

Filters

Table 1: Quick selection table according to filter class

Filter group	Filter class EN 779:2012	Filter class ISO 16890	Average arrestance (A_m) of synthetic dust	Average efficiency (E_m) of 0,4 μ m particles	Minimum efficiency of 0,4 μ m particles	Filter type
Coarse	G1	Coarse 50%	$50 \% \leq A_m < 65 \%$	–	–	Bag filters (FV) Panel filters (KA)
	G2	Coarse 50%	$65 \% \leq A_m < 80 \%$	–	–	
	G3	Coarse 50-55%	$80 \% \leq A_m < 90 \%$	–	–	
	G4	Coarse 60-65%	$90 \% \leq A_m$	–	–	
Medium	M5	Coarse 85-90%	–	$40 \% \leq E_m < 60 \%$	–	Bag filters (FV) Panel filters (KA)
	M6	ePM10 65%	–	$60 \% \leq E_m < 80 \%$	–	
Fine	F7	ePM2,5 65%	–	$80 \% \leq E_m < 90 \%$	35	
	F8	ePM1 75%	–	$90 \% \leq E_m < 95 \%$	55	
	F9	ePM1 80%	–	$95 \% \leq A_m$	70	

Table 2: Quick selection table according to filter class EPA, HEPA, ULPA

Filter group	Filter class	According to standard	Value Efficiency (MPPS)	Filter type
E ... EPA filters Efficient Particulate Air Filter	E10	EN 1822–1:2010	$\geq 85 \%$	EPA,HEPA,ULPA filters
	E11		$\geq 95 \%$	
	E12		$\geq 99,5 \%$	
H ... HEPA filters High Efficiency Particulate Air Filter	H13		$\geq 99,95 \%$	
	H14		$\geq 99,995 \%$	
U ... ULPA filters Ultra Low Penetration Air Filter	U15		$\geq 99,9995 \%$	
	U16		$\geq 99,99995 \%$	
	U17		$\geq 99,999995 \%$	

Table 3: Quick selection table according to application for carbon filters

Application type	Contaminants	Filter type
C1	Airports, Pharms & Food / Hydrocarbons	Carbon filters (FO)
C2	Industry / Mineral acids	
C3	Industry / Ammonia, amines	
C4	Industry & Waste water / (H_aS), (SO_2)	
C5	Museums & Libraries / H_2S , S_{ox} , NO_x formaldehyde	
C6	General Purpose / General Gas Removal	
C7	Nuclear industry / Radioactive dust particles	

Equation 1: Quick calculation of fan energy consumption for one filter

$$E = \frac{q_v \times \Delta p \times t}{\eta_f \times 1000}$$

Definition of symbols

E [kWh]	energy consumed by fan
q_v [m^3/s]	air flow rate at filter
Δp [Pa]	filter pressure drop
t [h]	operating time
η_f [/]	fan efficiency (usually from 0.6 – 0.8)

EPA, HEPA, ULPA filters

Liquid gasket, GEL

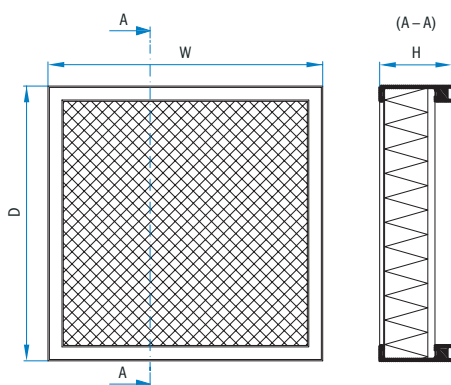
- filter version: standard HEPA filter for clean rooms (ceiling installation)
- manufacturer: American Air Filter
- frame material: aluminum
- temperature limit: 70 °C
- max. final pressure: 500 Pa, recommended final pressure drop 2x initial pressure drop

