



ProCold Product Competition

Professional and Commercial Refrigeration Equipment

– Competition rules –

With support from the European Union's Horizon 2020 research and innovation programme the ProCold project and its partners

ADEME – Agence De l'Environnement et de la Maîtrise de l'Energie (France), AEA – Austrian Energy Agency (Austria), Bush Energie (Switzerland), Guide Topten (France), Oeko-Institut – Institute for Applied Ecology (Germany), Politecnico Milano – Dipartimento di Energia (Italy), Quercus – National Association for Nature Conservation (Portugal), SEVEn (Czech Republic), and SSNC – Swedish Society for Nature Conservation (Sweden)

are inviting manufacturers of professional cold equipment to take part in a product competition for the most energy efficient product with climate friendly refrigerants available in the European market in the following categories and according to the specifications and rules provided below:

Vertical chilled storage cabinets

Beverage coolers

Small ice cream freezers

Vertical supermarket refrigerator cabinets

Refrigerated glass fronted vending machines

The competition will provide a basis for:

- **identifying** the professional and commercial cold products with the highest energy efficiency (and climate friendly refrigerant use),
- **highlighting** and **increasing visibility** of such products among professional buyers and other stakeholders,
- **promoting** their further market uptake, and
- **motivating** the development and offer of increasingly efficient energy-using products in the European market.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649293. The sole responsibility for the content of this document lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.

Eligible products and test conditions

The following criteria must be fulfilled to participate in the competition:

- a) The product must be commercially available in Europe at least from 30 September 2016 to 31 August 2017 (no prototypes).
- b) Submitted product must be of type “plug-in” (“integral”)
- c) Product must be compliant with all European regulations, including Ecodesign and labelling requirements for the product category as valid on 31 August 2016 (as published in the Official Journal of the European Union)
- d) The submitted product must fall in one of the following categories.

i. Vertical chilled storage cabinets

- As defined in Ecodesign Regulation (EU) 2015/1095 of 5 May 2015
- 1-door, 400-700 litres net volume calculated according to EN 16825:2016 (approved)
- Refrigerant with global warming potential (GWP) below 150 (e.g. R290, R600a, CO₂)
- Temperature class M1 according to EN 16825:2016 (approved) (-1°C to +5°C)
- Energy efficiency index (EEI) determined at 30°C/55% RH based on measurements according to EN 16825:2016 (approved) and EEI calculation according to Ecodesign Regulation (EU) 2015/1095

ii. Beverage coolers

- As defined in the (draft) European Ecodesign Regulation for refrigerated commercial display cabinets available on 31 August 2016 (and provided on topten.eu/pro-cold)
- 250 – 550 litres net volume calculated according to FprEN 16902 (under approval), vertical cabinet with one transparent door
- Refrigerant with global warming potential (GWP) below 150 (e.g. R290, R600a, CO₂)
- Temperature class K1 according to FprEN 16902 (under approval) (0°C to +7°C, $\varnothing \leq +3.5^\circ\text{C}$)
- Energy efficiency index (EEI) determined at 25°C/60% RH based on measurements according to FprEN 16902 (under approval) and EEI calculation according to applicable (draft) European Ecodesign Regulation

iii. Small ice cream freezers

- As defined in the (draft) European Ecodesign Regulation for refrigerated commercial display cabinets available on 31 August 2016 (and provided on topten.eu/pro-cold)
- 150 – 500 litres net volume calculated according to FprEN 16901 (under approval), with transparent lids
- Refrigerant with global warming potential (GWP) below 150 (e.g. R290, R600a, CO₂)
- Temperature class C1 according to FprEN 16901 (under approval) (-18°C)

