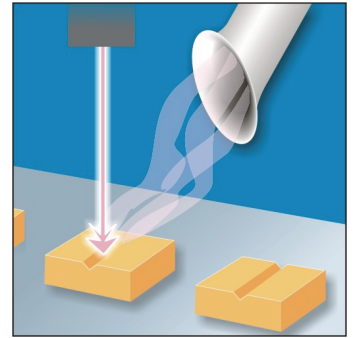


***LAS 500.10***  
**Technical documentation**  
Date of issue: 05/2015



# *ULT 500*



***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 500.10

### Use and application



*laser smoke*

The **LAS 500.10** 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, gas and fume ought to be extracted by collecting elements directly at their place of origin and are filtered by the LAS 500.10. The material of the filter elements ensures effective filtering out of the various dust particle sizes. Regular **automatic pneumatic cleaning** of the main filter element by the counter flow principle and the use of rotation air nozzles limits the risk of material damage and guarantees a very long lifetime of the main filters.

### Examples

- ⇒ Laser cutting
- ⇒ Laser engraving
- ⇒ Laser structuring

### ULT 500 modular air extraction and filtration unit

stationary unit,  
strong turbine, low maintenance effort, robust steel  
housing, powder coated RAL 7035 light grey

### Filter system:

cartridge filter system

automatically cleanable filter element for high  
pollutant emission

### Filter technology:

Main filter module

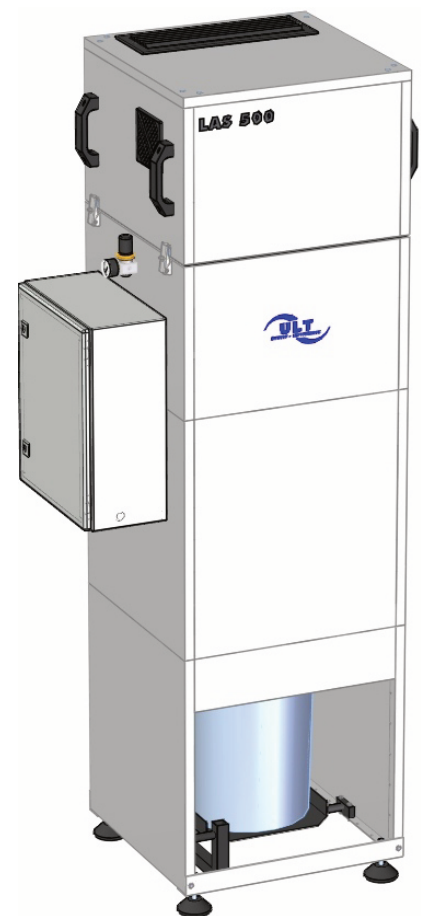
filter cartridge:	1 piece
filter material:	polyester fibre with teflon-coating (PTFE), antistatic
filter class:	BIA M, separation efficiency > 99% [with particles > 2 µm]
filter surface:	1 x 7,5 m <sup>2</sup>

Optional filter version (for the use of autom. filter aid dosage)

filter material:	polyester fibre
filter class:	BIA M
filter surface:	1 x 10 m <sup>2</sup>

### Equipment:

cleaning interval:	adjustable to the laser process
manually operated cleaning:	anytime by means of a push-button
SUB D9 interface:	remote ON/OFF, filter loading 100%, operation status



# Technical documentation

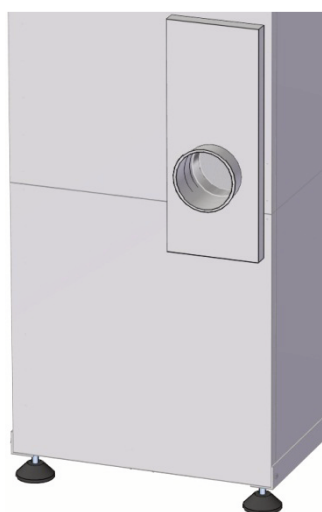
## Air extraction and filtration unit



# LAS 500.10

### Technical data

Parameter	Unit	500.10
max. air flow	m <sup>3</sup> /h	400
max. vacuum	Pa	20,200
nominal capacity	m <sup>3</sup> /h / Pa	270 / 5,000
motor nominal power	kW	1.80
nominal voltage	V	1~ 230
nominal current	A	13
frequency	Hz	50/60
protection class	IP	54
blower type		EC-blower
noise level	dB(A)	70
air flow controller		ja
SUB D9 interface		optional
loaded filter indicator	Optical	optional
operating hour meter		optional
pneumatic gate valve	(1*)	optional
automatic filter aid dosage		optional
intake module	Ø	1x Ø 125 mm, optional further Ø
	position	back side right of filter housing, optional rear side or left
air outlet		air exhaust louver
	position	on top of the unit
length	mm	670 (850 with electrical cabinet)
width	mm	590
height	mm	2,050
weight	kg	150
length of power cable	m	5
<b>filter system</b>		filter system: cartridge filter, automatic cleaning
		filter cartridge 7,5 m <sup>2</sup> polyester fibre, teflon-coated ULT 02.0.002
uncoated filter cartridge		<b>optional for filter aid dosage</b> ULT 02.0.004



(1\*)

# Technical documentation

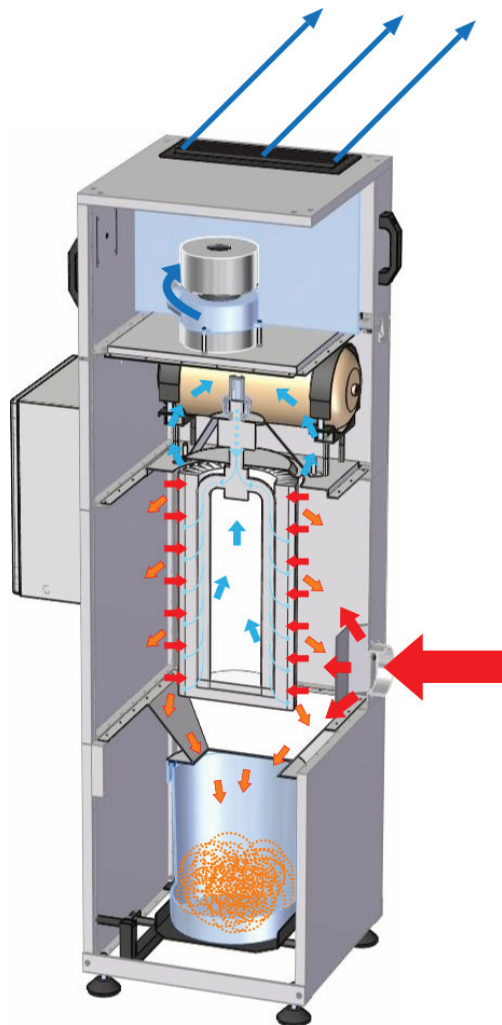
## Air extraction and filtration unit



### LAS 500.10



laser smoke



- raw gas
- clean gas
- cleaning air stream
- detached filter material
- collected filter material

#### 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. Thus, the polluted air will be reliably extracted.

The **particles** are separated on a **filter cartridge** (Teflon-coated polyester fibre (PTFE)) by the **surface filtration principle**. Regular automatic cleaning of the filter cartridge with a rotation air nozzle by the **counter flow principle** prevents it from being clogged. Operating such system requires compressed-air supply (6 – 10 bar). The **particles blown off** fall into a collecting bin provided for the removal and disposal of the filter deposits.

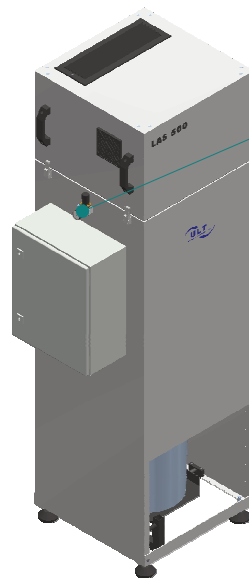
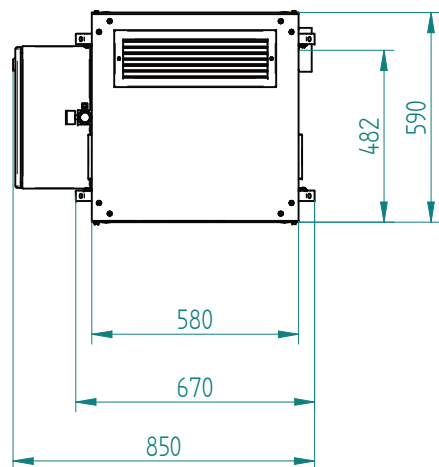
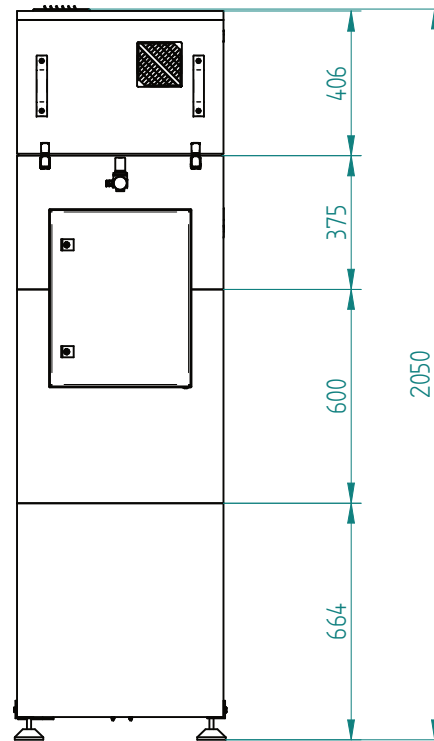
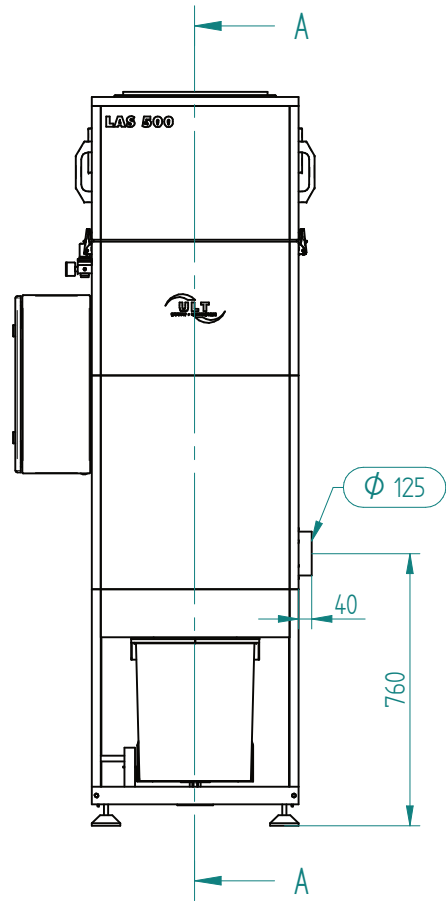
Cartridge filter system

Automatically cleanable filter element for high pollutant emission

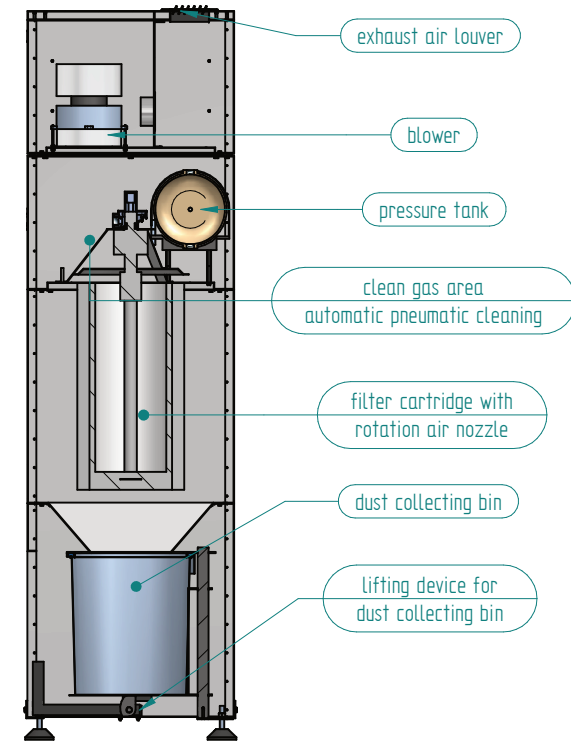
Filter cartridge ULT 02.0.002

- (1) **particulate filter** filter cartridge BIA M, separation efficiency > 99%

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

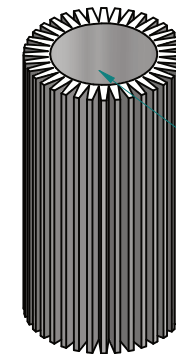


compressed air supply  
max. operating pressure 4 bar



cutaway A-A

filter set consisting of:



Filter cartridge teflon coated  
ULT 02.0.002

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				2013	date	name		drawing number:	scale:
001	base	20.06.13	JSACZ	edit.	20.06.	JSACZ		ULT 500_00_003_001	1 : 15
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