IQ LASER

DIODELINE

www.or-laser.com

A new way of repairing

Fast and economic: On-site repair welding

ORLASER

The taskforce for repair welding

Dimensions: width 420 mm x height 500 mm x length 636 mm
Weight: 30 kg net

IQ Laser: ready to operate any time, any place

The IQ LASER was specially developed to carry out localized smaller repairs on site, for example on injection molding machines. The 5 m long glass fiber cable makes it possible to reach any location on larger moldings and components. Even precision components such as turbines, medical components and rollers can be quickly repaired without complications. There are also no limits on the materials: aluminium, steel, and copper alloys can also be processed by the IQ LASER without problems. The 10“ touchdisplay ensures an excellent overview and guarantees safe and precise welding.

Flexibility pays off

With the IQ LASER, OR Laser presents a laser welding system which sets new standards in repair welding. The experience gained by our customers in practice, in addition to several years of research and development, have been incorporated into the construction of this mobile laser system.

The IQ LASER is compact, quickly ready for operation, precise, and combines the highest technical demands with practice-oriented ease of operation and enables repair welding „on the spot“.

Repair welding on an injection mold

Save time and money

OR Laser has always been an ideal partner if you are looking for economic efficiency and flexibility in tool and mold making. The new IQ LASER is a complete ready-to-operate solution which can result in enormous savings for any company.

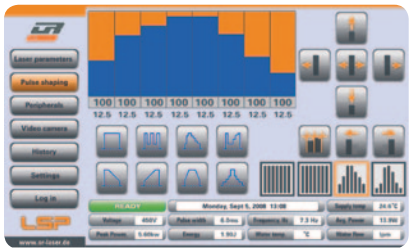
In future, expensive transport costs and long downtimes can be avoided by carrying out repair work on your tools at the jobsite, at any time. This means that the IQ LASER saves time and money even with low usage.

Control via touchscreen

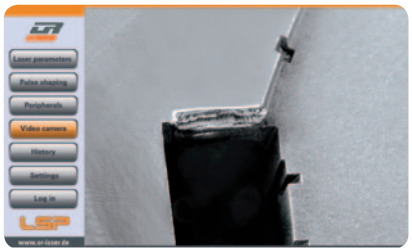
Via the 10“ touchscreen all parameters are accessible and there are reams of possibilities to adjust important settings which can also be stored directly. Saved data can be accessed anytime.

EXAMPLES:

Laser parameters
Configured easily and accurately.



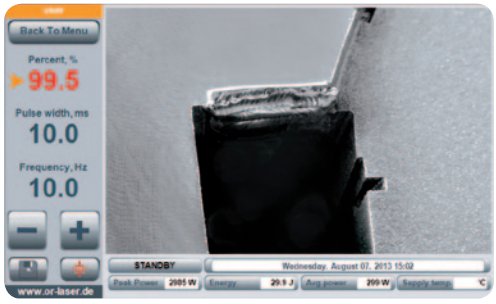
Peripherals
All system parameters of the hand laser can easily use the software will given.



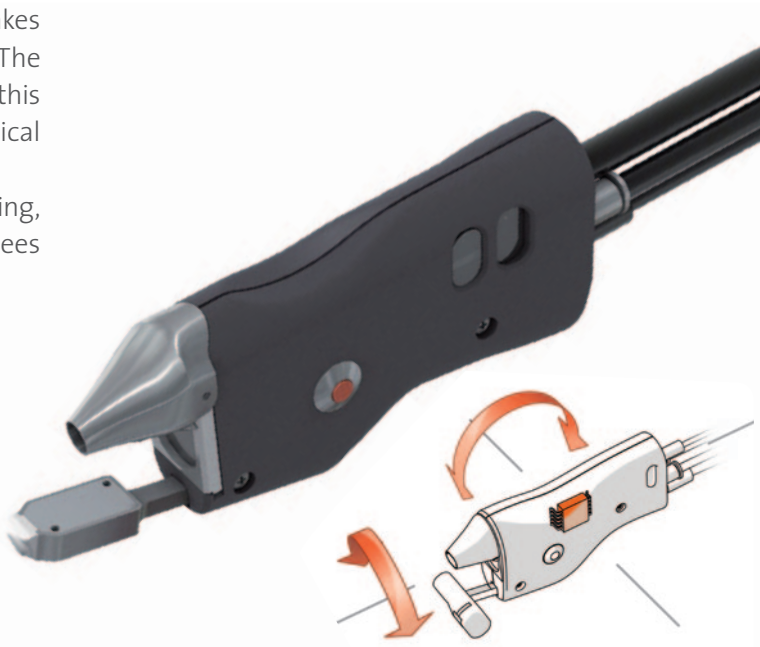
Video
1:1 tracking of the welding process and saved along with all technical parameters.

