

Brussels, XXX
[...] (2022) XXX draft

COMMISSION DELEGATED REGULATION (EU) .../...

of XXX

supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of professional refrigerated storage cabinets, scientific and healthcare refrigerated storage cabinets and condensing units.

(Text with EEA relevance)

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission. The information transmitted is intended only for the Member State or entity to which it is addressed for discussions and may contain confidential and/or privileged material.

COMMISSION DELEGATED REGULATION (EU) .../...

of **XXX**

supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of professional refrigerated storage cabinets, scientific and healthcare refrigerated storage cabinets and condensing units.

(Text with EEA relevance)

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, scientific and healthcare refrigerated storage cabinets and condensing units.
2. This Regulation shall apply to:
 - (a) electric mains-operated professional refrigerated storage cabinets, including those sold for the refrigeration of foodstuffs and animal feed;
 - (b) electric mains-operated refrigerated storage cabinets intended for use in laboratory research and healthcare environments including for scientific samples, plasma and blood products and cooled pharmaceutical products at chilled, frozen and ultra-low temperature applications;
 - (c) condensing units operating at low or medium temperature or both.
3. This Regulation shall not apply to the following types of professional refrigerated storage cabinets:
 - (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 10 of Annex I;
 - (j) refrigerator-freezers;
 - (k) static-air cabinets;
 - (l) built-in cabinets;
 - (m) roll-in and pass-through cabinets;
 - (n) chest freezers.
4. This Regulation shall not apply to the following types of scientific and healthcare refrigerated storage cabinets:
- (a) those primarily powered by energy sources other than electricity;
 - (b) those operating with a remote condensing unit;
 - (c) open cabinets, where their openness is a fundamental requirement for their primary functionality;
 - (d) custom-made cabinets, made on a one-off basis according to individual customer specification and not equivalent to other storage cabinets as described in definition 16 of Annex I;
 - (e) those with a gross internal volume exceeding 2000 litres;
 - (f) those designed for transportation;
 - (g) those with a primary function other than cold storage;
 - (h) ultra-low temperature cabinets operating primarily below -90 °C.
5. This Regulation shall not apply to the following types of condensing units:
- (a) condensing units including an evaporator, which may be an integral evaporator, such as in monobloc units, or a remote evaporator, such as in split units;
 - (b) compressor packs or racks, which do not include a condenser;
 - (c) condensing units of which the condenser-side does not use air as heat transfer medium.

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.
- (l) 'scientific and healthcare refrigerated storage cabinet' means an insulated refrigerating appliance integrating one or more compartments accessible via one or more doors or drawers, capable of continuously and reliably maintaining the temperature of stored products and samples within prescribed limits at chilled or frozen operating temperature, using a vapour compression cycle, and intended for the storage of scientific samples, plasma and blood products and cooled pharmaceutical products in scientific or healthcare environments;
- (m) 'plasma' means ...
- (n) 'blood products' means ...
- (o) 'pharmaceutical products' means ...
- (p) 'scientific samples' means ...
- (q) '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;

- (r) 'low temperature' means that the condensing unit is capable of delivering its rated cooling capacity at a saturated evaporating temperature of $-35\text{ }^{\circ}\text{C}$;
- (s) 'medium temperature' means that the condensing unit is capable of delivering its rated cooling capacity at a saturated evaporating temperature of $-10\text{ }^{\circ}\text{C}$;
- (t) 'rated cooling capacity' means the cooling capacity which the condensing unit allows the vapour compression cycle to reach, once connected to an evaporator and an expansion device, when operating at full load, and measured at standard rating conditions with the reference ambient temperature set at $32\text{ }^{\circ}\text{C}$, expressed in kW;
- (u) 'compressor pack' or 'compressor rack' means a product incorporating at least one or more electrically driven refrigeration compressor(s) and a control system.

Article 3

Obligations of suppliers

1. Suppliers shall ensure that:
 - (a) each professional refrigerated storage cabinet, scientific and healthcare refrigerated storage cabinet, condensing unit (from here on 'model') is supplied with a printed label in the format as set out in Annex III;
 - (b) an electronic label in the format and containing the information, as set out in Annex III, is made available to dealers for each model;
 - (c) an electronic product information sheet, as set out in Annex V, is made available to dealers for each model;
 - (d) if specifically requested by the dealer, the product information sheet shall be made available in printed form;
 - (e) the values of the parameters of the product information sheet, as set out in Annex V, are entered into the public part of the product database;
 - (f) the content of the technical documentation, as set out in Annex VI, is entered into the product database;
 - (g) any visual advertisement for a specific model contains the energy efficiency class and the range of energy efficiency classes available on the label in accordance with Annexes VII and VIII;
 - (h) any technical promotional material concerning a specific model, 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 Annexes VII and VIII.
2. The energy efficiency classes as set out in Annex II shall be calculated in accordance with Annex IV.

Article 4

Obligations of dealers

Dealers shall ensure that:

- (a) each professional, scientific and healthcare refrigerated storage cabinet and condensing unit (from here on ‘model’), at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with Article 3(1) with the label or the energy class being displayed in such a way as to be clearly visible and unequivocally associated to the specific model;
- (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, including on the internet, contains the energy efficiency class and the range of efficiency classes available on the label, in accordance with Annexes VII and VIII;
- (d) any technical promotional material concerning a specific model, 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 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 of the Parliament and of the Council¹ allows the direct selling of a professional, scientific or healthcare refrigerated storage cabinet and condensing unit 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, as set out in Annex IV.

¹ 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, 17.07.2000, p. 1).

Article 6

Verification procedure for market surveillance purposes

Member States shall apply the procedure laid down in Annex IX when performing the market surveillance checks referred to in Article 8(3) of Regulation (EU) 2017/1369.

Article 7

Review

The Commission shall review this Regulation in the light of technological progress and present the results of this assessment to the Consultation Forum established pursuant to Article 14(1) of Regulation (EU) 2017/1369 no later than five years after its entry into force. The review shall in particular assess the following:

- (a) the distribution of cabinet models across the label classes;
- (b) the verification tolerances set out in Annex IX;
- (c) the appropriateness of introducing a method for determining the standard annual energy consumption for professional refrigerator-freezer storage cabinets or static air professional refrigerated storage cabinets;
- (d) whether the scope of scientific and healthcare refrigerated storage cabinets should be extended to include: **XXX**.
- (e) the appropriateness of introducing an energy label for blast cabinets.
- (f) the possibility to address circular economy objectives (as supplementary information) in energy labels.

