

Overview of “Rotator series” piezoelectric motion unit

Low Temperature · Piezoelectric Motion - Rotator Series

Choose your suitable MultiFields® “Rotator Series” product



Rotator16



Rotator25

Series defined by size	“16mm Series”	“25mm Series”
1 Work Environment	Default: 1.4 K ~ 400 K; 1e-7 mbar; 35 Tesla Option1 - .ULT, lowest use temperature 30 mK; Option2 - .UHV, highest vacuum environment 2E-11 mbar;	
2 Dimensions	Dia 16 × 15.6 mm	25 × 25 × 16.5 mm
3 Travel Range	360 ° endless	
4 Max. Load	100 g	250 g
5 Dynamic Torque	0.4 Ncm	1.5 Ncm
6 Max. Velocity @300 K	10 °/s	3 °/s
7 Encoder	Resistive Sensor	
Sensor Range	270 °	320 °
Sensor Resolution	10 m°	
Sensor Repeatability	50 m°	
8 Fine Tune Resolution @ 2 K*	5 μ°	4 μ°
9 Step Size (min) @ 300 K*	0.5 m°	0.4 m°
10 Pins	Drive - 2 pins Sensor - 3 pins	
11 Main Body	Default: Pure Ti ULT: BeCu	
12 Weight	10 g	28 g

Fine Tune Resolution @2 K–Fine tune mode is a unique analog motion driven method, where piezo units are controlled by analog voltage signal, instead of continuous high frequency wave sequence. Because the resolution of the analog signal is very high, the stage can achieve sub-nano meter positioning accuracy.

Step Size (min) @300 K–The open loop minimum incremental step size that the stage can move when it's doing stick-slip motion, driven by continuous high frequency wave sequence.



Rotator25-optic



Rotator35-Optic

"25mm Series"	"35mm Series"	Series defined by size	
Default: 1.4 K ~ 400 K; 1e-7 mbar; 35 Tesla Option1 - .ULT, lowest use temperature 30 mK; Option2 - .UHV, highest vacuum environment 2E-11 mbar;		Work Environment	1
30 × 23 × 14.5 mm	35 × 35 × 16.5 mm	Dimensions	2
360 ° endless		Travel Range	3
250 g	500 g	Max. Load	4
1.5 Ncm	2.5 Ncm	Dynamic Torque	5
3 °/s	10 °/s	Max. Velocity @300 K	6
Resistive Sensor		Encoder	7
320 °		Sensor Range	
10 m°		Sensor Resolution	
50 m°		Sensor Repeatability	
4 μ°	3 μ°	Fine Tune Resolution @ 2 K*	8
0.4 m°	0.3 m°	Step Size (min) @ 300 K*	9
Drive - 2 pins Sensor - 3 pins		Pins	10
Default: Pure Ti ULT: BeCu		Main Body	11
24 g	45 g	Weight	12

Fine Tune Resolution @2 K–Fine tune mode is a unique analog motion driven method, where piezo units are controlled by analog voltage signal, instead of continuous high frequency wave sequence. Because the resolution of the analog signal is very high, the stage can achieve sub-nano meter positioning accuracy.

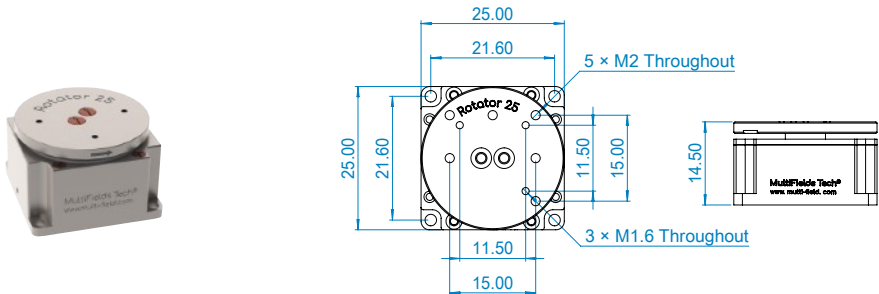
Step Size (min) @300 K–The open loop minimum incremental step size that the stage can move when it's doing stick-slip motion, driven by continuous high frequency wave sequence.

