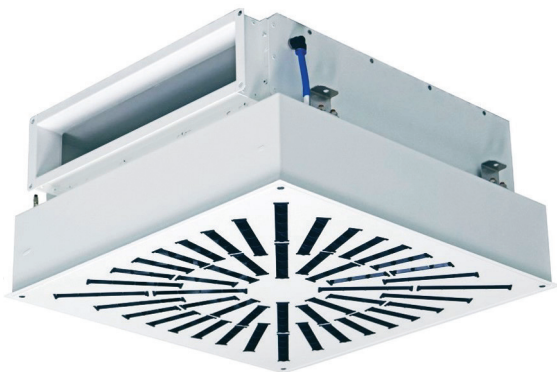


Ceiling HEPA filter units LFH



Description

The LFH filter housing is a clean room diffuser, which can be equipped with a HEPA filter. It is designed for installation in ceilings in premises with stringent requirements concerning the amount of particles and germs in the air. LFH is typically used for fresh air supply from the ceiling.

Features

- Customers can select from 6 different diffuser front plates, depending on visual design preference, throw requirements or intended purpose. Diffusers allow mixing (swirl and non-swirl) or displacement ventilation.
- 2 housing types with different heights enable installation of various filters with heights from 48 mm up to 150 mm.
- 10 different sizes of filter media can be installed.
- 2 gasket types:
 - semicircular foam gasket
 - liquid gel gasket
- 3 possible duct connections:
 - circular side connection
 - circular top connection
 - rectangular side connection

Standard connections for aerosol (DOP) leakage testing and for filter differential pressure measurements are available. LFH filter housings are airtight.

Optional accessory: shut-off damper (manual or motorized) for optimum conditions during filter replacement.

The LFH quick selection table offers basic technical parameters required for designing clean room technology.

Customized and non-standard versions are available upon request.

Materials and components

Upper section:

Material: Steel / epoxy powder coated or stainless steel EN 1.4301 / AISI 304

Lower section:

Material: Steel / epoxy powder coated or stainless steel EN 1.4301 / AISI 304

Standard colour: RAL 9010

Front plate:

Material: Steel / epoxy powder coated or stainless steel EN 1.4301 / AISI 304

Standard colour: RAL 9010

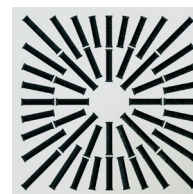
Diffuser front plate versions:



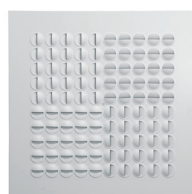
S1R



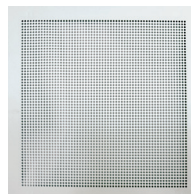
S2R



S3R



S4R



P1R



4WR

Gasket:

Liquid gel gasket

Semicircular foam gasket

Filters:

LFH is a versatile filter housing, making it possible to install various filter types with different heights and filter frame materials. If the filter type or supplier is not specified in the order specifications, a standard OC IMP Klima filter is supplied with the unit by default.

LFH / 606-1 / SC-0250 / W / H / P / R / R

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

1 Type

LFH	for filter with semicircular foam gasket, for filter with GEL (liquid) gasket
------------	---

2 Adapted for filter size

303-1	305 x 305 x (48-90)
303-2	305 x 305 x (104-150)
306-1	305 x 610 x (48-90)
306-2	305 x 610 x (104-150)
404-1	457 x 457 x (48-90)
404-2	457 x 457 x (104-150)
505-1	535 x 535 x (48-90)
505-2	535 x 535 x (104-150)
606-1	610 x 610 x (48-90)
606-2	610 x 610 x (104-150)
609-1	610 x 915 x (48-90)
612-1	610 x 1220 x (48-90)
511-1	535 x 1135 x (48-90)
707-1	762 x 762 x (48-90)
909-1	915 x 915 x (48-90)

Size	3 Circular side connection	3 Circular top connection	3 Rectangular side connection
303-1	SC-0160 Ø158	TC-0160 Ø158	SR-2010 (BxH) 200x100
303-2	SC-0160 Ø158	TC-0160 Ø158	SR-2010 (BxH) 200x100
306-1	SC-0200 Ø198	TC-0200 Ø198	SR-3010 (BxH) 300x100
306-2	SC-0200 Ø198	TC-0200 Ø198	SR-3010 (BxH) 300x100
404-1	SC-0200 Ø198	TC-0200 Ø198	SR-3010 (BxH) 300x100
404-2	SC-0200 Ø198	TC-0200 Ø198	SR-3010 (BxH) 300x100
505-1	SC-0250 Ø248	TC-0250 Ø248	SR-4510 (BxH) 450x100
505-2	SC-0250 Ø248	TC-0250 Ø248	SR-4510 (BxH) 450x100
606-1	SC-0250 Ø248	TC-0250 Ø248	SR-5010 (BxH) 500x100
606-2	SC-0250 Ø248	TC-0250 Ø248	SR-5010 (BxH) 500x100
609-1	SC-0315 Ø313	TC-0315 Ø313	SR-5015 (BxH) 500x150
612-1	SC-0355 Ø353	TC-0355 Ø353	SR-6015 (BxH) 600x150
511-1	SC-0315 Ø313	TC-0315 Ø313	SR-5015 (BxH) 500x150
707-1	SC-0315 Ø313	TC-0315 Ø313	SR-5015 (BxH) 500x150
909-1	SC-0400 Ø398	TC-0400 Ø398	SR-8015 (BxH) 800x150

