



Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2024

I, Josh Wilson, Assistant Minister for Climate Change and Energy, make the following determination.

Dated 10 September 2024

Josh Wilson
Assistant Minister for Climate Change and Energy

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Part 1—Preliminary

1 Name

This instrument is the *Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2024*.

2 Commencement

- (1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information		
Column 1	Column 2	Column 3
Provisions	Commencement	Date/Details
1. The whole of this instrument	The day after this instrument is registered.	

- (2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.
- (3) To avoid doubt, for the purposes of paragraph 34(b) of the Act, this instrument comes into force on the day specified by column 2 of the table.

3 Authority

This instrument is made under sections 23 and 35 of the *Greenhouse and Energy Minimum Standards Act 2012*.

4 Schedule 6

Each instrument that is specified in Schedule 6 to this instrument is amended or repealed as set out in the applicable items in that Schedule, and any other item in that Schedule has effect according to its terms.

5 This instrument revokes and replaces the old determination

For the purposes of section 35 of the Act, this instrument revokes and replaces the *Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2020*.

Note: Subsection 35(2) of the Act provides that, when a GEMS determination is revoked and replaced, the revoked determination ceases to be in force immediately before the replacement determination comes into force.

6 Definitions—standards referred to in this instrument

- (1) In this instrument:

EN 16825 means *European Standard 16825:2016 Refrigerated storage cabinets and counters for professional use - Classification, requirements and test*

conditions, as varied in accordance with clause 2 of Schedule 2 to this instrument.

Note: EN 16825 covers refrigerated cabinets that are designed for the storage of foodstuffs.

EN 16838:2016 means *European Standard 16838:2016 Refrigerated display scooping cabinets for gelato - Classification, Requirements and test conditions.*

EN 16838:2019 means *European Standard 16838:2019 Refrigerated display scooping cabinets and pozzetto for gelato - Classification, requirements, performance and energy consumption testing.*

Note: EN 16838 covers refrigerated cabinets that are designed for the sale and display of gelato.

EN 16901 means *European Standard 16901:2016 Ice-cream freezers - Classification, requirements and test conditions*, as varied in accordance with clause 3 of Schedule 2 to this instrument.

Note: EN 16901 covers refrigerated cabinets that are designed specifically for the storage and display of pre-packed ice cream.

IEC 60335:2010 means *Australian/New Zealand Standard 60335.2.89:2010, Household and similar appliances – Safety. Part 2.89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor.*

Note: IEC 60335:2010 incorporates amendments No. 1 and No. 2.

IEC 60335:2020 means *Australian/New Zealand Standard 60335.2.89:2020, Household and similar appliances – Safety. Part 2.89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor.*

Note: IEC 60335:2020 incorporates amendments No. 1 and No. 2.

ISO 22041 means *International Organisation for Standardisation Standard 22041:2019, Refrigerated storage cabinets and counters for professional use – Performance and energy consumption*, as varied in accordance with clause 4 of Schedule 2 to this instrument.

Note: ISO 22041 covers refrigerated cabinets that are designed for the storage of foodstuffs.

ISO 22043 means *International Organisation for Standardisation Standard 22043:2020, Ice-cream freezers – Classification, requirements and test conditions.*

Note: ISO 22043 covers refrigerated cabinets that are designed specifically for the storage and display of pre-packed ice cream.

ISO 23953-1:2015 means *International Organisation for Standardisation Standard 23953-1:2015, Refrigerated display cabinets – Part 1: Vocabulary.*

ISO 23953-2:2015 means *International Organisation for Standardisation Standard 23953-2:2015, Refrigerated display cabinets – Part 2: Classification, requirements and test conditions:*

- (a) as varied in accordance with subclause 5(1) of Schedule 2; and
- (b) in relation to determining the energy consumption (*E24h*) or energy efficiency index (*EEI*) of a low sales volume RSC—as further varied in accordance with subclause 5(2) of Schedule 2.

ISO 23953-1:2023 means *International Organisation for Standardisation Standard 23953-1:2023, Refrigerated display cabinets – Part 1: Vocabulary*

ISO 23953-2:2023 means *International Organisation for Standardisation Standard 23953-2:2023, Refrigerated display cabinets – Part 2: Classification, requirements and test conditions:*

- (a) as varied in accordance with subclause 1(1) of Schedule 2; and
- (b) in relation to determining the energy consumption (*E24h*) or energy efficiency index (*EEI*) of a low sales volume RSC—as further varied in accordance with subclause 1(2) of Schedule 2.

Note 1: ISO 23953-2:2023 covers refrigerated cabinets that are designed for the display of foodstuffs. Under this instrument; ISO 23953-2:2023 is also used to calculate the energy consumption (*E24h*) and energy efficiency index (*EEI*) of low sales volume RSCs.

Note 2: At the time this instrument was made, the texts of instruments mentioned in this section were available from Standards Australia Ltd (at www.standards.org.au), Standards New Zealand, or the British Standards Institution.

Note 3: The EN and ISO standards referred to in this section specify the following:

- requirements relating to the cabinets they cover;
- test conditions and methods for checking that those requirements have been satisfied;
- classifications of the cabinets;
- markings for the cabinets;
- characteristics of the cabinets to be declared by the manufacturer.

- (2) Each reference to a document in subsection (1) is taken to be a reference to that document as in force or existing on the day this instrument is made.

7 Definitions—other expressions used in this instrument

Note: A number of expressions used in this instrument are defined in the Act, including the following:

- category A product;
- covered by;
- family of models;
- GEMS;
- GEMS labelling requirements;
- GEMS level requirements;
- GEMS Regulator;
- model;
- product classes.

In this instrument:

Act means the *Greenhouse and Energy Minimum Standards Act 2012*.

E24h: see *energy consumption*.

EEI: see *energy efficiency index*.

energy consumption or **E24h**: see section 14.

energy efficiency index or **EEI** of a refrigerated cabinet means the amount calculated for the cabinet in accordance with section 25.

heavy duty, in relation to an RSC: see section 13.

horizontal, in relation to an RDC or an RSC: see section 11.

ice cream freezer cabinet: see section 10.

integral: see section 9.

light duty, in relation to an RSC: see section 13.

low-efficiency reference set: see subsection 23(1).

low sales volume, in relation to an RDC or an RSC: see section 15.

M-package temperature class: see subsection 12(1).

meets the requirements of an M-package temperature class: see subsection 12(2).

net volume or V_N of an ice cream freezer cabinet or an RSC means the net volume of the cabinet in litres, and is determined in accordance with:

- (a) for an ice cream freezer cabinet—clause 6.2.5 of ISO 22043; and
- (b) for an RSC—clause 6.1 of ISO 22041.

Note 1: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

Note 2: For the purposes of this instrument, the net volume of an RDC or a scooping cabinet do not need to be determined.

normal duty, in relation to an RSC: see section 13.

oversize, in relation to an RDC: see section 15.

parent model, in relation to a family of models: see subsection 16.

product class: see section 20.

RDC (short for refrigerated display cabinet): see section 10.

reference low-efficiency version: see subsection 23(1).

refrigerated cabinet: see section 8.

refrigerated drinks cabinet: see section 10.

relevant component: see subsection 23(1).

remote: see section 9.

RSC (short for refrigerated storage cabinet): see section 10.

scooping cabinet: see section 10.

specific energy consumption: see subsection 16(9).

TDA: see **total display area**.

test room climate class means a test room climate class set out in Schedule 4.

test standard means:

- (a) for an RDC—ISO 23953-1:2023 and ISO 23953-2:2023; and

- (b) for an RSC:
 - (i) when determining the energy consumption (*E24h*) or energy efficiency index (*EEI*) of a low sales volume RSC—ISO 23953-2:2023; and
 - (ii) for any other purpose—ISO 22041; and
- (c) for an ice cream freezer cabinet—ISO 22043; and
- (d) for a scooping cabinet—EN 16838:2019.

Note 1: Clause 1 of Schedule 2 to this instrument:

- sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument; and
- provides for how ISO 23953-2:2023 applies in relation to low sales volume RSCs.

