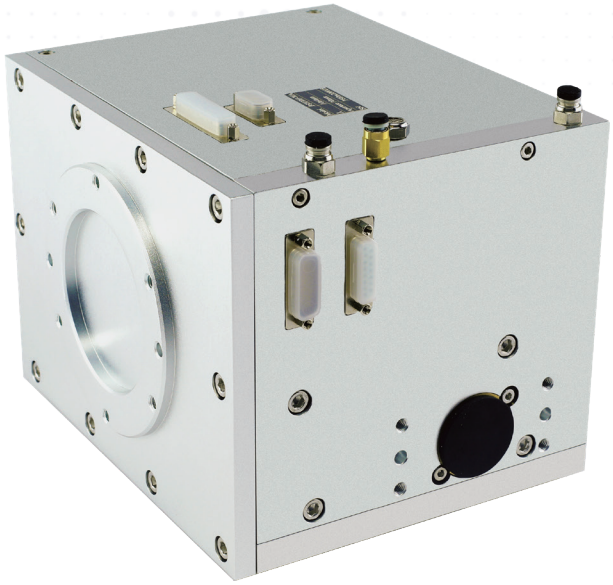
PSH30HW-8000W

Focusing on high-end industrial laser applications



Typical Applications:

PSH30HW is specifically designed for high-power laser processing applications, making it an ideal choice for a wide range of uses, including high-power welding, laser cutting, drilling, materials processing, processing-on-the-fly, etc.

PSH30HW series provides 2 choices in accordance with different laser power employed by customer: PSH30HW-6000W is configured with water-cooling system and suitable for laser power up to 6kW applications; while PSH30HW-8000W is configured with both water-cooling and air-cooling systems and suitable for laser power up to 8kW applications.

PSH30HW series is optimized to achieve highest dynamic performance in high-laser-power scenarios up to 8-kilowatt range. Its highly encapsulated housing ensures exceptional air-tightness. This series demonstrates excellent beam reflection-resistant ability and prioritizes safety features with the unique design.

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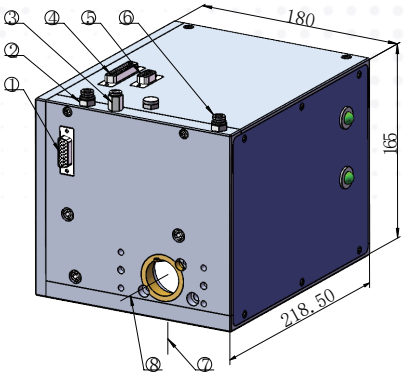
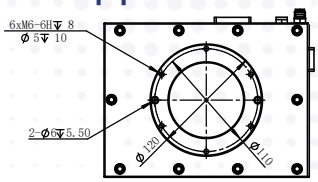
Mechanical Drawings (Dimensions in mm)

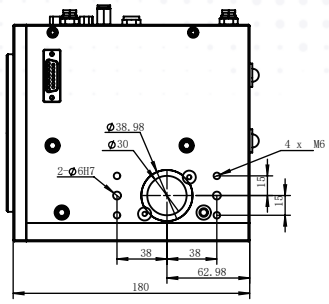


PSH30HW-8000W Scan Head

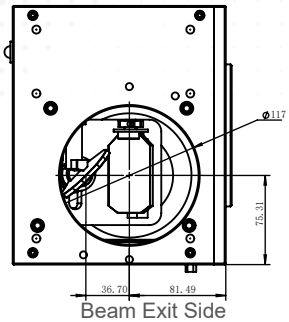
Legend:
1. I/O interface
2. Water in
3. Air in
4. XY2-100 interface
5. Power in
6. Water out
7. Beam out
8. Beam in



Robot adapter



Beam In & Mounting Bracket



Beam Exit Side

Specifications

Specifications	PSH30HW-8000W
Maximum allowed average laser power (1)	8000 W
Cooling	Water & air
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)	< 7 m/s
Line scan (3)	< 7 m/s
Vector scan (4)	< 1 m/s
Good writing quality (3) (5)	260 cps
Precision	
Linearity	99.9 %
Repeatability	2 μrad
Temperture drift (with laser power＜500W)	
Offset	20 μrad/℃
Gain	20 μrad/℃
Long-term drift (after 30 mins warm up) (6)	
Over 8 hours long-term offset drift	40 μrad
Over 8 hours long-term gain drift	60 μrad
Operating Temperature Range	25 ℃ ± 10 ℃
Signal interface	Analog: ± 10 V or ± 5 V Digital: XY_2 - 100, PRS422 protocol
Input power requirement (DC)	± 15 V @ 5 A Max RMS

Note:

(1) For laser wavelength 1030-1090 nm.

(2) All angles are in mechanical degrees.

(3) With F-Theta objective f = 163 mm. Speed value varies correspondingly with different focal lengths.

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

(5) Single-stroke font with 1 mm height.

(6) Long-term temperature drift is given under an ambient temperature environment of 25°C. and a working load under 500W. Temperature drift testing with high laser power is strictly prohibited. High laser power could induce thermal deformations in both the optical and mechanical systems, making it impossible to differentiate whether the drift is originating from galvanometer scanner itself or due to deformations in the optical and mechanical systems.