

ExactWeld 230 P

Laser Welding System for Polymers

The new Coherent ExactWeld 230 P enables particle-free high throughput welding of small to medium sized polymer parts. It combines a diode laser, servo-controlled clamping and responsive software to deliver distortion-free weld quality and rapid cycle times. An available vision system further enhances productivity by providing continuous weld quality assessment, correct product placement and automatic part offset correction. These capabilities make ExactWeld 230 P an ideal solution for polymer part joining in the automotive, medical and electronics markets.



FEATURES & BENEFITS

- Particle-free high throughput polymer welding
- Galvanometer scanned diode laser
- Quasi-simultaneous welding over complex contours
- Controlled clamping force with servo clamping
- Process control with collapse height closed loop
- Processing areas up to 400 x 200 mm
- Easily programmable software through an intuitive HMI
- Available thermal camera for quality inspection
- Class 1 laser housing meets the newest ergonomic guidelines
- Industry 4.0 ready

APPLICATIONS

- Polymer welding of automotive displays, instrumentation, sensors and lights, medical equipment, housings and tube connectors, as well as consumer electronics and appliances

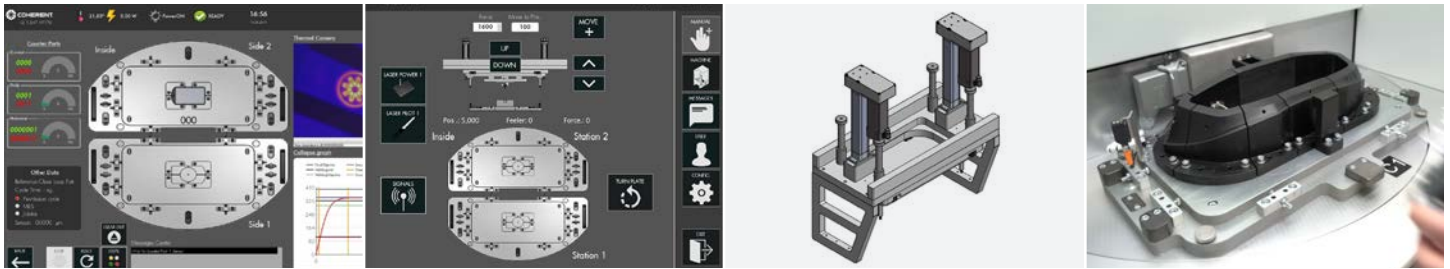
TECHNICAL SPECIFICATIONS	ExactWeld 230 P
Interface Display and Operation Data Interfaces	24" screen + keyboard USB device, RJ45 connection
INSTALLATION	
Dimensions (L x W x H)	1700 x 1000 x 2050 mm (66.9 x 39.4 x 80.7 in.)
Weight	1100 kg (2425.5 lbs.)
Maximum Payload (at each workstation)	40 kg (88.2 lbs.)
ELECTRIC	
Energy (VAC)	400 3P+N
Frequency (Hz)	50/60
Current (A)	16
POWER CONSUMPTION	
Effective Power (kW)	2.9
Standby (kW)	0.8
PNEUMATIC	
Compressed Air	6 bar
AXIS SYSTEM	
Z-Axis manual Trave	100 mm (3.94 in.)
Position Accuracy	0.1 mm (in.)
NOISE	
Noise (acoustic field on workplace)	<70 dB (A)
INSTALLATION CONDITIONS	
Laser Safety Class (according to EN60825-1:2015)	Laser Class 1
Description	As seated and standing workplace available (rotary table)
Working Temperature	25°C ±10°C
Storage Temperature	5°C to 40°C
Environmental Conditions	Not condensing, not corrosive, not freezing



INTEGRATED Compact Evolution

- CW 300 W diode laser
- High efficiency
- High power stability
- Homogeneous beam profile
- Matched beam geometry for polymer welding
- E-shutter function
- CE-labelling

FEATURES



Polymer Welding Control

- Collapse height and clamping force combined graph
- Part detection and production status feedback
- Full traceability of welding process, users and parameters
- Automatic reference calibration
- MES/FIS integration
- Jidoka functions

HMI Features

- Touchscreen HMI
- Intuitive interface
- Friendly configuration of the welding parameters
- Individual or group users
- Configurable user levels
- Manual mode for engineering adjustments
- Easy language selection

Servo Clamping

- Controlled clamping force
- High precision collapse height
- closed loop control
- Stable force distribution
- Welding areas of up to 400x200 mm

Tooling

- In house design for the machine tools and jigs
- RFID technology for tooling identification and traceability
- Easy to change tooling modules
- Automatic load/unload of upper tooling

