



## Panel Finedust/HEPA Filter Type GP



### Features

- HEPA efficiencies of 95% up to 99.99995% (@ 0.3  $\mu\text{m}$ ).
- Finedust efficiencies of 60% up to 98% ASHRAE.
- High quality micro fibreglass paper.
- Lowest initial pressure drop.
- Rigid frames.

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## Overview

The GP filter is designed and tested to extract the smallest particles out of the air. The GP series contains a fibreglass media pack in four (4) different heights (47mm, 56mm, 70mm, 93mm) and in different kinds of extruded aluminum frames.

The filter media is pleated in "Minipleat shape" with a new application technology of "Hot Melt Spacers" to achieve lowest pressure drop results.

## Features

- Frame heights of 70mm up to 197mm.
- High quality standard due to Quality Assurance System.
- HEPA filter tested by laser particle counting system.
- Highly economical through high final pressure drop.
- For use in clean rooms up to class 1.
- Usable in two flow directions.



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## Design

The filter frame is made from anodized extruded aluminum profile with two angles in each corner to get a rigid straight filter.

Each of the different types of extruded aluminum profiles contains a few sealant anchors to prevent any leakage between frame and media during the filter life.

Furthermore, there are features available such as a knife for fluid seal connection or the fluid seal on the filter.

All types of GP filters are available with one or two screens and EPDM gaskets.

The fibreglass media pleated in "Minipleat shape", available in four (4) different heights (47, 56, 70, and 93 mm) is cast with polyurethane sealant into the frame. This design achieves a highly active filter surface and ensures the minimal pressure drop of the GP model.





## Testing

Each HEPA filter is tested and packed in accordance with American Standard IEST-RP-CC001.3 (HEPA and ULPA Filters) or in accordance with the European standard EN 1822 -1, 4&5 (Testing filter elements HEPA and ULPA efficiency and scan method) or customer requested testings.

The prefilters are tested in accordance with European Standard EN 779 (Particulate air filters for general ventilation). This standard is based on ASHRAE 52.1 (Gravimetric and Dust-Spot Procedures for Testing Air Cleaning Devices Used in General Ventilation for Removing Particulate Matter 1992).



XY-Scanning Probes



Control Unit



PSL-Generator

## Applicable Standards:

- EN 1822-5
- IEST-RP-CC001.3
- EN 779
- ASHRAE 52.1
- ISO 9001:2000

## XY - Scan Testing Device

Filt Air XY-scan testing device is able to perform automated filter leak testing of high efficiency air filters using automatic particle counters and a motorized scan table. While the particle counter probe passes over the filter face, the computer compares the counted particles with the given leak tolerance setting. In addition it calculates the overall efficiency for each checked filter and measures the pressure drop @ nominal airflow.





#### Applicable Standards:

- EN 1822-5
- IEST-RP-CC001.3
- EN 779
- ASHRAE 52.1
- ISO 9001:2000

## Technical Data

Finedust Filter data		F 6	F 7	F 8	F 9
Rated face velocity	m/s	2.4	2.4	2.4	2.4
Media Pack	mm	47/56/70	47/56/70	47/56/70	47/56/70
Initial pressure drop @ rated airflow	Pa	90/75/70	125/105/100	155/130/125	200/170/165
Filter class as per EN 779		F 6	F 7	F 8	F 9
Atmospherical dust-spot efficiency					
@ rated airflow: average (final pressure drop 450 Pa)	%	65 (60-65)	85 (80-90)	95 (90-95)	97 (95-98)
Recommended final pressure drop	Pa	600	600	600	600
Flammability classification to DIN 53438		K1/F1	K1/F1	K1/F1	K1/F1
Max. relative humidity	%	100	100	100	100
Max. continuous temperature	°C	80	80	80	80

HEPA Filter data (low velocity)		H 10	H 13	H 14	U 15
Rated face velocity	m/s	0.5	0.5	0.5	0.5
Media Pack	mm	47/ 56/ 70/ 93	47/ 56/ 70/ 93	47/ 56/ 70/ 93	47/ 56/ 70/ 93
Initial pressure drop @ rated airflow	Pa	53/ 48/ 40/ 36	120/110/ 88/ 80	133/120/100/88	155/138/115/98
Filter class as per EN 1822		H 10	H13	H14	U15
Filter class as per EUROVENT 4/4		EU 10	EU 13	EU 14	
Filter class as per DIN 24184		R	S	T	
Initial efficiency @ rated airflow					
Test with MPPS (integral)	%	>85	>99.95	>99.995	>99.9995
Test with aerosol Ø 0.3 µm (integral)	%	>95	>99.995	>99.9995	>99.99995
Recommended final pressure drop	Pa	600	600	600	600
Flammability classification to DIN 53438		K1/F1	K1/F1	K1/F1	K1/F1
Max. relative humidity	%	100	100	100	100
Max. continuous temperature	°C	80	80	80	80

