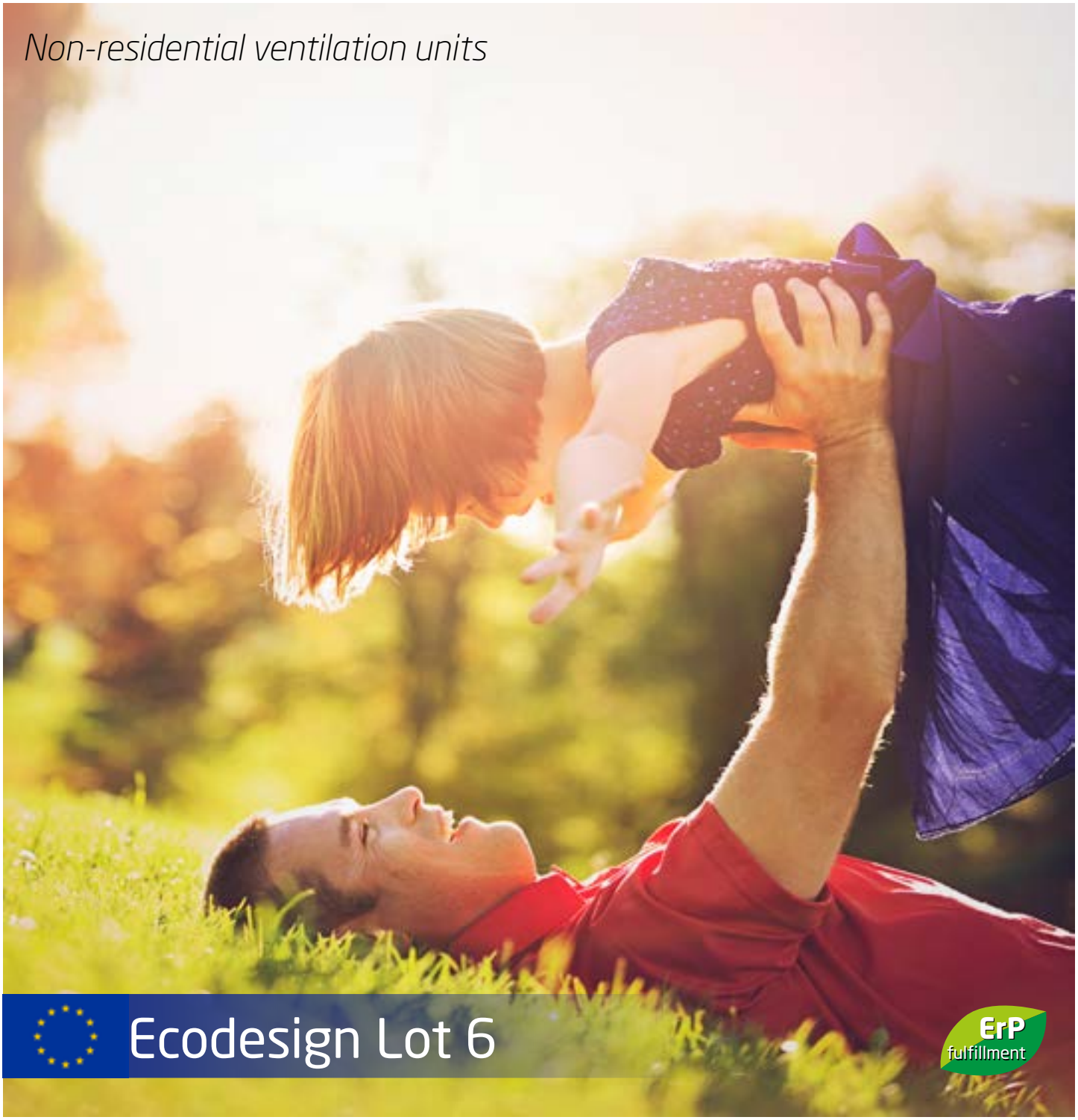
Investment for the future

Non-residential ventilation units



Swegon

What is ErP and Ecodesign?

ErP stands for "Energy Related Products". ErP is supported by Ecodesign Directive (2009/125/EC) to make the use of energy and energy related products more efficient, by phasing out inefficient products and making it easier for consumers to find energy information, providing guidance to more energy-efficient products.

The Ecodesign Directive is a vital part of the European Union's commitment to reaching the 2020 goals, aiming to reduce greenhouse gas emissions by 20% and overall energy consumption by 20%.

What is Ecodesign Directive Lot 6?

For practical reasons, the implementation of the Ecodesign Directive is split into a number of areas of related products, called "lots", focusing on the product areas with the most substantial energy consumption and the highest potential for energy savings.

