**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.


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:** $\lambda/6 \@ 633 \text{ nm per inch}$
- **Surface Roughness:** $< 70\text{Å RMS}$
- **Surface quality:** 60/40
- **Dynamic track:** $< 45 \text{ arc sec}$
- **Facet-Facet:** $< 5 \text{ arc sec total}$
- **Facet-Datum:** $< 10 \text{ arc sec total}$
- **Jitter:** $< 0.02\%$
- **Speed stability:** $< 0.02\%$
- **Bearing:** Ball bearing
- **Operating attitude:** Any
- **Supply Voltage:** 24 VDC
- **Max Current:** $< 3.0 \text{ A}$
- **Time to speed:** $< 60 \text{ sec}$
- **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

**STANDARD MIRRORS 8 or 10 facets have protected AU facets for IR**

**8 Facets:** Model PLS-08-525-090-AU
- **Scan angle up to $\approx 50 \text{ degrees}$ (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 $\approx 40 \text{ degrees}$ (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:


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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Precision Laser Scanning, LLC
25750 North 82nd Street
Scottsdale, Arizona 85255 USA
TEL 1-480-515-1643
info@precisionlaserscanning.com
www.precisionlaserscanning.com

Specifications subject to change without notice.
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