HT GROUP
YOUR PARTNER IN HEALTHCARE TECHNOLOGY

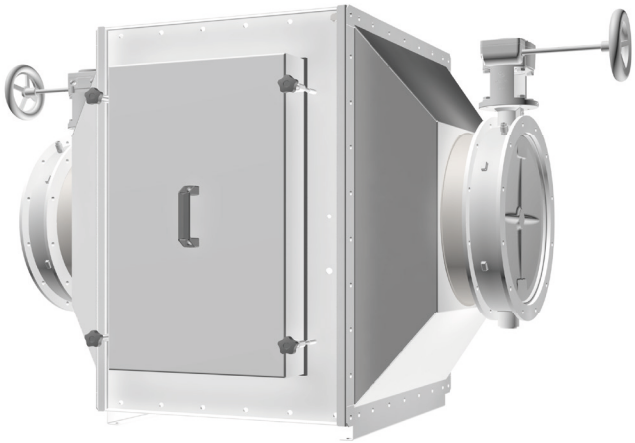
FILTER HOUSING

BIBO$_{HIGHTEC}$

Ventilating medical and biological facilities, pathogenic substances must be eliminated from the air in order to protect the environment as well as rooms from contamination from the outside.

Hereby, regarding safety and the degree of separation, high demands are placed on filter systems. For such applications, HT Group has developed the filter housing BiBo$_{hightec}$. This modular and compact filter housing can be adapted for every ambitious filtration requirement.

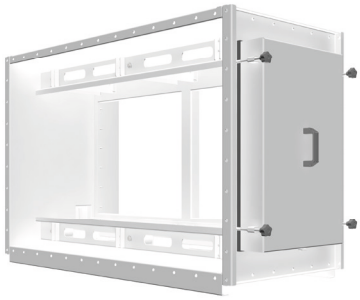
Compactness and the variety of upgrade options are characteristic for the filter housing. Due to modular design, only one control side and various outlet hoods, even requirements in limited spaces can be met by the system.



filter housing 1 x 1

CHARACTERISTICS AND FULFILMENT OF REQUIREMENTS	
Construction	very compact design
Design	design based on the modular principle
Features	different specification variants
Tightness	leak tightness requirements, inter alia, according to DIN 25 496, ASME
Leakage test	leakage test in the installed condition according to EN – ISO 14644-3
Disinfection and hygiene	disinfectability contamination-free change of filters using the Bag-in-Bag-out-Method (BiBo)

filter housing 2 x 2



filter housing 1 x 2

filter housing 2,5 x 2

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BIBO HIGHTEC

The safety housing is created for use in air intake and exhaust air systems of, for example, also containment laboratories of classes BSL 3 and 4, to separate highly sensitive particles, microorganisms as well as gases. It considers stipulations of relevant standards as World Health Organisation WHO "Laboratory biosafety manual, 3rd edition", the requirements of European standard EN 12128 etc.

The housing consists of a gas-tight sealed and screwed, torsion-free, 2 mm thick stainless steel panel construction made of material resistant to corrosion, amongst others available in AISI 304 (1.4301) AISI 316 L (1.4404) und AISI 316Ti (1.4571). The aerosol-generated and clean air hoods are made of 2 mm thick steel panels. The design ensures a good air distribution.

For every filtration level the pressure drop is displayed via analogous differential pressure measuring devices.

All pressure measuring ducts are designed with plastic hoses as standard, but are also available with hoses made of stainless steel. Before being delivered, leak tightness is tested by means of the leakage test method. Quality assurance is guaranteed in accordance with ISO 9001.

In general: The clamping devices of the HEPA filter elements are operable from the outside and dimensioned in such a way that, with a maximum permissible load and soft sealing components, compliance with leak tightness requirements (acc. to DIN 25 496) is ensured where the filter elements are mounted.

Leak tightness of the screwed housing panels is ensured by silicon profile seals. The advantage is that this sealing system is not sticky and thus, for maintenance work, can be easily removed.

DESIGN AND CONSTRUCTION	
Filter housing	a gas-tight sealed and screwed, torsion-free, 2 mm thick stainless steel panel construction made of material resistant to corrosion, amongst others available in AISI 304 (1.4301) AISI 316 L (1.4404) und AISI 316Ti (1.4571).
Connecting frame	front-mounted connecting frame for aerosol-generated and clean air flaps
Aerosol-generated and clean air hoods	made of 2 mm thick steel panels the design ensures a good air distribution
Separate insertion openings	for every filter row including maintenance board for the bag changing method, to ensure gas-tight sealing of insertion openings for filter elements
Maintenance cover	the maintenance cover is fixed to the filter housing by means of four screw elements with star grip for easy handling every maintenance cover got a handgrip in the middle
Maintenance bag board	maintenance bag board with two circumferential test grooves to change filters without touching
Plastic maintenance bag	the plastic maintenance bag is adapted to the housing and includes an integrated sealing ring as well as accesses changing the filters can be completed safely and contact free
Spring elements and cylinders	HEPA filter elements are fastened by spring elements that readjust mechanically and ensure the leakage rate to comply with DIN 25 496 while seals age and yield, spring elements are exonerated by single-acting cylinders that air pressure is applied to from the outside in order to change filters
Test groove	test groove as a circumferential test groove inside the filter element's sealing to prove leak-proof construction and secure mounting connect the test groove to the fit tester using the quick-action coupling positioned at the front side of the filter housing
Pressure measuring ducts	standard: plastic hoses optional: hoses made of stainless steel
Differential pressure display	monitoring of filter contamination via measuring device, model Magnehelic

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TECHNICAL DATA	
Manufacturer	HT
Type	BIBO hightec
Potential filter elements	fine particulate air filter elements acc. to EN 779 and HEPA filter elements acc. to EN 1822
Dimensions W/H/D	610/610/292 mm 610/305/292 mm
Number	1 to 16 pieces
Nominal volume flow	up to 50.000 m^3/h
Permissible differential pressure filter housing	+/- 6.000 Pa
Design temperature	90° C (194 °F)
External leakage (filter housing)	leakage volume flow < $3 \cdot 10^{-5}$ of nominal volume flow acc. to DIN 25 496 at Δp=2.000 Pa

TIGHTNESS	
Compliance of requirements	DIN 25 496 Eurovent 2/2:1991 (leak tightness class C) EN 1886:1998 (leak tightness class B) ISO 10648-2:1994 (leak tightness class 3) and EN 12237:2003 (leak tightness class D) at +-6000 Pa. before being delivered, leak tightness is tested by means of the leakage test method, quality assurance is guaranteed in accordance with ISO9001.

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