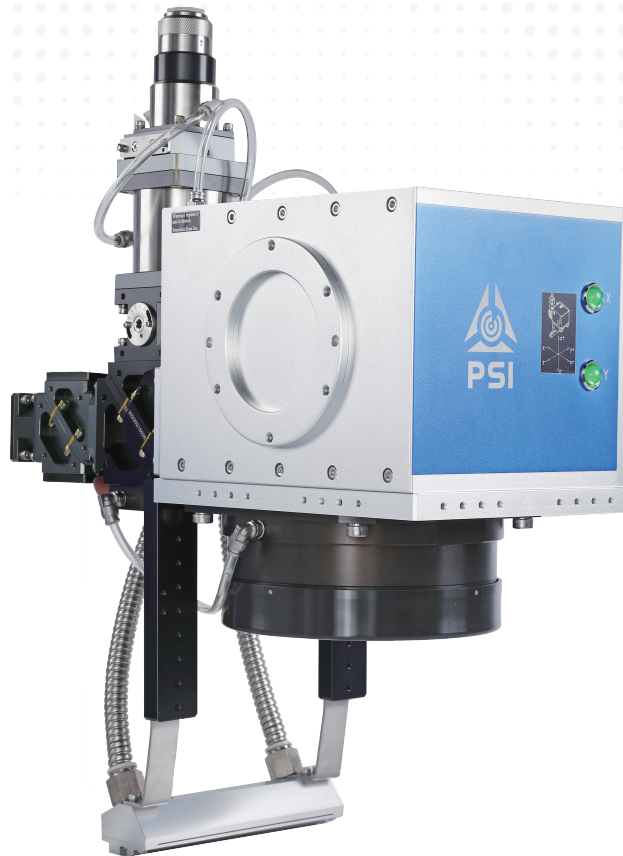


PS6000W Series

Focusing on high-end industrial laser applications



Typical Applications:

PS6000W scan welding system comprises collimator, galvanometer scanner, F-theta lenses, interface control cards and air knife to provide an integrated solution with optimal performance for various applications. It is also ideally suited to laser welding, laser cutting, laser cleaning, etc.

The system is characterized by its extraordinary tightness and safety design, and can be easily integrated into machines and product lines. The system is cost-efficient while exhibiting great dynamic performance, high positioning accuracy, low temperature drift and excellent long-term stability, thus making it suitable for various high-end demanding applications.

Specifications are subject to change without notice.
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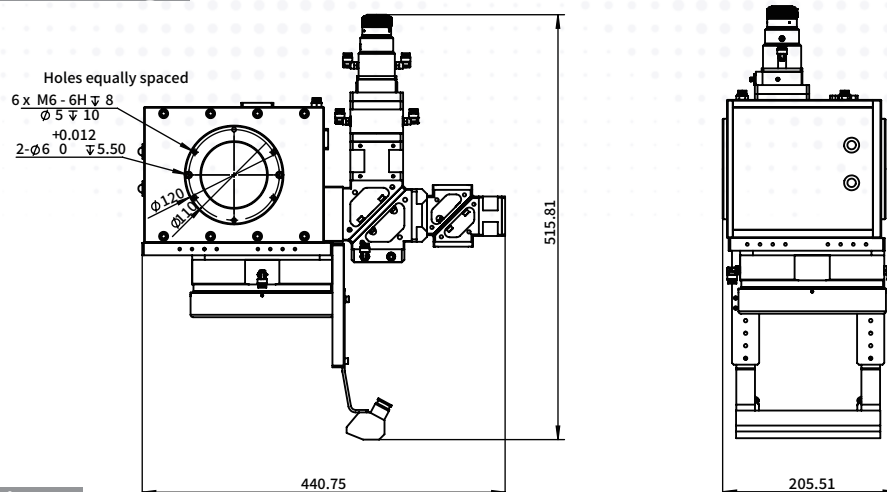
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PS6000W Series

Focusing on high-end industrial laser applications



Mechanical Drawings (Dimensions in mm)



Specifications

Specifications	PS6000W Series
Maximum allowed average laser power ⁽¹⁾	6000 W
Cooling	Water
Aperture	30 mm
Typical scan angle ⁽²⁾	± 10 °
Tracking error	≤ 0.5 ms
Step response time (1% of full scale)	≤ 1.1 ms
Speed	
Positioning / Jump ⁽³⁾	< 14.5 m/s
Line scan ⁽³⁾	< 14.5 m/s
Vector scan ⁽⁴⁾	< 1.8 m/s
Precision	
Linearity	99.9 %
Repeatability	2 μrad
Temperture drift (with laser power < 500W)	
Offset	20 μrad/°C
Gain	20 μrad/°C
Long-term drift (after 30 mins warm up)⁽⁵⁾	
Over 8 hours long-term offset drift	40 μrad
Over 8 hours long-term gain drift	80 μrad
Operating Temperature Range	25 °C ± 10 °C
Signal interface	Analog: ± 10 V or ± 5 V Digital: XY2 - 100, PRS422 protocol
Input power requirement (DC)	± 15 V @ 10 A Max RMS

Note:

(1) For laser wavelength 1030-1090 nm.

(2) All angles are in mechanical degrees.

(3) With F-Theta objective f = 348 mm. Speed value varies correspondingly with different focal lengths.

(4) Repeatability and temperature drift are measured within this speed.

(5) The long-term thermal drift test shall be carried out under a constant ambient temperature of approximately 25 °C, with the laser power kept below 500 W. High laser power shall not be adopted for thermal drift testing. Under high laser power, thermal distortion will occur in both the optical system and mechanical system. Consequently, it cannot be determined whether the measured drift originates from the inherent drift of the galvo scanner or from thermal deformation of the optical and mechanical systems.

(6) Appropriate delay parameters must be configured for normal operation of the galvo scanner. Failure to do so may result in abnormal operation of the galvo motor and even irreversible damage to the motor! Please contact PSI engineers regarding relevant parameter configuration issues.