

ULTJUMBO®

JUMBO Filtertrolley



LASER
FUMES



DUST AND
SMOKE



SOLDERING
FUMES



GERUCH,
GAS UND
DAMPF



MED



RESTAURO



CLEANING
INDUSTRIAL
GASES



NEW
EMISSIONS



WELDING
FUMES



OIL AND
EMULSION
MISTS



COMPLETE
SOLUTIONS

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Extraction. Filtration. Persistence.



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Series description

The units in the **series of the JUMBO Filtertrolley product range**

are suitable for collecting and filtering contaminants and impurities in the form of dusts and gases. There are suitable multi-level filtering systems **for every possible industrial application** and the most diverse compositions of harmful or unwanted substances.

The contaminants and impurities generated during the customer's process are collected directly from the point of origin via the collection elements and filtered by the **JUMBO Filtertrolley** product range. **High precipitation rates** are achieved thanks to the targeted combination of the available single filters. The underlying filter technology uses the principles of particle separation for dust and the principle of adsorption for gaseous substances.

Thanks to the high degree of cleaning, the filtered clean gas can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

The **JUMBO Filtertrolley** can be optionally combined with a **diverse range of accessories**. The right accessories can be selected according to the customer requirements.

Features of the JUMBO Filtertrolley extraction and filtration unit

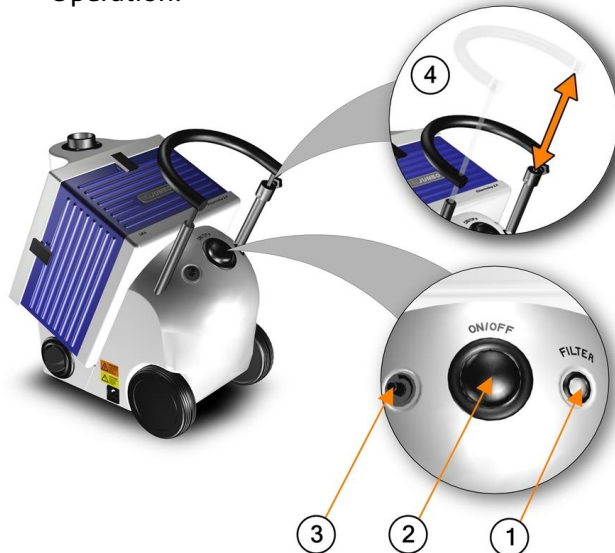
- ➔ An **exchangeable filter system** – low-contamination removal
- ➔ **Low replacement filter costs** thanks to the multi-level filter system with competitively priced prefilter elements with increased absorption capabilities
- ➔ **Very low energy consumption** thanks to energy-efficient electronics
- ➔ The electrical equipment provided enables **worldwide use**: operable at 230 V or 100 - 120 V
- ➔ Integrated sound insulation ensures that the device **operates extremely quietly**
- ➔ Central on/off switch
- ➔ Exhaust position freely selectable
- ➔ Continuously adjustable air flow controller
- ➔ Filter clogging indicator with indication of clogging of the intake and exhaust openings
- ➔ Impact-resistant ABS plastic housing
- ➔ Unit is **mobile** with wheels and a telescopic handle
- ➔ Standard extraction openings 1x Ø50; optional 1x Ø75
- ➔ Alsident® extraction arms can be directly mounted





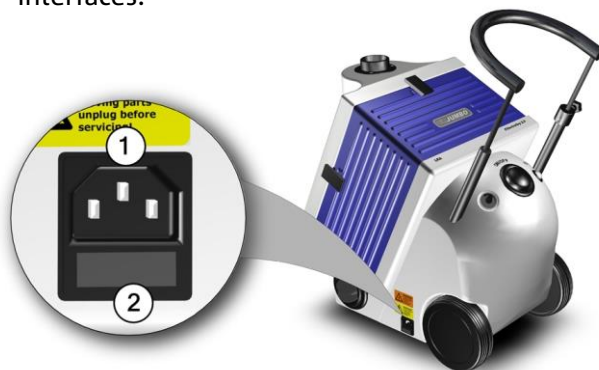
Equipment

→ Operation:



- 1 Loaded particle filter indicator
→ When the particulate filter is saturated, the indicator lights up (red)
- 2 On/Off switch
- 3 Potentiometer
→ Direct control of the blower speed
- 4 Retractable telescopic handle

→ Interfaces:



- (1) Mains connection socket
- (2) Fuse for mains voltage

→ Air intake versions:

Standard configuration:
1x intake nozzle Ø 50 mm

Option (for ACD, LAS, LRA only):
1x intake nozzle Ø 75 mm





Technical data ULT JUMBO Filtertrolley

Parameter		Unit	230 V	100 - 120 V
Volumetric flow, max.		m ³ / h	190	150 (100 V) - 160 (120 V)
Vacuum max.		Pa	3,200	2,500 (100 V) - 2,700 (120 V)
Rated operating point		m ³ /h @ Pa	80 @ 1,900	65 @ 1,300 (100 V) 80 @ 1,400 (120 V)
Protection rating		IP	54	54
Noise level (@ 50 - 100% air throughput)		dB(A)	49 - 54	49 - 54
Vacuum generator type			EC blower	EC blower
Rated voltage		VAC	1~230	1~100 - 120
Rated frequency		Hz	50/60	50/60
Motor rating		kW	0.15	0.15
Rated current		A	1.0	2.0
Air flow controller				Yes
Loaded particle filter indicator		optical		Yes
Interface SUB D9				No
Dimensions	Width	mm		340
	Depth	mm		450
	Height	mm		530 - 850
Weight (without filter)		kg		approx. 21
Max. filter weight		kg		approx. 15
Air intake versions:			Standard: 1x Ø 50 mm nozzle Option: 1x Ø 75 mm nozzle	
Connection options			Hose connection or arm installation	
Extracted air outlet:			2 adjustable exhaust nozzles	
Location			On the bottom on both sides	
Mains power cable		m	3.0	



ODORS,
GASES, AND
VAPORS

Application ACD – Odor, Gas and Vapors

Areas of application

Adhesive Bonding | Priming | Painting/Printing | Cleaning | Laminating | Casting

How it works:

An EC blower with a high pressure reserve generates a volumetric flow suitable for the application on the clean-gas side of the filter. The volumetric flow can be controlled individually and steplessly. In this way, the pollutant-laden raw gas is extracted in a reliable manner.

The **coarse-dust particles** are precipitated and held back in the first filter stage. The precipitation (adsorption) of **gaseous and vaporous** air contaminations takes place in the activated carbon filter.

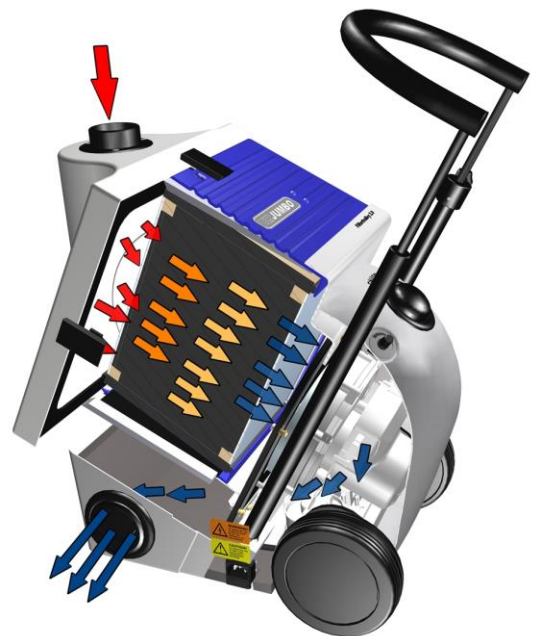
The filter effect of the activated carbon is based on **adsorption**, i.e. on the depositing of (gaseous) substances on the surface of the activated carbon. In general, no chemical changes of the adsorbed substance take place in physical adsorption. The filter construction is adapted to the nominal volumetric flow of the devices so that the contact period is sufficient for achieving a good adsorption response.

Activated carbon is not suitable as an adsorption medium in the presence of a multitude of gases and gaseous mixtures. The **chemisorption** adsorption process can be used in such applications, either as an alternative or as a supplement. A chemical alteration of the substances to be precipitated takes place in this connection.

