

# Laser Welders & Accessories



**Laser welding allows for precision unprecedented in other welding techniques. Machining a detail after laser welding is cheaper and much less time-consuming.**

One of the most important advantages of the laser welding technique is the negligible thermal influence on the detail, the seam is free from defects and the material structure outside its area is practically intact. It is very useful when it is necessary to surface small elements, especially sensitive to deformation due to overheating.

The laser padded material creates a coherent and durable weld, which in most cases does not leave any traces after processing, and the welded tool is comparable to the new one.

This technology allows for the welding of virtually all materials used in the construction of molds and tools (tool steel, bronze, aluminum, titanium and even copper).

## **You are interested?**

Please contact us. During the show at your company, we will show you how child's play laser welding with our devices is.

## **You save a lot of time and money with your own laser!**

Each mold is different and has its own degree of difficulty. With an open laser, you have an unbelievably many possibilities in practice.

Our lasers were created by experienced laser welders who know the issues of mold repair very well.



## HTS MOBILE mobile almighty

The HTS Mobile laser system combines flexibility and stability in repairs ranging from small precision parts to large injection molds.

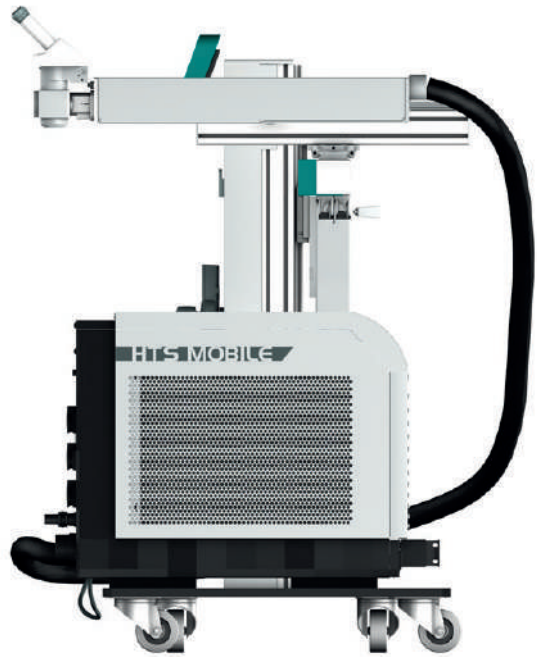
Large tools weighing from several to several dozen tons require just such mobile constructions to be used, allowing the access of the laser beam to various places.

The HTS MOBILE laser system is a tilt-articulated arm structure with a range of 1 - 1.5 m. with minimized vibration.

The combination of a swivel arm, movable resonator and optional head with 360 ° torsion optics allows you to machine almost any component (site), regardless of size, geometry and position.

The device can be easily moved and stably positioned thanks to the brakes. This results in minimal setup times.

The system is equipped with a digital joystick with Teach-In function.



By using high-quality Leica binoculars with 10x or 16x magnification, the welding positions can be determined precisely with an accuracy of 0.1mm.

The HTS Mobile welder is very well prepared for surfacing both those typical steel alloys used in the construction of molds and tools, but also aluminum, copper, bronze or titanium.

With the help of the lens extensions and the 360 ° optical swivel head as an add-on module, no angle remains inaccessible. The laser beam is guided with millimeter accuracy to the welding point. The minimum set-up times of the HTS Mobile device, as well as long axis guides, minimize the workload in the processing of tools (molds).