4 Air volume regulation

W	Without any regulation
M	Manual control airtight damper adjustable from outside
R	Manual control airtight damper adjustable from room side
L	Air tight damper with 24 V actuator
B	Air tight damper with 230 V actuator

5 Installation

H	With hangers (ceiling installation)
T	With traverse (fixed panel installation)

6 Filter gasket type

G	Gel (liquid) gasket
P	Semicircular (foamed) shaped profile

7 Housing finish

R	RAL 9010 (epoxy powder coating)
I	AISI 304 (stainless steel)

8 Diffuser type

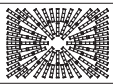
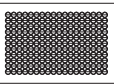
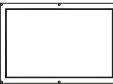
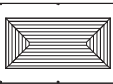
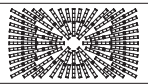
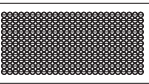
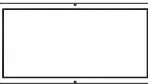
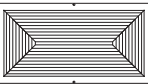
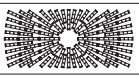
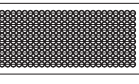
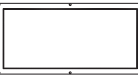
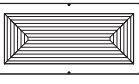
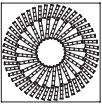
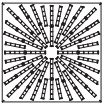
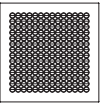
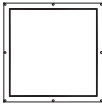
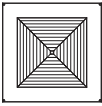
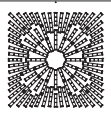
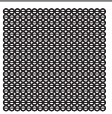
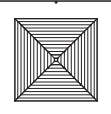
S1R	Swirl diffuser RAL 9010 (epoxy powder coating)
S2R	Swirl diffuser RAL 9010 (epoxy powder coating)
S3R	Swirl diffuser RAL 9010 (epoxy powder coating)
S4R	Swirl diffuser RAL 9010 (epoxy powder coating)
P1R	Perforated diffuser RAL 9010 (epoxy powder coating)
4W1	4-way diffuser RAL 9010 (epoxy powder coating), low air flow
4W2	4-way diffuser RAL 9010 (epoxy powder coating), high air flow
S2I	Swirl diffuser AISI 304
S3I	Swirl diffuser AISI 304
S4I	Swirl diffuser AISI 304
P1I	Perforated diffuser AISI 304

Note:

Filter is not included and must be ordered separately.

