

Minipleat filter cells

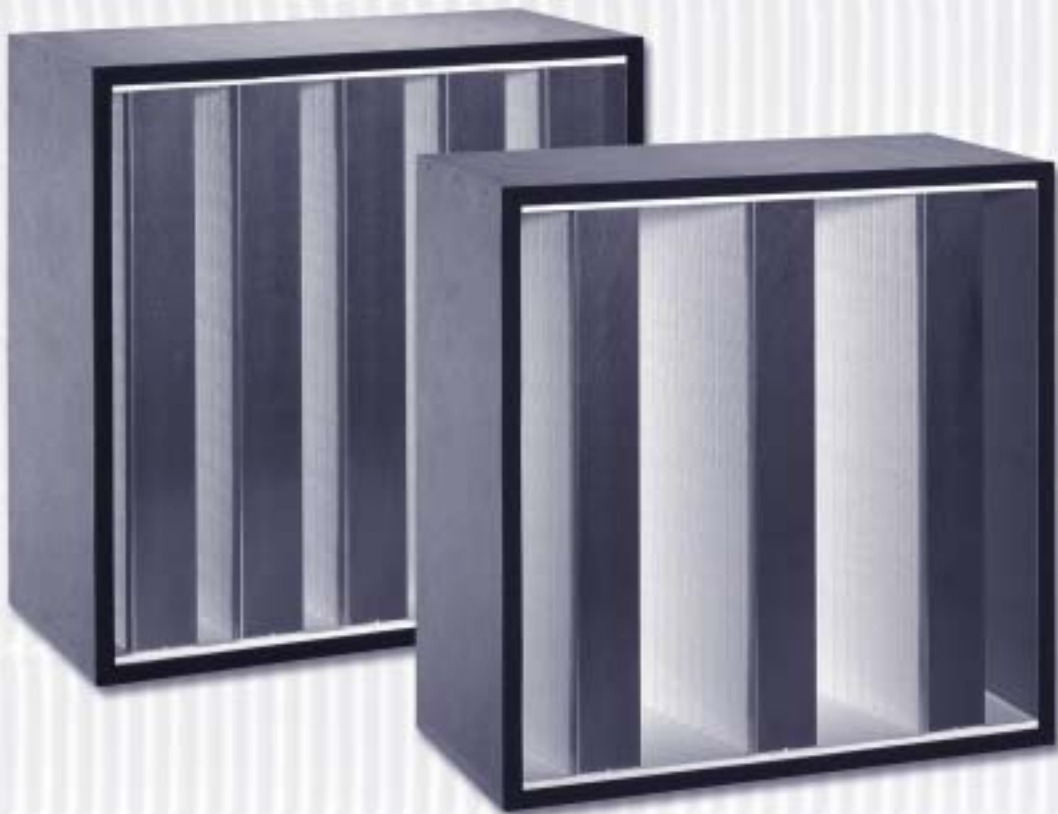
Fine dust filters: F756, F757, F759

Filter classes: F6, F7, F9

HEPA filters: F780, F781, F782

Filter classes: E11, H13, H14

- » Can be used as a prefilter for fine dust or high-efficiency filter for suspended particles and aerosols
- » Suitable for large volume flow rates with long filter life



Content overview

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Detail



Minipleat filter cell

» Application

Fine dust filters: Prefilters or final filters in ventilation systems for the separation of fine dust.

HEPA filters: Main or final filters used for the most critical requirements of air purity and sterility in areas such as industry, research, medicine, pharmaceuticals, and nuclear engineering. Separation of suspended particles or aerosols, toxic dusts, viruses, bacteria etc. from the supply and extract air in ventilation systems with large volume flow rates and long filter life.

» Filter types

Fine dust filters

- Type F756 (F6)
- Type F757 (F7)
- Type F759 (F9)

HEPA filters

- Type F780 (E11)
- Type F781 (H13)
- Type F782 (H14)

» Material

- Filter packs are made of high-quality, moisture-resistant glass-fibre paper which is folded into closely spaced shallow pleats.
- Spacers provide a uniform spacing of the pleats.
- Joint sealing compound made of permanently elastic two-component polyurethane adhesive.