Note 2: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

total display area or **TDA** of an RDC or a scooping cabinet means the total display area of the cabinet in square metres, and is determined in accordance with:

- (a) for an RDC—Annex A of ISO 23953-2:2023; and
- (b) for a scooping cabinet—clause 6.2 of EN 16838:2019.

Note 1: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Note 2: For the purposes of this instrument, the total display area (if any) of an ice cream freezer cabinet or an RSC do not need to be determined.

vertical, in relation to RDCs and RSCs: see section 11.

V_N : see **net volume**.

8 Meaning of refrigerated cabinet

In this instrument:

refrigerated cabinet means a device that:

- (a) consists of an insulated cabinet with an opening (whether or not the opening has a lid or a door); and
- (b) is capable of attaining and maintaining a specified temperature within the insulated cabinet within a range that overlaps the range -18°C to +10°C; and
- (c) is designed primarily for storage, display, or both storage and display, of chilled or frozen foodstuffs.

Note: For the purposes of this instrument, there are 5 types of refrigerated cabinet—see section 10.

9 Meaning of integral and remote

In this instrument:

integral: a refrigerated cabinet is **integral** if it is designed to have its condensing unit housed within, or directly attached to, the cabinet.

remote: a refrigerated cabinet is **remote** if it is not integral.

10 Types of refrigerated cabinets

In this instrument:

ice cream freezer cabinet means a refrigerated cabinet that:

- (a) is designed for storage and display of, and access by consumers to, pre-packaged frozen ice cream; and
- (b) is integral; and
- (c) can be accessed by opening a lid (whether solid or transparent); and
- (d) has a net volume, when determined in accordance with clause 6.2.5 of ISO 22043 as if the cabinet were covered by that standard, of no more than 500 litres; and
- (e) has a ratio of its net volume (V_N) to total display area (TDA) of greater than or equal to 0.35 m; and
- (f) has static air cooling with a skin evaporator.

Note: For the purposes of this instrument, definitions and requirements relating to ice cream freezer cabinets are found in ISO 22043.

RDC (short for refrigerated display cabinet) means a refrigerated cabinet that:

- (a) is designed for storage and display of, and access by consumers to, chilled or frozen items contained in the cabinet in a retail environment; and
- (b) is not:
 - (i) a scooping cabinet; or
 - (ii) an ice cream freezer cabinet.

Note 1: For the purposes of this instrument, RDCs may be designed:

- to be open, or to have transparent doors, drawers or lids; and
- to be integral or remote.

Note 2: For the purposes of this instrument, definitions relating to RDCs are found in ISO 23953-1:2023 and requirements relating to RDCs are found in ISO 23953-2:2023.

Note 3: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Note 4: A refrigerated cabinet will be an RDC if it meets this definition, regardless of the environment (for example, industrial commercial or domestic) in which it is actually used.

refrigerated drinks cabinet means an RDC that:

- (a) is designed for non-perishable drinks only; and
- (b) is integral.

RSC (short for refrigerated storage cabinet) means a refrigerated cabinet that:

- (a) is integral; and
- (b) is not:
 - (i) an RDC; or
 - (ii) a scooping cabinet; or
 - (iii) an ice cream freezer cabinet.

Note 1: For the purposes of this instrument, refrigerated storage cabinets may be designed:

- to have transparent, partially transparent, or opaque doors, drawers or lids; and
- to contain chilled or frozen items.

Note 2: This instrument does not apply to RSCs that are designed to be remote.

- Note 3: For the purposes of this instrument, definitions and requirements relating to RSCs are generally found in ISO 22041. For low sales volume RSCs, ISO 23953-2:2023 is used to calculate the energy consumption (*E24h*) and energy efficiency index (*EEL*).
- Note 4: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.
- Note 5: A refrigerated cabinet will be an RSC if it meets this definition, regardless of the environment (for example, industrial commercial or domestic) in which it is actually used.

scooping cabinet means a refrigerated cabinet that:

- (a) is designed for the storage, display and scooping of containerised frozen gelato or ice cream; and
- (b) is integral.

Note: For the purposes of this instrument, requirements relating to scooping cabinets are found in EN 16838:2019.

11 Meaning of *horizontal* and *vertical*

- (1) An RDC is:
 - (a) **horizontal** if it has an access opening only in its uppermost horizontal surface (whether or not the access opening can be closed by a door or a lid); and
 - (b) **vertical** otherwise.
- (2) An RSC is:
 - (a) **horizontal** if it has an overall height, when determined in accordance with ISO 22041, of no greater than 1,050 mm; and
 - (b) **vertical** otherwise.

Note: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

12 M-package temperature classes

Note 1: An M-package temperature class is a classification of refrigerated cabinets according to the temperatures of the warmest and coldest test packages (known as “M-packages”) recorded during the temperature test as defined in the relevant test standard.

Note 2: See section 33 for requirements relating to the M-package temperature class.

- (1) In this instrument:

M-package temperature class means a temperature class that is set out in:

 - (a) for an RDC, an RSC or a scooping cabinet—clause 1 of Schedule 3 to this instrument; and
 - (b) for an ice cream freezer cabinet—clause 2 of Schedule 3 to this instrument.
- (2) For the purposes of this instrument, a particular refrigerated cabinet **meets the requirements** of a particular M-package temperature class if, when the cabinet is tested:
 - (a) in accordance with the relevant test standard; and
 - (b) at a particular test room climate class;the requirements that are specified, in Schedule 3 to this instrument, for that M-package temperature class and for that type of cabinet are satisfied.

13 Meaning of *light duty*, *normal duty* and *heavy duty*

Note 1: For the purposes of this instrument, only RSCs are classified as light duty, normal duty or heavy duty.

Note 2: Under section 24, the GEMS level requirements for heavy duty RSCs differ from those of light or normal duty RSCs.

(1) In this instrument:

heavy duty: an RSC is ***heavy duty*** if, when tested:

- (a) in accordance with clause 5.3.4 of ISO 22041; and
- (b) in ambient conditions corresponding to test room climate class 5;

it is capable of continuously meeting the requirements for the relevant M-package temperature class in all of its compartments.

Note: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

light duty: an RSC is ***light duty*** if:

- (a) it is not heavy duty or normal duty; and
- (b) when tested:
 - (i) in accordance with clause 5.3.4 of ISO 22041; and
 - (ii) in ambient conditions corresponding to test room climate class 3;

it is capable of continuously meeting the requirements for the relevant M-package temperature class in all of its compartments.

Note: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

normal duty: an RSC is ***normal duty*** if:

- (a) it is not heavy duty; and
- (b) when tested:
 - (i) in accordance with clause 5.3.4 of ISO 22041; and
 - (ii) in ambient conditions corresponding to test room climate class 4;

it is capable of continuously meeting the requirements for the relevant M-package temperature class in all of its compartments.

Note: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

Meaning of relevant M-package temperature class

(2) In this section, the ***relevant*** M-package temperature class is:

- (a) for an RSC that is designed for storage of chilled foodstuffs—M1; and
- (b) for an RSC that is designed for storage of frozen foodstuffs—L1.

14 Meaning of *energy consumption* or *E24h*

(1) In this instrument:

energy consumption or ***E24h***, in relation to a refrigerated cabinet, means the energy consumption of the cabinet over a 24 hour period, in kWh per 24 hours, and is equal to the amount determined in accordance with subsection (2).

