

Clean air, our care



**We provide clean
air for the following
applications:**

Commercial
Buildings, Hospitals,
Data Centers,
Museums,
Food Industries,
Pharmaceuticals,
Others

Hoods & Units





CLEAN

Summary

Introduction

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Introduction

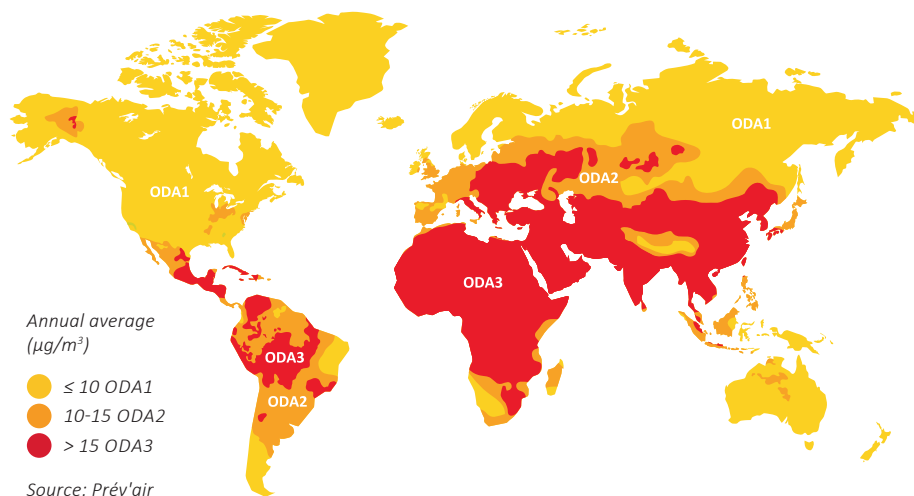
HEPA Filter Manufacturer

AFPRO Filters has been able to manufacture its products in all standard and non-standard dimensions, tailor-made to client specifications since 1979. These products manufactured by AFPRO Filters are high-quality, long-lasting and innovative products. In order to guarantee their quality, we have established a laboratory in which tests are carried out every day in order to make our air filters more efficient and longer lasting.

Our Recommendations for Obtaining Minimum Filtration Efficacy as per ISO 16890

Choose the filtration for your health establishment in accordance with ISO 16890 and the outside air quality.

1. Look for your location on the map



2. Match your zone and receive the minimal filtration recommendations.

Outdoor air quality	ePM2,5	ePM10	ePM1 AS1*
ODA1	≤ 10 $\mu\text{g}/\text{m}^3$	≤ 20 $\mu\text{g}/\text{m}^3$	70%
ODA2	≤ 15 $\mu\text{g}/\text{m}^3$	≤ 30 $\mu\text{g}/\text{m}^3$	80%
ODA3	> 15 $\mu\text{g}/\text{m}^3$	> 30 $\mu\text{g}/\text{m}^3$	90%

Air Supply (AS)

= The flow of air entering the treated room or air entering the system after treatment

* MIN minimum filtration requirement ISO PM1 50%

** MIN minimum filtration requirement ISO PM2.5 50%

Industrial applications that meet the maximum sanitary requirements

- hospital
- pharmaceutical industry
- electronics
- clean room

Classification of Very High Efficiency Filters: Standard EN1822

Standard EN 1822:2009 is used to classify HEPA and ULPA filters based on MPPS efficiency. The table gives more detailed information on the European filter classification.

Classes of filters	Integral MPPS values		Local MPPS values	
	Efficacy (%)	Penetration (%)	Efficacy (%)	Penetration (%)
E10	85	15	-	-
E11	95	5	-	-
E12	99.5	0.5	-	-
H13	99.95	0.05	99.75	0.25
H14	99.995	0.005	99.975	0.025
U15	99.9995	0.0005	99.9975	0.0025
U16	99.99995	0.00005	99.99975	0.00025
U17	99.999995	0.000005	99.9999	0.0001

MPPS: Most Penetrating Particle Size, i.e. the size of the particle that is the hardest to stop. Depending on the filters and air speeds, the MPPS is between 0.1 and 0.2 μm

Air cleanliness in Controlled Environments: Standard 14644

ISO 14644-1:2015 classifies the cleanliness of the air in clean rooms, clean zones and separative devices as defined in ISO 14644 7, based on the concentration of particles suspended in the air.

