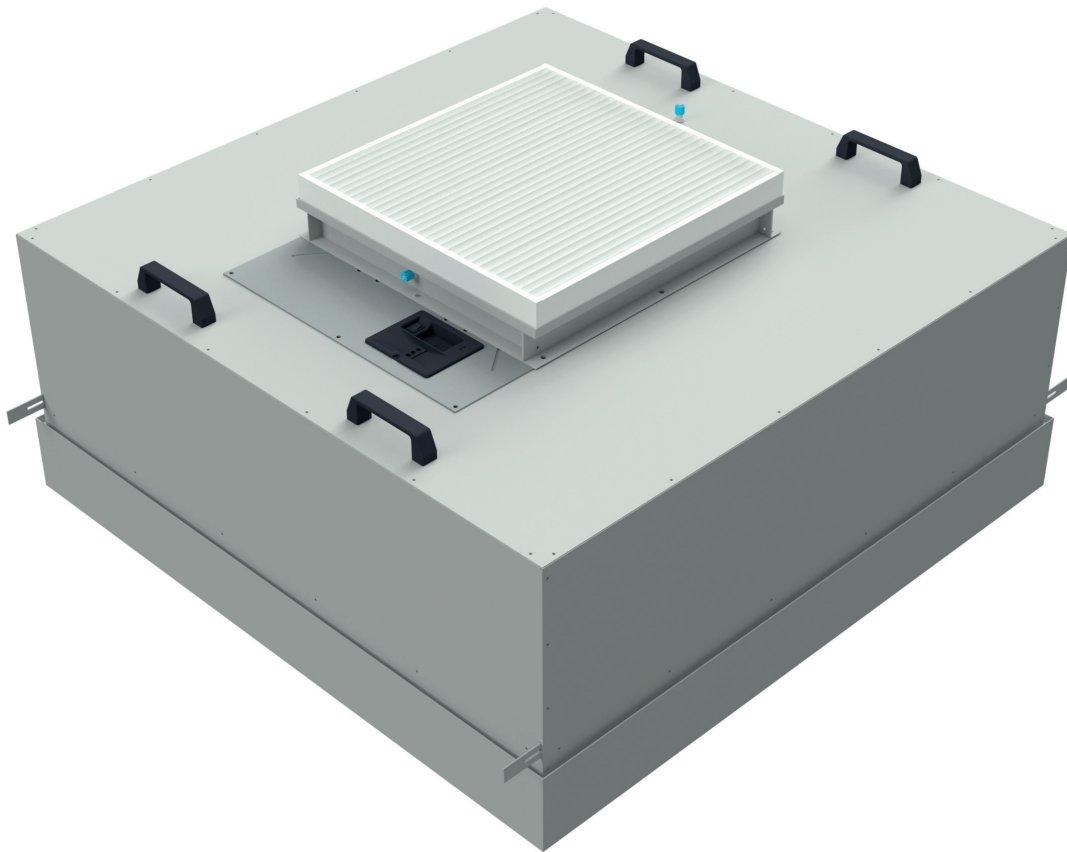
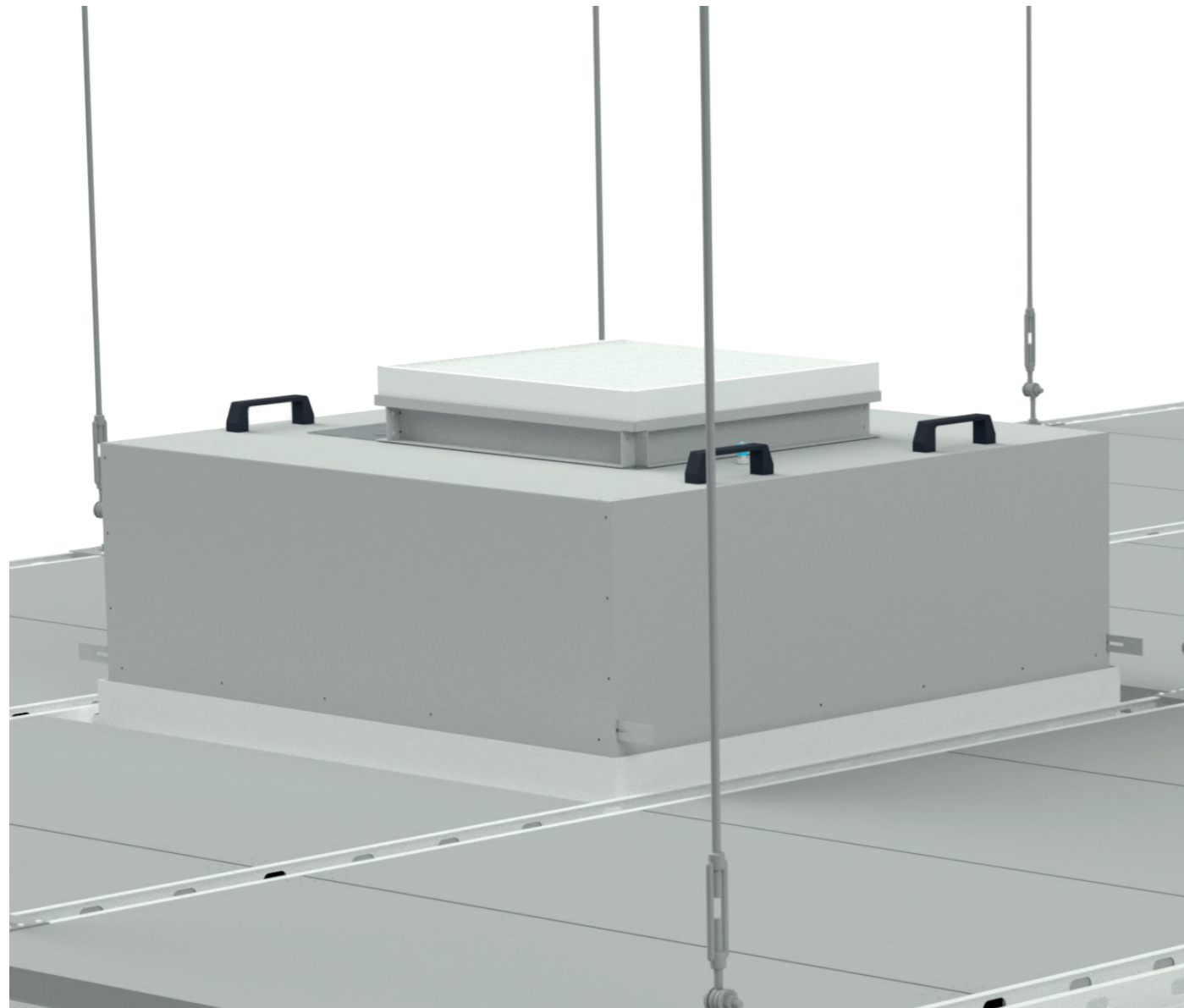


