

**COMMISSION DELEGATED REGULATION (EU) 2019/2018****of 11 March 2019****supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of refrigerating appliances with a direct sales function****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU <sup>(1)</sup>, and in particular Articles 11 and 16 thereof,

Whereas:

- (1) Regulation (EU) 2017/1369 empowers the Commission to adopt delegated acts as regards the labelling or re-scaling of the labelling of product groups representing significant potential for energy savings and, where relevant, other resources.
- (2) The Communication from the Commission COM(2016) 773 <sup>(2)</sup> (ecodesign working plan) established by the Commission in application of Article 16(1) of Directive 2009/125/EC of the European Parliament and of the Council <sup>(3)</sup> sets out the working priorities under the ecodesign and energy labelling framework for the period 2016-2019. Refrigerating appliances with a direct sales function are among the energy-related product groups to be considered as priorities for the undertaking of preparatory studies and eventual adoption of measure.
- (3) Measures from the ecodesign working plan have an estimated potential to deliver in total in excess of 260 TWh of annual final energy savings in 2030, which is equivalent to reducing greenhouse gas emissions by approximately 100 million tonnes per year in 2030. Refrigerating appliances with a direct sales function is one of the product groups listed in the ecodesign working plan, with an estimated 48 TWh of annual final energy savings in 2030.
- (4) The Commission carried out two preparatory studies covering the technical, environmental and economic characteristics of refrigerating appliances with a direct sales function typically used in the Union. The studies were carried out in close cooperation with stakeholders and interested parties from the Union and third countries. The results of these studies were made public and presented to the Consultation Forum established by Article 14 of Regulation (EU) 2017/1369.
- (5) The preparatory studies concluded that there was a need to the introduce energy labelling requirements for refrigerating appliances with a direct sales function.
- (6) The preparatory studies identified that energy consumption in the use phase is the most significant environmental aspect of refrigerating appliances with a direct sales function.
- (7) The preparatory studies have shown that the electricity consumption of products subject to this Regulation can be further reduced significantly by an energy labelling measure focusing on refrigerating appliances with a direct sales function.
- (8) This Regulation should apply to the following refrigerating appliances with a direct sales function: supermarket refrigerating (freezer or refrigerator) cabinets, beverage coolers, small ice-cream freezers, gelato-scooping cabinets and refrigerated vending machines.
- (9) Minibars and wine storage appliances with sales functions should not be considered refrigerating appliances with direct sales functions and therefore should be excluded from this Regulation, they are in the scope of the Commission Delegated Regulation (EU) 2019/2016 <sup>(4)</sup>.

<sup>(1)</sup> OJ L 198, 28.7.2017, p. 1.

<sup>(2)</sup> Communication from the Commission. Ecodesign working plan 2016-2019, COM(2016) 773 final, 30.11.2016.

<sup>(3)</sup> Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (OJ L 285, 31.10.2009, p. 10).

<sup>(4)</sup> Commission Delegated Regulation (EU) 2019/2016 of 11 March 2019 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of refrigerating appliances and repealing Commission Delegated Regulation (EU) No 1060/2010 (see page 102 of this Official Journal).

- (10) Vertical static-air cabinets are professional refrigerating appliances and are defined in Commission Regulation (EU) 2015/1095 <sup>(5)</sup>, and should therefore be excluded from this Regulation.
- (11) Refrigerating appliances with a direct sales function that are displayed at trade fairs should bear the energy label if the first unit of the model has already been placed on the market or is placed on the market at the trade fair.
- (12) The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council <sup>(6)</sup>.
- (13) The terminology and testing methods of this Regulation are consistent with the terminology and testing methods adopted in EN 16901, EN 16902, EN 50597 and EN ISO 23953-2.
- (14) Recognising the growth of sales of energy-related products through internet hosting platforms, rather than directly from suppliers' websites, it should be clarified that internet sales platforms should be responsible for enabling the displaying of the label provided by the supplier in proximity to the price. They should inform the dealer of that obligation, but should not be responsible for the accuracy or content of the label and the product information sheet provided. However, in application of Article 14(1)(b) of Directive 2000/31/EC of the Parliament and of the Council <sup>(7)</sup> on electronic commerce, such internet hosting platforms should act expeditiously to remove or to disable access to information about the product in question if they are aware of the non-compliance (e.g. missing, incomplete or incorrect label or product information sheet) for example if informed by the market surveillance authority. A supplier selling directly to end-users via its own website is covered by dealers' distance selling obligations referred to in Article 5 of Regulation (EU) 2017/1369.
- (15) The measures provided for in this Regulation were discussed by the Consultation Forum and the Member States' experts in accordance with Articles 14 and 18 of Regulation (EU) 2017/1369.

HAS ADOPTED THIS REGULATION:

#### *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 direct sales function, including appliances sold for refrigeration of items other than foodstuffs.
2. This Regulation does not apply to:
  - (a) refrigerated appliances with a direct sales function that are only powered by energy sources other than electricity;
  - (b) refrigerating appliances with a direct sales function that do not use a vapour compression refrigeration cycle;
  - (c) the remote components, such as the condensing unit, compressors or water condensed unit, to which a remote cabinet needs to be connected in order to function;
  - (d) food processing refrigerating appliances with a direct sales function;
  - (e) refrigerating appliances with a direct sales function specifically tested and approved for the storage of medicines or scientific samples;

<sup>(5)</sup> 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).

<sup>(6)</sup> Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12).

<sup>(7)</sup> Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce') (OJ L 178, 17.7.2000, p. 1).

- (f) refrigerating appliances with a direct sales function for the sale and display of live foodstuffs, such as refrigerating appliances for the sale and display of living fish and shellfish, refrigerated aquaria and water tanks;
- (g) saladettes;
- (h) horizontal serve-over counters with integrated storage designed to work at chilled operating temperatures;
- (i) refrigerating appliances with direct sales function that have no integrated system for producing cooling and function by ducting chilled air that is produced by an external air chiller unit; this does not include remote cabinets nor does it include category 6 refrigerated vending machines, as defined Annex IV, Table 4;
- (j) corner cabinets;
- (k) vending machines that are designed to work at frozen operating temperatures;
- (l) serve-over fish counters with flaked ice;
- (m) professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers as defined in Regulation (EU) 2015/1095;
- (n) wine storage appliances and minibars.

