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Position Paper on the review of Fan Regulation (EU) 327/2011 after the Consultation Forum meeting on 1 April 2022

In a nutshell

This Position Paper provides comments of Eurovent members on the working document of the reviewed Fan Regulation, regarding in particular:

- **Scope of exclusions**
- **Definitions**
- **Conformity assessment**
- **Ecodesign requirements for complete fans**
- **Measurements and calculations**

Introduction

Consultation Forum meeting on the review of the Ecodesign Regulation (EU) 327/2011 on fans took place on 1 April 2022. It was preceded by making available the draft working document.

Eurovent welcomes the proposals for amended ecodesign provisions for fans presented in the working document 'Draft Elements of a possible fans regulation' updated and published on CIRCABC after the meeting.

We also appreciate that the Commission took into consideration in the working document discussed at the Consultation Forum the comments made by Eurovent members prior to the meeting, which concerned:

- Need for better clarification on the exclusion of replacement for identical fans integrated in products.
- Clarification of CE marking requirements and indication of which fans are concerned if they are not complete or incomplete.
- Approach to the conformity assessment if a VSD is added to a complete fan.
- Dropping the explicit indication of the ban on halogenated flame retardants as an aspect to address in the next review.
- Correction of definitions for measurement categories B and C and the part load compensation factor.
- Refinement of the definition of 'custom fan'
- Missing definition of 'spare parts'

In addition to the already taken into account remarks of Eurovent provided in the document of 30 March (attached), we would like to submit and reiterate the following comments:

1 Subject matter and scope – Article 1

1.1 Exclusion of fans integrated in kitchen hoods < 280 W – point 2(c)

Eurovent members do not support and see no justification for the exclusion of this type of fan. In our opinion, this product should be included in the scope of the Regulation.

1.2 Exclusion of jet fans with maximum electric input power <5 kW – point 2(d)

Jet fans with a maximum electrical input >5 kW and above are within the scope of the draft regulation. Very often in car parking areas, systems comprising of several jet fans of power input <5kW are used. This kind of system will be installed into car parks also into the future and will account for significant energy consumption. Therefore, Eurovent proposes to include jet fans with a maximum electrical input <5 kW into the scope of the prospective regulation.

1.3 Exclusion of fans which are specified to operate exclusively in wind-turbines – point 3 e)

Eurovent members do not support and see no justification for the exclusion of this type of fan. In our opinion, this product should be included in the scope of the Regulation.

1.4 Exclusion of fans for emergency use with regard to fire safety – point 3 b)

In Regulation (EU) 327/2011 this exemption reads ‘emergency use only’, which is more explicit than the current proposal. The assessment and verification of constancy of performance of fans in compliance with Regulation (EU) 305/2011 is harmonized in standard EN 12101-3:2015. This standard classifies fans as emergency use only and dual purpose (emergency and comfort, day-to-day, ventilation).

In order to avoid a loophole, Eurovent proposes to specify that the exclusion is not intended for dual use fans designed for both ventilation under normal conditions and emergency use.

2 Definitions – Article 2

2.1 Non-removable protective grids as a significant element – point (2)

In the opinion of Eurovent members, protective grids which cannot be removed without making the fan ineffective should not be considered as a significant element for the conformity assessment.

This inclusion intended to facilitate activities of Market Surveillance Authorities would result in making the performance of the same fan different when installed with a permanent guard and with a plain (unguarded) supporting bracket. The minimum motor efficiency required for compliance with and without integral guard would become different, forcing a proliferation of fan designs. This would not be feasible to implement for logistic reasons. The manufacturers would tend to re-design their supporting brackets to make the guards a separate and optional component, with a cost increase and safety reduction. The proposed approach conflicts with the compromise adopted in prEN17166, which was the result of a long debate on the subject.

In our opinion this amendment will not result in energy savings but will compromise safety of operation for the user.

2.2 Variable speed drive (VSD) – point (8)

The current definition excludes a common in HVAC products application where several fans are powered from the same VSD. Eurovent proposes to retain the possibility of such application in the revised regulation.

2.3 Jet fan – point (17)

The 'jet fan' definition states that it is a fan capable of achieving at least an efficiency of 35%, which contradicts the provision to exclude fans with power input < 5 kW from the scope of Regulation requirements.

In addition, the requirement of 35% efficiency leads to uncertainties about the application of reduction factors for the minimum efficiency grades set out in Table 1 in case of reversible and not reversible dual use jet fans.