The table to the right classifies the ISOs based on the number and size of the particles.

Classes of filters	0.1 μM	0.2 μM	0.3 μM	0.5 μM	1 μM	5 μM
ISO 1	10	-	-	-	-	-
ISO 2	100	24	10	-	0	-
ISO 3	1 000	237	102	35	8	-
ISO 4	10 000	2 370	1 020	352	83	-
ISO 5	100 000	23 700	10 200	3 520	832	-
ISO 6	1 000 000	237 000	102 000	35 200	8 320	293
ISO 7	-	-	-	352 000	83 200	2 930
ISO 8	-	-	-	3 520 000	832 000	29 300
ISO 9	-	-	-	35 200 000	8 320 000	293 000



PHARMA

Terminal hoods

HL-PH UNIT



Characteristics

Application Air supply or return in clean rooms with turbulent or laminar flow HEPA Filters with polyurethane gaskets

Electro-galvanised steel 15/10e and 20/10e

Epoxy paint RAL 9010, oven-baked

Connection on the top or the side

For HEPA filters 68 or 110 mm thickness

Pressure connector 2 pressure ports

Grill: interchangeable perforated, swirl-jet or 4-way

Advantages

- Robust, welded construction
- Easy opening / closing of the diffusion grill
- Grill easy to remove
- Installation with universal system: Feet or brackets
- Wide choice of standard dimensions, compatible with most standard filters on the market
- Modular for filters that are 68 or 110 mm thick

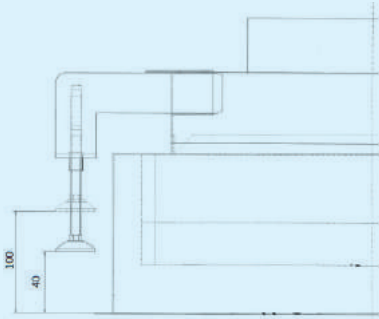
Size	External Dimensions* (mm)	For filters (mm)	T connection		Side S connection	
			Ø	Height**	Ø	Height
DBB	361X361	305X305X68/110	160	255	160	405
DCC	513x513	457x457x68/110	200	255	200	445
DBE	361x666	305x610x68/110	200	255	200	445
DEE	666x666	610x610x68/110	250	255	250	495
DEG	666x971	610x915x68/110	315	255	315	560
DEH	666x1276	610x1220x68/110	315	255	315	560

*Excluding 25 mm flange.
 **Excluding 50 mm connector.



Options

- Support feet for mounting on weight-bearing ceiling of thickness 40 to 100 mm
- Pivoting grill
- Magnetic grill closure
- Intermediate frame for the installation of 2 stages of filtration
- Rectangular duct connection
- Specific RAL for the paint
- Made of 304L or 316L stainless steel
- Special Production of 150 mm-thick filter (H +40 mm)
- 100% test port accessible from the room



Terminal hoods

HL-PHR UNIT



Characteristics

Application Air return in clean room with turbulent air flow and staged prefilters and fine filters

Electro-galvanised steel 15/10e and 20/10e

Epoxy paint RAL 9010, oven-baked

Connection on the top or the side

For filters 48 or 96 mm thick

Pressure connector accessible from the room

Grill: perforated

Advantages

- Robust, welded construction
- Easy opening/closing of the grill
- Grill easy to remove
- Installation with universal system: Feet or brackets
- Modular for filters of thickness 48 or 96 mm

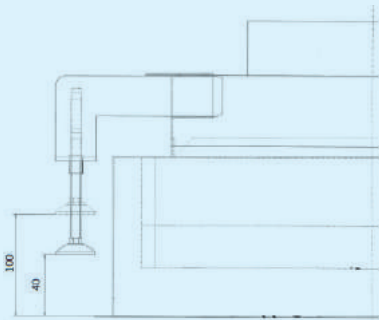
Size	External Dimensions* (mm)	For filters (mm)	Unit Height without plenum	Top T duct connection		Lateral S duct connection	
				Ø	Height**	Ø	Height
12X12	361X361	287X287X48/96	160	160	245	160	395
12x24	361x666	287x592x48/96	160	200	245	200	435
24x24	666x666	592x592x48/96	160	250	245	250	485

*Excluding 25 mm flange.

