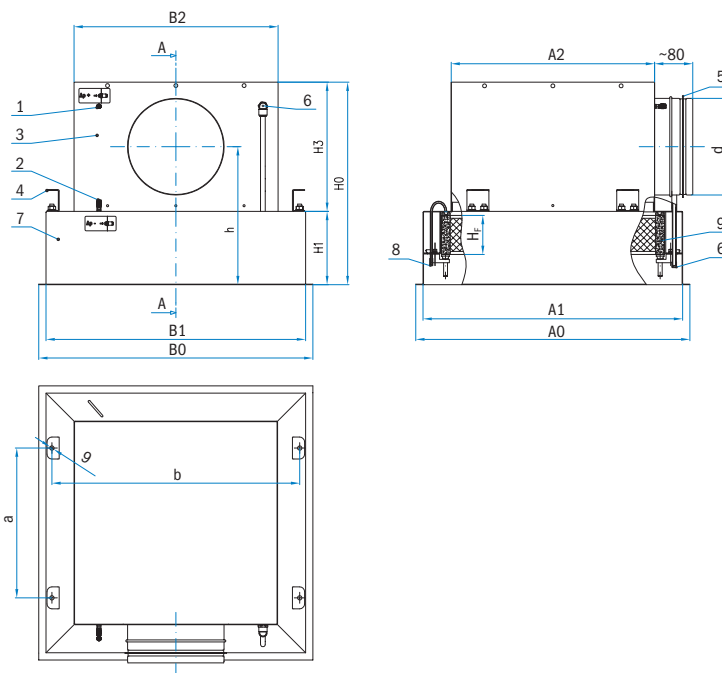


Ceiling HEPA filter units with semicircular or U-shaped gasket AFV-8B



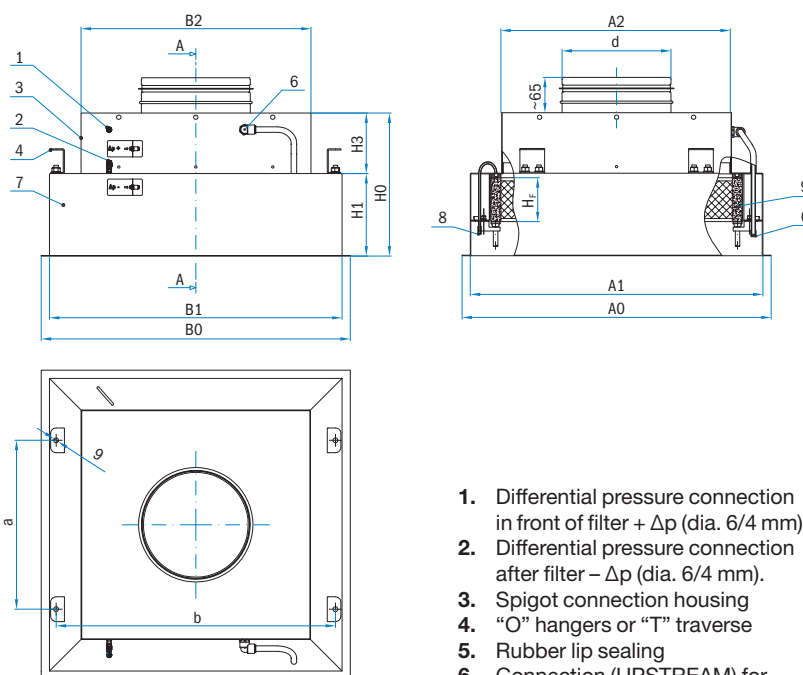
AFV-8B/F/_R_-S (side entry spigot)



Description

- General description: air supply for the highest standards of air purity,
- Filter: E10...H14 class (EN 1822:2009),
- Front plate: KD-1A, KD-6, OD-5, OD-9KK, OD-15KK, SR-4, OD-8KR
- (PO) semicircular (foam) gasket or (U) U-shaped profile,
- Suitable for: air supply in laboratories, infection-free and sterile departments, electronics, precision mechanics, pharmaceuticals, chemistry, food, film and audio tape industry.