Article 8

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 18 months after entry into force of this Regulation.

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

Done at Brussels, [date].

For the Commission

The President

Ursula VON DER LEYEN

DRAFT

Definitions applicable to the Annexes

Definitions related to professional refrigerated storage cabinets:

- (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 $-1\text{ }^{\circ}\text{C}$ and $5\text{ }^{\circ}\text{C}$;
- (3) 'frozen operating temperature' means that the temperature of foodstuffs stored in the cabinet is continuously maintained at a temperature lower than $-15\text{ }^{\circ}\text{C}$, 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 1 050 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 1 050 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 7 of Annex IV; 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) 'standard 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 4, as detailed in Table 7 in Annex IV;
- (9) '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 7 in Annex IV;
- (10) '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.

Definitions related to scientific and healthcare refrigerated storage cabinets

- (11) ‘scientific and healthcare refrigerated storage cabinet’ means an insulated refrigerating appliance integrating one or more compartments accessible via one or more doors or drawers, capable of continuously and reliably maintaining the temperature of stored products and samples within prescribed limits at chilled or frozen operating temperature, using a vapour compression cycle, and intended for the storage of scientific samples, plasma and blood products and cooled pharmaceutical products in scientific or healthcare environments;
- (12) ‘plasma’ means ...
- (13) ‘blood products’ means
- (14) ‘pharmaceutical products’ means...
- (15) ‘scientific samples’ means...
- (16) ‘equivalent scientific or healthcare refrigerated storage cabinet’ means a scientific or healthcare 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 scientific or healthcare refrigerated storage cabinet model placed on the market under a different commercial code number by the same manufacturer;

Definitions related to condensing units

- (11) ‘rated cooling capacity’ (P_A) means the cooling capacity that the condensing unit enables the vapour compression cycle to reach, once connected to an evaporator and an expansion device, when operating at full load, and measured at standard rating conditions with the reference ambient temperature set at 32 °C, expressed in kW to two decimal places;
- (12) ‘rated power input’ (D_A) means the electrical power input needed by the condensing unit (including the compressor, the condenser fan(s) and possible auxiliaries) to reach the rated cooling capacity, expressed in kW to two decimal places;
- (13) ‘rated coefficient of performance’ (COP_A) means the rated cooling capacity, expressed in kW, divided by the rated power input, expressed in kW, expressed to two decimal places;
- (14) ‘coefficients of performance COP_B , COP_C and COP_D ’ mean the cooling capacity, expressed in kW, divided by the power input, expressed in kW, expressed to two decimal places at rating points B, C and D;
- (15) ‘seasonal energy performance ratio’ ($SEPR$) is the efficiency ratio of a condensing unit for providing cooling at standard rating conditions, representative of the variations in load and ambient temperature throughout the year, and calculated as the ratio between annual cooling demand and annual electricity consumption, expressed to two decimal places;

- (16) ‘annual cooling demand’ means the sum of each bin-specific cooling demand multiplied by the corresponding number of bin hours;
- (17) ‘bin-specific cooling demand’ means the cooling demand for every bin in the year, calculated as the rated cooling capacity multiplied by the part load ratio, expressed in kW to two decimal places;
- (18) ‘part load’ ($P_c(T_j)$) means the cooling load at a specific ambient temperature T_j , calculated as the full load multiplied by the part load ratio corresponding to the same ambient temperature T_j and expressed in kW at two decimal places;
- (19) ‘part load ratio’ ($PR(T_j)$) at a specific ambient temperature T_j means the ambient temperature T_j minus 5 °C divided by the reference ambient temperature minus 5 °C, and — for medium temperature — multiplied by 0,4 and added to 0,6, and — for low temperature — multiplied by 0,2 and added to 0,8. For ambient temperatures higher than the reference ambient temperature, the part load ratio shall be 1. For ambient temperatures lower than 5 °C, the part load ratio shall be 0,6 for medium temperature and 0,8 for low temperature. The part load ratio can be expressed at three decimal places or in percentage, after multiplying by 100, at one decimal place;
- (20) ‘annual electricity consumption’ is calculated as the sum of the ratios between each bin-specific cooling demand and the corresponding bin-specific coefficient of performance, multiplied by the corresponding number of bin hours;
- (21) ‘ambient temperature’ means the dry bulb air temperature, expressed in degrees Celsius;
- (22) ‘bin’ (bin_j) means a combination of an ambient temperature T_j and bin hours h_j , as set out in Table 6 of Annex VI;
- (23) ‘bin hours’ (h_j) means the hours per year at which an ambient temperature occurs for each bin, as set out in Table 6 of Annex VI;
- (24) ‘reference ambient temperature’ means the ambient temperature, expressed in degrees Celsius, at which the part load ratio is equal to 1. It is set at 32 °C;
- (25) ‘bin-specific coefficient of performance’ (COP_j) means the coefficient of performance for every bin in the year, derived from the part load, the declared cooling demand and declared coefficient of performance for specified bins, and calculated for other bins by linear interpolation, corrected where necessary by the degradation coefficient;
- (26) ‘declared cooling demand’ means the cooling demand at a limited number of specified bins, and calculated as the rated cooling capacity multiplied by the corresponding part load ratio;

- (27) 'declared coefficient of performance' means the coefficient of performance at a limited number of specified bins, and calculated as the declared cooling capacity divided by the declared power input;
- (28) 'declared cooling capacity' means the cooling capacity which the unit delivers to meet the specific cooling demand at a limited number of specified bins, expressed in kW to two decimal places;
- (29) 'declared power input' means the electrical power input needed by the condensing unit to meet the declared cooling capacity, expressed in kW to two decimal places;
- (30) 'degradation coefficient' (*C_{dc}*) is set at 0,25 and means the measure of efficiency loss due to the possible on/off cycling of condensing units necessary to satisfy the required part load in case the unit's capacity control cannot unload to the required part load;
- (31) 'capacity control' means the ability of a condensing unit to change its capacity by changing the volumetric flow rate of the refrigerant, to be indicated as 'fixed' if the unit cannot change its volumetric flow rate, 'staged' if the volumetric flow rate is changed or varied in series of not more than two steps, or 'variable' if the volumetric flow rate is changed or varied in series of three or more steps;

Common definitions:

- (32) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (33) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (34) '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;
- (35) '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.