#### Article 2

#### Definitions

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

1. 'refrigerating appliance with a direct sales function' means an insulated cabinet with one or more compartments that are controlled at specific temperatures, cooled by natural or forced convection through one or more energy consuming means and intended for displaying and selling with or without assisted serving, foodstuffs and other items at specified temperatures below the ambient temperature to customers, accessible directly through open sides or through one or more doors or drawers or both including refrigerating appliances with a direct sales function with areas used for storage of foodstuffs and other items not accessible by customers, and excluding minibars and wine storage appliances;
2. 'foodstuffs' means food, ingredients, beverages, including wine, and other items primarily used for consumption which require refrigeration at specified temperatures;
3. 'condensing unit' means a product integrating at least one electrically driven compressor and one condenser, capable of cooling down and continuously maintaining low or medium temperature inside a refrigerated appliance or system, using a vapour compression cycle once connected to an evaporator and an expansion device, as defined in Regulation (EU) 2015/1095;
4. 'remote cabinet' means a refrigerating appliance with a direct sales function which consists of a factory-made assembly of components that in order to function as a refrigerating appliance with a direct sales function needs to be connected additionally to remote components (condensing unit and/or compressor and/or water condensed unit) which are not an integral part of the cabinet;
5. 'food processing refrigerating appliances with a direct sales function' means a refrigerating appliance with a direct sales function specifically tested and approved for carrying out food processing such as ice-cream makers or microwave-equipped refrigerated vending machines or ice makers; this does not include refrigerating appliances with a direct sales function equipped with one compartment specifically designed for carrying out food processing which is equivalent to less than 20 % of the appliance total net volume;
6. 'net volume' means the part of the gross volume of any compartment which is left after deduction of the volume of components and spaces unusable for the storage or display of foodstuffs and other items, in cubic decimetres (dm<sup>3</sup>) or litres (L);
7. 'gross volume' means the volume within the inside liners of the compartment without internal fittings and with door or lid closed, in cubic decimeters (dm<sup>3</sup>) or litres (L);

8. 'specifically tested and approved' means that the product complies with all the following requirements:
  - (a) it has been specifically designed and tested for the mentioned operating condition or application, according to the Union legislation mentioned or related acts, relevant Member State legislation, and/or relevant European or international standards;
  - (b) it is accompanied by evidence, to be included in the technical documentation in the form of a certificate, a type approval mark or a test report, that the product has been specifically approved for the mentioned operating condition or application;
  - (c) it is placed on the market specifically for the mentioned operating condition or application, as evidenced at least by the technical documentation, information provided for the product and any advertising or marketing materials;
9. 'saladette' means a refrigerating appliance with a direct sales function 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 pizza toppings or salad items;
10. 'horizontal serve-over counter with integrated storage' means a horizontal cabinet for assisted service, which includes refrigerated storage which is of at least 100 litres (L) per meter (m) length and which is normally placed at the serve-over counter's base;
11. 'horizontal cabinet' means a refrigerating appliance with a direct sales function with horizontal display, opening on its top, and accessible from above;
12. 'chilled operating temperature' means a temperature between -3,5 degrees Celsius (°C) and 15 degrees Celsius (°C) for appliances equipped with energy management systems for saving energy and between -3,5 degrees Celsius (°C) and 10 degrees Celsius (°C) for appliances not equipped with energy management systems for saving energy;
13. 'operating temperature' means the reference temperature inside a compartment during testing;
14. 'refrigerated vending machine' means a refrigerating appliance with a direct sales function designed to accept consumer payments or tokens to dispense chilled foodstuffs and other items without on-site labour intervention;
15. 'corner cabinet' means a refrigerating appliance with a direct sales function used to achieve geometrical continuity between two linear cabinets that are at an angle to each other and/or that form a curve. A corner cabinet does not have a recognisable longitudinal axis or length since it consists only of a filling shape (wedge or similar) and is not designed to function as a stand-alone refrigerated unit. The two ends of the corner cabinet are inclined at an angle between 30° and 90°;
16. 'frozen operating temperature' means a temperature below -12 degrees Celsius (°C);
17. 'serve-over fish counter with flaked ice' means a cabinet for horizontal assisted service, designed and marketed specifically for fresh fish display. It is characterised by having on its top a bed of flaked ice used to maintain the temperature of the displayed fresh fish, and it also has a built in drain outlet;
18. 'wine storage appliance' means a refrigerating appliance with only one type of compartment for the storage of wine, with precision temperature control for the storage conditions and target temperature, and equipped with anti-vibration measures, as defined in Delegated Regulation (EU) 2019/2016;
19. 'compartment' means an enclosed space within a refrigerating appliance with a direct sales function, 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;
20. 'external door' is the part of a refrigerating appliance with a direct sales function that can be moved or removed to at least allow inserting the load from the exterior to the interior or extracting the load from the interior to the exterior of the refrigerating appliance with a direct sales function;
21. 'sub-compartment' means an enclosed space in a compartment having a different operating temperature range from the compartment in which it is located;

22. '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, as defined in Delegated Regulation (EU) 2019/2016;
23. 'point of sale' means a location where refrigerating appliances with a direct sales function are displayed or offered for sale, hire or hire-purchase;
24. 'energy efficiency index' (EEI) means an index number for the relative energy efficiency of a refrigeration appliance with a direct sales function expressed in percentage (%), calculated in accordance with point 2 of Annex IV.

#### Article 3

##### **Obligations of suppliers**

1. Suppliers shall ensure that:
  - (a) each refrigerating appliance with a direct sales function is supplied with a printed label in the format, as set out in Annex III;
  - (b) the parameters of the product information sheet, set out in Annex V, are entered into the product database;
  - (c) if specifically requested by the dealer, the product information sheet shall be made available in printed form;
  - (d) the content of the technical documentation, set out in Annex VI, is entered into the product database;
  - (e) any visual advertisement for a specific model of a refrigerating appliance with a direct sales function contains the energy efficiency class and the range of energy efficiency classes available on the label, in accordance with Annex VII;
  - (f) any technical promotional material or other promotional material concerning a specific model of refrigerating appliances with a direct sales function, including technical promotional material or other promotional material on the internet, includes 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;
  - (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 refrigerating appliance with a direct sales function model;
  - (h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each refrigerating appliance with a direct sales function 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 with a direct sales function, at the point of sale of the appliance, including at trade fairs, bears the label provided by suppliers, in accordance with point 1(a) of Article 3, with the label displayed for built-in appliances in such a way to be clearly visible, and for other refrigerating appliances with a direct sales function 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 a refrigerating appliance with a direct sales function, 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 and VIII;
- (d) any technical promotional material or other promotional material concerning a specific model of a refrigerating appliance with a direct sales function, including technical promotional material or other 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 Annexes VII and VIII.

*Article 5***Obligations of internet hosting platforms**

Where a hosting service provider as referred to in Article 14 of Directive 2000/31/EC allows the direct selling of refrigerating appliances with a direct sales function through its internet site, the service provider shall enable the showing of the electronic label and electronic product fiche 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**

Member States 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.

*Article 8***Review**

The Commission shall review this Regulation in the light of technological progress and present the results of this assessment, including, if appropriate, a draft revision proposal, to the Consultation Forum no later than 25 December 2023. The review shall among other matters assess:

- (a) the energy efficiency classes;
- (b) the possibility to address circular economy aspects;
- (c) the feasibility of refining the classification of products, inter alia, considering the difference between integral and remote cabinets.

*Article 9***Entry into force and application**

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 March 2021.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 11 March 2019.

