

Submitting Products to Topten

Overview of selection criteria and accepted standards

Version 13 February 2017

Criteria for all products

- Criteria: ✓ Refrigerant with global warming potential GWP below 150 (e.g. R290/propane, R600a/isobutane, R744/CO₂)
 ✓ 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 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 (prEN 16902)
 - Primarily according to the new European standard for beverage coolers (prEN 16902)
 - In a transitional phase, measurements are also accepted according to EN ISO 23953-2:2005 /A1:2012, EN ISO 23953-2:2005 or AS 1731:2003 & Amendments

Ice Cream Freezers

- Criteria: ✓ With lid, maximum 600 litres net volume, static
 ✓ Maximum draft energy efficiency index of 75 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 (prEN 16901)
 - Primarily according to the new European standard for ice cream freezers (prEN 16901)
 - In a transitional phase, measurements are also accepted according to EN ISO 23953-2:2005 /A1:2012, EN ISO 23953-2:2005 or AS 1731:2003 & Amendments

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	<=50
Vertical freezers with glass doors (TDA < 2 m ²)	<=30
Vertical freezers with glass doors (TDA > 2 m ²)	<=60
Small counter-top freezers	<=10
Horizontal chilled display cabinets	<=50
Vertical chilled display cabinets	<=50

- 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, EN ISO 23953-2:2005 or AS 1731:2003 & Amendments *

* 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.

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	B	<35
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
- EU energy label for household refrigerating appliances:
<http://www.topten.eu/uploads/File/Energy%20Label%20regulation%20cold%202010.pdf>

Contact :

Maike Hepp, pro-cold (at) topten.eu, 0041 44 545 30 99

Info :

www.topten.eu/pro-cold

www.topten.eu/rebates - Rebate Programme in Switzerland*

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