Conforms to VDI 6022

Mini Pleat Filter

Type MFP-CR

6295 E Molloy Rd Suite 3, East Syracuse, NY 13057
sales-amn@troxgroup.com
www.trox-northamerica.com

TROX Social:

General information

Application

- Mini Pleat filter panel for the separation of suspended particles such as aerosols, toxic dusts, viruses, bacteria from the supply and extract air in cleanroom facilities with controlled air cleanliness and airflow.
- Particulate filter: Final filter for the most critical requirements of air cleanliness and sterility in areas such as production, research, medicine, pharmaceuticals industry, and nuclear engineering, etc.

Special characteristics

- Optimal pleat geometry of the filter medium
- Low-turbulence outflow of clean air
- Leakage test using the scan test as proof of leak-tightness and as assurance for compliance with separation efficiency and pressure loss (standard from H14).

Classification

- Hygiene Conformity

Nominal sizes

- B × H × T [mm (in.)]

Filter classes

Filter groups

- ePM 10 according to DIN EN ISO 16890 (comparable to ASHRAE 52.2 MERV ratings)
- ePM 1 according to DIN EN ISO 16890 (comparable to ASHRAE 52.2 MERV ratings)
- EPA according to DIN EN 1822
- HEPA according to DIN EN 1822
- ULPA according to DIN EN 1822

Filter classe

- ePM10 (acc. to ASHRAE 52.2)
- ePM 1 (acc. to ASHRAE 52.2)
- E11 (EPA)
- H13 (HEPA)
- H14 (HEPA)
- U15 (ULPA)
- U16 (ULPA)

Construction

Frame versions made from extruded aluminium section
List of frame depths according to construction:

Profiles with groove for continuous seal:

- ALD: 66 mm (2 5/8 in.)
- ALB: 69 mm (2 3/4 in.)
- ALC: 78 mm (3 1/16 in.)
- ALG: 90 mm (3 9/16 in.)
- ALJ: 115 mm (4 1/2 in.)

Profiles for continuous seal/flat seal

- ALN: 30 mm (1 3/16 in.)
- ALZ: 78 mm (3 1/16 in.)
- ALY: 150 mm (5 7/8 in.)

Profiles for fluid seal

- ALV: 85 mm (3 3/8 in.)
- ALU: 91 mm (3 9/16 in.)
- ALQ: 105 mm (4 1/8 in.)
- ALT: 130 mm (5 1/8 in.)
- ALH: 130 mm (5 1/8 in.)

Profiles with knife edge profile

- ALL: 94 mm (3 11/16 in.)
- ALS: 105 mm (4 1/8 in.)
- ALR: 109 mm (4 5/16 in.)
- ALX: 134 mm (5 1/4 in.)

Material and surfaces

- Filter media made of high-quality, wet-strength glass fibre papers, pleated
- Spacers made of thermoplastic hot-melt adhesive provide a uniform spacing of the pleats
- Joint sealing compound made of permanently elastic two-component polyurethane adhesive
- Frame made from extruded aluminium sections

Standards and guidelines

- Testing of particulate filters according to DIN EN 1822-1 and DIN EN ISO 29463-2 – DIN EN ISO 29463-5 (EPA, HEPA, and ULPA particulate filters): Standards for testing filtration performance at the manufacturing plant, based on particle counting methods using a liquid test aerosol.
- Testing in accordance with DIN EN ISO 16890; international standard: air filters for general ventilation. Classification of fractional efficiency based on the measured fractional efficiency which is processed into a reporting system for the particulate matter efficiency (ePM)
- For fine dust filters, the fractional efficiency of a certain size range is determined by aerosols (DEHS and KCl)
- Depending on the test values, the filters are classified into the filter groups ISO ePM10 and ISO ePM1
- Uniform classification of particulate filters according to separation efficiency, using a test aerosol with an average particle size within the minimum separation efficiency (MPPS)
- Particulate filters are classified, according to the values determined for the local separation efficiency and the overall separation efficiency, into EPA (filter classes E10, E11, E12), HEPA (filter classes H13, H14) or ULPA (filter classes U15, U16, U17)
- Hygiene compliance: VDI 6022, VDI 3803, DIN 1946 Part 4, ÖNORM H 6021 and ÖNORM H 6020, SWKI VA 104-01 and SWKI 99-3, and EN 16798

Options

FT: pleat depth
CSU: continuous seal on the upstream side
CSD: continuous seal on the downstream side
CSB: continuous seal on both sides
FNU: flat seal on the upstream side
FND: flat seal on the downstream side
FNB: flat seal on both sides
GPU: Fluid seal (only for ALV, ALU, ALQ, ALT, ALH)
TGU: test groove seal on the upstream side (only for filter classes H13, H14)
PU: protection grid on the upstream side
PD: protection grid on the downstream side
PB: protection grid on both sides
OT: oil mist test (only for filter classes H13, H14)
OTC: oil mist test with certificate (only for filter classes H13, H14)
ST: Scan test
LFU: full-surface laminar fleece on the upstream side
LFD: full-surface laminar fleece on the downstream side
LFS: laminar fleece strip

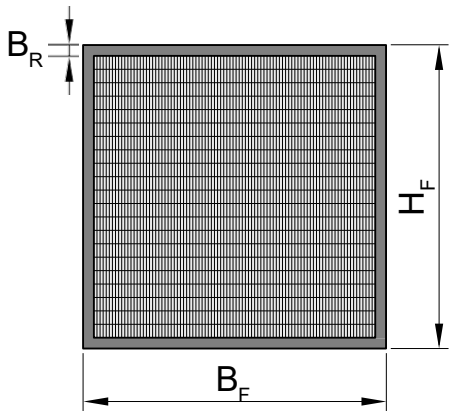
Technical data

Filter class	Upstream velocity	Pleat depth (Pa / in. w.g.)								
DIN EN ISO 16890/ DIN EN 1822		20*	46	50	58	68	70	73	90	120
ePM10 55 % (MERV 8)	2.57 m/s (506 fpm)			90 Pa (0.36)						
ePM1 65 % (MERV 13)	2.57 m/s (506 fpm)			110 Pa (0.44)						
ePM1 90 % (MERV 15)	2.57 m/s (506 fpm)			150 Pa (0.60)						
E11	0.90 m/s (177 fpm)	125 Pa (0.50)	135 Pa (0.54)	125 Pa (0.50)						
H13	0.90 m/s (177 fpm)	250 Pa (1.00)	270 Pa (1.08)	250 Pa (1.00)	215 Pa (0.86)	195 Pa (0.78)				135 Pa (0.54)
H14	0.45 m/s (89 fpm)		115 Pa (0.46)	110 Pa (0.44)	95 Pa (0.38)	90 Pa (0.36)	85 Pa (0.34)	80 Pa (0.32)	75 Pa (0.30)	70 Pa (0.28)
U15	0.45 m/s (89 fpm)			130 Pa (0.52)	115 Pa (0.46)	105 Pa (0.42)	100 Pa (0.40)	95 Pa (0.38)	80 Pa (0.32)	
U16	0.45 m/s (89 fpm)				140 Pa (0.56)	125 Pa (0.50)	120 Pa (0.48)	115 Pa (0.46)	105 Pa (0.42)	

* With a pleat depth of 20 mm (3/4 in.), the upstream velocity is 0.45 m/s (89 fpm).

Depending on the filter class and the pleat depth, the initial pressure differential [Pa] is determined.
The nominal volume flow is the product of the associated upstream velocity and upstream face area of the filter (B × H), minus the profile thickness. See chapter Quick sizing.

