

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**

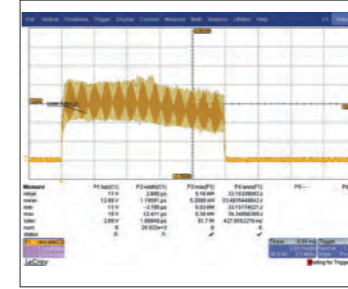


**Performance Open**



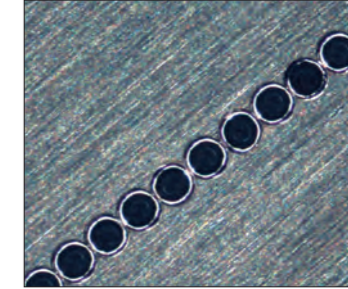
#### Dynamic Foot Switch

- 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.



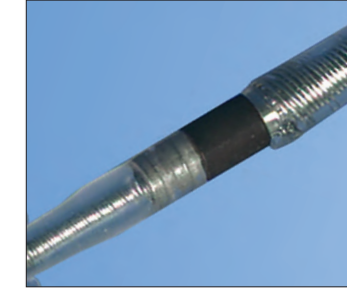
#### IPMmode™/Pulse Shaping

- 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.



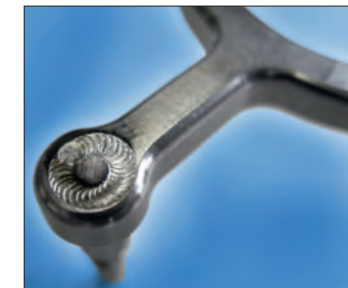
#### SPEEDmode™

- 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.



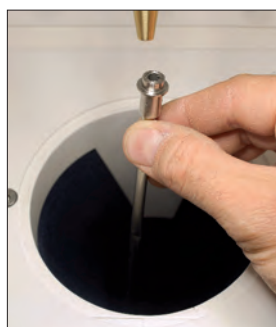
#### Performance Unlimited

- 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.



**PERFORMANCE - PERFORMANCE UNLIMITED - PERFORMANCE OPEN**

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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