

## New filter standard DIN EN ISO 16890

The standard has been changed as follows:

### 1. There are four new filter groups which are subdivided by retention efficiency:

- ISO Coarse: fine dust particles  $\geq 10 \mu\text{m}$
- ISO ePM10: fine dust particles  $\leq 10 \mu\text{m}$
- ISO ePM2,5: fine dust particles  $\leq 2,5 \mu\text{m}$
- ISO ePM 1: fine dust particles  $\leq 1 \mu\text{m}$

### 2. ISO 16890 specifies the criteria according to which the most important characteristics of air filters are to be determined and this replaces the old EN 779 test standard.

In order to obtain a measurement result that is as close to reality as possible, the particle size of  $0.4 \mu\text{m}$  is not taken into account as in the past, but a band spectrum between  $0.3 \mu\text{m}$  and  $10 \mu\text{m}$  is used. The laboratory test dust used for this purpose is ISO A2 and no longer ASHRAE dust as in the old DIN EN 779 standard. For a filter to be classified in ISO ePM1 and ISO ePM2.5 group, the filter must separate at least 50 % of the corresponding particle size range. In ePM10 group, on the other hand, the filter must achieve an average separation efficiency of at least 50 %. Everything that separates less than 50 % of the PM10 particles is grouped in ISO Coarse.

DIN EN 779	DIN EN ISO 16890			
	Coarse	ePM10	ePM2,5	ePM1
G1	–	–	–	–
G2	30 % - 50 %	–	–	–
G3	45 % - 65 %	–	–	–
G4	60 % - 85 %	–	–	–
M5	80 % - 95 %	40 % - 70 %	10 % - 45 %	5 % - 35 %
M6	> 90 %	45 % - 80 %	20 % - 50 %	10 % - 40 %
F7	> 95 %	80 % - 90 %	50 % - 75 %	40 % - 65 %
F8	> 95 %	90 % - 100 %	75 % - 95 %	65 % - 90 %
F9	> 95 %	90 % - 100 %	85 % - 95 %	80 % - 90 %

The information is intended as a guide and is provided without warranty of any kind.

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