

Eurovent Position Paper

Team member Massimiliano Ferrario **Phone** +32 (0)466 90 04 01 Email massimiliano.ferrario@eurovent.eu **Date** 2025-04-29

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Eurovent position following the Consultation Forum on the Revision of the Ecodesign Regulation (EU) 2016/2281

In a nutshell

With this paper, Eurovent would like to provide the Consultant VHK and the European Commission with comments and suggestions related to the ongoing revision of the Regulation (EU) 2016/2281. In particular:

- It is appreciated the recognition of the major changes that the industry will face in the coming years.
- Some proposals lack details and/or background, which prevents a thorough debate and the development of meaningful comments.
- The industry supports the inclusion of VHT process chillers and CRACs in the scope.
- The required technical documentation of the products should not differ from the reality of operation, particularly for units already using free cooling and for the part load conditions of VHT process chillers.
- CRAC-A self-contained for Telecom Application cannot meet the proposed minimum Ecodesign requirements.

General comment

Eurovent appreciates the work and effort put into the preparation of the documents distributed in advance of this meeting by the consultant VHK. We would also like to recognise the collaborative spirit of this Consultation Forum, where legislators, Member States, and industry representatives engaged constructively, and this is surely the ideal situation for the next phases of the revision process.

We also welcome the fact that the legislator recognised the critical period the industry is facing, in which a historic change in the refrigerants used will drive all the R&D efforts of the companies.

However, some provisions are not detailed enough to allow for a proper assessment. This undermines the very purpose of the Consultation Forum, as it becomes difficult to develop a constructive debate on the basis of the submitted proposals.

A draft Regulation would have offered greater clarity, improved assessment, and served as a more effective basis for discussion. We strongly recommend that the draft Regulations return to be the preparatory documents for these meetings.

Here below Eurovent presents synthetically the most relevant comments that emerged from the debate and the assessment of the preparatory documents.

The Eurovent secretariat and the chairpersons of all the Product Groups and Task Forces involved in this revision are at full disposal for any clarifications that may be needed.

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Removal of fan coils

Eurovent supports the conclusion of the Consultant VHK to remove only hydronic fan coils from the scope of the new Regulation, as this avoids creating loopholes that could exclude indoor units of multi-split systems.

Polyvalent units

Eurovent understood that the exclusion of Polyvalent units as a specific product category from the scope of the new Regulation is due to a lack of available data from both the Eurovent Certification database and manufacturers.

However, if the scope of the Ecodesign Regulation for hydronic space heaters is extended up to 1 MW capacity, we assume that polyvalent units will be implicitly included within the covered products.

Please note that Eurovent is preparing amendments to the Recommendation and will be ready for the next revision.

Inclusion and definition of CRAC

Eurovent supports the inclusion of CRACs within the scope of the new Regulation, as well as the inclusion of units marketed for telecommunication shelters under the category of information technology equipment.

Eurovent reiterates the suggestion for a definition of data centre cooling:

Data Centre Cooling refers to the systems, methods, and technologies used to regulate the temperature, humidity, and airflow within data centres to ensure the optimal performance and reliability of Information Technology and network telecommunications equipment (ITC). This is a mission-critical application, as maintaining proper equipment temperature through heat removal is essential to prevent overheating and avoid downtime. To ensure 365/24/7 cooling of the equipment different technologies can be applied depending on climate conditions, datacentre layout and design constraints, ranging from CRAC, to VHT chillers, free cooling, liquid cooling and others. Detailed definitions can be found in international standards like ISO/IEC 30134, ISO/IEC 22237 and AHRI STANDARD 1360.

Inclusion and definition of VHT process chillers

Eurovent supports the inclusion of VHT air cooled process chillers under the scope of the new Regulation and the nominal condition at 20°C.

Definition of rooftop units

Eurovent proposes adopting the updated new definition, which better reflects and represents the technology. The proposed definition is aligned with the latest definition developed for the FprEN17625.

Rooftop unit: Air conditioning unit whose function is space cooling or heating, or both, using a vapour compression cycle driven by electric compressor(s) and in which the evaporator, compressor, condenser and supplementary heaters are integrated into a single package, that can be provided on one or two separate frames. Rooftop units use recycled air or a mixture of recycled air and outdoor air on the indoor heat exchanger, and outdoor air or a mixture of outdoor air and extracted air on the outdoor heat exchanger, with capability of free cooling and may be equipped with a heat recovery system to benefit

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Page 3 of 8

from the extracted air. Air mixtures ratio can vary from 0 % to 100 %. It can have means for cleaning and/or dehumidifying the air.

