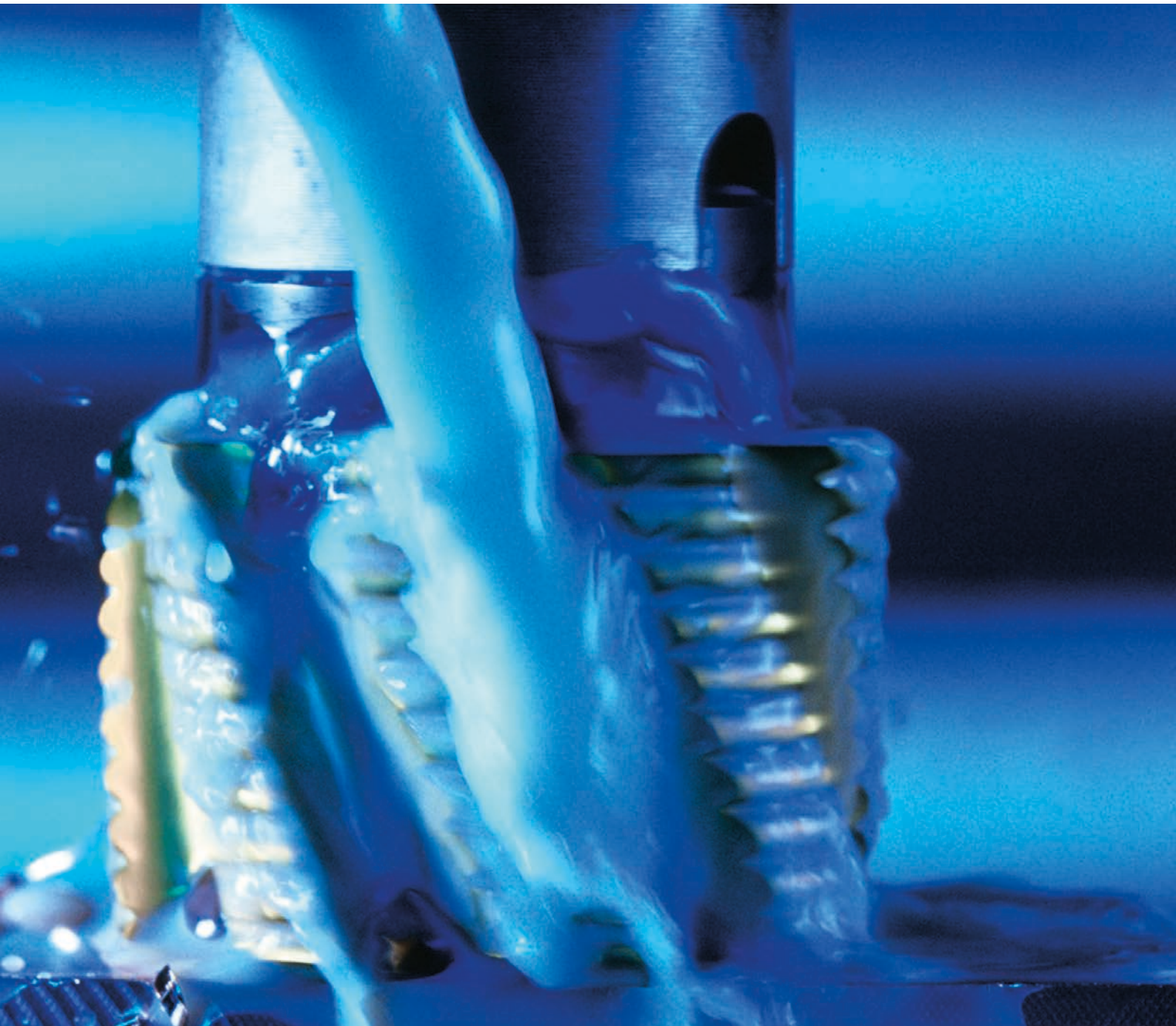


PRODUCT BROCHURE

**Compact aerosol separator
DELBAG® MultiAir Premium**

***The system solution
for emulsion mist and solid aerosols***



Safety for people and for machines



**SUSTAINABILITY
FOR YOUR PROCESSES**

Air Eco2nomy is more than just engineering. It is an attitude that creates values with a future: quality of life for people. Protection of the climate and environment. Security for companies and investors.

