Technical documentation

LASER FUMES

DUST AND SMOKE

SOLDERING FUMES

ODORS, GASES, AND VAPORS

CLEANING INDUSTRIAL GASES

NEW EMISSIONS

WELDING FUMES

OIL AND EMULSION MISTS

COMPLETE SOLUTIONS

series 260
LAS 260 MD/HD FK

Date of issue: 09/2017

ULT
UMWELT - LUFTTECHNIK

Extraction. Filtration. Persistence.

Technical documentation

LAS 260 MD/HD FK

LASER FUMES

Use and application

The **LAS 260 MD/HD FK** is suitable for collecting and filtering dry and non-combustible types of dust contained in non-explosive air mixtures produced during laser machining. Any emitted and partially unhealthy **types of dust, fumes and gases** ought to be extracted by collecting elements directly at their place of origin and filtered by the LAS 260 MD/HD FK. The innovative filter concept offers a significantly **larger filtering surface** and **reduces** the occurring **maintenance costs** thanks to the **huge storage capacity**. A **thick layer of activated carbon** enables a **long contact time** with the contaminated air flow. Gases and fumes are adsorbed effectively.

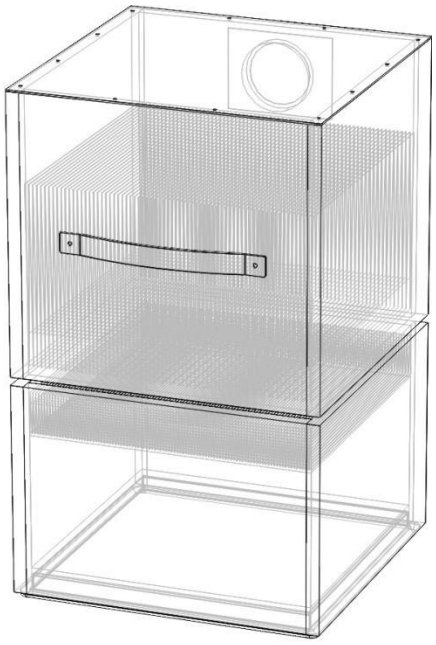
As high pressure version (HD.19) the extraction and filtering unit is also available W3-certified according to ISO 15012-1. This allows recirculating the air into the work space even if the laser process is treating high-alloyed steel. The layer of activated carbon is contained in the W3-certified version as an option.

Examples

- laser cutting,
- laser engraving,
- laser structuring
- laser processing of metal, plastic or organic material

ULT 260 mobile extraction and filtration unit

- mobile unit with castors
- with filter replacement system
- all interfaces on the back side
- control panel and access to filter elements on the front side
- easy filter handling
- robust steel housing
- powder coated RAL 7047 tele gray



Filter system:

Storage filter system
Filters which are replaced once they are saturated.

Filter technology:

(1) Particle filter cassette F9
filter class: F9 fine dust filter according to DIN EN 779

(2) Combined filter cassette H14A10

(2.1) Particle filter H14
filter class: H14 HEPA-filter according to DIN EN 1822

(2.2) Adsorption filter A10
filter medium:activated carbon (ca. 10 kg)

Configuration

Air flow controller:	suction power is continuously adjustable
Loaded particle filter indicator:	visualization of the particle filter condition
Minimum volume flow indicator:	only contained with W3-version, optical and acoustical warning when air-intake is blocked

