litres, of all compartments functioning at frozen operating temperature; where no compartments functioning at frozen operating temperature are present, the supplier shall declare '- L' instead of a value;

VII. the climate class (3, 4 or 5), together with the associated dry bulb temperature (in °C) and the relative

humidity (in %), as referred to in Table 3, Annex IX.

The design of the label shall be in accordance with point 3. By way of derogation, where a model has been awarded an 'EU ecolabel', a copy of the ecolabel may be added.

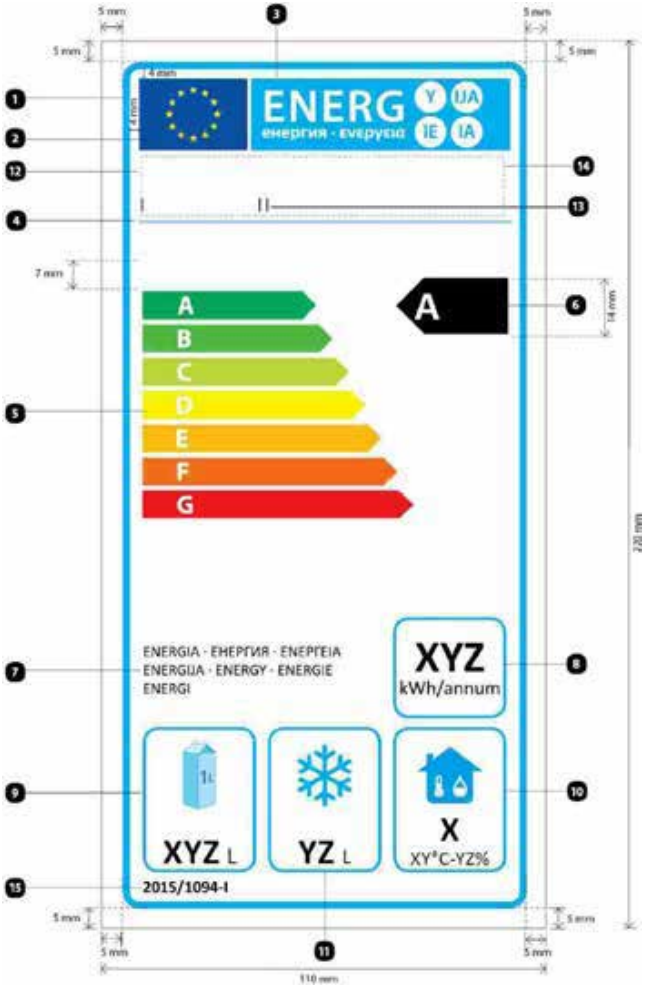
2. Label 2 – Professional refrigerated storage cabinets in energy efficiency classes A+++ to G



The information listed in point 1 shall be included in this label.

The design of the label shall be in accordance with point 3. By way of derogation, where a model has been awarded an 'EU eco-label', a copy of the eco-label may be added.

3. The design of the label for professional refrigerated storage cabinets shall be as follows:



Where:

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black; for example, 00-70-X-00 indicates 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall meet the following specifications (numbers refer to the figure above):

1. **EU label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm;
2. **EU logo:** colours: X-80-00-00 and 00-00-X-00;
3. **Energy label:** colour: X-00-00-00;

   Pictogram as depicted (EU logo + energy label): 92 mm wide × 17 mm high;
4. **Sub-logos border:** 1 pt – colour: Cyan 100 % – 92,5 mm long;
5. **A-G scale**

   Arrow: 7 mm high, gap 0,75 mm – colours:

   Highest class: X-00-X-00,

   Second class: 70-00-X-00,

   Third class: 30-00-X-00,

   Fourth class: 00-00-X-00,

   Fifth class: 00-30-X-00,

   Sixth class: 00-70-X-00,

   Last classes: 00-X-X-00.

   Text: Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, superscript, white, aligned on a single row;
6. **Energy efficiency class**

   Arrow: 26 mm wide × 14 mm high, 100 % black;

   Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, superscript, white and aligned on a single row;
7. **Energy**

   Text: Calibri regular 11 pt, capitals, 100 % black;
8. **Annual energy consumption**

   Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

   Value: Calibri bold 32 pt, 100 % black;

   2nd line: Calibri regular 14 pt, 100 % black;
9. **Sum of the net volumes of all compartments functioning at chilled operating temperature**

   Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

   Value: Calibri bold 25 pt, 100 % black; Calibri regular 17 pt, 100 % black;
10. **Climate class together with the associated dry bulb temperature and the relative humidity**

    Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

    Value: Calibri bold 25 pt, 100 % black;

    2nd line: Calibri regular 14 pt, 100 % black;
11. **Sum of the net volumes of all compartments functioning at frozen operating temperature**

    Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

    Value: Calibri bold 25 pt, 100 % black; Calibri regular 17 pt, 100 % black;

12. Supplier's name or trademark

13. Supplier's model identifier

14. The supplier's name or trademark and model identifier shall fit in a space of 90 × 15 mm

15. Number of Regulation

Text: Calibri bold 11 pt.

ANNEX IV
Product fiche

1. The information in the product fiche of the professional refrigerated storage cabinet shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) type of model in accordance with the definitions in Annex I;

(d) the energy efficiency class and energy efficiency index of the model, determined in accordance with Annex II;

(e) where the model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010, that information may be included;

(f) the energy consumption of the cabinet over 24 hours (E24h) and the annual energy consumption in kWh, calculated in accordance with Annex IX and rounded to the nearest integer;

(g) net volume of each compartment;

(h) climate class in accordance with Table 3 in Annex IX;

(i) for light-duty cabinets, the following sentence: 'This appliance is intended for use in ambient temperatures up to 25 °C and therefore is not suitable for use in hot professional kitchens';

(j) for heavy-duty cabinets, the following sentence: 'This appliance is intended for use in ambient temperatures up to 40 °C'.

2. A single fiche may cover a number of professional refrigerated storage cabinet models supplied by the same supplier.

3. The information in the fiche may be given in the form of a copy of the label, either in colour or in black and white, in which case information listed in point 1 and not displayed on the label shall also be provided.

ANNEX V
Technical documentation

1. The technical documentation referred to in Article 3(1)(c) shall include:

(a) the name and address of the supplier;

(b) sufficient description of the professional refrigerated storage cabinet model for it to be unambiguously identified;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) the results of the measurements and calculations for the technical parameters specified in Annex IX.

2. Where the information included in the technical documentation file for a professional refrigerated storage cabinet model has been obtained by a calculation based on an equivalent professional refrigerated storage cabinet model, the technical documentation shall include details of such calculations and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The technical information shall also include a list of all other equivalent professional refrigerated storage cabinet models where the information was obtained on the same basis.

3. The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

ANNEX VI

Information to be provided where end-users cannot be expected to see the product displayed, except on the internet

1. Where end-users cannot be expected to see the product displayed, except on the internet, the information shall be provided in the following order:

(a) the energy efficiency class of the model, in accordance with Annex II;

(b) the annual energy consumption in kWh per year, rounded to the nearest integer and calculated in accordance with Annex IX;

(c) the net volume of each compartment;

(d) the climate class in accordance with Annex IX.

2. Where other information contained in the product fiche is provided, it shall be in the form and order specified in Annex IV.

3. The size and font in which the information referred in this Annex is printed or shown shall be such that it is legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3(1)(b) shall be shown on the display mechanism near the price of the product in accordance with the timelines indicated in Article 3(2). The size of the label shall be such that it is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex III. The label may be displayed using a nested display, in which case the image used for accessing it shall comply with the specifications in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate the energy efficiency class of the product in white in the same font size as that used for the price; and

(c) be in one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex is shown on the display mechanism in proximity to the price of the product;

(b) the image links to the label;

(c) the label is displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label is displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification apply;

(f) display of the label is closed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, is the energy efficiency class of the product in the same font size as that used for the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(d) shall be shown on the display mechanism near the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing it shall clearly and legibly indicate 'Product fiche'. If nested display is used, the fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII

Method for calculating the energy efficiency index for professional refrigerated storage cabinets

For the calculation of the energy efficiency index (EEI) of a professional refrigerated storage cabinet model, the annual energy consumption of the cabinet shall be compared to its standard annual energy consumption.

The EEI shall be calculated as:

EEI = (AEC/SAEC) × 100

Where:

AEC = E24h × *af* × 365

AEC = annual energy consumption of the cabinet in kWh/year

E24h = energy consumption of the cabinet over 24 hours

af = adjustment factor

SAEC = M × Vn + N

SAEC = standard annual energy consumption of the cabinet in kWh/year

Vn = net volume of the appliance, which is the sum of net volumes of all compartments of the cabinet, expressed in litres.

M and N are given in the Table 2.

Table 2

M and N coefficient values

Category	Value for M	Value for N
Vertical Chilled	1,643	609
Vertical Frozen	4,928	1 472
Counter Chilled	2,555	1 790
Counter Frozen	5,840	2 380

ANNEX IX
Measurement and calculation

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for that purpose **in a dedicated section of the website of the Energy Community**, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the technical definitions, conditions, equations and parameters set out in this Annex.

2. For establishing the values of annual energy consumption and energy efficiency index for professional refrigerated storage cabinets, measurements shall be carried out under the following conditions:

- The temperature of test packages shall be between – 1 °C and 5 °C for chilled cabinets and lower than - 15 °C for frozen cabinets.

- The ambient conditions shall correspond to climate class 4 as detailed in Table 3, except for light-duty cabinets, which shall be tested in ambient conditions corresponding to climate class 3. Adjustment factors of 1,2 for light-duty cabinets at chilled operating temperature and 1,1 for light-duty cabinets at frozen operating temperature shall then be applied to the testing results obtained for light-duty cabinets.

- Professional refrigerated storage cabinets shall be tested:

  - at chilled operating temperature in the case of a combined cabinet containing at least one compartment exclusively intended for chilled operating temperature,

  - at chilled operating temperature in the case of a professional refrigerated storage cabinet which has solely one compartment exclusively intended for chilled operating temperature,

  - at frozen operating temperature in all other cases.

3. The ambient conditions of climate classes 3, 4 and 5 are shown in Table 3.

Table 3

Ambient conditions of climate classes 3, 4 and 5

Test room climate class	Dry bulb temperature, °C	Relative humidity, %	Dew point, °C	Water vapour mass in dry air, g/kg
3	25	60	16,7	12,0
4	30	55	20,0	14,8
5	40	40	23,9	18,8

ANNEX X[3]

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MCEnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 4.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 4.

(6) If the result referred to in point 5 is not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annexes VIII and IX.

3 Annex IX is amended in accordance with Article 13 and Annex XIII of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 4 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 4: Verification tolerances

Parameters	Verification tolerances
Net volume	The determined value shall not be lower than the declared value by more than 3 %.
Energy consumption ($E_{24h)}$	The determined value shall not exceed the declared value by more than 10 %.

DELEGATED REGULATION (EU) 2015/1186 of 24 April 2015 supplementing Directive 2010/30/EU with regard to the energy labelling of local space heaters

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on local space heaters with a nominal heat output of 50 kW or less.

This Regulation shall not apply to:

(a) electric local space heaters;

(b) local space heaters using a vapour compression cycle or sorption cycle for the generation of heat driven by electric compressors or fuel;

(c) solid fuel local space heaters that are specified for the combustion of non-woody biomass only;

(d) local space heaters specified for purposes other than indoor space heating to reach and maintain a certain thermal comfort of human beings by means of heat convection or heat radiation;

(e) local space heaters that are specified for outdoor use only;

(f) local space heaters of which the direct heat output is less than 6 % of the combined direct and indirect heat output at nominal heat output;

(g) solid fuel local space heaters that are not factory assembled, or are not provided as prefabricated components or parts by a single manufacturer which are to be assembled on site;

(h) luminous local space heaters and tube local space heaters;

(i) air heating products;

(j) sauna stoves.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, the following definitions shall apply for the purposes of this Regulation:

(1) 'local space heater' means a space heating device that emits heat by direct heat transfer or by direct heat transfer in combination with heat transfer to a fluid, in order to reach and maintain a certain level of

human thermal comfort within an enclosed space in which the product is situated, possibly combined with a heat output to other spaces and is equipped with one or more heat generators that convert electricity or gaseous, liquid or solid fuels directly into heat, through use of the Joule effect or combustion of fuels respectively;

(2) 'solid fuel local space heater' means an open fronted local space heater, closed fronted local space heater or cooker using solid fuels;

(3) 'gaseous fuel local space heater' means an open fronted local space heater or a closed fronted local space heater using gaseous fuel;

(4) 'liquid fuel local space heater' means an open fronted local space heater or a closed fronted local space heater using liquid fuel;

(5) 'electric local space heater' means a local space heater using the electric Joule effect to generate heat;

(6) 'open fronted local space heater' means a local space heater, using gaseous, liquid or solid fuels, of which the fire bed and combustion gases are not sealed from the space in which the product is fitted and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(7) 'closed fronted local space heater' means a local space heater, using gaseous, liquid or solid fuels, of which the fire bed and combustion gases can be sealed from the space in which the product is fitted and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(8) 'cooker' means a local space heater, using solid fuels, that integrates in one enclosure the function of a local space heater, and a hob, an oven or both to be used for preparation of food and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(9) 'fuel fired local space heater' means either an open fronted local space heater, closed fronted local space heater or cooker;

(10) 'luminous local space heater' means a local space heater, using gaseous or liquid fuel which is equipped with a burner; which is to be installed above head level, directed towards the place of use so that the heat emission of the burner, being predominantly infrared radiation, directly warms the subjects to be heated and which emits the products of combustion in the space where it is situated;

(11) 'tube local space heater' means a local space heater, using gaseous or liquid fuel, which is equipped with a burner; which is to be installed above head level, near the subjects to be heated, which heats the space primarily by infrared radiation from the tube or tubes heated by the internal passage of products of combustion and of which the products of combustion are to be evacuated through a flue duct;

(12) 'flueless heater' means a local space heater, using gaseous, liquid or solid fuel, emitting the products of combustion into the space where the product is situated, other than a luminous local space heater;

(13) 'open to chimney heater' means a local space heater, using gaseous, liquid or solid fuels intended to sit under a chimney or in a fireplace without sealing between the product and the chimney or fireplace opening, and allowing the products of combustion pass unrestricted from the fire bed to the chimney or flue;

(14) 'air heating product' means a product providing heat to an air-based heating system only that can be ducted and is designed to be used while fastened or secured in a specific location or wall mounted which distributes the air by means of an air moving device in order to reach and maintain a certain level of human thermal comfort within an enclosed space in which the product is situated;

(15) 'sauna stove' means a local space heater, incorporated in, or declared to be used in, dry or wet sauna's or similar environments;

(16) 'solid fuel' means a fuel which is solid at normal indoor room temperatures, including solid biomass and solid fossil fuel;

(17) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(18) 'woody biomass' means biomass originating from trees, bushes and shrubs, including log wood, chipped wood, compressed wood in the form of pellets, compressed wood in the form of briquettes, and sawdust;

(19) 'non-woody biomass' means biomass other than woody biomass, including, *inter alia*, straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells;

(20) 'preferred fuel' means the single fuel which is to be preferably used for the local space heater according to the supplier's instructions;

(21) 'fossil solid fuel' means solid fuel other than biomass, including anthracite and dry steam coal, hard coke, low temperature coke, bituminous coal, lignite, a blend of fossil fuels or a blend of biomass and fossil fuel; for the purposes of this Regulation it also includes peat;

(22) 'other suitable fuel' means a fuel, other than the preferred fuel, which can be used in the local space heater according to the supplier's instructions and includes any fuel that is mentioned in the instruction manual for installers and end-users, on free access websites of manufacturers and suppliers, in technical or promotional material and in advertisements;

(23) 'direct heat output' means the heat output of the product by radiation and convection of heat, as emitted by or from the product itself to air, excluding the heat output of the product to a heat transfer fluid, expressed in kW;

(24) 'indirect heat output' means the heat output of the product to a heat transfer fluid by the same heat generation process that provides the direct heat output of the product, expressed in kW;

(25) 'indirect heating functionality' means the product is capable of transferring part of the total heat output to a heat transfer fluid, for use as space heating or domestic hot water generation.

(26) 'nominal heat output' (Pnom) means the heat output of a local space heater comprising both direct heat output and indirect heat output (where applicable), when operating at the setting for the maximum heat output that can be maintained over an extended period, as declared by the supplier, expressed in kW;

(27) 'minimum heat output' (P_{min}) means the heat output of a local space heater comprising both direct heat output and indirect heat output (where applicable), when operating at the setting for the lowest heat output, as declared by the supplier, expressed in kW;

(28) 'intended for outdoor use' means the product is suitable for safe operation outside enclosed spaces, including possible use in outdoor conditions;

(29) 'equivalent model' means a model placed on the market with the same technical parameters set out in Table 2 or Table 3 of Annex V as another model placed on the market by the same supplier.

For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2020** suppliers placing on the market or putting into service local space heaters that are not flueless heaters using solid fuels or open to chimney heaters using solid fuels shall ensure that:

(a) such local space heater is provided with a printed label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out in Annex II;

(b) an electronic label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out Annex II is made available to dealers for such local space heater model;

(c) a product fiche in accordance with Annex IV, is provided for such local space heater;

(d) an electronic product fiche, in accordance with Annex IV, is made available to dealers for such local space heater model;

(e) the technical documentation, as set out in Annex V, is provided on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(f) any advertisement related to a specific such local space heater model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(g) any technical promotional material concerning a specific such local space heater model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

2. From 1 January 2022 suppliers placing on the market or putting into service flueless heaters using solid fuels or open to chimney heaters using solid fuels shall ensure that:

(a) such local space heater is provided with a printed label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out in Annex II;

(b) an electronic label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out Annex II is made available to dealers for such local space heater model;

(c) a product fiche in accordance with Annex IV, is provided for such local space heater;

(d) an electronic product fiche, in accordance with Annex IV, is made available to dealers for such local space heater model;

(e) the technical documentation, as set out in Annex V, is provided on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(f) any advertisement related to a specific such local space heater model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(g) any technical promotional material concerning a specific such local space heater model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

Article 4

Responsibilities of dealers

Dealers of local space heaters shall ensure that:

(a) each local space heater bears, at the point of sale, the label provided by suppliers in accordance with Article 3, on the outside of the front of the local space heater, in such a way as to be clearly visible;

(b) local space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by the suppliers in accordance with Annex VI, except where the offer is made through the internet, in which case the provisions of Annex VII shall apply;

(c) any advertisement for a specific local space heater model which contains energy-related or price information includes a reference to the energy efficiency class of that model;

(d) any technical promotional material concerning a specific local space heater model which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, set out in Annex VIII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex IX when assessing the conformity of the declared energy efficiency class of local space heaters.

Article 7

Review

<...>[1]

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council.

1 Not applicable in accordance with Article 3(3)(a) of Decision 2018/03/MC-EnC

It shall be transposed, implemented and applicable by 1 January 2020.

For flueless heaters using solid fuels and open to chimney heaters using solid fuels, it shall apply from 1 January 2022 as set out in Article 3(2). However, Articles 3(2)(f) and (g) and Article 4(b), (c) and (d) shall apply from 1 April 2022.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I
Definitions applicable for Annexes II to IX

For the purposes of Annexes II to IX the following definitions shall apply:

(1) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU, **as incorporated and adapted by the Ministerial Council Decision 2015/08/MC-EnC**[2]; the value of the conversion coefficient is CC = 2,5

(2) 'net calorific value' (NCV) means the total amount of heat released by a unit quantity of fuel containing the appropriate moisture of the fuel, when it is burned completely with oxygen, and when the products of combustion are not returned to ambient temperature;

(3) 'useful efficiency, at either nominal or minimum heat output, ($\eta_{th,nom}$ or $\eta_{th,min}$ respectively)' means the ratio of the useful heat output and the total energy input expressed in terms of NCV of a local space heater, expressed in %;

(4) 'electric power requirement at nominal heat output' (el_{max}) means the electric power consumption of the local space heater while providing the nominal heat output. The electric power consumption shall be established without consideration of the power consumption of a circulator in case the product offers indirect heating functionality and a circulator is incorporated, expressed in kW;

(5) 'electric power requirement at minimum heat output' (el_{min}) means the electric power consumption of the local space heater while providing the minimum heat output. The electric power consumption shall be established without consideration of the power consumption of a circulator in case the product offers indirect heating functionality and a circulator is incorporated, expressed in kW;

(6) 'electric power requirement in standby mode' (el_{sb}) means the electric power consumption of the product while in standby mode, expressed in kW;

(7) 'permanent pilot flame power requirement' (P_{pilot}) means the fuel consumption of gaseous, liquid or solid fuel of the product for the provision of a flame to serve as an ignition source for the more powerful combustion process needed for nominal or part load heat output, when lit for more than 5 minutes before the main burner is on, expressed in kW;

(8) 'single stage heat output, no room temperature control' means the product is not capable of varying its heat output automatically and that no feedback of room temperature is present to adapt the heat output automatically;

(9) 'two or more manual stages, no room temperature control' means the product is capable of varying its heat output manually by two or more levels of heat output and is not equipped with a device that automatically regulates the heat output in relation to a desired indoor temperature;

(10) 'with mechanic thermostat room temperature control' means the product is equipped with a non-electronic device that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort;

(11) 'with electronic room temperature control' means the product is equipped with an electronic device, either integrated or external, that allows the product to automatically vary its heat output over a certain

2 Directive 2012/27/EU, of 25 October 2012 on energy efficiency, **as incorporated and adapted by the Ministerial Council Decision 2015/08/MC-EnC**

time period, in relation to a certain required level of indoor heating comfort;

(12) 'with electronic room temperature control plus day timer' means the product is equipped with an electronic device, either integrated or external, that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort, and allows the setting of timing and temperature level for a 24-hours timer interval;

(13) 'with electronic room temperature control plus week timer' means the product is equipped with an electronic device, either integrated or external, that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort, and allows the setting of timing and temperature levels for a full week. During the 7-day period the settings must allow a variation on a day-to-day basis;

(14) 'room temperature control, with presence detection' means the product is equipped with an electronic device, either integrated or external, that automatically reduces the set-point for the room temperature when no person is detected in the room;

(15) 'room temperature control, with open window detection' means the product is equipped with an electronic device, either integrated or external, that reduces the heat output when a window or door has been opened. Whenever a sensor is used to detect the opening of a window or door, it can be installed with the product, externally to the product, built in the building structure or as a combination of those options;

(16) 'with distance control option' means the function that allows remote interaction from outside the building in which the product is installed with the control of the product;

(17) 'standby mode' means a condition where the product is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;

(18) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific local space heater model from other models with the same trade mark, supplier's name or dealer's name;

(19) 'other fossil fuel' means fossil fuel other than anthracite and dry steam coal, hard coke, low temperature coke, bituminous coal, lignite, peat or blended fossil fuel briquettes;

(20) 'other woody biomass' means woody biomass other than log wood with a moisture content of 25 % or less, briquetted fuel with a moisture content below 14 % or compressed wood with a moisture content below 12 %;

(21) 'moisture content' means the mass of water in the fuel in relation to the total mass of the fuel as used in the local space heater.

ANNEX II
Energy efficiency classes

The energy efficiency class of a local space heater shall be determined on the basis of its energy efficiency index as set out in Table 1.

Table 1

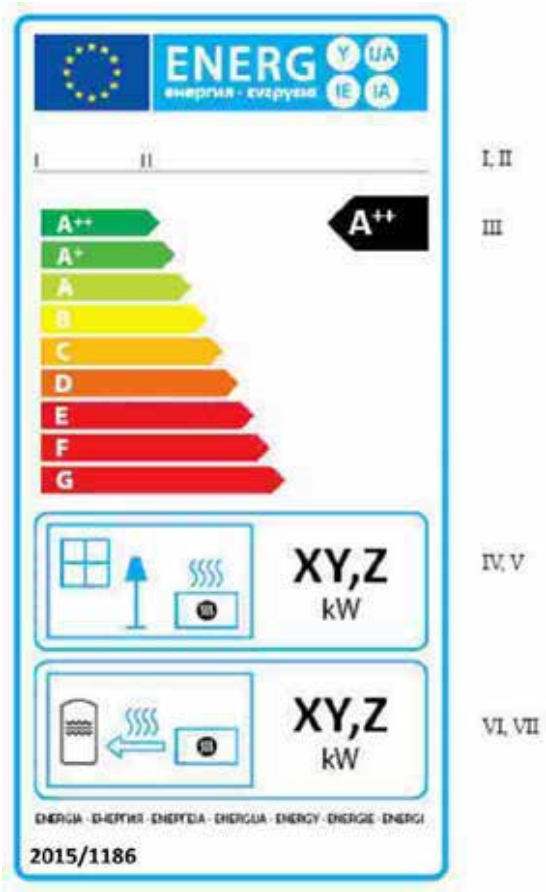
Energy efficiency classes of local space heaters

Energy efficiency class	**Energy efficiency index *(EEI)***
A^+	$107 \leq EEI < 130$
A	$88 \leq EEI < 107$
B	$82 \leq EEI < 88$
C	$77 \leq EEI < 82$
D	$72 \leq EEI < 77$
E	$62 \leq EEI < 72$
F	$42 \leq EEI < 62$
G	$EEI < 42$

The energy efficiency index of a local space heater shall be calculated in accordance with Annex VIII.

ANNEX III
The label

(a) The following information shall be included in the label:



I. supplier's name or trade mark;

II. supplier's model identifier;

III. the energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the energy efficiency class of the local space heater shall be placed at the same height as the head of the relevant energy efficiency class;

IV. the symbol for direct heat output;

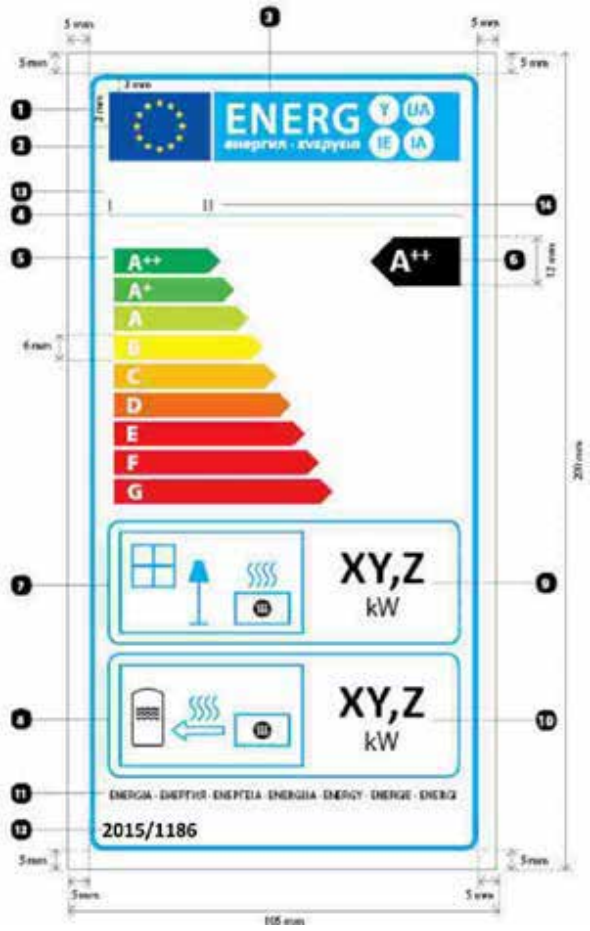
V. the direct heat output in kW, rounded to the nearest one decimal place;

VI. for local space heaters with heat transfer to a fluid, the symbol for indirect heat output;

VII. for local space heaters with heat transfer to a fluid, the indirect heat output in kW, rounded to the nearest one decimal place.

(b) The design aspects of the label for local space heaters shall be in accordance with point 2 of this Annex.

2. The design of the label for local space heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Scale of energy classes**
   - Arrow: height: 6 mm, gap: 1,3 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Seventh class: 00-X-X-00,
     - Eighth class: 00-X-X-00,
     - Last class: 00-X-X-00,
   - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
6. **Energy efficiency class:**
   - Arrow: width: 22 mm, height: 12 mm, 100 % black,
   - Text: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
7. **Direct heating functionality:**
   - Pictogram as depicted,
   - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
8. **If applicable, indirect heating functionality:**
   - Pictogram as depicted,
   - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
9. **Nominal direct heat output:**
   - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   - Value 'XY,Z': Calibri bold 34 pt, 100 % black,
   - Text 'kW': Calibri regular 18 pt, 100 % black.
10. **If applicable, nominal indirect heat output:**
    - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
    - Value 'XY,Z': Calibri bold 34 pt, 100 % black,
    - Text 'kW': Calibri regular 18 pt, 100 % black.
11. **Energy:**
    - Text: Calibri regular 8 pt, 100 % black.

12. Year of label introduction and number of Regulation:

- Text: Calibri bold 10 pt.

13. Supplier's name or trademark.

14. Supplier's model identifier:

- The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

ANNEX IV
Product fiche

1. The information in the product fiche of the local space heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trademark;

(b) supplier's model identifier;

(c) the energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(d) the direct heat output in kW, rounded to the nearest one decimal place;

(e) the indirect heat output in kW, rounded to the nearest one decimal place;

(f) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex VIII;

(g) the useful energy efficiency at nominal heat output, and at minimum load if applicable, rounded to the nearest one decimal place and calculated in accordance with Annex VIII;

(h) any specific precautions that shall be taken when the local space heater is assembled, installed or maintained.

2. One fiche may cover a number of local space heater models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX V
Technical documentation

For local space heaters, the technical documentation referred to in Article 3(1)(e) and Article 3(2)(e) shall include:

(a) the name and address of the supplier;

(b) the model identifier;

(c) where appropriate, the references of the harmonised standards applied;

(d) where the preferred fuel is other woody biomass, non-woody biomass, other fossil fuel or other blend of biomass and fossil fuel as referred to in Table 2, a description of the fuel sufficient for its unambiguous identification and the technical standard or specification of the fuel, including the measured moisture content and the measured ash content, and for other fossil fuel also the measured volatile content of the fuel;

(e) where appropriate, the other technical standards and specifications used;

(f) the identification and signature of the person empowered to bind the supplier;

(g) the information included in Table 2 (for solid fuel local space heaters) and Table 3 (for gaseous/liquid fuel local space heaters), measured and calculated in accordance with Annex VIII;

(h) reports of tests undertaken by suppliers or on their behalf, including the name and address of the body that conducted the tests;

(i) any specific precautions that shall be taken when the local space heater is assembled, installed or maintained;

(j) a list of equivalent models, if applicable. This information may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC of the European Parliament and of the Council.

Table 2

Technical parameters for solid fuel local space heaters

Model identifier(s):		
Indirect heating functionality:[yes/no]		
Direct heat output: …(kW)		
Indirect heat output: …(kW)		
Fuel	**Preferred fuel (only one):**	**Other suitable fuel(s):**
Wood logs with moisture content ≤ 25 %	[yes/no]	[yes/no]
Compressed wood with moisture content < 12 %	[yes/no]	[yes/no]
Other woody biomass	[yes/no]	[yes/no]
Non-woody biomass	[yes/no]	[yes/no]
Anthracite and dry steam coal	[yes/no]	[yes/no]
Hard coke	[yes/no]	[yes/no]

Low temperature coke	[yes/no]	[yes/no]
Bituminous coal	[yes/no]	[yes/no]
Lignite briquettes	[yes/no]	[yes/no]
Peat briquettes	[yes/no]	[yes/no]
Blended fossil fuel briquettes	[yes/no]	[yes/no]
Other fossil fuel	[yes/no]	[yes/no]
Blended biomass and fossil fuel briquettes	[yes/no]	[yes/no]
Other blend of biomass and solid fuel	[yes/no]	[yes/no]

Characteristics when operating with the preferred fuel							
Seasonal space heating energy efficiency η_s [%]:							
Energy Efficiency Index (EEI):							
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Heat output		**Useful efficiency (NCV as received)**					
Nominal heat output	P_{nom}	x,x	kW	Useful efficiency at nominal heat output	$\eta_{th,nom}$	x,x %	%
Minimum heat output (indicative)	P_{min}	[x,x/N.A.]	kW	Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	[x,x-/N.A.]	%
Auxiliary electricity consumption				**Type of heat output/room temperature control (select one)**			
At nominal heat output	el_{max}	x,xxx	kW	single stage heat output, no room temperature control			[yes/no]
At minimum heat output	el_{min}	x,xxx	kW	two or more manual stages, no room temperature control			[yes/no]
In standby mode	el_{SB}	x,xxx	kW	with mechanic thermostat room temperature control			[yes/no]
				with electronic room temperature control			[yes/no]
				with electronic room temperature control plus day timer			[yes/no]
				with electronic room temperature control plus week timer			[yes/no]
				Other control options (multiple selections possible)			
				room temperature control, with presence detection			[yes/no]
				room temperature control, with open window detection			[yes/no]

Permanent pilot flame power requirement				with distance control option	[yes/no]
Pilot flame-power requirement (if applicable)	P_{pilot}	[x,xxx/N.A.]	kW		
Contact details	Name and address of the supplier				

Table 3

Technical parameters for gaseous/liquid fuel local space heaters

Model identifier(s):							
Indirect heating functionality:[yes/no]							
Direct heat output: …(kW)							
Indirect heat output: …(kW)							
Fuel							
Select fuel type	[gaseous/liquid]		[specify]				
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Heat output		**Useful efficiency (NCV)**					
Nominal heat output	P_{nom}	x,x	kW	Useful efficiency at nominal heat output	$\eta_{th,nom}$	x,x	%
Minimum heat output (indicative)	P_{min}	[x,x/N.A.]	kW	Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	[x,x/ N.A.]	%
Auxiliary electricity consumption				**Type of heat output/room temperature control (select one)**			
At nominal heat output	el_{max}	x,xxx	kW	single stage heat output, no room temperature control			[yes/no]
At minimum heat output	el_{min}	x,xxx	kW	two or more manual stages, no room temperature control			[yes/no]
In standby mode	el_{SB}	x,xxx	kW	with mechanic thermostat room temperature control			[yes/no]
				with electronic room temperature control			[yes/no]
				with electronic room temperature control plus day timer [yes/no]			[yes/no]
				with electronic room temperature control plus week timer [yes/no]			[yes/no]

				Other control options (multiple selections possible)	
				room temperature control, with presence detection	[yes/no]
				room temperature control, with open window detection	[yes/no]
				with distance control option	[yes/no]
Permanent pilot flame power requirement					
Pilot flame power requirement (if applicable)	P_{pilot}	[x,xxx/N.A.]	kW		
Contact details	Name and address of the supplier				

ANNEX VI

Information to be provided in cases where end-users cannot be expected to see the product displayed, except on the internet

1. The information referred to in Article 4(1)(b) shall be provided in the following order:

(a) the energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the direct heat output in kW, rounded to the nearest one decimal place;

(c) the indirect heat output in kW, rounded to the nearest one decimal place.

2. The size and font in which the information referred in point 1 is printed or shown shall be legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex, the following definitions shall apply:

(a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3(1)(b) or Article 3(2)(b) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(d) or Article 3(2)(d) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII
Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in **a dedicated section of the website of the Energy Community**, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions set out in points 2 to 4.

2. General conditions for measurements and calculations

(a) Local space heaters shall be tested for the preferred fuel in order to determine the energy efficiency index, direct and indirect heat output.

(b) Declared values for direct and indirect heat output, and energy efficiency index, shall be rounded to the nearest one decimal place.

3. General conditions for energy efficiency index and consumption of local space heaters:

(a) The useful efficiency values $\eta_{th,nom}$, $\eta_{th,min}$ and the direct and indirect heat output values for P_{nom}, P_{min} are measured, where applicable.

(b) The energy efficiency index *(EEI)* shall be calculated as the seasonal space heating energy efficiency in active mode ($\eta_{s,on}$) corrected for local space heaters using biomass as preferred fuel by a factor taking into account the renewable character of the preferred fuel, and corrected by contributions accounting for temperature controls, auxiliary electricity consumption and permanent pilot flame energy consumption. The energy efficiency index *(EEI)* is expressed as a figure equivalent to its figure expressed in percentage.

4. Specific conditions for seasonal space heating energy efficiency

(a) The energy efficiency index *(EEI)* of all local space heaters is defined as:

$$\mathbf{EEI = (\eta_{s,on} \cdot BLF) - 10\% + F(2) + F(3) - F(4) - F(5)}$$

Where

- $\eta_{s,on}$ is the seasonal space heating energy efficiency in active mode, expressed in %, calculated as set out in point 4(b),

- *BLF* is the biomass label factor, which is 1,45 for biomass local space heaters and 1 for fossil fuel local space heaters,

- *F(2)* is a correction factor accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls of indoor heating comfort, the values of which are mutually exclusive, cannot be added on top of each other, expressed in %,

- *F(3)* is a correction factor accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls for indoor heating comfort the values of which can be added on top of each other, expressed in %;

- *F(4)* is a correction factor accounting for a negative contribution to the energy efficiency index by auxiliary electricity consumption, expressed in %;

- *F(5)* is a correction factor accounting for a negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame, expressed in %.

(b) The seasonal space heating energy efficiency in active mode is calculated as:

$\eta_{S,on} = \eta_{th,nom}$

Where

- $\eta_{th,nom}$, nom is the useful efficiency at nominal heat output, based on NCV.

(c) The correction factor *F(2)* accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls for indoor heating comfort, the values of which are mutually exclusive or cannot be added to each other, is calculated as follows:

For all local space heaters the correction factor *F(2)* is equal to one of the factors according to Table 4, depending on which control characteristic applies. Only one value can be selected.

Table 4

Correction factor *F(2)*

If the product is equipped with (only one option may apply):	***F(2)***
	Fuel fired local space heaters
single stage heat output, no room temperature control	0,0 %
two or more manual stages, no temperature control	1,0 %
with mechanic thermostat room temperature control	2,0 %
with electronic room temperature control	4,0 %
with electronic room temperature control plus day timer	6,0 %
with electronic room temperature control plus week timer	7,0 %

From 1 January 2022, *F(2)* shall be zero for solid fuel local space heaters with emissions, where the temperature control is set at the minimum heat output, higher than those set out in Annex II, point 2 of Commission Regulation (EU) 2015/1185. The heat output in this setting must not be higher than 50 % of the nominal heat output. From 1 January 2022, if *F(2)* is not zero the technical documentation shall include the relevant information on emissions at minimum heat output.

(d) The correction factor *F(3)* accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls for indoor heating comfort, the values of which can be added to each other, is calculated as follows:

For all local space heaters the correction factor *F(3)* is the summation of the values according to Table 5, depending on which control characteristic(s) applies.

Table 5

Correction factor *F(3)*

If the product is equipped with (multiple options may apply):	***F(3)***
	Fuel fired local space heaters
room temperature control with presence detection	1,0 %
room temperature control with open window detection	1,0 %
with distance control option	1,0 %

From 1 January 2022, *F(3)* shall be zero for solid fuel local space heaters with emissions, where the temperature control is set at the minimum heat output, higher than those set out in Annex II, point 2 of Regulation (EU) 2015/1185. The heat output in this setting must not be higher than 50 % of the nominal heat output. From 1 January 2022, if *F(3)* is not zero the technical documentation shall include the relevant information on emissions at minimum heat output.

(e) The auxiliary electricity use correction factor *F(4)* is calculated as:

$$\mathrm{F\,(4) = CC \cdot \frac{0{,}2 \cdot el_{max} + 0{,}8 \cdot el_{min} + 1{,}3 \cdot el_{sb}}{P_{nom}} \cdot 100\,[\%]}$$

This correction factor takes into account the auxiliary electricity consumption during on-mode and stand-by-mode operation.

For all local space heaters the auxiliary electricity consumption correction is calculated as follows: Where

- el_{max} is the electric power consumption at nominal heat output, expressed in kW;

- el_{min} is the electric power consumption at minimum heat output, expressed in kW. In case the product does not offer a minimum heat output the value for the electric power consumption at nominal heat output shall be used;

- el_{sb} is the electric power consumption of the product while in standby mode, expressed in kW,

- P_{nom} is the nominal heat output of the product, expressed in kW.

(f) The correction factor *F(5)* related to the energy consumption of a permanent pilot flame is calculated as follows:

This correction factor takes into account the permanent pilot flame power requirement. For all local space heaters the correction factor is calculated as:

$$\mathrm{F\,(5) = 0{,}5 \cdot \frac{P_{pilot}}{P_{nom}} \cdot 100\,[\%]}$$

Where

- P_{pilot} is the pilot flame consumption, expressed in kW,

- P_{nom} is the nominal heat output of the product, expressed in kW.

ANNEX IX[3]

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MCEnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform the measurements described in Annex VIII.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all mo dels that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance

3 Annex IX is amended in accordance with Article 14 and Annex XIV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6: Verification tolerances

Parameter	Verification tolerance
Energy efficiency index	The determined value shall not be lower than the declared value by more than 8 %.

DELEGATED REGULATION (EU) 2015/1187 of 27 April 2015 supplementing Directive 2010/30/EU with regard to energy labelling of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of and the provision of supplementary product information on solid fuel boilers with a rated heat output of 70 kW or less and packages of a solid fuel boiler with a rated heat output of 70 kW or less, supplementary heaters, temperature controls and solar devices.

2. This Regulation shall not apply to:

(a) boilers generating heat only for the purpose of providing hot drinking or sanitary water;

(b) boilers for heating and distributing gaseous heat transfer media such as vapour or air;

(c) solid fuel cogeneration boilers with a maximum electrical capacity of 50 kW or more;

(d) non-woody biomass boilers.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, the following definitions shall apply for the purposes of this Regulation:

(1) 'solid fuel boiler' means a device equipped with one or more solid fuel heat genererators that provides heat to a water-based central heating system in order to reach and maintain at a desired level the indoor temperature of one or more enclosed spaces, with a heat loss to its surrounding environment of not more than 6% of rated heat output;

(2) 'water-based central heating system' means a system using water as a heat transfer medium to distribute centrally generated heat to heat emitting devices for the heating of enclosed spaces within buildings or parts thereof, including block heating or district heating networks;

(3) 'solid fuel heat generator' means the part of a solid fuel boiler that generates the heat through the combustion of solid fuels;

(4) 'rated heat output' or 'Pr' means the declared heat output of a solid fuel boiler when providing heating of enclosed spaces with the preferred fuel, expressed in kW;

(5) 'solid fuel' means a fuel that is solid at normal indoor room temperatures, including solid biomass and solid fossil fuel;

(6) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(7) 'woody biomass' means biomass originating from trees, bushes and shrubs, including log wood, chipped wood, compressed wood in the form of pellets, compressed wood in the form of briquettes, and sawdust;

(8) 'non-woody biomass' means biomass other than woody biomass, including straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells;

(9) 'fossil fuel' means fuel other than biomass, including anthracite, brown coal, coke, bituminous coal; for the purposes of this Regulation it also includes peat;

(10) 'biomass boiler' means a solid fuel boiler that uses biomass as the preferred fuel;

(11) 'non-woody biomass boiler' means a biomass boiler that uses non-woody biomass as the preferred fuel and for which woody biomass, fossil fuel or a blend of biomass and fossil fuel are not listed among its other suitable fuels;

(12) 'preferred fuel' means the single solid fuel which is to be preferably used for the boiler according to the supplier's instructions;

(13) 'other suitable fuel' means a solid fuel, other than the preferred fuel, which can be used in the solid fuel boiler according to the supplier's instructions and includes any fuel that is mentioned in the instruction manual for installers and end-users, on free access websites of suppliers, in technical promotional material and in advertisements;

(14) 'solid fuel cogeneration boiler' means a solid fuel boiler capable of simultaneously generating heat and electricity;

(15) 'supplementary heater' means a secondary boiler or heat pump falling within the scope of Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, or a secondary solid fuel boiler, which generates extra heat where the heat demand is greater than the rated heat output of the primary solid fuel boiler;

(16) 'temperature control' means the equipment that interfaces with the end-user regarding the values and timing of the desired indoor temperature, and communicates relevant data to an interface of the solid fuel boiler such as a central processing unit, thus helping to regulate the indoor temperature(s);

(17) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;

(18) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(19) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it;

(20) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(21) 'hot water storage tank' means a vessel for storing hot water for water or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(22) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source supply is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(23) 'package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices' means a package offered to the end-user containing a solid fuel boiler combined with one or more supplementary heaters, one or more temperature controls or one or more solar devices;

(24) 'combination boiler' means a solid fuel boiler that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water.

For the purposes of Annexes II to X, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2020** suppliers placing solid fuel boilers on the market or putting them into service, including those integrated in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, shall ensure that:

(a) each solid fuel boiler is provided with a printed label in the format and containing the information set out in point 1.1 of Annex III and conforming to the energy efficiency classes set out in Annex II, and each solid fuel boiler intended for use in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices is provided with a second label in the format and containing the information set out in point 2 of Annex III;

(b) an electronic label in the format and containing the information set out in point 1.1 of Annex III and conforming to the energy efficiency classes set out in Annex II is made available to dealers for each solid fuel boiler model;

(c) a product fiche, in accordance with point 1 of Annex IV, is provided for each solid fuel boiler, and a second fiche, in accordance with point 2 of Annex IV, is provided for each solid fuel boiler intended for use in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(d) an electronic product fiche, in accordance with point 1 of Annex IV, shall be made available to dealers for each solid fuel boiler model;

(e) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and the **Secretariat**;

(f) any advertisement related to a specific solid fuel boiler model and containing energy-related information or price includes a reference to the energy efficiency class of that model;

(g) any technical promotional material concerning a specific solid fuel boiler model and describing its specific technical parameters includes a reference to the energy efficiency class of that model.

2. From **1 January 2020** suppliers placing solid fuel boilers on the market or putting them into service, including those integrated in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, shall ensure that:

(a) each solid fuel boiler is provided with a printed label in the format and containing the information set out in point 1.2 of Annex III and conforming to the energy efficiency classes set out in Annex II;

(b) an electronic label in the format and containing the information set out in point 1.2 of Annex III and conforming to the energy efficiency classes set out in Annex II is made available to dealers for each solid fuel boiler model.

3. From **1 January 2020** suppliers placing packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices on the market or putting them into service shall ensure that:

(a) a printed label in the format and containing the information set out in point 2 of Annex III and conforming to the energy efficiency classes set out in Annex II is provided for each package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(b) an electronic label in the format and containing the information set out in point 2 of Annex III and conforming to the energy efficiency classes set out in Annex II is made available to dealers for each model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(c) a product fiche, in accordance with point 2 of Annex IV, is provided for each package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(d) an electronic product fiche, in accordance with point 2 of Annex IV, is made available to dealers for each model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(e) the technical documentation, in accordance with point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(f) any advertisement relating to a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices and which contains energy-related information or price includes a reference to the energy efficiency class for that model;

(g) any technical promotional material concerning a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices which describes its specific technical parameters includes a reference to the energy efficiency class for that model.

Article 4

Responsibilities of dealers

1. Dealers in solid fuel boilers shall ensure that:

(a) each solid fuel boiler bears, at the point of sale, the label provided by suppliers in accordance with Article 3(1) or 3(2) on the outside of the front of the solid fuel boiler, in such a way as to be clearly visible;

(b) solid fuel boilers offered for sale, hire or hire purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex VII shall apply;

(c) any advertisement for a specific solid fuel boiler model which contains containing energy-related or price information includes a reference to the energy efficiency class of that model;

(d) any technical promotional material concerning a specific solid fuel boiler model which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

2. Dealers in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall ensure that:

(a) any offer for a specific package includes the energy efficiency class for that package, by displaying on the package the label provided by the supplier in accordance with Article 3(3)(a) and the product fiche provided by the supplier in accordance with Article 3(3)(c), duly filled with the characteristics of that package;

(b) packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices offered for sale, hire or hire purchase, where the end-user cannot be expected to see the package displayed, are marketed with the information provided in accordance with point 2 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex VII shall apply;

(c) any advertisement relating to a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar device models and which contains energy-related information or price includes a reference to the energy efficiency class for that model;

(d) any technical promotional material concerning a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices which describes its specific technical parameters includes a reference to the energy efficiency class for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-oft-he-art measurement and calculation methods, set out in Annex VIII. The energy efficiency index shall be calculated as set out in Annex IX.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex X when assessing the conformity with this Regulation of the declared energy efficiency class of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices.

Article 7

Review

<...>[1]

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

1 Not applicable in accordance with Article 3(2)(a) of Decision 2018/03/MC-EnC

ANNEX I
Definitions applicable to Annexes II to X

For the purposes of Annexes II to X the following definitions shall apply:

(1) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific model comprising a solid fuel boiler or a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices from other models with the same trade mark, supplier's name or dealer's name;

(2) 'seasonal space heating energy efficiency' or 'η_s' means the ratio between the space heating demand for a designated heating season, supplied by a solid fuel boiler and the annual energy consumption required to meet this demand, expressed in %;

(3) 'electrical efficiency' or 'η_{el} means the ratio of the electricity output and the total energy input of a solid fuel cogeneration boiler, whereby the total energy input is expressed in terms of *GCV* or in terms of final energy multiplied by *CC*;

(4) 'gross calorific value' or '*GCV*' means the total amount of heat released by a unit quantity of fuel containing the appropriate moisture content, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of the water vapour formed by the combustion of any hydrogen contained in the fuel;

(5) 'conversion coefficient' or *'CC'* means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council, a**s incorporated and adapted by the Ministerial Council Decision 2015/08/MC-EnC**[2]; the value of the conversion coefficient is *CC*= 2,5;

(6) 'temperature control fiche' means the product fiche required to be provided for temperature controls by Article 3(3)(a) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;

(7) 'boiler fiche' means for solid fuel boilers the product fiche required to be provided by Article 3(1)(c) of this Regulation and for boilers other than solid fuel boilers the product fiche required to be provided for such boilers by Article 3(1)(b) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;

(8) 'solar device fiche' means the product fiche required to be provided for solar devices by Article 3(4)

(a) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;

(9) 'heat pump fiche' means the product fiche required to be provided for heat pumps by Article 3(1)

(b) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;

(10) 'condensing boiler' means a solid fuel boiler in which, under normal operating conditions and at given operating water temperatures, the water vapour in the combustion products is partially condensed, in order to make use of the latent heat of this water vapour for heating purposes;

(11) 'other woody biomass' means woody biomass other than: log wood with a moisture content of 25 %

2 Directive 2012/27/EU on Energy Efficiency, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**

or less, chipped wood with a moisture content of 15 % or higher, compressed wood in the form of pellets or briquettes, or sawdust with a moisture content equal or less than 50 %;

(12) 'moisture content' means the mass of water in the fuel in relation to the total mass of the fuel as used in solid fuel boilers;

(13) 'other fossil fuel' means fossil fuel other than bituminous coal, brown coal (including briquettes), coke, anthracite or blended fossil fuel briquettes;

(14) 'electric power requirement at maximum heat output' or 'el_{max} means the electric power consumption of the solid fuel boiler at rated heat output, expressed in kW, excluding electricity consumption from a back-up heater and from incorporated secondary emission abatement equipment;

(15) 'electric power requirement at minimum heat output' or 'el_{min} means the electric power consumption of the solid fuel boiler at applicable part load, expressed in kW, excluding electricity consumption from a back-up heater and from incorporated secondary emission abatement equipment;

(16) 'back-up heater' means a Joule-effect electric resistance element that generates heat only to prevent the solid fuel boiler or the water based central heating system from freezing or when the external heat source supply is disrupted (including during maintenance periods) or out of order;

(17) 'applicable part load' means for automatically stoked solid fuel boilers, operation at 30 % of rated heat output, and for manually stoked solid fuel boilers that can be operated at 50 % of rated heat output, operation at 50 % of rated heat output;

(18) 'standby mode power consumption' or 'P_{SB} means the power consumption of a solid fuel boiler in standby mode, excluding from incorporated secondary emission abatement equipment, expressed in kW;

(19) 'standby mode' means a condition where the solid fuel boiler is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, or information or status display;

(20) 'seasonal space heating energy efficiency in active mode' or 'η_{son} means

(a) for automatically stoked solid fuel boilers, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 30 % of the rated heat output;

(b) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 50 % of the rated heat output;

(c) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, the useful efficiency at rated heat output;

(d) for solid fuel cogeneration boilers, the useful efficiency at rated heat output;

(21) 'useful efficiency' or 'η' means the ratio of the useful heat output and the total energy input of a solid fuel boiler, whereby the total energy input is expressed in terms of *GCV* or in terms of final energy multiplied by *CC*;

(22) 'useful heat output' or '*P*' means the heat output of a solid fuel boiler transmitted to the heat carrier, expressed in kW;

(23) 'fossil fuel boiler' means a solid fuel boiler that has fossil fuel or a blend of biomass and fossil fuel as the preferred fuel;

(24) 'gross calorific value moisture free' or 'GCV_{mf}' means the total amount of heat released by a unit quantity of fuel dried of inherent moisture, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of the water vapour formed by the combustion of any hydrogen contained in the fuel;

(25) 'equivalent model' means a model placed on the market with the same technical parameters set out in Table 4 of point 1 of Annex V, as another model placed on the market by the same supplier.

ANNEX II
Energy efficiency classes

The energy efficiency class of a solid fuel boiler shall be determined on the basis of its energy efficiency index as set out in Table 1.

The energy efficiency index of a solid fuel boiler shall be calculated in accordance with Annex IX.

