

## OR supply air ceiling system - panel filter ceiling



The supply air ceiling generates a vertical, laminar flow of clean air with low resistance for all types of operating rooms. The filters guarantee maximum operational reliability, a low germ count in the operating room and a low concentration of harmful gases in the working area of the operating team. The large filter surface area of the filter elements, which are positioned

over the entire sterile air zone, helps to reduce the initial filter pressure. This enables a mixing zone for fresh and recirculated air in the pressure chamber above. OR supply air ceilings are used in sensitive areas, such as operating theaters for procedures with foreign body implants and in pharmaceutical areas for the production of sterile medicaments.

### Technical data

Type description (sterile air zone)		square protection zone					
		1,6 x 2,4	1,8 x 2,4	2,0 x 2,4	2,4 x 2,4	3,0 x 3,0	3,2 x 3,0
Housing dimensions (mm)	A	1.706	1.906	2.106	2.506	3.106	3.306
	B	2.506	2.506	2.506	2.506	3.106	3.306
	H	550	550	550	550	550	550
Number of filters (piece)		6	8	6	6	10	6
Filter initial pressure (Pa)		80	80	80	80	80	80
Volume flow at 0.15 sec air velocity		2.074	2.333	2.592	3.110	4.860	5.530
Volume flow at 0.17 sec air velocity		2.350	2.644	2.938	3.555	5.508	6.267
Volume flow at 0.24 sec air velocity		3.318	3.732	4.147	4.977	7.776	8.847

Supply air ceilings can be realised in a proven standard size or, on request, in a special size or special geometry.

### Construction

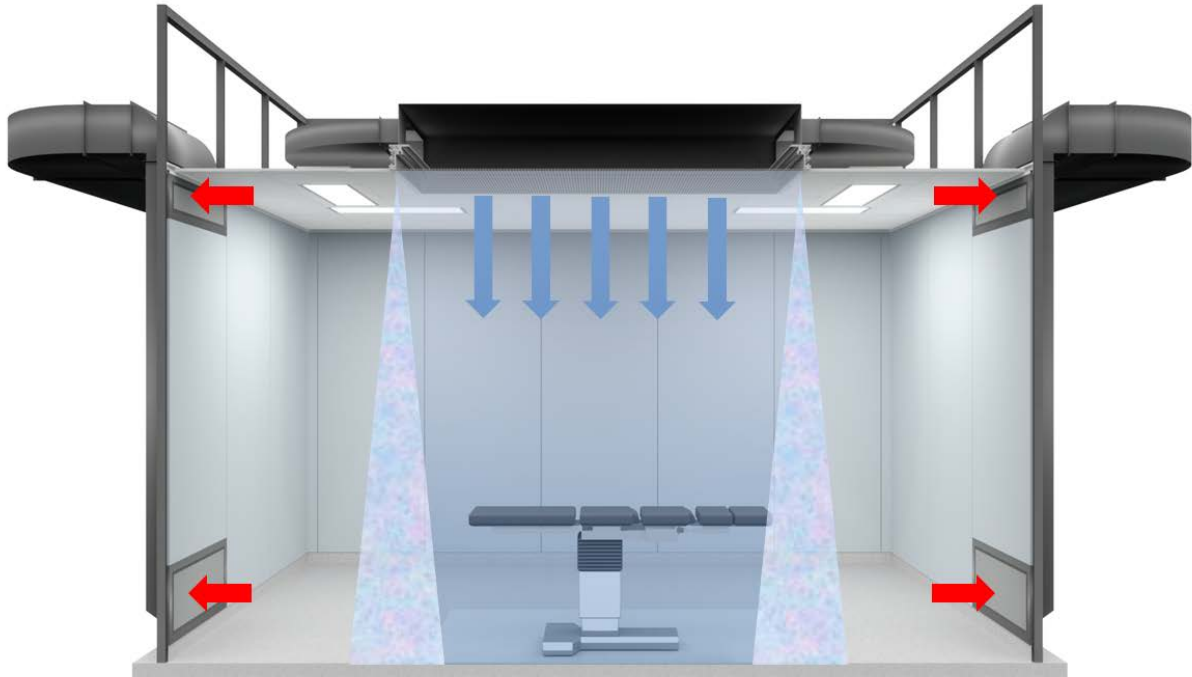
Cleanroom side	The filter frame profile is made of aluminium with a disinfectant-resistant surface coating in RAL 9010 to accommodate the particulate air filters. The particulate air filters correspond with class H14 and are assembled using a double sealing location system. A version with integrated test groove is optionally available. The fabric distributors are equipped with aluminium frame profiles that are attached to the filter frame profile without screws. A load-bearing, torsion-resistant outlet frame, suitable for the fitting of air baffles is installed, combined with an air-tight central OR illuminator feed.
Impure air side	An air-tight pressure chamber made of stainless steel or galvanised sheet steel elements is installed over the the particulate air filters. Connection supports for the outside air are built in and fixed to the pressure chamber.
Optional	Differential pressure sensor for monitoring the particulate air filters.

### Applicatin area

Application area acc. to	EN ISO 14644   ÖNORM H 6020 (2015-03-15)   DIN 1946-4 (2008-12) for medical use   VDI 2083
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### Functionality



The panel filter ceiling provides a clean air sterile area for patient, OR team and instruments. Panel filter ceilings, so-called supply air ceilings, are often used where a sufficiently large outlet section is intended to be supplied. They must be supplied from the air-conditioning system in accordance with the size of the ceiling. Supply air ceilings are characterised by maximum operational reliability and a low concentration of germs at the operating table.

The sterile air is blown into the OR protection area across the complete air throw in a laminar manner, as an option in a varying form, at a higher velocity at the centre and a lower peripheral velocity.

In addition to the operation area, the OR protection area includes the sterile clothed OR team, the patient drapes and open material and instrument tables.

The size of a LTF air outlet is determined individually by the space required by the surgeons, the staff, the type of procedure and the location of the sterile instruments.