Quick sizing



Calculation of the nominal volume flows

$$q_v = (B_F - 2 \times B_R) \times (H_F - 2 \times B_R) \times v \times 3600 \frac{s}{h}$$

qv: Volume flow [m3/h (cfm)]
BF: Filter width [m (ft)]
BR: Frame width [m (ft)]
HF: Filter height [m (ft)]
v: Upstream velocity [m/s (fpm)]

Sizing example

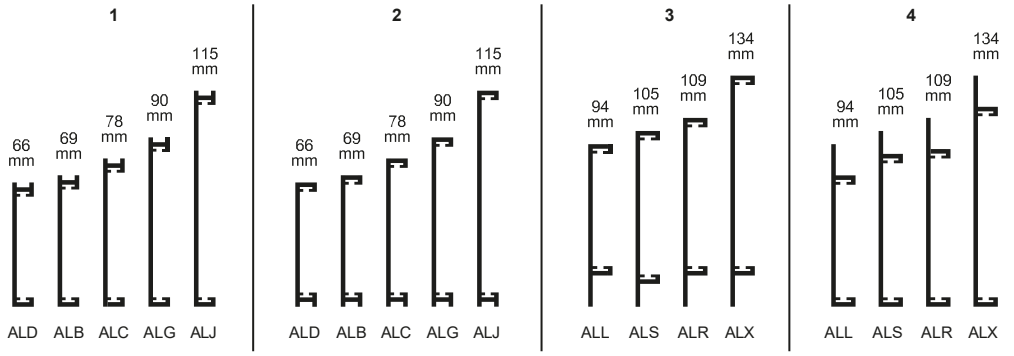
Given data
BF: 610 mm = 0.61 m or 24 in (2.00 ft)
HF: 610 mm = 0.61 m or 24 in (2.00 ft)
BR: 12 mm = 0.012 m or 0.47 in (0.039 ft)
v: 0.45 m/s or 89 fpm

Calculation

q_v - [(0.61 m - 0.024 m) × (0.61 m - 0.024 m)] × 0.45 m/s × 3600 s/h
q_v - [(2.00 ft – 0.07874 ft) × (2.00 ft – 0.07874 ft)] × 1.47638 ft/s × 3600 s/h

Result
q_v = v – 556 m³/h
q_v = v – 19627 ft³/h

Note: Initial pressure difference according to tab



1 Standard version profiles with groove
2 Option R profiles with groove
3 Standard version profiles with knife edge profile
4 Option R profiles with knife edge profile

Possible filter pleat depths according to profile

Profile type	Profile Height (mm / in)	Profile Width (mm / in)	Pleat depth								
			20 (3/4)	46 (1 13/16)	50 (2)	58 (2 5/16)	68 (2 11/16)	70 (2 3/4)	73 (2 7/8)	90 (3 9/16)	120 (4 3/4)
ALD	66 (2 5/8)	12 (1/2)		✓							
ALB	69 (2 3/4)	12 (1/2)			✓						
ALC	78 (3 1/16)	12 (1/2)			✓	✓					
ALG	90 (3 9/16)	12 (1/2)			✓			✓	✓		
ALJ	115 (4 1/2)	12 (1/2)			✓			✓	✓	✓	
ALL	94 (3 11/16)	12 (1/2)			✓	✓					
ALS	105 (4 1/8)	12 (1/2)			✓	✓		✓	✓		
ALR	109 (4 5/16)	12 (1/2)			✓	✓		✓	✓		
ALX	134 (5 1/4)	12 (1/2)			✓			✓	✓	✓	
ALV	85 (3 3/8)	24 (1)			✓		✓				
ALU	91 (3 9/16)	20 (3/4)			✓	✓					
ALQ	105 (4 1/8)	12 (1/2)			✓	✓		✓	✓		
ALT	130 (5 1/8)	12 (1/2)			✓			✓	✓	✓	
ALH	130 (5 1/8)	32 (1 1/4)			✓			✓	✓	✓	
ALN	30 (1 3/16)	20 (3/4)	✓								
ALZ	78 (3 1/16)	20 (3/4)			✓	✓					
ALY	150 (5 7/8)	20 (3/4)			✓	✓	✓				✓

Specification text

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Specification text

Mini Pleat filter panels MFPCR for the separation of suspended particles such as aerosols, toxic dusts, viruses and bacteria from the supply and extract air in clean room systems with controlled air cleanliness and airflow.
Use as particulate filters, i.e. main or final filters, for the most critical requirements of air cleanliness and sterility in areas such as production, research, medicine, pharmaceuticals industry, and nuclear engineering. Mini Pleat filter panels for clean room technology, consisting of an extruded aluminium frame, filter media of high-quality, moisture-resistant glass fibre papers with spacers made of thermoplastic hot-melt adhesive. Variable pleat depths enable optimal adjustment to individual requirements.

Cleanroom technology available in standard and special sizes, filter groups ISO ePM10, ISO ePM2.5, ISO ePM1 (fine dust filter) and EPA, HEPA, ULPA (particulate filter). As standard, mini pleat filter panels for cleanroom technology are equipped with a continuous seal or fluid seal on the upstream side, depending on the version. Optional designs are available with a seal on the downstream side, on both sides, or with protection grid (arrangement as needed), and with full-surface laminar fleece or laminar fleece strips. Mini pleat filter panels for cleanroom technology are tested as standard from filter class H14 using the automatic scan test.

Special features

- Optimal pleat geometry of the filter medium
- Low-turbulence outflow of clean air
- Leakage test using the scan test as proof of leak-tightness and assurance for compliance with separation efficiency and pressure loss

Materials and surfaces

- Filter media made of high-quality, wet-strength glass fibre papers, pleated
- Spacers made of thermoplastic hot-melt adhesive provide a uniform spacing of the pleats
- Joint sealing compound made of permanently elastic two-component polyurethane adhesive
- Frame made from extruded aluminium section

Construction

Frame versions made from extruded aluminium section
List of frame depths according to construction:

Profiles with groove for continuous seal:

- ALD: 66 mm (2 5/8 in.)
- ALB: 69 mm (2 3/4 in.)
- ALC: 78 mm (3 1/16 in.)
- ALG: 90 mm (3 9/16 in.)
- ALJ: 115 mm (4 1/2 in.)

Profiles for continuous seal/flat seal

- ALN: 30 mm (1 3/16 in.)
- ALZ: 78 mm (3 1/16 in.)
- ALY: 150 mm (5 7/8 in.)

Profiles for fluid seal

- ALV: 85 mm (3 3/8 in.)
- ALU: 91 mm (3 9/16 in.)
- ALQ: 105 mm (4 1/8 in.)
- ALT: 130 mm (5 1/8 in.)
- ALH: 130 mm (5 1/8 in.)

Profiles with knife edge profile

- ALL: 94 mm (3 11/16 in.)
- ALS: 105 mm (4 1/8 in.)
- ALR: 109 mm (4 5/16 in.)
- ALX: 134 mm (5 1/4 in.)

Sizing data

- Filter group [DIN EN ISO 16890 (MERV)]
- Separation efficiency [%]
- Filter class [DIN EN 1822]
- Volume flow [m³/h (cfm)]
- Initial differential pressure [Pa (in. w.g.)]
- Nominal size [mm (in.)]

Order code

MFPCR – H14 – – ALC – R / 1220 × 610 × 78 × 58 / PD / CSD – 11 – / ST / LFD
1 2 3 4 5 6 7 8 9 10 11 12 13

1 Type
MFPCR Mini Pleat filter panel for clean room technology

2 Filter class
ePM1 Fractional efficiency ePM1 according to ISO 16890 (acc. to ASHRAE 52.2)
ePM10 Fractional efficiency ePM10 according to ISO 16890 (acc. to ASHRAE 52.2)
E11 Filter class E11 according to DIN EN 1822
H13 Filter class H13 according to DIN EN 1822
H14 Filter class H14 according to DIN EN 1822
U15 Filter class U15 according to DIN EN 1822
U16 Filter class U16 according to DIN EN 1822

3 Separation efficiency
Only with filter class ePM1, ePM10
Specify separation efficiency [%] according to ISO 16890

4 Construction
Extruded aluminium section
ALN smooth frame for flat seal (depth 30 mm (1 3/16 in.))
ALZ smooth frame for flat seal (depth 78 mm (3 1/16 in.))
ALY smooth frame for flat seal (depth 150 mm (5 7/8 in.))
ALD Frame with groove for foamed seal (depth 66 mm (2 5/8 in.))
ALB Frame with groove for foamed seal (depth 69 mm (2 ¾ in.))
ALC Frame with groove for foamed seal (depth 78 mm (3 1/16 in.)
ALG Frame with groove for foamed seal (depth 90 mm (3 9/16 in.))
ALV Frame with U-profile for fluid seal (depth 85 mm (3 3/8 in.))
ALU Frame with U-profile for fluid seal (depth 91 mm (3 9/16 in.))
ALQ Frame with U-profile for fluid seal (depth 105 mm (4 1/8 in.))
ALT Frame with U-profile for fluid seal (depth 130 mm (5 1/8 in.))
ALL Frame with knife edge profile (depth 94 mm (3 11/16 in.))
ALS Frame with knife edge profile (depth 105 mm (4 1/8 in.))
ALR Frame with knife edge profile (depth 109 mm (4 5/16 in.))
ALX Frame with knife edge profile (depth 134 mm (5 ¼ in.))

