

Recommendations for professional refrigerated storage cabinets and blast cabinets

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Summary

EU energy labelling and Ecodesign regulations have been adopted in May 2015. Ecodesign requirements cover professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers, while the EU energy label is introduced only for professional refrigerated storage cabinets. Labelling and tier 1 of Ecodesign will be mandatory from 1 July 2016.

Positive:

- Label classes have been tightened several times as a reaction to updated product data. With the final version, no currently available product is better than class A, the classes A+ to A+++ are reserved for future products. The label incentivises technological innovation and is designed to reflect the market for many coming years.
- Two labels instead of four will make the implementation easier and save work for suppliers and dealers.
- At least, mandatory declaration of energy consumption was included for refrigerator-freezers and blast cabinets, when they are otherwise exempt from labelling and Ecodesign requirements. From now on it will be possible to consider both energy cost as well as purchase price when comparing products.

Further work is needed:

- Coming F-gas ban in 2022 notwithstanding, there are strong barriers to switch to green refrigerants on the market. Further activities to support the market transformation are needed to avoid any more sales of products using old, climate-damaging refrigerants. The chance to showcase products using green refrigerants on the EU energy label was missed for professional refrigerated storage cabinets.
- Static-air storage cabinets should have been covered by product information requirements, unless they will be included in the revision of the Lot 13 household Ecodesign regulation together with commercial wine coolers and minibars. Otherwise there will be an awkward gap and uncertainty in product information as it is at the discretion of suppliers and dealers to decide whether a product is intended for household or professional purposes and therefore should or should not be labelled.
- The energy efficiency requirements could have been stricter (e.g. EEI < 75), considering that the combined effect of the measures will neither stop nor reverse the trend that total energy consumption for professional refrigeration keeps increasing. From the expected increase in total annual electricity consumption for professional refrigeration of 38 TWh/year without measures, the EU energy label and Ecodesign measures are expected to only save 15.6 TWh/year by 2030.

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1. Label

The number of labels was reduced from four to two. This will make the implementation easier and save work for suppliers and dealers (see Table 1). The chance to showcase products using green refrigerants on the EU energy label was missed for professional refrigerated storage cabinets.

Final label				
May 2015:	1 st July 2016	deleted	deleted	1 st July 2019
Proposal				
Jan. 2014:	1 st Jan. 2016	1 st July 2017	1 st Jan. 2019	1 st July 2020
Proposal				
June 2013:	1 st July 2015	1 st July 2016	1 st July 2018	1 st July 2019
Proposal				
June 2012:	July 2014	Jan. 2015	Jan. 2016	Jan. 2018

Table 1: Draft and final energy labels and timetables

Label classes have been tightened several times as a reaction to updated product data (Figure 1). With the final label, the best currently available models are in class A and the classes A+ to A+++ are reserved for future products. Advantage: The label incentivises technological innovation and is designed to reflect the market for many coming years.

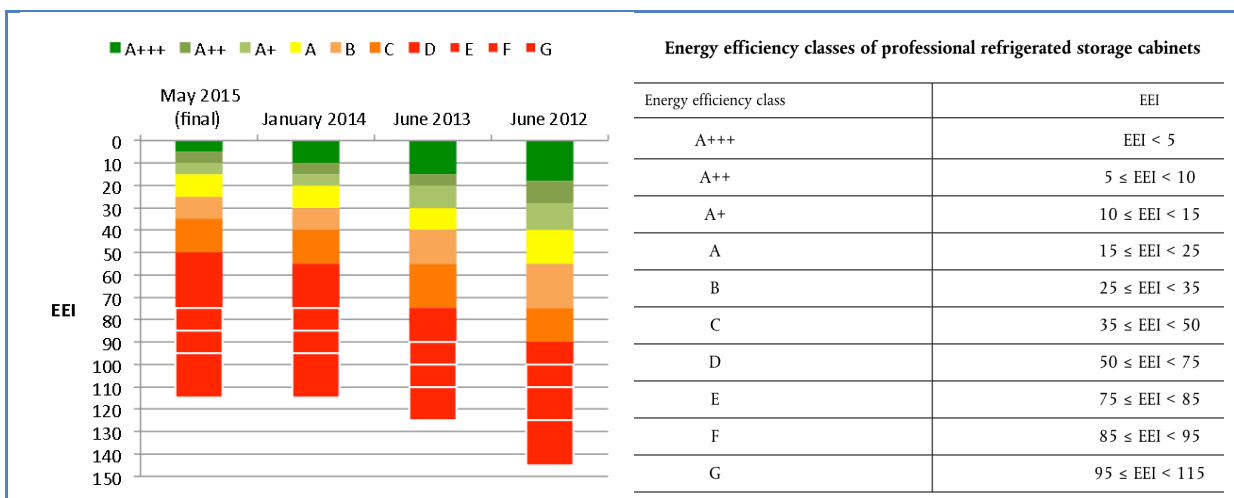


Figure 1: Development of the label classes from drafts to the final version (right: final label classes)