OPTIONS



Thermal Vision Check*

- Welding path thermal recognition and control check
- Software module integration into Coherent's Polymer Welding HMI suite
- Easy to configure quality control parameters
- Traceability database with all acquired parameters and results

Vision System for Automatic Welding Adjustment

- Integration into the HMI
- Detection of patterns and position
- Poka-Yoke functions
- Automatic part offset adjustment
- Datamatrix/barcode serial number reading and traceability

Instrument Panels

- Interior or exterior automotive parts with aesthetic requirements

Medical Devices

- Welding of sealed or sensitive medical devices or consumables

Electronic Modules

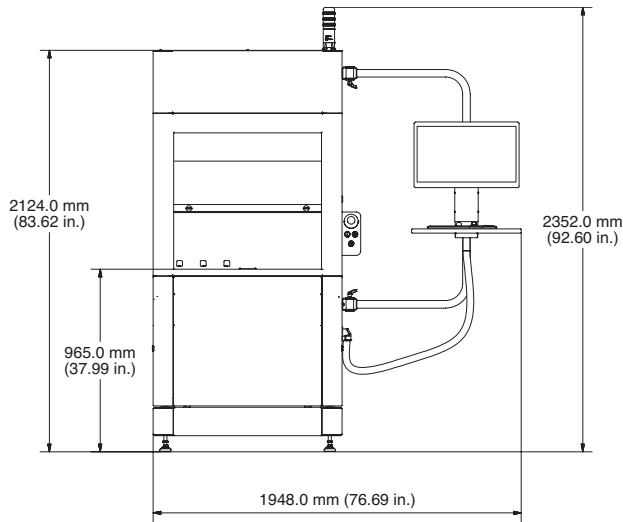
- Internal controllers or sensors requiring high precision cover welding
- Sealed welding
- Electronical consumer goods and appliances

APPLICATIONS

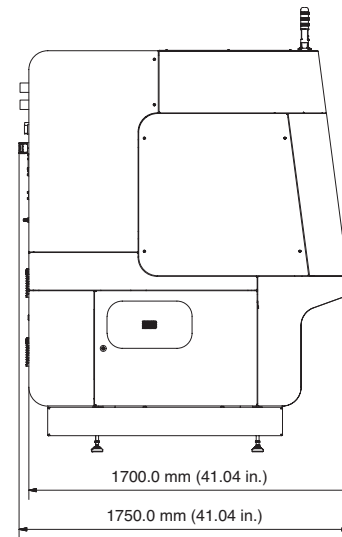
MECHANICAL SPECIFICATIONS

ExactWeld 230 P

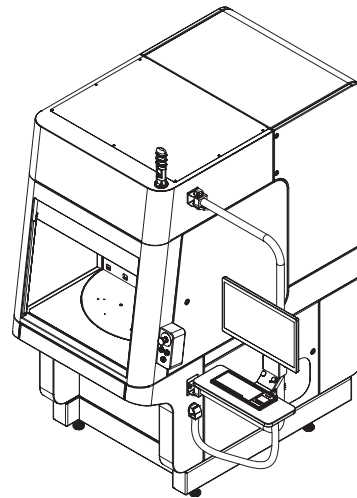
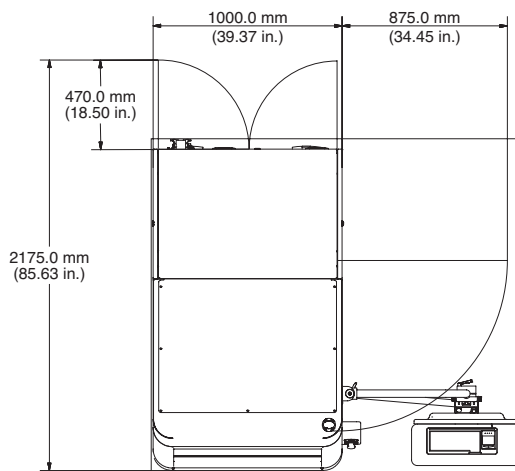
Front View



Side View



Top View



Coherent, Inc.,
 5100 Patrick Henry Drive Santa Clara, CA 95054
 p. (800) 527-3786 | (408) 764-4983
 f. (408) 764-4646

tech.sales@coherent.com www.coherent.com

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all ExactWeld 230 P Laser Welding Systems. For full details of this warranty coverage, please refer to the Service section at www.coherent.com or contact your local Sales or Service Representative. MC-041-19-0M1019 Copyright ©2019 Coherent, Inc.