Filtrasept
HEPA Filter Housings for Ceilings and Walls

CLEAN AIR

POWER GENERATION

CLEAN ROOM

INDUSTRIAL

Filtrasept housings with integrated EPA/HEPA filters are designed to provide air filtration and distribution in one unit. Viruses, bacteria and dust particles are filtered out of the airstream immediately before the air outlet, eliminating the risks associated with central system filtration, such as cross contamination in the ventilation ducts.

Filtrasept is ideal for use wherever clean air or a germ-free atmosphere is needed, for example in:

- **Hospitals:** lower class operating theatres and treatment rooms, intensive care, sterile zones isolation areas, etc.
- **Industry:** clean production environments in pharmaceutical, chemical, food, optical and electronic industries
- **Laboratories:** clean zones and work areas, for supply of clean air and discharge filtration of toxic or hazardous aerosols

KEY FACTS

- Multiple sizes and combinations: To suit a wide variety of applications and operational requirements
- Integrated air-tight dampers according to EN 1751 (optional)
- Low construction height: With special versions for minimal vertical space
- Leakage test with test aerosol according ISO 14644-3 and measurement of pressure drop from clean room accessible side
- Easily removable air outlets: For easy maintenance and disinfection
- Comprehensive accessory range: For seamless integration with current systems
- Available powder coated (white, RAL 9010) or stainless steel (1.4301): To meet the demands of different applications

Filtrasept Product Range

Filtrasept Filter Housing

- Sealed housing constructed from galvanized steel (powder coated, RAL 9010, white), resistant against disinfectants. Available also in stainless steel, 1.4301 and with fire-protection coating
- 9 standard sizes; with or without damper according to EN 1751 (manually operated or electrical)
- Spigot available for top entry
- Test port for pressure drop, test groove and aerosol
- Available with FS Swirl Diffuser (fits swirl diffusers of all leading brands); fixed with central screw
- Available with perforated plate; fixed with 4 corner screws

FS Swirl Diffuser

- Adjustable air deflectors
- High quality, solid construction; mounted with M8 central thread
- Colour white, RAL 9010, other RAL colours as option
- Air deflectors black, option white

Filtrasept Low Ceiling Height

- Housing for low ceilings with rectangular spigot; construction height of only 275 mm
- Damper available – manual, hydraulic or electrical operation

Filtrasept Wall System

- Sealed housing constructed from galvanized steel (powder coated, RAL 9010, white), resistant against disinfectants. Available also in stainless steel, 1.4301
- Air outlets available as perforated plate or grid, connected with 4 corner screws to the filter housing
- Compatible with a large selection of filters

ZAL Ceiling Outlets for Exhaust Air

- Air outlet supplied without filter; available in sizes from 50 to 900 m^3/h; dimensions from 318 x 318 x 330 mm to 623 x 623 x 380 mm
- Equipped with integral fluff separator
- Optionally available with diffusers or perforated plate
- Available in galvanized or powder coated steel (white, RAL 9010)
- Horizontal or vertical spigot
- Available with damper for air volume controlling

Filtrasept – Ceiling Unit

CONSTRUCTION

Filtrasept Ceiling Units are constructed from powder coated (white RAL 9010) or stainless steel. Units are also available with a fire-resistant coating, while stainless steel fittings secure the filter and diffuser/perforated plate in place. The air is supplied through a circular, side-mounted spigot, with an optional air tight, shut-off damper (according to EN 1751), which is accessible from the room side.

Filtrasept can also be supplied with a top-mounted spigot, while Filtrasept for low ceilings (construction height 275 mm), features a rectangular spigot to minimise size. Filtrasept can be equipped with a two-way, four-way or swirl diffuser, fitted centrally, or a perforated plate, which is secured with 4 corner screws. Standard colour for outlet elements is white (RAL 9010), with other colours available upon request.

Equipped with an integral test port, accessible from the room side for pressure, seal and aerosol tests, both the system and filter can be easily tested with a seal test instrument.