(2) For the purposes of subsection (1), the table has effect:

Item	For:	the <i>energy consumption</i> , or <i>E24h</i> , is equal to the amount:	as determined in accordance with:	at test room climate class:
1	an RDC	E_{TEC}	clauses 5 and 6 of ISO 23953-2:2023	3
2	an ice cream freezer cabinet	TEC	clauses 6 and 7 of ISO 22043	4
3	a scooping cabinet	TEC	clauses 6 and 7 of EN 16838:2019	4
4	a light duty RSC, other than one covered by item 5	E24h	clauses 5, 6 and 7 of ISO 22041	3
5	an RSC that is: (a) light duty; and (b) low sales volume	E_{TEC}	clause D.5.2 of ISO 23953-2:2023	3
6	a normal duty or heavy duty RSC, other than one covered by item 7	E24h	clauses 5, 6 and 7 of ISO 22041	4
7	an RSC that is: (a) normal duty or heavy duty; and (b) low sales volume	E_{TEC}	clause D.5.2 of ISO 23953-2:2023	4

- Note 1: Clause 1 of Schedule 2 to this instrument:
- sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument; and
 - provides for how ISO 23953-2:2023 applies in relation to low sales volume RSCs.
- Note 2: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

15 Meaning of *low sales volume* and *oversize*

In this instrument:

low sales volume: an RDC or an RSC is ***low sales volume*** at a particular date:

- (a) for an RDC or an RSC of a model that belongs to a family of models—if:
 - (i) the family of models is registered as a low sales volume family of models; and
 - (ii) no more than 25 units of the models that belong to the family of models are sold in the calendar year that includes that date; or
- (b) for an RDC or an RSC of a model that that does not belong to a family of models—if:
 - (i) the model is registered as a low sales volume model; and
 - (ii) no more than 10 units of the model are sold in the calendar year that includes that date.

oversize: an RDC is ***oversize*** if, at the time of:

- (a) if the model of the product was registered as a result of an application under section 41 of the Act—that application; or

- (b) if the model of the product was registered as a result of a subsequent application under section 46 of the Act—that application; as a result of its size, there is no testing laboratory;
- (c) in which the RDC is able to be tested in accordance with ISO 23953-2:2023; and
- (d) that has been approved by the National Association of Testing Authorities, Australia.

Note 1: Clause 1 of Schedule 2 to this instrument:

- sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument; and
- provides for how ISO 23953-2:2023 applies in relation to low sales volume RDCs.

Note 2: For the purposes of this instrument:

- models of ice cream freezer cabinets and scooping cabinets cannot be “low sales volume”; and
- models of ice cream freezer cabinets, scooping cabinets and RDCs cannot be “oversize”.

Note 3: A model of an RDC could be “low sales volume”, “oversize”, both, or neither. A model of an RSC might or might not be “low sales volume”.

Note 4: Under this instrument, the annual energy consumption (*AEC*) and reference annual energy consumption (*RAEC*), and hence the energy efficiency index (*EEL*), of “low sales volume” and/or “oversize” RDCs, and of “low sales volume” RSCs, are calculated differently from other RDCs and RSCs (see sections 25 and 26). There is also an additional testing requirement for some “low sales volume” RDCs and RSCs (see section 28).

Note 5: For “low sales volume” RDCs and RSCs, the GEMS Regulator may request evidence of annual sales volumes under section 56 of the Act.

Note 6: A model of an RDC or an RSC may be registered on the basis that it is “low sales volume”. For such a model, annual sales must not exceed the threshold sales volumes specified in this section in order for the model to continue to be classified as “low sales volume”.

For an RDC, if at some time after registration, its annual sales exceed the threshold sales volumes, unless models of the product are also “oversize”, they will need to comply with the requirements of this instrument that apply to RDCs generally.

For an RSC, if at some time after registration, its annual sales exceed the threshold sales volumes, models of the product will need to comply with the requirements of this instrument that apply to RSCs generally.

If the models do not satisfy these general requirements, the GEMS Regulator might consider suspending or cancelling the model’s registration under Division 6 of Part 5 of the Act, or might consider commencing enforcement action.

16 Families of models

- (1) For the purposes of section 28 of the Act, for a particular product class covered by this instrument, 2 or more models are in the same family of models if:
 - (a) they are members of a family that has been declared to the GEMS Regulator; and
 - (b) the requirements of this section are satisfied in relation to the models and the family.

Parent model requirements

- (2) There must be a single model (the *parent model*) for each family that:
 - (a) when compared to the other models in the family:
 - (i) has the highest, or the equal highest, specific energy consumption (see subsection (9)); and

- (ii) meets the requirements of the coldest, or the equal coldest, M-package temperature class when tested in accordance with the relevant test standard; and
 - (iii) has the largest, or the equal largest, vertical or horizontal opening; and
 - (iv) has the greatest, or the equal greatest, horizontal distance between the front and the rear of the cabinet; and
- (b) is included on a test report that was prepared prior to the application for registration being made under section 41 of the Act for any model that is a member of the family.

Family model requirements

- (3) Each model in the family must:
- (a) be in the same product class as the parent model; and
 - (b) meet the requirements of:
 - (i) the same M-package temperature class as the parent model; or
 - (ii) a warmer M-package temperature class than the parent model.

Additional requirements if parent model is an RDC

- (4) If the parent model is an RDC, each model in the family must have:
- (a) the same characteristics as the parent model in relation to:
 - (i) whether it is open or closed; and
 - (ii) whether it is oversize; and
 - (b) unless paragraph (c) provides otherwise—a total display area that is the same as that of the parent model; and
 - (c) if the family consists of models:
 - (i) that are remote; and
 - (ii) that are of modular construction; and
 - (iii) some or all of which are of different lengths;
 the same ratio of cabinet length to total display area as that of the parent model.

Additional requirements if parent model is an RSC

- (5) If the parent model is an RSC, each model in the family must have:
- (a) the same net volume; and
 - (b) the same duty classification (light duty, normal duty or heavy duty);
- as the parent model.

Additional requirements if parent model is an ice cream freezer cabinet

- (6) If the parent model is an ice cream freezer cabinet, each model in the family must have:
- (a) the same net volume; and
 - (b) the same total display area;
- as the parent model.

Additional requirements if parent model is a scooping cabinet

- (7) If the parent model is a scooping cabinet, each model in the family must have the same total display area as the parent model.

Number of models in family

- (8) A family must not contain more than 25 models.

Specific energy consumption

- (9) For the purposes of subparagraph (2)(a)(i), the **specific energy consumption** of a refrigerated cabinet is equal to:
- (a) for an RDC—the amount E_{SEC} in kWh per 24 hours per m² as calculated in accordance with clause 5.3.7.3.5 of ISO 23953-2:2023; and
 - (b) for an RSC—the amount SEC in kWh per 24 hours per m³ as calculated in accordance with subsection (10); and
 - (c) for a scooping cabinet—the amount $SEC-D$ in kWh per 24 hours per m² as calculated in accordance with clause 6.3.7.3.5 of EN 16838:2019; and
 - (d) for an ice cream freezer cabinet—the amount SEC in kWh per 24 hours per m³ as calculated in accordance with clause 6.3.6.6.4 of ISO 22043.

Note 1: For the purposes of paragraph (a), clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Note 2: For the purposes of paragraph (d), unlike RSCs, under ISO 22043, the amount SEC for an ice cream freezer cabinet is calculated by dividing the energy consumption by the “equivalent volume” (rather than the net volume). The “equivalent volume” of an ice cream freezer cabinet is related to the cabinet’s net volume, but is normalised by factors that depend on the M-package temperature class and test room climate class.

- (10) For the purposes of paragraph (9)(b), for an RSC, the amount SEC is given by the following formula:

$$SEC = \frac{\text{energy consumption}}{\text{net volume}}$$

where:

energy consumption is the cabinet’s energy consumption in kWh per 24 hours (see section 14).

net volume is the cabinet’s net volume in cubic metres.

17 Product category

For the purposes of section 29 of the Act, the products covered by this instrument are category A products.

18 Registrations affected by this instrument

For the purposes of section 36 of the Act, this instrument does not affect the registration of any model registered against the *Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2020*.

Note: If a model’s registration is not affected, the model is taken to be registered against this instrument. See subsection 36(2) of the Act.

Part 2—Products covered by this instrument

19 Purpose of Part

For the purposes of subsections 23(1) and (2) of the Act, this Part specifies:

- (a) one or more classes of products that are covered by this instrument; and
- (b) one or more classes of products that are not covered by this instrument.

20 Classes of products that are covered by this instrument

A numbered *product class* set out in Schedule 1 is a class of products covered by this instrument.

