





FAQs on Regulation (EU) 2024/1834

Industry interpretation of ecodesign requirements for fans driven by motors with an electric input power between 125 W and 500 kW

First Edition

Published on Wednesday, 24 September 2025 by Eurovent, 80 Bd A. Reyers Ln, 1030 Brussels, Belgium secretariat@eurovent.eu







Page 2 of 23

Document history

This Eurovent, AMCA Europe and EVIA Industry Recommendation / Code of Good Practice supersedes all of its previous editions, which automatically become obsolete with the publication of this document.

Modifications

This publication was modified as against previous editions in the following manner:

Modifications as against	Key changes
1 st edition	Current document

Preface

In a nutshell

This FAQ guide provides an industry interpretation on the implementation of ecodesign requirements for fans set out in Regulation (EU) 2024/1834 published on 24 July 2024. It addresses common questions on the interpretation of the regulation and aims to support the understanding of open interpretations and questions related to the regulation.

Authors

This document was published by Eurovent, AMCA Europe and EVIA was prepared in a joint effort by participants of the Eurovent Product Group 'Fan Technology (PG-FANS), members of AMCA Europe and members of the EVIA Fans Working Group, which represents a vast majority of all manufacturers of these products active on the EMEA market.

Copyright

© Eurovent, 2025

All content within this document, including but not limited to text, images, logos, artwork, and graphics, is the property of Eurovent and is protected by applicable copyright and intellectual property laws. Unless otherwise stated hereafter, this publication may be distributed in whole or in part, provided that proper attribution to Eurovent is made. Any reproduction or modification of the content, in whole or in part, is prohibited. For any content expressly identified as originating from sources other than Eurovent, permission must be obtained directly from the respective rights holder. Eurovent disclaims all responsibility for obtaining such permissions.

Suggested citation

Eurovent AISBL / IVZW / INPA. (2025). Industry interpretation of ecodesign requirements for fans driven by motors with an electric input power between 125 W and 500 kW. Brussels: Eurovent.

Important remarks

Eurovent does not grant any certification based on this document. All certification-related issues are managed by the Eurovent's subunit Eurovent Certification. For more information, visit www.eurovent-certification.com.







Page 3 of 23

Contents

FAC	Qs on Regulation (EU) 2024/1834	1
Do	cument history	2
Мо	difications	2
Pre	face	2
In a	nutshell	2
Aut	hors 2	
Cop	oyright Suggested citation	
Imp	portant remarks	2
List	t of abbreviations used	6
Def	finitions of terms used	6
Ма	in referred acts, standards and documents	6
For	eword	7
Int	roduction	7
1	Timetable for implementation of ErP2026 requirements	8
1.1	Stand-alone and new embedded fans	8
1.2	Existing embedded fans	9
1.3	Clarification on the pending amendment of Regulation 2024/1834	10
2	Key questions on the transition period	10
2.1	Must or may embedded fans comply with ErP2015 by 24 July 2027?	10
2.2	May ErP2015 compliant complete fans be put on the market after 24 July 2026?	10
2.3	May ErP2015 compliant incomplete fans be put on the market after 24 July 2026?	10
2.4	Can fans declared as ErP2015 compliant and placed on the market before 24 July 2026 be integrated into products after 24 July 2026 or later?	
2.5	2027)?	
	CASE 1 - Complete fan, in stock at EUFM	11 11
3	General questions	11
3.1	Are fans installed in appliances that are already ecodesign-regulated also affected?	11
3.2	What is the international impact of the regulation?	11







Page 4 of 23

3.3	How to declare and mark non-compliant, complete fans for export outside the EU?	12
4	Scope	12
4.1	Are comfort fans and HVLS fans affected by the Regulation?	12
4.2	Does the Regulation apply to extraction fans for short time operation at temperatures be 300°C?	
4.3	What does the exemption of fans handling gases with a compressibility factor not equal t	
4.4	Are fans in applications for 'transport of persons or goods' exempt from ErP2026?	13
4.5	How does the exemption for operating temperature of the gas over 100°C apply?	13
5	Definitions	14
5.1	What is a fan, a complete fan and an incomplete fan according to ErP2026?	14
5.2	What are non-fan elements that may decrease fan efficiency	16
5.3	What is meant by 'inoperable fan' in case of removing protective guards?	17
5.4	What is a free access website?	17
5.5	What does 'inherent speed' mean in the context of the different types of motors and thei control?	
6	CE marking and Declaration of Conformity	18
6.1	General questions on CE marking and conformity	19
6.2	Clarification examples for CE marking and conformity	19 20 20 20 20
7	Main requirements of the regulation	21
7.1	Minimum fan efficiency requirements	
7.2	Product information requirements for fans	
7.3	Information requirements on partial load or at specified duty	21
7.4	Resource efficiency requirements – Spare parts	21







Page 5 of 23

7.5	Material efficiency product information requirements	21
7.6	Product information requirements for spare part fans	21
ANNE	EX I - Regulation (EU) 2024/1834 - Timeline	22
Abou	t Eurovent	23
Abou	t AMCA	23
About EVIA		23

DISCLAIMER

This Frequently Asked Questions guide is intended for technical experts and relevant stakeholders in the fan industry who are implementing and working with Regulation (EU) 2024/1834.

