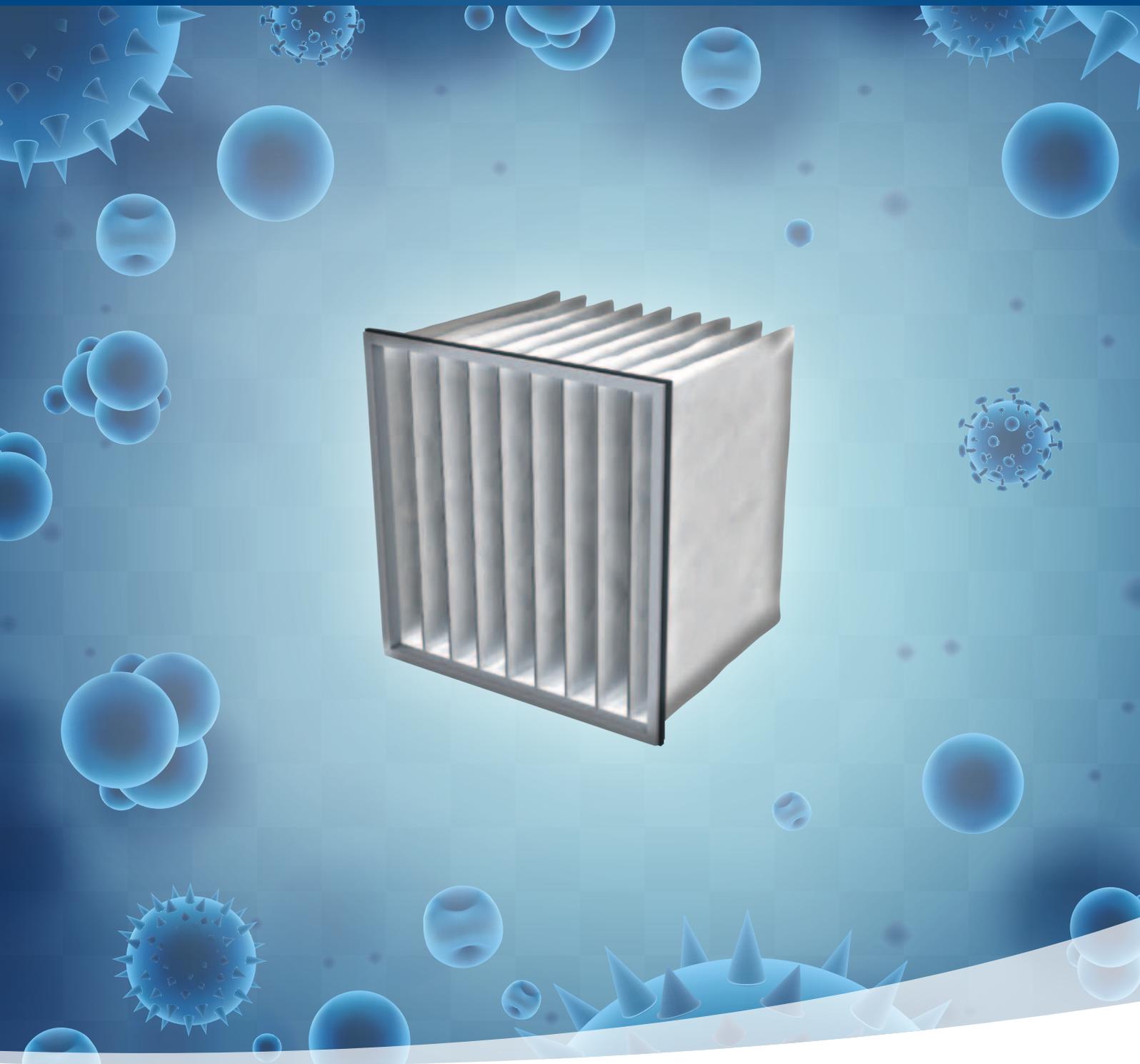


DELTRI+ powered by Systemair

Virucidal air filters for your AHUs



Systemair and Deltrian, a leading Belgian filter manufacturer, have joined forces to provide you with a new generation of filters for air handling units (AHUs), which are virucidal (= capable of neutralising or destroying viruses). The Luxembourg Institute of Science and Technology (LIST) has scientifically tested the functioning and reliability of this solution.

As the first HVAC manufacturer worldwide and in line with our proven #HygienicByDesign concept, we offer air filters with DELTRI+ technology as...

- Replacement filters in standard and special sizes for existing AHUs – independent from their brand.
- An optional order item for all newly shipped Systemair AHUs.
- A filter option selectable in our AHU configurators (upcoming).

The information provided about Deltri+ is according to the product specification of the manufacturer Deltrian International. The illustrations are for guidance only. Information is provided for general informational purposes only and is not a substitute for professional advice. Accordingly, before taking any actions based upon such information, we encourage you to consult directly with the manufacturer Deltrian International. Systemair as a Seller cannot provide any kind of advice.