Note 1: The product classes are numbered 1 to 15.

Note 2: Broadly speaking, the product classes cover the following:

- RDCs;
- refrigerated drinks cabinets;
- ice cream freezer cabinets;
- scooping cabinets;
- RSCs.

Note 3: This instrument covers products that fall within the product classes irrespective of the environment in which they are used. For example, this instrument covers such products regardless of whether they are used in an industrial, commercial or domestic environment.

21 Classes of products that are not covered by this instrument

(1) This instrument does not cover any of the following:

- (a) refrigerated vending machines;
- (b) icemakers;
- (c) chiller-freezers;
- (d) cabinets that are designed for both food processing and storage, whether or not the cabinet includes an integral refrigerated storage section;

Example: For the purposes of paragraph (d), examples include the following:

- bakery cabinets that chill, heat and humidify;
- open top tables and saladettes for food preparation;
- cabinets specifically intended for storage of foodstuffs (for example, fresh meat, fresh fish, wine) that are designed to operate at temperatures different to the temperatures of the test room climate classes specified in clause 1 of Schedule 4 to this instrument.

- (e) refrigerated cabinets that have liquid cooled condensers;
- (f) products covered by the *Greenhouse and Energy Minimum Standards (Household Refrigerating Appliances) Determination 2019*;
- (g) any of the following, within the meaning of EN 16825 or ISO 22041:
 - (i) built-in cabinets (that is, refrigerated cabinets that are designed to be installed into a prepared recess in a wall or similar location and that require furniture finishing);
 - (ii) roll-in cabinets (that is, refrigerated cabinets that are designed to be loaded with trolleys with shelves which are designed to be introduced into the cabinet as such);
 - (iii) pass through cabinets (that is, refrigerated cabinets that are designed to be accessible from both sides);

Note 1: Clause 2 of Schedule 2 to this instrument sets out variations to EN 16825 that apply for the purposes of this instrument.

Note 2: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

- (h) appliances that are designed for short-time or intermittent normal operation during the full day;
- (i) RDCs that:
 - (i) are low sales volume, oversize or both; and
 - (ii) have an indirect refrigeration-type system within the meaning of ISO 23953-2:2023 (that is, refrigerated cabinets in which a secondary refrigerant circulating system is installed between a central refrigerating system and the cabinet);

Note: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

- (j) RSCs that are not light duty, normal duty or heavy duty;
- (k) pozzetto.

(2) In this section:

chiller-freezer means a refrigerated cabinet that includes:

- (a) at least one compartment that is designed to attain and maintain temperatures within that compartment that are no lower than -1°C; and
- (b) at least one other compartment that is designed to attain and maintain temperatures within that other compartment that are lower than -1°C.

icemaker means a factory-made commercial assembly that has:

- (a) a condensing unit and ice making section that operate as an integrated unit; and
- (b) means for making and harvesting ice;

whether or not the assembly also includes means for storing ice, dispensing ice, or both.

liquid cooled condenser means a condenser that uses liquid as the cooling medium to condense hot refrigeration gas to liquid.

pozzetto means a refrigerated cabinet that is designed for the storage of containerised gelato in, and scooping of that gelato from, containers that are each continuously covered by an individual lid while the cabinet is in operation (except when gelato is being scooped from the container).

refrigerated vending machine means a self-contained refrigerated cabinet that is designed to accept consumer payments or tokens to dispense pre-packed beverages or foodstuffs (for example, in the form of cans, bottles or food packets), and that stores products at between 0°C and +5°C.

Part 3—GEMS level requirements

Division 3.1—Preliminary

22 Purpose of Part

This Part specifies:

- (a) GEMS level requirements in accordance with section 25 of the Act for the product classes covered by this instrument, for the purposes of paragraph 24(1)(a) of the Act; and
- (b) testing requirements for the purposes of this Part, for the purposes of paragraph 25(b) of the Act.

23 Definitions

- (1) In this Part:

low-efficiency reference set: see ***reference low-efficiency version***.

reference low-efficiency version of an RDC or an RSC means a hypothetical version of the cabinet in which the set of relevant components is replaced by a set of components (the ***low-efficiency reference set***):

- (a) each of which is of a kind listed in column 2 of the table to subsection (2); and
- (b) that collectively perform the same function as the components that are replaced.

Note: For a particular RDC or RSC, there might be more than one possible ***reference low-efficiency version*** (each having a different ***low-efficiency reference set*** of components). If there is more than one possible version, any version (having any suitable low-efficiency reference set of components) may be used for the purposes of this Part.

relevant component of a particular RDC or RSC means any component of the cabinet that is of a kind listed in column 1 of the table to subsection (2).

Note: A particular RDC or RSC will have only a single set of ***relevant components***.

- (2) For the purposes of subsection (1), the table is:

	Column 1 Kinds of relevant components	Column 2 Kinds of low-efficiency reference set components
1	Fan motor	A shaded pole fan motor with an efficiency of 35% or lower
2	Lighting	Fluorescent lamps with B2 ballasts
3	Anti-condensation heaters	An uncontrolled anti-condensation heater
4	Pan heaters	An uncontrolled pan heater
5	Defrost heaters	A defrost heater that is controlled by a timer

Division 3.2—GEMS level requirements

24 GEMS level requirements

The table has effect:

Item	For:	the <i>EEI</i> must be:
1	any of the following: (a) an RDC; (b) a scooping cabinet; (c) an ice cream freezer cabinet	< 130
2	a heavy duty RSC	< 115
3	light duty or normal duty RSC	< 95

Note 1: For the purposes of item 1 of the table, the product class could be any of product classes 1, 2, 5 to 8 or 11 to 15.

Note 2: For the purpose of items 2 and 3 of the table, the product class could be any of product classes 3, 4, 9 or 10.

Note 3: For the product classes, see section 20 and Schedule 1.

25 Calculation of *energy efficiency index* or *EEI*

The *energy efficiency index*, or *EEI*, of a refrigerated cabinet that is covered by this instrument is calculated in accordance with the following formula:

$$EEI = \frac{AEC}{RAEC} \times 100$$

where:

AEC is the refrigerated cabinet's annual energy consumption, in kWh per year, and is calculated in accordance with section 26.

RAEC is the refrigerated cabinet's reference annual energy consumption, in kWh per year, and is calculated in accordance with section 26.

Note: For refrigerated cabinets that are covered by this instrument, other than low sales volume and/or oversize RDCs and low sales volume RSCs, the reference annual energy consumption is equal to the standard annual energy consumption, which represents the energy consumption of a standard cabinet of the relevant type.

For low sales volume and/or oversize RDCs and low sales volume RSCs, the reference annual energy consumption is equal to the base annual energy consumption, which reflects the energy consumption of a reference low-efficiency version of a cabinet of the relevant type.

26 Calculation of annual energy consumption (*AEC*) and reference annual energy consumption (*RAEC*)

Note 1: Most calculations for the purposes of this section rely on calculation of the amount *E24h* (see section 14).

Note 2: For RDCs that are low sales volume and/or oversize, and for RSCs that are low sales volume, the calculations involve determination of various amounts on the basis of:

- the RDC or RSC with the actual components (the relevant components); and
- a hypothetical reference low-efficiency version of the cabinet with a low-efficiency reference set of components.

Note 3: In the case of low sales volume and/or oversize RDCs that are remote, the amounts are:

- the *DEC* (short for direct electrical energy consumption), which is a measure of the energy consumption of the electrical components of the RDC, and which excludes the energy consumption of the remote refrigeration system that runs the RDC (the *REC*); and

- the *REC* (short for refrigeration electrical energy consumption), which is a measure of the energy consumption of the refrigeration system that runs the RDC.

The sum of the *DEC* and the *REC* is a measure of the total energy consumption (the *TEC*) of the RDC.

Note 4: In the case of low sales volume and/or oversize RDCs that are integral, or low sales volume RSCs (which, in order to be covered by this instrument, must be integral), only the amount *TEC* is determined (and not the separate amounts *DEC* and *REC*), and this amount is the total energy consumption of the RDC or RSC, including the integral refrigeration system.

