Class ISO 5 / ISO 7 Filtering ceilings for operating theatres

TAS-OP / TAS-FV

Characteristics	TAS-OP	TAS-FV
Classification according to ISO 14644:2016	from 5 to 7	from 5 to 7
Classification according to Fed. Std. 209 E	M3,5 a M7	M3,5 a M7
Initial differential pressure	100 Pa	100 Pa
Recommended final differential pressure	250 Pa	250 Pa

ADVANATGES

- Available in multiple sizes, offering flexibility for different room layouts
- Flat design ensures ease of cleaning and decontamination
- High resistance to cleaning and disinfecting agents, particularly in the TAS-OP version (AISI 304 stainless steel)
- Individually manufactured, tested, and packaged HEPA filters in a contamination-controlled environment
- Easily removable perforated diffuser panels allow quick and direct access to internal filters.

This ceiling-mounted filtration and air distribution system features a unidirectional vertical airflow, specifically engineered for critical environments rated from ISO Class 7 to ISO Class 5, in compliance with ISO 14644:2016.
To ensure uniform and efficient airflow across the clean zone, proper dimensioning and placement of return air grilles is recommended..

MATERIALS AND FINISH

Frame and plenum options

– **TAS-OP** AISI 304L stainless steel, white polyester powder-coated (RAL 9010)
– **TAS-FV** steel construction, painted RAL 9010 white.

Perforated diffuser panel

– Aluminium, painted RAL 9010 white.
– HEPA Filtration – Model AB, H14 efficiency as per EN 1822-1:2019, with anodized aluminium frame.

APPLICATION

Designed for operating theatres classified from ISO Class 7 to ISO Class 5, in compliance with ISO 14644:2016.

VERSIONS

- AISI 304 L stainless steel perforated diffusers
- Diffusers equipped with LV membrane technology
- Liquid gel-based sealing system for enhanced tightness
- Structural accommodation for central mounting of surgical lighting
- Optionally integrated air recirculation module for energy-efficient ventilation.

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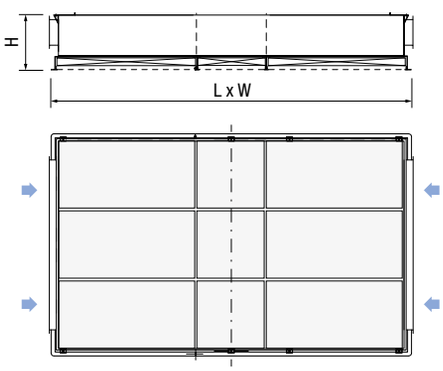
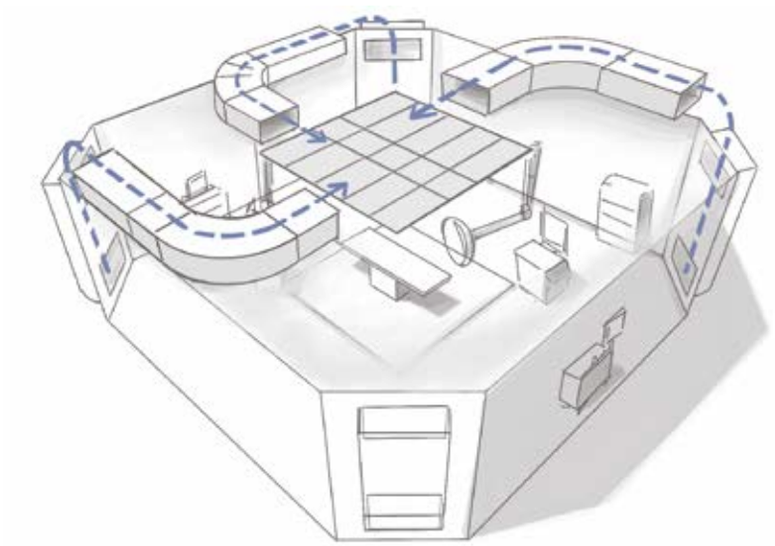
Code	Dimensions [mm]			Nominal air flow rate [m³/h]					
TAS-OP/TAS-FV	L	W	H	v_f = 0,24 m/s	v_f = 0,30 m/s	v_f = 0,38 m/s	v_f = 0,24 m/s	v_f = 0,30 m/s	v_f = 0,38 m/s
14/20	1400	2000	420	1600	2000	2500	2000	2400	3000
14/25	1400	2500	420	2200	2800	3500	2600	3200	4000
20/20	2000	2000	420	2600	3200	4000	3000	3600	4500
20/25	2000	2500	420	3500	4400	5500	4000	4800	6000
20/32	2000	3200	420	4400	5600	7000	4700	6000	7600
25/25	2500	2500	420	4800	6000	7600	5200	6400	8200
25/32	2500	3200	420	6200	7600	9700	6600	8000	10200
29/29	2900	2900	420	6800	8500	10800	6900	8600	10900
32/32	3200	3200	420	7800	9600	12000	8200	10000	12600
				WITH INSTALLATION of surgical light			WITHOUT INSTALLATION of surgical ligh		





CEILING UNIT WITH INTEGRATED RECIRCULATION

The ceiling unit with integrated recirculation modules offers maximum flexibility for both designers and installers.

Each system includes:

- A filter ceiling unit with H14 HEPA filters featuring differentiated airflow velocities
- High-efficiency fan modules (quantity depends on the recirculated flow rate)
- Sound-attenuation sections to reduce both transmitted and radiated noise
- Wall-mounted air intake grilles positioned at both floor and ceiling level in each corner of the room.

This configuration is designed to deliver a sterile air diffusion system, interfacing seamlessly with the fresh air supply while managing independent room-level recirculation.

The system fully complies with ISO 14644-1:2016, effectively minimizing airborne microbial concentrations (CFU).

To ensure optimal air distribution, DEC S model return grilles or air return columns - optionally equipped with pre-filters - must be properly dimensioned and located within the room.