When this procedure is used, the filter is filled with a mixture of activated carbon and chemisorption medium or the activated carbon is replaced in its entirety by the chemisorption medium.

Thanks to the high degree of cleaning, the **filtered clean gas** can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

Recirculated air operation is not permitted for the suctioning and filtration of carcinogenic, mutagenic or reprotoxic substances.



-  Raw gas
-  Filtration
-  Clean gas



ODORS,
GASES, AND
VAPORS

Device variants:

A variety of filter combinations is available for the suctioning and filtration of gases, odors and vapors. The available filter materials exhibit different suitabilities for precipitation, depending on the contaminant present. For expert advice for the selection of the correct filter medium, please contact your local dealer or ULT AG directly using ult@ult.de.

In accordance with customer-specific requirement, the **JUMBO Filtertrolley** series of units can be equipped with the following filter attachments:

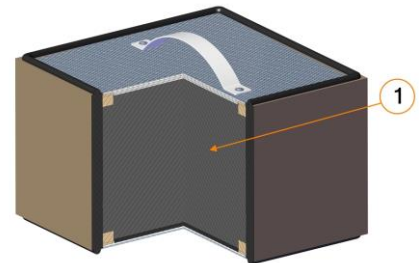
Jumbo ACD

Part number: ACD Jumbo 2.0-BM.3.0

Filter set-up for organic gases:

Main filter A6

- (1) Adsorption filter cassette A6
Filter medium: Activated carbon bed (6 kg)



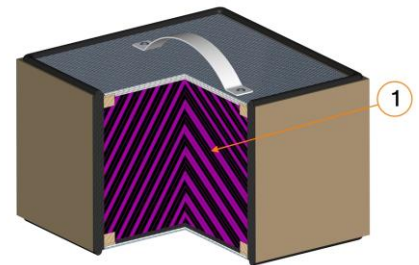
Optional filter set-up:

Part number of option: ULT JUMB.0-Opt.10

Filter for gas mixtures:

Main filter module AC8

- (1) AC8 Chemisorption filter cassette
Filter medium: Granulate bed made of 50 vol% activated carbon and 50 vol% chemisorption medium (total 8 kg)

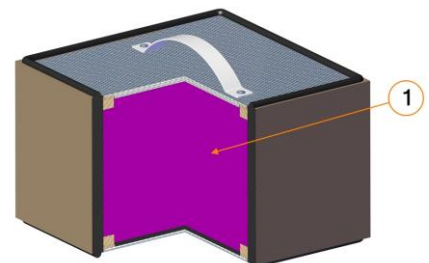


Part number of option: ULT JUMB.0-Opt.11

Filter for gaseous sulfur & nitrogen compounds:

C10 main filter module

- (1) C10 Chemisorption filter cassette
Filter medium: Granulate bed made of 100% chemisorption medium (10 kg)





Application ASD – dust and smoke

Areas of application

Grinding | Engraving | Polishing | Filling and dosing processes

How it works:

An EC blower with a high pressure reserve generates a volumetric flow suitable for the application on the clean-gas side of the filter. The volumetric flow can be controlled individually and steplessly. In this way, the pollutant-laden raw gas is extracted in a reliable manner.

In production processes in which **powder materials** are processed or materials are sawed, milled or ground, dust contaminates the working area. In addition, **mechanical processes** can generate smoke by heating the processed materials. Dust and smoke are harmful to health and affect the quality of production processes. For this reason, these pollutants must be removed from the work area.