It is not a general summary of the regulation nor a substitute for reading the regulation to obtain all necessary information for its implementation. The information provided in this FAQ is for general informational purposes only and does not constitute legal advice.

The document addresses common questions about interpreting the regulation within the industry and aims to support understanding of open interpretations and questions related to the regulation.







Page 6 of 23

List of abbreviations used

DoC EU Declaration of Conformity

EEA European Economic Area

EUFM European Fan Manufacturer

ErP2015 Term commonly used for Regulation (EU) 327/2011

ErP2026 Term commonly used for Regulation (EU) 2024/1834

VSD Variable Speed Drive

Definitions of terms used

Complete fan Fan as defined in ErP2026, see Section 5.1.

Embedded fan Fan exclusively developed to be integrated in another product¹.

Incomplete fan A product commonly understood as a fan, but not a fan within the meaning of

ErP2026. For example, a motorized impeller. See Section 5.1.

Stand-alone fan Fan that can be used without being integrated into another product².

Purchaser Customer of a fan manufacturer, purchasing fan components or complete fans

(e.g. HVAC-R equipment manufacturer).

Main referred acts, standards and documents

- [1] <u>Directive 2009/125/EC</u> of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of Ecodesign requirements for energy-related products.
- [2] Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products.
- [3] Regulation (EU) 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products.
- [4] Regulation (EU) 206/2012 of 6 March 2012 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for air conditioners and comfort fans.
- [5] EN 12101-3 Smoke and heat control systems Part 3: Specification for powered smoke and heat control ventilators (Fans)
- [6] EN ISO 5801 Fans Performance testing using standardized airways
- [7] The 'Blue Guide' on the implementation of EU product rules 2022 Official Journal of the European Union, C 247, Volume 65, 29 June 2022

¹ For completeness, in line with ISO standards - fan that is set or fixed firmly inside or attached to a surrounding piece of equipment whose purpose exceeds that of a or is different than that of a standalone fan (Source: definition 3.1.1.12 of ISO12759-6:2024). Also known as integrated fans

² For completeness, in line with ISO standards - fan used as a unique entity and not integrated into any other product (Source: definition 3.1.4 of EN ISO 13349-1:2019).







Page 7 of 23

Foreword

In this FAQ document, members of Air Movement and Control Association (AMCA), Eurovent and European Ventilation Industry Association (EVIA) provide their explanation and interpretation of requirements of Regulation (EU) 2024/1834 published in the Official Journal of the European Union on 04 July 2024.

Regulation (EU) 2024/1834 sets out ecodesign requirements for fans and supersedes the long-standing Regulation (EU) 327/2011, commonly known as ErP2015. To make it easier for the industry to refer to the new regulation, it is proposed to use the name ErP2026. This name will be used throughout this document.

The FAQ document will be continuously updated, and the next editions will include questions on new topics raised by industry stakeholders with answers and interpretations agreed by all three associations involved.

Introduction

Regulation (EU) 327/2011 'Ecodesign requirements for fans driven by motors with an electric input power between 125 W and 500 kW' was published in the Official Journal of the European Union on 6th April 2011. It set minimum energy efficiency and product information requirements for driven fans. A driven fan is defined in ISO 13349:2022 Fans — Vocabulary and definitions of categories — Part 1: Vocabulary as a fan driven by an electric motor – one or more impellers fitted to or connected to a motor with a stationary element, with or without transmission or variable speed drive.

There was some confusion from the start as some definitions conflicted with the common understanding of a driven fan. This resulted in the impeller of the fan falling within the scope of the requirements, but without measures to determine the efficiency. Jet fans were another problem, where they are within the scope of the regulation and again with no appropriate method to determine the performance and efficiency. This led to guidance document being published by the fan industry that was subsequently adopted by the European Commission as a frequently asked document (FAQ³) providing clarity to some aspect of the regulation.

The regulation set minimum energy efficiency limits based on the electrical input power at its declared best efficiency point (BEP). An efficiency grade (N) is given for each fan type. This grade is applied to the relevant formula together with the stated electrical input power to give a target efficiency. If the efficiency of the fan at its BEP meets or exceeds the target efficiency it may be placed on the market. If it does not, the fan shall not be placed on the market.

The scope of the regulation includes axial, centrifugal, mixed flow and crossflow fans that are standalone, as well as those integrated in other energy-related products as covered by Directive 2009/125 EC.

The regulation had a significant impact since the regulation was first implemented in 2013, the following savings in electrical energy were achieved: 12 GW electrical power, 150 TWh electrical energy, and 12 MT CO₂. This is significant and a good example for regulation (International journal of Turbomachinery Propulsion and Power⁴).

³ fag-ecodesign-requirements fans 0.pdf (europa.eu)

⁴ Energy and CO₂ Impact of the Eco-Design Regulation for Fans on the European Market.