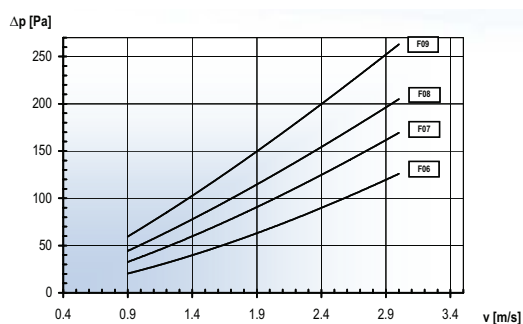
## Filter Sizes

Filter size		HEPA Filter Rated Airflow Media Pack 47-93 mm velocity of 0.5 m/s		Finedust Filter Rated Airflow Media Pack 47 - 70 mm velocity of 2.4 m/s	
305 x 305	mm	170	m³/h	800	m³/h
305 x 610	mm	335	m³/h	1610	m³/h
457 x 305	mm	250	m³/h	1205	m³/h
457 x 457	mm	375	m³/h	1805	m³/h
457 x 610	mm	500	m³/h	2410	m³/h
610 x 610	mm	670	m³/h	3215	m³/h
762 x 610	mm	840	m³/h	4015	m³/h
915 x 610	mm	1005	m³/h	4820	m³/h
1220 x 610	mm	1340	m³/h	6430	m³/h

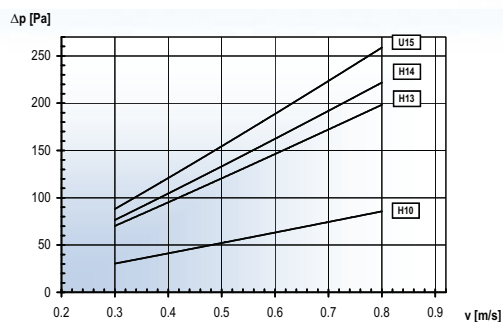


## Initial Pressure Drop

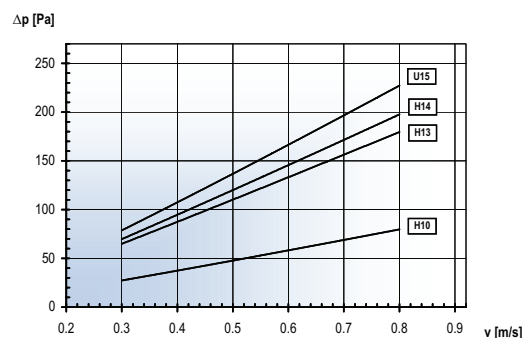
for 47mm height "Minipleat-Media Pack"  
in Finedust Grades



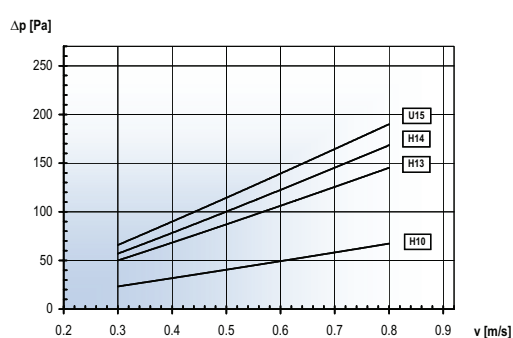
for 47mm height "Minipleat-Media Pack"  
in HEPA Grades



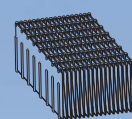
for 56mm height "Minipleat-Media Pack"  
in HEPA Grades



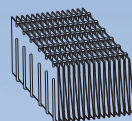
for 70mm height "Minipleat-Media Pack"  
in HEPA Grades



