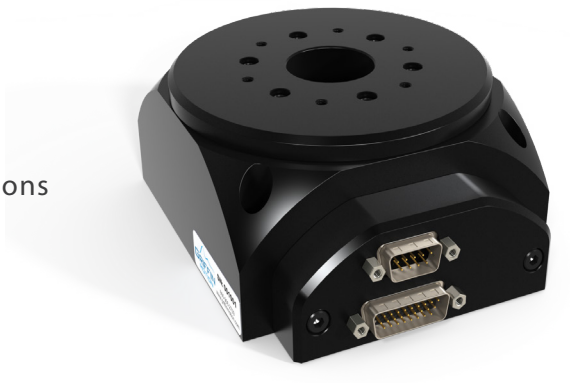
1040 CLASSIC ROAD | APEX, NC 27539
P: 866.906.2709 | F: 919.882.1430
www.griffinmotion.com

RTS-100 Datasheet

Compact, High-Precision Rotary Stage

FEATURES

- Direct-Drive Brushless Motor
- Continuous 360° Travel
- Optical Home Index
- Variety of Encoder Feedback Options
- Compact Design
- High-Rigidity Bearing
- Available Stainless Hub



The RTS-100 is a compact, high-precision rotary stage designed for applications requiring accurate and repeatable rotation or indexing. Driven by a direct-drive, brushless motor, the RTS-100 delivers smooth motion with minimal backlash and excellent dynamic response. Its rigid construction ensures stability and precision, even under load, while its compact footprint allows for integration into tight spaces. Ideal for metrology, optical alignment, and general automation, the RTS-100 offers reliable, high-performance rotary positioning.

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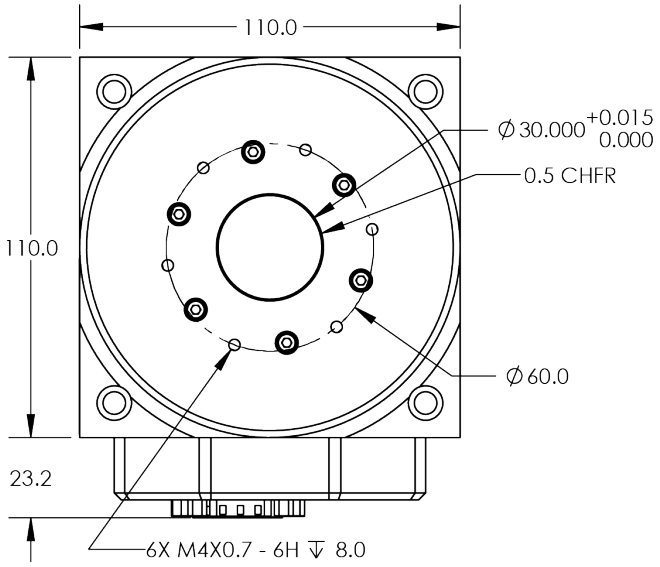
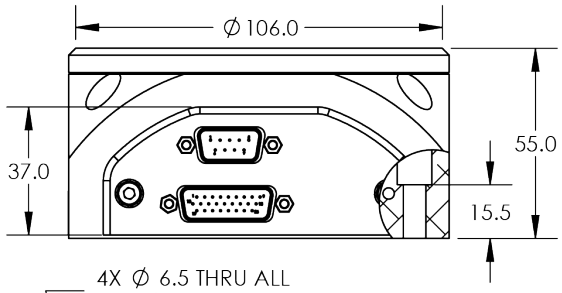
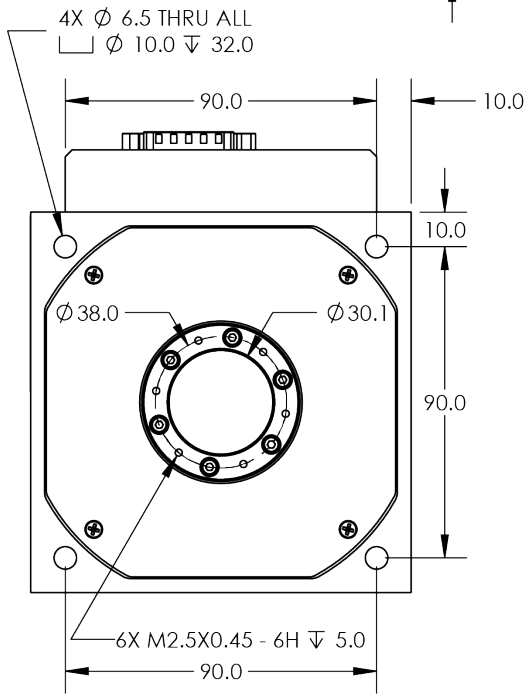
RTS-100 Dimensions







