

High Purity Filtration Solutions

Ceiling-mounted HEPA Air Purifier

AstroPure CLASSmate - Ceiling-mounted Clean Air Supply System to minimize virus-carrying aerosols



Introducing AstroPure CLASSmate

THE CLEAN-AIR SUPPLY SYSTEM FOR ENVIRONMENTS IN WHICH PARTICULARLY HIGH DEMANDS ON AIR QUALITY ARE NOW AND IN THE FUTURE INCREASINGLY CRITICAL.

Indoor air quality (IAQ) is a huge challenge for schools, universities or any other building where people meet and work. The age and overall condition of many of these buildings is one reason for that, as there are limited opportunities to exchange air by ventilation, i.e. through opening windows and doors. Especially in the cold season, this is not possible without serious interference in the daily routine.

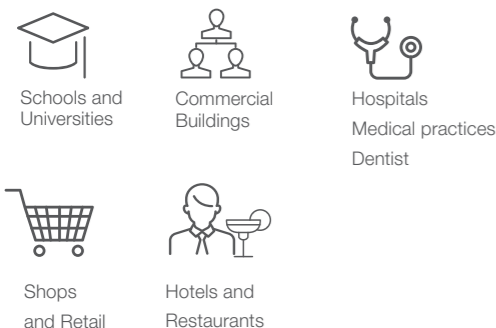
The use of air purification systems with efficient HEPA filtration can help here, providing clean air from which all viruses and contaminants are removed.

Product description

AstroPure CLASSmate is designed on the basis of a so called Fan Filter Unit and was developed in accordance with the applicable principles and design guidelines that are normally only found in clean rooms, for example in the pharmaceutical industry. This enabled us to work with the best fans on the market in respect to maintenance, energy consumption, robustness, flow and sound level.

The AstroPure CLASSmate is a totally self-contained stand-alone Recirculation Unit for areas where additional, extra high, filtration performance is needed against any type of contamination including viruses. When required, the unit can be connected to an existing system.

Typical applications



The air inside buildings can contain

- Viruses, bacteria and by-products
- Moulds, spores, pollens
- Carbon monoxide, radon, volatile organic compounds (VOCs)
- Vehicle engine exhaust, exhaust from industrial plants
- Asbestos, clays, elemental particles and man-made fibres

Features & Benefits at a glance

- HEPA filtration up to efficiency class H14
- Long service life of the HEPA filters through effective pre-filtration
- Developed with an integrated variable speed fan (electronically commutated)
- Classmate locks the sound into the housing and reduces the sound level
- Easy to install, use and maintain
- CE-conform, design according to VDI 6022

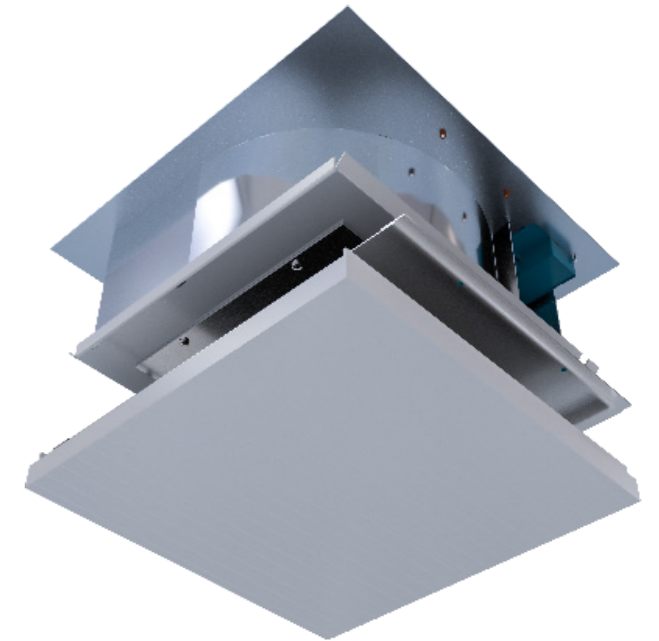


MEGAcel II eFRM HEPA filter

The heart of the unit is AAF's MEGAcel II filter with eFRM media. Besides HEPA H14 filtration efficiency this filter provides an exceptional low pressure drop leading to low energy cost and very low sound levels.