- suitable for: AFV-8G, LFH

Table 1: Filter technical data H-H14/G/ALU/AAF/F_

				Filter class	
				H14	
Nominal size	Width W	Depth D	Height H	Pressure drop Δp_s	Airflow Q
	[mm]	[mm]	[mm]	[Pa]	[m³/h]
F10	305 x 305	x 80		125	150
F20	305 x 610	x 80		125	300
F30	457 x 457	x 80		125	340
F50	610 x 610	x 80		125	600
F60	610 x 915	x 80		125	900
F70	610 x 1220	x 80		125	1200
F80	545 x 545	x 80		125	480
F51	610 x 610	x 128		75	600

Picture 1: Filter drawing H-H14/G/ALU/AAF/F_



Liquid gasket, GEL

- filter version: standard HEPA filter for clean rooms (ceiling installation)
- manufacturer: OC IMP Klima
- frame material: aluminum
- temperature limit: 70 °C
- Max. final pressure: 500 Pa, Rec. Final pressure drop 2x Initial pressure drop
- suitable for: AFV-8G, LFH

Table 2: Filter technical data H-H14/G/ALU/OCK/size WxDxH, 80 mm ALU frame

			Filter class	
			H14	
Nominal size				
Width W	Depth D	Height H	Pressure drop Δp_s	Airflow Q
[mm]	[mm]	[mm]	[Pa]	[m³/h]
305 x 305	x 80		125	150
305 x 610	x 80		125	300
457 x 457	x 80		125	340
535 x 535	x 80		125	465
545 x 545	x 80		125	470
610 x 610	x 80		125	600
610 x 915	x 80		125	900
610 x 1220	x 80		125	1200
535 x 1135	x 80		125	980
762 x 762	x 80		125	940
915 x 915	x 80		125	1350

Picture 2: Filter drawing H-H14/G/ALU/OCK/size

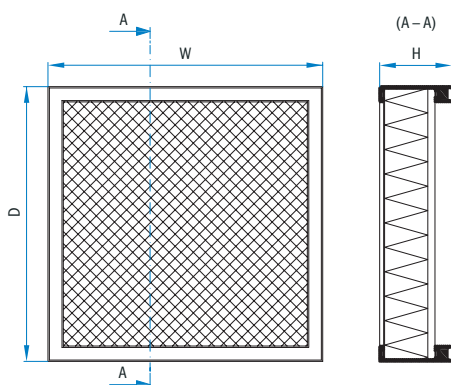


Table 3: Filter technical data H-H_/G/ALU/OCK/size WxDxH,
128 mm ALU frame

Nominal size	Filter class	
	H14	
Width Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 128	80	150
305 x 610 x 128	80	300
457 x 457 x 128	80	340
535 x 535 x 128	80	465
610 x 610 x 128	80	600

Dry gasket, U-shaped profile

- filter version: standard HEPA filter for clean rooms (ceiling installation)
- manufacturer: OC IMP Klima
- frame material: MDF wood
- temperature limit: 70 °C
- max. final pressure: 500 Pa, recommended final pressure drop: 2x initial pressure drop
- suitable for: AFV-8B

Picture 3: Filter H-H_/U/MDF/OCK/F_

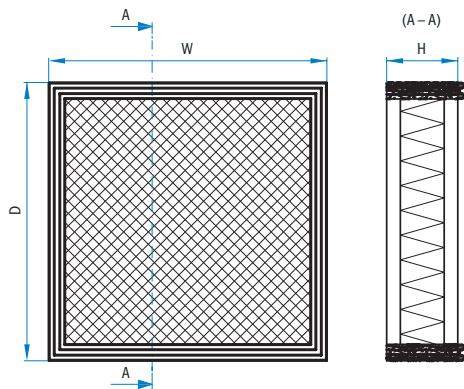


Table 4: Filter technical data H-H_/U/MDF/OCK/size WxDxH,
80 mm MDF frame

Nominal size	Filter class	
	H14	
Width Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 80	125	150
305 x 610 x 80	125	300
457 x 457 x 80	125	340
535 x 535 x 80	125	465
610 x 610 x 80	125	600
610 x 915 x 80	125	900
610 x 1220 x 80	125	1200

