Working Document with regards to the energy labelling of professional storage cabinets

THE EUROPEAN COMMISSION,

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

Having regard to Directive 2010/30/EU[1] of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products , and in particular Article 10 thereof,

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products that have a significant potential for energy savings but exhibit a wide disparity in performance levels with equivalent functionality.

(2) The energy consumed by professional storage cabinets accounts for a significant share of the total electricity demand in the Union, and professional storage cabinets with equivalent functionality exhibit a wide disparity in terms of energy efficiency. The scope for reducing their energy consumption is significant. Professional storage cabinets therefore be covered by energy labelling requirements.

(3) Harmonised provisions should be laid down on labelling and standard product information regarding the energy efficiency of professional storage cabinets in order to provide incentives for manufacturers to improve the energy efficiency of these products, to encourage end-users to purchase energy-efficient products and to contribute to the functioning of the internal market.

(4) The combined effect of this Working Document and Commission Regulation (EU) No XX/YY of ZZ implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional storage cabinets is expected to result by 2020 in estimated annual energy savings of about 1.8 TWh (terawatt hour) in 2020 and 4.1 TWh in 2030, corresponding to 0.7 and 1.4 million tonnes CO2 equivalent saving, compared to what would happen if no measures were taken.

(5) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art measurement methods including, where available, harmonised standards adopted by the European standardisation organisations, as listed in Annex I to Regulation (EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation[2].

(6) This Working Document should specify a uniform design and content of product labels for professional storage cabinets.

(7) In addition, this Working Document should specify requirements for the product fiche and technical documentation for professional storage cabinets.

(8) Moreover, this Working Document should specify requirements for the information to be provided for any form of distance selling of professional storage cabinets and in any advertisements and technical promotional material for such products.

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1 OJ L 153, 18.6.2010, p. 1.

2 OJ L 316, 14.11.2012, p. 12

(9) It is appropriate to provide for a review of the provisions of this Working Document taking into account technological progress,

HAS ADOPTED THIS WORKING DOCUMENT:

Chapter 1

Subject matter and scope

1. This Working Document establishes requirements for the labelling and the provision of supplementary product information professional storage cabinets. This Working Document shall apply to electric mains-operated professional storage cabinets including those sold for the refrigeration of items other than foodstuffs.

2. This Working Document shall not apply to:

   (a) Professional storage cabinets that are primarily powered by energy sources other than electricity;

   (b) Professional storage cabinets operating with a remote condensing unit;

   (c) Open cabinets, when their openess is a fundamental requirement for their primary functionality, such as open top preparation tables and saladettes;

   (d) Cabinets specifically designed for carrying out food processing through, for example, heating in addition to foodstuffs refrigeration or storage of refrigerated or frozen foodstuffs such as bakery cabinets that chill, heat and humidify. The mere presence of one compartment, equivalent to less than 20% of the whole internal volume, specifically designed for carrying out food processing is not sufficient for exemption;

   (e) Cabinets specifically designed only for the purpose of thawing frozen foodstuff in a controlled manner; the mere presence of one compartment specifically designed for thawing frozen foods in a controlled manner is not sufficient for exemption;

   (f) Serve-over counters and other similar forms of cabinet primarily intended for display and sale of foodstuffs in addition to refrigeration and storage;

   (g) Cabinets specifically designed for the storage of medicines and scientific samples;

   (h) Cabinets that do not use a vapour compression refrigeration cycle such as absorption and thermoelectric based systems;

   (i) Custom-made professional storage cabinets cabinets, made on a one-off basis and not equivalent functionally or materially to other professional storage cabinets cabinets;

   (j) Refrigerator-freezers.

Chapter 2

Definitions

In addition to the definitions set out in article 2 of Directive 2010/30/EU, the following definitions shall apply for the purpose of this Working Document:

(a) a ‘professional storage cabinet’ means an insulated refrigeration product 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 foodstuff in non household environments but not for the display to and 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 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 cabinet including one unique compartment that allows wheeled racks of product to be wheeled in;

(e) 'pass-through cabinet' means a cabinet accessible from both sides;

(f) 'static air cabinet' means a 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 such as fresh fish; a single static air compartment within the cabinet is not sufficient to designate the cabinet as a static air cabinet;

(g) 'heavy duty cabinet' means a professional storage cabinet capable of continuously maintaining chilled or frozen operating temperature in ambient conditions corresponding to climate class 5, as detailed in Table 3 of Annex VII;

(h) 'open cabinet' means a storage cabinet whose refrigerated enclosure can be reached from the outside without opening a door or a drawer;

(i) 'saladette' means a 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 pizza toppings or salad items;

(j) 'refrigerator-freezer' means a type of combined storage professional cabinet including at least one compartment exclusively intended for chilled operating temperature and one compartment exclusively intended for frozen operating temperature; a refrigerator-freezer is one specific type of combined cabinet;

(k) "combined cabinet" means a storage professional cabinet including two or more compartments with different temperature(s) for the refrigeration and storage of foodstuffs;

Additional definitions are set out in Annex I.