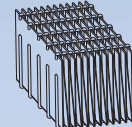
Media Pack 47 mm



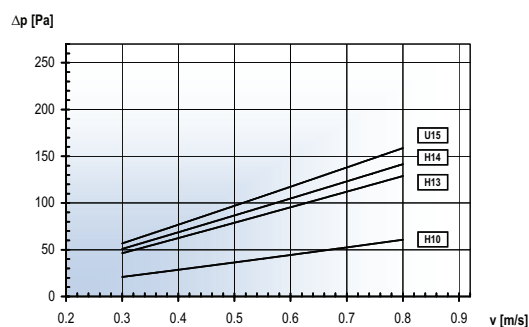
Media Pack 56 mm



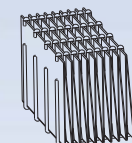
Media Pack 70 mm



for 93mm height "Minipleat-Media Pack"  
in HEPA Grades



Media Pack 93 mm

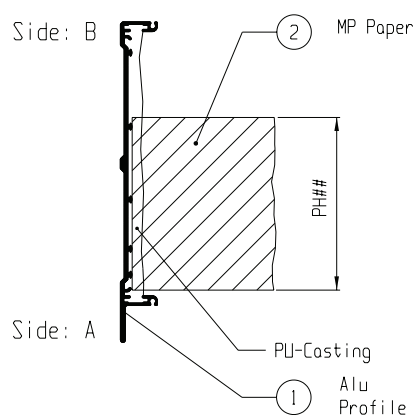




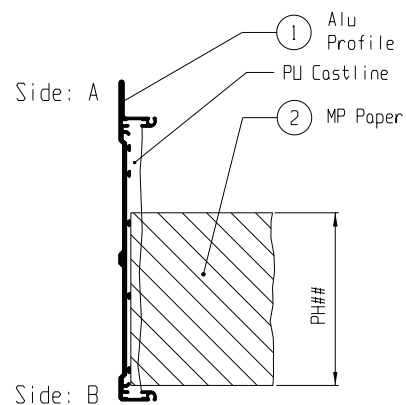
## Applicable Standards:

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- EN 779
- ASHRAE 52.1
- ISO 9001:2000

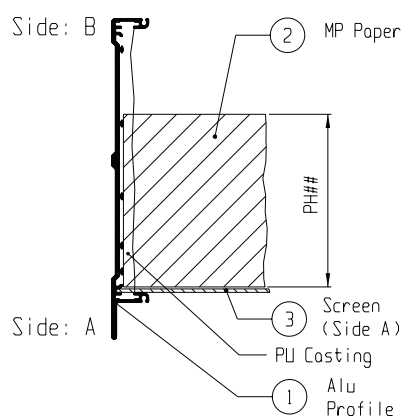
### Construction Code: B



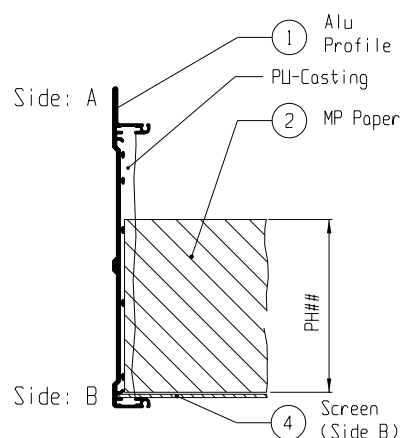
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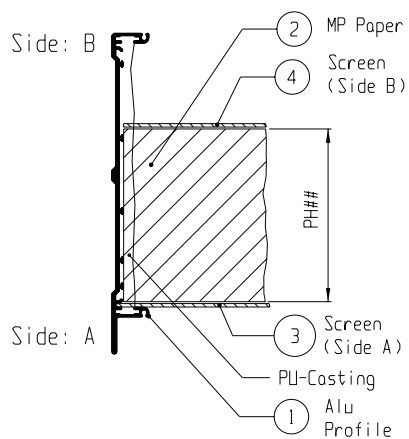
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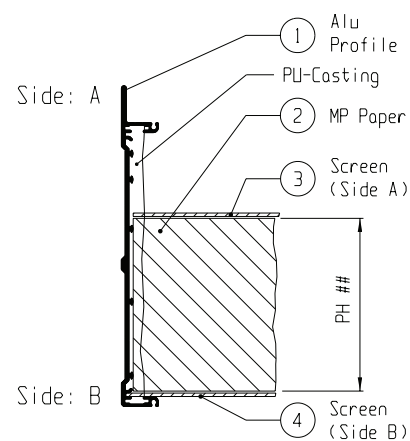
### Construction Code: E



### Construction Code: F



### Construction Code: G



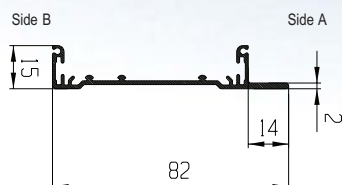


## Order Code

## Dimensional Sketch of Profiles

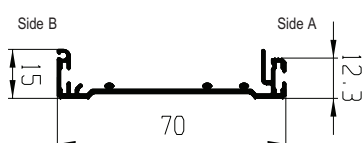
## Application

**K**



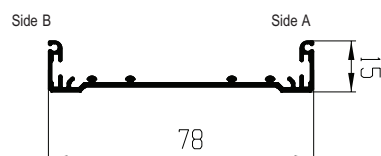
Special profile with "knife edge" (suitable for "fluid seal" system) for GP filters with Media Pack Order Code 4