AFV-8B/F/_R_-V (top entry spigot)



Material and surface protection

- Filter housing, diffuser and spigot connection housing made of cold rolled steel,
- Holding brackets made of stainless steel,
- Filter holders made of galvanized steel.

Stainless steel filter units are available upon request.

The filter housing and the front plate are powder coated in RAL 9010. Other RAL colours are available on request.

Accessories

See chapter Accessories.

1. Differential pressure connection in front of filter + Δp (dia. 6/4 mm).
2. Differential pressure connection after filter – Δp (dia. 6/4 mm).
3. Spigot connection housing
4. "O" hangers or "T" traverse
5. Rubber lip sealing
6. Connection (UPSTREAM) for scan test (dia. 8/10 mm).
7. Filter housing
8. Connection for filter tightness test (DIN 1946-4)
9. Filter.

AFV-8BF_R_-N - lowered housing version

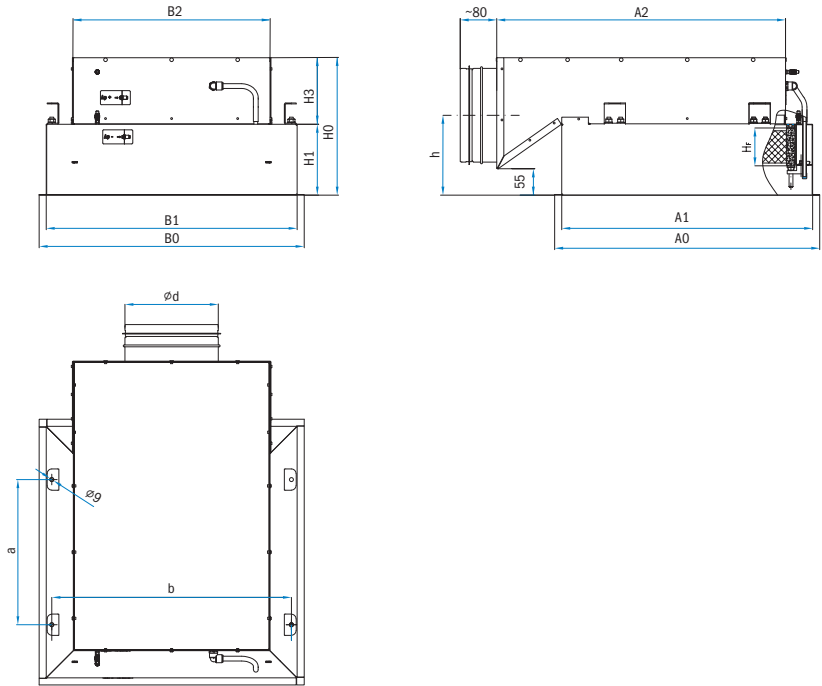


Table 1: Filter housing dimension and weight table AFV-8B

Filter dimension				Spigot	Plenum box								AFV-8B/F_/R_-S				AFV-8B/F_/R_-V							
				H _F	ød	A0	A1	A2	a	B0	B1	B2	b	h	H1	H3	H0	Weight [kg]	H1	H3	H0	Weight [kg]		
F10	305	x	305	x	69-80	R4	158	410	380	265	155	410	380	265	356	263	150	225	375	6.1	150	110	260	5.2
F20	305	x	610	x	69-80	R5	198	410	380	265	155	715	685	570	661	283	150	265	415	9.6	150	110	260	7.5
F30	457	x	457	x	69-80	R5	198	562	532	417	307	562	532	417	508	283	150	265	415	9.8	150	110	260	7.7
F40	535	x	535	x	69-80	R6	248	640	610	495	385	640	610	495	586	308	150	315	465	12.3	150	110	260	9.1
F50	610	x	610	x	69-80	R6	248	715	685	570	460	715	685	570	661	308	150	315	465	14.3	150	110	260	10.6
F60	610	x	915	x	69-80	R8	313	715	685	570	460	1020	990	875	966	340	150	380	530	19.8	150	110	260	13.6
F70	610	x	1220	x	69-80	R9	353	715	685	570	460	1325	1295	1180	1271	360	150	420	570	25.0	150	110	260	16.6