5 Section upstream side
No entry: Standard
R reverse execution (not with ALV, ALU, ALQ variant)

6 Nominal size [mm (in)]
Specify width × height × depth

7 Pleat depth [mm (in.)]
Specify pleat depth

8 Protection grid
No entry: without protection grid
PU Protection grid on the upstream side
PD Protection grid on the downstream side
PB Protection grid on both sides

9 Seal
WS without seal
FNU Flat seal on the upstream side
FND Flat seal on the downstream side
FNB Flat seal on both sides
TGU Test groove seal on the upstream side
CSU Continuous seal on the upstream side
CSD Continuous seal on the downstream side
CSB Continuous seal on both sides
GPU Fluid seal (only with ALV, ALU, ALQ, ALT version)

10 Seal type upstream side
Only with seal FNU, FNB, TGU, CSU, CSB, GPU
Specify seal type

11 Seal type downstream side
Only with seal FND, FNB, CSD, CSB
Specify seal type

12 Testing
No entry: no leakage test
OT Oil mist test (filter classes H13 and H14 only)
OTC Oil mist test with certificate (filter classes H13 and H14 only)
ST Scan test (filter classes H13, H14, U15, U16 only)

13 Laminar distribution fleece
No entry: none
LFU full-surface laminar fleece, upstream side
LFD full-surface laminar fleece, downstream side
LFS laminar fleece strips

Order example: MFPCR-H14-ALC-R/1220×610×78×58/PD/CSD-11/ST/LFD

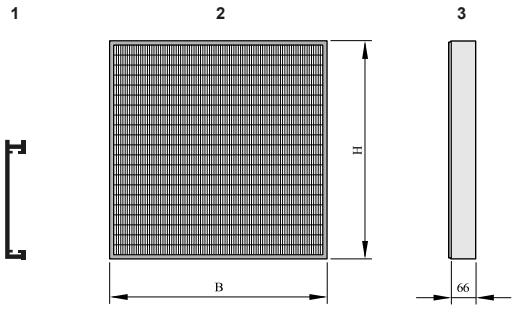
Type	MFPCR - Mini Pleat filter panel for clean room technology
Filter class	Filter class H14 according to DIN EN 1822
Separation efficiency	-
Construction	Frame with groove for foamed seal (depth 78 mm (3 1/16 in.))
Section upstream side	reverse execution
Nominal size [mm (in.)]	Width 1220 (48), height 610 (24), depth 78 (3 1/16)
Pleat depth [mm (in.)]	58 (2 9/32)
Protection grid	Protection grid on the downstream side
Seal	Continuous seal on the downstream side
Seal type upstream side	-
Seal type downstream side	Continuous seal foamed in groove
Testing	Scan test
Laminar distribution fleece	full-surface laminar fleece, downstream side

Dimensions

- Profiles with groove
- Flat profiles
- Profiles with fluid channel
- Profiles with knife edge profile

Profiles with groove

MFPCR-…-ALD



1 Profile type, frame width 12 mm (1/2 in.)
2 Front view
3 Side view

MFPCR with seal CSU (ALD)
Frame depth 66 mm (2 5/8 in.), designed pleat depth 46 mm (1 13/16 in.)

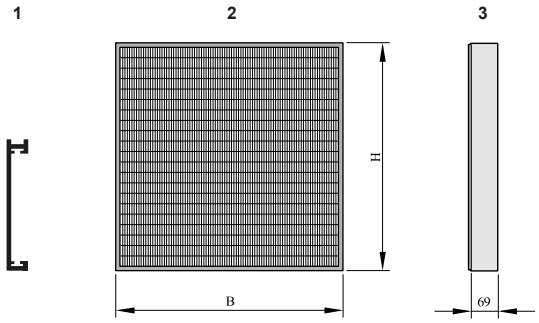
		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H13	0.90	71	256	270	2.2	1.2
305	610	H13	0.90	148	534	270	4.5	2.5
457	457	H13	0.90	84	304	270	5.2	2.8
610	610	H13	0.90	309	1113	270	9.5	5
915	610	H13	0.90	470	1692	270	14.4	8
1220	610	H13	0.90	631	2271	270	19.3	10
305	305	H14	0.45	42	128	115	2.2	1.2
305	610	H14	0.45	83	267	115	4.5	2.5
457	457	H14	0.45	94	304	115	5.2	2.8
610	610	H14	0.45	168	556	115	9.5	5
915	610	H14	0.45	251	846	115	14.4	8
1220	610	H14	0.45	335	1135	115	19.3	10

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H13	177	151	01.08	23.7	2.6
12	24	H13	177	314	01.08	48.4	5.5
18	18	H13	177	179	01.08	56.0	6.2
24	24	H13	177	655	01.08	102.3	11.0
36	24	H13	177	996	01.08	155.0	17.6
48	24	H13	177	1337	01.08	207.7	22.0
12	12	H14	89	75	0.46	23.7	2.6
12	24	H14	89	157	0.46	48.4	5.5
18	18	H14	89	179	0.46	56.0	6.2
24	24	H14	89	327	0.46	102.3	11.0
36	24	H14	89	498	0.46	155.0	17.6
48	24	H14	89	668	0.46	207.7	22.0

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:
For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALB



1 Profile type, frame width 12 mm (1/2 in)
2 Front view
3 Side view

MFPCR with seal CSU (ALB)
Frame depth 69 mm (2 3/4 in.), designed pleat depth 50 mm (2 in.)

		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H14	0.45	42	128	110	2.4	1.2
305	610	H14	0.45	83	267	110	4.9	2.4
457	457	H14	0.45	94	304	110	5.6	2.7
610	610	H14	0.45	168	556	110	10.3	4.7
915	610	H14	0.45	251	846	110	15.7	7
1220	610	H14	0.45	335	1135	110	21	9.5
305	305	U15	0.45	42	128	130	2.4	1.2
305	610	U15	0.45	83	267	130	4.9	2.4
457	457	U15	0.45	94	304	130	5.6	2.7
610	610	U15	0.45	168	556	130	10.3	4.7
915	610	U15	0.45	251	846	130	15.7	7
1220	610	U15	0.45	335	1135	130	21	9.5

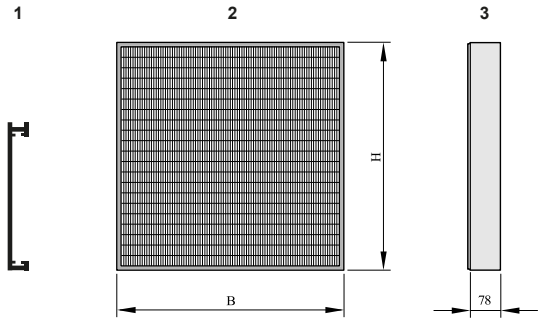
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in.]	[in.]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H14	89	75	0.44	25.8	2.6
12	24	H14	89	157	0.44	52.7	5.3
18	18	H14	89	179	0.44	60.3	6.0
24	24	H14	89	327	0.44	110.9	10.4
36	24	H14	89	498	0.44	169.0	15.4
48	24	H14	89	668	0.44	226.0	20.9
12	12	U15	89	75	0.52	25.8	2.6
12	24	U15	89	157	0.52	52.7	5.3
18	18	U15	89	179	0.52	60.3	6.0
24	24	U15	89	327	0.52	110.9	10.4
36	24	U15	89	498	0.52	169.0	15.4
48	24	U15	89	668	0.52	226.0	20.9

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALC



1 Profile type, frame width 12 mm (1/2 in.)
2 Front view
3 Side view

MFPCR with seal CSU (ALC)
Frame depth 78 mm (3 1/16 in.), designed pleat depth 58 mm (2 5/16 in.)

		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H14	0.45	36	128	95	2.7	1.4
345	345	H14	0.45	46	167	95	3.6	1.8
435	435	H14	0.45	76	274	95	5.9	3
457	457	H14	0.45	84	304	95	6.5	3.2
535	535	H14	0.45	118	423	95	9.1	4.2
575	575	H14	0.45	137	492	95	10.6	4.8
610	610	H14	0.45	154	556	95	12	5.5
762	762	H14	0.45	245	882	95	19	8.6
305	305	U15	0.45	36	128	115	2.7	1.4
345	345	U15	0.45	46	167	115	3.6	1.8
435	435	U15	0.45	76	274	115	5.9	3
457	457	U15	0.45	84	304	115	6.5	3.2
535	535	U15	0.45	118	423	115	9.1	4.2
575	575	U15	0.45	137	492	115	10.6	4.8
610	610	U15	0.45	154	556	115	12	5.5
762	762	U15	0.45	245	882	115	19	8.6

