

AFR / AFC – AIR FILTERS



Description

- Designed for rough, middle and precise air filtration in ventilation and air-conditioning installations.
- Filters are classified in accordance with EN 779.
 - Group G: from G2 to G4 (EU4) – filters for rough dust.
 - Group G: from F6 to F8 (EU8) – filters for fine dust.
- **AFC-M*** – metal filter cassettes for rough filtration of hot air and **explosion-proof** oil fumes. Suitable for incorporation into kitchen hoods. Class: G2:
 - AFC-MM – wire mesh filter cassettes;
 - AFC-ML – labyrinth filter cassettes;
 - AFC-MC – combined filter cassettes.

Types

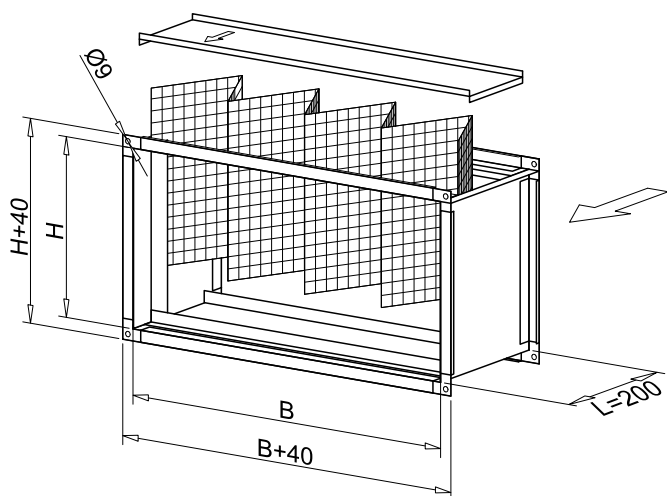
- **AFR-V** – Rectangular V-shape duct filters for middle filtration. Class G3 and G4.
- **AFC-**** – Filter cassettes for rough and precise air filtration:
 - AFC-PR G2 – cassette with regenerative filter material, suitable for fan coil units;
 - AFC-S G3÷G4 – cassettes with flat filter;
 - AFC-V G3÷G4 – V-shape cassettes, suitable air handling units;
 - AFC-Z G4 – filter cassettes with folded filtration surface, suitable for heat recovery units;
 - AFC-B – pocket filters for precise cleaning. Class: from F6 to F8.

Installation

- AFR-V filters are for incorporation at the air duct installation with flange connection.
- Filter cassettes type AFC-* are designed for incorporation in ventilation and air-conditioning equipment.
- The air flow direction has to be kept when installing.

AFR-V – rectangular V-shape filters – elements of inline system PKS

Standard joined dimensions



Model	A [mm]	H [mm]	Weight [kg]
AFR-V/200	400	200	3.6
AFR-V/225	500	250	4.5
AFR-V/250	500	300	4.8
AFR-V/285	600	300	5.4
AFR-V/315	600	350	5.7
AFR-V/355	700	400	6.8
AFR-V/400	800	500	7.9
AFR-V/450	1000	500	8.8

Description

- Filter for middle filtration produced of polyester fibers with progressive structure.
- $T_{\max} = 100^{\circ}\text{C}$.
- Combustion class DIN 53438 – F1.
- Used as a preliminary filter in filtration system or as a basic filter in ventilation system.
- Consist of corpus from galvanized metal sheets with zig-zags folded filter material over supporting galvanized wire mesh.
- Filtration class: G3 (standard version).
- Revisions cover for easy replacement of the filter material without dismounting of the corpus.
- Regeneration: replacement of the filter material.