**Excluding 50 mm connector.

Options

- Support feet for mounting on weight-bearing ceiling of thickness 40 to 100 mm
- Removable pivoting grill
- Magnetic grill closure
- Rectangular duct connection
- Specific RAL for the paint
- Made of 304L or 316L stainless steel
- Pressure connector accessible from the room



Bag in- Bag out Unit

SF-CH CANISTER UNIT



Characteristics

Application For installation in contaminated air extraction networks and secure replacement of the filter in a plastic bag

Welded Steel 20/10e

Epoxy paint RAL 9010, oven-baked

Rip Resistant bag with integrated elastic

Filter held in place with excentric cams

Maximum service temperature: 90°C

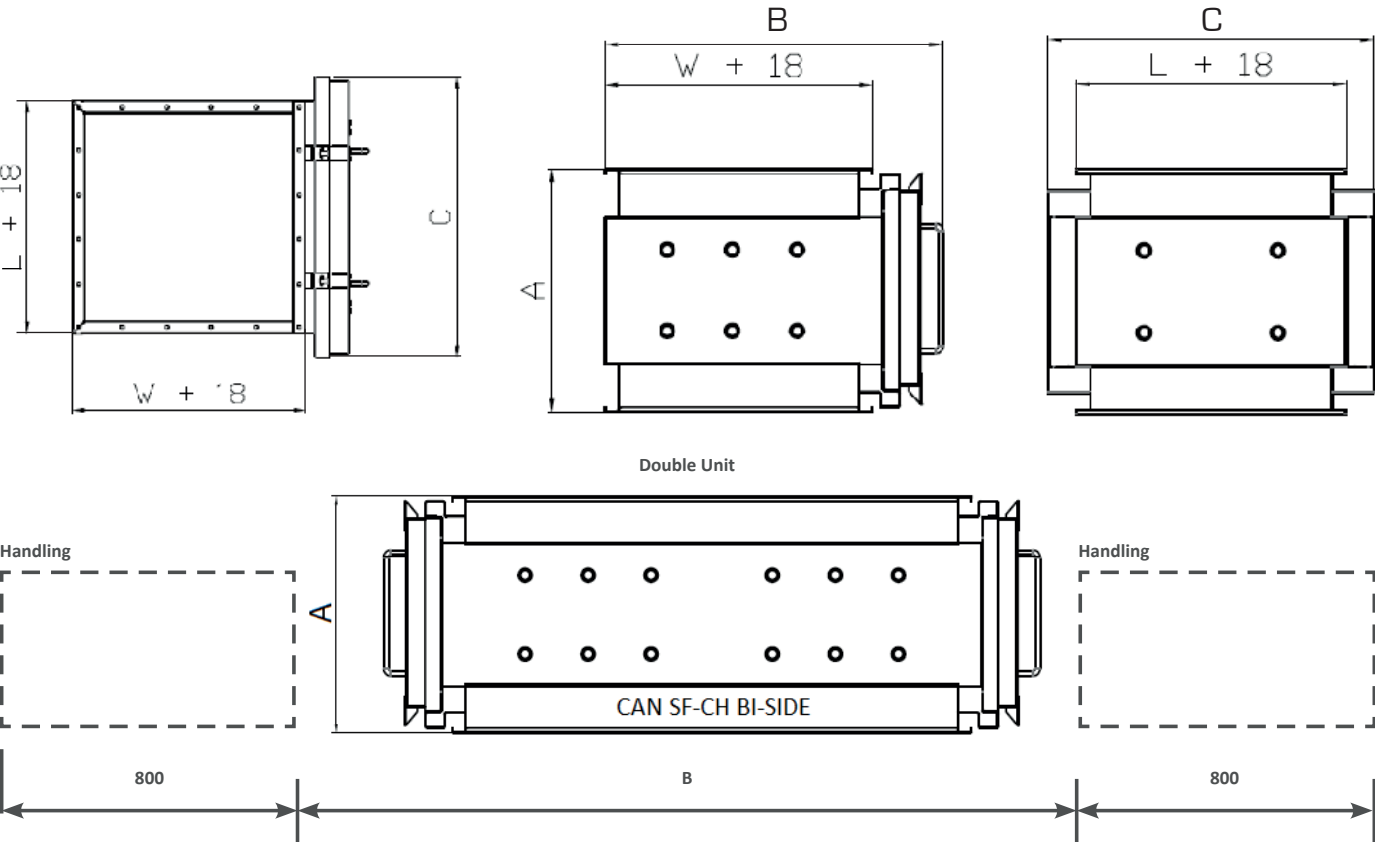
Stainless Steel Leverage System for Hepa filter

