



Brussels, 3 November 2023

Position on the review of ecodesign requirements for fans (ENER Lot 11)

Executive summary

The European Ventilation Industry Association (EVIA) welcomes the opportunity to provide written feedback to the Commission's draft review of Ecodesign Regulation (EU) No 327/2011 on fans. We would also like to thank the Commission for proposing a revision that challenges the industry to provide further energy consumption reductions and addresses circular economy aspects.

Nonetheless, EVIA sees an opportunity to further improve the proposal, and in this paper we specify how we believe that the new ecodesign rules can better reflect changing market and technological realities for fans.

Comments to the main text

- 1) Air circulating fans: exclude under Article 1(3) and adapt the Article 2(33) definition
- 2) Variable speed drive: change the Article 2(15) definition

Comments to the Annexes

- 3) Test points: add definition under Annex I(37)
- 4) Spare part fans exemption: extend to 15 years in Annex II
- 5) Maintain text on assumption of VSD use in Annex II.2
- 6) Improve data is marked on rating plate in Annex II.2
- 7) Clarify information requirements for single speed fans
- 8) Remove the +/- 5 % under Annex II
- 9) Editorial comments

Comments to the main text

1) Air circulating fans: exclude under Article 1(3) and adapt the Article 2(33) definition

Please change this exclusion into “*air circulating fans*” (see proposed definition below).

The reason is that small circulation fans with an input power less than 125 W, also called ‘comfort fans,’ are within the scope of Ecodesign Regulation (EU) No 206/2012 (ENER Lot 10), while large circulating fans >125 W are within the scope of ENER Lot 11. However, minimum requirements cannot be applied as they are not measured using the methods described in the regulation or in the draft standards FprEN 17166 drafted as requested by Mandate M/500 of January 2012. There are also no European test method standards for large circulating fans. The ENER Lot 11 proposal has the same problem: large circulating fans are within the scope, but the regulation does not define how to determine the performance.

Exclusion (q) for ceiling fans just addresses a small proportion of the different types of large circulating fans. As such, the exclusion must change to “*air circulating fans*” to address this problem.

EVIA notes that draft Article 8 states that “*ceiling fans and large comfort fans*” are considered in the next revision. Based on this, it is assumed that large comfort fans are excluded from the current draft, but assumptions should not be made. It is better to have clarity and to add large comfort fans (large circulating fans) to the exclusion under Article 1(3).

As such, EVIA also requests changing the definition in Article 2(33) into:

“*air circulating fan’ one that is unconnected to any ducting, and is with or without a housing, used for moving air within a space.*”

2) Variable speed drive: change the Article 2(15) definition

EVIA is concerned with the definition under Article 2(15) on 'variable speed drive.' With the manner it is worded, there is a concern of a backward step that allows use of variable voltage control. The definition in current Annex I.16 of Regulation (EU) No 327/2011 includes the text *"excluding variable voltage controllers where only the supply voltage for the motor is varied."* EVIA requests this text is included in the revised draft.

Comments to the Annexes

3) Test points: add definition under Annex I(37)

EVIA requests an additional definition to clarify the term 'test point' that is used in Annex II"

We propose the following text:

"'test point' is a point of operation that has been determined by measurement and calculation. A series of points of a constant condition, e.g., inherent speed, are used to construct a fan characteristic curve. Calculations, including laws of similarity of fluid dynamics, can be used to determine values of units from measured values of other units, or to determine values of points of a partial load curve from measured values of points of another speed curve."

4) Spare part fans exemption: extend to 15 years in Annex II

Concerning Annex II, EVIA requests that the exemption of spare part fans is extended from 10 to 15 years. The reason is that life expectancy of fans is dependent on usage and is often greater than 10 years. If more efficient versions are later developed that can fit in the same space envelope, then the current draft will mean that they would be used when available within this 15-year period.

5) Maintain text on assumption of VSD use in Annex II.2

On information displays under Annex II.2, we also believe that the statements on whether the calculation of fan efficiency assumed use of a VSD are retained from the current ecodesign rules in the new revision.

The reason is that Annex III.5(1) deals with the calculation of the fan efficiency and it includes a part load compensation factor C_c for when VSD are integrated within the fan or are intended to be used with a VSD. Without a published statement in product information and on the rating plate of the fan, Market Surveillance Authorities and others will not be able to ascertain if this compensation factor has been used and if it is correctly applied. Without this, it is feared that a loophole occurs that provides opportunities to make incorrect statements.

As such, we request that the following text from the current legislation is added:

“whether the calculation of fan efficiency assumed use of a VSD and if so, whether the VSD is integrated within the fan or the VSD must be installed with the fan;

...where for point x(x) one of the following forms of words must be used to indicate what is applicable:

- ‘A variable speed drive must be installed with this fan’,*
- ‘A variable speed drive is integrated within the fan’.”*

6) Improve data is marked on rating plate in Annex II.2

In Annex II.2(3), EVIA requests that point 2(e) ‘efficiency grade N at BEP’ is included in the data that shall be durably marked on the rating plate. The reason is that it will make it easier for Market Surveillance Authorities and others to check compliance.

In addition, it is requested that the requirements in the current regulation legislation use of VSD is retained, and therefore request that the following text is added to the rating plate:

“..where for point x(x) one of the following forms of words must be used to indicate what is applicable:

- ‘A variable speed drive must be installed with this fan’,*
- ‘A variable speed drive is integrated within the fan’.”*

7) Clarify information requirements for single speed fans

The scope of Annex II.3 includes fans, customs fans, jet fans, and multiple speed fans. However, it remains unclear what the information requirements are for single speed fans, which is a fan with a fixed speed motor that does not include a VSD or is placed on the market with the intention that a VSD will not be used. As such, EVIA would like to receive a clarification on this point.

8) Remove the +/- 5 % under Annex II

EVIA requests that the +/- 5 % is removed from the sentence “*plus an additional one in the middle (+/- 5 %) of the other two.*” under Annex II. The reason is this is an unnecessary restriction. As an alternative, we propose to change this text into (+/-10 %). If the value is retained or changed to +/- 10 %, it should be explained that this is an absolute value.

9) Editorial comments

- **Annex I(11) ‘power conversion correction’**
Change “*point 3 of Annex III*” into “*point 5 Annex III.*”
- **Annex II.1(4)**
Change “*point 3 of Annex III*” into “*point 5 Annex III.*”
- **Annex II.1(6)**
Change “*point 4 of Annex III*” into “*point 3 Annex III.*”
- **Annex III.7 ‘measurement and calculation’ – Specific speed σ_{BEP}**
Remove the equation duplication:

$$\sigma_{BEP} = n \cdot \frac{2 \cdot \sqrt{\pi \cdot q_{v,BEP}}}{\left(2 \cdot \frac{p_{f,BEP}}{\rho}\right)^{0.75}} \quad \frac{2 \cdot \sqrt{\pi \cdot q_{v,BEP}}}{\left(2 \cdot \frac{p_{s,BEP}}{\rho}\right)^{0.75}}$$

where:

About EVIA

The European Ventilation Industry Association ([EVIA](#)) was established in Brussels in July 2010. EVIA's mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU Member States.

Our membership is composed of more than 40 member companies and 6 national associations across Europe realising an annual turnover of over 7 Billion Euros and employing more than 45,000 people in Europe.

EVIA aims to promote highly energy efficient ventilation applications across Europe, with high consideration for health and comfort aspects. Fresh and good indoor air quality is a critical element of comfort and contributes to keeping people healthy in buildings.