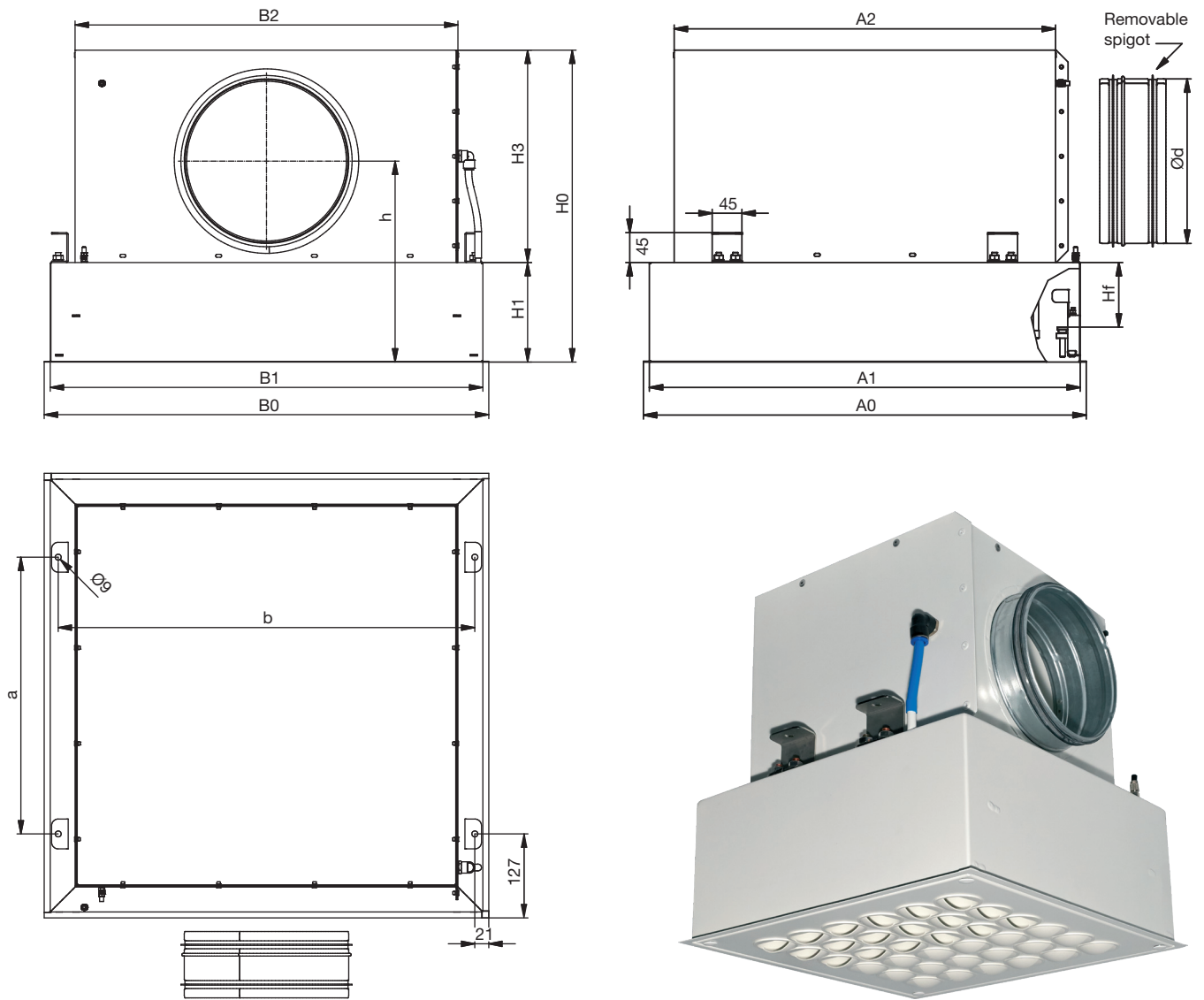
Front plates and dimensions

Filter dimension		Front plate dimension A3 x B3	S1R	S2R S2I	S3R S3I	S4R S4I	P1R P1I	4W1	4W2
305x305	48-90	342 x 342	•	•	•	•	•	•	•
305x610	48-90	342 x 647	-	-	•	•	•	•	•
457x457	48-90	494 x 494	•	•	•	•	•	•	•
535x535	48-90	572 x 572	•	•	•	•	•	•	•
610x610	48-90	647 x 647	•	•	•	•	•	•	•
610x915	48-90	647 x 952	-	-	•	•	•	•	-
610x1220	48-90	647 x 1257	-	-	•	•	•	•	-
535x1135	48-90	572 x 1172	-	-	•	•	•	•	-
762x762	48-90	799 x 799	-	•	•	•	•	•	-
915x915	48-90	952 x 952	-	•	•	•	•	•	-

Size	S1R	S2R / S2I	S3R / S3I	S4R / S4I	P1R / P1I	4W1	4W2
303							
306	•	•					
404							
505							
606							
609	•	•					•
612	•	•					•
511	•	•					•
707	•						•
909	•						•