# HTS MOBILE mobile almighty

## Key features:

- Motorized feed in X / Y / Z axes and R axis
- Teach-In function
- Direct laser beam source without the use of optical fibers
- Low oscillation due to high quality rail system



## Technical data

	160 W	200 W	300 W
Laser type	Nd: YAG	Nd: YAG	Nd: YAG
Max. mean power	160W	200W	300W
Pulse peak power	7,5 KW	9,0 KW	13,0 KW
Max. pulse energy	80 J	100 J	150 J
Pulse duration	0,4 - 20 ms	0,4 - 20 ms	0,4 - 20 ms
Pulse frequency	1 - 20 Hz (100Hz)	1 - 20 Hz (100Hz)	1 - 20 Hz (100Hz)
Focus diameter	0,2 - 2,0 mm	0,2 - 2,0 mm	0,2 - 2,0 mm
Line voltage (V/Ph/Hz)	400V/3/50-60Hz	400V/3/50-60Hz	400V/3/50-60Hz
No.	HTS-LP160	HTS-LP200	HTS-LP300

## 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 (Leica) • Focussing lens

## 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 • Traverse range: x-axis: 700 mm / y-axis: 400 mm • LED lighting • resonator ball mount allowing tilting positioning for welding large molds • Stable construction made of aluminum sections adjustable via step motors with powder-coated steel plate covers • Massive steel substructure mounted on heavy duty rollers

## Dimensions and weight

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

## Installation

The price of the device includes delivery and installation at the customer's plant and instruction.

## ECO Laser ideal for beginning

The ECO stationary model in a new, aesthetic and economical form. It was created for the processing of small series and single details, e.g. tools and molds up to a weight of 150 kg.

Application area in many industries:

electronics, mold and tool building, medicine, aerospace, machine building, etc.

Perfect for welding small precise details. Thanks to the open structure of the device, you can easily manipulate the workpiece, and the control of the table via a joystick in three axes allows for precise positioning and welding.

With up to 200W of power available, you can weld all available metal alloys.

We also have the right solutions for automated welding tasks.

The Autofocus system allows for automated 3D welding. The standard feature is an additional R axis that allows synchronized welding in rotation.

The ECO Laser laser system is ideal for repairing small-sized molds. The Eco model can be installed in virtually any room. Thanks to the extensive range of accessories, we can find a solution for every task.



The system is intuitively controlled via a 5" touch screen. All important parameters are easily accessible and the most important functions are at the touch of a finger. In addition, all technical parameters can be saved and, if necessary, loaded from the memory for up to 100 programs.



# ECO Laser ideal for beginning

## Key features:

- Motorized feed in X / Y / Z axes and R axis
- Teach-In function
- Direct laser beam source without the use of optical fibers
- New convenient joystick
- Table with a load capacity of up to 150 kg



## Technical data

	ECO 160	ECO 200
Laser type	Nd: YAG	Nd: YAG
Max. mean power	160W	200W
Pulse peak power	7,5 KW	9,0 KW
Max. pulse energy	80 J	100 J
Pulse duration	0,4 - 20 ms	0,4 - 20 ms
Pulse frequency	0,5 - 20 Hz	1 - 20 Hz (100 Hz)
Focus diameter	0,2 - 2,0 mm	0,2 - 2,0 mm
Line voltage (V/Ph/Hz)	400V/3/50-60Hz	400V/3/50-60Hz
No.	ECO-LP160	ECO-LP200

## 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 (Leica) • Focussing lens

## Linear system

4-axis controller • Operation via joystick • Traverse range z-axis: 400 mm (table) • x-y axis for working table with stepper motor • Positioning speed 0,5 - 15 mm/s • Travel: x-axis: 200 mm / y-axis: 120 mm • LED lightening • Inert gas supply directly controlled via magnetic valve

## Dimensions and weight

Dimensions: width 472 mm x height 1270 mm x length 1160 mm • Weight: 190 kg net

## Installation

The price of the device includes delivery and installation at the customer's plant and instruction.





## Binocular

high-quality Leica binoculars for all Laserpoint lasers ergonomic 45° tilt.

Type	Order no.
Binocular Leica Inclined 45°	4100004
Eyeiece 16 x 16 mm (1 piece)	4100047
Eyeiece 10 x 23 mm (1 piece), adjustable, for glasses wearers	4100038
Crosshair graticule	4100006
Eyecups for high eyepoint eyepieces	4100005/OG



## Focusing optics

laser lens with different focal length: 110 mm, 150 mm, 200 mm + M50 / M56 adapter.

Type	Order no.
Focusing optics F110 mm	2200008/T
Focusing optics F150 mm	2200027/T
Focusing optics F200 mm	2200010/T



## Optical swivel head

swivel optical head for easier welding in hard-to-reach places with large molds and bulky parts 2 x 360° - horizontally and vertically.

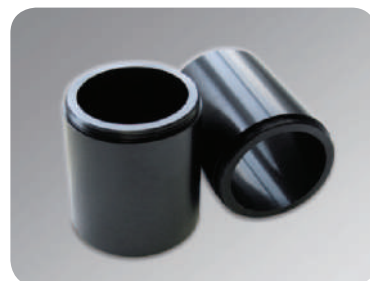
Order no.	2200012
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## Lens protective glass

perfect protection for your lens protects the lens from welding spatter. For lasers up to 300 W

Dimensions	Order no.
Ø 38mm x 3mm (old ORL version)	2200015
Ø 40mm x 2mm	2200015/T



## Lens extension 100mm

extension of the focus position, extension height 100mm.

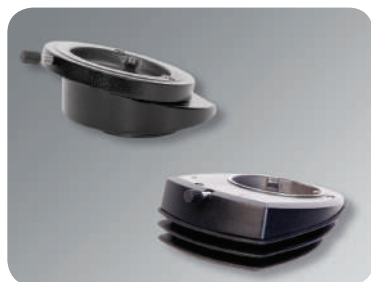
Order no.	2200005
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### LED ring light

LED ring light 20000 Lux, + lens extension 50mm

Order no.	
	32-RB2



### ErgoWedge®±15° // ErgoWedge 5° - 25°

for ergonomic work, especially in a sitting position, an additional 30° tilt.

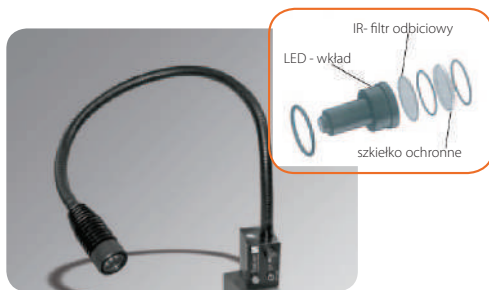
Type	Order no.
ErgoWedge®±15°	2300028/15
ErgoWedge®5°-25°	2300016



### Laser safety glasses

Fiber / YAG Laser protection range (850-1300nm), essential protection for your eyes.

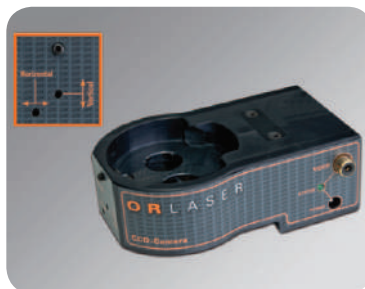
Type	Order no.
safety glasses <b>A</b> (blue)	32-LSG-C
safety glasses <b>C</b> (green)	32-LSG-A



### LED lighting on a flexible arm

for perfect illumination of the workpiece

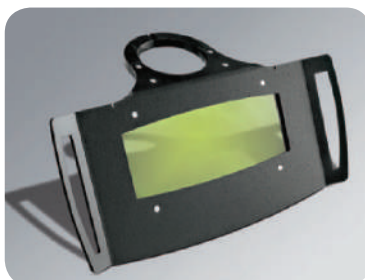
Type	Order no.
complete LED lighting	4240023
LED plug-in module	4100055
IR-reflection filter	4100054
protective glass	4100056
Ø88mm magnetic foot.	4630001



### CCD- camera

for observation and documentation of the welding process on the material surface. Analog camera, PAL system, 15mm field of view

Order no.	
	2300029



### Laser safety shield

the protective plate protects against reflections from laser radiation and heat

Order no.	
	2400040



## Service kit S- 120/160/200/300

for inspection and cleaning of your laser.