*For the Commission*

*The President*

Jean-Claude JUNCKER

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## ANNEX I

**Definitions applicable for the Annexes**

The following definition shall apply:

- (1) 'beverage cooler' means a refrigerating appliance with a direct sales function designed to cool, at a specified speed, packaged non-perishable beverages, excluding wine, loaded at ambient temperature, for sale at specified temperatures below the ambient temperature. A beverage cooler allows accessing the beverages directly through open sides or through one or more doors, drawers or both. The temperature inside the cooler may increase during periods of no demand, for the purpose of energy saving, in view of the non-perishable nature of beverages;
- (2) 'ice-cream freezer' means a horizontal closed cabinet intended to store and/or display and sell pre-packed ice cream, where access by the consumer to the pre-packed ice-cream is achieved by opening a non-transparent or transparent lid from the top, with a net volume  $\leq 600$  litres (L) and, only in the case of transparent lid ice-cream freezers, a net volume divided by the TDA  $\geq 0,35$  meters (m);
- (3) 'transparent lid' means a door made of a transparent material that covers at least 75 % of the door surface and that allows the end-user to clearly see items through it;
- (4) 'total display area (TDA)' means the total visible foodstuffs and other items area, including visible area through glazing, defined by the sum of horizontal and vertical projected surface areas of the net volume, expressed in square meters (m<sup>2</sup>);
- (5) '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 product database;
- (6) 'annual energy consumption' (AE) means the average daily energy consumption multiplied by 365 (days per year) expressed in kilowatt hour per year (kWh/a), calculated in accordance with point 2(b) of Annex IV;
- (7) 'daily energy consumption' ( $E_{daily}$ ) means the energy used by a refrigerating appliance with a direct sales function over 24 hours at reference conditions, expressed in kilowatt hour per day (kWh/24h);
- (8) 'standard annual energy consumption' (SAE) means the reference annual energy consumption of a refrigeration appliance with a direct sales function, expressed in kilowatt hour per year (kWh/a), calculated in accordance with point 2(c) of Annex IV;
- (9) 'M' and 'N' means modelling parameters that take into account the total display area or volume-dependence of the energy use, with values as set out in Table 3, Annex IV;
- (10) 'temperature coefficient' (C) means a correction factor that accounts for the difference in operating temperature;
- (11) 'climate class factor' (CC) means a correction factor that accounts for the difference in ambient conditions for which the refrigerating appliance is designed for;
- (12) 'P' means a correction factor that accounts for the differences between integral and remote cabinets;
- (13) 'integral cabinet' means a refrigerating appliance with a direct sales function that has an integral refrigeration system which incorporates a compressor and condensing unit;
- (14) 'gelato-scooping cabinet' means a refrigerating appliance with a direct sales function in which ice-cream can be stored, displayed and scooped, within prescribed temperature limits as set out in Annex IV, Table 4;
- (15) 'vertical cabinet' means a refrigerating appliance with a direct sales function with a vertical or inclined display opening;

- (16) 'semi- vertical cabinet' means a vertical cabinet with a vertical or inclined display opening whose overall height does not exceed 1,5 meters (m);
  - (17) 'combined cabinet' means a refrigerating appliance with a direct sales function which combines display and opening directions from a vertical and a horizontal cabinet;
  - (18) 'supermarket cabinet' means a refrigerating appliance with a direct sales function intended for the sale and display of foodstuffs and other items in retail applications, such as in supermarkets. Beverage coolers, refrigerated vending machines, gelato-scooping cabinets and ice-cream freezers are not considered supermarket cabinets;
  - (19) 'refrigerator' means a refrigerating appliance with a direct sales function that continuously maintains the temperature of the products stored in the cabinet at chilled operating temperature;
  - (20) 'freezer' means a refrigerating appliance with a direct sales function that continuously maintains the temperature of the products stored in the cabinet at frozen operating temperature;
  - (21) 'roll-in cabinet' means a supermarket cabinet which enables goods to be displayed directly on their pallets or rolls which can be placed inside by lifting, swinging, or removing the lower front part, where fitted;
  - (22) 'M-package' means a test package fitted with a temperature measuring device;
  - (23) 'multi-temperature vending machine' means a refrigerated vending machine including at least two compartments with different operating temperatures;
  - (24) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
  - (25) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
  - (26) 'nested display' means a 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;
  - (27) '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.
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## ANNEX II

**Energy efficiency classes**

The energy efficiency class of a refrigerating appliance with a direct sales function shall be determined on the basis of its EEI as set out in Table 1.

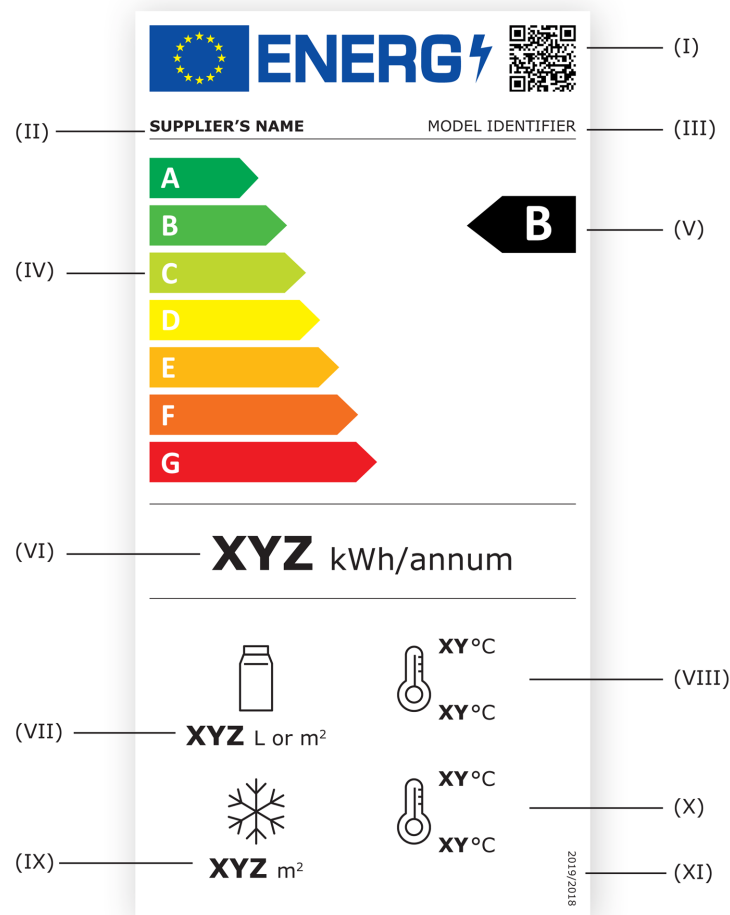
Table 1

**Energy efficiency classes of refrigerating appliances with a direct sales function**

Energy Efficiency Class	EEI
A	$EEI < 10$
B	$10 \leq EEI < 20$
C	$20 \leq EEI < 35$
D	$35 \leq EEI < 50$
E	$50 \leq EEI < 65$
F	$65 \leq EEI < 80$
G	$EEI \geq 80$

The Energy EEI of a refrigerating appliance with a direct sales function shall be determined in accordance with point 2 of Annex IV.