Advantages

- Continuously welded
- Robust and modular
- Door gasket seal leakages test Stainless Steel Leverage System
- Mechanical Resistance +/-5000 Pa
- Qualified Unit: Class D (EN 12237), Class C (Eurovent 2/2), L1 (EN 1886)

Type	Unit Dimensions (mm)				Filter Dimensions (mm)			Weight (Kg)
	C	B	B Double Unit	A	L	W*	H	
CAN SF-CH BE	505	804	1608	376	305	610	98	20.6
CAN SF-CH EE	755	804	1608	376	610	610	98	31.8
CAN SF-CH NBEL	505	804	1608	428	305	610	150	24.2
CAN SF-CH NEEL	755	804	1608	428	610	610	150	35.4
CAN SF-CH NBEM	505	804	1608	570	305	610	292	31
CAN SF-CH NEEM	755	804	1608	570	610	610	292	42.2

* Consider Wx2 for the double unit since this version contains 2 filters.

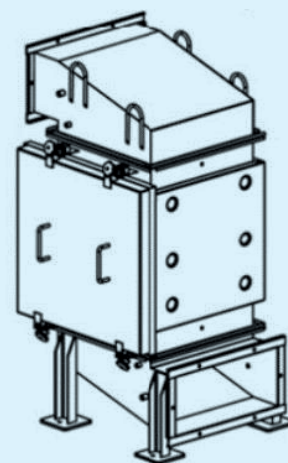


Bag in- Bag out Unit

SF-CH CANISTER UNIT

Options

- Pressure connectors with valves
- Upper/lower collector - support feet
- AISI 304 or AISI 316 Stainless steel version
- ATEX version
- Integrated manual test scan.
- Integrity control as per ISO 10644-3
- Double unit with a single door
- Unit with integrated prefilter
- Integrated maintenance table
- Porthole inspection on door
- Manometer with support
- Factory assembly or pre-assembly
- Individual factory test with report