Compared to conventional HEPA filters, it is extremely robust. This makes the filter easy to handle and maintain, even for inexperienced users.

As alternative to the filter with eFRM media, AAF offers traditional glass fibre filters with the same H14 efficiency that create the same air cleanliness. A 65 mm mini pleat media pack that is folded and tested according to EN1822:2019



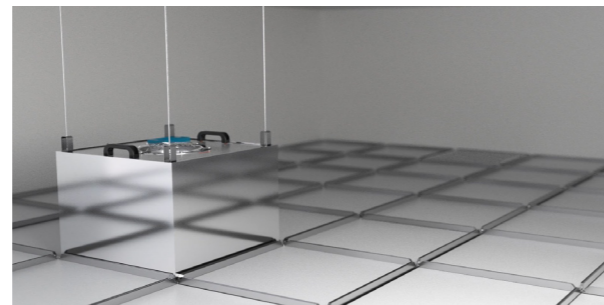
Technical data table

Nominal Size	FFU 66
Airflow m ³ /h	520
Nominal dimension L x W (mm)	570 x 570
Height with Integrated filter (RSC) (mm)	442
Power supply	220 - 240V 1 Phase 50/60 Hz
Power consumption	0,50 kW
Weight including filter	29 kg
Total static pressure (Pa)	60
Sound pressure Level at 0,45 m/s (dB(A))	45
Filter Media Types	Glass fibre or eFRM media
Efficiency	Filter class H14. 99,995% efficiency on MPPS tested according to EN 1822:2019. Individual test certificate included
Installation Options	Suspended from upper ceiling or placed into a ceiling
Accessories	Pre-filter / AMC Filter / Diffuser
Control Platform	PC / PLC / Potentio meter

Unique advantages of ceiling mounted devices

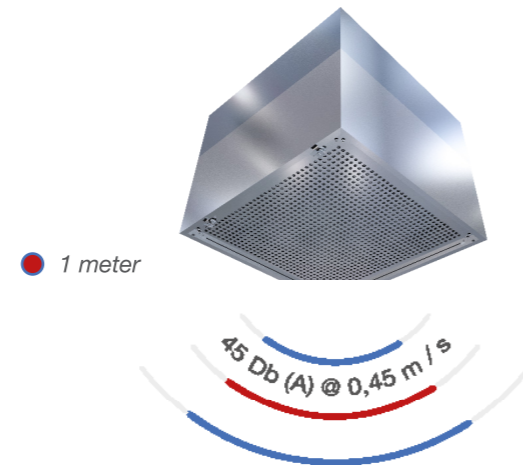
Most air purifiers are designed to be placed on the floor. The AstroPure CLASSmate is different. The unique air tight design is designed to be installed on the ceiling. This might look evident, but offers unique advantages.

- Enables ideal positioning in the room without occupying usable area because unit and filter are air tight
- Modular construction makes other sizes easy to manufacture
- Impurities are immediately driven downwards to the floor protecting people instantly and more effective than room cleaners that push the impurities upwards
- Optimized noise-isolating construction in combination with location in the ceiling ensures an imperceptible, whisper-quiet, operation
- Optimized and quicker distribution of the cleaned air to the room
- Protection against improper handling or undesired adjustment of the device settings



Whisper-Quiet Operation

Reducing distractions and disruptions are vital in classrooms, libraries, hospital rooms, offices and other environments. At a distance of 1 meter the sound pressure level is at 45 Db (A) @ 0.45 m / s, which is far below a normal conversation. In a standard classroom the distance from the occupant to the CLASSmate can be 2 meters or more.



