



DRAFT CARICOM REGIONAL STANDARD

ENERGY LABELLING – REFRIGERATING APPLIANCES –

REQUIREMENTS

DCRS 57: 201X

CARICOM Regional Organisation for Standards and Quality (CROSQ)

2nd Floor, Baobab Towers

Warrens, St Michael

Barbados

Telephone: +1 246-622-7670

Fax: +1 246-622-7678

Email: crosq.caricom@crosq.org

Website: <http://www.crosq.org>

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Committee representation

This CARICOM Regional Standard was developed under the supervision of the Regional Project Team - Energy Efficiency Standards and Labelling Scheme hosted by the CARICOM Member State, Barbados which at the time comprised the following members:

Members	Representing
Mr Erwin Edwards, PhD (Chairperson)	Barbados Association of Energy Professionals
Ms Nadita Ramachala (Vice Chairman) Kimberly Badloo (alternate)	Trinidad and Tobago Bureau of Standards Trinidad and Tobago Bureau of Standards
Mr Edward Baynes	Managing Director Alpha Engineering Antigua and Barbuda
Mr Hemraj Sanichara Mr. Brian Constantine (Alternate)	Guyana National Bureau of Standards Guyana Energy Agency
Mr John Telesford, PhD Mr Leslie Smith (Alternate)	T.A Marryshow Community College, Grenada Ministry of Energy, Grenada
Mr Jonathan Platt	Barbados National Standards Institution
Ms Kathleen George Jackson Mr. Shane Slater Ms. Tafara Smith	Bureau of Standards Jamaica Bureau of Standards Jamaica Bureau of Standards Jamaica
Mr Michael Henry Mr. Edgar Stephens (Alternate)	Ministry of Infrastructure, Ports, Energy and Labour, Saint Lucia Saint Lucia Bureau of Standards
Mr Nicolas D. Allien	Haiti Bureau of Standards
Mr Francis Paul	Electrical Regulations Specialist, Dominica
Mr Ryan Cobb	Ministry of Energy, Belize
Mr Fabian Scott (Technical Secretary)	Barbados National Standards Institution

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Foreword

This CARICOM Regional Standard CRS 57:201x, *Energy labelling - Refrigerating appliances - Requirements* has been developed under the authority of the CARICOM Regional Organisation for Standards and Quality (CROSQ). It was approved as a CARICOM Regional Standard by the CARICOM Council for Trade and Economic Development (COTED) at its **xx Meeting in MMM YYYY**.

The Standard is intended to improve the energy performance for refrigerators. The application of the standard is expected to improve energy efficiency within CARICOM Member States via the availability, selection and usage of more energy efficient refrigerators. The information given on the energy label provides consumers with information for consideration when making a purchasing decision.

In addition, the requirements of this Standard are expected to drive manufacturers, importers and retailers to provide more energy efficient refrigerator options to consumers as they compete to offer better value for money. It is envisaged that CARICOM Member States will commit to reference these requirements in legislation in order to accelerate the market place transition to more energy efficient refrigerators.

This standard is aligned with the CARICOM Energy Policy and its objectives which state, inter alia:

- increase energy efficiency and conservation in all sector...; and
- establishment and enforcement of labelling and standards for the importation of electrical appliances.

The implementation of this Standard within CARICOM Member States is expected to achieve the following:

- increase the usage of energy efficient refrigerators;
- reduce the electricity consumption of CARICOM households and businesses.

This Standard was drafted in accordance with ISO Directives, Part 2: Rules for the structure and drafting of International Standards.

1 Scope

This standard establishes the minimum energy performance standards (MEPs) for refrigerating appliances and relevant test method to specify the energy label. It also specifies the energy label requirements.

2 Normative references

The following documents are referred to in the text in such a way that some or all of the contents constitute requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

American National Standards Institute

AHAM HRF-1-2016, *Energy and internal volume of refrigerating appliances*

International Electrotechnical Commission

IEC 62552-1, *Household refrigerating appliances – Characteristics and test methods – Part 1: General requirements*.

National Commission for the Efficient Use of Energy, Official Mexican Standard

NOM-015-ENER-2012, *Energy efficiency of refrigerator and freezers appliances. Limits, test methods and labeling*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

energy consumption

energy used by a refrigerating appliance over a specified period of time, or for a specified operation in kilowatt per hour

3.2

energy efficiency

measure, usually expressed as a percentage or a ratio, of the energy performance of a model

3.3

estimated yearly operating cost

cost determined by multiplying the annual energy consumption by the specified rate for that energy

3.4

manufacturer

person or organisation who manufactures, produces, assembles, prepares or reassembles any good for sale, or any other use or the person who sells any goods under a trade name controlled by them

NOTE It also includes the importer of the goods.