» Construction

W = Frame made of MDF

E = Frame made of stainless sheet steel

M = Frame made of galvanised sheet steel

» Equipment

- Seal: Equipped with a perimeter flat section seal on the upstream side in the construction.
- As a variant, minipleat filter cells can be provided with a continuous foam seal or test groove seal (filter types F781 and F782) on the upstream side.
- Protection grid: Construction variant with an expanded metal grille as a protection grille.

» Associated TROX filter units

- Ducted HEPA filter units for highly sensitive areas; available in various sizes as individual units or as filter unit systems (F3/3/.../...).
- Duct casing, available in various casing widths and heights (F3/4/.../...).

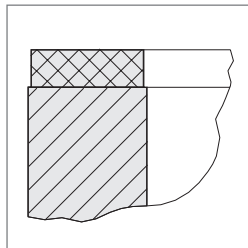
» Certification of EUROVENT

Minipleat filter cells of filter classes F6 to F9 are certified according to Eurovent. This certification can only be achieved by manufacturers whose filter product performance properties, filter classification and initial differential pressure have been tested by an independent institute. In this way, the quality of the fine dust filter is guaranteed.

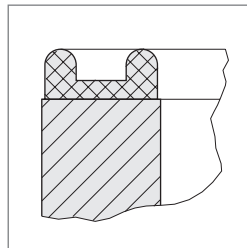


Seal

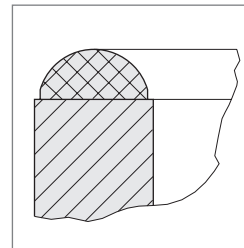
For further information regarding seals, see "Equipment".



Detail drawing 1:
Flat section seal
(standard design)



Detail drawing 2:
Test groove seal



Detail drawing 3:
Continuous seal

Order code for fine dust filters

<table border="1" style="margin: auto;"> <tr> <td>F</td><td>7</td><td>5</td><td>6</td><td>W</td><td>9</td><td>2</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td> </tr> <tr> <td colspan="4" style="text-align: center;">1</td> <td colspan="2" style="text-align: center;">2</td> <td colspan="2" style="text-align: center;">3</td> <td colspan="6" style="text-align: center;">4</td> </tr> </table>		F	7	5	6	W	9	2	0	0	0	0	0	0	0	1				2		3		4					
F	7	5	6	W	9	2	0	0	0	0	0	0	0																
1				2		3		4																					
<p>1 Filter type: Type F756 (F6) Type F757 (F7) Type F759 (F9)</p>	<p>3 Code number: Size of the minipleat filter cells See the code numbers in Tables 3 - 11</p>																												
<p>2 Construction: W = Frame made of MDF M = Frame made of galvanised sheet steel E = Frame made of stainless sheet steel</p>	<p>4 Zeros</p>																												

Example for minipleat filter cell

- » Filter type: **F756**
- » Construction for frame made of MDF: **W**
- » Filter size 610 x 610 x 292 mm: **92**

F	7	5	6	W	9	2	0	0	0	0	0	0	0
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Order code for HEPA filters

<table border="1" style="margin: auto;"> <tr> <td>F</td><td>7</td><td>8</td><td>1</td><td>M</td><td>6</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td> </tr> <tr> <td colspan="4" style="text-align: center;">1</td> <td colspan="2" style="text-align: center;">2</td> <td colspan="2" style="text-align: center;">3</td> <td colspan="2" style="text-align: center;">4</td> <td colspan="2" style="text-align: center;">5</td> <td colspan="2" style="text-align: center;">6</td> </tr> </table>		F	7	8	1	M	6	1	0	0	0	0	0	0	0	1				2		3		4		5		6	
F	7	8	1	M	6	1	0	0	0	0	0	0	0																
1				2		3		4		5		6																	
<p>1 Filter type: Type F780 (E11) Type F781 (H13) Type F782 (H14)</p>	<p>4 Seal: 0 = Flat section seal (standard) X = Continuous seal Z = Test groove seal</p>																												
<p>2 Construction: W = Frame made of MDF M = Frame made of galvanized sheet steel E = Frame made of stainless sheet steel</p>	<p>5 Filter area S = Large filter area (only for F781)</p>																												
<p>3 Code number: Size of the minipleat filter cells See the code numbers in Tables 3 - 11</p>	<p>6 Zeros</p>																												

Example for minipleat filter cell (large filter area)