Table 1

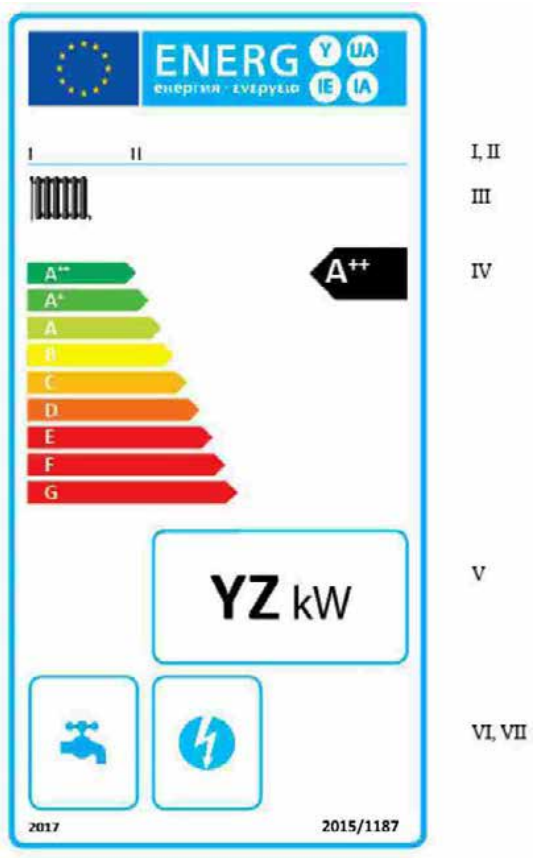
Energy efficiency classes of solid fuel boilers

Energy efficiency class	**Energy efficiency index *(EEI)***
A^{+++}	$EEI \geq 150$
A^{++}	$125 \leq EEI < 150$
A^{+}	$98 \leq EEI < 125$
A	$90 \leq EEI < 98$
B	$82 \leq EEI < 90$
C	$75 \leq EEI < 82$
D	$36 \leq EEI < 75$
E	$34 \leq EEI < 36$
F	$30 \leq EEI < 34$
G	$EEI < 30$

ANNEX III
The labels

1. SOLID FUEL BOILERS

1.1. Label 1



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function;

IV. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class of the solid fuel boiler shall be placed at the same height as the head of the relevant energy efficiency class;

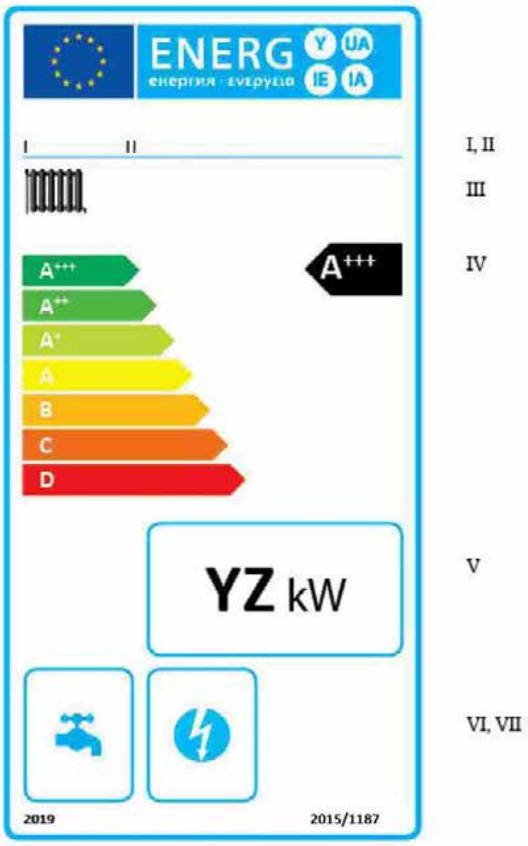
V. the rated heat output in kW, rounded to the nearest integer;

VI. for combination boilers, also the additional water heating function;

VII. for solid fuel cogeneration boilers, also the additional electricity generation function.

(b) The design aspects of the label for solid fuel boilers shall be in accordance with point 3 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

1.2. Label 2

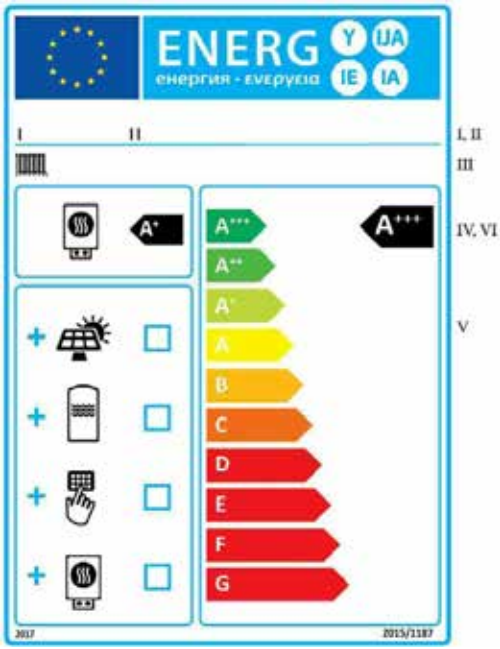


(a) The information listed in point 1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for solid fuel boilers shall be in accordance with point 3 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

Label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices in energy efficiency classes A+++ to G



(a) The following information shall be included in the label:

I. dealer's or supplier's name or trade mark;

II. dealer's or supplier's model(s) identifier;

III. the space heating function;

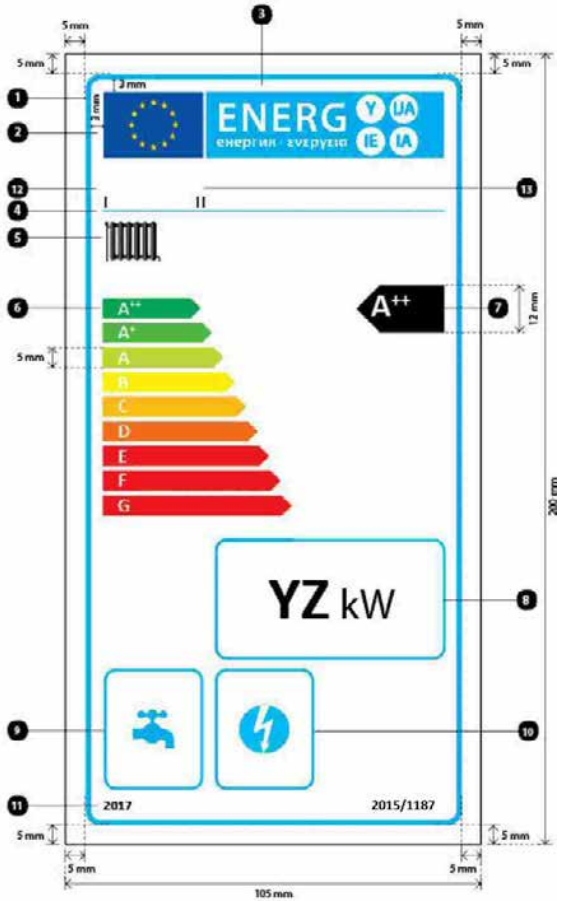
IV. the energy efficiency class of the solid fuel boiler, determined in accordance with Annex II;

V. indication of whether a solar collector, hot water storage tank, temperature control or supplementary heater may be included in the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

VI. the energy efficiency class of the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, determined in accordance with point 2 of Annex IV; the head of the arrow containing the energy efficiency class of the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be in accordance with point 4 of this Annex. For packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices in energy efficiency classes A+++ to D, the classes E to G in the A+++ to G scale may be omitted.

3. THE DESIGN OF THE LABEL FOR SOLID FUEL BOILERS SHALL BE THE FOLLOWING:



whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfill all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.

5. Space heating function:

– Pictogram as depicted.

6. A^{++}-G and A^{++}+-D scales, respectively:

– **Arrow:** height: 5 mm, gap: 1,3 mm, colours:

  – Highest class: X-00-X-00,

  – Second class: 70-00-X-00,

  – Third class: 30-00-X-00,

  – Fourth class: 00-00-X-00,

  – Fifth class: 00-30-X-00,

  – Sixth class: 00-70-X-00,

  – Seventh class: 00-X-X-00,

  – Eighth class: 00-X-X-00,

  – Last class: 00-X-X-00,

– **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;

– **Arrow:** height: 7 mm, gap: 1 mm, colours:

  – Highest class: X-00-X-00,

  – Second class: 70-00-X-00,

  – Third class: 30-00-X-00,

  – Fourth class: 00-00-X-00,

  – Fifth class: 00-30-X-00,

  – Sixth class: 00-70-X-00,

  – Last class: 00-X-X-00,

– **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

7. Energy efficiency class:

– **Arrow**: width: 22 mm, height: 12 mm, 100 % black,

– **Text:** Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

8. Rated heat output:

– **Border:** 2 pt – colour: cyan 100 % – round corners: 3,5 mm,

– **Value 'YZ':** Calibri bold 45 pt, 100 % black,

– **Text 'kW':** Calibri regular 30 pt, 100 % black.

9. Water heating function

– **Pictogram** as depicted,

– **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

10. Electricity function:

– **Pictogram** as depicted,

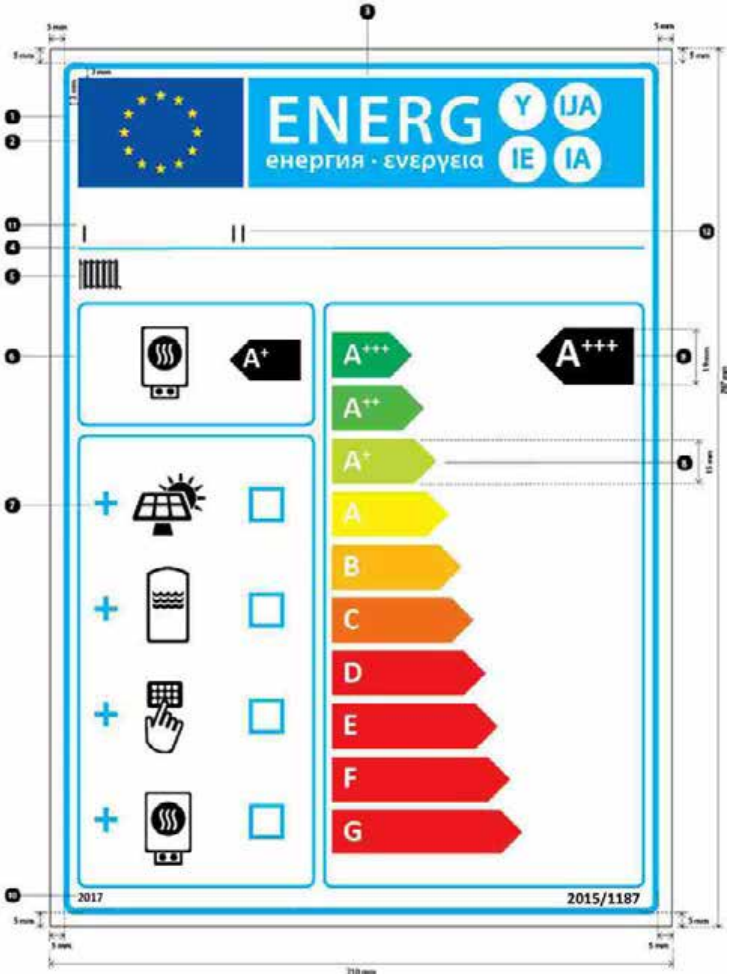
– **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

Year of label introduction and number of Regulation:

– **Text:** Calibri bold 10 pt. Supplier's name or trademark. Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

4. THE DESIGN OF THE LABEL FOR PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES SHALL BE THE FOLLOWING:



whereby:

(a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
4. **Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
5. **Space heating function:**
   - **Pictogram** as depicted.
6. **Solid fuel boiler:**
   - **Pictogram as depicted,**
   - **Energy efficiency class of solid fuel boiler:**
   - **Arrow: width: 24 mm, height: 14 mm, 100 % black;**
   - **Text: Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row,**
   - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
7. **Package with solar collectors, hot water storage tanks, temperature controls and supplementary heaters:**
   - **Pictograms as depicted,**
   - **'+' symbol: Calibri bold 50 pt, cyan 100 %,**
   - **Boxes: width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,**
   - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
8. **A^{+++}-G scale with border:**
   - **Arrow:** height: 15 mm, gap: 3 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Seventh class: 00-X-X-00,
     - If applicable, last classes: 00-X-X-00,
   - **Text: Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,**
   - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.

9. **Energy efficiency class for the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices:**
   - **Arrow: width: 33 mm, height: 19 mm, 100 % black,**
   - **Text:** Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
10. **Year of label introduction and number of Regulation:**
   - **Text:** Calibri bold 12 pt.
11. **Dealer's or supplier's name or trademark.**
12. **Dealer's or supplier's model identifier:**

The dealer's or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

ANNEX IV
Product fiche

1. SOLID FUEL BOILERS

1.1. The information in the product fiche of the solid fuel boiler shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trademark;

(b) supplier's model identifier;

(c) the energy efficiency class of the model, determined in accordance with Annex II;

(d) the rated heat output in kW, rounded to the nearest integer;

(e) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex IX;

(f) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with Annex VIII;

(g) any specific precautions that shall be taken when the solid fuel boiler is assembled, installed or maintained;

(h) in the case of solid fuel cogeneration boilers the electrical efficiency in %, rounded to the nearest integer;

1.2. One product fiche may cover a number of solid fuel boiler models supplied by the same supplier.

1.3. The information contained in the product fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

The fiche for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall contain the information set out in Figure 1 or Figure 2, as appropriate, for evaluating the energy efficiency index of the package offered, including the following information:

(a) **I:** the value of the energy efficiency index of the primary solid fuel boiler;

(b) **II:** the factor for weighting the heat output of primary solid fuel boiler and supplementary heaters of a package as set out in Tables 2 and 3 of this Annex, as appropriate;

(c) **III:** the value of the mathematical expression: 294/(11 ηPr), whereby *Pr* refers to the primary solid fuel boiler;

(d) **IV:** the value of the mathematical expression 115/(11 ηPr), whereby *Pr* refers to the primary solid fuel boiler.

Table 2

Weighting of primary solid fuel boiler and supplementary heater, for the purposes of Figure 1 of this Annex [1]

Psup/(Pr + Psup) [2]	**II, package without hot water storage tank**	**II, package with hot water storage tank**
0	0	0
0,1	0,30	0,37
0,2	0,55	0,70
0,3	0,75	0,85
0,4	0,85	0,94
0,5	0,95	0,98
0,6	0,98	1,00
≥ 0,7	1,00	1,00

Table 3

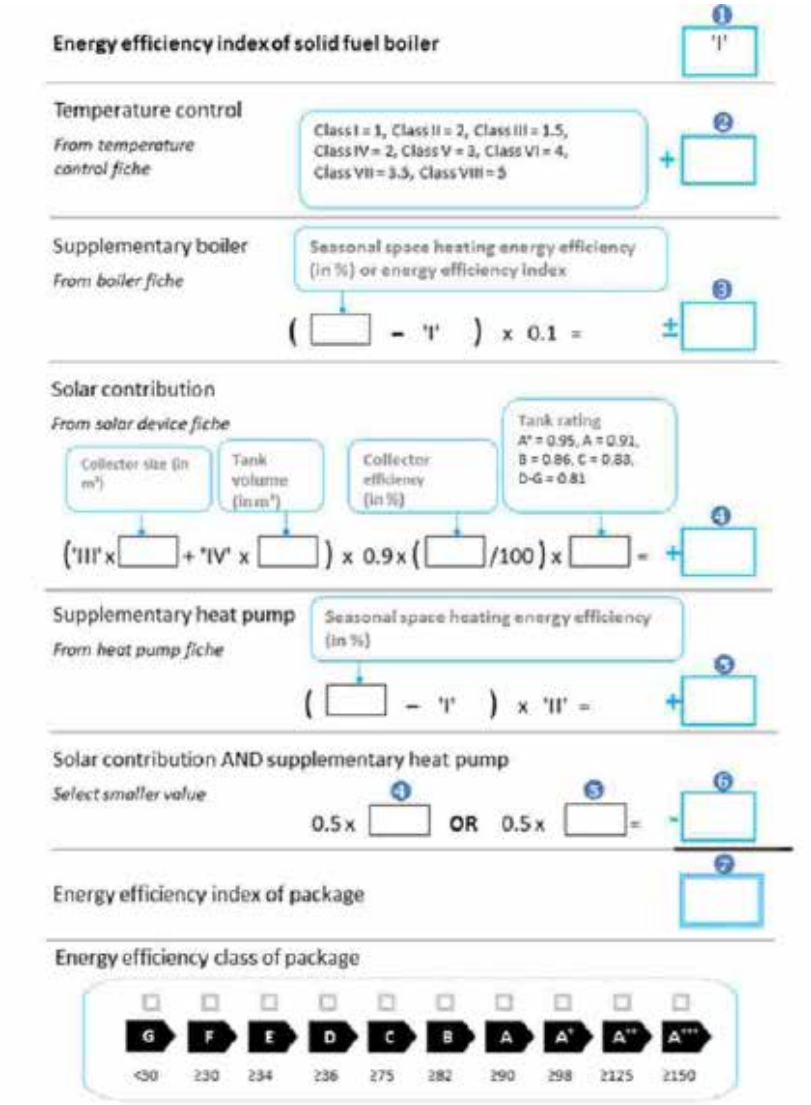
Weighting of primary cogeneration solid fuel boiler and supplementary heater, for the purposes of Figure 2 of this Annex [1]

Pr/(Pr + Psup) [3]	**II, package without hot water storage tank**	**II, package with hot water storage tank**
0	1,00	1,00
0,1	0,70	0,63
0,2	0,45	0,30
0,3	0,25	0,15
0,4	0,15	0,06
0,5	0,05	0,02
0,6	0,02	0
≥ 0,7	0	0

[1] The intermediate values are calculated by linear interpolation between the two adjacent values.
[2] Pr refers to the primary solid fuel boiler.
[3] Pr refers to the primary solid fuel boiler.

Figure 1

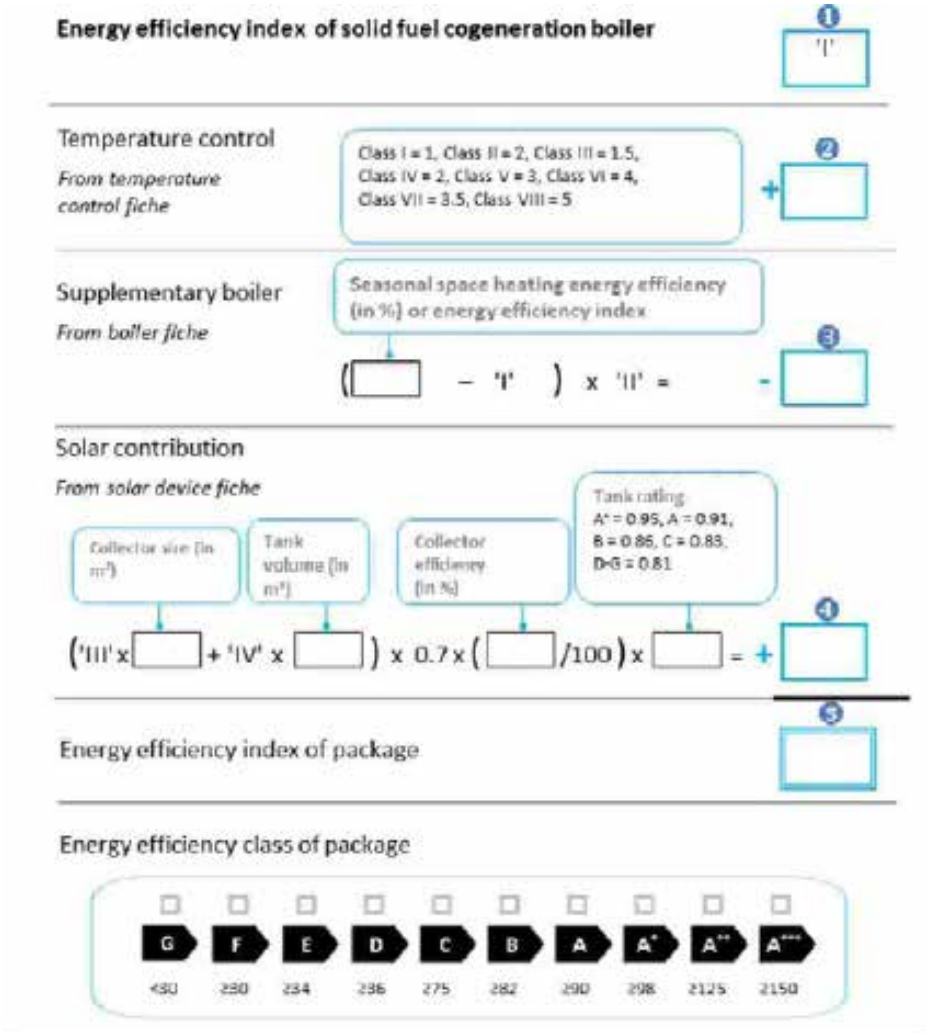
For primary solid fuel boilers, information to be given on the product fiche for a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, indicating the energy efficiency index of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 2

For primary solid fuel cogeneration boilers, information to be given on the product fiche for a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, indicating the energy efficiency index of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V
Technical documentation

1. SOLID FUEL BOILERS

For solid fuel boilers, the technical documentation referred to in Article 3(1)(e) shall include:

(a) the name and address of the supplier;

(b) the model identifier;

(c) where appropriate, the references of the harmonised standards applied;

(d) where the preferred fuel is other woody biomass, non-woody biomass, other fossil fuel or other blend of biomass and fossil fuel as referred to in Table 4, a description of the fuel sufficient for its unambiguous identification and the technical standard or specification of the fuel, including the measured moisture content and the measured ash content, and for other fossil fuel also the measured volatile content of the fuel;

(e) where appropriate, the other technical standards and specifications used;

(f) the name and signature of the person empowered to bind the supplier;

(g) the information included in Table 4, with its technical parameters measured and calculated in accordance with Annex VIII and IX;

(h) reports of tests undertaken by suppliers or on their behalf, including the name and address of the body that conducted the test;

(i) any specific precautions that must be taken when the solid fuel boiler is assembled, installed or maintained;

(j) a list of equivalent models, if applicable.

This information may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC of the European Parliament and of the Council.

Table 4

Technical parameters for solid fuel boilers and solid fuel cogeneration boilers

Model identifier		
Stoking mode: [Manual: the boiler should be operated with a hot water storage tank of a volume of at least x [(1)] litre/Automatic: it is recommended that the boiler be operated with a hot water storage tank of a volume of at least x [(2)] litre]		
Condensing boiler: [yes/no]		
Solid fuel cogeneration boiler: [yes/no]	Combination boiler: [yes/no]	
Fuel	**Preferred fuel (only one):**	**Other suitable fuel(s):**
Log wood, moisture content ≤ 25 %	[yes/no]	[yes/no]
Chipped wood, moisture content 15-35 %	[yes/no]	[yes/no]
Chipped wood, moisture content > 35 %	[yes/no]	[yes/no]
Compressed wood in the form of pellets or briquettes	[yes/no]	[yes/no]
Sawdust, moisture content ≤ 50 %	[yes/no]	[yes/no]
Other woody biomass	[yes/no]	[yes/no]
Non-woody biomass	[yes/no]	[yes/no]
Bituminous coal	[yes/no]	[yes/no]
Brown coal (including briquettes)	[yes/no]	[yes/no]
Coke	[yes/no]	[yes/no]
Anthracite	[yes/no]	[yes/no]
Blended fossil fuel briquettes	[yes/no]	[yes/no]
Other fossil fuel	[yes/no]	[yes/no]
Blended biomass (30-70 %) and fossil fuel briquettes	yes/no]	[yes/no]
Other blend of biomass and fossil fuel	[yes/no]	[yes/no]

<table>
<tr><td colspan="8">Characteristics when operating with the preferred fuel:</td></tr>
<tr><td colspan="8">Seasonal space heating energy efficiency η_s [%]:</td></tr>
<tr><td colspan="8">Energy efficiency index EEI:</td></tr>
<tr><td>Item</td><td>Symbol</td><td>Value</td><td>Unit</td><td>Item</td><td>Symbol</td><td>Value</td><td>Unit</td></tr>
<tr><td colspan="4">Useful heat output</td><td colspan="4">Useful efficiency</td></tr>
<tr><td>At rated heat output</td><td>Pn (3)</td><td>x,x</td><td>kW</td><td>At rated heat output</td><td>η_n</td><td>x,x</td><td>%</td></tr>
<tr><td>At [30 %/50 %] of rated heat output, if applicable</td><td>P_p</td><td>[x,x-/N.A.]</td><td>kW</td><td>At [30 %/50 %] of rated heat output, if applicable</td><td>η_p</td><td>[x,x/ N.A.]</td><td>%</td></tr>
<tr><td colspan="4" rowspan="2">For solid fuel cogeneration boilers: Electrical efficiency</td><td colspan="4">Auxiliary electricity consumption</td></tr>
<tr><td>At rated heat output</td><td>el_{max}</td><td>x,xxx</td><td>kW</td></tr>
<tr><td rowspan="3">At rated heat output</td><td rowspan="3">$\eta_{el,n}$</td><td rowspan="3">x,x</td><td rowspan="3">%</td><td>At [30 %/50 %] of rated heat output, if applicable</td><td>el_{min}</td><td>[x,xxx/ N.A.]</td><td>kW</td></tr>
<tr><td>Of incorporated secondary emission abatement equipment, if applicable</td><td>[x,xxx/ N.A.]</td><td>kW</td><td></td></tr>
<tr><td>In standby mode</td><td>P_{SB}</td><td>x,xxx</td><td>kW</td></tr>
<tr><td>Contact details</td><td colspan="7">Name and address of the supplier</td></tr>
</table>

(1) Tank volume = $45 \times P_r \times (1 - 2{,}7/P_r)$ or 300 litres whichever is higher, with P_r indicated in kW

(2) Tank volume = $20 \times P_r$ with P_r indicated in kW

(3) For the preferred fuel P_n equals P_r

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

For packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, the technical documentation referred to in Article 3(3)(e) shall include:

(a) the name and address of the supplier;

(b) a description of the model comprising the package of a solid fuel boiler, supplementary heaters, temperatures control and solar devices sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the name and signature of the person empowered to bind the supplier;

(f) technical parameters:

(1) the energy efficiency index, rounded to the nearest integer;

(2) the technical parameters set out in point 1 of this Annex and, where appropriate, the technical

parameters set out in point 1 of Annex V of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;

(3) the technical parameters set out in points 3 and 4 of Annex V of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/ MC-EnC**;

(g) any specific precautions that must be taken when the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices is assembled, installed or maintained.

ANNEX VI

Information to be provided in cases where end-users cannot be expected to see the product displayed, except on the internet

1. SOLID FUEL BOILERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

(a) the energy efficiency class of the model, determined in accordance with Annex II;

(b) the rated heat output in kW, rounded to the nearest integer;

(c) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex IX;

(d) in the case of solid fuel cogeneration boilers the electrical efficiency in %, rounded to the nearest integer.

1.2. The size and font in which the information referred in point 1.1 is printed or shown shall be legible.

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

(a) the energy efficiency class of the model, determined in accordance with Annex II;

(b) the energy efficiency index, rounded to the nearest integer;

(c) the information set out in Figure 1 and Figure 2 of Annex IV, as appropriate.

The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex

III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop-up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII
Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in **a dedicated section of the website of the Energy Community**, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 5.

2. General conditions for measurements and calculations

(a) Solid fuel boilers shall be tested with the preferred fuel.

(b) The declared value for the seasonal space heating energy efficiency shall be rounded to the nearest integer.

3. General conditions for the seasonal space heating energy efficiency of solid fuel boilers

(a) The useful efficiency values η_n, η_p and the useful heat output values P_n, P_p shall be measured, as appropriate. For solid fuel cogeneration boilers the electrical efficiency value $\eta_{el,n}$ is also measured.

(b) The seasonal space heating energy efficiency ηs shall be calculated as the seasonal space heating energy efficiency in active mode η_{son} , corrected by contributions accounting for temperature controls, auxiliary electricity consumption, and, for solid fuel cogeneration boilers, by adding the electrical efficiency multiplied by a conversion coefficient *CC* of 2,5;

(c) The consumption of electricity shall be multiplied by a conversion coefficient *CC* of 2,5.

4. Specific conditions for the seasonal space heating energy efficiency of solid fuel boilers

(a) Seasonal space heating energy efficiency η_s is defined as:

$$\eta_s = \eta_{son} - F(1) - F(2) + F(3)$$

where:

η_{son} is the seasonal space heating energy efficiency in active mode, expressed as a percentage, calculated as set out in point 4(b);

F(1) accounts for a loss of seasonal space heating energy efficiency due to adjusted contributions of temperature controls; F(1) = 3 %;

F(2) accounts for a negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption, expressed as a percentage, and is calculated as set out in point 4(c);

F(3) accounts for a positive contribution to the seasonal space heating energy efficiency by the electrical efficiency of solid fuel cogeneration boilers, expressed as a percentage, and is calculated as follows:

$F(3) = 2{,}5 \times \eta_{el,n}$

(b) the seasonal space heating energy efficiency in active mode, ηson , is calculated as follows:

(1) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, and for automatically stoked solid fuel boilers:

$\eta_{son} = 0{,}85 \times \eta_p + 0{,}15 \times \eta_n$

(2) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, and for solid fuel cogeneration boilers:

$\eta_{son} = \eta_n$

(c) *F(2)* is calculated as follows:

(1) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, and for automatically stoked solid fuel boilers:

$F(2) = 2{,}5 \times (0{,}15 \times el_{max} + 0{,}85 \times el_{min} + 1{,}3 \times P_{SB})/(0{,}15 \times P_n + 0{,}85 \times P_p)$

(2) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, and for solid fuel cogeneration boilers:

$F(2) = 2{,}5 \times (el_{max} + 1{,}3 \times PS_B)/P_n$

5. Calculation of gross calorific value

The gross calorific value *(GCV)* shall be obtained from the gross calorific value moisture free (GCV_{mf}) by applying the following conversion:

$$\boldsymbol{GCV = GCV_{mf} \times (1 - M)}$$

where:

(a) *GCV* and GCV_{mf} are expressed in megajoules per kilogram;

(b) *M* is the moisture content of the fuel, expressed as a proportion.

ANNEX IX

Method for calculating the Energy Efficiency Index

1. The Energy Efficiency Index *(EEI)* of solid fuel boilers shall be calculated for the preferred fuel and rounded to the nearest integer as:

$$EEI = \eta_{son} \times 100 \times BLF - F(1) - F(2) \times 100 + F(3) \times 100$$

where:

η_{son} is the seasonal space heating energy efficiency in active mode, calculated as set out in point 4(b) of Annex VIII;

BLF is the biomass label factor, which is 1,45 for biomass boilers and 1 for fossil fuel boilers;

F(1) accounts for a negative contribution to the energy efficiency index due to adjusted contributions of temperature controls; $F(1) = 3$;

F(2) accounts for a negative contribution to the energy efficiency index by auxiliary electricity consumption, and is calculated as set out in point 4(c) of Annex VIII;

F(3) accounts for a positive contribution to the energy efficiency index by the electrical efficiency of solid fuel cogeneration boilers, and is calculated as follows:

$F(3) = 2,5 \times \eta_{el,n}$

2. The Energy Efficiency Index *(EEI)* of packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall determined in accordance with point 2 of Annex IV.

ANNEX X[3]

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MCEnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 5. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform measurements according to Annex VIII.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective verification tolerances given in Table 5.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other

3 Annex X is amended in accordance with Article 15 and Annex XV of Delegated Regulation (EU) 2017/254, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VIII and IX.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 5 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 5: Verification tolerances

Parameter	Verification tolerance
Energy efficiency index	The determined value shall not be lower than the declared value by more than 6 %.

DELEGATED REGULATION (EU) 518/2014 of 5 March 2014 on labelling of energy-related products on the internet

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Amendments to Delegated Regulation (EU) No 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1059/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household dishwasher model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household dishwasher models;';

(b) the following point (g) is added:

'(g) an electronic product fiche as set out in Annex II is made available to dealers for each household dishwasher model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household dishwasher models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) household dishwashers offered for sale, hire or hirepurchase where the end-user cannot be expected to see the household dishwasher displayed, are marketed with the information provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;';

(3) a new Annex VIII is added in accordance with Annex I to this Regulation.

Article 2

Amendments to Delegated Regulation (EU) No 1060/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1060/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in Annex II is made available to dealers for each household refrigerating appliance model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models;';

(b) the following point (g) is added:

'(g) an electronic product fiche as set out in Annex III is made available to dealers for each household refrigerating appliance model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) household refrigerating appliances offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information to be provided by the suppliers in accordance with Annex V. Where the offer for is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex X shall apply instead;';

(3) a new Annex X is added in accordance with Annex II to this Regulation.

Article 3

Amendments to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1061/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household washing machine model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household washing machine models;';

(b) the following point (g) is added:

'(g) an electronic product fiche as set out in Annex II is made available to dealers for each household washing machine model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household washing machine models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) household washing machines offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed are marketed with the information to be

provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;';

(3) a new Annex VIII is added in accordance with Annex III to this Regulation.

Article 4

Amendments to Delegated Regulation (EU) No 1062/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1062/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in Annex V is made available to dealers for each television model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other television models;';

(b) in paragraph 1, the following point (g) is added:

'(g) an electronic product fiche as set out in Annex III is made available to dealers for each television model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other television models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) televisions offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the television displayed, are marketed with the information to be provided by the suppliers in accordance with Annex VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1)(f) and 3(1)(g) the provisions in Annex IX shall apply instead;';

(3) a new Annex IX is added in accordance with Annex IV to this Regulation.

Article 5

Amendments to Delegated Regulation (EU) No 626/2011, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 626/2011, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (h) is added:

'(h) an electronic label in the format and containing the information set out in Annex III is made available to dealers for each air conditioner model placed on the market from 1 January

2020 with a new model identifier, respecting energy efficiency classes set out in Annex II. It may also be made available to dealers for other air conditioner models;';

(b) in paragraph 1, the following point (i) is added:

'(i) an electronic product fiche as set out in Annex IV is made available to dealers for each air conditioner model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other air conditioner models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) air conditioners offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annexes IV and VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1)(h) and 3(1)

(i) the provisions of Annex IX shall apply instead;';

(3) a new Annex IX is added in accordance with Annex V to this Regulation.

Article 6

Amendments to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 392/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models;';

(b) the following point (g) is added:

'(g) an electronic product fiche as set out in Annex II is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) household tumble driers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, are marketed with the information provided by suppliers in accordance with Annex IV to this Regulation. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;';

(3) a new Annex VIII is added in accordance with Annex VI to this Regulation.

Article 7

Amendments to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 874/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 1 of Annex I is made available to dealers for each lamp model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other lamp models.';

(b) in paragraph 2, the following point (e) is added:

'(e) an electronic label in the format and containing information set out in point 2 of Annex I is made available to dealers for each luminaire model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other luminaire models.';

(2) Article 4 is amended as follows:

(a) in paragraph 1, point (a) is replaced by the following:

'(a) each model offered for sale, hire or hire-purchase where the final owner cannot be expected to see the product displayed is marketed with the information to be provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label has been made available in accordance with Article 3(1)(f) the provisions in Annex VIII shall apply instead;';

(b) in paragraph 2, the following point (d) is added:

'(d) each model offered for sale, hire or hire-purchase through the internet and for which an electronic label has been made available in accordance with Article 3(2)(e) is accompanied by the label in accordance with Annex VIII.';

(3) a new Annex VIII is added in accordance with Annex VII to this Regulation.

Article 8

Amendments to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 665/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in Annex II is made available to dealers for each vacuum cleaner model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other vacuum cleaner models;';

(b) in paragraph 1, the following point (g) is added:

'(g) an electronic product fiche as set out in Annex III is made available to dealers for each vacuum cleaner model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other vacuum cleaner models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) vacuum cleaners offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, are marketed with the information provided by suppliers in accordance with Annex V to this Regulation. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1)(f) and 3(1)(g) the provisions in Annex VIII shall apply instead;';

(3) a new Annex VIII is added in accordance with Annex VIII to this Regulation.

Article 9

Amendments to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;';

(b) in paragraph 1, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each space heater model, whereby for heat pump space heaters models, the electronic product fiche is made available to dealers at least for the heat generator.';

(c) in paragraph 1, the following subparagraph is added:

'From **1 January 2020** an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II.';

(d) in paragraph 2, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;';

(e) in paragraph 2, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each combination heater model, whereby for heat pump combination heaters models, the electronic product fiche is made available to dealers at least for the heat generator.';

(f) in paragraph 2, the following subparagraph is added:

'From **1 January 2020** an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II.';

(g) in paragraph 3, the following point (c) is added:

'(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each temperature control model.';

(h) in paragraph 4, the following point (c) is added:

'(c) an eletronic product fiche, as set out in point 4 of Annex IV, is made available to dealers for each solar device model.';

(i) in paragraph 5, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;';

(j) in paragraph 5, the following point (g) is added:

'(g) an electronic product fiche as set out in point 5 of Annex IV is made available to dealers for each model comprising a package of space heater, temperature control and solar device.';

(k) in paragraph 6, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 4 of Annex III is made available to dealers for each model comprising a package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;';

(l) in paragraph 6, the following point (g) is added:

'(g) an electronic product fiche as set out in point 6 of Annex IV is made available to dealers for each model comprising a package of combination heater, temperature control and solar device.';

(2) Article 4 is amended as follows:

(a) in paragraph 1, point (b) is replaced by the following:

'(b) space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected

to see the space heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(b) in paragraph 2, point (b) is replaced by the following:

'(b) combination heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the combination heater displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(c) in paragraph 3, point (b) is replaced by the following:

'(b) packages of space heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of space heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(d) in paragraph 4, point (b) is replaced by the following:

'(b) packages of combination heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of combination heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 4 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(3) Annex VI is amended in accordance with Annex IX to this Regulation;

(4) a new Annex IX is added in accordance with Annex IX to this Regulation.

Article 10

Amendments to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II;';

(b) in paragraph 1, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each water heater model, whereby for heat pump water heaters models, the electronic product fiche is made available to dealers at least for the heat generator.';

(c) in paragraph 1, the following subparagraph is added:

'From **1 January 2020** an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II.';

(d) in paragraph 2, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each hot water storage tank model in accordance with the energy efficiency classes set out in point 2 of Annex II;';

(e) in paragraph 2, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each hot water storage tank model.';

(f) in paragraph 2, the following subparagraph is added:

'From 1 January 2020 an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each hot water storage tank model, in accordance with the energy efficiency classes set out in point 2 of Annex II.';

(g) in paragraph 3, the following point (c) is added:

'(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each solar device model.';

(h) in paragraph 4, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of water heater and solar device, in accordance with the water heating energy efficiency classes set out in point 1 of Annex II;';

(i) in paragraph 4, the following point (g) is added:

'(g) an electronic product fiche as set out in point 4 of Annex IV is made available to dealers for each model comprising a package of water heater and solar device.';

(2) Article 4 is amended as follows:

(a) in paragraph 1, point (b) is replaced by the following:

'(b) water heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the water heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;';

(b) in paragraph 2, point (b) is replaced by the following:

'(b) hot water storage tanks offered for sale, hire or hire-purchase, where the end user cannot be expected to see the hot water storage tank displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI; except where the offer is made through the internet in which case the provisions in Annex X shall apply;';

(c) in paragraph 3, point (b) is replaced by the following:

'(b) packages of water heater and solar device offered for sale, hire or hire purchase, where the end-user cannot be expected to see the package of water heater and solar device displayed, are

marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;';

(3) Annex VI is amended in accordance with Annex X to this Regulation;

(4) A new Annex X is added in accordance with Annex X to this Regulation.

Article 11

Entry into force and application

This Regulation shall enter into force on the date of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I

Amendments to the Annexes to Delegated Regulation (EU) 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

The following Annex VIII is added:

'ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screenf" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX II

Amendments to the Annexes to Delegated Regulation (EU) No 1060/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC- EnC

The following Annex X is added:

'ANNEX X

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex II. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX III

Amendments to the Annexes to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC- EnC

The following Annex VIII is added:

'ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX IV

Amendments to the Annexes to Delegated Regulation (EU) No 1062/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC- EnC

The following Annex IX is added:

'ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(3). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 5 of Annex V. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX V

Amendments to the Annexes to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC- EnC

The following Annex IX is added:

'ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(h) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(4) to 3(6). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(i) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX VI

Amendments to the Annexes to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC- EnC

The following Annex VIII is added:

'ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 4 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX VII

Amendments to the Annexes to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC- EnC

The following Annex VIII is added:

'ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 4 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) or Article 3(2)(e) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.'

ANNEX VIII

Amendments to the Annexes to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC- EnC

The following Annex VII is added:

'ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(2). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex II. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX IX

Amendments to the Annexes to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

(a) In Annex VI the title is replaced by the following:

'Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet'

(b) The following Annex IX is added:

'ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex

III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX X

Amendments to the Annexes to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

(a) In Annex VI the title is replaced by the following:

'Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet'

(b) The following Annex X is added:

'ANNEX X

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex

III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

DELEGATED REGULATION (EU) 665/2013 with regard to energy labelling of vacuum cleaners

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 of the European Parliament and of the Council setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

On 7th January 2019, the European Commission published the Judgment of the General Court of 8 November 2018 where the Court annuls Commission Delegated Regulation (EU) 665/2013 with regard to energy labelling of vacuum cleaners. The annulment of Regulation (EU) 665/2013 took effect on 18 January 2019, with retroactive effect as if the regulation had never existed. The judgment of the General Court does not provide for transitional measures.

DELEGATED REGULATION (EU) 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on, water heaters with a rated heat output ≤ 70 kW, hot water storage tanks with a storage volume ≤ 500 litres and packages of water heater ≤ 70 kW and solar device.

2. This Regulation shall not apply to:

(a) water heaters specifically designed for using gaseous or liquid fuels predominantly produced from biomass;

(b) water heaters using solid fuels;

(c) water heaters within the scope of Directive 2010/75/EU of the European Parliament and of the Council;

(d) combination heaters as defined in Article 2 of Delegated Regulation (EU) No 811/2013[1];

(e) water heaters which do not meet at least the load profile with the smallest reference energy, as specified in Annex VII, Table 3;

(f) water heaters designed for making hot drinks and/or food only.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'water heater' means a device that:

(a) is connected to an external supply of drinking or sanitary water;

(b) generates and transfers heat to deliver drinking or sanitary hot water at given temperature levels, quantities and flow rates during given intervals; and

(c) is equipped with one or more heat generators;

1 Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014

(2) 'heat generator' means the part of a water heater that generates the heat using one or more of the following processes:

(a) combustion of fossil fuels and/or biomass fuels;

(b) use of the Joule effect in electric resistance heating elements;

(c) capture of ambient heat from an air source, water source or ground source, and/or waste heat;

(3) 'rated heat output' means the declared heat output of the water heater when providing water heating at standard rating conditions, expressed in kW;

(4) 'storage volume' *(V)* means the rated volume of a hot water storage tank, expressed in litres;

(5) 'standard rating conditions' means the operating conditions of water heaters for establishing the rated heat output, water heating energy efficiency and sound power level, and of hot water storage tanks for establishing the standing loss;

(6) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(7) 'biomass fuel' means a gaseous or liquid fuel produced from biomass;

(8) 'fossil fuel' means a gaseous or liquid fuel of fossil origin;

(9) 'hot water storage tank' means a vessel for storing hot water for water and/or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(10) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(11) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;

(12) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(13) 'package of water heater and solar device' means a package offered to the end-user containing one or more water heaters and one or more solar devices;

(14) 'water heating energy efficiency' *(T_{wh})* means the ratio between the useful energy provided by a water heater or a package of water heater and solar device and the energy required for its generation, expressed in %;

(15) 'sound power level' *(L_{WA})* means the A-weighted sound power level, indoors and/or outdoors, expressed in dB;

(16) 'standing loss' *(S)* means the heating power dissipated from a hot water storage tank at given water and ambient temperatures, expressed in W;

(17) 'heat pump water heater' means a water heater that uses ambient heat from an air source, water

source or ground source, and/or waste heat for heat generation.

For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2018** suppliers placing water heaters on the market and/or putting them into service, including those integrated in packages of water heater and solar device, shall ensure that:

(a) **<...>** for water heaters intended for use in packages of water heater and solar device, a second label complying with the format and content of information set out in point 3 of Annex III is provided for each water heater;

(b) a product fiche, as set out in point 1 of Annex IV, is provided for each water heater, whereby: for heat pump water heaters, the product fiche is provided at least for the heat generator; for water heaters intended for use in packages of water heater and solar device, a second fiche, as set out in point 4 of Annex IV, is provided;

(c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific water heater model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific water heater model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each water heater model, whereby for heat pump water heaters models, the electronic product fiche is made available to dealers at least for the heat generator.

From **1 January 2018** a printed label complying with the format and content of information set out in point 1.2 of Annex III shall be provided for each water heater conforming to the water heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump water heaters, the printed label shall be provided at least in the packaging of the heat generator.

From 1 January 2020 an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II.

2. From 1 January 2018 suppliers placing hot water storage tanks on the market and/or putting them into service shall ensure that:

(a) **<...>**

(b) a product fiche, as set out in point 2 of Annex IV, is provided;

(c) the technical documentation, as set out in point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific hot water storage tank model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(e) any technical promotional material concerning a specific hot water storage tank model and describing its specific technical parameters includes a reference to the energy efficiency class for that model;

(f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each hot water storage tank model in accordance with the energy efficiency classes set out in point 2 of Annex II;

(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each hot water storage tank model.

From 1 January 2018 a printed label complying with the format and content of information as set out in point 2.2 of Annex III shall be provided for each hot water storage tank conforming to the energy efficiency classes set out in point 2 of Annex II.

From 1 January 2020 an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each hot water storage tank model, in accordance with the energy efficiency classes set out in point 2 of Annex II.

3. From **1 January 2018** suppliers placing solar devices on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 3 of Annex IV, is provided;

(b) the technical documentation, as set out in point 3 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each solar device model.

4. From **1 January 2018** suppliers placing packages of water heater and solar device on the market and/or putting them into service shall ensure that:

(a) a printed label complying with the format and content of information set out in point 3 of Annex III is provided for each package of water heater and solar device conforming to the water heating energy efficiency classes set out in point 1 of Annex II;

(b) a product fiche, as set out in point 4 of Annex IV, is provided for each package of water heater and solar device;

(c) the technical documentation, as set out in point 4 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of water heater and solar device model and containing energy-related or price information includes a reference to the water heating energy efficiency class under

average climate conditions for that model;

(e) any technical promotional material concerning a specific package of water heater and solar device model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of water heater and solar device, in accordance with the water heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 4 of Annex IV is made available to dealers for each model comprising a package of water heater and solar device.

Article 4

Responsibilities of dealers

1. Dealers of water heaters shall ensure that:

(a) each water heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1), as set out in point 1 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) water heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the water heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;

(c) any advertisement relating to a specific water heater model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific water heater model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

2. Dealers of hot water storage tanks shall ensure that:

(a) each hot water storage tank, at the point of sale, bears the label provided by suppliers in accordance with Article 3(2), as set out in point 2 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(**b) hot water storage tanks offered for sale, hire or hire-purchase, where the end user cannot be expected to see the hot water storage tank displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI; except where the offer is made through the internet in which case the provisions in Annex X shall apply;**

(c) any advertisement relating to a specific hot water storage tank model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(d) any technical promotional material concerning a specific hot water storage tank model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

3. Dealers of packages of water heater and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(1), (3) and (4), that:

(a) any offer for a specific package includes the water heating energy efficiency and the water heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 3 of Annex III and providing the fiche set out in point 4 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of water heater and solar device offered for sale, hire or hire purchase, where the end-user cannot be expected to see the package of water heater and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;

(c) any advertisement relating to a specific package of water heater and solar device model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of water heater and solar device model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII and Annex VIII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex IX when assessing the conformity of the declared water heating energy efficiency class, water heating energy efficiency, annual energy consumption and sound power level of water heaters and the declared energy efficiency class and standing loss of hot water storage tanks.

Article 7

Review

<...>

Article 8

Entry into force and application

This Regulation shall apply from 1 January 2016.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties.

ANNEX I
Definitions applicable for Annexes II to IX

For the purposes of Annexes II to IX, the following definitions shall apply:

(1) 'conventional water heater' means a water heater that generates heat using the combustion of fossil and/or biomass fuels and/or the Joule effect in electric resistance heating elements;

(2) 'solar water heater' means a water heater equipped with one or more solar collectors, solar hot water storage tanks, heat generators and possibly pumps in the collector loop and other parts, a solar water heater is placed on the market as one unit;

(3) 'load profile' means a given sequence of water draw-offs, as specified in Annex VII, Table 3; each water heater meets at least one load profile;

(4) 'water draw-off' means a given combination of useful water flow rate, useful water temperature, useful energy content and peak temperature, as specified in Annex VII, Table 3;

(5) 'useful water flow rate' *(f)* means the minimum flow rate, expressed in litres per minute, for which hot water is contributing to the reference energy, as specified in Annex VII, Table 3;

(6) 'useful water temperature' *(T_m)* means the water temperature, expressed in degrees Celsius, at which hot water starts contributing to the reference energy, as specified in Annex VII, Table 3;

(7) 'useful energy content' *(Q_{tap})* means the energy content of hot water, expressed in kWh, provided at a temperature equal to, or above, the useful water temperature, and at water flow rates equal to, or above, the useful water flow rate, as specified in Annex VII, Table 3;

(8) 'energy content of hot water' means the product of the specific heat capacity of water, the average temperature difference between the hot water output and cold water input, and the total mass of the hot water delivered;

(9) 'peak temperature' *(T_p)* means the minimum water temperature, expressed in degrees Celsius, to be achieved during water draw-off, as specified in Annex VII, Table 3;

(10) 'reference energy' *(Q_{ref})* means the sum of the useful energy content of water draw-offs, expressed in kWh, in a particular load profile, as specified in Annex VII, Table 3;

(11) 'maximum load profile' means the load profile with the greatest reference energy that a water heater is able to provide while fulfilling the temperature and flow rate conditions of that load profile;

(12) 'declared load profile' means the load profile applied when determining water heating energy efficiency;

(13) 'conversion coefficient' *(CC)* means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council; the value of the conversion coefficient is $CC = 2,5$;

(14) 'daily electricity consumption' *(Q_{elec})* means the consumption of electricity over 24 consecutive hours under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;

(15) 'daily fuel consumption'*(Q_{fuel})* means the consumption of fuels over 24 consecutive hours under the declared load profile and under given climate conditions, expressed in kWh in terms of *GCV*, and for the

purposes of point 4 in Annex VIII expressed in GJ in terms of *GCV*;

(16) 'gross calorific value' *(GCV)* means the total amount of heat released by a unit quantity of fuel when it is burned completely with oxygen and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of any water

vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel;

(17) 'smart control' means a device that automatically adapts the water heating process to individual usage conditions with the aim of reducing energy consumption;

(18) 'smart control compliance' (smart) means the measure of whether a water heater equipped with smart controls fulfils the criterion set out in point 5 of Annex VIII;

(19) 'smart control factor' *(SCF)* means the water heating energy efficiency gain due to smart control under the conditions set out in point 3 of Annex VII;

(20) 'weekly electricity consumption with smart controls' *($Q_{elec,week,smart}$)* means the weekly electricity consumption of a water heater with the smart control function enabled, expressed in kWh in terms of final energy;

(21) 'weekly fuel consumption with smart controls' *($Q_{fuel,week,smart}$)* means the weekly fuel consumption of a water heater with the smart control function enabled, expressed in kWh in terms of *GCV*;

(22) 'weekly electricity consumption without smart controls' *($Q_{elec,week}$)* means the weekly electricity consumption of a water heater with the smart control function disabled, expressed in kWh in terms of final energy;

(23) 'weekly fuel consumption without smart controls' *($Q_{fuel,week}$)* means the weekly fuel consumption of a water heater with the smart control function disabled, expressed in kWh in terms of *GCV*;

(24) 'annual electricity consumption' *(AEC)* means the annual electricity consumption of a water heater under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;

(25) 'annual fuel consumption' *(AFC)* means the annual fossil and/or biomass fuel consumption of a water heater under the declared load profile and under given climate conditions, expressed in GJ in terms of *GCV*;

(26) 'ambient correction term' *(Q_{cor})* means a term which takes into account the fact that the place where the water heater is installed is not an isothermal place, expressed in kWh;

(27) 'standby heat loss' *(P_{stby})* means the heat loss of a heat pump water heater in operating modes without heat demand, expressed in kW;

(28) 'average climate conditions', 'colder climate conditions' and 'warmer climate conditions' mean the temperatures and global solar irradiance conditions characteristic for the cities of Strasbourg, Helsinki and Athens, respectively;

(29) 'annual energy consumption' *(Q_{total})* means the annual energy consumption of a solar water heater, expressed in kWh in terms of primary energy and/or kWh in terms of *GCV*;

(30) 'annual non-solar heat contribution' *(Q_{nonsol})*, means the annual contribution of electricity (expressed in kWh in terms of primary energy) and/or fuels (expressed in kWh in terms of *GCV*) to the useful heat output of a solar water heater or a package of water heater and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank;

(31) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat

energy so produced to a fluid passing through it; it is characterised by the collector aperture area, the zero-loss efficiency, the first order coefficient, the second-order coefficient and the incidence angle modifier;

(32) 'global solar irradiance' means the rate of total incoming solar energy, both direct and diffuse, on a collector plane with an inclination of 45 degrees and southward orientation at the Earth's surface, expressed in W/m^2;

(33) 'collector aperture area' *(A_{sol})* means the maximum projected area through which unconcentrated solar radiation enters the collector, expressed in m^2;

(34) 'zero-loss efficiency' *(η_0)* means the efficiency of the solar collector, when the solar collector mean fluid temperature is equal to the ambient temperature;

(35) 'first-order coefficient' *(a_1)* means the heat loss coefficient of a solar collector, expressed in W/(m^2 K);

(36) 'second-order coefficient' *(a_2)* means the coefficient measuring the temperature dependence of the first order coefficient, expressed in W/(m^2 K2);

(37) 'incidence angle modifier' (*IAM)* means the ratio of the useful heat output of the solar collector at a given incidence angle and its useful heat output at an incidence angle of 0 degrees;

(38) 'incidence angle' means the angle between the direction to the sun and the direction perpendicular to the solar collector aperture;

(39) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(40) 'heat generator water heating energy efficiency' *($\eta_{wh,nonsol}$)* means the water heating energy efficiency of a heat generator which is part of a solar water heater, expressed in %, established under average climate conditions and without using solar heat input;

(41) 'auxiliary electricity consumption' *(Q_{aux})*, for the purpose of Figure 1 in Annex IV referred to as 'auxiliary electricity', means the annual electricity consumption of a solar water heater or a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy;

(42) 'pump power consumption' *(solpump)* means the rated electrical power consumption of the pump in the collector loop of a solar water heater or solar-only system, expressed in W;

(43) 'standby power consumption' *(solstandby)* means the rated electrical power consumption of a solar water heater or solar-only system when the pump and the heat generator are inactive, expressed in W;

(44) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific water heater, hot water storage tank, solar device or package of water heater and solar device model from other models with the same trade mark, supplier's name or dealer's name.

ANNEX II
Energy efficiency classes

1. WATER HEATING ENERGY EFFICIENCY CLASSES OF WATER HEATERS

The water heating energy efficiency class of a water heater shall be determined on the basis of its water heating energy efficiency as set out in Table 1.

The water heating energy efficiency of a water heater shall be calculated in accordance with point 3 of Annex VIII, for solar water heaters and heat pump water heaters under average climate conditions.

Table 1

Water heating energy efficiency classes of water heaters, categorised by declared load profiles, η_{wh} *in %*

	3XS	XXS	XS	S	M	L	XL	XXL
A+++	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 69$	$\eta_{wh} \geq 90$	$\eta_{wh} \geq 163$	$\eta_{wh} \geq 188$	$\eta_{wh} \geq 200$	$\eta_{wh} \geq 213$
A++	$53 \leq \eta_{wh} < 62$	$53 \leq \eta_{wh} < 62$	$61 \leq \eta_{wh} < 69$	$72 \leq \eta_{wh} < 90$	$130 \leq \eta_{wh} < 163$	$150 \leq \eta_{wh} < 188$	$160 \leq \eta_{wh} < 200$	$170 \leq \eta_{wh} < 213$
A+	$44 \leq \eta_{wh} < 53$	$44 \leq \eta_{wh} < 53$	$53 \leq \eta_{wh} < 61$	$55 \leq \eta_{wh} < 72$	$100 \leq \eta_{wh} < 130$	$115 \leq \eta_{wh} < 150$	$123 \leq \eta_{wh} < 160$	$131 \leq \eta_{wh} < 170$
A	$35 \leq \eta_{wh} < 44$	$35 \leq \eta_{wh} < 44$	$38 \leq \eta_{wh} < 53$	$38 \leq \eta_{wh} < 55$	$65 \leq \eta_{wh} < 100$	$75 \leq \eta_{wh} < 115$	$80 \leq \eta_{wh} < 123$	$85 \leq \eta_{wh} < 131$
B	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$35 \leq \eta_{wh} < 38$	$35 \leq \eta_{wh} < 38$	$39 \leq \eta_{wh} < 65$	$50 \leq \eta_{wh} < 75$	$55 \leq \eta_{wh} < 80$	$60 \leq \eta_{wh} < 85$
C	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$36 \leq \eta_{wh} < 39$	$37 \leq \eta_{wh} < 50$	$38 \leq \eta_{wh} < 55$	$40 \leq \eta_{wh} < 60$
D	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$33 \leq \eta_{wh} < 36$	$34 \leq \eta_{wh} < 37$	$35 \leq \eta_{wh} < 38$	$36 \leq \eta_{wh} < 40$
E	$22 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$30 \leq \eta_{wh} < 33$	$30 \leq \eta_{wh} < 34$	$30 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 36$
F	$19 \leq \eta_{wh} < 22$	$20 \leq \eta_{wh} < 23$	$23 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$28 \leq \eta_{wh} < 32$
G	$\eta_{wh} < 19$	$\eta_{wh} < 20$	$\eta_{wh} < 23$	$\eta_{wh} < 23$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 28$

2. ENERGY EFFICIENCY CLASSES OF HOT WATER STORAGE TANKS

The energy efficiency class of a hot water storage tank shall be determined on the basis of its standing loss as set out in Table 2.