Dry gasket, semicircular FOAM profile

- filter version: standard HEPA filter for clean rooms (ceiling installation)
- manufacturer: OC IMP Klima
- frame material: MDF wood
- temperature limit: 70 °C
- max. final pressure: 500 Pa,
- recommended final pressure drop: 2x initial pressure drop
- suitable for: AFV-8B, DPS-N, DSS-N

Picture 4: Filter drawing H-H_/PO/MDF/OCK/size

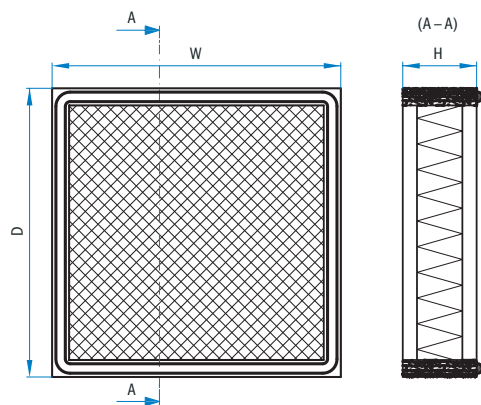


Table 5: Filter technical data H-H_/PO/MDF/OCK/size WxDxH, 80 mm MDF frame

			Filter class	
			H14	
Nominal size				
Width	Depth	Height	Pressure drop	Airflow Q
W	D	H	Δp_s	Q
[mm]	[mm]	[mm]	[Pa]	[m³/h]
305	305	80	125	150
305	610	80	125	300
457	457	80	125	340
535	535	80	125	465
610	610	80	125	600
610	915	80	125	900
610	1220	80	125	1200
535	1135	80	125	980
762	762	80	125	940
915	915	80	125	1350

Table 6: Filter technical data H-H_/PO/MDF/OCK/size WxDxH, 150 mm MDF frame

			Filter class	
			H14	
Nominal size				
Width	Depth	Height	Pressure drop	Airflow Q
W	D	H	Δp_s	Q
[mm]	[mm]	[mm]	[Pa]	[m³/h]
305	305	150	85	150
305	610	150	85	300
457	457	150	85	340
535	535	150	85	465
610	610	150	85	600

Table 7: Filter technical data H-H_/PO/MDF/OCK/size WxDxH, 292 mm MDF frame

			Filter class	
			H14	
Nominal size				
Width	Depth	Height	Pressure drop	Airflow Q
W	D	H	Δp_s	Q
[mm]	[mm]	[mm]	[Pa]	[m³/h]
305	305	292	270	750
305	610	292	270	1500
457	457	292	270	1700
535	535	292	270	2310
610	610	292	270	3000
610	762	292	270	3750

Dry gasket, semicircular foam profile

- filter version: standard HEPA filter for clean rooms (duct filter housings, exhaust housings)
- manufacturer: American Air Filter
- frame material: MDF wood
- temperature limit: 70 °C
- max. final pressure: 600 Pa, recommended final pressure drop: 2x initial pressure drop
- suitable for: AKF, AFH, LFH

Picture 5: Filter drawing H-H_/PO/MDF/AAF/F_

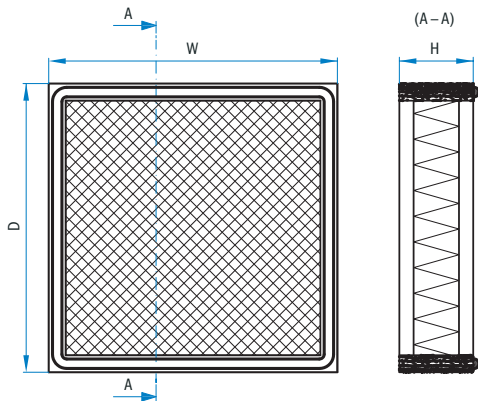


Table 8: Filter technical data H-H_/PO/MDF/AAF/F_

Filter dimension				Filter class			
Nominal size	Width W [mm]	Depth D [mm]	Height H [mm]	H13		H14	
				Pressure drop Δp_s [Pa]	Airflow Q [m³/h]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
F12	305	x 305	x 150	250	250	320	250
F22	305	x 610	x 150	250	500	320	500
F32	457	x 457	x 150	250	570	320	570
F52	610	x 610	x 150	250	1000	320	1000
F13	305	x 305	x 292	250	500	320	500
F23	305	x 610	x 292	250	1000	320	1000
F33	457	x 457	x 292	250	1130	320	1130
F53	610	x 610	x 292	250	2000	320	2000