The metalworking industries produce emulsion mists and solid aerosols that must be filtered out to comply with occupational health and safety regulations. DELBAG® Air Filtration has developed just the right solution for these demanding responsibilities: The MultiAir Premium compact aerosol separator that, together with Air Eco2nomy, assures pure air at industrial work places.

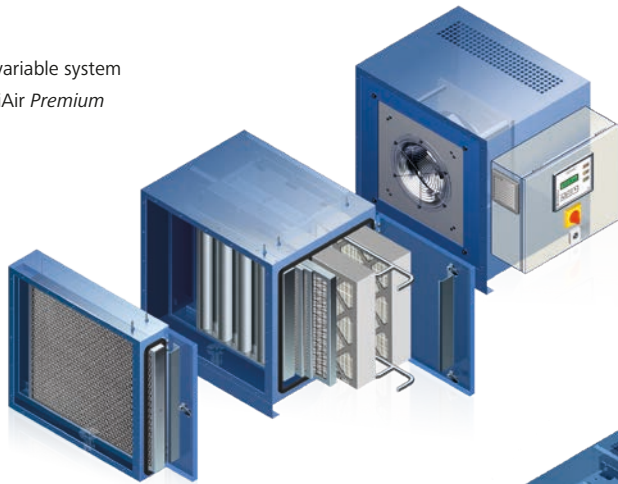
DELBAG® Air Filtration stands for competence and experience from more than 100 years of market leadership in air-filter technology. Under the motto Air Eco2nomy, we offer you comprehensively oriented solutions that set economic and ecological standards. Our MultiAir *Premium* compact aerosol separator is the best example here.

The newly developed system has a modular structure where individual modules can be easily customized to particular requirements. The polluted air is so thoroughly cleaned that the filter system can operate in recirculating air mode. The system reliably prevents any danger of fire or explosion. MultiAir *Premium* not only effectively safeguards your staff. Air Eco2nomy also protects your operations from cost-intensive down times and production losses. Owing to its very small dimensions, this compact aerosol separator system requires only small space and can be easily installed.

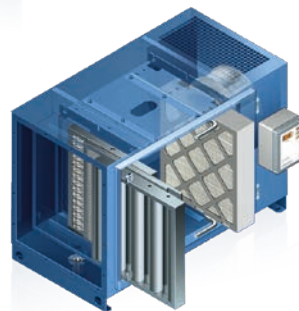
Continuously improved encapsulation means that advanced CNC machine tools often have reduced air extraction volumes. At the same time, however, this development has meant that increasingly greater filtration efficiency is required for such systems. In order to satisfy these new requirements, the smaller and especially cost-effective version MultiAir Junior *Premium* has been developed for air flows up to 1200m³/h. The functionalities and innovative features of this model are the same as with the large version.

- Safety filter function – no danger of fire or explosion
- Effective recirculated-air filtration mode with reliable compliance with specified MAK and TRK limit values
- Modular technology for horizontal installation onto industrial processing machines
- Welded air-tight and oil-tight structural design
- Powerful fans (230 and 400V, 50 and 60Hz)

The variable system
MultiAir *Premium*



The compact system
MultiAir Junior *Premium*



Quality and diversity for any situation

- Regenerable pre-filters (filter classes G2 to M5, in accordance with EN 779)
- Various AeroPlus fine-filter cells (filter classes F7 to H13, in accordance with EN 779 and/or EN 1822), as fully incineratable main filter with plastic frame – which prevents swelling of the material as with wooden frames
- Simple replacement of filters through large service doors
- Patented MultiTronic filter control system, with pressure-drop monitoring for all filter stages, and processor-controlled (closed-loop) air flow
- Standard ¾" removal fittings for each filter stage, for disposal of the removed aerosols and liquid cleaning agents
- Fast replacement of plug-in seals made of nitrile butadiene rubber (NBR) with stainless-steel cores

Mists resulting from water-mixed cooling lubricants or emulsions also carry fine aerosols. These mists, however, have properties that are different from oil and dry dust. Our filter combinations assure high degrees of droplet separation and very fast collection of the separated droplets. By using different types of pre- and fine filters, the aerosol separator can be optimally adapted to each individual application.

Owing to its compact dimensions, MultiAir Premium can be directly installed where it is used: i.e., just where cooling-lubricant mist and liquid and dry aerosols are emitted. The system guarantees a high degree of flexibility. A selection of module sizes and high-performance fans allow optimal matching to operational air-flow levels and to building conditions. Depending on the individual design, pre-filters, separators, after-filters and fan assembly are arranged as required.