Table 2

Energy efficiency classes of hot water storage tanks

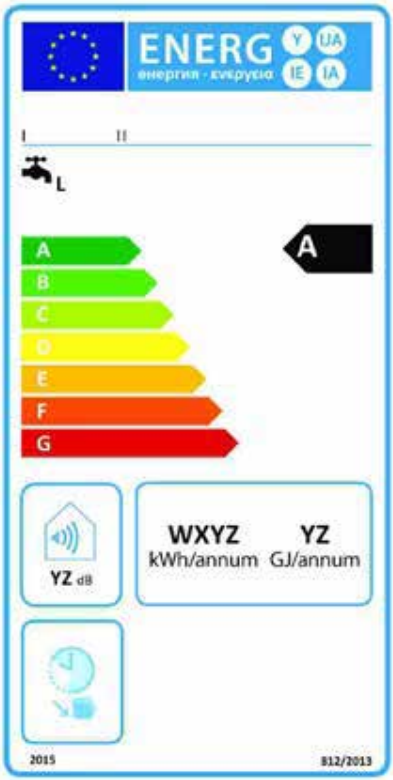
Energy efficiency class	Standing loss S in Watts, with storage volume V in litres
A+	$S < 5{,}5 + 3{,}16 \cdot V^{0{,}4}$
A	$5{,}5 + 3{,}16 \cdot V^{0{,}4} \leq S < 8{,}5 + 4{,}25 \cdot V^{0{,}4}$
B	$8{,}5 + 4{,}25 \cdot V^{0{,}4} \leq S < 12 + 5{,}93 \cdot V^{0{,}4}$
C	$12 + 5{,}93 \cdot V^{0{,}4} \leq S < 16{,}66 + 8{,}33 \cdot V^{0{,}4}$
D	$16{,}66 + 8{,}33 \cdot V^{0{,}4} \leq S < 21 + 10{,}33 \cdot V^{0{,}4}$
E	$21 + 10{,}33 \cdot V^{0{,}4} \leq S < 26 + 13{,}66 \cdot V^{0{,}4}$
F	$26 + 13{,}66 \cdot V^{0{,}4} \leq S < 31 + 16{,}66 \cdot V^{0{,}4}$
G	$S > 31 + 16{,}66 \cdot V^{0{,}4}$

ANNEX III
The labels

1. WATER HEATERS

1.1. Label 1

1.1.1. Conventional water heaters in water heating energy efficiency classes A to G



I, II

III

IV

VI, V

VII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in

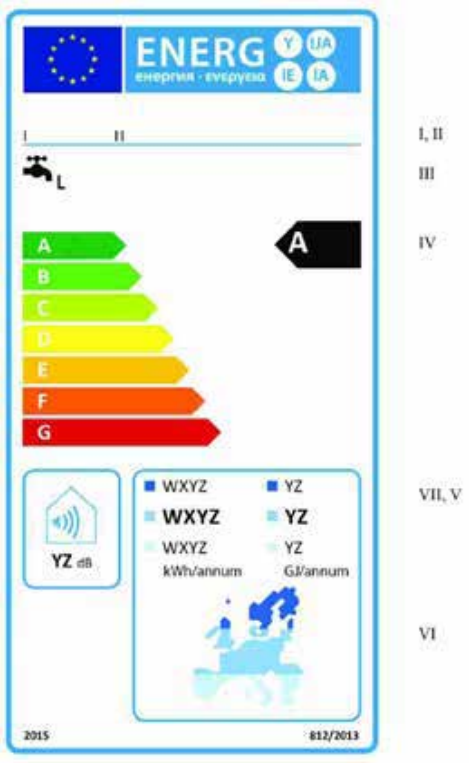
GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer;

VII. for conventional water heaters able to work only during off-peak hours, the pictogram referred to in point 4(d)(10) of this Annex may be added.

(b) The design aspects of the label for conventional water heaters shall be in accordance with point 4 of this Annex.

1.1.2. Solar water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

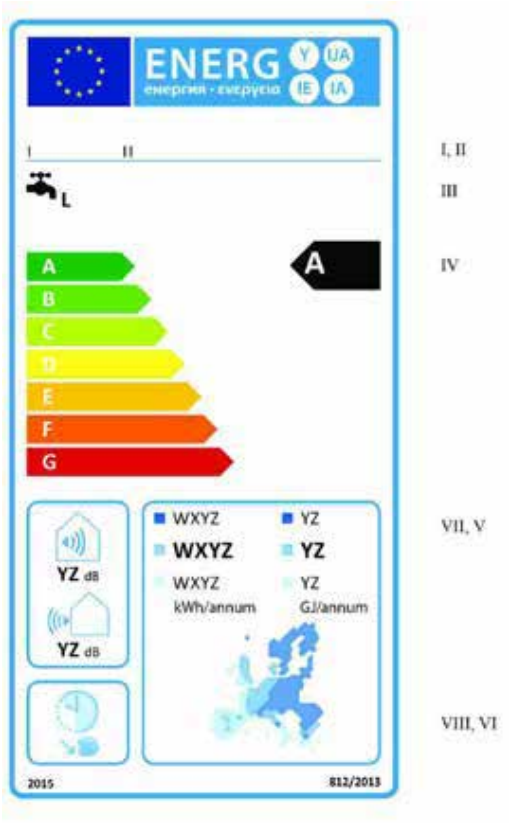
V. the annual electricity consumption in kWh in terms of final energy or the annual fuel consumption in GJ in terms of *GCV,* under average, colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. European solar map displaying three indicative global solar irradiance zones;

VII. the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for solar water heaters shall be in accordance with point 5 of this Annex.

1.1.3. Heat pump water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of

the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV,* under average, colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. European temperature map displaying three indicative temperature zones;

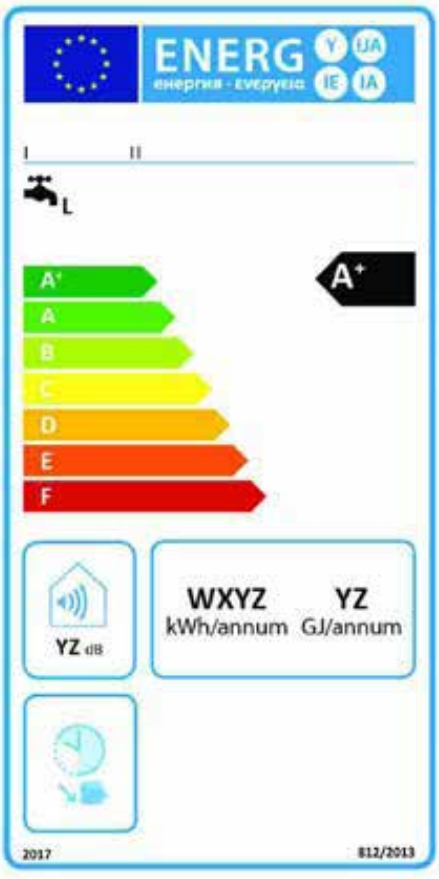
VII. the sound power level L_{WA}, indoors (if applicable) and outdoors, in dB, rounded to the nearest integer;

VIII. for heat pump water heaters able to work only during off-peak hours, the pictogram referred to in point 6(d)(11) of this Annex may be added.

(b) The design aspects of the label for heat pump water heaters shall be in accordance with point 6 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

1.2. Label 2

1.2.1. Conventional water heaters in water heating energy efficiency classes A⁺ to F



I, II

III

IV

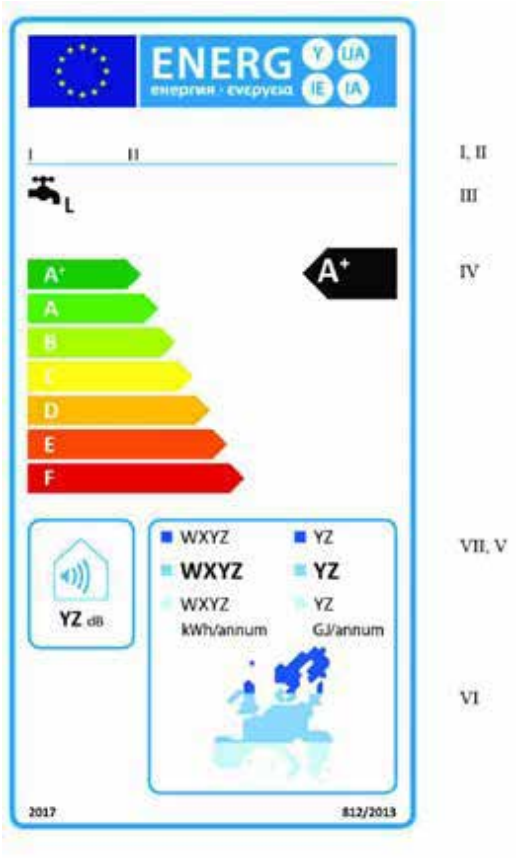
VI, V

VII

(a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for conventional water heaters shall be in accordance with point 4 of this Annex.

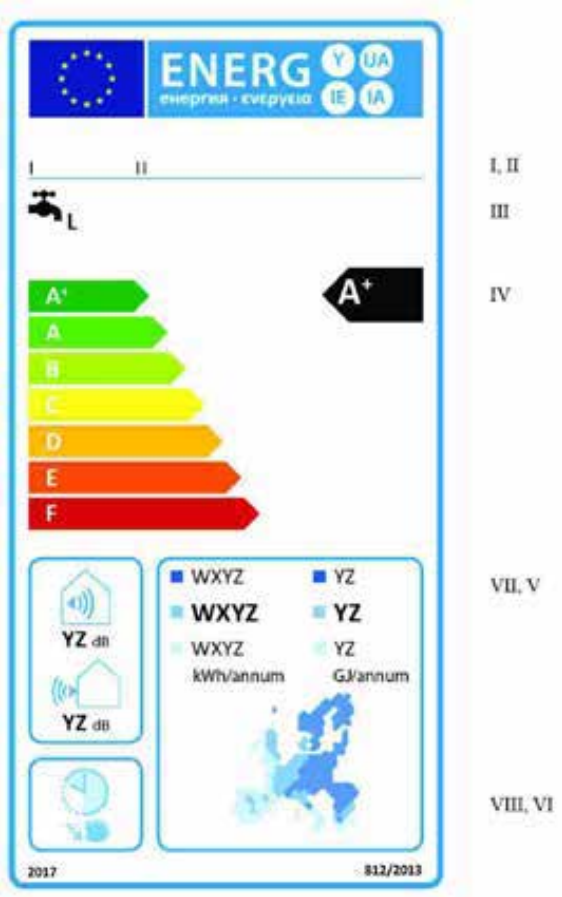
1.2.2. Solar water heaters in water heating energy efficiency classes A⁺ to F



(a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for solar water heaters shall be in accordance with point 5 of this Annex.

1.2.3. Heat pump water heaters in water heating energy efficiency classes A⁺ to F

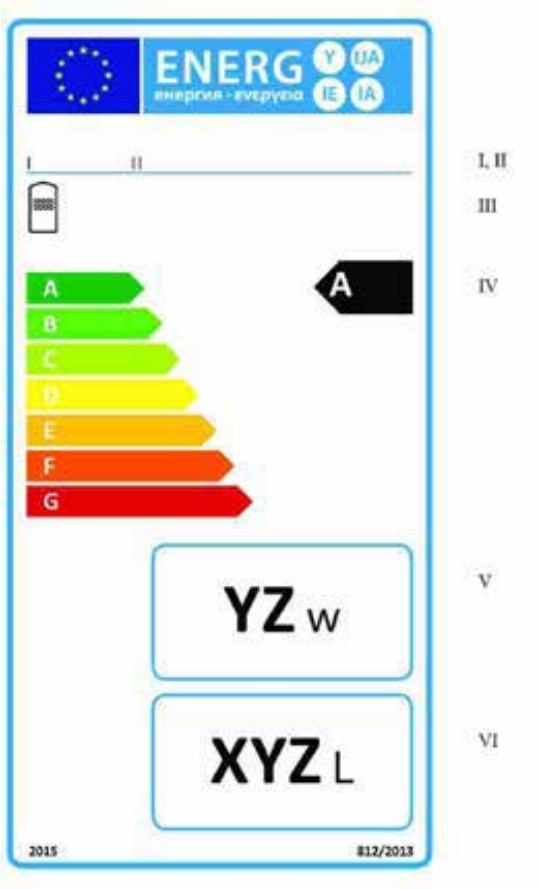


(a) The information listed in point 1.1.3(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump water heaters shall be in accordance with point 6 of this Annex.

2. HOT WATER STORAGE TANKS

2.1. Label 1 for hot water storage tanks in energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water storage function;

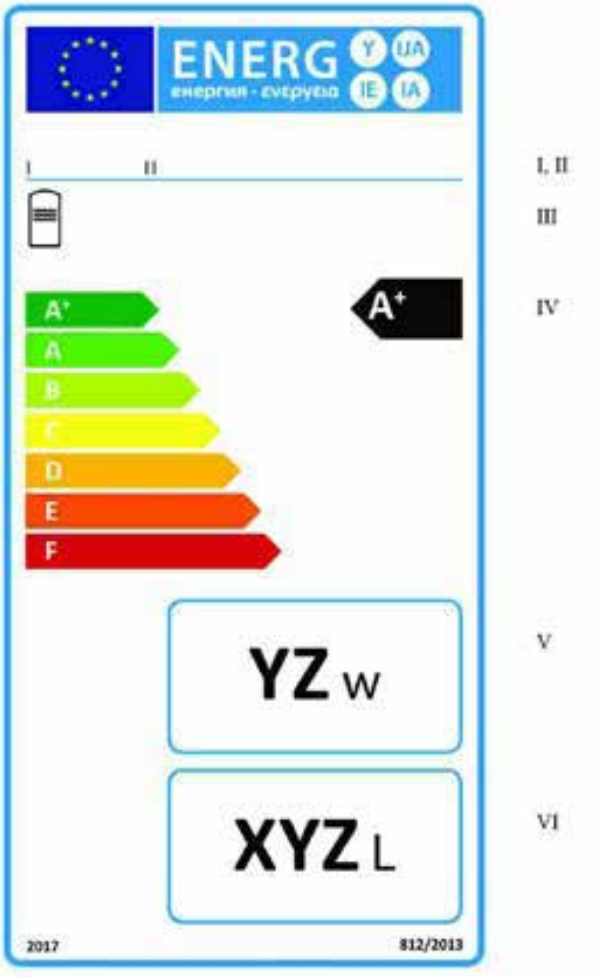
IV. the energy efficiency class, determined in accordance with point 2 of Annex II; the head of the arrow containing the energy efficiency class of the hot water storage tank shall be placed at the same height as the head of the relevant energy efficiency class;

V. the standing loss in W, rounded to the nearest integer;

VI. the hot water storage tank volume in litres, rounded to the nearest integer.

(b) The design aspects of the label for hot water storage tanks shall be in accordance with point 7 of this Annex.

2.2. Label 2 for hot water storage tanks in energy efficiency classes A⁺ to F

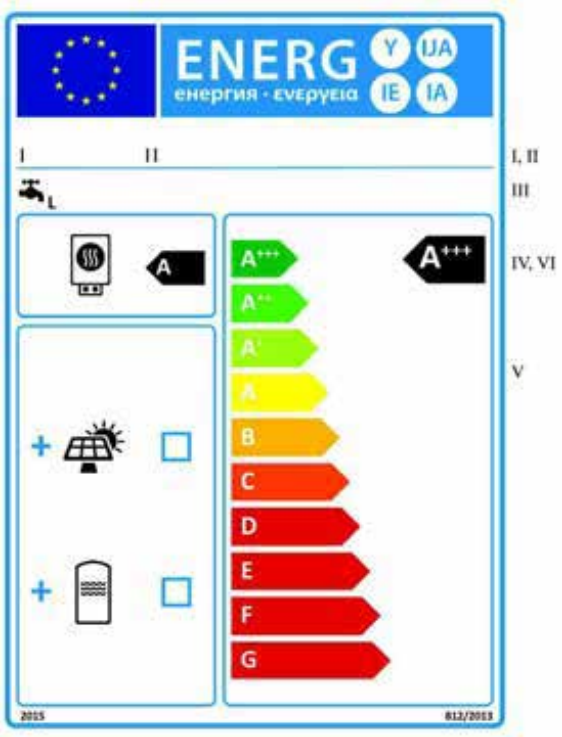


(a) The information listed in point 2.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for hot water storage tanks shall be in accordance with point 7 of this Annex.

3. PACKAGES OF WATER HEATER AND SOLAR DEVICE

Label for packages of water heater and solar device in water heating energy efficiency classes A+++ to G



(a) The following information shall be included in the label:

I. dealer's and/or supplier's name or trade mark;

II. dealer's and/or supplier's model(s) identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

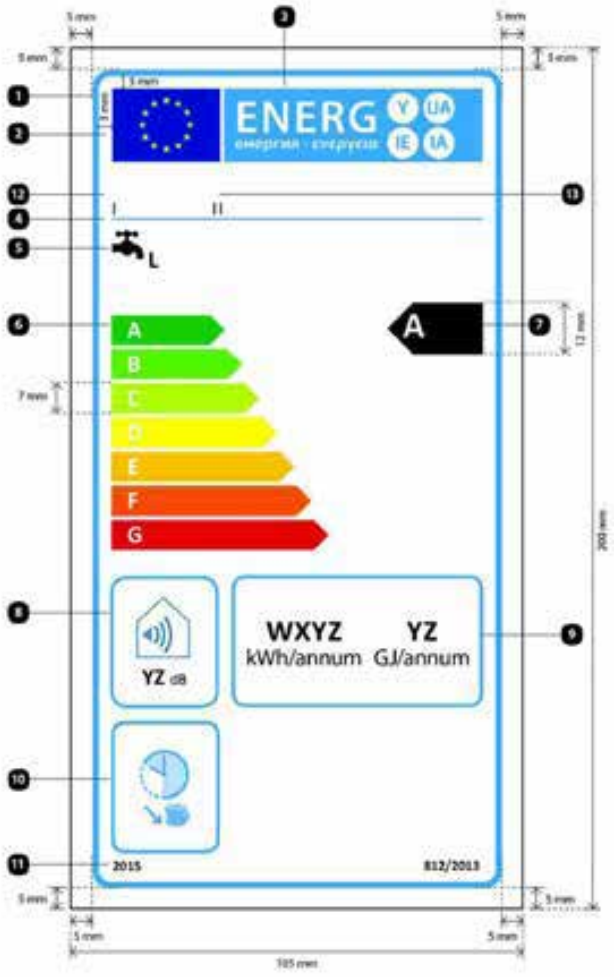
IV. the water heating energy efficiency class of the water heater, determined in accordance with point 1 of Annex II;

V. indication of whether a solar collector and hot water storage tank may be included in the package of water heater and solar device;

VI. the water heating energy efficiency class of the package of water heater and solar device, determined in accordance with point 4 of Annex IV; the head of the arrow containing the water heating energy efficiency class of the package of water heater and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of water heater and solar device shall be in accordance with point 8 of this Annex. For packages of water heater and solar device in water heating energy efficiency classes A+++ to D, the last classes E to G in the A+++ to G scale may be omitted.

4. The design of the label for conventional water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm,

height: 17 mm.

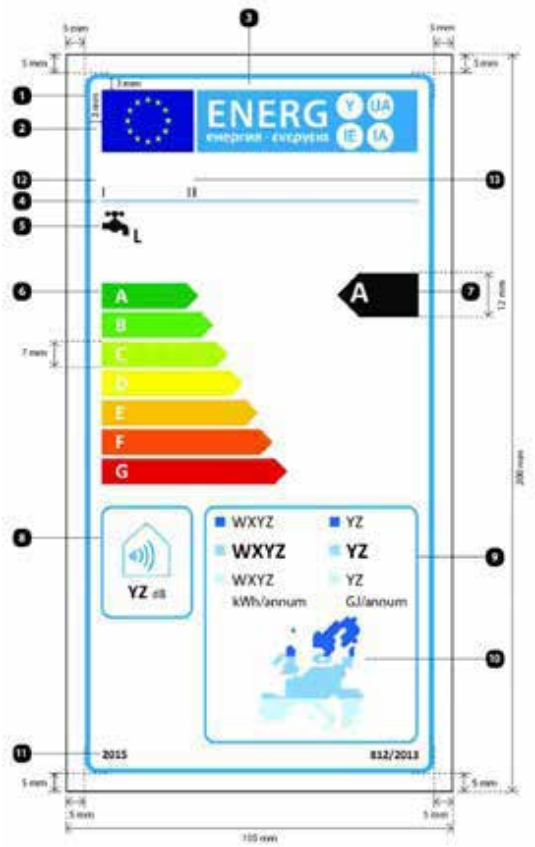
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Water heating function:**

   – **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.

6. **A-G or A^{+}-F scale:**
   - **Arrow:** height: 7 mm, gap: 1 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class: 00-X-X-00,
   - **Text**: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
7. **Water heating energy efficiency class:**
   - **Arrow**: width: 22 mm, height: 12 mm, 100 % black,
   - **Text**: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
8. **Sound power level, indoors:**
   - **Pictogram** as depicted,
   - **Border**: 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
   - **Value 'YZ'**: Calibri bold 15 pt, 100 % black,
   - **Text 'dB'**: Calibri regular 10 pt, 100 % black.
9. **Annual energy consumption in kWh/annum or GJ/annum:**
   - **Border**: 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
   - **Value 'WXYZ' or 'YZ'**: Calibri bold at least 20 pt, 100 % black,
   - **Text 'kWh/annum' or 'GJ/annum'**: Calibri regular at least 15 pt, 100 % black.
10. **If applicable, off-peak fitness:**
    - **Pictogram** as depicted,
    - **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
11. **Year of label introduction and number of Regulation:**
    - **Text**: Calibri bold 10 pt.
12. **Supplier's name or trademark.**
13. **Supplier's model identifier:**

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

5. The design of the label for solar water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

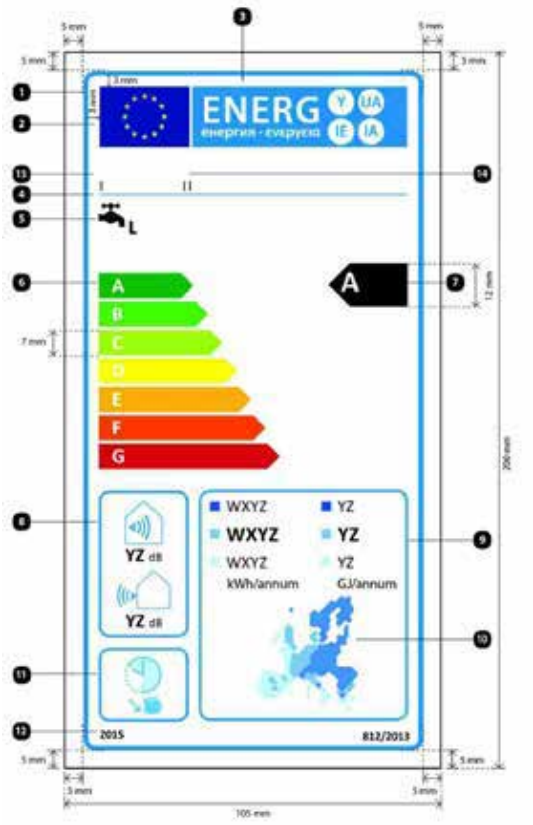
1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Water heating function:**

– **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.

6. **A-G or A^{+}-F scale:**
   – **Arrow**: height: 7 mm, gap: 1 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
7. **Water heating energy efficiency class:**
   – **Arrow**: width: 22 mm, height: 12 mm, 100 % black,
   – **Text**: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
8. **Sound power level, indoors:**
   – **Pictogram** as depicted,
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Value 'YZ'**: Calibri bold 15 pt, 100 % black,
   – **Text 'dB'**: Calibri regular 10 pt, 100 % black.
9. **Annual energy consumption in kWh/annum or GJ/annum:**
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Values 'WXYZ' or 'YZ'**: Calibri at least 13 pt, 100 % black,
   – **Text 'kWh/annum' or 'GJ/annum'**: Calibri regular at least 11 pt, 100 % black.
10. **European solar map and colour squares:**
   – **Pictogram** as depicted,
   – **Colours**: Dark blue: 86-51-00-00,
      Middle blue: 53-08-00-00,
      Light blue: 25-00-02-00.
11. **Year of label introduction and number of Regulation:**
   – **Text**: Calibri bold 10 pt.
12. **Supplier's name or trademark.**
13. **Supplier's model identifier:**

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

6. The design of the label for heat pump water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

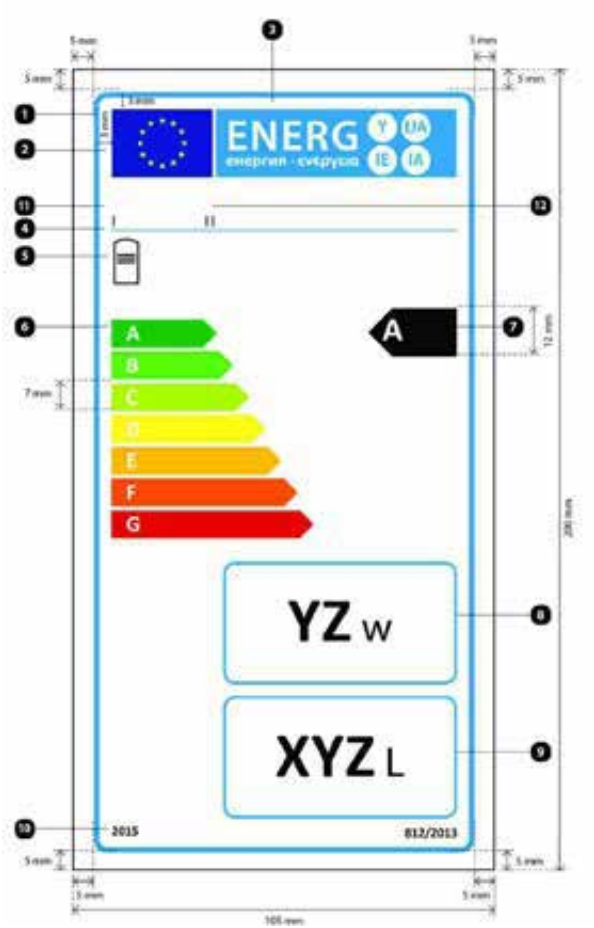
1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Water heating function:**
   – **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in

accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.

6. **A-G or A+-F scale:**
   - **Arrow**: height: 7 mm, gap: 1 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class: 00-X-X-00,
   - **Text**: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
7. **Water heating energy efficiency class:**
   - **Arrow**: width: 22 mm, height: 12 mm, 100 % black,
   - **Text**: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
8. **Sound power level, indoors (if applicable) and outdoors:**
   - **Pictogram** as depicted,
   - **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   - **Value 'YZ'**: Calibri bold 15 pt, 100 % black,
   - **Text 'dB'**: Calibri regular 10 pt, 100 % black.
9. **Annual energy consumption in kWh/annum or GJ/annum:**
   - **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   - **Values 'WXYZ' or 'YZ'**: Calibri at least 13 pt, 100 % black,
   - **Text 'kWh/annum' or 'GJ/annum'**: Calibri regular at least 11 pt, 100 % black.
10. **European temperature map and colour squares:**
    - **Pictogra**m as depicted,
    - **Colours:** Dark blue: 86-51-00-00,
      Middle blue: 53-08-00-00,
      Light blue: 25-00-02-00.
11. **If applicable, off-peak fitness:**
    - **Pictogram** as depicted,
    - **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
12. **Year of label introduction and number of Regulation:**
    - **Text**: Calibri bold 10 pt.
13. **Supplier's name or trademark.**
14. **Supplier's model identifier:**

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

7. The design of the label for hot water storage tanks shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

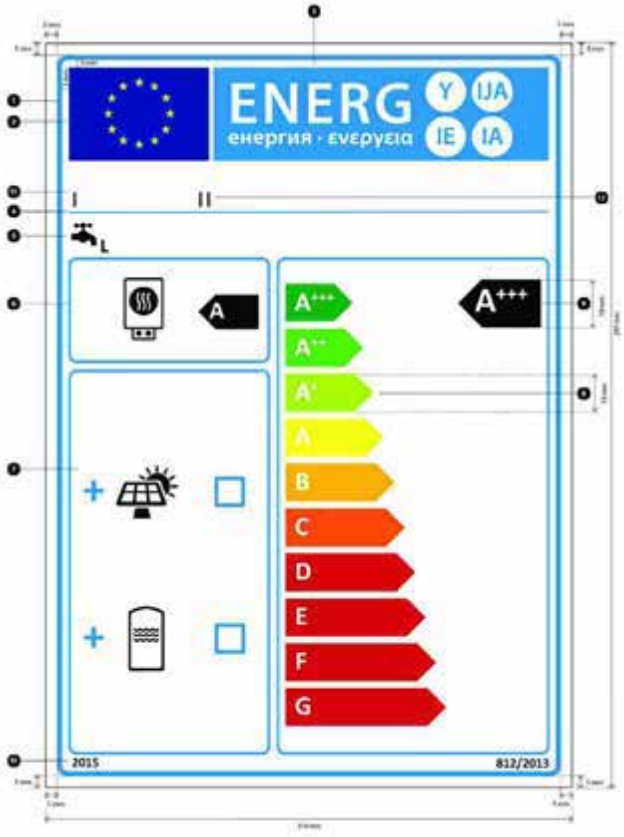
(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label: Colour:** X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Storage function**:
   – **Pictogram** as depicted.
6. **A-G or A^{+}-F scale:**
   – **Arrow**: height: 7 mm, gap: 1 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
7. **Energy efficiency class:**
   – **Arrow**: width: 22 mm, height: 12 mm, 100 % black,
   – **Text**: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
8. **Standing loss:**
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Value 'YZ'**: Calibri bold 45 pt, 100 % black,
   – **Text 'W'**: Calibri regular 30 pt, 100 % black.
9. **Storage volume:**
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Value 'XYZ'**: Calibri bold 45 pt, 100 % black,
   – **Text 'L'**: Calibri regular 30 pt, 100 % black.
10. **Year of label introduction and number of Regulation:**
   – **Text**: Calibri bold 10 pt.
11. **Supplier's name or trademark.**
12. **Supplier's model identifier**:

   The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

8. The design of the label for packages of water heater and solar device shall be the following:



Whereby:

(a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
4. **Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
5. **Water heating function:**

– **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 22 pt, 100 % black.

6. **Water Heater:**

– **Pictogram** as depicted.

– **Water heating energy efficiency class of water heater**:

– **Arrow**: width: 24 mm, height: 14 mm, 100 % black,

– **Text**: Calibri bold 28 pt, capitals, white,

– **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.

7. **Package with solar collector and/or hot water storage tank:**

– **Pictograms** as depicted,

– **'+' symbol**: Calibri bold 50 pt, cyan 100 %,

– **Boxes: width**: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,

– **Border**: 3 pt – colour: cyan 100 % – round corners: 3,5 mm.

8. **A^{+++}-G scale with border:**

– **Arrow**: height: 15 mm, gap: 3 mm, colours:

  – Highest class: X-00-X-00,

  – Second class: 70-00-X-00,

  – Third class: 30-00-X-00,

  – Fourth class: 00-00-X-00,

  – Fifth class: 00-30-X-00,

  – Sixth class: 00-70-X-00,

  – Seventh class: 00-X-X-00,

  – If applicable, last classes: 00-X-X-00,

– **Text**: Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,

– **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.

9. **Water heating energy efficiency class for package of water heater and solar device:**

– **Arrow**: width: 33 mm, height: 19 mm, 100 % black,

– **Text**: Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

10. **Year of label introduction and number of Regulation:**

– **Text**: Calibri bold 12 pt.

11. **Dealer's and/or supplier's name or trademark.**

12. **Dealer's and/or supplier's model identifier:**

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 91 × 19 mm.

ANNEX IV
Product Fiche

1. WATER HEATERS

1.1. The information in the product fiche of the water heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) the declared load profile, expressed by the appropriate letter and typical usage in accordance with Table 3 of Annex VII;

(d) the water heating energy efficiency class of the model, determined in accordance with point 1 of Annex II, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;

(e) the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;

(f) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;

(g) if applicable, other load profiles for which the water heater is suitable to use and the corresponding water heating energy efficiency and annual electricity consumption as set out in points (e) and (f);

(h) the thermostat temperature settings of the water heater, as placed on the market by the supplier;

(i) the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer (for heat pump water heaters if applicable);

(j) if applicable, an indication that the water heater is able to work only during off-peak hours;

(k) any specific precautions that shall be taken when the water heater is assembled, installed or maintained;

(l) where the value of *smart* is declared as being '1', an indication that the information on water heating energy efficiency, annual electricity and fuel consumption, as applicable, relate to enabled smart control settings only;

in addition, for solar water heaters and heat pump water heaters:

(m) the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;

(n) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII; in addition, for solar water heaters:

(o) the collector aperture area in m^2, to two decimal places;

(p) the zero-loss efficiency, to three decimal places;

(q) the first-order coefficient in W/(m^2 K), to two decimal places;

(r) the second-order coefficient in W/(m^2 K2), to three decimal places;

(s) the incidence angle modifier, to two decimal places;

(t) the storage volume in litres, rounded to the nearest integer;

(u) the pump power consumption in W, rounded to the nearest integer;

(v) the standby power consumption in W, to two decimal places; in addition, for heat pump water heaters:

(w) the sound power level L_{WA}, outdoors, in dB, rounded to the nearest integer.

1.2. One fiche may cover a number of water heater models supplied by the same supplier.

1.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. HOT WATER STORAGE TANKS

2.1. The information in the product fiche of the hot water storage tank shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) the energy efficiency class of the model, determined in accordance with point 2 of Annex II;

(d) the standing loss in W, rounded to the nearest integer;

(e) the storage volume in litres, rounded to the nearest integer.

2.2. One fiche may cover a number of hot water storage tank models supplied by the same supplier.

2.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 2.1 not already displayed on the label shall also be provided.

3. SOLAR DEVICES

3.1. The information in the product fiche of the solar device shall be provided in the following order and shall be included in the product brochure or other literature provided with the product (for pumps in the collector loop if applicable):

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) the collector aperture area in m^2, to two decimal places;

(d) the zero-loss efficiency, to three decimal places;

(e) the first-order coefficient in W/(m^2 K), to two decimal places;

(f) the second-order coefficient in W/(m^2 K2), to three decimal places;

(g) the incidence angle modifier, to two decimal places;

(h) the storage volume in litres, rounded to the nearest integer;

(i) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of *GCV* for fuels, for the load profiles M, L, XL and XXL under average climate conditions,

rounded to the nearest integer;

(j) the pump power consumption in W, rounded to the nearest integer;

(k) the standby power consumption in W, to two decimal places;

(l) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer.

3.2. One fiche may cover a number of solar device models supplied by the same supplier.

4. PACKAGES OF WATER HEATER AND SOLAR DEVICE

The fiche for packages of water heater and solar device shall contain the elements set out in Figure 1 for evaluating the water heating energy efficiency of a package of water heater and solar device, where the following information shall be included:

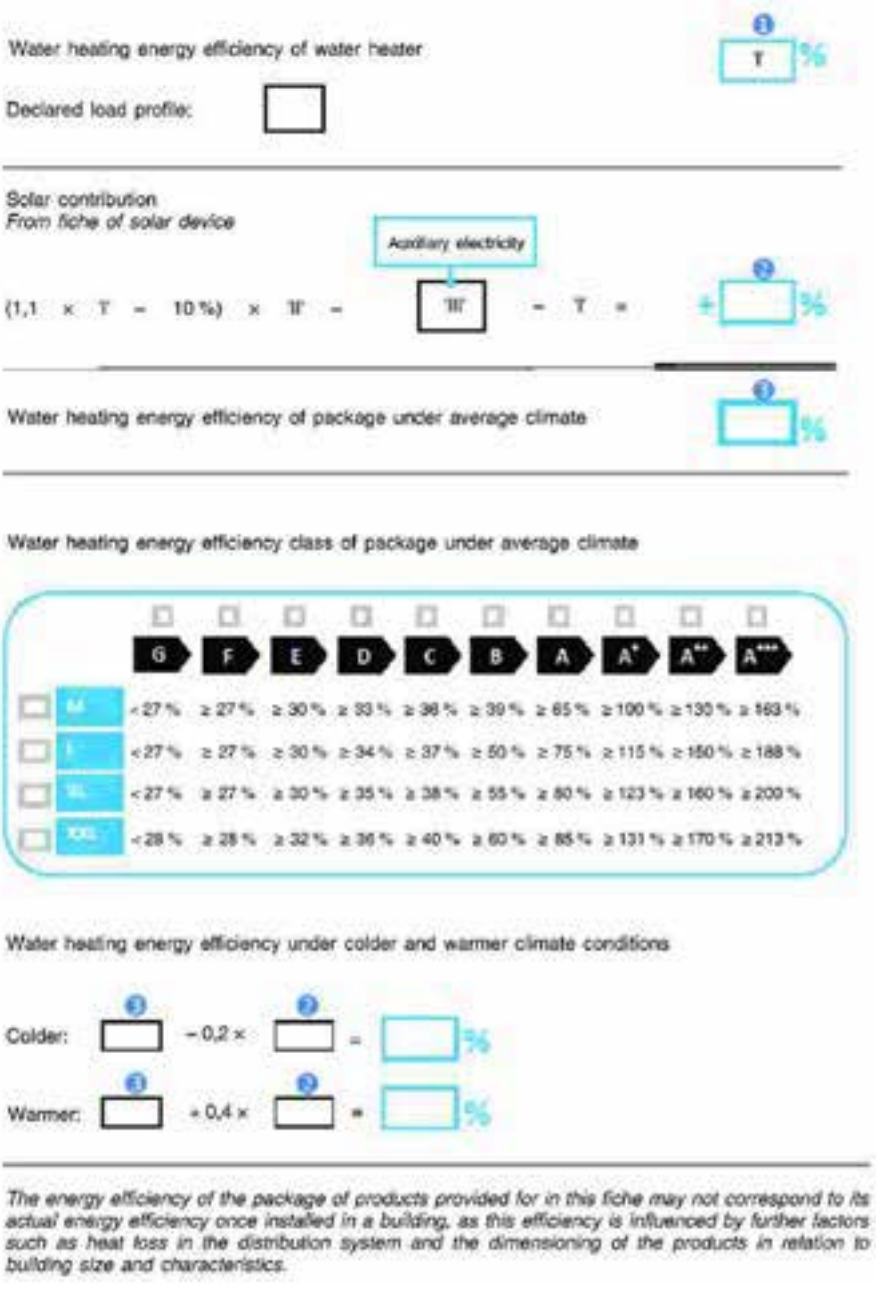
– I: the value of the water heating energy efficiency of the water heater, expressed in %,

– II: the value of the mathematical expression , where Q_{ref} is taken from Table 3 in Annex VII and Q_{nonsol} from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the water heater,

– III: the value of the mathematical expression , expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 3 in Annex VII for the declared load profile M, L, XL or XXL.

Figure 1

Fiche for a package of water heater and solar device indicating the water heating energy efficiency of the package offered



ANNEX V
Technical documentation

1. WATER HEATERS

For water heaters, the technical documentation referred to in Article 3(1)(c) shall include:

(a) the name and address of the supplier;

(b) a description of the water heater model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) the results of the measurements for the technical parameters specified in point 7 of Annex VII;

(g) the results of the calculations for the technical parameters specified in point 2 of Annex VIII;

(h) any specific precautions that shall be taken when the water heater is assembled, installed or maintained.

2. HOT WATER STORAGE TANKS

For hot water storage tanks, the technical documentation referred to in Article 3(2)(c) shall include:

(a) the name and address of the supplier;

(b) a description of the hot water storage tank model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) the results of the measurements for the technical parameters specified in point 8 of Annex VII;

(g) any specific precautions that shall be taken when the hot water storage tank is assembled, installed or maintained.

3. SOLAR DEVICES

The technical documentation of solar devices referred to in Article 3(3)(b) shall include:

(a) the name and address of the supplier;

(b) a description of the solar device model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) the results of the measurements for the technical parameters as specified in point 9 of Annex VII;

(g) any specific precautions that shall be taken when the solar device is assembled, installed or maintained.

4. PACKAGES OF WATER HEATER AND SOLAR DEVICE

For packages of water heater and solar device, the technical documentation referred to in Article 3(4)

(c) shall include:

(a) the name and address of the supplier;

(b) a description of the package of water heater and solar device model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

– the water heating energy efficiency in %, rounded to the nearest integer,

– the technical parameters set out in points 1, 2 and 3 of this Annex;

(g) any specific precautions that shall be taken when the package of water heater and solar device is assembled, installed or maintained.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet

1. WATER HEATERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

(a) the declared load profile, expressed by the appropriate letter and typical usage in accordance with Table 3 of Annex VII;

(b) the water heating energy efficiency class of the model, under average climate conditions, in accordance with point 1 of Annex II;

(c) the water heating energy efficiency in %, under average climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;

(d) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV,* under average climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

(e) the sound power level, indoors, in dB, rounded to the nearest integer (for heat pump water heaters, if applicable); in addition, for solar water heaters and heat pump water heaters:

(f) the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;

(g) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII; in addition, for solar water heaters:

(h) the collector aperture area in m^2, to two decimal places;

(i) the storage volume in litres, rounded to the nearest integer; in addition, for heat pump water heaters:

(j) the sound power level, outdoors, in dB, rounded to the nearest integer.

1.2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in point 1 of Annex IV.

1.3. The size and font in which the information referred in points 1.1 and 1.2 is printed or shown shall be legible.

2. HOT WATER STORAGE TANKS

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

(a) the energy efficiency class of the model, determined in accordance with point 2 of Annex II;

(b) the standing loss in W, rounded to the nearest integer;

(c) the storage volume in litres, rounded to the nearest integer.

2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

3. PACKAGES OF WATER HEATER AND SOLAR DEVICE

3.1. The information referred to in Article 4(3)(b) shall be provided in the following order:

(a) the water heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the water heating energy efficiency in %, rounded to the nearest integer;

(c) the elements set out in Figure 1 of Annex IV.

3.2. The size and font in which the information referred in point 3.1 is printed or shown shall be legible.

ANNEX VII
Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible measurement methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 9.

2. General conditions for testing water heaters:

(a) measurements shall be carried out using the load profiles set out in Table 3;

(b) measurements shall be carried out using a 24-hour measurement cycle as follows:

– 00:00 to 06:59: no water draw-off,

– from 07:00: water draw-offs according to the declared load profile,

– from end of last water draw-off until 24:00: no water draw-off;

(c) the declared load profile shall be the maximum load profile or the load profile one below the maximum load profile.

Table 3

Load profiles of water heaters

h	**3XS**			**XXS**			**XS**			**S**			
	Q_{tap}	f	T_m	Q_{tap}	f	T_m	Q_{tap}	f	T_m	Q_{tap}	f	T_m	T_p
	kWh	**l/min**	**°C**	**kWh**	**l/min**	**°C**	**kWh**	**l/min**	**°C**	**kWh**	**l/min**	**°C**	**°C**
7:00	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
7:05	**0,015**	2	25										
7:15	**0,015**	2	25										
7:26	**0,015**	2	25										
7:30	**0,015**	2	25	**0,105**	2	25	**0,525**	3	35	**0,105**	3	25	
7:45													
8:01													
8:05													
8:15													
8:25													
8:30				**0,105**	2	25				**0,105**	3	25	
8:45													
9:00	**0,015**	2	25										
9:30	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
10:00													
10:30													
11:00													
11:30	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	

11:45	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
12:00	**0,015**	2	25	**0,105**	2	25							
12:30	**0,015**	2	25	**0,105**	2	25							
12:45	**0,015**	2	25	**0,105**	2	25	**0,525**	3	35	**0,315**	4	10	55
14:30	**0,015**	2	25										
15:00	**0,015**	2	25										
15:30	**0,015**	2	25										
16:00	**0,015**	2	25										
16:30													
17:00													
18:00				**0,105**	2	25				**0,105**	3	25	
18:15				**0,105**	2	25				**0,105**	3	40	
18:30	**0,015**	2	25	**0,105**	2	25							
19:00	**0,015**	2	25	**0,105**	2	25							
19:30	**0,015**	2	25	**0,105**	2	25							
20:00				**0,105**	2	25							
20:30							**0,105**	3	35	**0,42**	4	10	55
20:45				**0,105**	2	25							
20:46													
21:00				**0,105**	2	25							
21:15	**0,015**	2	25	**0,105**	2	25							
21:30	**0,015**	2	25							**0,525**	5	45	
21:35	**0,015**	2	25	**0,105**	2	25							
21:45	**0,015**	2	25	**0,105**	2	25							
Q_{ref}	**0,345**			**2,100**			**2,100**			**2,100**			

Continued Table 3

Load profiles of water heaters

h	M				L				XL			
	Q_{tap}	f	T_m	T_p	Q_{tap}	f	T_m	T_p	Q_{tap}	f	T_m	T_p
	kWh	**l/min**	**°C**	**°C**	**kWh**	**l/min**	**°C**	**°C**	**kWh**	**l/min**	**°C**	**°C**
7:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
7:05	**1,4**	6	40		**1,4**	6	40					
7:15									**1,82**	6	40	
7:26									**0,105**	3	25	
7:30	**0,105**	3	25		**0,105**	3	25					
7:45					**0,105**	3	25		**4,42**	10	10	40
8:01	**0,105**	3	25						**0,105**	3	25	
8:05					**3,605**	10	10	40				
8:15	**0,105**	3	25						**0,105**	3	25	
8:25					**0,105**	3	25					
8:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	

8:45	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
9:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
9:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
10:00									**0,105**	3	25	
10:30	**0,105**	3	10	40	**0,105**	3	10	40	**0,105**	3	10	40
11:00									**0,105**	3	25	
11:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
11:45	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
12:00												
12:30												
12:45	**0,315**	4	10	55	**0,315**	4	10	55	**0,735**	4	10	55
14:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
15:00									**0,105**	3	25	
15:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
16:00									**0,105**	3	25	
16:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
17:00									**0,105**	3	25	
18:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
18:15	**0,105**	3	40		**0,105**	3	40		**0,105**	3	40	
18:30	**0,105**	3	40		**0,105**	3	40		**0,105**	3	40	
19:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
19:30												
20:00												
20:30	**0,735**	4	10	55	**0,735**	4	10	55	**0,735**	4	10	55
20:45												
20:46									**4,42**	10	10	40
21:00					**3,605**	10	10	40				
21:15	**0,105**	3	25						**0,105**	3	25	
21:30	**1,4**	6	40		**0,105**	3	25		**4,42**	10	10	40
21:35												
21:45												
Q_{ref}	**5,845**				**11,655**				**19,07**			

Continued Table 3

Load profiles of water heaters

h	**XXL**			
	Q_{tap}	f	T_m	T_p
	kWh	**l/min**	**°C**	**°C**
7:00	**0,105**	3	25	
7:05				
7:15	**1,82**	6	40	
7:26	**0,105**	3	25	

7:30				
7:45	**6,24**	16	10	40
8:01	**0,105**	3	25	
8:05				
8:15	**0,105**	3	25	
8:25				
8:30	**0,105**	3	25	
8:45	**0,105**	3	25	
9:00	**0,105**	3	25	
9:30	**0,105**	3	25	
10:00	**0,105**	3	25	
10:30	**0,105**	3	10	40
11:00	**0,105**	3	25	
11:30	**0,105**	3	25	
11:45	**0,105**	3	25	
12:00				
12:30				
12:45	**0,735**	4	10	55
14:30	**0,105**	3	25	
15:00	**0,105**	3	25	
15:30	**0,105**	3	25	
16:00	**0,105**	3	25	
16:30	**0,105**	3	25	
17:00	**0,105**	3	25	
18:00	**0,105**	3	25	
18:15	**0,105**	3	40	
18:30	**0,105**	3	40	
19:00	**0,105**	3	25	
19:30				
20:00				
20:30	**0,735**	4	10	55
20:45				
20:46	**6,24**	16	10	40
21:00				
21:15	**0,105**	3	25	
21:30	**6,24**	16	10	40
21:35				
21:45				
Q_{ref}	**24,53**			

3. Conditions for testing the smart control compliance *(smart)* of water heaters

Where the supplier deems it appropriate to declare the value of *smart* as being '1', measurements of the weekly electricity and/or fuel consumption with smart controls and the weekly electricity and/or fuel consumption without smart controls shall be carried out using a two-week measurement cycle as follows:

– days 1 to 5: random sequence of load profiles chosen from the declared load profile and the load profile one below the declared load profile, and smart control disabled,

– days 6 and 7: no water draw-offs, and smart control disabled,

– days 8 to 12: repetition of the same sequence applied for days 1 to 5, and smart control enabled,

– days 13 and 14: no water draw-offs, and smart control enabled,

– the difference between the useful energy content measured during days 1 to 7 and the useful energy content measured during days 8 to 14 shall not exceed 2 % of Q_{ref} of the declared load profile.

4. Conditions for testing solar water heaters

The solar collector, solar hot water storage tank, pump in the collector loop (if applicable) and heat generator shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination. The heat generator shall be tested under the conditions set out in point 2 of this Annex.

The results shall be used for the calculations set out in point 3(b) of Annex VIII under the conditions set out in Tables 4 and 5. For the purpose of establishing Q_{tota} the efficiency of the heat generator using the Joule effect in electric resistance heating elements is assumed to be 100/*CC*, expressed in %.

5. Conditions for testing heat pump water heaters

– Heat pump water heaters shall be tested under the conditions set out in Table 6,

– Heat pump water heaters which use ventilation exhaust air as the heat source shall be tested under the conditions set out in Table 7.

6. Conditions for testing solar devices

The solar collector, solar hot water storage tank and pump in the collector loop (if applicable) shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination.

The results shall be used for the calculations of Q_{nonsol} for the load profiles M, L, XL and XXL under the average climate conditions set out in Tables 4 and 5 and $Q_{aux.}$

Table 4

Average daytime temperature [°C]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	+2,8	+2,6	+7,4	+12,2	+16,3	+19,8	+21,0	+22,0	+17,0	+11,9	+5,6	+3,2
Colder climate conditions	−3,8	−4,1	−0,6	+5,2	+11,0	+16,5	+19,3	+18,4	+12,8	+6,7	+1,2	−3,5
Warmer climate conditions	+9,5	+10,1	+11,6	+15,3	+21,4	+26,5	+28,8	+27,9	+23,6	+19,0	+14,5	+10,4

Table 5

Average global solar irradiance [W/m²]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	70	104	149	192	221	222	232	217	176	129	80	56
Colder climate conditions	22	75	124	192	234	237	238	181	120	64	23	13
Warmer climate conditions	128	137	182	227	248	268	268	263	243	175	126	109

Table 6

Standard rating conditions for heat pump water heaters, temperatures in dry bulb air temperature (wet bulb air temperature in brackets)

Heat source	Outdoor air			Indoor air	Exhaust air	Brine	Water
Climate conditions	Average climate conditions	Colder climate conditions	Warmer climate conditions	Not applicable	All climate conditions		
Temperature	+ 7 °C (+ 6 °C)	+ 2 °C (+ 1 °C)	+ 14 °C (+ 13 °C)	+ 20 °C (maximum + 15 °C)	+ 20 °C (+ 12 °C)	0 °C (inlet)/ − 3 °C (outlet)	+ 10 °C (inlet)/ + 7 °C (outlet)

Table 7

Maximum ventilation exhaust air available [m³/h], at a temperature of 20 °C and with humidity of 5,5 g/m³

Declared load profile	XXS	XS	S	M	L	XL	XXL
Maximum ventilation exhaust air available	109	128	128	159	190	870	1 021

7. Technical parameters of water heaters

The following parameters shall be established for water heaters:

(a) the daily electricity consumption Q_{elec} in kWh, rounded to three decimal places;

(b) the declared load profile, expressed by the appropriate letter in accordance with Table 3 of this Annex;

(c) the sound power level in dB, indoors, rounded to the nearest integer (for heat pump water heaters, if applicable); in addition, for water heaters using fossil and/or biomass fuels:

(d) the daily fuel consumption Q_{fuel} in kWh in terms of *GCV*, rounded to three decimal places; in addition, for water heaters for which the value of smart is declared as being '1':

(e) the weekly fuel consumption with smart controls Q_{fuel} ,week,smart in kWh in terms of *GCV*, rounded to three decimal places;

(f) the weekly electricity consumption with smart controls $Q_{fuel,week,\ smart}$ in kWh, rounded to three decimal places;

(g) the weekly fuel consumption without smart controls $Q_{fuel,week,\ smart}$ in terms of *GCV*, rounded to three decimal places;

(h) the weekly electricity consumption without smart controls $Q_{fuel,week}$ in kWh, rounded to three decimal places;

in addition, for solar water heaters:

(i) the collector aperture area A_{sol} in m², rounded to two decimal places;

(j) the zero-loss efficiency η_0, rounded to three decimal places;

(k) the first-order coefficient a_1 in W/(m² K), rounded to two decimal places;

(l) the second-order coefficient a_2 in W/(m² K2), rounded to three decimal places;

(m) the incidence angle modifier *IAM*, rounded to two decimal places;

(n) the pump power consumption *solpump* in W, rounded to two decimal places;

(o) the standby power consumption *solstandby* in W, rounded to two decimal places; in addition, for heat pump water heaters:

(p) the sound power level L_{WA} in dB, outdoors, rounded to the nearest integer.

8. Technical parameters of hot water storage tanks

The following parameters shall be established for hot water storage tanks:

(a) the storage volume *V* in litres, rounded to one decimal place;

(b) the standing loss *S* in W, rounded to one decimal place.

9. Technical parameters of solar devices

The following parameters shall be established for solar devices:

(a) the collector aperture area A_{sol} in m^2, rounded to two decimal places;

(b) the zero-loss efficiencyy η_0, rounded to three decimal places;

(c) the first-order coefficient a_1 in W/(m^2 K), rounded to two decimal places;

(d) the second-order coefficient a_2 in W/(m^2 K2), rounded to three decimal places;

(e) the incidence angle modifier *IAM*, rounded to two decimal place;

(f) the pump power consumption *solpump* in W, rounded to two decimal places;

(g) the standby power consumption, *solstandby* in W, rounded to two decimal places.

ANNEX VIII

Method for calculating the water heating energy efficiency of water heaters

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other appropriate calculation methods that take into account the generally recognised state-of-the-art methods. They shall meet the technical parameters and calculations set out in points 2 to 6.

Technical parameters used for the calculations shall be measured in accordance with Annex VII.

2. Technical parameters of water heaters

The following parameters shall be calculated for water heaters under average climate conditions:

(a) the water heating energy efficiency y η_{wh} in %, rounded to one decimal place;

(b) the annual electricity consumption *AEC* in kWh in terms of final energy, rounded to the nearest integer;

in addition, for water heaters using fuels under average climate conditions:

(c) the annual fuel consumption *AFC* in kWh in terms of *GCV*, rounded to the nearest integer; in addition, for solar water heaters under average climate conditions:

(d) the heat generator water heating energy efficiency $\eta_{wh,\ nonsol}$ in %, rounded to one decimal place;

(e) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to one decimal place;

in addition, for solar water heaters and heat pump water heaters under colder and warmer climate conditions:

(f) the parameters set out in points (a) to (c);

in addition for solar water heaters under average, colder and warmer climate conditions:

(g) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of *GCV* for fuels, rounded to one decimal place.