Page 8 of 23

A consultation forum in 2015 presented a draft revised regulation following a review that started the previous year. It increased the minimum energy efficiency limits and proposed a methodology and limit for jet fans. The consultation forum excluded impellers and deleted the not-final-assembly calculation method, thus leaving just a direct-measurement method.

After several delays and consultation forums, that added clarity for the exclusion of industrial fans for dust and conveying, added a new category for centrifugal fans with a specific speed σ BEP <0.12, product information on partial load and circular economy aspects.

The information on partial load has been included to allow fan users and product integrators to make better informed decisions. With operation information at partial load, they can estimate with greater accuracy the effect of the overall installation to which the fan is applied.

The circular economy aspects include resource-efficiency requirements, providing information on spare parts, how to source and use them and details on dismantling for material recovery. Also, material efficiency information requirement providing information accessing professional repair services and details of proprietary tools.

1 Timetable for implementation of ErP2026 requirements

Related article(s): Article 9, Annex II

ErP2026 is significantly more complex than ErP2015, as it not only covers fan efficiency requirements and product information. It paves the way to the circular economy, as it already includes requirements for spare parts and for replacement fans, called in the regulation as spare part fans.

ErP2026 came into force on 24 July 2024, but its requirements regarding fan performance and product information will only apply after a transitional period of two years for stand-alone and new products, and of three years for existing embedded fans. In other words:

- Models of stand-alone fans and new embedded fans (whose first unit is put on the market after 24 July 2026), will have to meet ErP2026 requirements as of 24 July 2026.
- Models of embedded fans in circulation on the market already before 24 July 2026, will have to meet ErP2026 requirements as of 24 July 2027. By that time, they will have to comply with at least ErP2015 (see also Section 2.1)

Further requirements of the Regulation will apply on the following dates:

- From 24 July 2027: Information requirements on partial load or at a specified duty.
- From 24 July 2028: Availability of spare parts and software updates (if applicable) and access to repair information.
- From 24 July 2028: Material efficiency product information on free website.

The timeline of requirements is discussed in more detail in the following sections, and a comprehensive schedule for the application of particular requirements is presented in <u>Annex I</u>.

1.1 Stand-alone and new embedded fans

The timeline of requirements for stand-alone and new embedded fans is summarised in Figure 1. Minimum efficiency and product information requirements must be met when placing the first unit of the product on the market. Two years later, the requirements for spare parts, related repair information and software updates (if applicable) start to apply and continue until 10 years after the







Page 9 of 23

product withdrawal (the last unit of the product is placed on the market). The product information requirements will remain applicable for 10 more years, i.e. until 20 years after the product is withdrawn from the market.

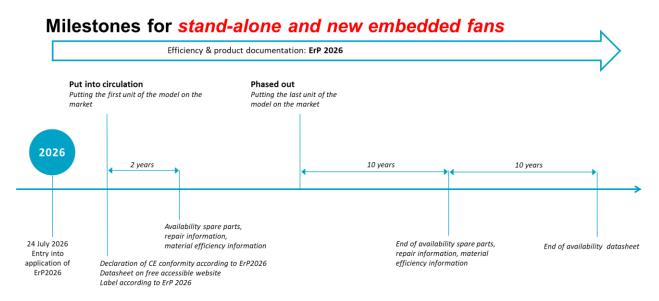


Figure 1. Timetable of ErP2026 requirements for stand-alone and new embedded fans

1.2 Existing embedded fans

For embedded fans that have already been placed on the market before 24 July 2026, the entry into application of the ErP2026 requirements is postponed by an additional year as shown on the corresponding timeline in Figure 2. This means the ErP2026 efficiency and product information requirements will not apply until 24 July 2027. In the same way, units put on the market during the additional transitional year will not be subject to spare part and repair information requirements.

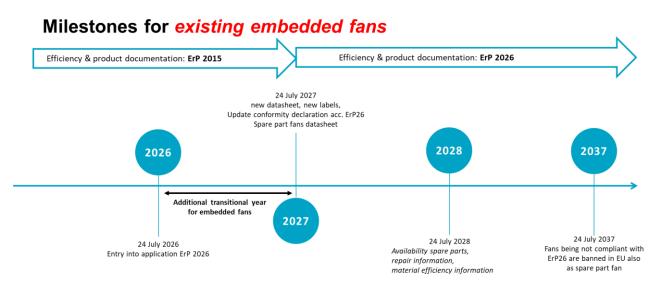


Figure 2. Timetable of ErP2026 requirements for existing embedded fans







Page 10 of 23

In order to foster circular economy, fans that comply with ErP2015 but do not meet the efficiency requirements of ErP2026 will be allowed to be sold as spare part fans until 24 July 2037 under the conditions laid down in Annex II.

