

series 400
LAS 400 MD HA14



LASER FUMES



DUST AND SMOKE



SOLDERING FUMES



ODORS, GASES, AND VAPORS



CLEANING INDUSTRIAL GASES



NEW EMISSIONS



WELDING FUMES



OIL AND EMULSION MISTS



COMPLETE SOLUTIONS

Date of issue: 03/2020



Extraction. Filtration. Persistence.



Use and application

The **LAS 400 MD HA14** LAS 400 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 ought to be extracted by collecting elements directly at their place of origin and filtered by the **LAS 400 MD HA14**. The material of the filter elements ensures effective filtering out of the various dust particle sizes. An expanded metal filter and a combination of filter mats with the filter classes M5 and F7 protect the following filter stages from premature saturation. The following H13-filter separates even the smallest particles from the polluted air. At the adsorption filter a thick layer of activated carbon is holding back gases and fumes effectively.

Example

- ➔ laser cutting,
- ➔ laser engraving,
- ➔ laser structuring

ULT 400 mobile air extraction filtration unit

- ➔ mobile unit with castors
- ➔ Filters which are replaced once they are saturated.
- ➔ control panel on the front side
- ➔ easy filter handling, modular system
- ➔ robust steel housing
- ➔ powder coated
 - vacuum module RAL 7035 silver grey
 - filter module RAL 5017 traffic blue



Filter system:

Storage filter system

Filters which are replaced once they are saturated.

Filter technology:

Main filter module

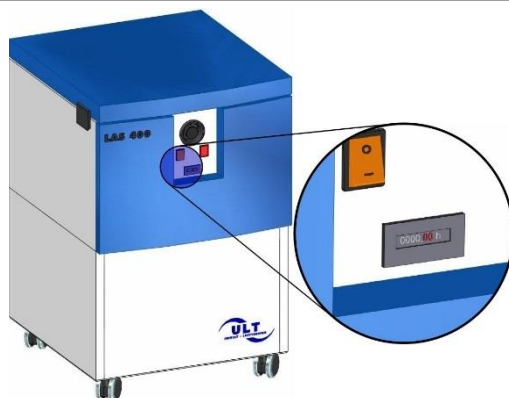
- (1) Expanded metal filter
metal knitting, spark protection filter
- (2) Filter mats M5/F7 in replacement frame
Filter classes: M5 medium dust filter and F7 fine dust filter according to DIN EN 779
- (3) Particle filter H13
filter class: H13 HEPA-filter, according to DIN EN 1822
- (4) Adsorptions filter cassette A14
filter medium: activated carbon (14 kg))



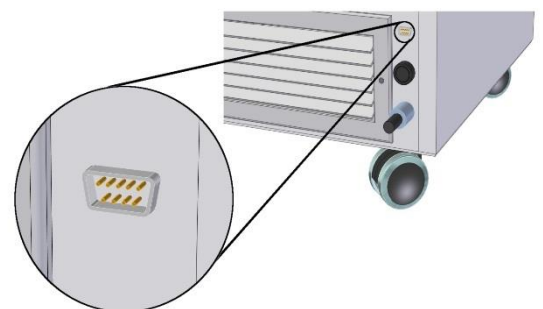


Parameter	unit	MD.17.10
Max. air flow	m ³ /h	1.000
Max. vacuum	Pa	2.600
Nominal capacity	m ³ /h / Pa	400 / 2.300
Motor-nominal power	kW	0,70
Nominal voltage	V	230
Nominal current	A	3,5
Frequency	Hz	50 / 60
Protection class	IP	54
Type blower		EC-blower
Noise level (at 50 - 100%)	dB(A)	< 60
Weight	kg	95
Air flow controller		yes
Loaded particle filter indicator	optical	yes
Operating hours counter	(1*)	optional
SUB D9 interface	(2*)	optional
Remote digital control		optional
Air intake		2x Ø 100 mm take off, optional further Ø
	position	upper backside of the unit
	optional position	2x Ø 100 mm take off, optional further Ø
		on top of the unit
Air outlet		air exhaust louver
	position	lower rear side
Width	mm	600
Depth	mm	660
Height	mm	900
Length of power cable	m	5
Filter system		filter system: storage filter
		filter set consisting of:
	(1)	Expanded metal filter ULT 02.0.015
	(2)	Filter mats M5/F7 ULT 02.0.039
	(3)	Particle filter H13 ULT 02.0.041
	(4)	Adsorption filter cassette A14 ULT 02.1.025

(1*)



(2*)



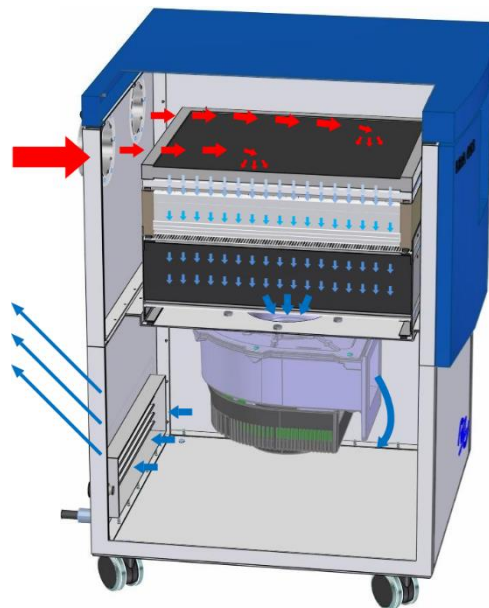


Functional principle:

At the **clean-air side** of the filter, a vacuum generator with a high pressure reserve produces a volume flow matched to the respective application. This volume flow can be individually and infinitely variably regulated by some units. 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.



- raw gas
- filtration
- ← clean gas

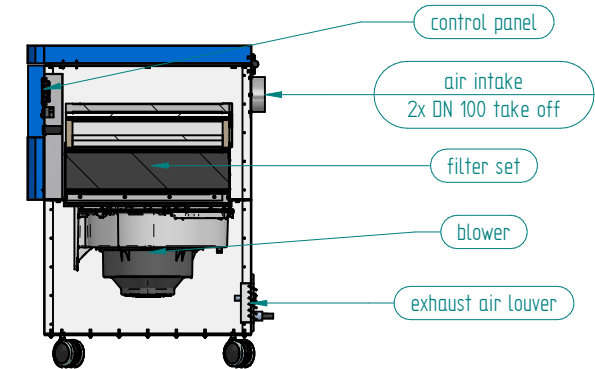
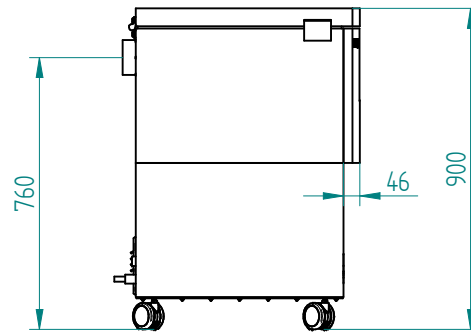
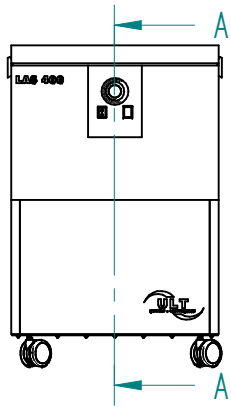
Storage filter system

Filters which are replaced once they are saturated.

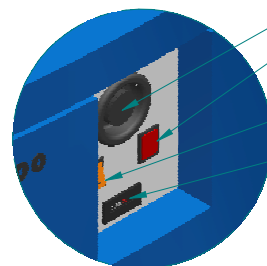
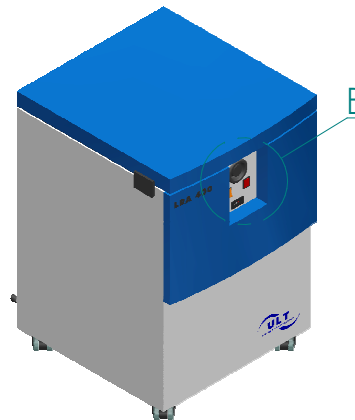
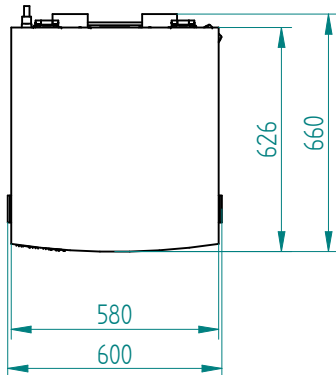
Filtration set complete

- | | |
|---|---|
| (1) sublimation / spark protection | Expanded metal filter |
| (2) fine dust filter | Filter mat M5 |
| (3) fine dust filter | Filter mat F7 |
| (4) particulate filter | HEPA filter H13 |
| (5) gas filtration | Adsorption filter cassette A14 (14 kg activated carbon) |

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



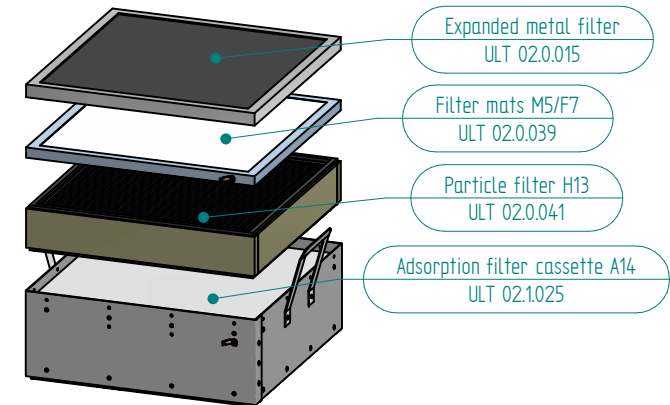
cutaway A-A



DETAIL B

- air flow controller
- loaded particle filter indicator
- on/off switch
- operating hours counter optional

filter set consisting of:



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