



## **Eurovent 14/7 – 2025**

# **Market surveillance for direct sales refrigerators**

### **Second Edition**

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## Document history

This Eurovent Industry Recommendation / Code of Good Practice supersedes all of its previous editions, which automatically become obsolete with the publication of this document.

## Modifications

This Eurovent publication was modified as against previous editions in the following manner:

Modifications as against	Key changes
1 <sup>st</sup> edition	Current document
2 <sup>nd</sup> edition	Editorial changes, amendment to paragraph 2.3.1.1

## Preface

### In a nutshell

**The aim of this document is to enhance the enforcement of Ecodesign and Energy Labelling requirements for refrigerating appliances having a direct sales function placed and put into service on the EU market. It is principally addressed to suppliers and market surveillance authorities.**

**The first five chapters provide the general legislative background and an overview of the specific requirements to which suppliers are subject. Chapter 6, particularly aimed at market surveillance authorities, presents practical tips to facilitate effective compliance monitoring.**

## Authors

This document was published by Eurovent and was prepared in a joint effort by participants of the Product Group 'Commercial Refrigeration Equipment' (PG-RDC), which represents a vast majority of all manufacturers of these products active on the EMEA market.

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## Legal note

This document reflects the views of Eurovent members and as such cannot in any case be considered as legally binding. The binding interpretation of EU legislation is the exclusive competence of the Court of Justice of the European Union. Referred EN standards are valid at the date of publication of this document.

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## List of abbreviations and symbols

DoC	Declaration of Conformity
ED	Ecodesign
EL	Energy Labelling
MSA	Market Surveillance Authority
RDC	Refrigerating appliances with a direct sales function

## Main referred regulations, standards and documents

- [1] [Directive 2009/125/EC](#) of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of Ecodesign requirements for energy-related products
- [2] [Commission Regulation \(EU\) 2019/2024](#) of 1 October 2019 laying down Ecodesign requirements for refrigerating appliances with a direct sales function pursuant to Directive 2009/125/EC of the European Parliament and of the Council
- [3] [Commission Delegated Regulation \(EU\) No 2019/2018](#) of 11 March 2019 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of refrigerating appliances with a direct sales function
- [4] [Regulation \(EU\) 2017/1369](#) of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU
- [5] [Decision No 768/2008/EC](#) of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, and repealing Council Decision 93/465/EEC
- [6] [Eurovent Industry Recommendation](#) 14/6 - 2022 on interpretation of Regulation (EU) 2019/2018 and of Regulation (EU) 2024/2019.

## 1 Introduction

According to Eurovent Market Intelligence, there are almost 50 manufacturers of refrigerating appliances with a direct sales function on the EU market in 2024.

Manufacturers must correctly declare the technical parameters of their refrigerating appliances with a direct sales function. If declared parameters do not match actual parameters, the designed performance of the refrigerating system with respect to, for instance, energy consumption and product temperature inside the display cabinet may not be achieved. It may also mean that the mandatory minimum Ecodesign and Energy Labelling requirements for products placed on the EU market are not met.

According to EU legislation, the responsibility for compliance of the refrigerating appliances with a direct sales function lays with the manufacturer, who must carry out the compliance assessment procedure including compliance testing. The legislator leaves freedom to manufacturers on how to ensure compliance and does not specify requirements for compliance testing.

Compliance monitoring and verification is the task of Market Surveillance Authorities (MSA) in Member States. These activities focus primarily on the verification of documentation requirements and CE declarations of conformity. One of the EU supporting initiatives aimed at increasing the rate of product compliance is the upcoming EEPLIANT4 project. Its activities include coordination of the monitoring, verification and enforcement actions of MSAs. Results of the previous EEPLIANT3 project for residential ventilation units<sup>1</sup> showed that 27% of products failed documentation check and 75% of products inspected in online shops were found non-compliant. These controls concerned only the verification of formal requirements and did not include performance testing of products.

For professional refrigeration equipment similar results were obtained during the EEPLIANT2 project<sup>2</sup>, 29 models were tested of which 16 had tested efficiencies lower than declared.

The objectives of this document drafted by Eurovent members include:

- Sharing best practices on the Ecodesign and Energy Labelling conformity assessment carried out by suppliers, in particular manufacturers, of refrigerating appliances having a direct sales function.
- Providing a 'quick check' tool for verification by MSA of the consistency of declared data that could be helpful for screening products at 'high-risk' of non-compliance with Ecodesign and Energy Labelling requirements.
- Provide end users with information on what declarations and documentation they should expect from suppliers of refrigerating appliances having a direct sales function.

<sup>1</sup> <https://eepliant.eu/index.php/newsletters/170-2nd-newsletter-including-graphs-complete>

<sup>2</sup> <https://eepliant.eu/index.php/new-about-eepliant/about-eepliant-2>

## 2 Legislative context

Products covered by the so-called New Approach Directives and other pieces of EU harmonisation legislation must comply with relevant requirements in force when placed or put into service on the EU market. The New Approach Directives concern either specific groups of products (for example machinery, energy-related products, including refrigerating appliances having a direct sales function) or risks and phenomena (noise emissions, electromagnetic compatibility). In addition, some products are subject to energy labelling requirements. A product may therefore be subject to different legislation and must meet all relevant requirements. It is the responsibility of the suppliers to assess which directives and regulations apply to the product in question. The term 'suppliers' includes:

- Manufactures established in the EU.
- Importers (by definition established in the EU), where the manufacturer is not established in the Union.
- Authorised representatives (by definition established in the EU) who have a written mandate from the manufacturer designating the authorised representative to perform the tasks set out in relevant legislation on the manufacturer's behalf.

It must be emphasised that an installer who purchases a product directly from outside the EU (not from an EU-based entity) and installs it in the EU market becomes a supplier and must comply with all its obligations.

The subject matter and scope of the requirements depend on the product type and are laid down in regulations relevant for the specific product. These may include both technical and performance requirements, as well as information requirements. Requirements for materials used in manufacturing may also be specified. Provisions of directives may be supported by harmonised standards with regard to the testing methods, design or manufacture of a particular product. Harmonised standards are cited in the Official Journal of the European Union. The application of a harmonised standard is not mandatory in most cases, and it does not usually automatically imply conformity with the corresponding requirements. However, the application of a harmonised standard shall provide for presumption of conformity of the product with the provisions of the Directive.

Suppliers are responsible for ensuring product compliance. By affixing the CE mark on the product and issuing the EU declaration of conformity, they confirm that the applicable requirements, including conformity assessment procedures, were met. Suppliers are also required to compile technical documentation for conformity assessment, which can be requested by MSAs.

### 2.1 Refrigerating appliances having a direct sales function

This document concerns refrigerating appliances having a direct sales function and focuses on the related Ecodesign and Energy Labelling requirements.

#### 2.1.1 Ecodesign - requirements and conformity assessment

The framework for Ecodesign requirements for energy-related products is established in the Directive 2009/125/EC and the specific Ecodesign requirements for refrigerating appliances having a direct sales function are set out in Regulation (EU) 2019/2024 and subsequent amendments made by Regulation (EU) 2021/341.

The applicable conformity assessment procedures specified in the Directive and Regulation are the internal design control system or the management system. Both procedures are described respectively in Annex IV and V of the Directive. None of these procedures requires involvement of a

notified body in the process, which means that the manufacturer itself assesses the conformity of the product with the requirements, carries out (or commissions to an external testing laboratory) measurements of the Ecodesign requirements, and declares on its sole responsibility that the product meets the requirements.

