

AL-CROSS

MOBILE FIBER LASER SYSTEM FOR WELDING

BESCHREIBUNG

Its housing is robust with sturdy aluminum handles that provide shock protection for edges and housing and supports the easy movement of the system. There are integrated eyelets for loading and stowing, plus a hook for a winch.

User-oriented are the generous storage areas for this and that, as well as the specially designed holders that can be fixed to the hole pattern on the sides of the welding laser to accommodate welding wire, joystick, the foot pedal, safety glasses and tools. The 5th wheel on the laser enables the direct transport of the gas bottle, which is extremely practical.

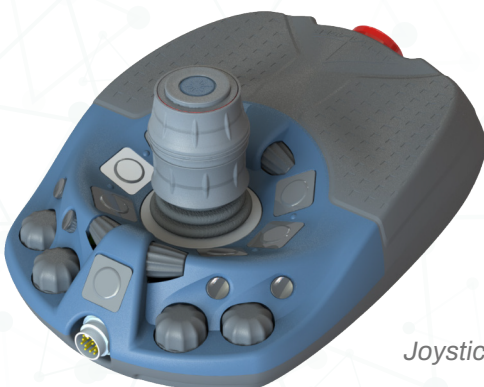
The AL-CROSS is mobile thanks to its easily movable wheels. It fits through standard doors and with its transport height of 1.25 m (display can be tilted) into every small van with a loading height of at least 1.40 m. And the best way to experience the mobility of the arm, the lenses and the laser head is to try it out!

The fiber laser is powerful, because 450 W/600 W constant laser power are waiting for use. Welding is either pulsed or in CW mode. The welding behaviour can be influenced via integrated pulse shapes. The parameters are set either via the colour display or via the multifunction footswitch or the new AL-DRIVE control unit.

The display is titlable (orientable) in order to always have an optimal view and an integrated keyboard is within easy reach of the operator.



AL-CROSS



Joystick AL-DRIVE

TECHNICAL DATA

	AL-CROSS 450 F	AL-CROSS 600 F
LASER		
Laser type/wave length	Faserlaser, 1070 nm	
Average power	450 W	600 W
CW power	450 W	600 W
Peak pulse power	4,5 kW	6 kW
Pulse energy	45 J	60 J
Pulse duration	0,2 ms - CW	
Pulse frequency	Pulse frequency Single pulse - 100 Hz	
Beam parameter product at 50 µm	2-3 mm * mrad	
Operating modes	Pulsed/CW	
Welding spot Ø	0,2-3,0 mm, optional 0,1-4,0 mm	
Focusing objective	150 mm, further according to lens data sheet	
Pulse shaping	Adjustability of power curve within a laser pulse	
Display and operation	Laser parameters set through touchscreen, multifunctional footswitch keyboard or/and AL-Drive	
OBSERVATION LENS	Leica microscope attachment with eyepieces for glasses wearers, 10 x, optional 16 x	
WORK AREA		
	The processing head can be freely positioned anywhere in the room and can also be moved by a motor using the	
Movement speed (X, Y, Z)	0-25 mm/s	
Movement range (X, Y, Z)	120 x 110 x 800 mm	
lowest working point	400 mm	
highest working point	1900 mm	
Arm deflection	1300 mm	
EXTERNAL DIMENSIONS		
W x D x H	790 x 1590 x 1250 mm	
Weight	480 kg	
EXTERNAL CONNECTIONS		
Electrical connection	3 x 400 V / 50-60 Hz / 3 x 16 A / 16 A	
Option for optics cooling	Internal water circuit for optics cooling, including connection possibility for an external cooler to support the cooling of the laser module.	
OPTIONEN		
	Turn and tilt objective Rotary axis module with chuck, tiltable, for horizontal to vertical rotation Crossjet Camera system for demonstrating and observing the welding process Ergo wedge	

A software feature is a rotatable coordinate system to adapt to the workpiece surface. And then there are a few fine apps for...

Circular welding

This allows two tubes to be butt welded together or, for example, a lid to be welded onto a sensor housing.

Another feature here is the ramp function, with which the power can be reduced over the pulse width at the end of the weld.



Welding a plane

With this app a square or rectangular area can be defined and then be welded on automatically.



Shaft welding

Here, a shaft (e.g. bearing seat) can be automatically welded on.

It is easy to enter the parameters for shaft diameter and length of the surface to be welded.