Chapter 3

Responsibilities of suppliers and timetable

1. From 1 July 2015 suppliers placing professional storage cabinets on the market and/or putting them into service, shall ensure that:

(a) a printed label complying with the format and content of information set out in Annex III is provided for each professional storage cabinet;

(b) a product fiche, as set out in Annex IV, is provided;

(c) the technical documentation, as set out in Annex V, is provided on request to the authorities of the Member States and to the Commission;

(d) any advertisement relating to a specific professional storage cabinet model and containing energy-related or price information includes a reference to the energy efficiency class of that model;

(e) any technical promotional material concerning a specific professional storage cabinet model and describing its specific technical parameters includes the energy efficiency class of that model;

2. The format of the label set out in Annex III shall be applied according to the following timetable:

(a) for professional storage cabinets placed on the market from 1 July 2015 labels shall be in accordance with label 1 of Annex III;

(b) for professional storage cabinets placed on the market from 1 July 2016 labels shall be in accordance with label 2 of Annex III;

(c) for professional storage cabinets placed on the market from 1 1uly 2018 labels shall be in accordance with label 3 of Annex III;

(d) for professional storage cabinets placed on the market from 1 July 2019 labels shall be in accordance with label 4 of Annex III.

Chapter 4
Responsibilities of dealers

Dealers of professional storage cabinets shall ensure that:

(a) each professional storage cabinet, at the point of sale, bears the label provided by suppliers in accordance with Chapter 3(1), as set out in point 1 of Annex III, on the outside of the front or top of the appliance, in such a way as to be clearly visible;

(b) professional storage cabinets offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the water heater displayed, are marketed with the information provided by the suppliers in accordance with Annex VI;

(c) any advertisement relating to a specific professional storage cabinet model and containing energy-related or price information includes a reference to the energy efficiency class of that model;

(d) any technical promotional material concerning a specific professional storage cabinet model and describing its specific technical parameters includes a reference to the energy efficiency class of that model.

Chapter 5
Measurement and calculation methods

The information to be provided pursuant to Chapters 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII.

Chapter 6
Verification procedure for market surveillance purposes

Member States shall apply the procedure set out in Annex VIII when assessing the conformity of the declared energy efficiency class, annual energy consumption and volumes.

Chapter 7

Review

The Commission shall review this Working Document in the light of technological progress no later than four years after its entry into force. The review shall in particular assess any significant changes in the market shares of various types of appliances, the appropriateness of the package fiche and label set out Annex III and Annex IV, and the verification tolerances set out in Annex VIII.

Chapter 8

Amendment to Commission delegated Regulation (EU) No 1060/2010

Point (p) of Annex I of Commission delegated Regulation (EU) No 1060/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household refrigerating appliances shall read:

'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; this definitions applies also to chest freezers sold for non-household use.

Chapter 9

Entry into force and application

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

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

Done at Brussels,

For the Commission
The President

ANNEX I

Definitions applicable for Annexes II to VIII

For the purposes of Annexes II to VIII, the following definitions shall apply:

(1) a professional storage cabinet may include one or more partially or wholly transparent door(s) and/or drawers(s), as long as the total transparent area of the cabinet door(s) and/or drawers(s) is not more than 80% of the total door/drawer area;

(2) ‘net volume means’ the volume containing foodstuffs within the load limit, minus the volume of shelves and any internal fittings;

(3) ‘gross storage volume’ means the volume within the inside walls of the cabinet or compartment, excluding internal fittings, doors or lids, if any, with these being closed;

(4) ‘chilled operating temperature’ means that the temperature of foodstuff stored in the cabinet is continuously maintained at a temperature comprised between -1°C and 5°C;

(5) frozen operating temperature’ means that the temperature of foodstuff stored in the cabinet is continuously maintained at a temperature lower than -15°C;

(6) ‘multi-use’ means that a professional storage cabinet or separate compartment of the same cabinet may be set at different temperatures for chilled or frozen foodstuffs;

(7) ‘vertical cabinet’ means a cabinet that has overall height equal or higher than 1050 mm with one or more vertical doors or drawers accessing the same compartment;

(8) ‘counter cabinet’ means a cabinet that has overall height lower than 1050 mm with one or more vertical doors or drawers accessing the same compartment;

(9) light duty cabinet’ means a professional storage cabinet only capable of continuously maintaining chiller or frozen operating temperature in ambient conditions corresponding to climate class 3, as detailed in Table 3 of Annex VII; if the cabinet is able to maintain temperature in ambient conditions corresponding to climate class 4 as detailed in Table 3 of Annex VII, it shall not be considered a light duty cabinet.