"25mm Series" – Rotator25 (closed-loop)

High-performance rotary stage with closed-loop control

- ➔ Features
- Compact design
 - Closed-loop control
 - Ultra-high vacuum & low temperature compatible
 - 360 ° endless travel range
 - Non-magnetic material

➔ Picture & dimensions



➔ Specifications

Optional Versions ⇨		.HV (default)	.ULT	.UHV	.ULT.UHV
		.HV version, compatible with 1E-7 mbar .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar			
1	Footprint × hight	25 × 25 × 14.5 mm			
2	Weight	28 g			
3	Work environment	Temperature range: 1.4 ~ 400 K, Max. Magnetic field: 35 Tesla			
4	Option1 - 30 mK		✓		✓
5	Option2 - 2e-11 mbar			✓	✓
6	Mainbody	Pure Ti	BeCu	Pure Ti	BeCu
7	Wires	Phosphor Bronze Twisted Paired Wires, 20cm			
8	Pin materials	Polyster (glass fiber filled), BeCu		Peek, BeCu	
9	Pins number	Drive - 2 pins, Sensor - 3 pins			
10	Fine Tune Resolution @2 K*	4 μ°			
11	Step Size (min) @300 K*	0.4 m°			
12	Travel range	360 ° endless			
13	Max. Velocity @300 K	~ 3 °/s			
14	Max. Load	250 g			
15	Dynamic torque	1.5 Ncm			
16	Position encoder	Resistive Sensor			
17	Encoder range	320 °			
18	Sensor resolution	10 m°			
19	Repeatability	~ 50 m°			

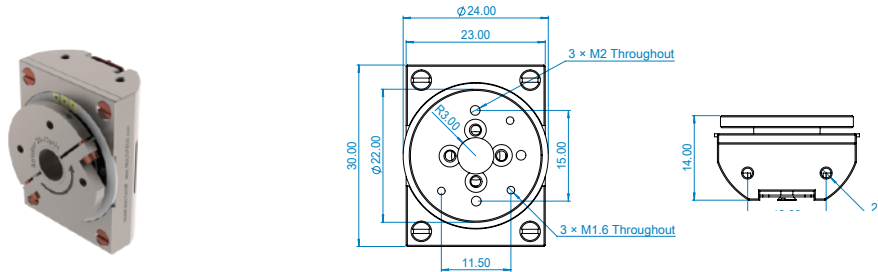
For detail drawing and 3D model please contact us.

"25mm Series" – Rotator25-Optic (closed-loop)

Ø6-mm throughout aperture along rotation axis.

- ➔ Features
- Compact design
 - 360 ° endless travel range
 - Ultra-high vacuum & low temperature compatible
 - 6-mm aperture
 - Vertical mounting

➔ Picture & dimensions



➔ Specifications

Optional Versions ⇨		.HV (default)	.ULT	.UHV	.ULT.UHV
		.HV version, compatible with 1E-7 mbar .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar			
1	Footprint × hight	30 × 23 × 14.5 mm			
2	Clear aperture	6mm			
3	Weight	24 g			
4	Work environment	Temperature range: 1.4 ~ 400 K, Max. Magnetic field: 35 Tesla			
5	Option1 - 30 mK		✓		✓
6	Option2 - 2e-11 mbar			✓	✓
7	Mainbody	Pure Ti	BeCu	Pure Ti	BeCu
8	Wires	Phosphor Bronze Twisted Paired Wires, 20cm			
9	Pin materials	Polyster (glass fiber filled), BeCu		Peek, BeCu	
10	Pins number	Drive - 2 pins, Sensor - 3 pins			
11	Fine Tune Resolution @2 K*	4 μ°			
12	Step Size (min) @300 K*	0.4 m°			
13	Travel range	360 ° endless			
14	Max. Velocity @300 K	~ 3 °/s			
15	Max. Load	250 g			
16	Dynamic torque	1.5 Ncm			
17	Position encoder	Resistive Sensor			
18	Encoder range	320 °			
19	Sensor resolution	10 m°			

For detail drawing and 3D model please contact us.