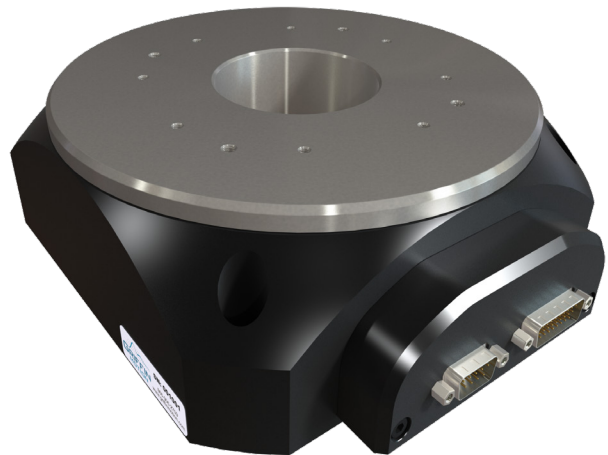


RTS-200 Datasheet

Low Profile, High-Precision Rotary Stage

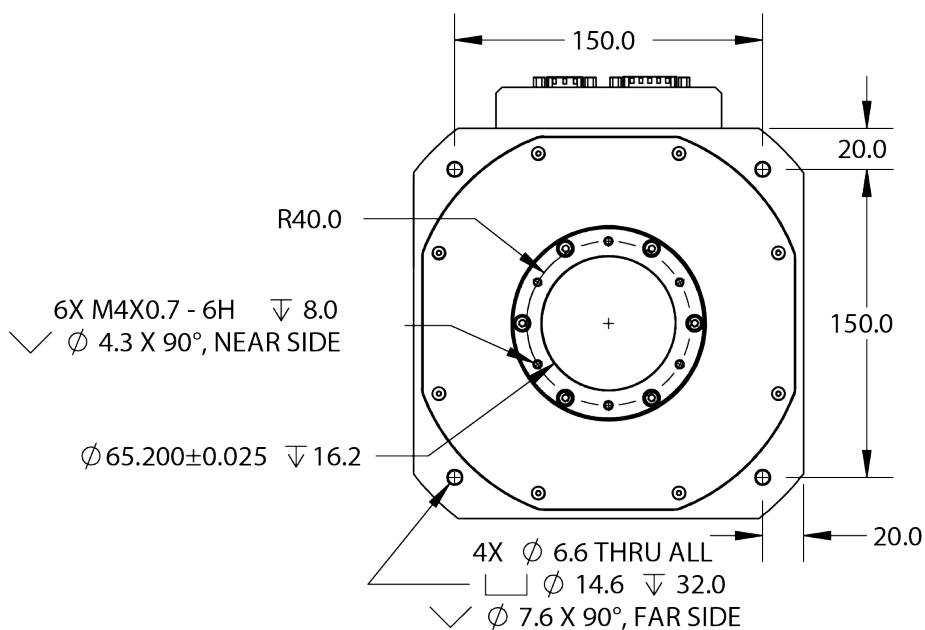
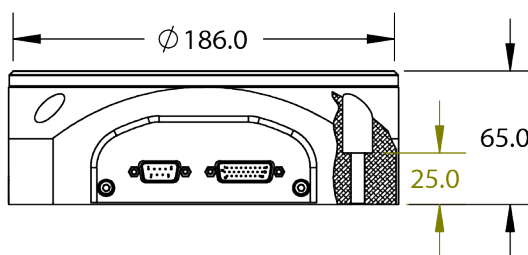
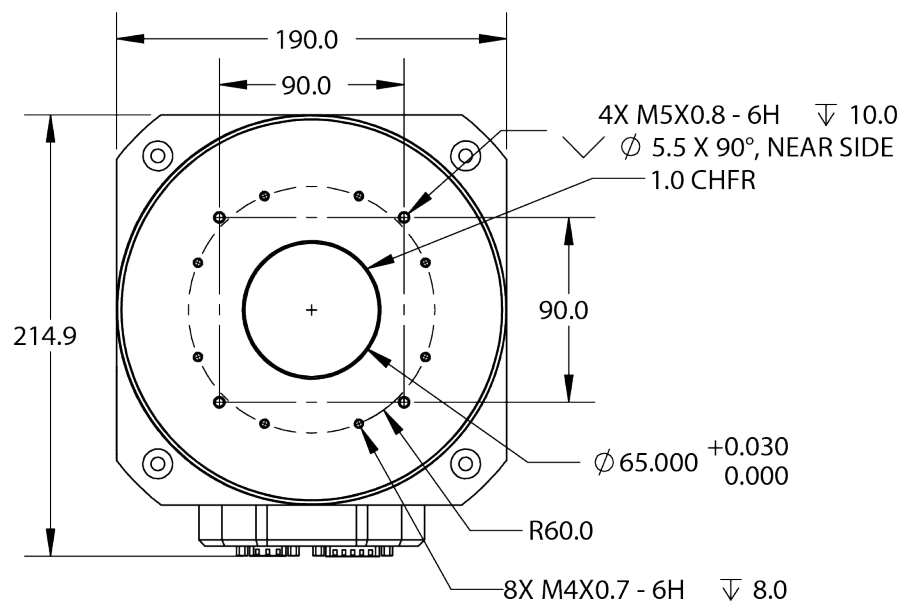
FEATURES

