Manufacturing Air Filters in the UK for Over 40 Years

Eurovent 4/11 The Energy Rating System for Air Filters

Effective from January 2012

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

JASUN ENVIROCARE PLC

Technical Bulletin 2: 2012

Eurovent 4/11 Energy Efficiency Classification

Eurovent Certification Guideline 4/11 classifies the energy efficiency of air filters that are tested according to the EN779:2012 standard. Based on an annual energy consumption calculation, each air filter in the efficiency class range from G4 up to F9 is provided with an energy efficiency label (A to G).

Air Filters play a critical role in reducing negative environmental impacts and improving life cycle costs.

Eurovent has issued a new methodology for classifying air filters according to their annual energy consumption, called 'Energy Efficiency Classification of Air Filters for General Ventilation Purposes'. It supports customers in selecting the most energy efficient air filter for their application requirements.

- Eurovent 4/11 is a Benchmarking Standard for Energy Ratings that came into effect in January 2012

  - Until this simple rating system came into effect, the business of low energy filter offerings was very much a game of extrapolation and assumption that generally resulted in confusion – the new Energy Rating label now says it all (see example below).

  - The energy rating system means that anyone can see, at a glance, how their filter will perform against other filters they may have installed.

- Why Energy Rate Air Filters... because 30% of the total cost of running an Air Handling Unit (AHU) is apportioned to the air filters!

- 81% of the whole life cycle cost of an air filter is energy.

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 ΔP_2

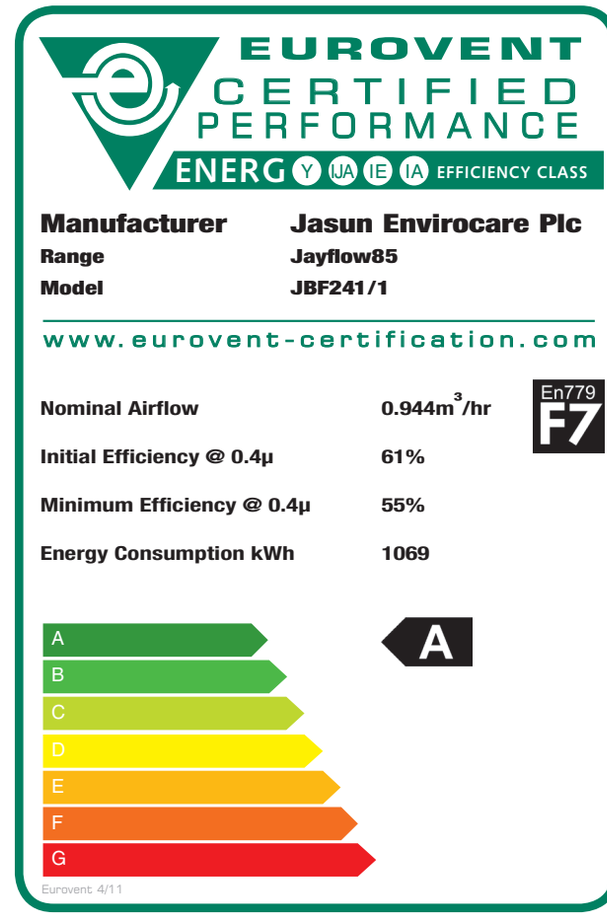
- A loading curve is then plotted on a graph

- Once the average pressure drop has been established, the equation below is used to calculate the Energy Rating in kWk (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 Non-Compliant	COMPACT RP7 EN779:2012 Compliant	JAYFLOW85 JBF EN779:2012 Compliant
		
Non-qualifying	**A** Energy Rated	**A-C** Energy Rated

The energy rating of the JAYFLOW Bag Filter can be raised to 'A' by increasing the number of pockets. Jasun Envirocare Plc manufactures and supplies filters across the full range - the F7 filters illustrated above are only examples

EN779:2012 Dust Fed Versus Pressure Drop - F7 Filters

Dust Fed (g)	Pressure Drop		
	ECOFLOW80*	**COMPACT RP7**	**JAYFLOW85 JBF**
30	171Pa	76Pa	108Pa
70	250Pa		
110	360Pa		
135			
175		150Pa	160Pa
250		220Pa	220Pa
300		280Pa	300Pa
360		350Pa	460Pa
450		445Pa	
610			