Furthermore, there are jet-fans which use centrifugal impellers instead of axial impellers. Referring to requirements of Annex II, point 1, it is not clear whether these jet fans, if they do not achieve 35% efficiency, should be classified as axial fans?

Given the above, Eurovent asks to remove the minimum efficiency requirement in the definition of jet fans.

3 Conformity assessment and verification procedure - Article 4/5

Liability for the identified non-compliance of an incomplete fan that has been transformed to a complete fan is not explicitly stated. It is not clear whether it lays with a manufacturer of the incomplete fan or an entity that had assembled the complete fan following the instructions referred to in Annex II bis.

In the opinion of Eurovent members the rules for liability in such a case must be univocally established.

4 Ecodesign requirements for fans that are not incomplete - Annex II

4.1 Tiers for the minimum fan efficiency requirements - point 1.

In the opinion of Eurovent, similar to the view of other Consultation Forum participants, there is no need for two tiers and only Tier 2 should be applied straight after 3 (three) years from the entry into force of the amended regulation.

4.2 Minimum efficiency equations and N grades - point 1, Table 1

Minimum efficiency grades (N) should be given as integers, as in the current Regulation, and not as decimals. The minimum efficiency equations should be amended accordingly.

Changing the efficiency grades to decimal fractions would impose an unjustified and unreasonable burden on manufacturers to update the format of existing documentation and fields in the selection software interfaces to accommodate two additional characters.

4.3 Product information requirements on fans - Section 2 point 1(5)

Eurovent does not support a proposal to display flow rate q_v in m^3/h when < 1 m^3/s , else in m^3/s . In our opinion the displayed unit of measure should be decided by the manufacturer regardless of the flow rate.

4.4 Information requirements on partial load – Section 3 point (1)

Eurovent welcomes the current proposal to provide the partial-load operational performance of the fan by means of at least three performance curves: at the stated inherent speed, at the minimum recommended speed, plus an additional one between the other two.

However,

- It should be specified that this requirement applies only to complete fans incorporating a variable speed drive, otherwise a precise and unambiguous procedure for dealing with compliant single speed fans must be established.
- relevant limitations for the additional (third) curve should be defined to avoid too close gap between other curves.

For the missing definition of the minimum recommended speed, we propose: a speed in the range between 40 and 50% of the fan maximum speed.

Furthermore, such information should not be addressed to end-users of final products, in which fans are integrated. Part load data is already provided for the final product.

4.5 Resource efficiency requirements - Section 5

Fans that are integrated in products already subject to Ecodesign, should be exempted from resource efficiency requirements. The final products in which they are integrated are already subject to spare part availability and delivery time requirements. Such requirement for components is not useful and can be counterproductive if not aligned.

4.6 Resource efficiency requirements – availability of spare parts – Sec. 5 point 1

Eurovent proposes to include in the requirement for availability of spare parts the following additional sentence: ‘Spare parts that are not possible to replace individually can be supplied as a package’.

In addition, further clarification is needed on the specific requirements for impellers. Some impellers are integrated with the motor and cannot be supplied as separate spare parts. Also, the wording ‘stator’ can be confusing. We believe this is meant to be the fan housing, but could be interpreted as the stator inside the motor

4.7 Resource efficiency requirements – delivery time of spare parts – Section 5 point 2

Eurovent members believe that due to the ongoing global crisis in access to raw materials and critical components, the proposed maximum delivery times of spare parts are not appropriate. It should not be expected that the situation will improve in the foreseeable future. The new requirements for electric motors and the general trend toward electrification will cause a lack of microchips and power-electronics components that is not solvable in a few years. Delivery times will be far more than 8 weeks also for raw materials needed for fans.

4.8 Resource efficiency requirements – RMI requirements – access to firmware for independent service repair providers – Section 5 point 3

In our understanding the working document proposes that instructions for installation of relevant software and firmware including reset software should be available to both manufacturer-authorized repair service providers and independent service repair service providers.

In the opinion of Eurovent members, granting access to independent service providers may infringe intellectual property of the supplier embedded in the firmware. Furthermore, the competence of independent service repair service providers to operate this kind of software cannot be properly verified by the supplier.

Therefore, Eurovent proposes to limit access to this repair and maintenance information only to authorised service providers.

5 Measurements and calculations – Fan flow angle - Annex III point 2

The value defined as 'Fan flow angle α ' is not technically measurable. Eurovent proposes to use additional explanations according to EN 17166.

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<p>1. Who receives which number of votes?</p> <p>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.</p>	<p>2. Who has the final decision-making power?</p> <p>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.</p>
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We are Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies – thinking 'Beyond HVACR'

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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.