Energy efficiency classes

1. Energy efficiency classes for professional, scientific and healthcare refrigerated storage cabinets

The energy efficiency class of a professional, scientific and healthcare 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, scientific and healthcare refrigerated storage cabinets

Energy efficiency class	EEI
A	$EEI < 30$
B	$30 \leq EEI < 45$
C	$45 \leq EEI < 60$
D	$60 \leq EEI < 80$
E	$80 \leq EEI < 100$
F	$100 \leq EEI < 120$
G	$120 \leq EEI < 140$

The EEI shall be calculated as detailed in Annex IV.

2. Energy efficiency classes for condensing units

The energy efficiency class of a condensing unit shall be determined on the basis of its energy efficiency index (EEI), as set out in Tables 2 to 5.

Table 2

Energy efficiency classes of low temperature condensing units with cooling capacity 0,1 – 2 kW

Energy efficiency class	$EEI = COP - 0.14 C$
A	$EEI \geq 1,22$
B	$1,22 > EEI \geq 1,15$
C	$1,15 > EEI \geq 1,08$
D	$1,08 > EEI \geq 1,01$
E	$1,01 > EEI \geq 0,94$
F	$0,94 > EEI \geq 0,87$
G	$0,87 < EEI$

Table 3

Energy efficiency classes of low temperature condensing units with cooling capacity 2 – 20 kW

Energy efficiency class	$EEI = SEPR - 0.005 C$
A	$EEI \geq 2,02$
B	$2,02 > EEI \geq 1,95$
C	$1,95 > EEI \geq 1,88$
D	$1,88 > EEI \geq 1,81$
E	$1,81 > EEI \geq 1,74$
F	$1,74 > EEI \geq 1,67$
G	$1,67 < EEI$

Table 4

**Energy efficiency classes of medium temperature condensing units with cooling capacity
0,2 – 5 kW**

Energy efficiency class	$EEI = COP - 0.09 C$
A	$EEI \geq 2,15$
B	$2,15 > EEI \geq 2,025$
C	$2,025 > EEI \geq 1,90$
D	$1,90 > EEI \geq 1,775$
E	$1,775 > EEI \geq 1,65$
F	$1,65 > EEI \geq 1,525$
G	$1,525 < EEI$

Table 5

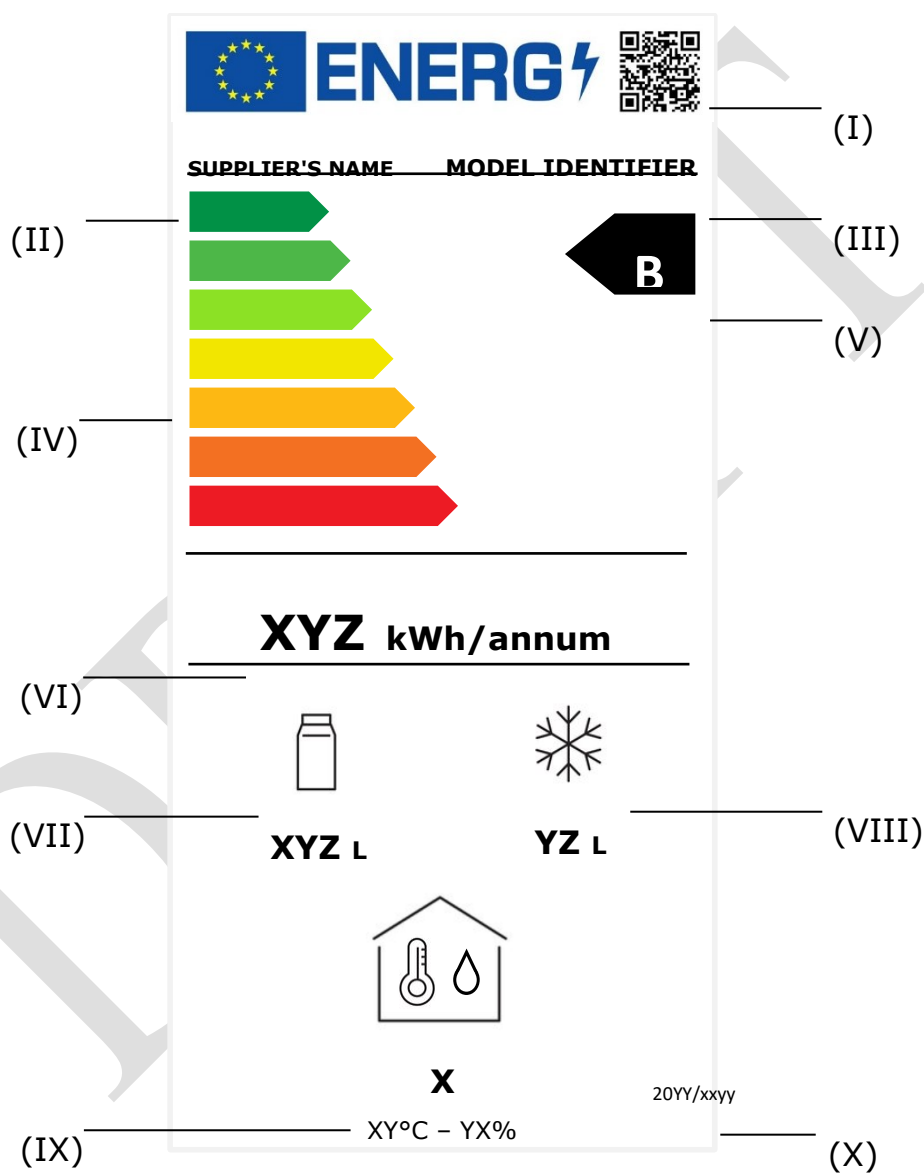
**Energy efficiency classes of medium temperature condensing units with cooling capacity 5
– 50 kW**

Energy efficiency class	$EEI = SEPR + 0.012 C$
A	$EEI \geq 4,55$
B	$4,55 > EEI \geq 4,25$
C	$4,25 > EEI \geq 3,95$
D	$3,95 > EEI \geq 3,65$
E	$3,65 > EEI \geq 3,35$
F	$3,35 > EEI \geq 3,05$
G	$3,05 < EEI$

DRAFT

Labels

1. Label for professional refrigerated storage cabinets



[Label above is for illustration only – not the proposed design (to be completed once draft has been agreed).]

