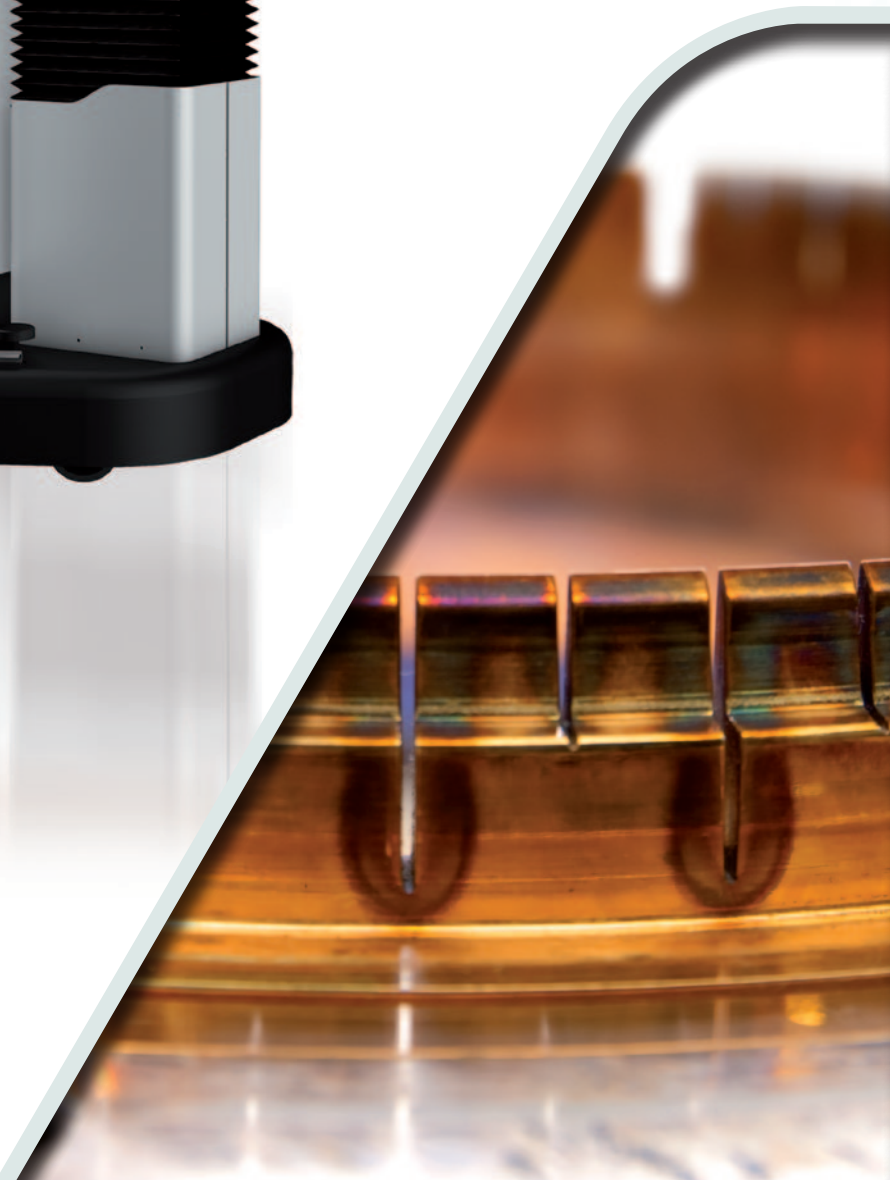


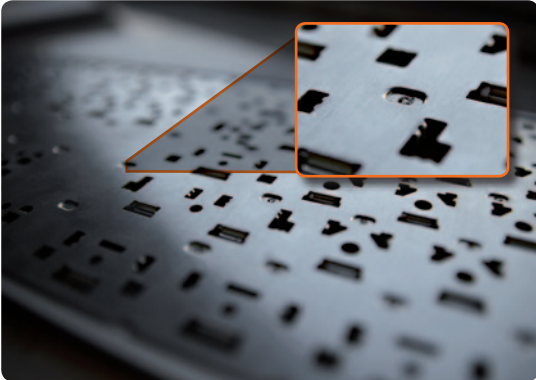
## Open to more flexibility

Mobile and compact laser welding system  
for open laser workstations



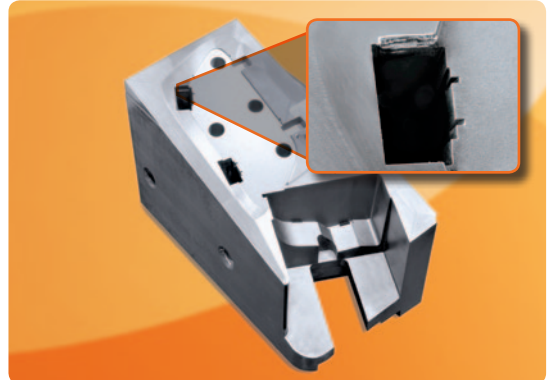
# Various industries, always ready for use: EVO MOBILE

## Electronics



Point welding of keyboards

## Tool and die making



Die insert injection molding tool

## Medical technology



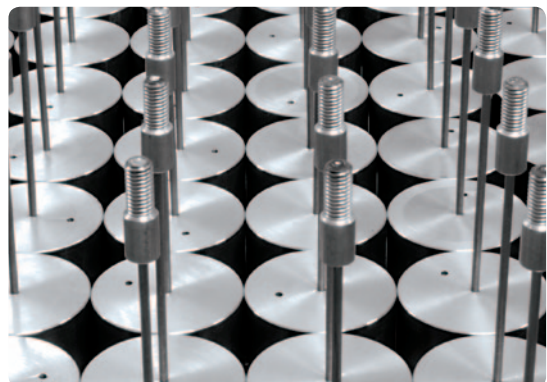
Implants for invasive transplants

## Aviation engineering



Engine components for military and civil aviation

## Mechanical engineering



Machine parts with complex alloys

## The EVO MOBILE laser system

Inspirations of our customers and several years of development led to a complete redevelopment of this laser welding system. The result is a mobile laser welding system that sets new standards for open laser workstations.

In addition to the comfortable operating features, designed with practical use in mind, a wide range of innovations support semiautomatic processing. Continue reading to learn about all the new developments and form your own opinion.



## Technical specifications

### LASER

- Newly developed resonator
- Modular components reduce maintenance times

### QUALITY ASSURANCE

- Recording of video for analysis and monitoring
- USB/Ethernet connection for saving data for quality assurance and verification
- Optional memory expansion
- Additional history log of the welding parameters used

### CONTROL

- Intuitive operation
- 10" touchscreen color display
- Relevant welding parameters and data at a glance
- Multi-lingual/multi-user (German, English and many more)
- Freely programmable pulse shapes (up to 4 shapes per pulse sequence – meaning optimal adaptation of the pulse to the material being processed)
- Saving of data via USB
- Removable operating element

## The added plus

Numerous useful aids are integrated for improving productivity. For example, the auto weld function allows the learning of geometric figures (points, circles, polygons) and the further processing of these surfaces with predefined welding parameters. This allows for a significant increase in productivity.

Another innovation is the option of rotating the coordinate system freely in space. This offers the user the ability to define an inclined plane in space as the processing surface, making welding significantly simpler for the user.

## Completely new processing capabilities

This new development has produced a laser system that sets new standards in the area of processing options. Small and compact but still with large traverse distances, it can be quickly readied for use and is extremely precise in order to meet the rising requirements of users such as service providers or tool and die makers.

The electromagnetically-controlled swivel arm can be extended like a telescope from 800 to 1500 mm and swiveled around its own axis. The traverse distance of the controlled axes is 700 mm in the x-axis and 400 mm in the y-axis. Vertically, the laser system can also traverse 400 mm in the z-axis. In other words, every laser welding process can be performed without constant repositioning or re-adjusting of the axes.



