

ecodesign requirements for fans - are they good or bad?

A unified voice for the ventilation industry in Brussels

good or bad?

- What is the impact on industry?
- Are there Carbon reductions?

The fan working group



- A group of 16 European fan manufacturers
- A group within EVIA
- Formed after the ecodesign regulation 327/2011 was published – why?

The fan guidance document



- Article 1 of the regulation
 - Placing on the market or putting into service
 - Placing on the market with further measures
 - Abrasive substance
 - Fans destined for use outside of EEA
 - *Jet fans*
 - Ceiling fans

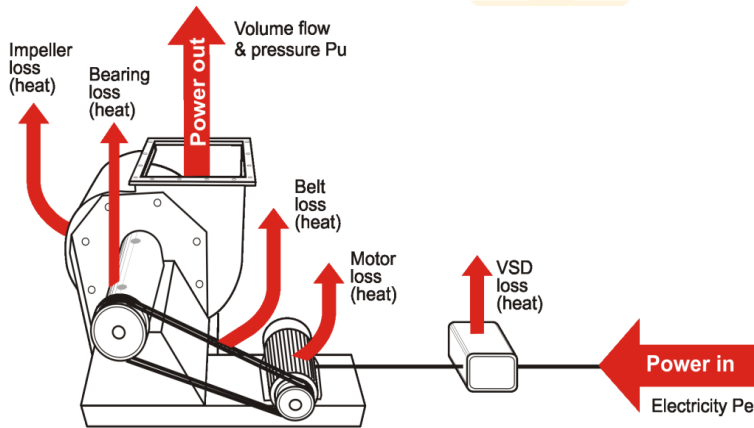
The fan guidance document



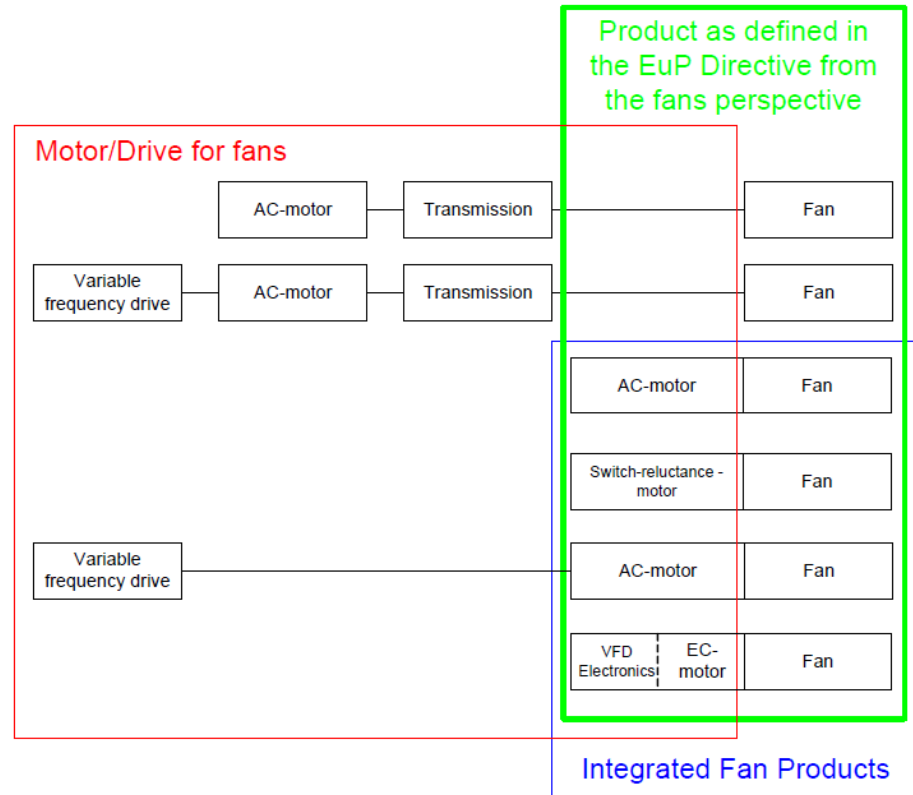
- Article 2 and 3 of the regulation
 - *What is a fan?*
 - What types of fans are included
 - What are information technology products?
 - What is specific ratio?
 - What is a mixed flow fan?
 - What is a non-gaseous substance?