3. Calculation of the water heating energy efficiency η_{wh}

(a) Conventional water heaters and heat pump water heaters:

The water heating energy efficiency is calculated as follows:

$$\eta_{wh} = \frac{Q_{ref}}{(Q_{fuel} + CC \cdot Q_{elec})\,(1 - SCF \cdot smart) + Q_{cor}}$$

For water-/brine-to-water heat pump water heaters, the electricity consumption of one or more ground water pumps shall be taken into account.

(b) Solar water heaters:

The water heating energy efficiency is calculated as follows:

$$\eta_{wh} = \frac{0{,}6 \cdot 366 \cdot Q_{ref}}{Q_{tota}}$$

Where:

$$Q_{tota} = \frac{Q_{nonsol}}{1{,}1 \cdot \eta_{wh,nonsol} - 0{,}1} + Q_{aux} \cdot CC$$

4. Calculation of the annual electricity consumption AEC and the annual fuel consumption AFC

(a) Conventional water heaters and heat pump water heaters:

The annual electricity consumption *AEC* in kWh in terms of final energy is calculated as follows:

$$AEC = 0{,}6 \cdot 366 \cdot \left(Q_{elec} \cdot (1 - SCF \cdot smart) + \frac{Q_{cor}}{CC} \right)$$

The annual fuel consumption *AFC* in GJ in terms of *GCV* is calculated as follows:

$$AFC = 0{,}6 \cdot 366 \cdot (Q_{fuel} \cdot (1 - SCF \cdot smart) + Q_{cor})$$

(b) Solar water heaters:

The annual electricity consumption *AEC* in kWh in terms of final energy is calculated as follows:

$$AEC = \frac{CC \cdot Q_{elec}}{Q_{fuel} + CC \cdot Q_{elec}} \cdot \frac{Q_{tota}}{CC}$$

The annual fuel consumption *AFC* in GJ in terms of *GCV* is calculated as follows:

$$AFC = \frac{Q_{fuel}}{Q_{fuel} + CC \cdot Q_{elec}} \cdot Q_{tota}$$

5. Determination of the smart control factor *SCF* and of smart control compliance *smart*

(a) The smart control factor is calculated as follows:

$$SCF = 1 - \frac{Q_{fuel,week,smart} + CC \cdot Q_{elec,week,smart}}{Q_{fuel,week} + CC \cdot Q_{elec,week}}$$

(b) If $SCF \geq 0{,}07$, the value of smart shall be 1. In all other cases, the value of smart shall be 0.

6. Determination of the ambient correction term Q_{cor}

The ambient correction term is calculated as follows:

(a) for conventional water heaters using electricity:

$$Q_{cor} = -k \cdot (CC \cdot (Q_{elec} \cdot (1 - SCF \cdot smart) - Q_{ref}))$$

(b) for conventional water heaters using fuels:

$$Q_{cor} = -k \cdot (Q_{fuel} \cdot (1 - SCF \cdot smart) - Q_{ref})$$

(c) for heat pump water heaters:

$$Q_{cor} = -k \cdot 24h \cdot P_{stby}$$

Where:

the k-values are given in Table 8 for each load profile.

Table 8

k-values

	3SX	XXS	XS	S	M	L	XL	XXL
k	0,23	0,23	0,23	0,23	0,23	0,23	0,23	0,0

ANNEX IX[2]

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 9.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 9.

(6) If the result referred to in point 5 is not achieved, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII and Annex VIII.

2 Annex IX is replaced in accordance with Article 10 and Annex X of Delegated Regulation (EU) 2017/254, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 9 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 9: Verification tolerances

Parameters	Verification tolerances
Daily electricity consumption, Q_{elec}	The determined value shall not exceed the declared value by more than 5 %.
Sound power level, L_{WA}, indoors and/or outdoors	The determined value shall not exceed the declared value by more than 2 dB.
Daily fuel consumption, Q_{fuel}	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption with smart controls, $Q_{fuel,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption with smart controls, $Q_{elec,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption without smart controls, $Q_{fuel,week}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption without smart controls, $Q_{elec,week}$	The determined value shall not exceed the declared value by more than 5 %.
Storage volume, V	The determined value shall not be lower than the declared value by more than 2 %.
Collector aperture area, Asol	The determined value shall not be lower than the declared value by more than 2 %.
Pump power consumption, solpump	The determined value shall not exceed the declared value by more than 3 %.
Standby power consumption, solstandby	The determined value shall not exceed the declared value by more than 5 %.
Standing loss, S	The determined value shall not exceed the declared value by more than 5 %.

ANNEX X

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate “Product fiche”. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on, space heaters and combination heaters with a rated heat output ≤ 70 kW, packages of space heater ≤ 70 kW, temperature control and solar device and packages of combination heater ≤ 70 kW, temperature control and solar device.

2. This Regulation shall not apply to:

(a) heaters specifically designed for using gaseous or liquid fuels predominantly produced from biomass;

(b) heaters using solid fuels;

(c) heaters within the scope of Directive 2010/75/EU of the European Parliament and of the Council

(d) heaters generating heat only for the purpose of providing hot drinking or sanitary water;

(e) heaters for heating and distributing gaseous heat transfer media such as vapour or air;

(f) cogeneration space heaters with a maximum electrical capacity of 50 kW or above.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EC, the following definitions shall apply for the purposes of this Regulation:

(1) 'heater' means a space heater or combination heater;

(2) 'space heater' means a device that

(a) provides heat to a water-based central heating system in order to reach and maintain at a desired level the indoor temperature of an enclosed space such as a building, a dwelling or a room; and

(b) is equipped with one or more heat generators;

(3) 'combination heater' means a space heater that is designed to also provide heat to deliver hot drink-

ing or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;

(4) 'water-based central heating system' means a system using water as a heat transfer medium to distribute centrally generated heat to heat emitters for the space heating of buildings, or parts thereof;

(5) 'heat generator' means the part of a heater that generates the heat using one or more of the following processes:

(a) combustion of fossil fuels and/or biomass fuels;

(b) use of the Joule effect in electric resistance heating elements;

(c) capture of ambient heat from an air source, water source or ground source, and/or waste heat;

(6) 'rated heat output' (Prated) means the declared heat output of a heater when providing space heating and, if applicable, water heating at standard rating conditions, expressed in kW; for heat pump space heaters and heat pump combination heaters the standard rating conditions for establishing the rated heat output are the reference design conditions, as set out in Annex VII, Table 10;

(7) 'standard rating conditions' means the operating conditions of heaters under average climate conditions for establishing the rated heat output, seasonal space heating energy efficiency, water heating energy efficiency and sound power level;

(8) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(9) 'biomass fuel' means a gaseous or liquid fuel produced from biomass;

(10) 'fossil fuel' means a gaseous or liquid fuel of fossil origin;

(11) 'cogeneration space heater' means a space heater simultaneously generating heat and electricity in a single process;

(12) 'temperature control' means the equipment that interfaces with the end-user regarding the values and timing of the desired indoor temperature, and communicates relevant data to an interface of the heater such as a central processing unit, thus helping to regulate the indoor temperature(s);

(13) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;

(14) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(15) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it;

(16) 'hot water storage tank' means a vessel for storing hot water for water and/or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(17) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(18) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(19) 'package of space heater, temperature control and solar device' means a package offered to the end-user containing one or more space heaters combined with one or more temperature controls and/or one or more solar devices;

(20) 'package of combination heater, temperature control and solar device' means a package offered to the end-user containing one or more combination heaters combined with one or more temperature controls, and/or one or more solar devices;

(21) 'seasonal space heating energy efficiency' (η_s) means the ratio between the space heating demand for a designated heating season, supplied by a space heater, a combination heater, a package of space heater, temperature control and solar device or a package of combination heater, temperature control and solar device, and the annual energy consumption required to meet this demand, expressed in %;

(22) 'water heating energy efficiency' (η_{wh}) means the ratio between the useful energy in the drinking or sanitary water provided by a combination heater or a package of combination heater, temperature control and solar device, and the energy required for its generation, expressed in %;

(23) 'sound power level' (L_{WA}) means the A-weighted sound power level, indoors and/or outdoors, expressed in dB.

For the purposes of Annexes II to VIII, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2018** suppliers placing space heaters on the market and/or putting them into service, including those integrated in packages of space heater, temperature control and solar device, shall ensure that:

(a) a printed label complying with the format and content of information set out in point 1.1 of Annex III is provided for each space heater conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump space heaters, the printed label is provided at least in the packaging of the heat generator; for space heaters intended for use in packages of space heater, temperature control and solar device, a second label complying with the format and content of information set out in point 3 of Annex III is provided for each space heater;

(b) a product fiche, as set out in point 1 of Annex IV, is provided for each space heater, whereby: for heat pump space heaters, the product fiche is provided at least for the heat generator; for space heaters intended for use in packages of space heater, temperature control and solar device, a second fiche, as set out in point 5 of Annex IV, is provided;

(c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific space heater model and containing energy-related or price

information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific space heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model

(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each space heater model, whereby for heat pump space heaters models, the electronic product fiche is made available to dealers at least for the heat generator.

From 26 September 2019 a printed label complying with the format and content of information set out in point 1.2 of Annex III shall be provided for each space heater conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump space heaters, the printed label shall be provided at least in the packaging of the heat generator.

From 1 January 2020 an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II.

2. From **1 January 2018** suppliers placing combination heaters on the market and/or putting them into service, including those integrated in packages of combination heater, temperature control and solar device, shall ensure that:

(a) a printed label complying with the format and content of information set out in point 2.1 of Annex III is provided for each combination heater conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II, whereby: for heat pump combination heaters, the printed label is provided at least in the packaging of the heat generator; for combination heaters intended for use in packages of combination heater, temperature control and solar device, a second label complying with the format and content of information set out in point 4 of Annex III is provided for each combination heater;

(b) a product fiche, as set out in point 2 of Annex IV, is provided for each combination heater, whereby: for heat pump combination heaters, the product fiche is provided at least for the heat generator; for combination heaters intended for use in packages of combination heater, temperature control and solar device, a second fiche, as set out in point 6 of Annex IV, is provided;

(c) the technical documentation, as set out in point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific combination heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific combination heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model

(f) an electronic label in the format and containing the information set out in point 2.1 of

Annex III is made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each combination heater model, whereby for heat pump combination heaters models, the electronic product fiche is made available to dealers at least for the heat generator.

From 26 September 2019 a printed label complying with the format and content of information set out in point 2.2 of Annex III shall be provided for each combination heater conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II, whereby: for heat pump combination heaters, the printed label shall be provided at least in the packaging of the heat generator.

From 1 January 2020 an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II.

3. From **1 January 2018** suppliers placing temperature controls on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 3 of Annex IV, is provided;

(b) the technical documentation, as set out in point 3 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each temperature control model.

4. From **1 January 2018** suppliers placing solar devices on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 4 of Annex IV, is provided;

(b) the technical documentation, as set out in point 4 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(c) an electronic product fiche, as set out in point 4 of Annex IV, is made available to dealers for each solar device model.

5. From **1 January 2018** suppliers placing packages of space heater, temperature control and solar device on the market and/or putting them into service shall ensure that:

(a) a printed label complying with the format and content of information set out in point 3 of Annex III is provided for each package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(b) a product fiche, as set out in point 5 of Annex IV, is provided for each package of space heater, temperature control and solar device;

(c) the technical documentation, as set out in point 5 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of space heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating

energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of space heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 5 of Annex IV is made available to dealers for each model comprising a package of space heater, temperature control and solar device.

6. From **1 January 2018** suppliers placing packages of combination heater, temperature control and solar device on the market and/or putting them into service shall ensure that:

(a) a printed label complying with the format and content of information set out in point 4 of Annex III is provided for each package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(b) a product fiche, as set out in point 6 of Annex IV, is provided for each package of combination heater, temperature control and solar device;

(c) the technical documentation, as set out in point 6 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of combination heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of combination heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 4 of Annex III is made available to dealers for each model comprising a package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(g) an electronic product fiche as set out in point 6 of Annex IV is made available to dealers for each model comprising a package of combination heater, temperature control and solar device.

Article 4

Responsibilities of dealers

1. Dealers of space heaters shall ensure that:

(a) each space heater, at the point of sale, bears the label provided by suppliers in accordance with Article

3(1), as set out in point 1 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the space heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;

(c) any advertisement relating to a specific space heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific space heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

2. Dealers of combination heaters shall ensure that:

(a) each combination heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(2), as set out in point 2 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) combination heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the combination heater displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;

(c) any advertisement relating to a specific combination heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific combination heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

3. Dealers of packages of space heater, temperature control and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(1), (3), (4) and (5), that:

(a) any offer for a specific package includes the seasonal space heating energy efficiency and the seasonal space heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 3 of Annex III and providing the fiche set out in point 5 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of space heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of space heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;

(c) any advertisement relating to a specific package of space heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of space heater, temperature control

and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

4. Dealers of packages of combination heater, temperature control and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(2), (3), (4) and (6), that:

(a) any offer for a specific package of combination heater, temperature control and solar device includes the seasonal space heating energy efficiency, the water heating energy efficiency, the seasonal space heating energy efficiency class and the water heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 4 of Annex III and providing the fiche set out in point 6 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of combination heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of combination heater, temperature control and solar device displayed, are marketed with the in- formation provided in accordance with point 4 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;

(c) any advertisement relating to a specific package of combination heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of combination heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex VIII when assessing the conformity of the declared seasonal space heating energy efficiency class, water heating energy efficiency class, seasonal space heating energy efficiency, water heating energy efficiency and sound power level of heaters.

Article 7

Review

<…>

Article 8

Entry into force and application

This Regulation shall apply from 1 January 2016.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties.

ANNEX I
Definitions applicable for Annexes II to VIII

For the purposes of Annexes II to VIII the following definitions shall apply:

Definitions related to heaters:

(1) 'boiler space heater', for the purposes of Figures 1 to 4 in Annex IV referred to as 'boiler', means a space heater that generates heat using the combustion of fossil fuels and/or biomass fuels, and/or using the Joule effect in electric resistance heating elements;

(2) 'boiler combination heater', for the purposes of Figures 1 to 4 in Annex IV referred to as 'boiler', means a boiler space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;

(3) 'heat pump space heater', for the purposes of Figures 1 and 3 in Annex IV referred to as 'heat pump', means a space heater using ambient heat from an air source, water source or ground source, and/or waste heat for heat generation; a heat pump space heater may be equipped with one or more supplementary heaters using the Joule effect in electric resistance heating elements or the combustion of fossil and/or biomass fuels;

(4) 'heat pump combination heater', for the purposes of Figures 1 and 3 in Annex IV referred to as 'heat pump', means a heat pump space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;

(5) 'supplementary heater' means a non-preferential heater that generates heat in cases where the heat demand is greater than the rated heat output of the preferential heater;

(6) 'rated heat output of supplementary heater' *(Psup)* means the declared heat output of the supplementary heater when providing space heating and, if applicable, water heating at standard rating conditions, expressed in kW; if the supplementary heater is a heat pump space heater or heat pump combination heater, the standard rating condition for establishing the rated heat output of supplementary heater is the outdoor temperature $T_j = +7$ °C;

(7) 'outdoor temperature' *(T_j)* means the dry bulb outdoor air temperature, expressed in degrees Celsius; the relative humidity may be indicated by a corresponding wet bulb temperature;

(8) 'annual energy consumption' *(Q_{HE})* means the annual energy consumption of a heater required for space heating to meet the reference annual heating demand for a designated heating season, expressed in kWh in terms of the final energy and/or in GJ in terms of *GCV*;

(9) 'standby mode' means a condition where the heater is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;

(10) 'standby mode power consumption' *(P_{SB})* means the power consumption of a heater in standby mode, expressed in kW;

(11) 'conversion coefficient' *(CC)* means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council [(1)]; the value of the conversion coefficient is *CC* = 2,5;

(12) 'gross calorific value' (*GCV*) means the total amount of heat released by a unit quantity of fuel when it is burned completely with oxygen and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of any water vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel;

Definitions related to boiler space heaters, boiler combination heaters and cogeneration space heaters:

(13) 'seasonal space heating energy efficiency in active mode' (η_{son}) means

– for fuel boiler space heaters and fuel boiler combination heaters, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 30 % of the rated heat output, expressed in %;

– for electric boiler space heaters and electric boiler combination heaters, the useful efficiency at rated heat output, expressed in %;

– for cogeneration space heaters not equipped with supplementary heaters, the useful efficiency at rated heat output, expressed in %;

– for cogeneration space heaters equipped with supplementary heaters, a weighted average of the useful efficiency at rated heat output with supplementary heater disabled, and the useful efficiency at rated heat output with supplementary heater enabled, expressed in %;

(14) 'useful efficiency' (η) means the ratio of the useful heat output and the total energy input of a boiler space heater, boiler combination heater or cogeneration space heater, expressed in %, whereby the total energy input is expressed in terms of *GCV* and/or in terms of final energy multiplied by *CC*;

(15) 'useful heat output' *(P)* means the heat output of a boiler space heater, boiler combination heater or cogeneration space heater transmitted to the heat carrier, expressed in kW;

(16) 'electrical efficiency' (η_{el}) means the ratio of the electricity output and the total energy input of a cogeneration space heater, expressed in %, whereby the total energy input is expressed in terms of *GCV* and/or in terms of final energy multiplied by *CC*;

(17) 'ignition burner power consumption' *(P_{ign})* means the power consumption of a burner intended to ignite the main burner, expressed in W in terms of *GCV*;

(18) 'condensing boiler' means a boiler space heater or boiler combination heater in which, under normal operating conditions and at given operating water temperatures, the water vapour in the combustion products is partially condensed, in order to make use of the latent heat of this water vapour for heating purposes;

(19) 'auxiliary electricity consumption' means the annual electricity required for the designated operation of a boiler space heater, boiler combination heater or cogeneration space heater, calculated from the electric power consumption at full load *(elmax)*, at part load *(elmin)*, in standby mode and default operating hours at each mode, expressed in kWh in terms of final energy;

(20) 'standby heat loss' *(P_{stby})* means the heat loss of a boiler space heater, boiler combination heater or cogeneration space heater in operating modes without heat demand, expressed in kW;

Definitions related to heat pump space heaters and heat pump combination heaters:

(21) 'rated coefficient of performance' *(COPrated)* or 'rated primary energy ratio' *(PERrated)* means the declared heat capacity, expressed in kW, divided by the energy input, expressed in kW in terms of *GCV* and/or in kW in terms of final energy multiplied by *CC*, for heating provided at standard rating conditions;

(22) 'reference design conditions' means the combination of the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex VII, Table 10;

(23) 'reference design temperature' *(Tdesignh)* means the outdoor temperature, expressed in degrees Celsius, as set out in Annex VII, Table 10, at which the part load ratio is equal to 1;

(24) 'part load ratio' *(pl(T_j))* means the outdoor temperature minus 16 °C divided by the reference design temperature minus 16 °C;

(25) 'heating season' means a set of operating conditions for average, colder and warmer climate conditions, describing per bin the combination of outdoor temperatures and the number of hours these temperatures occur per season;

(26) 'bin' *(bin_j)* means a combination of an outdoor temperature and bin hours, as set out in Annex VII, Table 12;

(27) 'bin hours' *(H_j)* means the hours per heating season, expressed in hours per year, at which an outdoor temperature occurs for each bin, as set out in Annex VII, Table 12;

(28) 'part load for heating' *(Ph(T_j))* means the heating load at a specific outdoor temperature, calculated as the design load multiplied by the part load ratio and expressed in kW;

(29) 'seasonal coefficient of performance' *(SCOP)* or 'seasonal primary energy ratio' *(SPER)* means the overall coefficient of performance of a heat pump space heater or heat pump combination heater using electricity or the overall primary energy ratio of a heat pump space heater or heat pump combination heater using fuels, representative of the designated heating season, calculated as the reference annual heating demand divided by the annual energy consumption;

(30) 'reference annual heating demand' *(Q_H)* means the reference heating demand for a designated heating season, to be used as the basis for calculating *SCOP* or *SPER* and calculated as the product of the design load for heating and the annual equivalent active mode hours, expressed in kWh;

(31) 'annual equivalent active mode hours' *(H_{HE})* means the assumed annual number of hours a heat pump space heater or heat pump combination heater has to provide the design load for heating to satisfy the reference annual heating demand, expressed in h;

(32) 'active mode coefficient of performance' *($SCOP_{on}$)* or 'active mode primary energy ratio' *($SPER_{on}$)* means the average coefficient of performance of the heat pump space heater or heat pump combination heater using electricity in active mode or the average primary energy ratio of the heat pump space heater or heat pump combination heater using fuels in active mode for the designated heating season;

(33) 'supplementary capacity for heating' (*sup(T_j))* means the rated heat output *Psup* of a supplementary heater that supplements the declared capacity for heating to meet the part load for heating, if the declared capacity for heating is less than the part load for heating, expressed in kW;

(34) 'bin-specific coefficient of performance' *(COPbin(T_j))* or 'bin-specific primary energy ratio' *(PERbin(T_j))* means the coefficient of performance of the heat pump space heater or heat pump combination heater using electricity or primary energy ratio of the heat pump space heater or heat pump combination heater

using fuel specific for every bin in a season, derived from the part load for heating, declared capacity for heating and declared coefficient of performance for specified bins and calculated for other bins by interpolation or extrapolation, corrected where necessary by the degradation coefficient;

(35) 'declared capacity for heating' *(Pdh(T_j))* means the heating capacity a heat pump space heater or heat pump combination heater is able to deliver, for an outdoor temperature, expressed in kW;

(36) 'capacity control' means the ability of a heat pump space heater or heat pump combination heater to change its capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle, to be indicated as 'fixed' if the volumetric flow rate cannot be changed or 'variable' if the volumetric flow rate is changed or varied in series of two or more steps;

(37) 'design load for heating' *(Pdesignh)* means the rated heat output *(Prated)* of a heat pump space heater or heat pump combination heater at the reference design temperature, whereby the design load for heating is equal to the part load for heating with outdoor temperature equal to reference design temperature, expressed in kW;

(38) 'declared coefficient of performance' *(COPd(T_j))* or 'declared primary energy ratio' *(PERd(T_j))* means the coefficient of performance or primary energy ratio at a limited number of specified bins;

(39) 'bivalent temperature' *(T_{biv})* means the outdoor temperature declared by the supplier for heating at which the declared capacity for heating equals the part load for heating and below which the declared capacity for heating requires supplementary capacity for heating to meet the part load for heating, expressed in degrees Celsius;

(40) 'operation limit temperature' *(TOL)* means the outdoor temperature declared by the supplier for heating, below which the air-to-water heat pump space heater or air-to-water heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero, expressed in degrees Celsius;

(41) 'heating water operation limit temperature' *(WTOL)* means the outlet water temperature declared by the supplier for heating, above which the heat pump space heater or heat pump combination heater will not be able to deliver any heating capacity and the declared capacity heating is equal to zero, expressed in degrees Celsius;

(42) 'cycling interval capacity for heating' *(Pcych)* means the integrated heating capacity over the cycling test interval for heating, expressed in kW;

(43) 'cycling interval efficiency' *(COPcyc* or *PERcyc*) means the average coefficient of performance or average primary energy ratio over the cycling test interval, calculated as the integrated heating capacity over the interval, expressed in kWh, divided by the integrated energy input over that same interval, expressed in kWh in terms of *GCV* and/or in kWh in terms of final energy multiplied by *CC*;

(44) 'degradation coefficient' *(Cdh)* means the measure of efficiency loss due to cycling of a heat pump space heater or heat pump combination heater; if *Cdh* is not determined by measurement then the default degradation coefficient is *Cdh* = 0,9;

(45) 'active mode' means the condition corresponding to the hours with a heating load for the enclosed space and activated heating function; this condition may involve cycling of the heat pump space heater or heat pump combination heater to reach or maintain a required indoor air temperature;

(46) 'off mode' means a condition in which the heat pump space heater or heat pump combination heater is connected to the mains power source and is not providing any function, including conditions

providing only an indication of off mode condition and conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council [2];

(47) 'thermostat-off mode' means the condition corresponding to the hours with no heating load and activated heating function, whereby the heating function is switched on but the heat pump space heater or heat pump combination heater is not operational; cycling in active mode is not considered as thermostat-off mode;

(48) 'crankcase heater mode' means the condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started;

(49) 'off mode power consumption' *(P_{OFF})* means the power consumption of a heat pump space heater or heat pump combination heater in off mode, expressed in kW;

(50) 'thermostat-off mode power consumption' *(P_{TO})* means the power consumption of the heat pump space heater or heat pump combination heater while in thermostat-off mode, expressed in kW;

(51) 'crankcase heater mode power consumption' *(P_{CK})* means the power consumption of the heat pump space heater or heat pump combination heater while in crankcase heater mode, expressed in kW;

(52) 'low-temperature heat pump' means a heat pump space heater that is specifically designed for low-temperature application, and that cannot deliver heating water with an outlet temperature of 52 °C at an inlet dry (wet) bulb temperature of – 7 °C (– 8 °C) in the reference design conditions for average climate;

(53) 'low-temperature application' means an application where the heat pump space heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 35 °C;

(54) 'medium-temperature application' means an application where the heat pump space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C;

Definitions related to water heating in combination heaters:

(55) 'load profile' means a given sequence of water draw-offs, as specified in Annex VII, Table 15; each combination heater meets at least one load profile;

(56) 'water draw-off' means a given combination of useful water flow rate, useful water temperature, useful energy content and peak temperature, as specified in Annex VII, Table 15;

(57) 'useful water flow rate' *(f)* means the minimum flow rate, expressed in litres per minute, for which hot water is contributing to the reference energy, as specified in Annex VII, Table 15;

(58) 'useful water temperature' *(T_m)* means the water temperature, expressed in degrees Celsius, at which hot water starts contributing to the reference energy, as specified in Annex VII, Table 15;

(59) 'useful energy content' *(Q_{tap})* means the energy content of hot water, expressed in kWh, provided at a temperature equal to, or above, the useful water temperature, and at water flow rates equal to, or above, the useful water flow rate, as specified in Annex VII, Table 15;

(60) 'energy content of hot water' means the product of the specific heat capacity of water, the average temperature difference between the hot water output and cold water input, and the total mass of the hot water delivered;

(61) 'peak temperature' *(T_p)* means the minimum water temperature, expressed in degrees Celsius, to be achieved during water draw-off, as specified in Annex VII, Table 15;

(62) 'reference energy' *(Q_{ref})* means the sum of the useful energy content of water draw-offs, expressed in kWh, in a particular load profile, as specified in Annex VII, Table 15;

(63) 'maximum load profile' means the load profile with the greatest reference energy that a combination heater is able to provide while fulfilling the temperature and flow rate conditions of that load profile;

(64) 'declared load profile' means the load profile applied when determining water heating energy efficiency;

(65) 'daily electricity consumption' *(Q_{elec})* means the consumption of electricity for water heating over 24 consecutive hours under the declared load profile, expressed in kWh in terms of final energy;

(66) 'daily fuel consumption' *(Q_{fuel})* means the consumption of fuels for water heating over 24 consecutive hours under the declared load profile, expressed in kWh in terms of *GCV* and, for the purposes of point 5(f) in Annex VII, expressed in GJ in terms of *GCV*;

(67) 'annual electricity consumption' *(AEC)* means the annual electricity consumption of a combination heater for water heating under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;

(68) 'annual fuel consumption' *(AFC)* means the annual fossil fuel and/or biomass fuel consumption of a combination heater for water heating under the declared load profile and under given climate conditions, expressed in GJ in terms of *GCV*;

Definitions related to solar devices:

(69) 'annual non-solar heat contribution' *(Q_{nonsol})*, means the annual contribution of electricity (expressed in kWh in terms of primary energy) and/or fuels (expressed in kWh in terms of *GCV*) to the useful heat output of a package of combination heater, temperature control and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank;

(70) 'collector aperture area' *(A_{sol})*, for the purposes of Figures 1 to 4 in Annex IV referred to as 'collector size', means the maximum projected area through which unconcentrated solar radiation enters the collector, expressed in m^2;

(71) 'collector efficiency' *(η_{col})* means the efficiency of the solar collector at a temperature difference between the solar collector and the surrounding air of 40 K and a global solar irradiance of 1 000 W/ m^2, expressed in %;

(72) 'standing loss' *(S)* means the heating power dissipated from a solar hot water storage tank at given water and ambient temperatures, expressed in W;

(73) 'storage volume' *(V)*, for the purposes of Figures 1 to 4 in Annex IV referred to as 'tank volume', means the rated volume of a solar hot water storage tank, expressed in litres or m^3;

(74) 'auxiliary electricity consumption' *(Q_{aux})*, for the purpose of Figure 5 in Annex IV referred to as 'auxiliary electricity', means the annual electricity consumption of a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy;

(75) 'pump power consumption' *(solpump)* means the rated electrical power consumption of the pump in the collector loop of a solar-only system, expressed in W;

(76) 'standby power consumption' *(solstandby)* means the rated electrical power consumption of a solar-only system when the pump and the heat generator are inactive, expressed in W;

Other definitions:

(77) 'average climate conditions', 'colder climate conditions' and 'warmer climate conditions' mean the temperature and global solar irradiance conditions characteristic for the cities of Strasbourg, Helsinki and Athens, respectively;

(78) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific space heater, combination heater, temperature control, solar device, package of space heater, temperature control and solar device, or package of combination heater, temperature control and solar device model from other models with the same trade mark, supplier's name or dealer's name.

ANNEX II
Energy efficiency classes

1. SEASONAL SPACE HEATING ENERGY EFFICIENCY CLASSES

The seasonal space heating energy efficiency class of a heater, with the exception of low-temperature heat pumps and heat pump space heaters for low-temperature application, shall be determined on the basis of its seasonal space heating energy efficiency as set out in Table 1.

The seasonal space heating energy efficiency classes of a low-temperature heat pump and a heat pump space heater for low-temperature application shall be determined on the basis of its seasonal space heating energy efficiency as set out in Table 2.

The seasonal space heating energy efficiency of a heater shall be calculated in accordance with points 3 and 4 of Annex VII, for heat pump space heaters, heat pump combination heaters and low-temperature heat pumps under average climate conditions.

Table 1

Seasonal space heating energy efficiency classes of heaters, with the exception of low-temperature heat pumps and heat pump space heaters for low-temperature application

Seasonal space heating energy efficiency class	**Seasonal space heating energy efficiency η_s in %**
A^{+++}	$\eta_s \geq 150$
A^{++}	$125 \leq \eta_s < 150$
A^{+}	$98 \leq \eta_s < 125$
A	$90 \leq \eta_s < 98$
B	$82 \leq \eta_s < 90$
C	$75 \leq \eta_s < 82$
D	$36 \leq \eta_s < 75$
E	$34 \leq \eta_s < 36$
F	$30 \leq \eta_s < 34$
G	$\eta_s < 30$

Table 2

Seasonal space heating energy efficiency classes of low-temperature heat pumps and heat pump space heaters for low-temperature application

Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency η_s in %
A^{+++}	$\eta_s \geq 175$
A^{++}	$150 \leq \eta_s < 175$
A^{+}	$123 \leq \eta_s < 150$
A	$115 \leq \eta_s < 123$
B	$107 \leq \eta_s < 115$
C	$00 \leq \eta_s < 107$
D	$61 \leq \eta_s < 100$
E	$59 \leq \eta_s < 61$
F	$55 \leq \eta_s < 59$
G	$\eta_s < 55$

2. WATER HEATING ENERGY EFFICIENCY CLASSES

The water heating energy efficiency class of a combination heater shall be determined on the basis of its water heating energy efficiency as set out in Table 3.

The water heating energy efficiency of a combination heater shall be calculated in accordance with point 5 of Annex VII.

Table 3

Water heating energy efficiency classes of combination heaters, categorised by declared load profiles, η_{wh} in %

	3XS	XXS	XS	S	M	L	XL	XXL
A^{+++}	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 69$	$\eta_{wh} \geq 90$	$\eta_{wh} \geq 163$	$\eta_{wh} \geq 188$	$\eta_{wh} \geq 200$	$\eta_{wh} \geq 213$
A^{+}	$53 \leq \eta_{wh} < 62$	$53 \leq \eta_{wh} < 62$	$61 \leq \eta_{wh} < 69$	$72 \leq \eta_{wh} < 90$	$130 \leq \eta_{wh} < 163$	$150 \leq \eta_{wh} < 188$	$160 \leq \eta_{wh} < 200$	$170 \leq \eta_{wh} < 213$
A^{+}	$44 \leq \eta_{wh} < 53$	$44 \leq \eta_{wh} < 53$	$53 \leq \eta_{wh} < 61$	$55 \leq \eta_{wh} < 72$	$100 \leq \eta_{wh} < 130$	$115 \leq \eta_{wh} < 150$	$123 \leq \eta_{wh} < 160$	$131 \leq \eta_{wh} < 170$
A	$35 \leq \eta_{wh} < 44$	$35 \leq \eta_{wh} < 44$	$38 \leq \eta_{wh} < 53$	$38 \leq \eta_{wh} < 55$	$65 \leq \eta_{wh} < 100$	$75 \leq \eta_{wh} < 115$	$80 \leq \eta_{wh} < 123$	$85 \leq \eta_{wh} < 131$
B	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$35 \leq \eta_{wh} < 38$	$35 \leq \eta_{wh} < 38$	$39 \leq \eta_{wh} < 65$	$50 \leq \eta_{wh} < 75$	$55 \leq \eta_{wh} < 80$	$60 \leq \eta_{wh} < 85$
C	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$36 \leq \eta_{wh} < 39$	$37 \leq \eta_{wh} < 50$	$38 \leq \eta_{wh} < 55$	$40 \leq \eta_{wh} < 60$

D	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$33 \leq \eta_{wh} < 36$	$34 \leq \eta_{wh} < 37$	$35 \leq \eta_{wh} < 38$	$36 \leq \eta_{wh} < 40$
E	$22 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$30 \leq \eta_{wh} < 33$	$30 \leq \eta_{wh} < 34$	$30 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 36$
F	$19 \leq \eta_{wh} < 22$	$20 \leq \eta_{wh} < 23$	$23 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$28 \leq \eta_{wh} < 32$
G	$\eta_{wh} < 19$	$\eta_{wh} < 20$	$\eta_{wh} < 23$	$\eta_{wh} < 23$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 28$

3. ENERGY EFFICIENCY CLASSES OF SOLAR HOT WATER STORAGE TANKS, IF (PART OF) A SOLAR DEVICE

The energy efficiency class of a solar hot water storage tank, if (part of) a solar device, shall be determined on the basis of its standing loss as set out in Table 4.

Table 4

Energy efficiency classes of solar hot water storage tanks, if (part of) a solar device

Energy efficiency class Standing loss S in Watts, with storage volume V in litres

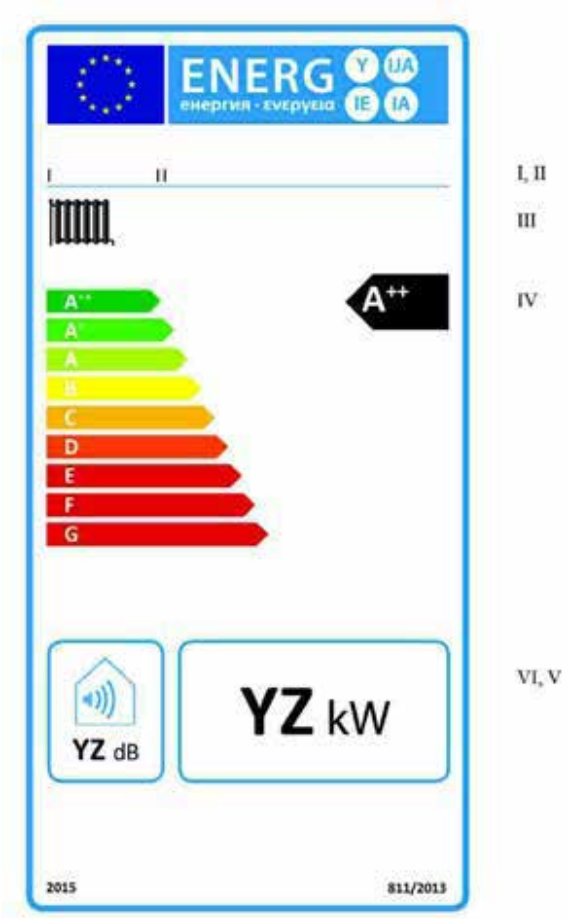
A+	$S < 5{,}5 + 3{,}16 \cdot V^{0,4}$
A	$5{,}5 + 3{,}16 \cdot V^{0,4} \leq S < 8{,}5 + 4{,}25 \cdot V^{0,4}$
B	$8{,}5 + 4{,}25 \cdot V^{0,4} \leq S < 12 + 5{,}93 \cdot V^{0,4}$
C	$12 + 5{,}93 \cdot V^{0,4} \leq S < 16{,}66 + 8{,}33 \cdot V^{0,4}$
D	$16{,}66 + 8{,}33 \cdot V^{0,4} \leq S < 21 + 10{,}33 \cdot V^{0,4}$
E	$21 + 10{,}33 \cdot V^{0,4} \leq S < 26 + 13{,}66 \cdot V^{0,4}$
F	$26 + 13{,}66 \cdot V^{0,4} \leq S < 31 + 16{,}66 \cdot V^{0,4}$
G	$S > 31 + 16{,}66 \cdot V^{0,4}$

ANNEX III
The labels

1. SPACE HEATERS

1.1. Label 1

1.1.1. Boiler space heaters in seasonal space heating energy efficiency classes A++ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function;

IV. the seasonal space heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the boiler space

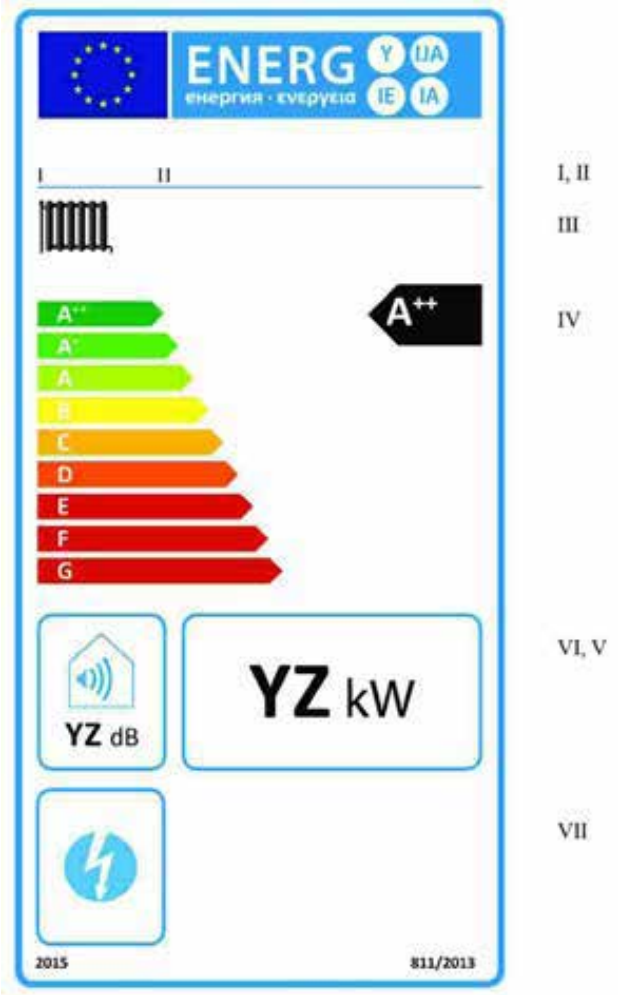
heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output in kW, rounded to the nearest integer;

VI. the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for boiler space heaters shall be in accordance with point 5 of this Annex.

1.1.2. Cogeneration space heaters in seasonal space heating energy efficiency classes A++ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function;

IV. the seasonal space heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the cogeneration space heater shall be placed at the same height as the head of the relevant energy efficiency class;

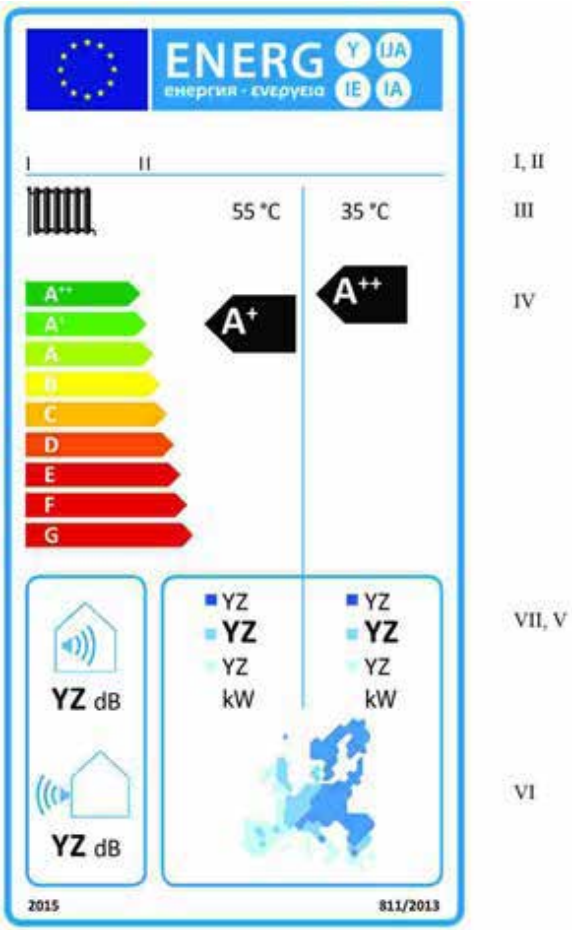
V. the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer;

VI. the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer;

VII. the additional electricity generation function.

(b) The design aspects of the label for cogeneration space heaters shall be in accordance with point 6 of this Annex.

1.1.3. Heat pump space heaters, except low-temperature heat pumps, in seasonal space heating energy efficiency classes A++ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function for medium- and low-temperature application, respectively;

IV. the seasonal space heating energy efficiency class under average climate conditions for medium- and low-temperature application, respectively, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the heat pump space heater for medium- and low-temperature application, respectively, shall be placed at the same height as the head of the relevant energy efficiency class;

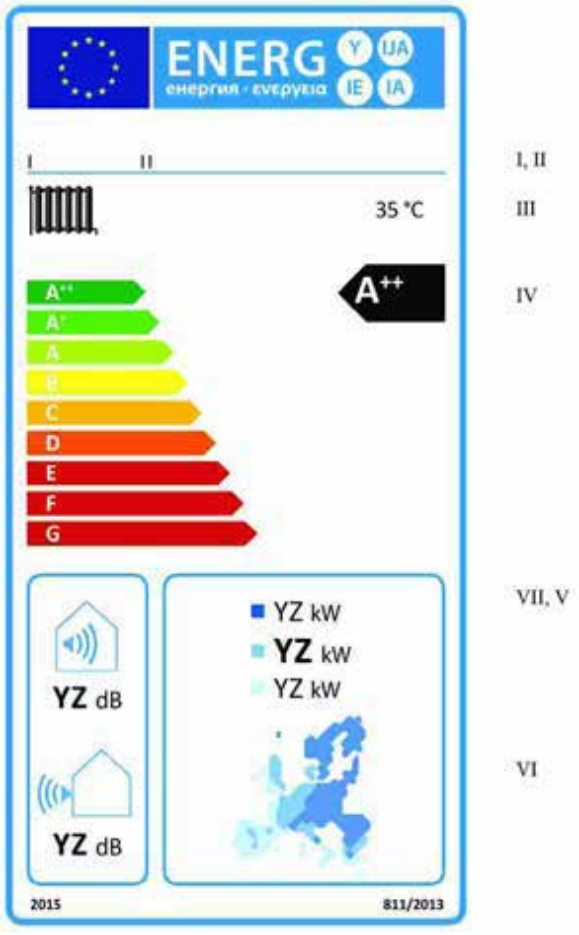
V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions for medium- and low-temperature application, respectively, rounded to the nearest integer;

VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA}, indoors (if applicable) and outdoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for heat pump space heaters shall be in accordance with point 7 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council (1), a copy of the EU Ecolabel may be added.

1.1.4. Low-temperature heat pumps in seasonal space heating energy efficiency classes A++ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function for low-temperature application;

IV. the seasonal space heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the low-temperature heat pump shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions, rounded to the nearest integer;

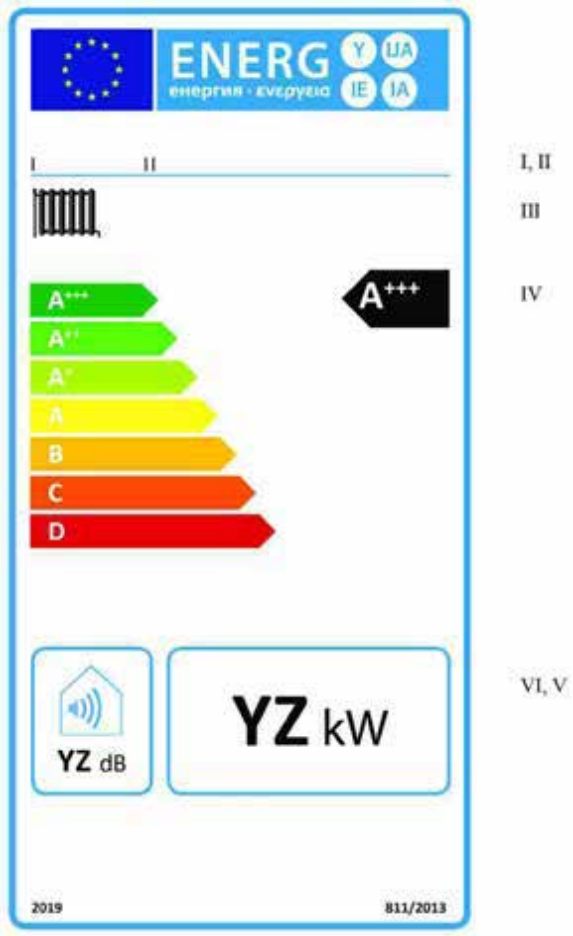
VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA}, indoors (if applicable) and outdoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for low-temperature heat pumps shall be in accordance with point 8 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

1.2. Label 2

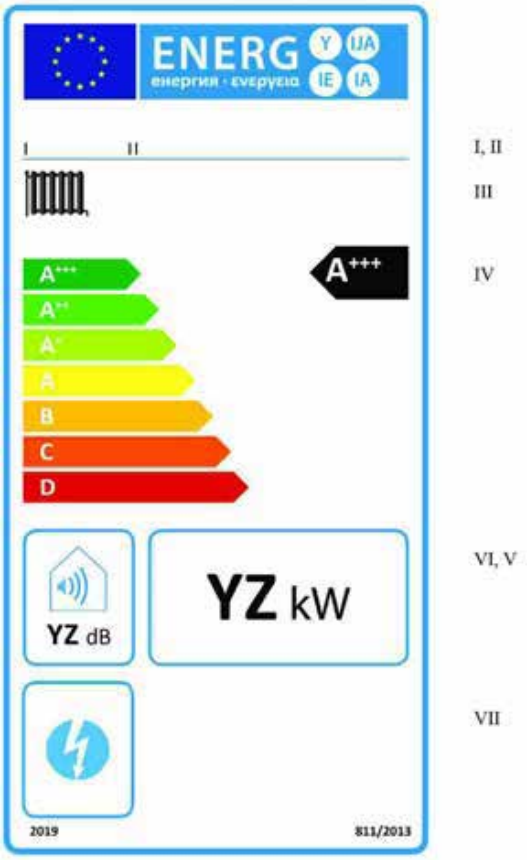
1.2.1. Boiler space heaters in seasonal space heating energy efficiency classes A+++ to D



(a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for boiler space heaters shall be in accordance with point 5 of this Annex.

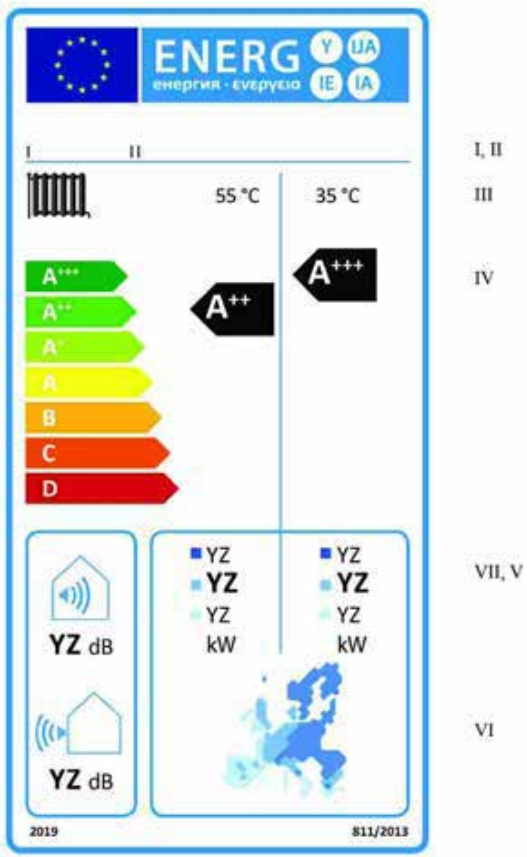
1.2.2. Cogeneration space heaters in seasonal space heating energy efficiency classes A^{+++} to D



(a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for cogeneration space heaters shall be in accordance with point 6 of this Annex.

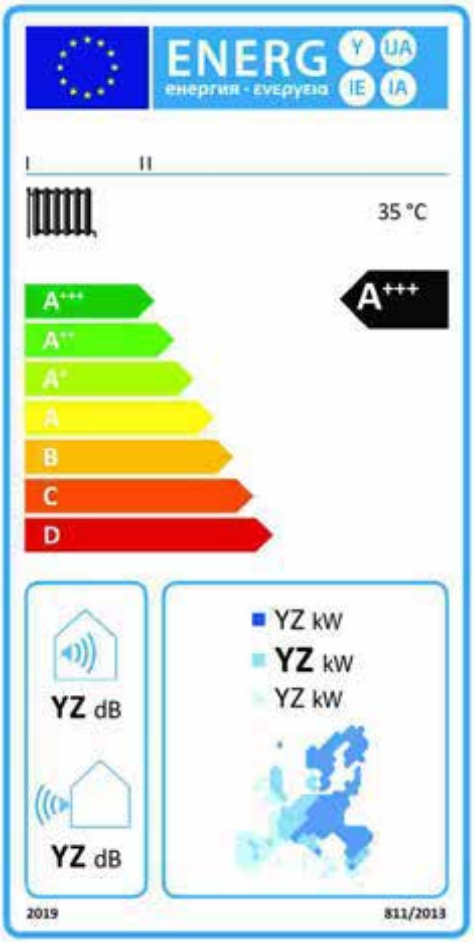
1.2.3. Heat pump space heaters, except low-temperature heat pumps, in seasonal space heating energy efficiency classes A+++ to D



(a) The information listed in point 1.1.3(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump space heaters shall be in accordance with point 7 of this Annex.

1.2.4. Low-temperature heat pumps in seasonal space heating energy efficiency classes A+++ to D



I, II

III

IV

VII, V

VI

(a) The information listed in point 1.1.4(a) of this Annex shall be included in the label.

(b) The design aspects of the label for low-temperature heat pumps shall be in accordance with point 8 of this Annex.

2. COMBINATION HEATERS

2.1. Label 1

2.1.1 Boiler combination heaters in seasonal space heating energy efficiency classes A++ to G and in water heating energy efficiency classes A to G



I, II

III

IV

VI, V, VII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;

IV. the seasonal space heating energy efficiency class and the water heating energy efficiency class, determined in accordance with points 1 and 2 of Annex II; the head of the arrows containing the seasonal space heating energy efficiency class and water heating energy efficiency class of the boiler combination

heater shall be placed at the same height as the head of the relevant energy efficiency class;

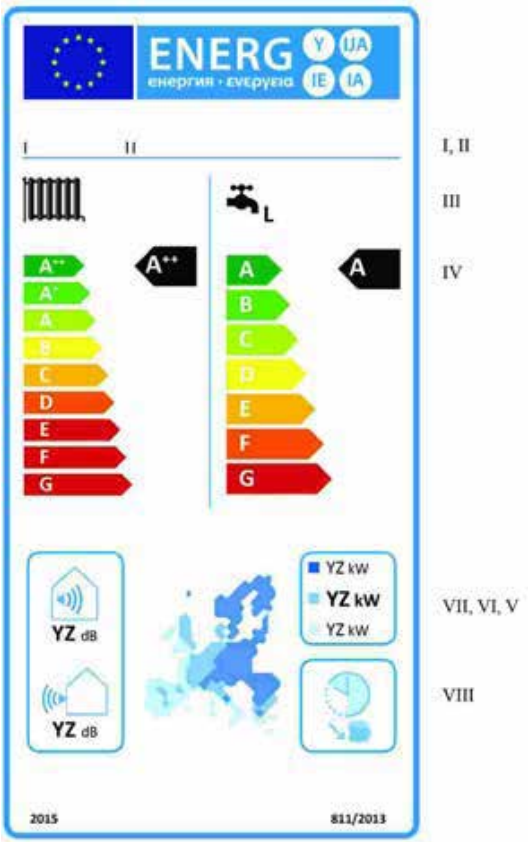
V. the rated heat output in kW, rounded to the nearest integer;

VI. the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer.

VII. for boiler combination heaters able to work only during off-peak hours, the pictogram referred to in point 9(d)(11) of this Annex may be added.

(b) The design aspects of the label for boiler combination heaters shall be in accordance with point 9 of this Annex.

2.1.2. Heat pump combination heaters in seasonal space heating energy efficiency classes A++ to G and in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function for medium-temperature application and the water heating function, includ-

ing the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;

IV. the seasonal space heating energy efficiency class under average climate conditions for medium-temperature application and the water heating energy efficiency class under average climate conditions, determined in accordance with points 1 and 2 of Annex II; the head of the arrows containing the seasonal space heating energy efficiency class and water heating energy efficiency class of the heat pump combination heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions, rounded to the nearest integer;

VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA}, indoors (if applicable) and outdoors, in dB, rounded to the nearest integer;

VIII. for heat pump combination heaters able to work only during off-peak hours, the pictogram referred to in point 10(d)(12) of this Annex may be added.

(b) The design aspects of the label for heat pump combination heaters shall be in accordance with point 10 of this Annex.

2.2. Label 2

2.2.1. Boiler combination heaters in seasonal space heating energy efficiency classes A+++ to D and in water heating energy efficiency classes A+ to F



I, II

III

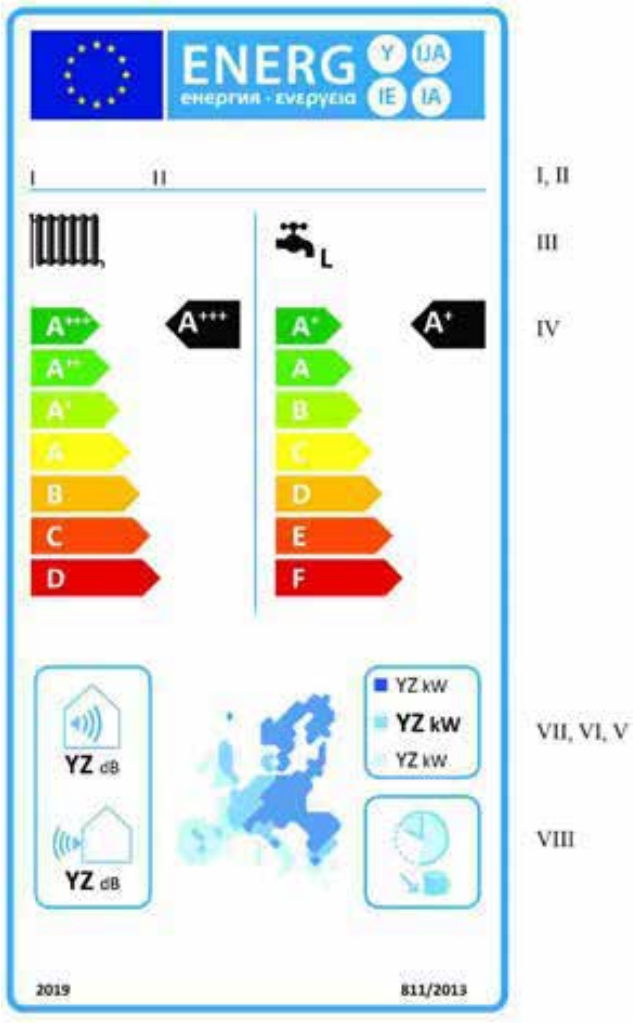
IV

VI, V, VII

(a) The information listed in point 2.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for boiler combination heaters shall be in accordance with point 9 of this Annex.