## ANNEX III

**Label for refrigerating appliances with a direct sales function****1. LABEL FOR REFRIGERATING APPLIANCES WITH A DIRECT SALES FUNCTION, EXCEPT FOR BEVERAGE COOLERS AND ICE-CREAM FREEZERS****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. AE in kWh per year and rounded to the nearest integer;
- VII.
  - for refrigerated vending machines: the sum of the net volumes of all compartments with chilled operating temperatures, expressed in litres (L) and rounded to the nearest integer;

- for all other refrigerating appliances with a direct sales function: the sum of the display areas with chilled operating temperatures, expressed in square meters (m<sup>2</sup>) and rounded to two decimal places;
- for refrigerating appliances with a direct sales function that does not contain compartments with chilled operating temperatures: the pictogram and the values in litres (L) or square meters (m<sup>2</sup>) in VII are omitted;

## VIII.

- for refrigerating appliances with a direct sales function with all compartments with chilled operating temperature having the same temperature class, with the exception of refrigerated vending machines:
  - the temperature at the top: the highest temperature of the warmest M-package of the compartment(s) with chilled operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 4;
  - the temperature at the bottom: the lowest temperature of the coldest M-package of the compartment(s) with chilled operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, or the highest minimum temperature of all M-packages of the compartment(s) with chilled operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 4;
- for refrigerated vending machines:
  - the temperature at the top: the maximum measured product temperature of the compartment(s) with chilled operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 4;
  - the temperature at the bottom: the temperature is omitted;
- for refrigerating appliances with a direct sales function that does not contain compartments with chilled operating temperatures the pictogram and the values in degrees Celsius (°C) in VIII shall be omitted;

## IX.

- for all refrigerating appliances with a direct sales function, except for vending machines: the sum of the display areas with frozen operating temperatures, expressed in square meter (m<sup>2</sup>) and rounded to two decimal places;
- for refrigerating appliances with a direct sales function that does not contain compartments with frozen operating temperatures: the pictogram and the values in square meters (m<sup>2</sup>) in IX are omitted;

## X.

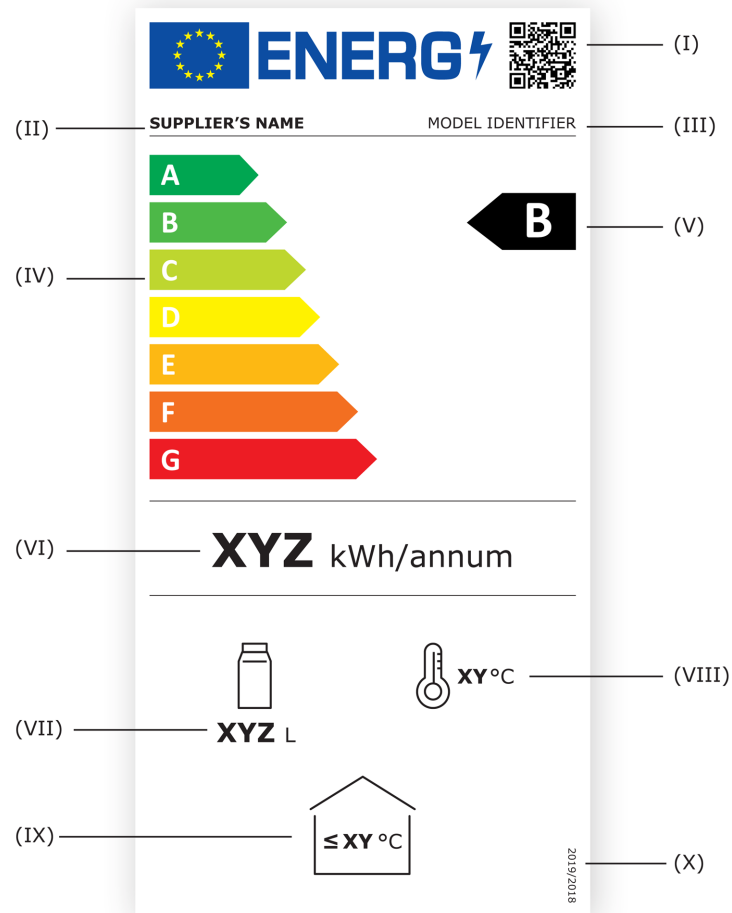
- for refrigerating appliances with a direct sales function with all compartments with frozen operating temperatures having the same temperature class, with the exception of refrigerated vending machines:
  - the temperature at the top: the highest temperature of the warmest M-package of the compartment(s) with frozen operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 4;
  - the temperature at the bottom: the lowest temperature of the coldest M-package of the compartment(s) with frozen operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, or the highest minimum temperature of all M-packages of the compartment(s) with frozen operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 4;
- for refrigerated vending machines:
  - the temperature at the top: the maximum measured product temperature of the compartment(s) with frozen operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 4;

- the temperature at the bottom: the temperature is omitted;
- for refrigerating appliances with a direct sales function that does not contain compartments with frozen operating temperatures: the pictogram and the values in degrees Celsius (°C) in X are omitted;

XI. the number of this Regulation, that is '2019/2018'.

## 2. LABEL FOR BEVERAGE COOLERS

### 2.1. Label:



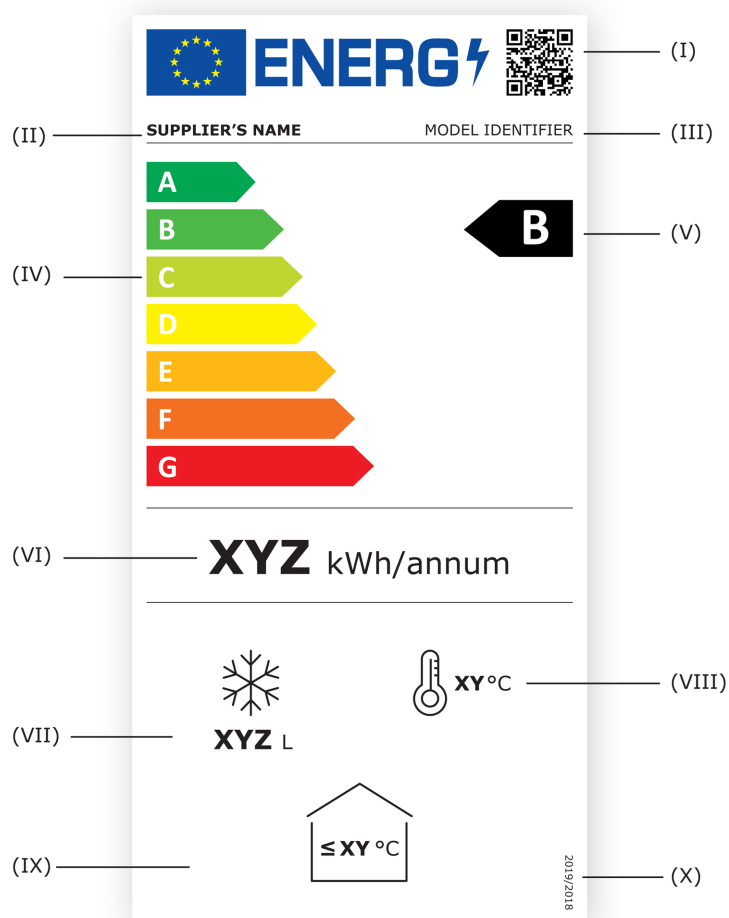
### 2.2. The following information shall be included in the label:

- 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 in kWh per year and rounded to the nearest integer;

- VII. the sum of the gross volumes of all compartments with chilled operating temperatures, expressed in litres (L) and rounded to the nearest integer;
- VIII. the highest average compartment temperature of all compartments with chilled operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 5;
- IX. the warmest ambient temperature, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 6;
- X. the number of this Regulation, that is '2019/2018'.