Note:

Upon customers request is possible to produced filters:

- with different dimensions
- with filtration class G4

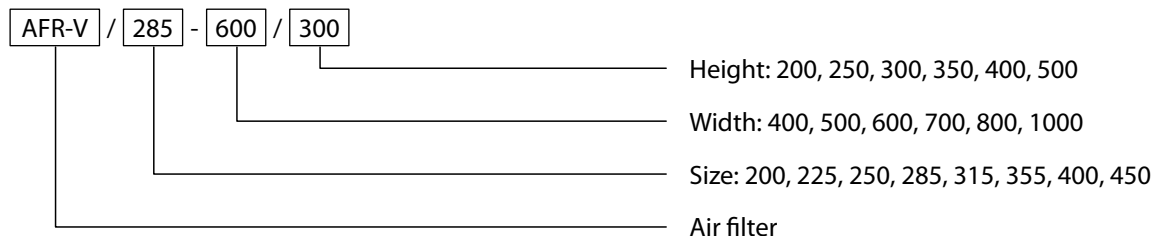
Initial pressure drop of clean filter Δp_0 [Pa]

W_0 [m/s]	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	4.00
AFR-V/** - G3	26	35	46	58	72	87	103	121	140	183
AFR-V/** - G4	34	46	60	76	94	113	135	159	184	240

Note:

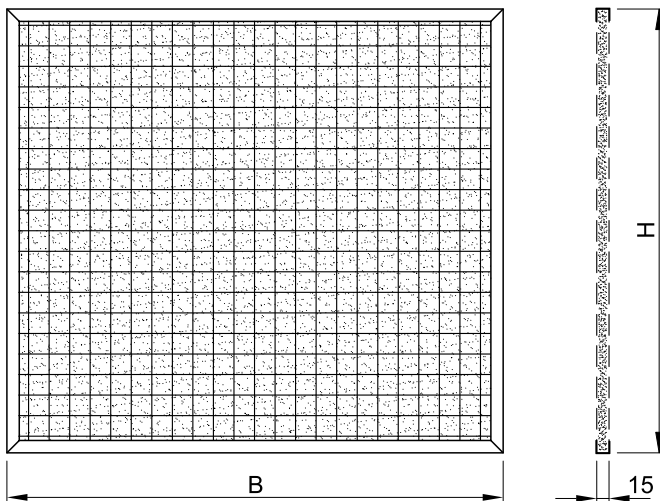
- W_0 – velocity in the inlet section [m/s]
- $\Delta p_f = 250$ Pa – pressure drop in case of dirty filter

Order designation



AFC-PR – filter cassette with regenerative filter material

Standard joined dimensions



B [mm]	200	300	400	500	600	800	1000	1200
H [mm]	200	300	400	500				

Description

- Filter cassette from foamed polyurethane for rough filtration.
- Suitable for fan coils and duct type air-conditioners, and also for re-circulation grilles.
- $T_{max} = 80^{\circ}C$.
- Combustion class DIN 53438 – F1
- Consist of a frame from galvanized metal sheets with filter material incorporated with galvanized wire mesh
- Filtration class: G2.
- Regeneration: cleaning of the filter with non-aggressive detergents.

Note:

- Dimensions B and H are arbitrary and mark the installation sockets. Filter cassettes are produced 5 mm smaller.
- By customer request is possible filters with different dimensions to be produced, as well as a frame from stainless steel sheets (additionally marked).

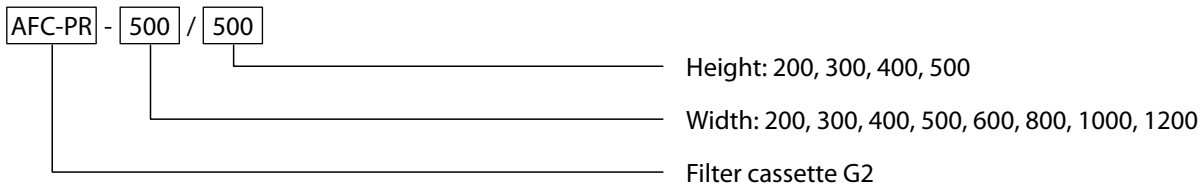
Initial pressure drop of clean filter, δp_0 [pa] Δp_0 [Pa]