- » Filter type: **F781**
- » Construction for frame made of galvanised steel sheet: **M**
- » Filter size 610 x 610 x 292 mm: **61**
- » Flat section seal (standard): **0**
- » With large filter area: **S**

F	7	8	1	M	6	1	0	S	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---

Example for minipleat filter cell (standard filter area)

- » Filter type: **F781**
- » Construction for frame made of MDF: **W**
- » Filter size 305 x 610 x 292 mm: **35**
- » Test groove seal: **Z**
- » With standard filter area: **0**

F	7	8	1	W	3	5	Z	0	0	0	0	0	0
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Technical data

Filter type		F756	F757	F759
Filter class according to EN 779		F6	F7	F9
Average efficiency according to EN 779	in %	65	85	95
Initial differential pressure at nominal volume flow rate	in Pa	90	110	140
Recommended final differential pressure	in Pa	450	450	450
Max. operating temperature	in °C	80	80	80
Max. relative humidity	in %	100	100	100

Table 1: Technical data for filter types F756, F757, and F759

Filter type		F780	F781	F782
Filter class according to EN 1822		E11	H13	H14
Efficiency (MPPS) according to EN 1822	in %	> 95	> 99.95	> 99.995
Initial differential pressure at nominal volume flow rate	in Pa	125	250	250
Recommended final differential pressure	in Pa	300	600	600
Max. operating temperature	in °C	80	80	80
Max. relative humidity	in %	100	100	100

Table 2: Technical data for filter types F780, F781, and F782

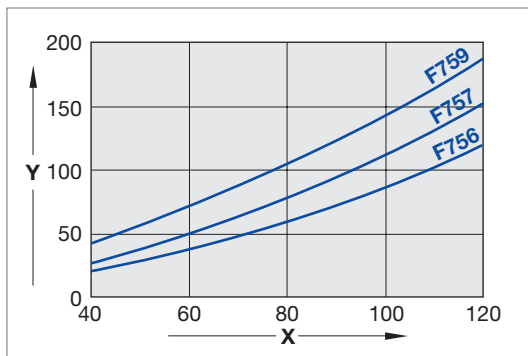


Diagram 1: Minipleat filter cells F756, F757, F759

X = Volume flow rate in % of nominal volume flow rate
Y = Initial differential pressure in Pa

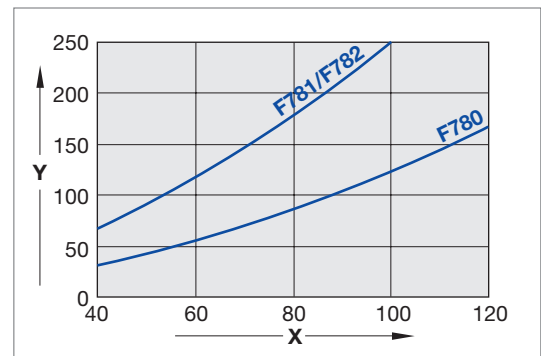


Diagram 2: Minipleat filter cells F780, F781, F782

X = Volume flow rate in % of nominal volume flow rate
Y = Initial differential pressure in Pa

Test

» Testing fine dust filters

EN 779: Particulate filters for general ventilation

This European standard describes the test method and test rig for measuring the filter performance.

For fine dust filters, the average efficiency is tested with a liquid test aerosol at a particle size of 0.4 µm diameter.

The filters are classified into filter classes F5 to F9 depending on the tested values (see Leaflet P/1/././.).

» Testing particulate filters

EN 1822: High efficiency air filters (EPA, HEPA and ULPA).

This European standard defines a method for testing the filtration efficiency based on a particle counting method using a liquid test aerosol and permits a uniform classification of the particulate filters according to the filtration efficiency.

The filtration efficiency is determined using a test aerosol whose particle sizes lie within the minimum filter efficiency range.

Particulate filters are classified according to the values determined for the local efficiency and the overall efficiency in EPA (filter classes E10 to E12), HEPA (filter classes H13 and H14) and ULPA (filter classes U15 to U17) see Leaflet P/2/././.).

