

Welding Laser model ALW vario 100

ALPHA LASER implemented important new features into its ALW vario lasers



- ? **Digital control** for very fine movement of the workpiece in x,y,z direction and also of the rotary axis by one control unit (joystick),
 - precise stop of the workpiece feed,
 - absolutely constant increase of the feed speed in relation with the tilt of the joystick
 - high speed for positioning of the workpiece/return movement,
 - indication of the positioning speed on the display – mm/sec.,
 - preselection of the positioning speed for each axis by potentiometer.
- ? **CPC System** for maximum power stability of the laser impulse (Constant Power Control).
- ? **Pulse shape** offers best setting of the energy distribution of the laser impulse on the material properties.
- ? **Ergonomically designed operating position** for long lasting work due to the height adjustment of the bottom plate with multifunctional footswitch.

Description:

The processing station consists of a laser source with optical viewing system and a x, y, z positioning system and optionally a tiltable rotating table.

These components are built into a housing which conforms with laser class 4, i.e. no additional protective measures are necessary. No separate room required.

The loading is done through a big door at the front of the housing or by crane when housing cover is taken off. It is possible to weld big work pieces with the door open. In this case protective measures have to be taken.

Technical Data processing station:

Outside measurements:	W x D x H 920 x 1220 x 1570 mm
Size of working chamber:	W x D x H 800 x 850 x 500 mm
Max. load:	350 kg
Positioning path:	z: 400 mm x,y: 200 x 200 mm
Protecting gas supply	double, can be locked and adjusted individually
Welding fume exhaust:	integrated, with a special filter class EU 13/K2
Electrical connection	Triple phase 380V / 50 Hz - 60 Hz / 3 x 16 A / 8 kW

Technical Data Laser:

Laser crystal:	Nd:YAG
Wave length:	1,06 µm
Average power:	100 Watt
Max. peak pulse power:	9 kW
Max. pulse energy:	75 Joule
Pulse duration:	0,5 - 20 ms
Pulse frequency:	single pulse /continuous pulse 0,5 - 15 Hz
Diameter of welding spot:	0,2 - 2 mm
Cooling of the laser	integrated / water-air-heat exchanger
Focus setting:	integrated, motorized high quality laser objective with long focal length for optimal welding characteristics and a good picture in the stereo-microscope

Optical Viewing System

Trinocular-microscope model Leica
14 fold magnification / field of vision diameter 18 mm
Tiltable for weldings under < 90° - < 45°

Programming Memory	128 parameter sets are programmable
Pulse shaping	Modulation of the intensity of the impulse
Operation/Footswitch	setting of all laser parameters is done with a multi-functional footswitch and/or by keys

Approval	CE Certificate by Landesgewerbeamt Bayern
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