

Accessories, compact heat recovery units and modular air handling units

DELTRI+ virucidal air filters  
Even safer, cost-effective, and easy-to-use



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## A new solution for a reliable future

Systemair and Deltrian, a leading Belgian filter manufacturer, have joined forces to provide you with a new generation of virucidal filters for air handling units (AHUs).

As the first HVAC manufacturer worldwide and in line with our proven #HygienicByDesign concept, we supply the DELTRI+ filter for new and existing air handling units, regardless of size or brand.



- ✓ ePM1 90% (F9)
- ✓ Neutralise 99% of all viruses



## Even safer

The DELTRI+ filter acts as an extra safeguard by **capturing and inactivating** viruses.

- ✓ Offers **more than 99% reduction** of virus load
- ✓ Independently and scientifically **proven**
- ✓ Uses **organic components** (citric acid)



## Easy-to-use

**Quickly improve existing AHUs and indoor air quality** with DELTRI+ filters before opting for more extensive, costly upgrades to ventilation systems.

- ✓ Simply **replace** existing filters
- ✓ **No modifications** to unit required
- ✓ **No additional power supply** needed



## Cost-effective

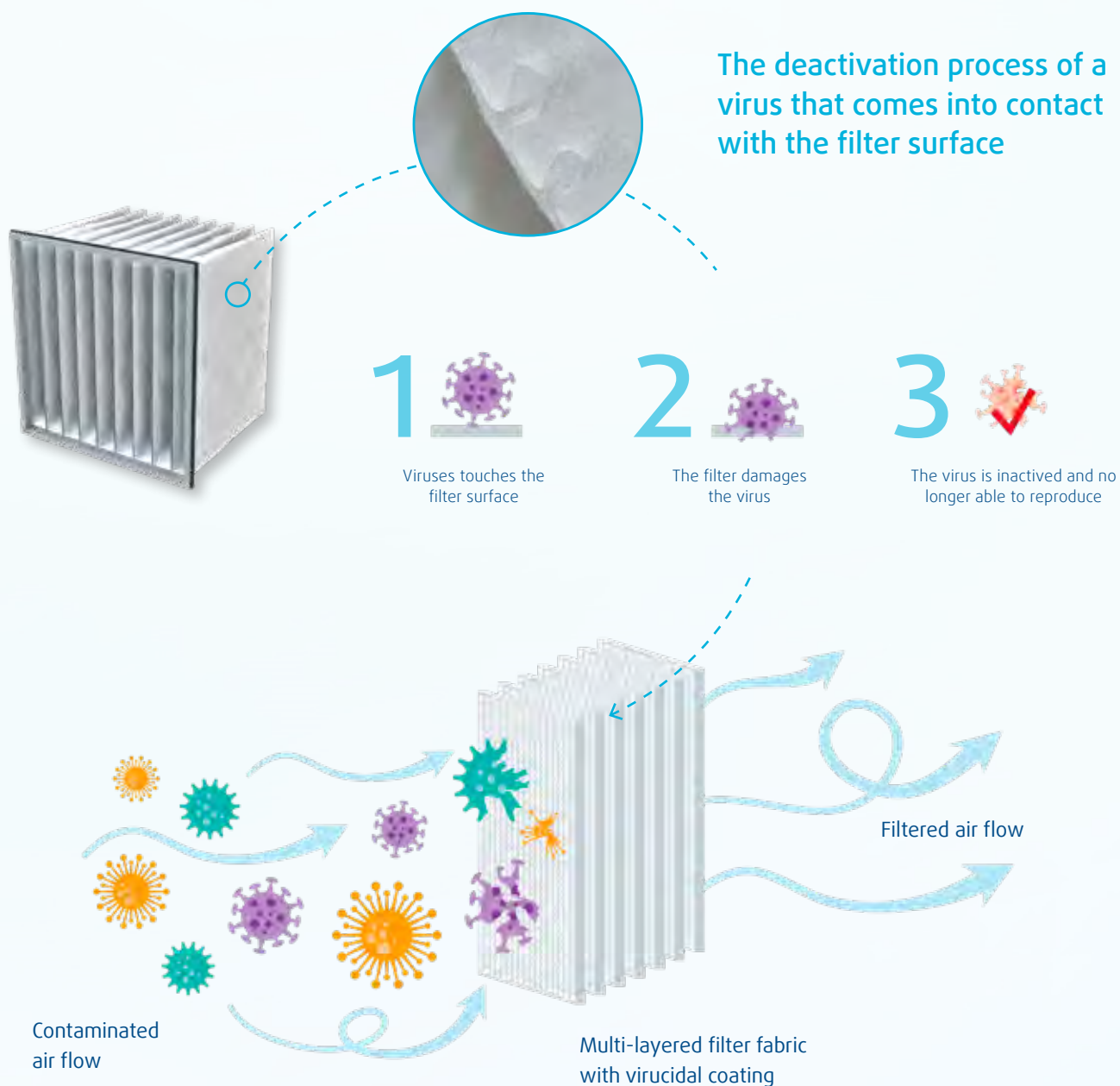
There's no need to worry about significantly increasing energy costs. **Very little extra energy is required** for this extra layer of virus protection.

