

EVIA comments on EU 1253 and 1254/2014 (LOT 6) Review following Draft Task 1,2 and 3 reports November 2019

UVU – Box and roof fans without air treatment for non-residential application

EVIA strongly supports the Ecodesign and Energy Labelling Legislation. Both regulations are pushing the market to develop energy efficient products and support the harmonisation of product performance and test methods. Furthermore, they are enhancing the export competitiveness of European products in the global market.

Following the publication of the draft report Task 1, 2 and 3 reports in November 2019, EVIA submitted two documents providing comments separately on aspects related to residential and non-residential ventilation.

EVIA would like to take the opportunity provide for stakeholder consultation to make the following additional submission providing comments on the regulation on 'box fans' and 'roof fans'.

General Aspects:

Based on the published draft report, it is not really clear for EVIA, what is intended to be used for the further development of the regulation.

EVIA members are strongly requesting a 2nd Stakeholder Meeting to clarify the open issues.

Detailed Comments on 'box fans' and 'roof fans' Aspects:

EVIA welcomes the identification of the need for (further) clarification on the nature of 'box fans' and 'roof fans', in particular concerning their compliance with LOT 6 (EU 1253/2014 and EU 1254/2014), and the LOT 11 (Fans Ecodesign Regulation EU 327/2011).

EVIA would like to stress the fact, that UVU's without air treatment are only conveying air. Compared to fans regulated under EU 327/2011, they have an additional casing which for example, is used to tune the aerodynamic curve to the application needs, direct the air and/or reduce sound emissions.

Box and roof fans without air treatment are not only used for ventilation applications, but also in many other applications where air and gas transportation is needed. Currently, this provides for loopholes, as there is no design difference between box and roof fans used for ventilation and those used for air transportation.

EVIA therefore proposes to shift these products into EU 327/2011 in the mid-term.

As a first step, EVIA proposes to **implement a separate Annex for box and roof fans** without air treatment under LOT 6. This separate annex shall consider the following aspects:

- Clear definitions for these products based on FprEN17166:2019. Filtration is considered as an air treatment.
- Specifying the minimal requirements for an air transportation device and not only for a ventilation application thereby closing the loopholes.

- Using aspects of Controls, which might be implemented in LOT 6 for non-residential ventilation units, allowing comparable demand control ventilation (DCV) options.


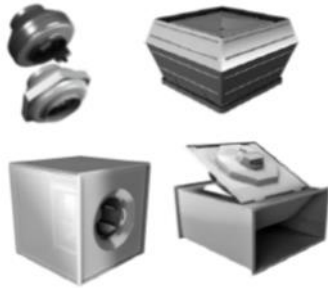

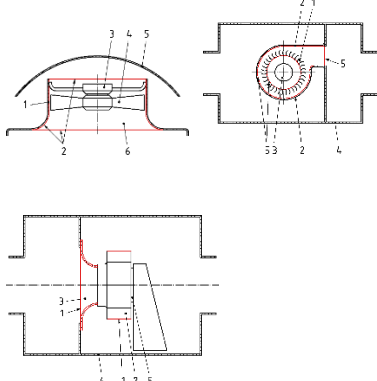
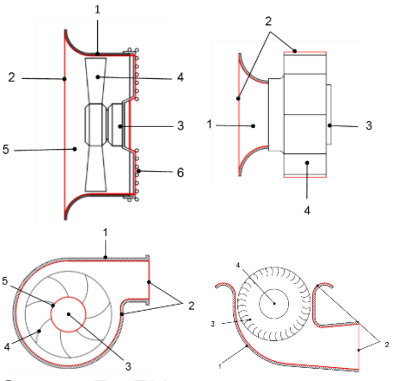
This new annex with definitions and requirements would constitute a basis to easily facilitate the a shift to LOT 11 as part of a future revision of EU 327/2011.

Furthermore, UVU's without air treatment are tested exactly the same way as fans within the scope of LOT 11: in its final stage of assembly, directly mounted on a test stand. This testing is easily reproducible after placing the product on the market.