2.2.2. Heat pump combination heaters in seasonal space heating energy efficiency classes A+++ to D and in water heating energy efficiency classes A+ to F

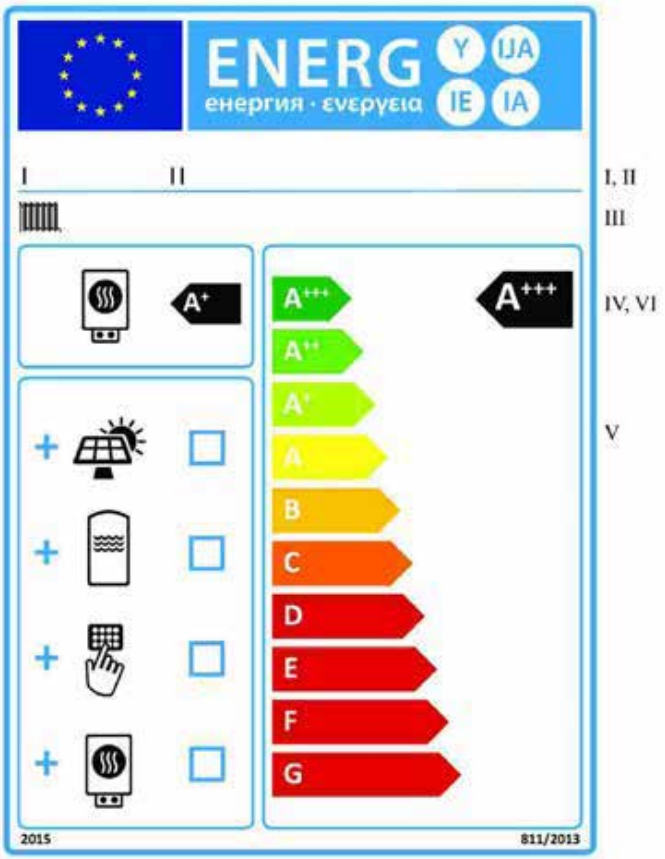


(a) The information listed in point 2.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump combination heaters shall be in accordance with point 10 of this Annex.

3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

Label for packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A+++ to G



(a) The following information shall be included in the label:

I. dealer's and/or supplier's name or trade mark;

II. dealer's and/or supplier's model(s) identifier;

III. the space heating function;

IV. the seasonal space heating energy efficiency class of the space heater, determined in accordance with point 1 of Annex II;

V. indication of whether a solar collector, hot water storage tank, temperature control and/or supplementary space heater may be included in the package of space heater, temperature control and solar device;

VI. the seasonal space heating energy efficiency class of the package of space heater, temperature control and solar device, determined in accordance with point 5 of Annex IV; the head of the arrow containing

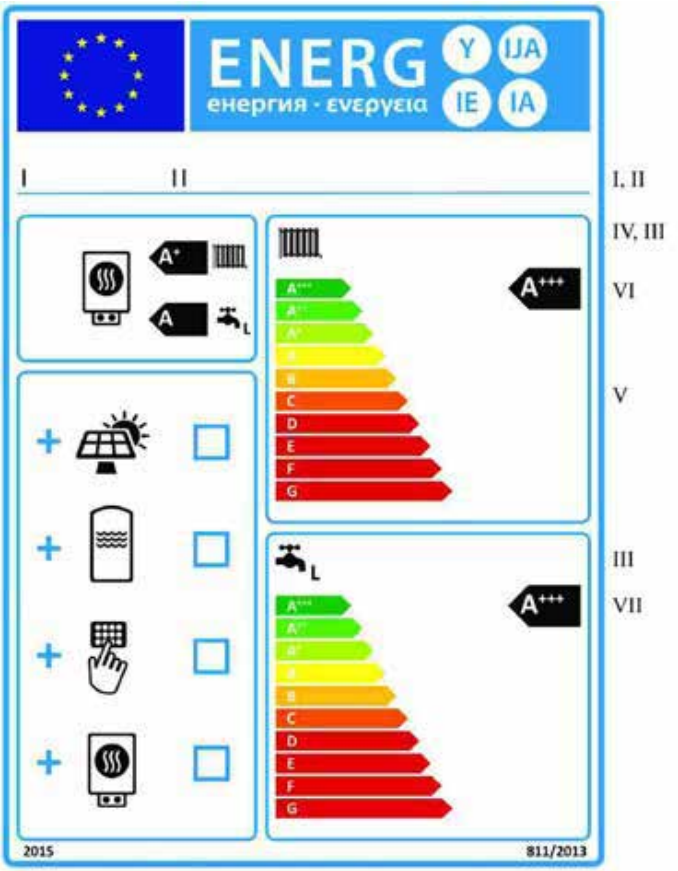
the seasonal space heating energy efficiency class

of the package of space heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of space heater, temperature control and solar device shall be in accordance with point 11 of this Annex. For packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A^{+++} to D, the last classes E to G in the A^{+++} to G scale may be omitted.

4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

Label for packages of combination heater, temperature control and solar device in seasonal space heating and water heating energy efficiency classes A^{+++} to G



(a) The following information shall be included in the label:

I. dealer's and/or supplier's name or trade mark;

II. dealer's and/or supplier's model(s) identifier;

III. the space heating function and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;

IV. the seasonal space heating and water heating energy efficiency classes of the combination heater, determined in accordance with points 1 and 2 of Annex II;

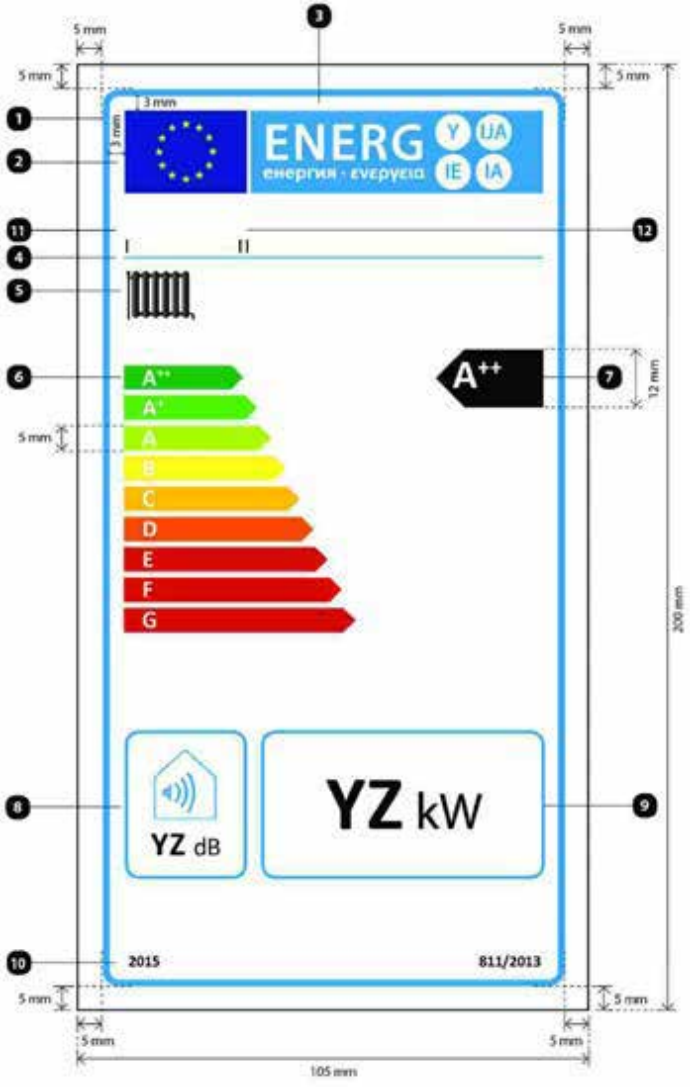
V. indication of whether a solar collector, hot water storage tank, temperature control and/or supplementary heater, may be included in the package of combination heater, temperature control and solar device;

VI. the seasonal space heating energy efficiency class of the package of combination heater, temperature control and solar device, determined in accordance with point 6 of Annex IV; the head of the arrow containing the seasonal space heating energy efficiency class of the package of combination heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class;

VII. the water heating energy efficiency class of the package of combination heater, temperature control and solar device, determined in accordance with point 6 of Annex IV; the head of the arrow containing the water heating energy efficiency class of the package of combination heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of combination heater, temperature control and solar device shall be in accordance with point 12 of this Annex. For packages of combination heater, temperature control and solar device in seasonal space heating and/or water heating energy efficiency classes A^{+++} to D, the last classes E to G in the A^{+++} to G scale may be omitted.

5. The design of the label for boiler space heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

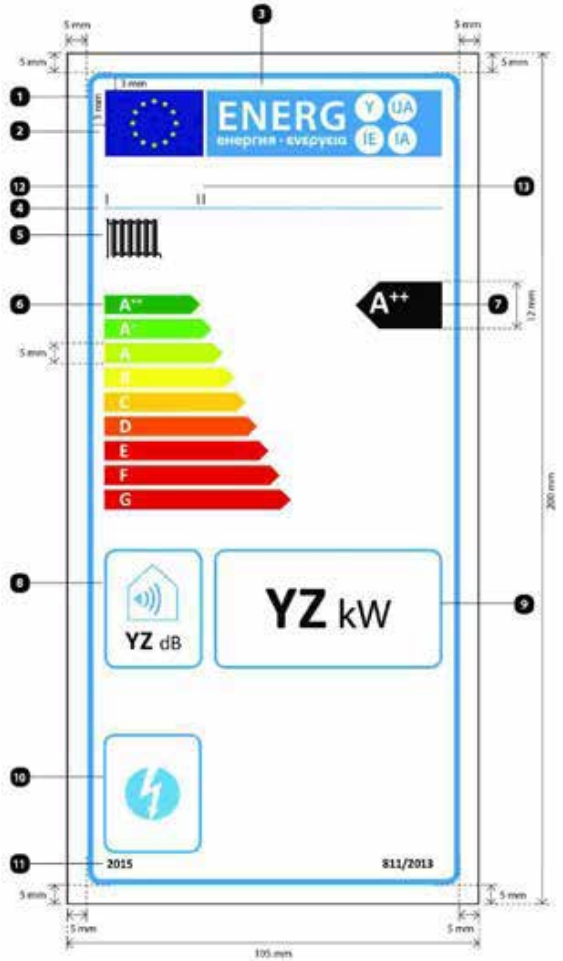
(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Space heating function:**
   - **Pictogram** as depicted.
6. **A^{++}-G and A^{+++}-D scales, respectively:**
   - **Arrow**: height: 5 mm, gap: 1,3 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Seventh class: 00-X-X-00,
     - Eighth class: 00-X-X-00,
     - Last class: 00-X-X-00,
   - **Text**: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
   - **Arrow**: height: 7 mm, gap: 1 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class: 00-X-X-00,
   - **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
7. **Seasonal space heating energy efficiency class:**
   - **Arrow**: width: 22 mm, height: 12 mm, 100 % black,
   - **Text**: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
8. **Sound power level, indoors:**
   - **Pictogram** as depicted,
   - **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   - **Value 'YZ'**: Calibri bold 20 pt, 100 % black,
   - **Text 'dB'**: Calibri regular 15 pt, 100 % black.

9. **Rated heat output:**
   – **Border**: 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
   – **Value 'YZ'**: Calibri bold 45 pt, 100 % black,
   – **Text 'kW'**: Calibri regular 30 pt, 100 % black.
10. **Year of label introduction and number of Regulation:**
   – **Text**: Calibri bold 10 pt.
11. **Supplier's name or trademark.**
12. **Supplier's model identifier**:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

6. The design of the label for cogeneration space heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Space heating function:**
   - **Pictogram** as depicted.
6. **A^{++}-G and A^{+++}-D scales, respectively:**
   - **Arrow**: height: 5 mm, gap: 1,3 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Seventh class: 00-X-X-00,
     - Eighth class: 00-X-X-00,
     - Last class: 00-X-X-00,
   - **Text**: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
   - **Arrow**: height: 7 mm, gap: 1 mm, colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class: 00-X-X-00,
   - **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
7. **Seasonal space heating energy efficiency class:**

– **Arrow**: width: 22 mm, height: 12 mm, 100 % black,

– **Text**: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

8. **Sound power level, indoors**:

– **Pictogram** as depicted,

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Value 'YZ'**: Calibri bold 20 pt, 100 % black,

– **Text 'dB'**: Calibri regular 15 pt, 100 % black.

9. **Rated heat output:**

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Value 'YZ'**: Calibri bold 45 pt, 100 % black,

– **Text 'kW'**: Calibri regular 30 pt, 100 % black.

10. **Electricity function:**

– **Pictogram** as depicted,

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

11. **Year of label introduction and number of Regulation:**

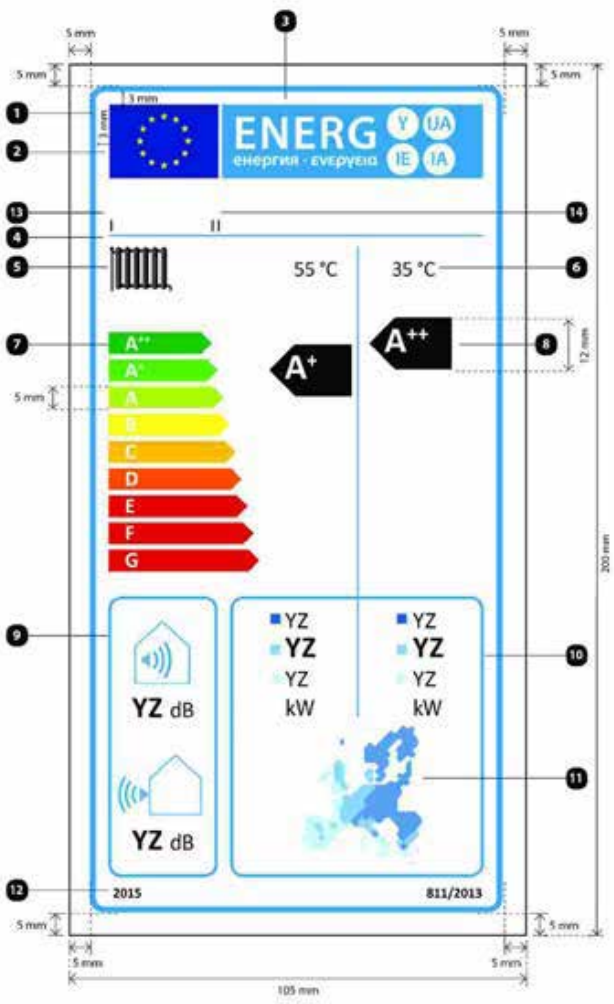
– **Text**: Calibri bold 10 pt.

12. **Supplier's name or trademark.**

13. **Supplier's model identifier:**

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

7. The design of the label for heat pump space heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Space heating function:**
   – **Pictogram** as depicted.
6. **Medium- and low-temperature application:**
   – **Text** '55 °C' and '35 °C': Calibri regular 14 pt, 100 % black.
7. **A^{++}-G and A^{+++}-D scales, respectively:**
   – **Arrow**: height: 5 mm, gap: 1,3 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Seventh class: 00-X-X-00,
      – Eighth class: 00-X-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
   – **Arrow**: height: 7 mm, gap: 1 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
8. **Seasonal space heating energy efficiency class:**
   – **Arrow**: width: 19 mm, height: 12 mm, 100 % black,
   – **Text**: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
9. **Sound power level, indoors (if applicable) and outdoors:**
   – **Pictogram** as depicted,
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Value 'YZ'**: Calibri bold 20 pt, 100 % black,

– **Text 'dB'**: Calibri regular 15 pt, 100 % black.

10. Rated heat output:

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Values 'YZ'**: Calibri at least 15 pt, 100 % black,

– **Text 'kW'**: Calibri regular 15 pt, 100 % black.

11. European temperature map and colour squares:

– **Pictogram** as depicted,

– **Colours**:

  – Dark blue: 86-51-00-00,

  – Middle blue: 53-08-00-00,

  – Light blue: 25-00-02-00.

12. Year of label introduction and number of Regulation:

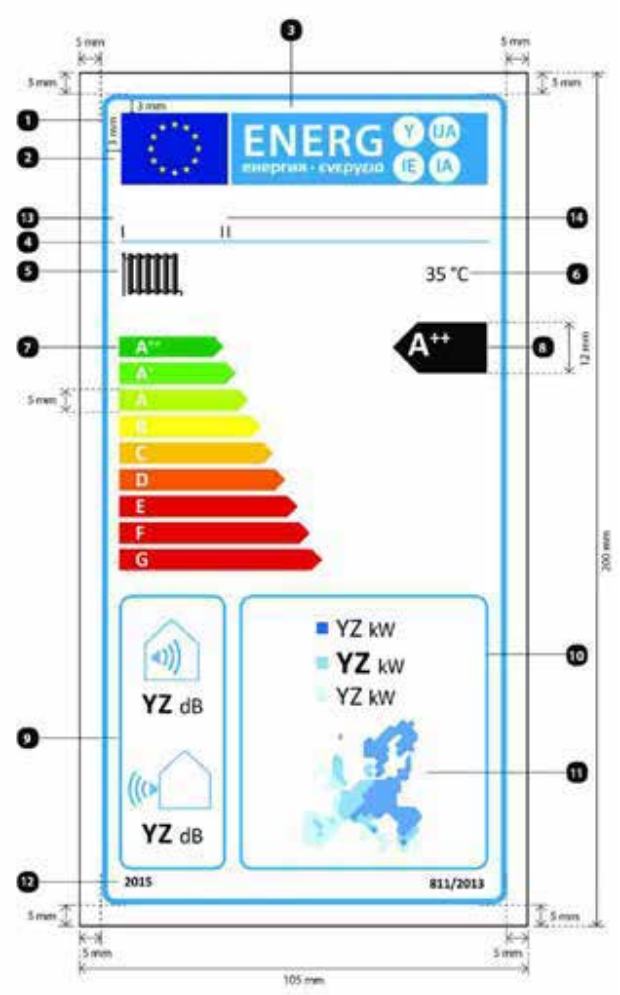
– **Text**: Calibri bold 10 pt.

13. Supplier's name or trademark.

14. Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

8. The design of the label for low-temperature heat pumps shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.

3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Space heating function:**
   – **Pictogram** as depicted.
6. **Low-temperature application:**
   Text '35 °C': Calibri regular 14 pt, 100 % black.
7. **A^{++}-G and A^{+++}-D scales, respectively:**
   – **Arrow**: height: 5 mm, gap: 1,3 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Seventh class: 00-X-X-00,
      – Eighth class: 00-X-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
   – **Arrow**: height: 7 mm, gap: 1 mm – colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
8. **Seasonal space heating energy efficiency class:**
   – **Arrow**: width: 22 mm, height: 12 mm, 100 % black,
   – **Text**: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
9. **Sound power level, indoors (if applicable) and outdoors:**
   – **Pictogram** as depicted,
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Value 'YZ'**: Calibri bold 20 pt, 100 % black,
   – **Text 'dB'**: Calibri regular 15 pt, 100 % black.

10. Rated heat output:

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Values 'YZ'**: Calibri at least 18 pt, 100 % black,

– **Text 'kW'**: Calibri regular 13,5 pt, 100 % black.

11. European temperature map and colour squares:

– **Pictogram** as depicted,

– **Colours:**

– Dark blue: 86-51-00-00,

– Middle blue: 53-08-00-00,

– Light blue: 25-00-02-00.

12. Year of label introduction and number of Regulation:

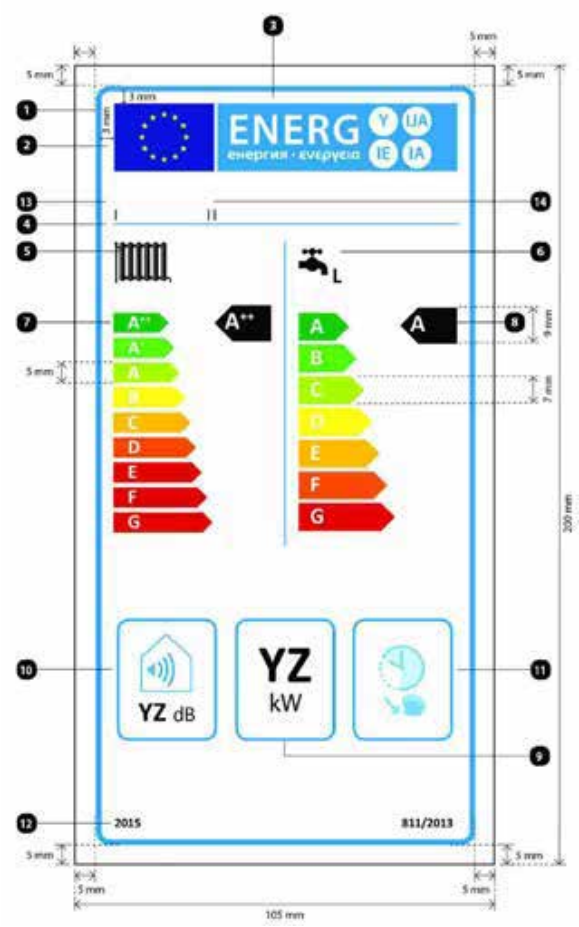
– **Text**: Calibri bold 10 pt.

13. Supplier's name or trademark.

14. Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

9. The design of the label for boiler combination heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Space heating function:**
   – **Pictogram** as depicted.
6. **Water heating function:**
   – **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
7. **A^{++}-G and A-G, A^{+++}-D or A^{+}-F scales, respectively:**
   – **Arrow**: height: 5 mm, gap: 1,3 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Seventh class: 00-X-X-00,
      – Eighth class: 00-X-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
   – **Arrow**: height: 7 mm, gap: 1 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
8. **Seasonal space heating and water heating energy efficiency classes:**
   – **Arrow**: width: 14 mm, height: 9 mm, 100 % black,
   – **Text**: Calibri bold 18 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
9. **Rated heat output:**
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Value 'YZ'**: Calibri bold 37,5 pt, 100 % black,
   – **Text 'kW'**: Calibri regular 18 pt, 100 % black.
10. **Sound power level, indoors:**
   – **Pictogram** as depicted,

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Value 'YZ**': Calibri bold 20 pt, 100 % black,

– **Text 'dB**': Calibri regular 15 pt, 100 % black.

11. If applicable, off-peak fitness:

– **Pictogram** as depicted,

– **Border**: 2 pt – colour: cyan 100 % – round corners: 3,5 mm.

12. Year of label introduction and number of Regulation:

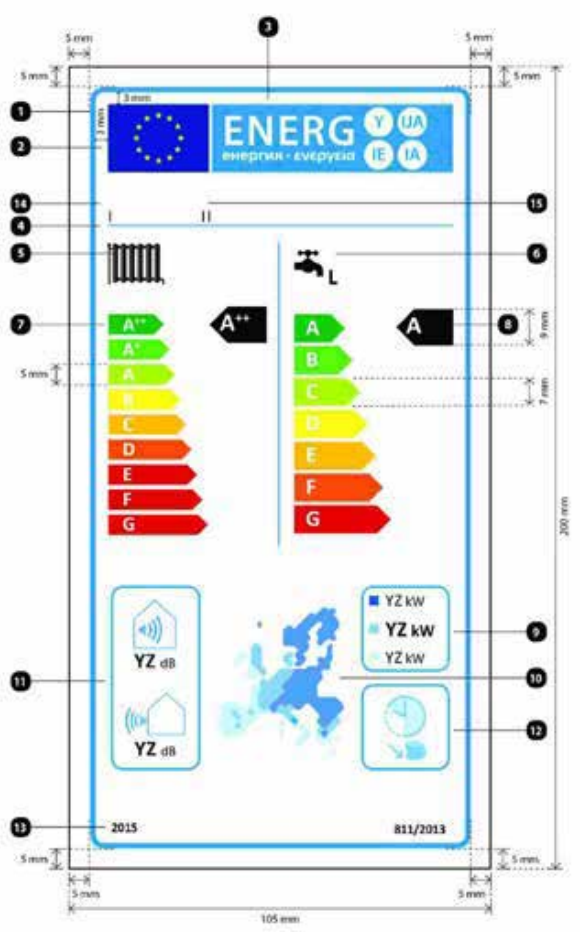
– **Text**: Calibri bold 10 pt.

13. Supplier's name or trademark.

14. Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

10. The design of the label for heat pump combination heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

4. **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
5. **Space heating function:**
   – **Pictogram** as depicted.
6. **Water heating function:**
   – **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
7. **A^{++}-G and A-G, A^{+++}-D or A^{+}-F scales, respectively:**
   – **Arrow**: height: 5 mm, gap: 1,3 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Seventh class: 00-X-X-00,
      – Eighth class: 00-X-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
   – **Arrow**: height: 7 mm, gap: 1 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Last class: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
8. **Seasonal space heating and water heating energy efficiency classes:**
   – **Arrow**: width: 14 mm, height: 9 mm, 100 % black,
   – **Tex**t: Calibri bold 18 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
9. **Rated heat output:**
   – **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
   – **Values 'YZ'**: Calibri at least 12 pt, 100 % black,
   – **Text 'kW'**: Calibri regular 10 pt, 100 % black.
10. **European temperature map and colour squares:**
   – **Pictogram** as depicted,

– **Colours**:
  – Dark blue: 86-51-00-00,
  – Middle blue: 53-08-00-00,
  – Light blue: 25-00-02-00.

11. Sound power level, indoors (if applicable) and outdoors:

– **Pictogram** as depicted,

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

– **Value 'YZ'**: Calibri bold 15 pt, 100 % black,

– **Text 'dB'**: Calibri regular 10 pt, 100 % black.

12. If applicable, off-peak fitness:

– **Pictogram** as depicted,

– **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

13. Year of label introduction and number of Regulation:

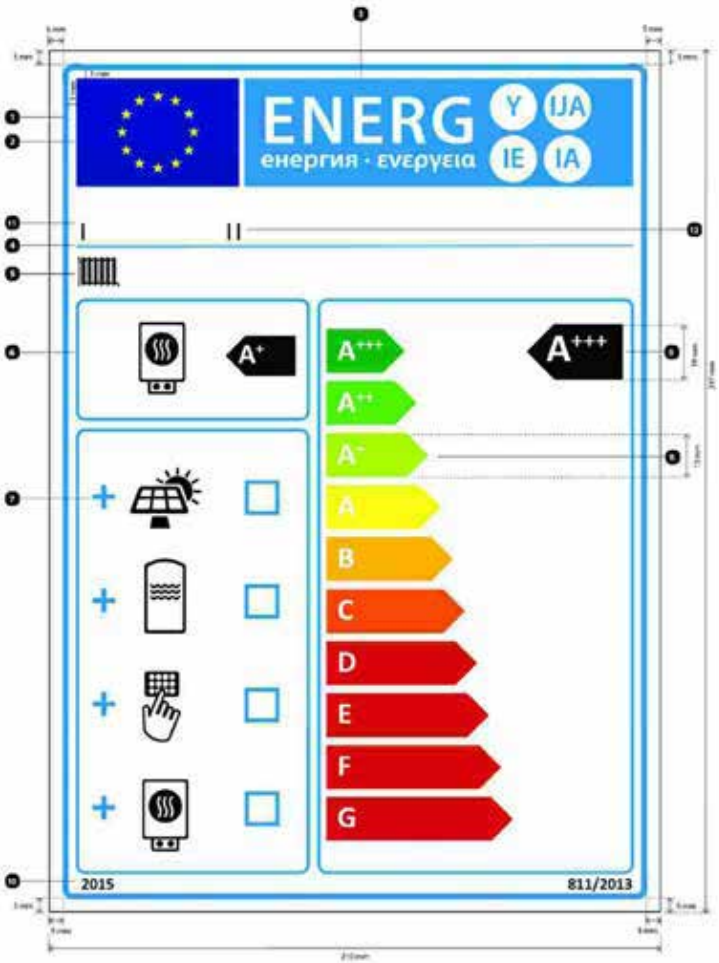
– **Text**: Calibri bold 10 pt.

14. Supplier's name or trademark.

15. Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

11. The design of the label for packages of space heater, temperature control and solar device shall be the following:



Whereby:

(a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.

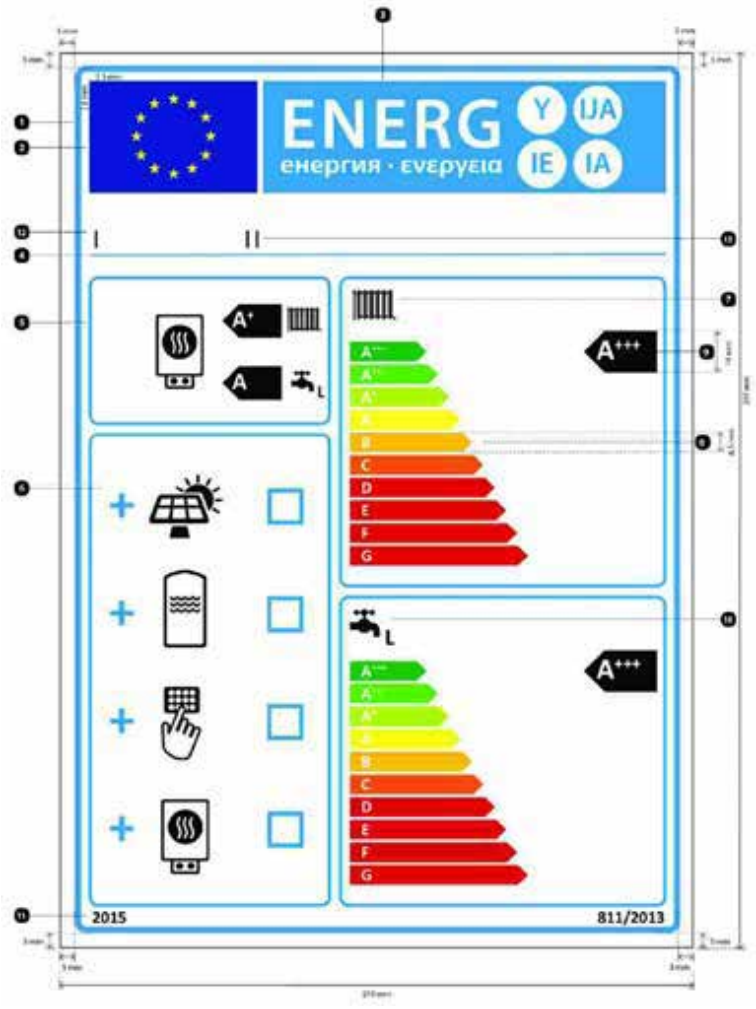
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label: Colour:** X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
4. **Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
5. **Space heating function:**
   – **Pictogram** as depicted.
6. **Space heater:**
   – **Pictogram** as depicted,
   – Seasonal space heating energy efficiency class of space heater:
   – **Arrow**: width: 24 mm, height: 14 mm, 100 % black;
   – **Text**: Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
   – **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
7. **Package with solar collector, hot water storage tank, temperature control and/or supplementary heater:**
   – **Pictograms** as depicted,
   – **'+' symbol**: Calibri bold 50 pt, cyan 100 %,
   – **Boxes: width**: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
   – **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
8. **A^{+++}-G scale with border:**
   – **Arrow**: height: 15 mm, gap: 3 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Seventh class: 00-X-X-00,
      – If applicable, last classes: 00-X-X-00,
   – **Text**: Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
   – **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
9. **Seasonal space heating energy efficiency class for package of space heater, temperature control and solar device:**
   – **Arrow**: width: 33 mm, height: 19 mm, 100 % black,
   – **Text**: Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
10. **Year of label introduction and number of Regulation:**
   – **Text**: Calibri bold 12 pt.

11. Dealer's and/or supplier's name or trademark.

12. Dealer's and/or supplier's model identifier:

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

12. The design of the label for packages of combination heater, temperature control and solar device shall be the following:



Whereby:

(a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
4. **Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
5. **Combination heater:**
   – **Pictograms** as depicted; for water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
   – **Seasonal space heating and water heating energy efficiency class of combination heater:**
   – **Arrow**: width: 19 mm, height: 11 mm, 100 % black,
   – **Text**: Calibri bold 23 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
   – **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
6. **Package with solar collector, hot water storage tank, temperature control and/or supplementary heater:**
   – **Pictogram**s as depicted,
   – **'+' symbo**l: Calibri bold 50 pt, cyan 100 %,
   – **Boxes**: width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
   – **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
7. **Space heating function:**
   – **Pictogram** as depicted.
8. **A^{+++}-G scale with border:**
   – **Arrow**: height: 6,5 mm, gap: 1 mm, colours:
      – Highest class: X-00-X-00,
      – Second class: 70-00-X-00,
      – Third class: 30-00-X-00,
      – Fourth class: 00-00-X-00,
      – Fifth class: 00-30-X-00,
      – Sixth class: 00-70-X-00,
      – Seventh class: 00-X-X-00,
      – If applicable, last classes: 00-X-X-00,
   – **Text**: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
   – **Border**: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
9. **Seasonal space heating and water heating energy efficiency class, respectively, for package of combination heater, temperature control and solar device:**
   – **Arrow**: width: 24 mm, height: 14 mm, 100 % black,
   – **Text**: Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

10. Water heating function:

– **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 22 pt, 100 % black.

11. Year of label introduction and number of Regulation:

– **Text**: Calibri bold 12 pt.

12. Dealer's and/or supplier's name or trademark.

13. Dealer's and/or supplier's model identifier:

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

ANNEX IV
Product fiche

1. SPACE HEATERS

1.1. The information in the product fiche of the space heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trademark;

(b) supplier's model identifier;

(c) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(d) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump space heaters under average climate conditions);

(e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters under average climate conditions);

(f) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters under average climate conditions);

(g) the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer (for heat pump space heaters if applicable);

(h) any specific precautions that shall be taken when the space heater is assembled, installed or maintained; in addition, for cogeneration space heaters:

(i) the electrical efficiency in %, rounded to the nearest integer; in addition, for heat pump space heaters:

(j) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(k) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;

(l) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;

(m) the sound power level L_{WA}, outdoors, in dB, rounded to the nearest integer.

1.2. One fiche may cover a number of space heater models supplied by the same supplier.

1.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. COMBINATION HEATERS

2.1. The information in the product fiche of the combination heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trademark;

(b) supplier's model identifier;

(c) for space heating, the medium-temperature application (and for heat pump combination heaters the low-temperature application, if applicable); for water heating, the declared load profile, expressed as the appropriate letter and typical usage in accordance with Table 15 of Annex VII;

(d) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;

(e) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump combination heaters under average climate conditions);

(f) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters under average climate conditions); for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters under average climate conditions);

(g) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters under average climate conditions); the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters under average climate conditions);

(h) the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer (for heat pump combination heaters if applicable);

(i) if applicable, an indication that the combination heater is able to work only during off-peak hours;

(j) any specific precautions that shall be taken when the combination heater is assembled, installed or maintained;

in addition, for heat pump combination heaters:

(k) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(l) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(m) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(n) the sound power level L_{WA}, outdoors, in dB, rounded to the nearest integer.

2.2. One fiche may cover a number of combination heater models supplied by the same supplier.

2.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 2.1 not already displayed on the label shall also be provided.

3. TEMPERATURE CONTROLS

3.1. The information in the product fiche of the temperature control shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) the class of the temperature control;

(d) the contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place.

3.2. One fiche may cover a number of temperature control models supplied by the same supplier.

4. SOLAR DEVICES

4.1. The information in the product fiche of the solar device shall be provided in the following order and shall be included in the product brochure or other literature provided with the product (for pumps in the collector loop if applicable):

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) the collector aperture area in m^2, to two decimal places;

(d) the collector efficiency in %, rounded to the nearest integer;

(e) the energy efficiency class of the solar hot water storage tank, determined in accordance with point 3 of Annex II;

(f) the standing loss of the solar hot water storage tank in W, rounded to the nearest integer;

(g) the storage volume of the solar hot water storage tank in litres and m^3;

(h) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of *GCV* for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;

(i) the pump power consumption in W, rounded to the nearest integer;

(j) the standby power consumption in W, to two decimal places;

(k) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer.

4.2. One fiche may cover a number of solar device models supplied by the same supplier.

5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

The fiche for packages of space heater, temperature control and solar device shall contain the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, for evaluating the seasonal space heat-

ing energy efficiency of a package of space heater, temperature control and solar device, including the following information:

– I: the value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %;

– II: the factor for weighting the heat output of preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;

– III: the value of the mathematical expression: $294/(11 \cdot \mathrm{Prated})$, whereby *Prated* is related to the preferential space heater;

– IV: the value of the mathematical expression $115/(11 \cdot \mathrm{Prated})$, whereby *Prated* is related to the preferential space heater; in addition, for preferential heat pump space heaters:

– V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;

– VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %.

6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

The fiche for packages of combination heater, temperature control and solar device shall contain the elements set out in points (a) and (b):

(a) the elements set out in Figure 1 and Figure 3, respectively, for evaluating the seasonal space heating energy efficiency of a package of combination heater, temperature control and solar device, including the following information:

– I: the value of the seasonal space heating energy efficiency of the preferential combination heater, expressed in %;

– II: the factor for weighting the heat output of the preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;

– III: the value of the mathematical expression: $294/(11 \cdot \mathrm{Prated})$, whereby *Prated* is related to the preferential combination heater;

– IV: the value of the mathematical expression $294/(11 \cdot \mathrm{Prated})$, whereby *Prated* is related to the preferential combination heater;

in addition, for preferential heat pump combination heaters:

– V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;

– VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %;

(b) the elements set out in Figure 5 for evaluating the water heating energy efficiency of a package of combination heater, temperature control and solar device, where the following information shall be included:

– I: the value of the water heating energy efficiency of the combination heater, expressed in %;

– II: the value of the mathematical expression $(220 \cdot Q_{ref})/Q_{nonsol}$, where Q_{ref} is taken from Table 15 in Annex VII and Q_{nonsol} from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the combination heater;

– III: the value of the mathematical expression $(Q_{aux} \cdot 2{,}5) / (220 \cdot Q_{ref})$, expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 15 in Annex VII for the declared load profile M, L, XL or XXL.

Table 5

For the purposes of Figure 1 of this Annex, weighting of preferential boiler space heater or boiler combination heater and supplementary heater [1]

Psup/ (Prated + Psup) [2]	**II, package without hot water storage tank**	**II, package with hot water storage tank**
0	0	0
0,1	0,30	0,37
0,2	0,55	0,70
0,3	0,75	0,85
0,4	0,85	0,94
0,5	0,95	0,98
0,6	0,98	1,00
≥ 0,7	1,00	1,00

Table 6

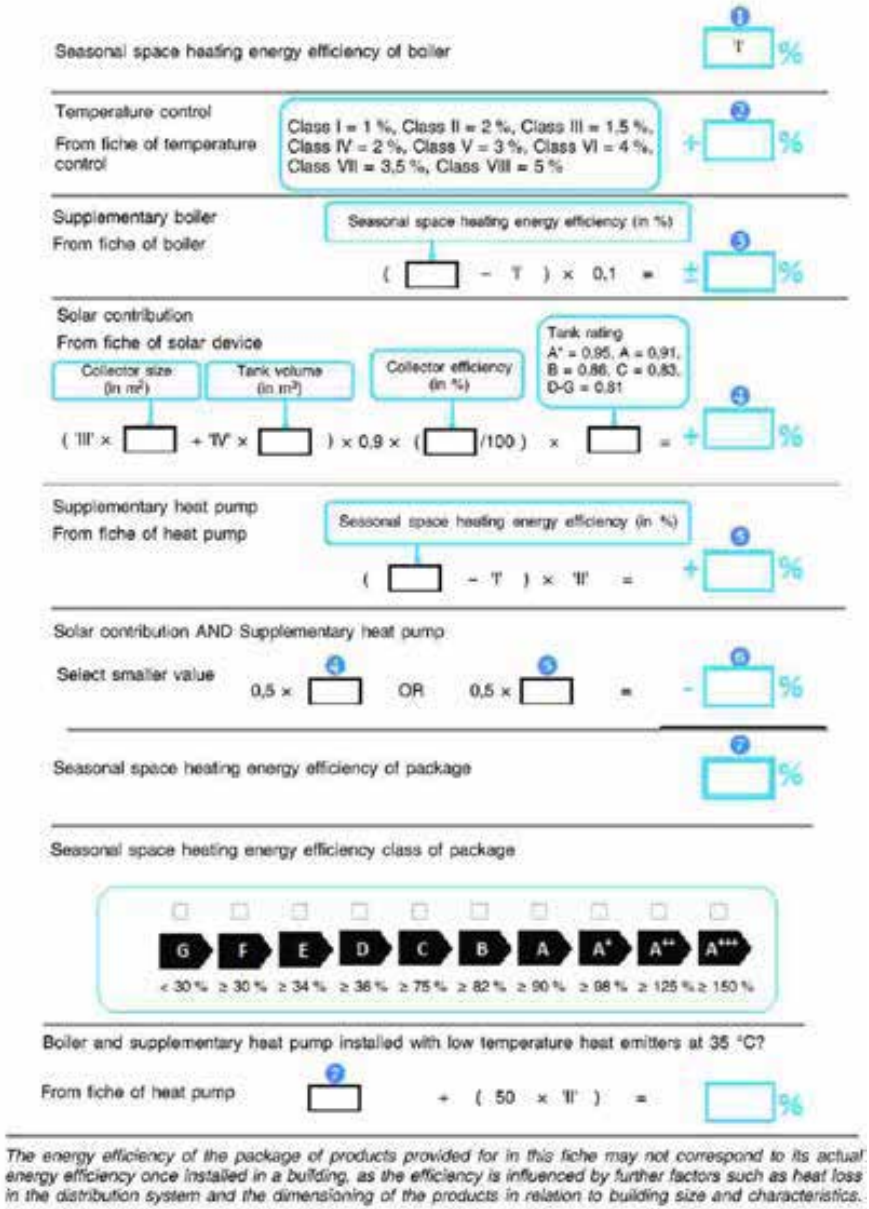
For the purposes of Figures 2 to 4 of this Annex, weighting of preferential cogeneration space heater, heat pump space heater, heat pump combination heater or low-temperature heat pump and supplementary heater [3]

Prated/ (Prated + Psup) [4]	**II, package without hot water storage tank**	**II, package with hot water storage tank**
0	1,00	1,00
0,1	0,70	0,63
0,2	0,45	0,30
0,3	0,25	0,15
0,4	0,15	0,06
0,5	0,05	0,02
0,6	0,02	0
≥ 0,7	0	0

[1] The intermediate values are calculated by linear interpolation between the two adjacent values.
[2] *Prated* is related to the preferential space heater or combination heater.
[3] The intermediate values are calculated by linear interpolation between the two adjacent values.
[4] *Prated* is related to the preferential space heater or combination heater.

Figure 1

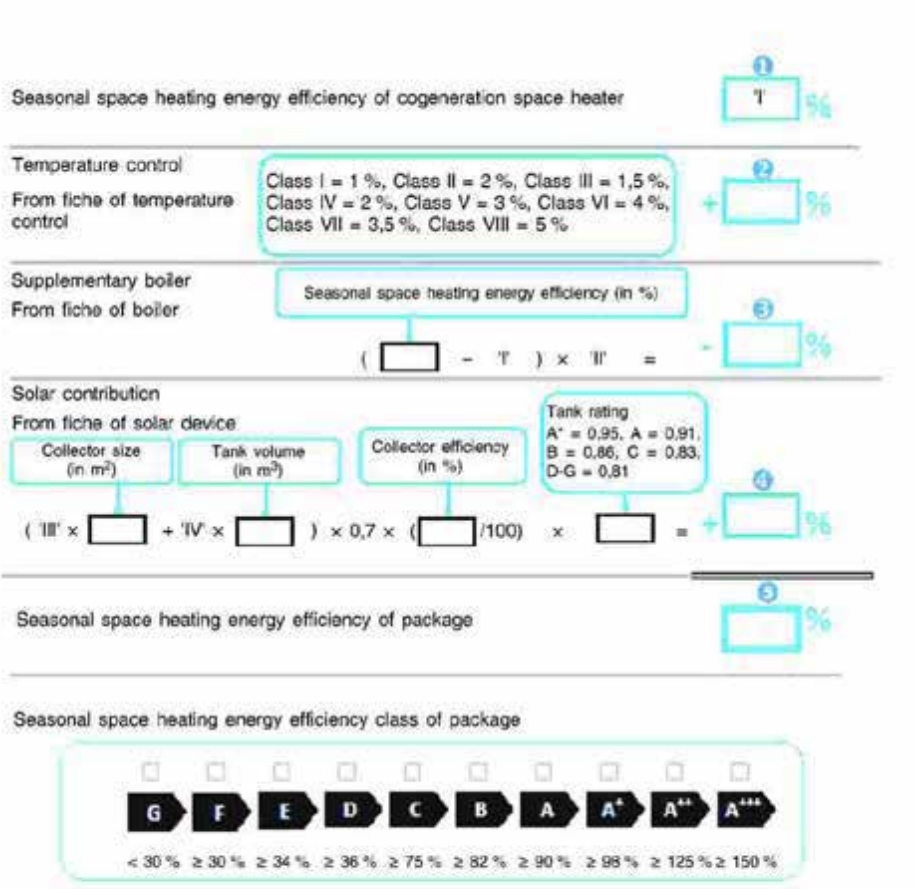
For preferential boiler space heaters and preferential boiler combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 2

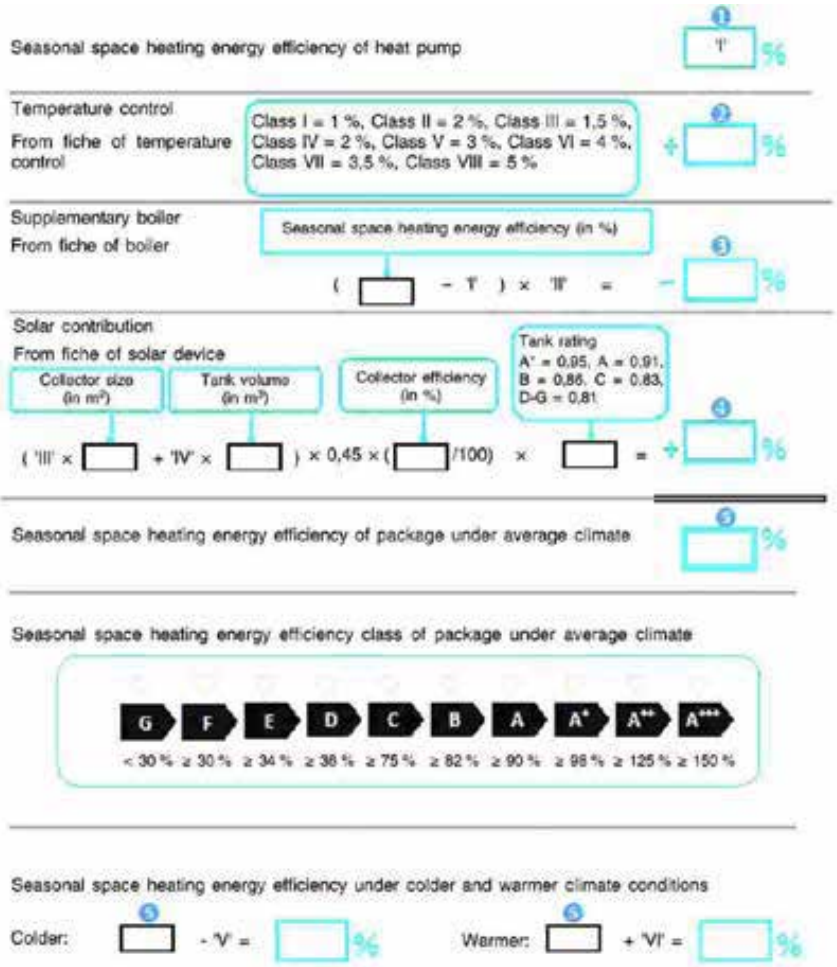
For preferential cogeneration space heaters, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 3

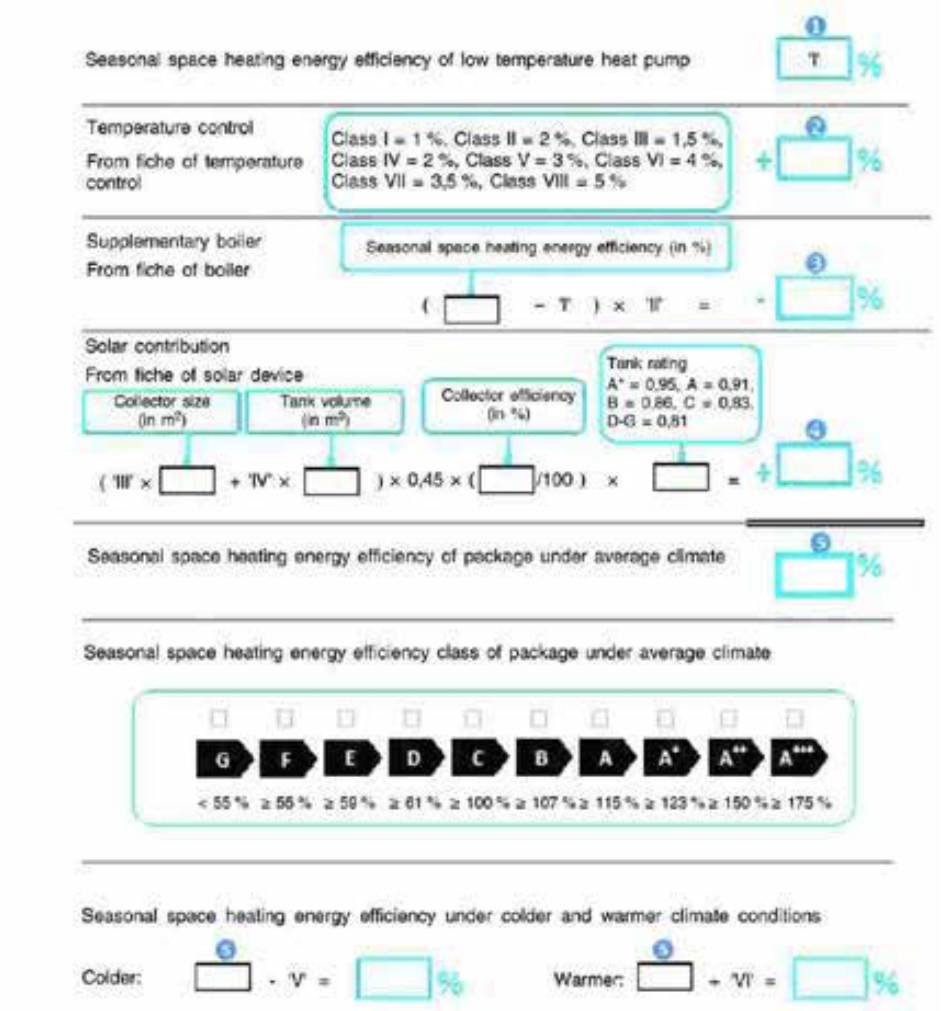
For preferential heat pump space heaters and preferential heat pump combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 4

For preferential low-temperature heat pumps, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 5

For preferential boiler combination heaters and preferential heat pump combination heaters, element of the fiche for a package of combination heater, temperature control and solar device indicating the water heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V
Technical documentation

1. SPACE HEATERS

For space heaters, the technical documentation referred to in Article 3(1)(c) shall include:

(a) the name and address of the supplier;

(b) a description of the space heater model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

- for boiler space heaters and cogeneration space heaters, the technical parameters set out in Table 7, measured and calculated in accordance with Annex VII;
- for heat pump space heaters, the technical parameters set out in Table 8, measured and calculated in accordance with Annex VII;
- for heat pump space heaters where the information relating to a specific model comprising a combination of indoor and outdoor units has been obtained by calculation on the basis of design and/or extrapolation from other combinations, the details of such calculations and/or extrapolations, and of any tests undertaken to verify the accuracy of the calculations, including details of the mathematical model for calculating the performance of such combinations and details of the measurements taken to verify this model;

(g) any specific precautions that shall be taken when the space heater is assembled, installed or maintained.

2. COMBINATION HEATERS

For combination heaters, the technical documentation referred to in Article 3(2)(c) shall include:

(a) the name and address of the supplier;

(b) a description of the combination heater model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

- for boiler combination heaters, the technical parameters set out in Table 7, measured and calculated in accordance with Annex VII;
- for heat pump combination heaters, the technical parameters set out in Table 8, measured and calculated in accordance with Annex VII;
- for heat pump combination heaters where the information relating to a specific model comprising a combination of indoor and outdoor units has been obtained by calculation on the basis of design and/

or extrapolation from other combinations, the details of such calculations and/or extrapolations, and of any tests undertaken to verify the accuracy of the calculations, including details of the mathematical model for calculating the performance of such combinations and details of the measurements taken to verify this model;

(g) any specific precautions that shall be taken when the combination heater is assembled, installed or maintained.

Table 7

Technical parameters for boiler space heaters, boiler combination heaters and cogeneration space heaters

Model(s): [information identifying the model(s) to which the information relates]							
Condensing boiler: [yes/no]							
Low-temperature [2] boiler: [yes/no]							
B11 boiler: [yes/no]							
Cogeneration space heater: [yes/no]				If yes, equipped with a supplementary heater: [yes/no]			
Combination heater: [yes/no]							
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated deat output	*Prated*	x	kW	**Seasonal space heating energy efficiency**	η_s	x	%
For boiler space heaters and boiler combination heaters: Useful heat output				For boiler space heaters and boiler combination heaters: Useful efficiency			
At rated heat output and high-temperature regime [1]	P_4	x,x	kW	At rated heat output and high-temperature regime [1]	η_4	x,x	%
At 30 % of rated heat output and low-temperature regime [2]	P_1	x,x	kW	At 30 % of rated heat output and low-temperature regime [2]	η_1	x,x	%
For cogeneration space heaters: Useful heat output				For cogeneration space heaters: Useful efficiency			
At rated heat output of cogeneration space heater with supplementary heater disabled	$P_{CHP100+Sup0}$	x,x	kW	At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{CHP100+Sup0}$	x,x	%

At rated heat output of cogeneration space heater with supplementary heater enabled	$P_{CHP100+Sup100}$	x,x	kW	At rated heat output of cogeneration space heater with supplementary heater enabled	$\eta_{CHP100+Sup100}$	x,x	%
For cogeneration space heaters: Electrical efficiency				Supplementary heater			
At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{el,CHP100+Sup0}$	x,x	%	Rated heat output	*Psup*	x,x	kW
At rated heat output of cogeneration space heater with supplementary heater enabled	$\eta_{el,CHP100+Sup100}$	x,x	%	Type of energy input			
Auxiliary electricity consumption				Other items			
At full load	*elmax*	x,x	kW	Standby heat loss	P_{stby}	x,x	kW
At part load	*elmin*	x,x	kW	Ignition burner power consumption	P_{ign}	x,x	kW
In standby mode	P_{SB}	x,xxx	kW	Annual energy consumption	Q_{HE}	x	k W h or GJ
				Sound power level, indoors	L_{WA}	x	dB
For combination heaters:							
Declared load profile				**Water heating energy efficiency**	η_{wh}	x	%
Daily electricity consumption	Q_{elec}	x,xxx	kWh	Daily fuel consumption	Q_{fuel}	x,xxx	kWh
Annual electricity consumption	*AEC*	x	kWh	Annual fuel consumption	*AFC*	x	GJ
Contact details	Name and address of the supplier.						