Table 2: Filter housing dimension and weight table AFV-8B - for installation in suspended ceilings 600x600

Filter dimension				Spigot	Plenum box								AFV-8B/F40/C6-SC				AFV-8B/F40/C6-VC							
				H _F	ød	A0	A1	A2	a	B0	B1	B2	b	h	H1	H3	H0	Weight [kg]	H1	H3	H0	Weight [kg]		
F40	535	x	535	x	69-80	C6	248	595	580	495	385	595	580	495	560	308	150	315	465	12	150	110	260	8,8

Table 3: Filter housing dimension and weight table AFV-8B/F_/R_-N - lowered housing version

Filter dimension				Spigot	Plenum box								AFV-8B/F_/R_-N							
				H _F	ød	A0	A1	A2	a	B0	B1	B2	b	h	H1	H3	H0	Weight [kg]		
F10	305	x	305	x	69-80	R4	158	410	380	460	155	410	380	265	356	149	150	100	250	6,1
F20	305	x	610	x	69-80	R5	198	410	380	460	155	715	685	570	661	169	150	140	290	9,6
F30	457	x	457	x	69-80	R5	198	562	532	612	307	562	532	417	508	169	150	140	290	9,8
F40	535	x	535	x	69-80	R6	248	640	610	690	385	640	610	495	586	194	150	190	340	12,3
F50	610	x	610	x	69-80	R6	248	715	685	765	460	715	685	570	661	194	150	190	340	14,3
F60	610	x	915	x	69-80	R8	313	715	685	765	460	1020	990	875	966	226	150	255	405	19,8
F70	610	x	1220	x	69-80	R9	353	715	685	765	460	1325	1295	1180	1271	261	150	310	460	25,0

Table 4: Filter housing dimension and weight table AFV-8B-F40-C6-N - lowered housing version for installation into suspended ceilings 600x600

Filter dimension					Spigot			Plenum box							AFV-8B/F40/C6-N					
					H _F		ød	A0	A1	A2	a	B0	B1	B2	b	h	H1	H3	H0	Weight [kg]
F40	535	x	535	x	69-80	C6	248	595	580	690	385	595	580	495	560	194	150	190	340	12

Note:

- Total weight = weight of front plate + weight of housing + weight of filter.
- Deviation of weight is ±10 %.

Detail: Filter gasket type

(U) U-shaped profile:

- Filter tightness test (DIN 1946-4)
- Measuring tube size ø4 mm on the housing allows pressure tapping for filter tightness test (position 8)

(PO) Semicircular shaped profile:

- The housing does not have a measuring tube for pressure tapping for filter tightness test

Detail: Filter and diffuser front plate fixing

The front plate is mounted with screws to caged nuts (position 10) on filter housing. The filter is fixed in place with a pressure screw on filter holders (position 11 and 17). Filter frame height can be from 69 up to 80 mm.

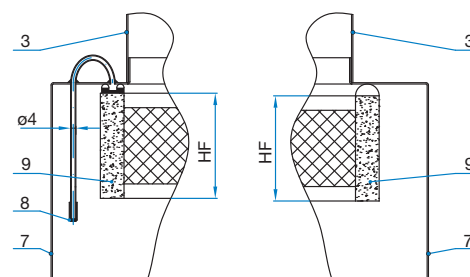
Detail: UPSTREAM connection for scan test

The housing has an UPSTREAM connection (position 6) size ø8 mm for scan test. This allows you to measure the concentration of MPPS size aerosol particles on the dirty side of the filter and to confirm filter efficiency and filter housing tightness.

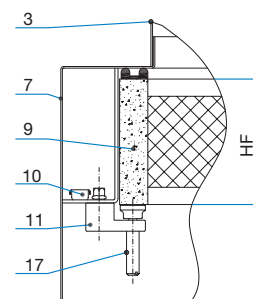
It can also be used to monitor differential pressure upstream of the filter + Δp.