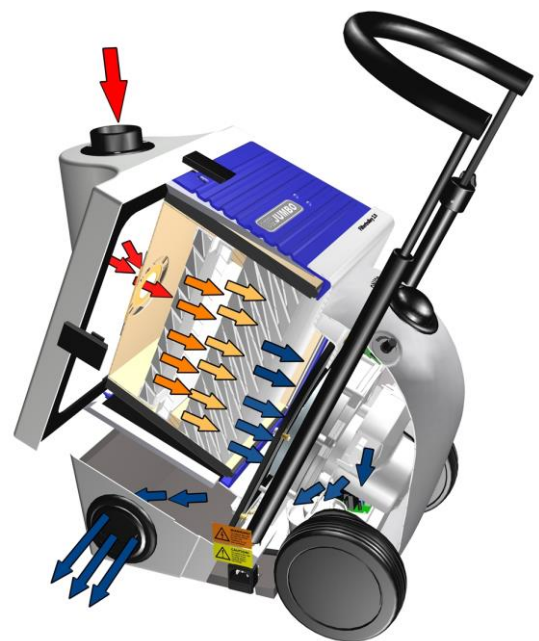
The filter set-up used is specially designed for this purpose. An upstream Z-Line filter in a carton retains coarse dust particles. The Z-Line filter is integrated into a disposal carton and is sealed at the raw gas. The raw gas enters via the lip seal. The Z-Line filter can be disposed of via the disposal carton at a low level of contamination. The **particles** contained in the raw gas are precipitated in a multi-stage storage filter system. Thanks to their **depth penetration**, the filter mats used are particularly suitable for the precipitation of a wide spectrum of particles and for cooled smoke constituents.

The prefilter elements prevent premature clogging of the downstream H13 main filter element. Regularly changing the prefilter elements at shorter intervals significantly extends the functionality of the main filter.

Extremely fine suspended substances are held back by the High Efficiency Particulate Air filter H13 in the particle filter cassette H13. This guarantees a **precipitation rate of 99.95%**.

Thanks to the high degree of cleaning, the **filtered clean gas** can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

Recirculated air operation is not permitted for the suctioning and filtration of carcinogenic, mutagenic or reprotoxic substances.



-  Raw gas
-  Filtration
-  Clean gas



DUST AND
SMOKE

Device variants:

Units in the **JUMBO Filtertrolley** series can be equipped with the following filter set-up for extracting and filtering air contamination in the form of dust and smoke:

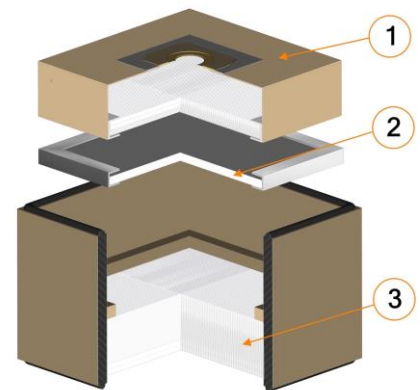
Jumbo ASD

Part number: ASD Jumbo 2.0-BM.3.0

Filter set-up for dust and smoke:

Combined filter cassette

- | | |
|---------------|---|
| (1) | G4 Z-Line filter cassette |
| Filter class: | ISO Coarse 90% according to ISO 16890 |
| (2) | Filter mat M5 |
| Filter class: | ISO Coarse 85% according to ISO 16890 |
| (3) | Particle filter cassette H13 |
| Filter class: | H13 High Efficiency Particulate Air (HEPA) filter, suspended matter filter according to DIN EN 1822 |





Application LAS – laser smoke

Areas of application

Laser Cutting | Laser Marking | Laser Structuring | Laser Engraving

How it works:

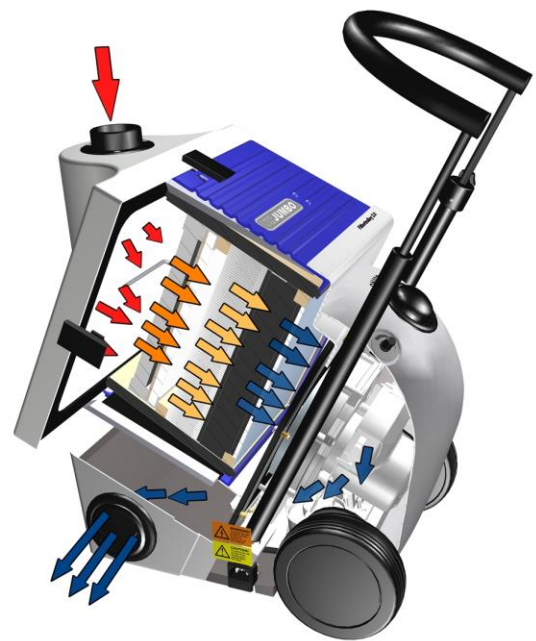
An EC blower with a high pressure reserve generates a volumetric flow suitable for the application on the clean-gas side of the filter. The volumetric flow can be controlled individually and steplessly. In this way, the pollutant-laden raw gas is extracted in a reliable manner.

