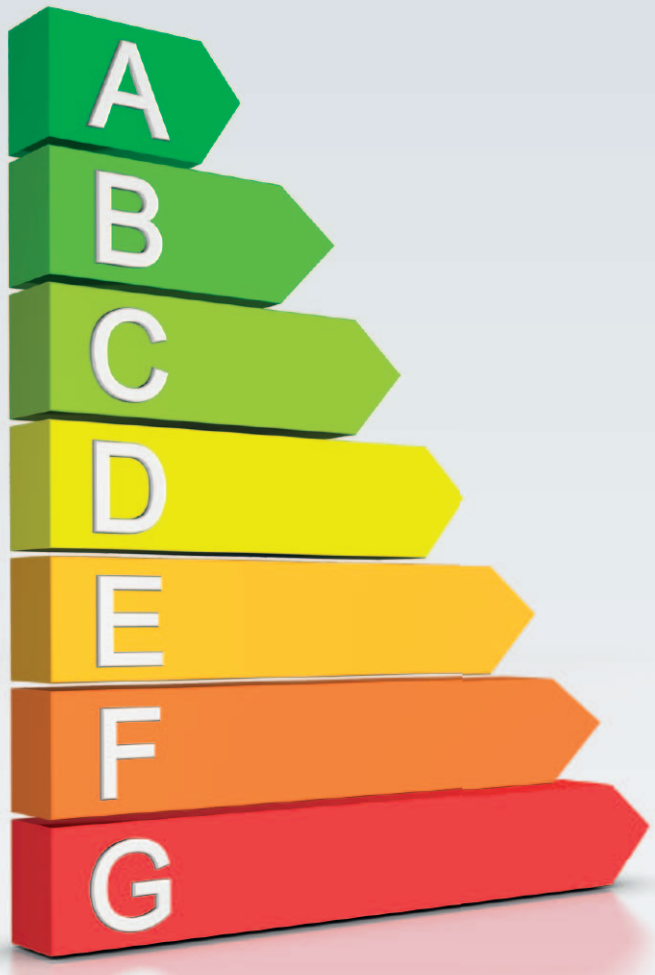
camfil FARR

Energy Efficiency Classification



Clean air solutions

A new way of comparing air filters.

At last, buyers of air filters will find it a lot easier to find the right filter– regarding both energy efficiency and indoor air quality. Eurovent's new, objective energy efficiency classification has now been implemented. Now all air filters can be graded from A to G – A for the lowest energy consumption and G for the highest. The new classification is based on EN779:2012 and will give you a good understanding of annual energy consumption, initial efficiency and minimum efficiency.

Higher demands.

As the price of energy increases and the demands of reducing CO2 emissions get tougher, the energy consumption related to air filters has become the focus of attention. Currently, air filters are classified only by their average efficiency. The new energy classification is far more precise.

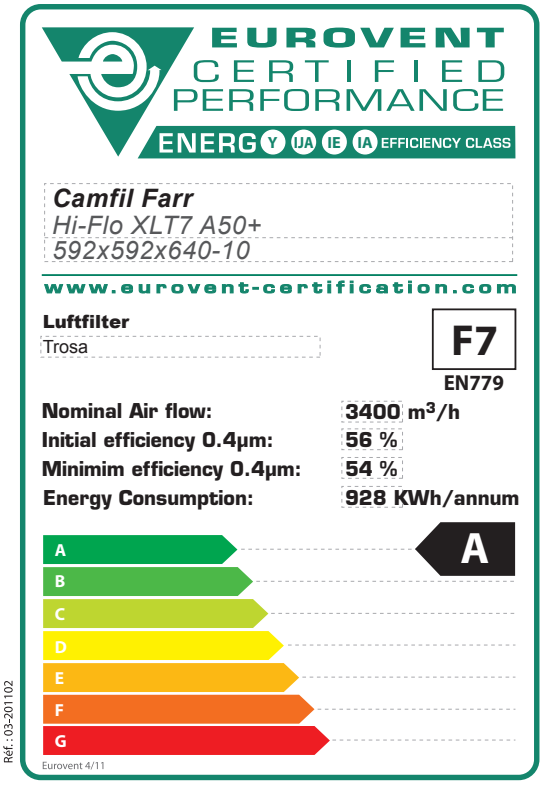
The new standard.