1.3 Clarification on the pending amendment of Regulation 2024/1834

In the Regulation text published on 04 July 2024, an error occurred regarding the application date of the requirements for existing embedded fans. It is understood this will to be amended to align with Article 2. The Commission has launched a procedure to amend the mistakenly stated date of 24 July 2037 to 24 July 2027, in line with the draft regulation made available earlier. Accordingly, the correct date of 24 July 2027 is used in this FAQ document. Furthermore, taking opportunity of the launched correction procedure and following concerns raised by the industry, the Commission decided to include in the amended regulation additional improvements regarding definitions, verification tolerances, test results corrections and other provisions that relate to fan speed. The amended regulation is expected to be published by the end of 2025. More information can be found on the EU Commission website⁵.

2 Key questions on the transition period

2.1 Must or may embedded fans comply with ErP2015 by 24 July 2027?

Related article(s): Article 1, Annex II

Embedded fans, which are placed on the market until 24 July 2027, may comply with ErP2026, but must comply at least with ErP2015 requirements set out in its Annex I, that are subject to calculation methods in Annex II to that Regulation, and verifiable by market surveillance authorities in accordance with Annex III to that Regulation.

2.2 May ErP2015 compliant complete fans be put on the market after 24 July 2026?

Related article(s): Article 9, Annex II (a) to (d), the Blue Guide [7] paragraphs 2.10 to 2.11

Yes, if an embedded, complete and ErP2015 compliant unit of the same model have already been placed on the market before 24 July 2026, they can further be put on the market in the period from 24 July 2026 to 24 July 2027. In this case, the EU declaration of conformity issued by the EUFM needs to refer to ErP2026 and indicate making use of the exemption specified in Annex II (a) to (d).

2.3 May ErP2015 compliant incomplete fans be put on the market after 24 July 2026?

Related article(s): Article 9, Annex II (a) to (d), the Blue Guide [7] paragraphs 2.10 to 2.11

Yes, if an embedded, incomplete and ErP2015 compliant unit of the same model have already been placed on the market before 24 July 2026, they can further be put on the market in the period from 24 July 2026 to 24 July 2027, similar to complete fans. The EUFM stays the manufacturer during the period from 24 July 2026 to 24 July 2027 and issues the EU declaration of conformity that needs to refer to ErP2026 and indicate making use of the exemption specified in Annex II (a) to (d).







Page 11 of 23

2.4 Can fans declared as ErP2015 compliant and placed on the market before 24 July 2026 be integrated into products after 24 July 2026 or later?

Yes, because the product is already placed on the market and ErP2026 has no additional requirements that products already placed on the market must be replaced or changed. The same applies to fans put on the market under the exemption specified in Annex II (a) to (d) during the additional period. ErP2015 compliant fans placed on the market by 24 July 2027 can be integrated into products even after 24 July 2027.

2.5 What happens with fans in stock after 24 July 2026 (for embedded fans from 24 of July 2027)?

As of 24 July 2027, for embedded fans and as of 24 July 2026 for other fans the following cases apply.

CASE 1 - Complete fan, in stock at EUFM

In order to be allowed on the EEA market, a complete fan has to meet ErP2026 requirements. Under restricted conditions, ErP2015 compliant fans can be placed on the market as spare parts fans (see Section 7.6). Complete fans failing these requirements can only be exported outside the EEA.

CASE 2 - Incomplete fan, in stock at EUFM

As for 24 July 2026, incomplete fans will no longer be in the scope of the ErP2026 and will freely be able to be put on the market in the EEA. Purchasers integrating incomplete fans into their application, completing the fan, will be considered as fan manufacturer (see Section 5.1) and fully responsible to meet the ErP2026 requirements.

CASE 3 - Complete fan, in stock at purchaser

A complete fan is already placed on the market (complies with ErP2015) and can be freely marketed, integrated into products and put into service.

CASE 4 - Incomplete fan, in stock at purchaser

As the ErP2015 makes no distinction between complete and incomplete fans, this case is identical to CASE 3.

3 General questions

3.1 Are fans installed in appliances that are already ecodesign-regulated also affected?

Related article(s): Article 1(1)

Yes, the EU Commission is pursuing a cascading approach here. This means that the manufacturer of ventilation units, for example, must ensure the minimum efficiency meet ecodesign requirements of the fans used. Attention must be brought to spare parts: if in the regulation of the application the spare parts are regulated, that regulation takes priority over the ErP2026.

3.2 What is the international impact of the regulation?

The regulation is binding for all products and components that are placed on the market in the EEA, regardless of whether they are produced in the EEA or imported from third countries. Products for







Page 12 of 23

export are not covered. However, comparable efficiency requirements already apply in many non-EEA countries.

3.3 How to declare and mark non-compliant, complete fans for export outside the EU?

The fan should not be CE marked as it does not meet the requirements. An agreement should be in place between the supplier and customer. The documentation, purchase order, acknowledgement, delivery note and invoice shall have a statement that the product shall not be put into service in the EEA and is sold on the understanding that it will be exported and put into service outside of the EEA.

4 Scope

4.1 Are comfort fans and HVLS fans affected by the Regulation?

Related article(s): Article 1

No, comfort fans like ceiling fans, oscillating desk and pedestal fans, tower fans, as well as High Volume Low Speed (HVLS) fans, not connected to any ducting, without a stator or with a stator that cannot be connected to ducting, used for moving air within a space, such as a room or an open-air area, are not covered by this regulation.