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Technical Data

Parameter	unit	MD.14	HD.16	HD.19	HD.19 W3
Max. air flow	m^3 / h	635	200	320 / 340*	
Max. vacuum	Pa	3,200	22,000	7,200 / 8,300*	
Nominal capacity	m^3/h @ Pa	250 @ 2,000	160 @ 6,500	200 @ 4,500 / 200 @ 5,000*	
Motor-nominal power	kW	0.36	1.20	0.8 / 1.00*	
Nominal voltage	V	1~ 230	1~ 230	1~120 / 1~230	
Nominal current	A	2.2	10	12	
Frequency	Hz	50 / 60	50 / 60	50 / 60	
Protection class	IP	54	54	54	
Type blower		EC-turbine	EC-turbine	EC-wide range turbine	
Noise level (at 50 - 100%)	dB(A)	51 - 56	60 - 70	68 - 72	
Loaded particle filter indicator	optical	yes	yes	yes	no
Minimum volume flow indicator	optical / acoustic	no	no	no	yes
Air flow controller		yes			
SUB D9 interface		optional			
Air intake		1x Ø 80 mm nozzle			
	position	upper part of the backside			
Air outlet		air exhaust louver, optional Ø 100 mm exhaust nozzle			
	position	lower part of the backside			
Width	mm	460			
Depth	mm	475			
Height	mm	975			
Weight	kg	80			
Length of power cable	m	3.0			
Filter system		ULT-Order Number			
(1) Particle filter cassette F9		ULT 02.1.711			
(2) Combined filter cassette H14A10: (2.1) Particle filter H14 (2.2) Adsorption filter A10		ULT 02.1.721			Option
(2) Particle filter cassette H14		Option			ULT 02.0.712

unit with option SUB-D9 and exhaust air louver from the back:

*Characteristics at 120 V and 230 V

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LAS 260 MD/HD FK

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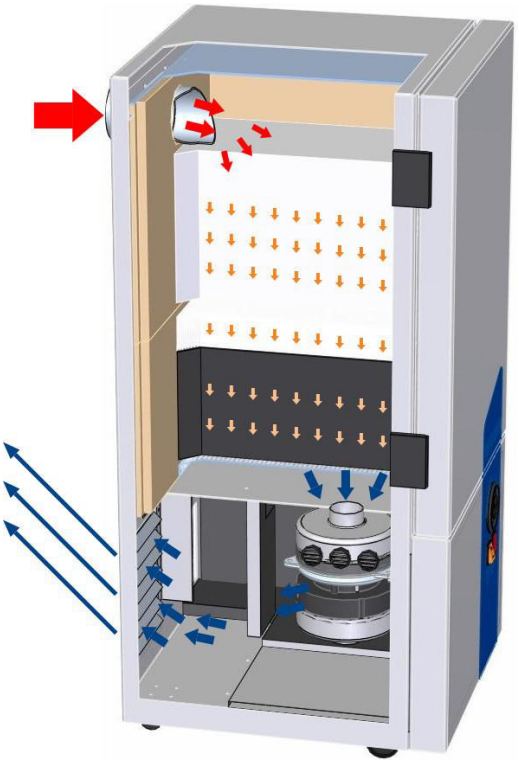

raw gas
filtration
clean gas

Functional principle:

At the clean-air side of the filter, a turbine with a high pressure reserve produces a volume flow matched to the respective application. This volume flow can be individually and infinitely variably regulated. Thus, the polluted air will be reliably extracted.

The **particles** are separated and held back at the first filtration level in multiple stages. **Gaseous and vaporous air pollutants** are separated (adsorbed) in an activated carbon filter.

The filtering effect of activated carbon is based on adsorption, i. e. an accumulation of substances (to be filtered out) on the surface of the activated carbon. During this process there are no chemical reactions and changes of the captured substances. The construction of the filter elements underlies the volume flow of the unit; the contact time is based on a medium adsorption reaction.

The filter combination can be accessed through the front door. Thanks to the user-friendly design of the filter space the replacement of the filter elements requires little effort.

Storage filter system

Filters which are replaced once they are saturated.

Pre-filtration cassette

(1)	**fine dust filter**	Particle filter F9

Combined filter cassette

(2.1)	**particulate filter**	HEPA filter H14
(2.2)	gas filtration	Adsorption filter A10 (10 kg activated carbon)

This excellent filter efficiency makes it possible to recirculate the **filtered air** and reduce energy costs.