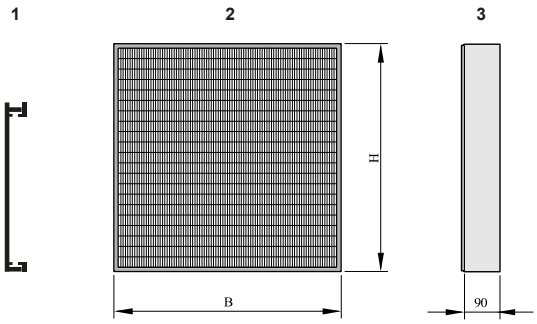
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H14	89	75	0.38	29.1	3.1
13 9/16	13 9/16	H14	89	98	0.38	38.8	4.0
17 1/8	17 1/8	H14	89	161	0.38	63.5	6.6
18	18	H14	89	179	0.38	70.0	7.1
21 1/16	21 1/16	H14	89	249	0.38	98.0	9.3
22 5/8	22 5/8	H14	89	290	0.38	114.1	10.6
24	24	H14	89	327	0.38	129.2	12.1
30	30	H14	89	519	0.38	204.5	19.0
12	12	U15	89	75	0.46	29.1	3.1
13 9/16	13 9/16	U15	89	98	0.46	38.8	4.0
17 1/8	17 1/8	U15	89	161	0.46	63.5	6.6
18	18	U15	89	179	0.46	70.0	7.1
21 1/16	21 1/16	U15	89	249	0.46	98.0	9.3
22 5/8	22 5/8	U15	89	290	0.46	114.1	10.6
24	24	U15	89	327	0.46	129.2	12.1
30	30	U15	89	519	0.46	204.5	19.0

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALG



1 Profile type, frame width 12 mm (1/2 in.)
2 Front view
3 Side view

MFPCR with seal CSU (ALG)
Frame depth 90 mm (3 9/16 in.), designed pleat depth 70 mm (2 3/4 in.)

		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H14	0.45	36	128	85	3.2	1.3
345	345	H14	0.45	46	167	85	4.2	1.7
435	435	H14	0.45	76	274	85	6.9	2.7
535	535	H14	0.45	118	423	85	10.6	4.1
575	575	H14	0.45	137	492	85	12.3	4.7
610	610	H14	0.45	154	556	85	13.9	5.3
762	762	H14	0.45	245	882	85	22.1	8.2
915	610	H14	0.45	235	846	85	21.2	7.9
1220	610	H14	0.45	315	1135	85	28.5	10
1220	1220	H14	0.45	644	2317	85	57.3	19.5

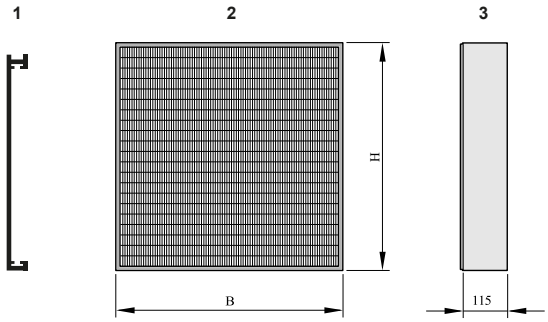
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H14	89	75	0.34	34.4	2.9
13 9/16	13 9/16	H14	89	98	0.34	45.2	3.7
17 1/8	17 1/8	H14	89	161	0.34	74.3	6.0
21 1/16	21 1/16	H14	89	249	0.34	114.1	9.0
22 5/8	22 5/8	H14	89	290	0.34	132.4	10.4
24	24	H14	89	327	0.34	149.6	11.7
30	30	H14	89	519	0.34	237.9	18.1
36	24	H14	89	498	0.34	228.2	17.4
48	24	H14	89	668	0.34	306.8	22.0
48	48	H14	89	1364	0.34	616.8	43.0

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALJ



1 Profile type, frame width 12 mm (1/2 in.)
2 Front view
3 Side view

MFPCR with seal CSU (ALJ)
Frame depth 115 mm (2 3/4 in.), designed pleat depth 90 mm (3 9/16 in.)

						3	4	5
B [mm]	H [mm]	Filter class	Inflow [m/s]	q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H14	0.45	36	128	75	4	1.5
305	610	H14	0.45	74	267	75	8.3	3
457	457	H14	0.45	84	304	75	9.4	3.5
610	610	H14	0.45	154	556	75	17.3	6
915	610	H14	0.45	235	846	75	26.3	9
1220	610	H14	0.45	315	1135	75	36.3	12
305	305	U15	0.45	36	128	80	4	1.5
305	610	U15	0.45	74	267	80	8.3	3
457	457	U15	0.45	84	304	80	9.4	3.5
610	610	U15	0.45	154	556	80	17.3	6
915	610	U15	0.45	235	846	80	26.3	9
1220	610	U15	0.45	315	1135	80	36.3	12

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H14	89	75	0.30	43.1	3.3
12	24	H14	89	157	0.30	89.3	6.6
18	18	H14	89	179	0.30	101.2	7.7
24	24	H14	89	327	0.30	186.2	13.2
36	24	H14	89	498	0.30	283.1	19.8
48	24	H14	89	668	0.30	390.7	26.5
12	12	U15	89	75	0.32	43.1	3.3
12	24	U15	89	157	0.32	89.3	6.6
18	18	U15	89	179	0.32	101.2	7.7
24	24	U15	89	327	0.32	186.2	13.2
36	24	U15	89	498	0.32	283.1	19.8
48	24	U15	89	668	0.32	390.7	26.5

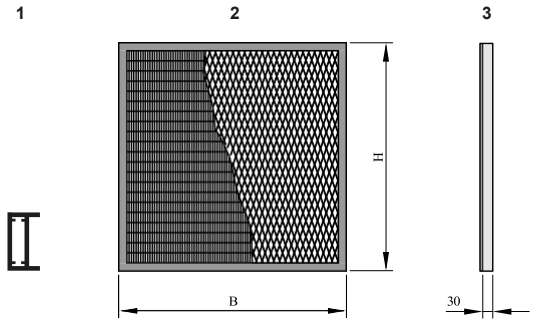
1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

Flat profiles

MFPCR-…-ALN



1 Profile type, frame width 20 mm (3/4 in.)
2 Front view
3 Side view

MFPCR with seal FNU (ALN)
Frame depth 30 mm (1 3/16 in), designed pleat depth 20 mm (3/4 in)

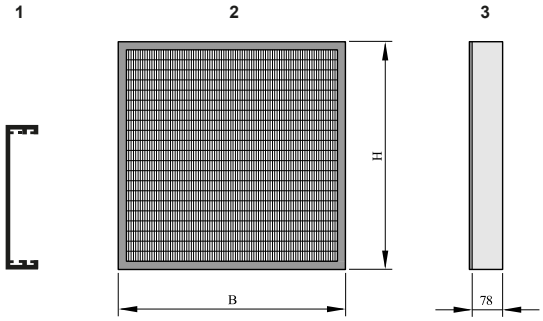
		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
610	610	H13	0.45	293	1053	250	5.1	2.8
915	610	H13	0.45	449	1616	250	7.7	4.2
1220	610	H13	0.45	605	2179	250	10.4	5.6

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
24	24	H13	89	620	1.00	54.9	6.2
36	24	H13	89	951	1.00	82.9	9.3
48	24	H13	89	1282	1.00	112.0	12.3

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:
For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALZ



1 Profile type, frame width 20 mm (3/4 in)
2 Front view
3 Side view

MFPCR with seal FNU (ALZ)
Frame depth 78 mm (3 1/16 in.), designed pleat depth 50 mm (2 in.)

		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H13	0.90	63	228	250	2.4	1.2
305	610	H13	0.90	136	489	250	4.9	2.4
345	345	H13	0.90	84	301	250	3.1	1.5
435	435	H13	0.90	141	506	250	5.1	2.4
457	457	H13	0.90	156	563	250	5.6	2.6
535	535	H13	0.90	221	794	250	7.8	3.6
575	575	H13	0.90	258	927	250	9.1	4.2
610	610	H13	0.90	293	1053	250	10.3	4.7
762	762	H13	0.90	469	1689	250	16.3	7.3
835	535	H13	0.90	354	1275	250	12.4	5.6
1135	535	H13	0.90	488	1756	250	17	7.7
1220	610	H13	0.90	605	2179	250	21	9.4
305	305	H14	0.45	32	114	110	2.4	1.2
305	610	H14	0.45	68	245	110	4.9	2.4
345	345	H14	0.45	42	151	110	3.1	1.5
435	435	H14	0.45	70	253	110	5.1	2.4
457	457	H14	0.45	78	282	110	5.6	2.6
535	535	H14	0.45	110	397	110	7.8	3.6
575	575	H14	0.45	129	464	110	9.1	4.2
610	610	H14	0.45	146	526	110	10.3	4.7
762	762	H14	0.45	234	844	110	16.3	7.3
835	535	H14	0.45	177	638	110	12.4	5.6
1135	535	H14	0.45	244	878	110	17	7.7
1220	610	H14	0.45	303	1090	110	21	9.4

