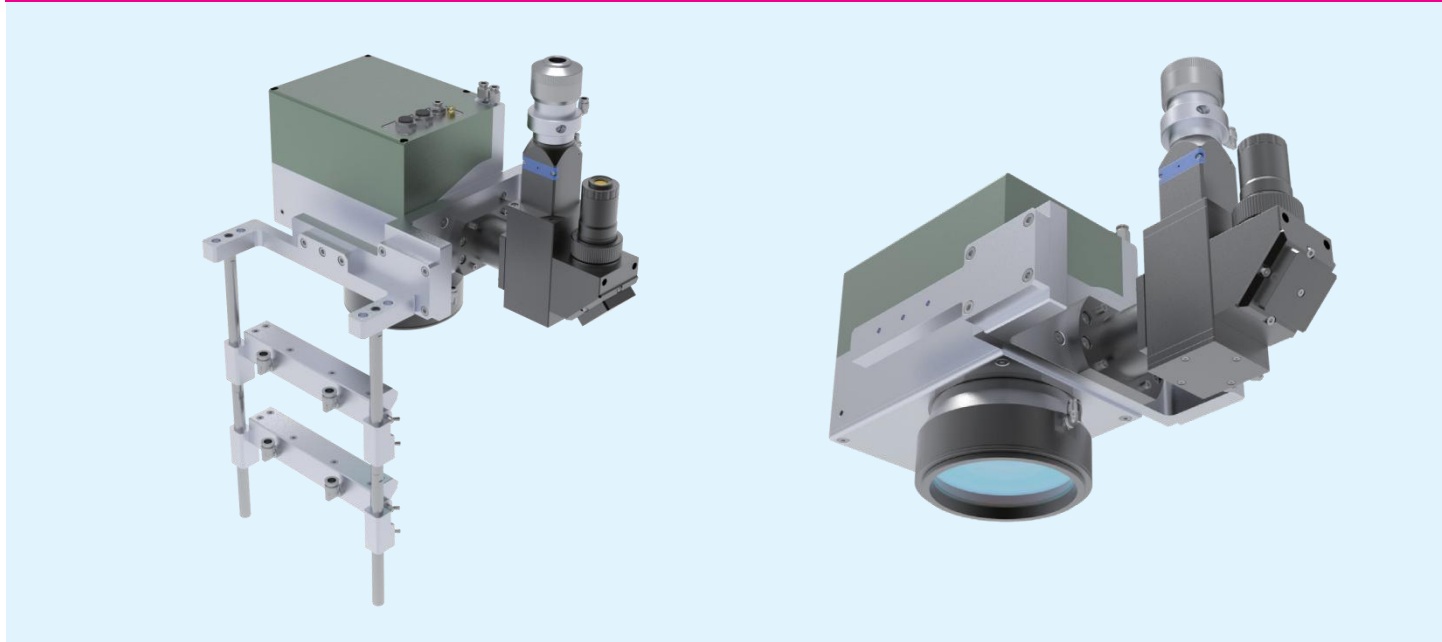
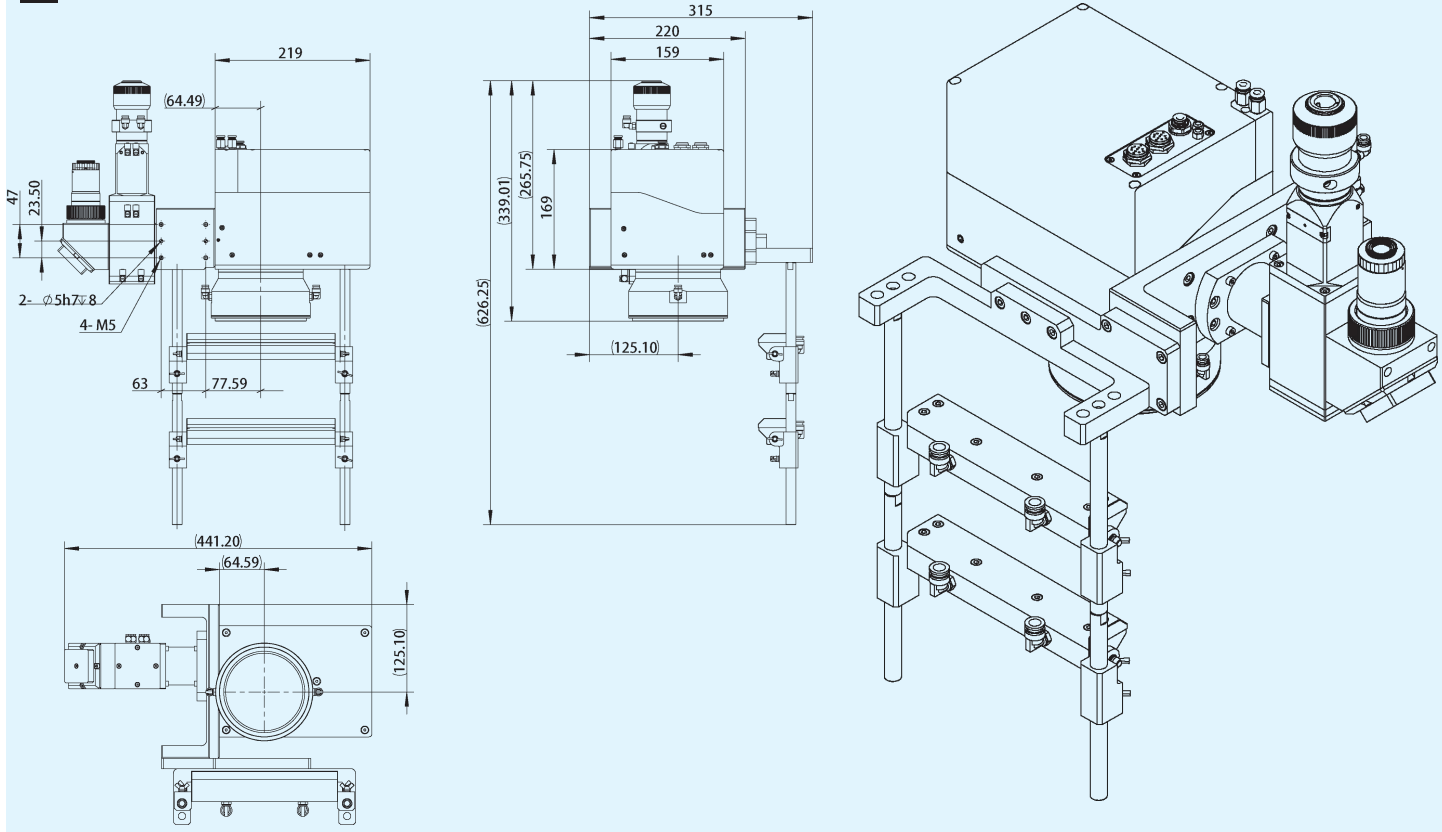