Table 8

Technical parameters for heat pump space heaters and heat pump combination heaters

Model(s): [information identifying the model(s) to which the information relates]							
Air-to-water heat pump: [yes/no]							
Water-to-water heat pump: [yes/no]							
Brine-to-water heat pump: [yes/no]							
Low-temperature heat pump: [yes/no]							
Equipped with a supplementary heater: [yes/no]							
Heat pump combination heater: [yes/no]							
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.							
Parameters shall be declared for average, colder and warmer climate conditions.							
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated deat output (3)	*Prated*	x	kW	**Seasonal space heating energy efficiency**	η_s	x	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T_j			
$T_j = -7$ °C	*Pdh*	x,x	kW	$T_j = -7$ °C	*COPd or PERd*	x , x x or x,x	– or %
$T_j = +2$ °C	*Pdh*	x,x	kW	$T_j = +2$ °C	*COPd or PERd*	x , x x or x,x	– or %
$T_j = +7$ °C	*Pdh*	x,x	kW	$T_j = +7$ °C	*COPd or PERd*	x , x x or x,x	– or %
$T_j = +12$ °C	*Pdh*	x,x	kW	$T_j = +12$ °C	*COPd or PERd*	x , x x or x,x	– or %
T_j = bivalent temperature	*Pdh*	x,x	kW	T_j = bivalent temperature	*COPd or PERd*	x , x x or x,x	– or %
T_j = operation limit temperature	*Pdh*	x,x	kW	T_j = operation limit temperature	*COPd or PERd*	x , x x or x,x	– or %
For air-to-water heat pumps: $T_j = -15$ °C (if *TOL* < – 20 °C)	*Pdh*	x,x	kW	For air-to-water heat pumps: $T_j = -15$ °C (if *TOL* < – 20 °C)	*COPd or PERd*	x , x x or x,x	– or %
Bivalent temperature	T_{biv}	x	°C	For air-to-water heat pumps: Operation limit Temperature	*TOL*	x	°C

Cycling interval capacity for heating	*Pcych*	x,x	kW	Cycling interval efficiency	*COPd or PERd*	x , x x or x,x	– or %
Degradation co-efficient (4)	*Cdh*	x,x	–	Heating water operating limit temperature	*WTOL*	x	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	x,xxx	kW	Rated heat output [4]	*Psup*	x,x	kW
Thermostat-off mode	P_{TO}	x,xxx	kW				
Standby mode	P_{SB}	x,xxx	kW	Type of energy input			
Crankcase heater mode	P_{CK}	x,xxx	kW				
Other items							
Capacity control	fixed/variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	x	m^3/h
Sound power level, in-doors/ outdoors	L_{WA}	x / x	dB	or water- or brine-to- water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	x	m^3/h
Annual energy consumption	Q_{HE}	x	k Wh or GJ				
For heat pump combination heater:							
Declared load profile	x			**Water heating energy efficiency**	η_{wh}	x	%
Daily electricity consumption	Q_{elec}	x,xxx	kWh	Daily fuel consumption	Q_{fuel}	x,xxx	kWh
Annual electricity consumption	*AEC*	x	kWh	Annual fuel consumption	*AFC*	x	GJ
Contact details	Name and address of the supplier.						

[1] High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

[2] Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

[3] For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating *sup(Tj)*.

[4] If *Cdh* is not determined by measurement then the default degradation coefficient is *Cdh* = 0,9.

3. TEMPERATURE CONTROLS

For temperature controls, the technical documentation referred to in Article 3(3)(b) shall include:

(a) the name and address of the supplier;

(b) a description of the temperature control model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

- the class of the temperature control;
- the contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place;

(g) any specific precautions that shall be taken when the temperature control is assembled, installed or maintained.

4. SOLAR DEVICES

For solar devices, the technical documentation referred to in Article 3(4)(b) shall include:

(a) the name and address of the supplier;

(b) a description of the solar device model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters (for pumps in the collector loop if applicable):

- the collector aperture area A_{sol} in m^2, to two decimal places;
- the collector efficiency η_{col} in %, rounded to the nearest integer;
- the energy efficiency class of the solar hot water storage tank, determined in accordance with point 3 of Annex II;
- the standing loss S of the solar hot water storage tank in W, rounded to the nearest integer;
- the storage volume V of the solar hot water storage tank in litres and m^3;
- the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of *GCV* for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;
- the pump power consumption solpump in W, rounded to the nearest integer;
- the standby power consumption solstandby in W, to two decimal places;
- the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer;

(g) any specific precautions that shall be taken when the solar device is assembled, installed or maintained.

5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

For packages of space heater, temperature control and solar device, the technical documentation referred to in Article 3(5)(c) shall include:

(a) the name and address of the supplier;

(b) a description of the package of space heater, temperature control and solar device model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

- the seasonal space heating energy efficiency in %, rounded to the nearest integer;
- the technical parameters set out in points 1, 3 and 4 of this Annex;

(g) any specific precautions that shall be taken when the package of space heater, temperature control and solar device is assembled, installed or maintained.

6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

For packages of combination heater, temperature control and solar device, the technical documentation referred to in Article 3(6)(c) shall include:

(a) the name and address of the supplier;

(b) a description of the package of combination heater, temperature control and solar device model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

- the seasonal space heating energy efficiency and water heating energy efficiency in %, rounded to the nearest integer;
- the technical parameters set out in points 2, 3 and 4 of this Annex;

(g) any specific precautions that shall be taken when the package of combination heater, temperature control and solar device is assembled, installed or maintained.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet

1. SPACE HEATERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump space heaters, under average climate conditions);

(c) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters, under average climate conditions);

(d) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters, under average climate conditions);

(e) the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer (for heat pump space heaters if applicable);

in addition, for cogeneration space heaters:

(f) the electrical efficiency in %, rounded to the nearest integer; in addition, for heat pump space heaters:

(g) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(h) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;

(i) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;

(j) the sound power level L_{WA}, outdoors, in dB, rounded to the nearest integer; in addition, for low-temperature heat pumps:

(k) an indication that the low-temperature heat pump is only suitable for low-temperature application;

1.2. The size and font in which the information referred in point 1.1 is printed or shown shall be legible.

2. COMBINATION HEATERS

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

(a) for space heating, the medium-temperature application; for water heating, the declared load profile, expressed as the appropriate letter and typical usage in accordance with Table 15 of Annex VII;

(b) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;

(c) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to

the nearest integer (for heat pump combination heaters, under average climate conditions);

(d) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters, under average climate conditions); for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters, under average climate conditions);

(e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters, under average climate conditions); the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters, under average climate conditions);

(f) the sound power level L_{WA}, indoors, in dB, rounded to the nearest integer (for heat pump combination heaters if applicable);

(g) if applicable, an indication that the combination heater is able to work only during off-peak hours; in addition, for heat pump combination heaters:

(h) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(i) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(j) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(k) the sound power level L_{WA}, outdoors, in dB, rounded to the nearest integer.

2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

3.1. The information referred to in Article 4(3)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the seasonal space heating energy efficiency in %, rounded to the nearest integer;

(c) the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, of Annex IV.

3.2. The size and font in which the information referred in point 3.1 is printed or shown shall be legible.

4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

4.1. The information referred to in Article 4(4)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;

(b) the seasonal space heating energy efficiency and the water heating energy efficiency in %, rounded to the nearest integer;

(c) the elements set out in Figure 1 and Figure 3, respectively, of Annex IV;

(d) the elements set out in Figure 5 of Annex IV.

4.2. The size and font in which the information referred in point 4.1 is printed or shown shall be legible.

ANNEX VII
Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible methods that take into account the generally recognised state- of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 6.

2. General conditions for measurements and calculations

(a) For the purposes of the measurements set out in points 3 to 7, the indoor ambient temperature shall be set at 20 °C.

(b) For the purposes of the calculations set out in points 3 to 7, electricity consumption shall be multiplied by a conversion coefficient *CC* of 2,5, unless the annual electricity consumption is expressed in final energy for the end-user, as set out in points 3(b), 4(g), 5(e) and 6.

(c) For heaters equipped with supplementary heaters, the measurement and calculation of rated heat output, seasonal space heating energy efficiency, water heating energy efficiency, sound power level and emissions of nitrogen oxides shall take account of the supplementary heater.

(d) Declared values for rated heat output, seasonal space heating energy efficiency, water heating energy efficiency, annual energy consumption and sound power level shall be rounded to the nearest integer.

3. Seasonal space heating energy efficiency and consumption of boiler space heaters, boiler combination heaters and cogeneration space heaters

(a) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal space heating energy efficiency in active mode η_{son} , corrected by contributions accounting for temperature controls, auxiliary electricity consumption, standby heat loss, ignition burner power consumption (if applicable) and, for cogeneration space heaters, corrected by adding the electrical efficiency multiplied by a conversion coefficient *CC* of 2,5.

(b) The annual energy consumption Q_{HE} in kWh in terms of final energy and/or in GJ in terms of *GCV* shall be calculated as the ratio of the reference annual heating demand and the seasonal space heating energy efficiency.

4. Seasonal space heating energy efficiency and consumption of heat pump space heaters and heat pump combination heaters

(a) For establishing the rated coefficient of performance COP_{rated} or rated primary energy ratio PER_{rated} , or the sound power level, the operating conditions shall be the standard rating conditions set out in Table 9 and the same declared capacity for heating shall be used.

(b) The active mode coefficient of performance $SCOP_{on}$ for average, colder and warmer climate conditions shall be calculated on the basis of the part load for heating $Ph(T_j)$, the supplementary capacity for heating $sup(T_j)$ (if applicable), and the bin-specific coefficient of performance $COPbin(T_j)$ or bin-specific primary

energy ratio *PERbin(T_j)*, weighted by the bin-hours for which the bin conditions apply, using the following conditions:

– the reference design conditions set out in Table 10;

– the European reference heating season under average, colder and warmer climate conditions set out in Table 12;

– if applicable, the effects of any degradation of energy efficiency caused by cycling, depending on the type of control of the heating capacity.

(c) The reference annual heating demand Q_H shall be the design load for heating *Pdesignh* for average, colder and warmer climate conditions, multiplied by the annual equivalent active mode hours H_{HE} of 2 066, 2 465 and 1 336 for average, colder and warmer climate conditions, respectively.

(d) The annual energy consumption Q_{HE} shall be calculated as the sum of:

– the ratio of the reference annual heating demand Q_H and the active mode coefficient of performance $SCOP_{on}$ or active mode primary energy ratio $SPER_{on}$; and

– the energy consumption for off, thermostat-off, standby, and crankcase heater mode during the heating season.

(e) The seasonal coefficient of performance *SCOP* or seasonal primary energy ratio *SPER* shall be calculated as the ratio of the reference annual heating demand Q_H and the annual energy consumption Q_{HE}.

(f) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal coefficient of performance *SCOP* divided by the conversion coefficient *CC* or the seasonal primary energy ratio *SPER*,

corrected by contributions accounting for temperature controls and, for water-/brine-to-water heat pump space heaters and heat pump combination heaters, the electricity consumption of one or more ground water pumps.

(g) The annual energy consumption Q_{HE} in kWh in terms of final energy and/or GJ in terms of *GCV* shall be calculated as the ratio of the reference annual heating demand Q_H and the seasonal space heating energy efficiency η_s.

5. Water heating energy efficiency of combination heaters

The water heating energy efficiency η_{wh} of a combination heater shall be calculated as the ratio between the reference energy Q_{ref} and the energy required for its generation under the following conditions:

(a) measurements shall be carried out using the load profiles set out in Table 15;

(b) measurements shall be carried out using a 24-hour measurement cycle as follows:

– 00:00 to 06:59: no water draw-off;

– from 07:00: water draw-offs according to the declared load profile;

– from end of last water draw-off until 24:00: no water draw-off;

(c) the declared load profile shall be the maximum load profile or the load profile one below the maximum load profile;

(d) for heat pump combination heaters, the following additional conditions apply:

– heat pump combination heaters shall be tested under the conditions set out in Table 9;

– heat pump combination heaters which use ventilation exhaust air as the heat source shall be tested

under the conditions set out in Table 11;

(e) the annual electricity consumption *AEC* in kWh in terms of final energy shall be calculated as daily electricity consumption Q_{elec} in kWh in terms of final energy multiplied by 220;

(f) the annual fuel consumption *AFC* in GJ in terms of *GCV* shall be calculated as daily fuel consumption Q_{fuel} multiplied by 220.

6. Conditions for measurements and calculations of solar devices

The solar collector, solar hot water storage tank and pump in the collector loop (if applicable) shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination.

The results shall be used for the determination of the standing loss S and the calculations of the collector efficiency η_{col}, the annual non-solar heat contribution Q_{nonsol} for the load profiles M, L, XL and XXL under the average climate conditions set out in Tables 13 and 14, and the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy.

Table 9

Standard rating conditions for heat pump space heaters and heat pump combination heaters

Heat source	**Outdoor heat exchanger**		**Indoor heat exchanger**			
	Climate condition	**Inlet dry bulb (wet bulb) temperature**	**Heat pump space heaters and heat pump combination heaters, except low-temperature heat pumps**		**Low-temperature heat pumps**	
			Inlet temperature	**Outlet temperature**	**Inlet temperature**	**Outlet temperature**
Outdoor air	Average	+ 7 °C (+ 6 °C)	+ 47 °C	+ 55 °C	+ 30 °C	+ 35 °C
	Colder	+ 2 °C (+ 1 °C)				
	Warmer	+ 14 °C (+13 °C)				
Exhaust air	All	+ 20 °C (+ 12 °C)				
		Inlet / outlet temperature				
Water	All	+ 10 °C / + 7 °C				
Brine	All	0 °C / - 3 °C				

Table 10

Reference design conditions for heat pump space heaters and heat pump combination heaters, temperatures in dry bulb air temperature (wet bulb air temperature indicated in brackets)

Climate condition	Reference design temperature	Bivalent temperature	Operation limit temperature
	Tdesignh	T_{biv}	***TOL***
Average	– 10 (– 11) °C	maximum + 2 °C	maximum – 7 °C
Colder	– 22 (– 23) °C	maximum – 7 °C	maximum – 15 °C
Warmer	+ 2 (+ 1) °C	maximum + 7 °C	maximum + 2 °C

Table 11

Maximum ventilation exhaust air available [m³/h], with humidity of 5,5 g/m³

Declared load profile	XXS	XS	S	M	L	XL	XXL
Maximum ventilation exhaust air available	109	128	128	159	190	870	1021

Table 12

European reference heating season under average, colder and warmer climate conditions for heat pump space heaters and heat pump combination heaters

bin_j	T_j [°C]	Average climate conditions	Colder climate conditions	Warmer climate conditions
		H_j [h/annum]	H_j [h/annum]	H_j [h/annum]
1 to 8	–30 to –23	0	0	0
9	–22	0	1	0
10	–21	0	6	0
11	–20	0	13	0
12	–19	0	17	0
13	–18	0	19	0
14	–17	0	26	0
15	–16	0	39	0
16	–15	0	41	0
17	–14	0	35	0
18	–13	0	52	0
19	–12	0	37	0
20	–11	0	41	0
21	–10	1	43	0
22	–9	25	54	0

23	–8	23	90	0
24	–7	24	125	0
25	–6	27	169	0
26	–5	68	195	0
27	–4	91	278	0
28	–3	89	306	0
29	–2	165	454	0
30	–1	173	385	0
31	0	240	490	0
32	1	280	533	0
33	2	320	380	3
34	3	357	228	22
35	4	356	261	63
36	5	303	279	63
37	6	330	229	175
38	7	326	269	162
39	8	348	233	259
40	9	335	230	360
41	10	315	243	428
42	11	215	191	430
43	12	169	146	503
44	13	151	150	444
45	14	105	97	384
46	15	74	61	294
Total hours:		4 910	6 446	3 590

Table 13

Average daytime temperature [°C]

	January	**february**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Average climate conditions	+2,8	+2,6	+7,4	+12,2	+16,3	+19,8	+21,0	+22,0	+17,0	+11,9	+5,6	+3,2

Table 14

Average global solar irradiance [W/m²]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	70	104	149	192	221	222	232	217	176	129	80	56

Table 15

Water heating load profiles of combination heaters

h	3XS			XXS			XS			S			
	Q_{tap}	f	T_m	Q_{tap}	f	T_m	Q_{tap}	f	T_m	Q_{tap}	f	T_m	T_p
	kWh	l/min	°C	kWh	l/min	°C	kWh	l/min	°C	kWh	l/min	°C	°C
7:00	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
7:05	**0,015**	2	25										
7:15	**0,015**	2	25										
7:26	**0,015**	2	25										
7:30	**0,015**	2	25	**0,105**	2	25	**0,525**	3	35	**0,105**	3	25	
7:45													
8:01													
8:05													
8:15													
8:25													
8:30				**0,105**	2	25				**0,105**	3	25	
8:45													
9:00	**0,015**	2	25										
9:30	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
10:00													
10:30													
11:00													
11:30	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
11:45	**0,015**	2	25	**0,105**	2	25				**0,105**	3	25	
12:00	**0,015**	2	25	**0,105**	2	25							
12:30	**0,015**	2	25	**0,105**	2	25							
12:45	**0,015**	2	25	**0,105**	2	25	**0,525**	3	35	**0,315**	4	10	55
14:30	**0,015**	2	25										
15:00	**0,015**	2	25										
15:30	**0,015**	2	25										
16:00	**0,015**	2	25										

16:30													
17:00													
18:00				**0,105**	2	25				**0,105**	3	25	
18:15				**0,105**	2	25				**0,105**	3	40	
18:30	**0,015**	2	25	**0,105**	2	25							
19:00	**0,015**	2	25	**0,105**	2	25							
19:30	**0,015**	2	25	**0,105**	2	25							
20:00				**0,105**	2	25							
20:30							**0,105**	3	35	**0,42**	4	10	55
20:45				**0,105**	2	25							
20:46													
21:00				**0,105**	2	25							
21:15	**0,015**	2	25	**0,105**	2	25							
21:30	**0,015**	2	25							**0,525**	5	45	
21:35	**0,015**	2	25	**0,105**	2	25							
21:45	**0,015**	2	25	**0,105**	2	25							
Q_{ref}	**0,345**			**2,100**			**2,100**			**2,100**			

Continued Table 15

Water heating load profiles of combination heaters

h	M				L				XL			
	Q_{tap}	f	T_m	T_p	Q_{tap}	f	T_m	T_p	Q_{tap}	f	T_m	T_p
	kWh	**l/min**	**°C**	**°C**	**kWh**	**l/min**	**°C**	**°C**	**kWh**	**l/min**	**°C**	**°C**
7:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
7:05	**1,4**	6	40		**1,4**	6	40					
7:15									**1,82**	6	40	
7:26									**0,105**	3	25	
7:30	**0,105**	3	25		**0,105**	3	25					
7:45					**0,105**	3	25		**4,42**	10	10	40
8:01	**0,105**	3	25						**0,105**	3	25	
8:05					**3,605**	10	10	40				
8:15	**0,105**	3	25						**0,105**	3	25	
8:25					**0,105**	3	25					
8:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
8:45	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
9:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
9:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
10:00									**0,105**	3	25	
10:30	**0,105**	3	25	40	**0,105**	3	25	40	**0,105**	3	10	40
11:00									**0,105**	3	25	
11:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
11:45	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	

12:00												
12:30												
12:45	**0,315**	4	10	55	**0,315**	4	10	55	**0,735**	4	10	55
14:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
15:00									**0,105**	3	25	
15:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
16:00									**0,105**	3	25	
16:30	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
17:00									**0,105**	3	25	
18:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
18:15	**0,105**	3	40		**0,105**	3	40		**0,105**	3	40	
18:30	**0,105**	3	40		**0,105**	3	40		**0,105**	3	40	
19:00	**0,105**	3	25		**0,105**	3	25		**0,105**	3	25	
19:30												
20:00												
20:30	**0,735**	4	10	55	**0,735**	4	10	55	**0,735**	4	10	55
20:45												
20:46									**4,42**	10	10	40
21:00					**3,605**	10	10	40				
21:15	**0,105**	3	25						**0,105**	3	25	
21:30	**1,4**	6	40		**0,105**	3	25		**4,42**	10	10	40
21:35												
21:45												
Q_{ref}	**5,845**				**11,655**				**19,07**			

Continued Table 15

Water heating load profiles of combination heaters

h	XXL			
	Q_{tap}	f	T_m	T_p
	kWh	**l/min**	**°C**	**°C**
7:00	**0,105**	3	25	
7:05				
7:15	**1,82**	6	40	
7:26	**0,105**	3	25	
7:30				
7:45	**6,24**	16	10	40
8:01	**0,105**	3	25	
8:05				
8:15	**0,105**	3	25	
8:25				
8:30	**0,105**	3	25	
8:45	**0,105**	3	25	

9:00	**0,105**	3	25	
9:30	**0,105**	3	25	
10:00	**0,105**	3	25	
10:30	**0,105**	3	10	40
11:00	**0,105**	3	25	
11:30	**0,105**	3	25	
11:45	**0,105**	3	25	
12:00				
12:30				
12:45	**0,735**	4	10	55
14:30	**0,105**	3	25	
15:00	**0,105**	3	25	
15:30	**0,105**	3	25	
16:00	**0,105**	3	25	
16:30	**0,105**	3	25	
17:00	**0,105**	3	25	
18:00	**0,105**	3	25	
18:15	**0,105**	3	40	
18:30	**0,105**	3	40	
19:00	**0,105**	3	25	
19:30				
20:00				
20:30	**0,735**	4	10	55
20:45				
20:46	**6,24**	16	10	40
21:00				
21:15	**0,105**	3	25	
21:30	**6,24**	16	10	40
21:35				
21:45				
Q_{ref}	**24,53**			

ANNEX VIII
Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 16.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 16.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 16 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 16: Verification tolerances

Parameters	Verification tolerances
Space-heating energy efficiency, η_s	The determined value shall not be lower than the declared value by more than 8 %.
Water-heating energy efficiency, η_{wh}	The determined value shall not be lower than the declared value by more than 8 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).
Class of the temperature control	The class of the temperature controls corresponds to the declared class of the unit.
Collector efficiency, η_{col}	The determined value shall not be lower than the declared value by more than 5 %.
Standing loss, S	The determined value shall not exceed the declared value by more than 5 %.
Auxiliary electricity consumption, Q_{aux}	The determined value shall not exceed the declared value by more than 5 %.

ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate “Product fiche”. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 392/2012 of 1 March 2012 supplementing Directive 2010/30/EU with regard to energy labelling of household tumble driers

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated and gas-fired household tumble driers and built-in household tumble driers, including those sold for non-household use.

2. This Regulation shall not apply to household combined washer-driers and household spin-extractors.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'household tumble drier' means an appliance in which textiles are dried by tumbling in a rotating drum, through which heated air is passed and which is designed to be used principally for non-professional purposes;

(2) 'built-in household tumble drier' means a household tumble drier intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;

(3) 'household combined washer-drier' means a household washing machine which includes both a spin extraction function and also a means for drying the textiles, usually by heating and tumbling;

(4) 'household spin-extractor', also known commercially as 'spin-drier', means an appliance in which water is removed from the textiles by centrifugal action in a rotating drum and drained through an automatic pump and which is designed to be used principally for non-professional purposes;

(5) 'air-vented tumble drier' means a tumble drier that draws in fresh air, passes it over the textiles and vents the resulting moist air into the room or outside;

(6) 'condenser tumble drier' means a tumble drier which includes a device (either using condensation or any other means) for removing moisture from the air used for the drying process;

(7) 'automatic tumble drier' means a tumble drier which switches off the drying process when a certain moisture content of the load is detected, for example through conductivity or temperature sensing;

(8) 'non-automatic tumble drier' means a tumble drier which switches off the drying process after a pre-defined period, usually controlled by a timer, but which may also be manually switched off;

(9) 'programme' means a series of operations that are predefined and which are declared by the supplier as suitable for drying certain types of textile;

(10) 'cycle' means a complete drying process, as defined for the selected programme;

(11) 'programme time' means the time that elapses from the initiation of the programme until the completion of the programme, excluding any end-user programmed delay;

(12) 'rated capacity' means the maximum mass in kilograms, indicated by the supplier in 0,5 kilogram increments of dry textiles of a particular type, which can be treated in a household tumble drier with the selected programme, when loaded in accordance with the supplier's instructions;

(13) 'partial load' means half of the rated capacity of a household tumble drier for a given programme;

(14) 'condensation efficiency' means the ratio between the mass of moisture condensed by a condenser tumble drier and the mass of moisture removed from the load at the end of a cycle;

(15) 'off-mode' means a condition where the household tumble drier is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household tumble drier is connected to a power source and used in accordance with the supplier's instructions; where there is no control or switch accessible to the end-user, 'off-mode' means the condition reached after the household tumble drier reverts to a steady-state power consumption on its own;

(16) 'left-on mode' means the lowest power consumption mode that may persist for an indefinite time after completion of the programme without any further intervention by the end-user besides unloading of the household tumble drier;

(17) 'equivalent household tumble drier' means a model of household tumble drier placed on the market with the same rated capacity, technical and performance characteristics, energy consumption, condensation efficiency where relevant, standard cotton programme time and airborne acoustical noise emissions during drying as another model of household tumble drier placed on the market under a different commercial code number by the same supplier;

(18) 'end-user' means a consumer buying or expected to buy a household tumble drier;

(19) 'point of sale' means a location where household tumble driers are displayed or offered for sale, hire or hire-purchase.

(20) 'standard cotton programme' means the cycle which dries cotton laundry with an initial moisture content of the load of 60% up to a remaining moisture content of the load of 0%.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

(a) each household tumble drier is supplied with a printed label in the format and containing the information set out in Annex I;

(b) a product fiche, as set out in Annex II, is made available;

(c) technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement for a specific model of household tumble drier contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific model of household tumble drier which describes its specific technical parameters includes the energy efficiency class of that model;

(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models;

(g) an electronic product fiche as set out in Annex II is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) each household tumble drier, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household tumble drier, in such a way as to be clearly visible;

(b) household tumble driers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/ EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC, are marketed with the information provided by suppliers in accordance with Annex IV to this Regulation. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;

(c) any advertisement for a specific model of household tumble drier contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model of household tumble drier which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex V for assessing the conformity of the declared energy efficiency class, the energy consumption per cycle, the condensation efficiency class where applicable, the rated capacity, the power consumption in off-mode and left-on mode, the duration of the left-on mode, the programme time and airborne acoustical noise emissions.

Article 7

Revision

<...>

Article 8

Repeal

<...>

Article 9

Transitional provisions

1. Article 3(d) and (e) and Article 4(b), (c) and (d) shall not apply to printed advertisements and printed technical promotional material published before **30 April 2016**.

2. Household tumble driers placed on the market before **1 January 2016** shall comply with the provisions of Directive 95/13/EC.

3. Household tumble driers which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 95/13/EC.

Article 10

Entry into force and application

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties.**

2. It shall apply from **1 January 2016**. However, Article 3(d) and (e) and Article 4(b), (c) and (d) shall apply from **30 April 2016**.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation.

ANNEX I
Label

1. LABEL FOR AIR-VENTED HOUSEHOLD TUMBLE DRIER



I
II
III
IV
V
VI
VII
VIII

1.1. The following information shall be included in the label for air vented household tumble driers:

I. supplier's name or trade mark;

II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household tumble drier model from other models with the same trade mark or supplier's name;

III. the energy efficiency class as defined in point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household tumble drier shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. weighted annual energy consumption *(AE_C)* in kWh/year, rounded up to the nearest integer and calculated in accordance with Annex VII;

V. information on the type of household tumble drier;

VI. cycle time corresponding to the standard cotton programme at full load in minutes and rounded to the nearest minute;

VII. rated capacity, in kg, for the standard cotton programme at full load;

VIII. the sound power level (weighted average value – L_{WA}), during the drying phase, for the standard cotton programme at full load, expressed in dB, rounded to the nearest integer.

1.2. The design of the label for air vented household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

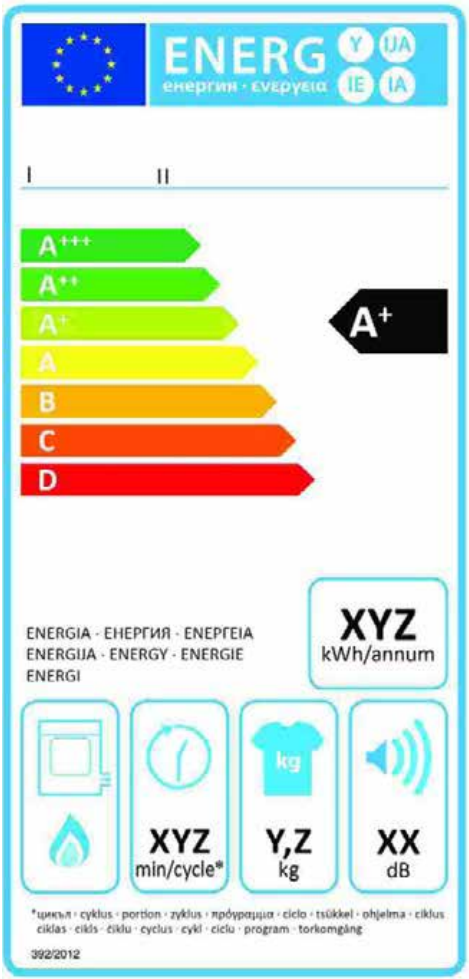
2. LABEL FOR CONDENSER HOUSEHOLD TUMBLE DRIER



2.1. In addition to the information listed in point 1.1, the label for condenser household tumble driers shall include:

IX. the condensation efficiency class in accordance with point 2 of Annex VI.

2.2. The design of the label for condenser household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.



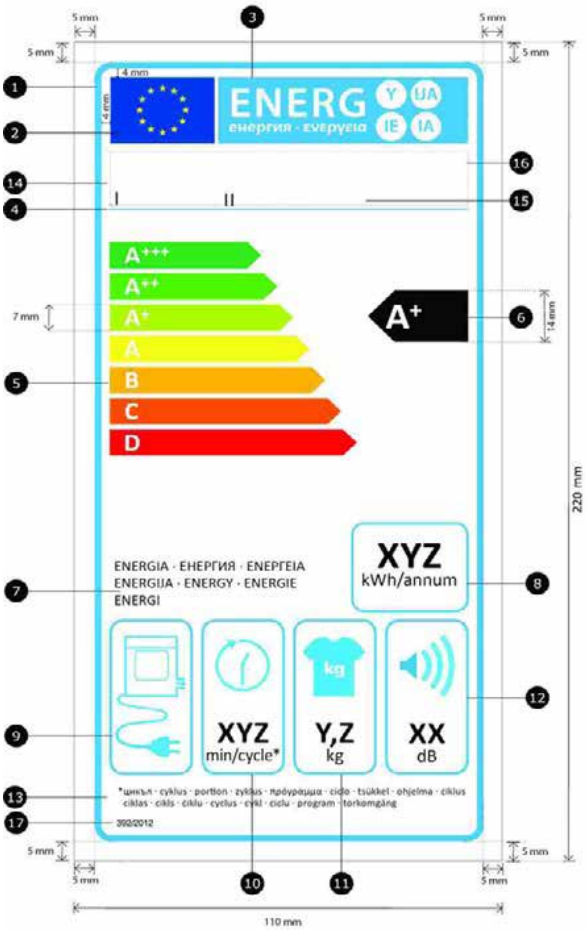
I
II
III
IV
V
VI
VII
VIII

3.1. The information listed in point 1.1 shall be included in the label for gas fired household tumble driers.

3.2. The design of the label for gas fired household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

4. LABEL DESIGN

4.1. For air vented household tumble driers, the design of the label shall be as in the figure below.



Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

1. **Eu label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm.
2. **EU logo – colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:** colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined):

width: 92 mm, height: 17 mm.

4. **Sub-logos border:** 1 pt – colour: Cyan 100 % – length: 92,5 mm.
5. **A-G scale**
   - **Arrow**: height: 7 mm, gap: 0,75 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class: 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, white aligned on a single row.
6. **Energy efficiency class**
   - **Arrow**: width: 26 mm, height: 14 mm, 100 % black;
   - **Text**: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, white aligned on a single row.
7. **Energy**
   - **Text**: Calibri regular 11 pt, capitals, 100 % black.
8. **Weighted annual energy consumption:**
   - **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.
   - **Value**: Calibri bold 30 pt, 100 % black.
   - **Second line**: Calibri regular 14 pt, 100 % black.
9. **Type of household tumble drier:**
   - **Pictogram** as depicted
   - **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.
10. **Cycle time:**
    - **Pictogram** as depicted
    - **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.
    - **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
11. **Rated capacity:**
    - **Pictogram** as depicted
    - **Border**: 2 pt – colour: Cyan 100% – round corners: 3,5 mm.
    - **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
12. **Sound power level:**
    - **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

13. Asterisk: Calibri regular 6 pt, 100 % black.

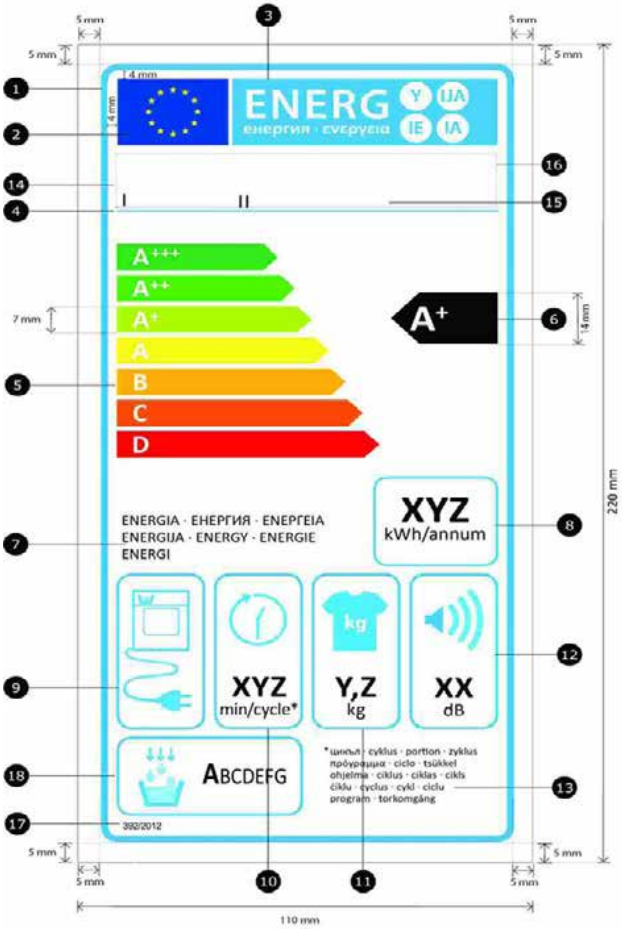
14. Supplier's name or trade mark

15. Supplier's model identifier

16. The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

17. Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

4.2. For condenser household tumble driers, the design of the label shall be as in the figure below.



Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

1. **Eu label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm.
2. **EU logo** – colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.
4. **Sub-logos border:** 1 pt – colour: Cyan 100 % – length: 92,5 mm.
5. **A-G scale**
   - **Arrow**: height: 7 mm, gap: 0,75 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class: 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, white aligned on a single row.
6. **Energy efficiency class**
   - **Arrow**: width: 26 mm, height: 14 mm, 100 % black;
   - **Text**: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, white aligned on a single row.
7. **Energy**
   - **Text**: Calibri regular 11 pt, capitals, 100 % black.
8. **Weighted annual energy consumption:**
   - **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.
   - **Value**: Calibri bold 30 pt, 100 % black.
   - **Second line**: Calibri regular 14 pt, 100 % black.
9. **Type of household tumble drier:**
   - **Pictogram** as depicted
   - **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.
10. **Cycle time:**
    - **Pictogram** as depicted
    - **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

11. Rated capacity:

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

12. Sound power level:

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

13. Asterisk: Calibri regular 6 pt, 100 % black.

14. Supplier's name or trade mark

15. Supplier's model identifier

16. The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

17. Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

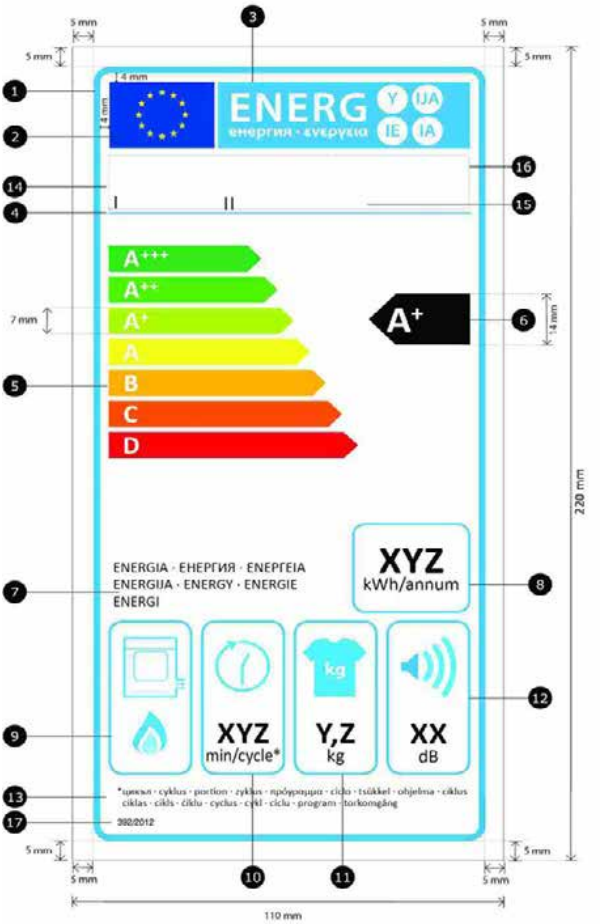
18. Condensation efficiency class:

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri regular 16 pt, horizontal scale 75 %, 100 % black and Calibri bold 22 pt, horizontal scale 75 %, 100 % black.

4.3. For gas fired household tumble driers, the design of the label shall be as in the figure below.



Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

1. **Eu label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm.
2. **EU logo** – colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:** colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.

4. **Sub-logos border:** 1 pt – colour: Cyan 100 % – length: 92,5 mm.
5. **A-G scale**

– **Arrow**: height: 7 mm, gap: 0,75 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class: 00-X-X-00.

– **Text**: Calibri bold 18 pt, capitals and white; ·+· symbols: Calibri bold 12 pt, white aligned on a single row.

6. **Energy efficiency class**

– **Arrow**: width: 26 mm, height: 14 mm, 100 % black;

– **Text**: Calibri bold 29 pt, capitals and white; ·+· symbols: Calibri bold 18 pt, white aligned on a single row.

7. **Energy**

– **Text**: Calibri regular 11 pt, capitals, 100 % black.

8. **Weighted annual energy consumption:**

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 30 pt, 100 % black.

– **Second line**: Calibri regular 14 pt, 100 % black.

9. **Type of household tumble drier:**

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

10. **Cycle time:**

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

11. **Rated capacity:**

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

12. **Sound power level:**

– **Pictogram** as depicted

– **Border**: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

13. Asterisk: Calibri regular 6 pt, 100 % black

14. Supplier's name or trade mark

15. Supplier's model identifier

16. The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

17. Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

ANNEX II
Product Fiche

1. The information in the product fiche of household tumble driers shall be given in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier, which means the code, usually alphanumeric, which distinguishes a specific household tumble drier model from other models with the same trade mark or supplier's name;

(c) rated capacity in kg of cotton laundry for the standard cotton programme at full load;

(d) whether the household tumble drier is an air-vented, condenser or gas-fired household tumble drier;

(e) energy efficiency class in accordance with point 1 of Annex VI;

(f) for electric mains-operated household tumble drier:

the weighted Annual Energy Consumption (AE_C) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AE_{C(Gas)}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

(g) whether the household tumble drier is an 'automatic tumble drier' or 'non-automatic tumble drier';

(h) where the household tumble drier has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;

(i) the energy consumption (E_{dry}, $E_{dry½}$, E_{gdry}, $E_{gdry½}$, $E_{gdry,a}$, $E_{gdry½,a}$) of the standard cotton programme at full and partial load;

(j) the power consumption of the off-mode (P_o) and of the left-on mode (P_l) for the standard cotton programme at full load;

(k) if the household tumble drier is equipped with a power management system, the duration of the 'left-on mode';

(l) indication that the 'standard cotton programme' used at full and partial load is the standard drying programme to which the information in the label and the fiche relates, that this programme is suitable for drying normal wet cotton laundry and that it is the most efficient programme in terms of energy consumption for cotton;

(m) the weighted programme time (T_t) of the 'standard cotton programme at full and partial load' in minutes and rounded to the nearest minute as well as the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry½}$) in minutes and rounded to the nearest minute;

(n) if the household tumble drier is a condenser tumble drier, the condensation efficiency class in accordance with point 2 of Annex VI, expressed as 'condensation efficiency class 'X' on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);

(o) if the household tumble drier is a condenser tumble drier, the average condensation efficiency C_{dry} and $C_{dry½}$ of the standard cotton programme at full load and partial load and the weighted condensation efficiency (C_t) for the 'standard cotton programme at full and partial load', as a percentage and rounded to the nearest whole percent;

(p) the sound power level (weighted average value – L_{WA}) expressed in dB and rounded to the nearest integer for the standard cotton programme at full load;

(q) if the household tumble drier is intended to be built-in, an indication to this effect.

2. One product fiche may cover a number of household tumble drier models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III
Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

(a) the name and address of the supplier;

(b) a general description of the household tumble drier model, sufficient for it to be unequivocally and easily identified;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters for measurements as follows:

(i) for electric mains-operated household tumble drier:

the energy consumption (E_{dry}, $E_{dry½}$, E_{gdry}, $E_{gdry½}$, $E_{gdry,a}$, $E_{gdry½,a}$) of the standard cotton programme at full and partial load,

for household gas-fired tumble drier:

the weighted Annual Energy Consumption (*AEC(Gas)*) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

(ii) power consumption in 'off-mode' and the power consumption in 'left-on mode';

(iii) the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry½}$), in minutes and rounded to the nearest minute;

(iv) if the household tumble drier is equipped with a power management system, the duration of the 'left-on mode';

(v) if the household tumble drier is a condenser tumble drier, the average condensation efficiency C_{dry} of the standard cotton programme at full load and the average condensation efficiency of the standard cotton programme at partial load $C_{dry½}$;

(vi) the sound power level;

(g) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation for a particular household tumble drier model has been obtained by calculation on the basis of design or by extrapolation from other equivalent household tumble driers, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken.

The information shall also include a list of all other equivalent household tumble drier models where the information was obtained in the same way.

ANNEX IV

Information to be provided in cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:

(a) the rated capacity in kg of cotton, for the standard cotton programme at full load;

(b) whether the household tumble drier is an air-vented, condenser or gas-fired household tumble drier;

(c) the energy efficiency class as defined in point 1 of Annex VI;

(d) for electric mains-operated household tumble drier:

the weighted Annual Energy Consumption (A_{EC}) rounded up to the nearest integer, to be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programmes at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AE_{C(Gas)}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

(e) whether the household tumble drier is an 'automatic tumble drier' or 'non-automatic tumble drier';

(f) the energy consumption (E_{dry}, $E_{dry½}$, E_{gdry}, $E_{gdry½}$, $E_{gdry,a}$, $E_{gdry½,a)}$ of the standard cotton programme at full and partial load, rounded up to two decimal places and calculated in accordance with Annex VII;

(g) the power consumption of the off-mode (P_o) and the left-on mode (P_l) for the standard cotton programme at full load;

(h) the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry½}$), in minutes and rounded to the nearest minute, calculated in accordance with Annex VII;

(i) if the household tumble drier is a condenser tumble drier, the condensation efficiency class in accordance with point 2 of Annex VI;

(j) the sound power level (weighted average value – L_{WA}) for the standard cotton programme at full load, expressed in dB and rounded to the nearest integer;

(k) if the household tumble drier is intended to be built-in, an indication to this effect.

2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.

3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in a dedicated section

of the website of the Energy Community. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1: Verification tolerances

Parameters	Verification tolerances
Weighted annual energy consumption (AE_C)	The determined value shall not exceed the declared value of AE_C by more than 6 %.
Weighted energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 6 %.
Weighted condensation efficiency (C_t)	The determined value shall not be less than the declared value of C_t by more than 6 %.
Weighted programme time (T_t)	The determined value shall not exceed the declared value of T_t by more than 6 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 6 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left- on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 6 %.
Sound power level, L_{WA}	The determined value shall not exceed the declared value of L_{WA}.

ANNEX VI

Energy efficiency classes and condensation efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household tumble drier shall be determined on the basis of its Energy Efficiency Index (*EEI*) as set out in Table 1.

The Energy Efficiency Index (*EEI*) of a household tumble drier shall be determined in accordance with point 1 of Annex VII.

Table 1

Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A^{+++} (most efficient)	$EEI < 24$
A^{++}	$24 \leq EEI < 32$
A^{+}	$32 \leq EEI < 42$
A	$42 \leq EEI < 65$
B	$65 \leq EEI < 76$
C	$76 \leq EEI < 85$
D (least efficient)	$85 \leq EEI$

2. CONDENSATION EFFICIENCY CLASSES

The condensation efficiency class of a condenser household tumble drier shall be determined on the basis of the weighted condensation efficiency (C_t) as set out in Table 2.

The weighted condensation efficiency (C_t) of a condenser household tumble drier shall be determined in accordance with point 2 of Annex VII.

Table 2

Condensation efficiency classes

Energy efficiency class	Energy Efficiency Index
A (most efficient)	$C_t > 90$
B	$80 < C_t \leq 90$
C	$70 < C_t \leq 80$
D	$60 < C_t \leq 70$
E	$50 < C_t \leq 60$
F	$40 < C_t \leq 50$
G (least efficient)	$C_t \leq 40$

ANNEX VII

Method for calculating the Energy Efficiency Index and the weighted condensation efficiency

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (*EEI*) of a household tumble drier model, the weighted Annual Energy Consumption of a household tumble drier for the standard cotton programme at full and partial load is compared to its Standard Annual Energy Consumption.

(a) The Energy Efficiency Index (*EEI*) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

AE_C = weighted Annual Energy Consumption of the household tumble drier.

SAE_C = standard Annual Energy Consumption of the household tumble drier.

(b) The Standard Annual Energy Consumption (SAE_C) is calculated in kWh/year as follows and rounded to two decimal places:

– for all household tumble driers that are not air-vented:

$SAE_C = 140 \times c\ 0{,}8$

– for air-vented household tumble driers:

$$SAE_C = 140 \times c^{0,8} - \left(30 \times \frac{T_t}{60}\right)$$

where:

c is the rated capacity of the household tumble drier for the standard cotton programme.

T_t is the weighted programme time for the standard cotton programme.

(c) The weighted Annual Energy Consumption (AE_C) is calculated in kWh/year as follows and is rounded to two decimal places:

(i

$$AE_C = E_t \times 160 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 160)}{2} + P_l \times \frac{525\,600 - (T_t \times 160)}{2}\right]}{60 \times 1\,000}$$

where:

E_t = weighted energy consumption, in kWh and rounded to two decimal places.

P_o = power in 'off-mode' for the standard cotton programme at full load, in W and rounded to two decimal places.

P_l = power in 'left-on mode' for the standard cotton programme at full load, in W and rounded to two decimal places.

T_t = weighted programme time, in minutes and rounded to the nearest minute.

160 = total number of drying cycles per year.

(ii) When the household tumble drier is equipped with a power management system, with the household tumble drier reverting automatically to 'off-mode' after the end of the programme, the weighted Annual Energy Consumption (AE_c) is calculated taking into consideration the effective duration of the 'left-on mode', according to the following formula:

$$AE_C = E_t \times 160 + \frac{\{(P_l \times T_l \times 160) + P_o \times [525\,600 - (T_t \times 160) - (T_l \times 160)]\}}{60 \times 1\,000}$$

where:

T_l = duration of the 'left-on mode' for the standard cotton programme at full load, in minutes and rounded to the nearest minute.

(d) The weighted programme time (T_t) for the standard cotton programme is calculated in minutes as follows and rounded to the nearest minute:

$T_t = (3 \times T_{dry} + 4 \times T_{dry½})/7$ where:

T_{dry} = programme time for the standard cotton programme at full load, in minutes and rounded to the nearest minute.

$T_{dry½}$ = programme time for the standard cotton programme at partial load, in minutes and rounded to the nearest minute.

(e) The weighted energy consumption (E_t) is calculated in kWh as follows and rounded to two decimal places:

$E_t = (3 \times E_{dry} + 4 \times E_{dry½})/7$ where:

E_{dry} = energy consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{dry½}$ = energy consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

(f) For gas-fired household tumble driers, the energy consumption for the standard cotton programme at full and partial load is calculated in kWh and rounded to two decimal places, as:

$$E_{dry} = \frac{Eg_{dry}}{f_g} + Eg_{dry,a} \quad E_{dryÂ_i} = \frac{Eg_{dryÂ_i}}{f_g} + Eg_{dryÂ_i,a}$$

where:

Eg_{dry} = gas consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$Eg_{dry½}$ = gas consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

$Eg_{dry,a}$ = auxiliary electricity consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$Eg_{dry½,a}$ = auxiliary electricity consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

f_g = 2,5.

2. CALCULATION FOR THE PRODUCT INFORMATION DESCRIBED IN 'ANNEX II PRODUCT FICHE', 'ANNEX III TECHNICAL DOCUMENTATION' AND 'ANNEX IV INFORMATION TO BE PROVIDED IN CASES WHERE END-USERS CANNOT BE EXPECTED TO SEE THE PRODUCT DISPLAYED'

For gas-fired household tumble driers, the energy consumption on gas for the standard cotton programme at full and partial load for the information in Annex II, III and IV is calculated in kWh_{Gas} and rounded to two decimal places, as:

$AE_{C(Gas)} = 160 \times (3 \times Eg_{dry} + 4 \times Eg_{dry1/2})/7$

For gas-fired household tumble driers, the energy consumption on electricity for the standard cotton programme at full and partial load for the information in Annex II, III and IV is calculated in kWh and rounded to two decimal places, as:

$AE_{C(Gas)el} = 160 \times (3 \times Eg_{dry,a} + 4 \times Eg_{dry1/2,a})/7 + ((P_l \times T_l \times 160) + P_o \times [525\ 600 - (T_t \times 160) - (T_l \times 160)])/60 \times 1\ 000$

3. CALCULATION OF THE WEIGHTED CONDENSATION EFFICIENCY

The condensation efficiency of a programme is the ratio between the mass of moisture condensed and collected in the container of a condenser household tumble drier and the mass of moisture removed from the load by the programme, the latter being the difference between the mass of the wet test load before drying and the mass of the test load after drying. For calculating the weighted condensation efficiency, the average condensation efficiency for the standard cotton programme at both full and partial load is considered.

The weighted condensation efficiency (C_t) of a programme is calculated as a percentage and rounded to the nearest whole percent as:

$C_t = (3 \times C_{dry} + 4 \times C_{dry½})/7$ where:

C_{dry} = average condensation efficiency of the standard cotton programme at full load.

$C_{dry½}$ = average condensation efficiency of the standard cotton programme at partial load. The average condensation efficiency C is calculated from the condensation efficiencies of test runs and expressed

$$C = \frac{1}{(n-1)} \Sigma_{j=2}^{n} \left(\frac{W_{wj}}{W_i - W_f} \times 100 \right)$$

as a percentage:

where:

n is the number of test runs, comprising at least four valid test runs for the selected programme. j is the test run number.

W_{wj} is the mass of water collected in the condenser reservoir during test run j.

W_i is the mass of the wet test load before drying.

W_f is the mass of the test load after drying.

ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 4 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 626/2011 of 4 May 2011 supplementing Directive 2010/30/EU with regard to energy labelling of air conditioners

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

The adaptations made by Ministerial Council Decisions 2011/03/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for electric mains-operated air conditioners with a rated capacity of ≤ 12 kW for cooling, or heating, if the product has no cooling function.

2. This Regulation shall not apply to:

a) appliances that use non-electric energy sources;

b) air conditioners of which the condensoror evaporator-side, or both, do not use air for heat transfer medium.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU of the European Parliament and of the Council, the following definitions shall apply:

(1) "air conditioner" means a device capable of cooling or heating, or both, indoor air, using a vapour compression cycle driven by an electric compressor, including air conditioners that provide additional functionalities such as dehumidification, air-purification, ventilation or supplemental air-heating by means of electric resistance heating and appliances that may use water (either condensate water that is formed on the evaporator side or externally added water) for evaporation on the condensor, provided that the device is also able to function without the use of additional water, using air only;

(2) "double duct air conditioner" means an air conditioner in which, during cooling or heating, the condensor or evaporator intake air is introduced from the outdoor environment to the unit by a duct and rejected to the outdoor environment by a second duct, and which is placed wholly inside the space to be conditioned, near a wall;

(3) "single duct air conditioner" means an air conditioner in which, during cooling or heating, the condensor or evaporator intake air is introduced from the space containing the unit and discharged outside this space;

(4) "rated capacity" (Prated) means the cooling or heating capacity of the vapour compression cycle of the

unit at standard rating conditions;

(5) "end-user" means a consumer buying or expected to buy an air conditioner;

(6) "point of sale" means a location where air conditioners are displayed or offered for sale, hire or hire-purchase.

Additional definitions for the purpose of Annexes II to VIII are set out in Annex I.

Article 3

Responsibilities of suppliers

1. Suppliers shall take action as described in points (a) to (g):

(a) a printed label is provided for each air conditioner respecting energy efficiency classes as set out in Annex II. The label shall comply with the format and content of information as set out in Annex III. For air conditioners, except single and double duct air conditioners, a printed label must be provided, at least in the packaging of the outdoor unit, for at least one combination of indoor and outdoor units at capacity ratio 1. For other combinations, the information can be alternatively provided on a free access web site;

(b) a product fiche, as set out in Annex IV, is made available. For air conditioners, except single and double duct air conditioners, a product fiche must be provided at least in the packaging of the outdoor unit, for at least one combination of indoor and outdoor units at capacity ratio 1. For other combinations, the information can be alternatively provided on a free access web site;

(c) technical documentation as set out in Annex V is made available electronically on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific model of an air conditioner shall contain the energy efficiency class, if the advertisement discloses energy-related or price information. Where more than one efficiency class is possible, the supplier or the manufacturer, as appropriate, shall declare the energy efficiency class for heating at least in "Average" heating season. Information in the cases where end-users cannot be expected to see the product displayed is to be provided as set out in Annex VI;

(e) any technical promotional material concerning a specific model of an air conditioner which describes its specific technical parameters shall include the energy efficiency class of that model as set out Annex II;

(f) instructions for use are made available;

(g) single ducts shall be named "local air conditioners" in packaging, product documentation and in any advertisement material, whether electronic or in paper;

(h) an electronic label in the format and containing the information set out in Annex III is made available to dealers for each air conditioner model placed on the market from 1 January 2020 with a new model identifier, respecting energy efficiency classes set out in Annex II. It may also be made available to dealers for other air conditioner models;

(i) an electronic product fiche as set out in Annex IV is made available to dealers for each air conditioner model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other air conditioner models.[1]

1 Article 3, points (h) and (i) are added in accordance with Article 5(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

2. The energy efficiency class shall be determined as set out in Annex VII.

3. The format of the label for air conditioners except for single and double duct air conditioners shall be as set out in Annex III.