ANNEX II
Energy efficiency classes

The energy efficiency class of a professional storage cabinet shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1

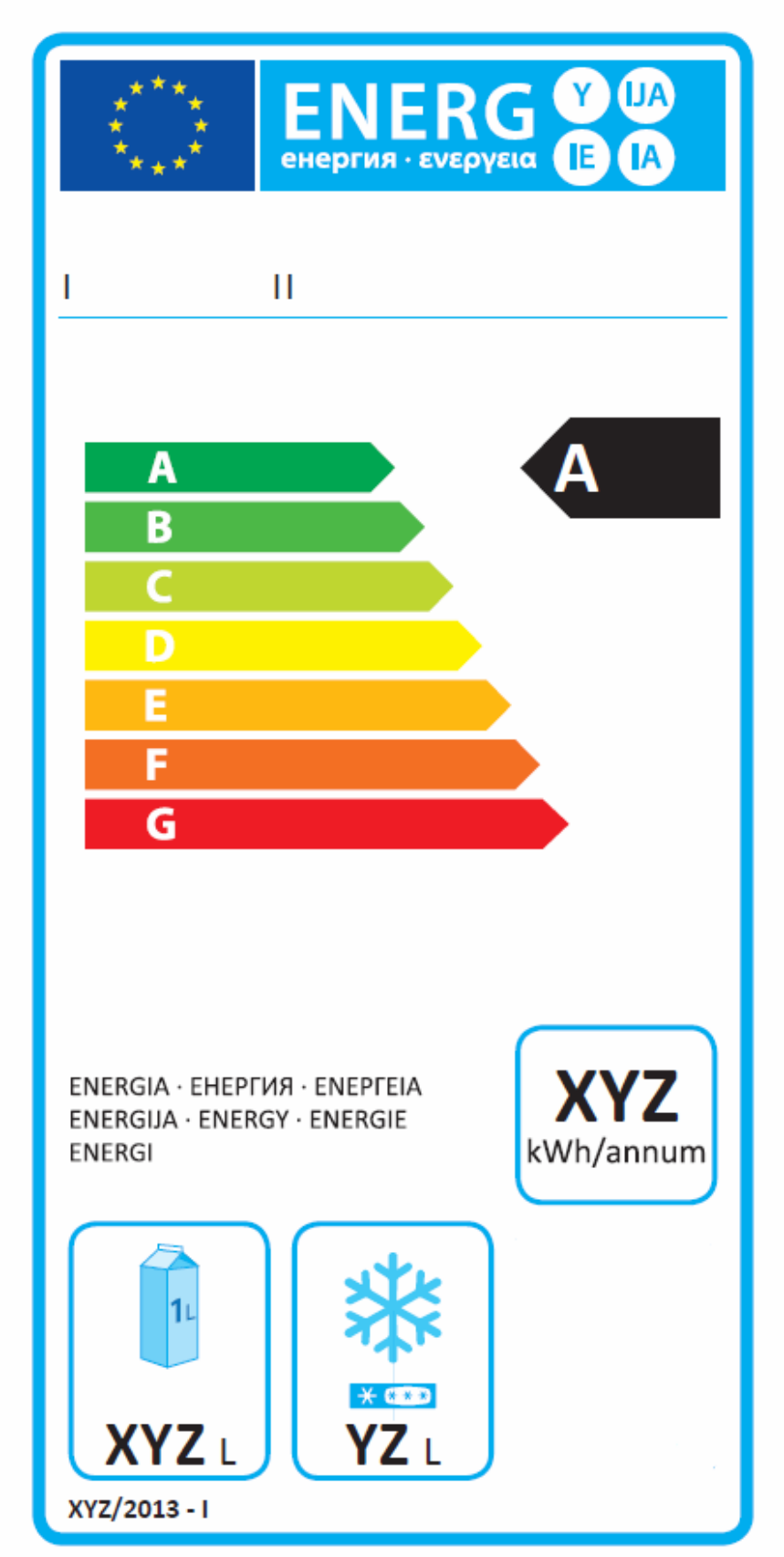
Table 1: Energy efficiency classes of professional storage cabinets

Energy efficiency class	EEI
A+++	EEI< 15
A++	15 ≤ EEI < 20
A+	20 ≤ EEI < 30
A	30 ≤ EEI < 40
B	40 ≤ EEI < 55
C	55 ≤ EEI < 75
D	75 ≤ EEI < 90
E	90 ≤ EEI < 100
F	100 ≤ EEI < 110
G	110 ≤ EEI < 125

The EEI will be calculated as detailed in Annex VII.