Definitions

- A fan



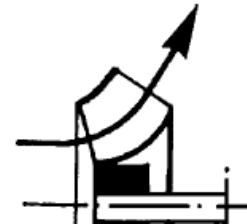
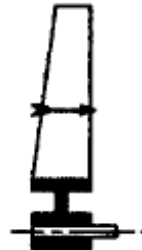
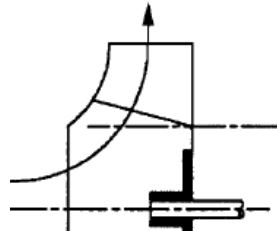
Source: ISO5801



Source: Figure 8 Lot 11-fans-2nd report

Definitions

mixed-flow fan



The fan guidance document

- Article Annex 1 of the regulation
 - What should be shown on the fan label?
 - Year of manufacture
 - Pitch adjustable fans

The fan guidance document

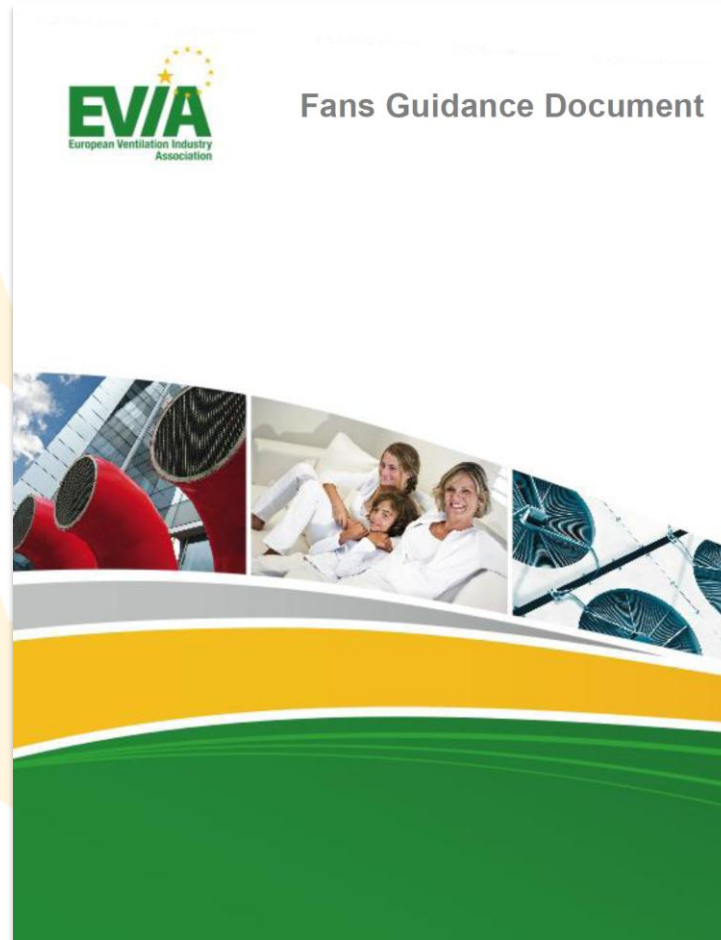


- Article Annex 2 of the regulation
 - Optimum efficiency
 - Bare shaft fan
 - Not Final Assembly compensation factor C_m

measured or calculated?

- Calculated
 - *not final assembly*
 - $\eta_e = \eta_r \cdot \eta_m \cdot \eta_T \cdot C_m \cdot C_c$
 - Where;
 - η_e is the overall efficiency;
 - η_r is the optimal fan impeller efficiency according to $Pu(s)/Pa$, as given in ISO 5801;
 - η_m is the motor efficiency;
 - η_T is the drive mechanism (transmission efficiency);
 - C_m is the compensation factor to account for matching of components = 0,9;
 - C_c is part load compensation factor.