- ✓ Efficient, **low energy consumption** (Eurovent Class A+)
- ✓ **Low pressure drop**
- ✓ **Market-leading** dust holding capacity

# How does the DELTRI+ filter work?

The DELTRI+ filter is treated with an advanced plasma technology that creates a virucidal layer on the filter.

It neutralizes 99% or more of all viruses, including SARS-CoV-2 that causes COVID-19. The filter surface damages the virus and renders it inactive. **DELTRI+ filters are also effective against bacteria and mold.**

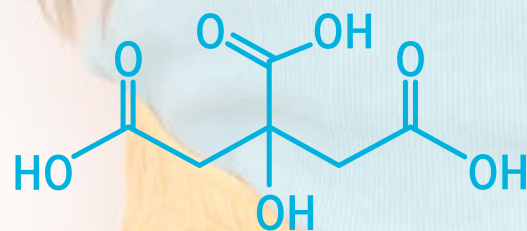




## Citric acid

Effective in destroying viruses,  
safe for humans.

The virucide in DELTRI+ is citric acid. An organic compound that is widely used for cleaning and sanitising. Citric acid is used for food and drinks. The human body produces it for its own metabolism.



# Applications

In order to protect all people present in a building, maintaining a good indoor air quality is vital. DELTRI+ filters provide the best possible protection against viruses and provide excellent filtration. The DELTRI+ filter is not a replacement for other prevention measures, but it certainly makes a significant contribution to extra security and good ventilation of buildings.

**Schools & Kindergartens**

**Public buildings**

**Offices & Commercial buildings**



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## Suitable for a variety of application areas

DELTRI+ filter offers a hygienic answer for many types of applications, especially in buildings where many people gather, such as schools, offices and public spaces.

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## Proper maintenance

The reliability of the filters requires proper maintenance. Regular replacement, at least every year, is needed to keep the filter functioning in a hygienic way.

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## DELTRI+ as an extract air filter

When using rotary heat exchangers and plate heat exchangers, the risk of (minimal) leakages cannot be ruled out. That is why we recommend using the DELTRI+ filter in the extract air; after all, fresh outside air can be assumed to contain no virus particles. In specific cases, a second filter stage in the supply air can also be performed with a DELTRI+ filter.



# Offices, schools and public buildings

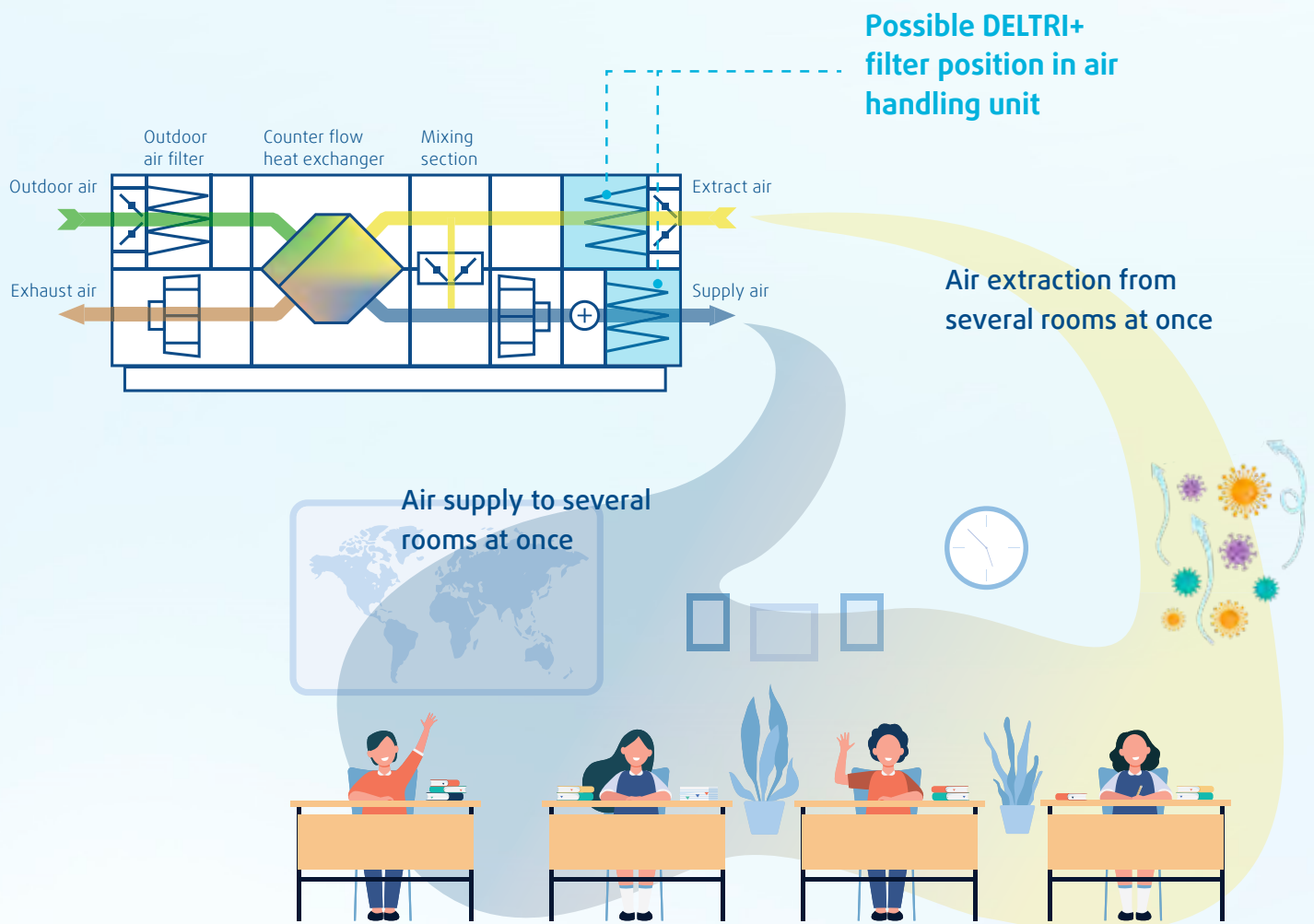
## Existing units with recirculation

Many existing installations use recirculation to reduce energy costs for heating or cooling. Extract air is mixed with the fresh outside air.

When in doubt about the quality of the extract air, the advice from REHVA and ASHRAE is to switch off the recirculation if possible or to improve the extract filters. The DELTRI+ filter is, of course, a good option for improving the extract filters and neutralize any virus particles present in the extract air.

## Locating the DELTRI+ filter

In the example shown below, an air handling unit with heat recovery and a mixing section is used to supply air to induction units in the different areas of a building. In this example, the air handling unit is also equipped with a second filter in the supply. The exhaust filter and/or the second supply filter can be replaced with DELTRI+ filters.



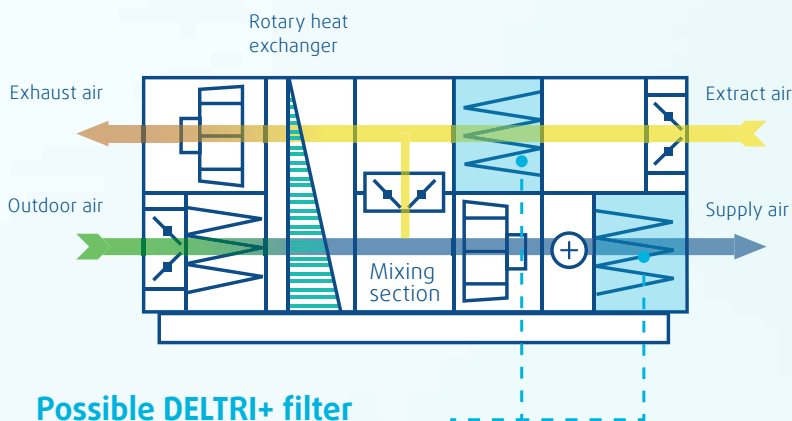


# Healthcare

## Hygienic by design

Extra filter sections are often already included in healthcare institutions to sufficiently purify the supply air from contaminants. In these cases, the application of the DELTRI+ filter gives extra certainty about the quality of

the supply air and, with sufficient ventilation, provides the optimum indoor climate and protection for people getting and providing care.



**Possible DELTRI+ filter position in air handling unit**

## Locating the DELTRI+ filter

The example shows an air handling unit of the type regularly installed in healthcare institutions. Here too, DELTRI+ filters can be used for both the second supply filter and the exhaust filter.

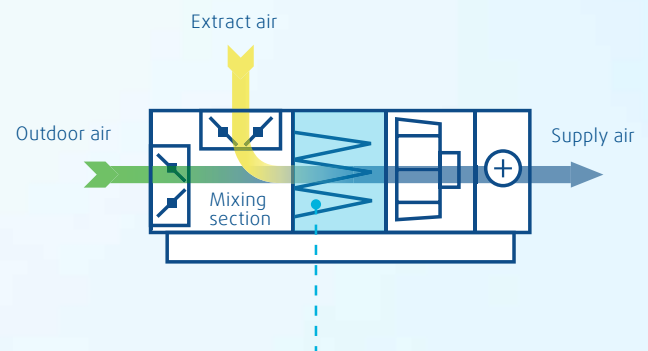
# Marine & Offshore

## At sea, reliable solutions are a must

The requirements for air treatment for ships can be extreme. Safety is of the utmost importance in maritime applications, while space is limited and the temperature and humidity can vary enormously. Moreover, especially on passenger ships, many people are in a relatively small, often closed, space.

## Positioning the DELTRI+ filter

The image shows an air handling unit that is regularly used in maritime applications. In the example a DELTRI+ filter is placed in the supply air.



**Possible DELTRI+ filter position in supply or recirculation air handling unit**

## Testing and certification

A great effort was done to prove that the DELTRI+ filter works and is safe. Several independent laboratories have provided more than 15 reports and certificates, all of which are available upon request.

### Tests were done on:

Material safety



Virucidal effect



Filtration efficiency



Dynamic behavior



All test reports are available upon request.

## ISO rating

The filters have been tested according to ISO 16890. The filtration efficiencies measured:

- ISO ePM 1 = 90 [%]
- ISO ePM 2,5 = 95 [%]
- ISO ePM 10 = 95 [%]

Filter class (according to ISO 16890) is defined as ISO ePM1 90%. This is comparable to filter class F9 (EN 779) and MERV 16 (ANSI/ASHRAE 52.2).

ISO 16890

## Eurovent A+

The filter is certified by Eurovent based on the ISO 16890 test report. Based on TCR ECP-11 (Eurovent technical guideline), the Energy Efficiency Class (EEC) has been determined as A+.



## Virucidal effect

The virucidal effect has been determined according to several standards and test methods. Independent third parties have tested the effect of the virucide (EN 14476) and its effect when applied to a textile (ISO 18184).

According to ISO 10705 the Virus Load Reduction (VLR) has been measured:

- VLR after 1 hour = 99,999 [%]
- VLR after 12 months = 99,21 [%]

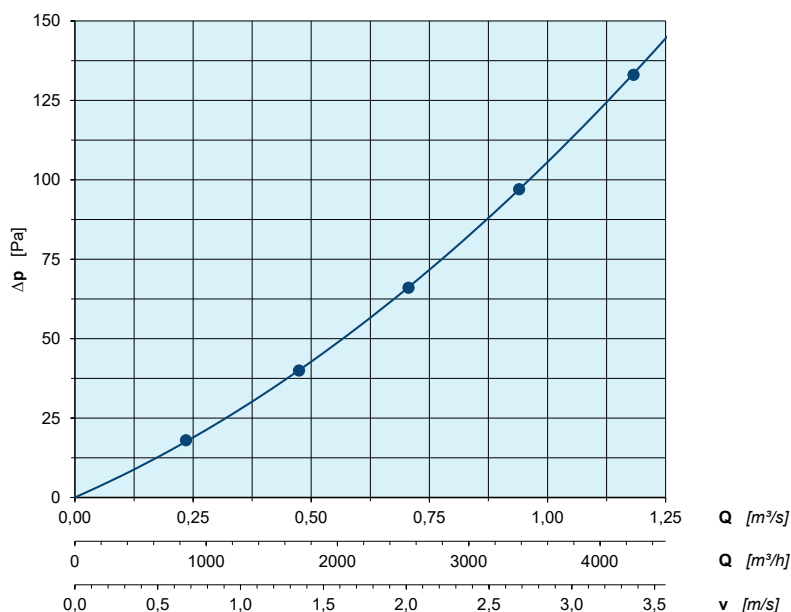
The dynamic performance of the DELTRI+ filter has been tested with live viruses, bacteria, and molds. Air was contaminated with colony-forming units (CFUs) and subsequently pumped through the filter. The air leaving the filter was collected and the amount of CFUs that remain in the air were measured. After 5 minutes, the following values for the remaining CFUs were measured:

- Bacteria : 0 [%] --> 100 [%] efficient
- Mold : 2,5 [%] --> 97,5 [%] efficient
- Viruses : 0 [%] --> 100 [%] efficient

VLR  
> 99%

# Technical specification

The right filter for every application

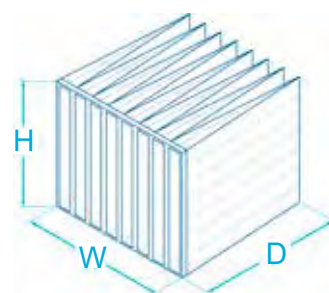


## Pressure difference for standard filter size

Q		V	Δp
[m³/s]	[m³/h]	[m/s]	[Pa]
0,235	846	0,67	18
0,474	1706	1,35	40
0,706	2542	2,01	66
0,940	3384	2,68	97
1,182	4255	3,37	133

### Technical data for standard filter size

Type		Deltri+
Class (acc. ISO 16890)		ePM1 90%
Energy class (acc. Eurovent RS4/C/001-2015)		A+
Filter area	[m²]	13
Nominal flow rate	[m³/h]	3400
Nominal Δp	[Pa]	98
W x H x D	[mm]	592 x 592 x 400
Number of bags per filter frame		11
Maximum operational temperature	[°C]	80
Maximum relative humidity	[%]	90



## Delivery

For air handling units in which the DELTRI+ filter is selected, the filter is separately sealed with the air handling unit supplied (just like with a HEPA filter), so that the virucidal coating is not affected when not already in use. The twelve months life cycle only begins when you start using the filter.

## Save time

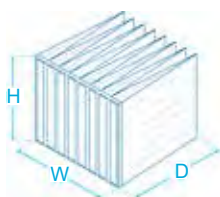
You can order the DELTRI+ filters quickly and easily via our webshop. You can find the webshop on the homepage of our website. Here you will find all types of filters for Topvex, Geniox and Sense.

## By your side

Would you like to know more about the DELTRI+ filter? Then we are happy to assist you. For technical support or general questions, please contact us by phone or visit our website.



# Individual filters

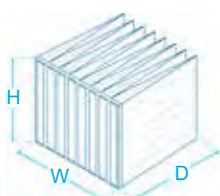


- For application in extract air or second stage in supply air
- Filter class ePM1 90% (ISO 16890)
- Comparable to filter class F9 (EN 779) and MERV 16 (ASHRAE 52.2)
- Eurovent Energy Efficiency Class A+
- UL 900 certified product



Product number	W [mm]	H [mm]	D [mm]	Number of bags per filter frame
483898	490	287	400	9
890783	287	287	400	5
890784	287	490	400	5
890785	287	592	400	5
890786	490	392	400	9
890787	490	592	400	9
890788	490	490	400	9
890789	592	287	400	11
890790	592	392	400	11
890791	592	490	400	11
890792	592	592	400	11
890793	792	392	400	15
890794	437	287	400	8
890795	437	592	400	8
890796	566	350	400	10
890797	706	430	400	13
890798	866	430	400	16
890799	512	510	400	9
890800	448	670	400	8
890801	502	750	400	9
890802	555	830	400	10
890803	592	892	400	11
890804	287	892	400	5
890867	592	437	400	11