Comfort fans up to 125 W are currently covered by Regulation 206/2012 while HVLS are not subject to any specific requirements since there is not a reference standard to evaluate their performance.







Figure 3. Example of comfort fans @Assoclima

4.2 Does the Regulation apply to extraction fans for short time operation at temperatures below 300°C?

Related article(s): Article 1 (3)(b)

Fans for emergency use only, with regard to fire safety requirements as set out in Regulation (EU) 305/2011, capable of short-time duty operation of 1 hour or more at temperatures of 300°C and above are exempt from the Regulation scope. However, EN 12101-3 also classifies fans for smoke extraction for short time operation at temperatures of 200°C and 250°C. In turn, fans considered as dual use fans, are subject to the Regulation but their efficiency requirements are reduced by a factor of 0.9 as shown in Annex II (1)(6).

Accordingly, the following interpretation applies:







Page 13 of 23

Fans exclusively for smoke extraction

- All fans classified according to Regulation (EU) 305/2011 as fire rated products for operation below 300°C are included in the scope of Regulation (EU) 2024/1834
- Fans rated as F300 or higher are exempt from the Regulation scope.

Dual use fans (for smoke extraction and general ventilation)

- All dual use fans classified according to Regulation (EU) 305/2011 as fire rated products are subject to the Regulation but their efficiency requirements are reduced by a factor of 0.9 as shown in Annex II (1)(6).

4.3 What does the exemption of fans handling gases with a compressibility factor not equal to 1,00 mean?

Related article(s): Article 1 (3)(l)

The Regulation does not apply to fans for handling gases with a compressibility factor, rounded to the nearest second decimal, in the designated pressure and temperature range of the scope that is not equal to 1,00. This provision means that the regulation deals with gases and vapours that have roughly the same characteristics as air. The formulation is specific to ensure that a 'simplified' efficiency calculation applies, i.e. without the compressibility factor that would otherwise need to be taken into account according to ISO 5801.

4.4 Are fans in applications for 'transport of persons or goods' exempt from ErP2026?

Related article(s): Directive 2009/125/EC Article 1(3), Regulation (EU) 2024/1834 Article 79(1)(b)

Yes. Fans integrated in, for instance, railway applications are exempt. Not directly in the legal text of ErP2026, but through its legal framework. ErP2026 implements provisions of Directive 2009/125/EC, which explicitly excludes 'means of transport for persons or goods' in Article 1(3). Although Directive 2009/125/EC was repealed by Regulation (EU) 2024/1781 (ESPR) as of 18 July 2024, it continues to apply to ErP2026 as set out in Article 79(1)(b) of ESPR.

Consequently, fans used in transport applications like railways remain exempt from the ErP2026 requirements for fans.

4.5 How does the exemption for operating temperature of the gas over 100°C apply?

Related article(s): Article 1(3)(e)

The exemption describes the operating temperatures of the gas being moved can be higher than 100°C, or lower than -40°C, or both. The exemption applies when fans are regularly used at gas temperatures above 100°C or/and below - 40°C.







Page 14 of 23

5 Definitions

5.1 What is a fan, a complete fan and an incomplete fan according to ErP2026?

Related article(s): Article 2

According to the Regulation, a fan consists of at least three main components. These are: stator, motor and impeller. The stator refers to the air-carrying elements and the motor is the electric drive, with or without speed control.

In a more general approach, a fan consists of so-called significant elements. According to the Regulation text, 'significant elements' means fan elements that contribute to the continuous conversion of electric power into air volume flow rate and pressure, or that influence the efficiency of that conversion. The following Figure 4 gives examples.



Figure 4. Fan significant elements ©ebm-papst

In practice, two types of fans will be distinguished: complete fans (i.e. fans in the sense of Regulation 2024/1834) and incomplete fans (motorized impellers, for instance). The difference between the complete and incomplete fan is in explained in Figure 5.







Page 15 of 23





Complete centrifugal fan, consist of impeller (green), motor (orange) and stator (blue)

incomplete centrifugal fan: motor/impeller combination

Figure 5. Example of a complete fan (left) and an incomplete fan (right). ©ebm-papst (left), ©Ziehl-Abegg (right)

Industry players who purchase incomplete fans and integrate them into their devices become fan manufacturers. For instance, a fan is incomplete if it was purchased without a wall ring, which is already an integral part of the device. Examples of an incomplete fan are shown in Figure 6 (for the air handling unit manufacturer) and Figure 7 (for the condenser manufacturer).



Figure 6. Example of an incomplete fan: the air handling unit manufacturer mounts an incomplete fan (black) in its product. The fan wall ring is integrated into the air handling unit (blue). The air handling unit manufacturer completes the fan and therefore becomes fan manufacturer. ©ebm-papst







Page 16 of 23



Figure 7. Example of an incomplete fan: The condenser manufacturer mounts incomplete axial fans (black) into application. The fan wall ring and support brackets are integrated into the application or assembled by the condenser manufacturer (blue). Again, the condenser manufacturer completes the fan and therefore becomes fan manufacturer. ©ebm-papst

Important: The definition of a fan has a big influence on the declaration of conformity, For FAQs on the conformity see section 6 - CE marking and Declaration of Conformity.

