

Minipleat filter elements

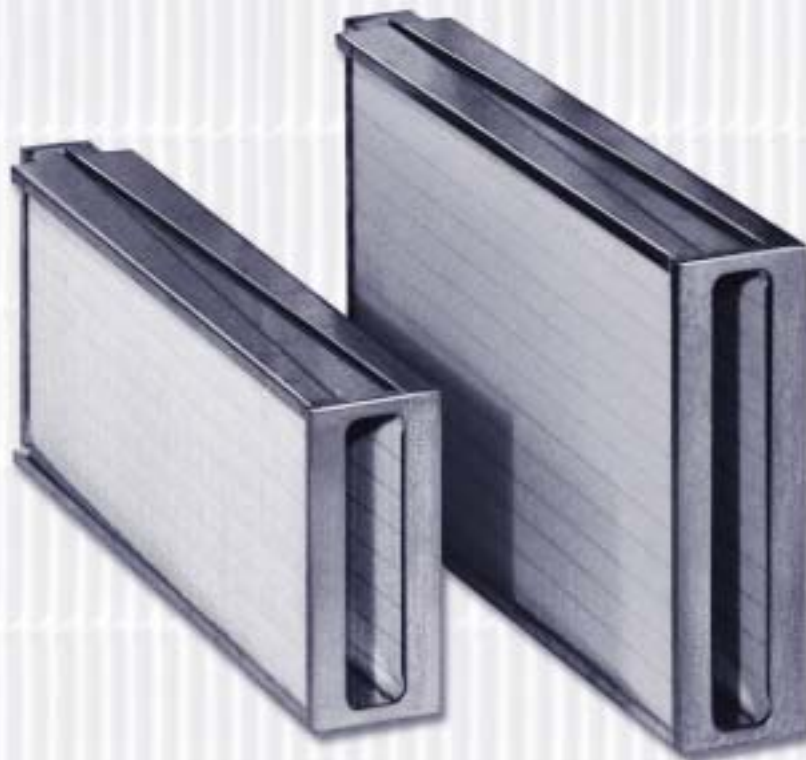
Fine dust filter: F759

Filter class: F9

HEPA filters: F780, F781

Filter classes: E11, H13

- » Dimensions provide an optimum matching to pre-designed installation cross-sections
- » Suitable for extremely small installation depths or cross-sections



Content overview

General information	2	Construction A and M	5
Order code	3	Specification text	7
Special information	4		



Detail



Minipleat filter element

» 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 F759 (F9)

HEPA filters

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

» 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

A = Frame made of aluminium sheet

M = Frame made of galvanised sheet steel

» Certification of EUROVENT

Minipleat filter elements of filter class 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

The special adhesive tape for sealing off the filter elements to be ordered separately.

The filter elements are joined together by a special adhesive tape to the holding frame or the installation casing to provide an air-tight seal.

Special adhesive tape for sealing of filter media:
Order number M645 AP0
width 19 mm; length 55 m

One roll suffices for about:

- 50 filter elements of the size 600 x 65 x 202 mm.
- 70 filter elements of the size 86.5 x 303 x 600 mm.
- 100 filter elements of the size 86.5 x 202 x 600 mm.

Order code

<table border="1" style="margin: auto;"> <tr> <td>F</td><td>7</td><td>8</td><td>1</td><td>A</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><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	8	1	A	1	0	0	0	0	0	0	0	0	0	1				2		3		4					
F	7	8	1	A	1	0	0	0	0	0	0	0	0	0																
1				2		3		4																						
<p>1 Filter type: Type F759 (F9) Type F780 (E11) Type F781 (H13)</p>	<p>3 Code number: Size of the minipleat filter elements See the code numbers in Tables 3 - 5</p>																													
<p>2 Construction: A = Frame made of aluminium sheet M = Frame made of galvanised sheet steel</p>	<p>4 Zeros</p>																													

Example for minipleat filter elements

- » Filter type: **F781**
- » Construction for frame made of aluminium sheet: **A**
- » Filter size 600 x 65 x 202 mm: **10**

F	7	8	1	A	1	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Technical data

Filter type		F759
Filter class according to EN 779		F9
Average efficiency according to EN 779	in %	95
Initial differential pressure at nominal volume flow rate: code no. 10	in Pa	50
Recommended final differential pressure: code no. 10	in Pa	130
Initial differential pressure at nominal volume flow rate: code nos. 11 and 12	in Pa	120
Recommended final differential pressure: code nos. 11 and 12	in Pa	300
Max. operating temperature	in °C	100
Max. relative humidity	in %	100