W_0 [m/s]	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
AFC-PR - G2	5	8	10	14	18	23	28	34	40

Note:

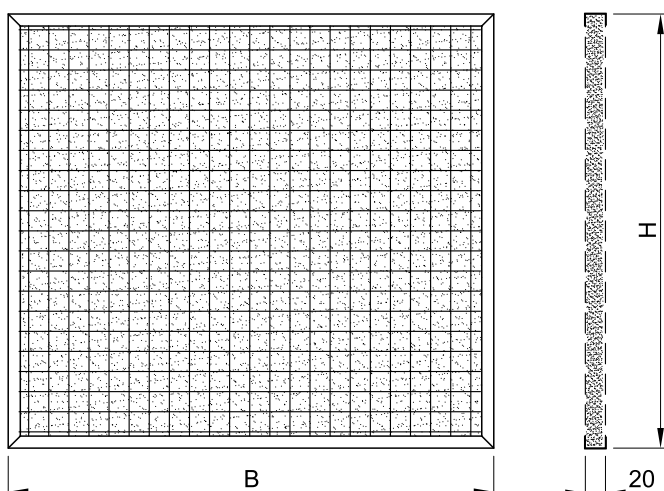
- Weight is a function of the input and can not be more than 1.6 kg/m².
- W_0 – velocity in the inlet section [m/s].
- $\Delta p_f = 100$ Pa – pressure drop in case of dirty filter.

Order desigantion



AFC-S – filter cassette with flat filter

Standard joined dimensions



B [mm]	200	300	400	500	600	800	1000	1200
H [mm]	200	300	400	500				

Description

- Filter cassette for middle filtration produced of polyester fibers with progressive structure.
- $T_{\max} = 90^{\circ}\text{C}$.
- Combustion class DIN 53438 – F1.
- Consist of a frame from galvanized metal sheets with filter material incorporated with galvanized wire mesh.
- Filtration class: G3 (standard version).
- One-time usage.
- Regeneration: replacement of the filter cassette.

Note:

- Dimensions B and H are arbitrary and mark the installation sockets. Filter cassettes are produced 5 mm smaller.
- By customer request is possible filters with different dimensions and filtration class G4 (additionally marked).

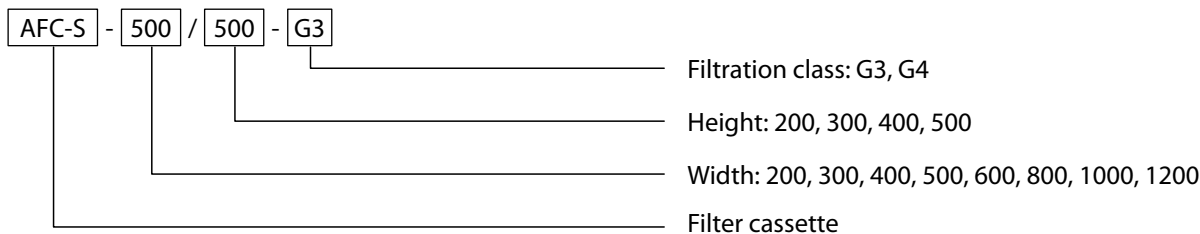
Initial pressure drop of clean filter Δp_0 [Pa]

W_0 [m/s]	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
AFC-S – G3	15	25	34	46	60	75	93	112	134
AFC-S – G4	20	34	45	62	80	102	125	152	180

Note:

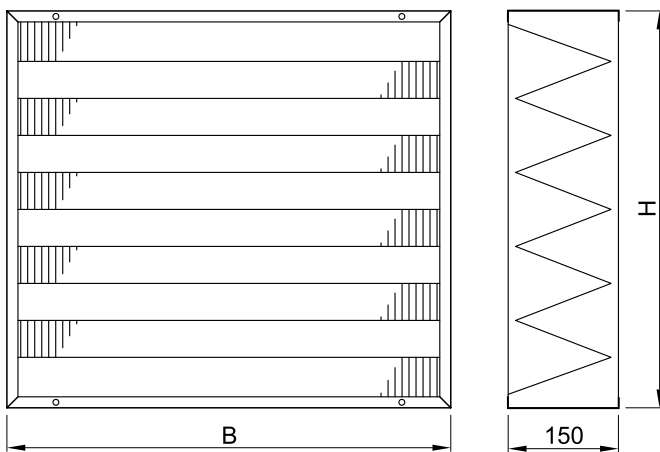
- Weight is a function of the inlet section not exceeding $3,6 \text{ kg/m}^2$.
- W_0 – velocity in the inlet section [m/s].
- $\Delta p_f = 250 \text{ Pa}$ – pressure drop in case of dirty filter.

Order designation



AFV - V-shape filter cassette

Standard joined dimensions



B [mm]	400	500	600	800	1000		
H [mm]	400	500	600	800	1000	1200	1400

Description

- Filter cassette for middle filtration produced of polyester fibers with progressive structure.
- Suitable for fresh and exhaust air filtration in air handling units.
- $T_{\max} = 90^{\circ}\text{C}$.
- Combustion class DIN 53438 – F1.
- Consist of a frame form galvanized metal sheets with supporting profiles and V-shaped stretched filter material.
- Filtration class: G3 (standard version).
- Regeneration: filter material replacement.

Note:

- Dimensions B and H are arbitrary and mark the installation sockets. Filter cassettes are produced 5 mm smaller.
- By customer request is possible filters with different dimensions to be produced, as well as a frame from stainless steel sheets.

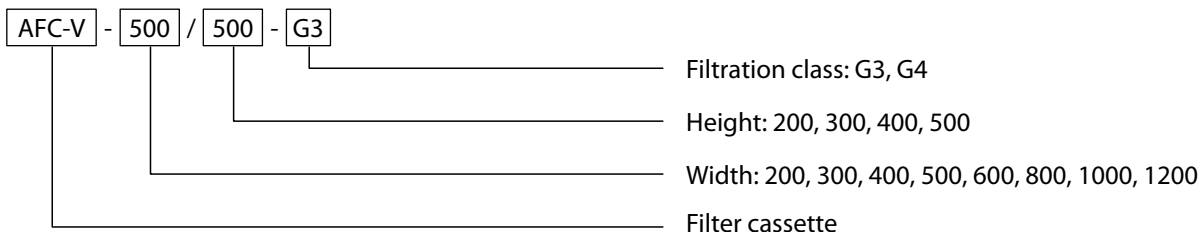
Initial pressure drop of clean filter Δp_0 [Pa]

W_0 [m/s]	1.00	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
AFV – G3	10	22	29	38	48	59	72	85	100	116
AFV – G4	12	27	37	48	61	75	91	108	127	147

Note:

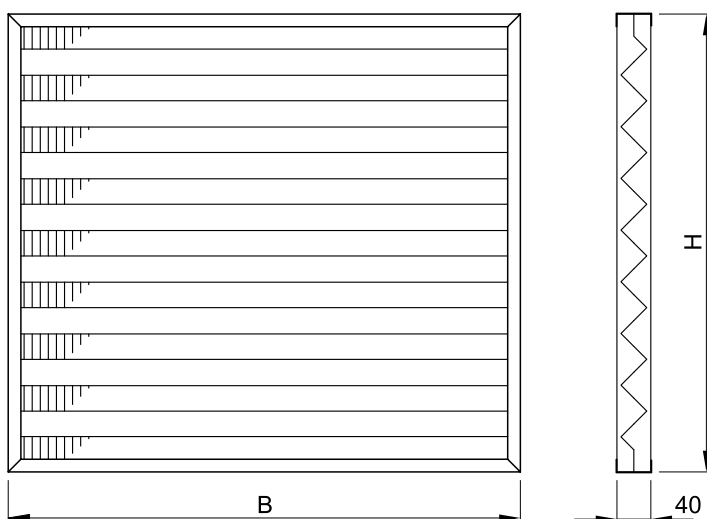
- Weight is a function of inlet section but not exceeding 16 kg/m^2
- W_0 – velocity in the inlet section [m/s].
- $\Delta p_f = 250 \text{ Pa}$ – pressure drop in case of dirty filter.