Circular side connection — housing type 1

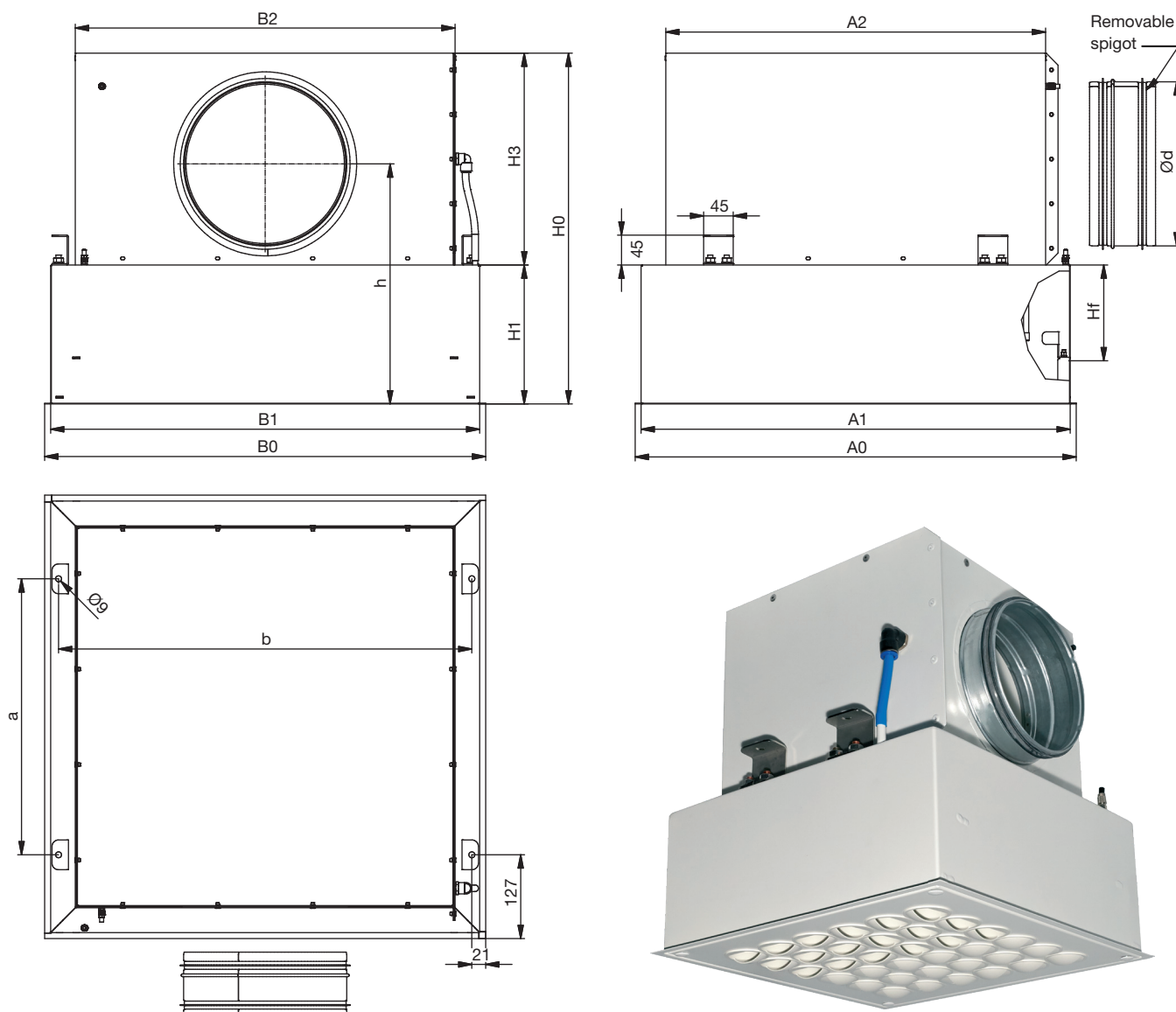
Dimensions



Filter dimension		Circular connection	Plenum box dimensions										
Size	Hf	Ød	A0	A1	A2	a	B0	B1	B2	b	H1	H3	H0
305x305	48-90	158	365	347	272	112	365	347	272	323	150	230	380
305x610	48-90	198	365	347	272	112	670	652	577	628	150	270	420
457x457	48-90	198	517	499	424	264	517	499	424	475	150	270	420
535x535	48-90	248	595	577	502	342	595	577	502	553	150	320	470
610x610	48-90	248	670	652	577	417	670	652	577	628	150	320	470
610x915	48-90	313	670	652	577	417	975	957	882	933	150	385	535
610x1220	48-90	353	670	652	577	417	1280	1262	1187	1238	150	425	575
535x1135	48-90	313	595	577	502	342	1195	1177	1102	1153	150	385	535
762x762	48-90	313	822	804	729	569	822	804	729	780	150	385	535
915x915	48-90	398	975	957	882	722	975	957	882	933	150	470	620

Circular side connection — housing type 2

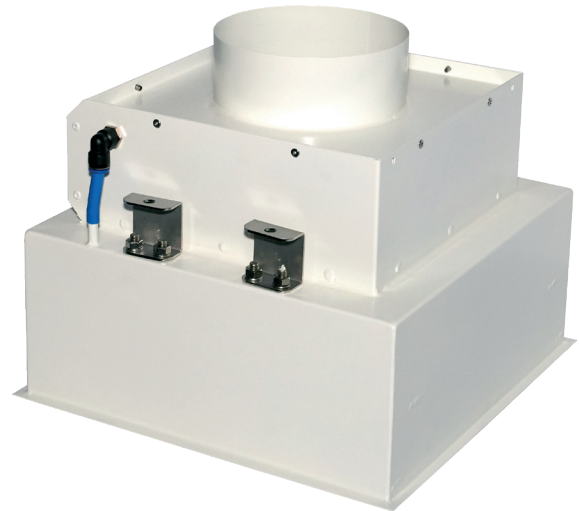
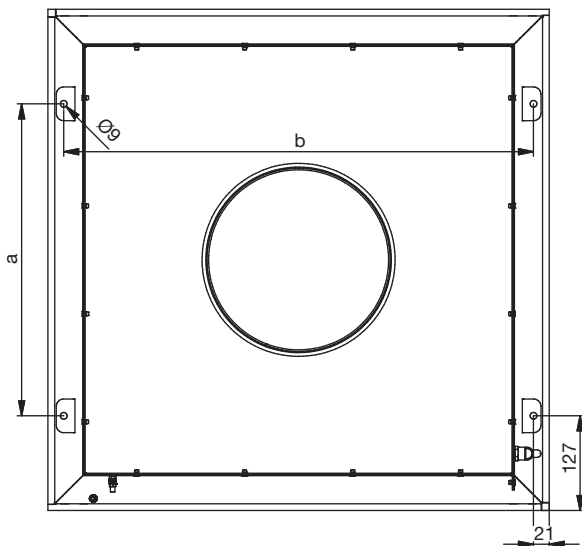
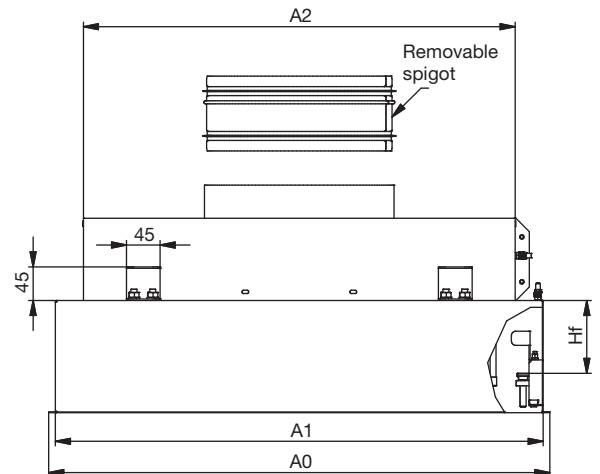
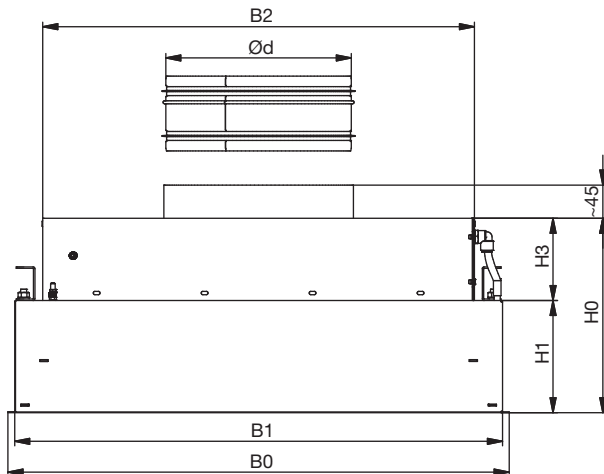
Dimensions