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RTS-100 Ordering Options

RTS-100 Ordering Options	
Product Series	RTS: Rotary Stage
Drive Technology	DD: Direct Drive
Stage Diameter Size	100: 110mm Diameter Hub
Encoder Disk	M: Glass Disk, 10,000 Lines per Revolution, Incremental Q: Mylar Disk, 2,966 Lines per Revolution, Incremental V: Stainless Steel Ring, Absolute
Encoder Feedback	C: RS422, 25X Interpolation (1,000,000 counts/rev)[1] D: RS422, 100X Interpolation (4,000,000 counts/rev)[1] E: 1Vpp Sin-Cos (10,000 sine periods/rev)[1] G: RS422, 1X Interpolation (11,864 counts/rev)[2] M: 26-Bit BiSS C, Unidirectional (67,108,864 counts/rev)[3,4]
Hub Material	A: Aluminum S: Stainless Steel
Precision Grade	S: Standard Precision P: High Precision U: Ultra-High Precision
Additional Options	0: No Additional Options H: Laser Marked Graduations
Customizations	00: Standard Product 01-99: Custom Stage, Customer Specific[5]
Example Part Number	RTS-DD-100-M-D-A-P-0-02
Notes	1: "M" Encoder Disk Only 2: "Q" Encoder Disk Only 3: "V" Encoder Disk Only 4: Stainless Hub Required 5: Common customizations include: custom hole patterns and cleanroom preparation

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RTS-100 Performance Specifications

RTS-100 Specifications, Standard Precision			
Encoder Disk	M	V	Q
Accuracy (±arc-sec)[1]	30.0		1080.0
Bi-Directional Repeatability (arc-sec)[1]	3.0		360.0
Axial Runout (µm)[2]	10.0		
Radial Runout (µm)[2]	10.0		
Wobble (±arc-sec)[2]	10.0		
Continuous Torque (Nm)	0.65		
Peak Torque (Nm)	1.30		
X Load Capacity (Fx) (N)	110		
Y Load Capacity (Fy) (N)	110		
Z Load Capacity (Fz) (N)	250		
Moment Load Capacity (Mx) (Nm)	10.0		
Moment Load Capacity (My) (Nm)	10.0		
Rotational Inertia (kg•mm²)	0.000485		
Stage Mass (kg)	1.7		

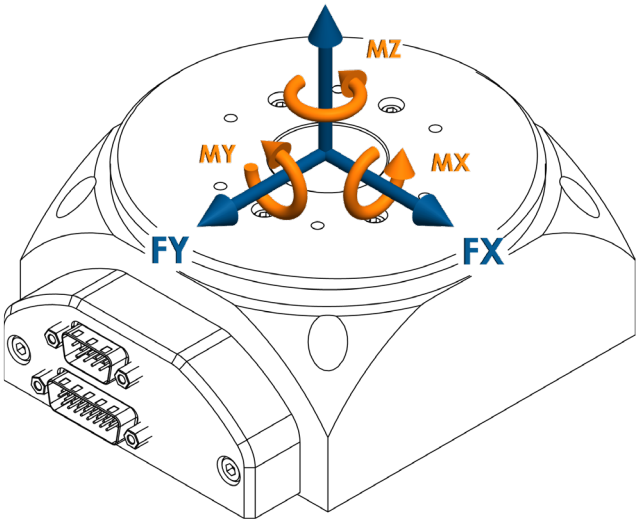
Notes:
1:Specification is verified via laser interferometer on every stage
2: Specification may be verified upon request, additional charges may apply

RTS-100 Specifications, High Precision		
Encoder Disk	M	V
Accuracy (±arc-sec)[1]	20.0	
Bi-Directional Repeatability (arc-sec)[1]	2.0	
Axial Runout (µm)[2]	6.0	
Radial Runout (µm)[2]	6.0	
Wobble (±arc-sec)[2]	8.0	

Notes:
1:Specification is verified via laser interferometer on every stage
2: Specification may be verified upon request, additional charges may apply

RTS-100 Specifications, Ultra-High Precision	
Encoder Disk	M
Accuracy (±arc-sec)[1]	5.0
Bi-Directional Repeatability (arc-sec)[1]	1.0
Axial Runout (µm)[2]	3.0
Radial Runout (µm)[2]	3.0
Wobble (±arc-sec)[2]	5.0

Notes:
1:Specification is verified via laser interferometer on every stage
2: Specification may be verified upon request, additional charges may apply



RTS-100 Maximum Velocity	
Encoder Disk/Output Code	Max Velocity (°/s)[1,2]
M-C	3120
M-D	720
M-E	4800
Q-G	
V-M	

Notes:
1: The true maximum velocity of a rotary stage is dependent on the controls system as well as the stage
2: Ultra-High Precision Stages are limited to 480°/s