SUBSIDIARY LEGISLATION 427.80

ENERGY LABELLING OF ELECTRIC HOUSEHOLD REFRIGERATORS, FREEZERS AND THEIR COMBINATIONS IMPLEMENTING MEASURES) REGULATIONS

20th July, 2011*

LEGAL NOTICE 343 of 2011.

1. (1) The title of these regulations is the Energy Labelling of Electric Household Refrigerators, Freezers and their combinations (Implementing Measures) Regulations.

(2) These regulations shall be interpreted in terms of the Indication by Labelling and Standard Product Information of the Consumption of Energy and other Resources by Energy Related Products Regulations, hereinafter referred to as "the Energy Labelling Regulations".

(3) These regulations implement the requirements of Commission Directive 94/2/EC of 21 January 1994 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric refrigerators, freezers and their combinations.

(4) These regulations constitute an implementing measure within the meaning of the Energy Labelling Regulations with regard to the energy labeling of household electric refrigerators, freezers and their combination.

2. (1) These regulations shall apply to electric mains Scope and operated household refrigerators, frozen food storage cabinets, ^{application.} food freezers and their combinations.

(2) Appliances that may also use other energy sources, such as batteries, are excluded.

3. The definitions of the Energy Labelling Regulations shall apply.

4. (1) The technical documentation referred to in regulation 6(2)(a) of the Energy Labelling Regulations shall include:

- (a) the name and address of the supplier;
- (b) a general description of the model, sufficient for it to be identified;
- (c) information, including drawings as relevant, on the main design features of the model and in particular items which appreciably affect its energy consumption;

Citation and scope.

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Definitions.

Energy label and information requirements.

^{*}See regulation 1(5) of these Regulations as originally promulgated.

- (d) reports of relevant measurement tests carried out under the test procedures of the harmonised standards referred to in sub-regulation (8);
- (e) operating instructions, if any.

Where the information relating to a particular model (2)combination has been obtained by calculation on the basis of design, and, or extrapolation from other combinations, the documentation should include details of such calculations and, or extrapolations, and of tests undertaken to verify the accuracy of the calculations undertaken (details of mathematical model for calculating performance and of measurements taken to verify this model).

(3) The appliances covered by these regulations shall be divided into the 'categories' set out in Schedule IV.

The label referred to in regulation 5(1) of the Energy Labelling Regulations shall be as specified in Schedule I. It shall be placed on the outside of the front or top of the appliance, in such a way as to be clearly visible, and not obscured.

(5) The content and format of the fiche referred to in regulation 5(2) of the Energy Labelling Regulations shall be as specified in Schedule II.

(6) Where the appliances are offered for sale, hire or hire purchase by means of a printed or written communication, or by other means which imply that the potential customer cannot be expected to see the appliance displayed, such as a written offer, a mail order catalogue, advertisements on the Internet or on other electronic media, that communication shall include all the information specified in Schedule III.

(7) The energy efficiency class of an appliance shall be as specified in Schedule V.

(8) The information required by these regulations shall be obtained by means of measurements made in accordance with harmonised standards adopted by the European Standardisation Bodies (CEN, CENELEC, ETSI) under mandate from the Commission in accordance with Directive 98/34/EC, the reference numbers of which have been published in the Official Journal of the European Communities and for which Member States have published the reference numbers of the national standards transposing those harmonised standards.

(9) The provisions of Schedules I, II and III requiring the giving of information relating to noise shall apply only where that information is required by Member States under Article 3 of Directive 86/594/EEC. This information shall be measured in accordance with that Directive.

SCHEDULE I

Based on Annex I of Directive 94/2/EC

THE LABEL

Label Design

1. The label shall be the relevant language version chosen from the following illustrations:

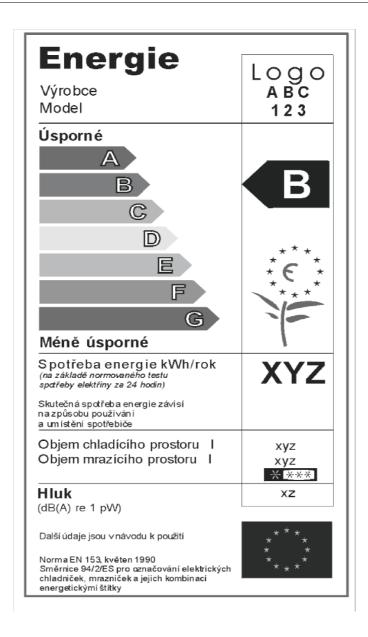
Energy Manufacturer Model	Logo ABC 123	1 1
More efficient		
B C	В	III
E F G Less efficient		IV
Energy consumption kWh/year (Based on standard test results for 24 h)	XYZ	v
Actual consumption will depend on how the appliance is used and where it is located		
Fresh food volume I Frozen food volume I	xyz xyz ★ ***	
Noise (dB(A) re 1 pW)	xz	—— IX
Further information is contained in product brochures		
Norm EN 153 May 1990 Refrigerator Label Directive 94/2/EC	* * *	A.

