

# SELECT MANUAL WELDERS

## Flexible Tool for Micro-Welding Tasks

The Select is a compact, freestanding, all-in-one system for producing high quality spot and seam laser welds on metal workpieces. The Select supports fully manual processing (operator handholds the part), partial automation with joystick control of 4 motorized axes, and fully automated CNC operation. This enables everything from quick processing of individual pieces through rapid, short run production. Exceptional weld quality makes it well-suited for medical device manufacturing.

The Select Manual Welder combines a laser source, enclosed, ergonomic work chamber, stereomicroscope viewer and control interface into a single system. It's compact and mounted on casters, which makes it convenient to use in workshops, repair facilities and production lines.



## FEATURES

- Select SweetSpot™
  - Lamp-pumped Nd:YAG with patented SweetSpot laser resonator
  - Very wide power range for very small, strong welds and for highly-reflective material
- Select Fiber
  - Fiber laser for high process stability and best pulse-to-pulse stability
  - No maintenance
  - Precision welds with extremely high quality requirements
  - Advanced beam optics with real beam expander and pulse power monitor

## APPLICATIONS

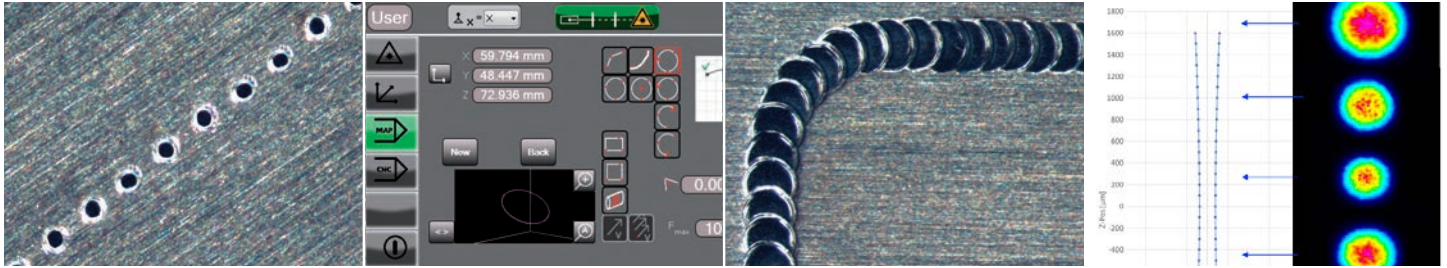
- Medical Devices
- Electronics
- Repair
- Prototyping

## SELECT MANUAL WELDERS

Specifications	LPSS SweetSpot Resonator	Fiber Laser 150
Wavelength (nm)	1064	1070
Peak Power (kW)	0.1 to 8	0.1 to 1.3
Pulse Length (kW)	0.3 to 50	0.05 to 50
Pulse Energy (J)	70 (with SPEEDmode: 100)	0.1 to 13
Pulse-to-Pulse Variation (%)	1 to 10 (depending on pulse power)	2 to 18 (dependent on pulse setting)
Repetition Rate (Hz)	Single Pulse: -50 (with SPEEDmode: 100)	Single Pulse: -100
Power (W)	55 (with SPEEDmode: 150)	130
Focus Diameter (mm)	f 120 mm: 0.2 to 2.0 with MicroWeld: 0.1 to 0.5	f 120 mm: 0.09 to 1.2
Z-Position Tolerance (mm)	depending on focus setting	>±0.4
Utilities		
Voltage (V)	230	230
Current (A)	16	16
Frequency (Hz)	50/60	50/60
Power Consumption (kVA)	3	1
Environment		
Ambient Temperature (°C)	10 to 35	15 to 35

## Robust All-in-One Solution

- Doors completely hidden inside the machine when open
- Large working chamber accessed by manual ports with leather cuffs
- Flow-controlled exhaust system with HEPA filters
- Closed-loop cooling circuit for 24/7 operation
- Generously dimensioned linear axes and additional rotary axis
- Ready to use after delivery



## MicroWeld and SweetSpot Resonator®

Smallest weld spot diameters of <0.1 mm for very fine applications showing a constantly high weld quality

## Teach-Functions

Extensive library of teaching functions optimized for laser processing

## SynchroWeld and Look ahead

Consistent pulse overlap on seam welds independent of path contour and welding speed

## Advanced beam guiding optics with real beam expander

Improved z-position tolerance for robust process set-up



## Pulse-Power Monitor

Measures and logs every single applied welding pulse

## Axes System

Servo motor-driven linear axes with positioning control for high dynamics and high precision

## Multi-Touch Display

Easy and intuitive parameter setting, ideal even for beginners

## Joystick Box

Can be configured individually with 4 axes and parameter display

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## Mechanical Specifications

### Select Manual Welder

