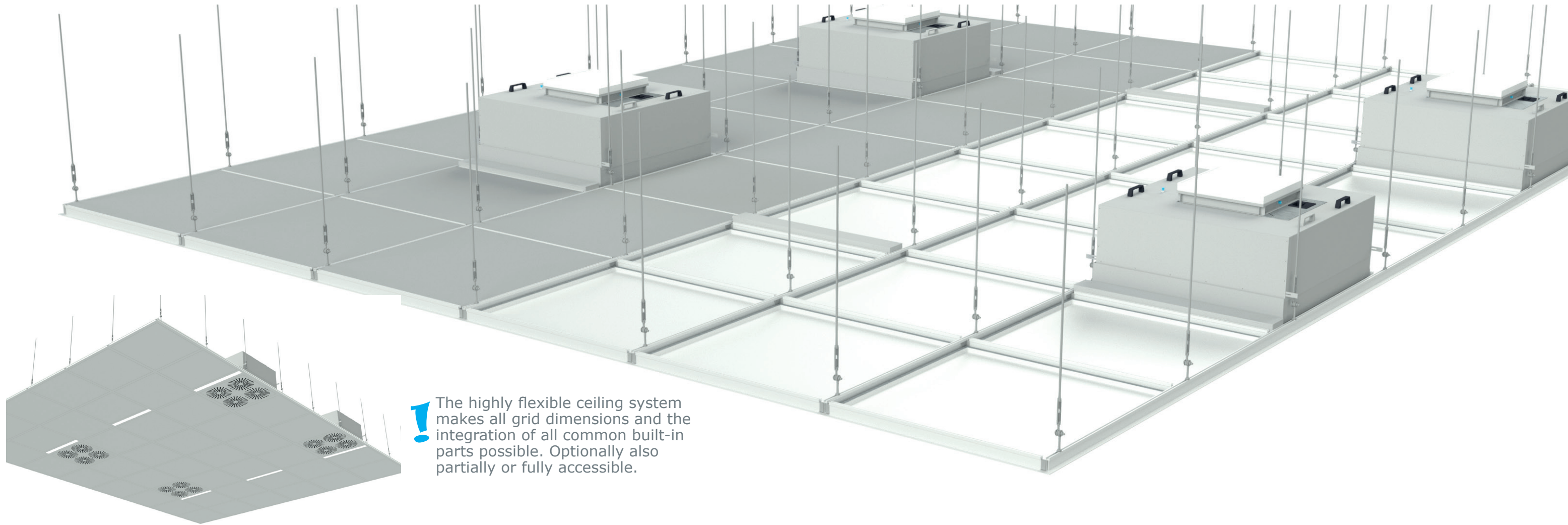


T-grid

Cross band grid ceiling



Cleanroom ceiling systems



! The highly flexible ceiling system makes all grid dimensions and the integration of all common built-in parts possible. Optionally also partially or fully accessible.

As a system supplier, **clean-tek** has various cleanroom ceiling systems developed in-house, all of which are characterised by their flexibility and maximum modularity.

Thanks to in-house production and components that have been tried and tested over many years, the company can offer an optimal cleanroom solution for almost any application.

Since ceiling systems in particular are a key success factor in the construction of cleanrooms, **clean-tek** has invested decades of development work in its own cleanroom ceiling systems.

The **T-grid cross-band grid ceiling** is a highly flexible ceiling system, which can also be designed as a partial or fully walkable ceiling system with the appropriate suspension.

The system complies with the high requirements of the EG GMP guidelines as well as the DIN EN ISO 14644.

Features and benefits:

- Optional full-, partial-, or non-walkable
- Complies with FDA, GMP, DIN EN ISO and WHO requirements
- All elements can be interchanged independently of adjacent bays
- Maintenance of common built-in parts possible from above or from the cleanroom side
- Compatible with all common installation parts
- Highly flexible. All grid dimensions are possible
- Suitable for all cleanroom classes
- Any cleanroom area can be realised
- Future-proof investment thanks to a 10-year subsequent delivery guarantee for all conversion and supplementary components
- Easy to clean and resistant to disinfectants

T-grid cross band grid ceiling

clean-tek®



Material information:

Beam	Aluminium, powder-coated Optionally aluminium anodised (EV1)
Non-walkable ceiling panels	Galvanised sheet steel, 1.00 mm Stainless steel 1.4301 (V2A), 1.00 mm Stainless steel 1.4401 (V4A), 1.00 mm Anodised aluminium (EV1)
Walk-on ceiling panels	Galvanised sheet steel, 2.00 mm Alternative: Sandwich panel with a filling of Aluminium honeycomb
Colour	Standard RAL 9010 Other colours on request
Coating	Coil coating Powder coating Ground (stainless steel only)
Suspension	Threaded rod with turnbuckle Hot-dip galvanised
Sealing	Cleanroom silicone Alternative: Hybrid sealant
Wall connection	Aluminium powder-coated RAL 9010

Construction:

The T-grid cross-grid ceiling is a highly flexible cross-grid system in which the beams form an upside-down T-shaped profile.

Typically, the girder system is aligned in one axis. Transverse ledgers made of the same profile material are installed between the beams.

The ceiling system is suspended from the beam profiles or from the transoms. This offers maximum flexibility with regard to the positioning of the suspension. The suspension can be moved along the along the ceiling grid.

The ceiling grid can be produced in any grid dimension. However, standard dimensions are recommended, as some third-party built-in parts are based on these standard dimensions.

The ceiling panels are inserted into the ceiling grid from above. Flush installation is possible on request. All built-in parts such as luminaires, filter fan units and ceiling panels are installed between the beams, filter fan units and ceiling panels.

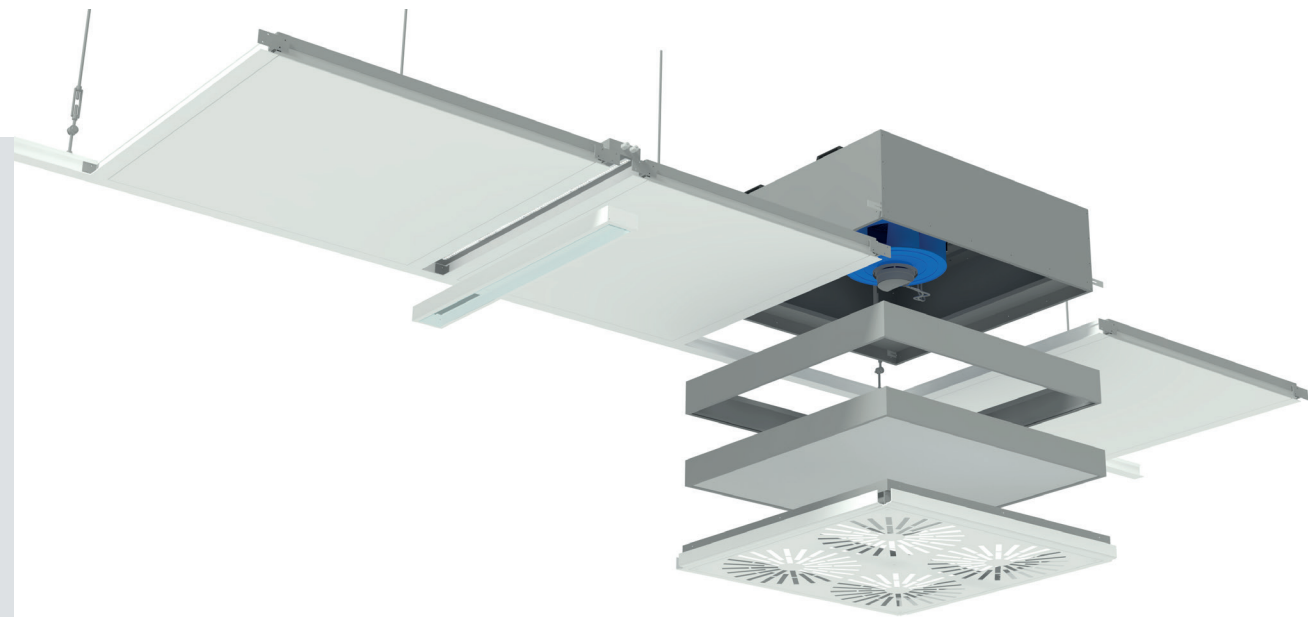
The T-grid ceiling can be designed so that it is not accessible, fully accessible or partially walkable.