Fig. 1

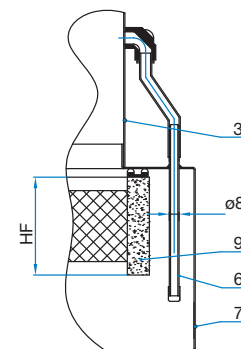
Detail: Filter gasket type



Detail: Filter and diffuser front plate fixing



Detail: UPSTREAM connection for scan test



- 3. Spigot connection housing
- 6. Connection UPSTREAM for scan test
- 7. Filter housing
- 8. Connection for filter tightness test (DIN 1946-4)
- 9. Filter
- 10. Front plate nuts
- 11. Filter holders

Installation: "O" hangers

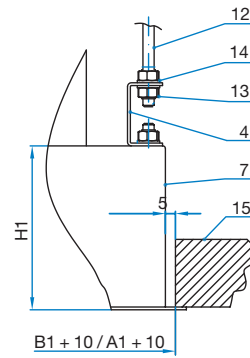
When using "O" hangers, the first step is to mount four threaded rods diameter 8 mm (position 12) to the fixed ceiling according to dimension a and b from Table 1 in place of the AFV-8B final position. The second step is to make a B1+10 / A1+10 sized opening in the suspended ceiling to fit the filter housing (position 7). The final step is to place a sealant on the interface of the filter housing and the suspended ceiling and secure it in place with a nut (position 13) and a spring washer (position 14) on the threaded rod.

Installation: "T" traverse

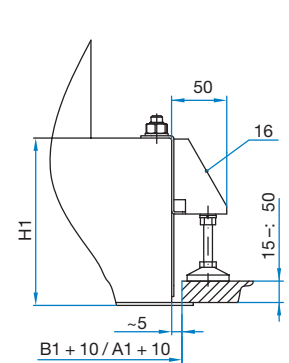
When using "T" traverse, the first step is to make a B1+10 / A1+10 sized opening in the suspended ceiling to fit the filter housing (position 7). Then place a sealant on the interface of the filter housing and the suspended ceiling, attach the traverse (position 16) on the filter housing and secure it to the suspended ceiling. The thickness of the suspended ceiling can be from 15 to 50 mm, other thicknesses on request.

Fig. 2

Installation: "O" hangers



Installation: "T" traverse



- | | |
|----------------------------|------------------------------------|
| 4. "O" hangers | 13. Nut for threaded rod |
| 7. Filter housing | 14. Spring washer for threaded rod |
| 11. Filter holders | 15. Suspended ceiling |
| 12. Threaded rod size 8 mm | 16. "T" traverse |

Regulation:

First install the filter and lock it into place. Then loosen the screw for the hatch blocker (position 5) and move the regulation hatch (position 1) into place with the regulation axis (position 3). Then tighten the screw for the hatch blocker (position 5) and install the diffuser front plate.

Housing size:

Standard air volume regulation can be chosen only for filter sizes F10, F20, F30, F40, F50.

Material and surface protection:

- filter housing, bottom plate and spigot connection housing made of cold-rolled steel,
- holding brackets and regulation axis made of stainless steel,
- detachable air volume regulator made of galvanized sheet steel,
- filter holders made of galvanized engineering steel.

Other materials are available upon request.

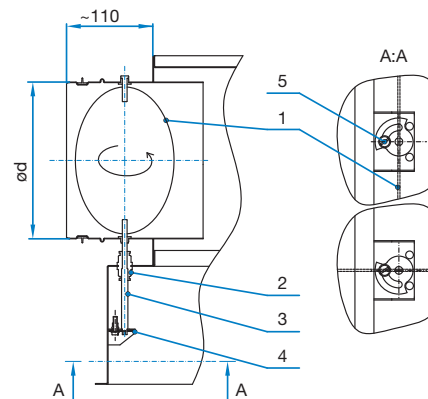
The filter housing and the diffuser front plate are powder coated in RAL 9010, 30 % gloss. Other RAL colours are available upon request.

Dimensions and weight 1,2

- 1) The whole weight is the sum of the weight of the diffuser front plate, housing, filter and additional weight of the air volume regulator specified in Table 2.
- 2) The deviation of weight is $\pm 10\%$.