5.2 What are non-fan elements that may decrease fan efficiency

Related article(s): Article 2 (11)

The definition of 'stator' excludes any non-fan elements that may decrease efficiency of the fan. A nonexhaustive list of such elements includes:

- detachable guard grilles, which can be dismounted and must not be considered in the evaluation of efficiency,
- wind and backdraft shutters,
- silencers,
- components designed to separate solid particles or prevent the entry of condensation and rainwater.



Figure 8. Example of a non-fan element decreasing efficiency. Axial fan vane controller © Systemair







Page 17 of 23

5.3 What is meant by 'inoperable fan' in case of removing protective quards?

Related article(s): Annex III (6)

Inoperable means that a fan is not able to move air, when switched-on. An example is when the protective guard and the motor fixing are one part, and after taking it away the fan is no more able to operate.

5.4 What is a free access website?

A free access website is a conventional website. Any mandatory registration process, even free of charge, is prohibited.

5.5 What does 'inherent speed' mean in the context of the different types of motors and their control?

Related article(s): Annex I (36)

The ongoing amendment of Regulation (EU) 2024/1834 is expected to include an improved and more detailed definition of 'inherent speed' (see also Section 1.3). All three fan industry associations put forward the following definition for implementation:

Inherent speed' means the rotation speed of the fan impeller, when it is operated at its nominal voltage and frequency. In case of fans with a variable speed drive or intended to be used with a variable speed drive, the inherent speed is the maximum speed achieved by the fan or at the speed at which the efficiency is declared by the manufacturer, and that is in line with the fan safe operation and in line with the intended use of the fan. Where the motor is a multiple speed motor, the highest speed made available to the customer applies.

Further rules for interpreting of this definition depending on the motor type and the way its speed is controlled, are as follow:

Motor technology		Characteristic	VSD	Rule
EC (Electronically Commutated Motor)		Maximum input control signal	Yes	2
		No control	No	1
		Frequency controlled	Yes	2
AC (Asynchronous Induction Motor)		Input voltage controlled	No	1
		Multiple speed motor	Yes	4
		Multiple speed motor	No	3
Rule	Definition			
1	Here, the inherent speed is the maximum rotation speed of the impeller occurring when the output torque of the motor exactly matches the torque required by the impeller at rated voltage and frequency.			







Page 18 of 23

2	Here, the inherent speed is the maximum rotation speed of the impeller occurring when the output torque of the motor exactly matches the torque required by the impeller at the maximum speed set by the Variable Speed Drive (VSD).
3	Here, the inherent speed is the maximum rotation speed of the impeller occurring when the output torque of the motor exactly matches the torque required by the impeller at rated voltage and frequency and the highest selectable speed of the motor.
4	Here, the inherent speed is the maximum rotation speed of the impeller occurring when the output torque of the motor exactly matches the torque required by the impeller at rated voltage and frequency and the highest selectable speed of the motor set by the Variable Speed Drive (VSD).

Table 1. Interpretation rules for the definition of 'inherent speed' for different motor and control types.

Additional clarifications:

- Table 1 applies for inner and outer rotor motors.
- EC-motors are considered to have an integrated variable speed drive (VSD) within its housing.
- All maximum speeds are based on the maximum mechanical strength of the impeller, the thermal limits of the motor and the maximum capacities of the VSD, declared by the manufacturer.
- In case of placing a fan for the first time on the market and as integrated into an application, the limiting impeller speed of the application is becoming the inherent speed.

6 CE marking and Declaration of Conformity

Fans, like other products covered by the so-called new approach Directives and other pieces of EU harmonisation legislation must comply with relevant requirements in force when placed or put into service on the EU market. The requirements may concern either specific groups of products (for example machinery, energy-related products – which is the case for complete fans) or risks and phenomena (e.g., electromagnetic compatibility). A product may therefore be subject to different legislation and must meet all relevant requirements. It is the responsibility of the suppliers to assess which directives and regulations apply to the product in question. Suppliers are responsible for ensuring product compliance. By affixing the CE mark on the product and issuing the EU declaration of conformity, they confirm that the applicable requirements, including conformity assessment procedures, were met. The term 'suppliers' includes:

- Manufactures established in the EU.
- Importers (by definition established in the EU), where the manufacturer is not established in the Union.
- Authorised representatives (by definition established in the EU) who have a written mandate from the manufacturer designating the authorised representative to perform the tasks set out in relevant legislation on the manufacturer's behalf.







Page 19 of 23

6.1 General questions on CE marking and conformity

6.1.1 How to recognize fans that comply with regulations?

Compliance of the complete fan, according to the definition of Article 2, must be indicated by the CE mark. Only CE-compliant fans may be placed on the EU market. In addition, specific information shall be marked on the label as specified in Annex II (2)(2).

