

FLEXURE-BASED GALVANOMETERS

SS-30 AND SP-30

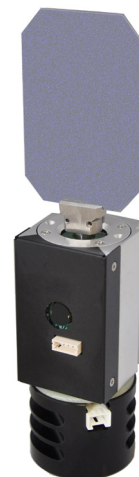
Nutfield Technology's Flexure Galvanometers use specially designed cross flexure pivots to provide the ultimate in smoothness and repeatability. The flexure pivot eliminates the mechanical noise inherent in ball bearings. These galvanometers are an excellent choice for raster applications where consistent line placement is key to image quality. They can also be used in small angle applications, where ball bearings experience excessive wear and reduced life.

Nutfield Technology's **SilkScan-30** (SS-30) and SP-30 are intended for larger mirrors. They are ideal for use as the page scanner in raster imaging systems, having great smoothness at low velocity. They can also be used as a tracking scanner for viewing or marking moving objects, or stabilization in imaging systems. Both SS-30 and SP-30 are used with mirrors from 20mm - 50mm clear aperture, and can be adapted for custom optic. Capacitive position sensing insures excellent linearity while the moving-magnet drive provides excellent efficiency without producing off axis forces on the rotor.

All three are compatible with our QD-4000 Servo Amplifier which is available in a low noise version for the most demanding applications. Due to the spring force inherent in the flexure pivot, some scanning modes, such as large angle point and shoot, are not recommended.



SS-30



SP-30

CROSS FLEXURE PIVOT REPLACES BALL BEARINGS
IDEAL FOR RASTER APPLICATIONS
EXCELLENT CROSS-AXIS REPEATABILITY
REDUCED ON-AXIS JITTER
NO LUBRICANTS - USEFUL IN VACUUM APPLICATIONS
EXTENDED LIFE IN SMALL ANGLE APPLICATIONS

APPLICATIONS:

- INSTRUMENTATION
- POLYGON FACET CORRECTION
- IDEAL FOR HIGH-DUTY OR SMALL ANGLE APPLICATIONS
- EXCELLENT FOR HIGH-RESOLUTION IMAGING APPLICATIONS
- IMAGING
- MARKING

SPECIFICATIONS*

*Specifications are subject to change without notice.

	SS-30	SP-30
Mechanical		
Rated excursion - raster	±20°	±20°
Rated excursion - vector	±10°	±10°
Rotor inertia gram centimeters ²	8.25	8.25
Recommended beam aperture	15 - 50mm	15 - 50mm
Torque constant dyne-cm/Amp	2.8*10 ⁵	2.8*10 ⁵
Electrical		
Coil resistance	5.8 ohm	5.8 ohm
Coil induction @ 1000 Hz	450 µh	450 µh
Position Detector		
Angular sensitivity	100 µA/°	100 µA/°
Linearity	>99.9%	>99.9%
Gain drift	190 ppm/°C	190 ppm/°C
Offset drift	30 µrad/°C	30 µrad/°C
Repeatability	2 µrad	2 µrad
Dynamic Performance		
Step response time (1% of full scale, 99% settled)		
10mm		
15mm		
20mm (S) X-Mirror	700 µs	700 µs
30mm X-Mirror	900 µs	900 µs
Installation: electrically insulated		
Operating Temperature	0 - 40°C	0 - 40°C
Storage Temperature	10 to 50°	10 to 50°

All specifications are using Nutfield Tech's QD-4000 Servo Amplifier.

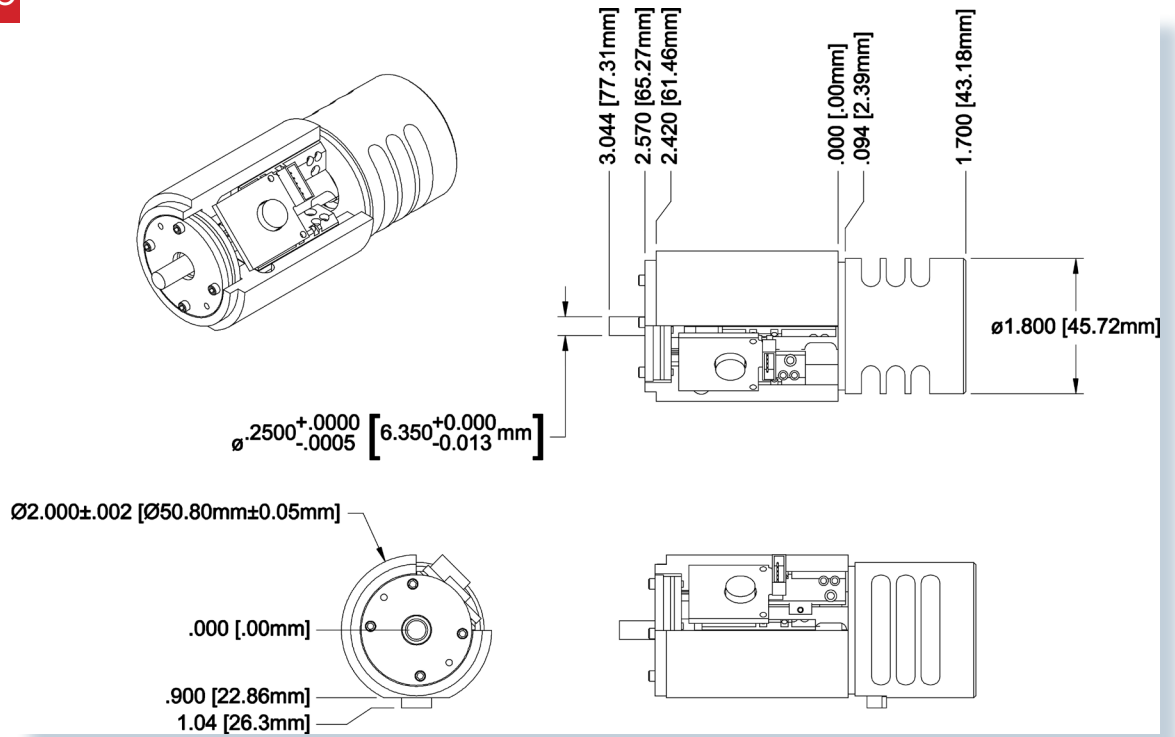
*Due to spring force inherent in the flexures, some types of motion are not recommended. Continuous raster scanning can be performed at larger angles than vector or point-and-hold applications.

CAD DRAWINGS*

*Measurements in mm.

SS-30

1-2014



SP-30

1-2014