Regulation (EU) 2019/2024, and subsequent amendments, requires that the technical documentation file for conformity assessment should be compiled in accordance with Annex IV to Directive 2009/125/EC and sets out additional elements specific for refrigerating appliances having a direct sales function to be included in the documentation. For more details refer to paragraph 4.1. In article 5 and Annex IV, the Regulation sets out details of the verification procedure for market surveillance purposes, including verification tolerances to apply in compliance testing.

### 2.1.2 Energy labelling - requirements and conformity assessment

The framework for energy labelling is set in Regulation (EU) 2017/1369 which repealed Directive 2010/30/EU, while the specific energy labelling requirements for refrigerating appliances having a direct sales function are defined in Regulation (EU) 2019/2018 and its subsequent amendments made by Regulations (EU) 2021/340 and (EU) 2023/2048. The Regulation (EU) 2019/2018 sets out the details of the verification procedure for market surveillance purposes in its Annex IX.

## 2.2 Market surveillance

Given that the features and performance data of refrigerating appliances having a direct sales function related to Ecodesign and Energy Labelling requirements are provided by manufactures in a form of self-declaration, independent product checking is very important. This role is performed by market surveillance authorities, which are designated by the Member States. A list of national market surveillance authorities can be found on [https://single-market-economy.ec.europa.eu/single-market/goods/building-blocks/market-surveillance/organisation\\_en](https://single-market-economy.ec.europa.eu/single-market/goods/building-blocks/market-surveillance/organisation_en).

Market surveillance protects not only the interests of product users, but also of the manufacturers, ensuring a level playing field in the market. An efficient control system stops dishonest companies from cutting corners on product safety, efficiency or tests related to conformity assessment. In other words, market surveillance is crucial for the smooth functioning of the Single Market, and it protects businesses from unfair competition by those who ignore the rules.

The framework for market surveillance and compliance of products is laid down in Regulation (EU) 2019/1020. To enforce Union harmonisation legislation and ensure that it is fully complied with, Member States organise and carry out market surveillance and designate market surveillance authorities in their territory. Member States also ensure that their market surveillance authorities have the necessary resources, including sufficient budgetary and sufficient competent staff, procedures, and other arrangements for the proper performance of their duties.

EU market surveillance legislation provides:

- clear and uniform rules applying to non-food products and economic operators
- requirements (infrastructure, organisation, legal powers, etc.) to ensure that market surveillance can cope with enforcing EU legislation
- streamlined market surveillance procedures for controlling products within the EU and at its borders (import controls)



### 2.2.1 What are the activities and responsibilities of MSA authorities?

Market surveillance authorities perform appropriate checks of products by means of documentary checks and, where appropriate, physical and laboratory checks based on adequate samples.

Refrigerating appliances with a direct sales function, except stand-alone products, are part of refrigerating systems, and their actual performance strongly depends on the system characteristics. Therefore, contrary to typical stand-alone 'plug and play' products, the compliance monitoring for these products also needs to take into account putting into service, which must be carried out by a professional installer according to the manufacturer's instructions.

Market surveillance authorities in each Member State individually decide on which checks to perform, for which types of products and on what scale. In this decision they take into account factors such as possible hazards and non-compliance associated with the products, their occurrence on the market, consumer complaints and other information received from other authorities, economic operators, media and other sources that might indicate non-compliance. This action should be designed to achieve the greatest impact on the market. **This means that the approach to the compliance check of refrigerating appliances having a direct sales function may considerably vary in different Member States. However, best practices developed by some of the market surveillance authorities that may be of benefit to other market surveillance authorities should be identified and reported in the EU MSA network.**

The correctness of product marking and its technical documentation may be subject to control in the first instance. In particular, the EU Declaration of Conformity (see also paragraph 5) is an important document for market surveillance authorities. If the findings of the check indicate that the product does not meet the essential requirements, further administrative proceedings are to be initiated.

Market surveillance authorities have power particularly to:

- require suppliers to provide relevant documents, technical specifications, data or information on compliance and technical aspects of the product, including access to embedded software,
- require suppliers to provide relevant information on the supply chain, on the details of the distribution network, on quantities of products on the market and on other product models that have the same technical characteristics as the product in question,
- carry out unannounced on-site inspections and physical checks of products, at both production facilities and in the field,
- enter any premises, land or means of transport that the economic operator in question uses to identify non-compliance and to obtain evidence,
- start own-initiative investigations to identify non-compliances and bring them to an end,
- impose penalties on a non-compliant supplier in accordance with rules laid down by a Member State,
- acquire product samples, including under a cover identity, to inspect those samples and to reverse engineer them in order to identify non-compliance and to obtain evidence.

Market surveillance authorities may require a supplier to reclaim the costs of actions taken in relation to cases of non-compliance. These may include the cost of carrying out testing, costs of storage and costs of other activities relating to products found to be non-compliant.

When market surveillance authorities find that a product does not comply with the applicable requirements of Union harmonisation legislation, they require the relevant supplier to take appropriate and proportionate corrective action to eliminate the non-compliance. If the supplier (economic operator) fails to take corrective action or the non-compliance persists, market surveillance authorities may evaluate that the product is withdrawn or its availability on the EU market is prohibited or restricted, please refer to chapter 6 for more details.

### 2.3 EPREL

The European Product Registry for Energy Labelling (EPREL) and the obligation for suppliers to register products in it was introduced by Regulation (EU) 2017/1369. One of EPREL's objectives is to support market surveillance authorities in carrying out their tasks in monitoring compliance. The other task is to provide the public with information about products placed on the market with regard to their energy labels and product information sheets. The database is also helpful in providing up-to-date market data for the regulatory process on revisions of product-specific labels and information sheets.

EPREL is therefore intended to comprise two parts: the compliance part, accessible only to market surveillance authorities and including technical information for the compliance control, and the public part accessible by the online portal, as well as by scanning the QR code on the energy label. This part includes only information derived from the Energy Label and partly from the product information sheet. The public EPREL website for citizens was officially launched in May 2022 at <https://eprel.ec.europa.eu/>.

The obligation to register the product in EPREL before placing on the EU/EEA market is in force since 2019. It applies to suppliers of products that require an energy label. These include refrigerating appliances having a direct sales function, which represent the vast majority of registered products, as can be seen in the figure below.