**M**



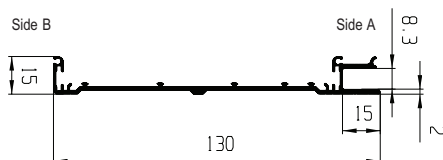
Standard profile for GP filters with Media Pack Order Code 4

**N**



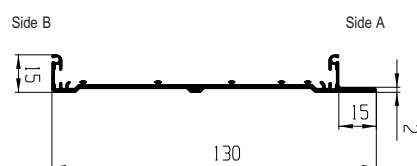
Standard profile for GP filters with Media Pack Order Code 4 or 5

**Y**



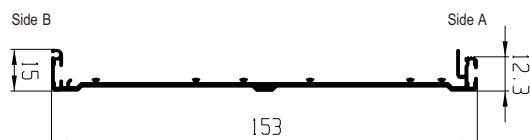
Special profile with "fluid seal" (suitable for "knife edge" system) for GP filters with Media Pack Order Code 4, 5, 7 or 9

**X**



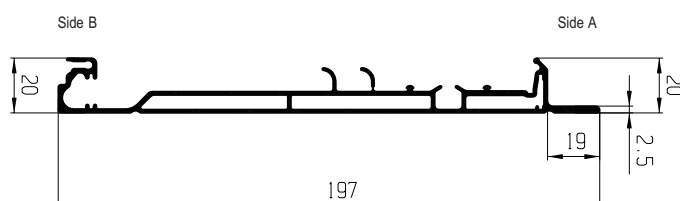
Special profile with "knife edge" (suitable for "fluid seal" system) for GP filters with Media Pack Order Code 4, 5, 7 or 9

**Z**



Standard profile for GP filters with Media Pack Order Code 4, 5, 7 or 9

**9**



Special profile with "knife edge" (suitable for "fluid seal" system) for GP filters with Media Pack Order Code 4, 5, 7 or 9

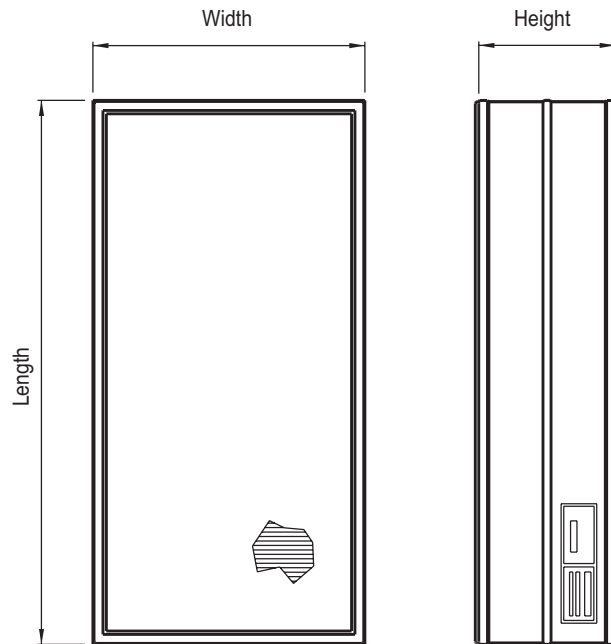


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## Dimensional Drawing



## Order Numbers

Order no. GP - A - B C - D E F G  
 Example GP - 4 - 13 66 - N D C 0

Media Pack	A	Efficiency	B	Size L x W	C	Frame	D	Construction	E	Screen Material	F	Seal	G
47 mm	4	F 6	06	305 x 305 mm	33	82mm (K14-1)	K	No Screen/Media at Profile Side A	B	No Screen	0	No Seal	0
56 mm	5	F 7	07	305 x 610 mm	36	70mm (S-1)	M			Exp. Aluminium	A	1x Dry, Side A	A
70 mm	7	F 8	08	457 x 305 mm	43	78mm (S-1)	N	No Screen/Media at Profile Side B	C	Exp. Steel / Powder Coated	C	1x Dry, Side B	B
93 mm	9	F 9	09	457 x 457 mm	44	130mm (K15-1)	X	1x Screen/Media at Profile Side A	D			Both Side, Dry	C
		H10	10	457 x 610 mm	46	130mm (U15-1)	Y	1x Screen/Media at Profile Side B	E	Exp. Stainless Steel	U	1x Fluid, Side A	D
		H13	13	610 x 610 mm	66	153mm (S-1)	Z	2x Screen/Media at Profile Side A	F			1x Fluid, Side A	F
		H14	14	762 x 610 mm	76	197mm (K19-1)	9	2x Screen/Media at Profile Side B	G			1x Dry, Side B	
		U15	15	915 x 610 mm	96								
				1220 x 610 mm	06								
				Other dimensions available upon request.									

Specifications are subject to change without prior notice