3.5

features

functions and characteristics which determine the performance of a refrigerating appliance and are used as selection options for purchase

EXAMPLE Water and ice dispenser, lateral freezer, manual or digital settings.

3.6 refrigerating appliance

insulated cabinet with one or more compartments controlled at specific temperatures and are of suitable size and equipped for household use, cooled by natural convection or a forced convection system whereby the cooling is obtained by one or more energy-consuming means

NOTE From the point of view of insulation, there are various types of household refrigerating appliances (free-standing, portable, wall-mounted, built-in, etc.)

4 General requirements

4.1 The energy label declared on refrigerating appliances shall be affixed to each unit adjacent to the purchase price, clearly visible and easily read at point-of-sale.

EXAMPLE The energy label can be affixed on the upper right corner of the appliance door.

4.2 The information on the energy label shall be printed, legible, indelible and in the official language of the country of sale.

4.3 The energy label shall include a statement that the energy label shall not be removed except by the consumer.

5 Specific label requirements

5.1 The following information shall be required on the energy label:

- a) the programme name;
- b) the type of refrigerating appliance;

EXAMPLE Refrigerator, wine cooler.

- c) the measured capacity, or size in SI units or a combination of SI and imperial units;
- d) special features which will categorize it in a product type;
- e) the measured energy consumption
- f) the brand name of the refrigerating appliance
- g) the model identification number
- h) the name of the manufacturer;
- i) the country of origin.

5.2 The following information may be placed on each energy label:

- a) estimated yearly operating cost in the currency of the country of sale;

NOTE Estimated yearly operating cost should be displayed where the purchase price or financing terms are also quoted.

- b) the current energy rate used to calculate the estimated yearly operating cost in the currency of the country of sale per kWh;
- c) a validity period for the information on the energy label;
- d) a statement indicating "Your cost will vary with electricity rates and use".

6 Test methods

6.1 Energy consumption shall be determined in accordance with AHAM HRF-1-2016 at ambient temperature of 25 °C and 32 °C.

6.2 The refrigerated appliances shall be tested at a rated voltage and frequency of the country of sale.

7 Minimum Energy Performance Standards (MEPS)

Refrigerating appliances shall meet the maximum energy consumption limits as defined in Table 1 for the particular refrigerating appliance.

Table 1 — Maximum energy consumption limits for refrigerators and freezers

Number	Electrical household appliance description	E_{max}
1	Refrigerator only, conventional and refrigerator-freezer (R/F) with manual or semiautomatic defrosting	0.31 AV + 248.4
2	Refrigerator-freezer with partially automatic defrosting.	0.31 AV + 248.4
3	Refrigerator-freezer with auto-defrosting and top-mounted freezer, without ice dispenser, and refrigerator only with auto-defrosting	0.35 AV + 276.0
4	Refrigerator-freezer with auto-defrosting and side-mounted freezer, without ice dispenser	0.17 AV + 507.5
5	Refrigerator-freezer with auto-defrosting and bottom-mounted freezer, without ice dispense	0.16 AV + 459.0
5A	Refrigerator-freezer with auto-defrosting and bottom-mounted freezer, with door ice dispense	0.18 AV + 539.0
6	Refrigerator-freezer with auto-defrosting and top-mounted freezer, with ice dispense	0.36 AV + 356.0
7	Refrigerator-freezer with auto-defrosting and side-mounted freezer, with ice dispense	0.36 AV + 406.0
8	Vertical freezer with manual defrosting	0.27 AV + 258.3
9	Vertical freezer with auto-defrosting	0.44 AV + 326.1
10	Horizontal freezer and all other freezers, except compact freezers	0.35 AV + 143.7
10A	Horizontal freezer with auto-defrosting	0.52 AV + 211.5
11	Refrigerator and compact refrigerator-freezer with manual defrosting	0.38 AV + 299.0
12	Compact refrigerator-freezer with partially automatic defrosting	0.25 AV + 398.0
13	Compact refrigerator-freezer with auto-defrosting and top-mounted freezer and compact refrigerator only with auto-	0.45 AV + 355.0

Number	Electrical household appliance description	E_{\max}
	defrosting	
14	Compact refrigerator-freezer with auto-defrosting and side-mounted freezer	$0.27 AV + 501.0$
15	Compact refrigerator-freezer with auto-defrosting and bottom-mounted freezer	$0.46 AV + 367.0$
16	Compact vertical freezer with manual defrosting	$0.35 AV + 250.8$
17	Compact vertical freezer with auto-defrosting	$0.40 AV + 391.0$
18	Compact horizontal freezer	$0.37 AV + 152.0$

Where,

E_{\max} is Maximum energy consumption per year, in kWh/year

AV is Adjusted volume, in dm^3

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