### 3. LABEL FOR ICE-CREAM FREEZERS

#### 3.1. Label:



#### 3.2. 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 in kWh per year and rounded to the nearest integer;

VII. the sum of the net volumes of all compartments with frozen operating temperatures, expressed in litres (L) and rounded to the nearest integer;

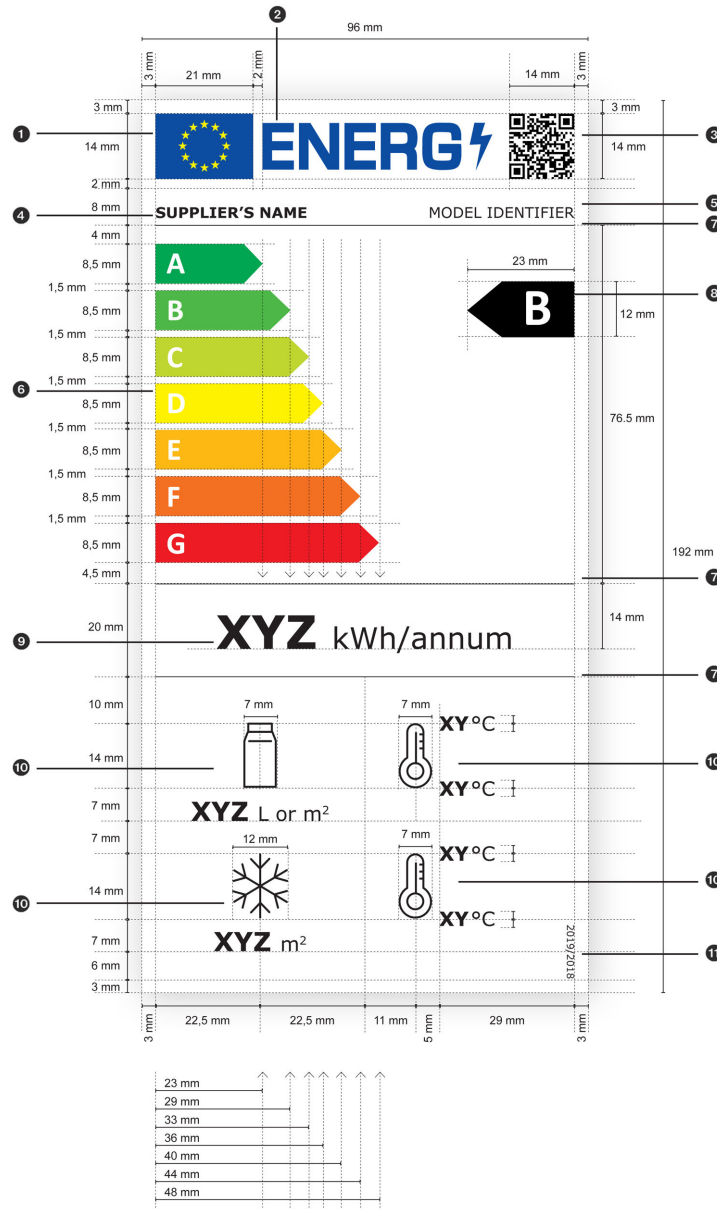
VIII. the highest average compartment temperature of all compartments with frozen operating temperatures, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 7;

IX. the maximum ambient temperature, in degrees Celsius (°C) and rounded to the nearest integer, as set out in Table 8;

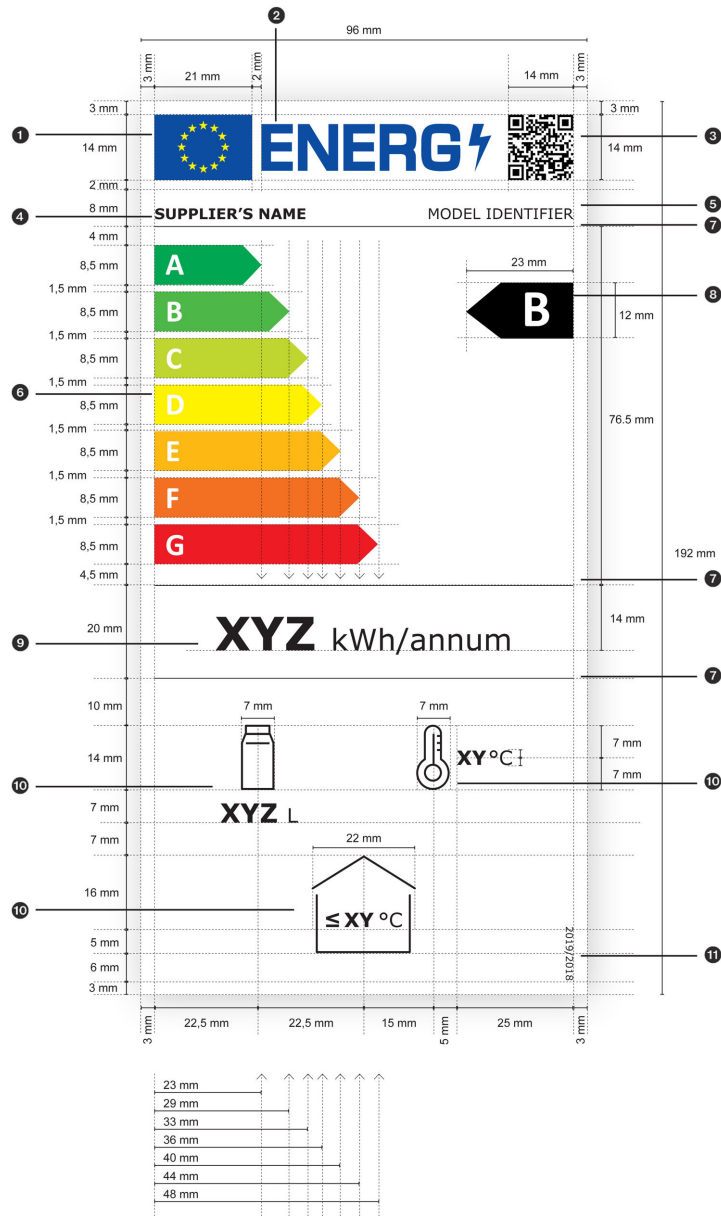
X. the number of this Regulation, that is '2019/2018'.