4. For the air conditioners, except for single and double duct air conditioners, the format of the label set out in Annex III shall be applied according to the following timetable:

(a) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2013, labels with energy efficiency classes A, B, C, D, E, F, G shall be in accordance with point 1.1 of Annex III for reversible air conditioners, with point 2.1 of Annex III for cooling-only air conditioners and with point 3.1 of Annex III for heating-only air conditioners;

(b) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2015, labels with energy efficiency classes A^{+}, A, B, C, D, E, F, shall be in accordance with point 1.2 of Annex III for reversible air conditioners, with point 2.2 of Annex III for cooling-only air conditioners and with point 3.2 of Annex III for heating-only air conditioners;

(c) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2017, labels with energy efficiency classes A^{++}, A^{+}, A, B, C, D, E, shall be in accordance with point 1.3 of Annex III for reversible air conditioners, with point 2.3 of Annex III for cooling-only air conditioners and with point 3.3 of Annex III for heating-only air conditioners;

(d) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2019, labels with energy efficiency classes A^{+++}, A^{++}, A^{+}, A, B, C, D shall be in accordance with point 1.4 of Annex III for reversible air conditioners, with point 2.4 of Annex III for cooling-only air conditioners and with point 3.4 of Annex III for heating-only air conditioners.

5. The format of the label for double duct air conditioners placed on the market from 1 January 2013 with energy efficiency classes A^{+++}, A^{++}, A^{+}, A, B, C, D shall be in accordance with point 4.1 of Annex III for reversible double duct air conditioners, with point 4.3 of Annex III for cooling-only double duct air conditioners and with point 4.5 of Annex III for heating-only double duct air conditioners.

6. The format of the label for single duct air conditioners placed on the market from 1 January 2013 with energy efficiency classes A^{+++}, A^{++}, A^{+}, A, B, C, D shall be in accordance with point 5.1 of Annex III for reversible single duct air conditioners, with point 5.3 of Annex III for cooling-only single ducts air conditioners and with point 5.5 of Annex III heating-only single duct air conditioners.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) air conditioners, at the point of sale, bear the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the appliance, in such a way as to be clearly visible;

(b) air conditioners offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annexes IV and VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with

Article 3(1)(h) and 3(1)(i) the provisions of Annex IX shall apply instead;

(c) any advertisement for a specific model of air conditioner contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information. Where more than one efficiency class is possible, the supplier/manufacturer will declare the energy efficiency class at least in "Average" season zone;

(d) any technical promotional material concerning a specific model which describes the technical parameters of an air conditioner includes a reference to the energy efficiency class(es) of the model and the instructions for use provided by the supplier. Where more than one efficiency class is possible, the supplier/manufacturer will declare the energy efficiency class at least in "Average" season zone;

(e) single ducts shall be named "local air conditioners" in packaging, product documentation and in any promotional or advertisement material, whether electronic or in paper.

Article 5

Measurement methods

The information to be provided under Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art calculation and measurement methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

When **Contracting Parties** assess the conformity of the declared energy efficiency class, the annual or hourly energy consumption, as appropriate, and the noise emissions, they shall apply the procedure laid down in Annex VIII.

Article 7

Revision

<...>

Article 8

Repeal

<...>

Article 9

Transitional provision

1. Air conditioners placed on the market before 1 January 2013 shall comply with the provisions set out

in Directive 2002/31/EC.

Article 10

Entry into force and application

1. This Decision [2011/03/MC-EnC] enters into force upon its adoption <...>

2. It shall apply from 1 January 2013.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties.**

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation <...> and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

ANNEX I

Definitions applicable for the purposes of annexes II to VII

For the purposes of Annexes II to VII, the following definitions shall apply:

(1) 'Reversible air conditioner' means an air conditioner capable of both cooling and heating;

(2) 'Standard rating conditions' means the combination of indoor (T_{in}) and outdoor temperatures (T_j) that describe the operating conditions while establishing the sound power level, rated capacity, rated air flow rate, rated energy efficiency ratio (EER_{rated}) and/or rated coefficient of performance (COP_{rated}), as set out in Annex VII, table 2;

(3) 'Indoor temperature' (T_{in}) means the dry bulb indoor air temperature [°C] (with the relative humidity indicated by the corresponding wet bulb temperature);

(4) 'Outdoor temperature' (T_j) means the dry bulb outdoor air temperature [°C] (with the relative humidity indicated by the corresponding wet bulb temperature);

(5) 'Rated energy efficiency ratio' (EER_{rated}) means the declared capacity for cooling [kW] divided by the rated power input for cooling [kW] of a unit when providing cooling at standard rating conditions;

(6) 'Rated coefficient of performance' (COP_{rated}) means the declared capacity for heating [kW] divided by the rated power input for heating [kW] of a unit when providing heating at standard rating conditions;

(7) 'Global warming potential' (*GWP*) means the measure of how much 1 kg of the refrigerant applied in the vapour compression cycle is estimated to contribute to global warming, expressed in kg CO_2 equivalents over a 100 year time horizon;

GWP values considered will be those set out in Annex I of Regulation (EC) No 842/2006 of the European Parliament and of the Council;

for fluorinated refrigerants, the GWP values shall be those published in the Third Assessment Report (TAR), adopted by the Intergovernmental Panel on Climate Change[2] (2001 IPCC GWP values for a 100 year period);

for non-fluorinated gases, the GWP values are those published in the first IPCC assessment[3] over a 100 year period;

total GWP values for mixtures of refrigerants shall be based on the formula stated in Annex I of the Regulation (EC) No 842/2006;

for refrigerants not included in the above references, the IPCC UNEP 2010 report on Refrigeration, Air Conditioning and Heat Pumps, dated February 2011, or newer, shall be used as a reference;

(8) 'Off mode' is a condition in which the air conditioner or comfort fan is connected to the mains power source and is not providing any function. As off mode also are considered conditions providing only an indication of off mode condition, as well as conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council;

(9) 'Standby mode' means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following

2 IPCC Third Assessment Climate Change 2001. A Report of the Intergovernmental Panel on Climate Change: http://www. ipcc.ch/ publications_and_data/publications_and_data_reports.shtml

3 Climate Change, The IPCC Scientific Assessment, J.T Houghton, G.J.Jenkins, J.J. Ephraums (ed.) Cambridge University Press, Cambridge (UK) 1990.

functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;

(10) 'Reactivation function' means a function facilitating the activation of other modes, including active mode, by remote switch including remote control, internal sensor, timer to a condition providing additional functions, including the main function;

(11) 'Information or status display' is a continuous function providing information or indicating the status of the equipment on a display, including clocks;

(12) 'Sound power level' means the A-weighted sound power level [dB(A)] indoors and/or outdoors measured at standard rating conditions for cooling (or heating, if the product has no cooling function);

(13) 'Reference design conditions' means the combination of requirements for the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex VII, Table 3;

(14) 'Reference design temperature' means the outdoor temperature [°C] for either cooling (*Tdesignc*) or heating (*Tdesignh*) as described in Annex VII, Table 3, at which the part load ratio shall be equal to 1, and which varies according the designated cooling or heating season;

(15) 'Part load ratio' ($pl(T_j)$) means the outdoor temperature minus 16°C, divided by the reference design temperature minus 16°C, for either cooling or heating;

(16) 'Season' means one of the four sets of operating conditions (available for four seasons: one cooling season, three heating seasons: average / colder / warmer) describing per bin the combination of outoor temperatures and the number of hours these temperatures occur per season for which the unit is declared fit for purpose;

(17) 'Bin' (with index 'j') means a combination of an outdoor temperature (T_j) and bin hours (h_j), as set out in Annex VII, Table 1;

(18) 'Bin hours' means the hours per season (h_j) the outdoor temperature occurs for each bin, as set out in Annex VII, Table 1;

(19) 'Seasonal energy efficiency ratio' (*SEER*) is the overall energy efficiency ratio of the unit, representative for the whole cooling season, calculated as the reference annual cooling demand divided by the annual electricity consumption for cooling;

(20) 'Reference annual cooling demand' (*QC*) means the reference cooling demand [kWh/a] to be used as basis for calculation of *SEER* and calculated as the product of the design load for cooling (*Pdesignc*) and the equivalent active mode hours for cooling (*HCE*);

(21) 'Equivalent active mode hours for cooling' (*HCE*) means the assumed annual number of hours [h/a] the unit must provide the design load for cooling (Pdesignc) in order to satisfy the reference annual cooling demand, as set out in Annex VII, Table 4;

(22) 'Annual electricity consumption for cooling' (Q*CE*) means the electricity consumption [kWh/a] required to meet the reference annual cooling demand and is calculated as the reference annual cooling demand divided by the active mode seasonal energy efficiency ratio ($SEER_{on}$), and the electricity consumption of the unit for thermostat off-, standby-, off- and crankcase heater-mode during the cooling season;

(23) 'Active seasonal mode energy efficiency ratio' ($SEER_{on}$) means the average energy efficiency ratio of the unit in active mode for the cooling function, constructed from part load and bin-specific energy efficiency

ratio's ($EER_{bin}(T_j)$) and weighted by the bin hours the bin condition occurs;

(24) 'Part load' means the cooling load ($Pc(T_j)$) or the heating load ($Ph(T_j)$) [kW] at a specific outdoor temperature T_j, calculated as the design load multiplied by the part load ratio;

(25) 'Bin-specific energy efficiency ratio' ($EER_{bin}(T_j)$) means the energy efficiency ratio specific for every bin j with outdoor temperature T_j in a season, derived from the part load, declared capacity and declared energy efficiency ratio ($EER_d(T_j)$) for specified bins (j) and calculated for other bins through inter/extrapolation, when necessary corrected by the degradation coefficient;

(26) 'Seasonal coefficient of performance' (*SCOP*) is the overall coefficient of performance of the unit, representative for the whole designated heating season (the value of *SCOP* pertains to a designated heating season), calculated as the reference annual heating demand divided by the annual electricity consumption for heating;

(27) 'Reference annual heating demand' (Q_H) means the reference heating demand [kWh/a], pertaining to a designated heating season, to be used as basis for calculation of *SCOP* and calculated as the product of the design load for heating (Pdesignh) and the seasonal equivalent active mode hours for heating (H_{HE});

(28) 'Equivalent active mode hours for heating' (H_{HE}) means the assumed annual number of hours [h/a] the unit must provide the design load for heating (Pdesignh) in order to satisfy the reference annual heating demand, as set out in Annex VII, Table 4;

(29) 'Annual electricity consumption for heating' (Q_{HE}) means the electricity consumption [kWh/a] required to meet the indicated reference annual heating demand and which pertains to a designated heating season; and is calculated as the reference annual heating demand divided by the active mode seasonal coefficient of performance ($SCOP_{on}$), and the electricity consumption of the unit for thermostat off-, standby-, off- and crankcase heater-mode during the heating season;

(30) 'Active mode seasonal coefficient of performance' ($SCOP_{on}$) means the average coefficient of performance of the unit in active mode for the designated heating season, constructed from the part load, electric back up heating capacity (where required) and bin-specific coefficients of performance ($COP_{bin}(T_j)$) and weighted by the bin hours the bin condition occurs;

(31) 'Electric back-up heater capacity' ($elbu(T_j)$) is the heating capacity [kW] of a real or assumed electric back-up heater with *COP* of 1 that supplements the declared capacity for heating ($Pdh(T_j)$) in order to meet the part load for heating ($Ph(T_j)$) in case $Pdh(T_j)$ is less than $Ph(T_j)$, for the outdoor temperature (T_j);

(32) 'Bin-specific coefficient of performance' ($COP_{bin}(T_j)$) means the coefficient of performance specific for every bin j with outdoor temperature T_j in a season, derived from the part load, declared capacity and declared coefficient of performance ($COPd(T_j)$) for specified bins (j) and calculated for other bins through inter/extrapolation, when necessary corrected by the degradation coefficient;

(33) 'Declared capacity' [kW] is the capacity of the vapour compression cycle of the unit for cooling ($Pdc(T_j)$) or heating ($Pdh(T_j)$), pertaining to an outdoor temperature T_j and indoor temperature (T_{in}), as declared by the manufacturer;

(34) 'Function' means the indication of whether the unit is capable of indoor air cooling, indoor air heating or both;

(35) 'Design load' means the declared cooling load (*Pdesignc*) and/or declared heating load (*Pdesignh*) [kW] at the reference design temperature, whereby

(a) for cooling mode, Pdesignc is equal to the declared capacity for cooling at T_j equal to *Tdesignc*;

(b) for heating mode, Pdesignh is equal to the part load at T_j equal to *Tdesignh*;

(36) 'Declared energy efficiency ratio' ($EER_d(T_j)$) means the energy efficiency ratio at a limited number of specified bins (j) with outdoor temperature (T_j), as declared by the manufacturer;

(37) 'Declared coefficient of performance' ($COP_d(T_j)$) means the coefficient of performance at a limited number of specified bins (j) with outdoor temperature (T_j), as declared by the manufacturer;

(38) 'Bivalent temperature' (Tb_{iv}) means the outdoor temperature (T_j) [°C] declared by the manufacturer for heating at which the declared capacity equals the part load and below which the declared capacity must be supplemented with electric back up heater capacity in order to meet the part load for heating;

(39) 'Operation limit temperature' (T_{ol}) means the outdoor temperature [°C] declared by the manufacturer for heating, below which air conditioner will not be able to deliver any heating capacity. Below this temperature, the declared capacity is equal to zero;

(40) 'Active mode' means the mode corresponding to the hours with a cooling or heating load of the building and whereby the cooling or heating function of the unit is activated. This condition may involve on/off-cycling of the unit in order to reach or maintain a required indoor air temperature;

(41) 'Thermostat-off mode' means a mode corresponding to the hours with no cooling or heating load whereby the cooling or heating function of the unit is switched on but the unit is not operational as there is no cooling or heating load. This condition is therefore related to outdoor temperatures and not to indoor loads. Cycling on / off in active mode is not considered as thermostat off;

(42) 'Crankcase heater operation mode' means a condition where the unit has activated a heating device to avoid the refrigerant migrating to the compressor in order to limit the refrigerant concentration in oil at compressor start;

(43) 'Thermostat-off mode operating hours' (*HTO*) means the annual number of hours [h/a] the unit is considered to be in thermostat-off mode, the value of which depends on the designated season and function;

(44) 'Standby mode operating hours' (*HSB*) means the annual number of hours [h/a] the unit is considered to be in standby mode, the value of which depends on the designated season and function;

(45) 'Off-mode hours' (*HOFF*) means the annual number of hours [h/a] the unit is considered to be in off-mode, the value of which depends on the designated season and function;

(46) 'Crankcase heater mode operating hours' (*HCK*) means the annual number of hours [h/a] the unit is considered to be in crankcase heater operation mode, the value of which depends on the designated season and function;

(47) 'Electricity consumption of single and double ducts' (*QSD* respectively *QDD*) means the electricity consumption of single or double duct air conditioners for the cooling and/or heating mode (whichever applies) [single duct in kWh/h, double duct in kWh/a];

(48) 'Capacity ratio' means the ratio of the total declared cooling or heating capacity of all operating indoor units to the declared cooling or heating capacity of the outdoor unit at standard rating conditions.

ANNEX II
Energy efficiency classes

1. The energy efficiency of air conditioners shall be determined on the basis of measurements and calculations set out Annex VII.

Both the *SEER* and *SCOP* shall take into account the reference design conditions and the operational hours per relevant mode of operation, and the *SCOP* shall relate to the heating season 'average', as laid down in Annex VII. The rated energy efficiency ratio (EER_{rated}) and the rated coefficient of performance (COP_{rated}) shall relate to standard rating conditions, as laid down in Annex VII.

Table 1

Energy efficiency classes for air conditioners except double ducts and single ducts

Energy Efficiency Class	***SEER***	***SCOP***
A^{+++}	$SEER \geq 8.50$	$SCOP \geq 5.10$
A^{++}	$6.10 \leq SEER < 8.50$	$4.60 \leq SCOP < 5.10$
A+	$5.60 \leq SEER < 6.10$	$4.00 \leq SCOP < 4.60$
A	$5.10 \leq SEER < 5.60$	$3.40 \leq SCOP < 4.00$
B	$4.60 \leq SEER < 5.10$	$3.10 \leq SCOP < 3.40$
C	$4.10 \leq SEER < 4.60$	$2.80 \leq SCOP < 3.10$
D	$3.60 \leq SEER < 4.10$	$2.50 \leq SCOP < 2.80$
E	$3.10 \leq SEER < 3.60$	$2.20 \leq SCOP < 2.50$
F	$2.60 \leq SEER < 3.10$	$1.90 \leq SCOP < 2.20$
G	$SEER < 2.60$	$SCOP < 1.90$

Table 2

Energy efficiency classes for double ducts and single ducts

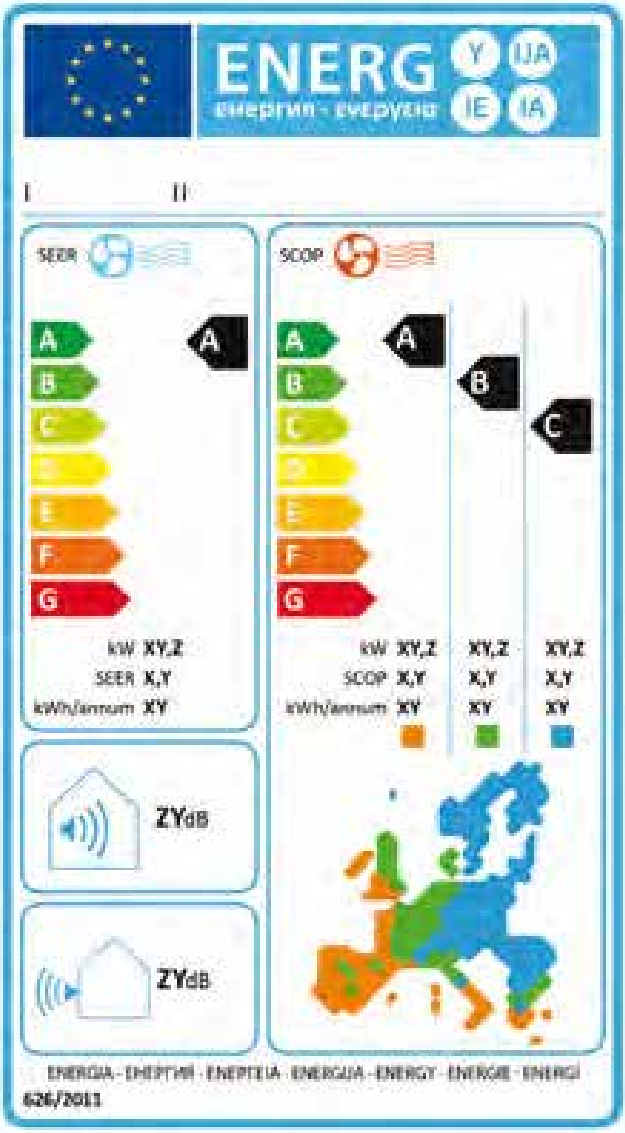
Energy Efficiency Class	**Double ducts**		**Single ducts**	
	EER_{rated}	COP_{rated}	EER_{rated}	COP_{rated}
A+++	≥ 4.10	≥ 4.60	≥ 4.10	≥ 3.60
A++	3.60 ≤ *EER* < 4.10	4.10 ≤ *COP* < 4.60	3.60 ≤ *EER* < 4.10	3.10 ≤ *COP* < 3.60
A+	3.10 ≤ *EER* < 3.60	3.60 ≤ *COP* < 4.10	3.10 ≤ *EER* < 3.60	2.60 ≤ *COP* < 3.10
A	2.60 ≤ *EER* < 3.10	3.10 ≤ *COP* < 3.60	2.60≤ *EER* < 3.10	2.30 ≤ *COP* < 2.60
B	2.40 ≤ *EER* < 2.60	2.60 ≤ *COP* < 3.10	2.40 ≤ *EER* < 2.60	2.00 ≤ *COP* < 2.30
C	2.10 ≤ *EER* < 2.40	2.40 ≤ *COP* < 2.60	2.10 ≤ *EER* < 2.40	1.80 ≤ *COP* < 2.00
D	1.80 ≤ *EER* < 2.10	2.00 ≤ *COP* < 2.40	1.80 ≤ *EER* < 2.10	1.60 ≤ *COP* < 1.80
E	1.60 ≤ *EER* < 1.80	1.80 ≤ *COP* < 2.00	1.60 ≤ *EER* < 1.80	1.40 ≤ *COP* < 1.60
F	1.40 ≤ *EER* < 1.60	1.60 ≤ *COP* < 1.80	1.40 ≤ *EER* < 1.60	1.20 ≤ *COP* < 1.40
G	G < 1.40	< 1.60	< 1.40	< 1.20

ANNEX III

The label

1. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

1.1. Reversible air conditioners classified in energy efficiency classes A to G



I
II
III
IV
V
VI
VII
VIII
IX
X
XI

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SEER' and 'SCOP' for cooling and heating, with a blue fan and air wave indication for SEER and red fan and air wave indication for SCOP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating. For heating, energy efficiency for Average heating season is mandatory. Indication of efficiency for Warmer and Colder seasons is optional;

V. for cooling mode: design load in kW, rounded up to one decimal;

VI. for heating mode: design load in kW, for up to 3 heating seasons rounded up to one decimal.

Values for heating seasons for which the design load is not provided shall be indicated as 'X';

VII. for cooling mode: seasonal energy efficiency ratio (SEER value), rounded up to one decimal;

VIII. for heating mode: seasonal coefficient of performance (SCOP value), for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which SCOP is not provided shall be indicated as 'X';

IX. annual energy consumption in kWh per year, for cooling and heating, rounded up to the nearest integer. Values for climate profiles for which annual energy consumption is not provided shall be indicated as 'X';

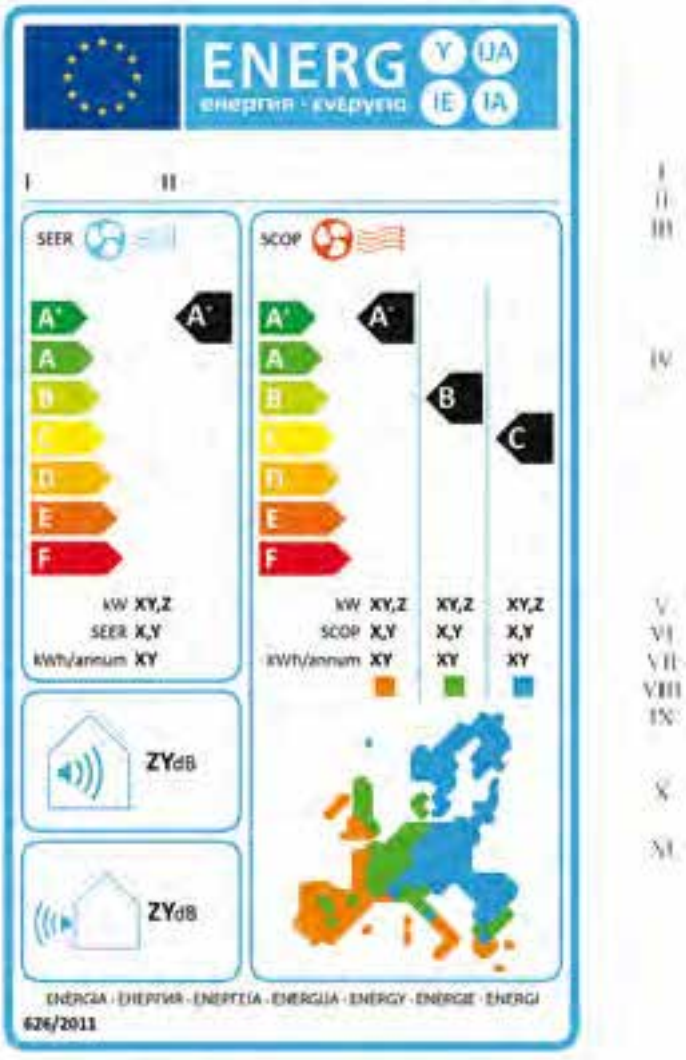
X. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the

nearest integer;

XI European map with a display of three indicative heating seasons and corresponding colour squares. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 1.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

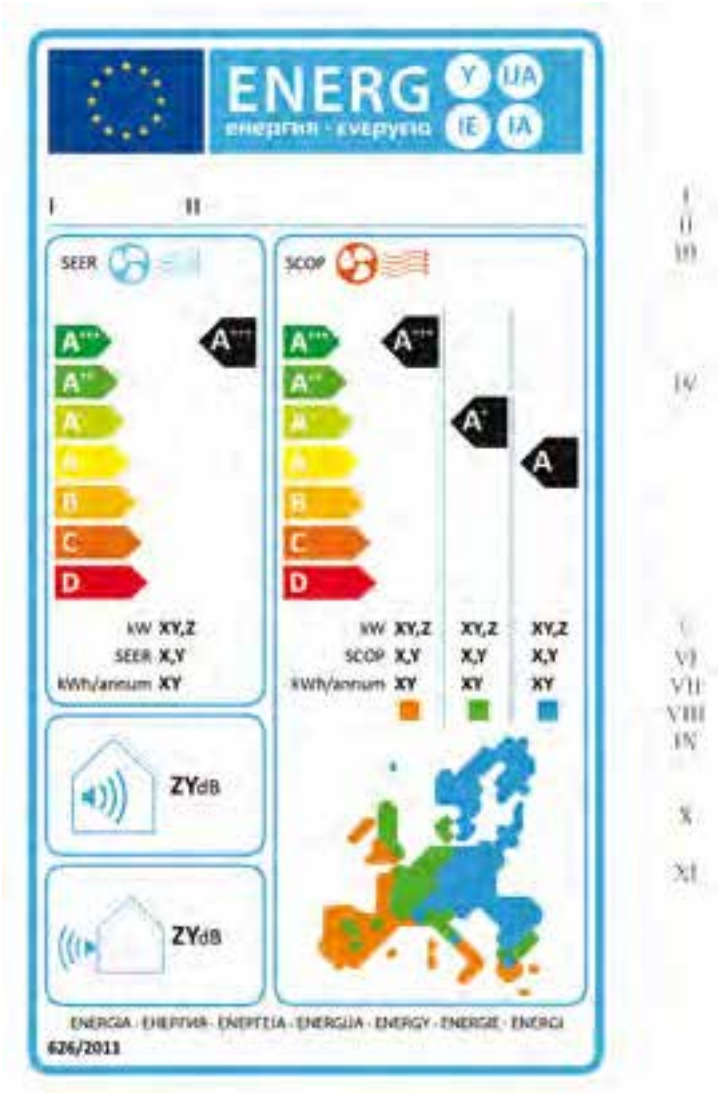
1.2. Reversible air conditioners classified in energy efficiency classes A⁺ to F



(a) The information listed in point 1.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 1.5.

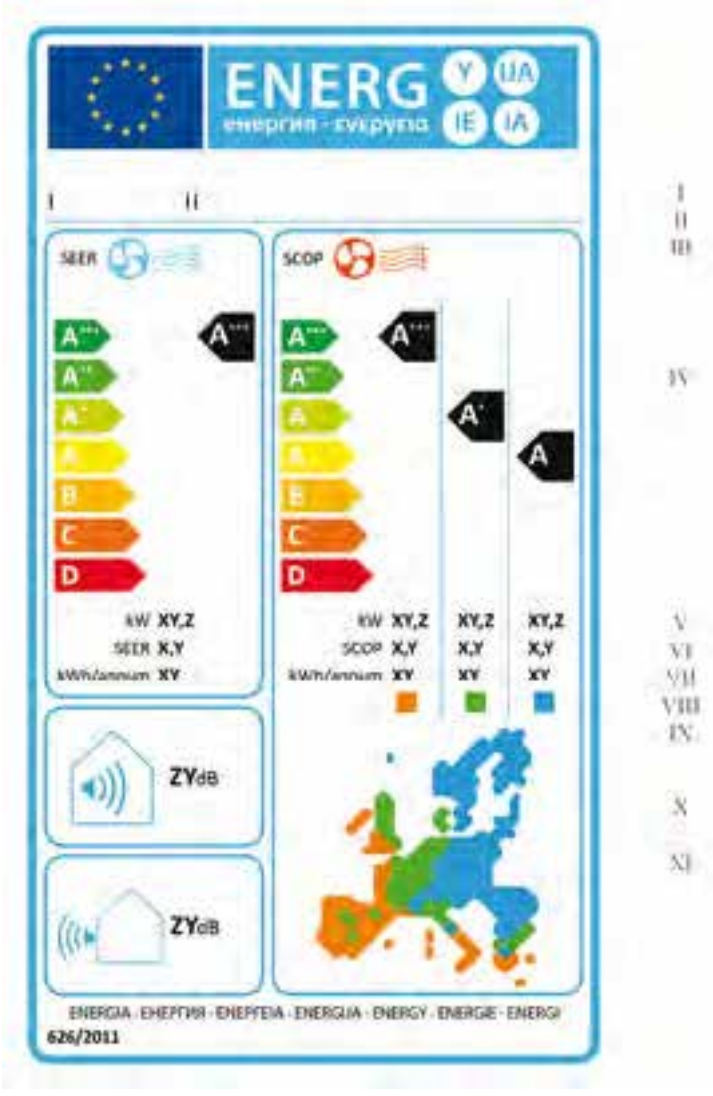
1.3. Reversible air conditioners classified in energy efficiency classes A⁺⁺ to E



(a) The information listed in point 1.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 1.5.

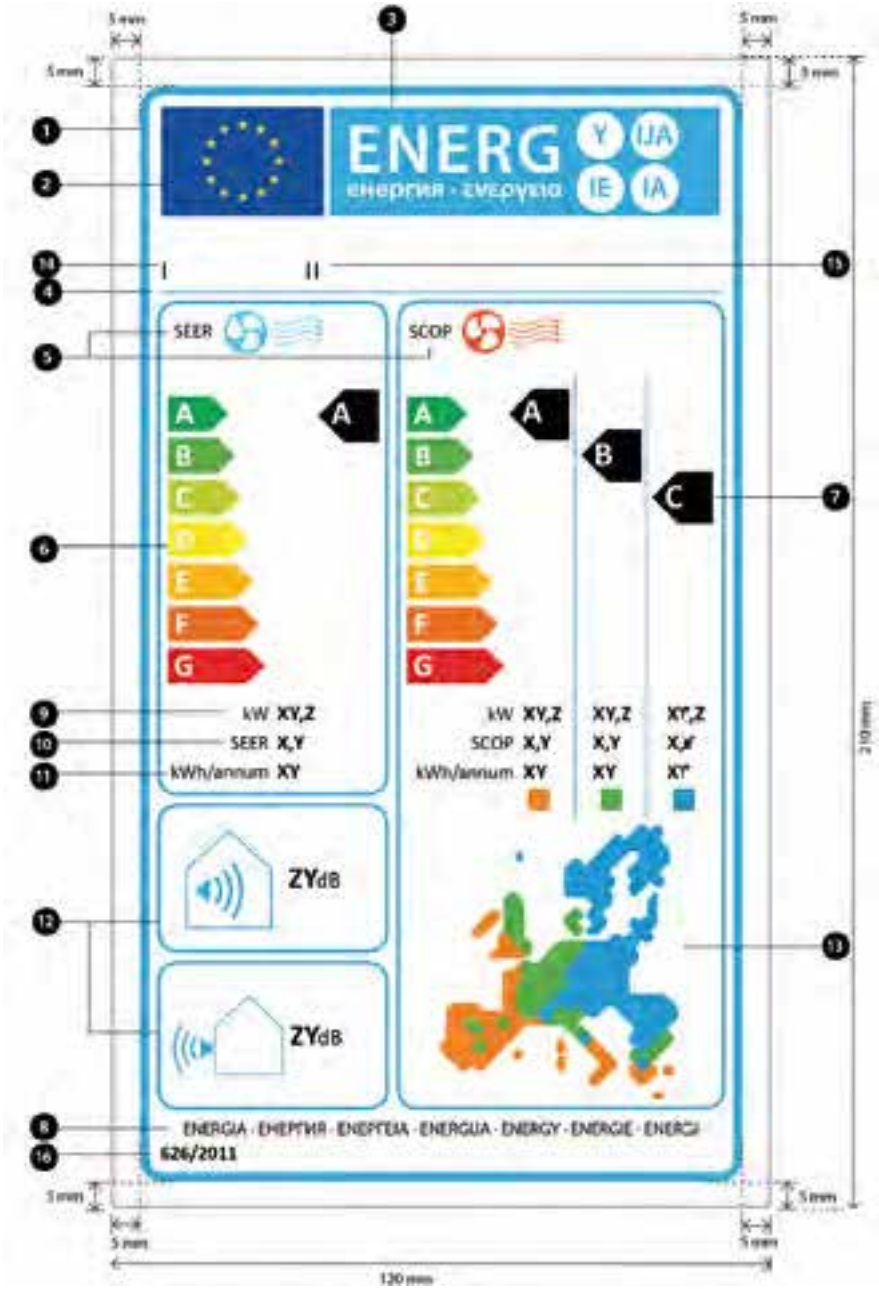
1.4. Reversible air conditioners classified in energy efficiency classes A^{+++} to D



(a) The information listed in point 1.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 1.5.

1.5. Label design



Whereby:

(i) The label shall be at least 120 mm wide and 210 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 102 mm, height: 20 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 103,6 mm.
5. **SEER and SCOP indication:**
   - **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
   - **Text**: Calibri regular 10 pt, capitals, 100% black.
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1 mm – colours:
     - Highest class: X-00-X-00
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 16 pt, capitals, white.
7. **Energy efficiency class(es):**
   - **Arrow**: width: 11 mm, height: 10 mm, 100% black;
   - **Text**: Calibri bold 18 pt, capitals, white.
8. **Energy**
   - **Text**: Calibri regular 9 pt, capitals, 100% black.
9. **Rated capacity for cooling and heating in kW:**
   - **Text 'kW'**: Calibri regular 10 pt, 100% black.
   - **Value 'XY,Z'**: Calibri bold 11 pt, 100% black.
10. **SCOP and SEER values, rounded up to one decimal:**
    - **Text 'SEER'/'SCOP'**: Calibri regular 10 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 11 pt, 100% black.

11. Annual energy consumption in kWh/annum:

– **Text 'kWh/annum'**: Calibri regular 10 pt, 100 % black.

– **Value 'XY'**: Calibri bold 11 pt, 100 % black.

12. Noise emissions:

– **Border**: 2 pt – colour: cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 15 pt, 100 % black; Calibri regular 12 pt, 100 % black.

13. European map and colour squares:

– **Colours**:

Orange: 00-46-46-00.

Green: 59-00-47-00.

Blue: 54-08-00-00.

14. Supplier's name or trademark.

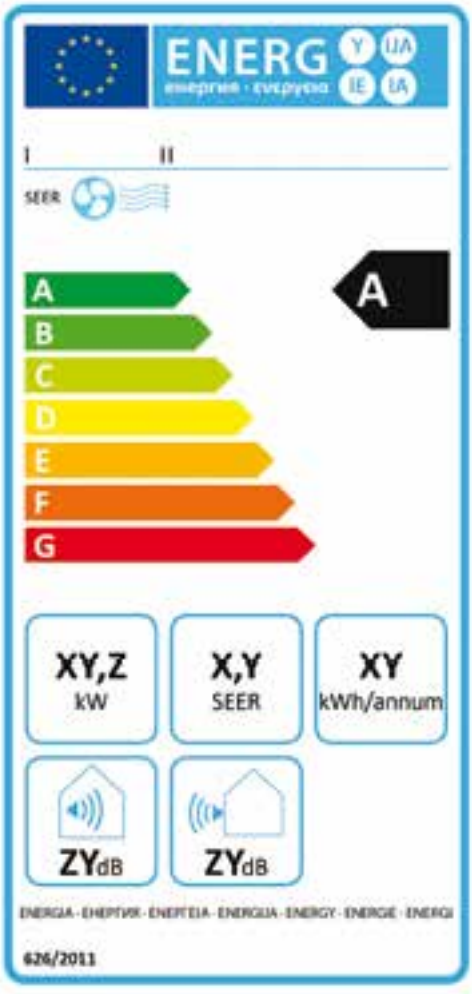
15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 102 × 13 mm.

16. Reference period: Text: Calibri bold 10 pt.

2. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

2.1. Cooling-only air conditioners classified in energy efficiency classes A to G



I
II
III

IV

V
VI
VII

VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SEER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. design load for cooling in kW, rounded up to one decimal;

VI. seasonal energy efficiency ratio (SEER value), rounded up to one decimal;

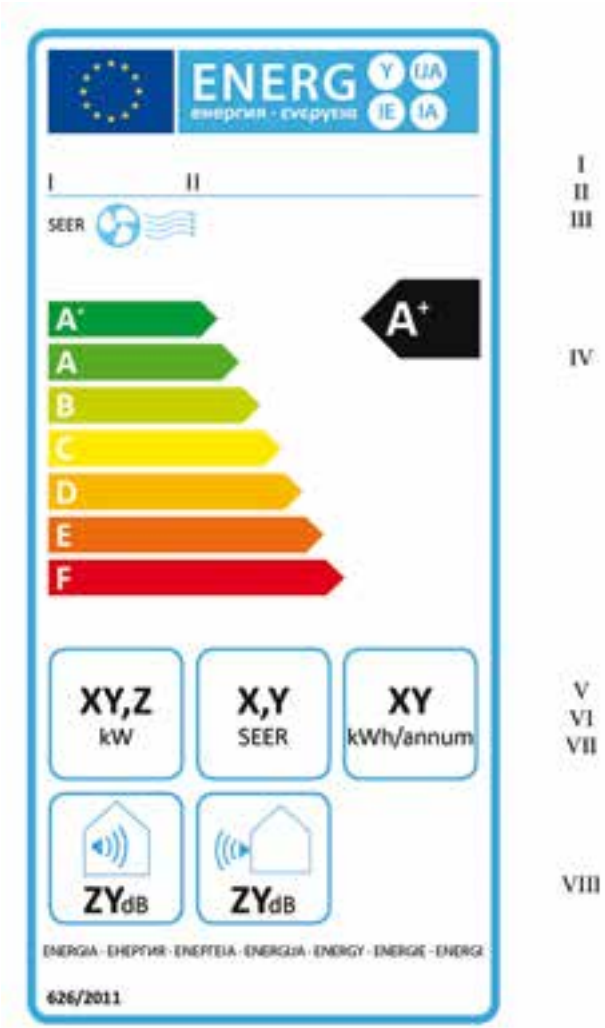
VII. annual energy consumption in kWh per year, rounded up to the nearest integer;

VIII. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 2.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

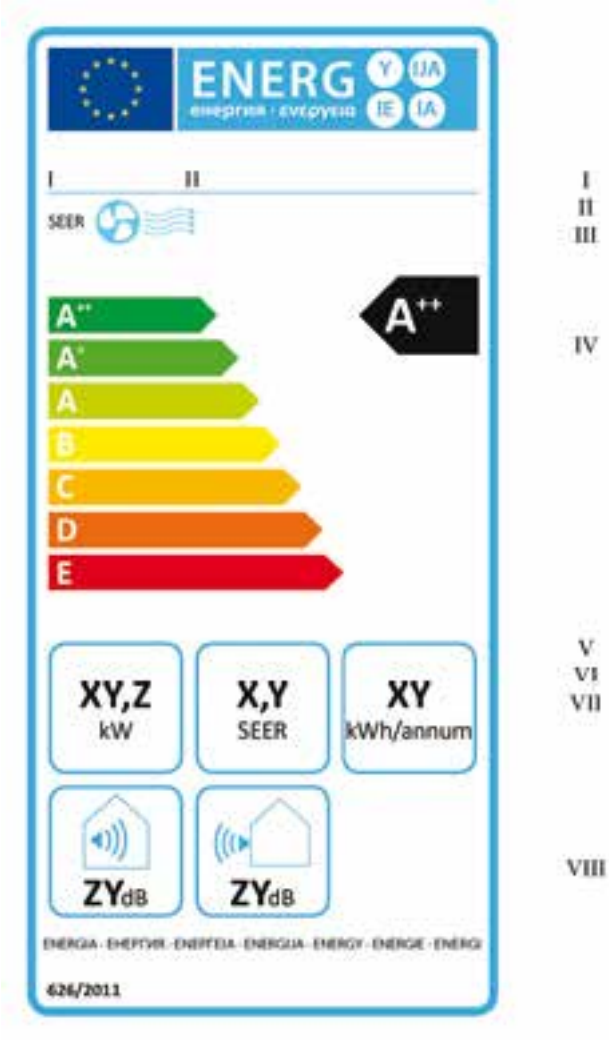
2.2. Cooling-only air conditioners classified in energy efficiency classes A⁺ to F



(a) The information listed in point 2.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 2.5.

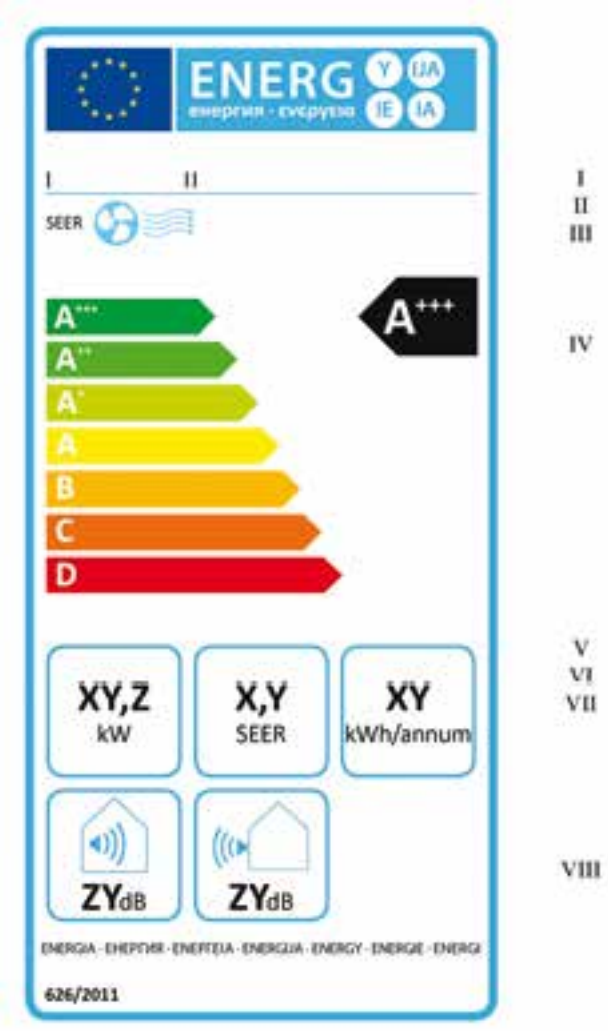
2.3. Cooling-only air conditioners classified in energy efficiency classes A++ to E



(a) The information listed in point 2.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 2.5.

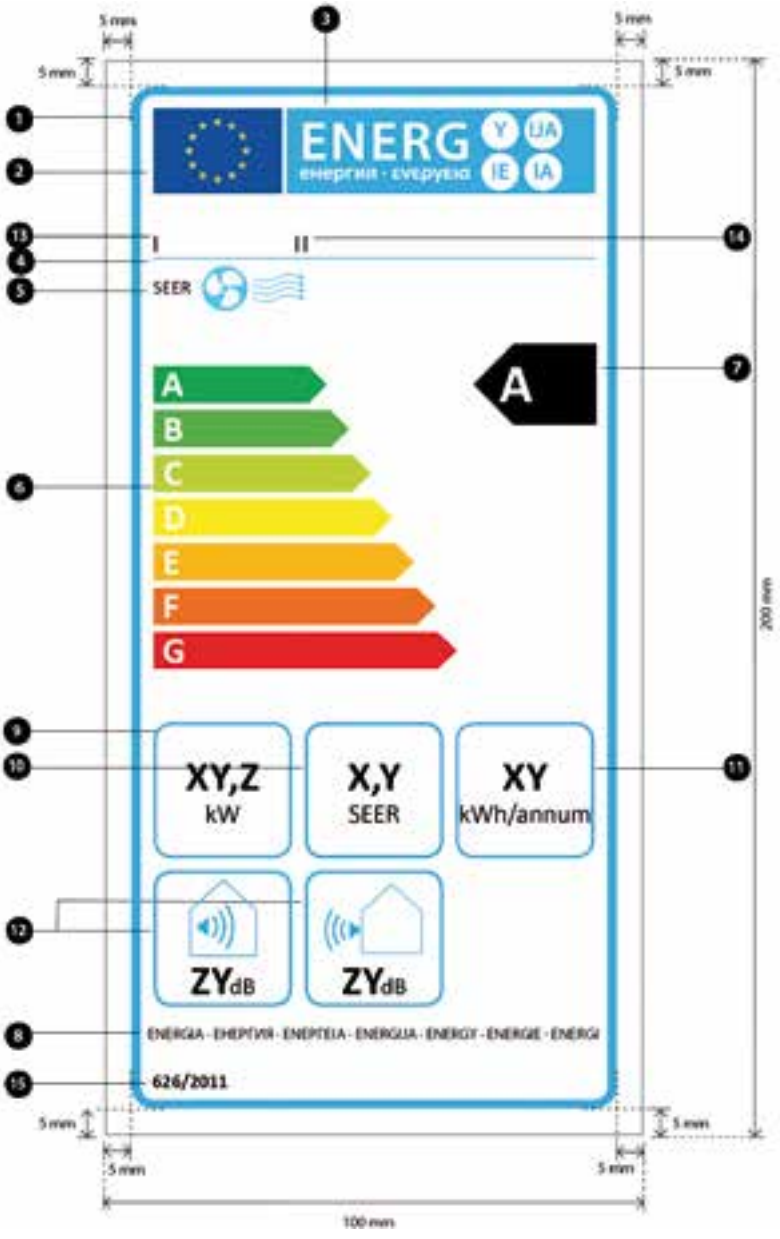
2.4. Cooling-only air conditioners classified in energy efficiency classes A^{+++} to D



(a) The information listed in point 2.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 2.5.

2.5. Label design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 93 mm, height: 18 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 93,7 mm.
5. **SEER indication:**
   - **Text**: Calibri regular 10 pt, capitals, 100% black.
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white.
7. **Energy efficiency class:**
   - **Arrow**: Width: 23 mm, height: 15 mm, 100% black;
   - **Text**: Calibri bold 29 pt, capitals, white.
8. **Energy:**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **Rated capacity in kW:**
   - **Text 'kW'**: Calibri regular 14 pt, 100% black.
   - **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.
10. **SEER value rounded up to one decimal:**
    - **Border**: 3 pt – colour: cyan 100% – round corners: 3,5 mm.
    - **Text 'SEER'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

11. Annual energy consumption in kWh/annum:

– **Text 'kWh/annum'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

12. Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

13. Supplier's name or trademark.

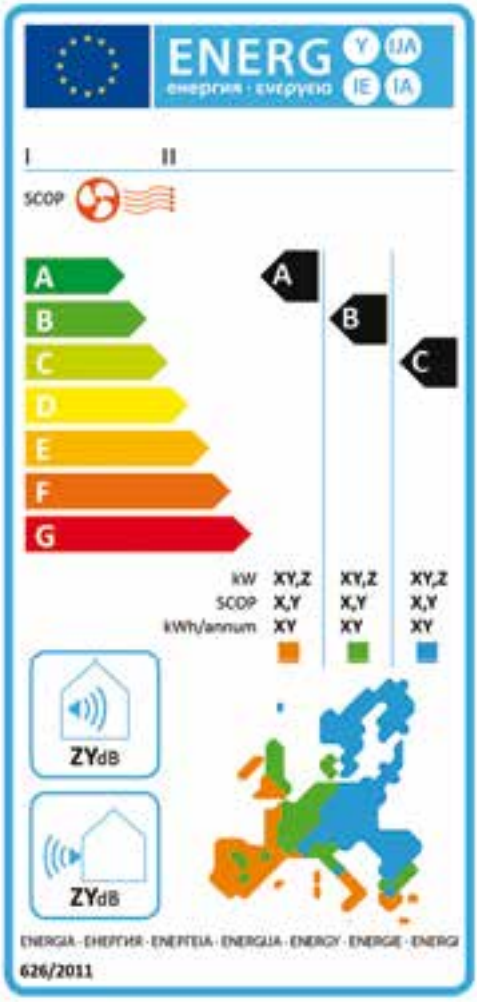
14. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm.

15. Reference period: Text: Calibri bold 10 pt.

3. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

3.1. Heating-only air conditioners classified in energy efficiency classes A to G



I
II
III
IV
V
VI
VII
VIII
IX

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SCOP', with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency for Average heating season is mandatory. Indication of efficiency for Warmer and Colder climates is optional;

V. design load for heating in kW, for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which design load is not provided shall be indicated as 'X';

VI. seasonal coefficient of performance (SCOP) for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which SCOP is not provided shall be indicated as 'X';

VII. annual energy consumption in kWh per year, rounded up to the nearest integer. Values for heating seasons for which annual energy consumption is not provided shall be indicated as 'X';

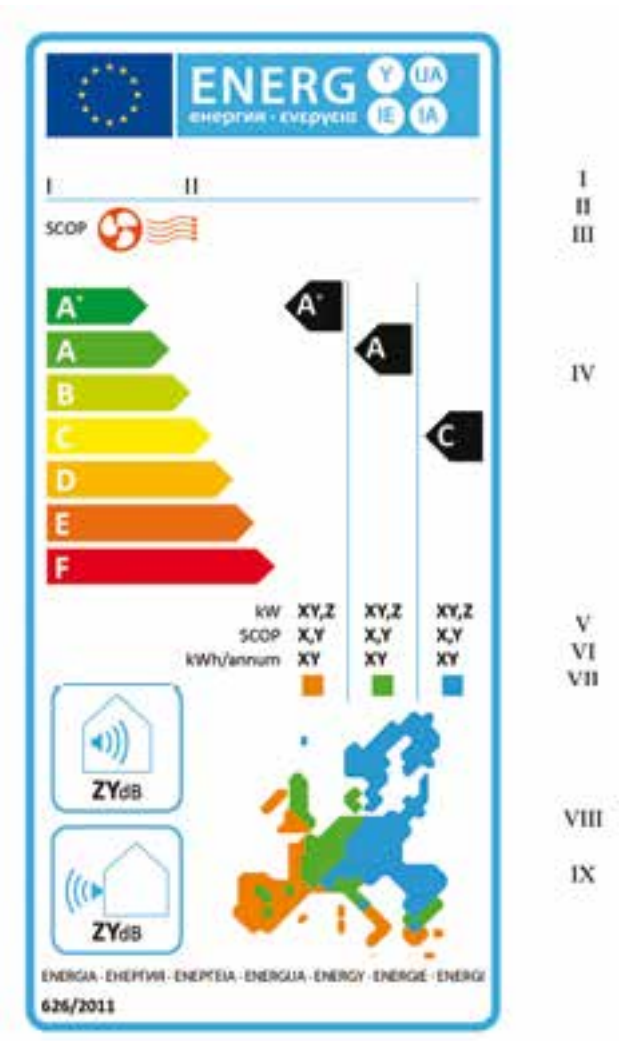
VIII. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer;

IX. European map with a display of three indicative heating seasons and corresponding colour squares.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 3.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

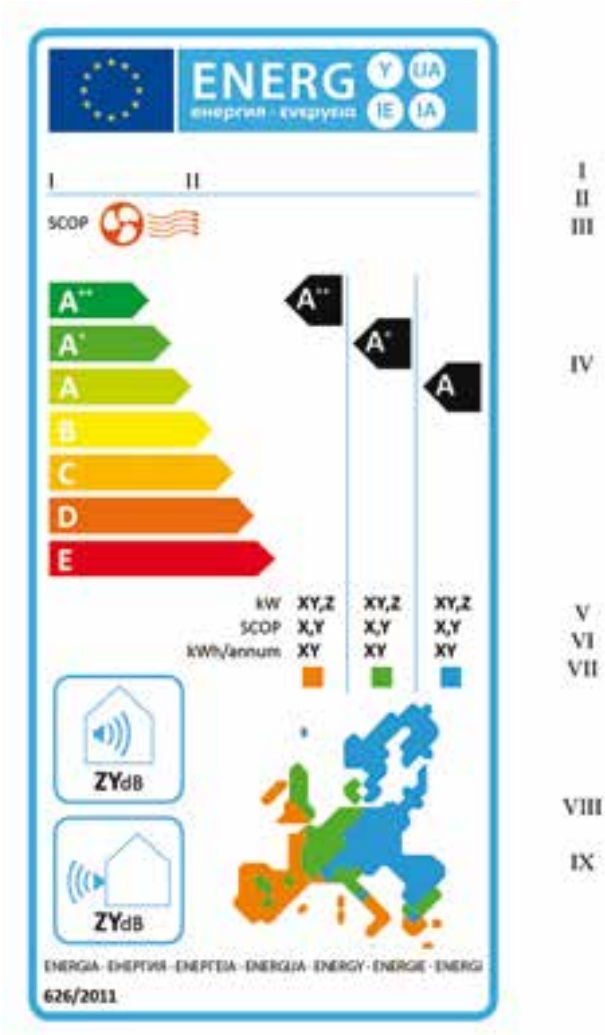
3.2. Heating-only air conditioners classified in energy efficiency classes A+ to F



(a) The information listed in point 3.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 3.5.

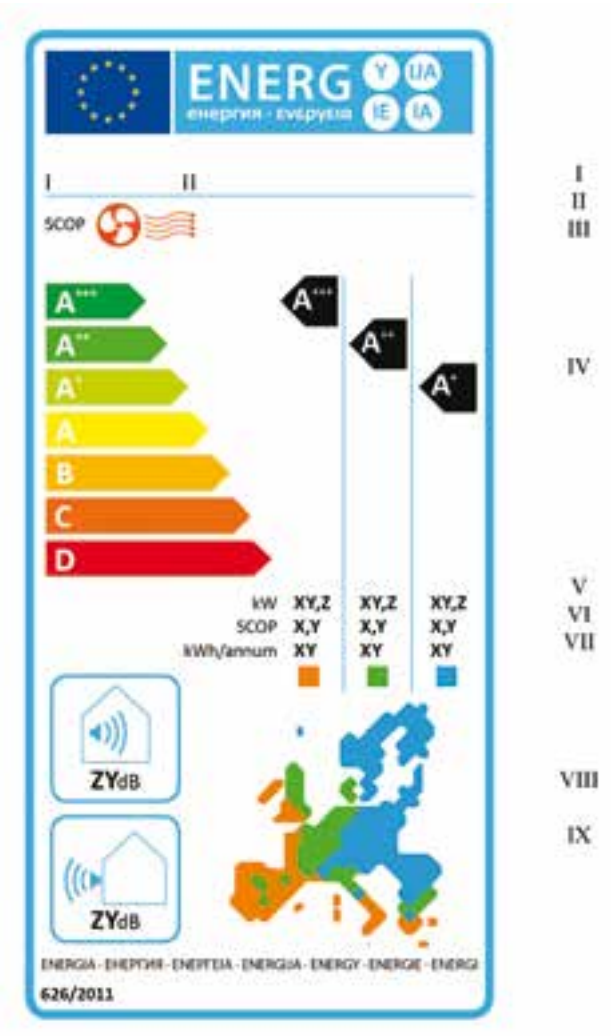
3.3. Heating-only air conditioners classified in energy efficiency classes A^{++} to E



(a) The information listed in point 3.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 3.5.