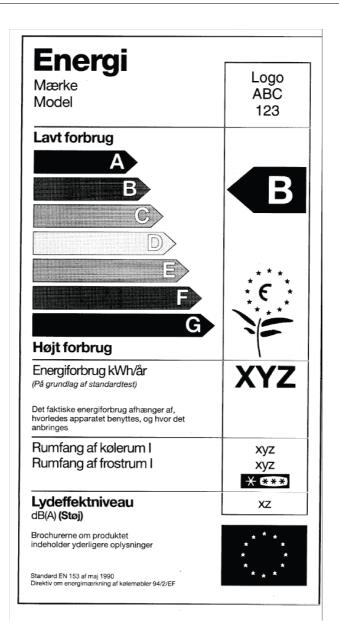


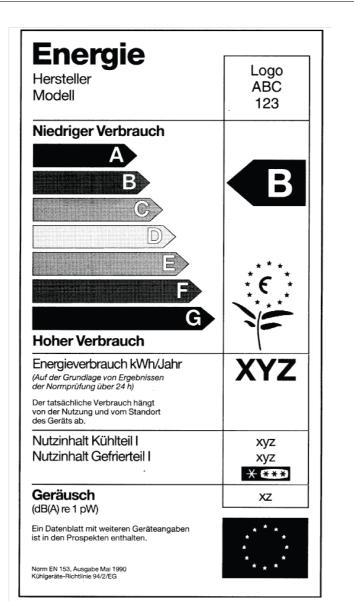
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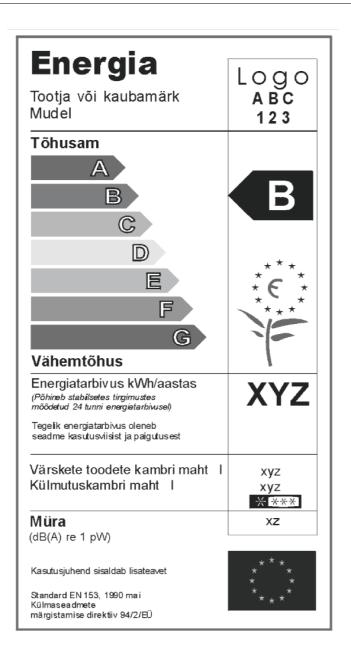
Energía Fabricante Modelo	Logo ABC 123
Más eficiente	
Α	
C	
	· · • ·
	÷ c *
	• • • •
G	
Menos eficiente	
Consumo de energía kWh/año Sobre la base del resultado obtenido en 24 h. en condiciones de ensayo normalizadas	XYZ
El consumo real depende de las condiciones de utilización del	
aparato y de su localización	
Volumen alimentos frescos I	xyz
Volumen alimentos congelados I	xyz
Ruido	
dB(A) re 1 pW	XZ
Ficha de información detallada en	.***.
los folletos del producto	*

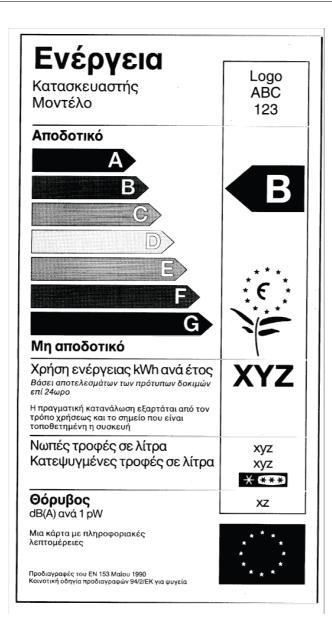






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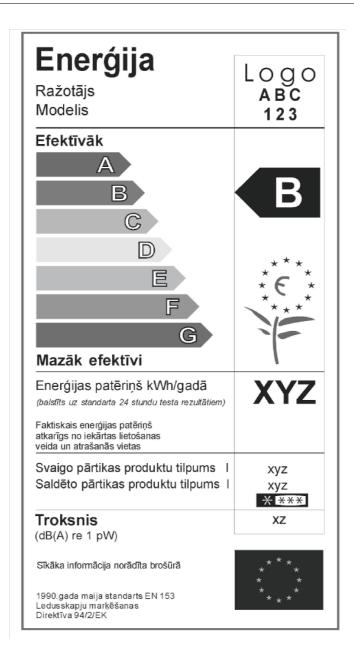