ANNEX III
The labels

1. Label 1 Professional storage cabinets in energy efficiency classes A to G



The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class shall be placed at the same height as the head of the relevant energy efficiency class;

IV. the annual electricity consumption in kWh in terms of final energy consumption per year, rounded to the nearest integer and calculated in accordance with Annex VII;

V. the sum of the storage volumes of all chilled compartments.

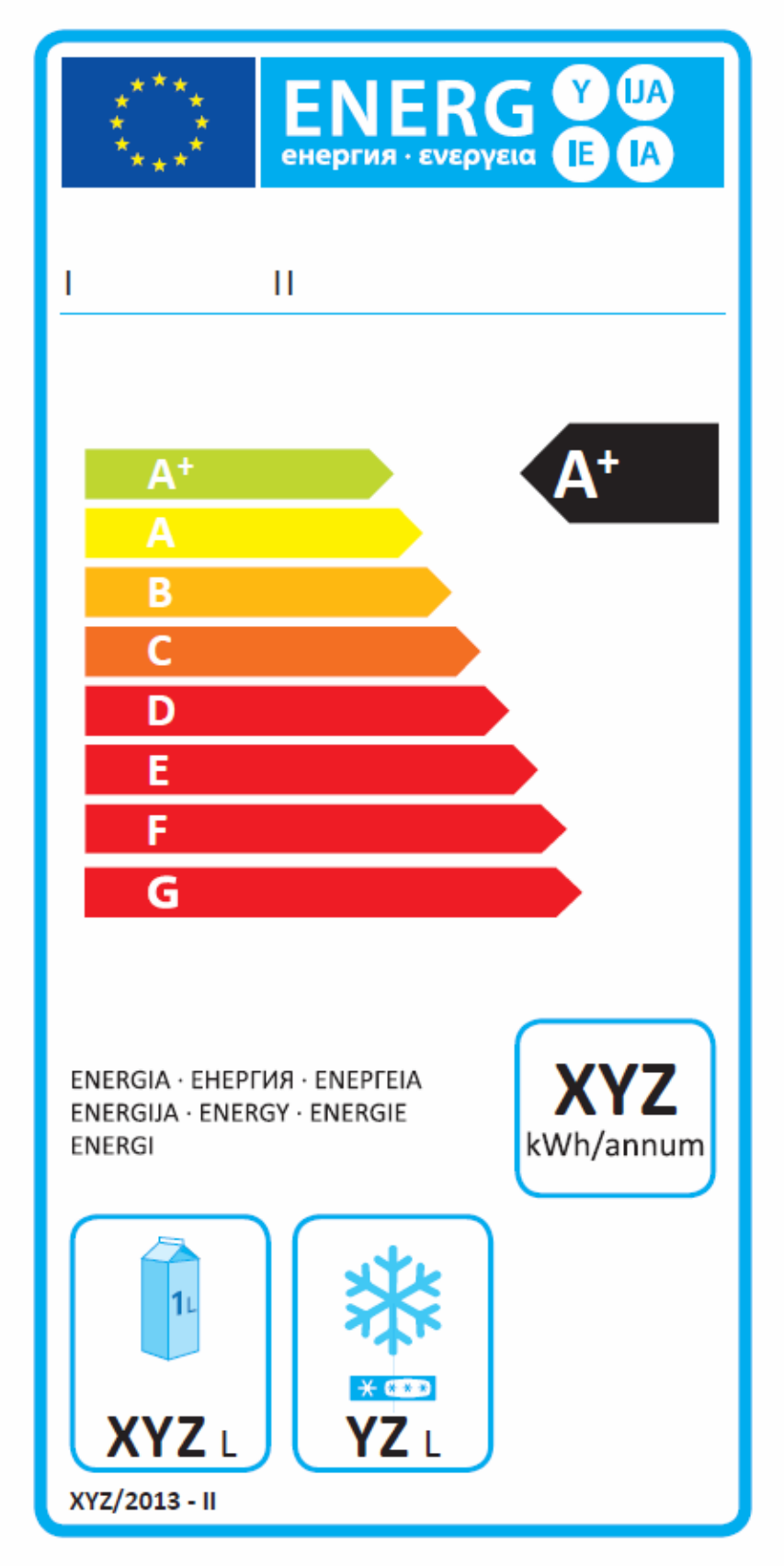
VI. the sum of the storage volumes of all frozen compartments.

The design aspects of the label for professional storage cabinets shall be in accordance with point 5 of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council[3], a copy of the EU Ecolabel may be added

2. Label 2

Professional storage cabinets in energy efficiency classes A+ to G

[3] OJ L 27, 30.1.2010, p. 1.



