ORLASER

iQLASER

Fast and economical

On-site repair welding

The new laser 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“.

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 ready-to-operate complete 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.

IQ Laser: ready to operate any time, any place.

The IQ laser was specially developed to carry out localised smaller repairs on site, for example on injection molding machines. The 5 m long glass fibre 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 inch LCD display ensures an excellent overview and guarantees safe and precise welding.

The Taskforce for repair welding

Touchit

...one click for everything.

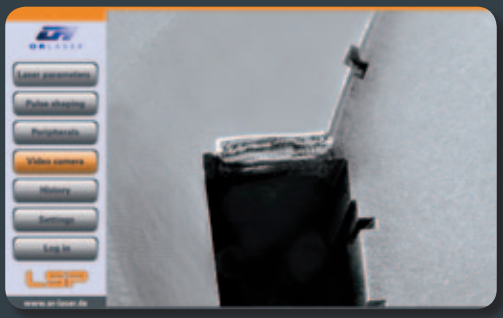
iQLASER

Software and control using the touchscreen

Operation of the laser system takes place intuitively using a colour 10 inch touchscreen display. All the important functions can be reached with just a few clicks. In addition to direct input of technological data such as laser power, pulse duration and others, you can also access data which has already been saved. If you have discovered new technological data for your specific process, it is also possible to save these.

Programming the ideal settings

Welding with the LCD display



Feelit

...perceptibly simple repairs!

Injection molding machine

The mold to be welded

Simple, safe and precise welding ...

...using the LCD display.

In Line Laser Repair

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

IN LINE LASER REPAIR

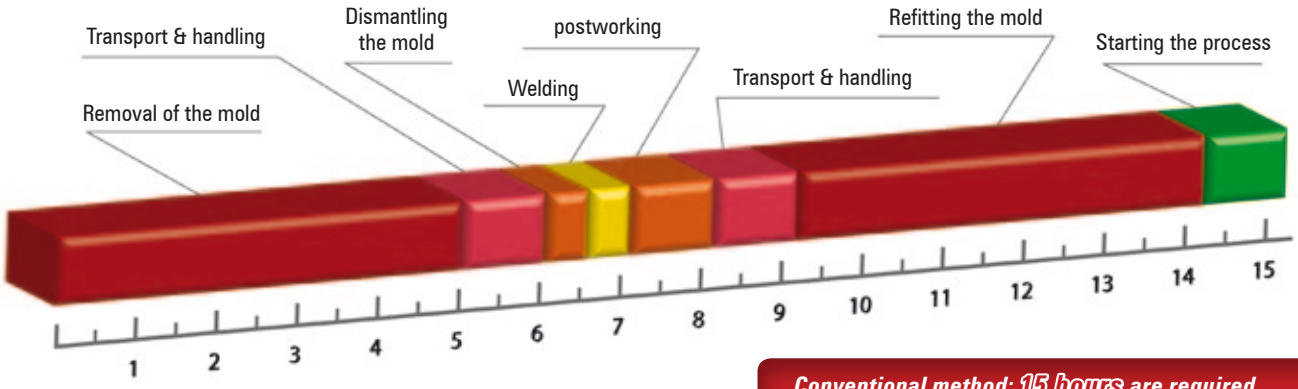
OR Laser presents an innovative concept with In Line Laser Repair.
Your benefits: the component to be repaired no longer needs to be removed.

iQLASER vs. standard repair

Time and cost example for a 10t injection mold

Conventional repair methods

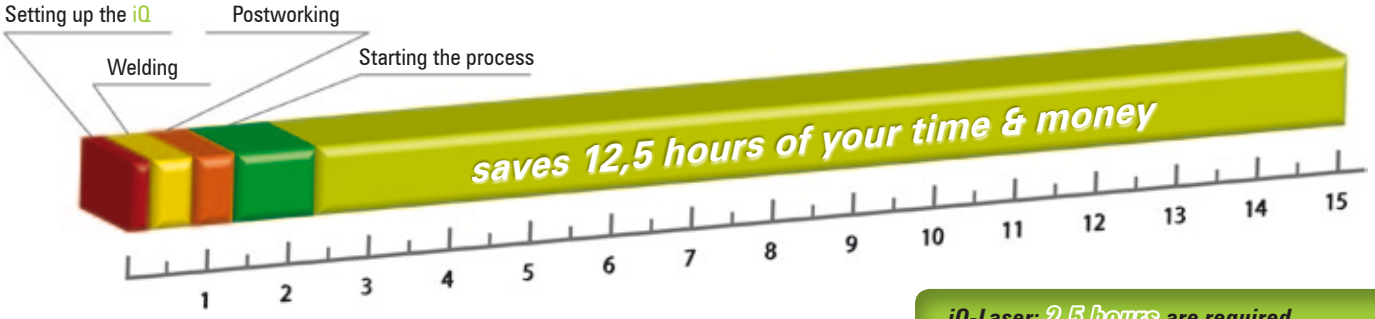
In our example, a 10 t injection mold needs to be welded. The conventional operations required are very costly: around 5 hours are required to remove the mold, transport and handling to the workshop takes a further 1 hour. It then takes half an hour to dismantle the mold and remove any inserts, another half-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 you have to cope with downtime for the injection molding machine plus the transport costs etc.



Conventional method: 15 hours are required.

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, postworking half an hour and 1 hour to restart the process. This makes a total of 2.5 hours. The injection molding machine downtime is considerably reduced, and further costs are avoided.



iQ-Laser: 2,5 hours are required.

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 rest of the points are clearly awarded to the IQ laser system.

Technical*data*

Lasertyp: Nd: YAG // max. average power 55 W // pulse peak power 9 kW // max. pulse energy 80 J // pulse duration 0,2 - 30 ms // Pulse frequency 1,0 - 20 Hz // focus diameter 0,4 - 0,8 mm // main voltage (V/Hz) 230 / 50

Laser system: Laser resonator including resonator mechanics · Laser rod · Cavity · Resonator mirror · Safety shutter· Beam expander Mains supply including mains fuse · Mains isolator · Emergency stop switch · Motor protection switch · Low-voltage power supply 24 VDC · Interface with hardware monitoring function · Light switch · Industrial controller for settings and power display, Pulse duration, pulse repetition frequency with external trigger via foot switch · C-Bank · Internal water-air cooling system

Machining optics: Variable beam expander · Beam deflector · Safety glass · LCD glare protection · 10 X binoculars · Focusing lens

Dimensions and weight: width 420 mm x height 500 mm x length 636 mm // **Weight:** 40 kg net

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