2. Ecodesign

EU regulation No 2015/1095 defines Ecodesign requirements for four product categories: professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers. These recommendations only concern the first two categories.

Product information requirements

It is positive that for two product types it will at least be mandatory to declare energy consumption from 1 July 2016, when they are otherwise exempt from labelling and Ecodesign requirements:

- For **refrigerator-freezers** the indicative daily energy consumption shall be declared.
- For **blast cabinets** it is the full load capacity (kg of foodstuffs), the standard temperature cycle, meaning from which temperature in °C down to which temperature in °C foodstuffs are intended to be cooled and in how many minutes, the energy consumption in kWh per kg and type, name and GWP of the refrigerant for integral equipment.

This creates transparency on the market. From now on the electricity costs of these products can easily be compared and asked for in offers. Users will be able to reduce costs. When it is time for revising the Ecodesign regulation, product data will be available and allow definition of measures close to the actual market.

For the same reasons, **static-air storage cabinets** should have been covered by product information requirements, unless they will be included in the revision of the Lot 13 household Ecodesign regulation together with commercial wine coolers and minibars.

Energy efficiency requirements

Positive: The energy efficiency requirements are aligned with the label classes. This facilitates their implementation.

1 July 2106	EEl < 115	bans products worse than class G
1 January 2018	EEl < 95	bans class G
1 July 2019	EEl < 85	bans class F

Table 2: Energy efficiency requirements for professional refrigerated storage cabinets

The energy efficiency requirements could have been stricter, considering that the combined effect of the measures will neither stop nor reverse the trend that total energy consumption for professional refrigeration keeps increasing. While total annual electricity consumption would increase from 116.5 TWh (terawatt hours) in 2012 to 154.5 TWh in 2030 under a business-as-usual scenario (+ 38 TWh), the EU energy label and Ecodesign measures are expected to only save 15.6 TWh/year by 2030.

The choice of products with EEl < 75 (class D or better) is large. The product lists on Topten.eu represent 7 different brands (Gram, Desmon, Electrolux, Foster, Liebherr, Porkka, Snowflake) with 64 model types (not counting similar models with different configurations) that are all at least class D or better (Table 3).

Category	A	B	C	D	Total
Storage counter refrigerators	3	1	-	-	4
Storage refrigerators 1-door	6	4	14	-	24
Storage refrigerators 2-doors	-	-	4	4	8
Storage counter freezers	1	1	-	-	2
Storage freezers 1-door	1	3	2	14	20
Storage freezers 2-doors	-	-	-	5	5

Storage refrigerator-freezers	-	-	-	1	1
Total	11	9	20	24	64

Table 3: Number of professional refrigerated storage cabinets listed on Topten.eu

3. References and links

Useful links

Topten.eu storage refrigeration product lists:

- <http://www.topten.eu/english/professional-refrigerators/storage-refrigerators/storage-counter-refrigerators.html>
- <http://www.topten.eu/english/professional-refrigerators/storage-refrigerators/storage-refrigerators-1-door.html>
- <http://www.topten.eu/english/professional-refrigerators/storage-refrigerators/storage-refrigerators-2-doors.html>
- <http://www.topten.eu/english/professional-refrigerators/storage-freezers/storage-counter-freezers.html>
- <http://www.topten.eu/english/professional-refrigerators/storage-freezers/storage-freezers-1-door.html>
- <http://www.topten.eu/english/professional-refrigerators/storage-freezers/storage-freezers-2-doors.html>
- <http://www.topten.eu/english/professional-refrigerators/storage-combined-refrigerator-freezers.html>

Topten.eu storage refrigeration selection criteria:

- <http://www.topten.eu/english/criteria/professional-storage-refrigerators.html&fromid=>

References

Commission delegated regulation (EU) 2015/1094 of 5 May 2015 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of professional refrigerated storage cabinets

Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers

Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006