4. LABEL DESIGNS

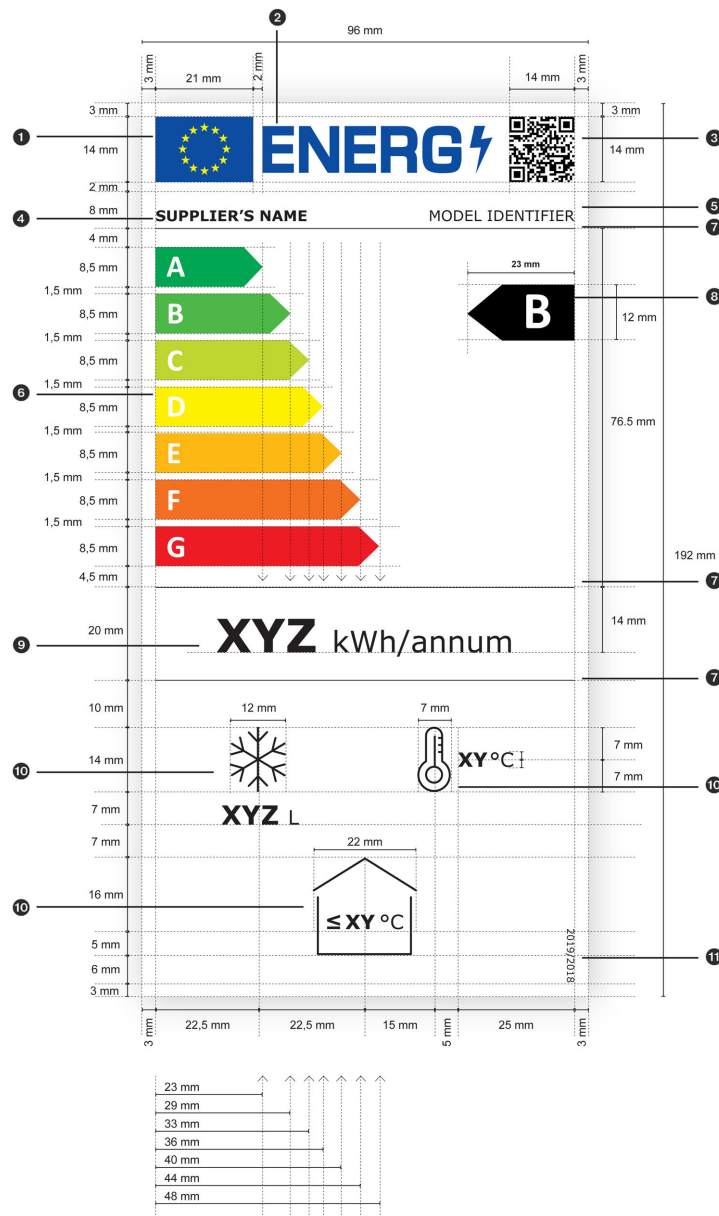
4.1. Label design for refrigerating appliances with a direct sales function, except for beverage coolers and ice-cream freezers:



4.2. Label design for beverage coolers:



## 4.3. Label design for ice-cream freezers:



## 4.4. Whereby:

- 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.
- The background of the label shall be 100 % white.
- The typefaces shall be Verdana and Calibri.
- The dimensions and specifications of the elements constituting the label shall be as indicated in the label designs in points 4.1 to 4.3.
- 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 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 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. They 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 numbers under the pictograms shall be in Verdana Bold 16 pt with the units in Verdana Regular 12 pt and they shall be centred under the pictograms;
  - the temperatures values shall be in Verdana Bold 12 pt with the °C in Verdana Regular 12 pt and they shall be placed either on the right side of the thermometer pictogram or inside the pictogram representing the ambient temperature;

— for refrigerating appliances with a direct sales function, except for beverage coolers and ice-cream freezers: if the appliance contains only frozen compartment(s) or only unfrozen compartment(s), only the relevant pictograms, as set out in point 1.2 VII, VIII, IX and X, shall be shown and centred between the internal divider below the annual energy consumption and the bottom of the energy label;

- 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 take into account the generally recognised state-of-the-art methods and are in line with the following 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) the ambient conditions shall correspond to Set 1, except for ice-cream freezers and gelato scooping cabinets which shall be tested in ambient conditions corresponding to Set 2, as set out in Table 2.
  - (b) where a compartment can be set to different temperatures, it shall be tested at the lowest operating temperature.
  - (c) refrigerated vending machines with compartments with variable volumes shall be tested with the net volume of the compartment with the highest operating temperature adjusted to its minimum net volume.
  - (d) for beverage coolers, the specified cooling speed shall be according to the half reload recovery time.

Table 2

**Ambient conditions**

	Dry bulb temperature, °C	Relative humidity, %	Dew point, °C	Water vapour mass in dry air, g/kg
Set 1	25	60	16,7	12,0
Set 2	30	55	20,0	14,8

2. Determination of the EEI:
  - (a) For all refrigerating appliances with a direct sales function, the EEI, expressed in % and rounded to the first decimal place, is the ratio of the AE (in kWh/a) and the reference SAE (in kWh/a) and is calculated as:

$$EEI = AE/SAE.$$

- (b) The AE, expressed in kWh/a and rounded to two decimal places, is calculated as follows:

$$AE = 365 \times E_{daily};$$

with:

—  $E_{daily}$  is the energy consumption of the refrigerating appliance with a direct sales function over 24 hours, expressed in kWh/24h and rounded to three decimal places.

- (c) The SAE is expressed in kWh/a and rounded to two decimal places. For refrigerating appliances with a direct sales function with all compartments having the same temperature class and for refrigerated vending machines, the SAE is calculated as follows:

$$SAE = 365 \times P \times (M + N \times Y) \times C;$$

For refrigerating appliances with a direct sales function with more than one compartment having different temperature classes, with the exception of refrigerated vending machines, the SAE is calculated as follows:

$$SAE = 365 \times P \times \sum_{c=1}^n (M + N \times Y_c) \times C_c;$$

where:

- (1) c is the index number for a compartment type ranging from 1 to n, with n being the total number of compartment types.

(2) The values of M and N are given in Table 3.

Table 3  
M and N values

Category	Value for M	Value for N
Beverage coolers	2,1	0,006
Ice-cream freezers	2,0	0,009
Refrigerated vending machines	4,1	0,004
Gelato-scooping cabinets	25,0	30,400
Vertical and combined supermarket refrigerator cabinets	9,1	9,100
Horizontal supermarket refrigerator cabinets	3,7	3,500
Vertical and combined supermarket freezer cabinets	7,5	19,300
Horizontal supermarket freezer cabinets	4,0	10,300
Roll-in cabinets (from 1 March 2021)	9,2	11,600
Roll-in cabinets (from 1 September 2023)	9,1	9,100

(3) The values of C, the temperature coefficient are given in Table 4.