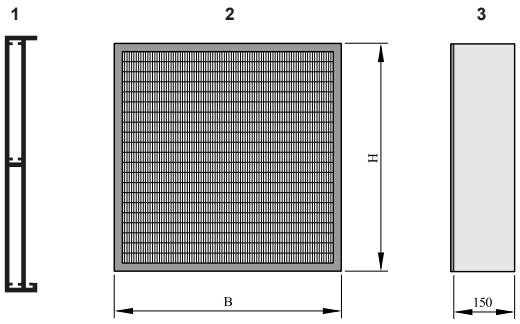
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H13	177	134	1.00	25.8	2.6
12	24	H13	177	288	1.00	52.7	5.3
13 9/16	13 9/16	H13	177	177	1.00	33.4	3.3
17 1/8	17 1/8	H13	177	298	1.00	54.9	5.3
18	18	H13	177	331	1.00	60.3	5.7
21 1/16	21 1/16	H13	177	467	1.00	84.0	7.9
22 5/8	22 5/8	H13	177	546	1.00	98.0	9.3
24	24	H13	177	620	1.00	110.9	10.4
30	30	H13	177	994	1.00	175.5	16.1
32 7/8	21 1/16	H13	177	750	1.00	133.5	12.3
44 11/16	21 1/16	H13	177	1034	1.00	183.0	17.0
48	24	H13	177	1282	1.00	226.0	20.7
12	12	H14	89	67	0.44	25.8	2.6
12	24	H14	89	144	0.44	52.7	5.3
13 9/16	13 9/16	H14	89	89	0.44	33.4	3.3
17 1/8	17 1/8	H14	89	149	0.44	54.9	5.3
18	18	H14	89	166	0.44	60.3	5.7
21 1/16	21 1/16	H14	89	234	0.44	84.0	7.9
22 5/8	22 5/8	H14	89	273	0.44	98.0	9.3
24	24	H14	89	310	0.44	110.9	10.4
30	30	H14	89	497	0.44	175.5	16.1
32 7/8	21 1/16	H14	89	375	0.44	133.5	12.3
44 11/16	21 1/16	H14	89	517	0.44	183.0	17.0
48	24	H14	89	642	0.44	226.0	20.7

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALY



1 Profile type, frame width 20 mm (3/4 in)
2 Front view
3 Side view

MFPCR with seal FNU (ALY)
Frame depth 150 mm (5 7/8 in), designed fold depth 120 mm (4 3/4 in)

		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H13	0.90	63	228	135	4.4	2.7
305	610	H13	0.90	136	489	135	9.1	5.4
345	345	H13	0.90	84	301	135	5.7	3.5
435	435	H13	0.90	141	506	135	9.3	5.5
457	457	H13	0.90	156	563	135	10.3	6.1
535	535	H13	0.90	221	794	135	14.4	8.3
575	575	H13	0.90	258	927	135	16.8	9.6
610	610	H13	0.90	293	1053	135	19	10.9
762	610	H13	0.90	370	1333	135	23.9	13.6
305	305	H14	0.45	32	114	70	4.4	2.7
305	610	H14	0.45	68	245	70	9.1	5.4
345	345	H14	0.45	42	151	70	5.7	3.5
435	435	H14	0.45	70	253	70	9.3	5.5
457	457	H14	0.45	78	282	70	10.3	6.1
535	535	H14	0.45	110	397	70	14.4	8.3
575	575	H14	0.45	129	464	70	16.8	9.6
610	610	H14	0.45	146	526	70	19	10.9
762	610	H14	0.45	185	667	70	23.9	13.6

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H13	177	134	0.54	47.3	6.0
12	24	H13	177	288	0.54	98.0	11.9
13 9/16	13 9/16	H13	177	177	0.54	61.4	7.7
17 1/8	17 1/8	H13	177	298	0.54	100.1	12.1
18	18	H13	177	331	0.54	110.9	13.4
21 1/16	21 1/16	H13	177	467	0.54	155.0	18.3
22 5/8	22 5/8	H13	177	546	0.54	180.8	21.2
24	24	H13	177	620	0.54	204.5	24.0
30	24	H13	177	785	0.54	257.3	30.0
12	12	H14	89	67	0.28	47.3	6.0
12	24	H14	89	144	0.28	98.0	11.9
13 9/16	13 9/16	H14	89	89	0.28	61.4	7.7
17 1/8	17 1/8	H14	89	149	0.28	100.1	12.1
18	18	H14	89	166	0.28	110.9	13.4
21 1/16	21 1/16	H14	89	234	0.28	155.0	18.3
22 5/8	22 5/8	H14	89	273	0.28	180.8	21.2
24	24	H14	89	310	0.28	204.5	24.0
30	24	H14	89	393	0.28	257.3	30.0

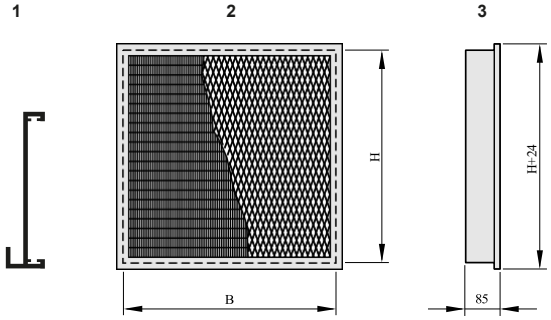
1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

Profiles with fluid channel

MFPCR-…-ALV



1 Profile type, frame width 24 mm (1 in.)
2 Front view
3 Side view

MFPCR with GPU seal (ALV)

- **Frame depth 85 mm (3 3/8 in.)**
- **Designed pleat depth, filter class H13: 50 mm (2 in.)**
- **Designed pleat depth, filter class H14: 58 mm (2 5/16 in.)**

		Filter class	Inflow [m/s]			3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
295	295	H13	0.90	66	238	250	2.2	1.4
395	395	H13	0.90	124	446	250	4.1	2.5
495	495	H13	0.90	200	719	250	6.7	4
520	520	H13	0.90	221	797	250	7.4	4.4
295	295	H14	0.45	33	119	95	2.9	1.4
395	395	H14	0.45	62	223	95	5.4	2.5
495	495	H14	0.45	100	359	95	8.7	4
520	520	H14	0.45	111	399	95	9.7	4.4

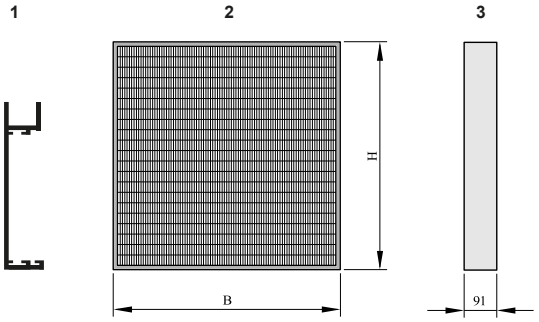
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
11 5/8	11 5/8	H13	177	140	1.00	23.7	3.1
15 9/16	15 9/16	H13	177	263	1.00	44.1	5.5
19 1/2	19 1/2	H13	177	423	1.00	72.1	8.8
20 1/2	20 1/2	H13	177	469	1.00	79.7	9.7
11 5/8	11 5/8	H14	89	70	0.38	31.2	3.1
15 9/16	15 9/16	H14	89	131	0.38	58.1	5.5
19 1/2	19 1/2	H14	89	211	0.38	93.6	8.8
20 1/2	20 1/2	H14	89	235	0.38	104.4	9.7

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALU



1 Profile type, frame width 20 mm (3/4 in.)
2 Front view
3 Side view

MFPCR with GPU seal (ALU)
Frame depth 91 mm (3 9/16 in), designed pleat depth 50 mm (2 in)

1		Filter class	Inflow [m/s]	2		3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H13	0.90	65	234	250	2.4	1.4
305	610	H13	0.90	139	500	250	4.9	2.8
345	345	H13	0.90	86	309	250	3.1	1.8
435	435	H13	0.90	143	516	250	5.1	2.8
457	457	H13	0.90	159	574	250	5.6	3.1
535	535	H13	0.90	224	807	250	7.8	4.3
575	575	H13	0.90	261	941	250	9.1	5
610	610	H13	0.90	297	1068	250	10.3	5.5
762	762	H13	0.90	474	1708	250	16.3	8.8
835	535	H13	0.90	359	1292	250	12.4	6.8
1135	535	H13	0.90	494	1777	250	17	9.2
1220	610	H13	0.90	612	2202	250	21	11
305	305	H14	0.45	33	117	110	2.4	1.4
305	610	H14	0.45	69	250	110	4.9	2.8
345	345	H14	0.45	43	155	110	3.1	1.8
435	435	H14	0.45	72	258	110	5.1	2.8
457	457	H14	0.45	80	287	110	5.6	3.1
535	535	H14	0.45	112	403	110	7.8	4.3
575	575	H14	0.45	131	471	110	9.1	5
610	610	H14	0.45	148	534	110	10.3	5.5
762	762	H14	0.45	237	854	110	16.3	8.8
835	535	H14	0.45	179	646	110	12.4	6.8
1135	535	H14	0.45	247	888	110	17	9.2
1220	610	H14	0.45	306	1101	110	21	11

