



Filters for inVENTer systems

Brief information

Note: This information is only valid in combination with the installation- and operating instructions of the corresponding inVENTer® ventilation systems, and supplements them. The limitations and exclusions of liability given in the corresponding instructions apply fully.

Overview

All inVENTer® ventilation systems delivered ex-works are equipped with one or more dust filters. They are visual discreet integrated into the ventilation system and reliably retain allergens, insects as well as dusts before they can enter living spaces. Additionally they protect your ventilation unit from contamination.

Filters are subdivided into coarse filters (G) and fine filters (F).

The classification of coarse filters is based on its average arrestance. The arrestance defines which amount of incoming particles (e.g. dust) with a cross section of $> 10 \mu\text{m}$ is „arrested“ (withhold) and thus cannot pass through the filter.

The classification of fine filters is based on the separation efficiency. It indicates the ratio between incoming and filtered particles with a cross section from 0.3 up to $10 \mu\text{m}$. The reference value for determining fine filters is at $0.4 \mu\text{m}$.



inVENTer filter	Filter class	Filtered particles	Average arrestance [%] Particles $> 10 \mu\text{m}$	Separation efficiency [%] Particle $0,4 \mu\text{m}$
iV – Ventilation systems: Decentralised ventilation with heat recovery				
Dust filter	G3	Insects, coarse pollen, sand, fly ash, spores, textile fibre, hairs	80 – 90	0
	G4		> 90	0
Pollen filter	F5	Pollen, spores, fine deposits, germs and bacteria attached to particles	100	40 – 60
Activated carbon filter	–	Pollen, spores, fine deposits, germs and bacteria attached to particles, odours	100	
aV – Extract air systems: Ventilation units without heat recovery				
Filter AC60	G3	Insects, dusts, textile fibres, hairs	80 – 90	0
Filter Aventus	G2		65 – 80	0
aV – Extract air systems: Fresh air inlet ALD				
Dust filter	G1	Rough contaminants, such as leaves, birds, large insects	50 – 65	0
Pollen filter	G3	Insects, coarse pollen, sand, fly ash	80 – 90	0
Flimmer filter	F7	Pollen, spores, fine deposits, germs and bacteria attached to particles	100	80 – 90
inVENTer PAX				
Outdoor and extract air filter	G4	Insects, coarse pollen, sand, fly ash, spores	> 90	0

Decentralised ventilation with heat recovery (iV)

The filters of inVENTer ventilation units with heat recovery are integrated easy of access and visually discreet into the inner cover or in fan unit (iV-Twin+). As a standard, all inner covers Flair are equipped with a filter of class G4. The inner covers Classic and Quadra as well as the fan unit of the iV-Twin+ are equipped with a filter of class G3.

The type of filter needed depends on your ventilation system, and inner cover.

Dust filters filter off reliably coarse dusts as well as insects and allergenic particles (e. g. heavy pollen) from the ambient air before it can enter living spaces. The inVENTer dust filters for iV ventilation units are washable coarse filters (G classes).

- **Filters of class G4** are used in all ventilation units of the product ranges iV-Smart+ , iV14-Zero, iV-Light, and iV-Compact. They have an average arrestance of 93 %. Due to the high pressure build-up and the high air flow of the Xenion fan no flow reduction takes place, if the filter is equipped in units with Xenion fan. Note: When inserting the filter of class G4 into units without Xenion fan the air flow is reduced due to a lower pressure build-up compared to the Xenion fan.
- **Filters of class G3** are used in all ventilation units of the product ranges iV25, iV-Twin and iV-Twin+, iV14, and iV-Smart. They have an average arrestance of 80 up to 90 %. When inserting the G3 filter into the ventilation units mentioned above the air flow is not reduced.



To fulfil the high demands of hygienic and ecological standards as well as the local circumstances, pollen filters and activated carbon filters are available as an option. These are disposable products and represent an alternative to dust filters.

Pollen filters are high-performance filters of class F5. In addition to pollen or spores they filter also fine deposits, such as ashes, coaldust or bacteria and germs associated with particles. Due to its fine pores and high filter capacity, pollen filters reduce the ventilation unit's air flow volume by up to 25 %. Thus, an optimal air exchange of your ventilation system cannot be ensured whilst usage, and makes micro filters only suitable and recommended during specific seasonal events, e. g. dry summer months.

Activated carbon filters improve the indoor air quality in two ways:





They filter allergenic particles (such as pollen, spores, and dust), fine deposits (such as ashes or coal dust) or bacteria and germs which are attached to particles from the ambient air before they can enter living spaces.

In addition, dissolved particles are removed by adsorption: Gaseous odorous and noxious substances (such as smog or smoke), hydrocarbons, and traces of inorganic compounds from the ambient air are prevented from entering the interior. The air flow volume is reduced by approx. 20 % when using an activated carbon filter.



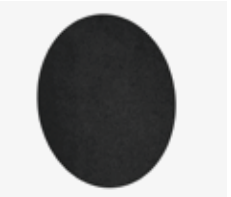
Decentralised ventilation with heat recovery (iV)

Specifications & Application range

Inner cover Flair V-233x233

Type of filter	Dust filter		Pollen filter	Carbon filter
				
Order number	1004-0175	1004-0142	1004-0143	1004-0158
Filter class	G4	G3	F5	–
Material	Cotton, incl. filter ring	Synthetic fibres, incl. filter ring	Cotton, incl. filter ring	Polyester non-woven enriched with activated carbon, incl. filter ring
Scope of supply	2 pcs.	2 pcs.	2 pcs.	2 pcs.
Systems ¹⁾	iV-Smart+, iV14-Zero	iV14R, iV14V, iV-Smart	iV-Smart+, iV14-Zero, iV14R, iV14V, iV-Smart	iV-Smart+, iV14-Zero, iV14R, iV14V, iV-Smart

Inner cover Classic R-D290

Type of filter	Dust filter	Pollen filter	Activated carbon filter
			
Order number	1004-0033	1004-0090 1004-0092 (iV-Twin)	1004-0156
Filter class	G3	F5	–
Material	Synthetic fibres	Cotton	Polyester non-woven enriched with activated carbon
Scope of supply	2 pcs.	2 pcs.	2 pcs.
Systems ¹⁾	iV14R, iV14V, iV-Smart, iV25, iV-Twin	iV14R, iV14V ²⁾ , iV-Smart, iV25, iV-Twin	iV14R, iV14V, iV-Smart, iV25, iV-Twin




¹⁾ Available for all variants of the product range, if present (Standard, Corner, Ohio, Sylt, Top).

²⁾ Not iV14V-Top.

Decentralised ventilation with heat recovery (iV)

Specifications & Application range

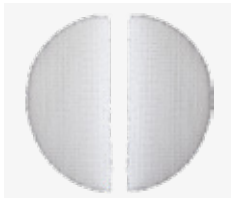


Inner cover Quadra V-284x284

Type of filter	Dust filter	Pollen filter	Activated carbon filter
			
Order number	1004-0062	1004-0091 1004-0093 (iV-Twin)	1004-0157
Filter class	G3	F5	–
Material	Synthetic fibres	Cotton	Polyester non-woven enriched with activated carbon
Scope of supply	2 pcs.	2 pcs.	2 pcs.
Systems ¹⁾	iV14R, iV14V, iV-Twin	iV14R, iV14V ²⁾ , iV-Twin	iV14R, iV14V, iV-Twin

¹⁾ Available for all variants of the product range, if present (Standard, Corner, Ohio, Sylt, Top).

²⁾ Not iV14V-Top.

Fan unit iV-Twin+

Type of filter	Dust filter	Pollen filter	Activated carbon filter
			
Order number	1004-0192	1004-0193	1004-0194
Filter class	G3	F5	–
Material	Synthetic fibres	Cotton	Polyester non-woven enriched with activated carbon
Scope of supply	2 pcs.	2 pcs.	2 pcs.

Decentralised ventilation with heat recovery (iV)

Servicing & Maintenance

Polluted or defective filters may reduce the air flow volume of your ventilation device. Therefore change/clean the filters regularly.

Our dust filters are multi-use products and washable through rinsing warm water. We recommend to check the dust filter quarterly for contamination and clean them regularly.

Remove the panel of the inner cover in order to clean or change the dust filter. Afterwards remove the filter from the base plate. Clean it in warm water. If necessary, a commercially available detergent can be used for cleaning the dust filter. Make sure that the dust filter is completely dried out before inserting it again.

If defective, change the dust filter, as for defective filter sufficient filter efficiency cannot be guaranteed.

The **pollen and activated carbon filters** are disposable and must not be washed. After use, change these optional filters. We recommend not to use pollen filters for a longer period than 4 weeks. Activated carbon filters should be used for a maximum of 6 months.

Remove the panel of the inner cover in order to change the pollen, or activated carbon filter.

If defective, change the pollen, micro or carbon filter before prematurely, as for defective filter sufficient filter efficiency cannot be guaranteed.

Depending on your requirements and/or air quality your personal maintenance schedule for every type of filter may deviate. Used and/or defective filters can be easily disposed of in domestic waste.

Extract air systems: Ventilation units without heat recovery (aV)


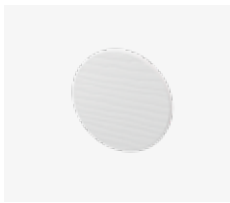

Extract air ventilation units

The extract air ventilation units Aventus and AC60 are equipped with filters that are integrated into the ventilation unit's casing.

The filters are used to protect the fan insert inside the ventilation unit. Hairs, dusts or other contaminations in the room, which are sucked together with the stale extract air, are filtered off before entering the ventilation unit. Thus, a loss of the fan's performance or defect of the extract air system is prevented.

The type of filter needed depends on your extract system.

Specifications & Application range

Type of filter	Dust filter		Dust filter
	Extractor fan	Second room	
			
Order number	1004-0179	1004-0180	1004-0112
Filter class	G2	G2	G3
Material	Synthetic fibres	Synthetic fibres	Polyester
Scope of supply	1 pc.	1 pc.	1 pc.
Systems	Aventus AP ¹⁾ , Aventus UP ²⁾		AC60 AP ¹⁾ , AC60 UP ²⁾

¹⁾ AP = surface mounted casing
²⁾ UP = flush mounted casing

Servicing & Maintenance

Polluted or defective filters may result in performance loss or defect of your extract air system, as dust particles from the room's air may enter the ventilation unit. In addition polluted filters increase noises, because the fans counterbalance an output loss by a higher rotational speed. Therefore, replace the filters regularly.

We recommend a change of the dust filters every 3 months. The dust filters are disposable and must not be washed. Depending on your requirements and/or air quality your personal maintenance schedule may deviate.

Used and/or defective filters can be easily disposed of in domestic waste.

Extract air systems: Ventilation units without heat recovery (aV)

Outdoor air inlets ALD

The filters for the outdoor air inlets ALD are located inside a filter cartridge, which is slided into the ventilation unit's wall sleeve.




They filter off contaminations and insects from the ambient air, before the can enter living spaces through the ALD. All filters may be used season independent.

The **dust filters** of class G1 hold back insects, coarse dusts as wells allergenic particles (such as heavy pollen) from the ambient air before they can enter living spaces.

The **pollen filter** of class G3 have finer pores than dust filters. In addition to pollen and spores, they also filter fine deposits such as fly ash or cement dust. Due to the higher filter class they reduce the ALD's air flow volume compared to dust filters.

As the **Flimmer filter** of class F7 has a very high filter efficiency, coarse and fine dusts , allergenic particles as pollen and fine deposits as fly ash or coal dust are reliably filtered. In comparation to dust and pollen filters, also germs and bacterias attached to particles are kept outside.

Specifications & Application range

Filtertyp	Dust filter	Pollen filter	Flimmer filter
			
Order number	1004-0164	1004-0163	1004-0165
Filter class	G1	G3	F7
Material	Polyester	Polyester	High-Performance filter made of polypropylene
Scope of supply	2 pcs.	2 pcs.	1 pc.
Systems ¹⁾	aV100 ALDs	aV100 ALDs	aV100 ALDs

¹⁾ Available for all products in the product range (Standard, Corner, Plus).

Servicing & Maintenance

Polluted or defective filters may cause an air flow reduction through your outdoor air inlet ALD.

Check the dust and pollen filters half yearly for contaminations and defects. The **dust filters** are multi-use products and may be washed several times under warm rinsing water. If necessary, clean polluted dust filters. Defective dust filters must be replaced.

The **pollen filters** are disposable and must be replaced, if polluted or defective.

Flimmer filter are disposable products and must be replaced. Check the flimmer filters yearly for contaminations and defects. Replace defective filters immediately. Replace flimmer filters after a maximum using period of 2 years.

Depending on your requirements and/or air quality your personal maintenance schedule for all filter types may deviate.

inVENTer PAX

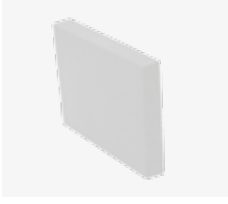
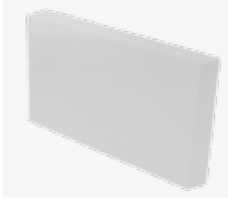
The inVENTer PAX ventilation unit is equipped with two filters of class G4: an outdoor air filter and an extract air filter.

Both filters are located in filter cartridges inside the main module – each in front of the inlet and outlet openings for the outdoor and extract air. They protect the ventilation unit and the room from contamination and filter the outdoor air before it can enter living spaces. Both filters are applicable season independent.

The **extract air filter** protects the main module's components against contamination from the interior room. Hairs, dusts or other particles, sucked with the stale extract air, are filtered off before entering the ventilation unit. Thus, a performance loss is prevented.

The **outdoor air filter** keeps back insects, pollen, spores and allergenic particles (such as pollen farina) as well as fine deposits (e. g. fly ash or cement dust) from the fresh air, before they may enter living spaces through the ventilation unit. Only filtered fresh air enters the room and the ventilation unit's components are protected from contamination.

Specifications & Application range

Filtertyp	Outdoor air filter	Extract air filter
		
Order number	1004-3001	
Filter class	G4	G4
Material	Polyester	Polyester
Scope of supply	1 pc. per set of dust filters	1 pc. per set of dust filters
System	inVENTer PAX	

Servicing & Maintenance

Polluted and defective filters may result in performance loss and damage your ventilatipn unit inVENTer PAX. Dust particles from the interior or contaminations and allergenic particles from the exterior may be sucked into the ventilation unit unfiltered.

Always replace both filters simultaneously.

Check the outdoor and extract air filters regularly for contamination and defects. Replace defective filters immediately. Depending on your requirements and/or air quality, you may set your personal filter change interval based on your observation.

Replace both filters after a maximum using period of 1 year. The dust filters are disposable products and must be replaced after usage. Used and/or defective filters can be easily disposed of in domestic waste.