Fig. 3

Detail: Side entry spigot with air volume regulator (not airtight)

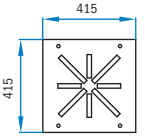
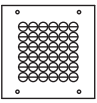
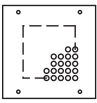
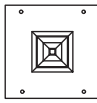
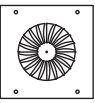
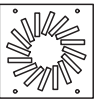
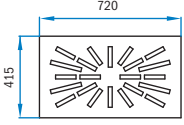
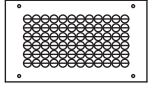
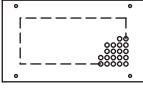
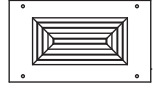
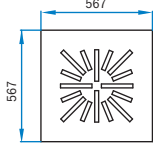
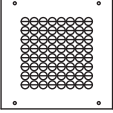
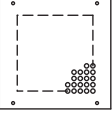

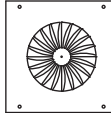
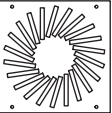
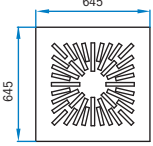
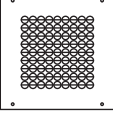
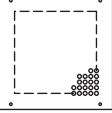

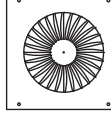
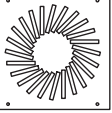
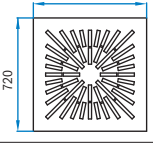
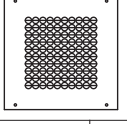
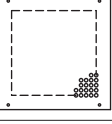

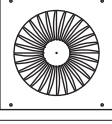
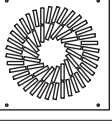
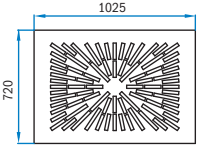
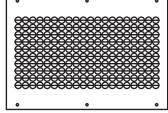
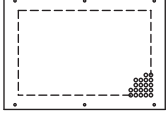
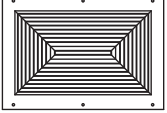
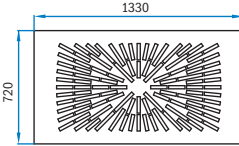
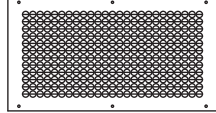

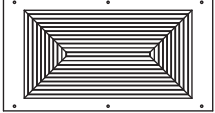


1. Air flow regulator
2. Air tight fittings
3. Regulation axis (0° to 90°)
4. Hatch blocker
5. Screw for hatch blocker

Table 2: Additional weight for air volume regulator

Spigot		
	ød	Weight [kg]
R4	158	0.3
R5	198	0.4
R6	248	0.5

Filter and front plate combinations AFV-8B

Filter size	Front plate							
F10	OD-9KK/AFV-8B size 310/F10 	OD-15KK/AFV-8B size 300/F10 	KD-6/AFV-8B size F10 	KD-1A/AFV-8B size 1(2)/F10 	OD-5/AFV-8B size 300/F10 	OD-8KR/AFV-8B size 300/16 		
F20	OD-9KK/AFV-8B size F20 	OD-15KK/AFV-8B size F20 	KD-6/AFV-8B size F20 	SR-4/AFV-8B size F20 				
F30	OD-9KK/AFV-8B size 400/F30 	OD-15KK/AFV-8B size 400/F30 	KD-6/AFV-8B size F30 	KD-1A/AFV-8B size 2(3,4)/F30 	OD-5/AFV-8B size 400/F30 	OD-8KR/AFV-8B size 400/22/F30 		
F40	OD-9KK/AFV-8B size 500/F40 	OD-15KK/AFV-8B size 500/F40 	KD-6/AFV-8B size F40 	KD-1A/AFV-8B size 4(5,6)/F40 	OD-5/AFV-8B size 500/F40 	OD-8KR/AFV-8B size 500/24/F40 		
F50	OD-9KK/AFV-8B size 600/F50 	OD-15KK/AFV-8B size 600/F50 	KD-6/AFV-8B size F50 	KD-1A/AFV-8B size 5(6,7,8)/F50 	OD-5/AFV-8B size 600/F50 	OD-8KR/AFV-8B size 600/54/F50 		
F60	OD-9KK/AFV-8B size F60 	OD-15KK/AFV-8B size F60 	KD-6/AFV-8B size F60 	SR-4/AFV-8B size F60 				
F70	OD-9KK/AFV-8B size F70 	OD-15KK/AFV-8B size F70 	KD-6/AFV-8B size F70 	SR-4/AFV-8B size F70 				

