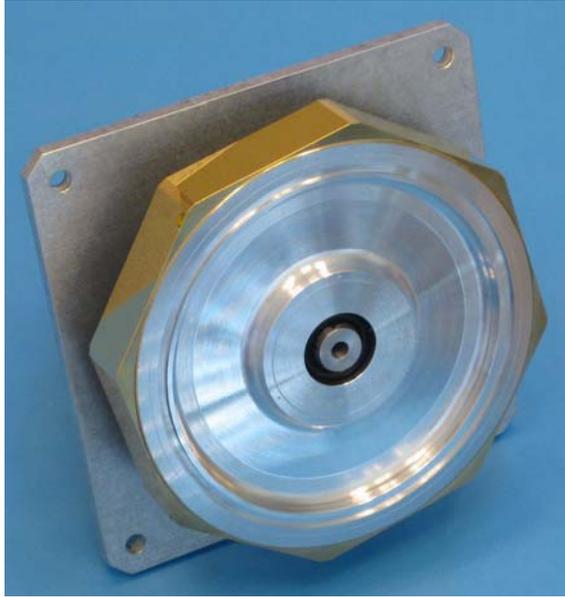


WOOD PECKER™ Large Facet Polygon Scanners



Speed up Material Processing!

In the world of material processing, galvanometer (galvo) scanners dominate. However, with high power and ultra-fast (picosecond & femtosecond) lasers, galvos may not be fast enough. The solution may be a polygon scanner which can be 10+ times faster than galvo scanners. Polygon scanners also provide a much higher laser damage threshold.

WOOD PECKER™ large facet polygon scanners, are designed for material processing systems that need to scan faster. The polygon mirror can accommodate beams of over 20 mm on the facets so the scan lens can focus to a small spot. Operating from 400 to 4000 RPM, this covers approximately ten times the linear working speed of galvo scanners.

Standard models have short lead time and low prices! Custom facet counts and facet sizes are available on request.

Need polygon speed but not familiar with how to implement polygon scanning technology? See the Laser Scanning News section of our website for educational information.

<http://precisionlaserscanning.com/laser-scanning-news/>

Feel free to contact us with questions.

WOOD PECKER™ SPECS

(General specs for typical mirror sizes.)

Speed: 400 – 4,000 RPM

Speed control: TTL Ext freq reference

Rotation: CW standard

Facet Flatness: $\lambda/6$ @ 633 nm per inch

Surface Roughness: < 70Å RMS

Surface quality: 60/40

Dynamic track: < 45 arc sec

Facet-Facet: < 5 arc sec total

Facet-Datum < 10 arc sec total

Jitter: < 0.02%

Speed stability: < 0.02%

Bearing: Ball bearing

Operating attitude: Any

Supply Voltage: 24 VDC

Max Current: < 3.0 A

Time to speed: < 60 sec

Motor-Controller cable: 300 mm

Controller Power-I/O cable: 500 mm

Controller: 80 W x 130 L x 40 H mm

Start/Stop control: TTL

Speed sync signal: TTL

Shipping & Storage: -20C to +70C

Operating: 15C to 45C, 10-80% RH

STANDARD MIRRORS 8 or 10 facets

have protected AU facets for IR

8 Facets: Model PLS-08-525-090-AU

Scan angle up to \approx 50 degrees (depending on spot size and beam feed angle)

Scan Rate: 53 to 533 Hz

Inscribed Diameter: 5.250" (133.35 mm)

Mirror thickness: 0.90" (22.86 mm)

Facet clear aperture: 1.96" x 0.84"

(49.8 x 21.3 mm)

10 Facets: Model PLS-10-525-090-AU

Scan angle up to \approx 40 degrees (depending on spot size and beam feed angle)

Scan Rate: 66 to 667 Hz

Inscribed Diameter: 5.250" (133.35 mm)

Mirror thickness: 0.90" (22.86 mm)

Facet clear aperture: 1.64" x 0.84"

(41.7 x 21.3 mm)

OPTIONAL START OF SCAN DETECTION

An SOS detector is required to achieve accurate line to line registration with any polygon scanner. It is used to synchronize a CW or pulsed laser to the scanner. (Galvo scanners need absolute encoders, polygon scanners need Start-Of-Scan detection.) Read more about it here:

<http://precisionlaserscanning.com/start-of-scan-sos-detection-for-polygon-scan-heads/>



The PRECISION SOS DETECTOR™ is the first commercially available Start-Of-Scan detector made for the challenging environment inside a high power Polygon Scan Head. It is designed to work with the PRECISION SOS LASER DIODE MODULE™

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Specifications subject to change without notice.
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