(1) For the definitions of *AEC* and *RAEC* in section 25, the table has effect:

Item	For:	<i>AEC</i> is given by	<i>RAEC</i> is given by
1	an RDC, other than one covered by item 5 or item 6	$E24h \times 365$	$(M + (N \times TDA)) \times 365$
2	a scooping cabinet	$E24h \times 365$	$(M + (N \times TDA)) \times 365$
3	an ice cream freezer cabinet	$E24h \times 365$	$(M + (N \times V_N)) \times 365$
4	an RSC, other than one covered by item 7	$E24h \times af \times 365$	$(M \times V_N) + N$
5	an RDC that is: (a) remote; and (b) either or both of the following: (i) low sales volume; (ii) oversize	$(DEC_{actual} + REC_{actual}) \times af \times 365$	$(DEC_{reference} + REC_{actual}) \times 365$
6	an RDC that is: (a) integral; and (b) either or both of the following: (i) low sales volume; (ii) oversize	$TEC_{actual} \times af \times 365$	$TEC_{reference} \times 365$
7	a low sales volume RSC	$TEC_{actual} \times af \times 365$	$TEC_{reference} \times 365$

Definitions—items 1 to 4 (RDCs, scooping cabinets, ice cream freezer cabinets and RSCs)

(2) For the purposes of items 1 to 4 of the table to subsection (1):

af is the adjustment factor for the purposes of item 4, and is equal to:

- for a light duty RSC that is a chiller—1.2; and
- for a light duty RSC that is a freezer—1.1; and
- for a normal duty or heavy duty RSC—1.

E24h is the energy consumption of the cabinet in kWh per 24 hours (see section 14).

M is the coefficient for the cabinet's product class, as given by Schedule 1.

N is the coefficient for the cabinet's product class, as given by Schedule 1.

TDA is the total display area of the cabinet, in square metres (see section 7).

V_N is the net volume of the cabinet in litres (see section 7).

Definitions—item 5 (low sales volume or oversize RDCs that are remote)

- (3) For the purposes of item 5 of the table to subsection (1):

af is the adjustment factor for the purposes of item 5, and is equal to 1.1304.

DEC_{actual} is the electrical energy consumption of the cabinet, as calculated in accordance with Formula D.3 of Annex D to ISO 23953-2:2023 on the basis of amounts for the relevant components of the cabinet that are:

- (a) if the cabinet is low sales volume but not oversize:
 - (i) measured in accordance with Part D.3 of Annex D to ISO 23953-2:2023 (the *relevant provisions*); or
 - (ii) if, for a particular component, measurement is not reasonably practicable—calculated in accordance with the relevant provisions; and
- (b) if the cabinet is oversize (whether or not it is also low sales volume)—calculated in accordance with the relevant provisions.

Note: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

DEC_{reference} is the hypothetical electrical energy consumption of a reference low-efficiency version of the cabinet, as calculated in accordance clause D.3.4.1 of Annex D to ISO 23953-2:2023 on the basis of amounts, for the components in the low-efficiency reference set, that are calculated in accordance with Part D.3 of Annex D to ISO 23953-2:2023.

Note: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

REC_{actual} is the electrical energy consumption of a refrigeration system that can be used to operate the refrigerated cabinet, and is equal to the amount $E_{REC,24h}$ as determined in accordance with Formula 12 of ISO 23953-2:2023.

Note: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Definitions—items 6 and 7 (low sales volume or oversize RDCs that are integral, low sales volume RSCs)

- (4) For the purposes of items 6 and 7 of the table to subsection (1):

af is the adjustment factor for the purposes of items 6 and 7, and is equal to:

- (a) for the purposes of item 6—1.1304; and
- (b) for the purposes of item 7:
 - (i) for a heavy duty RSC—1.15; and
 - (ii) for a light duty or normal duty RSC—1.1875.

TEC_{actual} is the total daily electrical energy consumption of the cabinet (including the condensing unit energy consumption), as calculated in accordance with Formula D.22 of Annex D to ISO 23953-2:2023 on the basis of amounts for the relevant components of the cabinet that are:

- (a) for an RDC:
 - (i) if the cabinet is low sales volume but not oversize:

- (A) measured in accordance with clauses D.5.2 and D.5.3 of Annex D to ISO 23953-2:2023 (the *relevant provisions*); or
- (B) if, for a particular component, measurement is not reasonably practicable—calculated in accordance with the relevant provisions; and
- (ii) if the cabinet is oversize (whether or not it is also low sales volume)—calculated in accordance with the relevant provisions; and
- (b) for an RSC:
 - (i) measured in accordance with the relevant provisions; or
 - (ii) if, for a particular component, measurement is not reasonably practicable—calculated in accordance with the relevant provisions.

Note 1: Clause 1 of Schedule 2 to this instrument:

- sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument; and
- provides for how ISO 23953-2:2023 applies in relation to low sales volume RSCs.

Note 2: For the *relevant provisions*, the main formula for calculating the E_{TEC} is formula D.22 of Annex D to ISO 23953-2:2023, which is set out in clause D.5.2 of that Annex.

$TEC_{reference}$ is the hypothetical total daily electrical energy consumption of a reference low-efficiency version of the cabinet, as calculated in accordance with clauses D.5.2 and D.5.3 of Annex D to ISO 23953-2:2023 on the basis of:

- (a) in relation to the condensing unit—the value of E_{CEC} , as used in Formula D.22 of Annex D to ISO 23953-2:2023, that was used for the calculation of the amount TEC_{actual} ; and
- (b) for other elements of the calculation—amounts, for the components in the low-efficiency reference set, that are calculated in accordance with clause D.5.2 of Annex D to ISO 23953-2:2023.

Note 1: Clause 1 of Schedule 2 to this instrument:

- sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument; and
- provides for how ISO 23953-2:2023 applies in relation to low sales volume RSCs.

Note 2: The main formula for calculating the E_{TEC} is formula D.22 of Annex D to ISO 23953-2:2023, which is set out in clause D.5.2 of that Annex.

Division 3.3—Conducting tests

27 Testing requirements—general

For the purposes of this instrument, all testing must be conducted in accordance with the relevant test standard.

28 Additional testing requirements—integral, low sales volume RDC that is not oversize and low sales volume RSCs

- (1) This section applies in relation to the following:
 - (a) an RDC:
 - (i) that is low sales volume; and
 - (ii) that is integral; and
 - (iii) that is not oversize;
 - (b) a low sales volume RSC.

- (2) In addition to the testing that is required to determine the value of TEC_{actual} in accordance with subsection 26(4), the total electrical energy consumption of the cabinet as a whole must be measured directly by testing in accordance with ISO 23953-2:2023.

Note: Clause 1 of Schedule 2 to this instrument:

- sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument; and
- provides for how ISO 23953-2:2023 applies in relation to low sales volume RSCs.

Part 4—GEMS labelling requirements

29 Purpose of Part

For the purposes of paragraph 24(1)(b) of the Act, this Part specifies GEMS labelling requirements in accordance with section 26 of the Act for the product classes covered by this instrument.

30 Use of star ratings

If, at the time of supply, or offer of supply, of a product covered by this instrument, the energy efficiency of the product is described in terms of one or more stars, the number of stars must be calculated in accordance with Schedule 5.

31 Impact of replacement determination

A GEMS labelling requirement of this instrument (the *revoked requirement*) is taken to be complied with if:

- (a) this instrument is revoked in accordance with paragraph 35(1)(a) of the Act; and
- (b) another GEMS determination (the *replacement determination*) is made in accordance with paragraph 35(1)(b) of the Act; and
- (c) a transitional GEMS labelling requirement (the *replacement requirement*) of the replacement determination provides that, if the replacement requirement is complied with, the revoked requirement is taken to be complied with.

Part 5—Other requirements

32 Purpose of Part

For the purposes of subsection 24(2) of the Act, this Part specifies other requirements in accordance with section 27 of the Act for product classes covered by this instrument.