Order designation



AFC-Z – filter cassette

Standard joined dimensions



B [mm]	200	300	400	500	545				
H [mm]	320	440	540	640	740	840	1080	1280	1480

Description

- Filter cassette for middle filtration produced of polyester fibers with progressive structure.
- Suitable for fresh and exhaust air filtration before heat exchanger in heat recovery units (EVB).
- $T_{\max} = 90^{\circ}\text{C}$.
- Combustion class DIN 53438 – F1.
- Consist of a frame from galvanized metal sheets with zigzag folded filter material with supporting wire mesh.
- Filtration class: G4.
- Regeneration: possible filter material replacement.

Note:

- Dimensions B and H are arbitrary and mark the installation sockets. Filter cassettes are produced 5 mm smaller.
- Width B=545 mm is standard dimension.
- On customer's request is possible filters with different dimensions to be produced (B<550 and H<2000 mm), as well as a frame from stainless steel sheets.

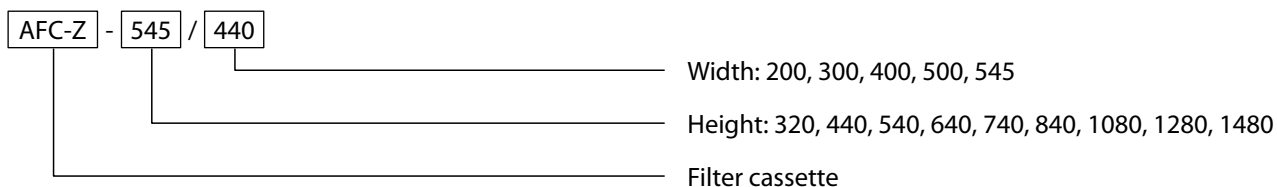
Initial pressure drop of clean filter Δp_0 [Pa]

W_0 [m/s]	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
AFC-Z – G4	15	26	34	46	60	76	94	114	135

Note:

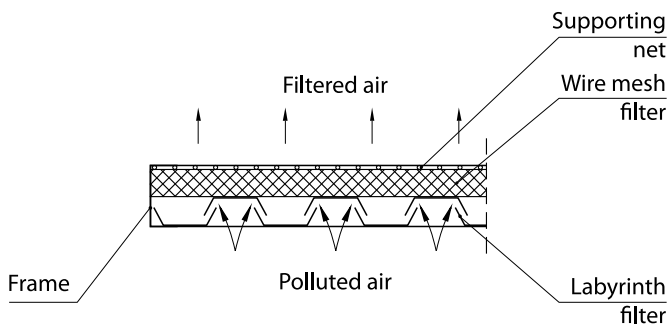
- Weight is a function of inlet section not exceeding 4 kg/m^2 .
- W_0 – speed in the inlet section [m/s].
- $\Delta p_f = 250 \text{ Pa}$ – pressure drop in case of dirty filter.

Order designation



AFC-M* – metal filter cassette

Standard joined dimensions



Description

- **AFC-MM – WIRE MESH FILTER CASSETTE** – frame from galvanized metal sheets with incorporated metal wire mesh, fixed with galvanized supporting net.
- **AFC-ML – LABYRINTH FILTER CASSETTE** – filling from labyrinth type positioned profiles, installed in a frame. Labyrinth filter cassette is produced only from stainless steel.
- **AFC-MC – COMBINED FILTER CASSETTE** – frame from galvanized metal sheets with contiguously incorporated in air flow direction fillings from labyrinth and wire mesh filters.
- **Cannot be used with flammable and explosive mixtures.**
- Produced with standard dimensions 500x500x30 mm (production of different dimensions – on customer’s request).
- Suitable for kitchen hoods for local extraction installations in kitchens.
- $T_{max} = 200^{\circ}C$. Combustion class – M0.
- Filtration class: G2.
- Regeneration: cleaning with non-aggressive detergents.