Dry gasket, semicircular foam profile

- filter version: standard HEPA filter for clean rooms
- manufacturer: OC IMP Klima
- frame material: aluminum

Table 9: Filter technical data H-H_/PO/ALU/OCK/size WxDxH, 80 mm ALU frame

Nominal size	Filter class	
	H14	
Width Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 80	125	150
305 x 610 x 80	125	300
457 x 457 x 80	125	340
535 x 535 x 80	125	465
610 x 610 x 80	125	600
610 x 915 x 80	125	900
610 x 1220 x 80	125	1200
535 x 1135 x 80	125	980
762 x 762 x 80	125	940
915 x 915 x 80	125	1350

Table 10: Filter technical data H-H_/PO/ALU/OCK/size WxDxH, 150 mm ALU frame

Nominal size	Filter class	
	H14	
Width Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 150	85	150
305 x 610 x 150	85	300
457 x 457 x 150	85	340
535 x 535 x 150	85	465
610 x 610 x 150	85	600

Dry gasket, semicircular foam profile

- filter version: standard HEPA filter for clean rooms
- manufacturer: OC IMP Klima
- frame material: galvanized steel

Table 11: Filter technical data H-H_/PO/GAL/OCK/size WxDxH, 292 mm galvanized steel frame

Nominal size	Filter class	
	H14	
Width Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 292	270	750
305 x 610 x 292	270	1500
457 x 457 x 292	270	1690
535 x 535 x 292	270	2310
610 x 610 x 292	270	3000
610 x 762 x 292	270	3750

Dry gasket, semicircular foam profile

- filter version: FilHF ... high flow
- manufacturer: American Air Filter
- frame material: galvanized steel
- temperature limit: 70 °C
- recommended final pressure: 750 Pa
- suitable for: AKF

Picture 6: Filter drawing H-H_/PO/POC/AAF/F_

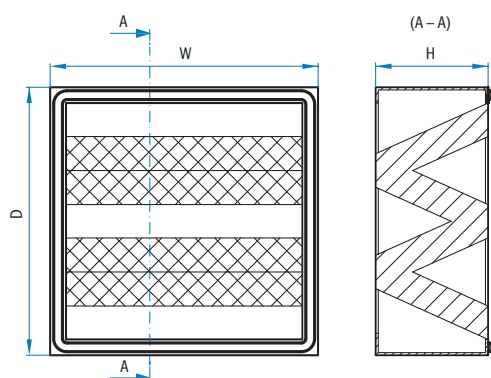


Table 12: Filter technical data H-H_/PO/POC/AAF/F_

Nominal size	Filter dimension			Filter class			
	Width W [mm]	Depth D [mm]	Height H [mm]	H13		H14	
				Pressure drop Δp_s [Pa]	Airflow Q [m³/h]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
F23	305	x 610	x 292	250	1500	380	1500
F53	610	x 610	x 292	250	4000	380	4000

Dry gasket, flat profile

- filter version: standard HEPA filter for clean rooms (ceiling installation, duct filter housings, exhaust housings)
- manufacturer: OC IMP Klima
- frame material: MDF wood
- temperature limit: 70 °C
- max. final pressure: 600 Pa,
- recommended final pressure drop: 2x initial pressure drop
- suitable for: AFV-8, AFH-1