Filter dimension		Circular connection	Plenum box dimensions										
	Hf	Ød	A0	A1	A2	a	B0	B1	B2	b	H1	H3	H0
305x305	104-150	158	365	347	272	112	365	347	272	323	210	230	440
305x610	104-150	198	365	347	272	112	670	652	577	628	210	270	480
457x457	104-150	198	517	499	424	264	517	499	424	475	210	270	480
535x535	104-150	248	595	577	502	342	595	577	502	553	210	320	530
610x610	104-150	248	670	652	577	417	670	652	577	628	210	320	530

Circular top connection – housing type 1

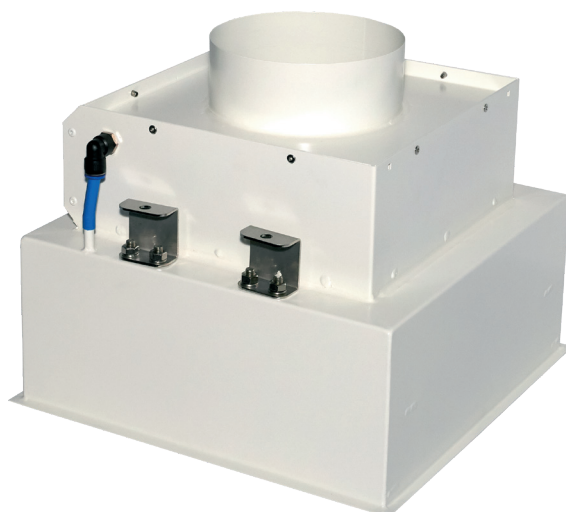
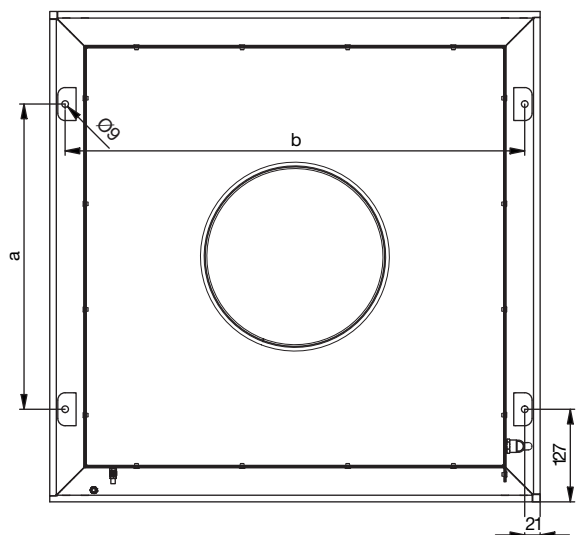
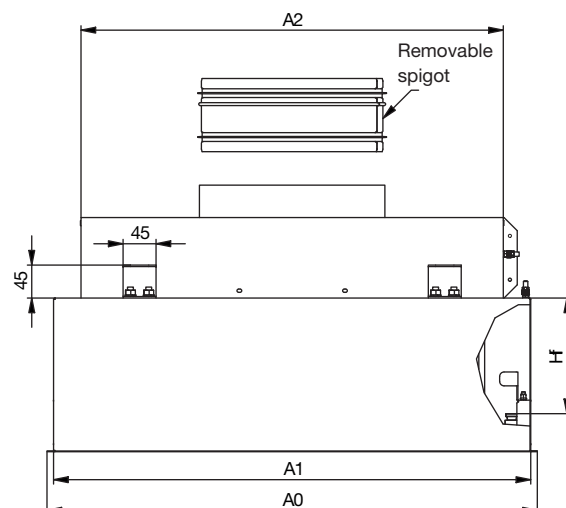
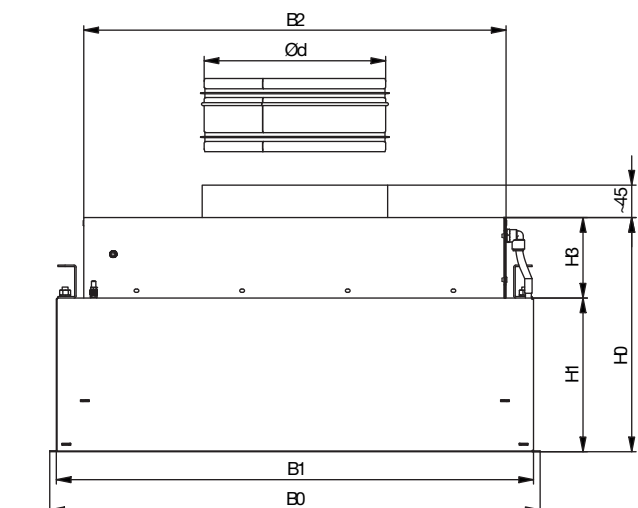
Dimensions