We inform that the tests were carried out under standardized test conditions and that the effect of Deltri+ may differ between installations and/or conditions of the environment/building. All information about Deltri+ is provided in good faith, despite the greatest care, editorial errors or translation mistakes cannot be completely ruled out, therefore no liability can be accepted for cases of negligence.





Benefits with DELTRI+

- Building owners can quickly improve existing units before thinking about more extensive upgrades to their ventilation systems.
- For facility managers, the filters enable additional safety when exchanged.
- Compared with other methods utilised for virus prevention (e.g., UV-C lights), our DELTRI+ filters constitute a straightforward solution, easy for you to apply, handle, and sell.

“Operators do not need to worry about significantly increasing energy cost. In addition to its virucidal functions and being classified ISO16890 ePM1 90%, the filter holds an Eurovent Certified Performance A+ energy class rating, ensuring a low-pressure drop

and market-leading dust holding capacity with the best possible energy efficiency”



Lena Eklind
Group Technical Director, Systemair

Technical data of the Deltrian NWES98PLUS standard size filter with DELTRI+ technology

ENERGY SAVING

Description	Width A (mm)	Height B (mm)	Depth C (mm)	Pocket	Filter area (m ²)	Flow rate (m ³ /h) Delta P (Pa)	Energy class
ePM1 - 90%							
NWES98PLUS-6/400/11	592	592	400	11	13	3400/98	A+



VALID
ACCORDING TO
EN18184

VALID
ACCORDING TO
EN14476

ISO
10705

ISO
16890

NEW

Application example

Replacing an extract air filter in a compact air handling unit with DELTRI+ air filter.



How does the DELTRI+ technology work?

The Luxembourg Institute of Science and Technology (LIST) has confirmed the anti-virus activity of DELTRI+ following in-depth laboratory tests.

Here is how and why it works:

1. As tested by the Luxembourg Institute of Science and Technology and an independent laboratory in France, DELTRI+ Technology significantly reduces biological aerosols including SARS-CoV-2.
2. The treated filter surface activates on contact with the droplets that carry viruses.
3. After the contact time, viruses are inactivated and no longer infectious.



Good to know: Some high-quality face masks already utilise comparable technology. DELTRI+ brings a similar concept to the HVAC sector, suitable for much larger surfaces and usage times.



“We are proud to cooperate with one of the world’s leading ventilation companies in launching DELTRI+. Systemair’s technical expertise and long-term market knowledge have proven invaluable in the development of this solution. After all, we are proud to say that DELTRI+ can capture and inactivate viruses. Its effectivity is proven in dry and wet environments, open and closed circuits alike. In addition, the filters reduce the risk of transmission and proliferation of viruses and bacteria in the air. While it does not replace other preventive measures, we consider it a hands-on contribution to support a return to a more normal life.”

Jürgen Alexius
Owner and CCO, Deltrian

What do we offer?

Systemair can provide you with the following filter types:

- ISO16890 ePM1 90% (comparable to EN 779 F9)
- All standard AHU filter sizes and special formats for compact units

You can already order our DELTRI+ air filters in most of Europe and many other markets worldwide.

- Contact any of our local sales offices.
- Visit our Webshop to order with the click of a button (only in markets where available).

What else should I know?

These are answers to the most frequently asked questions:

- The Luxembourg Institute of Science and Technology (LIST) and an independent laboratory in France have scientifically proven the DELTRI+ Technology’s effectiveness against biological aerosols, including SARS-CoV-2.
- Deltrian has developed this technology to last over a commonly recommended filter life cycle prescribed by trusted manufacturers suitable for your type of application and environment, but not longer than 12 months. We generally encourage more frequent filter replacements.
- Systemair delivers the filters separately with the AHU for commissioning. To ensure that the virucidal treatment and coating does not get affected during transportation and storage all filters are packaged. The 12 months lifetime starts when you unpack and start using the filter.
- The technology’s reliability ultimately depends on how well you generally maintain your units.

For more information, please look at our FAQ section, which provides more in-depth insights into the functioning of DELTRI+.

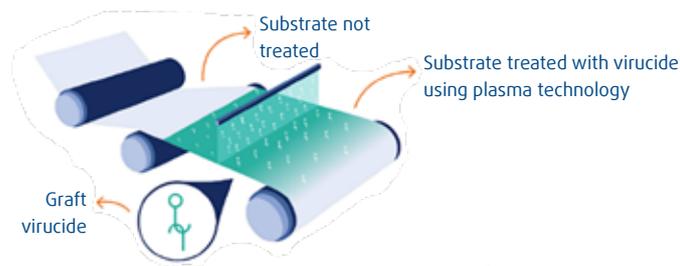
FAQ

How were the filters tested?