Picture 7: Filter drawing H-H_/PL/MDF/OCK/size

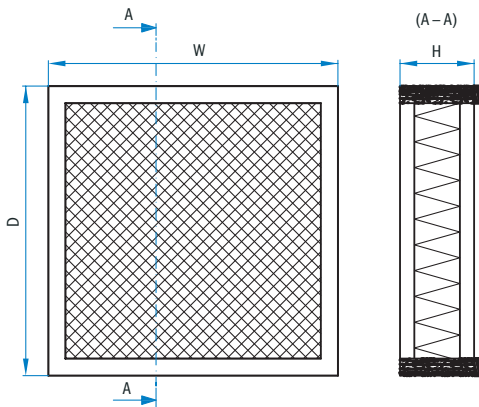


Table 13: Filter technical data for 80 mm MDF frame H-H_/PL/MDF/OCK/size WxDxH

		Filter class	
		H14	
Nominal size			
Width	Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 80		125	150
305 x 610 x 80		125	300
457 x 457 x 80		125	340
535 x 535 x 80		125	465
610 x 610 x 80		125	600
610 x 915 x 80		125	900
610 x 1220 x 80		125	1200
535 x 1135 x 80		125	980
762 x 762 x 80		125	940
915 x 915 x 80		125	1350

Table 14: Filter technical data for 150 mm MDF frame H-H_/PL/MDF/OCK/size WxDxH

		Filter class	
		H14	
Nominal size			
Width	Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 150		85	150
305 x 610 x 150		85	300
457 x 457 x 150		85	340
535 x 535 x 150		85	465
610 x 610 x 150		85	600

Table 15: Filter technical data for 292 mm MDF frame H-H_/PL/MDF/OCK/size WxDxH

		Filter class	
		H14	
Nominal size			
Width	Depth Height W x D x H [mm] [mm] [mm]	Pressure drop Δp_s [Pa]	Airflow Q [m³/h]
305 x 305 x 292		270	750
305 x 610 x 292		270	1500
457 x 457 x 292		270	1700
535 x 535 x 292		270	2310
610 x 610 x 292		270	3000
610 x 762 x 292		270	3750

Panel filters

Without gasket

- filter version: Filter ... standard
- manufacturer: Ecotip
- frame material: galvanized steel
- temperature limit: 80 °C
- recommended final pressure: 450 Pa (exception is 250 Pa for filter classes Coarse 55% - 85% acc. to ISO 16890 (old designation: G3, G4, M5))
- suitable for: AKF