Table 4  
Temperature conditions and corresponding temperature coefficient values, C

(a) Supermarket cabinets					
Category	Temperature class	Highest temperature of warmest M-package (°C)	Lowest temperature of coldest M-package (°C)	Highest minimum temperature of all M-package (°C)	Value for C
Vertical, combined supermarket refrigerator cabinets	M2	≤ +7	≥ -1	n.a.	1,00
	H1 and H2	≤ +10	≥ -1	n.a.	0,82
	M1	≤ +5	≥ -1	n.a.	1,15
Horizontal supermarket refrigerator cabinets	M2	≤ +7	≥ -1	n.a.	1,00
	H1 and H2	≤ +10	≥ -1	n.a.	0,92
	M1	≤ +5	≥ -1	n.a.	1,08
Vertical and combined supermarket freezer cabinets	L1	≤ -15	n.a.	≤ -18	1,00
	L2	≤ -12	n.a.	≤ -18	0,90
	L3	≤ -12	n.a.	≤ -15	0,90
Horizontal supermarket freezer cabinets	L1	≤ -15	n.a.	≤ -18	1,00
	L2	≤ -12	n.a.	≤ -18	0,92
	L3	≤ -12	n.a.	≤ -15	0,92

**(b) Gelato-scooping cabinets**

Temperature class	Highest temperature of warmest M-package (°C)	Lowest temperature of coldest M-package (°C)	Highest minimum temperature of all M-package (°C)	Value for C
G1	-10	-14	n.a.	1,00
G2	-10	-16	n.a.	1,00
G3	-10	-18	n.a.	1,00
L1	-15	n.a.	-18	1,00
L2	-12	n.a.	-18	1,00
L3	-12	n.a.	-15	1,00
S	Special classification			1,00

**(c) Refrigerated vending machines**

Temperature class (**)	Maximum measured product temperature ( $T_V$ ) (°C)	Value for C
Category 1	7	$1+(12-T_V)/25$
Category 2	12	
Category 3	3	
Category 4	$(T_{V1}+T_{V2})/2$ (*)	
Category 6	$(T_{V1}+T_{V2})/2$ (*)	

**(d) other refrigerating appliances with a direct sales function**

Category	Value for C
Other appliances	1,00

## Notes:

(\*) For multi-temperature vending machines,  $T_V$  shall be the average of  $T_{V1}$  (the maximum measured product temperature in the warmest compartment) and  $T_{V2}$  (the maximum measured product temperature in the coldest compartment).

(\*\*) category 1 = refrigerated closed fronted can and bottle machines where the products are held in stacks, category 2 = refrigerated glass fronted can and bottle, confectionery & snack machines, category 3 = refrigerated glass fronted machines entirely for perishable foodstuffs, category 4 = refrigerated multi-temperature glass fronted machines, category 6 = combination machines consisting of different categories of machine in the same housing and powered by one chiller.

n.a = not applicable

(4) Coefficient Y is calculated as follows:

(a) for beverage coolers:

$Y_c$  is the equivalent volume of the compartments of the beverage cooler with target temperature  $T_c$ , ( $Ve_{q_c}$ ), calculated as follows:

$$Y_c = Ve_{q_c} = \text{GrossVolume}_c \times ((25 - T_c)/20) \times CC;$$

where  $T_c$  is the average compartment classification temperature of the compartment and  $CC$  is the climate class factor. The values for  $T_c$  are set out in Table 5. The values for  $CC$  are set out in Table 6.

Table 5

**Temperature classes and corresponding average compartment temperatures ( $T_c$ ) for beverage coolers**

Temperature class	$T_c$ (°C)
K1	+3,5
K2	+2,5
K3	-1,0
K4	+5,0

Table 6

**Operating conditions and  $CC$  values for beverage coolers**

Warmest ambient temperature (°C)	Ambient relative humidity (%)	$CC$
+25	60	1,00
+32	65	1,05
+40	75	1,10

(b) for ice-cream freezers:

$Y_c$  is the equivalent volume of compartments of the ice-cream freezer with target temperature  $T_c$ , ( $Ve_{q_c}$ ), calculated as follows:

$$Y_c = Ve_{q_c} = \text{NetVolume} \times ((12 - T_c)/30) \times CC;$$

where  $T_c$  is the average compartment classification temperature of the compartment and  $CC$  is the climate class factor. The values for  $T_c$  are set out in Table 7. The values for  $CC$  are set out in Table 8.

Table 7

**Temperature classes and corresponding average compartment temperatures ( $T_c$ ) for ice-cream freezers**

Temperature class		$T_c$ (°C)
Warmest M-package temperature colder or equal to in all tests (except lid opening test) (°C)	Warmest M-package maximum temperature rise allowed during the lid opening test (°C)	
-18	2	-18,0
-7	2	-7,0

Table 8

**Operating conditions and corresponding CC values for ice-cream freezers**

	Minimum		Maximum		CC
	Ambient temperature (°C)	Ambient relative humidity (%)	Ambient temperature (°C)	Ambient relative humidity (%)	
Ice-cream freezer with transparent lid	16	80	30	55	1,00
			35	75	1,10
			40	40	1,20
Ice-cream freezer with non-transparent lid	16	80	30	55	1,00
			35	75	1,04
			40	40	1,10

(c) for refrigerated vending machines:

$Y$  is the net volume of the refrigerated vending machine, which is the sum of the volumes of all compartments within which the products directly available for vending are contained and the volume through which the products pass during the dispensing process, expressed in litres (L) and rounded to the nearest integer.

(d) for all other refrigerating appliances with direct sales function:

$Y_c$  is the sum of the TDA of all compartments of the same temperature class of the refrigerating appliance with a direct sales function, expressed in square meters (m<sup>2</sup>), and rounded to two decimal places.

(5) The values for  $P$  are set out in Table 9.

Table 9

**P values**

<i>Cabinet type</i>	<i>P</i>
Integral supermarket cabinets	1,10
Other refrigerating appliances with a direct sales function	1,00

## ANNEX V

**Product information sheet**

Pursuant to point 1(b) of Article 3, the supplier shall enter into the product database the information as set out in Table 10.

Table 10

**Product information sheet**

**Supplier's name or trademark:**

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**Supplier's address <sup>(b)</sup>:**

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**Model identifier:**

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**Use:**

Display and sale

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**Type of refrigerating appliance with a direct sales function:**

[Beverage coolers/Ice-cream freezers/Gelato-scooping cabinet/supermarket cabinet/refrigerated vending machines]

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Cabinet family code, according to the harmonised standards or other reliable, accurate and reproducible methods in accordance with Annex IV.