Includes laser lamp, protective glass, protective kit for LED lighting, mesh filter, cleaning and inspection buttresses

Type	Order no.
Wearing part set S-120/160	2700028
Wearing part set S-200	2700011
Wearing part set S-300	2700042



## Pressure reducer (Arg)

for gas shielded welding for optimal setting of the required amount of gas adjustable to 5 l / min

Order no.	2500015
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## Safety set interlock

to protect bystanders from laser radiation. The beacon signaling the laser work, together with the door contact switch that turns off the laser when it intrudes into the room, is connected to the Interlook socket on the laser. Additional set included warning signboards.

Order no.	2400011
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## ND laser lamp

Nd: Yag laser flash lamps for all Laserpoint and old OR lasers systems. Lamp life is on average up to 3 million discharges.

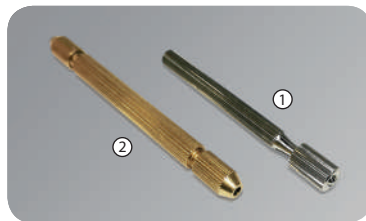
Type	Order no.
LS-P 120/160	2700012
LS-P 200	2700013
LS-P 300	2700055



## Protection gaz nozzle with thread

for fine adjustment of the shielding gas stream  
*additionally a 200mm segment extension*

Type	Order no.
Gas nozzle	4500227
Segment extension	2500013/PP



## Holder for fine wires

It facilitates feeding of thin wires, protects the wire against hand sweat. Two versions, with an open back for wires from 0.2mm to 1mm and double-sided for wires from 0.2mm to 0.6mm.

Type	Order no.
1. Wireholder 0,2-1,0mm	32-LDH
2. Wireholder 0,2-0,6mm (double-side)	32-LDH/T1





### Magnetic clamping ball

Magnetic spheres of various sizes for easy attachment and manipulation of the workpiece under a microscope. High-quality, strong magnets.

Type	Order no.
Ø magn. 100mm, Ø sphere 120mm	6-MCB100
Ø magn. 125mm, Ø sphere 170mm	6-MCB125
Ø magn. 160mm, Ø sphere 210mm	6-MCB160



### Magnetic clamping hemisphere

two sizes : 125mm magnet and 160mm magnet.

Type	Order no.
Ø magnes 125mm	6-MCHB125
Ø magnes 160mm	6-MCHB160

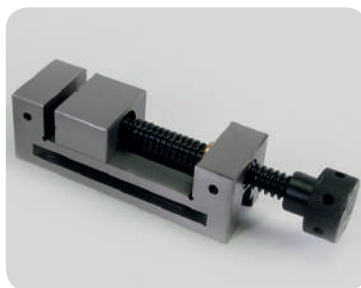


fixing  
max. 56 mm.

### piggyClamp

clever ball with a clamping system, two cranks work in opposite directions, so they can be quickly tightened or loosened. A very useful device for welding non-magnetic details.

Order no.	
	6-PC1



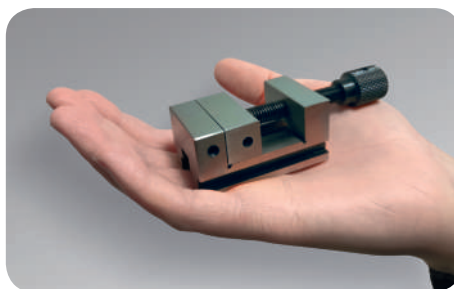
### Precision vice

Made of high quality steel, hardened to 58-62 HRC.

Parallelism with an accuracy of +/- 5 microns.

Two sizes: small and larger. Perfect clamping in combination with a magnetic ball.