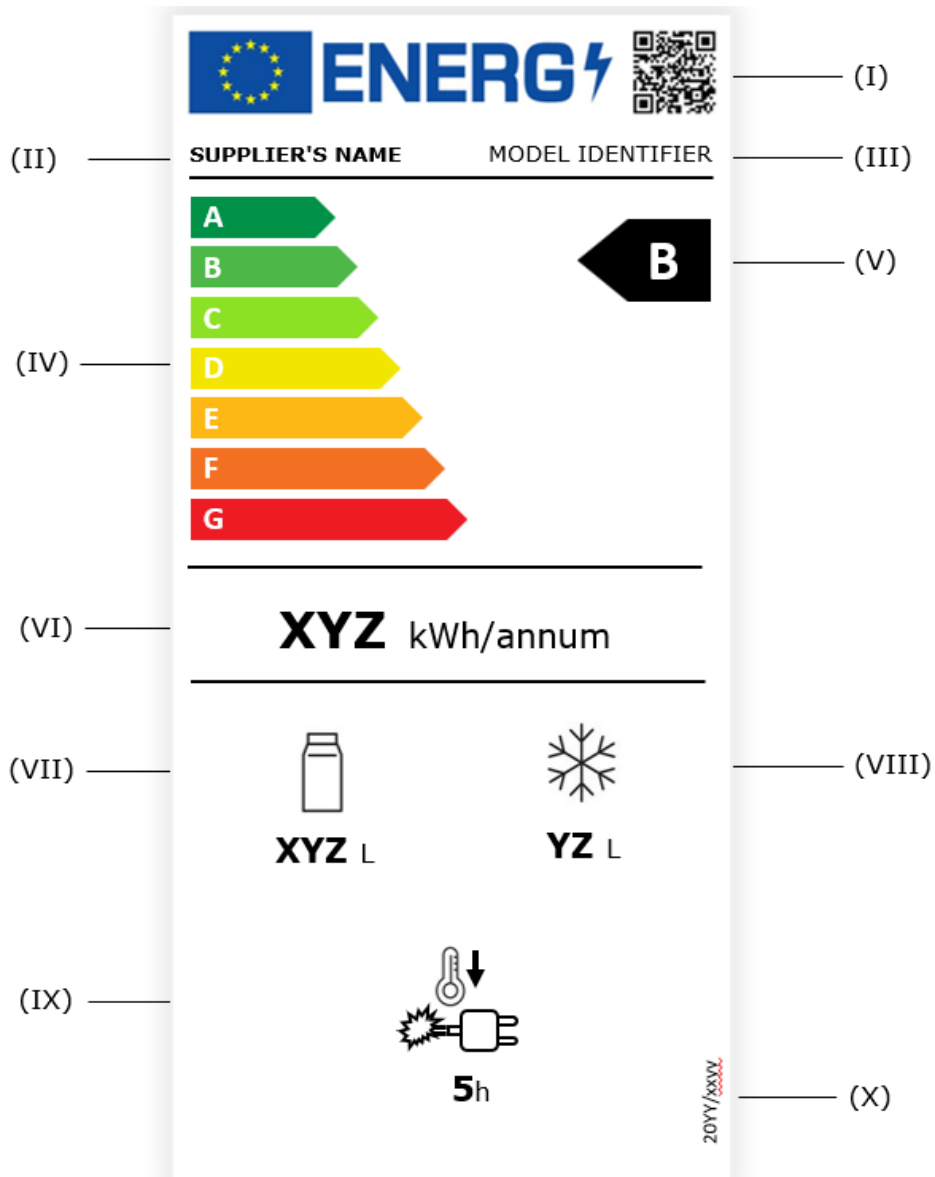
The following information shall be included in the label:

- 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. 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;
- VI. the annual electricity consumption in kWh in terms of final energy consumption per year, calculated in accordance with Annex IV and rounded to the nearest integer;
- VII. 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;
- VIII. 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;
- IX. 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 7, Annex IV.
- X. the number of this Regulation, that is '20YY/XXXX'.

The design of the label shall be in accordance with point 4. By way of derogation, where a model has been awarded an 'EU ecolabel' ⁽²⁾, a copy of the ecolabel may be added.

² Under Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel (OJ L 27, 30.1.2010, p. 1).

2. Label for scientific and healthcare refrigerated storage cabinets



[Label above is for illustration only – not the proposed design (to be completed once draft has been agreed).]

Possible use of a table to declare reference temperature(s) for which the AEC is calculated and associated volume(s):

