

Guidelines for Topten Public Procurers

Household Freezer

[Steffen Hepp](#), June 2021



Why follow Topten criteria?

- Topten.eu/pro (www.topten.eu/pro) is a European web portal helping buyers, professionals, public procurers and large buyers to find the most energy efficient products available in Europe. The products are selected and updated continuously, according to their high energy and environmental performances, independently from the manufacturers.
- The Topten criteria below can be inserted directly into tendering documents.
- All household freezers displayed on www.topten.eu meet the criteria contained in these guidelines. Procurers can therefore use the website to check the availability and assortment of products currently on the market, which meet the [Topten selection criteria for Household Freezers](#).
- Topten.eu/pro links to national partners Topten Pro websites and was developed under the Topten Act project, supported by the European Union through Horizon 2020 programme.

How much can you save?

The category household freezer, listed on www.topten.eu, includes upright (standing) and chest models. Considering the following assumptions, it is possible to achieve the savings indicated in the next table.

- Assumptions
- Lifetime expectation: 15 years
 - Daily use: 24h in use-mode
 - Electricity cost: 0.20 €/kWh

	Topten model	Inefficient model	Topten model	Inefficient model
Type	Upright	Upright	Chest freezer	Chest freezer
Net volume (liter)	369	369	248	248
Energy class	D	F	D	F
Electricity consumption	224 kWh/year	336 kWh/year	173 kWh/year	260 kWh/year
Use cost (electricity in 15 yrs)	672 €	1,008 €	519 €	780 €
Savings in 15 years	33% energy / unit ⇒ 336 € / unit		33% energy / unit ⇒ 261 € / unit	

Comparing models with similar net volume, the Topten models allow electricity savings from around 33% over their life time of 15 years, which translates into cost savings of 336 € / unit or 261 € / unit for the respective appliances.

Differences in electricity consumption between inefficient and Topten models rise as the net capacity grows, leading to higher energy savings and consequently greater money savings.

The form factor (upright vs chest), however, does not impact energy efficiency, hence, can be chosen as best suits the setting.

Procurement criteria

The following criteria can be inserted directly into tendering documents. The Topten selection criteria and the product lists are updated regularly. The newest versions are always available at www.topten.eu/pro.

SUBJECT: HIGHLY ENERGY-EFFICIENT HOUSEHOLD FREEZERS

TECHNICAL SPECIFICATIONS

Energy class

Household freezers must have an energy class between A and D, declared in agreement with the European Energy Label.

Refrigerants

Consumer freezers must not use any refrigerants, i.e., be free of CFC and HFC.

Verification

Bidders must supply the energy label and technical data according to EU Regulations No. 2019/2019 and No. 2019/2016.

Table 1: Overview of energy classes allowed on the European market

<p>The image shows a standard EU energy label template. At the top left is the EU flag and the word 'ENERGY' with a lightning bolt. Below it are fields for 'SUPPLIER'S NAME' and 'MODEL IDENTIFIER'. A vertical bar on the left shows efficiency classes A through G in colored arrows. A black arrow points to class 'B'. Below this is the text 'XYZ kWh/annum'. At the bottom, there are icons for a freezer (XYZ L), a refrigerator (XYZ L), and a speaker for noise emission (XY dB, ABCD). A QR code area is at the top right.</p>	<p style="text-align: center;">Commission Delegated Regulation n° 2019/2016</p> <table border="1"> <thead> <tr> <th>Energy efficiency class</th> <th>Energy efficiency index</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>$EEI \leq 41$</td> </tr> <tr> <td>B</td> <td>$41 < EEI \leq 51$</td> </tr> <tr> <td>C</td> <td>$51 < EEI \leq 64$</td> </tr> <tr> <td>D</td> <td>$64 < EEI \leq 80$</td> </tr> <tr> <td>E</td> <td>$80 < EEI \leq 100$</td> </tr> <tr> <td>F</td> <td>$100 < EEI \leq 125$</td> </tr> <tr> <td>G</td> <td>$EEI > 125$</td> </tr> </tbody> </table> <p>Note: The lower the value, the better the efficiency of the device</p>	Energy efficiency class	Energy efficiency index	A	$EEI \leq 41$	B	$41 < EEI \leq 51$	C	$51 < EEI \leq 64$	D	$64 < EEI \leq 80$	E	$80 < EEI \leq 100$	F	$100 < EEI \leq 125$	G	$EEI > 125$
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Since 1 March 2021 the revised EU energy label for household refrigerating appliances is mandatory. It shows:

- the energy efficiency class;
- the annual electricity consumption in kWh per year;
- the net volume of freezer compartments;
- noise emission classes (A to D) that help compare noise levels

ADDITIONAL REMARKS

To increase savings and reduce environmental impact, procurers should evaluate life cycle costs when tendering for household freezers. Thus, it is advisable to include in the tender a costing exercise - even if simple - for the product life cycle costs.

Table 2: Example of a breakdown costs table, to be filled in by bidders

	Information details	Different unit costs in € (excluding tax)	Total cost in € (excluding tax)
Delivery			
Installation			
Use*	Energy consumption in kWh/year x product life time (15 yrs) x n° units	Electricity cost**: 0,20 €/kWh	
Maintenance			
Recycling and disposal			

* Example of how use costs can be determined.

** This figure is just an example. The procurer can use the average electricity price paid during the last 2 or 3 years, and also include subscription fee and taxes.

Advice and support

If you would like further assistance in using the information presented here in your own procurement actions or more information on [Topten Pro](#) contact your national Topten team (find it on [Topten.eu](#)).

The European Commission's [Green Public Procurement](#) website contains valuable legal and practical guidance together with procurement criteria for a range of commonly procured products and services.



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