HOSPITALS

Terminal hood

HL-HD



Characteristics

Application : multiple applications, hospitals, production facilities

Galvanised Steel RAL 9010 epoxy paint

Connection on the top or the side

Plenum and filter support assembled and sealed, air-tight

For HEPA filters 68 or 150 mm thick

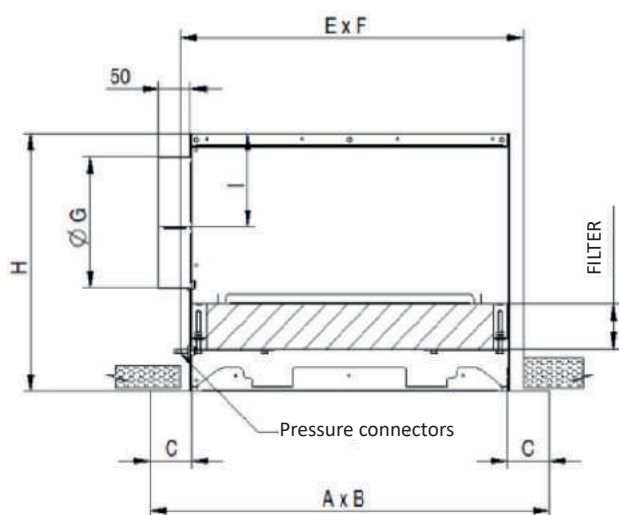
Pressure connectors mounted

Grill: interchangeable perforated, helicoid-jet or 4-way

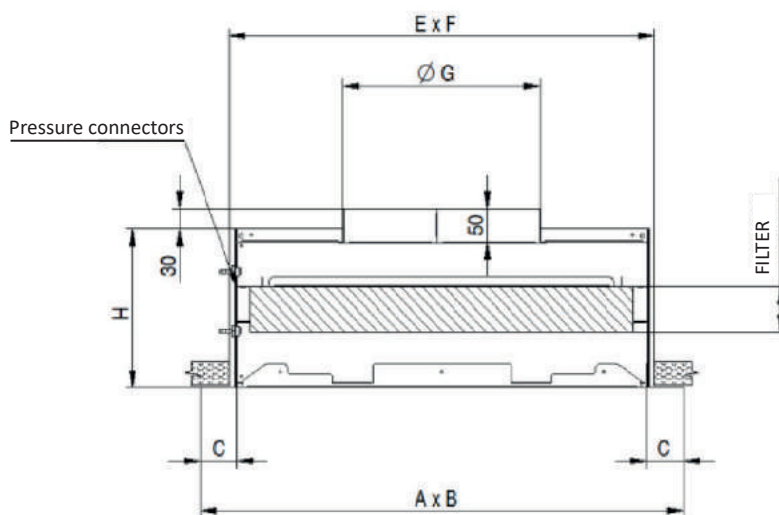
Advantages

- Can be used for many purposes: air supply/return, wall or ceiling installation
- 3 diffuser models suitable for different types of diffusion:
- Perforated Grill for vertical diffusion
- Helicoid grill for diffusion of air via mixture
- 4-way grill for multidirectional diffusion
- HL-HD-S version available with register that can be adjusted from the room

Size	Filter Dimensions (mm)	Overall Ax B (mm)	Cut out dimensions Ex F (mm)	H HL-HD-T (mm)	H HL-HD-S (mm)	ØG (mm)	I (mm)	Weight HL-HD-T (Kg)	Weight HL-HD-S (Kg)
DBBE	305x305x68	469x469	425x425	240	350	159	115	7	9
DBBL	305x305x150	469x469	425x425	325	475	199	135	8	10
DBEE	305x610x68	469x769	425x725	240	390	199	135	9	12
DCCE	457x457x68	635x635	591x591	240	390	199	135	10	14
DCCL	457x457x150	635x635	591x591	325	525	249	160	10	15
DEEE	610x610x68	769x769	725x725	240	440	249	160	11	17
DEEL	610x610x150	769x769	725x725	325	672	399	235	12	19
DEGE	610x915x68	769x1069	725x1025	240	510	314	192	17	24
DEHE	610x1220x68	769x1379	725x1335	240	510	314	192	20	31
F.P DCCE	457x457x68	595x595	565x565	240	390	199	135	10	14
F.P DCCL	457x457x150	595x595	565x565	325	525	249	160	10	15