High-Power Laser Galvanometer Welding System (Digital)
Industrial Applications



- Product Features
- ◆ High welding speed with superior repeat positioning accuracy, minimal thermal drift during extended operation, and versatile scanning pattern capabilities.
 - ◆ Fully sealed internal cavity with dual air knife configuration for superior dust protection, effectively preventing optical component contamination.
 - ◆ Employs overload, overcurrent, and reverse polarity protection design for enhanced operational reliability.
 - ◆ Utilizes electromagnetic compatibility optimized design, ensuring high signal-to-noise ratio and superior anti-interference capability.
 - ◆ Integrated water-cooling circulation design for enhanced operational stability and reliability.
 - ◆ Modular design with multiple optical configurations and accessories available to meet diverse industrial application requirements.

Product Dimensions



High-Power Laser Galvanometer Welding System (Digital)
Industrial Applications

Product Specifications

Product Model	X30-RS06
Product Name	High-Power Laser Galvanometer Welding System
Maximum Laser Power Capacity	6000W@1064nm CW
Clear Aperture	φ30 mm
Collimation Focal Length (FC)	Optional: 100 mm, 150 mm, 200 mm
F-Theta Field Lens Focal Length (FL)	Optional: 210 mm, 254 mm, 330 mm, 420 mm
Scanning Field Size	140×140 mm, 160×160 mm, 200×200 mm, 255×255 mm
Dynamic Performance	
Tracking Error	< 0.25 ms
Processing Speed ¹	3.0 m/s
Positioning Speed ¹	10.0 m/s
1% Full-Scale Step Response Time ³	1.1 ms
10% Full-Scale Step Response Time ³	2.5 ms
Accuracy and Stability	
Repeatability (RMS)	< 2.0 μrad
Nonlinearity	< 0.9 mrad/44°
Gain Drift	< 15 ppm/K
Zero Point Drift	< 10μrad/K
8-Hour Long-Term Drift	< 80μrad
Optical Performance	
Scanning Angle	±0.393 rad
Gain Error	< 5 mrad
Zero Point Error	< 5 mrad
General Specifications	
Power Supply	±15V DC, max 3A
Communication Protocol	XY2-100
Operating Temperature	0°C to +45°C
Storage Temperature	-10°C to +60°C
Total Weight	Galvanometer approx. 6.5 kg, complete system approx. 12 kg
Water-Cooling Control	
Cooling Water	Purified water
Water Temperature	22°C -28°C
Maximum Water Pressure	< 0.3 bar
Flow Rate & Pressure Drop	2 l/min & 0.4 bar, 4 l/min & 0.8 bar, 6 l/min & 1.2 bar

Remarks: The above parameters were measured after 30-minute warm-up under stable ambient temperature and load conditions.

1. Testing performed using F-Theta field lens with focal length of 163 mm;
2. Test character: single-stroke character with 1 mm height;
3. Settling to 1/5000 of full scale;

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