

# Submitting Products to Topten

## Overview of selection criteria and accepted standards

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### Criteria for all products

- Criteria: ✓ Natural refrigerant with global warming potential  $GWP \leq 3$   
(e.g. R290/propane, R600a/isobutane, R744/CO<sub>2</sub>)
- ✓ Plug-in (integral, self-contained)

### Beverage Coolers

- Criteria: ✓ Forced-air circulation (capable of pulling down temperature within 4 hours, respectively)
- ✓ Maximum draft energy efficiency index of 30 according to latest working document; R744 models with a maximum draft energy efficiency index of 50 according to latest working document
- Data:
- Measurement at climate class 3 (25°C, 60% relative humidity)
  - Temperature class must be one of the following: M1 or M2 (EN ISO 23953); K1, K2, K3 or K4 (EN 16902)
  - Primarily according to the new European standard for beverage coolers (EN 16902)
  - In a transitional phase, measurements are also accepted according to EN ISO 23953-2:2005 /A1:2012

### Ice Cream Freezers

- Criteria: ✓ With lid, maximum 600 litres net volume, static
- ✓ Maximum draft energy efficiency index of 50 according to latest working document
- Data:
- Measurement at climate class 4 (30°C, 55% relative humidity) preferred, if measurement at climate class 3 (25°C, 60% RH) then energy consumption is multiplied by a factor of 1.24
  - Temperature class must be one of the following: L1, L2 or L3 (EN ISO 23953); C1 or C2 (EN 16901)
  - Primarily according to the new European standard for ice cream freezers (EN 16901)
  - In a transitional phase, measurements are also accepted according to EN ISO 23953-2:2005 /A1:2012

### Refrigerated Display Cabinets

- Criteria: ✓ Maximum draft energy efficiency index as given in table below according to latest working document, except value for M = 8.5 instead of 1.6 for vertical, semi-vertical and combined supermarket freezer cabinets.

Category	Energy efficiency index
Horizontal display freezers	$\leq 50$
Small counter-top freezers	$\leq 10$
Vertical freezers with glass doors (TDA < 2 m <sup>2</sup> ) *	$\leq 30$
Vertical freezers with glass doors (TDA > 2 m <sup>2</sup> ) *	$\leq 60$
Horizontal chilled display cabinets	$\leq 50$
Vertical chilled display cabinets	$\leq 50$

\* with closed sides

- Data:
- Measurement at climate class 3 (25°C, 60% relative humidity)
  - Temperature class must be one of the following: M1, M2, H1, H2, L1, L2 or L3
  - Primarily according to EN ISO 23953-2:2015
  - In a transitional phase, measurements are also accepted according to EN ISO 23953-2:2005/A1:2012 \*

\* Energy consumption is multiplied by a factor of 1.1 for vertical chilled cabinets (no correction for frozen or horizontal cabinets). The correction factor accounts for the higher number and longer duration of door openings under EN ISO 23953-2:2005 /A1:2012.

## Refrigerated Vending machines

Criteria: ✓ Maximum draft energy efficiency index of 75 according to latest working document

- Data:
- Measurement at climate class 3 (25°C, 60% relative humidity)
  - Primarily according to the new European standard for vending machines (EN 50597:2015)

## Storage Refrigerators and Freezers

Criteria: ✓ Energy efficiency class according to the EU energy label (EU regulation No 2015/1094) as given in the following table (or better):

Category	Energy efficiency class	Energy efficiency index
Storage counter refrigerators	B	<35
Storage refrigerators 1-door	A	<25
Storage refrigerators 2-doors	D	<75
Storage counter freezers	B	<35
Storage freezers 1-door	C	<50
Storage freezers 2-doors	D	<75
Storage refrigerator-freezers	D	<75

## Minibars

Criteria: ✓ Energy efficiency class according to the EU energy label (EU regulation No 1060/2010) as given in the following table (or better):

Category	Energy efficiency class	Energy efficiency index
Minibars	A+	<42

## Wine coolers

Criteria: ✓ Energy efficiency class according to the EU energy label (EU regulation No 1060/2010) as given in the following table (or better):

Category	Energy efficiency class	Energy efficiency index
One temperature zone	A+	<42
Multi temperature zones	A	<55

## Links to documents

- EU energy label for refrigerated commercial display cabinets, latest working document:  
[http://www.topten.eu/uploads/File/CF\\_draft%20Energy\\_label\\_DG%20ENER%20Lot%2012%20refrigerated%20commercial%20display%20cabinets%20\(2\).docx](http://www.topten.eu/uploads/File/CF_draft%20Energy_label_DG%20ENER%20Lot%2012%20refrigerated%20commercial%20display%20cabinets%20(2).docx)
- EU energy label for storage refrigerators and freezers:  
[http://www.topten.eu/uploads/File/2015-1094\\_EN\\_Professional-equipment\\_Label.pdf](http://www.topten.eu/uploads/File/2015-1094_EN_Professional-equipment_Label.pdf)
- EU energy label for household refrigerating appliances:  
<http://www.topten.eu/uploads/File/Energy%20Label%20regulation%20cold%202010.pdf>

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### Info :

[www.topten.eu/pro-cold](http://www.topten.eu/pro-cold)

[www.topten.eu/rebates](http://www.topten.eu/rebates) - Rebate Programmes in Switzerland and Austria\*

\* Note that for certain product categories stricter criteria apply for the rebate programme