Reference temperature:	-80°C	+8°C
Net volume:	700 L	500 L

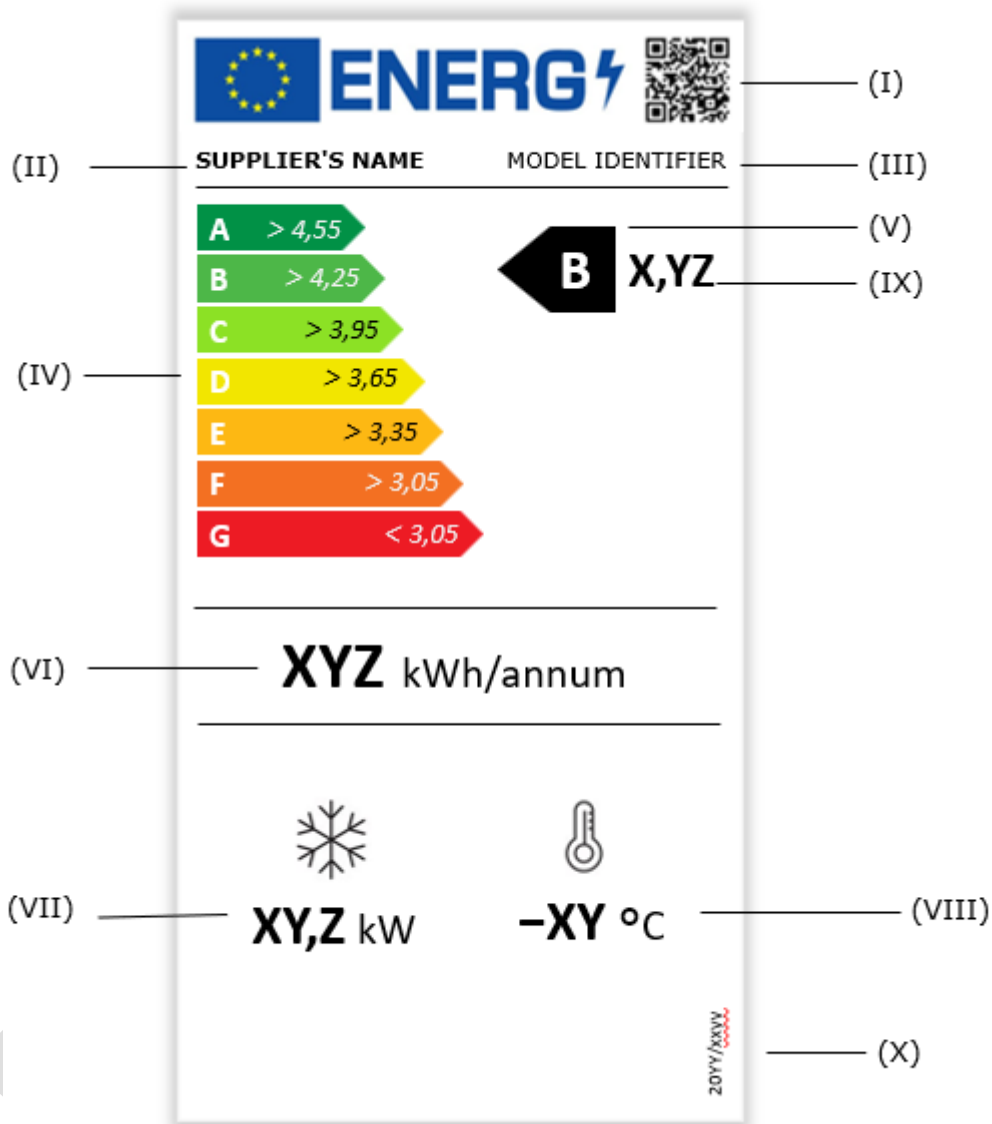
The following information shall be included in the label:

- 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; 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;
- VI. the annual electricity consumption in kWh in terms of final energy consumption per year, calculated in accordance with Annex IV and rounded to the nearest integer;
- VII. **One option to address display of net volumes and temperatures:** a table displaying the reference temperatures for which the annual energy consumption is calculated, together with the sum of the net volumes, expressed in litres, of all compartments associated with each reference temperature;
- VIII. TBD;
- IX. TBD;
- X. the number of this Regulation, that is '**XXX/XXX**'.

The design of the label shall be in accordance with point 4. By way of derogation, where a model has been awarded an 'EU ecolabel' ⁽³⁾, a copy of the ecolabel may be added.

³ Under Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel (OJ L 27, 30.1.2010, p. 1).

3. Label for condensing units



[Label above is of a MT condensing unit with cooling capacity 5-50 kW and is for illustration only – not the proposed design (to be completed once draft has been agreed).]

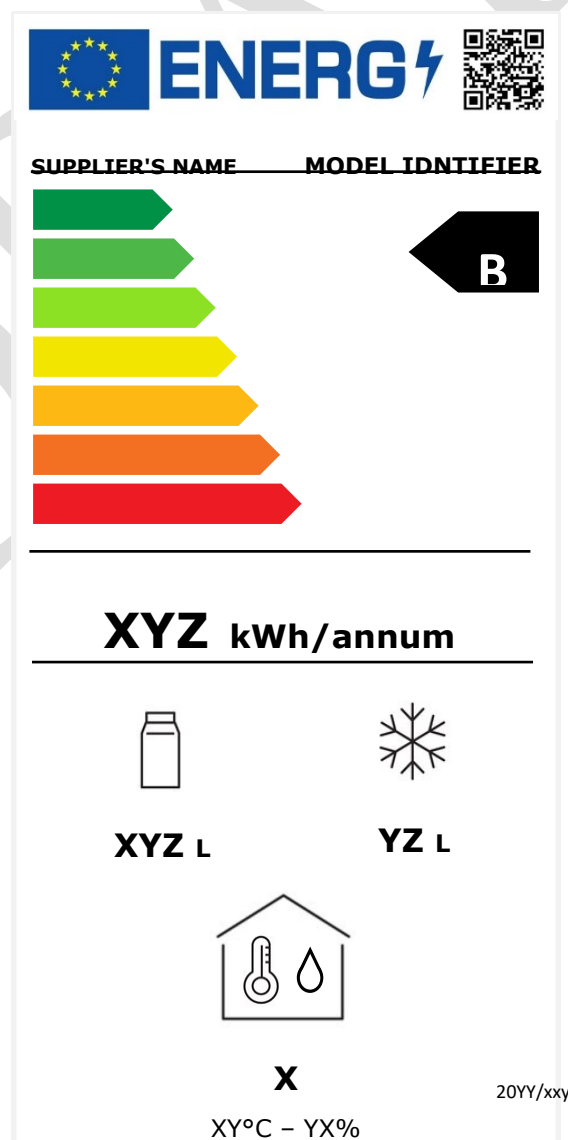
The following information shall be included in the label:

- 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; 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;
- VI. the annual electricity consumption in kWh in terms of final energy consumption per year, calculated in accordance with Annex IV and rounded to the nearest integer;
- VII. the rated cooling capacity in kW calculated in accordance with Annex IV and rounded to two decimal places;
- VIII. the operating temperature of the condensing unit. – 10° C for medium temperature, – 35° C for low temperature;
- IX. efficiency expressed in EEI, calculated in accordance with Annex IV and rounded to two decimal places;
- X. the number of this Regulation, that is '20YY/XXXX'.

