

ErP - Energy Related Products Directive

What is ErP?

ErP is the European Energy Related Products Directive which is driving more transparency and information in the matters of energy efficiency. As a CE Marking Directive, it provides the ecodesign requirements for defined energy-related products or functions.

You will probably already be familiar with it in relation to white goods.

From refrigerators to washing machines and TV's and hoovers, ErP is responsible for the introduction of the energy efficiency label, which indicates the energy consumption of the unit.



What is the objective of the ErP directive?

The objective of the ErP Directive is to reduce greenhouse gas emissions and other adverse environmental impacts throughout the life-cycle of a product. The emphasis is being placed on the design and development stages of a product with a view to improving its energy efficiency.

Currently, the European market for domestic ventilation units is subject to numerous different national and international approval and certification programmes. The new regulation means a further step towards greater market transparency and better consumer information across Europe.

How does the ErP affect ventilation products?

The ErP Directive 2009/125/EC, covering residential and non-residential ventilation units, will be effective from **1st January 2016**.

This focuses on three ventilation product categories:

1. Residential Units <30 watts
2. Residential units >30 watts
3. Non-residential units

For information purposes every energy-related product, within these categories, must have a Declaration of Performance (DoP) available on their respective manufacturer's website.

The DoP provides the necessary energy performance information and rating A+ - G

The implementation of this legislation is set to have a major impact on the ventilation products that are available on the market. The onus is on ventilation system manufacturers to ensure they are selling products which comply with the CE Marking/ErP requirements.

Every product must have a DoP but what is actually within scope for 1.1.2016?

Residential units (>30 watts)

This includes central mechanical systems such as Mechanical Extract Ventilation (**MEV**) and Mechanical Ventilation with Heat Recovery (**MVHR**) Systems.

The eco-design criteria, for each of the above products, within this category require that as from the 1st January 2016:

- The Specific Energy Consumption (SEC), calculated for the average climate, is no more than 0 kWh/(m².a)
- All ventilation units are to be equipped with a multi-speed drive or variable speed drive
- All MVHR units (classified as Bidirectional Ventilation Units - BVUs) will be required to include a thermal by-pass facility

As well as providing DoP information on the manufacturers website, all products in this category 'Residential units >30 watts' must also have the DoP and ErP label(s) provided with the product. This is so that the installer can attach the correct label at the point of installation.

What information is provided on the DoP?

Ranging from airflow rates, electrical wattage consumption, through to the noise level at the unit, every product is tested to obtain the key performance data for differing install applications, i.e. how the unit will be controlled, to determine the SEC rating.

Declaration of Performance Heat Recovery Unit Zehnder ComfoAir 350 GB L/R												
Supplier name or trade mark	Zehnder Group			Zehnder Group			Zehnder Group			Zehnder Group		
Supplier Model Identifier and options installed	Manual control			Clock control			central demand control			local demand control		
SEC in [kWh/(m ² a)] for each climate (Cold, Average, Warm)	-75,0	-36,6	-12,0	-76,0	-37,4	-12,7	-78,4	-39,5	-14,6	-82,3	-42,8	-17,5
SEC class	A			A			A			A+		
Declared topology	Bidirectional			Bidirectional			Bidirectional			Bidirectional		
Type of drive installed	Multi-speed drive (3-position switch)			Multi-speed. Three variable speed settings			Variable speed			Variable speed		
Type of heat recovery	Recuperative			Recuperative			Recuperative			Recuperative		
Thermal efficiency ¹	90%			90%			90%			90%		
Maximum flow rate in [m ³ /h] ²	400			400			400			400		
Maximum electric Power [W]	245			245			245			245		
Sound power level (L _{WA}) in [dB(A)] ³	52			52			52			52		
Reference flow rate in [m ³ /s] ⁴	0,078			0,078			0,078			0,078		
Reference pressure difference	50			50			50			50		
SPI in [W/(m ³ /h)] ⁵	0,28			0,28			0,28			0,28		
Control factor and typology	1			0,95			0,85			0,65		
Declared maximum internal and external leakage [%] ⁶	Internal : 0,6 % External : 1,1 %			Internal : 0,5 % External : 1,7 %			Internal : 0,5 % External : 1,7 %			Internal : 0,5 % External : 1,7 %		
Position and description of visual filter warning	"Fil-Ter" warning on display on unit or room controller			"Fil-Ter" warning on display on unit or room controller			"Fil-Ter" warning on display on unit or room controller			"Fil-Ter" warning on display on unit or room controller		
Internet address for pre-/dis-assembly instructions	www.zehnder.co.uk			www.zehnder.co.uk			www.zehnder.co.uk			www.zehnder.co.uk		
AEC (kWh electricity/a) for each climate (Cold, Average, Warm)	14,6	9,2	8,8	13,9	8,6	8,1	12,2	6,8	6,3	9,5	4,2	3,7
AHS (in kWh primary energy/a) for each climate (Cold, Average, Warm)	89,6	45,8	20,7	89,9	46,0	20,8	90,6	46,3	20,9	91,8	46,9	21,2

1: Efficiency according EN13141-7:2010 at reference flow @ 50 Pa.

