



# Eurovent 4/21 The Energy Rating System for Air Filters

Effective from January 2015

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Technical Bulletin 2: 2015



# A new and tougher energy efficiency scheme for air filters - Eurovent 4/21

As the price of energy increases and the demands for reducing CO2 emissions get tougher, energy consumption related to air filters has become the focus of attention.

The latest update to the Eurovent energy efficiency scheme came into effect on January 1st 2015. With a new A+ grade and tougher limits, Eurovent 4/21 is good news for customers and the industry alike.

Since the 4/11 programme was introduced in 2012, great strides have been taken in air filter technology. The products available today are now so efficient in their energy usage that the previous grading structure was no longer appropriate.

Eurovent 4/21 places a tougher limit on each grade and is structured to place a percentage of products into each category, so only the very best filters will achieve the higher classifications.

## NEW Eurovent Energy Efficiency Classifications

Buyers of air filters will now find it a lot easier to find the right filter both in terms of energy efficiency and indoor air quality. Eurovent's new, objective energy efficiency classification has now been implemented. All air filters can be graded from A+ to E: with A+ for the lowest energy consumption and E for the highest.

There are two key benefits for buyers and end-users:

- Selecting a higher grade filter product will really mean you are choosing one of the most efficient options possible.
- The new classification encourages greater competition and product development, meaning better air filters with better performance. This tougher Eurovent 4/21 will result in air filters that offer even lower operating costs and energy consumption.

## Eurovent 4/21 - Energy Consumption by Filter Grade (kWh)

The resulting effect of this re-structuring is that around 14% of all products will be downgraded from an A class - even those that fall just outside the new limit. It should be remembered that the performance of these products has not deteriorated in any way and they still provide excellent energy efficiency. There is now simply more room for improvement.

It is also worth highlighting the difference in energy efficiencies between each filter grade. An A+ rated F7 filter could consume the same amount of energy as a B rated M6, for example. So it is crucial to choose a product according to what is required; not to over-specify the filter grade or make a selection based upon purchase history. The key is choosing the filter that will deliver the correct level of air cleanliness at the lowest possible energy consumption.



Grade	A+	A	B	C	D	E
Proportion of total	1%	5%	15%	30%	30%	19%

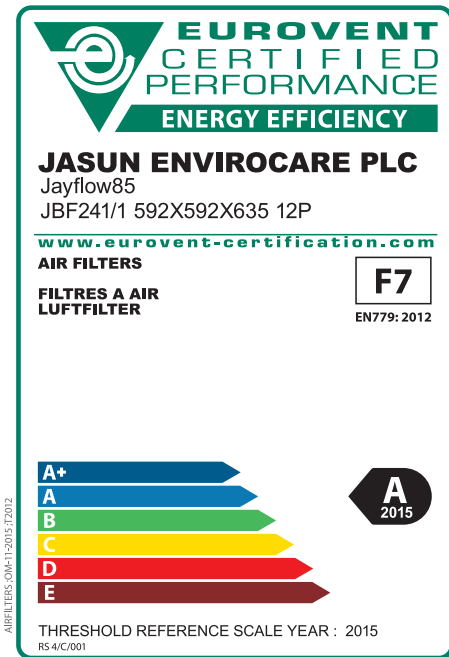
## Working out the kWh number used in an air filter's Energy Rating

- The filter is loaded with Ashrae test dust in increments  $m_{tot}$  and the pressure drop noted  $\Delta P_2$
- A loading curve is then plotted on a graph
- Once the average pressure drop has been established, the equation below is used to calculate the Energy Rating in kWh (as illustrated in the sample Energy Rating Label).

$$W = \frac{q_v \cdot \overline{\Delta p} \cdot t}{\eta \cdot 1000}$$

Calculation used in the new Energy Efficiency classification by Eurovent.

- The kWh figure is purely a benchmark to compare one filter with another and should not be considered to be an actual consumption figure.



Sample 'Energy Rating' Label - as displayed on our qualifying air filter boxes.

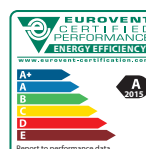
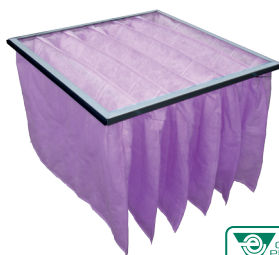
## Energy Ratings F7 Grade Bag Filters



ECOFLOW80  
EN779:2012 Class M6  
EN779:2002 Class F7

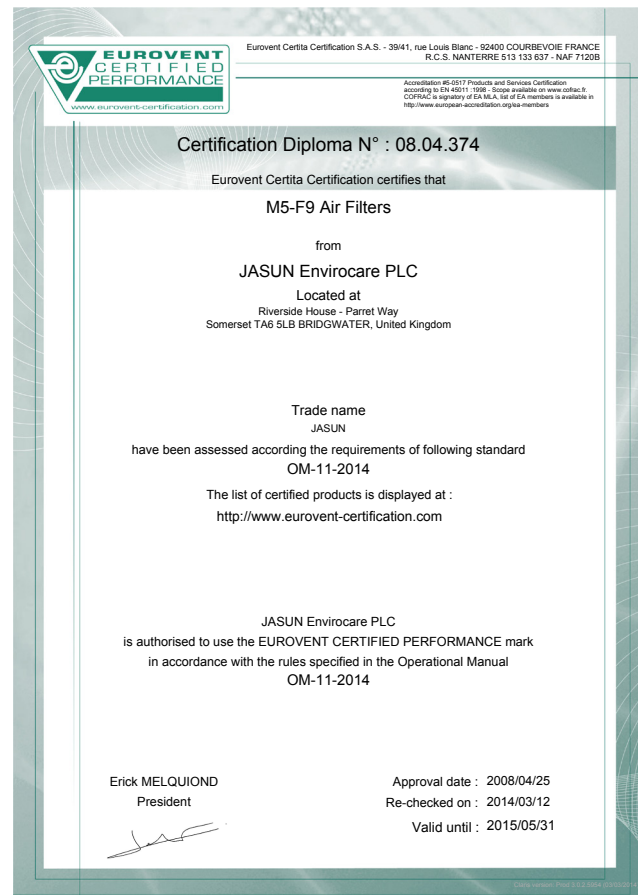
COMPACT RP7  
EN779:2012 Class F7

JENERGIE Bag Filters  
EN779:2012 Compliant



## What does our Eurovent Certificate mean for our customers?

- The Eurovent Certificate that Jasun Envirocare Plc has been awarded proves that our air filters deliver on promised performance.
- Customers should be requesting a Eurovent Certificate (as shown here) as proof of compliance or should be asking for sight of an EN779:2012 product certificate.
- Our M5 to F9 filters are compliant with the new Eurovent standard and deliver better IAQ (Indoor Air Quality) throughout filter service.
- Participants in the Eurovent Scheme must undergo stringent testing criteria, resulting in guaranteed filter performance.



## Our Commitment

We recognise the need for sustainable clean air solutions that contribute to improved air quality at beneficial life cycle costs. Our ongoing commitment is to develop and manufacture air filters that are at the forefront of energy cost/filtration efficiency performance ratios.



We are accredited by BSI to ISO 9001, ISO 14001 and to OHSAS 18001.

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### FREE Energy Filter Audit - Contact our Service Division

**Online Services** - Our Energy Rated products are available online at [www.jfilters.com](http://www.jfilters.com) and at [www.jasunfiltration.com](http://www.jasunfiltration.com)