33 Requirement relating to M-package temperature class

Application of section

- (1) This section does not apply in relation to an RDC that is oversize.

Requirement relating to M-package temperature class

(2) Subject to subsections (3) and (4), the table has effect:

Column 1	Column 2	Column 3	Column 4	
Item	The following type of product:	must meet the requirements of one of the following M-package temperature classes:	when tested in accordance with:	at test room climate class:
1	an RDC other than a refrigerated drinks cabinet	M0, M, M1, M2, H1, H2, L1, L2, L3	clause 5.3.4 of ISO 23953-2:2023	3
2	a refrigerated drinks cabinet	M2	clause 5.3.4 of ISO 23953-2:2023	3
3	a normal duty or heavy duty RSC	M1, L1	clause 5.3.4 of ISO 22041	4
4	a light duty RSC	M1, L1	clause 5.3.4 of ISO 22041	3
5	an ice cream freezer cabinet	C1, C2	Annex E of ISO 22043	4
6	a scooping cabinet	G1, G2, G3, L1, L2, L3	clause 6.3.4 or EN 16838:2019	3 or 4

(3) If Column 2 contains more than one M-package temperature class for a particular type of product, then an application for registration of a product of that type must specify one M-package temperature class against which the product is to be tested.

(4) Where an M-package temperature class is specified under subsection (3), Column 2 applies as if it referred only to that M-package temperate class.

Note 1: Clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Note 2: Clause 4 of Schedule 2 to this instrument sets out variations to ISO 22041 that apply for the purposes of this instrument.

Note 3: Clause 1 of Schedule 4 to this instrument sets out the test room climate classes.

34 Marking plates

- (1) At the time of supply, or offer of supply, of an RSC that is covered by this instrument, the RSC must comply with clause 7 of IEC 60335:2020.
- (2) At the time of supply, or offer of supply, of any other product that is covered by this instrument, the product must comply with:
- (a) clause 7 of IEC 60335:2020; and
 - (b) whichever of the following is applicable:
 - (i) for an RDC—clause 7.2 of ISO 23953-2:2023;
 - (ii) for an ice cream freezer cabinet—clause 8.2 of ISO 22043;
 - (iii) for a scooping cabinet—clause 8.1 of EN 16838:2019.

Note 1: For the purposes of subparagraph (2)(b)(i), clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Note 2: Section 36 sets out specific transitional arrangements in relation to this section.

Part 6—Transitional arrangements

35 Alternative standards for various types of refrigerated cabinets

Alternative standards for RSCs

- (1) For an item of the following table, the provisions of this instrument referred to in column 1 may be applied to an RSC as though the reference to a standard or part of a standard in those provisions were a reference to the standard or part referred to in column 2.

Note 1: Subsection (1) has the effect that if one provision referred to in column 1 for an item is applied as though a reference in that provision to a standard or part of a standard were a reference to the standard or part referred to in column 2 for that item, each other provision referred to in column 1 must be applied as though a reference to a standard or part in each of those provisions were a reference to the standard or part referred to in column 2 for the relevant item.

Note 2: Clause 2 of Schedule 2 to this instrument sets out variations to EN 16825 that apply for the purposes of this instrument.

Alternative standards for RSCs		
	Column 1	Column 2
Item	Provision of instrument	Alternative standard or part
1	paragraph (b) of the definition of “net volume” of an RSC in section 7	clause 6.1 of EN 16825
2	Subparagraph (b)(i) of the definition of “test standard” for an RSC in section 7	ISO 23953-2:2015
3	The following provisions: (a) subparagraph (b)(ii) of the definition of “test standard” for an RSC in section 7; (b) paragraph 11(2)(a)	EN 16825
4	The following provisions: (a) paragraph (a) of the definition of “heavy duty” in subsection 13(1); (b) subparagraph (b)(i) of the definition of “light duty” in subsection 13(1); (c) subparagraph (b)(i) of the definition of “normal duty” in subsection 13(1); (d) items 3 and 4 of the table to subsection 33(2)	clause 5.3.4 of EN 16825
5	Items 4 and 6 of the table to subsection 14(2)	clauses 5, 6 and 7 of EN 16825
6	Items 5 and 7 of the table to subsection 14(2)	clauses D.4.2 and D.4.3 of ISO 23953-2:2015
7	The opening words of the definition of “TEC _{actual} ” in subsection 26(3)	Formula D.14 of Annex D to ISO 23953-2:2015
8	The opening words of the definition of “TEC _{reference} ” in subsection 26(3)	clauses D.4.2 and D.4.3 of Annex D to ISO 23953-2:2015
9	paragraph (a) of the definition of “TEC _{reference} ” in subsection 26(3)	Formula D.14 of Annex D to ISO 23953-2:2015
10	paragraph (b) of the definition of “TEC _{reference} ” in subsection 26(3)	Clause D.4.2 of Annex D to ISO 23953-2:2015

Alternative standards for RSCs		
	Column 1	Column 2
Item	Provision of instrument	Alternative standard or part
11	Subsection 28(2)	ISO 23953-2:2015

Alternative standards for ice cream freezer cabinets

- (2) For an item of the following table, the provisions of this instrument referred to in column 1 may be applied to an ice cream freezer cabinet as though the reference to a standard or part of a standard in those provisions were a reference to the standard or part referred to in column 2.

Note 1: Subsection (2) has the effect that if one provision referred to in column 1 for an item is applied as though a reference in that provision to a standard or part of a standard were a reference to the standard or part referred to in column 2 for that item, each other provision referred to in column 1 must be applied as though a reference to a standard or part in each of those provisions were a reference to the standard or part referred to in column 2 for the relevant item.

Note 2: Clause 3 of Schedule 2 to this instrument sets out variations to EN 16901 that apply for the purposes of this instrument.

Alternative standards for ice cream freezer cabinets		
	Column 1	Column 2
Item	Provision of instrument	Alternative standard or part
1	The following provisions: (a) paragraph (a) of the definition of “net volume” of an ice cream freezer cabinet in section 7; (b) paragraph (d) of the definition of “ice cream freezer cabinet” in section 10	Annex B of EN 16901
2	paragraph (c) of the definition of “test standard” for an ice cream freezer cabinet in section 7	EN 16901
3	Item 2 of the table to subsection 14(2)	clauses 6 and 7 of EN 16901
4	paragraph 16(9)(d)	clause 6.3.6.6.4 of EN 16901
5	Item 5 of the table to subsection 33(2)	Annex F of EN 16901
6	Subparagraph 36(3)(c)(ii)	clause 8.2 of EN 16901

Alternative standards for scooping cabinets

- (3) For an item of the following table, the provisions of this instrument referred to in column 1 may be applied to a scooping cabinet as though the reference to a standard or part of a standard in those provisions were a reference to the standard or part referred to in column 2.

Note: Subsection (3) has the effect that if one provision referred to in column 1 for an item is applied as though a reference in that provision to a standard or part of a standard were a reference to the standard or part referred to in column 2 for that item, each other provision referred to in column 1 must be applied as though a reference to a standard or part in each of those provisions were a reference to the standard or part referred to in column 2 for the relevant item.

Alternative standards for scooping cabinets		
	Column 1	Column 2
Item	Provision of instrument	Alternative standard or provision
1	paragraph (d) of the definition of “test standard” for a scooping cabinet in section 7	EN 16838:2016
2	paragraph (b) of the definition of “total display area” for a scooping cabinet in section 7	clause 6.2 of EN 16838:2016
3	Item 3 of the table to subsection 14(2)	clauses 6 and 7 of EN 16838:2016
4	paragraph 16(9)(c), the amount <i>SEC-D</i> in kWh per 24 hours per m ²	clause 6.3.7.3.5 of EN 16838:2016
5	Item 6 of the table to subsection 33(2)	clause 6.3.4 of EN 16838:2016
6	Subparagraph 36(3)(c)(iii)	clause 8.1 of EN 16838:2016

Alternative standards for RDCs

- (4) For an item of the following table, the provisions of this instrument referred to in column 1 may be applied to an RDC as though the reference to a standard or part of a standard in those provisions were a reference to the standard or part referred to in column 2.