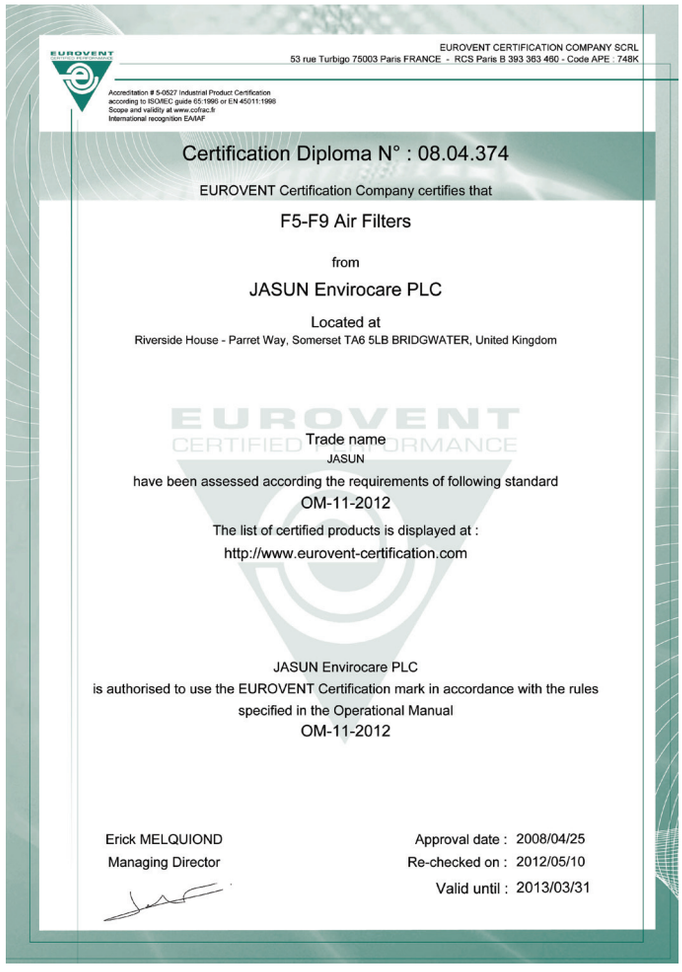
The table above illustrates how the three different filter types load as dust is fed into them during testing.

The old style (non-compliant) synthetic bag (ECOFLOW) is fully loaded and in need of change at just 110 grams, whilst the other two filters (JAYFLOW and COMPACT) are still operational at three times (3x) that load. This slower increase in resistance as dust loading takes place, directly relates to energy consumption and filter life. Energy rated filters simply make financial sense when you assess the all-round benefits.

***ECOFLOW80 is a filter previously rated F7 to EN779:2002 and, as such, is not compliant with the new standard EN779:2012.**

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 compliancy 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.



EUROVENT CERTIFICATION COMPANY SCRL
53 rue Turbigo 75003 Paris FRANCE - RCS Paris B 393 383 460 - Code APE : 748K

Accreditation # 5-0527 Industrial Product Certification according to ISO/IEC guide 65:1996 or EN 45011:1998
Scope and validity at www.cofrac.fr
International recognition EAIAF

Certification Diploma N° : 08.04.374

EUROVENT Certification Company certifies that

F5-F9 Air Filters

from

JASUN Envirocare PLC

Located at

Riverside House - Parret Way, Somerset TA6 5LB BRIDGWATER, United Kingdom

Trade name

JASUN

have been assessed according the requirements of following standard

OM-11-2012

The list of certified products is displayed at :

http://www.eurovent-certification.com

JASUN Envirocare PLC

is authorised to use the EUROVENT Certification mark in accordance with the rules specified in the Operational Manual

OM-11-2012

Erick MELQUIOND
Managing Director

Approval date : 2008/04/25
Re-checked on : 2012/05/10
Valid until : 2013/03/31

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.

QUALITY
ISO 9001: 2008
FM29257

ENVIRONMENTAL
ISO 14001: 2004
EMS 81914

HEALTH & SAFETY
OHSAS 18001: 2007
OHS 557342

constructionline

SAFEcontractor APPROVED

We are accredited by BSI to ISO 9001, ISO 14001and 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 and at www.jasunfiltration.com