

LAS 300 MDHD THA9

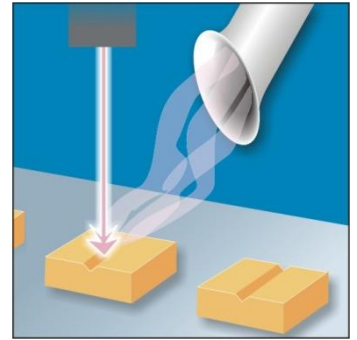
Technical Documentation

Date of issue: 08 / 2010



ULT 300

Modular system



**clean air,
strong performance**

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



Air handling equipment for environmental and health protection

Technical documentation

Air extraction and filtration unit

LAS 300 MDHD THA9



Use and application

The **LAS300** 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 be filtered by the **LAS300**. The material of the filter element ensures effective filtering out of the various dust particle sizes. The combination of main module (pocket filter and HEPA filter) and second module activated carbon filter guarantees a separation efficiency of > 99 % by multiple cleaning, provided the filter elements are exchanged regularly.



laser smoke

Examples

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

ULT 300 modular air extraction and filtration unit

mobile unit,
with vacuum and filter modules and storage filter system
robust steel housing, powder coated

- filter module RAL 7035, silver grey
- vacuum generator module RAL 7001, light grey

Filter system:

Storage filter system,
filters which are replaced once they are saturated.

Filter technical:

main filter module

(1) pocket pre-filter

filter class F9 fine dust filter, according to Din EN 779

(2) filter mat

filter class F5 fine dust filter, according to DIN EN 779

(3) HEPA filter

filter class H13 HEPA filter, according to DIN EN 1822

secondary filter module

(1) adsorption filter

filter medium activated charcoal, 10 kg

Components:

Air flow controller

stepless adjustment for the suction power,

Loaded particle filter indicator

optical signal shows the particle filter condition,

Interface SUB D9

remote ON/OFF; filter 100%; operation status

Vacuum modules:

High performance blower and turbines with maintenance-free EC-technology



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Technical documentation

Air extraction and filtration unit



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LAS 0300.0-aa.bb.11.5007		vacuum modules			
Parameter	unit	MD.14	MD.16	HD.12	HD.13
max. air flow	m³/h	635	900	220	400
max. vacuum	Pa	3.200	3.650	22.000	12.000
nominal capacity	m³/h at Pa	250 / 2.200	250 / 3.500	120 / 12.000	200 / 7.500
	m³/h at Pa	400 / 1.700	400 / 3.200	200 / 3.500	250 / 5.000
motor nominal power	kW	0,4	1,3	1,3	1,3
nominal voltage	V	230	230	230	230
nominal current	A	2,2	10,0	11,0	11,0
frequency	Hz	50 / 60	50 / 60	50 / 60	50 / 60
protection class	IP	54	54	54	54
typ blower		EC-blower	EC-blower	EC-turbine	EC-turbine
noise level (bei 50 - 100%)	dB(A)	52 – 56	65 – 71	60 - 70	60 – 71
with sound absorber(at 50 - 100%)	dB(A)	48 - 51	62 - 65	57 - 67	59 - 68
air flow controller		incl.	incl.	incl.	incl.
loaded filter indicator		incl.	incl.	incl.	incl.
SUB D9 interface		incl.	incl.	incl.	incl.
air intake	Ø	2x Ø 75 mm; optional: further Ø			
	position	on the top or on the rear side			
air outlet		air exhaust louver; optional: exhaust air connection			
	position	on the rear side of the vacuum module			
length	mm	475			
width	mm	585			
height	mm	1272			
weight	kg	approx. 70			
length of power cable	m	3			
filter structure	HFM TH	main filter module			
		filter system: storage filter			
		(1) pocket filter F9-02	ULT 02.1.480		
		(2) filter mat; F5 fine dust filter	ULT 02.1.482		
	(3) particle filter H13	ULT 02.0.484			
	NFM A9	secondary filter module			
		filter system: storage filter			
		ULT300 filter ACD base	ULT 02.1.401		
(1) gase filtration; activated charcoal filter					
additional options:					
sound absorber	(1)	changed depth: 685 mm			
exhaust air connection	(2)	1 x Ø 100 mm			
without extra module	(3)	hose connection on the rear side: 2x Ø 75mm; optional further Ø			
without extra module	(4)	hose connection on the top: 2x Ø 75mm; optional further Ø			
mounting bracket for ALSIDENT-arm	(5)	Alsident-U-Profil S50/75; for max. 2 ALSIDENT arms			



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laser smoke

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 and held back in a multi-stage saturation-type filtering system.

Main filter module ULT 300 TH

- | | |
|--------------------------------|------------------|
| (1) pre-filter | pocket filter F9 |
| (2) fine dust filter | filter mat F5 |
| (3) particulates filter | HEPA H13 |

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.

