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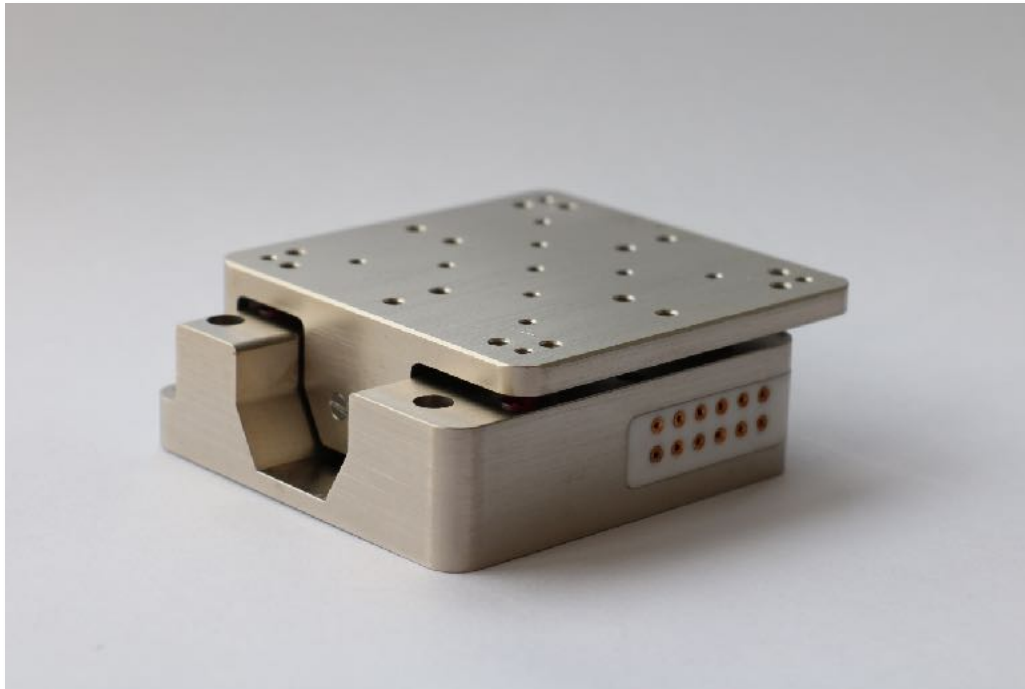
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## Low Temperature • Piezoelectric Motion Unit

A product line of piezoelectric motion , MultiFields Technologies.

Piezoelectric Motion - LT

Piezoelectric Motion - LT

Product Family of Low Temperature · Piezoelectric Motion

All products are categorized by size dimension (16mm, 25mm, 35mm and 55mm) & movement type (linear, rotary, scanning motion and goniometer).

Table, Product Line of Piezoelectric Motion @LT

	Linear Motion Unit				Rotary Motion	Rotary Motion	Goniometer Motion Unit		Scanning Motion Unit		
16mm Series	 Linear16-x		 Linear16-z		 Rotator16	NA	NA		 Scanner16-xy	 Scanner16-z	5 Products
25mm Series	 Linear25-x-Slim	 Linear25-x-Pro	 Linear25-z	 Linear25-z-LR	 Rotator25	 Rotator25-Optic	 Goniometer25-phi	 Goniometer25-theta	 Scanner25-xy	 Scanner25-z	10 Products
35mm Series	 Linear35-x-Slim				 Rotator35	NA	 Goniometer35-phi	 Goniometer35-theta	NA		4 Products
55mm Series	 Linear55-x-Slim		 Linear55-x-Pro		NA	NA	NA		 Scanner55-xy	 Scanner55-z	4 Products
	Linear stage, 9 Products				Rotator, 4 Products	Rotator, 4 Products	Goniometers, 4 Products		Scanners, 6 Products		Total, 23

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# List, all piezoelectric motion units

Including linear motion, rotation motion, tilting motion and scanning motion

.HV ~ 1e-7 mbar, High Vacuum

.UHV ~ 2e-11 mbar Ultra High Vacuum

.ULT ~ 10 mK, Ultra Low Temperature (BeCu Frame)

## Linear16 Series

- Linear16-x.HV
- Linear16-x.UHV
- Linear16-x.ULT
- Linear16-x.UHV.ULT
- Linear16-z.HV
- Linear16-z.UHV
- Linear16-z.ULT
- Linear16-z.UHV.ULT

## Rotator16 Series

- Rotator16.HV
- Rotator16.UHV
- Rotator16.ULT
- Rotator16.UHV.ULT

## Scanner16 Series

- Scanner16-xy.HV
- Scanner16-xy.UHV
- Scanner16-xy.ULT
- Scanner16-xy.UHV.ULT
- Scanner16-z.HV
- Scanner16-z.UHV
- Scanner16-z.ULT
- Scanner16-z.UHV.ULT