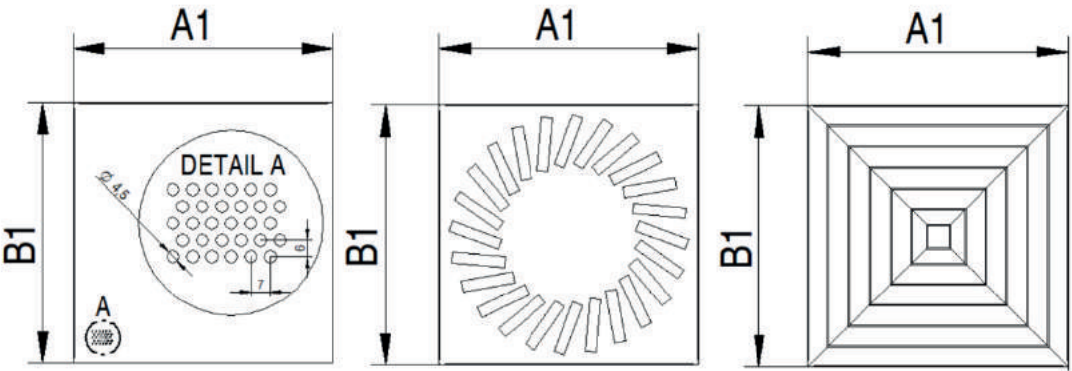
HL-HD-S



HL-HD-T

Terminal hood

HL-HD DIFFUSERS



		Type					
		Perforated Grill		Helicoid Grill		4-way Grill	
		Maximum Flow (m³/h)					
Size	Overall (CxH)	Filter E11	Filter H14	Filter E11	Filter H14	Filter E11	Filter H14
DBBE	370x370	240	150	240	150	240	150
DBBL	370x370	480	300	250	250	480	300
DBEE	370x670	480	300	-	-	480	300
DCCE	520x520	500	350	500	350	540	350
DCCL	520x520	800	700	600	600	800	700
DEEE	670x670	720	600	600	600	780	600
DEEL	670x670	1400	1200	800	800	1400	1200
DEGE	670x970	1120	900	-	-	1120	900
DEHE	670x1270	1300	1200	-	-	1300	1200
F.P DCCE	520x520	500	350	500	350	540	350
F.P DCCL	520x520	800	700	600	600	800	700

** adapt based on the diffuser installation height.
Perforated grills are generally used with 68 mm filters.*



TERTIARY

Filter box

HL-DA UNIT



Characteristics

Application Unit for the installation of one or several stages of filtration in a duct network.

Single-block galvanised steel

Upstream/downstream clamps, width 30 mm

Side door for filter access, knurled-knob closure and sealed gasket

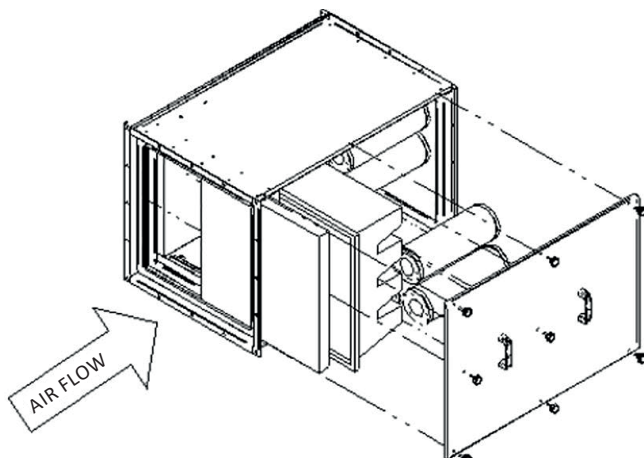
Runner system for prefilters, tightening via cam for high-efficiency filters, welded plate for active carbon cartridges

Installation of 1 to 3 stages of filtration: prefilter, high-efficiency filter and activated carbon filter

Option to mount from one to several filters per filtration stage to adapt to higher air flow rates.

Configuration

- Installation of 1 to 3 stages of filtration: prefilter, high-efficiency filter and activated carbon filter
- Option to mount from one to several filters per filtration stage to adapt to higher air flow rates.