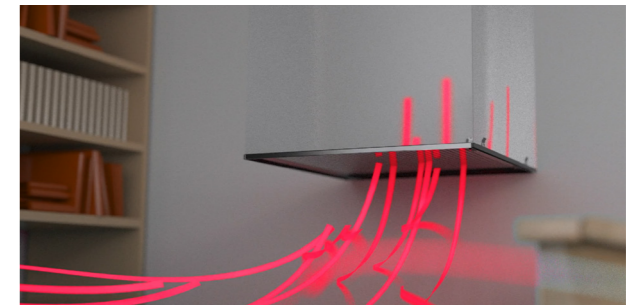
Extremely variable suspension and assembly options

Depending on the available ceiling height, the AstroPure CLASSmate can be fully integrated, partially integrated or sub-mounted in the ceiling or upper structure. If there are no mounting frames, the AstroPure CLASSmate can also be installed independently in the ceiling using turnbuckle with a treaded rod.

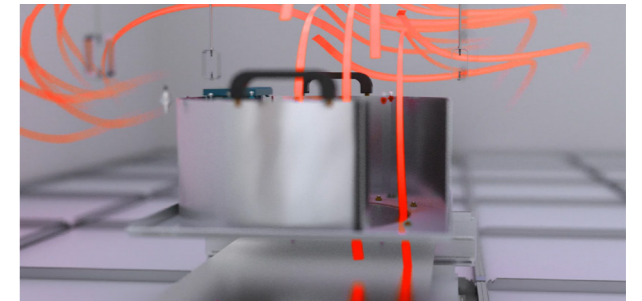


AstroPure Classmate in Operation

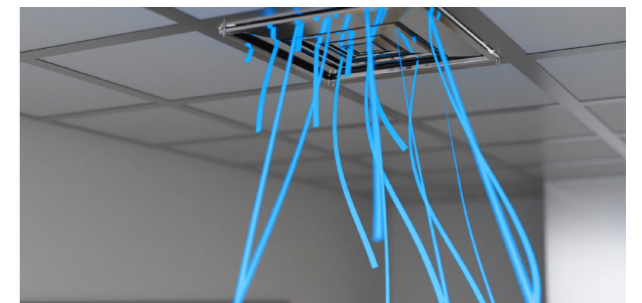
Air quality can deteriorate quickly due to intensive use of a room, caused by a multitude of different contaminants such as viruses, bacteria, spores and other fine particles. This is not only reducing human comfort but also increases the risk on possible diseases.



The fan of the AstroPure CLASSmate generates an airflow within the room. This ensures that potentially contaminated air reaches the AstroPure CLASSmate via an intake duct or ceiling. The risk of inhaling impurities by humans is highly reduced as the airflow with contaminated air moves away from the people unlike room purifiers that are placed in the room.