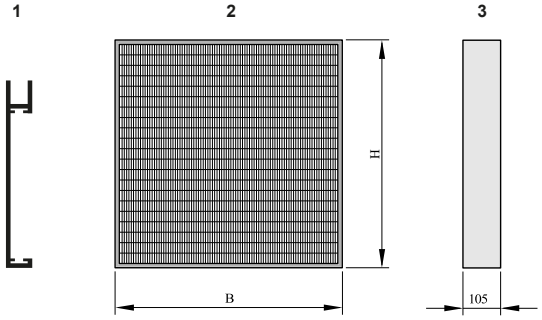
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H13	177	138	1.00	25.8	3.1
12	24	H13	177	294	1.00	52.7	6.2
13 9/16	13 9/16	H13	177	182	1.00	33.4	4.0
17 1/8	17 1/8	H13	177	304	1.00	54.9	6.2
18	18	H13	177	338	1.00	60.3	6.8
21 1/16	21 1/16	H13	177	475	1.00	84.0	9.5
22 5/8	22 5/8	H13	177	554	1.00	98.0	11.0
24	24	H13	177	629	1.00	110.9	12.1
30	30	H13	177	1005	1.00	175.5	19.4
32 7/8	21 1/16	H13	177	760	1.00	133.5	15.0
44 11/16	21 1/16	H13	177	1046	1.00	183.0	20.3
48	24	H13	177	1296	1.00	226.0	24.3
12	12	H14	89	69	0.44	25.8	3.1
12	24	H14	89	147	0.44	52.7	6.2
13 9/16	13 9/16	H14	89	91	0.44	33.4	4.0
17 1/8	17 1/8	H14	89	152	0.44	54.9	6.2
18	18	H14	89	169	0.44	60.3	6.8
21 1/16	21 1/16	H14	89	237	0.44	84.0	9.5
22 5/8	22 5/8	H14	89	277	0.44	98.0	11.0
24	24	H14	89	314	0.44	110.9	12.1
30	30	H14	89	503	0.44	175.5	19.4
32 7/8	21 1/16	H14	89	380	0.44	133.5	15.0
44 11/16	21 1/16	H14	89	523	0.44	183.0	20.3
48	24	H14	89	648	0.44	226.0	24.3

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALQ



1 Profile type, frame width 12 mm (1/2 in)
2 Front view
3 Side view

MFPCR with GPU seal (ALQ)
Frame depth 105 mm (4 1/8 in), designed pleat depth 58 mm (2 5/16 in)

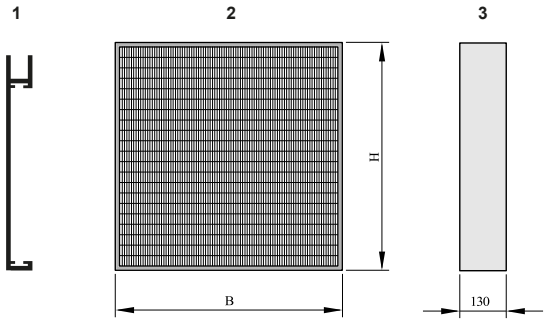
						3	4	5
B [mm]	H [mm]	Filter class	Inflow [m/s]	q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	305	H13	0.90	71	256	215	2.7	1.6
345	345	H13	0.90	93	334	215	3.6	2
435	435	H13	0.90	152	547	215	5.9	3.2
535	535	H13	0.90	235	846	215	9.1	4.8
575	575	H13	0.90	273	984	215	10.6	5.6
610	610	H13	0.90	309	1113	215	12	6.3
762	762	H13	0.90	490	1765	215	19	9.8
305	305	H14	0.45	36	128	95	2.7	1.6
345	345	H14	0.45	46	167	95	3.6	2
435	435	H14	0.45	76	274	95	5.9	3.2
535	535	H14	0.45	118	423	95	9.1	4.8
575	575	H14	0.45	137	492	95	10.6	5.6
610	610	H14	0.45	154	556	95	12	6.3
762	762	H14	0.45	245	882	95	19	9.8

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	12	H13	177	151	0.86	29.1	3.5
13 9/16	13 9/16	H13	177	197	0.86	38.8	4.4
17 1/8	17 1/8	H13	177	322	0.86	63.5	7.1
21 1/16	21 1/16	H13	177	498	0.86	98.0	10.6
22 5/8	22 5/8	H13	177	579	0.86	114.1	12.3
24	24	H13	177	655	0.86	129.2	13.9
30	30	H13	177	1039	0.86	204.5	21.6
12	12	H14	89	75	0.38	29.1	3.5
13 9/16	13 9/16	H14	89	98	0.38	38.8	4.4
17 1/8	17 1/8	H14	89	161	0.38	63.5	7.1
21 1/16	21 1/16	H14	89	249	0.38	98.0	10.6
22 5/8	22 5/8	H14	89	290	0.38	114.1	12.3
24	24	H14	89	327	0.38	129.2	13.9
30	30	H14	89	519	0.38	204.5	21.6

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:
For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALT



1 Profile type, frame width 12 mm (1/2 in)
2 Front view
3 Side view

MFPCR with GPU seal (ALT)
Frame depth 130 mm (5 1/8 in), designed pleat depth 90 mm (3 9/16 in)

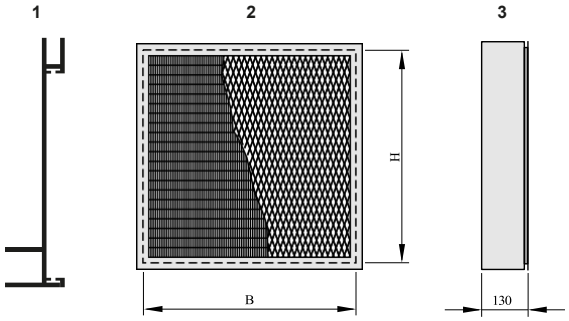
1		Filter class	Inflow [m/s]	2		3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
305	610	H14	0.45	74	267	75	8.3	3.3
610	610	H14	0.45	154	556	75	17.3	6.5
1136	536	H14	0.45	256	922	75	28.7	10.7
1136	836	H14	0.45	406	1463	75	45.5	16.8
1136	1136	H14	0.45	556	2003	75	61.4	22
305	610	U15	0.45	74	267	80	8.3	3.3
610	610	U15	0.45	154	556	80	17.3	6.5
1136	536	U15	0.45	256	922	80	28.7	10.7
1136	836	U15	0.45	406	1463	80	45.5	16.8
1136	1136	U15	0.45	556	2003	80	61.4	22

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
12	24	H14	89	157	0.30	89.3	7.3
24	24	H14	89	327	0.30	186.2	14.3
44 3/4	21 1/8	H14	89	543	0.30	308.9	23.6
44 3/4	32 15/16	H14	89	861	0.30	489.8	37.0
44 3/4	44 3/4	H14	89	1179	0.30	660.9	48.5
12	24	U15	89	157	0.32	89.3	7.3
24	24	U15	89	327	0.32	186.2	14.3
44 3/4	21 1/8	U15	89	543	0.32	308.9	23.6
44 3/4	32 15/16	U15	89	861	0.32	489.8	37.0
44 3/4	44 3/4	U15	89	1179	0.32	660.9	48.5

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:
For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALH



1 Profile type, frame width 32 mm (1 1/4 in)
2 Front view
3 Side view

MFPCR with GPU seal (ALH)
Frame depth 130 mm (5 1/8 in), designed pleat depth 90 mm (3 9/16 in)

1		Filter class	Inflow [m/s]	2		3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
1132	532	H14	0.45	225	810	75	28.4	9
1132	832	H14	0.45	369	1329	75	45.1	14
1132	1132	H14	0.45	513	1848	75	61	19
1132	532	U15	0.45	225	810	80	28.4	9
1132	832	U15	0.45	369	1329	80	45.1	14
1132	1132	U15	0.45	513	1848	80	61	19

1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
44 9/16	20 15/16	H14	89	477	0.30	305.7	19.8
44 9/16	32 3/4	H14	89	782	0.30	485.4	30.9
44 9/16	44 9/16	H14	89	1088	0.30	656.6	41.9
44 9/16	20 15/16	U15	89	477	0.32	305.7	19.8
44 9/16	32 3/4	U15	89	782	0.32	485.4	30.9
44 9/16	44 9/16	U15	89	1088	0.32	656.6	41.9