INSTALLATION

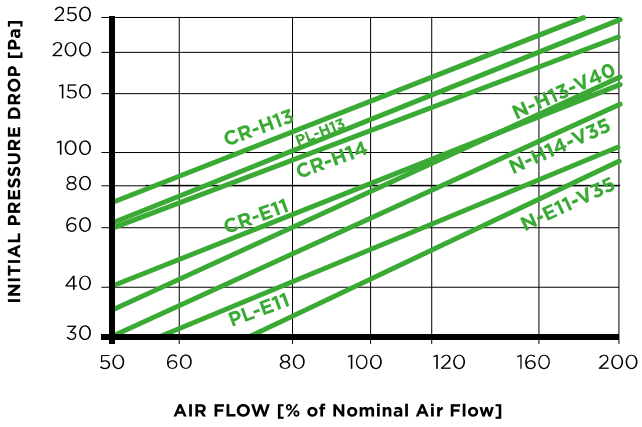
Filtrasept can be installed in all conventional ceiling systems, whilst custom connections can be designed to suit the exact requirements of cleanroom ceiling manufacturers. When designing the room layout, the consultant should ensure that Filtrasept units which are equipped with diffusers, are located far enough from walls, pillars and other air distribution units, in order to avoid disruption to the air flow pattern.

FILTRASEPT COMBINATIONS

Filtrasept units with perforated plates can be installed adjacent to each other, allowing coverage of significantly larger areas.

PRESSURE DROP AS FUNCTION OF NOMINAL AIR FLOW

If several Filtrasept units are used, of the same or different sizes but with the same pressure drop performance curve and upstream pressure, no air flow adjustment is required. This is because as the dust build-up becomes greater, the pressure drop for all sizes increases equally. If Filtrasept types with different performance curves are combined, the air flow must be adjusted.



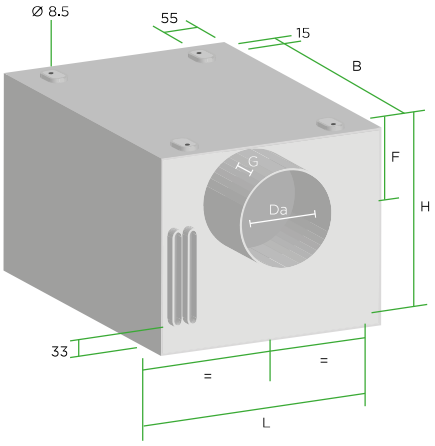
Air Flow in % of Nominal Flow (m³/h)[1]		50 %	60 %	80 %	100 %	120 %	160 %	200 %
Type 2	with **CR**	70	85	110	140	170	225	280
Type 3	with **PL**	135	160	215	270	325	430	540
Type 4	with **CR**	160	190	260	320	385	510	640
Type 5	with **PL**	270	325	430	540	650	865	1,080
Type 5C & 6C	with **CR**	600	720	960 [2]	1,200 [2]	–	–	–
Type 7 & 9	with **CR**	300	360	480	600	720	960	1,200
Type 8	with **CR**	250	300	400	500	590	790	990
Type 10	with **N**	535	640	850	1,070	1,280	1,710	2,140

1) At greater than 100% of rated air flow both the air acoustic limits and comfort criteria should be considered separately. Furthermore, the filters efficiency many decrease below the class limits.; 2) Please consider comfort criteria (avoid draft)

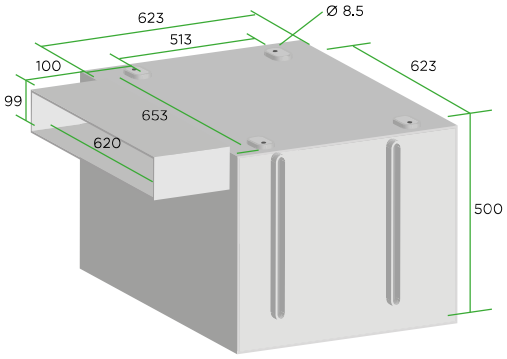
Filtrasept – Ceiling Unit Technical Data