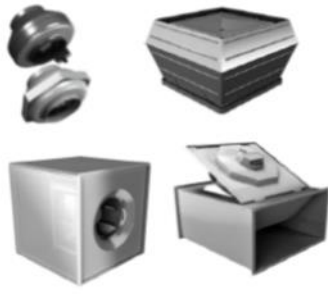

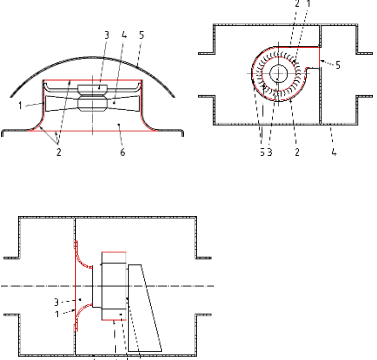
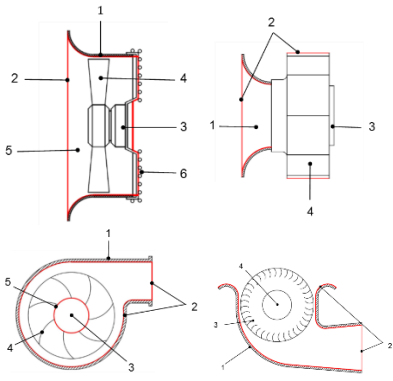
The following aspects outline additional information in relation to EVIA's position on UVU's without air treatment (so-called 'box fans', such as roof fans, duct fans, tube fans) in line with earlier EVIA position papers:

- EVIA comments on box and roof fans (7. May 2013)
- EVIA response following the second stakeholder meeting 22nd January 2015

Current situation:

Ventilation Regulation 1253/2014		Fan regulation 327/2011
EVU's with air treatment	UVU's without air treatment	Fans
		
	 <p>Source FprEN 17166</p>	 <p>Source FprEN 17166</p>
η_{vu} and SFP_{INT}	η_{vu}	η_{target}

EVIA Non-residential Ventilation Working Group proposal:

Ventilation Regulation 1253/2014		Fan regulation 327/2011
UVU's with air treatment	UVU's without air treatment	Fans
		
	 <p>Source FprEN 17166</p>	 <p>Source FprEN 17166</p>
η_{vu} and SFP_{INT}	η_{vu} 1352/2014; $6,2\% \cdot LN(P) + 42\%$ if $P \leq 30$ kW $63,1\%$ if $P \geq 30$ kW	η_{target} draft revision: $4,56\% \cdot LN(P) - 10,5\% + N < 10$ kW $1,1\% \cdot LN(P) - 2,06\% + N > 10$ kW

Explanation:

Examples for a fan tested in different installation situations based on ISO 5801 standardized test bench:

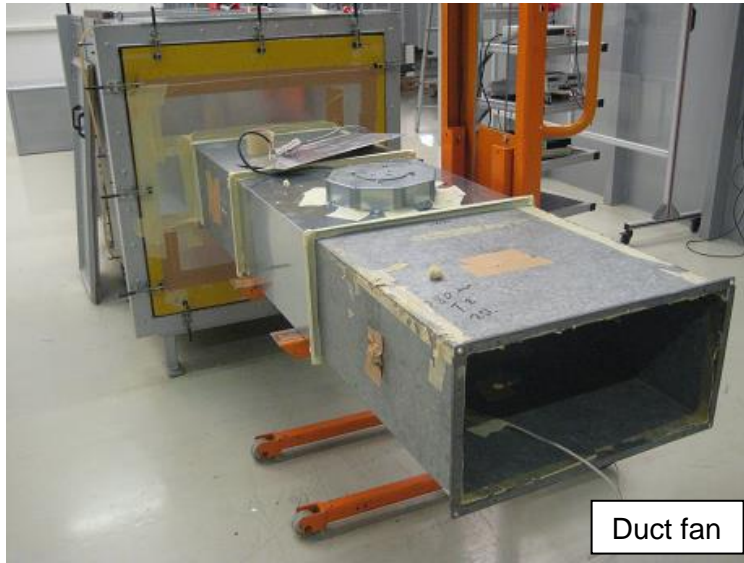
- a) Roof fan connected on top of a suction-side chamber test bench
- b) Duct fan connected to a suction-side chamber test bench
- c) Isolated 'box' fan
- d) Examples for axial and centrifugal LOT 11 fans

So-called 'box fans' are from testing side much more similar to products from scope of LOT 11 than to "ventilation products" from LOT 6.

a)