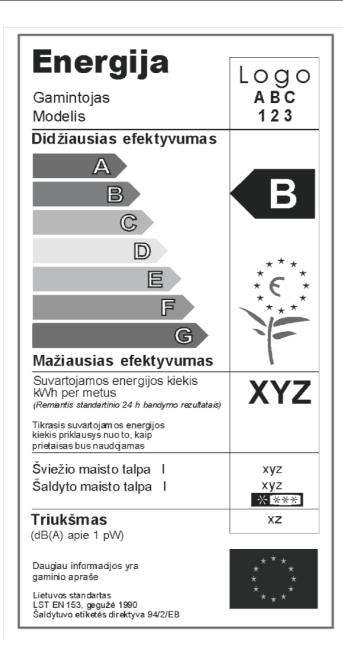


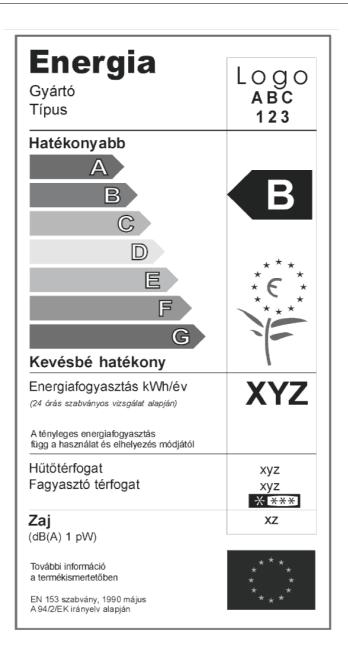
10

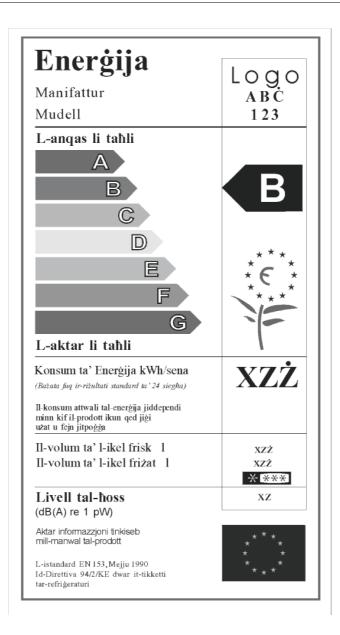
7	
Énergie Fabricant Modèle	Logo ABC 123
Économe	
Α	
B	
\mathbb{D}	
E	* * *
	* E * * * * *
G	
Peu économe	
Consommation d'énergie kWh/an Sur la base du résultat obtenu pour 24h dans des conditions d'essai normalisées	XYZ
La consommation réelle dépend des conditions d'utilisation et de la localisation de l'appareil	
Capacité de denrées fraîches l Capacité de denrées congelées l	xyz xyz ★ €★★★
Bruit dB(A) re 1 pW	XZ
Une fiche d'information détaillée figure dans la brochure	* * *
Norme EN 153, mai 1990. Directive 94/2/CE relative à l'étiquetage des réfrigérateurs	* *

Energia Logo Costruttore ABC Modello 123 Bassi consumi Δ B 0 G Alti consumi Consumi di energia kWh/anno **XYZ** In base ai risultati di prove standard per 24 ore Il consumo effettivo dipende dal modo in cui l'apparecchio viene usato e dal posto in cui è situato Volume alimenti freschi I xyz Volume alimenti congelati I xyz * *** Rumore хz dB(A) re 1 pW Gli opuscoli illustrativi contengono una scheda particolareggiata Norma EN 153 Maggio 1990 Direttiva 94/2/CE relativa all'etichettatura dei frigoriferi

