

# COMPACT POCKET FILTERS

## F 45 S, F 40, F 45 SEL

RELIABLE, EFFECTIVE, ROBUST

FILTER TYPE	FILTER CLASS TO ISO 16890	FILTER CLASS TO EN 779:2012
F 45 S	ISO ePM10 50%	G 4
F 40	ISO ePM10 50%	G 4
F 45 SEL	ISO coarse 70%	G 4



### The application

F 45 S, F 40 und F 45 SEL are used for supply, exhaust and recirculating air filtration in all kinds of ventilation systems, such as

- in general air-conditioning applications
- for ventilating machine rooms and production areas
- for exhaust and recirculating air filtration in paint lines
- as prefilters for fine and micro-filters in industrial processes (metal processing, chemicals, pharmaceuticals, food and beverages, optics, electronics, etc.), in ventilation and air conditioning technology, in paint lines/paint spray booths and for turbomachinery.

### The characteristics and benefits

- As filter media, we use our progressively structured high-performance nonwovens made in-house from tear-resistant synthetic organic fibers.

- High separation capacity with low pressure drop, **long service life and excellent cost-efficiency**.
- Thanks to their high dust-holding capacity and low pressure drop over the operating time, the F 40 and F 45 SEL filters ensure **reduced energy costs** and lower CO<sub>2</sub> emissions.
- F 45 S/F 40/F 45 SEL pocket filters are free of glass fibers, non-corroding, self-extinguishing to DIN 53438 (Fire class F1) and **microbiologically inactive**. They also meet all hygiene requirements for HVAC systems according to the VDI 6022 standard.
- **Maximized functional reliability** thanks to the leak-proof welded configuration of the filter pockets, foamed-in polyurethane front frame, aerodynamically optimized welded-in spacers (long-pocket filters only), and dimensionally stable construction of the filter element as a whole.

- The uniformly high quality of the filters is assured by our certified **quality management** system to ISO 9001, as well as by type-testing to EN 779 and ISO 16890.

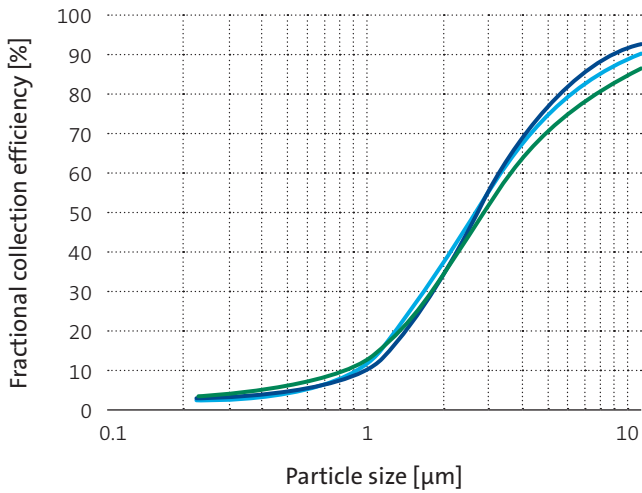
### The special features

- The robust filter series for heavy coarse dust loadings, even at high air flow rates.
- High functional reliability, even under extremely moist and wet operating conditions.
- Thanks to their shorter pockets, F 45 S filters offer a **space-saving solution** for plants where the use of long-pocket filters would not be possible.
- To optimize pre-filtration and/or when used in confined spaces, an **additional filter stage** can be inserted into an existing filter wall using the reverse-flow F 45 R short-pocket filter.

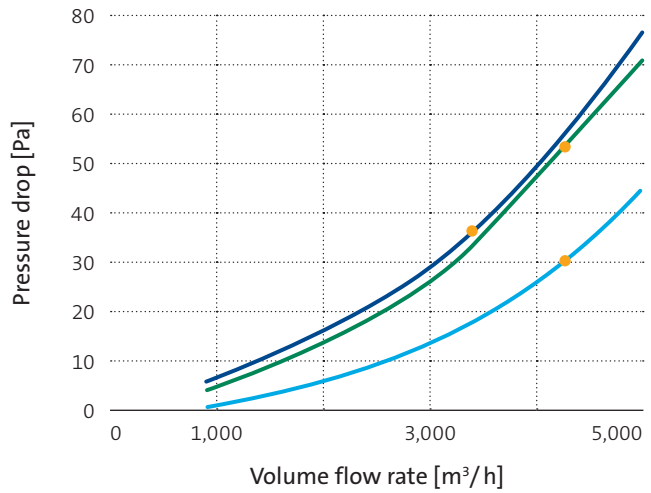
GEOMETRIES AVAILABLE		F 45 S 1/1	F 45 S 5/6	F 45 S 1/2	F 40 1/1	F 40 5/6	F 40 1/2	F 40 1/4	F 45 SEL 1/1
Nominal volume flow rate	m <sup>3</sup> /h	3,400	2,700	2,000	4,250	3,400	2,500	1,500	4,250
Front frame	mm	592 × 592	492 × 592	289 × 592	592 × 592	492 × 592	289 × 592	289 × 289	592 × 592
Overall depth	mm	330	330	330	650	650	650	650	650
Number of pockets		5	4	3	5	4	3	4	8
Filtering area	m <sup>2</sup>	2.0	1.6	1.2	4.0	3.2	2.4	1.5	6.2
Weight, approx.	kg	1.2	1.0	0.8	1.7	1.5	1.2	0.7	2.7
Thermal stability	°C	70	70	70	70	70	70	70	70
Moisture-resistance (rel. hum.)	%	100	100	100	100	100	100	100	100
Suitable for standard mounting frame	mm	610 × 610	508 × 610	305 × 610	610 × 610	508 × 610	305 × 610	305 × 305	610 × 610

# TECHNICAL FILTER TEST DATA TO EN 779 AND ISO 16890

Fractional collection efficiency curves



Initial pressure drop curves



— F45S 1/1      — F40 1/1      — F45SEL 1/1      ● Nominal volume flow rate

KEY DATA		F45S 1/1	F40 1/1	F45SEL 1/1
Nominal volume flow rate ●	m³/h	3,400	4,250	4,250
Face velocity	m/s	2.5	3.2	3.2
Initial pressure drop	Pa	35	30	50
Class to ISO 16890		ISO ePM10 50%	ISO ePM10 50%	ISO coarse 70%
Particulate matter efficiency ISO ePM10	%	52	51	48
Initial gravimetric arrestance		71	71	70
Cut-off particle size	µm	> 10	> 10	> 10
Filter class to EN 779:2012		G4	G4	G4
Recom. final pressure drop*	Pa	250	250	250
Dust holding capacity approx. AC fine/300 Pa	g	1,700	4,400	5,600

\* For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the final pressure drop stated. It can also be exceeded in certain applications.

The figures given are mean values subject to tolerances due to normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations.