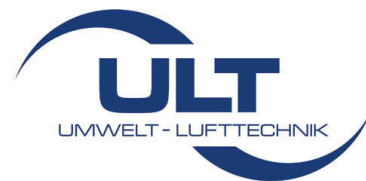
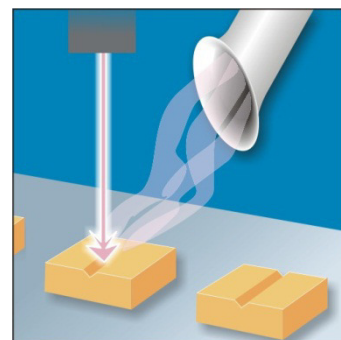


LAS 400
Technical documentation
Date of issue: 06/2013



ULT 400



***Clean air,
high performance.***

***LAS-series, mobile
air extraction and
filtration units for
laser smoke.***



Air handling equipment for environmental and health protection

Technical documentation

Air extraction and filtration unit

LAS 400



Use and application



laser smoke

The **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. 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 charcoal is holding back gases and fumes effectively.

Examples

- ⇒ laser cutting
- ⇒ laser engraving
- ⇒ laser structuring

ULT 400 mobile air extraction and filtration unit

mobile unit,
with storage filter system
robust steel housing, powder coated
RAL 7035 light grey / RAL 5017 traffic blue



Filter system:

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

Filter technology:

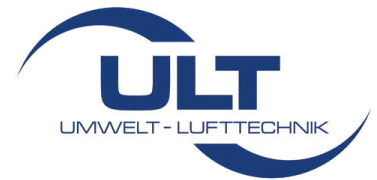
Main filter module

- (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) Adsorption filter cassette A14
filter medium: activated charcoal (14 kg)



Technical documentation

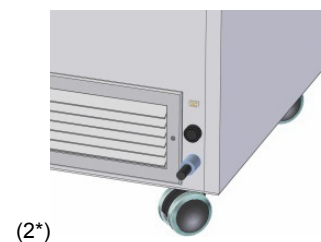
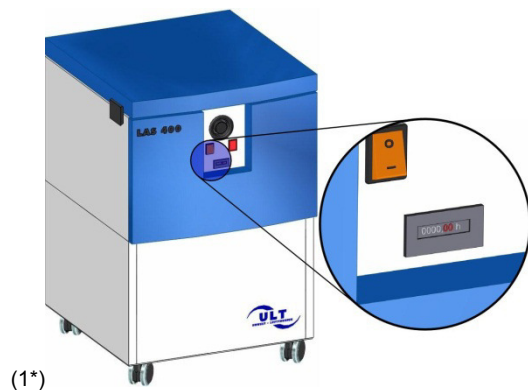
Air extraction and filtration unit



LAS 400

technical Data

Parameter	unit	400-1	400-2
Max. air flow	m³/h	1.000	1.500
Max. vacuum	Pa	2.600	3.250
Nominal capacity	m³/h / Pa	400 / 2.300	600 / 2.500
Motor-nominal power	kW	0,70	0,86
Nominal voltage	V	230	230
Nominal current	A	3,5	4,8
Frequency	Hz	50 / 60	50 / 60
Protection class	IP	54	54
Type blower		EC-blower	EC-blower
Noise level (at 50 - 100%)	dB(A)	57 - 62	57 - 64
Gewicht	kg	95	100
Air flow controller		yes	yes
Loaded particle filter indicator	optical	yes	yes
Operating hours counter	(1*)	optional	optional
SUB D9 interface	(2*)	optional	optional
Remote digital control		optional	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



Technical documentation

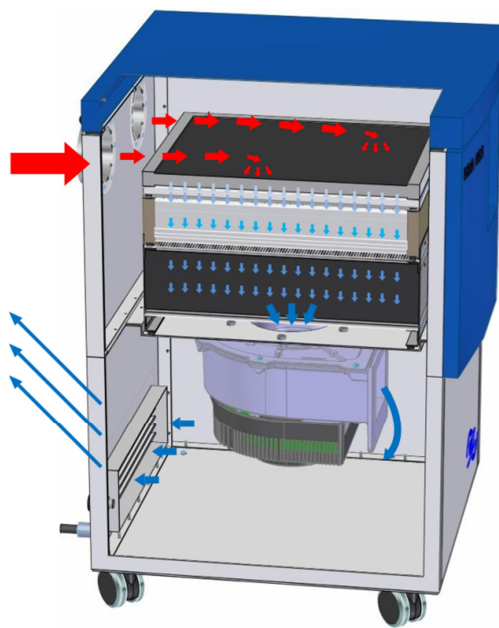
Air extraction and filtration unit



LAS 400



laser smoke



- ← raw gas
- ← filtration
- ← clean gas

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 charcoal filter.

The filtering effect of activated charcoal is based on adsorption, i. e. an accumulation of substances (to be filtered out) on the surface of the activated charcoal. 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.

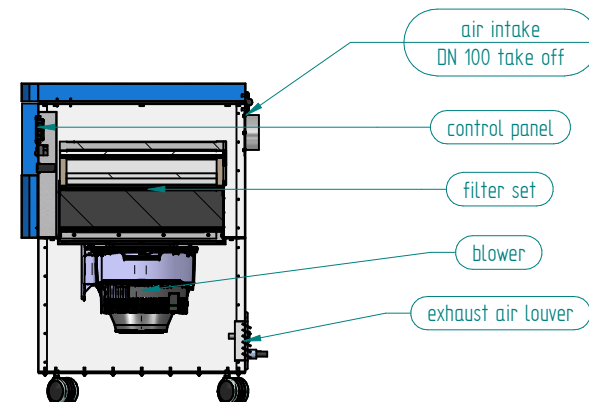
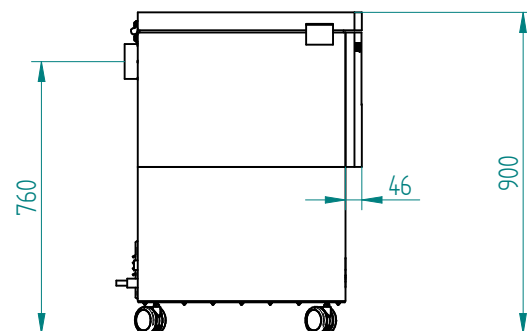
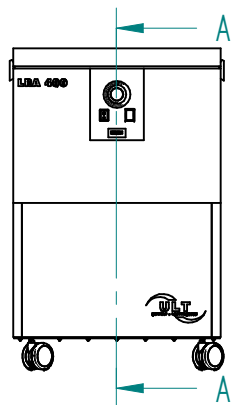
Storage filter system

Filters which are replaced once they are saturated.

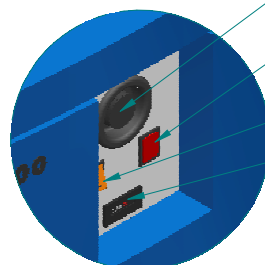
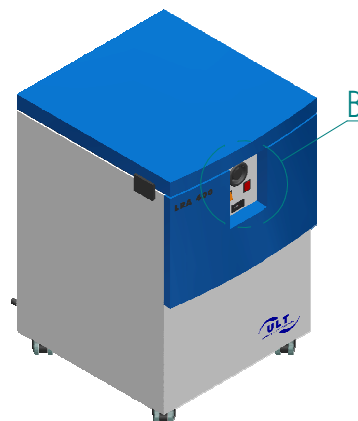
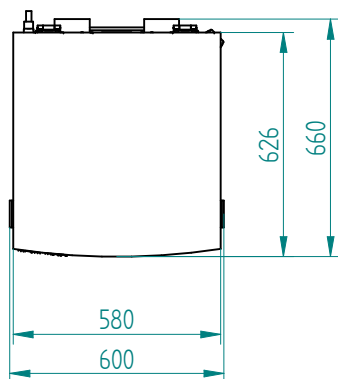
Filtration set complete

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

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

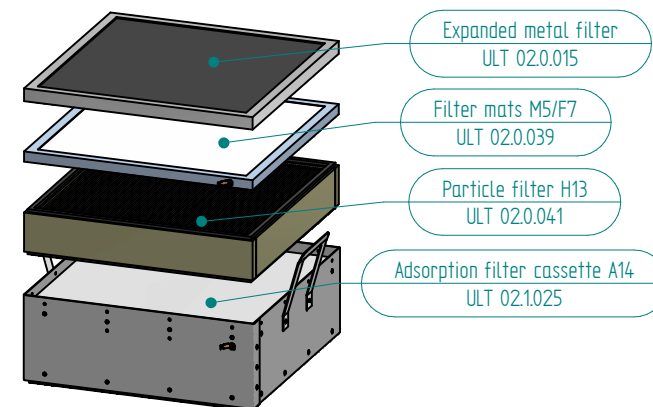


Schnitt A-A



DETAIL B

filter set consisting of:



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Other measure are to be taken from the 3D record. For the drawing we reserve ourselves all rights.

				ULT AG Am Göpelteich 1 D-02708 Lobau		designation: LAS 400
001	base	22.05.13	JSACZ	2013	date	name
issue	revision	day	name	edit.	22.05.	JSACZ
				vert.	drawing number: ULT 400_00_003_002	
				Norm	scale: 1 : 15	