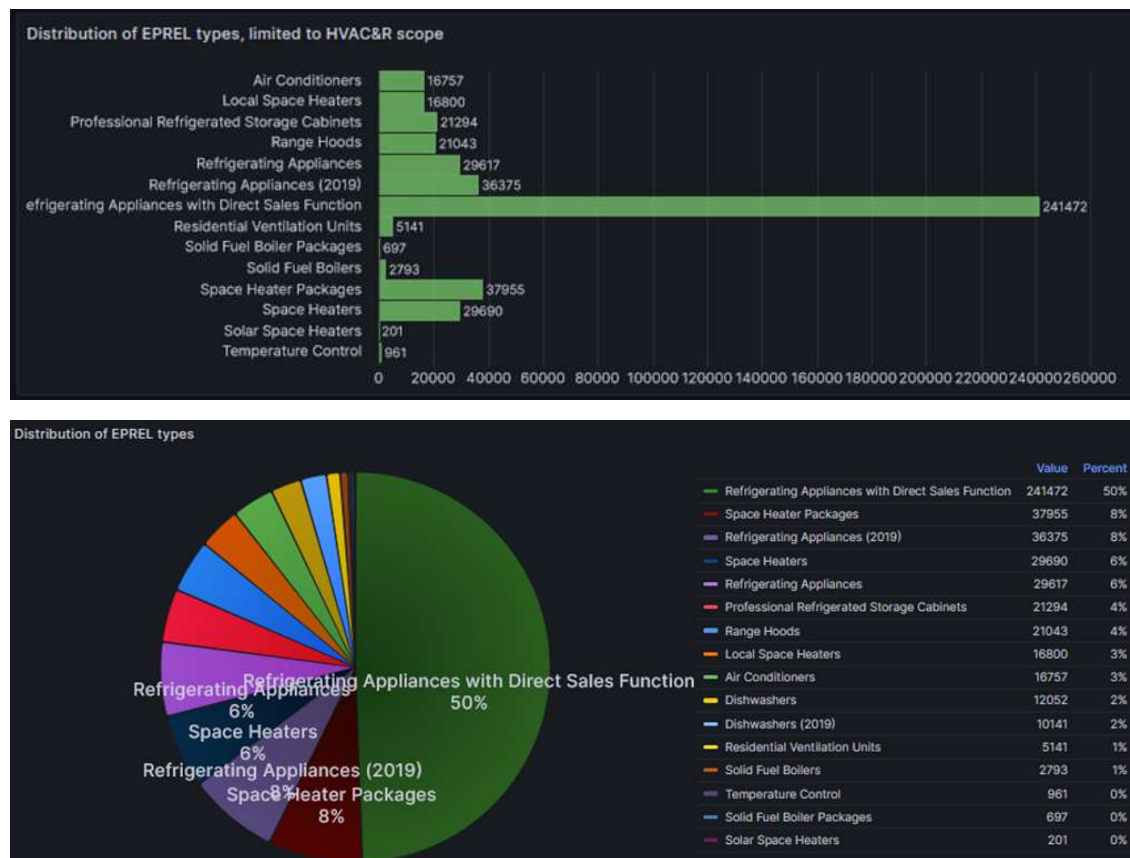


Figure 1: Distribution of EPREL registered products as of 10 May 2023

The mandatory specific parts of the technical documentation that the supplier shall upload to EPREL cover:

- a general description of the model, sufficient for it to be unequivocally and easily identified,
- references to the harmonised standards applied or other measurement standards used or testing conditions if not described sufficiently in standards,
- specific precautions that shall be taken when the model is assembled, installed, maintained or tested,
- the measured technical parameters of the model,
- the calculations performed with the measured parameters.

The Eurovent Product Group 'Commercial Refrigeration Equipment' has also asked the European Commission to add these additional filters to the search engine of the public website of the EPREL database:

- Total Display Area
- Temperature Performance Classes.

On a voluntary basis, the supplier can also upload additional parts of the technical documentation file for conformity assessment.

EPREL is the latest but not the only tool used by MSAs for information exchange. One of them is [ICSMS](#) (Information and Communication System for Market Surveillance) which is a comprehensive communication platform for market surveillance on products and for mutual recognition for goods. This system provides information on non-compliant products (test results, product identification data, economic operator information, information on measures taken by surveillance authorities etc.) to be quickly and efficiently shared between authorities. The other is [RAPEX](#) (Rapid Exchange of Information System) which is the EU rapid alert system for unsafe consumer products including potentially harmful ingredients or posing a risk to the user (like electric shock or ignition hazard) due to technical faults.

### 2.3.1 Placing on the market

According to the Eurovent Recommendation 14-6<sup>3</sup>, different cases of determining the time of placing on the market are foreseeable.

#### 2.3.1.1 Incomplete Delivery

Eurovent contributed to the development of a dedicated assessment of incomplete deliveries because it can happen that a supermarket dealer wants to buy an incomplete refrigerating cabinet without certain components (notably without lights, doors and/or shelves) and customise it afterwards. For clarification, please refer to the official [FAQ](#) published by the European Commission in December 2024 and the Eurovent Recommendation 14-8<sup>4</sup>.

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<sup>3</sup> Eurovent AISBL / IVZW / INPA. (2020). Eurovent 14/6 - 2022 - Interpretation of Regulation (EU) 2019/2018 and of Regulation (EU) 2019/2024. Brussels: Eurovent.  
<https://www.eurovent.eu/publications/eurovent-14-6-2022-interpretation-of-regulation-eu-2019-2018-and-of-regulation-eu-2019-2024/>

<sup>4</sup> Eurovent AISBL / IVZW / INPA. (2025). Eurovent 14/8 - 2025 - Understanding the Commission FAQ on incomplete deliveries. Brussels: Eurovent.  
<https://www.eurovent.eu/publications/eurovent-14-8-understanding-the-european-commissions-faq-on-incomplete-deliveries/>

**KEY LEARNING POINTS**

- The supplier, which may be the manufacturer, importer or authorised representative, is responsible for the compliance of the product.
- Based on the conformity assessment procedure, including testing, the supplier declares compliance by affixing the CE mark on the product and issuing the EC declaration of conformity.
- The conformity assessment procedure for refrigerating appliances having a direct sales function does not require involvement of an accredited third-party, which means that the supplier takes sole responsibility for the declared product data and its compliance with the requirements.
- Monitoring of compliance of refrigerating appliances having a direct sales function placed on the EU market is the task of Market Surveillance Authorities (MSA) in Member States.
- Different options of determining the time of placing on the market are foreseeable for refrigerating appliances having a direct sales function.
- In case of incomplete delivery, if a refrigerating cabinet without doors does not comply with the minimum Ecodesign requirements set out in Annex II to Regulation (EU) 2019/2024 it cannot be placed on the market or put into service..
- Effective market surveillance is essential to achieve the underlying environmental objectives of Ecodesign and Energy Labelling requirements. It is also necessary to protect the interests of product users, but also of the manufacturers, ensuring a level playing field in the market.

### **3 Products in the scope of this Recommendation and Regulations (EU) 2019/2024 and 2019/2018**

#### **3.1 Products in scope of this Recommendation**

Electric mains-operated refrigerating appliances with a direct sales function, including appliances sold for refrigeration of items other than foodstuffs, specifically:

- Supermarket refrigerating (freezer or refrigerator) cabinets
- Beverage coolers
- Ice-cream freezers

Refrigerated vending machines are also in the scope of the Regulation but not included in the scope of this Recommendation.

##### **3.1.1 Testing standards for refrigerating appliances with a direct sales function**

Refrigerating appliances having a direct sales function are tested according to:

- EN/ISO 23953-1-2 (Supermarket equipment)
- EN/ISO 22043 (Ice-cream freezers)
- EN/ISO 22044 (Commercial beverage coolers)
- EN/IEC 63252 (Refrigerated vending machines – not in the scope of this Recommendation)

The above-listed standards provide clear testing methods on how to test, measure, and calculate the product performances and energy consumption.

