

## MODEL HT1 ROTARY INCREMENTAL ACTUATOR



The Moog Type HT-1 Rotary Incremental Actuator is a new addition to the rotary actuator product line. It is a compact, closely integrated coaxial design composed of a small size permanent magnet stepper motor driving the output stage through a gear transmission consisting of a larger size harmonic drive. The actuator provides relatively high holding and running torque for its size. This actuator is optimized for low weight and relatively high

torsional stiffness. Co-axial nesting of the motor and transmission drive elements gives the unit a low profile geometry. Nested new technology coarse and fine potentiometers provide high resolution, telemetry with noise-free operation.



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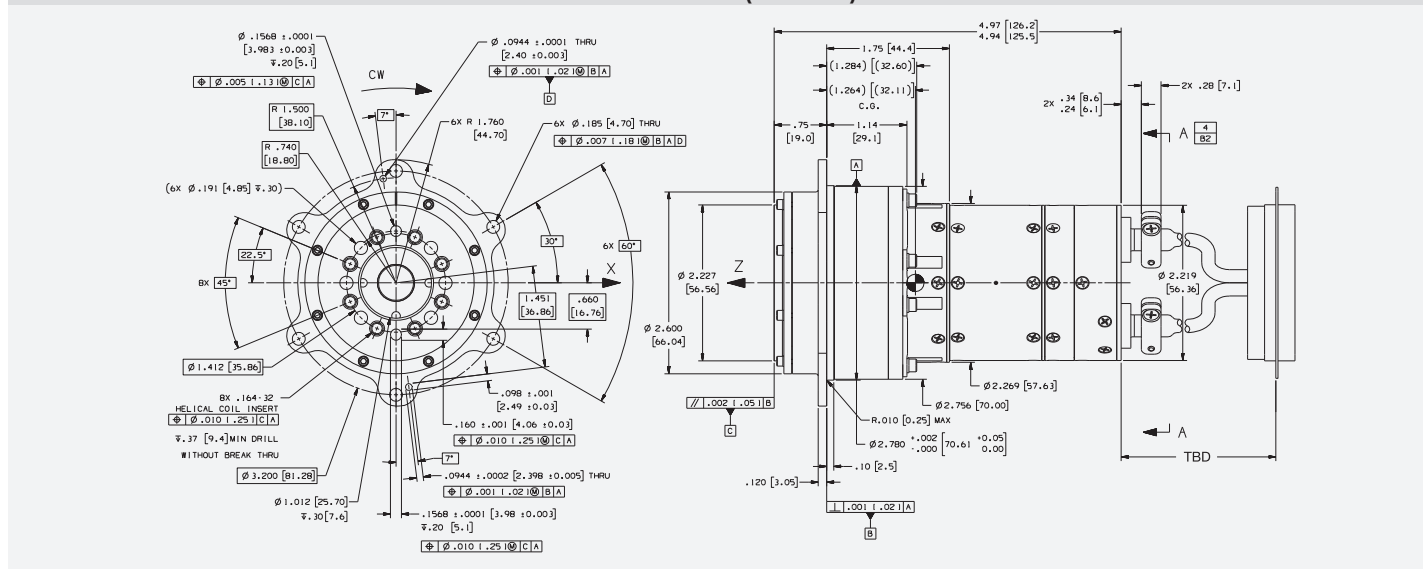
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## SPECIFICATIONS

Parameter	Units	Basis	Data
Output Step Angle	Degrees	Standard	0.0039
Steps per Revolution	Steps	Standard	92160
Max. Output Step Rate	Steps/sec (Deg/sec)	Maximum	400 (1.56)
Backlash	Degrees	Maximum	<0.01°
Operating Temperature Range	°C	Maximum	-70 to +105
Torsional Stiffness	lb-in/Rad	Minimum	125,000
Bending Stiffness	lb-in/Rad	Minimum	250,000
Axial Stiffness	lb/in	Minimum	88,000
Radial Stiffness	lb/in	Minimum	80,000
Output Load Capability Axial	lbf	Nominal	370
Transverse	lbf	Nominal	370
Moment	Lb-in	Nominal	430
Fine Potentiometer	Primary/Redundant	352° min. Electrical Travel	1% Linearity
Coarse Potentiometer	Non-Redundant	192° min. Electrical Travel	.25%
Output Torque	Lb-in	Minimum	300
Unpowered Holding Torque	Lb-in	Minimum	300
Powered Holding Torque	Lb-in	Minimum	>450
Power	Watts	Maximum	10
Total Assembly Weight	Lb	Maximum	2.10
Inertia Capability	kg-m <sup>2</sup>	Minimum	800 kg-m <sup>2</sup>

## DIMENSIONS (INCHES)



**MOOG**  
SPACE AND DEFENSE GROUP

21339 Nordhoff Street, Chatsworth, California 91311 USA  
+1.818.734.6700 Fax: +1.818.341.3884  
www.moog.com



linkedin.com/  
company/moog-sdg



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