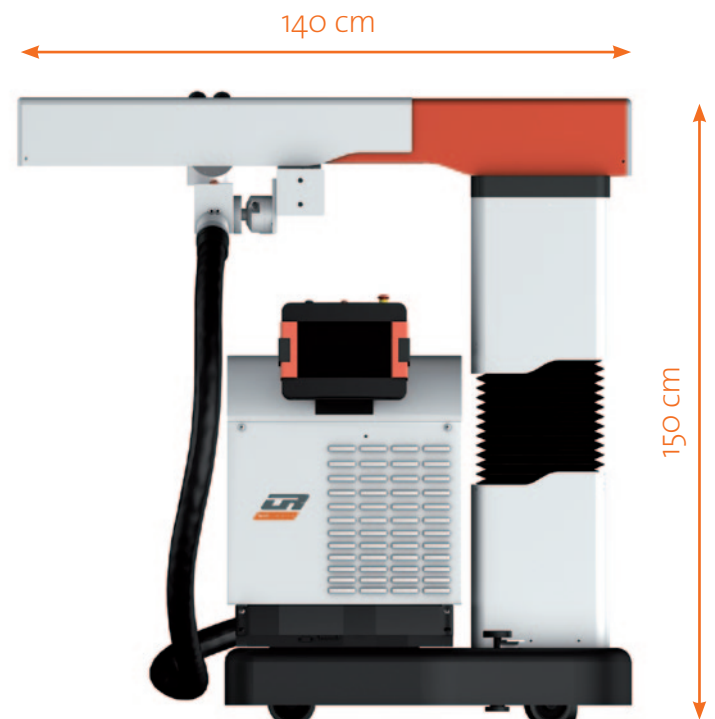
## Ultra compact

The compact height of only 110 cm also allows for easy transport of this fully mobile laser system in a mini van or small truck and is setting new standards by significantly extending the reach compared to previous laser systems.

The laser beam is directed to the welding position within the realm of millimeter precision. The minimal setup and takedown time as well as the long axis traverse distances of the EVO MOBILE minimizes the total amount of work when processing tools and dies.

## Ultra flexible

The EVO MOBILE is extremely easy to use and can be held in a stationary position with the stabilization brakes. Movement of the axes allows for very long traverse distances and is also controlled via the joystick. This allows the welding position to be set with absolute precision down to 0.1 mm. With optical extensions and 360° swivel optics capabilities, no angle will remain hidden.



## Control via touchscreen

Via the 10" touch display all parameters are accessible and there are reams of possibilities to adjust important settings which can also be stored directly. Saved data can be accessed anytime.



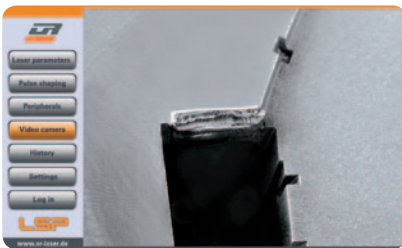
### EXAMPLES:



**Laser parameters**  
Configured easily and accurately.



**Pulse shaping**  
Program the ideal setting.



**Video**  
1:1 tracking of the welding process and saved along with all technical parameters.

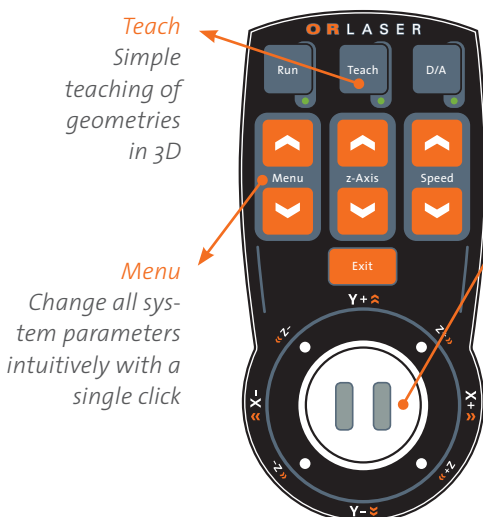


**Motion**  
Welding line determination, r-axis.

## One-hand operation via joystick

Along with the display, the joystick functions are the central operating element. Traverse speed, axis direction and more can be controlled and executed with the joystick directly. This increases efficiency

during welding since modifications can be made directly during the welding process rather than only via the display. Path data can also be programmed directly with the joystick.