The versatile work processes in which lasers are used generate **laser smoke**. This toxic, corrosive mixture of aerosol, gas and nanoparticles poses a health hazard and adversely affects the product and process quality. Depending on the process, very different precipitating mixtures of substances can be created, which must be removed from the raw gas.

The filter set-up used is specially designed for this purpose. An upstream filter combination of an **expanded metal filter and filter mats** retains **aerosols and particles** and prevents premature clogging of the downstream H13 main filter element.

The upstream **expanded metal filter** can be cleaned in an industrial washer, making it reusable.

Regularly changing the prefilter mats at shorter intervals significantly extends the functionality of the main filter.



-  Raw gas
-  Filtration
-  Clean gas

Thanks to their **depth penetration**, the prefilters used are particularly suitable for the precipitation of laser smokes. A majority of the particles contained in the laser smoke are trapped at this stage. Extremely fine suspended substances are held back by the High Efficiency Particulate Air filter H13 in the combined filter cassette H13A. This guarantees a **particle precipitation rate of 99.95%**.

The precipitation (adsorption) of **gaseous and vaporous** air contamination takes place in the activated carbon bed of the combined filter cassette H13A.

The filter effect of the activated carbon is based on **adsorption**, i.e. on the depositing of (gaseous) substances on the surface of the activated carbon. In general, no chemical changes of the adsorbed substance take place in physical adsorption. The nominal volumetric flow of the devices is based on the filter construction, the contact period is oriented to a medium adsorption response.

Thanks to the high degree of cleaning, the **filtered clean gas** can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

Recirculated air operation is not permitted for the suctioning and filtration of carcinogenic, mutagenic or reprotoxic substances.



Device variants:

Units in the **JUMBO Filtertrolley** series can be equipped with the following filter set-up for suctioning and filtering harmful gas/dust mixtures from laser machining processes:

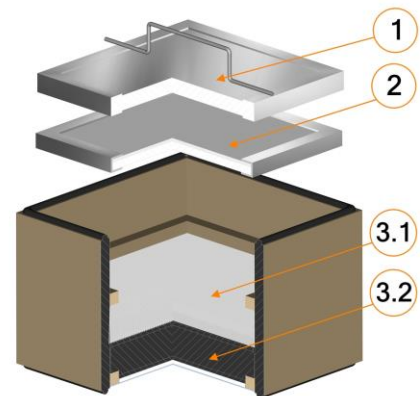
Jumbo LAS

Part number: LAS Jumbo 2.0-BM.3.0

Filter set-up for laser smoke:

Multi-stage filter cassette

- | | |
|-----|--|
| (1) | Expanded metal prefilter
Metal mesh, condensation filter |
| (2) | Interchangeable frame with M5 and F7 filter mat
Filter classes:
Filter mat M5: ISO Coarse 85% according to ISO 16890
F7 filter mat: ISO ePM ₁₀ 75% according to ISO 16890 |
| (3) | Combined filter cassette H13A
(3.1) H13 particulate filter
Filter class: H13 High Efficiency Particulate Air (HEPA) filter, suspended matter filter to DIN EN 1822
(3.2) Adsorption filter A
Filter medium: Activated carbon bed |





Application LRA – Soldering smoke

Areas of application

Manual Soldering | Robot Soldering | Soldering Systems at Special Workstations

How it works:

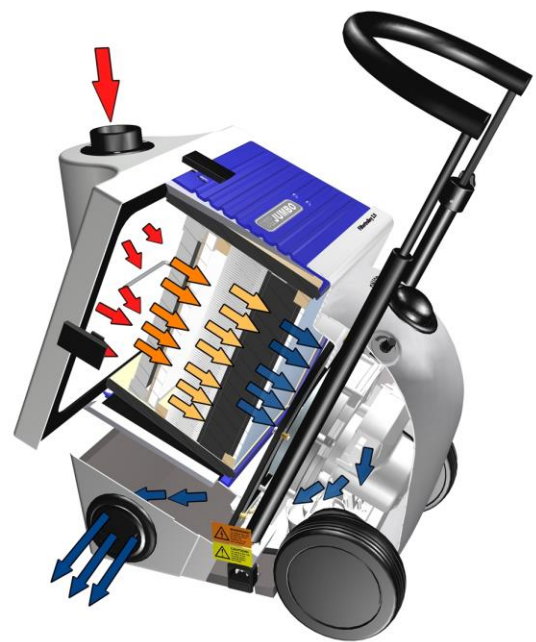
An EC blower with a high pressure reserve generates a volumetric flow suitable for the application on the clean-gas side of the filter. The volumetric flow can be controlled individually and steplessly. In this way, the pollutant-laden raw gas is extracted in a reliable manner.

When soldering work is performed, **soldering smoke** forms out of vaporizing flux, small quantities of solder and gas-emitting substances from working circuit boards and components. This is comprised of a mixture of adhesive aerosols, particles and gases that must be removed from the raw gas.

The filter set-up used is specially designed for this purpose. An upstream filter combination of an **expanded metal filter and filter mats** retains the cooled, **sticky aerosols** in the suction line and **particles** in the soldering smoke to prevent premature clogging of the downstream H13 main filter element.

The **expanded metal filter** can be cleaned in an industrial washer and can be reused multiple times.

Regularly changing the filter M5/F7 filter mat combination at shorter intervals significantly extends the functionality of the main filter.



-  Raw gas
-  Filtration
-  Clean gas

Thanks to their **depth penetration**, the filter mats used are particularly suitable for the precipitation of soldering smokes. A majority of the particles contained in the soldering smoke are trapped at this stage. Extremely fine suspended substances are held back by the High Efficiency Particulate Air filter H13 in the combined filter cassette H13A. This guarantees a **particle precipitation rate of 99.95%**.

The precipitation (adsorption) of **gaseous and vaporous** air contamination takes place in the activated carbon bed of the combined filter cassette H13A.

The filter effect of the activated carbon is based on **adsorption**, i.e. on the depositing of (gaseous) substances on the surface of the activated carbon. In general, no chemical changes of the adsorbed substance take place in physical adsorption. The nominal volumetric flow of the devices is based on the filter construction, the contact period is oriented to a medium adsorption response.

Thanks to the high degree of cleaning, the **filtered clean gas** can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

Recirculated air operation is not permitted for the suctioning and filtration of carcinogenic, mutagenic or reprotoxic substances.



Device variants:

Units in the **JUMBO Filtertrolley** series can be equipped with the following filter set-up for extracting and filtering harmful gas/dust mixtures from soldering processes:

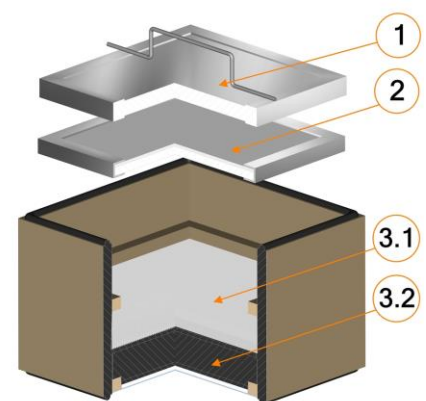
Jumbo LRA

Part number: LRA Jumbo 2.0-BM.3.0.

Filter set-up for soldering smoke:

Multi-stage filter cassette

- | | |
|-----|--|
| (1) | Expanded metal prefilter
Metal mesh, condensation filter |
| (2) | Interchangeable frame with M5 and F7 filter mat
Filter classes:
Filter mat M5: ISO Coarse 85% according to ISO 16890
F7 filter mat: ISO ePM ₁₀ 75% according to ISO 16890 |
| (3) | Combined filter cassette H13A
(3.1) H13 particulate filter
Filter class: H13 High Efficiency Particulate Air (HEPA) filter, suspended matter filter to DIN EN 1822
(3.2) Adsorption filter A
Filter medium: Activated carbon bed |





Series LAS – Medical laser smoke

Areas of application

Medical laser smoke

How it works:

An EC blower with a high pressure reserve generates a volumetric flow suitable for the application on the clean-gas side of the filter. The volumetric flow can be controlled individually and steplessly. The pollutant-laden **raw gas** is thus reliably extracted.