- Energy efficiency index (EEI) determined at 30°C/55% RH based on measurements according to FprEN 16901 (under approval) and EEI calculation according to applicable (draft) European Ecodesign Regulation

iv. Vertical supermarket refrigerator cabinets

- As defined in the (draft) European Ecodesign Regulation for refrigerated commercial display cabinets available on 31 August 2016 (and provided on topten.eu/pro-cold)
- Total display area (TDA) between 0.5 and 3 m² calculated according to EN ISO 23953-2:2015
- Refrigerant with global warming potential (GWP) below 150 (e.g. R290, R600a, CO₂)
- Temperature class M1 (-1°C to + 5°C) according to EN ISO 23953:2015
- Energy efficiency index (EEI) determined at 25°C/60% RH based on measurements according to EN ISO 23953-2:2015 and EEI calculation according to applicable (draft) European Ecodesign Regulation

v. Refrigerated glass fronted vending machines

- As defined in the (draft) European Ecodesign Regulation for refrigerated commercial display cabinets available on 31 August 2016 (and provided on topten.eu/pro-cold)
- Category 2 “Refrigerated glass fronted can and bottle, confectionery & snack machines” according to EN 50597:2015
- Refrigerant with global warming potential (GWP) below 150 (e.g. R290, R600a, CO₂)
- Temperature class according to Category 2 machine type (12°C)
- Energy efficiency index (EEI) determined at 25°C/60%* RH based on measurements according to EN 50597:2015 and EEI calculation according to applicable (draft) European Ecodesign Regulation

* EN 50597:2015 will be revised soon to better align with other standards and to be in alignment with the Ecodesign requirements. One planned change is with regard to the ambient test room conditions. In the upcoming revision of the norm these are expected to be fixed at 25 ± 2°C/60 ± 5% RH. These expected conditions shall apply for measurements for the product competition.

Products in each product category are assessed according to the defined measurement standards and test conditions. The Energy Efficiency Index (EEI) is the core performance criterion based on which the winner in each category will be determined.

*Please note: In case the final text of **referenced regulations** is not available on 31 August 2016, the draft version available at that time shall apply (as available from topten.eu/pro-cold). In case the final version of a **referenced standard** is not available on 1 July 2016, the latest draft version available at that time shall be used.*

Submission requirements

All documents and required information must be submitted latest **by 30 September 2016** by using the application form provided on the topten.eu/pro-cold website.

The following information and documents must be provided with the competition application for each product submitted:

- a) Name of the submitting company or trade mark, address and internet address
- b) Contact person of the submitting company (name, function/position, address, phone number, email-address)
- c) Applicable category, in which the product is competing
- d) Additional information on each product (if specified, according to requirements in the applicable regulations):
 - i. Brand
 - ii. Model (including alternative names for same model) and specific configuration of model used for testing. The specified configuration must be described in a way that potential purchasers of the appliance are able to purchase an appliance with the same performance characteristics as the model submitted to the competition.
 - iii. Availability in European countries
 - iv. Net volume/total display area
 1. For beverage coolers, small ice cream freezers and vending machines: net volume in litres.
 2. For vertical supermarket refrigerator cabinets: total display area in square metres (m²)
 3. For vertical chilled storage cabinets: the sum of the net volumes of all compartments functioning at chilled operating temperature
 - v. Energy efficiency index and energy efficiency class of the product
 - vi. Energy consumption of the cabinet over 24 hours (E24h) and the annual energy consumption in kWh, rounded to the nearest integer
 - vii. Climate class
 - viii. Temperature class
 - ix. Dimensions W/D/H (mm)
 - x. Static and/or forced air cooling type
 - xi. Category, name and Global Warming Potential (GWP) of the refrigerant fluid(s) contained in the cabinet and refrigerant charge (kg) rounded to two decimal places;
 - xii. Name and Global Warming Potential (GWP) of principle foaming agent used
 - xiii. Product picture(s) (min 800 px wide)
- e) Full test report with results of all tests required to determine the EEI and with the EEI calculation based on the test results. EEI must be provided rounded to one decimal (xx.x). The full test reports will not be made publicly available.
- f) Signed statement “In case our submitted product is the top-performing or second best performing product in its category, an appliance of the type and configuration submitted to the competition will be made available to an internationally recognised test laboratory upon request, free of charge and other costs, at own risk and all shipping (incl. take back) costs covered by the submitting organisation. We allow for the free selection of an appliance from assembly line or warehouse (if possible) by a ProCold representative or designated laboratory representative. The laboratory will perform an independent control test and calculation of EEI. The testing laboratory will be designated by ProCold and the direct testing costs borne by the ProCold Consortium.” (see “Winner identification and announcement”)

Winner identification and announcement

- a) Within each category, all submitted products will be ranked based on the value of their EEI.
- b) For each category the top performing product will be identified based on the lowest EEI (rounded to one decimal xx.x).