Filter dimension		Circular connection	Plenum box dimensions										
Size	Hf	Ød	A0	A1	A2	a	B0	B1	B2	b	H1	H3	H0
305x305	48-90	158	365	347	272	112	365	347	272	323	150	110	260
305x610	48-90	198	365	347	272	112	670	652	577	628	150	110	260
457x457	48-90	198	517	499	424	264	517	499	424	475	150	110	260
535x535	48-90	248	595	577	502	342	595	577	502	553	150	110	260
610x610	48-90	248	670	652	577	417	670	652	577	628	150	110	260
610x915	48-90	313	670	652	577	417	975	957	882	933	150	110	260
610x1220	48-90	353	670	652	577	417	1280	1262	1187	1238	150	110	260
535x1135	48-90	313	595	577	502	342	1195	1177	1102	1153	150	110	260
762x762	48-90	313	822	804	729	569	822	804	729	780	150	110	260
915x915	48-90	398	975	957	882	722	975	957	882	933	150	110	260

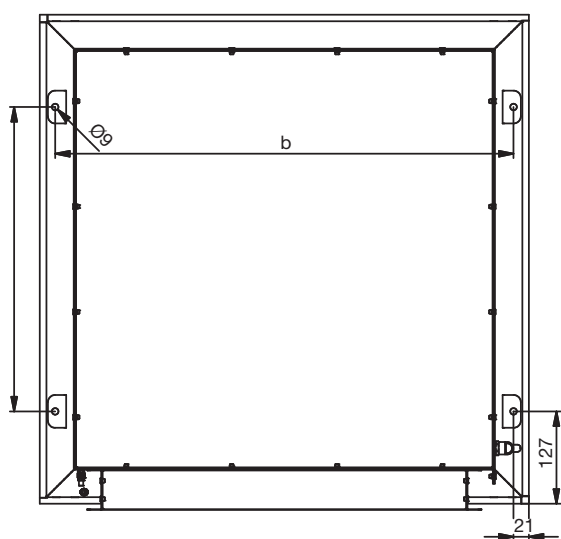
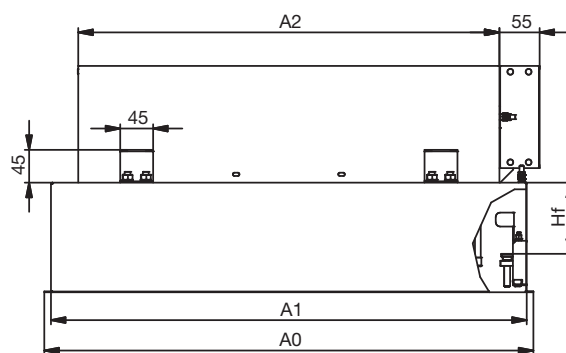
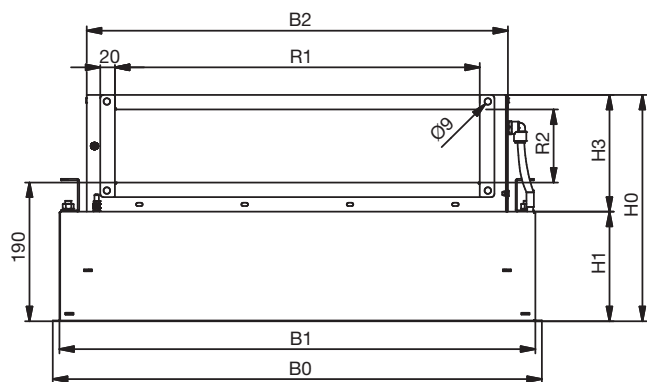
Circular top connection – housing type 2

Dimensions



Filter dimension		Circular connection	Plenum box dimensions										
	Hf	Ød	A0	A1	A2	a	B0	B1	B2	b	H1	H3	H0
305x305	104-150	158	365	347	272	112	365	347	272	323	210	110	320
305x610	104-150	198	365	347	272	112	670	652	577	628	210	110	320
457x457	104-150	198	517	499	424	264	517	499	424	475	210	110	320
535x535	104-150	248	595	577	502	342	595	577	502	553	210	110	320
610x610	104-154	248	670	652	577	417	670	652	577	628	210	110	320