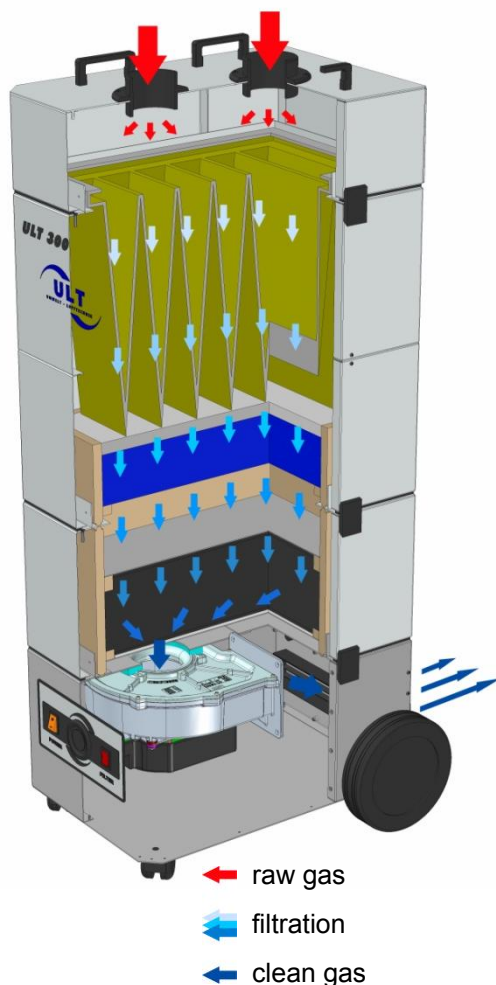
Secondary filter module ULT 200 Filter A9

- | | |
|---------------------------|-------------------------|
| (1) gas filtration | activated carbon, 9 kgs |
|---------------------------|-------------------------|

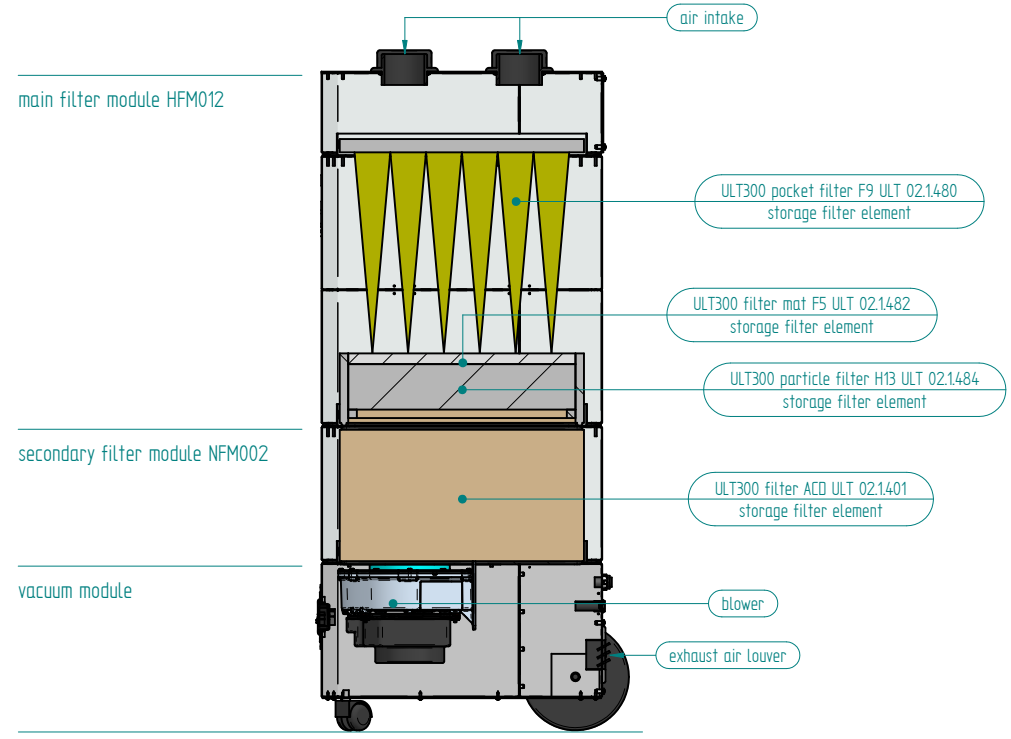
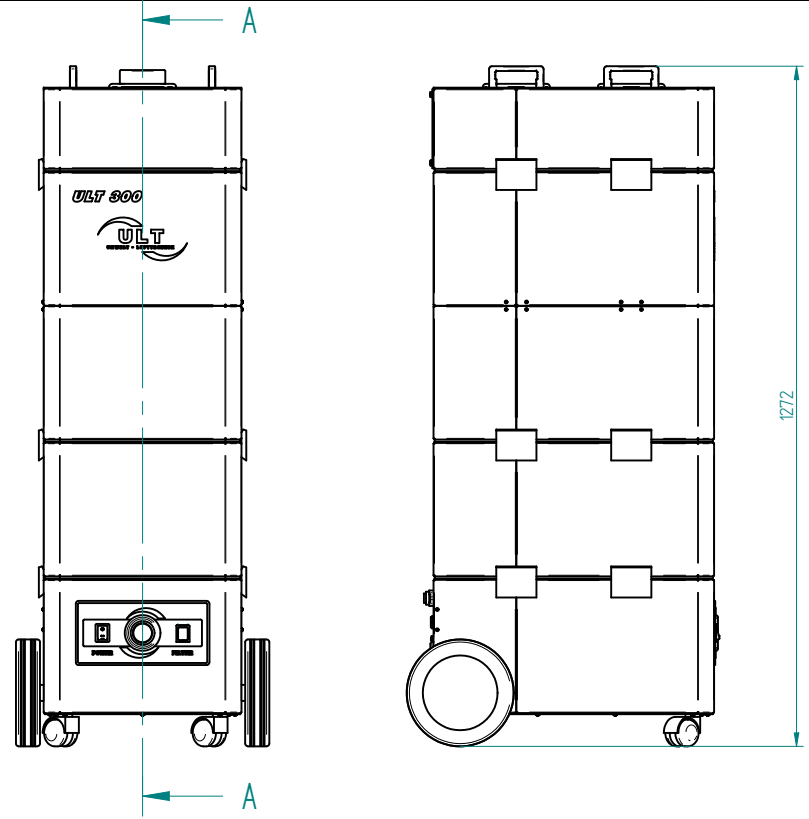
This excellent filter efficiency makes it possible to recirculate the **filtered air** and reduce energy costs.

Further additional options can be connected to the unit. These are to be selected according to the respective requirements.

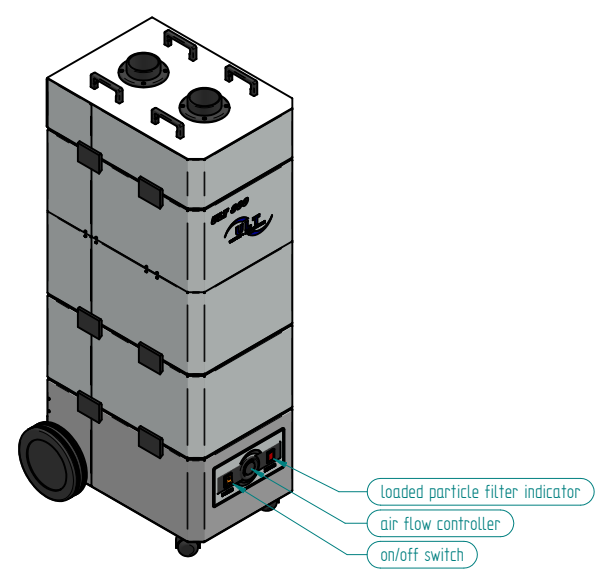
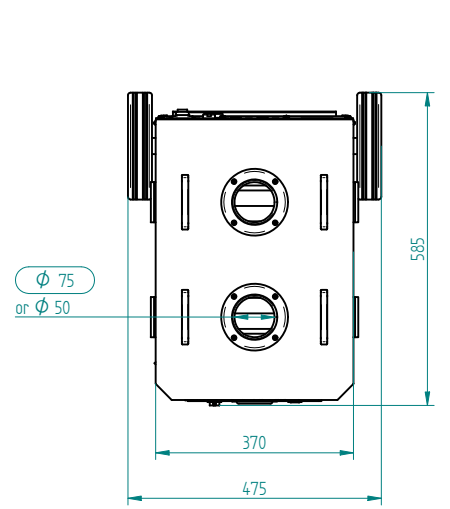
For the extraction and filtration from pollutants varying from this application case, other module combinations are available.



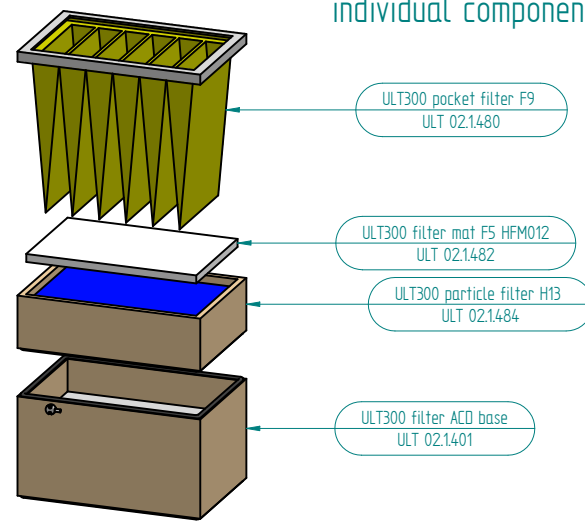
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section A-A



individual components



				ULT AG Am Gopelreich 1 D-02708 Lobau		Benennung: ULT 300x TKA9 Gesamtzeichnung Zeichnungsnummer:			
				2010 Datum Name					
				Bearb. 25.05 R. Schütze					
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Aenderung	Tag	Name	Norm						