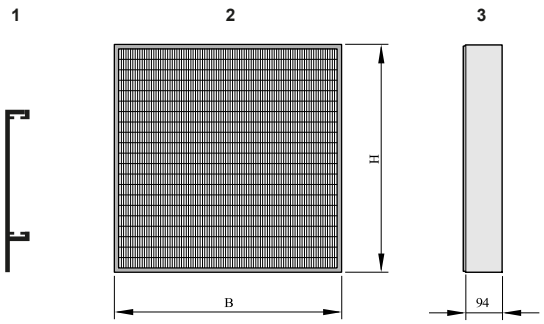
1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Notes:

- For calculation of dimensions and filter classes not listed, see design formula in chapter Technical data
- For more information, see chapter Product details - **Drill holes in frame profile ALH**
- If no information on the drilling pattern is available, the frame profile is supplied without drill holes

Profiles with knife edge profile

MFPCR-…-ALL



1 Profile type, frame width 12 mm (1/2 in)
2 Front view
3 Side view

MFPCR with knife edge profile (ALL)
Frame depth 94 mm (3 11/16 in), designed pleat depth 58 mm (2 5/16 in)

1		Filter class	Inflow [m/s]	2		3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
1140	540	H14	0.45	259	933	95	20	8
1140	1140	H14	0.45	561	2018	95	42.7	17.8
1140	540	U15	0.45	259	933	115	20	8
1140	1140	U15	0.45	561	2018	115	42.7	17.8

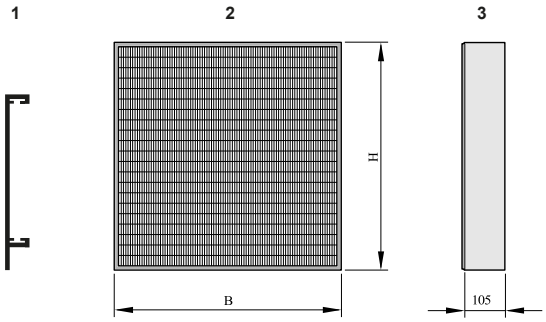
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
44 7/8	21 1/4	H14	89	549	0.38	215.3	17.6
44 7/8	44 7/8	H14	89	1188	0.38	459.6	39.2
44 7/8	21 1/4	U15	89	549	0.46	215.3	17.6
44 7/8	44 7/8	U15	89	1188	0.46	459.6	39.2

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALS



1 Profile type, frame width 12 mm (1/2 in)
2 Front view
3 Side view

MFPCR with knife edge profile (ALS)
Frame depth 105 mm (4 1/8 in), designed pleat depth 58 mm (2 5/16 in)

1		Filter class	Inflow [m/s]	2		3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
1138	538	H14	0.45	258	928	95	19.9	8.2
1138	838	H14	0.45	408	1469	95	31.6	12.8
1138	1138	H14	0.45	558	2010	95	42.6	17.4
1138	538	U15	0.45	258	928	115	19.9	8.2
1138	838	U15	0.45	408	1469	115	31.6	12.8
1138	1138	U15	0.45	558	2010	115	42.6	17.4

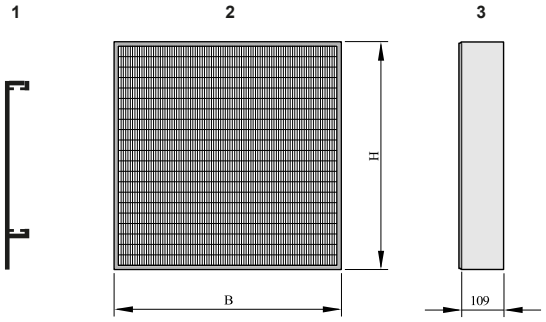
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_V [cfm]	ΔpA [in. w.g.]	[sqft]	[lb]
44 13/16	21 3/16	H14	89	546	0.38	214.2	18.1
44 13/16	33	H14	89	865	0.38	340.1	28.2
44 13/16	44 13/16	H14	89	1183	0.38	458.5	38.4
44 13/16	21 3/16	U15	89	546	0.46	214.2	18.1
44 13/16	33	U15	89	865	0.46	340.1	28.2
44 13/16	44 13/16	U15	89	1183	0.46	458.5	38.4

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALR



1 Profile type, frame width 12 mm (1/2 in)
2 Front view
3 Side view

MFPCR with knife edge profile (ALR)
Frame depth 109 mm (4 5/16 in), designed pleat depth 58 mm (2 5/16 in)

1		Filter class	Inflow [m/s]	2		3	4	5
B [mm]	H [mm]			q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
1140	540	H14	0.45	259	933	95	20	8.3
1140	1140	H14	0.45	561	2018	95	42.7	18
1140	540	U15	0.45	259	933	115	20	8.3
1140	1140	U15	0.45	561	2018	115	42.7	18

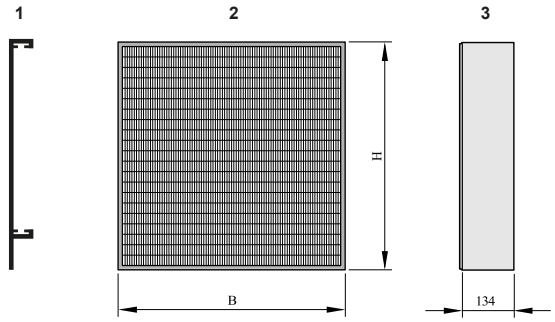
1		Filter class	Inflow [fpm]	2	3	4	5
B	H						
[in]	[in]			q_v [cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
44 7/8	21 1/4	H14	89	549	0.38	215.3	18.3
44 7/8	44 7/8	H14	89	1188	0.38	459.6	39.7
44 7/8	21 1/4	U15	89	549	0.46	215.3	18.3
44 7/8	44 7/8	U15	89	1188	0.46	459.6	39.7

1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

MFPCR-…-ALX



1 Profile type, frame width 12 mm (1/2 in.)
2 Front view
3 Side view

MFPCR with knife edge profile (ALX)
Frame depth 134 mm (5 1/4 in.), designed pleat depth 90 mm (3 9/16 in.)

1		Filter class	Inflow	2		3	4	5
B [mm]	H [mm]		[m/s]	q_v [l/s]	q_v [m³/h]	Δp_A [Pa]	m²	kg
1135	535	H14	0.45	256	920	75	28.6	9
1135	1135	H14	0.45	556	2000	75	61.3	18.8
1135	535	U15	0.45	256	920	80	28.6	9
1135	1135	U15	0.45	556	2000	80	61.3	18.8

1		Filter class	Inflow	2	3	4	5
B	H						
[in]	[in]		[fpm]	[cfm]	Δp_A [in. w.g.]	[sqft]	[lb]
44 11/16	21 1/16	HEPA	89	256	0.30	307.8	19.8
44 11/16	44 11/16	HEPA	89	556	0.30	659.8	41.4
44 11/16	21 1/16	ULPA	89	256	0.30	307.8	19.8
44 11/16	44 11/16	ULPA	89	556	0.30	659.8	41.4

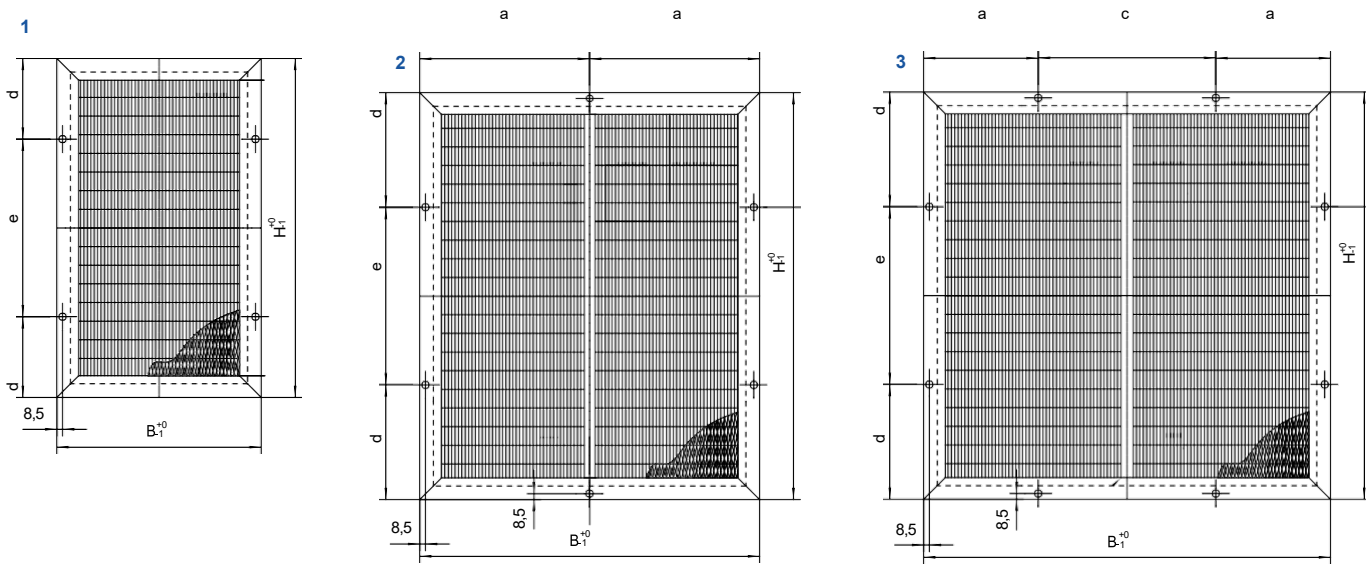
1 Nominal size, 2 Nominal volume flow, 3 Initial differential pressure, 4 Filter area, 5 Weight

Note:

For calculation of dimensions and filter classes not listed, see design formula in chapter Quick sizing.

