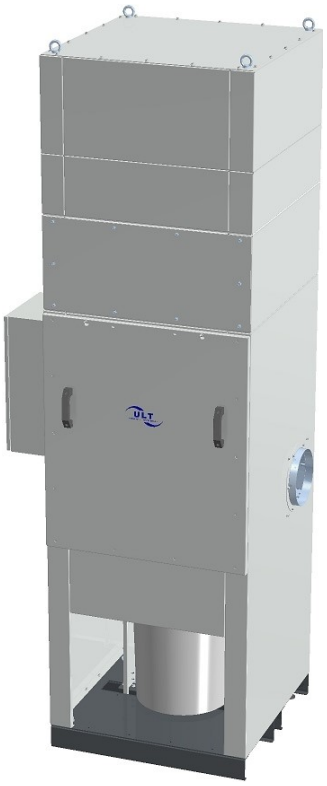
Technical documentation

series 2500
LAS 2500 MD 4PaR45



Date of issue: 05/2021

LASER FUMES

DUST AND SMOKE

SOLDERING FUMES

ODORS, GASES, AND VAPORS

CLEANING INDUSTRIAL GASES

NEW EMISSIONS

WELDING FUMES

OIL AND EMULSION MISTS

COMPLETE SOLUTIONS

ULT
UMWELT - LUFTTECHNIK

Extraction. Filtration. Persistence.

Technical documentation

LAS 2500 MD 4PaR45

LASER FUMES

Use and application

The LAS 2500 MD 4PaR45 is suitable for collecting and filtering dry and non-combustible types of dust contained in non-explosive air mixtures produced during laser machining. Mostly every laser machining process produces mixtures of partially unhealthy dust, gases and fumes in different concentrations. Those substances ought to be extracted by collecting elements directly at their place of origin. All dust particles are filtered by the LAS 2500 MD 4PaR45. The material of the filter element ensures effective filtering out of the various dust particle sizes with a separation efficiency lying significantly above 99%. Regular automatic pneumatic cleaning cycles of the cartridge filters with rotation air nozzles guarantee very long main filter lifetimes. An optional non-return flap at the raw gas intake can prevent pressure fluctuations in the air intake piping system during the pneumatic cleaning process.

Examples

- laser cutting,
- laser engraving,
- laser structing
- laser welding

ULT 2500 stationary extraction and filtration unit

- cartridge filter system with automatic cleaning
- easy filter handling, Quick-Lock system
- 70 l dust collecting bin
- Control elements located in separate cabinet
- robust steel housing
- powder coated
  - RAL 7035 light grey

Filter system:

cartridge filter system
automatically cleanable filter elements
for high pollutant emission

Filter technology:

Filter cartridges:	4 pieces, conical, mounting from raw gas side
cleaning:	rotation air nozzles, triggered by rising differential pressure
filter material:	Polyester fibre, Teflon coated
filter class:	class M according to DIN EN 60335-2-69:2008
filter surface:	45 m^2 (3x 12,5 m^2, 1x 7,5 m^2)

Vacuum generator

Middle pressure fan with 3-phase drive, integrated noise modulation

Configuration

Remote control cabinet with indicator lights and operating elements

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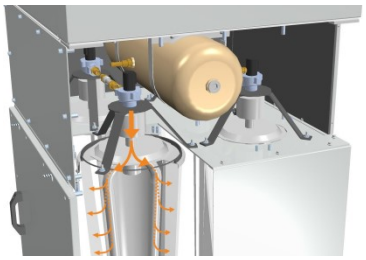
LASER-RAUCH

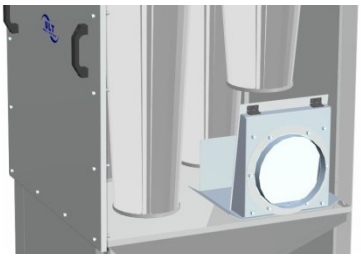
LAS 2500.0-MD.63.30.4019

Parameter	unit	
Max. air flow	m^3 / hr	5.000
Max. vacuum	Pa	3.250
Nominal capacity	m^3/hr / Pa	3.000 / 2.750
Motor-nominal power	kW	4,0
Nominal voltage	V	3~ 400
Nominal current	A	7,5
Frequency	Hz	50
Protection class	IP	54
Type blower		Ventilator
Air intake	Ø	1x 250 mm
	position	lower back on the right side; optional left side
Air outlet	Ø	Exhaust air louver, optional air outlet 1x 250 mm
	position	upper backside
Width	mm	900
Depth	mm	1.000
Height	mm	3.120
Weight	kgs	ca. 600
Length of power cable		Has to be connected to the control cabinet
configuration		
Automatic pneumatic cleaning	(1*)	pneumatic, rotation air nozzles
Loaded particle filter indicator		visualization with signal lamp
non-return flap (optional)	(2*)	No pressure fluctuations in intake piping
70 l dust collecting bin	(3*)	= disposal containment, high capacity
Transportation feet, lifting eyes		Easy handling during transportation and installation
Filter system		cartridge filter, automatic cleaning by rotating wing
		Filter cartridge set - Polyester fibre Teflon coated* ULT 02.0.786 ▪ 3x filter cartridge 12,5 m^2 ▪ 1x filter cartridge 7,5 m^2
* no Teflon coating when filter aid powder metering unit is used		

