



Nutfield Technology

Photonics in Motion®



The Industry's First

- ◆ Ceramic Rotor For Faster Step Response
- ◆ Thermally De-Coupled Stator For Lower Drift
- ◆ SLR Stator Design For Higher Bandwidth
- ◆ Position Detector With Signal / Noise >100,000:1

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QuantumScan-30

Moving Magnet Galvanometers

Nutfield Technology's QS-30 uses exotic materials and an innovative architecture to provide industry leading performance. The QS-30 has faster step response, higher signal-to-noise position detection and improved thermal management compared to any scanner in its class.

NTI continuously performs research to improve scanner performance so that your products remain competitive in the marketplace. This research has led us to a patent pending ceramic rotor design. This first of a kind rotor has exceptionally low inertia and high stiffness, which results in higher bandwidth performance.

The QS-30 Position Detector was designed close to the mirror for the best possible accuracy. Further position detector refinements give NTI galvanometers up to 8 times greater signal-to-noise; the highest in the industry. This means greater pointing accuracy and repeatability in your application.

The galvanometer's stator is thermally isolated and located far away from the position detector. This reduces thermally induced drift; a patent pending feature found only in NTI galvanometers.



QuantumScan-30™
For 20 - 50 mm Beam Apertures

Another breakthrough is our stator design, which is the first to incorporate Side Load Reduction (SLR) technology to reduce off axis magnetic forces on the rotor. The benefit is higher bandwidth and faster step response resulting from less stator induced side forces.

Nutfield Technology provides a range of control options to meet your time to market and budget requirements. Call us today to find out how we can help customize a solution for your scanning application.

Applications Include:

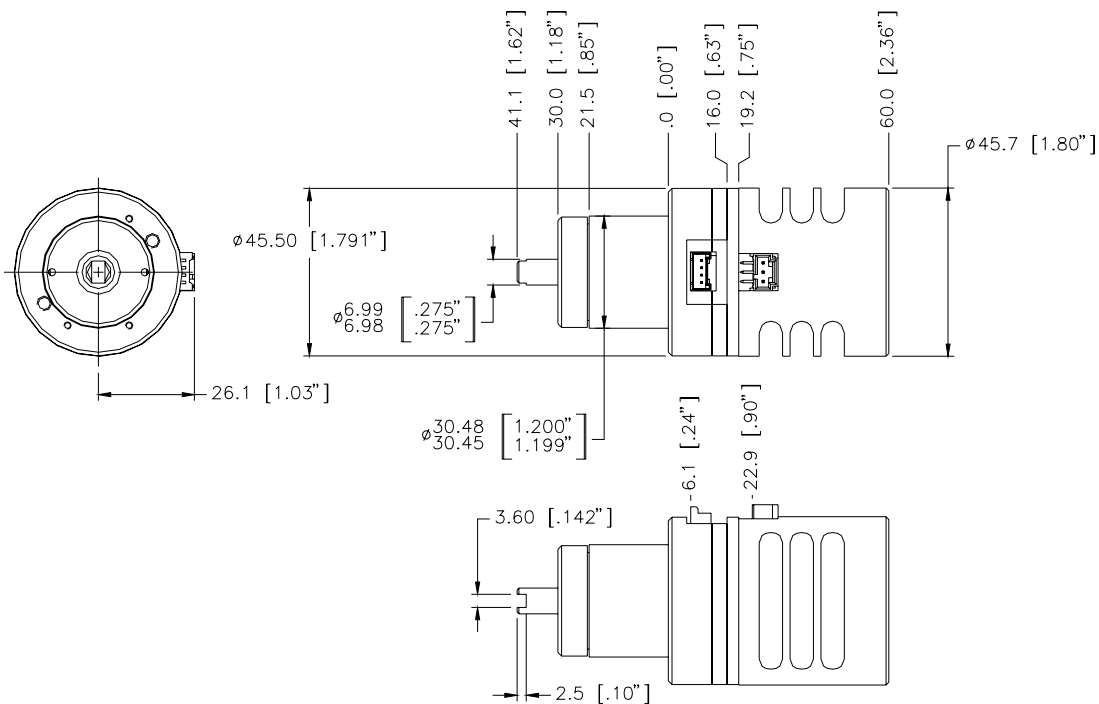
- ◆ Large Field Marking
- ◆ Small Spot Drilling
- ◆ High Power Welding

QuantumScan-30

Galvanometer Specifications

SPECIFICATION	UNITS	PERFORMANCE
Excursion	Degrees Optical	+/- 48
Rotor Inertia	Gram*Centimeters ²	5.1
Recommended Beam Apertures	Millimeters	20-50
Small Step Response *	Microseconds	800 (20mm), 1200 (30mm), 1100 (45mm S.C.)
Torque Constant	Dyne*cm/Amp	2.8×10^5
Coil Inductance	Micro Henrys	(at 1000Hz) 450
Coil Resistance	Ohms	5.8
Angular Sensitivity	Micro Amps/Degree	100
Repeatability	Micro Radians	2
Linearity	Percent, Minimum	99.9
Zero Drift**	μrad./degree C, Max	9/1
Gain Drift**	ppm/degree C, Max	30/1

* With QD-4000 Servo Drive Board **With Low Drift Thermal Control Option.



For More Details Contact Nutfield Technology or Go On-Line.

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Specifications subject to change without notice. 2007