Guidance



Frequently Asked Questions

FAQ



Problems

- Dual purpose fan
- Total versus Static pressure
- Axial Fan Best Available Technology
- Spare Parts
- Motor default value for *not final assembly*
- Jet fan
- Impeller only

ecodesign requirement for fans



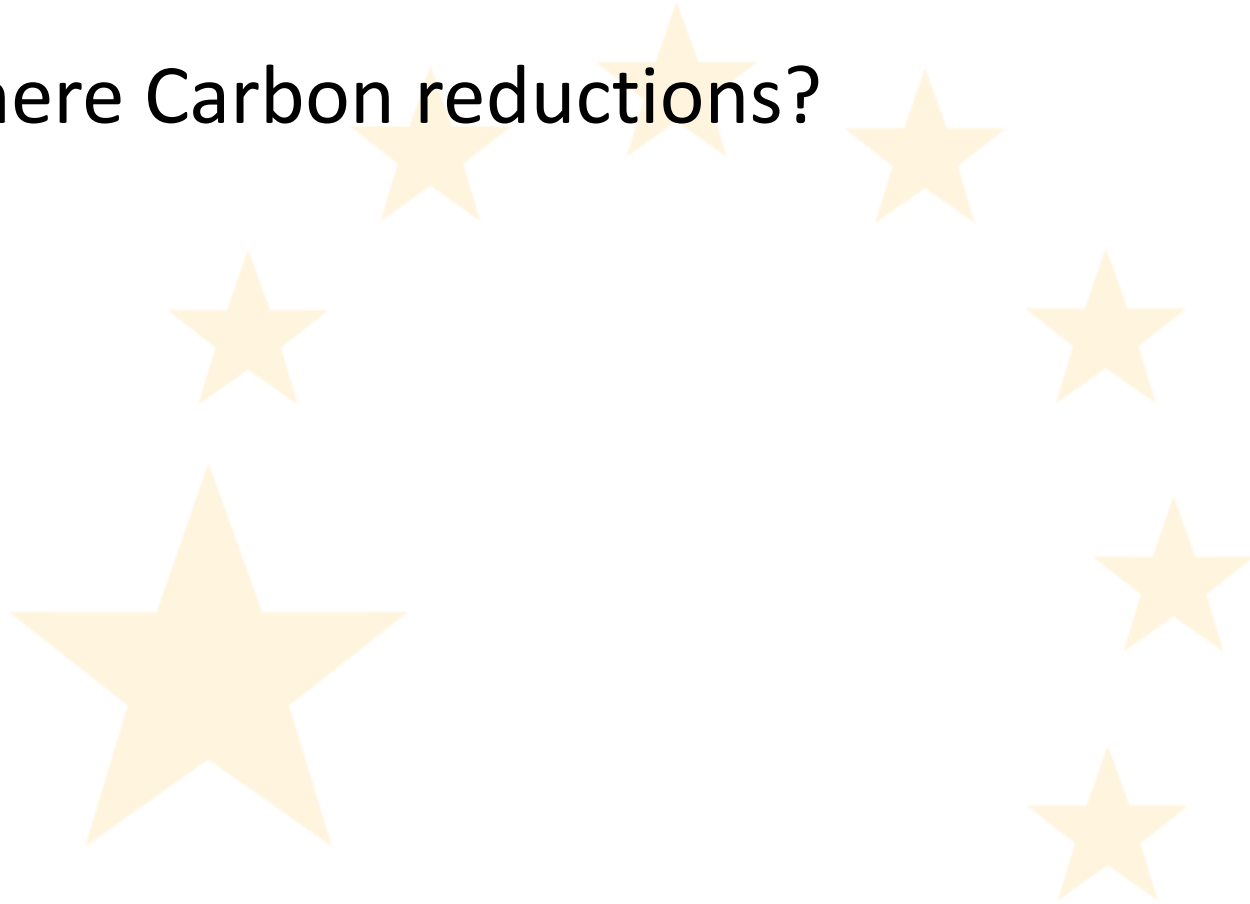
- What is the impact on the industry?



ecodesign requirement for fans



- Are there Carbon reductions?



The good points

- It sets a standard
- The limits are demanding
- It is making OEM's more aware
- It is making fan manufactures more aware
- It is stimulating innovation
- Energy is being reduced
- Carbon emission are being reduced

What next?

- Monitoring verification and compliance
 - FAQ
 - Equal and consistent enforcement
 - Third party certification?
- New unified Market Surveillance Regulation in 2015
 - Major revision of the rules
 - Simplify so that it works better

EVIA members



34 Member companies:



Climate Systems



3 Associate members: