

INDOOR AIR FILTRATION

FreciousComfort



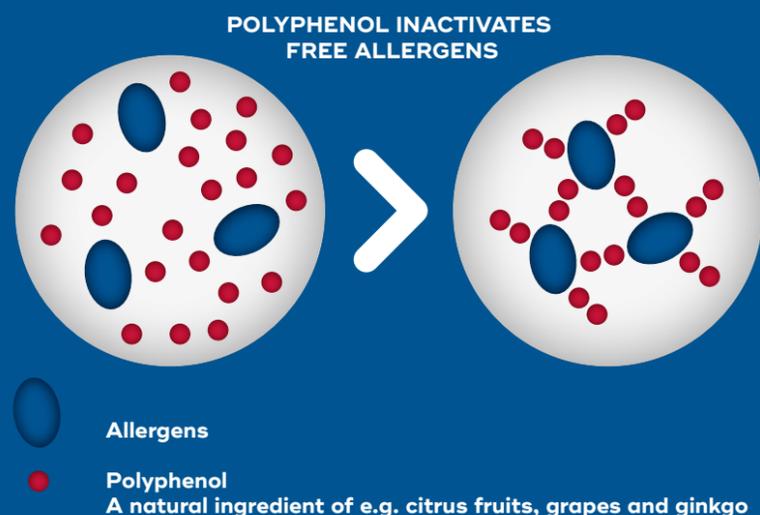
FreciousComfort Controls allergens and microbial growth

PROTECTS AGAINST ALLERGENS

Allergens, along with bacteria, pseudoallergens, endotoxins, molds and particulate matter, are a biological source of allergies. The allergenic substances consisting of protein compounds are found, for example, inside pollen. If pollen is exposed to mechanical stress (e.g. by coming up against a filter fibre), it can burst open, causing the tiny allergens to be released. These can penetrate conventional filter media and enter the respiratory tract. FreciousComfort technology for HVAC filters and indoor air purifiers contains a special natural polyphenol coating to protect your health.

INHIBITS MICROBIAL GROWTH

Furthermore, the FreciousComfort technology offers an antimicrobial coating. This coating inhibits the growth of microorganisms, such as bacteria, mold or fungi on the filter media's surface. Thus, it reduces bad smells caused by these microorganisms, providing another positive effect on your well-being and comfort.



Retrofitting the filter in time

According to studies, good indoor air quality (IAQ) has a direct positive relation to productivity, motivation and the mental state of the people. A higher air quality means more oxygen in air, but less pollutants! Healthy air contributes directly to the improved performance of employees and protects them against health risks.

There are many reasons, why it is important, not only to use the filter, but also to exchange them regularly. A polluted filter causes higher operation and Energy costs as acquisition costs. Also the downstream devices benefit from a clean air due to lower maintenance and longer Lifespan, which reduces total cost of ownership.

When remodeling or replacing is on the optimum, pay attention to the filter size. A filter with a larger filter area is more efficient because it reduces the pressure difference. A large filter area slows down the increase in the pressure difference, which has an impact on the whole facility. The air flow is stabilized and the energy consumption in the system is reduced.

CALCULATION AND ENERGY-EFFICIENCY RATING:

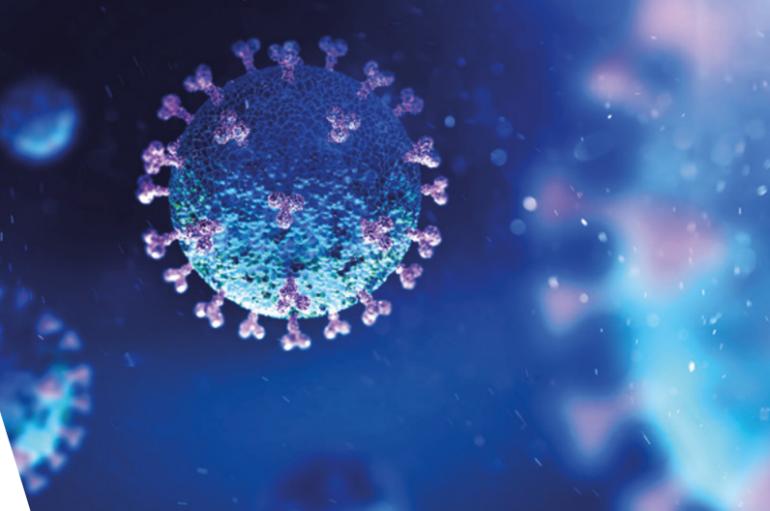
$$E = \frac{q \cdot \Delta p \cdot t}{\eta \cdot 1000} \quad (\text{Kwh/year})$$