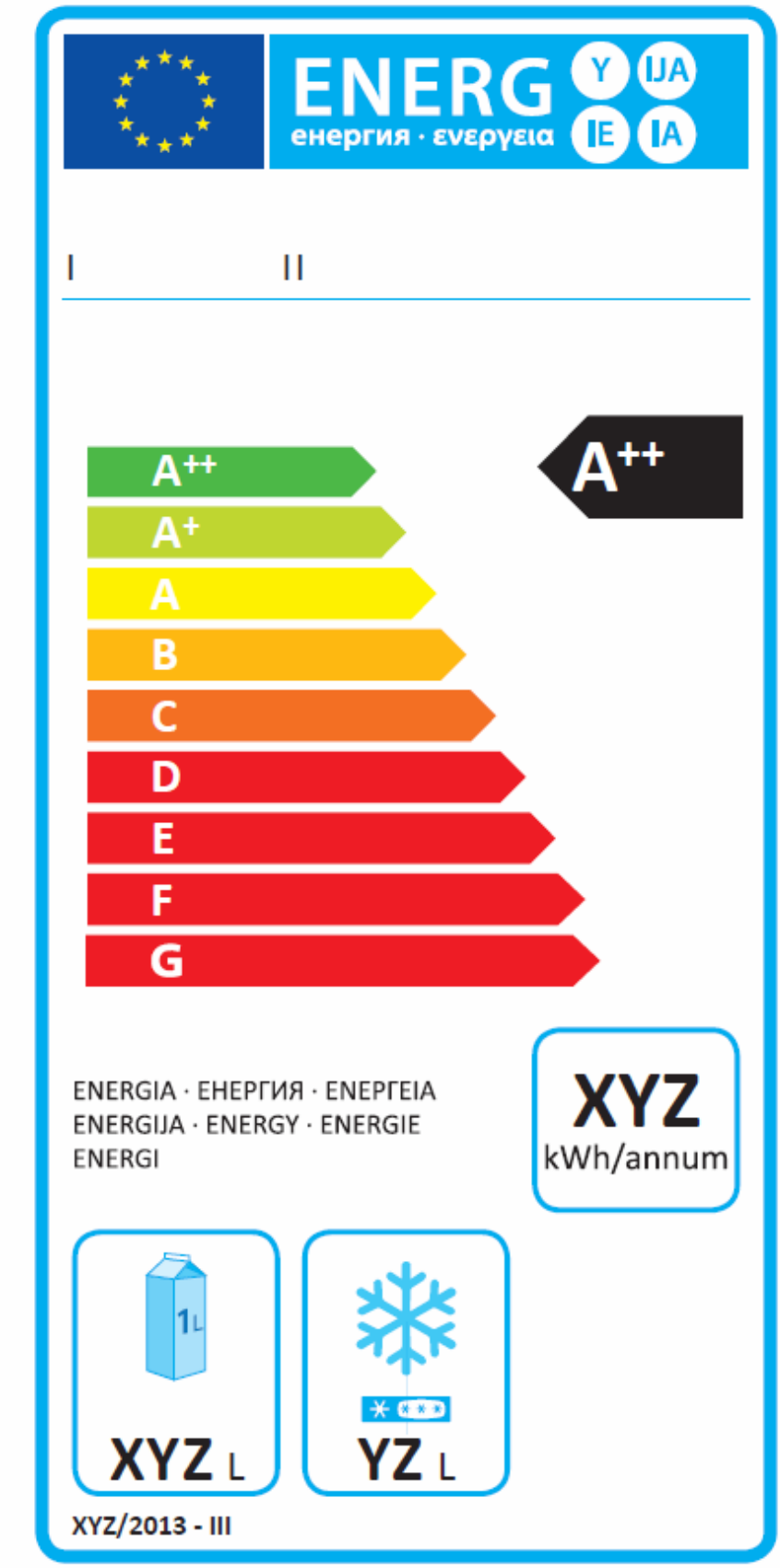
The information listed in point 1 shall be included in this label.

The design of the labels shall be in accordance with point 5 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No