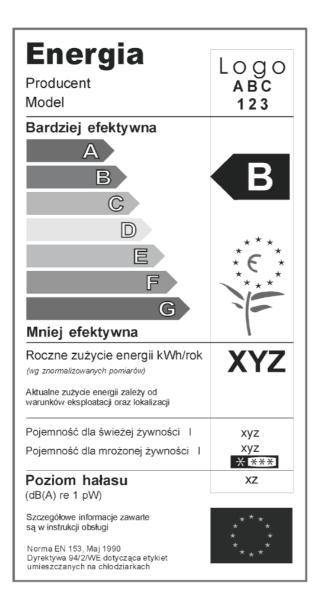






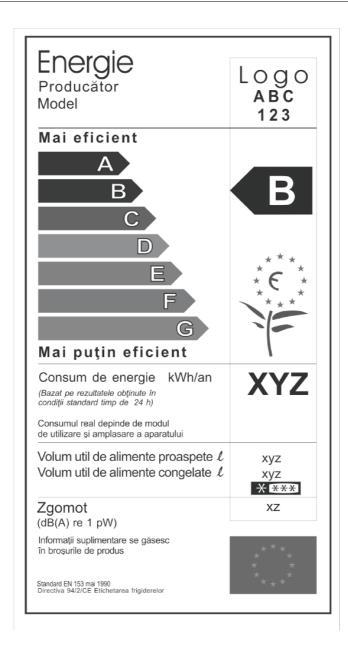


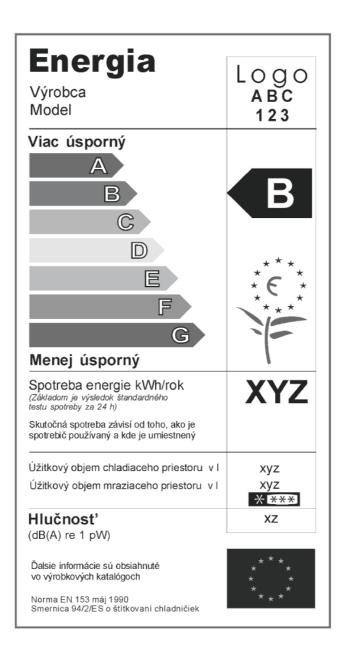
Efficiënt	Logo ABC 123
Efficiënt B	В
A B C	В
C	
C	
	* * *
	• • • •
G	
Inefficiënt	
Energieverbruik kWh per jaar Gebaseerd op de resultaten van een standaardtest gedurende 24 uur	XYZ
Werkelijk verbruik wordt bepaald door de wijze waarop het apparaat wordt gebruikt en de plaats waar het staat	
Inhoud Koelruimte I	xyz
Inhoud Vriesruimte I	xyz
Geluidsniveau	XZ
dB(A) re 1 pW	~~
Een kaart met nadere gegevens is opgenomen in de brochures over het apparaat	* * *
Norm EN 153 mei 1990 Richtlijn Etikettering koelkasten 94/2/EG	* *



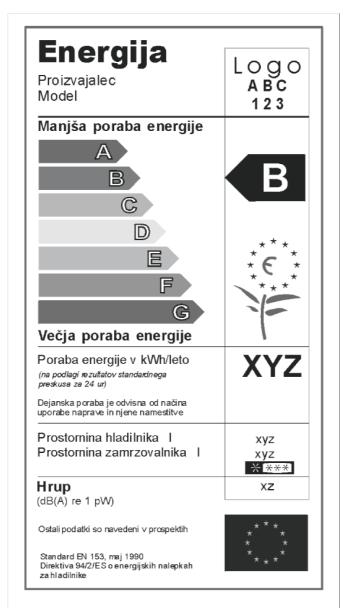
18

Energia Fabricante Modelo	Logo ABC 123
Eficiente	
A	
B C D	
E	* * *
E	
Ineficiente	
Consumo de energia kWh/ano Com base nos resultados do ensaio normalizado de 24h	XYZ
O consumo real varia com as condições de utilização da máquina e com a sua localização	
Volume de alimentos frescos I Volume de alimentos congelados I	xyz xyz ★ € * * *
Nível de ruído dB(A) re 1 pW	xz
Ficha pormenorizada no folhet o do produto	*****
Norma EN 153, Maio de 1990 Directiva 94/2/CE (Etiquetagem de aparelhos frigorificos)	* *