Picture 9: Filter drawing KA-G_/-/POC/ECO/F_

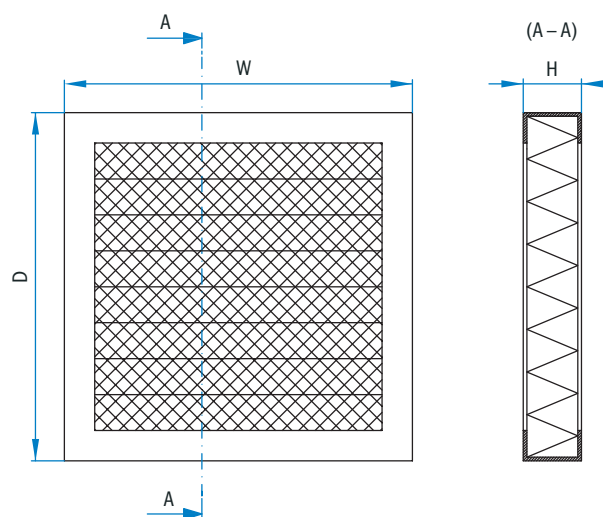


Table 18: Filter technical data KA-G_/-/POC/ECO/F_ ... coarse and medium filters

Filter dimension						Filter class							
Nominal size	Width W		Depth D		Height H	G3 / Coarse 50%		G4 / Coarse 60%		M5 / Coarse 85%		M6 / ePM10 65%	
						Pressure drop Δp_s	Airflow Q	Pressure drop Δp_s	Airflow Q	Pressure drop Δp_s	Airflow Q	Pressure drop Δp_s	Airflow Q
	[mm]	[mm]	[mm]	[Pa]	[m³/h]	[Pa]	[m³/h]	[Pa]	[m³/h]	[Pa]	[m³/h]		
	F102	287	x	287	x	48	30	460	40	460	60	460	68
F112	287	x	490	x	48	30	820	40	820	60	820	68	820
F122	287	x	592	x	48	30	985	40	985	60	985	68	985
F132	490	x	490	x	48	30	1440	40	1440	60	1440	68	1440
F142	490	x	592	x	48	30	1735	40	1735	60	1735	68	1735
F152	592	x	592	x	48	30	2130	40	2130	60	2130	68	2130
F103	287	x	287	x	98	30	755	40	755	60	755	68	755
F113	287	x	490	x	98	30	1280	40	1280	60	1280	68	1280
F123	287	x	592	x	98	30	1540	40	1540	60	1540	68	1540
F133	490	x	490	x	98	30	1935	40	1935	60	1935	68	1935
F143	490	x	592	x	98	30	2325	40	2325	60	2325	68	2325
F152	592	x	592	x	98	30	2720	40	2720	60	2720	68	2720

Table 19: Filter technical data KA-G_/-/POC/ECO/F_ ... fine filters

Filter dimension						Filter class					
						F7 / ePM2,5 65%		F8 / ePM1 75%		F9 / ePM1 80%	
Nominal size	Width		Depth		Height	Pressure drop	Airflow	Pressure drop	Airflow	Pressure drop	Airflow
	W		D		H	Δp_s	Q	Δp_s	Q	Δp_s	Q
	[mm]		[mm]		[mm]	[Pa]	[m³/h]	[Pa]	[m³/h]	[Pa]	[m³/h]
F102	287	x	287	x	48	83	460	86	460	86	460
F112	287	x	490	x	48	83	820	86	820	86	820
F122	287	x	592	x	48	83	985	86	985	86	985
F132	490	x	490	x	48	83	1440	86	1440	86	1440
F142	490	x	592	x	48	83	1735	86	1735	86	1735
F152	592	x	592	x	48	83	2130	86	2130	86	2130
F103	287	x	287	x	98	83	755	86	755	86	755
F113	287	x	490	x	98	83	1280	86	1280	86	1280
F123	287	x	592	x	98	83	1540	86	1540	86	1540
F133	490	x	490	x	98	83	1935	86	1935	86	1935
F143	490	x	592	x	98	83	2325	86	2325	86	2325
F152	592	x	592	x	98	83	2720	86	2720	86	2720

Ordering key

HHV / H-13 / P / M / OCK / 305x610x292

1 2 3 4 5 6

1 Filter type

UHV	V-shape high flow filters (filter frame 292) U15-U17
HHV	V-shape high flow filters (filter frame 292) H13-H14
EHV	V-shape high flow filters (filter frame 292) E10-E12
ECA	High-temperature filters with aluminum sep. (filter frame 292 mm) E10-E12
HCA	Standard high-flow filters (filter frame 292 mm) H13-H14
EHS	Standard high-flow filters (filter frame 292 mm) E10-E12
HHS	Standard high-flow filters (filter frame 292 mm) H13-H14
UC	Standard filters for ceiling installation (filter frame 66-150 mm) U15-U17
HC	Standard filters for ceiling installation (filter frame 66-150 mm) H13-H14
EC	Standard filters for ceiling installation (filter frame 66-150 mm) E10-E12
FP	Panel filters G3-F9
FB	Bag filters G3-F9
FC	Carbon filters

2 Filter class

U15-U17
H13-H14
E10-E12
G3-F9
G3-F9
Active carbon

3 Gasket type

P	Polyurethane, endless foamed
U	U-shaped EPDM
F	EPDM flat continuous
G	GEL (silicone gel, liquid)
X	Without any gasket

4 Frame material

M	MFD (plywood)
A	Aluminum
I	Stainless steel (INOX)
G	Galvanized steel
P	Plastic (ABS)
C	Cardboard (water resistant)

5 Manufacturer

OCK	OC IMP Klima
AAF	American Air Filter
CAF	Camfil
ECO	Ecotip

6 Filter size = A x B x H [mm]

A	Width
B	Length
H	Frame height (depth)