



Virus-free air in
buildings
Air filter upgrade
in HVAC systems

Stay safe in the cold season Reduce the risk of infection



H13 HEPA filters¹
capture more than
99.95%
of viruses, bacteria &
other micro-organisms



Maximum protection
even in recirculation
mode



Half the pressure drop
of conventional HEPA
filters



Fire protection
according to EN 15423
and VDI 3803-4



Low power consumption
through optimized
media design

Your expert development partner

From HEPA upgrades to your HVAC system, air purification systems or real-time indoor air monitoring devices, MANN+HUMMEL is your development partner of choice for healthy air quality.

THE THREAT ON THE HORIZON

With winter approaching the threat of COVID-19 increases exponentially. People will once again spend more time indoors, where social distancing is more difficult and viruses linger in the air – especially when that space is warmed by an HVAC system in energy-saving recirculation mode.

The good news is that that HVAC system could be your secret weapon in the fight against COVID-19. But only if the filtration system is configured to capture viruses.

THE SECRET TO VIRUS-FREE INDOOR AIR

In Germany, the Federal Institute for Occupational Safety and Health recommends the use of HEPA filters in recirculation mode to reduce the risk of transmission of infections. If you've always considered HEPA filters to be too expensive or not suitable for HVAC systems – it's time to think again.

Nanoclass Cube Pro Membrane is a new HEPA filter proven in cleanroom environments, but developed for use in HVAC systems too. The H13 model separates more than 99.95% of viruses, bacteria and other micro-organisms, and fulfills all the requirements for use in HVAC systems – even in recirculation mode.

A QUICK AND EASY UPGRADE

Nanoclass Cube Pro Membrane comes in various standardized dimensions so you won't need to retrofit or convert your air handling unit (AHU). And its low pressure drop means your HVAC energy costs will remain at a similar level to your existing system – they may even be lower.

This makes protecting your customers, team and visitors with cleanroom-quality supply air a quick, easy and cost effective process.

[Learn more about our anti-COVID filtration systems](#)

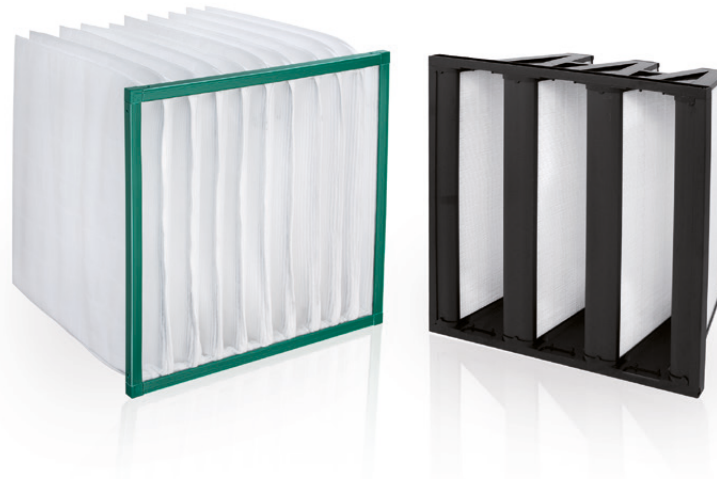


Easy upgrade For anti-viral indoor air

Recent studies show that H13 filters in combination with an adequate pre-filter deliver the filtration efficiency for supply air at cleanroom levels. Depending on the application and required air cleanliness, the configuration can also be upgraded to H14.

AIRPOCKET EF First-stage filter

With its multi-layer structure and built-in prefilter, Airpocket EF is the perfect companion for HVAC HEPA filters. Its high removal efficiency captures larger particles to protect the downstream HEPA. While its extremely low pressure drop means Airpocket EF achieves the highest A+ energy rating and minimizes the power consumption of the entire HVAC system.



NANOCLASS CUBE PRO MEMBRANE Second stage HEPA filter

Everything about Nanoclass Cube Pro Membrane makes it the ideal choice for upgrading to HEPA-quality air. It comes in a variety of sizes and a standard compact filter form – meaning it fits all commonly-used frames and AHUs. Its rigid and robust frame means that you don't need to be a cleanroom specialist to install it. And Nanoclass Cube Pro Membrane's cleanroom pedigree means that you can count on it to deliver virus-free air into your building – reliably and consistently.