DIMENSIONS (mm)

Ceiling Unit Sizes 1 – 9



Ceiling Unit Size 10



Ceiling unit size	Installable Filter Type	Installable Filter Size	Dimensions of air outlets			Dimensions of case						Weight with Filter kg
			Perforate Plate ø mm	Diffuser ø mm	Swirl Diffuser ø mm	B mm	L mm	H mm	Da mm	F mm	G mm	
3	PL-E11/H13	610 x 610 x 30	623	(623) (676)	(623) (650 + 676)	623	623	345	198	120	60	20
5	PL-E11/H13	1,220 x 610 x 30	2 x 623	–	–	623	1,247	345	198	120	60	36
6	PL-E11/H13	1,220 x 610 x 30	2 x 623	–	–	1,247	623	345	198	120	60	36
2	CR-E11/H13/H14	305 x 305 x 75	(318)	359	(398)	318	318	345	148	95	60	12
4	CR-E11/H13/H14	457 x 457 x 75	(470)	498	498	470	470	385	198	120	60	18
5C	CR-E11/H13/H14	1,220 x 610 x 75	2 x 623	–	–	623	1,247	435	248	140	60	50
6C	CR-E11/H13/H14	1,220 x 610 x 75	2 x 623	–	–	1,247	623	435	248	140	60	50
7	CR-E11/H13/H14	610 x 610 x 75	(623)	623 676	623 650 + 676	623	623	400	222	125	60	30
8	CR-E11/H13/H14	557 x 557 x 75	(570)	598 623	(598) 623	570	570	400	222	125	60	26
9	CR-E11/H13/H14	610 x 610 x 75	(623)	623 676	623 650 + 676	623	623	435	248	140	80	36
10	N-F7/F9 N-E11/H13/H14	610 x 610 x 292	–	623 676	(623) (650 + 798)	623	623	500	-	-	-	45

Filter Performance	Unit	PL-E11	PL-H13	CR-E11	CR-H13	CR-H14	N-E11-V35	N-H13-V40	N-H14-V35
Typical Efficiency to EN 1822 (for MPPS with Test Aerosol)	%	97	99.97	97	99.98	99.998	97	99.95	99.998
Filter Class as per EN 1822	-	E11	H13	E11	H13	H14	E11	H13	H14
Maximum Final Pressure Drop	Pa	600	600	400	400	400	800	800	800