Laser smoke resulting from medical applications presents a health risk to patients and medical personnel. This is a mixture of fine dust and corrosive aerosol that can enter the lungs and is also contaminated with bacteria. A simple face mask is not sufficient here. Laser smoke also damages the equipment through the depositing of strongly adherent coatings. These pollutants must therefore be completely removed directly at the point of origin.

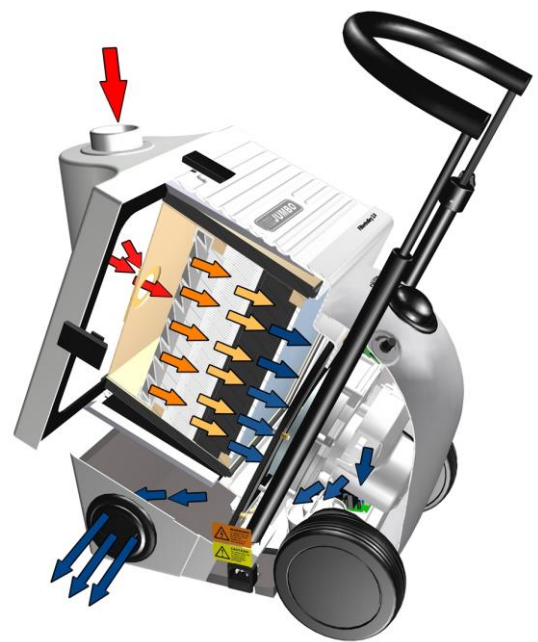
The filter set-up used is specially designed for this application. The combination of prefiltering, suspended matter filtering and a large activated carbon layer ensures a high rate of precipitation of the gases and vapors that are potentially hazardous to health. The **particles** contained in the laser smoke are precipitated in a multi-stage storage filter system. Extremely fine suspended substances are retained by the ULPA U15 filter in the U15 combined filter cassette. This guarantees a **particle precipitation rate significantly greater than 99.9995%**.

The precipitation (adsorption) of **gaseous** air contamination takes place in the activated carbon bed of the U15A combined filter cassette.

The filter effect of the activated carbon is based on **adsorption**, i.e. on the depositing of (gaseous) substances on the surface of the activated carbon. In general, no chemical changes of the adsorbed substance take place in physical adsorption. The nominal volumetric flow of the devices is based on the filter construction, the contact period is oriented to a medium adsorption response.

Thanks to the high degree of cleaning, the **filtered clean gas** can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

Recirculated air operation is not permitted for the suctioning and filtration of carcinogenic, mutagenic or reprotoxic substances.



-  Raw gas
-  Filtration
-  Clean gas



Device variants:

Units in the **JUMBO Filtertrolley** series can be equipped with the following filter set-up for extracting and filtering laser smoke resulting from medical applications:

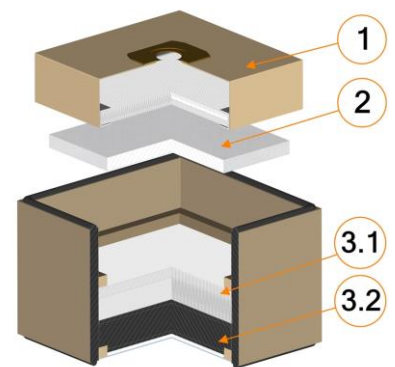
Jumbo MED

Part number: MED Jumbo 2.0-BM.3.0

Filter set-up for combustion products of medical laser applications:

Combined suspended matter filter

- | | |
|-----|--|
| (1) | G4 Z-Line filter cassette: ISO Coarse 90% according to ISO 16890 |
| (2) | Filter mat M5:
Filter class ISO Coarse >85% according to ISO 16890: |
| (3) | U15A combined filter cassette |
- (3.1) U15 particulate filter
Filter class: U15 Ultra Low Penetration Air (UPLA) filter, suspended matter filter according to DIN EN 1822
- (3.2) Adsorption filter A
Filter medium: Activated carbon bed





RESTAURO

Restauro series – Dusts, Smoke, Vapors

Areas of application

Grinding | Polishing | Restoration and Cleaning of Objects of Art

How it works:

An EC blower with a high pressure reserve generates a volumetric flow suitable for the application on the clean-gas side of the filter. The volumetric flow can be controlled individually and steplessly. In this way, the pollutant-laden raw gas is extracted in a reliable manner.