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



The RTS-200 is a low-profile, high-precision rotary stage designed for applications requiring accurate and repeatable rotation or indexing. Driven by a direct-drive, brushless motor, the RTS-200 delivers smooth motion with minimal backlash and excellent dynamic response. Its rigid construction ensures stability and precision, even under load, while its low height allows for integration into tight spaces. Ideal for metrology, optical alignment, and general automation, the RTS-200 offers reliable, high-performance rotary positioning.

RTS-200 Dimensions





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www.griffinmotion.com

RTS-200 Ordering Options

RTS-200 Ordering Options	
Product Series	RTS: Rotary Stage
Drive Technology	DD: Direct Drive
Stage Diameter Size	200: 190mm Diameter Hub
Encoder Disk	P: Mylar Disk, 4,536 Lines per Revolution, Incremental S: Stainless Steel Ring, Absolute Y: Glass Disk, 21,600 Lines per Revolution, Incremental
Encoder Feedback	C: RS422, 25X Interpolation (2,160,000 counts/rev) ¹ D: RS422, 100X Interpolation (8,640,000 counts/rev) ¹ E: 1Vpp Sin-Cos (21,600 sine periods/rev) ¹ H: RS422, 1X Interpolation (18,144 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 ⁴
Additional Options	0: No Additional Options A: Wide Temperature Range Preparation
Customizations	00: Standard Product 01-99: Custom Stage, Customer Specific ⁵
Example Part Number	RTS-DD-200-Y-D-A-P-0-07
Notes	1: "Y" Encoder Disk Only 2: "P" Encoder Disk Only 3: "S" Encoder Disk Only 4: Stainless Hub Required 5: Common customizations include: custom hole patterns and cleanroom preparation

RTS-200 Performance Specifications

RTS-200 Specifications, Standard Precision			
Encoder Disk	P	S	Y
Accuracy ($\pm$ arc-sec) ¹	400.0	30.0	
Bi-Directional Repeatability (arc-sec) ¹	200.0	3.0	
Axial Runout (μ m) ²	10.0		
Radial Runout (μ m) ²			
Wobble ($\pm$ arc-sec) ²	10.0		
Continuous Torque (Nm)	3.44		
Peak Torque (Nm)	6.88		
X Load Capacity (Fx) (N)	250		
Y Load Capacity (Fy) (N)	250		
Z Load Capacity (Fz) (N)	500		
Moment Load Capacity (Mx) (Nm)	25		
Moment Load Capacity (My) (Nm)	25		
Aluminum Hub Inertia (kg·mm ²)	0.00659		0.00659
Steel Hub Inertia (kg·mm ²)		0.0149	0.0171
Aluminum Hub Stage Mass (kg)	5.28		5.28
Steel Hub Stage Mass (kg)		8.84	8.16

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

RTS-200 Specifications, High Precision		
Encoder Disk	S	Y
Accuracy ($\pm$ arc-sec) ¹	20.0	
Bi-Directional Repeatability (arc-sec) ¹	2.0	
Axial Runout (μ m) ²	6.0	
Radial Runout (μ m) ²		
Wobble ($\pm$ arc-sec) ²	6.0	

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

RTS-200 Specifications, Ultra-High Precision	
Encoder Disk	Y
Accuracy ($\pm$ arc-sec) ¹	10.0
Bi-Directional Repeatability (arc-sec) ¹	1.0
Axial Runout (μ m) ²	4.0
Radial Runout (μ m) ²	
Wobble ($\pm$ arc-sec) ²	4.0

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

RTS-200 Maximum Velocity	
Encoder Disk/Output Code	Max Velocity (°/s) ^{1,2}
P-H	1,600
S-M	2,190
Y-C	1,460
Y-D	365
Y-E	1,600

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 800°/s