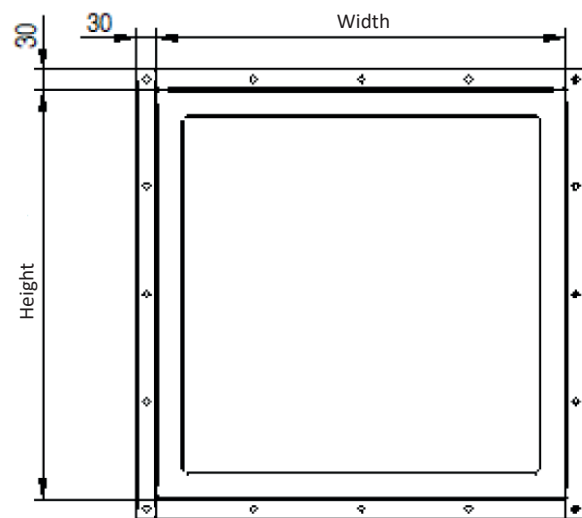
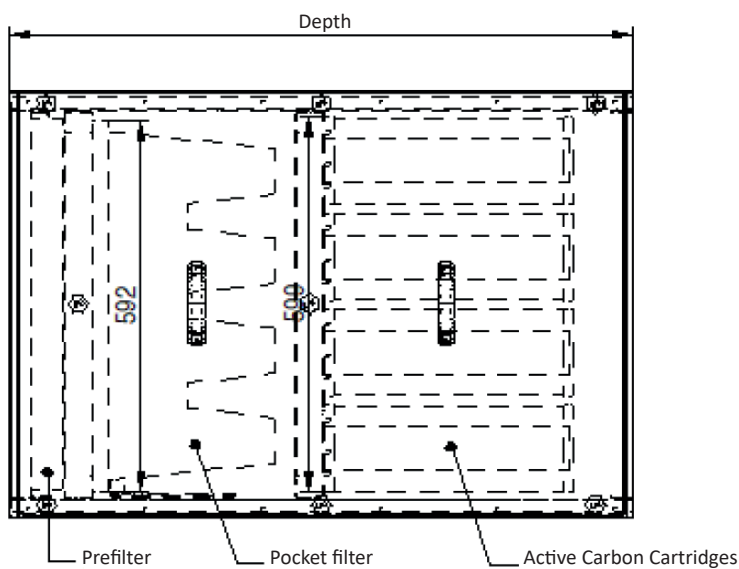


Construction Variants and Options

- Made of stainless steel 304L or 316L
- Hinged door
- Epoxy paint finishing, RAL as chosen
- Clamp drilling on plane
- Pressure connectors
- Flanges with circular duct connection up to H1L1
- Round/square conical adaptor for duct connection
- Register for the adjustment and/or sealed isolation (Class 3 or Class 4 as per EN 1751)
- Storm grill with heavy duty anti-volatile mesh
- Weather capping for outside installation
- Support Feet
- Ground connection for ATEX zone
- Special Construction for HEPA filters

Filter box

HL-DA UNIT



Size	Number of filters	Dimensions Filters (mm)	Width (mm)	Height (mm)	Depth (mm)**					
					Prefilter	Pocket Filters	Carbon Cartridges	Prefilter + Pocket filter	Prefilter + Carbon Cartridge	Prefilter + Pocket Filter + Carbon Cartridge
H1L1	1	592x592	620	620	400	700	700	700	700	1100
H1L1.5	1 1	592x592 287x592	930	620	400	700	700	700	700	1100
H1L2	2	592x592	1240	620	400	700	700	700	700	1100
H1.5L1	1 1	592x592 287x592	620	930	400	700	700	700	700	1100
H1.5L2	2 2	592x592 287x592	1240	930	400	700	700	700	700	1100
H2L1	2	592x592	620	1240	400	700	700	700	700	1100
H2L1.5	2 2	592x592 287x592	930	1240	400	700	700	700	700	1100
H2L2	4	592x592	1240	1240	400	700	700	700	700	1100
H2L3	6	592x592	1855	1240	400	700	700	700	700	1100
H3L2	6	592x592	1240	1855	400	700	700	700	700	1100
H3L3	9	592x592	1855	1855	400	700	700	700	700	1100

*Unit with hinged door = depth +100 mm.



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