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Notes on label

2. The following notes define the information to be included:

Note

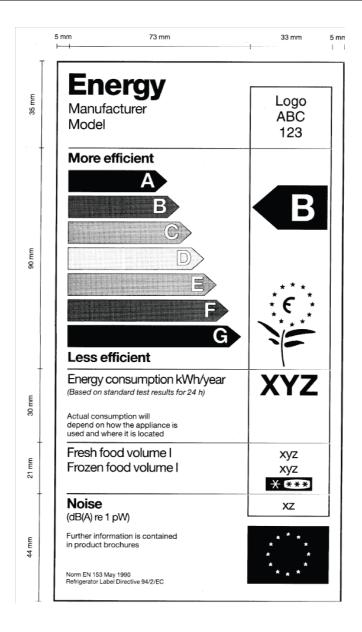
- I. Supplier's name or trade mark.
- II. Supplier's model identifier.
- III. The energy efficiency class of an appliance shall be determined in accordance with Annex V. The appropriate letter shall be placed at the same level as the relevant arrow.

- IV. Without prejudice to any requirements under the Community eco-label scheme, where a model has been granted a 'European Union eco-label' under Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme, a copy of the eco-label may be added here. The 'refrigerator/ freezer label design guide', referred to below, explains how the Ecoaward mark, may be included in the label.
- V. Energy consumption in accordance with standards referred to in regulation 4(8), but expressed in kWh per year (i.e. per 24 hours × 365).
- VI. Sum of net storage volume of all compartments that do not merit a star rating (i.e. operating temperature > -6° C).
- VII. Sum of net storage volume of all frozen food storage compartments which merit a star rating (i.e. operating temperature $\leq -6^{\circ}$ C).
- VIII. Star rating of frozen food storage compartment, in accordance with standards referred to in regulation 4(8). Where this compartment does not merit any stars, this position shall be left blank.
- IX. Where applicable, noise measured in accordance with Directive 86/594/ EEC.

Printing

3. The following defines certain aspects of the label:

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The indicator letter for A+ and A++ appliances shall be in accordance with the following illustrations, and shall be placed in the same position as the A indicator for A class appliances

Λ++



A+



Colours used:

CMYK - cyan, magenta, yellow, black.

Ex.07X0: 0% cyan, 70% magenta, 100% yellow, 0% black.

Arrows

А X0X0

- В 70X0
- С 30X0
- D 00X0
- Е 03X0
- F 07X0
- G 0XX0

Outline colour: X070

All text is in black. The background is white.

SCHEDULE II

Based on Annex II of Directive 94/2/EC

THE FICHE

The fiche shall contain the following information. The information may be given in the form of a table covering a number of appliances supplied by the same supplier, in which case it shall be given in the order specified, or given close to the description of the appliance:

- 1. Supplier's trade mark.
- 2. Supplier's model identifier.
- 3. Type of appliance as follows:

Category	Description in Fiche
1	Larder Fridge
2	Refrigerator / Chiller
3	Refrigerator
4	Refrigerator
5	Refrigerator
6	Refrigerator
7	Fridge/Freezer
8	Upright Freezer
9	Chest Freezer
	For category 10 appliances, the supplier may choose its description of the type of appliance

The energy efficiency class of the model as defined in Schedule V, expressed 4. as 'Energy efficiency class on a scale of A++ (most efficient) to G (least efficient)'. Where this information is provided in a table this may be expressed by other means provided it is clear that the scale is from A++ (most efficient) to G (least efficient).

5. Where the information is provided in a table, and where some of the appliances listed in the table have been granted a 'European Union eco-label'under Regulation (EC) No 1980/2000, this information may be included here. In this case the row heading shall state 'European Union eco-label', and the entry shall consist of a copy of the eco-label mark. This provision is without prejudice to any requirements under the Community eco-label scheme.

6. Energy consumption in accordance with standards referred to in regulation 4(8) but expressed in kWh per year (i.e. per 24 hours \times 365), described as: 'energy consumption XYZ kWh per year, based on standard test results for 24 h. Actual energy consumption will depend on how the appliance is used and where it is located.'

7. Net storage volume of fresh food storage compartment (5°C) in accordance with standards referred to in regulation 4(8) - omit for classes 8 and 9.

8. Net storage volume of frozen food storage compartment, and of chill compartment when available, in accordance with standards referred to in regulation 4(8) - omit for classes 1, 2 and 3. For class 3 appliances the net volume of the 'ice box'.

7 and 8. For classes 2 and 10 the net volume of each compartment should be listed, in accordance with standards referred to in regulation 4(8).