### 3.2 Products not in scope of the Regulations

- Refrigerating appliances with a direct sales function that are only powered by energy sources other than electricity
- The remote components, such as the condensing unit, compressors or water condensed unit, to which a remote cabinet needs to be connected in order to function
- Food processing refrigerating appliances with a direct sales function
- Refrigerating appliances with a direct sales function specifically tested and approved for the storage of medicines or scientific samples
- Refrigerating appliances with a direct sales function that have no integrated system for producing cooling, and function by ducting chilled air that is produced by an external air chiller unit; this does not include remote cabinets, nor does it include category 6 refrigerated vending machines, as defined in Table 5 of Annex III
- Professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers as defined in Regulation (EU) 2015/1095
- Wine storage appliances and minibars

### 3.3 Products covered by the resource efficiency and information requirements only

Eurovent holds that the requirements in points 1 and 3(k) of Annex II of Regulation (EU) 2019/2024 as well as those of Regulation (EU) 2019/2018 do not apply to the products not assessed or covered by any applicable standard.

It is not possible to calculate the standard energy consumption of the products (including those newly introduced to the market) not assessed within the above-mentioned standards.

Eurovent re-states that according to the Annex II of the Regulation (EU) 2019/2024, the below-listed products are to be considered as covered only by the requirements in points 2 and 3 (not including point k) of:

- Refrigerating appliances with a direct sales function that do not use a vapour compression refrigeration cycle
- Refrigerating appliances with a direct sales function for the sale and display of live foodstuffs, such as refrigerating appliances for the sale and display of living fish and shellfish, refrigerated aquaria and water tanks
- Saladettes
- Horizontal serve-over counters with integrated storage designed to work at chilled operating temperatures
- Corner cabinets
- Serve-over fish counters with flaked ice
- Backwall cabinets (remote and integral units, chilled and frozen) with integrated refrigerated reserve spaces having a compartment volume  $\geq 100$  l/m

- Fruit, vegetables or meat chilled cabinets (vertical and horizontal) using humidification systems
- Curved cabinets:
  - o resulting from the assembly of several corner cabinets (e.g. 30° - 45° - 90°)
  - o single-frame cabinets not mechanically separable into a linear part plus a corner not having a recognisable longitudinal axis.

**KEY LEARNING POINTS**

- Ecodesign and Energy Labelling requirements for refrigerating appliances with a direct sales function are laid down respectively in Regulation (EU) 2019/2024 and Regulation (EU) 2019/2018
- The regulations provide definitions of unit types covered by the requirements and the exclusions.
- The Regulations deal only with electric mains-operated units.
- For some products, only resource efficiency and information requirements are mandatory

## 4 Supplier's obligations resulting from Ecodesign and Energy Labelling Regulations

The specific Ecodesign and Energy Labelling requirements for refrigerating appliances with a direct sales function are respectively set out in Regulation (EU) 2019/2024 and Regulation (EU) 2019/2018 (and subsequent amendments). The scope, exemptions and definitions are the same for both regulations, and their requirements are interrelated.

The supplier of a refrigerated display cabinet with a direct sales function within the scope of regulations must comply with:

- Specific Ecodesign requirements.
- Information requirements.
- Energy Labelling requirements.

### 4.1 Supplier obligations

The supplier must ensure that the refrigeration appliance with a direct sales function placed on the market complies with the requirements established by the Regulations. To this end, the supplier has to follow a conformity assessment procedure using either the design control system or the management system for assessing conformity (see also paragraph 2.1.1). In case of the design control system, these measures involve at least the following.

#### 4.1.1 Supplier obligations as regards documentation

Establishing the technical documentation file that enables to assess the conformity of the refrigeration appliance with a direct sales function with requirements. The documentation must contain:

- a general description of the product and of its intended use.
- product design specification relating to Ecodesign aspects of the product.
- a list of the appropriate harmonised standards applied (fully or partly) or a description of the solution adopted to meet requirements if the harmonised standards were not applied or not available.

- the results of measurements and calculations on the Ecodesign requirements carried out, including details of compliance with the requirements. Calculation of the energy efficiency index (EEI) requirement must be carried out in accordance with Annex III to Regulation (EU) 2019/2024.
- set of product information according to annex II to Regulation (EU) 2019/2024 (the scope of information requirements is outlined in paragraph 4.2).

Where the information included in the technical documentation for a particular model was obtained by calculation based on design, or extrapolation from other units, or both, the technical documentation should include details of such calculations and/or extrapolations, and details of tests undertaken by manufacturers to verify the accuracy of the calculations and extrapolations. When extrapolation rules are not defined by international standards (e.g. ISO 23953) it is suggested to carefully check the extrapolation methods explained by the manufacturer because the non-existence of a standard implies high risk of mistakes due to difficulty of the development of an extrapolation rule.

The supplier must keep relevant documents, relating to the conformity assessment performed and declarations of conformity issued, available for inspection by Member States for a period of 10 years after the last of that product has been manufactured.

There are no specific requirements as to the form of the documentation, but it can be generally assumed that the better the quality and consistency of the conformity assessment documentation drawn up by the supplier, the lower the risk of non-compliance. It should be also noted that the measurements documentation, that may typically consist of several test reports, should contain summary and conclusions demonstrating compliance.

#### 4.1.2 Supplier obligations as regards manufacturing

The manufacturer should take all measures to ensure that the refrigeration appliance with a direct sales function is produced in compliance with the design specification of technical documentation and with Ecodesign requirements set out in Regulation (EU) 2019/2024 and subsequent amendments.

The above provision, which stems directly from Directive 2009/125/EC, means that the manufacturer has complete freedom to choose how to manage production and its quality so that compliance of the product is ensured. However, given the complexity of refrigeration appliance with a direct sales function manufacturing, Eurovent holds that the minimum measure to ensure compliance should be the implementation and operation in accordance with a standardised quality management system (e.g., EN ISO 9001 or similar adequate internal quality management system). Usually, manufacturers adopt a conformity to the "type" as per CE marking Directives and Regulations, so one product similar or identical to the one in production is tested and the quality system ensures the conformity of the whole production.

The quality system shall anyway ensure proper management of CE declaration and adherence of production models, as labelled, on the product to the product type subject to testing or certification according to their CE declaration.

## 4.2 Information requirements

In addition to complying with specific Ecodesign requirement on the product performance and design, the refrigeration appliance with a direct sales function's manufacturer must provide product information covering several items which are listed in Annex II to Regulation (EU) 2019/2024.



All required information must be available in the instruction manuals for installers and end-user of refrigeration appliance with a direct sales function, on free access websites of manufacturers, their authorised representatives and importers, and be included in the technical documentation file for conformity assessment (see also paragraph 4.1). The information presented on free access websites, including the energy label, must be identical to the information in the technical documentation and must contain detailed instructions for repair and maintenance.

According to both EU Regulations, 2019/2024 and 2019/2018, the technical characteristics and information of the unit subject to requirements should be measured and calculated using reliable, accurate and reproducible methods which take into account recognised state-of-the-art measurement and calculation methods, including, where available, harmonised standards adopted by the European standardisation bodies. Application of these methods, outlined hereafter, provides a presumption of conformity of the tests with the letter of the regulation. Furthermore, these methods are used by accredited laboratories, also for the compliance check tests commissioned by the MSAs.