(1*)



(2*)



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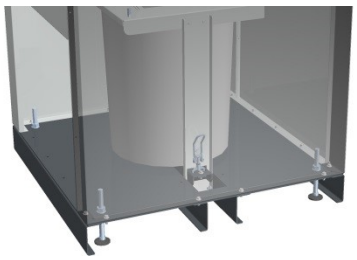

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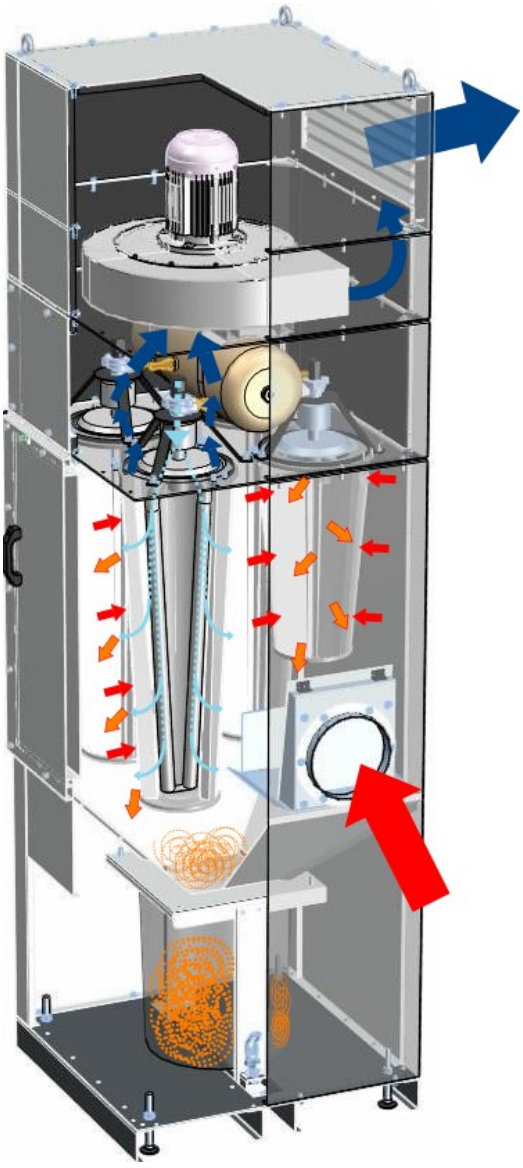
LASER FUMES



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

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 **dust particle fractions** are captured directly at the place of their origin by appropriate collecting elements and through an applicable piping system the pollutants are carried to the filter elements. To prevent the filter elements from getting worn out in short time they are protected by a baffle plate or a non-return flap at the air intake holding back large particles.

The particles are separated and held back on two filter cartridges (Teflon (PTFE) coated polyester fibre) by the surface filtration principle. Clogged filter cartridges are automatically and individually treated with rotation air nozzles on the basis of the counter flow cleaning principle. Operating the cleaning system requires compressed air supply (4 – 5 bar). The particles blown off fall into a 70 l one-way collecting bin provided for the removal and disposal of the filter deposits.

Cartridge filter system

automatically cleanable filter element for high pollutant emission

(1) **Particulate filter** 4 filter cartridges, class M according to DIN EN 60335-2-69:2008, separation efficiency > 98%

(at particle size of 4 µm)

filter surface 45 m²

This excellent filter efficiency makes it possible to recirculate the **filtered air** (please pay attantion to your regional regulations) and reduce energy costs.

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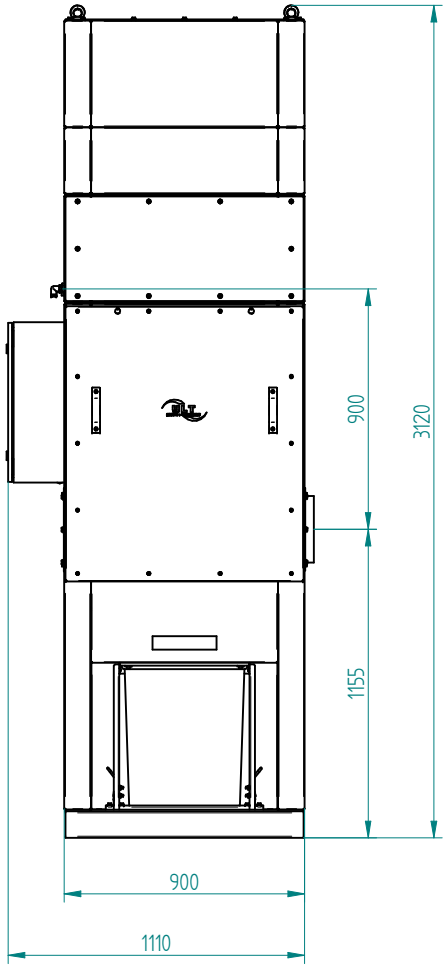