AIRPOCKET EF	TECHNICAL DATA	NANOCLASS CUBE PRO MEMBRANE
ePM1 65% ¹ / F7 ²	Filter Class	≥ H13 ³
592 x 592 x 635 mm	Dimensions	592 x 592 x 292 mm (other dimensions available on request)
10	Number of Pockets	-
3,400 m ³ /h	Air Flow Rate	3490 m ³ /h (H13) or ≤ 2800 m ³ /h (H14)
65 Pa	Pressure Drop	225 Pa
840 kWh/year	Energy Consumption	-
A+	Energy Class	-

¹According to ISO 16890. ²According to EN 779. ³According to ISO 29463 & EN 1822.

Virus-free air Doesn't have to cost more

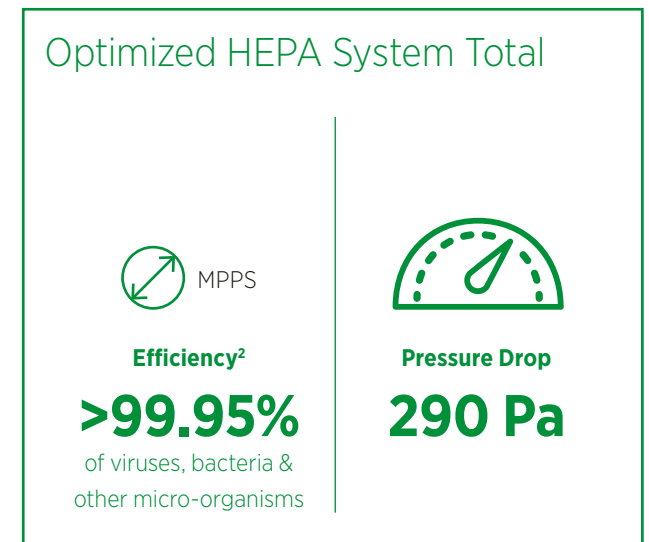
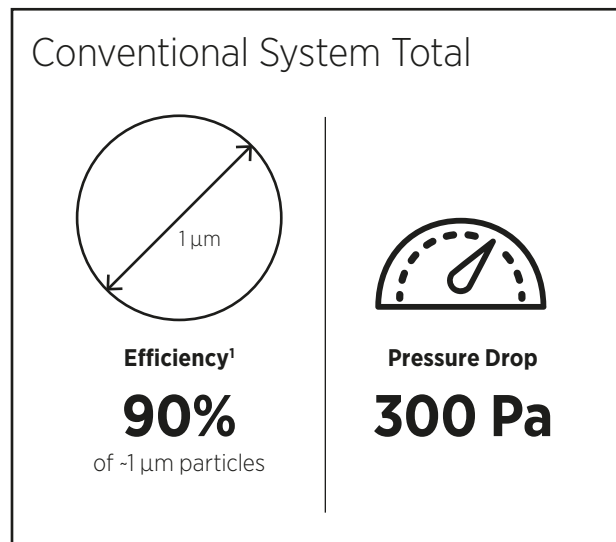
COMPARING THE COST - BEFORE AND AFTER

Both Airpocket EF and Nanoclass Cube Pro Membrane feature industry-leading pressure drop performance. And, as Airpocket EF also protects the HEPA filter stage with its high dust capacity, switching to virus-free air doesn't have to mean higher operating costs.

Here's how a typical HVAC filtration configuration compares to the MANN+HUMMEL optimized HEPA system.

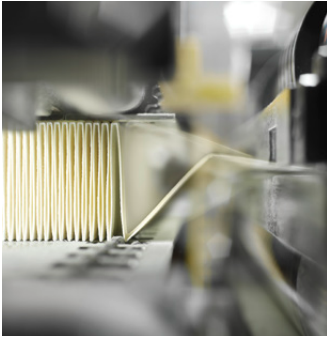
Conventional System	Prefilter: Typical Bag Filter	Final Filter: Typical Bag Filter	System Total
Filter Class	ePM1 60%	ePM1 80%	ePM1 90%
Pressure Drop @ 3400 m ³ /h	120 Pa	180 Pa	300 Pa

Optimized System	Prefilter: Airpocket EF	Final Filter: Nanoclass Cube Pro Membrane	System Total
Filter Class	ePM1 65%	H13	H13
Pressure Drop @ 3400 m ³ /h	65 Pa	225 Pa	290 Pa



¹ According to ISO 16890 ² According to EN 1822

A filtration leader For almost 80 years



For more than three-quarters of a century MANN+HUMMEL has been finding new ways to separate the useful from the harmful.

Today, our 22,000-strong team of filter experts – more than 1,000 of which make up our R&D department – work together to make our world a cleaner place.

26 filters roll off our production lines every second of every day.

So you can trust us to protect your employees, customers, visitors and building.

Find out more...

The first step towards virus-free air



HVAC UPGRADE



**NANOCLASS CUBE
PRO MEMBRANE**



CONTACT US