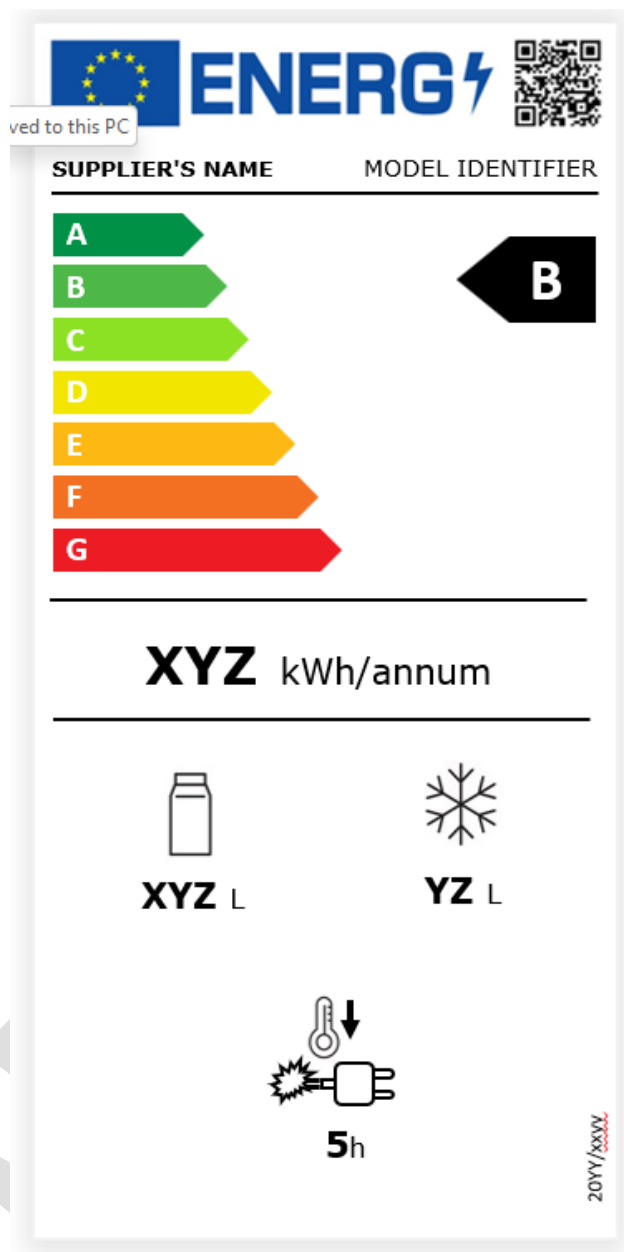
4. LABEL DESIGN

4.1 Label design for professional refrigerated storage cabinets:



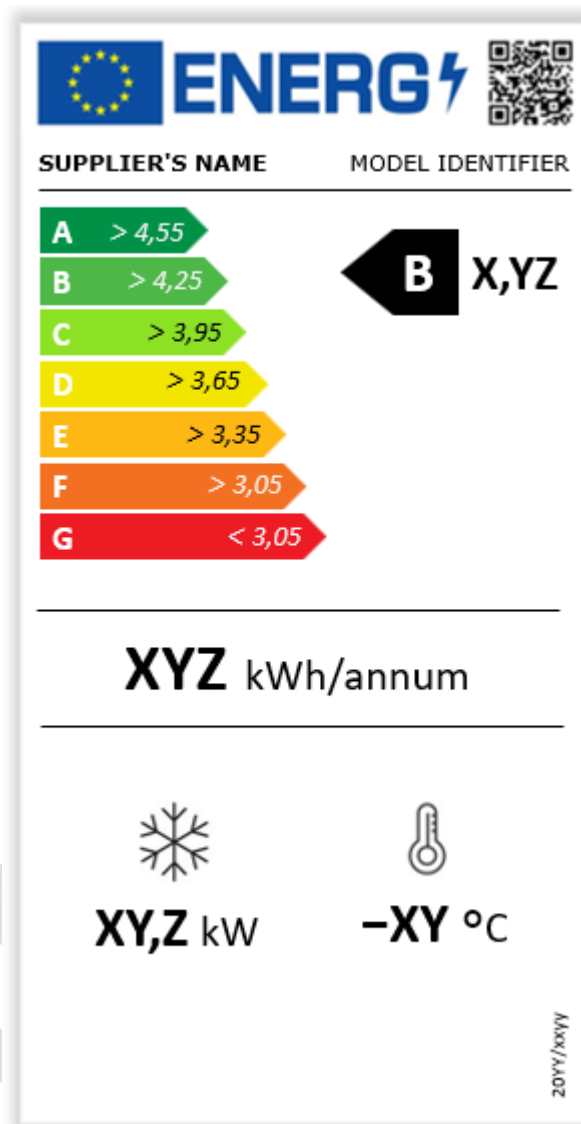
[Label above is for illustration only – not the proposed design (to be completed once draft has been agreed).]

4.2 Label design for scientific and healthcare refrigerated storage cabinets:



[Label above is for illustration only – not the proposed design (to be completed once draft has been agreed).]

4.3 Label design for condensing units:



[Label above is of a MT condensing unit with cooling capacity 5-50 kW and is for illustration only – not the proposed design (to be completed once draft has been agreed).]

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.

- (d) 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.
- (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 labels shall fulfil the following specifications requirements (numbers refer to the figure above):

❶ the colours of the EU logo shall be as follows:

— the background: 100,80,0,0;

— the stars: 0,0,100,0;

❷ the colour of the energy logo shall be: 100,80,0,0;

❸ the QR code shall be 100 % black;

❹ the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;

❺ the model identifier shall be 100 % black and in Verdana Regular 9 pt;

❻ 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 professional, scientific or healthcare refrigerated storage cabinets: if the appliance contains only frozen compartment(s) or only unfrozen compartment(s), only the relevant pictograms, as set out in points 1 and 2, 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.

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 that 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 technical definitions, conditions, equations and parameters set out in this Annex.

1. Measurement methods and calculations for professional refrigerated storage cabinets.

For establishing the values of annual energy consumption and energy efficiency index for professional refrigerated storage cabinets, the calculation of which is given in point 3, 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 7, 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.