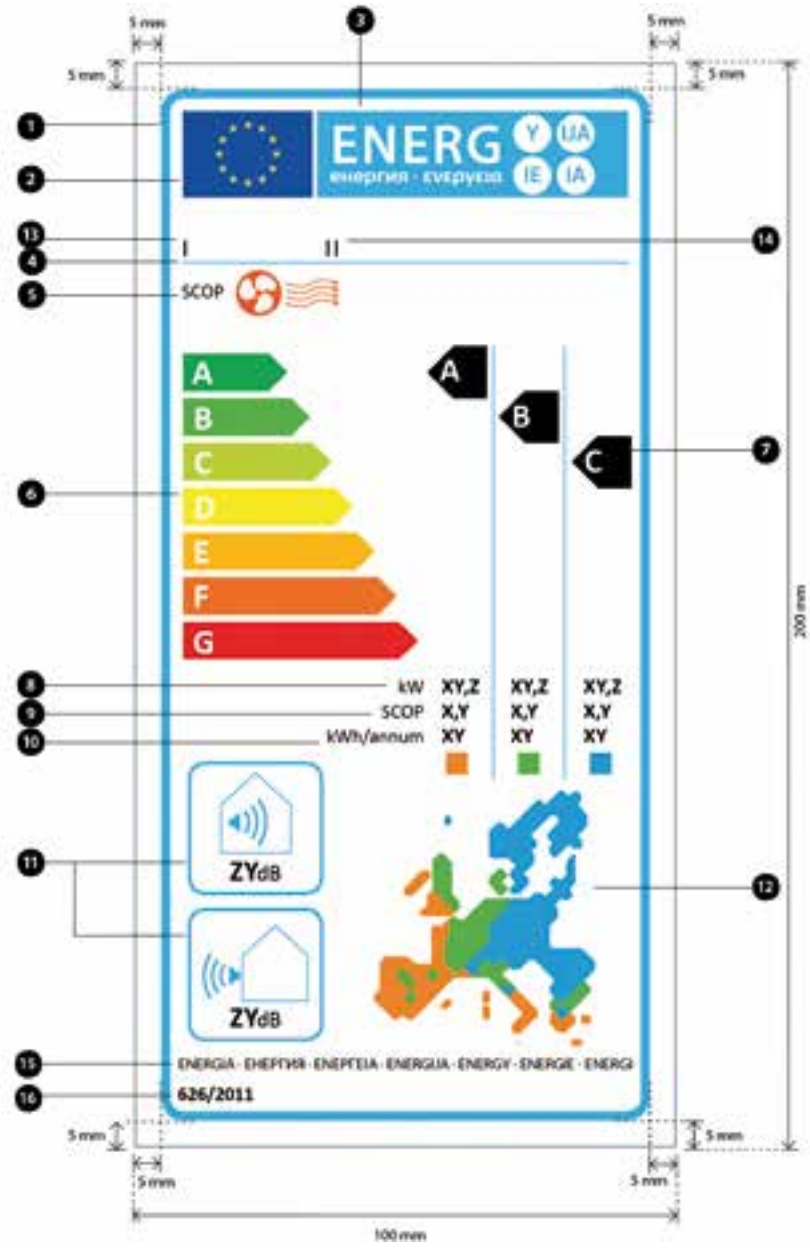
3.4. Heating-only air conditioners classified in energy efficiency classes A^{+++} to D



(a) The information listed in point 3.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 3.5.

3.5. Label design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 93 mm, height: 18 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 93,7 mm.
5. **SCOP indication:**
   - **Text**: Calibri regular 10 pt, capitals, 100% black.
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00, Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00, Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white.
7. **Energy efficiency class(es):**
   - **Arrow**: width: 11 mm, height: 10 mm, 100% black;
   - **Text**: Calibri bold 18 pt, capitals, white.
8. **Rated capacity in kW:**
   - **Text 'kW'**: Calibri regular 10 pt, 100% black.
   - **Value 'XY,Z'**: Calibri bold 11 pt, 100% black.
9. **SCOP values, rounded up to one decimal:**
   - **Text 'SCOP'**: Calibri regular 10 pt, capitals, 100% black.
   - **Value 'X,Y'**: Calibri bold 11 pt, 100% black.
10. **Annual energy consumption in kWh/annum:**
    - **Text 'kWh/annum'**: Calibri regular 10 pt, 100% black.
    - **Value 'XY'**: Calibri bold 11 pt, 100% black.

11. Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 15 pt, 100% black.

– **Text**: Calibri regular 12 pt, 100% black.

12. European map and colour squares:

– **Colours:**

– Orange: 00-46-46-00.

– Green: 59-00-47-00.

– Blue: 54-08-00-00.

13. Supplier's name or trademark.

14. Supplier's model identifier:

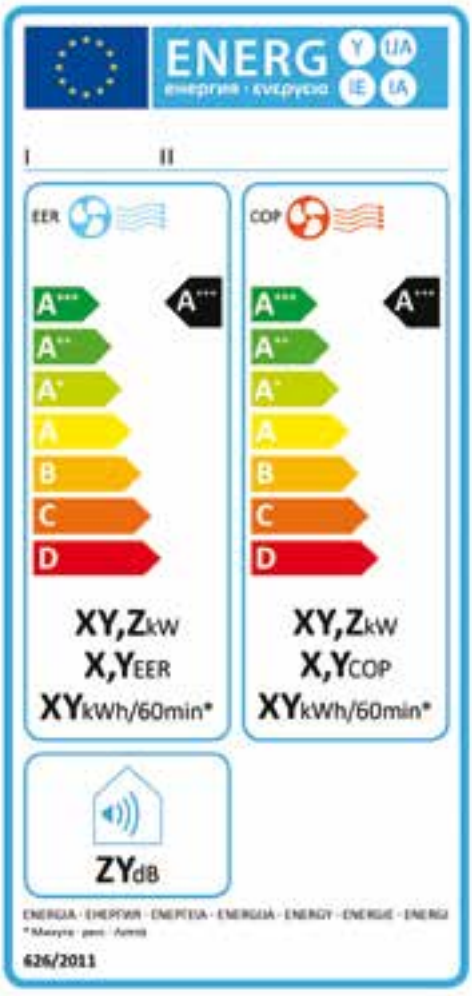
The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm.

15. Energy: Text: Calibri regular 8 pt, capitals, 100% black.

16. Reference period: Text: Calibri bold 10, pt.

4. LABEL OF DOUBLE DUCT AIR CONDITIONERS

4.1. Reversible double duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER' and 'COP' for cooling and heating, with a blue fan and air wave indication for EER and red fan and air wave indication for COP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating;

V. Rated capacity for cooling and heating mode in kW, rounded up to one decimal;

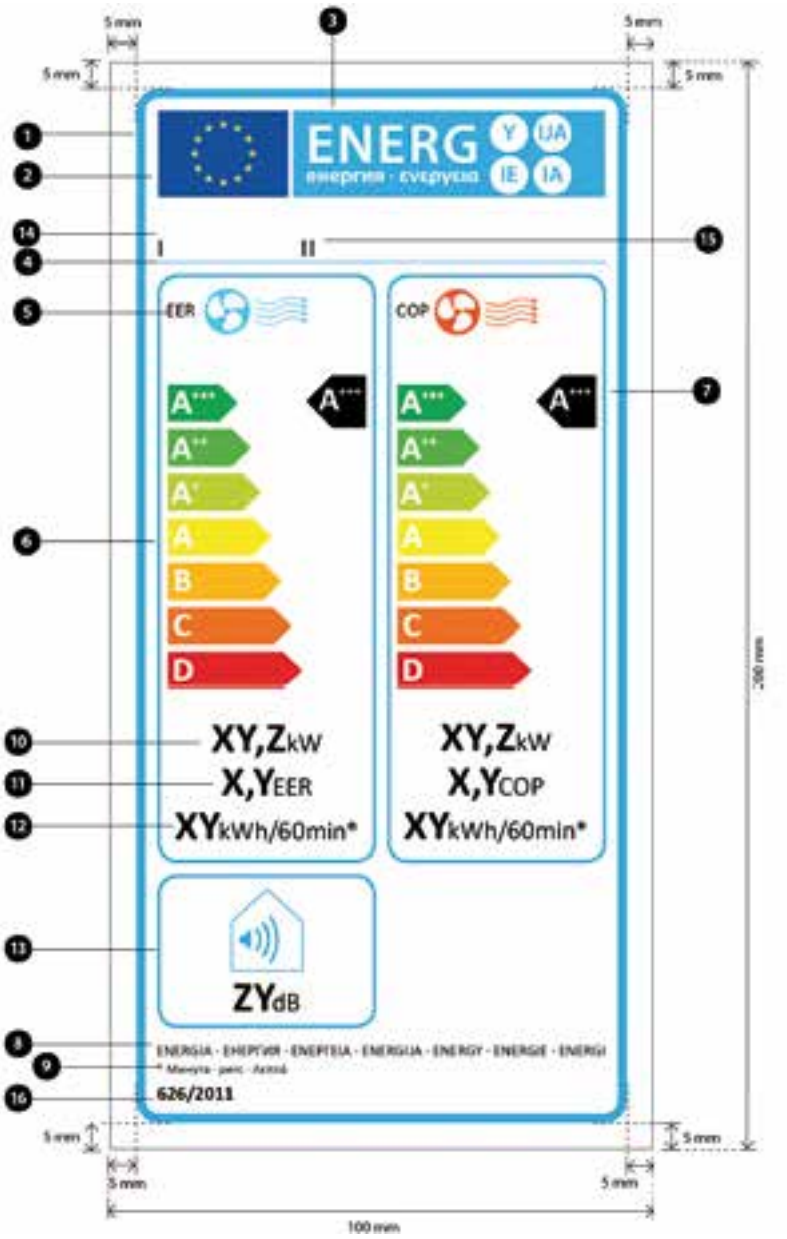
VI. EER rated and COP rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, for cooling and heating mode, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.2. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.2. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 92,5 mm.
5. **EER and COP indication:**
   - **Text**: Calibri regular 10 pt, 100% black
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.
7. **Energy efficiency classes:**
   - **Arrow**: width: 11 mm, height: 10 mm, 100% black;
   - **Text**: Calibri bold 18 pt, capitals, white.
     Calibri bold 7 pt, white.
8. **Energy:**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **'Minutes'-translation:**
   - **Text**: Calibri regular 7 pt, 100% black.
10. **Rated capacity for cooling and heating mode in kW:**
    - **Text 'kW'**: Calibri regular 14 pt, 100% black.
    - **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.

11. COP and EER values, rounded up to one decimal:

– **Text 'EER'/'COP':** Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12. Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY**': Calibri bold 22 pt, 100% black.

13. Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

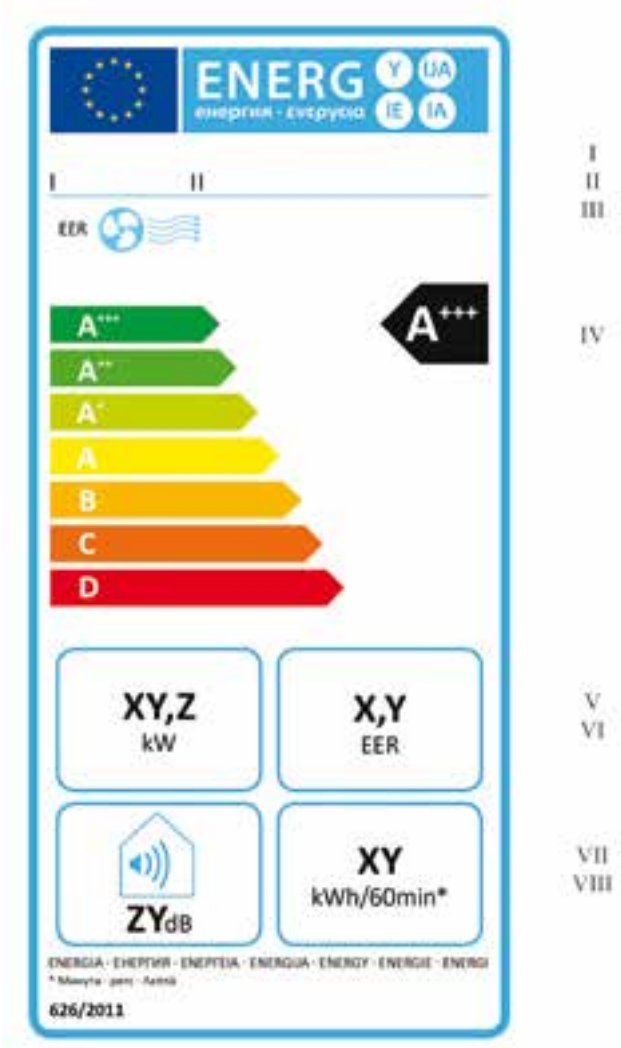
14. Supplier's name or trademark.

15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16. Reference period: Text: Calibri bold 10 pt.

4.3. Cooling-only double duct air conditioners classified in energy efficiency classes A^{+++} to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. Rated capacity for cooling in kW, rounded up to one decimal;

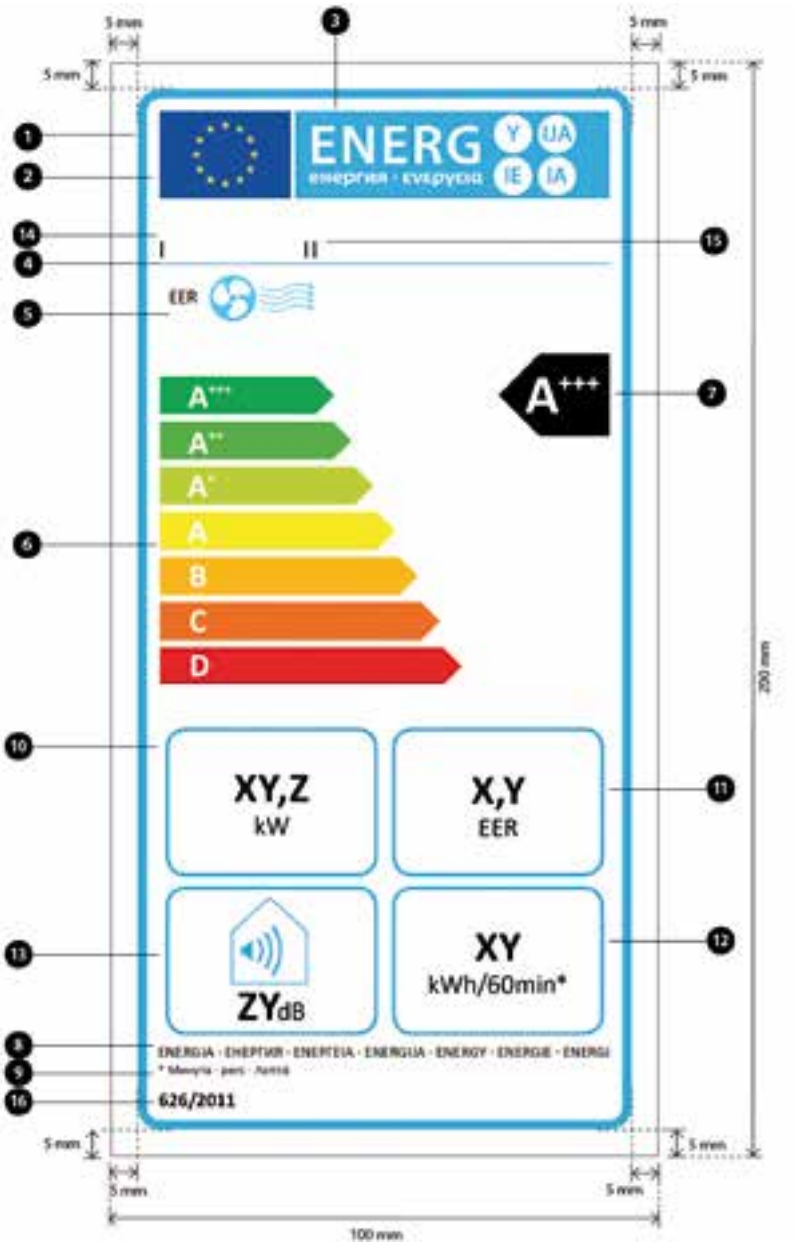
VI. EER rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer; All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.4. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.4. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: Cyan 100% – round corners: 3,5 mm.
2. **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 92,5 mm.
5. **EER indication:**
   - **Text**: Calibri regular 10 pt, capitals, 100% black
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white;
     Calibri bold 7 pt, white.
7. **Energy efficiency class:**
   - **Arrow**: width: 20 mm, height: 15 mm, 100% black;
   - **Text**: Calibri bold 30 pt, capitals, white;
     Calibri bold 14 pt, white.
8. **Energy**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **'Minutes'-translation:**
   - **Text**: Calibri regular 7 pt, 100% black.
10. **Rated capacity in kW:**
    - **Text 'kW'**: Calibri regular 14 pt, 100% black.

– **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.

11. EER value, rounded up to one decimal:

– **Text 'EER'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12. Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13. Noise emissions:

– **Border**: 2 pt – colour: 100% cyan – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

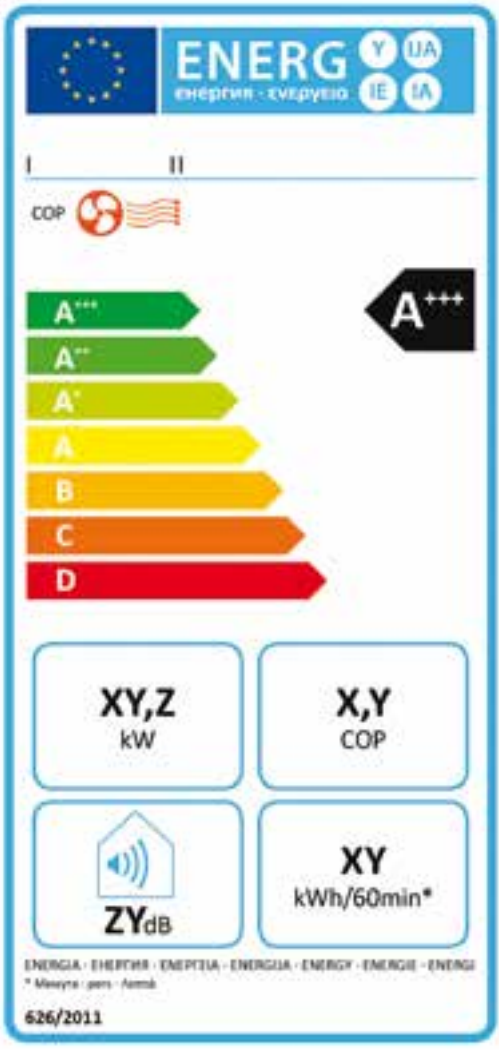
14. Supplier's name or trademark.

15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16. Reference period: Text: Calibri bold 10 pt.

4.5. Heating-only double duct air conditioners classified in energy efficiency classes A^{+++} to D



I
II
III
IV
V
VI
VII
VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'COP' with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for heating in kW, rounded up to one decimal;

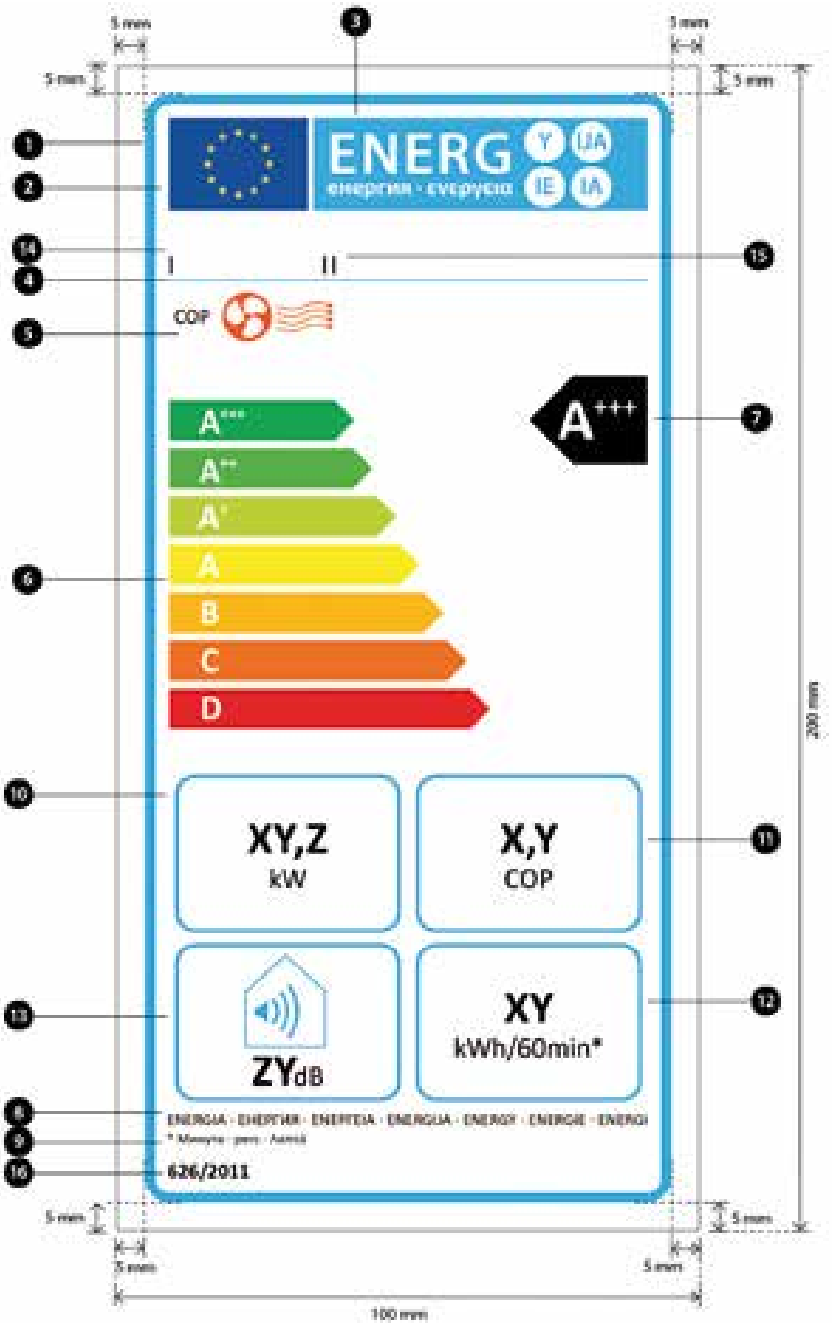
VI. COP rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.6. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.6. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
4. **Sub-logos border:** 1 pt – colour: 100% cyan – length: 92,5 mm.
5. **COP indication:**
   - **Text**: Calibri regular 10 pt, capitals, 100% black
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.
7. **Energy efficiency class:**
   - **Arrow**: width: 20 mm, height: 15 mm, 100% black;
   - **Text**: Calibri bold 30 pt, capitals, white; Calibri bold 14 pt, white.
8. **Energy:**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **'Minutes'-translation:**
   - **Text**: Calibri regular 7 pt, 100% black.
10. **Rated capacity in kW:**
    - **Text 'kW'**: Calibri regular 14 pt, 100% black.
    - **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.
11. **COP value, rounded up to one decimal:**

– **Text 'COP'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12. Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13. Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

14. Supplier's name or trademark.

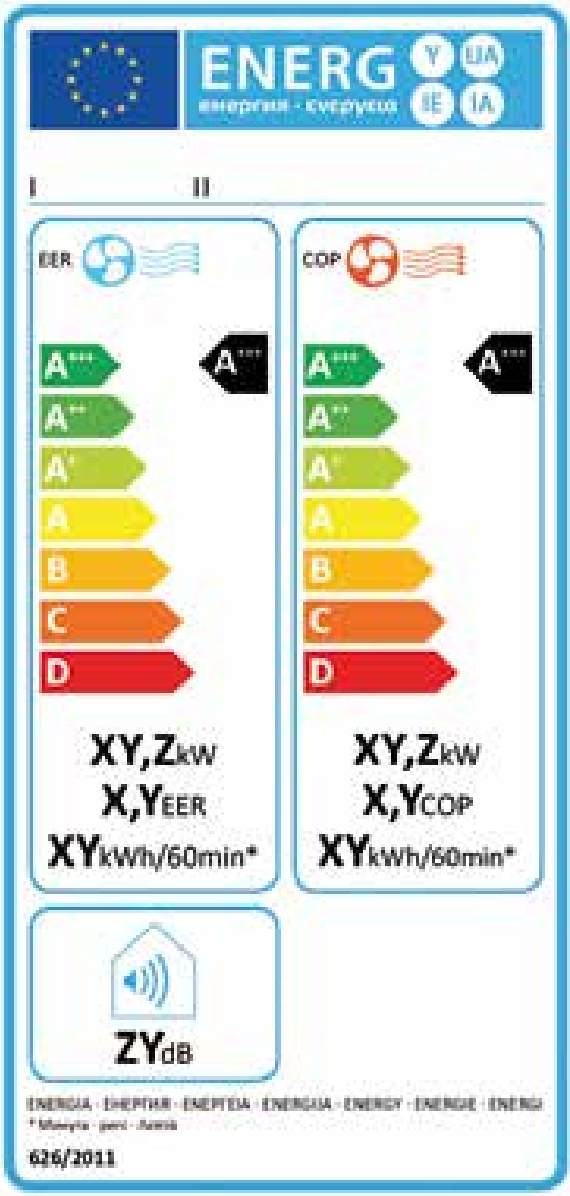
15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16. Reference period: Text: Calibri bold 10 pt.

5. LABEL OF SINGLE DUCT AIR CONDITIONERS

5.1. Reversible single duct air conditioners classified in energy efficiency classes A+++ to D



I
II
III
IV
V
VI
VII
VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER' and 'COP' for cooling and heating, with a blue fan and air wave indication for EER and red fan and air wave indication for COP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating;

V. rated capacity for cooling and heating mode in kW, rounded up to one decimal;

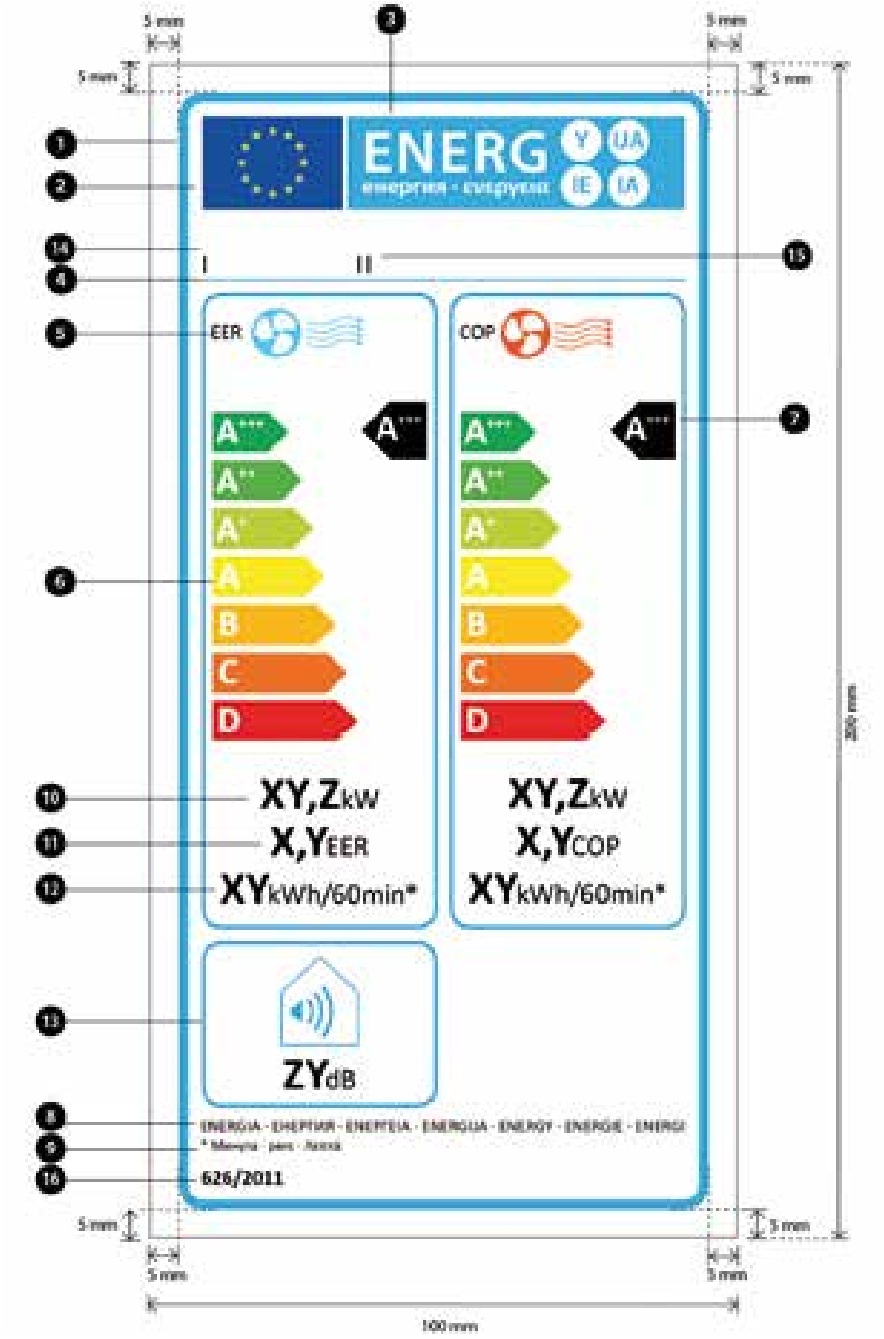
VI. EER_{rated} and COP_{rated}, rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, for cooling and heating, rounded up to one decimal;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.2. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.2. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 92,5 mm.
5. **EER and COP indication:**
   - **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
   - **Text**: Calibri regular 10 pt, capitals, 100% black.
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white;
     Calibri bold 7 pt, white.
7. **Energy efficiency classes:**
   - **Arrow**: Width: 11 mm, height: 10 mm, 100% black;
   - **Text**: Calibri bold 18 pt, capitals, white.
8. **Energy:**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **'Minutes'-translation:**
   - **Text**: Calibri regular 7 pt, 100% black.
10. **Rated capacity for cooling and heating in kW:**
    - **Text** 'kW': Calibri regular 14 pt, 100% black.

– **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.

11. EER and COP values, rounded up to one decimal:

– **Text**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12. Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13. Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

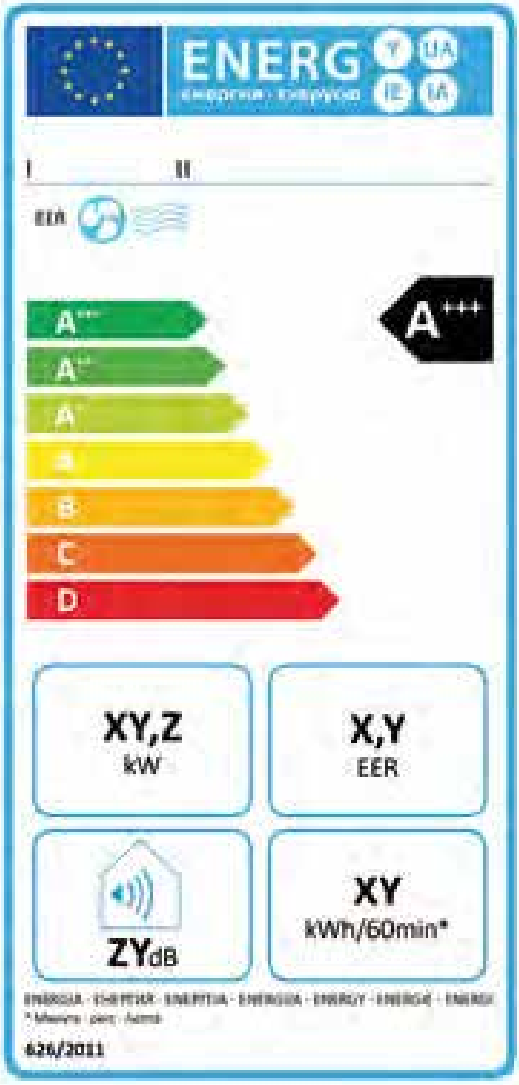
14. Supplier's name or trademark.

15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16. Reference period: Text: Calibri bold 10 pt.

5.3. Cooling-only single duct air conditioners classified in energy efficiency classes A^{+++} to D



I
II
III
IV
V
VI
VII
VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for cooling in kW, rounded up to one decimal;

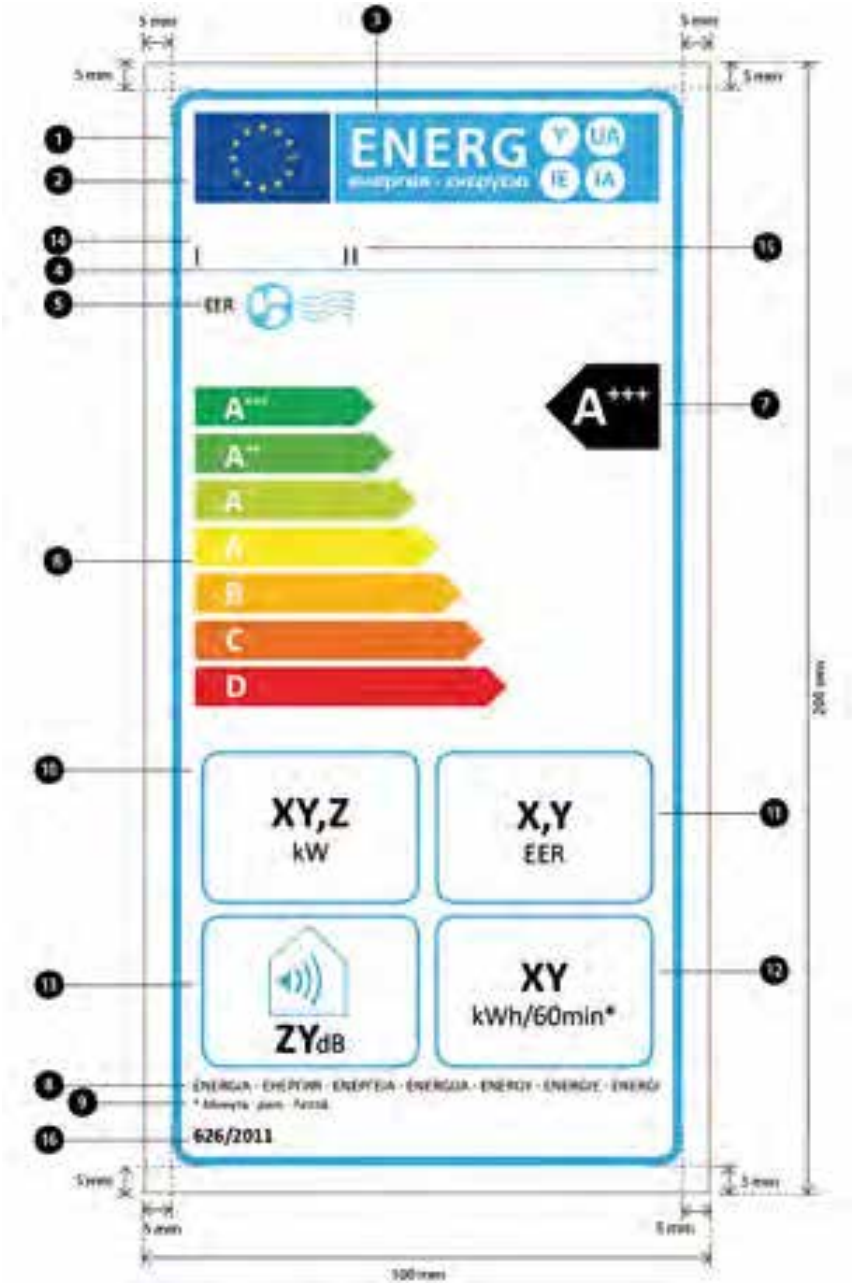
VI. EER rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to one decimal;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.4. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.4. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour:** X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 92,5 mm.
5. **EER indication:**
   - **Text**: Calibri regular 10 pt, capitals, 100% black.
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.
7. **Energy efficiency class:**
   - **Arrow**: Width: 20 mm, height: 15 mm, 100% black;
   - **Text**: Calibri bold 30 pt, capitals, white; Calibri bold 14 pt, capitals, white.
8. **Energy:**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **'Minutes'-translation:**
   - **Text**: Calibri regular 7 pt, 100% black.
10. **Rated capacity in kW:**
    - **Text 'kW'**: Calibri regular 14 pt, 100% black.
    - **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.
11. **EER value, rounded up to one decimal:**

– **Text 'EER'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12. Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13. Noise emissions:

– **Border**: 2 pt – colour: 100% cyan – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

14. Supplier's name or trademark.

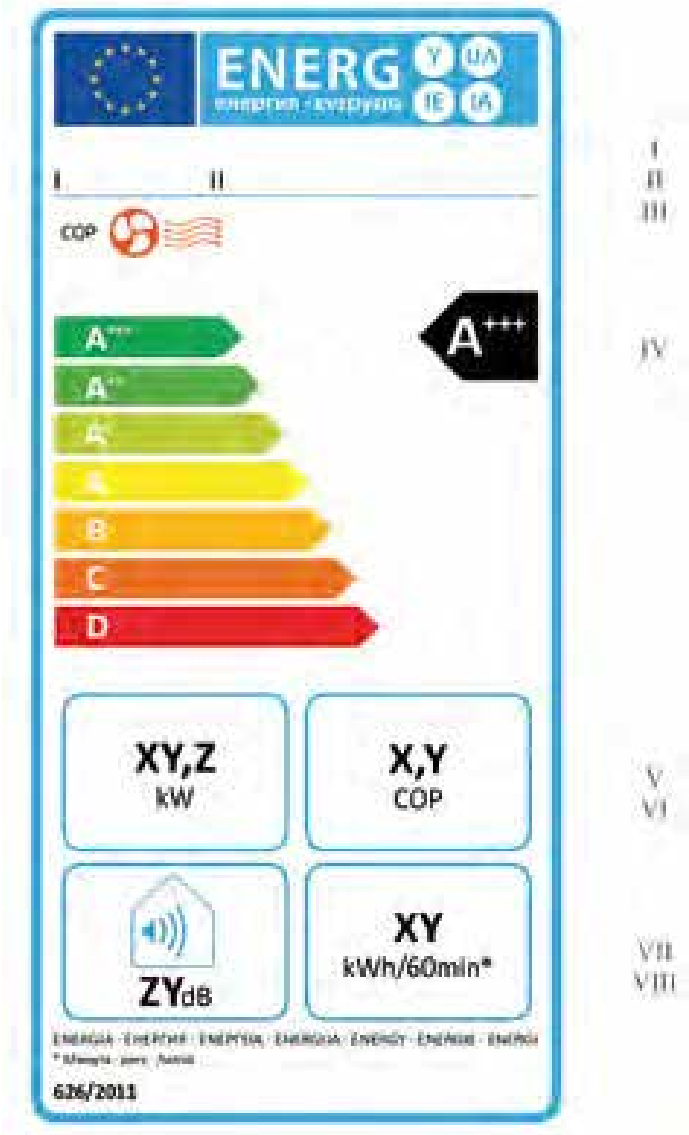
15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16. Reference period:

– **Text**: Calibri bold 10 pt.

5.5. Heating-only single duct air conditioners classified in energy efficiency classes A^{+++} to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'COP' with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for heating in kW, rounded up to one decimal;

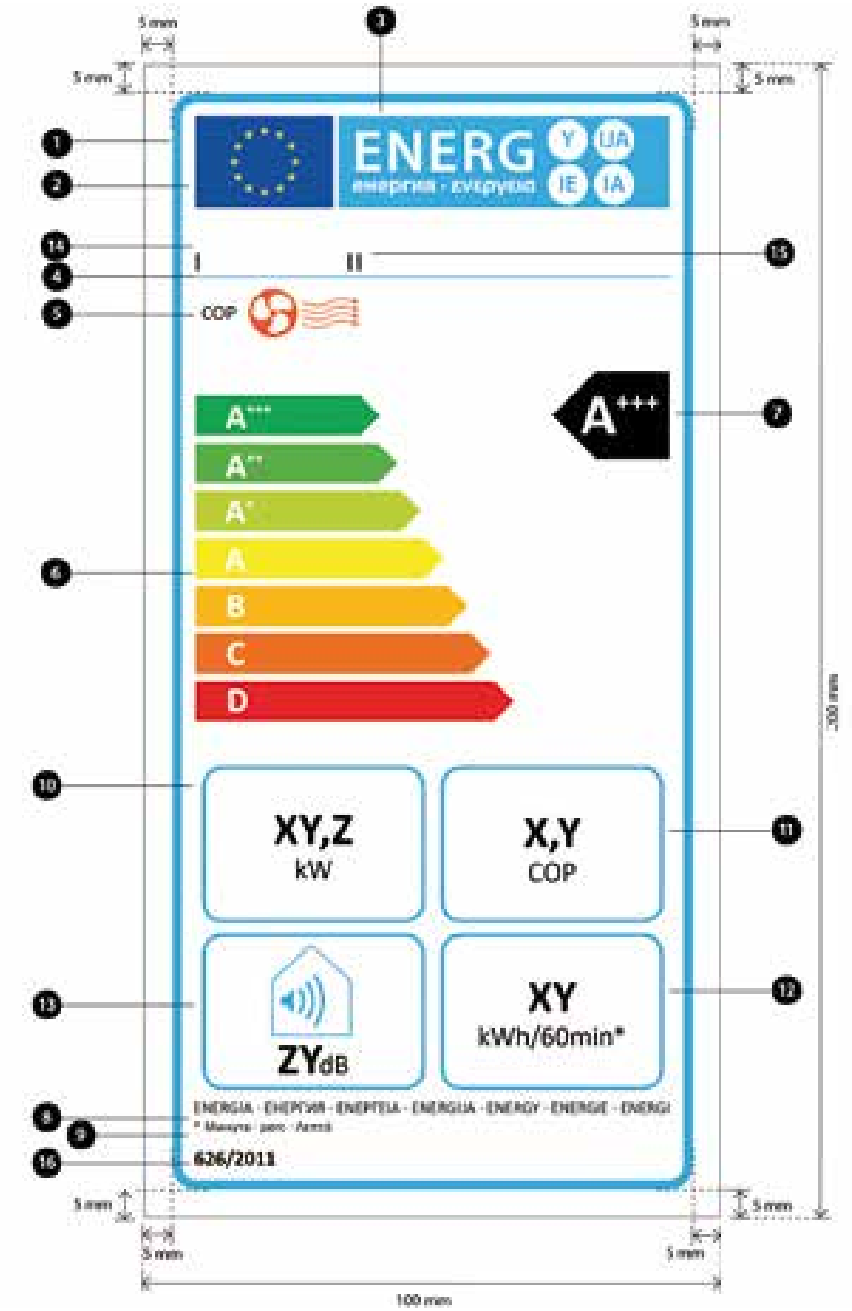
VI. COP_{rated}, rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.6. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.6. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1. **EU label border:** stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
2. **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
3. **Energy label:**
   - **Colour**: X-00-00-00.
   - **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
4. **Sub-logos border:** 1 pt – colour: cyan 100% – length: 92,5 mm.
5. **COP indication:**
   - **Text**: Calibri regular 10 pt, capitals, 100% black
6. **A-G scale:**
   - **Arrow**: height: 7 mm, gap: 1,3 mm – colours:
     - Highest class: X-00-X-00,
     - Second class: 70-00-X-00,
     - Third class: 30-00-X-00,
     - Fourth class: 00-00-X-00,
     - Fifth class: 00-30-X-00,
     - Sixth class: 00-70-X-00,
     - Last class(es): 00-X-X-00.
   - **Text**: Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.
7. **Energy efficiency class:**
   - **Arrow**: Width: 20 mm, height: 15 mm, 100% black;
   - **Text**: Calibri bold 30 pt, capitals, white;
     Calibri bold 14 pt, capitals, white.
8. **Energy:**
   - **Text**: Calibri regular 8 pt, capitals, 100% black.
9. **'Minutes'-translation:**
   - **Text**: Calibri regular 7 pt, 100% black.
10. **Rated capacity in kW:**
    - **Text 'kW'**: Calibri regular 14 pt, 100% black.
    - **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.

11. COP value, rounded up to one decimal:

– **Text 'COP'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12. Hourly energy consumption in kWh/60 minutes:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13. Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

14. Supplier's name or trademark.

15. Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16. Reference period: Text: Calibri bold 10 pt.

ANNEX IV
Product fiche

1. The information in the product fiche shall be given in the order specified below:

(a) supplier's name or trade mark;

(b) model identifier of the indoor air conditioner or of the indoor and outdoor elements of the air conditioner;

(c) without prejudice to any requirements under the Union eco-label scheme, where a model has been granted a 'European Union eco-label' under Regulation (EC) No 66/2010, a copy of the eco-label may be added;

(d) inside and outside sound power levels at standard rating conditions, on cooling and/or heating modes;

(e) the name and GWP of the refrigerant used and a standard text as follows:

'Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to [xxx]. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [xxx] times higher than 1 kg of CO2 , over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.'

2. Additionally, the following information shall be included in the product fiche on air conditioners on the cooling mode, when efficiency is declared on the basis of the seasonal energy efficiency ratio (SEER):

(a) the SEER and the energy efficiency class of the model (model of a unit or of a combination of units) determined in accordance with definitions and test procedures in Annex I and VII for the cooling mode as well as with the class limits defined in Annex II;

(b) the indicative annual electricity consumption Q CE in kWh/a during the cooling season, determined in accordance with definitions and test procedures in Annex I and VII, respectively. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) the design load Pdesignc in kW of the appliance in cooling mode determined in accordance with definitions and test procedures in Annex I and VII, respectively;

3. Additionally, the following notes define the information to be included in the fiche on the heating mode, when efficiency is declared on the basis of seasonal coefficient of performance (SCOP):

(a) the SCOP and the energy efficiency class of the model, or combination, in heating mode determined in accordance with definitions and test procedures in Annex I and VII, respectively, as well as with the class limits defined in Annex II;

(b) the indicative annual electricity consumption for an average heating season Q_{HE} in kWh/a, determined in accordance with definitions and test procedures in Annex I and VII, respectively. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) other designated heating seasons for which the unit is declared fit for purpose, with options of warmer (optional) or colder (optional) seasons, as defined in Annex I;

(d) the design load Pdesignh in kW of the appliance in heating mode determined in accordance with definitions and test procedures in Annex I and VII;

(e) the declared capacity and an indication of the back up heating capacity assumed for the calculation of SCOP at reference design conditions.

4. Additionally, the following notes define the information to be included in the fiche of air conditioners, when efficiency is declared on the basis of energy efficiency ratio (EER_{rated}) or coefficient of performance (COP_{rated}):

(a) the energy efficiency class of the model, determined in accordance with definitions and test procedures in Annex I and VII, as well as the class limits defined in Annex II;

(b) for double ducts, the indicative hourly electricity consumption Q_{DD} in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII. It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) for single ducts, the indicative hourly electricity consumption Q_{SD} in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII. It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(d) the cooling capacity P_{rated} in kW of the appliance determined in accordance with definitions and test procedures in Annex I and VII;

(e) the heating capacity P_{rated} in kW of the appliance determined in accordance with definitions and test procedures in Annex I and VII.

5. One fiche may cover a number of appliance models supplied by the same supplier.

6. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in points 1-4 not already displayed on the label shall also be provided.

ANNEX V
Technical documentation

The technical documentation referred to in Article 3 (1)(c) shall include at least the following items:

(a) the name and address of the supplier;

(b) a general description of the appliance model, sufficient for it to be unequivocally and easily identified. Single ducts shall be referred to as 'local air conditioners';

(c) where appropriate, the references for the harmonised standards applied;

(d) where appropriate, the other calculation methods, measurement standards and specifications used;

(e) identification and signature of the person empowered to bind the supplier;

(f) where appropriate the technical parameters for measurements, established in accordance with Annex VII:

(i) overall dimensions;

(ii) specification of the type of the air conditioner;

(iii) specification whether the appliance is designed for cooling or heating only or for both;

(iv) the energy efficiency class of the model as defined in Annex II;

(v) The energy efficiency ratio (EER_{rated}) and coefficient of performance (COP_{rated}) for single and double duct air conditioners or seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) for other air conditioners;

(vi) The heating season for which the appliance is declared fit for purpose;

(vii) Sound power levels expressed in dB(A) re1 pW, rounded to the nearest integer;

(viii) the name and GWP of refrigerant used.

(g) the results of calculations performed in accordance with Annex VII.

Suppliers may include additional information at the end of the above list.

Where the information included in the technical documentation file for a particular air conditioner model has been obtained by calculation on the basis of design, or extrapolation from other equivalent appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent appliance models where the information was obtained on the same basis.

ANNEX VI

Information to be provided in the cases where end-users Cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:

(a) The energy efficiency class of the model as defined in Annex II;

(b) for air conditioners other than single ducts and double ducts:

(i) the seasonal energy efficiency ratio (SEER) and/or seasonal coefficient of performance (SCOP);

(ii) the design load (in kW);

(iii) the annual electricity consumption;

(iv) the cooling and/or each heating ('Average, Colder, Warmer') season the appliance is declared fit for purpose;

(c) for single duct and double duct air conditioners:

(i) the energy efficiency ratio (EER) and/or coefficient of performance (COP);

(ii) the rated capacity (kW);

(iii) for double ducts, the hourly electricity consumption for cooling and/or heating;

(iv) for single ducts, the hourly electricity consumption for cooling and/or heating;

(d) Sound power levels expressed in dB(A) re1 pW, rounded to the nearest integer;

(e) Name and GWP of refrigerant used.

2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.

3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VII
Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published in the Official Journal of European Union, or other reliable, accurate and reproducible method, which takes into account the generally recognised state of the art methods, and whose results are deemed to be of low uncertainty.

2. The determination of the seasonal energy consumption and seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) shall take into account:

(a) European seasonal conditions, as defined in Table 1 of this Annex;

(b) Reference design conditions, as defined in Table 3 of this Annex;

(c) Electric energy consumption for all relevant modes of operation, using time periods as defined in Table 4 of this Annex;

(d) Effects of the degradation of the energy efficiency caused by on/off cycling (if applicable) depending on the type of control of the cooling and/or heating capacity;

(e) Corrections on the seasonal coefficients of performance in conditions where the heating load can not be met by the heating capacity;

(f) The contribution of a back-up heater (if applicable) in the calculation of the seasonal efficiency of a unit in heating mode.

3. Where the information relating to a specific model, being a combination of indoor and outdoor unit(s), has been obtained by calculation on the basis of design, and/or extrapolation from other combinations, the documentation should include details of such calculations and/or extrapolations, and of tests undertaken to verify the accuracy of the calculations undertaken (including details of the mathematical model for calculating performance of such combinations, and of measurements taken to verify this model).

4. The energy efficiency ratio (EER_{rated}) and, when applicable, coefficient of performance (COP_{rated}) for double ducts and single ducts shall be established at the standard rating conditions as defined in Table 2 of this Annex.

5. The calculation of electricity consumption for cooling and/or heating shall take into account electric energy consumption of all relevant modes of operation, when appropriate, using time periods as defined in Table 4 of this Annex.

Table 1

Bin number (j), outdoor temperature (Tj) in °C and number of hours per bin (hj) for the cooling season and for heating seasons 'average', 'warmer' and 'colder'. 'db' = dry bulb temperature

Cooling season			Heating season				
					Average	Warmer	Colder
j	Tj	hj	j	Tj	hjA	hjW	hjC
#	°C	h	#	°C	h	h	h
	db			db			
1	17	205	1 to 8	-30 to -23	0	0	0
2	18	227	9	-22	0	0	1
3	19	225	10	-21	0	0	6
4	20	225	11	-20	0	0	13
5	21	216	12	-19	0	0	17
6	22	215	13	-18	0	0	19
7	23	218	14	-17	0	0	26
8	24	197	15	-16	0	0	39
9	25	178	16	-15	0	0	41
10	26	158	17	-14	0	0	35
11	27	137	18	-13	0	0	52
12	28	109	19	-12	0	0	37
13	29	88	20	-11	0	0	41
14	30	63	21	-10	1	0	43
15	31	39	22	-9	25	0	54
16	32	31	23	-8	23	0	90
17	33	24	24	-7	24	0	125
18	34	17	25	-6	27	0	169
19	35	13	26	-5	68	0	195
20	36	9	27	-4	91	0	278
21	37	4	28	-3	98	0	306
22	38	3	29	-2	165	0	454
23	39	1	30	-1	173	0	385
24	40	0	31	0	240	0	490
			32	1	280	0	533
			33	2	320	3	380
			34	3	357	22	228
			35	4	356	63	261

			36	5	303	63	279
			37	6	330	175	229
			38	7	326	162	269
			39	8	348	259	233
			40	9	335	360	230
			41	10	315	428	243
			42	11	215	430	191
			43	12	169	503	146
			44	13	151	444	150
			45	14	105	384	97
			46	15	74	294	61
Total		**2602**			**4910**	**3590**	**6446**

Table 2

Standard rating conditions, temperatures in 'dry bulb' air temperature

('wet bulb' indicated in brackets)

Appliance	Function	Indoor air temperature (°C)	Outdoor air temperature (°C)
air conditioners, excluding single duct	cooling	27 (19)	35 (24)
	heating	20 (max. 15)	7 (6)
single duct	cooling	35 (24)	35 (24) (*)
	heating	20 (12)	20 (12) (*)

(*) In case of single ducts, the condensor (evaporator) when cooling (heating), is not supplied with outdoor air, but indoor air.

Table 3

Reference design conditions, temperatures in 'dry bulb' air temperature

('wet bulb' indicated in brackets)

Function / season	Indoor air temperature (°C)	Outdoor air temperature (°C)	Bivalent temperature (°C)	Operating limit temperature (°C)
	Tin	Tdesignc/Tdesignh	Tbiv	Tol
cooling	27 (19)	Tdesignc = 35 (24)		n.a.
heating / Average	20 (15)	Tdesignh = – 10 (– 11)	max. 2	max. – 7
heating / Warmer		Tdesignh = 2 (1)	max. 7	max. 2
heating / Colder		Tdesignh = – 22 (– 23)	max. – 7	max. – 15

Table 4

Operational hours per type of appliance per functional mode to be used for calculation of electricity consumption

Type of appliance / functionality (if applicable)		**Unit**	**Heating season**	**On mode**	**Thermostat off mode**	**Standby mode**	**Off mode**	**Crankcase heater mode**
				cooling: H_{CE} heating: H_{HE}	H_{TO}	H_{SB}	H_{OFF}	H_{CK}
Air conditioners, except double ducts and single duct								
Cooling mode, if appliance offers cooling only		h/annum		350	221	2142	5088	7760
Cooling and heating modes, if appliance offers both modes	Cooling mode	h/annum		350	221	2142	0	2672
	Heating mode	h/annum	Average	1400	179	0	0	179
			Warmer	1400	755	0	0	755
			Colder	2100	131	0	0	131
Heating mode, if appliance offers heating only one mode		h/annum	Average	1400	179	0	3672	3851
			Warmer	1400	755	0	4345	4476
			Colder	2100	131	0	2189	2944
Double duct air conditioner				cooling: H_{CE} heating: H_{HE}	H_{TO}	H_{SB}	H_{OFF}	H_{CK}
Cooling mode, if appliance offers cooling only one mode		h/60 min		1	n/a	n/a	n/a	n/a
Cooling and heating modes, if appliance offers both modes	Cooling mode	h/60 min		1	n/a	n/a	n/a	n/a
	Heating mode	h/60 min		1	n/a	n/a	n/a	n/a
Heating mode, if appliance offers heating only		h/60 min		1	n/a	n/a	n/a	n/a
Single duct air conditioner				cooling: H_{CE} heating: H_{HE}				
Cooling mode		h/60 min		1	n/a	n/a	n/a	n/a
Heating mode		h/60 min		1	n/a	n/a	n/a	n/a

ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

(1) The Contracting Party authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.

(3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1: Verification tolerances

Parameters	Verification tolerances
Seasonal energy efficiency ratio (SEER)	The determined value shall not be lower than the declared value by more than 8 %.
Seasonal coefficient of performance (SCOP)	The determined value shall not be lower than the declared value by more than 8 %.
Power consumption in off mode	The determined value shall not exceed the declared value by more than 10 %.
Power consumption in stand-by mode	The determined value shall not exceed the declared value by more than 10 %.
Energy efficiency ratio (EER_{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Coefficient of performance (COP_{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).'

ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(h) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(4) to 3(6). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;
(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(i) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.