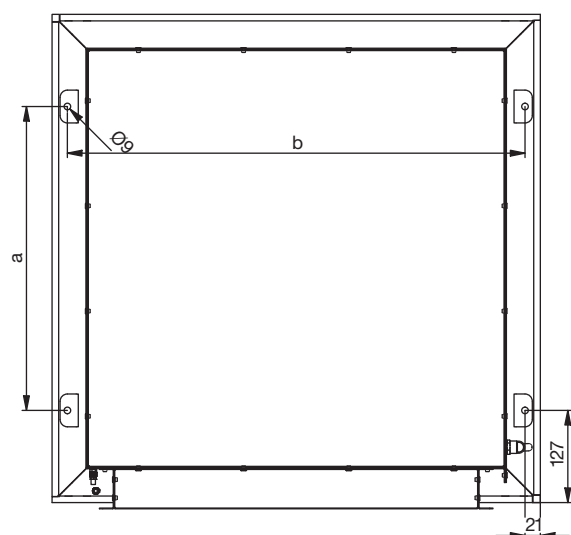
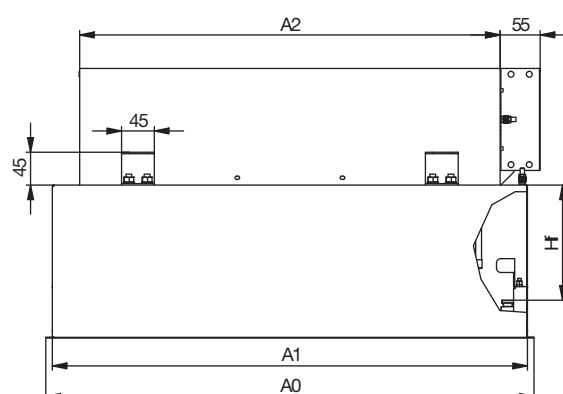
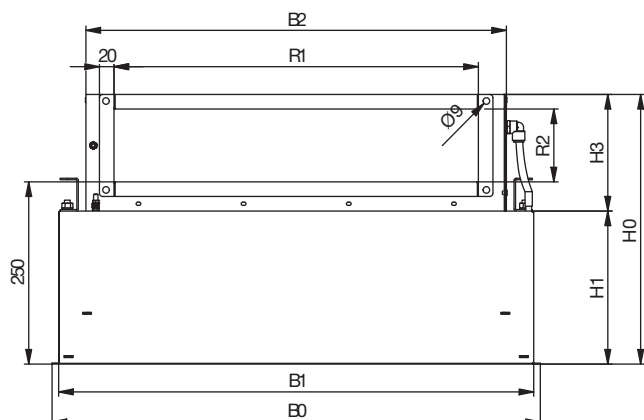
Rectangular side connection – housing type 1 Dimensions



Filter dimension		Circular connection	Plenum box dimensions										
Size	Hf	Ød	A0	A1	A2	a	B0	B1	B2	b	H1	H3	H0
305x305	48-90	200x100	365	347	272	112	365	347	272	323	150	160	310
305x610	48-90	300x100	365	347	272	112	670	652	577	628	150	160	310
457x457	48-90	300x100	517	499	424	264	517	499	424	475	150	160	310
535x535	48-90	450x100	595	577	502	342	595	577	502	553	150	160	310
610x610	48-90	500x100	670	652	577	417	670	652	577	628	150	160	310
610x915	48-90	500x150	670	652	577	417	975	957	882	933	150	210	360
610x1220	48-90	600x150	670	652	577	417	1280	1262	1187	1238	150	210	360
535x1135	48-90	500x150	595	577	502	342	1195	1177	1102	1153	150	210	360
762x762	48-90	500x150	822	804	729	569	822	804	729	780	150	210	360
915x915	48-90	800x150	975	957	882	722	975	957	882	933	150	210	360

Rectangular side connection – housing type 2

Dimensions



Filter dimension		Circular connection	Plenum box dimensions										
	Hf	Ød	A0	A1	A2	a	B0	B1	B2	b	H1	H3	H0
305x305	104-150	200x100	365	347	272	112	365	347	272	323	210	160	370
305x610	104-150	300x100	365	347	272	112	670	652	577	628	210	160	370
457x457	104-150	300x100	517	499	424	264	517	499	424	475	210	160	370
535x535	104-150	450x100	595	577	502	342	595	577	502	553	210	160	370
610x610	104-150	500x100	670	652	577	417	670	652	577	628	210	160	370

Filter data

Filter efficiency of all filters is compliant with class H14 acc. to EN 1822.

Filter frame PU 69 mm / GEL 80 mm

Suitable for LFH housing type 1.

Filter frame height: 69 mm PU foam gasket, 80 mm GEL (liquid) gasket.

