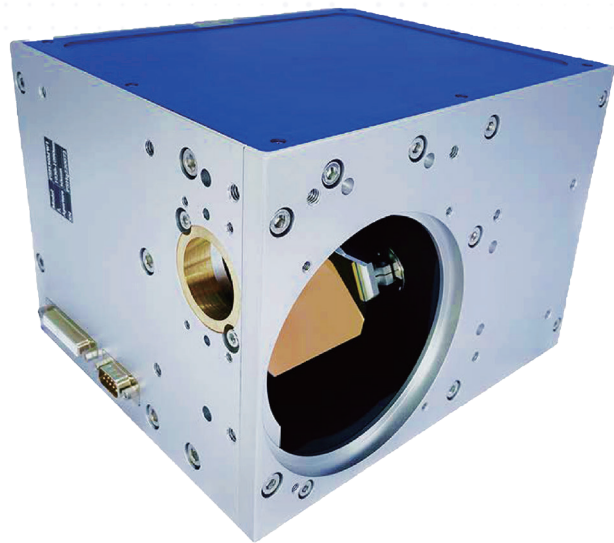


PSH30MW Scan Head

Focusing on high-end industrial laser applications



Typical Applications:

The PSH30MW scan heads are highly versatile and well-suited for a wide range of laser processing applications, such as laser marking, laser cleaning, drilling, welding, scribing, micro-structuring, materials processing, processing on-the-fly, etc.

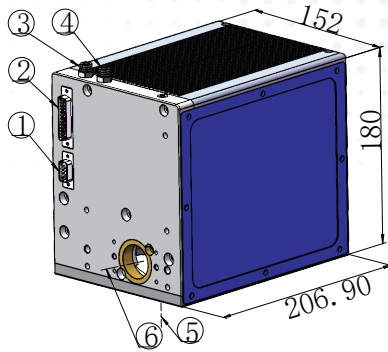
The PSH30MW scan heads are specifically designed to perform optimally in high-laser-power scenarios below the 3-kilowatt range. All products are equipped with a water cooling system to effectively minimize temperature drift. These products exhibit exceptional long-term stability, high dynamic performance, and superior safety features.

PSH30MW Scan Head

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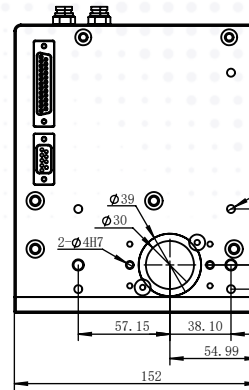
Mechanical Drawings (Dimensions in mm)



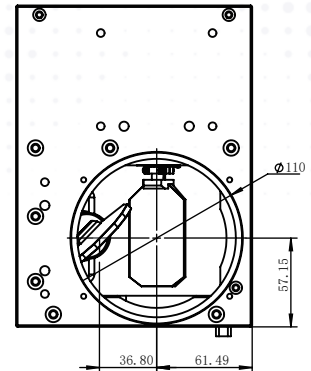
PSH30MW Scan Head

Legend:

1. Power in
2. XY2-100 interface
3. Water in
4. Water out
5. Beam out
6. Beam in



Beam In & Mounting Bracket



Beam Exit Side

Specifications

Specifications	PSH30MW
Maximum allowed average laser power ⁽¹⁾	3000 W
Cooling	Water
Aperture	30 mm
Typical scan angle ⁽²⁾	± 10 °
Tracking error	≤ 0.45 ms
Step response time (1% of full scale)	≤ 1 ms
Speed	
Positioning / Jump ⁽³⁾	< 8 m/s
Line scan ⁽³⁾	< 8 m/s
Vector scan ⁽⁴⁾	< 1.2 m/s
Good writing quality ⁽³⁾⁽⁵⁾	280 cps
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)⁽⁶⁾	
Over 8 hours long-term offset drift	40 µrad
Over 8 hours long-term gain drift	60 µrad
Operating Temperature Range	25 °C ± 10 °C
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) Repeatability 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.