q = air volume in m^3/s (variable)

t = operating hours in hours a year

Δp = depressurization in Pa (variable)

η = effectiveness



Since the introduction of the ISO 16890, it's now even easier, to find the right air filter with the lowest energy consumption and the best indoor air quality.

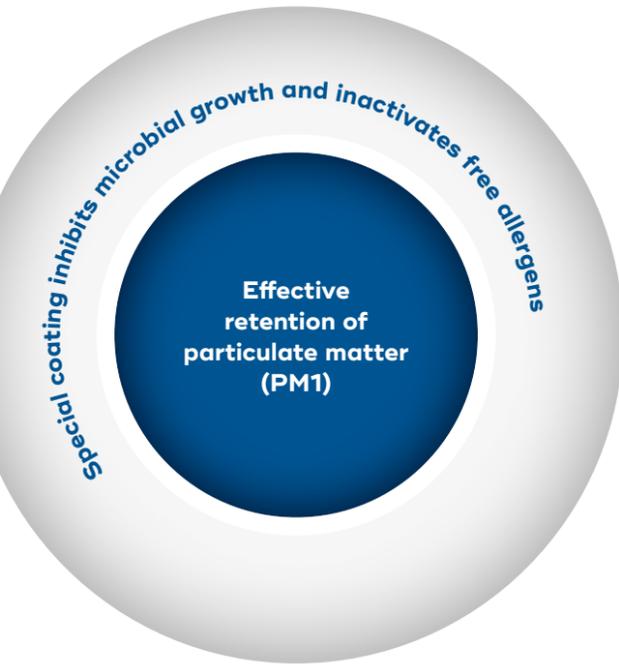
We help to determine the right filter with optimal filter efficiency based on the internal space requirements. So you can save money at the electricity consumption and the CO_2 balance will be improved.

ALWAYS UP TO DATE WITH OUR SUMMARY OF SERVICES:

- Examination of needs
- Professional consultancy
- Cost analysis over the entire lifecycle
- Customer service
- Facility Management
- Service

BENEFITS TO CHANGE A FILTER:

- 1 Better air
- 2 CO_2 reduction
- 3 Higher efficiency
- 4 Higher savings
- 5 Lower costs
- 6 Longer lifespan of ventilation



28%

of adults in Europe suffer from allergies
(Robert Koch Institute, 2017)

>20%

of children suffered from an allergy in 2013
(swr.de, 2013)

50%

of Europeans will suffer from allergies in 2040
(Helmholtz Centre Munich, 2014)

86%

of allergy sufferers are sensitive to pollen

14%

are sensitive to mold



Overview of advantages

	FreciousComfort	FreciousComfort Carboactiv
Inactivates free allergens	✓	✓
Prevents the passage of bacteria and molds to the clean side of the filter	✓	✓
Removes odours and captures harmful gases, such as ozone, nitrogen oxides and sulphur dioxide		✓
Improved human well-being: lower disease rates, higher productivity	✓	✓
ISO 16890 ePM1 50 – 60 %	✓	✓
Certified quality (bifa, Hohenstein Institute)	✓	✓

Filter structure and media

1

PARTICULATE MATTER FILTRATION

The powerful filter medium catches even the smallest particles, such as particulate matter (ISO 16890 ePM1 50 – 60 %).

2

ANTI-ALLERGENIC COATING

Natural polyphenol inactivates free allergens.

ANTI-MICROBIAL COATING

Prevents bacteria and molds from penetrating to the clean side.

3

ACTIVE CARBON (OPTIONAL)

The activated carbon layer removes unpleasant odours and harmful gases such as ozone, sulphur dioxide and nitrogen oxides.

Airpocket FreciousComfort

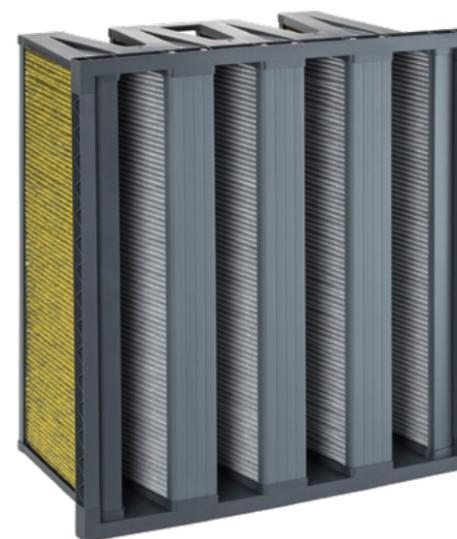


- ✓ anti-allergenic coating inactivates free allergens
- ✓ anti-microbial treatment prevents bacteria and molds on the clean air side
- ✓ particle filtration via synthetic, meltblown filter media
- ✓ high dust holding capacity

DESIGN

Pocket filters built with metal or plastic frame. Single pocket made from multilayer, poly-propylene meltblown media with integrated prefilter layer and conical spacer seams for an optimal V shape.

Carboactiv Cube FreciousComfort



- ✓ anti-allergenic coating inactivates free allergens
- ✓ anti-microbial treatment prevents bacteria and molds on the clean air side
- ✓ particle filtration and gas adsorption in one layer
- ✓ removes odors and captures harmful gases
- ✓ certified quality (bifa, Hohenstein Institute)

DESIGN

Filter elements are sealed into a 4V plastic frame with polyurethane for an extremely robust construction. The pleat packs are built up of 3 layers featuring particulate matter filtration, activated carbon and the FreciousComfort with the biofunctional layer. The frame features an integrated handle for ease of transportation.

PERFORMANCE DATA

Filter Class ISO 16890	Dimensions (mm)	Flow Rate (m³/h)	Pressure Drop (Pa)	Energy Consumption (kWh/year)	Energy Class (Eurovent 2019)
ePM1 60 %	592 x 592 x 635	3.400	105	1.699	D
ePM1 60 %	490 x 592 x 635	2.800	105		
ePM1 60 %	287 x 592 x 635	1.700	105		
ePM1 60 %	287 x 287 x 635	850	105		
ePM1 60 %	592 x 490 x 635	2.800	105		
ePM1 60 %	592 x 287 x 635	1.700	105		

SPECIFICATIONS

Recommended air flow	Flow rate +-15 %
Heat resistance	Max 70°C
Regenerable	No
Recommended final pressure drop	250 Pa (Max 450 Pa)
Moisture resistance	100 % rel. rel. Humidity
Incinerable	Yes (excluding metal frame versions)

OPTIONS

Frame	Plastic or galvanized steel
Gasket	EPDM-Flachdichtung
Header depth	25 mm or 20 mm

PERFORMANCE DATA

Filter Class ISO 16890	Dimensions (mm)	Flow Rate (m³/h)	Pressure Drop (Pa)	Energy Consumption (kWh/year)	Energy Class (Eurovent 2019)
ePM1 50 %	592 x 592 x 300	3.400	140	> 2.500	E
ePM1 50 %	592 x 287 x 300	1.700	140		

SPECIFICATIONS

Heat resistance	< 30°C (Peak 50°C)
Regenerable	No
Adsorption capacity	750 g
Moisture resistance	< 60 % (Max <90 %)
Incinerable	Yes*

OPTIONS

Gasket	Continuous polyurethane 1 or 2 sides
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* Please ensure accordance with relevant disposal directives

Air for life. Climate for well-being.
What we produce meets essential human needs. That drives us to do our best.
System solutions for ventilation and air conditioning that inspire thanks to cutting-edge technology, reliability and sustainability. Worldwide.

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