



# ExactMark 230 USP

## Corrosion-Resistant High-Contrast Laser Marking

The ExactMark 230 USP is a highly integrated system that combines the PowerLine Rapid NX laser marker and motion hardware with user-friendly software, to produce high-contrast permanent marks on materials such as stainless steel, titanium, aluminum and various plastics. All ExactMark 230 USP machines are supplied with a vertical linear motion axis (Z) for focal height adjustment, and can be configured with multiple other axes of motion as options. Control is via an easy-to-use GUI with a 24" (610 mm) touch screen monitor.



### FEATURES

- Class 1 Turnkey system
- Highest ergonomical and safety standards
- State-of-the-art Picosecond laser marking sub-system
- Various servo axes for positioning, motion, and focal height adjustments
- Easy-to-use software "Visual Laser Marker" (VLM)
- Various options available

### BENEFITS

- High-contrast marking
- Permanent, corrosion-resistant marks
- Applicable on fragile parts due to minimal thermal stress
- Various materials from metals to plastics

SIZE & WEIGHT		ExactMark 230 USP
Width		
without monitor arm		1000 mm (39.37 in.)
max. with monitor arm		1836 mm (72.28 in.)
max. with open door		2137 mm (84.13 in.)
Depth		1700 mm (66.93 in.)
Height		2100 mm + 300 mm (82.68 in. + 11.81 in.) signal pillar
Weight		~1100 kg (2425 lbs.)
AREA NECESSARY		
Depth		3064 mm (120.63 in.)
Width		2400 mm (94.49 in.)
Height		approx. 2500 mm (98.43 in.)
Area (m <sup>2</sup> )		7.4
POSITIONING LINEAR AXIS TRAVEL LENGTH		
Z - axis		300 mm (11.81 in.)
X - axis		300 mm (11.81 in.)
Y - axis		280 mm (11.02 in.)
MAXIMUM WEIGHT OF WORK PIECE		
Max. Weight of Work Piece (incl. clamping)		40 kg (88.18 lbs.)
ELECTRICITY		
Input Fuse		3 x 16 A
Nominal Voltage		400 V (±10%); 3-phases; N; PE
Nominal Frequency		50/60 Hz; neutral conductor loaded
Power Input		4 kVA (at 50 Hz)
Supply Line		5-pin CEE circular plug with 5 cables, 5g 4.0 mm <sup>2</sup>
PNEUMATIC PROVISION		
Media		Filtered compressed air, not oily
Working Pressure		6 bar, 10 bar max.
Temperature Range		-10°C to +60°C (14 °F to 140°F)
Connection Diameter		6 mm (0.24 in.)
LASER SAFETY CLASS		
		Laser Safety Class 1 according to EN (IEC) 60825-1:2014

## MATERIALS



Stainless Steel



Titanium



Anodized Aluminum

Plastic Material like  
PEEK/PPSU

## LASER SUB-SYSTEM

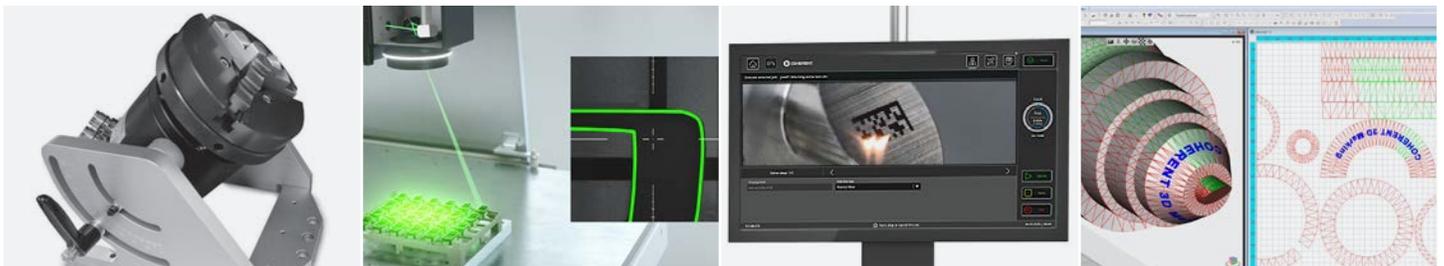
The PowerLine Rapid NX laser marker incorporates a high-reliability Coherent ultrashort pulse (USP) laser with a pulse length <15 ps at a wavelength of 1064 nm. The integrated water-to-air cooling ensures stable operation in common industrial environments. Optionally it can also be tailored with individual marking field sizes, a dynamic focus shifter, and a vision system for pre and post inspection tasks.



## SOFTWARE

The marking process is controlled via Coherent Laser Framework, the easy-to-use GUI by Coherent. This software package is a set of programs for laser processing tasks, including a 2D graphic editor, a CAD program, Laser Display, 3D Modeler, Laser parameter wizard and other configuration tools. Laser Framework relies on the proven technology VLM (Visual Laser Marker) and RCU (Rail Control Unit).