T-grid cross band grid ceiling

Technical data:

Beam length	max. 6.000 mm
Beam width	58 mm
Ceiling height	65 mm
Suspension grid walkable	1.200 x 1.200 mm
Suspension grid not walkable	Freely selectable, but one axis min. 1.200 mm
Standard grid	600 x 1.200 mm 900 x 1.200 mm 1.200 x 1.200 mm Special grid dimensions can also be implemented
Compressive strength	±200 Pa
Walkability	Optional 150 kg/m ² live load
Weight of ceiling	31 kg/m ² accessible version 18 kg/m ² non-walk-in version
Inspection opening	Clean room side
Design of ceiling panels	Optionally flush or Not flush



clean-tek®

Installation parts and options:

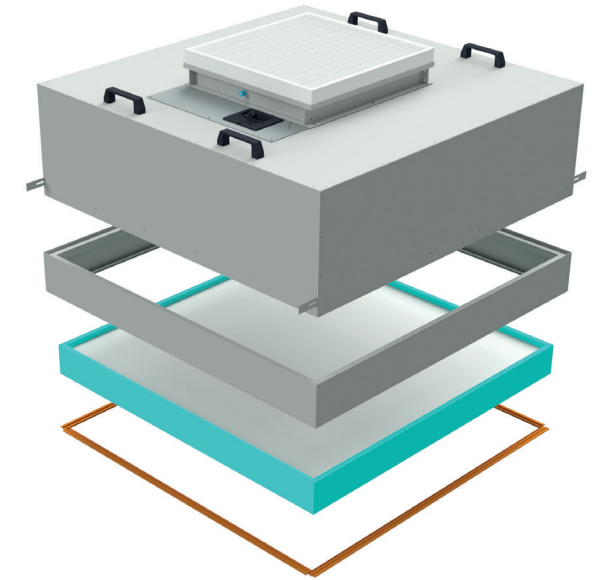
clean-tek offers all common installation parts. These include in particular:

Fan Filter Unit / Filter Boxes / Recirculation Modules

clean-tek offers factory-made FFUs to match the ceiling system.

For the integration of third-party products, an interface clarification by means of a detailed drawing is required.

Also filter boxes, which are connected to the on-site ventilation system, as well as special recirculation modules, can be integrated into the T-grid cross band grid ceiling after individual detailed planning.



Air diffusers

Ceiling diffusers are used for the ventilation of the clean room. To guarantee flush installation of each brand, clean-tek also supplies the corresponding adapter frame if required.

clean-tek supplies according to customer requirements:

- Swirl diffusers
- CG diffusers (laminators)
- Perforated plates



Laminar flow fields

By means of several filter units arranged in a row with corresponding air outlets (CG distributors) and corresponding room partitions (walls or PVC curtains), individual areas can be supplied with laminar air flow as protective zones.

With regard to possible sources of interference in this area requiring special protection, individual consultation and planning are always required.