66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

3. Label 3

Professional storage cabinets in energy efficiency classes A++ to G

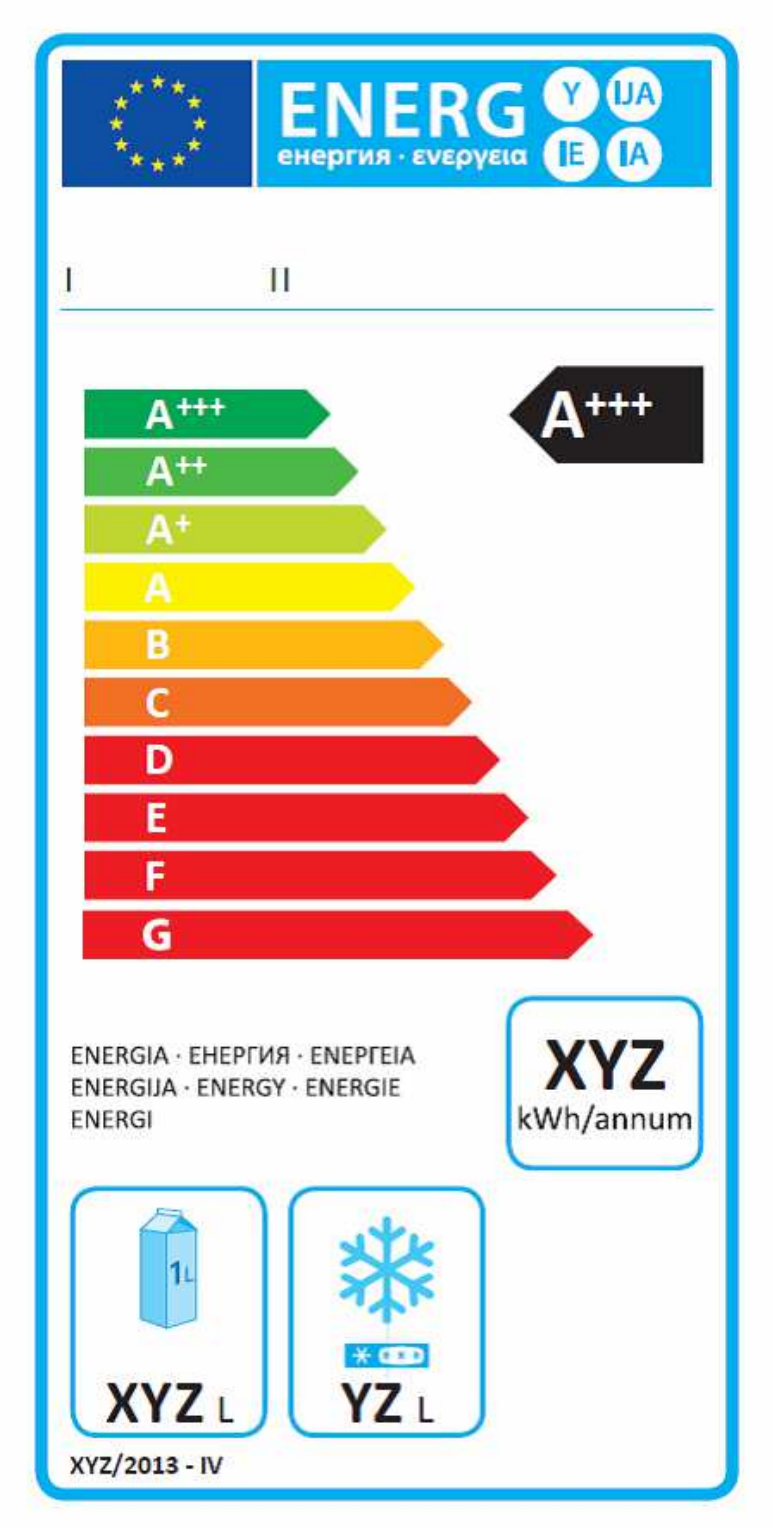

ENERG
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ENERGI
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kWh/annum
1L
XYZ L
YZ L
XYZ/2013 - III

The information listed in point 1 shall be included in this label.

The design of the labels shall be in accordance with point 5 of this Annex. By way of derogation, where a model has been awarded an ‘EU eco-label’ under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

Label 4

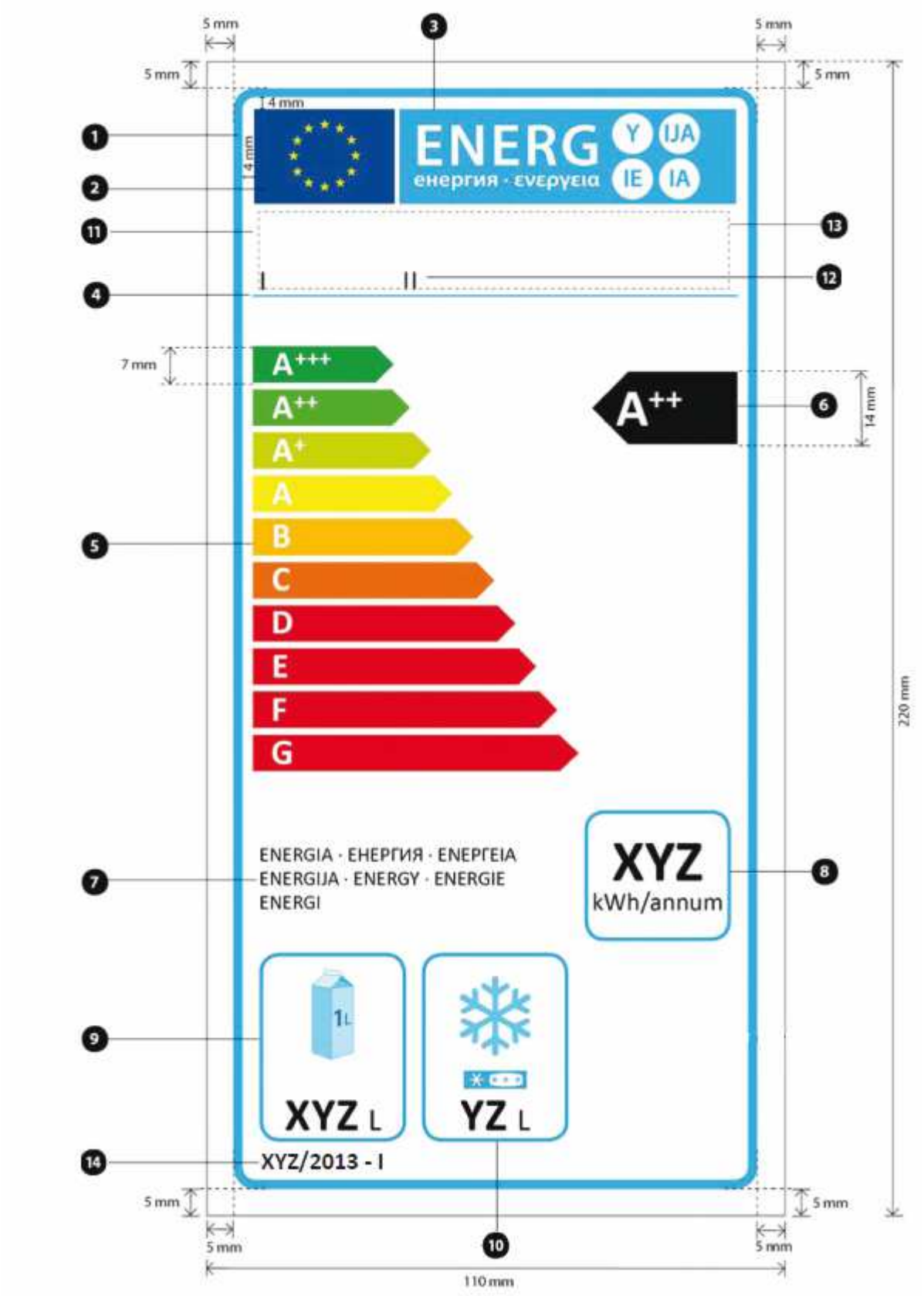
Professional storage cabinets in energy efficiency classes A+++ to G