9. Star rating of frozen food storage compartment, if any, in accordance with standards referred to in regulation 4(8).

10. The mention 'no frost' may be included here when in accordance with the definitions given in the standards referred to in regulation 4(8).

11 'Power cut safe Z h' defined as 'temperature rise time' in accordance with standards referred to in regulation 4(8).

12. 'Freezing capacity' in kg/24 h in accordance with standards referred to in regulation 4(8).

13. 'Climate class' in accordance with the standards referred to in regulation 4(8). Where appliance is of 'temperate' climate class this may be omitted.

14. 'Noise', where applicable, measured in accordance with Directive 86/594/ EEC.

15. If the model is produced in order to be built-in, this should be stated. Where an appliance contains compartments other than a single fresh food compartment and a single frozen food compartment, extra lines may be added at 7, 8, 9, 10, 11, 12 and 13 to include the information in respect of these compartments. In this case the naming and order of listing of the compartments shall be consistent. Where the design temperature of a compartment does not conform to the star rating system, or the standard fresh food compartment temperature (5°C), this design temperature shall be given. The information contained in the label may be given in the form of a copy of the label, either in colour or in black and white. In this case the further information given only in the fiche must still be included.

SCHEDULE III

Based on Annex III of Directive 94/2/EC

MAIL ORDER AND OTHER DISTANCE SELLING

Mail order catalogues and other printed communications referred to in regulation 4(6) shall contain the following information, given in the order specified:

1.	Energy efficiency class	(Schedule II, point 4)
2.	Energy consumption	(Schedule II, point 6)
3.	Net volume of fresh food compartment	(Schedule II, point 7)
4.	Net volume of frozen food compartment	(Schedule II, point 8)
5.	Star rating	(Schedule II, point 9)
6.	Noise	(Schedule II, point 14)

Where other information contained in the product information fiche is provided, it shall be in the form defined in Schedule II and shall be included in the above list in the order specified for the fiche.

The size and font, in which all the information referred to above is printed, shall be legible.

SCHEDULE IV

Based on Annex IV of Directive 94/2/EC

CATEGORIES

The appliances covered by these Regulations shall be divided into the following 'categories':

- 1. Household refrigerators, without low temperature compartments.
- 2. Household refrigerator/chillers, with compartments at 5°C and/or 10°C.
- 3. Household refrigerators, with no-star low temperature compartments.
- 4. Household refrigerators, with low temperature compartments *.
- 5. Household refrigerators, with low temperature compartments **.
- 6. Household refrigerators, with low temperature compartments ***.
- 7. Household refrigerator/freezers, with low temperature compartments *(***).
- 8. Household food freezers, upright.
- 9. Household food freezers, chest.
- 10. Household refrigerators and freezers with more than two doors, or other appliances not covered above.

SCHEDULE V

Based on Annex V of Directive 94/2/EC

ENERGY EFFICIENCY CLASS

PART 1: Definitions of Classes A+ and A++

An appliance shall be classified as A+ or A++, where the energy efficiency index alpha (I α) is within the ranges specified in Table 1.

Table 1	
Energy efficiency index α (Iα)	Energy efficiency class
$30 > I\alpha A + +$	A++
$42 > I\alpha \ge 30 \text{ A} +$	A+
$I\alpha \ge 42$	A to G (see below)

In Table 1:

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$$I\alpha = \frac{AC}{SC\alpha} \times 100$$

where:

AC = annual energy consumption of appliance (in accordance with Schedule I, note V)

 $SC\alpha$ = standard annual energy consumption α of appliance $SC\alpha$ is calculated as

$$M_{\alpha}X \sum_{\text{Compartments}} \left(Vc \times \frac{(25 - Tc)}{20} \times FF \times CC \times BI \right) + N_{\alpha} + CH$$

where:

Vc is the net volume (in litres) of the compartment (in accordance with standards referred to in regulation 4(8)).

Tc is the design temperature (in °C) of the compartment.

The values of M and N are given in Table 2 and the values of FF, CC, BI and CH are given in Table 3.