For example: [HC1/.../HC8], [VC1/.../VC4]

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**Product specific parameters**

(Beverage coolers: fill in point 1, ice-cream freezers: fill in point 2, Gelato-scooping cabinet: fill in point 3, supermarket cabinet: fill in point 4, refrigerated vending machines: fill in point 5. If the refrigerating appliance with a direct sales function contains compartments working at different temperatures, or a compartment that can be set to different temperatures, the lines shall be repeated for each compartment or temperature setting):

---

**1. Beverage coolers:**


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Gross volume (dm <sup>3</sup> or L)	Ambient conditions for which the appliance is suitable (according to Table 6)	
	Warmest temperature (°C)	Relative humidity (%)
x	x	x



**2. Ice-cream freezers with [transparent lid/non-transparent lid]:**

Net volume (dm <sup>3</sup> or L)	Ambient conditions for which the appliance is suitable (according to Table 8)			
	Temperature range (°C)		Relative humidity range (%)	
	minimum	maximum	minimum	maximum
x	x	x	x	x

**3. Gelato-scooping cabinet**

Total display area (m <sup>2</sup> )	Temperature class (according to Table 4(b))
x,xx	[G1/G2/G3/L1/L2/L3/S]

**4. [Integral/Remote] [horizontal/vertical (other than semi-vertical)/semi-vertical/combined] supermarket cabinet, roll-in: [yes/no]:**

Total display area (m <sup>2</sup> )	Temperature class (according to Table 4(a))
x,xx	[refrigerator: [M2/H1/H2/M1]/freezer: [L1/L2/L3]]

**5. Refrigerated vending machines, [refrigerated closed fronted for cans and bottles where the products are held in stacks/refrigerated glass fronted for [can and bottle, confectionery & snack/entirely for perishable food-stuffs]/multi-temperature for [fill in the type of foodstuffs it is intended for]/combination machines consisting of different categories of machine in the same housing and powered by one chiller for [fill in the type of food-stuffs it is intended for]]:**

Volume (dm <sup>3</sup> or L)	Temperature class (according to Table 4(c))
x	category [1/2/3/4/6]

**General product parameters:**

Parameter	Value	Parameter	Value
Annual energy consumption (kWh/a) <sup>(d)</sup>	x,xx	Recommended temperature(s) for optimised food storage (°C) (These settings shall not contradict the temperature conditions set out in Annex IV, Table 4, 5 or 6, as applicable)	x
EEl	x,x	Energy efficiency class	[A/B/C/D/E/F/G] <sup>(e)</sup>

**Light source parameters <sup>(a)</sup> <sup>(b)</sup>:**

Type of light source	[type]
Energy efficiency class	[A/B/C/D/E/F/G] <sup>(c)</sup>

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**Minimum duration of the guarantee offered by the supplier <sup>(b)</sup>:**

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**Additional information:**

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The weblink to the supplier's website, where the information in point 3 of Annex II of Commission Regulation (EU) 2019/2024 <sup>(1)</sup> <sup>(b)</sup> is found:

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<sup>(a)</sup> as determined in accordance with Commission Delegated Regulation (EU) 2019/2015 <sup>(2)</sup>.

<sup>(b)</sup> changes to these items shall not be considered relevant for the purposes of paragraph 4 of Article 4 of Regulation (EU) 2017/1369.

<sup>(c)</sup> if the product database automatically generates the definitive content of this cell the supplier shall not enter these data.

<sup>(d)</sup> if the refrigerating appliance with a direct sales function has different compartments working at different temperatures, the annual energy consumption of the integrated unit shall be provided. If separate refrigeration systems provide cooling for separate compartments of the same unit, the energy consumption associated with each sub-system shall also be provided where possible.

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<sup>(1)</sup> Commission Regulation (EU) 2019/2024 of 11 March 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).

<sup>(2)</sup> Commission Delegated Regulation (EU) 2019/2015 of 11 March 2019 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of light sources and repealing Commission Delegated Regulation (EU) No 874/2012 (see page 68 of this Official Journal)

## ANNEX VI

**Technical documentation**

1. The technical documentation referred to in point 1(d) of Article 3 shall include the following elements:

- (a) the information as set out in Annex V;
- (b) the information as set out in Table 11;

Table 11

**Additional information to be included in the technical documentation**

**A general description of the refrigerating appliance with direct sales function 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	Standard annual energy consumption (kWh/a)	x,xx
Daily energy consumption (kWh/24h)	x,xxx	Ambient conditions	[Set 1/Set 2]
M	x,x	N	x,xxx
Temperature coefficient (C)	x,xx	Y	x,xx
P	x,xx		
Climate class factor (CC) <sup>(a)</sup>	x,xx	Target temperature (Tc) (°C) <sup>(a)</sup>	x,x

**Additional information:**

The references of the harmonised standards or other reliable accurate and reproducible methods applied:

Where appropriate, identification and signature of the person empowered to bind the supplier:

A list of equivalent models, including model identifiers:

<sup>(a)</sup> Only for beverage coolers and ice-cream freezers

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.

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## ANNEX VII

**Information to be provided in visual advertisements, in technical promotional material or other promotional material, in distance selling except distance selling on the internet**

1. In visual advertisements for refrigerating appliances with a direct sales function, for the purposes of ensuring conformity with the requirements laid down in point 1(e) 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 or other promotional material for refrigerating appliances with a direct sales function, for the purposes of ensuring conformity with the requirements laid down in point 1(f) 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 refrigerating appliances with a direct sales function 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 white, Calibri Bold and in a font size at least equivalent to that of the price, if the price is shown, in all other cases clearly visible and legible font size;
  - (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 black around the arrow and the letter of the energy efficiency class.

By derogation, if the visual advertisement, technical promotional material or other promotional material or paper based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material, other promotional material or paper based distance selling.

*Figure 1*

**Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated**



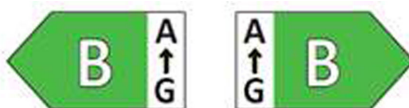
5. Telemarketing based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the full label and the product information sheet through a free access website, 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, if the price is shown, and in all other cases in proximity to 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 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 a 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 white, Calibri Bold and in a font size equivalent to that of the price, if the price is shown, in all other cases a clearly visible and legible font size; and
  - (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 example, with range of energy 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, if the price is shown, and in all other cases in proximity to 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, if the price is shown, and in all other cases a clearly visible and legible font size.
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, if the price is shown, and in all other cases in proximity to 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 database, 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 set out in this Annex relate only to the verification of the declared parameters by Member State 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.

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.

When verifying the compliance of a product model with the requirements laid down in this Regulation, the authorities of the Member States shall apply the following procedure:

- (1) The Member State 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 (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 Member State 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 12.
- (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 Member State 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 12.
- (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 Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay once a decision has been taken on the non-compliance of the model according to points 3 and 6.

The Member State authorities shall use the measurement and calculation methods set out in Annex IV.

The Member State authorities shall only apply the verification tolerances set out in Table 12 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 12, no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 12

**Verification tolerances for measured parameters**

Parameters	Verification tolerances
Net volume, and net compartment volume where applicable	The determined value <sup>(a)</sup> shall not be more than 3 % or 1 L lower — whichever is the greater value — than the declared value.
Gross volume, and gross compartment volume where applicable	The determined value <sup>(a)</sup> shall not be more than 3 % or 1 L lower — whichever is the greater value — than the declared value
TDA, and compartment TDA where applicable	The determined value <sup>(a)</sup> shall not be more than 3 % lower than the declared value.
$E_{daily}$	The determined value <sup>(a)</sup> shall not be more than 10 % higher than the declared value
AE	The determined value <sup>(a)</sup> shall not be more than 10 % higher than the declared value.

<sup>(a)</sup> 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.