The information listed in point 1 shall be included in this label.

The design of the labels shall be in accordance with point 5 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

4. The design of the label for professional storage cabinets shall be the following:



Whereby:

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be white.

(c) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

❶ **EU label border stroke:** 5 pt — colour: Cyan 100 % – round corners: 3,5 mm.

❷ **EU logo** — colours: X-80-00-00 and 00-00-X-00.

❸ **Energy label:** colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 92 mm, height: 17 mm.

❹ **Sub-logos border:** 1 pt — colour: Cyan 100 % – length: 92,5 mm.

❺ **A-G scale**

— **Arrow:** height: 7 mm, gap: 0,75 mm — colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last classes: 00-X-X-00.

— **Text:** Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.

❻ **Energy efficiency class**

— **Arrow:** width: 26 mm, height: 14 mm, 100 % black;

— **Text:** Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white and aligned on a single row.

❼ Energy

— **Text:** Calibri regular 11 pt, capitals, black.

❽ Annual energy consumption:

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 32 pt, 100 % black.

— **Second line:** Calibri regular 14 pt, 100 % black.

❾ Storage volumes of all compartments that do not merit a star rating:

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 25 pt, 100 % black. Calibri regular 17 pt, 100 % black.

❿ Storage volumes of all frozen-food storage compartments that merit a star rating:

— **Border:** 3 pt — colour: Cyan 100 % — round corners: 3,5 mm.

— **Value:** Calibri bold 25 pt, 100 % black.

Calibri regular 17 pt, 100 % black.

⓫ Supplier’s name or trademark

⓬ Supplier’s model identifier

⓭ The supplier’s name or trademark and model identifier should fit in a space of 90 x 15 mm.

⓮ Numbering of the Regulation:

Text: Calibri bold 11 pt.

ANNEX IV
Product Fiche

1. The information in the product fiche of the professional storage cabinet shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

   (a) supplier's name or trade mark;

   (b) supplier's model identifier;

   (c) type of the model in accordance with the definitions of Annex I;

   (d) the energy efficiency class of the model, determined in accordance with Annex VII;

   (e) where the model has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;

   (f) the annual electricity consumption in kWh, rounded to the nearest integer and calculated in accordance with Annex VII;

   (g) storage volume of each compartment;

   (h) climate class in accordance with Table 3 of Annex VII

   (i) any specific precautions that shall be taken when the professional storage cabinet is installed or maintained;

   (j) for semi-professional cabinets, the following information: 'This appliance is not intended to be used in hot professional kitchens;'

   (k) for heavy duty cabinets, the following information: 'This appliance is capable of maintaining test conditions at climate class 5;

2. One fiche may cover a number of professional storage cabinets models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX V
Technical documentation

1. The technical documentation referred to in Chapter 3(c) shall include:

   (a) the name and address of the supplier;

   (b) a description of the professional storage cabinet model, sufficient for its unambiguous identification;

   (c) where appropriate, the references of the harmonised standards applied;

   (d) where appropriate, the other technical standards and specifications used;

   (e) the identification and signature of the person empowered to bind the supplier;

   (f) the results of the measurements and of the calculations for the technical parameters specified in Annex VII;

   (g) any specific precautions that shall be taken when the professional storage cabinet is installed or maintained.