» Leakage test

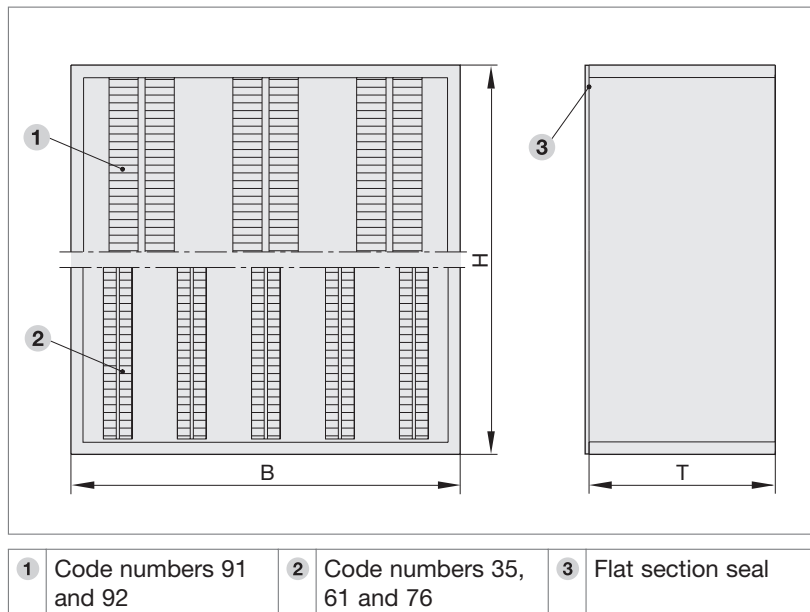
In the standard procedure, all particulate filter classes H13 and above are individually tested to prove they are leak-free.

Detail

2 W = Frame made of MDF with flat section seal

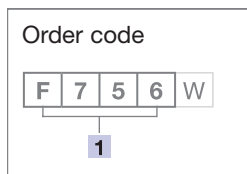
Technical data

Dimensional tolerance:
+ 0 mm
- 1 mm



Detail drawing 4: Minipleat filter cells, construction W, frame depth 292 mm

Technical data



F756, F757, F759: Construction W

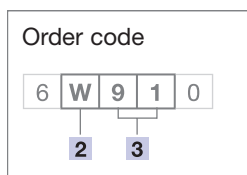
Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. [3]
B	H	T	l/s	m³/h		
305	610	292	590	2125	9.0	91
610	610	292	1180	4250	15.0	92

Table 3: Minipleat filter cells F756, F757, F759

F780: Construction W

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. [3]
B	H	T	l/s	m³/h		
305	610	292	310	1100	9.0	91
305	610	292	415	1500	9.0	35
610	610	292	610	2200	15.0	92
610	610	292	830	3000	15.0	61
762	610	292	1040	3750	20.0	76

Table 4: Minipleat filter cells F780



F781: Construction W

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. [3]
B	H	T	l/s	m³/h		
203	610	292	315	870	8.0	34
305	610	292	310	1100	9.0	91
305	610	292	415	1500	9.0	35
610	610	292	610	2200	15.0	92
610	610	292	830	3000	15.0	61
762	610	292	1040	3750	20.0	76

Table 5: Minipleat filter cells F781

F782: Construction W

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. [3]
B	H	T	l/s	m³/h		
305	610	292	365	1320	9.0	35
610	610	292	735	2640	15.0	61
762	610	292	880	3170	20.0	76

Table 6: Minipleat filter cells F782

All weights are net, without packaging.

