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Position Paper

In a nutshell

With this position paper, members of the Eurovent Product Group 'Residential Air Handling Units' would like to share with the Commission and EPREL team their comments and observations, which may be helpful in considering further improvements to EPREL and its public interface.

1. Introduction

Eurovent welcomed the launch of the public EPREL website for EU Citizen, which we believe is an effective measure to enforce ecodesign and energy labelling requirements, contributing to a level playing field and supporting consumers in their informed choice of the most energy efficient product.

It also appears to be a useful market tool giving an overview of products available on the market and potentially impacting the business of suppliers.

2. Eurovent comments and suggestions regarding improvements to EPREL

Members of the Eurovent Product Group 'Residential Air Handling Units', which brings together the vast majority of European manufactures of bidirectional RVUs, would like to share with the Commission the following observations and comments that may be helpful in further improvements to EPREL and its public interface.

We will appreciate taking our suggestions into consideration.

2.1 Presenting the RVU energy class in relation to CTRL factor

The RVU energy efficiency class displayed on the label highly depends on the CTRL factor. Its value, contrary to other tested and default values needed to determine the energy class, is declared by the supplier according to the applied control typology of the system. CTRL value ranges from 1.00 (manual), 0.95 (clock), 0.85 (central) to 0.65 (local demand control). In practice this means that the energy class of the same RVU (featuring the same tested SPI and temperature efficiency, and type of drive) but calculated and intended for 4 different CTRL values will result in different SEC value and normally give different energy classes for the same product.

An actual example of such a case is presented below:

| | |
|---------------------------------------|--------------------------------|
| A Details > | |
| Energy class for CTRL = 0.65 | |
| Typology | Bidirectional Ventilation Unit |
| Annual Electricity Consumption | 238 kWh electricity/annum |
| More | |
| B Details > | |
| Energy class for CTRL = 0.85 | |
| Typology | Bidirectional Ventilation Unit |
| Annual Electricity Consumption | 407 kWh electricity/annum |
| More | |

Most of modern RVU controllers are able to provide all control modes, but it does not mean that a RVU actually operates in the best mode, as it may require additional system elements (e.g. sensors or duct dampers) which are not included in the standard package.

A non-expert customer browsing the EPREL records is unaware of these technical considerations, and naturally tends to choose a high efficiency class unit. However, the selected product may not offer in practice the desired energy efficiency, even though its controller is able to provide it.

The current way of presenting information on the product list does not show any link between the energy class and the control typology. Furthermore, it does not give any clarification on system requirements which must be fulfilled to meet the energy class (see screenshots below).

| | | | |
|--------------------------------|---------------------------------------|--------------------------|------------------------------|
| | | A | Details > |
| Typology | Bidirectional Ventilation Unit | | |
| Annual Electricity Consumption | 410 | kWh electricity/annum | |
| Maximum flow rate | 140 | m ³ /h | |
| Sound power level | 53 | dB | |
| Less | | | |
| | | B | Details > |
| Typology | Bidirectional Ventilation Unit | | |
| Annual Electricity Consumption | 450 | kWh electricity/annum | |
| Maximum flow rate | 140 | m ³ /h | |
| Sound power level | 62 | dB | |
| Less | | | |
| | | C | Details > |
| Typology | Bidirectional Ventilation Unit | | |
| Annual Electricity Consumption | 139 | kWh electricity/annum | |
| Maximum flow rate | 403 | m ³ /h | |
| Sound power level | 58 | dB | |
| Less | | | |

In the opinion of Eurovent members, this can be misleading in making the right decision by the consumers, given that it is likely that most of them do not consult detailed technical information which may be not comprehensible to them.

To avoid a potential misrepresentation, Eurovent proposes to include at the product listing level (not in the product details window):

- **Information on the declared control type in relation to the energy class displayed, along with a comprehensive explanation of any additional system requirements which must be fulfilled to meet that energy class (particularly for local demand control)**
- **All available energy classes for the unit, if a supplier declares more than one energy class for the same unit due to, for instance, different controller configuration or components included in the package.**

Currently, EPREL assigns to a product (which has its own article number) a unique registration number that is linked to only one declared SEC value and Energy class (usually the best value). The product, however, may be available on the market with a different control typology. Some suppliers

work around this limitation and enter the same product (with the same item number) into the database separately for each applicable CTRL value. Such an approach entails an additional burden and does not contribute to a consistent presentation of the data of all products.

2.2 Harmonisation of 'carry over' values in EPREL with the test standard

When adding a product to the EPREL database, for bidirectional RVUs with regenerative heat recovery system, only the carry over value can be entered.

Such RVUs are tested according to EN 13141-7, where the test of the carry over itself is not defined. The EN 13141-7 test results in the value of total internal leakage including carry over but without external leakage (if in-duct tracer gas method is used) or the total internal leakage including carry over and external leakage (if chamber method is used).

Furthermore, for BVUs with regenerative heat exchangers, Regulation (EU) 1253/2014 provides for declaration of maximum internal and external leakage rates **or** carry over.

Inability to enter the internal and external leakage rates into the EPREL database for regenerative exchangers, means that data for some products may not be correctly declared.

Eurovent members request the Commission to adjust the structure of data in EPREL to the provisions of Regulation (EU) 1253/2013 and the available test methods.

