Dove™ Polygon Scanner - 15mm Aperture @ 8K RPM

Multi-Kilowatt Laser Damage Threshold!

Dove™ is an intermediate size polygon laser scanner with a top speed of 8,000 RPM. Polygon scanners produce a linear scan speed of up to hundreds of meters per second which can be >10x galvanometer speed. The 15 mm aperture is suitable for material processing at >5KW as well as LIDAR, inspection, imaging and other high-speed raster scanning applications. The Sapphire protected gold coating is especially durable.

Need polygon speed but not familiar with how to implement polygon scanning technology? Precision Laser Scanning provides the tools to help you quickly implement a polygon scanner. That includes:

- Start Of Scan detection.
- Synchronize laser to polygon.
- Synchronize galvo or stage and laser to polygon.
**Dove™ Specifications**

- **Speed**: 1,000 – 8,000 RPM
- **Speed control**: TTL Ext freq reference & internal reference (not infinitely variable)
- **Rotation**: CW standard
- **Facet Flatness**: λ/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**: -20°C to +70°C
- **Operating**: 15°C to 45°C, 10-80% RH
- **Facets**: 8
- **Coating**: Sapphire protected AU for IR
- **Scan angle**: up to ≈ 50 degrees (depending on spot size and beam feed angle)
- **Scan Rate**: 133 to 1067 Hz
- **Inscribed Diameter**: 4.00” (101.6 mm)
- **Mirror thickness**: 0.90” (22.86 mm) at center
- **Laser Damage Threshold**: >5KW
- **Facet clear aperture**: 1.57” x 0.59” (39.9 x 15.0 mm)

**Optional Start of Scan Detection**

- **Mini-SOS Detection Kit**
- **Universal SOS Detection Kit**