Note 1: Subsection (4) has the effect that if one provision referred to in column 1 for an item is applied as though a reference in that provision to a standard or part of a standard were a reference to the standard or part referred to in column 2 for that item, each other provision referred to in column 1 must be applied as though a reference to a standard or part in each of those provisions were a reference to the standard or part referred to in column 2 for the relevant item.

Note 2: Clause 5 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2015 that apply for the purposes of this instrument.

Alternative standards for RDCs		
	Column 1	Column 2
Item	Provision of instrument	Alternative standard or provision
1	paragraph (a) of the definition of “test standard” for an RDC in section 7	ISO 23953-1:2015 and ISO 23953-2:2015
2	paragraph (a) of the definition of “total display area” for an RDC in section 7	Annex A of ISO 23953-2:2015
3	Item 1 of the table to subsection 14(2)	clauses 5 and 6 of ISO 23953-2:2015
4	paragraph (c) of the definition of “oversize” in section 15	ISO 23953-2:2015
5	paragraph 16(9)(a)	clause 5.3.6.3.5 of ISO 23953-2:2015
6	Subparagraph 21(1)(i)(ii)	ISO 23953-2:2015
7	The opening words of the definition of “DEC _{actual} ” in subsection 26(3)	Formula D.3 of Annex D to ISO 23953-2:2015
8	Subparagraph (a)(i) of the definition of “DEC _{actual} ” in subsection 26(3)	Part D.3 of Annex D to ISO 23953-2:2015
9	The definition of “DEC _{reference} ” in subsection 26(3)	clause D.3.4.1 of Annex D and Part D.3 of Annex D to ISO 23953-2:2015
10	The definition of “REC _{actual} ” in subsection 26(3)	Formula 9 of ISO 23953-2:2015

Alternative standards for RDCs		
	Column 1	Column 2
Item	Provision of instrument	Alternative standard or provision
11	The opening words of the definition of “TEC _{actual} ” in subsection 26(3)	Formula D.14 of Annex D to ISO 23953-2:2015
12	Subsubparagraph (a)(i)(A) of the definition of “TEC _{actual} ” for an RDC in subsection 26(3)	clauses D.4.2 and D.4.3 of Annex D to ISO 23953-2:2015
13	The opening words of the definition of “TEC _{reference} ” in subsection 26(3)	clauses D.4.2 and D.4.3 of Annex D to ISO 23953-2:2015
14	paragraph (a) of the definition of “TEC _{reference} ” in subsection 26(3)	Formula D.14 of Annex D to ISO 23953-2:2015
15	paragraph (b) of the definition of “TEC _{reference} ” in subsection 26(3)	Clause D.4.2 of Annex D to ISO 23953-2:2015
16	Subsection 28(2)	ISO 23953-2:2015
17	Items 1 and 2 of the table to subsection 33(2)	clause 5.3.4 of ISO 23953-2:2015
18	Subparagraph 36(3)(c)(i)	clause 7.2 of ISO 23953-2:2015

36 Transitional arrangements for marking plates

- (1) This section applies to a product covered by this instrument for which the test report was prepared not later than one year after this instrument came into force (a **transitional product**) despite anything in section 34.
- (2) At the time of supply, or offer of supply, of an RSC that is a transitional product, the RSC must comply with either:
 - (a) clause 7 of IEC 60335:2020; or
 - (b) clause 7 of IEC 60335:2010.
- (3) At the time of supply, or offer of supply, of any other transitional product, the product must comply with one or more of the following:
 - (a) clause 7 of IEC 60335:2020;
 - (b) clause 7 of IEC 60335:2010;
 - (c) whichever of the following is applicable:
 - (i) for an RDC—clause 7.2 of ISO 23953-2:2023;
 - (ii) for an ice cream freezer cabinet—clause 8.2 of ISO 22043;
 - (iii) for a scooping cabinet—clause 8.1 of EN 16838:2019.

Note 1: For the purposes of paragraph (3)(c), subsections 35(2), (3) and (4) set out alternative standards that may be applied to ice cream freezer cabinets, scooping cabinets and RDCs.

Note 2: For the purposes of subparagraph (3)(c)(i), clause 1 of Schedule 2 to this instrument sets out variations to ISO 23953-2:2023 that apply for the purposes of this instrument.

Schedule 1—Product classes

Note: See the definition of *product class* in section 20.

1 Product classes

For the purposes of section 20, a numbered *product class* identified in the following table consists of products that:

- (a) are the kind of product indicated; and
- (b) have the characteristics indicated; and
- (c) are not excluded by section 21.

Note: The product class is needed in order to identify the relevant values of *M* and *N*, which are used when assessing compliance with the GEMS level requirements set out in Part 3.

Kind of product	Product class	Characteristics (code)	Coefficient	
			M	N
Integral, horizontal cabinets: Any of the following: (a) RDCs that are integral and horizontal; (b) RSCs that are horizontal; (c) ice cream freezer cabinets; (d) scooping cabinets	1	RDC—chiller (IRH)	3.7	3.5
	2	RDC—freezer (IFH)	4.2	9.8
	3	RSC—chiller (SRH)	2.55	1790
	4	RSC—freezer (SFH)	5	5
	5	Ice cream freezer cabinet (IFH-5)	5.84	2380
	6	Scooping cabinet (GSC or ISC)	1	0.009
Integral, vertical cabinets—general: Any of the following: (a) RDCs that are integral and vertical, other than refrigerated drinks cabinets; (b) RSCs that are vertical	7	RDC—chiller (IRV)	10.4	30.4
	8	RDC—freezer (IFV)	9.1	9.1
	9	RSC—chiller (SRV)	1.6	19.1
	10	RSC—freezer (SFV)	1.64	609
	3	4.92	1472	
Integral, vertical cabinets—other: Refrigerated drinks cabinets	11	RDC—chiller (IRV-4)	0.69	5.97
Remote, horizontal cabinets: RDCs that are remote and horizontal	12	RDC—chiller (RRH)	3.7	3.5
	13	RDC—freezer (RFH)	4.2	9.8
Remote, vertical cabinets: RDCs that are remote and vertical	14	RDC—chiller (RRV or RRV-2)	9.1	9.1
	15	RDC—freezer (RFV)	1.6	19.1

Note: The letters in the codes (in parentheses) in the table are a short hand description of the characteristics of that product class.

For RDCs, the first letter refers to the location of the condenser (internal or remote), the second letter refers to the temperature (refrigerator or freezer) and the third letter refers

to the configuration (horizontal or vertical). For example, 'IRH' is short for 'integral, refrigerator, horizontal'.

For RSCs, the first letter refers to 'storage', the second letter refers to temperature (refrigerator or freezer) and the third letter refers to the configuration (horizontal or vertical). For example, 'SFV' is short for 'storage, freezer, vertical'.

For ice cream freezer cabinets and scooping cabinets, 'GSC' is short for 'gelato scooping cabinet' and 'ISC' is short for 'ice cream scooping cabinet'.

Schedule 2—Variations to standards

Note: See the definitions of *ISO 23953-2:2015*, *ISO 23953-2:2023*, *ISO 22041*, *EN 16825* and *EN 16901* in section 6.

1 Variations that relate to ISO 23953-2:2023

- (1) For the purposes of section 6, the following table sets out the variations that relate to ISO 23953-2:2023.

Variations that relate to ISO 23953-2:2023		
Item	The following provision:	is taken to be varied by:
1	paragraph (b) of clause 5.3.3.3.2	omitting “chilled vertical”

- (2) For:

- (a) items 5 and 7 of the table to subsection 14(2); and
- (b) to the extent they apply to low sales volume RSCs:
 - (i) subsection 26 (4);
 - (ii) subsection 28(2);

ISO 23953-2:2023 applies as if, in addition to the variations of subclause (1), the following apply:

- (c) references to “Commercial Refrigerated Display Cabinets” were to low sales volume RSCs;
- (d) for normal duty or heavy duty RSCs, tests were required to be undertaken at test room climate class 4.