Drill holes in frame profile ALH

MFPCR-...-ALH front view: drilling patterns 1 - 3



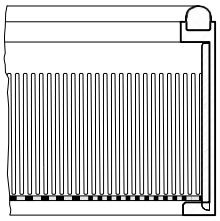
Drill holes in frame profile

Drill holes according to customer specifications

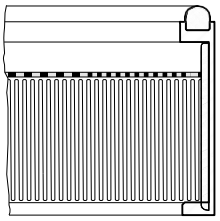
- For mounting screws M6 × 70 including cover caps (installation on site)
- To determine the required drilling distances, see drilling patterns 1 - 3
- Further information on request

Option protection grid

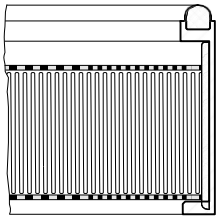
Downstream side



Upstream side



Both ends

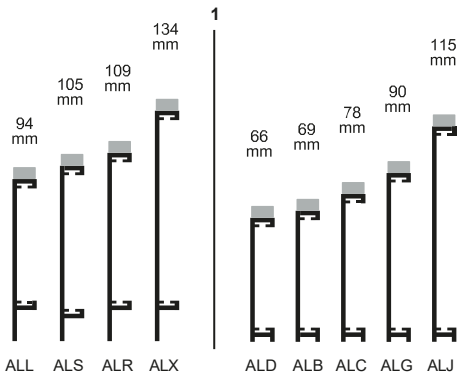


Sealing options upstream side

Order code detail 10: Sealing options upstream side

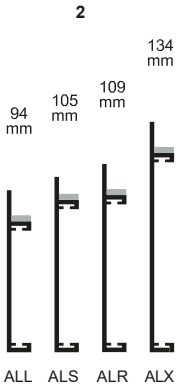
Number	Sealing type	Dimensions	Variant standard	reverse execution
1	Flat seal made of EPDM	11 × 6 mm (7/16 x 1/4 in.)	ALL, ALS, ALR, ALX	ALB, ALC, ALD, ALG, ALJ
2	Flat seal made of EPDM	10 × 3 mm (3/8 x 1/8 in.)		ALL, ALS, ALR, ALX
3	Flat seal made of EPDM	18 × 8 mm (11/16 x 5/16 in.)	ALN, ALY, ALZ	
11	Continuous seal in groove, foamed		ALB, ALC, ALD, ALG, ALJ	
12	Continuous seal free foamed		ALL, ALS, ALR, ALX, ALN, ALY, ALZ	
13	Fluid seal		ALH, ALQ, ALT, ALU, ALV	

Sealing options upstream side



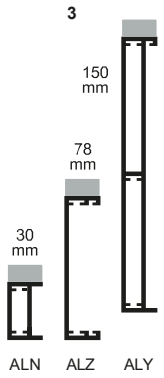
Flat seal made of EPDM, 11 × 6 mm (7/16 x 1/4 in)

Sealing options upstream side



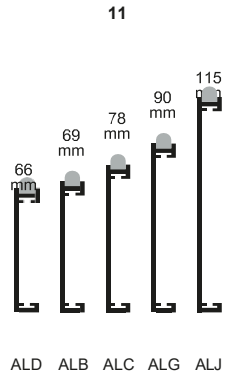
Flat seal made of EPDM, 10 × 3 mm (3/8 x 1/8 in)

Sealing options upstream side



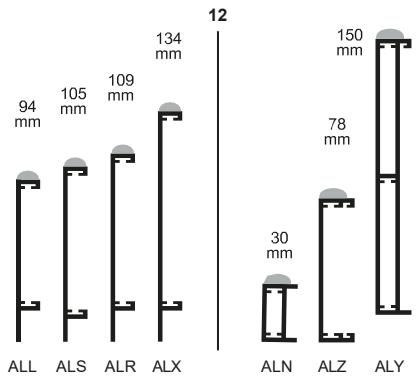
Flat seal made of EPDM, 18 × 8 mm (11/16 x 5/16 in)

Sealing options upstream side



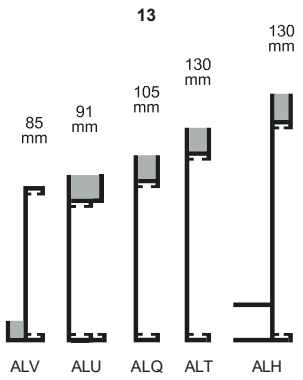
Continuous seal in groove, foamed

Sealing options upstream side



Continuous seal free foamed

Sealing options upstream side



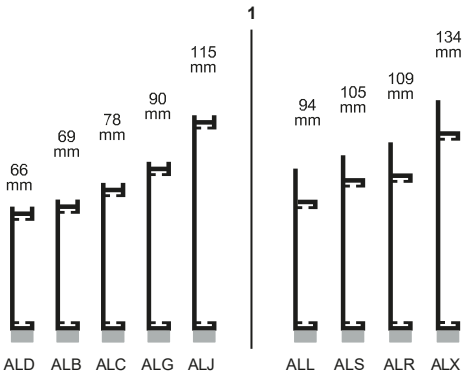
Fluid seal

Sealing options downstream side

Order code detail 11: Sealing options downstream side

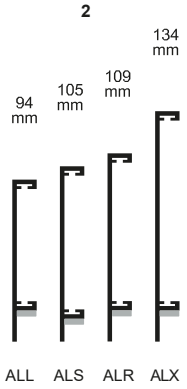
Number	Sealing type	Dimensions	Construction	reverse execution
1	Flat seal made of EPDM	11 × 6 mm (7/16 x 1/4 in)	ALB, ALC, ALD, ALG, ALJ	ALL, ALS, ALR, ALX
2	Flat seal made of EPDM	10 × 3 mm (3/8 x 1/8 in)	ALL AS, ALR, ALX	
3	Flat seal made of EPDM	18 × 8 mm (11/16 x 5/16 in)	ALN, ALY, ALZ	
11	Continuous seal in groove, foamed			ALB, ALC, ALD, ALG, ALJ
12	Continuous seal free foamed		ALB, ALC, ALD, ALG, ALJ, ALL, ALS, ALR, ALX, ALN, ALY, ALZ	

Sealing options downstream side



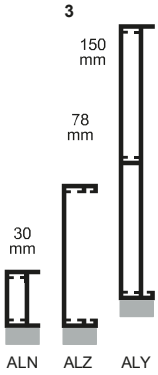
Flat seal made of EPDM, 11 × 6 mm (7/16 x 1/4 in.)

Sealing options downstream side



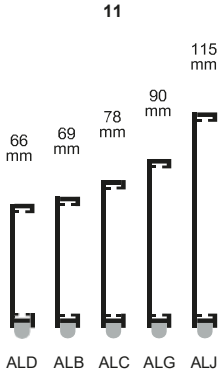
Flat seal made of EPDM, 10 × 3 mm (3/8 x 1/8 in.)

Sealing options downstream side



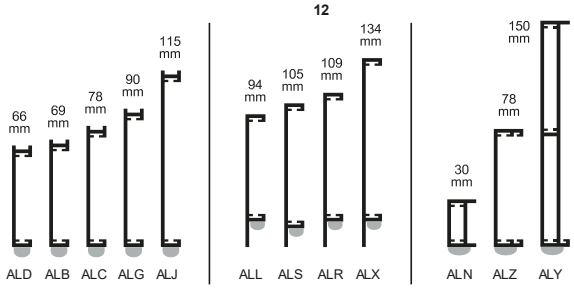
Flat seal made of EPDM, 18 × 8 mm (11/16 x 5/16 in.)

Sealing options downstream side



Continuous seal in groove, foamed

Sealing options downstream side



Continuous seal free foamed