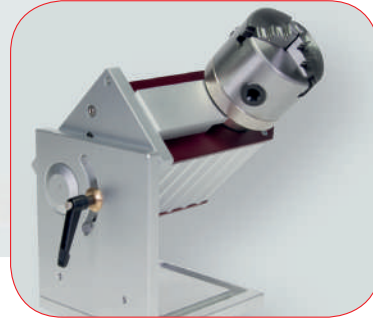
length	W x H	Jaw height	max. opening	kg	Order no.
155 mm	50 x 50 mm	25	65	2,8	37-PSS01
220 mm	80 x 80 mm	40	100	7,0	37-PSS02



### Precision mini - vice

Mini vise for mini needlework.

length	W x H	Jaw height	max. opening	kg	Order no.
57 mm	33 x 27 mm	15	20	0,25	37-PSS03

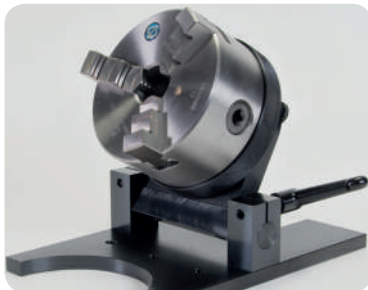


## Rotary axis motor-driven

Machining cylindrical parts with motorized, synchronized rotary chucks greatly simplifies the process. A motorized axis rotates the workpiece during engraving or welding.

For laser welding systems, we dedicate 2 models with a three-jaw chuck Ø 80 and Ø 120mm.

Rotary chuck	Order no.
Ø 80mm motor	32-MRD80
Ø120mm motor	32-MRD120



## Turning and swiveling device with Ø 125 mm three-jaw chuck

The device is universal, extremely helpful in laser welding, and not only. Precise, axial clamping of the workpiece, the possibility of tilting it.

Type	Order no.
Ø125mm manual	6-DSV1



## Laser safety curtain

a mobile protective curtain made of durable material complies with the 12254 standard. Dimensions 2 x 2 m.

Order no.	2400005
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**Extractor III 200W**  
**Mobile extraction and filtering system**



For the absorption of dust, as well as harmful combustion vapors, e.g. generated during the welding and laser engraving of metals. Efficient filter system, with a durable, long-distance brushless motor at a very good price.

Max. air flow of 135 m<sup>3</sup> / h for Ø50mm extraction duct and 310 m<sup>3</sup> / h for Ø75mm; air speed 18m / s and noise level <60dBA.

The system has a removable 3-stage filter:

- (1) preliminary EU4,
- (2) small molecule EU5 (98% > 3µ) and
- (3) activated carbon filter (99.97% <0.3 µm).

Optionally with a flexible hose Ø50mm x 2.0m + with a segment nozzle Ø 50 x 300 on a magnetic foot or a segmented arm Ø 50mm x 1.5m. Dimensions 250 x 425 x 410 mm, weight 14 kg.

Description	Order no.
Extractor III unit (without a suction hose)	36-780
segmented extraction arm Ø 50 mm Ø50mm x 1,5m	36-781/50
Hose kit flex with cuff Ø50mm x 2m	36-786
Segment nozzle Ø 50mm x 300mm on a magnetic foot	36-786NMF
Pre-Filter for Extractor III, Size: 175 x 360 x 10 mm (pack. 4 pcs)	36-782
Filter cartridge complete for Extractor III	36-783

**This extraction and filter system must not be used for extracting flammable dust !**



**External cooling system**

Description	Order no.
<b>CY- 6000</b> - compressor cooling system with a cooling capacity of 3.0 kW, weight 60 kg, H 890 x W 550 x D 480mm, 230V power supply.	32-ChZ60
<b>CY-8500</b> - compressor cooling system with a cooling capacity of 8.2 kW, weight 130 kg, H 900 x W 750 x D 610mm, 400V power supply.	32-ChZ85

# Laserpoint around the world



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## Partner

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Hungary · Slovakia

### AMERICA

Mexico

### ASIA

India



Cost-efficient laser welding technology for large and small workpieces (mold and tool elements), small series and individual parts.

[www.laserpoint.pl](http://www.laserpoint.pl)