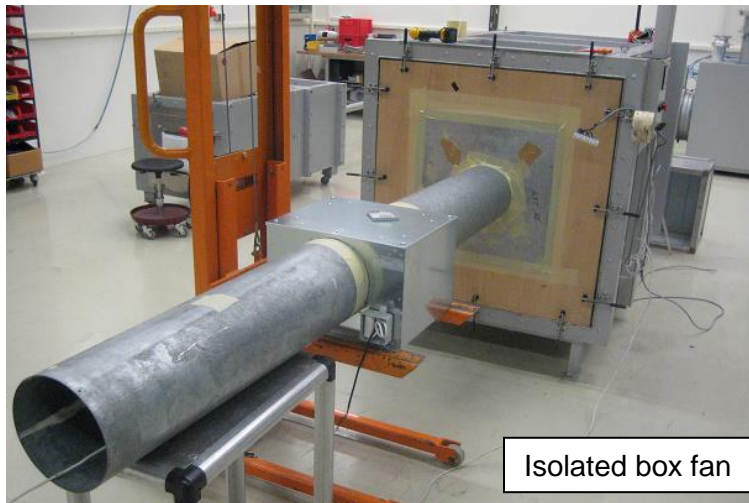


b)



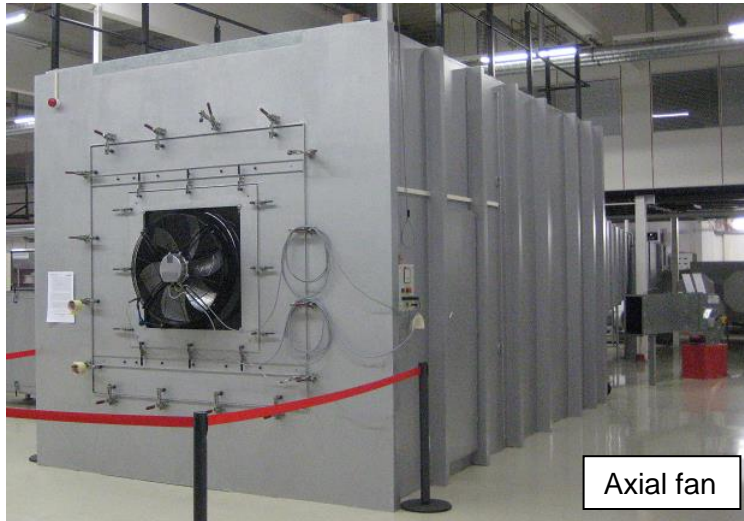
Duct fan

c)



Isolated box fan

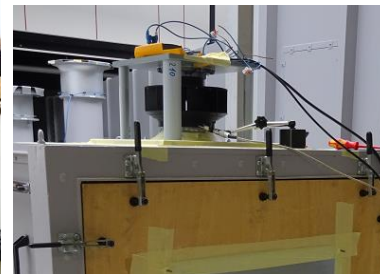
d)



Axial fan



Centrifugal fan without casing



Proposal for an Annex:

Ecodesign requirements for Casing Fans (CF) for non-residential ventilation application without air treatment. (Aspects for Smart controls or DCV shall be added).

Definitions -

The definitions of Article 2 of Regulation EU xxx/xxxx (revision of regulation 327/2011) shall apply in addition to:

Casing Fans (CF) a fan according EU 327/2011 with a casing.

Unidirectional ventilation unit (UVU) without air treatment a Casing Fan and used for ventilation according EU 1253/2014 rev.

Casing is an element that is additional to the stator of a fan.

Ecodesign requirements -

1. The ecodesign requirements for Casing Fan (CF) are set out below, using definitions in Article 2 and Annex I of regulation xxx/xxx (revision of 327/2011)

η_{vu} is $^{*,***} \times \text{LN}(P_e) - ^{*,**} + ^{*,**}$ where $P_e \leq xx \text{ kW}$

η_{vu} is $^{*,***} \times \text{LN}(P_e) - ^{*,**} + ^{*,**}$ where $P_e \geq xx \text{ kW}$

2. Casing fans used as UVU without air treatment (except dual use units) shall be equipped with a multi speed drive or a variable speed drive.
Justification: the current level of requirements for dual use units with regard to control equipment shall not be increased.
3. The minimum energy efficiency requirements shall apply from xxx
4. The product information requirements on UVU without air treatment on how they must be displayed are as set out in Annex III of regulation xxx/xxx (revision of 327/2011). These requirements shall apply from xxx
5. Compliance with ecodesign requirements shall be measured and calculated in accordance with requirements of regulation xxx/xxx (revision of 327/2011) and related EN standards.

Requirements shall be further detailed for dual use, reversible UVU, smoke and fire etc..

About EVIA

The European Ventilation Industry Association (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.