The systems are delivered in pre-assembled mode, which significantly shortens the final assembly time on site. Module units and electronic controls are installed ready for operation, and are tested to ensure flawless function. The primary application is for separation of emulsion mist that arises in metalcutting operations – and of erosion machining mist and other aerosols that increasingly occur in all areas of metalworking industries. In many cases, physical or safety considerations prevent the use of electrostatic precipitators for such uses.

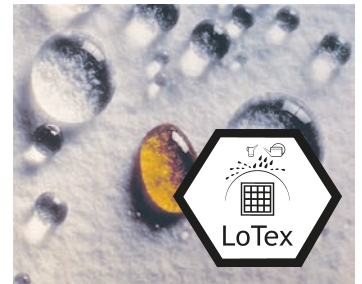
A wide selection of pre- and main filters is available, according to specific requirements. All pre-filters can be regenerated (with the exception of filter pads). The main filters are provided with oleophobic and hydrophobic properties. Fine-particle air filters made by DELBAG® Air Filtration are tested by Eurovent for conformity to filter-class and initial pressure-drop specifications. The Eurovent seal verifies that the data in suppliers' brochures for a particular product category conform with all the systems of regulations applying to the filters being offered. The testing data can be systematically found under www.eurovent-certification.com – and this means in turn that you benefit from a maximum of transparency.

Two control systems are available for choice: the MechaTronic basic control, or the MultiTronic comfort control. Both new developments assure optimal operational safety.



LoTex®-Filter pads – Technology for low energy consumption

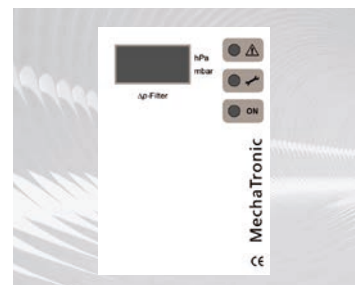
DELBAG® Air Filtration has developed LoTex® as a brand new filter media based on lotus effect. It is used primarily for separating of liquid droplets from the air stream, as the unique media treatment allows for a significantly reduced wettability. Water, oils, and emulsions easily pearl off, instead of evaporating in the filter and resinifying there. These characteristics mean that relatively large amounts of liquids can be separated and – if desired - can be effectively reused. A further benefit: since the pressure drops with DELBAG® Air Filtration LoTex® filters are appreciably less than those experienced in conventional demisters (droplet separators), power consumption for air filtration is cut in half. The advantages are double: cost reduction and protection of the environment



LoTex Filter pads

The MechaTronic basic control system

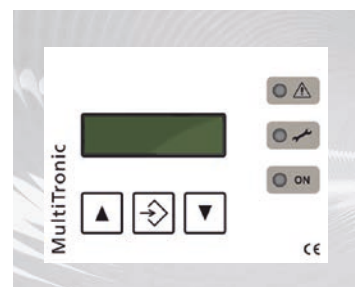
- Compact interface and control unit, connection of external signals is possible
- Sealed membrane keypad with control LEDs for operation, service, and malfunction modes
- Integrated pressure-drop monitoring
- Digital display of the operational pressure drop
- Setting range of the differential pressure switch point from 200 to 1,000 Pa
- Advance warning before reaching the final pressure drop
- Additional external reports for operation, service, and malfunction states, by floating switching contacts
- Fan monitoring by thermal contacts



The MechaTronic control system

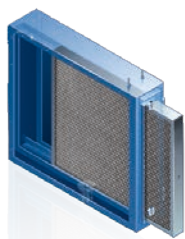
The MultiTronic comfort control

- Closed-loop control, monitoring, and stabilization of the air flow through the filter system
- Pre-selection of 2 different air flow levels, with call-up of these levels during the machining process
- Digital display of filter-pressure drops
- Signaling when service is required
- Several floating outputs provided for remote display
- Bus interface for display of various parameters on the user interface of the industrial processing machine



The MultiTronic filter control system

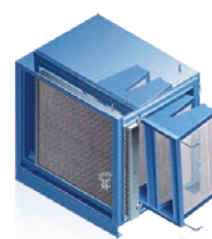
Technical Data



Pre-filter unit V



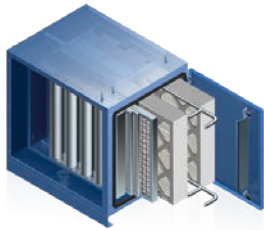
Pre-filter unit V_w



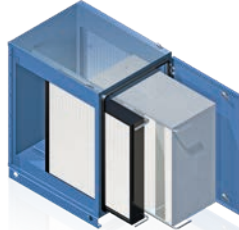
Separator unit A

Size		KNA/W 1/1	KNA/W 2/1	KNA/W 2/2
Max. air flow	m ³ /h	2,500	3,200	6,400
Width	mm	618	618	1,200
Height (+ 60 mm for base)	mm	578	740	740
Max. operating temperature	°C	40	40	40
Relative humidity	%	100	100	100

Filter modules		KNA/W 1/1	KNA/W 2/1	KNA/W 2/2
Pre-filter unit V				
Length	mm	136	136	136
Weight	kg	14	17	30
Number of filter stages		2	2	2
Pre-filter unit V_w				
Length	mm	223	223	223
Weight	kg	16	19	34
Number of filter stages	Pre-filter	2	2	2
Separator unit A				
Length	mm	500	500	500
Weight	kg	40	48	83
Number of filter stages	Pre-filter	1	1	1
	Main filter	1	1	1





Separator unit S




Afterfilter unit N



Fan unit F_{ec}

Filter modules				KNA/W 1 / 1	KNA/W 2 / 1	KNA/W 2 / 2
Separator unit S						
Length	mm			500	500	500
Weight	kg			40	48	83
Number of filter stages	Pre-filter			2	2	2
	Main filter			2	2	2
Afterfilter unit N						
Length	mm			500	500	500
Weight	kg			40	48	83
Number of filter stages				2	2	2

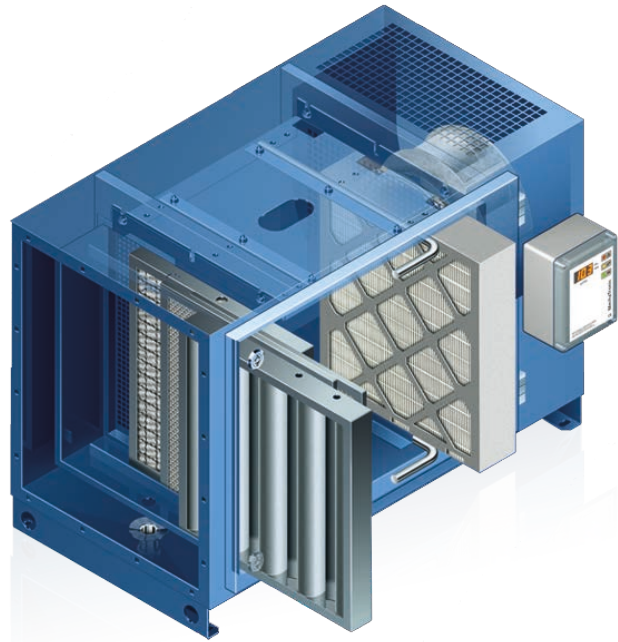
Fan modules			KNA/W 1 / 1	KNA/W 2 / 1	KNA/W 2 / 2
Fan unit F_{ec} (continuously controllable)					
Length	mm		500	500	500
Weight	kg		41	46	77
Rated voltage	VAC 50/60Hz		3~380-480 ¹	3~380-480 ¹	3~380-480
Power consumption	kW		0.94	1.66	3.0
Sound pressure level ²	approx. dB (A)		≤ 70	≤ 70	≤ 73





¹ also available with 230-277VAC

² at a distance of 1 m

The alternative for small air flows

- Single-part steel enclosure with oil-tight welding and with 3 chambers that are sealed off with respect to each other (i.e., no by-passes)
- Wide selection of filters that can be fitted
- Fan with great degree of efficiency and with minimal energy costs
- Adjustable filter clamps (with clamping heights of 25, 50, 80, and 150 mm) made of stainless steel: no corrosion and never any problems during change of filters over the lifetime of the system
- Price-effective, completely incineratable main filters with plastic frames or metal frames – with no swelling of the material as with wooden frames
- Fast replacement of plug-in seals made of nitrile butadiene rubber (NBR) with stainless-steel cores

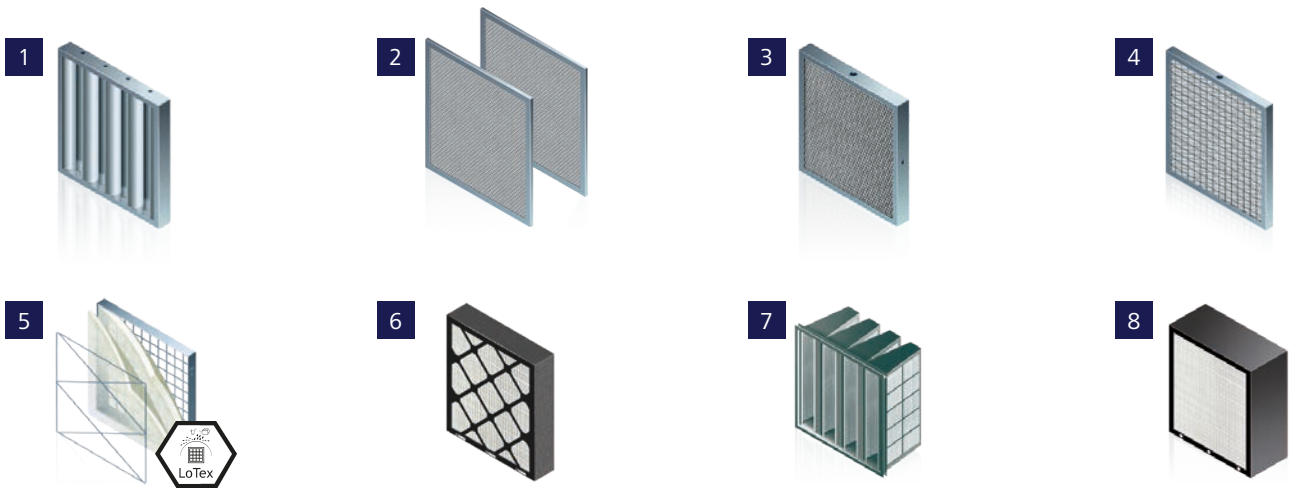


Size	   	KNA/W 025/1
Max. air flow	m ³ /h	1.200
Width	mm	580
Height	mm	583
Length	mm	825
Weight	kg	70
Max. operating temperature	°C	40
Relative humidity	%	100
Rated voltage	VAC 50 Hz ¹	200–277 / (400)
Power consumption Ventilator	kW	0,49 / (0,32)
Sound pressure level ²	db (A)	< 65

¹ also available with 60 Hz, 230 V infinitely variable

² at a distance of 1 m

Filter media



Pre-filter

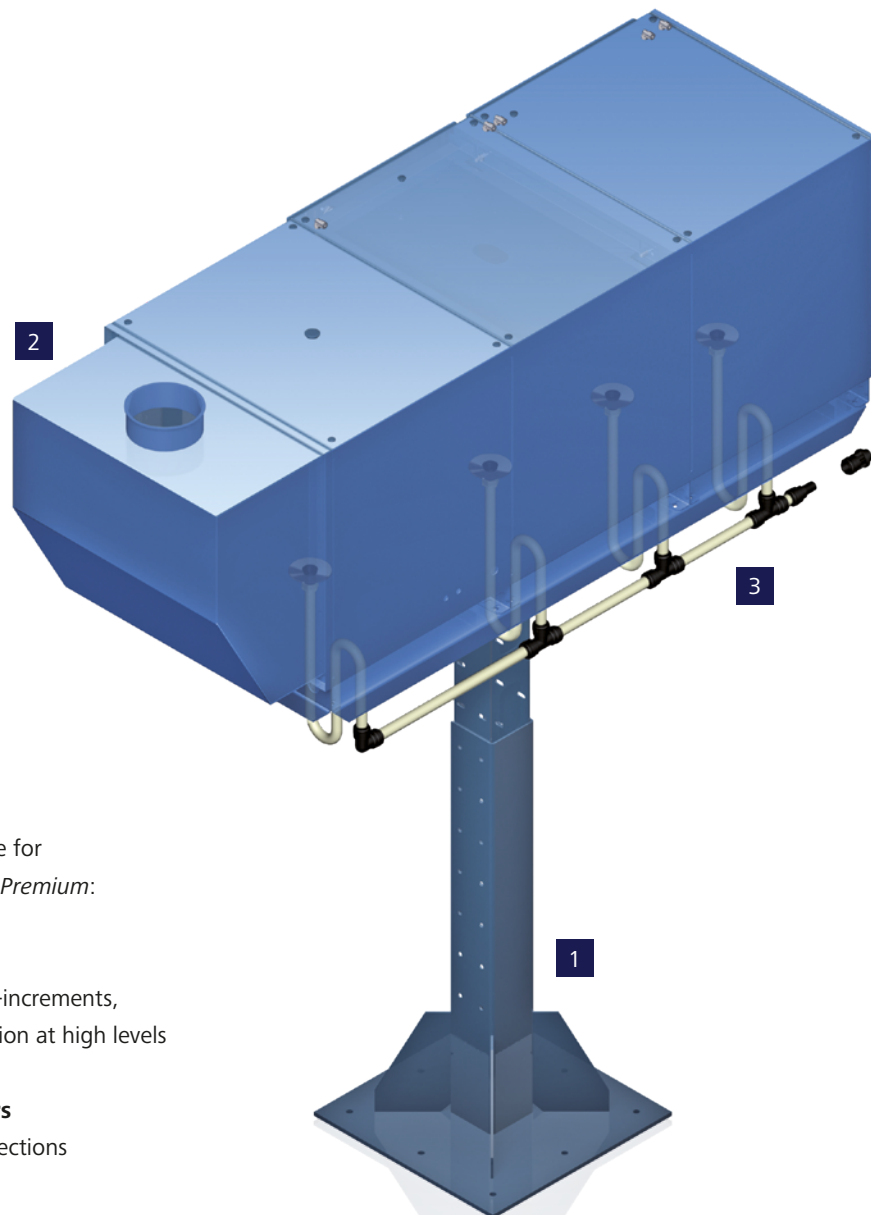
- 1 **Droplet separator**
Offset arranged stainless steel profiles;
regenerable
- 2 **Metal filters, expanded metal mesh**
Multi-layer, expanded-mesh aluminum layers,
robust U-profile frame; regenerable
- 3 **Metal filters, woven mix**
Woven metal made of aluminum or stainless
steel, in a robust U-profile frame; regenerable
- 4 **Metal filters, woven mix**
High-quality woven mixture in a robust U-profile
frame; regenerable
- 5 **Filter pads LoTex® M5**
Synthetic-fiber fleece with progressive depth
structure; not regenerable

Main- and afterfilter

- 6 **Filter cell F7, F9**
Pleated micro-glass-fiber fleece, oleo- and
hydrophobic, in plastic frame; not regenerable
- 7 **Filter element F8**
Pleated micro-glass-fiber fleece, oleo- and
hydrophobic, in re-usable metal frame;
not regenerable
- 8 **E11, H13 HEPA filters**
Pleated micro-glass-fiber fleece, in metal frames;
not regenerable



Accessory



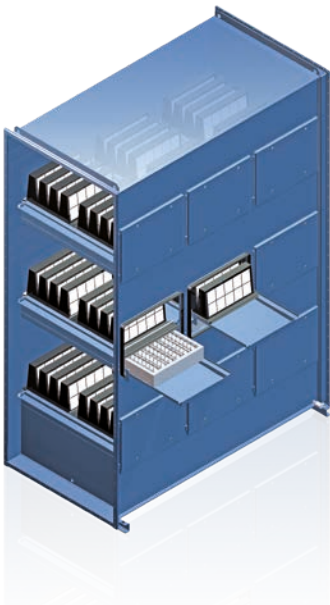
The following accessories are available for MultiAir Premium and MultiAir Junior Premium:

- 1 Installation uprights**
adjustable heights in 100-mm-increments, from 1.8 to 2.5 m, for installation at high levels
- 2 Various connection adapters**
including accessories for connections to the air-extraction point
- 3 Individual siphons or siphon systems**
maintenance-friendly, made of semitransparent polyethylene (PE)

DUCT AIR FILTERS FOR HIGH AIR VOLUMES

Solution for central systems

Our systems offer a customised solution for each location and for all production conditions. If, however, greater flexibility is desired and if the machinery pool changes more frequently, we recommend decentral extraction with our *MultiAir Premium* compact filter units installed directly at the machines. If a company's machinery pool remains constant over relatively long periods of time, we recommend either central or group air-extraction units. The KNA duct mist precipitator and the universal duct air filter system MultiMaster-Vario are examples of filter systems as a central-plant solution offered by DELBAG® Air Filtration.



KNA duct mist precipitator



Universal duct air filter
MultiMaster-Vario

***DELBAG® Air Filtration is a dynamic globally active company
within air treatment - filter technology - air quality.***

Our local consultant and service teams gladly take their time to develop ideas and solutions together with our clients – creatively and professionally.