Table 2			
Type of appliance	Temperature of coldest compartment	Μα	Να
1 Larder Fridge	> - 6°C	0.233	245
2 Refrigerator/chiller	> - 6°C	0.233	245
3 Refrigerator no star	> - 6°C	0.233	245
4 Refrigerator *	<u>≤</u> - 6°C *	0.643	191
5 Refrigerator **	<u><</u> - 12°C **	0.450	245
6 Refrigerator ***/	<u>≤</u> - 18°C ***/*(***)	0.777	303
7 Fridge-freezer *(***)	<u>≤</u> - 18°C ***/*(***)	0.777	303
8 Upright freezer	<u><</u> - 18°C *(***)	0.539	315
9 Chest freezer	<u><</u> - 18°C *(***)	0.472	286

10 Multi-door or other appliance		(1)	(1)
⁽¹⁾ For these appliances, the temperatu temperature will determine the valu compartments shall be considered as frie	ues of M and N. Applianc		

Table 3		
Correction factor	Value	Condition
FF (frost-free)	1.2	For 'frost-free' (ventilated) frozen
		food compartments
	1	Otherwise
CC (climate class)	1.2	For 'tropical' appliances
	1.1	For 'subtropical' appliances
	1	Otherwise
BI (built-in)	1.2	For built-in appliances ⁽¹⁾ of under
		58 cm in width
	1	Otherwise
CH (chill compartment)	50 Kwh/y	For appliances with a chill compartment of at least 15 litres
	0	•
	0	Otherwise
⁽¹⁾ An appliance is 'built-in	n' only if it is des	signed exclusively for installation within a

kitchen cavity with a need of furniture finishing, and tested as such.

If an appliance is not A+ or A++, it shall be classified in accordance with Part 2.

PART 2: Definitions of Classes A to G

The energy efficiency class of an appliance shall be determined in accordance with the following Table:

Table 1		
Energy efficiency index: I	Energy efficiency class	
I < 55	А	
55 <u><</u> I < 75	В	
75 <u><</u> I < 90	С	
90 <u>≤</u> I < 100	D	
100 <u><</u> I < 110	Е	
110 <u><</u> I < 125	F	
125 ≤ I	G	

Where:

'energy efficiency index' (expressed as a percentage) = annual energy consumption of appliance $^{(1)}$ / standard annual energy consumption of appliance

'estandard annual energy consumption of appliance' (expressed in kWh/year) = M \times adjusted net volume + N

And

adjusted net volume (expressed in litres) = net volume of fresh food compartment + $\Omega \times$ net volume of frozen food compartment.

The values of M, N and Ω are taken from Table 2.

Table 2				
Class of Appliance	Ω	М	N	
1 Larder fridge	-	0,233	245	
2 Refrigerator/chiller	0,75 (1)	0,233	245	
3 Refrigerator no star	1,25	0,233	245	
4 Refrigerator *	1,55	0,643	191	
5 Refrigerator **	1,85	0,450	245	
6 Refrigerator ***	2,15	0,657	235	
7 Fridge/freezer *(***)	(3)	0,777	303	
8 Upright freezer	2,15 ⁽²⁾	0,472	286	
9 Chest freezer	2,15 ⁽²⁾	0,446	181	
10 Multi-door or other appliances	(3)	(4)	(4)	

⁽¹⁾ For refrigerator/chillers the adjusted volume = net volume of fresh food compartment + $\Omega \times$ net volume of chiller (10°C) compartment (expressed in litres).

⁽²⁾ For 'no frost' appliances as defined in Schedule II point 10, this index is increased by a provisional factor of 1.2, giving a value of 2.58. (This allows for the possible bias of the measurement method, which does not allow for the lack of ice build up on 'no frost' appliances. In practical use ice build up will somewhat increase the consumption of 'conventional' appliances.)

⁽³⁾ Adjusted net volume AV is calculated by the formula:

$$AV = \sum \frac{(25 - Tc)}{20} \times V_e \times F_e$$

all compartments

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Where TC is design temperature (in °C) of each compartment, VC is the net volume (in litres) of each compartment, and FC is a factor which equals 1.2 for 'no frost' compartments and 1 for other compartments.

⁽⁴⁾ For these appliances the values of M and N will be determined by the temperature and star rating of the compartment with the lowest temperature, as follows:

Temperature of coldest compartment	Equivalent Class	М	Ν
> - 6°C	1/2/3 Larder Fridge/ no star refrigerator/ refrigerator chiller	0.233	245
≤ - 6°C *	4 Refrigerator *	0.643	191
≤ - 12°C **	5 Refrigerator **	0.450	245
≤ - 18°C ***	6 Refrigerator ***/	0.647	235
\leq - 18°C *(***) with freezing capacity	7 Fridge-freezer *(***)	0.777	303