(The definition of the standard includes notes to entry that have been merged within the definition for simplicity.)

Recalling the previous position paper, <u>PP – 2024-01-26</u>, the reason for this is that the current definition of Regulation (EU) 2016/2281 does not sufficiently reflect the complexity and all functions of products available on the market, that have an impact on their functionality and energy efficiency. This particularly concerns the free cooling function which can contribute to a significant reduction in energy consumption. Furthermore, the amended definition should not exclude the water/brine-to-air design which is also applicable to rooftop units.

Timetable

As discussed and shared by all the stakeholders during the Consultation Forum, the introduction of 2 Tiers in 2029 and 2031 does not provide the industry with sufficient time to adapt, therefore, it is not the best way forward.

As also debated during the consultation forum, today it is not yet known what the technologies of the future will be, therefore Eurovent strongly recommends allowing adequate time for adaptation, especially if additional requirements beyond MEPS are to be introduced.

Considering the different options proposed, it is difficult to support a specific timeframe because it depends on the final decision that will be made on the MEPS and the additional requirements.

Having said that, Eurovent recommends that the new efficiency requirements should not enter into force before 2031, and any additional obligations introduced beyond MEPS should be accompanied by further transition time. Eurovent will provide detailed feedback on eventual additional requirements as soon as more information becomes available.

TPCA

Eurovent remarks that following a specific request for more details, these were not available during the Consultation Forum. Therefore, it's a critical situation where the industry is called to provide comments or suggestions with high uncertainty.

Following the internal assessment, almost all the Eurovent members except one do not support the implementation of TPCA and suggests keeping the status quo. The status quo implies recognising that the voluntary third-party certification is working well and contributes to the pursuit of efficiency of the products placed on the market. A stronger market surveillance system, independent from third-party certification, is to be achieved.

Proposed definition of VRF

Eurovent considers the introduction of this definition unnecessary and potentially confusing.

Since the current Regulation has not led to any issues concerning its application to VRF and multi-split units, Eurovent suggests not introducing a separate definition for VRF in the new Regulation.

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Definition of sensible Energy Efficiency Ratio (EERsens)

The proposal defines the sensible energy efficiency ratio as:

'sensible energy efficiency ratio is the ratio of the sensible cooling capacity in kW to the total electric power input in kilowatts under rating conditions;

Eurovent recommends clarifying that the sensible cooling capacity is the net capacity, so the usable cooling capacity.

A reference example is provided in AHRI Standard 1360-2022 (I-P), where the Net Sensible Cooling Capacity is defined as:

"The rate, expressed in Btu/h or kW, or both, where the equipment removes sensible heat from the air passing through the unit under specified conditions of operation, including the fan energy dissipated into the conditioned space."

MEPS

- As already stated during the Consultation Forum, forcing units to work without free cooling for testing purposes is not representative of the reality in which these units will operate. The result will be technical documentation that is not representative of the reality. Free cooling is indeed important for Very High Temperature applications, IT cooling and rooftops.
- Eurovent reiterates its position that the term "natural" refrigerants should be avoided, as it is not defined. Instead, recognising the concerns of the consultant VHK, Eurovent supports the adoption of the term "non-fluorinated" refrigerants, already used by Regulation (EU) 2024/573.
- It is also important to note that the performance of units using future low-GWP refrigerants remains uncertain, and further granularity is needed to define relevant MEPS. In fact, it's possible that the MEPS identified today based on the current performance of units relying on widely used refrigerants like R410A and R32 will have a larger than expected impact on units running on low-GWP fluorinated refrigerants allowed by the F-gas regulation (for example, some kinds of HFOs perhaps still in the early stage of adoption).
- A/A appliances are subject to significant increases in both heating and cooling performance requirements. For reversible appliances, meeting both requirements at the same time will be especially challenging. Moreover, A/A products will be subject to redesign due to the upcoming FGAS bans and potential PFAS restrictions. Imposing further increases in MEPS on products that are unlikely to remain on the market in the near future places an unnecessary burden on manufacturers.