Filter and front plate combinations - AFV-8B for installation in suspended ceilings 600x600

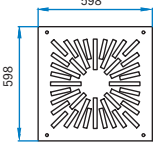
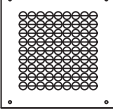
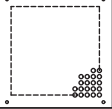

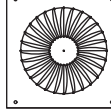
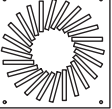
Filter size	Front plate							
F40	OD-9KK/AFV-8B size 500/F40 	OD-15KK/AFV-8B size 500/F40 	KD-6/AFV-8B size F40 	KD-1A/AFV-8B size 4(5,6)/F40 	OD-5/AFV-8B size 500/F40 	OD-8KR/AFV-8B size 500/24/F40 		

Table 3: Front plate weight table

Front plate	Filter size						
	F10	F20	F30	F40	F50	F60	F70
OD-5	1.5 kg	/	2.7 kg	3.4 kg	4.2 kg	/	/
OD-8KR	1.5 kg	/	2.6 kg	3.3 kg	4.0 kg	/	/
OD-9KK	1.5 kg	2.4 kg	2.6 kg	3.3 kg	4.0 kg	5.7 kg	7.3 kg
OD-15KK	1.3 kg	2.1 kg	2.3 kg	3.0 kg	3.7 kg	4.8 kg	6.2 kg
KD-6	1.0 kg	1.7 kg	1.8 kg	2.4 kg	2.9 kg	4.2 kg	5.4 kg
KD-1A	size 1 / 2.0 kg size 2 / 2.1 kg	/	size 2 / 3.3 kg size 3 / 3.5 kg size 4 / 3.7 kg	size 4 / 4.4 kg size 5 / 4.7 kg size 6 / 5.0 kg	size 5 / 5.5 kg size 6 / 5.8 kg size 7 / 6.4 kg size 8 / 6.5 kg	/	/
SR-4	/	3.7 kg	/	/	/	9.8 kg	13.0 kg

Ordering key

AFV-8B / F... / R... - S - ... / O / Z / PO / OD-5

1 2 3a 3b 3c 4 5 6 7

1 Type

AFV-8B for filters with semicircular foam gasket or filters with U shaped gasket (tightness test)

2 Adapted for filter size

F10 305 x 305 x 80 (standard spigot size in Table 1)
F20 305 x 610 x 80
F30 457 x 457 x 80
F40 535 x 535 x 80
F50 610 x 610 x 80
F60 610 x 915 x 80
F70 610 x 1220 x 80

3a Spigot type

S Side spigot entry
V Top spigot entry
N Low side spigot version

3b Spigot diameter

R4 Ø158
R5 Ø198
R6 Ø248
R7 Ø298
R8 Ø313
R9 Ø353

3c Version

C Version for suspended ceilings 600x600 (available only in size F40)
K Square entry spigot, size available on request

4 Installation

O Installation with hangers
T Installation with traverse

5 Air volume regulation

R Airtight damper ZL-3N - with manual control, adjustable from outside
Z1 Airtight damper ZL-3N - with 24 V actuator (available only with version RS and RV)
Z2 Airtight damper ZL-3N - with 230 V actuator (available only with version RS and RV)
M Air volume regulator, adjustable from room inside (not air tight)

6 Gasket type

U Dry gasket filter: U-shaped profile (connection for filter sit-tightness test acc. to DIN 1946-4)
PO Dry gasket filter: semicircular shaped profile

7 Diffuser type

OD-5 Swirl diffuser
OD-8KR Swirl diffuser
OD-9KK Swirl diffuser
OD-15KK Swirl diffuser
KD-1A Square 4-way diffuser (available for sizes F10, F30, F40, F50)
KD-6 Perforated diffuser
KD-6 Rectangular 4-way diffuser (available for sizes F20, F60, F70)

Note:
 Filter is not included and must be ordered separately.