The standard EN/ISO 23953-2:2023 is expected to be cited on the Official Journal of the European Union in the course of 2024 to give presumption of conformity, annexes ZA and ZB of the standard should/will state:

## **ECODESIGN**

European Standard has been prepared under a Commission's standardization request M/582 C(2022) 2764 final to provide one voluntary means of conforming to the ecodesign requirements of Commission Regulation (EU) No 2019/2024 of 1st October 2019 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for refrigerating appliances with a direct sales function OJEU L 315/313 5th December 2019 keeping into account the amending Commission Regulation (EU) 2021/341 of 23 February 2021 OJEU L 68/108.

## **ENERGY LABELLING**

European Standard has been prepared under a Commission's standardization request M/582 C(2022) 2764 final to provide one voluntary means of conforming to the energy labelling requirements of Commission Delegated Regulation (EU) No 2019/2018 of 11th March 2019 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of refrigerating appliances with a direct sales function OJEU L 315/155 5th December 2019 keeping into account the amending Commission Regulation (EU) 2021/340 of 17 December 2020 OJEU L 68/108.

### **4.2.1 Measured values**

The parameters to be measured provide the necessary basis for confirming compliance with Ecodesign requirements. They are also necessary for determining the EEI value to be calculated.

Third party certification of a product is not required by legislation, but a quality system must give traceability and repeatability of measurements. Due to the very limited accredited third-party laboratories resources, usually the manufacturers carry out tests in their own professional measuring laboratory with traceability on measuring equipment and methods, and on several occasions do additional verifications in an accredited third-party laboratory. Therefore, the use of an ISO 17025 accredited laboratory is a mean to best prove reliable and comparable quality of tests results. In that case the name of the testing laboratory and report number must be specified in the documentation.

Refrigerating appliances having a direct sales function in scope of this recommendation are tested according to the latest edition of:

- EN/ISO 23953-1-2 (Supermarket equipment)
- EN/ISO 22043 (Ice-cream freezers)
- EN/ISO 22044 (Commercial beverage coolers)

The above-listed standards provide clear testing methods on how to test, measure, and calculate the product performances and energy consumption.

It is not possible to calculate the standard energy consumption of the products (including those newly introduced to the market) not assessed within the above-mentioned standards.

#### 4.2.2 Calculated values

The main value to be calculated is the energy efficiency index (EEI). The method of calculating EEI is set out in Annex III to Regulation (EU) 2019/2024.

Also, general conditions for testing are provided:

- the ambient conditions shall correspond to Set 1, except for ice-cream freezers and gelato-scooping cabinets which shall be tested in ambient conditions corresponding to Set 2, as set out in the table below;
- (b) where a compartment can be set to different temperatures, it shall be tested at the lowest operating temperature;
- (d) for beverage coolers, the specified cooling speed shall be according to the half reload recovery time.

**Table 1: Ambient conditions**

	Dry bulb temperature, °C	Relative humidity, %	Dew point, °C	Water vapour mass in dry air, g/kg
Set 1	25	60	16,7	12,0
Set 2	30	55	20,0	14,8

For all refrigerating appliances with a direct sales function, the EEI, expressed in % and rounded to the first decimal place, is the ratio of the AE (in kWh/a) and the reference SAE (in kWh/a). AE is the annual energy consumption and means the average daily energy consumption multiplied by 365 (number of standard days per year), expressed in kilowatt hour per year (kWh/a). SAE is the standard annual energy consumption and means the reference annual energy consumption of a refrigeration appliance with a direct sales function, expressed in kilowatt hour per year (kWh/a).

The AE, expressed in kWh/a and rounded to two decimal places, is calculated as follows:

$$AE = 365 \times E_{daily}$$

$E_{daily}$  is the energy consumption of the refrigerating appliance with a direct sales function over 24 hours, expressed in kWh/24h and rounded to three decimal places.

The SAE is expressed in kWh/a and rounded to two decimal places. Its formula varies between refrigerating appliances with a direct sales function with all compartments having the same temperature class and refrigerating appliances with a direct sales function with more than one compartment having different temperature classes.

**Table 2: SAE formulas**

refrigerating appliances with a direct sales function with all compartments having the same temperature class	$SAE = 365 \times P \times (M + N \times Y) \times C$
refrigerating appliances with a direct sales function with more than one compartment having different temperature classes	$SAE = 365 \times P \times \sum_{c=1}^n (M + N \times Y_c) \times C_c$

### Deviations between the Regulation and current EN 23953-2 standard

It is important to note that currently there is a deviation between the terminology adopted by the Regulation and the standards in force. This is clarified also in the Annex ZA and ZB of the standard EN/ISO 23953-2:  $E_{daily} = E_{TEC}$ ;  $TDA = S_{TDA}$ ;  $Y = TDA$ .

#### 4.2.2.1 Coefficients

- $c$  is the index number for a compartment type ranging from 1 to  $n$ , with  $n$  being the total number of compartment types
- $M$  and  $N$  are modelling parameters that take into account the total display area or volume-dependence of the energy use.  $M$  and  $N$  depend on the category of the refrigerating appliances with a direct sales function. The values of  $M$  and  $N$  are given in Table 4 of Annex III to the Regulation 2019/2024
- $C$  is a correction factor that accounts for the difference in operating temperature. The temperature coefficient  $C$  depends on the category of the refrigerating appliances with a direct sales function, the temperature class, the highest and lowest temperature of the warmest and coldest M-package respectively and the highest minimum temperature of all M-packages. The value of  $C$  is determined in the table 5 of Annex III to the Regulation 2019/2024
- 'M-package' means a test package fitted with a temperature measuring device
- Coefficient  $Y$  has different calculation formula and different meaning depending on the type of the refrigerating appliances with a direct sales function. For example, the  $Y$  coefficient for all the refrigerating appliances with direct sales function, except beverage coolers, ice-cream freezers and refrigerated vending machines, means the sum of the TDA of all compartments of the same temperature class of the refrigerating appliance with a direct sales function, expressed in square meters ( $m^2$ ), and rounded to two decimal places
- TDA is the 'total display area' and means the total visible foodstuffs and other items area, including visible area through glazing, defined by the sum of horizontal and vertical projected surface areas of the net volume, expressed in square meters ( $m^2$ ). TDA can be difficult in face of practical geometry of appliances. **Detailed definition and calculation procedure of TDA is provided in the relevant standard EN/ISO 23953-2 Annex A.**

### 4.2.3 Extrapolated values

The Ecodesign Regulation in article 4, point 3b allows the manufacturer to provide energy consumption and EEI data based on calculations and extrapolations. Specifically, for refrigerating display cabinets the Annex D of the standard EN/ISO 23953-2:2023 added a significant new chapter to extrapolation rules due to the huge number of models only different in one dimensional size, like length or height as well as other extrapolation rules.

- The standard configuration defines the configuration to be used to perform tests, particularly the test for reference model, for the benefit of repeatability, decrease the number of potentially different models, to ease comparison and standardise the entry into extrapolation methods. The standard configuration fixes some geometrical parameter available in a range, the accessories to be used among the available ones, some setting or product configuration in the hand of the end-user [e.g. shelf position].
- Alternate components: Annex D of EN/ISO 23953-2 defines a methodology to calculate daily energy consumption when alternate electrical components are used. The result of this calculation is identified by “Total Revised Refrigeration Energy Consumption” (TECR).
- Length, delta front opening and delta depth extrapolation rules.