Warning! The 'China Export' logo is very similar to the European Union's CE mark. Refer to Figure 9, which shows the differences between the two marks to avoid being misled.

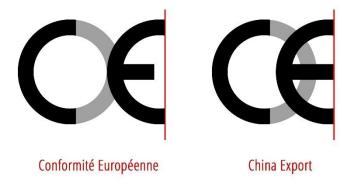


Figure 9. Difference between the EU CE-mark and 'China Export' marking.

6.1.2 Are there options under which ErP2026 non-compliant fans can be sold on the EU market?

Yes, there are:

- ErP2026 allows to sell embedded fans until 24 July 2027, as explained in sections 1 and 2.
- Fans for export outside the EU, see Section 3.3.
- As spare part fan, until 24 July 2037, if no alternative replacement fan that is fit to be integrated into the product is available (see Section 7.6).

6.1.3 Who issues the EC declaration of conformity?

The CE marking is a self-declaration issued by the manufacturer or its authorised representative of the complete fan as defined in Article 2. The issuer is personally liable for compliance with the requirements. Where the manufacturer is not established within the European Community and in the absence of an authorised representative, the importer has the obligation to ensure that the product placed on the market or put into service complies with the Regulation and must keep and make available the EU Declaration of Conformity.

6.2 Clarification examples for CE marking and conformity

The rules regarding CE marking and declaration of conformity outlined below only refer the requirements of ErP2026. The CE marking and conformity declaration for applicable regulatory requirements, other than ErP2026, must be considered, too.

The fan manufacturer is responsible for declaring that the performance of the fan complies with ErP2026 requirements. If the purchaser becomes the fan manufacturer, it may be possible to use the performance data from the EUFM, provided that the components used have identical dimensions and performance to those used for the measurements of the EUFM. However, even when referring to







Page 20 of 23

EUFM data, the manufacturer (in this case the purchaser) remains fully accountable for the accuracy and validity of the declared performance data for a specified product.

CASE 1: EUFM supplies fan as a complete system

EUFM supplies the complete fan with stator, impeller and motor. EUFM has determined on suitable test benches that the overall efficiency meets the ErP2026 ecodesign requirements. EUFM declares conformity and affixes the CE mark to the product and is the manufacturer.

CASE 2: EUFM supplies all elements of a complete fan as a kit

EUFM supplies all relevant components unassembled (stator, impeller and motor). The purchaser completes the fan according to EUFM's specifications. The purchaser must declare the EC conformity as he completed the fan and becomes the fan manufacturer.

CASE 3: EUFM supplies an incomplete fan, without a stator

EUFM supplies only the motor and impeller, and the purchaser manufactures the stator itself according to the EUFM's technical documentation or completes the fan with dimensionally deviating components. The purchaser must declare the EU conformity as he completed the fan and becomes the fan manufacturer.

CASE 4: EUFM supplies an incomplete fan, without a motor

EUFM supplies all relevant components except the motor. The purchaser integrates the complete (direct or belt driven) fan with a motor, according to EUFM's specifications or a similar motor. The purchaser who integrates the complete fan (as per definition of Article 2) becomes the fan manufacturer and must declare its EU conformity.

CASE 5: EUFM supplies plug fans for plenum

EUFM supplies plug fans for plenum (frame, impeller and motor, without stator). The purchaser integrates these plug fans in its equipment (in the plenum-stator). The purchaser who integrates the complete fan (as per definition of Article 2) takes the responsibility for its compliance and declares the ErP2026 conformity.

CASE 6: EUFM supplies a motorized impeller as an incomplete fan

EUFM supplies a non-assembled motorized impeller. The purchaser assembles the fan and completes it with all necessary parts. Because the delivered motorized impeller is not a complete fan according to ErP2026, no ErP-data (e.g. N-value) should be stated on its label from EUFM.

If EUFM supplies the purchaser with an incomplete fan and the full characteristics of the corresponding complete fan have been measured by EUFM, EUFM may supply a label for the complete fan to be integrated by the purchaser, including ErP data and the purchaser's name, provided that the relevant legal issues have been clarified. The label for the incomplete fan still must not contain ErP data under the EUFM name to avoid any misleading.

CASE 7: Buyer imports fan from third countries

The buyer purchases a complete fan from a non-EU country. It can use the documentation supplied to declare the EU conformity but is fully responsible for the correctness and completeness of the documentation and the compliance of the fan performance.

The legally responsible person is always the importer registered in the EU. Furthermore, it must be stressed that the user who purchases a product from non-EU countries and puts it into service becomes an importer and is also responsible for compliance.







Page 21 of 23

7 Main requirements of the regulation

7.1 Minimum fan efficiency requirements

7.1.1 Are measurements always required, or can calculations also be used?

Related article(s): Article 4(3)

Yes, calculations are possible, there is no defined need to have all values measured.