**Move**  
Move in the x, y, z-axes or navigate with the laser menu control

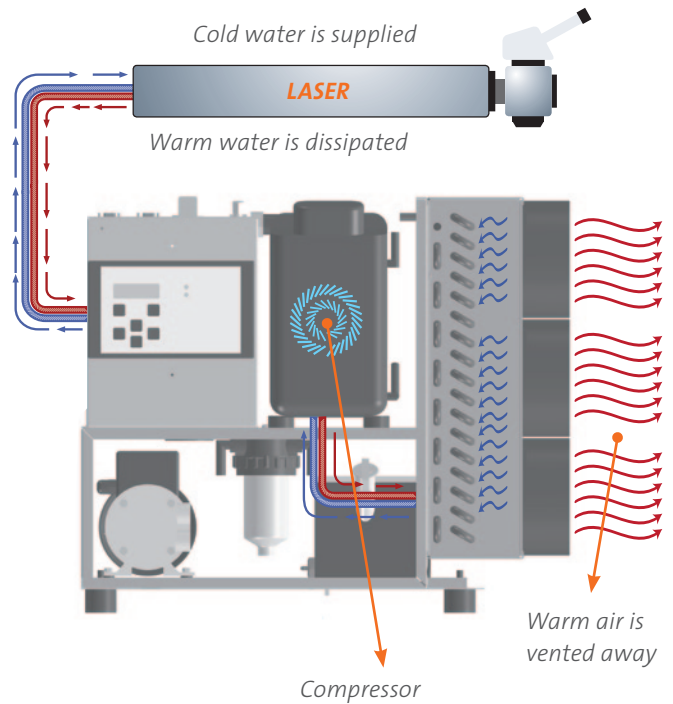


## Compressor cooling System–COR-22

The external compressor cooling system guarantees prolonged operation – without overheating! A temperature stability of  $\pm 1^\circ\text{C}$  ensures constant pulse/pulse stability and increases the service life of the laser lamp.

The external compressor laser cooling guarantees a constant water temperature. This means consistently constant laser output and a longer lifetime for the optical components.

After one hour already, overheating can occur with standard cooling systems. With the COR-22, you can weld practically around the clock.



## Useful accessories

For the EVO MOBILE system we offer a whole range of accessories to facilitate your work.



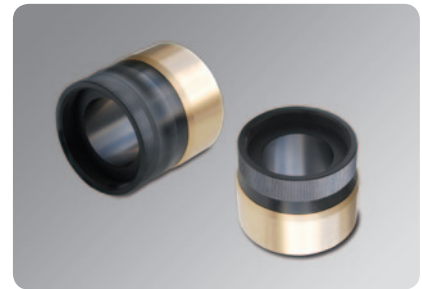
*Magnetic ball*

The ideal accessory for simple handling of your welding parts.



*Rotating device*

Rotating device with fully adjustable 3-Jaw chuck,  $90^\circ$  tilting and  $360^\circ$  swivel makes working on tools quick and easy.



*Telescope optics*

The telescopic extension allows continuous real time changes in focal positions up to 20 mm.

Not enough? We will be happy to send you the current accessories catalogue by e-mail or post.

# Technical data

## POWER

	TYP: 120 W	TYP: 160 W	TYP: 200 W	TYP: 300 W
Lasertype	Nd: YAG	Nd: YAG	Nd: YAG	Nd: YAG
Max. mean power	120 W	160 W	200 W	300 W
Pulse peak power	6 kW	7,5 kW	9 kW	13 kW
Max. pulse energy	60 J	80 J	100 J	150 J
Pulse duration	0,4 - 20 ms	0,4 - 20 ms	0,4 - 20 ms	0,4 - 20 ms
Pulse frequency	1 - 20 Hz (100 Hz)	1 - 20 Hz (100 Hz)	1 - 20 Hz (100 Hz)	1 - 20 Hz (100 Hz)
Focus diameter	0,2 - 2,0 mm	0,2 - 2,0 mm	0,2 - 2,0 mm	0,2 - 2,0 mm
Line voltage (V/Ph/Hz)	400/3/50	400/3/50	400/3/50	400/3/50