Table 1: Technical data for filter type F759

Filter type		F780	F781
Filter class according to EN 1822		E11	H13
Efficiency (MPPS) according to EN 1822	in %	> 95	> 99.95
Initial differential pressure at nominal volume flow rate: code no. 10	in Pa	140	160
Recommended final differential pressure: code no. 10	in Pa	400	500
Initial differential pressure at nominal volume flow rate: code nos. 11 and 12	in Pa	190	220
Recommended final differential pressure: code nos. 11 and 12	in Pa	550	700
Max. operating temperature	in °C	100	100
Max. relative humidity	in %	100	100

Table 2: Technical data for filter types F780 and F781

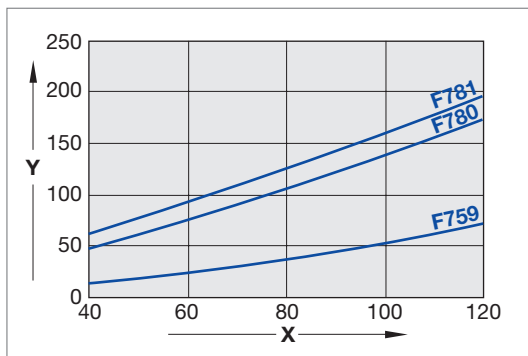


Diagram 1: Minipleat filter elements F759, F780, F781, code number 10

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

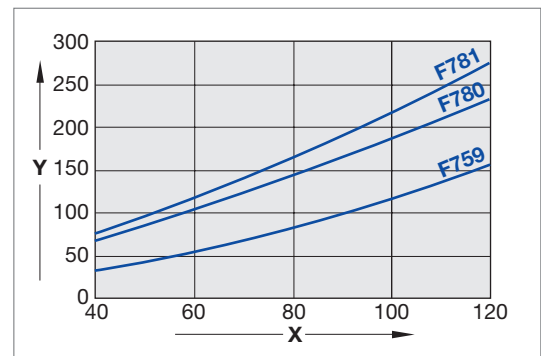


Diagram 2: Minipleat filter elements F759, F780, and F781, code numbers 11 and 12

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 with a particle size of 0.4 µm diameter.

The filters are classified into filter classes F5 to F9 depending on the tested performance (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.

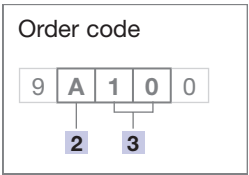
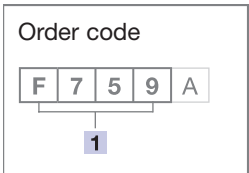
Detail

2 A = Frame made of aluminium sheet

M = Frame made of galvanised sheet steel

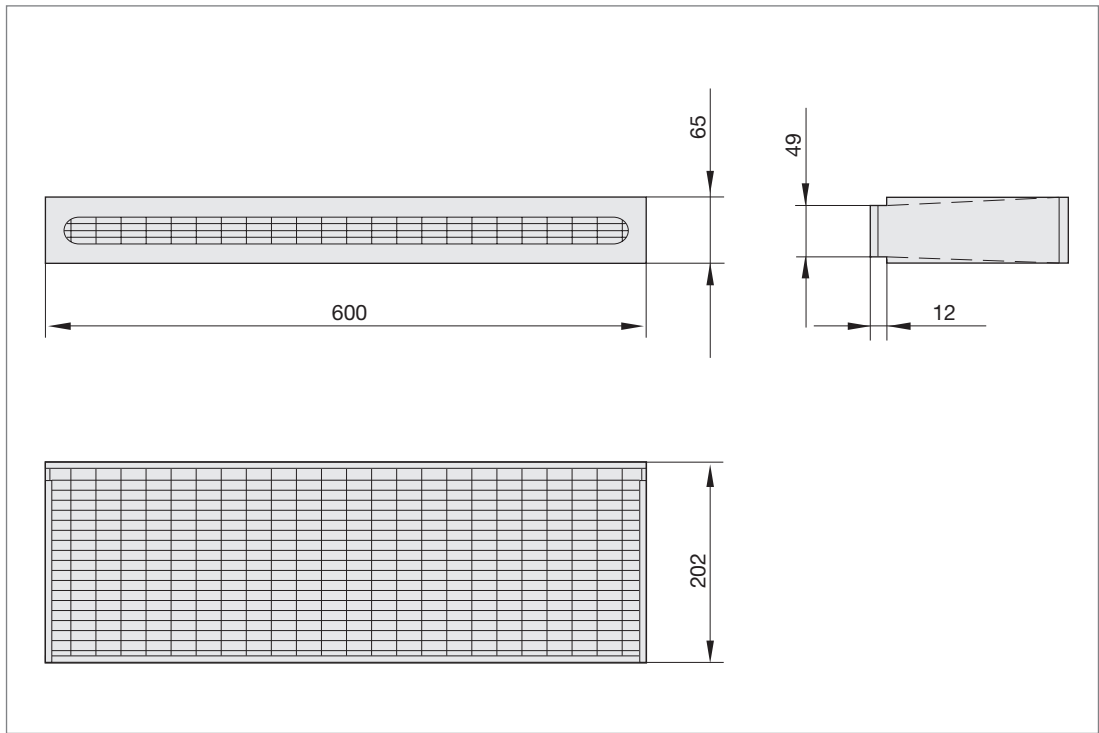
Technical data

Dimensional tolerance:
+ 0 mm
- 1 mm



All weights are net, without packaging.