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However, an additional line must be developed for units self-contained for Telecom Application, which can't reach the proposed minimum efficiencies due to lack of space for the heat exchanger:

	EERsens	In accordance with Eurovent proposal @30°C, 35%RH room conditions and:
CRAC-A self-contained for Telecom Application	2,1	@ 35 °C outdoor temp.
CRAC-A	3,5	@ 45 °C cond. temp. (for units without integrated condenser)
CRAC-W	4,0	TBD

Table 1: Eurovent proposal for Tier 1 for CRACs

	EERsens at 35 °C outdoor temperature	In accordance with Eurovent proposal, @30°C, 35%RH room conditions and:
CRAC-A self-contained for Telecom Application	2,3	@ 35 °C outdoor temp.
CRAC-A	3,8	@ 45 °C cond. temp. (for units without integrated condenser)
CRAC-W	4,4	TBD

Table 2: Eurovent proposal for Tier 2 for CRACs

Additionally, units with free cooling are disadvantaged by the current approach, as testing at 35°C without a seasonal approach does not reflect the additional energy savings that free cooling entails.

For a common understanding, efficiency values are influenced among other things by:

- the refrigerant,
- the available external static pressure,
- the type of installation (indoor or external wall-mounted, for self-contained telecom applications; downflow or upflow in general for CRACs).

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Air flow rate limit

Rooftops

Eurovent supports the inclusion of air flow rate limit as an information requirement for rooftop units in this revision.

However, the current proposal by the Consultant is based "on the outdoor unit rated capacity under cooling or Pdesignc" which is not a declared value for Rooftop units. The approach originates from VRF and split AC and is not yet adapted to rooftop units, therefore a new proposal must be developed and discussed.

Control Verification Procedure

Eurovent is not against this proposal, we suggest referring only to the EN 14825 standard.

Availability of spare parts

Given the B2B nature of the market covered by this Regulation, Eurovent considers a list of mandatory spare parts unnecessary. We appreciate that both the Consultant and several Member States acknowledged these professional market specificities during the Consultation Forum.

In B2B applications, product operability is typically ensured through preventive maintenance, such as remote monitoring and scheduled inspections, rather than reactive repairs.

In case of a spare part requirement, we suggest a limit to 12 kW capacity, with product specific lists restricted to essential components.

We also suggest an approach similar to the Ecodesign Regulation (EU) 2024/1834 for industrial fans, so exclude custom products where spare part availability is contractually defined: "For custom fans for which spare part availability is addressed in the contract, and which are not covered by the previous paragraph, no specific requirements shall apply."

As for maximum delivery time of spare parts: "During the period mentioned in point (c), the manufacturer, importer or authorised representative shall ensure the delivery of the spare parts with the following timeframe: as specified in a contract, where a contract exists between the manufacturer and the end user of the fan,"

Product information tables

Eurovent supports the position of the Member States that the Code of Conduct should not be included among the information requirements, because this would make it mandatory.

Similarly, the inclusion of information on the successful outcome of the CVP check is redundant, therefore, Eurovent suggests removing it.

Free cooling and heat recovery

For rooftop units, free cooling is already addressed in the upcoming FprEN 17625 standard, which will be published by the end of 2025.

Therefore, Eurovent invites the Consultant VHK to evaluate the draft standard to consider free cooling for rooftop units already in this revision (for more detailed context, please refer to the Position Paper <u>PP – 2024-08-29</u>).

It is also important that the Regulation and the standard are aligned on the methodology, as the Consultant's proposal currently differs from FprEn17625.

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The other technologies currently lack methodologies to properly address free cooling and heat recovery; therefore, Eurovent recommends issuing a mandate to CEN/TC 113 to develop the methodology for the next revision of the Regulation.

VHT process chillers testing conditions

Very High Temperature process chillers operate with a different ΔT compared with High Temperature units. Furthermore, their market is not aligned with the proposed Partial Load conditions.

Since IT cooling represents the large majority of the market for VHT process chillers, 75% better reflects the reality of installations.

Considering what above, Eurovent recommends adopting the 75% constant part load to better reflect the reality of the applications of this technology.

Self-monitoring

In principle, this requirement can cause additional costs for the customer without a proper additional value.

It must be noted that the products covered by this regulation are sometimes used in large buildings with Building Automation and Control Systems (BACS), and therefore these units are already requested to have these functionalities installed. Making it mandatory for all the units it is not appropriate.

Eurovent recommends keeping this requirement as simple as possible, with the main objective being to allow the end user to monitor energy consumption during the operation of the unit, rather than imposing complex additional functions.

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Page 8 of 8

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