T-grid cross band grid ceiling

LED cleanroom luminaires

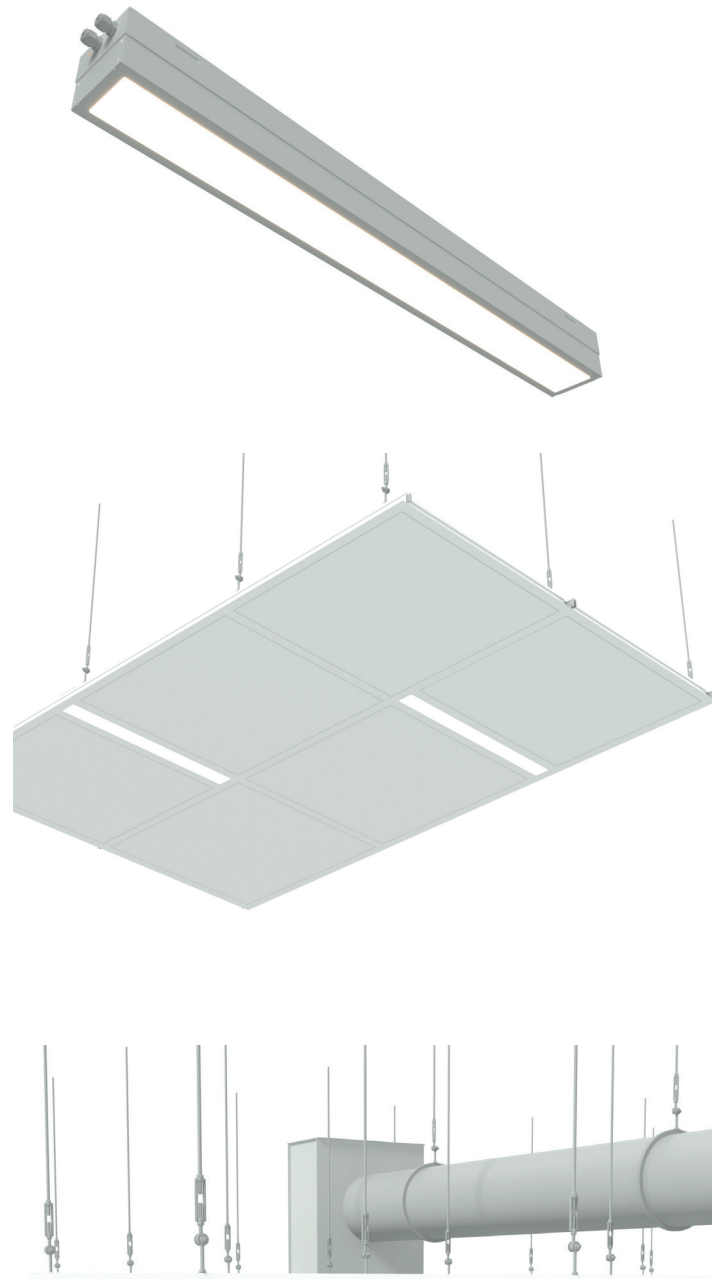
Matching the ceiling system, **clean-tek** offers the factory-made rectangular LED recessed luminaire, **TGL** for short.

The TGL is inserted into the ceiling grid in a similar way to a ceiling panel. A cut-out in the ceiling panel is not necessary.

Alternatively, a factory-made square LED recessed luminaire, **EBL** for short, can also be integrated.

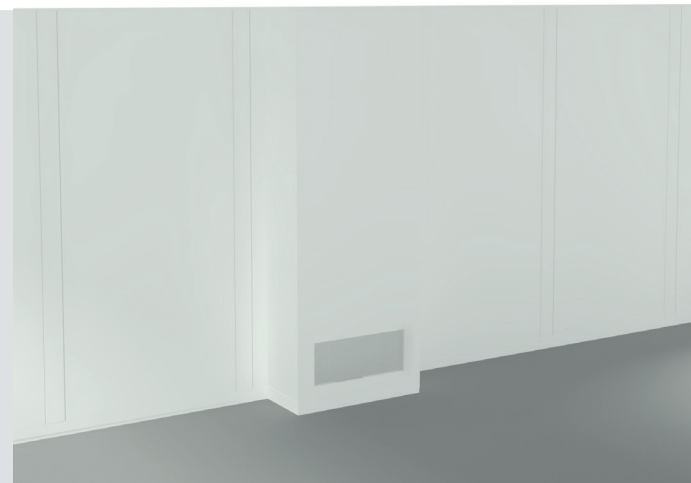
However, this requires a cut-out in the ceiling system, as well as an additional set-up set for the flush integration of the luminaire into the ceiling cut-out.

For the integration of **external lighting**, the interface must be clarified by means of a detailed drawing.



Duct routing of return air shafts

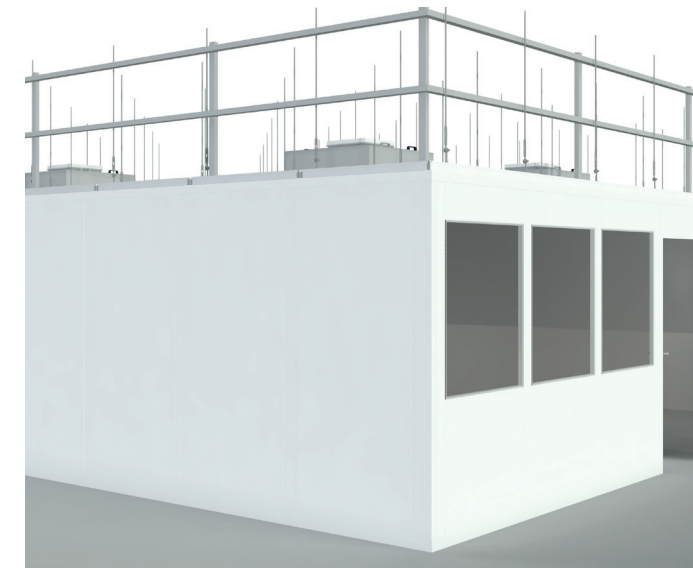
After individual planning of the interface between the ceiling system and the ventilation duct, **clean-tek** also offers return air ducts for integrating the exhaust air to the ventilation system.