Initial pressure drop of clean filter Δp_0 [Pa]

W_0 [m/s]	0.25	0.50	0.75	1.00	1.25	1.50	Weight [kg]
AFC-MM	0	2	4	7	11	16	2.5
AFC-ML	3	13	29	51	80	115	2.7
AFC-MC	4	15	33	58	91	131	3.9

Note:

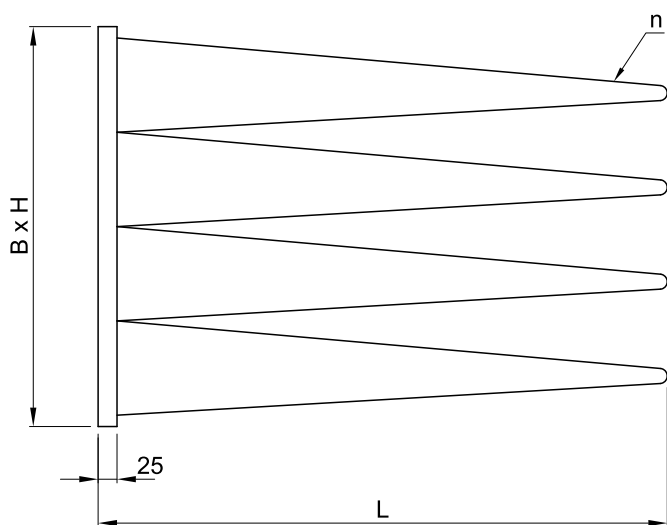
- Weight is a function of inlet section but not exceeding 16 kg/m².
- W_0 – velocity in the inlet section [m/s].
- The data in blue is recommended filtration velocity in case of incorporation into kitchen hoods ($W_0 = 0.5$ m/s)
- Pressure drop in case of dirty filter:
 $\Delta p_f = 100$ Pa – AFC-MM (wire mesh filter)
 $\Delta p_f = 200$ Pa – AFC-ML/AFC-MC (labyrinth or combined air filter).

Order designation



AFB-B – pocket filters

Standard joined dimensions



Typesize	B [mm]	H [mm]	L [mm]	n
AFC-B/3.3	300	300	550	4
AFC-B/6.3	600	300	550	8
AFC-B/6.6	600	600	550	8

n – pockets number

Description

- Filter cassette for precise filtration from polyester fibers with progressive structure.
- Suitable for air treatment in chemical and pharmaceutical industry.
- $T_{\max} = 90^{\circ}\text{C}$.
- Combustion class – F1, DIN 53438.
- Consist of corpus from galvanized metal sheets with filter pockets, fixed on the internal side with frame.
- Filtration class: F6 to F8.
- Regeneration: filter cassette replacement.

Note:

- Filter cassettes with different dimensions can be produced on customer's request.
- Dimensions B and H are arbitrary and mark the installation sockets. Filter cassettes are produced 10 mm smaller
- Filter cassettes AFC-B can be incorporated in casing for in-line system with dimensions BxH and length L=700 mm (by request).

Initial pressure drop of clean filter Δp_0 [Pa]

W_0 [m/s]	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
AFC-B – F6	13	22	30	40	52	66	82	99	117	138	160
AFC-B – F7	15	26	34	46	60	76	94	114	135	159	184
AFC-B – F8	21	36	47	64	84	106	131	159	189	220	256

Note:

- Weight is a function of inlet section not exceeding 3.6 kg/m^2 .
- W_0 – speed in the inlet section [m/s].
- $\Delta p_f = 350 \text{ Pa}$ – pressure drop in case of dirty filter.

Order designation