The energy consumption of air filters can be determined as a function of the volume flow rate, the fan efficiency, the operation time and the average pressure drop. Due to the dust loading during operation, the pressure drop of an air filter is constantly increasing. The related energy consumption during a certain period of time can be calculated from the integral average of the pressure drop over this period of time.

Put your supplier to the test.

Many suppliers do not test their filters properly, making it impossible for customers to compare different brands. At Camfil, we test all our filters to guarantee a high standard of quality. Does your air filter supplier have what it takes?

- ☑ Is the supplier certified by Eurovent?
- ☑ Are there labels on all boxes?
- ☑ Is there a test protocol?
- ☑ Are all tests based on EN779:2012?



Calculation and classification.

The new standard measures both filtration efficiency and pressure drop as a function of dust loading. A representative energy consumption level is calculated using the mean pressure drop difference averaged over the course of dust loading. On the basis of these figures, the energy performance of a filter over an operating period of one year is simulated in a laboratory. This representative energy value is used for a classification of air filters into energy classes.

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

The calculation used in the new energy efficiency classification by Eurovent.

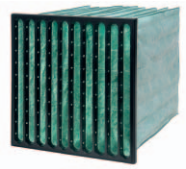
Filter class	G4	M5	M6	F7	F8	F9
ME	–	–	–	ME ≥ 35%	ME ≥ 55%	ME ≥ 70%
	M_G = 350g ASHRAE	M_M = 250g ASHRAE		M_F = 100g ASHRAE		
A	0 – 600 kWh	0 – 650 kWh	0 – 800 kWh	0 – 1200 kWh	0 – 1600 kWh	0 – 2000 kWh
B	>600 – 700 kWh	>650 – 780 kWh	>800 – 950 kWh	>1200 – 1450 kWh	>1600 – 1950 kWh	>2000 – 2500 kWh
C	>700 – 800 kWh	>780 – 910 kWh	>950 – 110 kWh	>1450 – 1700 kWh	>1950 – 2300 kWh	>2500 – 3000 kWh
D	>800 – 900 kWh	>910 – 1040 kWh	>1100 – 1250 kWh	>1700 – 1950 kWh	>2300 – 2650 kWh	>3000 – 3500 kWh
E	>900 – 1000 kWh	>1040 – 1170 kWh	>1250 – 1400 kWh	>1950 – 2200 kWh	>2650 – 3000 kWh	>3500 – 4000 kWh
F	>1000 – 1100 kWh	>1170 – 1300 kWh	>1400 – 1550 kWh	>2200 – 2450 kWh	>3000 – 3550 kWh	>4000 – 4500 kWh
G	>1100 kWh	>1300 kWh	>1550 kWh	>2450 kWh	>3350 kWh	>4500 kWh

New product names provide additional information.

Our new product name suffixes are a combination of energy rating and minimum efficiency. They will point out the difference between our filters and those of our competitors. Here are three examples from our air filter product range.

Hi-Flo XLT7 A50+

Hi-Flo XLT7 is an A-rated product with a minimum efficiency of over 50% and will be called: Hi-Flo XLT7 A50+



Depth	640 mm
Energy rating	A
Energy consumption	928 kWh/y
Initial efficiency	56%
Minimum efficiency	54%

Hi-Flo A6 E

Hi-Flo A6 is an E-rated product and will be called: Hi-Flo A6 E

Depth	600 mm
Energy rating	E
Energy consumption	1280 kWh/y
Initial efficiency	25%
Minimum efficiency	-

Opakfil Energy F9 A80+

Opakfil Energy F9 is an A-rated product with a minimum efficiency of over 80% and will be called: Opakfil Energy F9 A80+

Depth	290mm
Energy rating	A
Energy consumption	1529 kWh/y
Initial efficiency	80%
Minimum efficiency	80%

CAMFIL FARR is the world's largest and leading manufacturer of filters and clean air solutions.

There is a good chance that, at this very moment, you are breathing clean air that has passed through a filter manufactured by us. Our products can be found everywhere from offices to clean rooms for sensitive electronics production, mines, factories, hospitals and nuclear power stations. Camfil Farr is a global company with 29 subsidiaries, 23 production plants and an extensive network of agents in Europe, North America and Asia.