2. Measurement methods and calculations scientific and healthcare refrigerated storage cabinets.

For establishing the values of annual energy consumption and energy efficiency index for scientific and healthcare refrigerated storage cabinets, the calculation of which is given in point 3, measurements shall be carried out under the following conditions:

- The reference temperatures shall be as given in Table 6.
- The ambient conditions shall correspond to climate class 3 as detailed in Table 7.
- Professional refrigerated storage cabinets shall be tested:

[additional conditions TBD.]

Table 6

Reference temperatures for scientific and healthcare refrigerated storage cabinets

Temperature class	Storage temperature range, °C	Reference temperature, °C	Examples of applications	Threshold temperature for electricity supply failure, °C	Temperature homogeneity range*, K
B	+2 to +6	+4	Blood products	+10	4
Ph	+2 to +8	+5	Pharmaceuticals, laboratory	+10	6
Pl	≤ -30	-30	Freezers for plasma and laboratory use	-23	10
ULT1	≥ -90	-80	Ultra-low temperature freezer for biological specimens	-60	(application specific)

*Temperature homogeneity range is the maximum difference allowed between the integrated average temperature of the warmest measuring point and the coolest measuring point.

Table 7

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

3. Method for calculating the energy efficiency index for professional, scientific and healthcare 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:

$$EEI = (AEC/SAEC) \times 100$$

Where:

$$AEC = E_{24h} \times af \times 365$$

AEC = annual energy consumption of the cabinet in kWh/year

E_{24h} = energy consumption of the cabinet over 24 hours

af = *adjustment factor* to be applied only for light-duty cabinets, according to point 1. In all other cases *af* = 1.

$$SAEC = M \times V_n + N$$

SAEC = standard annual energy consumption of the cabinet in kWh/year

V_n = net volume of the appliance, which is the sum of net volumes of all compartments of the cabinet, expressed in litres.

M and N values for professional refrigerated storage cabinets are given in Table 8; M and N values for scientific and healthcare storage cabinets are given in Table 9.

Table 8

M and N coefficient values for professional refrigerated storage cabinets

Category	Value for M	Value for N
Vertical Chilled	0,950	370
Vertical Frozen	3,370	1074
Counter Chilled	1,330	666
Counter Frozen	6,400	1357

Table 9

M and N coefficient values for scientific and healthcare refrigerated storage cabinets

Category	Value for M	Value for N
B	0,730	420
Ph	0,730	420
P1	3,504	242
ULT1	4,307	730

4. Measurement methods and calculations for condensing units.

For establishing the values of cooling capacity, power input, coefficient of performance and seasonal energy performance ratio, measurements shall be made under the following conditions:

- the reference ambient temperature at the outdoor heat exchanger (condenser) shall be 32 °C;
- the saturated evaporating temperature at the indoor heat exchanger (evaporator) shall be – 35 °C for low temperature and – 10 °C for medium temperature;
- where applicable, the variations of ambient temperature throughout the year, representative of average climate conditions in the Union, and the corresponding number of hours when these temperatures occur, shall be as set out in Table 10;

- where applicable, the effect of the degradation of energy efficiency caused by cycling, depending on the type of capacity control of the condensing unit, shall be taken into account.

Table 10

Variations of outdoor temperatures across the year under average climate conditions in Europe for condensing units

j	T _j	h _j	j	T _j	h _j	j	T _j	h _j
1	- 19	0,08	21	1	282,01	41	21	196,31
2	- 18	0,41	22	2	275,91	42	22	163,04
3	- 17	0,65	23	3	300,61	43	23	141,78
4	- 16	1,05	24	4	310,77	44	24	121,93
5	- 15	1,74	25	5	336,48	45	25	104,46
6	- 14	2,98	26	6	350,48	46	26	85,77
7	- 13	3,79	27	7	363,49	47	27	71,54
8	- 12	5,69	28	8	368,91	48	28	56,57
9	- 11	8,94	29	9	371,63	49	29	43,35
10	- 10	11,81	30	10	377,32	50	30	31,02
11	- 9	17,29	31	11	376,53	51	31	20,21
12	- 8	20,02	32	12	386,42	52	32	11,85
13	- 7	28,73	33	13	389,84	53	33	8,17
14	- 6	39,71	34	14	384,45	54	34	3,83
15	- 5	56,61	35	15	370,45	55	35	2,09
16	- 4	76,36	36	16	344,96	56	36	1,21
17	- 3	106,07	37	17	328,02	57	37	0,52
18	- 2	153,22	38	18	305,36	58	38	0,40
19	- 1	203,41	39	19	261,87			
20	0	247,98	40	20	223,90			

[additional conditions and calculations TBD.]

ANNEX IVa

Transitional Methods

References and qualifying notes for professional, scientific and healthcare refrigerated storage cabinets and condensing units.

Parameter	Reference Test Method / Title	Notes
Professional refrigerated storage cabinets		
Net volume, V _n (litres)	ISO 22041:2019 Clause 6.1	Where applicable chilled or frozen.
Energy consumption over 24 hours (E _{24h})	ISO 22041:2019 Clause 5.3.5.2	
Climate class	ISO 22041:2019 Clause 5.3.5.3	
Scientific and healthcare refrigerated storage cabinets		
Energy Efficiency Index (EEL)		
Net volume, V _n (litres)	DIN 13277 Clause 5.4	
Declared reference temperature for AEC measurement		Climate class/ ambient temperature
Energy consumption over 24 hours (E _{24h})	DIN 13277 Clause 5.12	
Condensing units		
Condensing units with a rated cooling capacity lower than 5 kW for medium operating temperatures and 2 kW for low operating temperatures		
Evaporating temperature (t)	EN 13215:2016+A1:2020 Annex B	
Parameters at full load and ambient temperature 32 °C		
Rated cooling capacity (P _A)	EN 13215:2016+A1:2020	