2.3 Questionable values of presented data

A superficial review of randomly selected EPREL records reveals that the values of the same data for similar products can significantly vary (sometimes by several orders of magnitude). This cast doubt on the reliability of the EPREL data. See an example below.

| Parameter | Value | Unit |
|--|-------------------------------|--------------------------|
| Specific energy consumption (cold zone) | -76,1 | kWh/(m2.a) |
| Specific energy consumption (average zone) | -38,7 | kWh/(m2.a) |
| Specific energy consumption (warm zone) | -14,6 | kWh/(m2.a) |
| Type of drive | Variable speed drive | |
| 270 m3/h | | |
| Electric power input of the fan drive | 110 | W |
| Sound power level | 41 | dB |
| Reference flow rate | 0,053 | m3/s |
| Reference pressure difference | 50 | Pa |
| Specific Power Input | 0,25 | W/(m3/h) |
| Control typology - control factor | Central demand control - 0,85 | |
| DUCTED UNIT | | |
| Annual Electricity Consumption | 271 | kWh electricity/annum |
| Annual Heating Saved at cold climate | 8 760 | kWh primary energy/annum |
| Annual Heating Saved at average climate | 4 478 | kWh primary energy/annum |
| Annual Heating Saved at warm climate | 2 025 | kWh primary energy/annum |

| Parameter | Value | Unit |
|--|-------------------------------|--------------------------|
| Specific energy consumption (cold zone) | -73,5 | kWh/(m2.a) |
| Specific energy consumption (average zone) | -35,9 | kWh/(m2.a) |
| Specific energy consumption (warm zone) | -11,7 | kWh/(m2.a) |
| Type of drive | Multi-speed drive | |
| 150 m3/h | | |
| Electric power input of the fan drive | 56 | W |
| Sound power level | 47 | dB |
| Reference flow rate | 0,03 | m3/s |
| Reference pressure difference | 50 | Pa |
| Specific Power Input | 0,3 | W/(m3/h) |
| Control typology - control factor | Clock control (no DCV) - 0,95 | |
| DUCTED UNIT | | |
| Annual Electricity Consumption | 3,9 | kWh electricity/annum |
| Annual Heating Saved at cold climate | 87,9 | kWh primary energy/annum |
| Annual Heating Saved at average climate | 44,9 | kWh primary energy/annum |
| Annual Heating Saved at warm climate | 20,3 | kWh primary energy/annum |

To avoid undermining the credibility of the data, Eurovent members suggest implementing a verification algorithm to check whether entered values lay within acceptable and realistic range.

2.4 Verification of the supplier identity and the electronic seal

Eurovent understands the reason for the improved procedure for verifying the identity of the suppliers listed in the EPREL public interface and supports this change.

However, we would like to stress that the compulsory obtaining of the electronic seal is considered by many Eurovent members as a difficult, time consuming and costly process.

Therefore, avoiding similar surprising burdens in the future will be welcomed by the industry.

Eurovent and transparency

When assessing position papers, are you aware whom you are dealing with?

Eurovent's structure rests upon democratic decision-making procedures between its members and their representatives. The more than 1.000 organisations within the Eurovent network count on us to represent their needs in a fair and transparent manner. Accordingly, we can answer policy makers' questions regarding our representativeness and decisions-making processes as follows:

1. Who receives which number of votes?

At Eurovent, the number of votes is never determined by organisation sizes, country sizes, or membership fee levels. SMEs and large multinationals receive the same number of votes within our technical working groups: 2 votes if belonging to a national Member Association, 1 vote if not. In our General Assembly and Eurovent Commission ('steering committee'), our national Member Associations receive two votes per country.

2. Who has the final decision-making power?

The Eurovent Commission acts as the association's 'steering committee'. It defines the overall association roadmap, makes decisions on horizontal topics, and mediates in case manufacturers cannot agree within technical working groups. The Commission consists of national Member Associations, receiving two votes per country independent from its size or economic weight.

3. How European is the association?

More than 90 per cent of manufacturers within Eurovent manufacture in and come from Europe. They employ around 150.000 people in Europe largely within the secondary sector. Our structure as an umbrella enables us to consolidate manufacturers' positions across the industry, ensuring a broad and credible representation.

4. How representative is the organisation?

Eurovent represents more than 1.000 companies of all sizes spread widely across 20+ European countries, which are treated equally. As each country receives the same number of votes, there is no 'leading' country. Our national Member Associations ensure a wide-ranging national outreach also to remote locations.

Check on us in the [European Union Transparency Register](#) under identification no. 89424237848-89.

We are Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies – thinking 'Beyond HVACR'

Eurovent is Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies. Its members from throughout Europe represent more than 1.000 companies, the majority small and medium-sized manufacturers. Based on objective and verifiable data, these account for a combined annual turnover of more than 30bn EUR, employing around 150.000 people within the association's geographic area. This makes Eurovent one of the largest cross-regional industry committees of its kind. The organisation's activities are based on highly valued democratic decision-making principles, ensuring a level playing field for the entire industry independent from organisation sizes or membership fees.

Eurovent's roots date back to 1958. Over the years, the Brussels-based organisation has become a well-respected and known stakeholder that builds bridges between the manufacturers it represents, associations, legislators and standardisation bodies on a national, regional and international level. While Eurovent strongly supports energy efficient and sustainable technologies, it advocates a holistic approach that also integrates health, life and work quality as well as safety aspects. Eurovent holds in-depth relations with partner associations around the globe. It is a founding member of the ICARHMA network, supporter of REHVA, and contributor to various EU and UN initiatives.

Internal assignment (remember to delete from final PDF)

Delivery annotation

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|------------------------------------|--|
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| Concerns | General comments of PG-RAHU members on Eprel |
| Other comments of relevance | |