Filter size [mm]	Nominal airflow [m³/h]	Initial pressure drop [Pa]
305x305	150	125
305x610	300	125
457x457	340	125
535x535	470	125
610x610	600	125
610x915	900	125
610x1220	1200	125
535x1135	980	125
762x762	930	125
915x915	1470	125

Filter frame PU 150 mm

- Suitable for LFH housing type 2.
- Filter frame height: 150 mm PU Foam gasket

Filter size [mm]	Nominal airflow [m³/h]	Initial pressure drop [Pa]
305x305	150	80
305x610	300	80
457x457	340	80
535x535	470	80
610x610	600	80

Filter frame GEL 128 mm

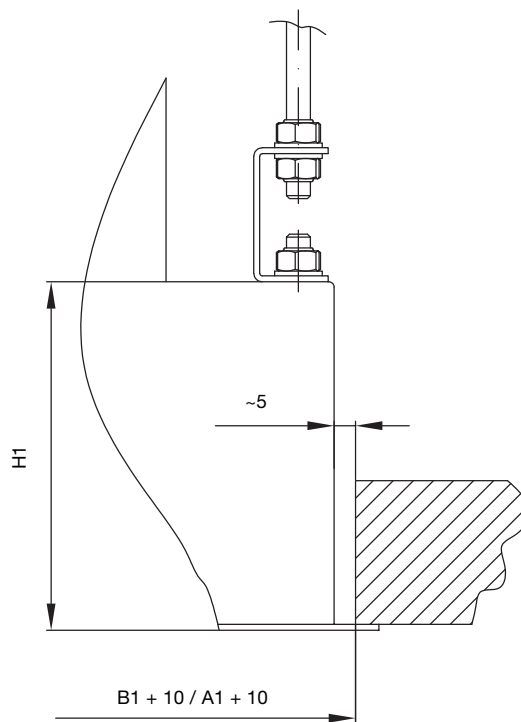
- Suitable for LFH housing type 2.
- Filter frame height: 128 mm GEL (liquid) gasket

Filter size [mm]	Nominal airflow [m³/h]	Initial pressure drop [Pa]
305x305	150	80
305x610	300	80
457x457	340	80
535x535	470	80
610x610	600	80

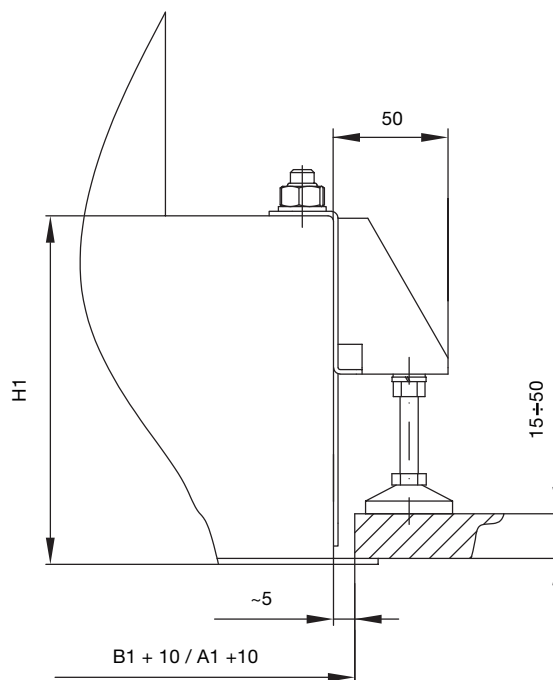
Installation

Installation is possible with hangers (H) into suspended ceilings or with traverse (T) for installation into fixed panels, see installation manual for detailed instructions.

Hanger installation (H)



Traverse installation (T)



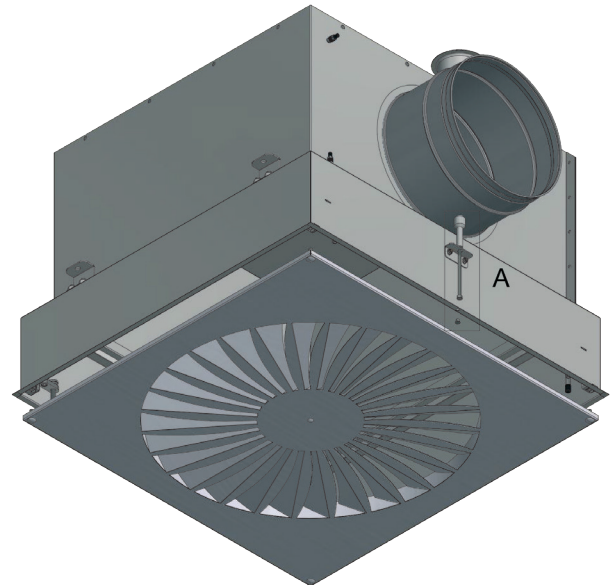
Manual air tight damper R, adjustable from room side

Version R of the airtight damper can be manually opened or closed from room side, without any intervention in the ceiling or need for an inspection opening.

The airtight damper can be adjusted by simply turning the damper mechanism with a regular hex key through the opening in the filter housing frame.

This feature significantly simplifies maintenance and filter replacement from the room where the housing is installed.

Damper adjustment element



Turning the damper blade with a hex key