The adhesive tape must be ordered separately; see page 2.



Detail drawing 1: Minipleat filter elements F759, F780, F781, code number 10

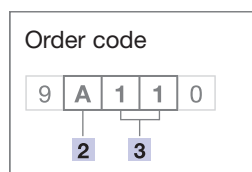
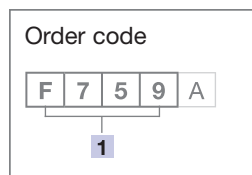
F759, F780, F781: Constructions A and M

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. [3]
B	H	T	l/s	m³/h		
600	65	202	55	200	1.2	10

Table 3: Minipleat filter elements F759, F780, F781

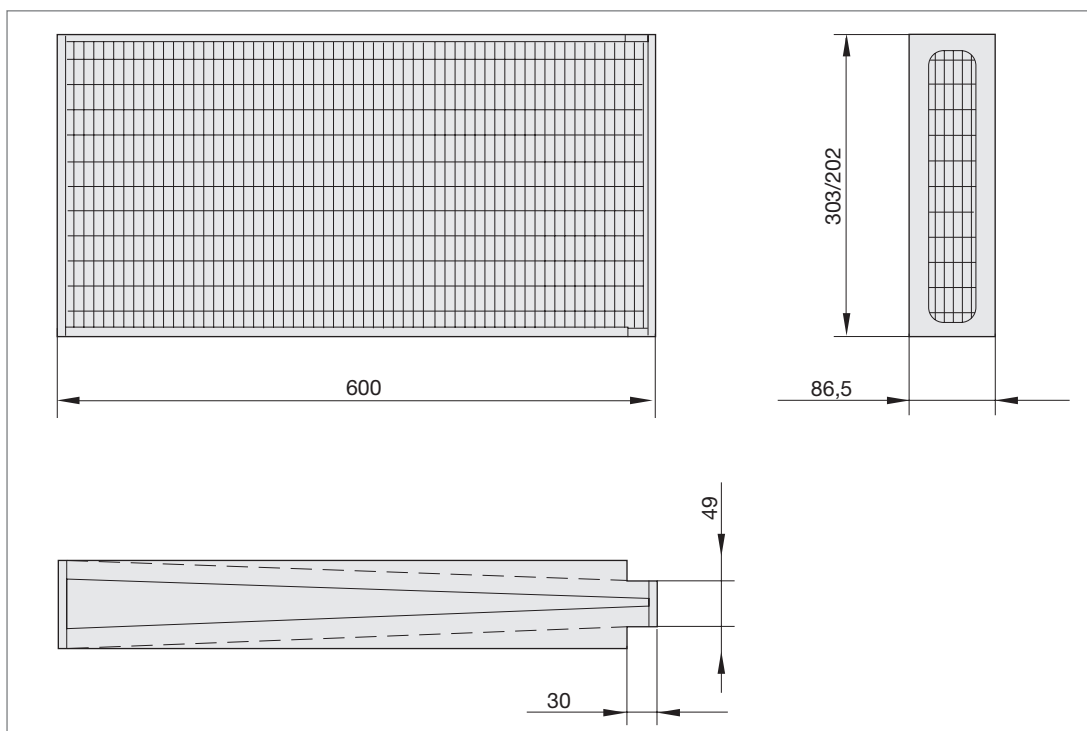
Construction A and M

Technical data



All weights are net, without packaging.

The adhesive tape to be ordered separately; see page 2.



Detail drawing 2: Minipleat filter elements F759, F780, and F781, code numbers 11 and 12

F759, F780, F781: Constructions A and M

Dimensions in mm			Nominal volume flow rate		Weight Approx. kg	Code no. 3
B	H	T	l/s	m ³ /h		
86.5	202	600	55	200	1.4	12
86.5	303	600	85	300	1.5	11

Table 4: Minipleat filter elements F759, F780, F781

Specification text

TROX minipleat filter elements

- » Frame made of galvanised sheet steel or aluminium sheet.
- » Filter packs are made of high-quality, moisture-resistant glass-fibre paper.
- » Packed in stable carton suitable for transport.

Type F759:

- » Tested according to EN 779.

Types F780 and F781:

- » Tested according to EN 1822.
- » Minipleat filter element F781, leakage 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

Subject to change / All rights reserved / © TROX GmbH (1/2010)