## SYSTEM EQUIPMENT

### Laser system

- Laser resonator inclusive resonator mechanics
- Laser rod
- Cavity
- Resonator mirror
- Safety shutter
- Beam expansion
- Mains supply including mains fuse
- Mains isolator
- Emergency stop
- Motor circuit breaker
- Low voltage power supply 24 VDC
- Interface with hardware monitoring function
- Lamp switch
- Industry controller for setting and display of power, pulse duration, pulse repetition frequency with external trigger via footswitch
- C-bank
- Water/air cooling system

### Processing optics

- Variable beam expansion
- Beam deflection
- Safety glass
- LCD anti-glare
- Binoculars 10x
- FocusSing lens

### Operating unit

- Integrated control with 10" TFT display
- One-hand operation of all functions via joystick/touchpad
- Simple coordinates transformation
- Teach-in and synchronisation for forward feed and laser
- Circle and continuous path control with pulse synchronisation

### Linear system

- z-axis for mounting the resonator
- Swiveling unit for resonator for the motor-controlled welding of large molds
- Operation via joystick
- Shielding gas supply direct
- Traverse range z-axis: 570 mm controlled via solenoid valve
- x-y axis for positioning the resonator
- Positioning speed 0,5 – 15 mm/s
- Stable construction made of aluminum sections adjustable via step motors with powder-coated steel plate covers
- Massive steel substructure mounted on heavy duty rollers
- Traverse range: x-axis: 700 mm / y-axis: 400 mm
- LED lighting

### Dimensions and weight

Dimensions: width 950 x height 1550 x length 1250 mm  
 Weight: 370 kg net

# wORLD of LASER



## HEAD OFFICE

### Germany

O.R. Lasertechnologie GmbH  
Güterstrasse 7  
64807 Dieburg  
Tel.: +49 (0) 6071-209 89 0  
Fax: +49 (0) 6071-209 89 99  
info@or-laser.de  
www.or-laser.de

## BRANCHES

### USA

O.R. Lasertechnologie Inc.  
1420 Howard Street  
Elk Grove Village, IL 60007  
Tel.: +1 847-593-5711  
Fax: +1 847-593-5752  
sales@or-laser.com  
www.or-laser.com

### Israel

Laser-Tech 3000 LTD.  
Hacharoschet Street 35  
21651 Karmiel  
Tel.: +972 (0) 58 380 468  
info@or-laser.de  
www.or-laser.de

### Turkey

OR LAZER Kaynak Makinaları  
Tic. Ltd. Şti  
İkitelli O.S.B İpkas San.  
Sit. 9/A Blok No:24  
İkitelli K. Çekmece –  
Istanbul 34000  
Tel.: +90 (0) 212 671 83 30  
Fax: +90 (0) 212 671 84 39  
info@orlazer.com.tr  
www.or-laser.com.tr

### India

O.R. LASER TECHNOLOGIE  
INDIA P LTD.  
Regd Office:  
#1 Dhruva Tara · 241  
Dr. Rajendra Prasad  
Road Tatabad Coimbatore  
- 641 012  
Tel.: 0422-2493 786/4377 909  
info@or-laser.com  
www.or-laser.com

### Romania

OR Laser Romania  
Strada Baciului 2-4  
3400 Cluj-Napoca  
Tel.: +40 (0)264 436 180  
Fax: +40 (0)264 436 181  
info@or-laser.de  
www.or-laser.de

## PARTNERS

### Europe

Germany · France · Italy  
Switzerland · UK · Spain  
Austria · Poland · Portugal  
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Australia · New Zealand



YOUR ENGINEERING QUALITY IS ALWAYS ON OUR FOCUS