# Sense

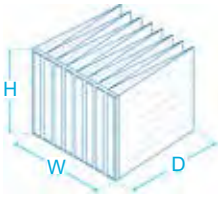


- Filter for use in extract air
- Filter class ePM1 90% (ISO 16890)
- Comparable to filter class F9 (EN 779) and MERV 16 (ASHRAE 52.2)
- Eurovent Energy Efficiency Class A+
- UL 900 certified product



Product number	Deltri+ filters suitable for	W [mm]	H [mm]	D [mm]	Number of bags per filter frame	Quantity required
890806	Sense 700	425	270	300	8	1
890805	Sense 1000	520	400	250	10	1

# Topvex

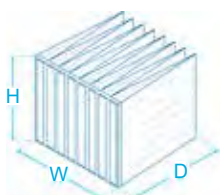


- Filter for use in extract air
- Filter class ePM1 90% (ISO 16890)
- Comparable to filter class F9 (EN 779) and MERV 16 (ASHRAE 52.2)
- Eurovent Energy Efficiency Class A+



Product number	Deltri+ filters suitable for	W	H	D	Number of bags per filter frame	Quantity required
		[mm]	[mm]	[mm]		
277390	Topvex 1000	246	654	300	5	1
277392	Topvex 1500	316	754	300	6	1
277409	Topvex FC02	837	242	370	16	1
277410	Topvex FC04	490	287	370	9	2
277411	Topvex FC06	592	392	370	11	2
277412	Topvex FR03	434	434	400	8	1
277413	Topvex FR06	534	534	400	10	1
277414	Topvex FR08	634	636	400	12	1
277415	Topvex FR11	734	736	400	14	1
277416	Topvex SC03	317	493	300	6	2
277416	Topvex SC04	317	493	300	6	2
277417	Topvex SC06	399	588	300	7	2
277418	Topvex SC08	399	738	370	7	2
277418	Topvex SC11	399	738	370	7	2
890773	Topvex SC20	634	454	300	12	1
890774	Topvex SC25	748	454	300	14	1
890775	Topvex SC35	748	679	400	14	1
890776	Topvex SC60	468	679	400	9	2
890777	Topvex SC70	640	679	400	12	2
277391	Topvex SR03	654	392	370	12	1
277393	Topvex SR04	754	433	300	14	1
277401	Topvex SR06	904	476	370	17	1
277403	Topvex SR09	510	475	370	9	2
890772	Topvex SR100	812	848	400	15	2
277405	Topvex SR11	565	530	370	10	2
890778	Topvex SR20	634	360	250	12	1
890762	Topvex SR25	749	403	300	14	1
890764	Topvex SR35	842	466	350	15	1
890766	Topvex SR60	502	520	400	9	2
890768	Topvex SR70	582	595	400	11	2
890771	Topvex SR80	682	716	350	12	2
890778	Topvex TC20	634	360	250	12	1
890779	Topvex TC25	748	360	250	14	1
890780	Topvex TC35	748	530	300	14	1
890781	Topvex TC60	468	537	300	9	2
890782	Topvex TC70	640	537	300	12	2
277390	Topvex TR03	246	654	300	5	1
277392	Topvex TR04	316	754	300	6	1
277400	Topvex TR06	904	315	400	17	1
277402	Topvex TR09	512	346	400	10	2
277404	Topvex TR12	567	396	400	11	2
277408	Topvex TR15	687	396	400	13	2
890761	Topvex TR20	630	237	350	11	1
890763	Topvex TR25	749	278	250	14	1
890765	Topvex TR35	834	298	300	15	1
890767	Topvex TR60	502	367	350	9	2
890769	Topvex TR70	582	367	350	11	2
890770	Topvex TR80	682	367	350	12	2

# Geniox



- For application in extract air or second stage in supply air
- Applicable for filter configurations:  
Stand filter configuration  
1, ½ & ¼ filters - can only be applied if the filter selection has been made suitable for this purpose
- Filter class ePM1 90% (ISO 16890)
- Comparable to filter class F9 (EN 779) and MERV 16 (ASHRAE 52.2)
- Eurovent Energy Efficiency Class A+



For Geniox complete filter sets are standardised. This set contains all necessary filters per unit size.

