

PERFORMANCE

SETTING BENCHMARKS

THE PERFORMANCE FAMILY

MANUAL LASER WELDING

Discover the benchmark of manual laser welding.

Back in 1992 we pioneered manual laser welding, setting the standards till today.

The Performance is available in three different variations - two closed laser-safe versions and an open one - to meet the needs of our customers in an ideal way.

Stronger – enough power at any time

- Up to 100 W output power and 50 Hz pulse frequency significantly increase welding speed.
- Manual laser welding systems are frequently used as workhorses in rough workshop environments. The cooling unit of the Performance is designed for a 100% duty cycle even at high ambient temperature.
- The embedded control unit and state-of-the-art power supply enhance long-term stability and reliability – guaranteeing reliable 24/7 operation.

Smarter – weld-assist systems for a new level of control and user friendliness

- The Performance is clever it takes advantage of welding intermissions for workpiece handling. The new SPEEDmode™ increases the maximum pulse frequency significantly and uses work-piece handling time for reloading.
- The ECOmode™ saves energy during longer intermissions.
- BURSTmode™ and Pulse Ramping: simplify welding tasks or jobs asking for high concentration, like welding of delicate medical devices. They offer a new level of control and sensitiveness.
- The dynamic foot switch provides an intuitive control of welding speed or strength on the fly.



Performance



Performance Unlimited

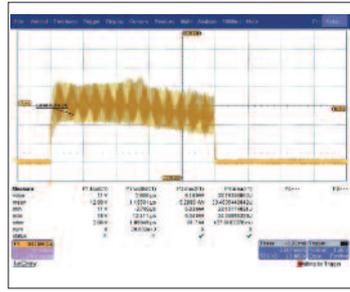


Performance Open



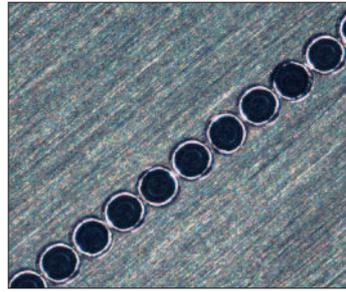
Dynamic Foot Switch

- Offers sensitive control of an arbitrary laser parameter.
- Acts like a foot throttle and is easy to configure.
- Triggers start and end-ramp when using Pulse Ramping mode.
- Adjusts welding speed or power during welding.



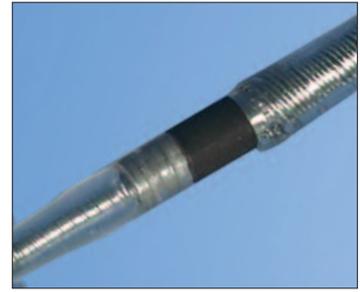
IPMmode™/Pulse Shaping

- IMPmode™ guarantees high pulse to pulse stability.
- Especially suited for micro welds.
- Pulse shaping to preset pulse shapes for many materials.
- Perfect welds even of highly reflective metals and alloys.



SweetSpot®

- Patented resonator design.
- No first-pulse effect.
- Constant weld quality from the very first pulse.
- Assures a reliable welding process.



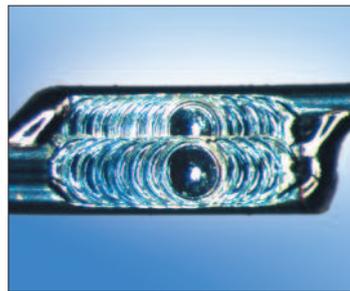
MicroWeld™

- Weld spots with less than 0.1 mm diameter.
- For extremely fine welds and delicate workpieces.



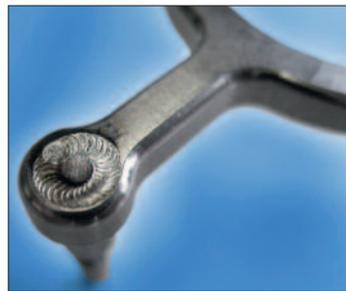
SPEEDmode™

- Significant power increase within a certain timespan.
- Shorter process time through higher pulse frequencies.
- System reloading during welding intermissions for workpiece handling.



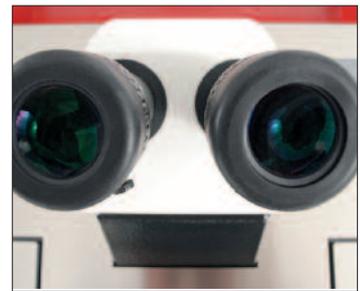
BURSTmode™

- Fires laser pulses with a predefined number.
- Stops automatically when number of pulses is reached.
- Risk-free working with fast pulse sequences.
- Increased processing speed.



Pulse Ramping

- Successively increases/decreases the power of first/last laser pulses.
- Ideally suited for closed seam welds and gas-tight housings.
- A good choice for starting a weld on highly reflective material.
- Reduced risk of piercing thin material.



TrueView™

- Ensures a 100 % hit-rate even when working out of focus.
- The laser beam is always aligned to the crosshair.
- No parallax misalignment.



ECOMode™

- Switches off system components during idle times.
- Only 10 W power consumption vs. 200 W in standby mode.
- Fast restart within less than 1 sec at any time.
- Reduced costs due to less lamp wear.



Housing/Working Chamber

- Easy, barrier-free access through wide opening door.
- Slender foot area offers comfortable seating position.
- Single-handed opening, other hand may stay in working position.



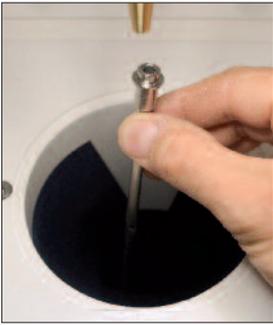
Performance Unlimited

- Mechanical rocker as hand rest
- Laser proofed safety curtain
- High flexibility combined with high laser safety



Performance Open

- Open class 4 concept.
- It allows a high degree of freedom while working on long and bulky parts.


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Laser Source		Classic	SweetSpot®
Type		pulsed Nd:YAG; 1064 nm	
Nominal power	W	70	55
Max. power with SPEEDmode™	W	100	85
Pulse peak power	kW	8	6
Pulse energy	J	90	70
Pulse duration	ms	0.3 bis 50	
Pulse frequency	Hz	single pulse up to 50	
Focal diameter	mm	0.3 - 2	0.2 - 2.5
With MicroWeld™	mm		0.1 - 0.5
Pulse shaping		15, graphic editor	
Memory	kB	32	

User Interface

Display and operation	5.7" color TFT touch display, joystick in working chamber	
Interfaces	USB Device optional	

Utilities

Electrical	V	110/230
	Hz	50/60
	A	16/13
	Ph	1
Power consumption		
Nominal power	kW	2.2
Standby	kW	0.2
ECOmode™	kW	0.01
Cooling	integrated water-air heat exchanger	

Measures

Weight	kg	125
Dimensions (WxHxD)	mm	530x1240x994
Ambient temperature max.	C°	35

Configuration

Dynamic foot switch	optional
MicroWeld™	optional
ECOmode™	X
SPEEDmode™	X
Processing gas supply	fixed and flexible gas nozzle
Cooling air	optional flexible cooling air nozzle
LED ring light	optional
Exhaust	integrated, filtration efficiency 99.997% acc. DIN24184
Microscope	LEICA 10-x, optional 16-x

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