Dust, smoke and also often gases and vapors are released during the restoration of cultural objects. The restorers are subjected to these contaminants for long periods of time, which endangers their health. The dust also settles on the objects again. Effective extraction and filter technology is therefore essential.

The filter set-up used is specially designed for this purpose. An upstream filter combination retains coarse **dust particles** and prevents premature clogging of the downstream H13 main filter element. Regularly changing the upstream Z-Line filter and the M5 filter mat at shorter intervals significantly extends the functionality of the main filter.

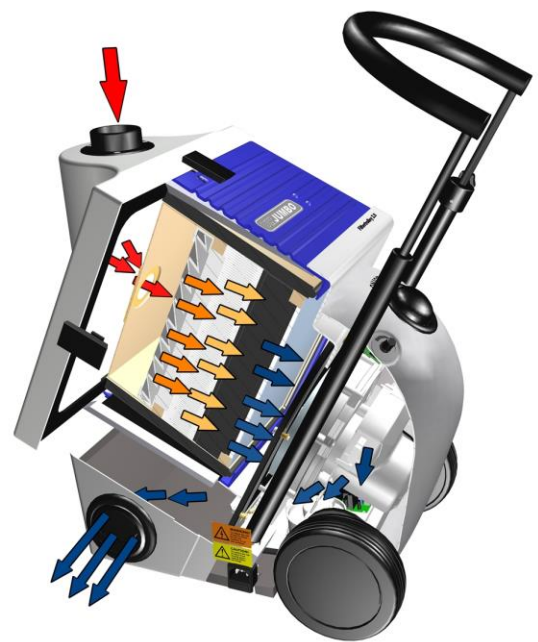
The **particles** contained in the dust are precipitated in a multi-stage storage filter system. Thanks to the **depth penetration**, the filter mat used is particularly suitable for the precipitation of dusts. A majority of the particles contained in the dust are trapped at this stage. Extremely fine suspended substances are held back by the High Efficiency Particulate Air filter H13 in the combined filter cassette H13A. This guarantees a **particle precipitation rate of 99.95%**.

The precipitation (adsorption) of **gaseous and vaporous** air contamination takes place in the activated carbon bed of the combined filter cassette H13A.

The filter effect of the activated carbon is based on **adsorption**, i.e. on the depositing of (gaseous) substances on the surface of the activated carbon. In general, no chemical changes of the adsorbed substance take place in physical adsorption. The nominal volumetric flow of the devices is based on the filter construction, the contact period is oriented to a medium adsorption response.

Thanks to the high degree of cleaning, the **filtered clean gas** can then be returned to the working area (**recirculated-air** operation). This avoids any loss of heat.

Recirculated air operation is not permitted for the suctioning and filtration of carcinogenic, mutagenic or reprotoxic substances.



-  Raw gas
-  Filtration
-  Clean gas



Device variants:

Units in the **JUMBO Filtertrolley** series can be equipped with the following filter set-up for extracting and filtering harmful gas/dust mixtures from restoration processes:

Jumbo Restauro

Part number: RES Jumbo 2.0-BM.3.0

Filter set-up for dust:

Combined suspended matter filter

- | | |
|-------|---|
| (1) | G4 Z-Line filter cassette: ISO Coarse 90% according to ISO 16890 |
| (2) | Filter mat M5: ISO Coarse > 85% according to ISO 16890: |
| (3) | Combined filter cassette H13A |
| (3.1) | H13 particulate filter
Filter class: H13 High Efficiency Particulate Air (HEPA) filter, suspended matter filter according to DIN EN 1822 |
| (3.2) | Adsorption filter A
Filter medium: Activated carbon bed |