Inovative process observation

A camera, which is integrated into the laser head, makes it possible to follow the welding progress in real time. The system also has an on-board motion sensor. Using this sensor, the small turns of the laser pistol around its optical axis can be equalized.
The welder can completely concentrate on the welding, even if the laser pistol is turned a bit, so the welder sees always a straight image on the screen.



The image on the screen stays always horizontal even if the laser pistol is turned.



The on-board motion sensor prevents the image to be rotated.

Concept: IN LINE LASER REPAIR

OR Laser presents an innovative concept with *In Line Laser Repair*. Your benefits: The component to be repaired no longer needs to be removed.

Simply weld on the spot, job done. The process is ready to start again once you have carried out inspection and postworking.

An injection mold for the automotive industry

The mold to be welded

Simple, safe and precise welding...

...using the LCD display

Useful accessories

Guide rail (optional)

The useful accessoiry is the guide rail, which is mounted directly on the laser pistole. The welders can easly weld along a straight line.

Available from January 2014

IQ LASER vs. Conventional repair methods

In our example, a 10 t injection mold needs to be welded. The conventional operations required are very costly: About 5 hours are required to remove the mold, transport and handling to the workshop takes a further 1 hour. It then takes half an hour to dismantle the mold and remove any inserts, another half an hour to carry out the welding and 1 hour for the die-spotting presses and post-work. Then the same again, in reversed order: 1 hour for handling and transport, then 5 hours for refitting. On top of all this, another 1 hour is required to restart the process. This makes a total of 15 hours, and on top of this there is the downtime of for the injection molding machine plus the transport costs etc.

Repairs using the IQ LASER

This is how quickly and simply repairs can be made using the IQ laser. Setting up the laser around 20 minutes, welding operations half an hour, post-processing half an hour and 1 hour to restart the process. This makes a total of 2.5 hours. The downtime of the injection molding machine is considerably reduced, and further costs are avoided.

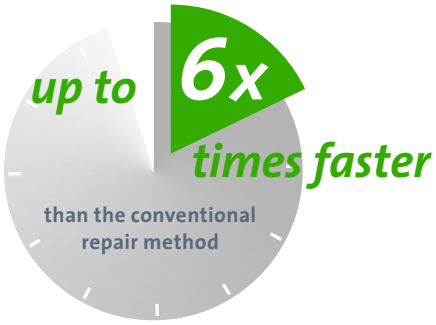
The result

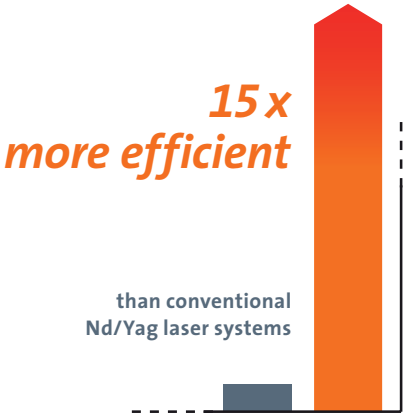
When making a direct comparison between the IQ LASER and standard repairs, the clear winner is the IQ LASER system in almost all categories.

The welding quality is identical for both methods. The remaining points are clearly awarded to the IQ LASER system.

The advantages of the diode-pumped laser **DIODE**LINE

Average power of 300 W peak power of 3 kW and maximum energy of 30 Joules





Other highlights:

- No water cooling
- Easy socket connection is enough
- Operation in pulse mode and cw mode
- Excellent and stable beam quality

Technical data

Power

	DIODELINE Typ: 160 W	DIODELINE Typ: 300 W
Lasertyp	diode-pumped	diode-pumped
max. mittlere Leistung	160 W	300 W
Pulsspitzenleistung	1,5 kW	3 kW
max. Pulsenergie	15 J	30 J
Pulsdauer	0,4 - 50 ms	0,1 - 50 ms
Pulsfrequenz	0,1 - 100 Hz	0,1 - 100 Hz
Fokusdurchmesser	0,2 - 0,8 mm	0,1 - 2,0 mm
Netzspannung (V/Ph/Hz)	230/1/ 50	230/1/ 50

System equipment

Laser system

- 10“ Touchdisplay
- Mains isolator
- Emergency stop
- 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
- Air cooling system
- Shielding gas supply direct
- Video Interface
- Variable beam expansion
- Camera 5 x
- distance sensor
- LED lighting

Dimensions and weight

Dimensions: width 420 mm x height 500 mm x length 636 mm
Weight: 40 kg net

wORld of LASER

Head Office

Germany
O.R. Lasertechnologie GmbH
Dieselstrasse 15
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. Lasertechnology 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

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Your Engineering Quality is always on our focus