Filtrasept – Wall Unit

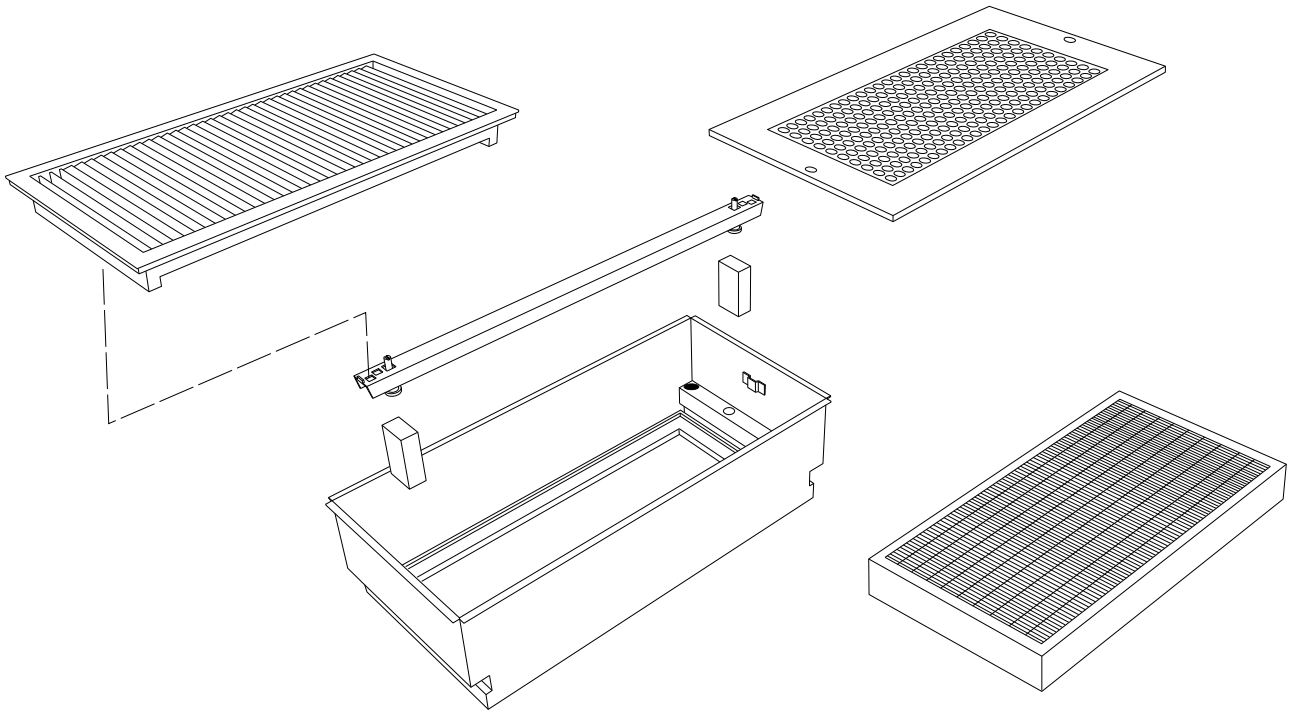
INSTALLATION AND ASSEMBLY

The Filtrasept Wall Unit is designed to be fitted to both the air duct and the wall or partition; with a wall frame available as an optional accessory for even simpler installation.

CONSTRUCTION

Designed with a flange for connection to the wall and air duct, the unit offers an all-in-one solution for the installation of EPA/ HEPA filters. The air outlet is by way of a perforated plate (white, RAL 9010) or an outlet grill.

All Filtrasept wall units are equipped with a test port for pressure drop or aerosol measurement, and when fitted with EPA/HEPA filters the units can be specified with an integral test port for seal tests. Filters and connections are accessible from the room side.



Filtrasept – Wall Unit Technical Data

Types, Dimensions, Weights	Unit	Hepatex CR	Hepatex N	Micratex FP-P	Compatex FP
Installation Filter Size (W x D x H)	mm	305 x 610 x 75	305 x 610 x 292	288 x 593 x 88	288 x 593 x 292
Case Depth (D)	mm	240	450	240	450
Weight (with outlet, without filter)	kg	12.5	16.0	10.0	13.5

Filter and Air Flow Data

Unit Type	Installable Filters Size 610 x 305 mm	Filter Class (acc. to EN 779 & EN 1822)	Nominal Air Flow (m^3/h)[1)]	Pressure Drop (Pa)
Micratex FP-P	FP-P-HT-F6-305 to F9-305	F6-F9	1,250	75-180 Pa
	FP-P-HT-E11-305	E11	1,000	190 Pa
	FP-P-HT-E12-305	E12	750	300 Pa
Compatex FP	FP-F6-305 to F9-305	F6-F9	1,700	70-100 Pa
	FP-P-HT-E10-305 to E12-305	E10-E12	1,700	140-290 Pa
	FP-P-HT-H13-305	H13	1,250	240
Hepatex CR	CR-E11 to H14	E11-H14	3,00	120
Hepatex CR	N-F7-V40-305	F7	1,900	140
	N-F9-V40-305	F9	1,900	180
	N-E11-V35-305	E11	1,700	190
	N-H13-V35-305	H13	1,700	250
	N-H14-V40-305	H14	1,500	250

1) For air flows (V_L) ,<700 m^3/h the use of a perforated plate outlet and for V_L. >700 m^3/h a grille outlet is recommended. At V_L. >1,000 m^3/h eventual acoustic limits should be taken into account separately.