Filter Fan Unit (FFU)

Filter fan unit for clean air generation



Accessories and components



As a system supplier, clean-tek has different, self-developed cleanroom ceiling systems with precisely designed installation modules, all of which are characterised by 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 filter and air purification modules are a key success factor in the construction of cleanrooms, clean-tek has invested decades of development work in its own Filter Fan Units (FFUs).

The **Filter Fan Units (FFUs)** produce high quality supply air, reducing particle concentrations in cleanrooms or individual protected zones within a cleanroom facility.

In the upper intake area, the air is optionally cooled by an attached cooler and optionally also pre-cleaned by a pre-filter. Afterwards, the intake air is finely cleaned by a HEPA filter and introduced into the cleanroom as a low-turbulence displacement flow.

Features and benefits:

- Generates low-turbulence displacement flow or turbulent mixed ventilation
- Standard sizes and special dimensions - enables integration into almost all common cleanroom ceiling systems
- Filter change and maintenance of the fan possible from the cleanroom side and from above
- Energetically optimised fans
- Sound-optimised design
- Integrated measuring devices
- High mechanical stability

Classic applications:

- Classic cleanroom ventilation with turbulent mixed ventilation or low-turbulence displacement flow
- Special protection zones with laminar air flow
- Weighing areas
- and much more

Filter Fan Unit (FFU)

Construction:

The FFU consists of an aluminium housing and has a compact, highly efficient EC fan with backward curved blades. Sound absorber elements are integrated inside the housing to reduce sound emission. On the air inlet side, the FFUs have a handle guard. If a pre-filter is integrated, an adapter frame is installed on the FFU.

The speed control of the motor is via MODBUS. Alternatively, the EC fan can be controlled continuously with a 0-10 VDC-signal.