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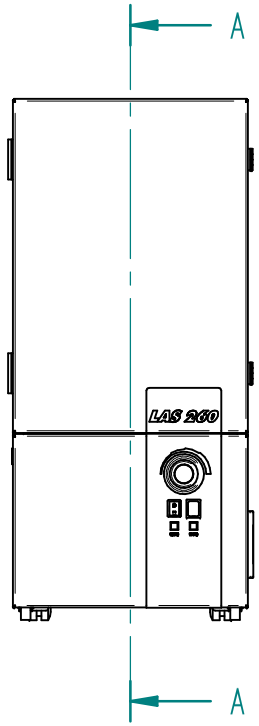
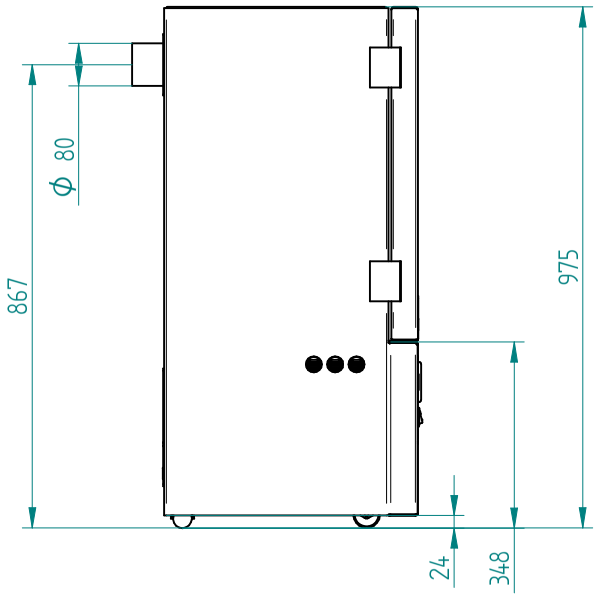
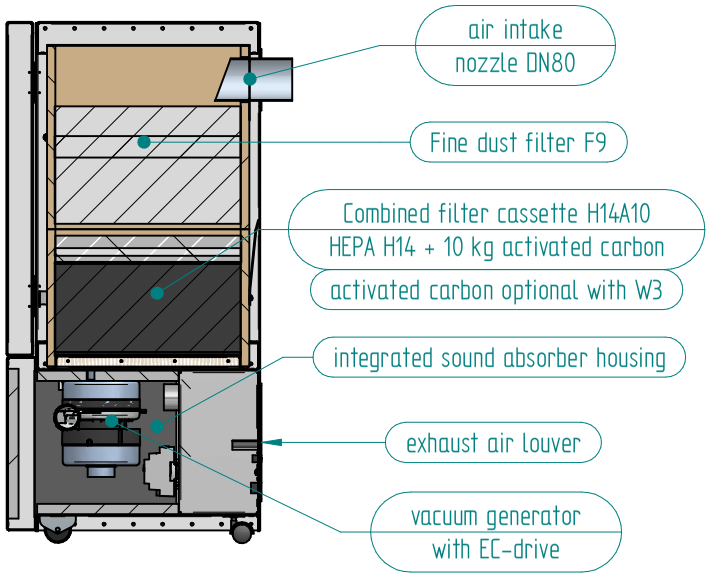
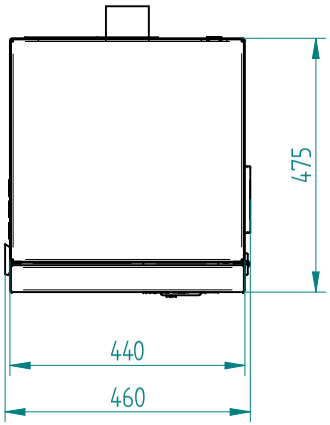
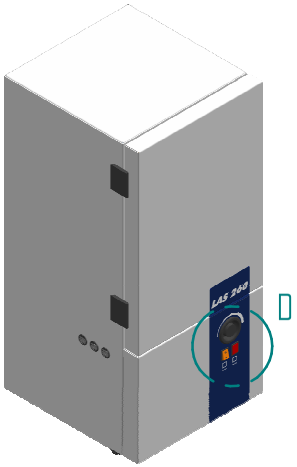


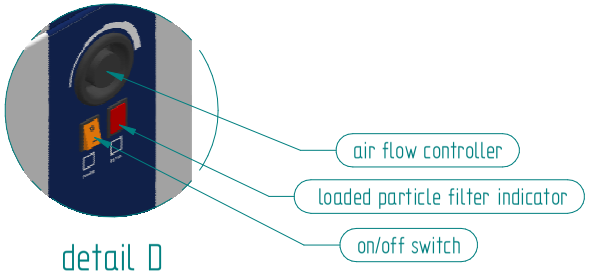




cutaway A-A







detail D

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