2: Maximum flow at 100 Pa external pressure.

3: Casing radiation at reference flow rate at 50 Pa external pressure.

4: Reference flow rate is 70% of maximum flow at 50 Pa external pressure according EN13141-7:2010

5: According EN13141-7:2010 at reference flow rate.

6: According EN13141-7:2010.

SEC: Specific Energy Consumption

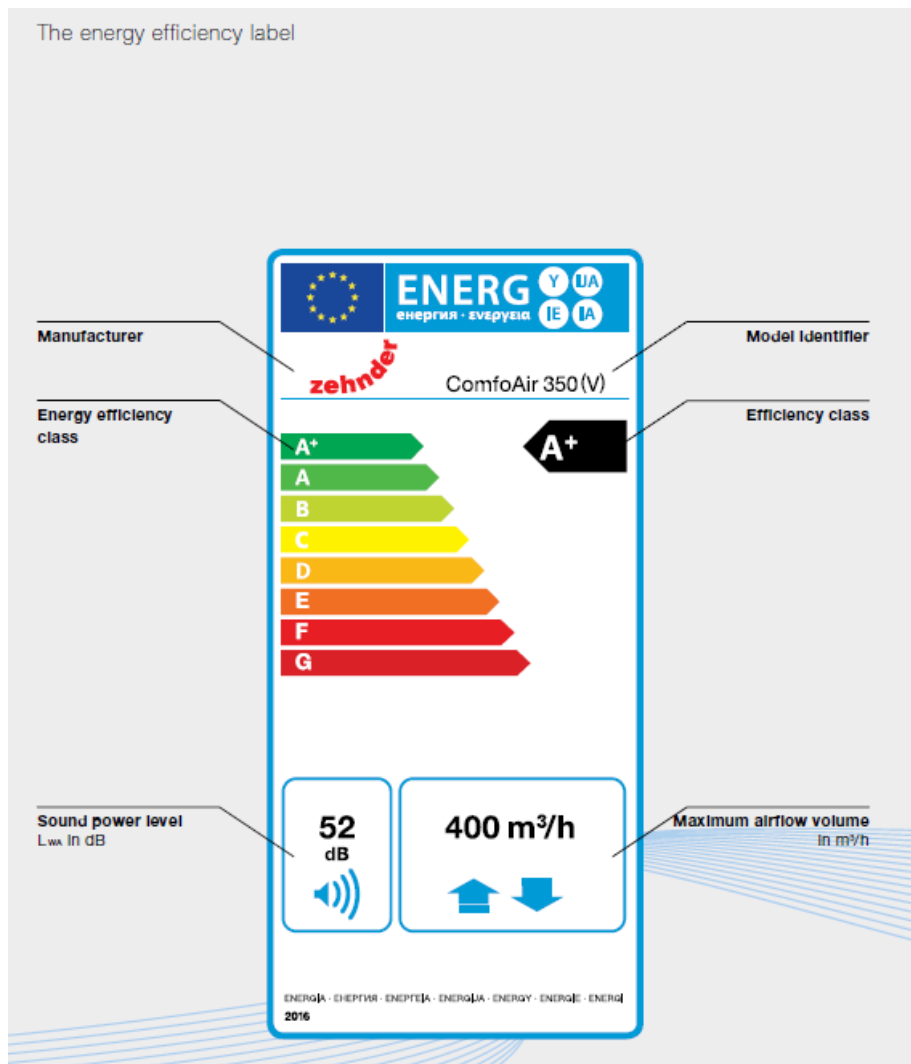
AEC: Annual Electricity Consumption

AHS: Annual Heating Saved

What do the four control installations mean for MEV/MVHR? (Shows as supplier model identified and options installed on Declaration of Performance)

Control	How it works?
Manual Control	Can only be boosted using a manual switch
Clock Control	has a seven weekday manual setting capability with at least two airflow setback periods, i.e. reduced or no flow rate
Central Demand Control	automatically regulates the airflow rate using one sensor
Local Demand Control	automatically regulates the airflow rate using more than one sensor

What information does the ErP label provide?



For simplicity only the key points from the DoP are shown on the label.

The installer identifies the correct label through the SEC Class dependent on the installation and controls

i.e. the example shown would be when the ComfoAir 350 unit was installed utilising local demand control.

How do I understand the Energy Performance Scale?

There is one energy performance scale for all ventilation units and the energy efficiency class.

It isn't just about the wattage or energy that is consumed when the product is working – the test for different types of products takes into consideration controls amongst other things to determine the class rating.

More Information

If you have any further questions in relation to ErP please do not hesitate to get in contact with your regional manager or our Technical Services Department on 01276 605800.

From 1.1.2016 all Zehnder and Greenwood Airvac products will be compliant with the ErP directive and the Declaration of Performance Information will be available on each website. www.greenwood.co.uk and www.zehnder.co.uk