A typical calculation and extrapolation flow is the following:

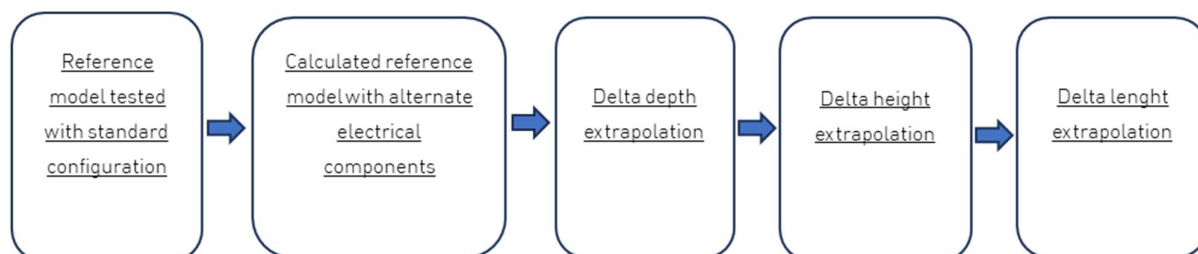


Figure 2: calculation and extrapolation flow

### 4.2.4 Additional clarification

Concerning horizontal combined chilled cabinets having two or more separate horizontal refrigerated chest one over the other, Eurovent holds that the M/N coefficients to be used are the same as for horizontal chilled products.

### 4.3 Energy Labelling requirements

Under the requirements for Energy Labelling set out in Regulation (EU) 2019/2018 each electric mains-operated refrigerating appliances with a direct sales function, including appliances sold for refrigeration of items other than foodstuffs, placed on the EU market must be accompanied by a printed label, which must be provided at least in the packing of the unit. This responsibility lies with the suppliers (manufacturers, importers or authorised representatives).

**It is important to always refer to the model identifier (Item III on the label) to correctly identify the equipment on the EPREL database.**

#### 4.3.1 Obligations of suppliers

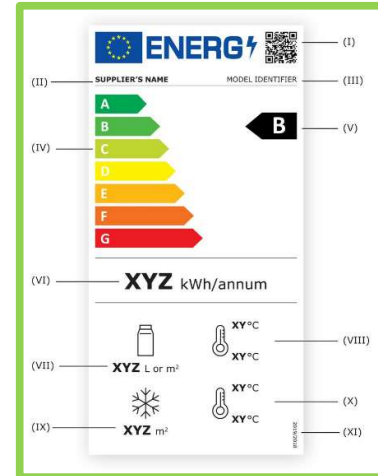
In addition to the label, the supplier must provide a product fiche, in accordance with Annex V and VI to the Regulation 2019/2018, which must be entered into the product database at least and supplied in printed form (the product information sheet) if specifically requested by the dealer.

Additional provisions for suppliers are:

- any visual advertisement for a specific model of a refrigerating appliance with a direct sales function contains the energy efficiency class and the range of energy efficiency classes available on the label, in accordance with Annex VII to the regulation 2019/2018;
- any technical promotional material or other promotional material concerning a specific model of refrigerating appliances with a direct sales function, including technical promotional material or other promotional material on the internet, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII and Annex VIII to the regulation 2019/2018;
- an electronic label in the format and containing the information, as set out in Annex III to the regulation 2019/2018, shall be made available to dealers for each refrigerating appliance with a direct sales function model;
- an electronic product information sheet, as set out in Annex V to the regulation 2019/2018, is made available to dealers for each refrigerating appliance with a direct sales function model.

Further to the above requirements for suppliers, the Regulation sets out responsibilities of dealers (Article 4) and internet hosting platforms (Article 5).

The market surveillance authorities may require a supplier to make available the technical documentation set out in Annex V and VI.



**Figure 3: label for refrigerating appliance with a direct sales function, except beverage coolers and ice-cream freezers**

**KEY LEARNING POINTS**

- The supplier of a refrigerating appliances with a direct sales function must comply with specific Ecodesign, information and Energy Labelling requirements.
- Harmonised standards are already or soon will be available on the market to give presumption of conformity to the Regulations.
- The specific Ecodesign requirements include the performance parameters and design of the unit. To ensure that a unit placed on the EU market meets the requirements, the supplier must carry out a conformity assessment procedure, and produce the appropriate technical documentation that allows verification of compliance by MSAs. Appropriate manufacturing requirements must also be met to ensure that the unit is manufactured in accordance with the design specification of the technical documentation.
- In accordance with Energy Labelling requirements, each unit placed on the EU market must be accompanied by a printed label presenting its energy efficiency class and other Ecodesign performance characteristics.
- Missing energy labels and registration on EPREL are examples of highly relevant non-conformities, and complying with the documentation requirements is expected, therefore appropriate and proportionate measures for deviations can be applied by MSAs.
- The parameters of the product information sheet, set out in Annex V, and the contents of the technical documentation, set out in Annex VI, must be entered in the product database.

## 5 EU Declaration of Conformity

The EU declaration of conformity (DoC) is a mandatory document that a manufacturer or its authorised representative need to sign to declare that the products comply with the EU requirements. By signing the DoC the manufacturer or authorised representative takes full responsibility for product's compliance with the applicable EU law.

The EU declaration of conformity should contain the following information:

- The name and address of the manufacturer or of its authorised representative.
- Description of the model sufficient for its unambiguous identification. It may include a colour image of sufficient clarity to enable the identification of the product.
- The relevant legislation with which the product complies (e.g. Ecodesign Directive 2009/125/EC).
- References of the harmonised standards applied and/or other technical standards and specifications used.
- The identification and signature of the person empowered to bind the manufacturer or its authorised representative.
- The date the declaration was issued.

### KEY LEARNING POINTS

- The manufacturer of a refrigerating appliance with a direct sales function or its authorised representative must issue the EU declaration of conformity which attest that the product meets all the applicable EU requirements, and that the manufacturer/representative takes responsibility for the product's compliance.
- The manufacturer shall ensure that the model or "type" tested conform to the manufactured product.

## 6 Effective monitoring of compliance by MSA

This chapter provides suggestions and hints of Eurovent members on measures which might be helpful in improving the effectiveness of market surveillance and facilitate identification of high-risk non-compliant products on the market.

### 6.1 Checking procedure

Regarding the check procedure for refrigerating appliances with a direct sales function, it is recommended that the checks may range from the simple documentation control to the full test of the appliance, in the freedom of the Market Surveillance Authorities operation.

Meanwhile, Eurovent recommends checking on field whether all appliances installed in a selected field installation, trade fairs, showrooms (except prototypes and products not yet placed on the market) etc. are registered in the EPREL database. Therefore, MSAs should carry out field inspections and check if cabinets can be traced back to the relevant EPREL registrations with either the unequivocal product identifier labelled on the cabinet or with the cabinet series number from the type plate (MSA to contact to the manufacturer to get the EPREL identifier for the specific series number).

To do a valuable control of the documentation, it is important that the MSA has the required knowledge and expertise in testing of refrigerating appliances with a direct sales function.

In general, the screening procedure to identify high risk non-compliance products for further testing, should be focused on models:

- with very low EEL compared to other units of the same type and size,
- for which the data in EPREL or on the manufacturer's website is incomplete or incorrect,
- with low availability and quality of test reports from the manufacturer,
- with general bad quality of mandatory information,
- with problems of getting requested documents from the manufacturer,
- from manufacturers that have already shown non-compliance in past examination,
- taking into proper account evidence of non-conformities coming from external sources

When screening the documentation, it is expected that the most commonly test verified non-compliances include the following parameters (in order of prevalence):

- Missing energy label and registration on EPREL website
- Coherence with energy label data, the declared temperature class
- TDA correctness, inclusion of sidewall TDA
- The temperature declared on the label shall be the smallest achievable. E.g., if the instruction refers to performances at 3M1 the label cannot be referred to performances at 3M2.