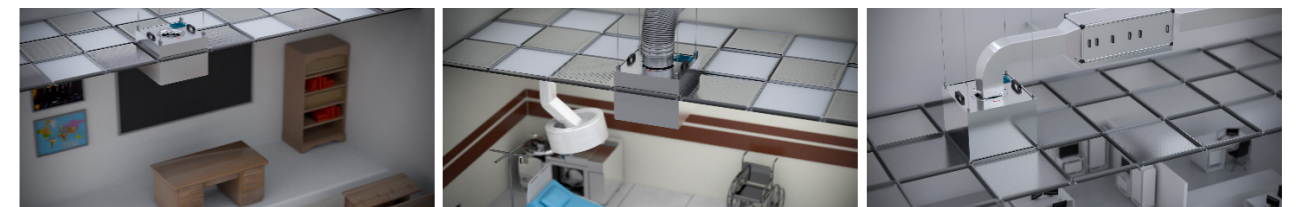


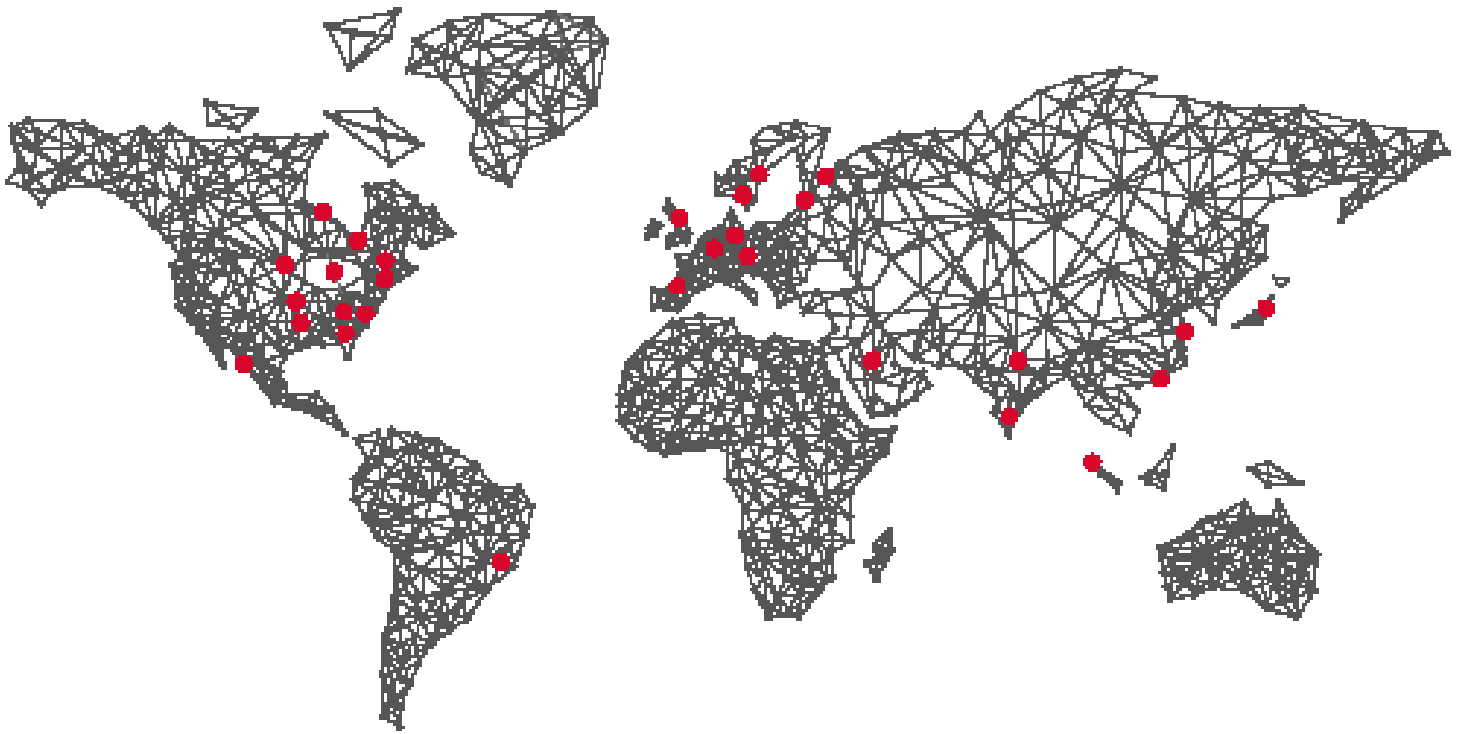
The MEGAcel II eFRM HEPA filter or traditional glass fiber filter cleans then cleans the air from harmful particles such as viruses. The cleaned air is released back into the room, completely free from any contaminant.



Installation examples

AstroPure CLASSmates creates and maintains good and healthy air at places where we learn, work and meet by bringing cleanroom technology into everyday life.





AAF International Plant Locations

AAF, the world's largest manufacturer of air filtration solutions, operates production, warehousing and distribution facilities in 22 countries across four continents. With its global headquarters in Louisville, Kentucky, AAF is committed to protecting people, processes and systems through the development and manufacturing of the highest quality air filters, filtration equipment, and associated housing and hardware available today.

Contact your local AAF representative for a complete list of AAF Air Filtration Product Solutions.

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