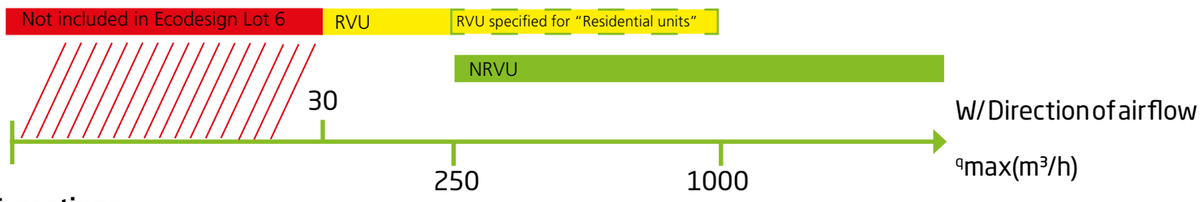
Lot 6 concerns ventilation units, a highly relevant product area, since ventilation, heating and air conditioning represent about 15% of the total energy consumption in the EU, and there is a wide variance in energy efficiency among the products on the market. Estimates show that the implementation of Lot 6 of the Ecodesign Directive will result in annual European energy savings of 1,300 PJ (PetaJoule) by year 2025. This corresponds roughly to today's entire production of electricity in the UK.

The Ecodesign Directive Lot 6 will achieve its target by setting up minimum performance requirements for ventilation products, which will be implemented in steps from 2016 to 2018.

Exceptions and limitations

Classification

Ventilation units are classified either as "Residential Ventilation Units" (RVU in the diagram below) or "Non-Residential Ventilation Units" (NRVU in the diagram below). The requirements are different for these two classes.



Exceptions:

- Fans in a casing according to 327/2011 (power input of less than 30W)
- ATEX Directive (explosive atmospheres)
- For emergency situations
- Certain extreme temperatures
- Power supply voltage > 1000 V AC or > 1500 V DC
- In toxic, corrosive, inflammable environments or in environments with abrasive materials.
- Ventilation systems that include a heat exchanger and a heat pump for heat recovery.
- Kitchen fans.

Ecodesign Lot 6 for non- residential ventilation units

1. All ventilation units, except fans with more than one range of application (for example fans used for both ventilation and combustion gas extraction) shall be equipped with a step-by-step or a variable speed controller.

2. All ventilation units with two directions of airflow shall have a heat recovery system.

3. The heat recovery system shall have a thermal bypass. This means heat recovery regulation between 1-100%.

4. In ventilation units with two directions of airflow, the minimum thermal efficiency of all heat recovery systems (except run-around liquid systems) shall be the following:

- *As from 1 January 2016: Min. 67%*
- *As from 1 January 2018: Min. 73%*

5. In ventilation units with two directions of airflow, the minimum thermal efficiency of run-around liquid heat recovery systems shall be the following:

- *As from 1 January 2016: Min. 63%*
- *As from 1 January 2018: Min. 68%*

6. The ratio between specific fan power (SFP_{int}) and the heat recovery system's efficiency is specified in a formula. If the efficiency on heat recovery for example is higher than 67%, a higher specific fan power (SFP_{int}) is permissible. This requirement will be implemented in two steps. The first step will be implemented on 1 January 2016, and the second, with more stringent demands, on 1 January 2018.

Effect on non-residential Swegon units

All the GOLD, COMPACT, SILVER and TITANIUM (Lemmens) Swegon products series will meet the Ecodesign Lot 6 requirements for their respective implementations.

The simplest way to calculate the highest permissible SFP_{int} in relation to efficiency (see Item 6), is to use our product selection software, which will indicate a clear warning if the maximum levels are exceeded.

Energy labelling

Is energy labelling required for air handling units?

It depends! For residential ventilation units, labelling is mandatory. But for non-residential ventilation units the regulation text regarding energy labelling (1253/2014) explicitly states that:

"Non-residential ventilation units" (NRVUs) should be excluded from labelling as these products are chosen by planners and architects and are largely independent from consumer behavior and market patterns."

However, energy labelling may still be relevant for ventilation units for non-residential units. A high-quality ventilation unit should have Eurovent labelling, which in contrast to ecodesign labeling is voluntary. The Eurovent labelling is a guarantee that the performance of the product corresponds to what is promised in the product specification.

EUROVENT CERTIFIED PERFORMANCE
N° 06.06.319. Range: GOLD
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This brochure is a brief summary of Ecodesign Lot 6 (1253/2014). To read the actual Ecodesign Directive itself, please visit http://eur-lex.europa.eu.

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