

Laminar-Flow-Modules (LFM)

For partial increase of the cleanliness class



Accessories and components



Features and benefits::

- They generate a low-turbulence, unidirectional airflow (laminar flow)
- Modular design enables simple but effective generation of additional protection zones in the clean room
- Optimum product protection against airborne particles
- Flush installation in the clean room ceiling possible
- Installation directly below the clean room ceiling possible
- Elevated solutions possible
- Operates independently of the clean room ventilation system
- Easy maintenance through inspection openings
- GMP-compliant design
- Proven product for filling and packaging lines
- Easy to clean and resistant to disinfectants
- Extensive control and monitoring functions
- Energy-optimised fans
- Integrated connection nozzles for aerosol feed and raw gas measurement

As a system supplier, clean-tek manufactures laminar flow modules that provide protection against airborne particles in a controlled production environment. Thanks to our own production, we offer you a modular system with which we develop optimal cleanroom solutions. Individual special solutions are part of our standard. Thanks to the flexibility of our systems, we can guarantee almost limitless variability.

The clean-tek Laminar-Flow-Modules enable simple and economic retrofitting of LF fields within a cleanroom system. The flexibility of the modules means that the layout of the protected area can be changed at any time. In addition, the module offers numerous installation and mounting options independently of the existing ceiling system. The LFM generates a low-turbulence laminar flow that reliably prevents contamination of products by airborne particles. They are frequently used above sterile filling lines in the pharmaceutical industry.





Material information:

Housing	Aluminium, 1.50 m
Colour	Rawly
Air curtains / lateral boundary	Static-free vertical blinds (ESD)

Technical data:

Length	Customized		
Width	Customized		
Installation height (min.)	800 mm		
Controllable air discharge speed	0,25 - 0,54 m/s		
Speed control	Optionally with a hot-wire anemometer		
Dimensions per filter module	1120x1120mm	1120x820mm	1120x520mm
Weight per filter module	35 kg	30 kg	25 kg
Volume flow	2100 m ³ /h	1550 m ³ /h	1000 m ³ /h
Power (max.)	0,5 kW	0,5 kW	0,5 kW
Sound pressure level	55 dB(A)	52 dB(A)	49 dB(A)
Standard filter	H14		
Filter types	Fibre glass PTFE		
Air outlet	Perforated plate CG distributor		

Construction:

The LFM consists of an aluminium grid system for the integration of FFUs, lighting and sterile air distributors.

It is designed individually according to customer requirements, optionally with a plenum housing made of stainless steel.

The panels can be opened without screws and allow quick access for necessary maintenance work.

All commercially available filters can be used.

The LFM is either integrated flush into the cleanroom ceiling or suspended directly below it.

The LFMs are equipped with their own autonomous control system.

Built-in components and options:

- Lateral boundary consisting of antistatic lamella curtains, PVC cleanroom curtains, safety glass or a partition wall system
- The module offers numerous possibilities for customer-specific special solutions
- Elevated version possible
- Optionally with integrated lighting
- Optionally with air cooler
- Optional with pre-filter
- Optional installation of probes for monitoring
- Generation of large-scale LF areas by stringing together several LFM modules

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