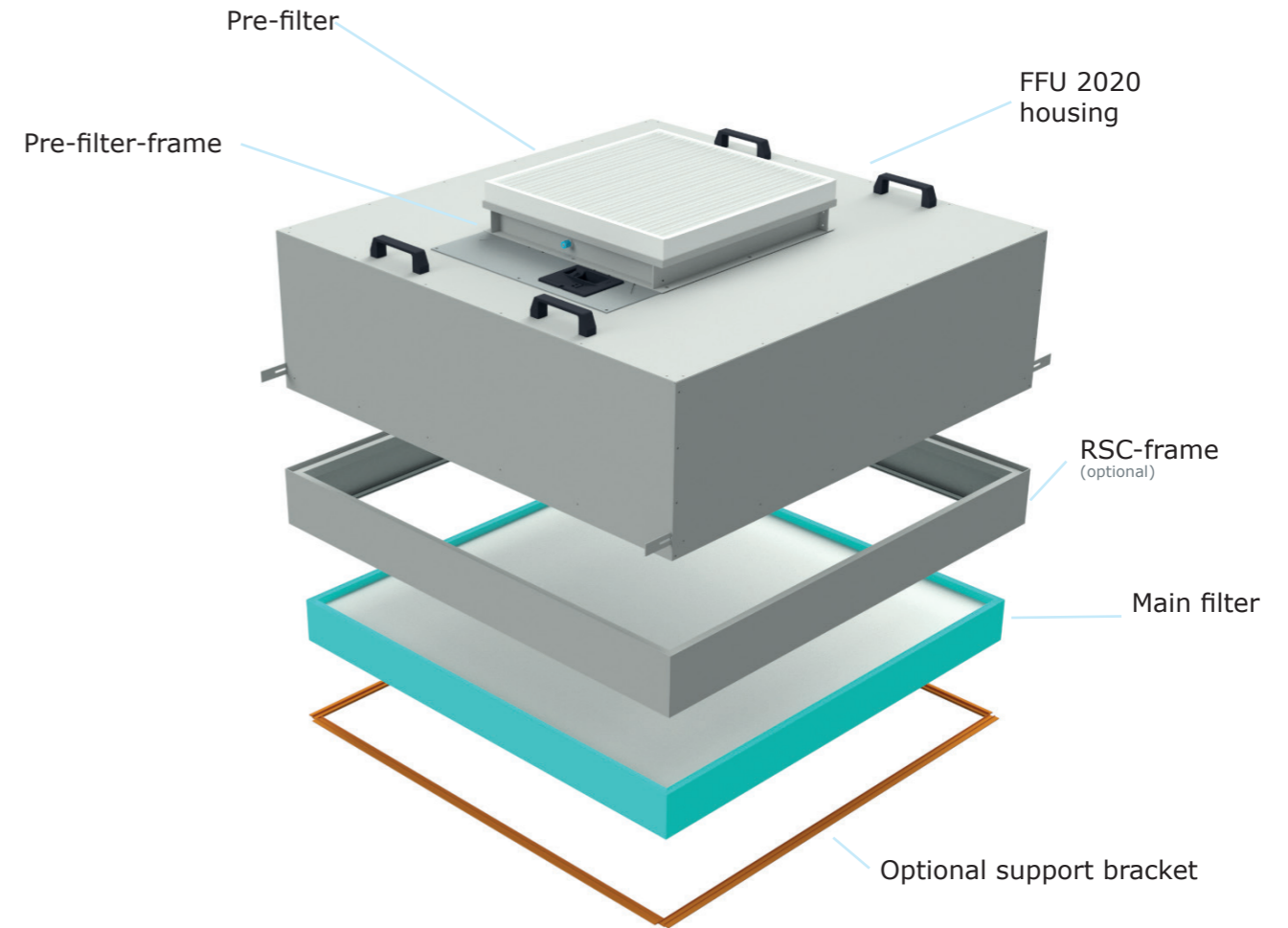
In a typical application (cleanrooms up to class 3 according to DIN EN ISO 14644-1, or class A according to EC GMP guidelines) HEPA or ULPA filters are used, according to the respective requirements.

Material information:

Housing	Aluminium 1.50 mm <i>Alternative: Sheet steel, galvanised 1.50 mm Stainless steel 1.4301 (V2A) 1.50 mm</i>
Colour	Standard RAL 9010 Other colours on request
Sealing	Hybrid sealant

Installation parts and options:

- Integration of an air cooler
- Integration of a pre-filter
- Air speed control, e.g. via a sensor
- Air outlet optionally via swirl diffusers, perforated plates or CG distributors
- Filter differential pressure measurement
- Generation of LF areas through the stringing together several FFUs with CG distributors and corresponding partitions (PVC curtains or wall systems).
- Special sizes possible
Min. 520 mm
Max. 1400 mm



Technical data:

Standard sizes

Type	Axle spacing Ceiling [LxB]	Housing dimension [LxB]	Filter dimension [LxB]	Outflow velocity [m/s]	Nominal volume flow [m³/h]	Filter diff. pressure [Pa]	Maximum pressure [Pa]	Sound pressure level [db(A)]	Max. Speed Fan [min ⁻¹]	Electrical Connection [V/Hz/~]	Power consumption [kW]	Starting current [A]	Weight [kg]
FFU 12-12	1200x1200 mm	1120x1120 mm	L < 1138 mm B < 1138 mm	0,45 m/s	2100 m³/h	120 Pa	375 Pa	55 db(A)	1470 min ⁻¹	200-277 V 50/60Hz 11~	Max. 0,50 kW	1,90-2,60 A	35 kg
FFU 12-09	1200x900 mm	1120x 820 mm	L < 1138 mm B < 838 mm	0,45 m/s	1550 m³/h	120 Pa	410 Pa	52 db(A)	1470 min ⁻¹	200-277 V 50/60Hz 11~	Max. 0,50 kW	1,90-2,60 A	30 kg
FFU 12-06	1200x600 mm	1120x520 mm	L < 1138 mm B < 538 mm	0,45 m/s	1000 m³/h	120 Pa	435 Pa	49 db(A)	1470 min ⁻¹	200-277 V 50/60Hz 11~	Max. 0,50 kW	1,90-2,60 A	25 kg

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

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