



D6.2: CALCULATION TOOL.

WP6: Dissemination – know-how transfer to procurers and users why and how commercial refrigeration can improve

Task 6.2: Calculation tool

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Revised version

Project Partners



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CONTENT

What is the ProCold calculator?

The ProCold calculation tool is designed to help buyers of new refrigerators and freezers in the commercial sector to save electrical energy and money. The comparison between the existing refrigerators (which the customer wants to replace) and the new energy efficient devices is the main function of this tool. The results of the calculation provide information about the energy- and cost savings.

How does it work?

This short step by step guide shows you how to use the ProCold calculation-tool. First of all – to enable a comparison between the existing refrigerator/freezer and the efficient device, the tool needs some input data (cells with gray background colour):

input data (step by step)	cells
1) Select right country (e.g. Austria) – the language will be set automatically	P3
2) Fill in the country specific tariff and CO ₂ emission factor (e.g. 0,12 €/kWh and 0,44 kg CO ₂ /kWh)	P7, P8
3) Select type of your own devices (existing refrigerators/freezers) with the help of the drop down menu (e.g. Storage Counter Refrigerators)	P10
4) Fill in the nominal volume of the respective refrigerator/freezer (e.g. 315 L)	P13
5) Fill in the annual energy consumption of your device (e.g. 1533 kWh/a) - you can also use the slider	P15
6) How many products of the same category do you have? (e.g. 3x Storage Counter Refrigerator)	P17
7) Enter the service life of your device (e.g. 8 years)	P19
8) Fill in the purchase price of your own device (e.g. 1000 €)	P21
9) Fill in the purchase price of the new efficient device (e.g. 1200 €)	P22

With this information the tool is able to calculate the total cost of ownership and presents the result (cells with green background colour):

output data	cells
total energy saved (related to service life)	N27
total energy costs saved (related to service life)	R27
total CO ₂ emissions saved (related to service life)	T27
grey CO ₂ emissions (related to the liters of selected device)	T29
Energy Class of your own device	Q29
Energy Class of efficient device	Q30

There is also a tip-link which you can use to instantly find the most efficient devices for your selected product category (e.g. Counter Storage Refrigerators).

Use and access of the calculation tool

The calculator and all updated versions will be uploaded on ADEME's file sharing platform and can be used by the project partners.

The calculator is also public available on the following websites:

- <http://www.topten.eu/english/pro-cold.html>

It can be downloaded from the section called "CO₂ Calculator" – see screenshot attached.

CO2 Calculator

This excel tool is easy to use and calculates CO2 savings as well as energy and cost savings of Topten models compared to other products ([download excel](#)).

EU Regulations on Energy Labels, Ecodesign and F-Gas

[top](#)

- Since 1 July 2016, the EU energy label for **professional refrigerated storage cabinets** is mandatory.
- An EU energy label for **commercial refrigerated display cabinets** is being planned. It will likely be adopted in 2017 and become mandatory in 2018.
- **Minibars and wine coolers** intended for commercial use could soon be included in the scope of the revised EU energy label for household refrigerating appliances.
- Fluorinated refrigerants such as **R404A and R134a will be banned** for plug-in refrigeration equipment in 2020/2022. This is laid down in the so-called F-Gas Regulation.

Read more on these EU regulations [here](#).



- <http://www.pro-cold.eu/>

It can be downloaded from the deliverable section – see screenshot attached.

WP6 Dissemination

- [D6_1_Cooperation with Topten portals](#)
- [D6_2_Calculation Tool](#)
 - [Download Calculation Tool](#)
- [D6_3_CSR tools](#)
- [D6_6_National Events](#)
 - [EEDAL Conference \(Paper & Presentation\)](#)
- [D6_8_Website](#)