## OPTIONS



### Positioning Axes

- X-Y-Z Axes Motion System
  - X: 300 mm
  - Y: 280 mm
  - Z: 300 mm
- Rotary axis RT100 with precision 3 jaw chuck

### TTL (Through-the-lens) Alignment

On-axis alignment with identical laser and camera path leads to efficient part processing and ultra-precise mark placement

### Process Monitoring

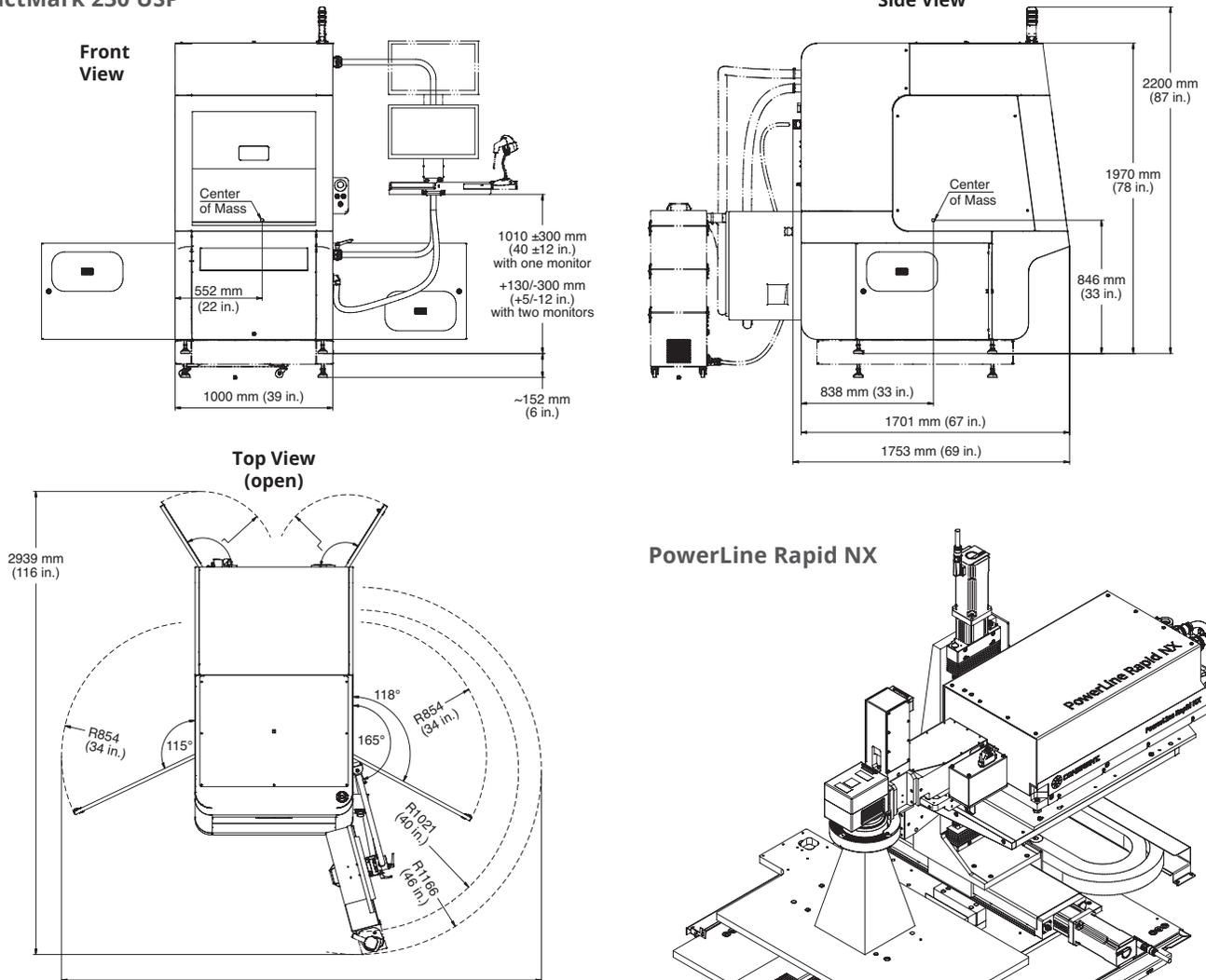
- Power measurement
- Exhaust on/off detection

### SmartMap 3D

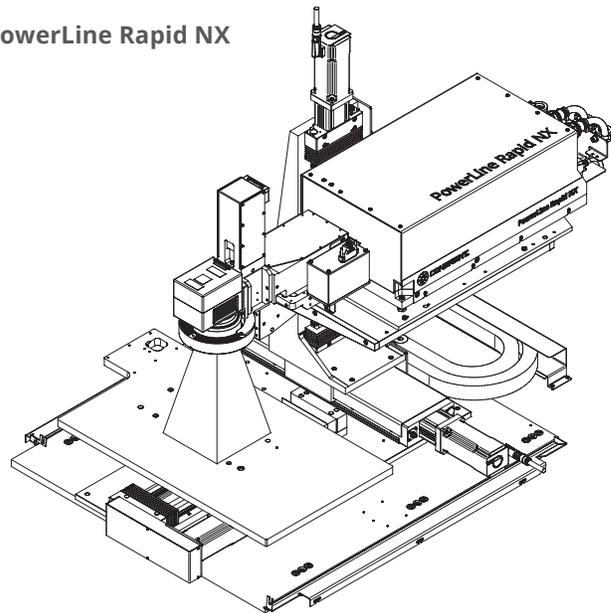
Precision marking of inclined surfaces, geometric shapes of all types and even free-form shapes

## MECHANICAL SPECIFICATIONS

### ExactMark 230 USP



### PowerLine Rapid NX



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](mailto:tech.sales@coherent.com) [www.coherent.com](http://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 ExactMark 230 USP Laser Marking Systems. For full details of this warranty coverage, please refer to the Service section at [www.coherent.com](http://www.coherent.com) or contact your local Sales or Service Representative. MC-043-20-0M1220 Copyright ©2020 Coherent, Inc.