Refrigerating appliances with a direct sales function are products customised for the consumer's needs. Therefore, to ensure a more smooth and efficient process, Eurovent proposes the following approach.

Before testing an appliance, it is recommended involving the manufacturer in the correct installation and set-up of the unit because it requires highly skilled technicians.



If a unit does not comply with the tolerances set out in table 11 in ANNEX IV '**Verification procedure for market surveillance purposes**' during the test, additional three-unit test is usually performed. As an alternative, the three additional units selected may be of one or more equivalent models.

It is recommended that the manufacturer is confronted with the test result with a chance to comment it.

The manufacturer can ask the MSA a repetition of the test on the failed unit in an ISO 17025 accredited laboratory or at his premises before the production of three additional units (this because refrigerating appliances with a direct sales function are manufactured at request and not available in stock).

Parameters	Verification tolerances
Net volume, and net compartment volume where applicable	The determined value <sup>(*)</sup> shall not be more than 3 % or 1 L lower — whichever is the greater value — than the declared value.
Gross volume, and gross compartment volume where applicable	The determined value <sup>(*)</sup> shall not be more than 3 % or 1 L lower — whichever is the greater value — than the declared value
TDA, and compartment TDA where applicable	The determined value <sup>(*)</sup> shall not be more than 3 % than the declared value.
$E_{daily}$	The determined value <sup>(*)</sup> shall not be more than 10 % higher than the declared value
AE	The determined value <sup>(*)</sup> shall not be more than 10 % higher than the declared value.

<sup>(\*)</sup> in the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.

**Figure 4: verification tolerances as defined in Annex IV to regulation 2019/2024**

### 6.1.1 Selection of appliances for documentation check

To select the refrigerating appliances with a direct sales function for documentation check, EPREL alone is not enough. Some products are in the scope of Ecodesign but not covered by Energy Labelling requirements, and therefore are not subject to EPREL mandatory publication.

Additionally, the database may not cover the entire market because some manufacturers do not register their products even if it is mandatory.

The Market Surveillance Authority can contact the manufacturer if the energy label has been removed after the product has been installed and if the model is not reported on the nameplate to trace back to the model declared on the EPREL database.

The selection of the product to be verified should take into account the reliability and quality of the data provided, if the data are certified by qualified independent third parties, based on internal existing testing laboratories or self-declared without supporting test data.

### 6.1.2 Selection of appliances for laboratory test

The selection of refrigerating appliances with a direct sales function for physical testing can be done in different ways. The cost for buying the units is often high, which is why the MSAs often decide to get the unit directly from the manufacturer.

When MSAs select a cabinet for a laboratory validation test, the manufacturer should be contacted to clarify the standard test configuration; a (remote) refrigerated display in most cases cannot simply be ordered off the shelf, so manufacturer has to be involved in the ordering process. Eurovent suggests that MSA uses the manufacturer's contact as per the the EPREL registration.

During the product's test, the relevant test laboratory should contact the manufacturer for the correct setup; also experts from the manufacturer should be invited to validate the correct test setup before starting the official test. This will reduce additional testing costs caused by incorrect setup and repetition of tests.

Since manufacturers shall ensure that products that are not placed on the market anymore are also properly indicated on the EPREL database, the MSA should check in the EPREL database if the selected model is still placed on the market before requesting the manufacturer to reproduce it.

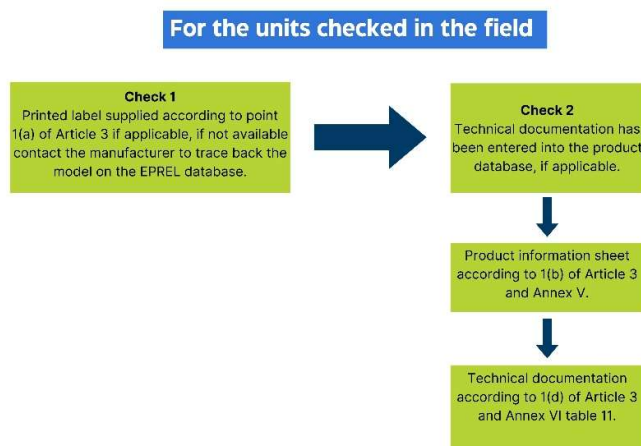
#### 6.1.2.1 Standard configuration for the test

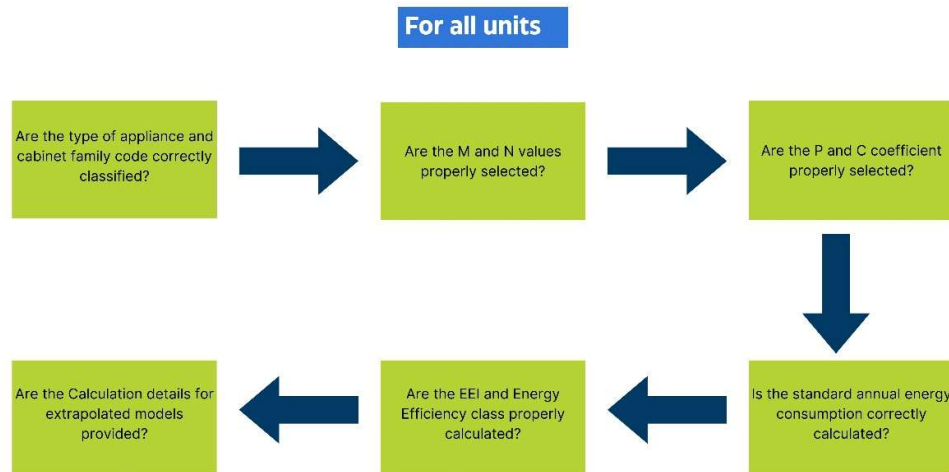
Eurovent would like to propose the approach that is briefly presented in the following and is written in the standard ISO 23953-2, Annex D for the extrapolation of length, depth, height and shelves.

As written in the standard, the values reported using the Annex D allow comparison of specific energy consumption (ESEC) of different models of commercial refrigerated display cabinets within the same product family, at the same product temperature classification, at the standard rating conditions. Furthermore, using the Annex D it is possible to compare the specific energy consumption of the same cabinet model when alternative electric components are used.

## 6.2 Documentation check to effectively identify non-compliances

Eurovent proposes a list of controls based on the Ecodesign and Energy Labelling Regulations currently in force. As stated in the previous chapters, some products are subject to Ecodesign requirements but not Energy Labelling requirements, therefore their documentation will not be present on the EPREL database. This documentation can be checked on the manufacturers' websites when public and requested directly from the manufacturers.