2. Where the information included in the technical documentation file for a professional storage cabinet model has been obtained by calculation on the basis of an equivalent professional storage cabinet, the technical documentation shall include details of such calculations and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The technical information shall also include a list of all other equivalent professional storage cabinet models where the information was obtained on the same basis.

3. The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

ANNEX VI
Information to be provided in cases where end-users cannot be expected to see the product displayed

1. The information referred to in Chapter 4 (b) shall be provided in the following order:

   (a) the energy efficiency class of the model, under average climate conditions, in accordance with Annex II;

   (b) the annual electricity consumption in kWh per year, rounded to the nearest integer and calculated in accordance with point Annex VII;

   (c) the storage volume of each compartment;

   (d) the 'climate class' in accordance with Annex VII;

2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex IV.

3. The size and font in which the information referred in this Annex is printed or shown shall be legible.

ANNEX VII
Measurement and calculation methods

1. For the purposes of compliance and verification of compliance with the requirements of this Working Document, measurements and calculations shall be made using a reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art measurement and calculation methods, including harmonised standards the reference numbers of which have been published for the purpose in the Official Journal of the European Union. They shall meet the technical definitions, conditions, equations and parameters set out this Annex.

2. Method for calculating the Energy Efficiency Index for professional storage cabinets.

For the calculation of the Energy Efficiency Index (EEI), of a professional storage cabinet model, the Annual Energy Consumption of the cabinet is compared to its Standard Annual Energy Consumption.

The Energy Efficiency Index (EEI) is calculated and rounded to the first decimal place, as:

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

Where:

$AEC = E24h \times 365$

With AEC = Annual Energy Consumption of the cabinet in kWh/year

E24h = energy consumption of the cabinet over 24 hours

and

$SAEC = M \times Vn + N$

With SAEC = Standard Annual Energy Consumption of the cabinet in kWh/year

Vn = net volume of the appliance, which is the sum of net volumes of all compartments of the cabinet.

M and N are given in the Table 2.

Table 2 – M and N coefficient values

Category	Value for M	Value for N
Vertical Chilled	1.643	609
Vertical Frozen	4.928	1472
Counter Chilled	2.555	1790
Counter Frozen	5.840	2380

3. For establishing the values of annual energy consumption and Energy Efficiency Index for professional storage cabinets, measurements shall be done using the following conditions:

The temperature of test packages shall be comprised between -1°C and 5°C for chilled cabinets and lower than -15°C for frozen cabinets

The ambient conditions shall correspond to climate class 4 as detailed in Table 3, except for light-duty cabinets which shall be tested in ambient conditions corresponding to climate class 3 as detailed in Table 3; an adjustment factor should then be applied to the testing results thus obtained for light-duty cabinets

If one or several compartment(s) is/are multi-use, it/they shall be tested at the lowest operating temperature at which it/they can be used

The ambient conditions of the climate classes 3, 4 and 5 are shown in Table 3.

Table 3 – Ambient conditions of the 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

The door opening protocol shall be as follows. For chilled professional storage cabinets and counter frozen professional storage cabinets, each door shall be opened for 2 minutes, and for 6 seconds, 6 times per hour, for a total of 12 hours; doors should be closed for 12 hours less 2 minutes. For vertical frozen professional storage cabinets, each door should be opened for 1 minute, and for 6 sec, 6 times per hour, for a total of 4 hours; both steps should be repeated once; doors should be closed for 12 hours less 2 minutes.

The net storage volume (V_n) shall be calculated with the following formula:

Vn cabinets = $base\ surfasse \bullet (h - (n \bullet 10))$

where:

base surface means the surface of the shelf containing the maximum configuration of test packages

h means the space from the top surface of the shelf in the lowest position to the load limit line

n means the number of shelves used based on the loading scheme, not including the shelf at the lowest position

10 is a fixed value expressed in millimetres representing the thickness of the shelf.

ANNEX VIII
Verification procedure for market surveillance purposes

For the purposes of assessing conformity with the requirements laid down in Chapters 3 and 4, the authorities of the Member States shall apply the following verification procedure:

1. The Member State authorities shall test one single unit per model.

2. The model shall be considered to comply with the applicable requirements if:

   (a) the measured volume shall not be less than the rated value by more than 3%

   (b) the measured value of the energy consumption shall not be greater than the rated value by more than 10 %

3. If the result referred to in point 2 is not achieved, the Member State authorities shall randomly select three additional units of the same model for testing and provide the information on the test results to the authorities of the other Member States and to the Commission within one month of testing.

4. The model shall be considered to comply with the applicable requirements if:

   (a) the average of the three units for the measured volume shall not be less than the rated value by more than 3%

   (b) the average of the three units for the measured value of the energy consumption shall not be greater than the rated value by more than 10 %

5. If the results referred to in point 4 are not achieved, the model and all other equivalent professional storage cabinet models shall be considered not to comply with this Working Document. The Member State authorities shall provide the test results and other relevant information to the authorities of the other Member States and to the Commission within one month of the decision being taken on the non-compliance of the model.

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