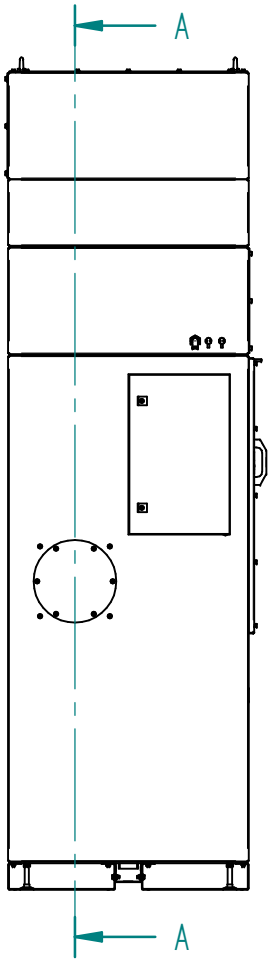

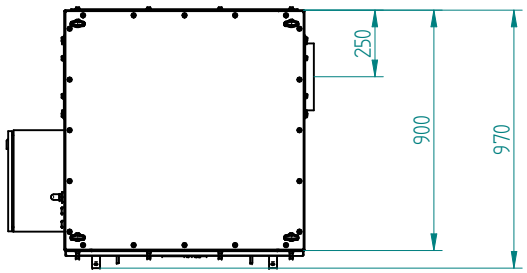

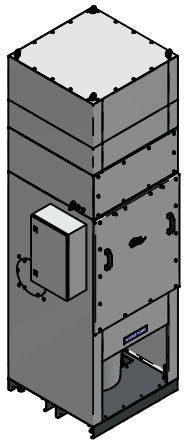

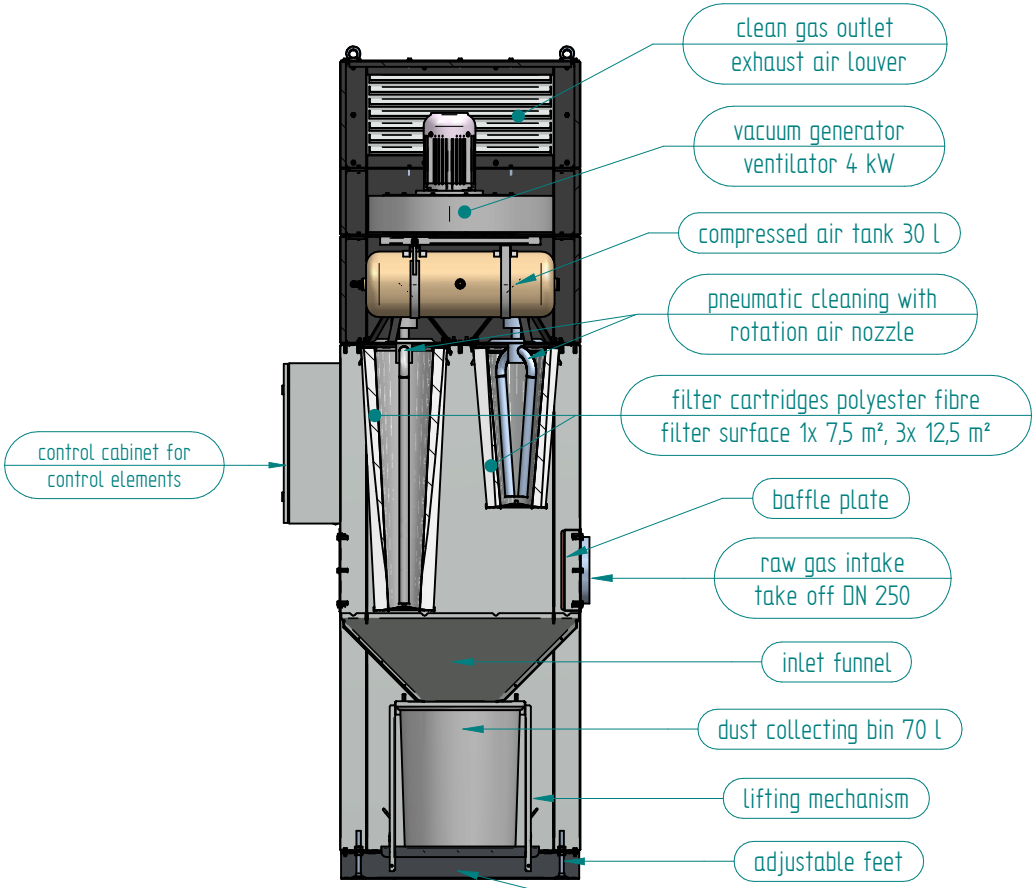

cutaway A–A

Allgemeintoleranzen DIN ISO 2768-mK

Ausgabe	Änderung	Tag	Name
001	Varianten	19.03.14	JSacz
000	Basis Dok	30.10.13	JSACZ

ULT AG
Am Gopelteich 1
D-02708 Löbau

	Datum	Name
2013		
Bearb.	30.10.	JSACZ
Gepr.		
Norm		

Benennung: ASD 2500 MD 4PaR 45 3000 m³/h

Zeichnungsnummer: ULT2500_00_005

Maßstab: 1 : 20