- c) For the top performing product in each category according to this preliminary ranking an independent verification test will be performed. This will be done by an independent and internationally recognised test laboratory selected and designated by the ProCold Consortium. The respective manufacturer must be able and agree to provide at no cost a standard appliance of the same type from its assembly line or warehouse, randomly picked by a representative of the ProCold Consortium or designated other representative.
- d) The top performing product in each category will be recognised as winning product, if this laboratory test confirms the submitted EEI and previous ranking. The tolerance margins of the applicable (draft) European Ecodesign Regulation apply.
- e) Should this test provide an EEI higher than the second best performing product but within the tolerances established in the applicable (draft) European Ecodesign Regulation, or already in parallel to the testing of the top performing product (decision by ProCold team), the second best performing product will be tested as well to establish a definitive order and winning product based on the measured and calculated EEI values. If the two (or more) highest ranked products have an identical EEI rounded to one decimal, several winners will be announced.
- f) Should any test provide higher EEI results outside the tolerance margins established in the applicable (draft) European Ecodesign Regulation, then the ProCold team will contact the respective manufacturer. The manufacturer will be provided with an opportunity to sponsor an additional definitive test to be completed by 31st January 2017 according to the rules established above (all costs for this additional test must be borne by manufacturer). The test must be performed by an internationally recognised independent laboratory agreed by the manufacturer and the ProCold Consortium according to the conditions above (Winner identification and announcement, point c)). Both a ProCold representative and the manufacturer can be present as witnesses to the test. Should the manufacturer decline the invitation to sponsor an additional test, the product will be considered as withdrawn from the competition and from the topten.eu/pro-cold website.

Use of competition entries and results

- a) Winning products will be announced and awarded during the EuroShop 2017 (5-9 March 2017) and further promoted during HOST 2017 (20-24 October 2017) fairs.
- b) The information provided will be used to populate the Topten lists. All submitted products meeting the Topten technical criteria will be listed on the Topten websites of the ProCold partners after the application deadline as long as all Topten criteria are fulfilled and the product is available in the respective country. Topten criteria can be consulted online at topten.eu/pro-cold and the national Topten websites. *Full test reports will not be made publicly available.*
- c) Manufacturers can use the competition results for marketing purposes. For this purpose, winners will receive a certificate and a visual recognition (mark) that they can use under specified conditions in their own communication.
- d) The partners of the ProCold Consortium will reference winning products in their own public communication (including a dedicated press release) and in their ongoing dialogue with stakeholders.

Disclaimer

- a) Should this be necessary, clarifications on the ProCold competition rules will be published on topten.eu/pro-cold.
- b) Should developments outside the influence of the ProCold Consortium or other reasons compromise a fair and orderly implementation of the product competition, the ProCold Consortium reserves the right to modify or append the above rules. Such changes or amendments will be announced to all known participants and interested suppliers as well as on topten.eu/pro-cold.
- c) The ProCold project and its partners do not assume any responsibility or liability for damages or loss incurred as a result of participating in the competition.
- d) In case of doubts, the English language versions of regulations and measurement standards shall apply.

Competition timeline



Contact

For any questions on the competition please visit

topten.eu/pro-cold

or contact:

Rasmus Priess
Sustainable Products and Material Flows
Oeko-Institut e.V. - Institute for Applied Ecology
Tel.: ++49-761-45295-264
Fax: ++49-761-45295-288
r.priess@oeko.de
www.oeko.de

Document version history

Version	Changes
ProCold_Product Competition_Competition Rules	Document based on received stakeholder comments on preliminary rules
ProCold_Product Competition_Competition Rules_update	Document incorporating Q&A (see extra document)