For units subject to Ecodesign but not to Energy Labelling requirements:  
 resource and information requirements

**Documentation to be added to EPREL Technical file (detailed from a to g):**

## EPREL TECHNICAL FILE

### EPREL technical documentation

<b>a</b>	General description	
<b>b</b>	Reference to harmonized standards	
<b>c</b>	special precautions	
<b>d</b>	measured technical parameter	
<b>e</b>	calculations	
<b>f</b>	test conditions	
<b>g</b>	additional part	

**Figure 5: documentation for EPREL database**

- a - general description: operational manual or alternative document where a general description of the product is present
- b - reference to harmonized standards: Declaration of Conformity or the references of the harmonised standards or other reliable accurate and reproducible methods applied
- c – special precautions: Eurovent interprets it as special precautions that need to be taken when testing. It is not always applicable, for example, can be used to add safety instructions for flammable refrigerants.
- d – measured technical parameter: extract from the test report used to make the assessment or as the base for the calculations.

- e – calculations: any calculation done to define the Energy Efficiency Index and class, any calculations done for extrapolations according to Eurovent Recommendation 14/6 or standards or any other internal calculations.
- f – test conditions: all the test conditions defined in the relevant standards to be applied for the testing
- g – additional part: not mandatory, everything that the manufacturer thinks that can be useful for MSAs (installation manuals for example)

### 6.2.1 Product fiche – general check

Special attention should be paid in verifying that the model on the nameplate is coherent with the model identified in the declaration of conformity and the model identified in the test report that assess the measured values. If tests are performed with a reference model different from the declared model, the connection shall be explained in the EPREL technical file.

If data are calculated/extrapolated, the used calculation rules should be clearly documented. Extrapolations should be based on a test report for a reference cabinet. If the documentation is inconsistent, MSAs should contact the manufacturer for clarifications.

The MSAs controls that the information in the product fiche is sufficient and in accordance with Annex V and VI of the Regulation (UE) 2019/2018.

### 6.2.2 Requirements for testing laboratories

Market Surveillance Authorities must ensure that the accredited laboratories according to ISO/EN 17025:2017 that will run the performance tests of the commercial refrigeration appliances with a direct sales function have in scope the standards relevant for the appliance under test:

- EN/ISO 23953-1-2 (Supermarket equipment)
- EN 16901 (Ice-cream freezers)
- EN ISO 22044:2022 (Commercial beverage coolers)

Eurovent also recommends a round robin test within the selected test laboratories to assess the tolerances between the involved laboratories.

### 6.2.3 Verification of declared data with physical testing

This chapter explains some relevant key issues for the verification of the declared data in case of the verification of the Market Surveillance Authority requires a physical test:

- be sure that stabilisation is reached. Commercial refrigeration products may have very long-time response. The standards highlight how the stabilisation has to be verified to ensure repeatability of the test;
- in case of incoherence between the declared data and the test results, detailed data should be made available to the manufacturer for the analysis (e.g. time series, heat map)
- check that the defrost method is coherent with the declared model and the testing laboratory measurements
- be sure that loading of the cabinet is done following with precision the loading methods of standards, respecting loading heights and load limit line. The loading line could be indicated on the product itself or explained in the user documentation.

**KEY LEARNING POINTS**

- MSAs should check the coherence between the declared model on the EPREL database and the actual model on the market.
- There are methods to test reference models and to apply extrapolations that need to be carefully checked when doing the assessment

## 7 Third-Party Certification

As explained in paragraph 2.1.1, the conformity assessment procedure for refrigerating appliances with a direct sales function does not require involvement of an accredited third-party and the supplier takes sole responsibility for the declared product data and its compliance with the requirements. However, each supplier can join a third-party certification programme on a voluntary basis to ensure that the data and compliance of its products are independently verified by an accredited body.

## 8 Annex I. Good Practices for Tendering: Testing & Documentation Checks

As a complement to Chapter 6, this annex presents a proposed good practice regarding tenders for test and documentation check of refrigerating appliances with a direct sales function.

Some tenders are large tenders where several MSAs in different countries go together, and some tenders are small where it is the individual country that makes a tender.

For both it is important to keep it simple both regarding the call and wish for documentation, in order to reduce the price, so the MSA gets the most test for the budget, and the additional cost is reduced, as the laboratories use large resources to prepare the offer, which influence the price.

The following are the most important comments and points concerning the tender.

**Exclusion Criteria**

- Declaration of Honour.
- Laboratory not accredited.

**Qualification criteria and requirements**

- Information about the company.
- Address, VAT, etc.
- Brief description of the organisation.

**Information and documentation regarding the laboratory specifically**

- General information about the laboratory, placement, etc.
- Accreditation documentation to ISO 17025 and further additional accreditation documentation.
- Method list – the laboratory must be accredited in accordance with the relevant test standards.
- Ask for simple references for CV and experience of the staff for testing, analysing and consulting of MSA's regarding Ecodesign.
- Ask about experience of the laboratory the last 5 years and indication of customer references.
- Do not ask for detailed test procedure or descriptions regarding the laboratory etc. – the accreditation documentation is sufficient.
- Be clear about subcontracting.

- Check operational specs e.g. what is the air flow direction (is it according to the ISO?), how many units are tested in same chamber in parallel (ideally not more than one unless the chamber is big enough otherwise the measurement is affected), etc.

**Financial criteria**

- The tender must document the economic key numbers or an average turnover for the last three years to make sure the tenderer is economically solid and stable.
- Standard conditions for liability are around 3 times the contract amount.
- Is recommended to not only look at the price but let the professional quality have a high influence on the estimation on the tenderer. It is their guarantee of the quality of the service provided.

**Timeline**

- The laboratory must have enough time to plan the test.
- Ask for periods where test capacity normally is low in the laboratory for example caused by vacation.
- Fast confirmation of the test report and feedback whether specific case is done, or further action must be taken.
- To respect the timing, ensure that provision for M-package cooling is available.

**Storage**

- The storage and conditions must be described and make sure that the laboratories only have to store a test sample 2-3 months after the case is closed.

**Financial proposal**

- Make it possible for the tenderer to give prices for a specific product group and type of test sample,
- Prices for each test type could be broken down as follows:
  - o Startup – handling documentation and verification of the test sample, information, and communication
  - o Before entering in the test room, prior to testing any parameter, in case significant non conformities can be caught without testing (e.g. TDA, Volume, Family classification, Loading line, M,N,C,P coefficients etc.) the test shall be avoided. In such a way, the high cost of the testing room usage is avoided.
  - o Performance test
  - o Reporting
  - o Storage and handling of shipping
  - o Price for triple testing, if the test sample does not pass,
- The MSA should make sure that the winning tenderer is secured a minimum number of tests. The specific laboratory otherwise will have no convenience regarding the work to maintain accreditation and quality of the laboratory to comply with the requirements in the tender.

## About Eurovent

Eurovent is Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies. Its members from throughout Europe represent more than 1.000 organisations, the majority small and medium-sized manufacturers. Based on objective and verifiable data, these account for a combined annual turnover of more than 30bn EUR, employing around 150.000 people within the association's geographic area. This makes Eurovent one of the largest cross-regional industry committees of its kind. The organisation's activities are based on highly valued democratic decision-making principles, ensuring a level playing field for the entire industry independent from organisation sizes or membership fees.

### Our Member Associations

Our Member Associations are major national sector associations from Europe that represent manufacturers in the area of Indoor Climate (HVAC), Process Cooling, Food Cold Chain, and Industrial Ventilation technologies.

The more than 1.000 manufacturers within our network (Eurovent 'Affiliated Manufacturers' and 'Corresponding Members') are represented in Eurovent activities in a democratic and transparent manner.

→ For in-depth information and a list of all our members, visit [www.eurovent.eu](http://www.eurovent.eu)