Rated power input (D_A)	Clause 8.1	
Rated COP (COP_A)		
Parameters at full load and ambient temperature 25 °C		
Cooling capacity (P_2)		
Power input (D_2)	EN 13215:2016+A1:2020 Clause 8.1	
COP (COP_2)		
Parameters at full load and ambient temperature 43 °C		
Cooling capacity (P_3)		
Power input (D_3)	EN 13215:2016+A1:2020 Clause 8.1	
COP (COP_3)		
Condensing units with a rated cooling capacity higher than 5 kW for medium operating temperatures and 2 kW for low operating temperatures respectively		
Evaporating temperature (t)		
Annual electricity consumption (Q)		
Seasonal energy performance ratio (SEPR)		
Parameters at full load and ambient temperature 32 °C		
Rated cooling capacity (P_A)		
Rated power input (D_A)	EN 13215:2016+A1:2020 Clause 8.1	
Rated COP (COP_A)		
Parameters at part load and ambient temperature 25 °C		
Cooling capacity (P_B)		
Power input (D_B)	EN 13215:2016+A1:2020 Clause 8.1	
COP (COP_B)		
Parameters at part load and ambient temperature 15 °C		
Cooling capacity (P_C)		
Power input (D_C)	EN 13215:2016+A1:2020 Clause 8.1	

COP (COP _C)		
Parameters at part load and ambient temperature 5 °C		
Cooling capacity (P _D)	EN 13215:2016+A1:2020 Clause 8.1	
Power input (D _D)		
COP (COP _D)		
Parameters at full load and ambient temperature 43 °C		
Cooling capacity (P ₃)	EN 13215:2016+A1:2020 Clause 8.1	
Power input (D ₃)		
COP (COP ₃)		
Applicable to all products in scope		
Disassembly, recycling or disposal at end-of-life	EN 45553:2020 EN 45555:2019 EN 45558:2019 EN 45559:2019	Disassembly aspects. Assessing the recyclability and recoverability of an energy related product. Critical raw material (CRM) content. Methods for providing information relating to material efficiency.

[Table to be updated once draft has been agreed.]

Product information sheet**1. Product information sheet for professional, scientific and healthcare refrigerated storage cabinets**

1. The information in the product information sheet of the professional refrigerated storage cabinet, scientific or healthcare refrigerated 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.1;
 - (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 IV and rounded to the nearest integer;
 - (g) net volume of each compartment;
 - (h) climate class in accordance with Table 7 in Annex IV;
 - (i) for light-duty professional refrigerated storage 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 standard duty professional refrigerated storage cabinets, the following sentence: 'This appliance is intended for use in ambient temperatures up to 30 °C';
 - (k) for heavy-duty professional refrigerated storage cabinets, the following sentence: 'This appliance is intended for use in ambient temperatures up to 40 °C';
 - (l) for scientific and healthcare refrigerated storage cabinets, the number of hours taken for the integrated average temperature inside each compartment to reach the threshold temperature after electricity supply failure as shown in Table 6, rounded to the nearest integer value(s).
2. A single information sheet may cover a number of professional, scientific or healthcare refrigerated storage cabinet models supplied by the same supplier.
3. The information in the information sheet 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.

2. Product information sheet for condensing units

DRAFT

1. The information in the product information sheet of the condensing unit 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.2
 - (e) **TBD**

DRAFT

Technical documentation

1. The technical documentation referred to in Article 3(1)(f) shall include:
 - (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 11; those values are considered as the declared values for the purpose of the verification procedure set out in Annex IX;
 - (e) the details and the results of calculations performed in accordance with Annex IV;
 - (f) measurement or testing conditions if not described sufficiently in point (b), if applicable;
 - (g) parameters of the initial test procedure for the energy efficiency index, if not described sufficiently under the settings of Annex IV and of Annex IVa.
2. Where the information included in the technical documentation for a professional, scientific or healthcare refrigerated storage cabinet or condensing unit has been obtained by any of the following methods, or both:
 - (a) from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different supplier,
 - (b) 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.

Table 11

Technical parameters of the model and their declared values

PARAMETER	UNIT	VALUE
	[x]	x
	[x]	x
	[x]	x

	[x]	x
	[x]	x
	[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:

[Table to be completed once draft has been agreed.]

DRAFT

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 professional, scientific and healthcare refrigerated storage cabinets and condensing units, for the purposes of ensuring conformity with the requirements laid down in point 1(g) 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 or other promotional material for professional, scientific and healthcare refrigerated storage cabinets and condensing units, for the purposes of ensuring conformity with the requirements laid down in point 1(h) 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 professional, scientific and healthcare refrigerated storage cabinets and condensing units 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.

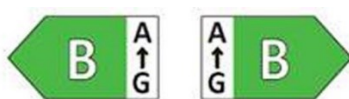
DRAFT

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(b) of Article 3 shall be shown on the display mechanism in proximity of the price of the product, if the price is shown, and in all 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 it 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 a 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, 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 is 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.

5. The electronic product information sheet made available by suppliers in accordance with point 1(c) 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 information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DRAFT

Verification procedure for market surveillance purposes

The verification tolerances defined in this Annex relate only to the verification by Member State 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 those 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 Member States shall apply the following procedure:

- (1) The Member State authorities shall verify one single unit per 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 for professional, scientific and healthcare refrigerated storage cabinets and Table 13 for condensing units.
- (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 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 tested pursuant to point 4, where applicable, the arithmetical mean of the determined values complies with the respective tolerances given in Table 12 for

professional, scientific and healthcare refrigerated storage cabinet and Table 13 for condensing units.

- (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, 6 or the second paragraph of this Annex.

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 that are set out in Table 12 for professional, scientific and healthcare refrigerated storage cabinets and Table 13 for condensing units, 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 12

Verification for professional, scientific and healthcare refrigerated storage cabinets

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 %.

Table 13

Verification tolerances for condensing units

Parameters	Verification tolerances
The seasonal energy performance ratio (<i>SEPR</i>) of condensing units with a rated cooling capacity higher than 2 kW at low temperature and 5 kW at medium temperature.	The determined value shall not be more than 10 % lower than the declared value, with point A measured at the rated cooling capacity.
The rated coefficient of performance (COP_A) of condensing units with a rated cooling capacity lower than 2 kW at low temperature and 5 kW at medium temperature.	The determined value shall not be more than 10 % lower than the declared value measured at the rated cooling capacity.
The coefficients of performance COP_B , COP_C and COP_D of condensing units with a rated cooling capacity higher than 2 kW at low temperature and 5 kW at medium temperature.	The determined values shall not be more than 10 % lower than the declared value measured at the rated cooling capacity.