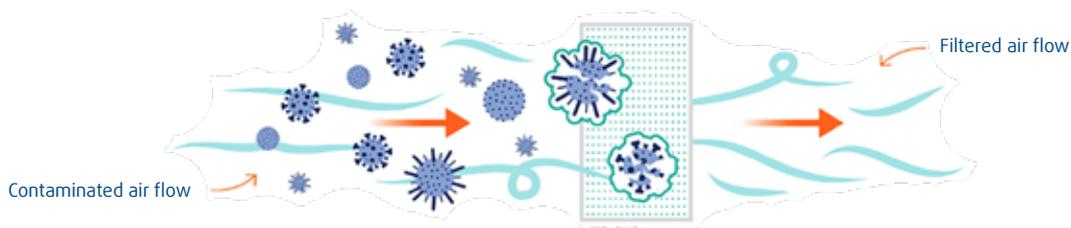
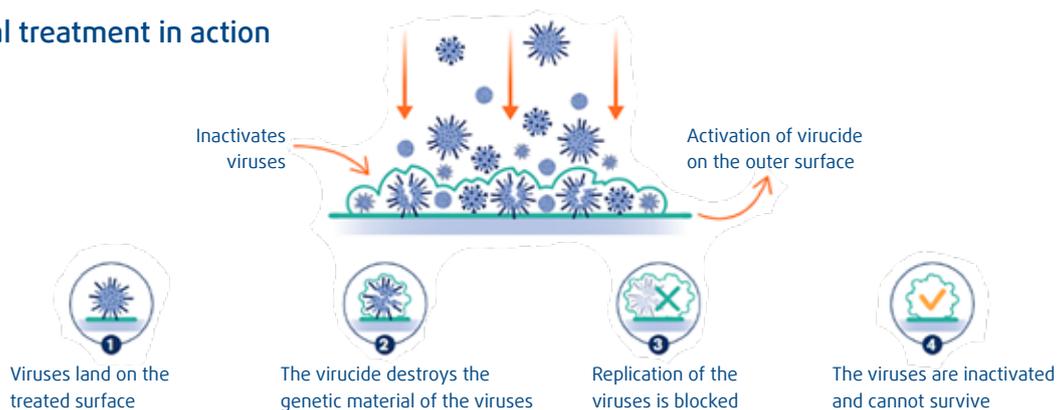
The Luxembourg Institute of Science and Technology (LIST) and an independent laboratory in France have tested the reliability of the virucidal effect in three different ways.

- First, LIST did the following: The institute performed a Bacterial Filtration Efficiency (BFE) on filtration materials and devices designed to protect against biological aerosols, such as face masks, surgical gowns and air filters. As a result, DELTRI+ has achieved a BFE of 99,8%.
- LIST tested the Viral Load Reduction (VLR) of the filter material following multiple standards. According to ISO10705, adapted to account for an equivalent Coronavirus strain (MS2), the tests show a VLR of 99,21% after 12 months.
- A French independent laboratory tested according to EN18184, and test results prove a VLR of 99,999% after 1 hour. The tests confirmed the filters' effectivity following standard test requirements. A third test conducted by the same independent laboratory ensures conformity with EN14476.

How does the virucidal treatment work in practice?



Virucidal treatment in action





How long does a DELTRI+ filter last?

Third-party tests at LIST have shown that the filters should last over a commonly recommended filter life cycle prescribed by trusted manufacturers suitable for your type of application and environment, but not longer than one year. We generally recommend shorter replacement cycles – independent from the filter solution.



Will DELTRI+ allow us to reactivate recirculation functions in our AHUs?

In many COVID19 recommendations, including Systemair's, it is recommended to turn off recirculation functions in AHUs and switch to 100% fresh air supply mode.

Recirculation was utilised in many situations before the pandemic to save energy (e.g., during a low occupancy at night in a building or when CO2 levels in a room are low). In an intelligent ventilation system, this was "normal" and made sense.

Many building operators and owners have contacted us over the past months as they would like to activate recirculation functions again. First, however, they would like to have the confidence to do so.

DELTRI+ is a straightforward solution in this respect. While high-quality ePM1 filters already help, the DELTRI+ technology offers an additional safety net, which can enable (partial) recirculation again to save energy.

Is this filter effective against COVID19?

As tested by the Luxembourg Institute of Science and Technology, DELTRI+ Technology significantly reduces biological aerosols including SARS-CoV-2. However, the technology's reliability ultimately depends on

how well you generally maintain your units. It is also not a substitute for recommended COVID19 prevention measures in your markets, such as wearing masks, increasing ventilation rates, and the like.

Does this solution support us in tackling the potential impact of leakages in heat exchangers?

As confirmed by respected organisations such as ASHRAE or REHVA, an inevitable leakage occurs with rotary and plate heat exchangers. However, in well maintained, designed and operated air handling units by trusted manufacturers, leakage impacts tend to be minimal. Furthermore, in rotors, purge sectors can further minimise leakages.

To date, there is no scientific evidence that SARS-CoV-2 can reach an air handling unit. However, if this was to occur, quality filtration is vital. DELTRI+ can play an important role here. It goes beyond the commonly recommended ISO16890 rated ePM1 filters by providing an additional layer of security and thus peace of mind for your clients.