2 Variations that relate to EN 16825

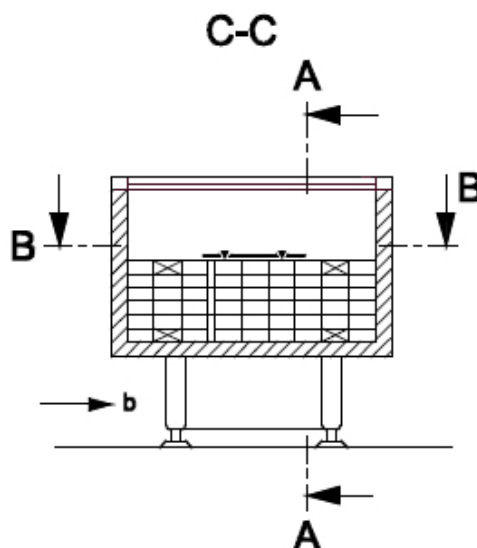
For the purposes of section 6, the following table sets out the variations that relate to EN 16825:

Variations that relate to EN 16825		
Item	The following provision:	is taken to be varied by:
1	clause 4.2.3	omitting the clause
2	clause 5.3.2.4	adding, at the end of the clause: “Alternative test packages as specified in clause 5.3.2.7 of ISO 23953-2:2023 are permitted.”
3	clause 5.3.5	omitting the clause
4	clause 6.4.4	omitting the clause

3 Variations that relate to EN 16901

For the purposes of section 6, the following table sets out the variations that relate to EN 16901:

Variations that relate to EN 16901		
Item	The following provision:	is taken to be varied by:
1	Figure 6	replacing cross-section C-C with the following:



4 Variations that relate to ISO 22041

For the purposes of section 6, the following table sets out the variations that relate to ISO 22041:

Variations that relate to ISO 22041		
Item	The following provision:	is taken to be varied by:
1	clause 5.3.2.4	adding, at the end of the clause: “Alternative test packages as specified in clause 5.3.2.7 of ISO 23953-2:2023 are permitted.”

5 Variations that relate to ISO 23953-2:2015

(1) For the purposes of section 6, the following table sets out the variations that relate to ISO 23953-2:2015.

Variations that relate to ISO 23953-2:2015		
Item	The following provision:	is taken to be varied by:
1	clause 4.1.1.6	inserting, at the end of the clause: “Some States or Territories might dictate different requirements for dimensions.”

Variations that relate to ISO 23953-2:2015

Item	The following provision:	is taken to be varied by:
2	clause 4.1.6	inserting, before the Note to the clause: “Remote temperature monitoring is permitted.”
3	paragraph (b) of clause 5.3.2.3.2	omitting “chilled vertical cabinets”, substituting “open cabinets”
4	paragraph (d) of clause 5.3.2.3.2	omitting “frozen”
5	clause 5.3.2.3.2	inserting, after paragraph (d): “(e) The loading height for closed cabinets shall equal half height loading of test packages.”
6	description of Figure 27	omitting “frozen”, substituting “closed”
7	clause 5.3.2.7.1	inserting, after paragraph (b) of the clause: “Automatic lighting function switches are permitted. Should a cabinet have no automatic lighting control function fitted, the lights are to be operated continuously for the duration of the test.”
8	clause 5.3.3.2	omitting the clause, substituting: “5.3.3.2 Closed refrigerated cabinets (a) The test for closed refrigerated cabinets shall always be carried out on the complete cabinet, regardless of the number of doors or lids. Each door or lid shall be opened six times per hour. Doors that are used for service, cleaning or loading of the cabinet only shall not be opened during this test. Where more than one door or lid pertains to the cabinet under test, the sequence in which the doors and lids are opened shall be staggered, i.e. in the case of two doors: door 1 at 0 min, door 2 at 5 min, door 1 at 10 min, door 2 at 15 min, etc. Hinged lids and doors shall be opened beyond an angle of 60°. Sliding glass doors or lids shall be opened beyond 80 % of the maximum area which can be opened. The door or lid shall be opened for a total of 6 s. During this opening period, the doors or lids shall be kept open beyond the minimum required opening for 4 s. Prior to the start of the 12-h period of door opening, each door or lid shall be opened once for 3 min. Where a cabinet is provided with more than one door or lid, each door or lid shall be opened once for 3 min consecutively. Within the test period, the doors or lids shall be opened cyclically for 12 h within 24 h. The 12-h cycle of door or lid opening shall start at the beginning of the test period. (b) If the refrigerated cabinet is fitted with a lighting system, this shall be switched on 1 h before starting the opening cycle. During the test, lighting pertaining to the cabinet shall be lit continuously and anti-sweat heaters shall run for the duration of the test period unless controlled by a time-clock, smart sensor or similar automatic device. Where a cabinet is fitted with an automated lighting control, the tests shall be conducted using the pre-set lighting regime. (c) In all test conditions, maximum energy consumption and minimum efficiency should be determined as worst case.”

(2) For:

- (a) items 5 and 7 of the table to subsection 14(2); and
- (b) to the extent they apply to low sales volume RSCs:
 - (i) subsection 26 (4);
 - (ii) subsection 28(2);

ISO 23953-2:2015 applies as if, in addition to the variations of subclause (1), the following apply:

- (c) references to “Commercial Refrigerated Display Cabinets” were to low sales volume RSCs;
- (d) for normal duty or heavy duty RSCs, tests were required to be undertaken at test room climate class 4.

Schedule 3—M-package temperature classes

Note: See the definition of *M-package temperature class* in subsection 12(1) and the definition of *meets the requirements* of a particular M-package temperature class in subsection 12(2).

1 M-package temperature classes—RDCs, RSCs and scooping cabinets

For RDCs, RSCs and scooping cabinets, the M-package temperature classes, and the corresponding requirements, are set out in the following table:

	Column 1	Column 2	Column 3	Column 4
Item	M-package temperature class	Highest temperature, θ_{ah} , of warmest M-package colder than or equal to:	Lowest temperature, θ_b , of coldest M-package warmer than or equal to:	Highest minimum temperature, θ_{al} , of all M-package colder than or equal to:
1	G1	-10	-14	-
2	G2	-10	-16	-
3	G3	-10	-18	-
4	H1	+10	+1	-
5	H2	+10	-1	-
6	L1	-15	-	-18
7	L2	-12	-	-18
8	L3	-12	-	-15
9	M0	+4	-1	-
10	M	+6	-1	-
11	M1	+5	-1	-
12	M2	+7	-1	-

2 M-package temperature classes—ice cream freezer cabinets

For ice cream freezer cabinets, the M-package temperature classes, and the corresponding requirements, are set out in the following table:

	Column 1	Column 2	Column 3
Item	M-package temperature class	Warmest M-package colder or equal to in all tests except lid opening test [°C]	Warmest M-package maximum temperature rise allowed [K]
1	C1	-18.0	2.0
2	C2	-7.0	2.0

Schedule 4—Test room climate classes

Note: See the definition of *test room climate class* in section 7.

1 Test room climate classes

In this instrument, the following are the *test room climate classes*:

Test room climate class	Dry bulb temperature °Celsius	Relative humidity %	Dew point °Celsius	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

Schedule 5—Star ratings

1 Star ratings

For the purposes of section 30, if the energy efficiency index, or *EEI*, of the product is within one of the ranges in the following table, the number of stars is as specified in the corresponding row:

Energy efficiency index	Number of stars
$100 \leq \text{EEI} < 130$	1
$77 \leq \text{EEI} < 100$	2
$60 \leq \text{EEI} < 77$	3
$45 \leq \text{EEI} < 60$	4
$35 \leq \text{EEI} < 45$	5
$27 \leq \text{EEI} < 35$	6
$21 \leq \text{EEI} < 27$	7
$16 \leq \text{EEI} < 21$	8
$12 \leq \text{EEI} < 16$	9
$0 \leq \text{EEI} < 12$	10

Schedule 6—Repeals

Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2020

1 The whole of the instrument

Repeal the instrument.