Product number	Deltri+ filters suitable for	Filter configuration	Quantity & Dimensions WxH [mm]	Number of bags per filter frame
890819	Geniox 10	Only using 1, ½ & ¼ filters	2 → 1x [287x287] + 1x [592x287]	16 → 1x [5] + 1x [11]
890807	Geniox 10	Standard filter configuration	1 → 1x [792x392]	15 → 1x [15]
890819	Geniox 11	Only using 1, ½ & ¼ filters	2 → 1x [287x287] + 1x [592x287]	16 → 1x [5] + 1x [11]
890808	Geniox 11	Standard filter configuration	2 → 2x [490x392]	18 → 2x [9]
890819	Geniox 12	Only using 1, ½ & ¼ filters	2 → 1x [287x287] + 1x [592x287]	16 → 1x [5] + 1x [11]
890809	Geniox 12	Standard filter configuration	2 → 1x [490x490] + 1x [592x490]	20 → 1x [9] + 1x [11]
890820	Geniox 14	Only using 1, ½ & ¼ filters	2 → 2x [592x592]	22 → 2x [11]
890810	Geniox 14	Standard filter configuration	3 → 1x [287x592] + 2x [490x592]	23 → 1x [5] + 2x [9]
890821	Geniox 16	Only using 1, ½ & ¼ filters	3 → 1x [287x592] + 2x [592x592]	27 → 1x [5] + 2x [11]
890811	Geniox 16	Standard filter configuration	3 → 3x [490x592]	27 → 3x [9]
890821	Geniox 18	Only using 1, ½ & ¼ filters	3 → 1x [287x592] + 2x [592x592]	27 → 1x [5] + 2x [11]
890812	Geniox 18	Standard filter configuration	6 → 2x [490x392] + 4x [592x392]	62 → 2x [9] + 4x [11]
890822	Geniox 20	Only using 1, ½ & ¼ filters	6 → 3x [592x287] + 3x [592x592]	66 → 3x [11] + 3x [11]
890813	Geniox 20	Standard filter configuration	6 → 3x [592x287] + 3x [592x592]	66 → 3x [11] + 3x [11]
890823	Geniox 22	Only using 1, ½ & ¼ filters	8 → 1x [287x287] + 1x [287x592] + 3x [592x287] + 3x [592x592]	76 → 1x [5] + 1x [5] + 3x [11] + 3x [11]
890814	Geniox 22	Standard filter configuration	8 → 2x [287x490] + 6x [592x490]	76 → 2x [5] + 6x [11]
890823	Geniox 24	Only using 1, ½ & ¼ filters	8 → 1x [287x287] + 1x [287x592] + 3x [592x287] + 3x [592x592]	76 → 1x [5] + 1x [5] + 3x [11] + 3x [11]
890815	Geniox 24	Standard filter configuration	8 → 1x [490x592] + 1x [490x490] + 3x [592x490] + 3x [592x592]	84 → 1x [9] + 1x [9] + 3x [11] + 3x [11]
890824	Geniox 27	Only using 1, ½ & ¼ filters	8 → 8x [592x592]	88 → 8x [11]
890816	Geniox 27	Standard filter configuration	10 → 8x [490x592] + 2x [592x592]	94 → 8x [9] + 2x [11]
890825	Geniox 29	Only using 1, ½ & ¼ filters	10 → 2x [287x592] + 8x [592x592]	98 → 2x [5] + 8x [11]
890817	Geniox 29	Standard filter configuration	10 → 4x [490x592] + 6x [592x592]	102 → 4x [9] + 6x [11]
890826	Geniox 31	Only using 1, ½ & ¼ filters	10 → 10x [592x592]	110 → 10x [11]
890818	Geniox 31	Standard filter configuration	15 → 5x [592x287] + 5x [592x490] + 5x [592x592]	165 → 5x [11] + 5x [11] + 5x [11]
890926	Geniox 35	All	18 → 1x [287x287] + 2x [287x592] + 5x [592x287] + 10x [592x592]	180 → 1x [5] + 2x [5] + 5x [11] + 10x [11]
890927	Geniox 38	All	18 → 3x [287x592] + 15x [592x592]	180 → 3x [5] + 15x [11]
890928	Geniox 41	All	21 → 3x [287x592] + 18x [592x592]	213 → 3x [5] + 18x [11]
890929	Geniox 44	All	28 → 1x [287x287] + 3x [287x592] + 6x [592x287] + 18x [592x592]	284 → 1x [5] + 3x [5] + 6x [11] + 18x [11]



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