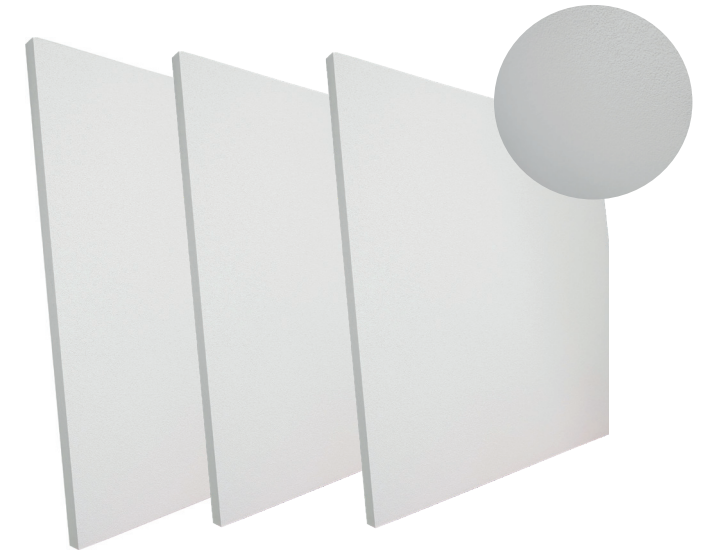
Further options:

Sound insulation

On request, a special sound insulation panel can be laid in the false ceiling. The leakage of particles is reliably prevented by the firm sheathing with a suitable plastic foil.



clean-tek[®]



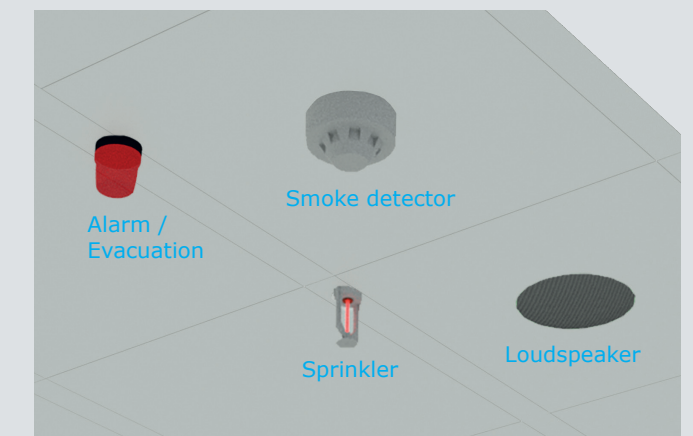
Fall protection

To avoid hazards in accessible suspended ceilings, it often makes sense to install a fall protection system. The design always requires individual detailed planning.

Installation of fire detection equipment

Sprinklers and fire detectors can be integrated at any point in the ceiling panel.

With regard to the design, individual detailed planning is always required.



Clean-tek stands for first-class cleanroom technology from our own production.

As a pioneer in cleanroom technology, **clean-tek** has played a key role in shaping the development of modern cleanroom technology since 1986.

Tradition, innovation and experience are the values that still characterise **clean-tek** today and at the same time the key to constant growth and success.

Services

- Engineering, implementation and service of cleanroom systems
- Development of customised special solutions
- In-house production of all essential cleanroom components
- Interface management during the entire project
- Consulting and training
- On request, delivery of turnkey cleanroom systems as a general contractor
- Consultation and training

Products

- Cleanroom ceiling systems
- Cleanroom wall systems
- Cleanroom door systems
- Laminar flow modules
- Weighing units and sampling cabins
- Decontamination showers
- Accessories and components among others:
 - Material pass-throughs
 - Lights
 - Filter fan unit

clean-tek Reinraumtechnik GmbH

Steinbeisstraße 4 · 71272 Renningen · Germany
Phone: +49 7159 / 9312-0 · info@clean-tek.de

clean-tek Reinraum- und Hospitaltechnik AG

Voltastraße 100 · 4056 Basel · Switzerland
Phone: +41 61 511 / 89-50 · info@clean-tek.ch