Important: Especially Article 4 describes documentation necessities, if calculations are made: 'the technical documentation shall include the details of the calculation, the assessment undertaken by the manufacturer to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different manufacturers'.

7.2 Product information requirements for fans

7.2.1 Must the technical data sheet or user manual be supplied with the fan?

Related article(s): Annex II (2)(1)(a)

No, technical data sheets or user manuals do not need to be supplied with the fan if the fan has a compliant QR code and internet link to free access electronic copies.

7.3 Information requirements on partial load or at specified duty

The FAQs on this subject will be included in the next update of the document, based on the questions and cases constantly arriving from stakeholders.

7.4 Resource efficiency requirements – Spare parts

The FAQs on this subject will be included in the next update of the document, based on the questions and cases constantly arriving from stakeholders.

7.5 Material efficiency product information requirements

The FAQs on this subject will be included in the next update of the document, based on the questions and cases constantly arriving from stakeholders.

7.6 Product information requirements for spare part fans

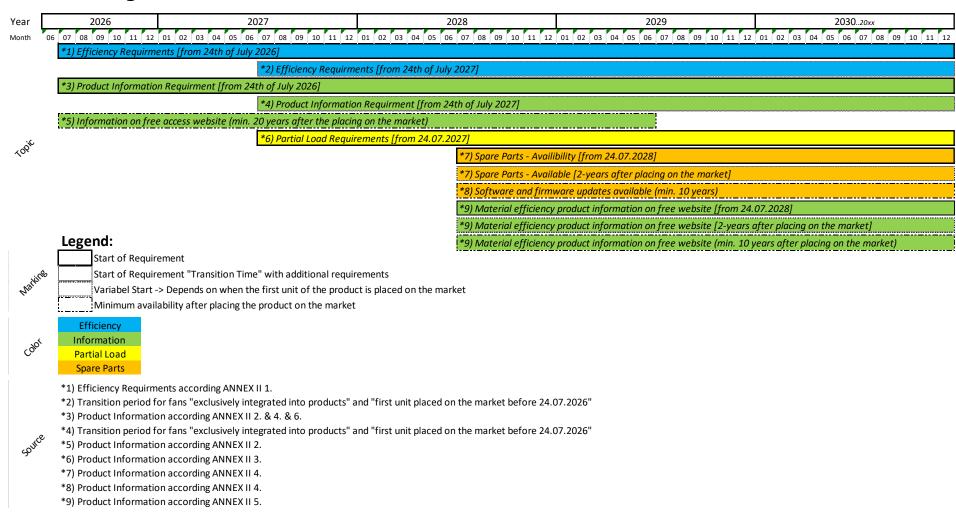
The FAQs on this subject will be included in the next update of the document, based on the questions and cases constantly arriving from stakeholders.







ANNEX I - Regulation (EU) 2024/1834 - Timeline



Eurovent AISBL / IVZW / INPA

European Industry Association EU Trans. Reg.: 89424237848-89 80 Bd A. Reyers Ln 1030 Brussels BELGIUM www.eurovent.eu +32 (0)466 90 04 01 secretariat@eurovent.eu Fortis Bank
IBAN: BE 31 21004399955
BIC: GEBABEBB







About Eurovent

Eurovent is the voice of the European HVACR industry, representing over 100 companies directly and more than 1.000 indirectly through our 16 national associations. The majority are small and medium-sized companies that manufacture indoor climate, process cooling, and cold chain technologies across more than 350 manufacturing sites in Europe. They generate a combined annual turnover of more than 30 billion EUR and employ over 150.000 Europeans in good quality tech jobs.

Mission

Eurovent's mission is to bring together HVACR technology providers to collaborate with policymakers and other stakeholders towards conditions that foster fair competition, innovation, and sustainable growth for the European HVACR industry.

Vision

Eurovent's vision is an innovative and competitive European HVACR industry that enables sustainable development in Europe and globally, which works for people, businesses, and the environment.

→ For in-depth information and a list of all our members, visit <u>www.eurovent.eu</u>

About AMCA

AMCA is a not-for-profit association of manufacturers of fans, louvres, dampers, air curtains, airflow-measurement devices, ducts, acoustic attenuators, and other air-system components. AMCA is a truly global association with operations in Europe (Brussels), Asia, North America, the Middle East, and Latin America, and nearly 400 member companies. AMCA provides global services for verification of compliance, development of standards, and advocacy for model codes, regulations, and utility incentive programs promoting efficiency and life safety.

→ For more information, visit <u>www.amca.org</u>

About EVIA

The European Ventilation Industry Association (EVIA) represents the views and interests of the ventilation industry and serves 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 39 European mechanical ventilation manufacturers and 6 national associations across Europe, realising an annual turnover of over EUR 7 billion and employing more than 45,000 people in Europe.

Mission

EVIA advocates for the development and implementation of sustainable, energy efficient ventilation solutions that enhance indoor air quality in buildings, promoting a healthier and more circular built environment.

Vision

We envision a world where every individual has access to healthy indoor air, fostering well-being and productivity in every living and working space.

→ For more information, visit <u>www.evia.eu</u>