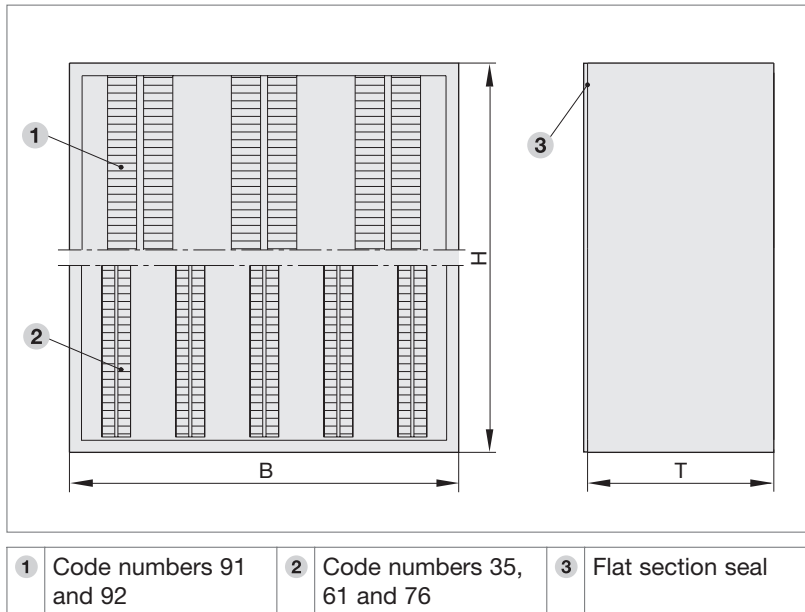
Detail

2 M = Frame made of galvanised sheet steel with flat section seal

E = Frame made of stainless sheet steel with flat section seal

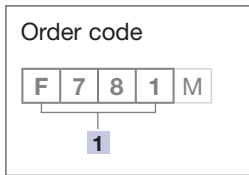
Technical data

Dimensional tolerance:
+ 0 mm
- 1 mm



Detail drawing 5: Minipleat filter cells, construction M, frame depth 292 mm

Technical data



F756, F757, F759: Constructions M and E

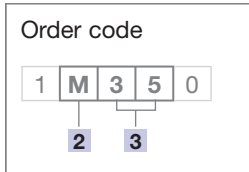
Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. ③
B	H	T	l/s	m³/h		
305	610	292	590	2125	9.0	91
610	610	292	1180	4250	15.0	92

Table 7: Minipleat filter cells F756, F757, F759

F780: Constructions M and E

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. ③
B	H	T	l/s	m³/h		
305	610	292	345	1250	9.0	91
305	610	292	470	1700	9.0	35
610	610	292	695	2500	15.0	92
610	610	292	945	3400	15.0	61
762	610	292	1180	4250	20.0	76

Table 8: Minipleat filter cells F780



F781: Constructions M and E

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. ③
B	H	T	l/s	m³/h		
305	610	292	345	1250	9.0	91
305	610	292	470	1700	9.0	35
610	610	292	695	2500	15.0	92
610	610	292	945	3400	15.0	61
762	610	292	1180	4250	20.0	76

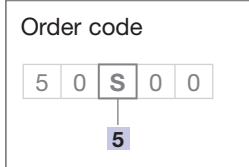
Table 9: Minipleat filter cells F781

F781: Constructions M and E

5 Large filter area = code number S

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. ③
B	H	T	l/s	m³/h		
203	610	292	320	1150	7.5	34
305	610	292	555	2000	9.5	35
610	610	292	1110	4000	15.0	61
762	610	292	1390	5000	20.0	76

Table 10: Minipleat filter cells F781



F782: Constructions M and E

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. ③
B	H	T	l/s	m³/h		
305	610	292	415	1500	9.0	35
610	610	292	830	3000	15.0	61
762	610	292	1000	3600	20.0	76

Table 11: Minipleat filter cells F782

All weights are net, without packaging.

Specification text

TROX minipleat filter cells:

- » Frame made of MDF, galvanised sheet steel, or stainless sheet steel.
- » Flat section seal on the upstream side.
- » Filter packs are made of high-quality, moisture-resistant glass-fibre paper.
- » Packed in stable carton suitable for transport.

Type F756, F757, and F759:

- » Tested according to EN 779.

Type F780, F781, and F782:

- » Tested according to EN 1822.
- » Minipleat filter inserts F781 and F782, leak-tested at the factory according to EN 1822.

Technical data:

Filter class according to EN 779 _____
 Average efficiency according to EN 779 _____%
 Filter class according to EN 1822 _____
 Efficiency (MPPS) according to EN 1822 _____%
 Dimensions (B x H x T) _____mm
 Nominal volume flow rate _____l/s (m³/h)
 Initial differential pressure _____Pa
 Max. operating temperature _____°C
 Max. relative humidity _____%
 Net weight _____kg
 Order number _____
 Make: TROX

TROX[®] TECHNIK TROX GmbH
The art of handling air

Siemensstraße 24
47574 Goch, Germany
Phone +49 (0) 28 23/10 09-0
Fax +49 (0) 28 23/10 09-14
E-mail troxfilter@trox.de
www.troxtechnik.com

Filters

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