



# 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



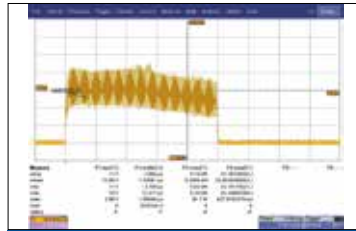
Performance Unlimited



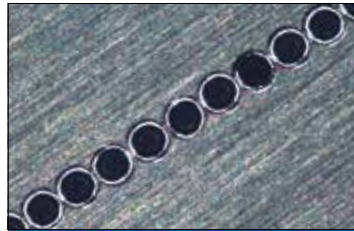
Performance Open


**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.


**IPMode™/Pulse Shaping**

- IPMode™ 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®**

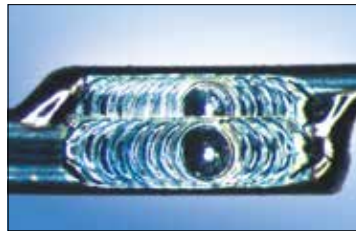
- Patented resonator design.
- No first-pulse effect.
- Constant weld quality from the very first pulse.
- Assures a reliable welding process.


**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
	Stand-by	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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