## Linear25-x Series

- Linear25-x-Slim.HV
- Linear25-x-Slim.UHV
- Linear25-x-Slim.ULT
- Linear25-x-Slim.UHV.ULT
- Linear25-x-Pro.HV
- Linear25-x-Pro.UHV
- Linear25-x-Pro.ULT
- Linear25-x-Pro.UHV.ULT

## Linear25-z Series

- Linear25-z.HV
- Linear25-z.UHV
- Linear25-z.ULT
- Linear25-z.UHV.ULT
- Linear25-z.HV.LR
- Linear25-z.UHV.LR
- Linear25-z.ULT.LR
- Linear25-z.UHV.ULT.LR

## Rotator25 Series

- Rotator25.HV
- Rotator25.UHV
- Rotator25.ULT
- Rotator25.UHV.ULT
- Rotator25-optic.HV
- Rotator25-optic.UHV
- Rotator25-optic.ULT
- Rotator25-optic.UHV.ULT

## Scanner25 Series

- Scanner25-xy.HV
- Scanner25-xy.UHV
- Scanner25-xy.ULT
- Scanner25-xy.UHV.ULT
- Scanner25-z.HV
- Scanner25-z.UHV
- Scanner25-z.ULT
- Scanner25-z.UHV.ULT

## Goniometer25 Series

- Goniometer25-phi.HV
- Goniometer25-phi.UHV
- Goniometer25-phi.ULT
- Goniometer25-phi.UHV.ULT
- Goniometer25-theta.HV
- Goniometer25-theta.UHV
- Goniometer25-theta.ULT
- Goniometer25-theta.UHV.ULT

## Linear35 Series

- Linear35-x.HV
- Linear35-x.UHV
- Linear35-x.ULT
- Linear35-x.UHV.ULT
- Linear35-z.HV
- Linear35-z.UHV
- Linear35-z.ULT
- Linear35-z.UHV.ULT

## Rotator35 Series

- Rotator35.HV
- Rotator35.UHV
- Rotator35.ULT
- Rotator35.UHV.ULT

## Goniometer35 Series

- Goniometer35-phi.HV
- Goniometer35-phi.UHV
- Goniometer35-phi.ULT
- Goniometer35-phi.UHV.ULT
- Goniometer35-theta.HV
- Goniometer35-theta.UHV
- Goniometer35-theta.ULT
- Goniometer35-theta.UHV.ULT

Total, 80 Products

# Overview of "Linear Series" Piezoelectric Motion Unit

Low Temperature Piezoelectric Motion - Linear Series

Choose your suitable MultiFields® "Linear Series" products



Defined by size	"16mm Series"					"25mm Series"					"25mm Series"				"35mm Series"		"55mm Series"		Defined by size
1 Work Environment	<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>										<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>				Work Environment	1			
2 Dimensions	16*16*10.5 mm	16*16*16 mm	25*25*9.5 mm	25*25*17 mm	25*25*19.6 mm			25*25*29.6 mm	35*35*10.5 mm	55*55*10.5 mm	55*55*21.2 mm			Dimensions	2				
3 Travel Range	3 mm	3 mm	6 mm	6 mm	6 mm			16 mm	20 mm	30 mm	25 mm			Travel Range	3				
4 Max. Load	50 g	250 g	500 g	300 g	300 g			300 g	2500 g	2500 g	500 g			Max. Load	4				
5 Dynamic Drive Force	1.5 N	3 N	2 N	3 N	3 N			3 N	3 N	3 N	5 N			Dynamic Drive Force	5				
6 Encoder	Resistive sensor										Resistive sensor				Encoder	6			
Sensor Range	3 mm	3 mm	6 mm	6 mm	6 mm			16 mm	20 mm	30 mm	25 mm			Sensor Range					
Sensor Resolution	150 nm										150 nm				Sensor Resolution				
Sensor Repeatability	1 -2 um										1 -2 um				Sensor Repeatability				
7 Drive Voltage	Max. 200 V										Max. 200 V				Drive Voltage	7			
8 Pins Number	Drive - 2 pins Sensor - 3 pins	Drive - 2 pins / 4pins (adv) Sensor - 3 pins	Drive - 2 pins Sensor - 3 pins	Drive - 2 pins / 4pins (adv) Sensor - 3 pins				Drive - 2 pins / 4pins (adv) Sensor - 3 pins	Drive - 3 pins Sensor - 3 pins	Drive - 2 pins Sensor - 3 pins	Drive - 2 pins / 7pins (adv) Sensor - 3 pins			Pins Number	8				
9 Weight	10 g	12 g	24 g	28 g	34g			40 g	38 g	130 g	200 g			Weight	9				

# "16mm Series" – Linear16-x (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

Smallest linear stage with closed-loop control

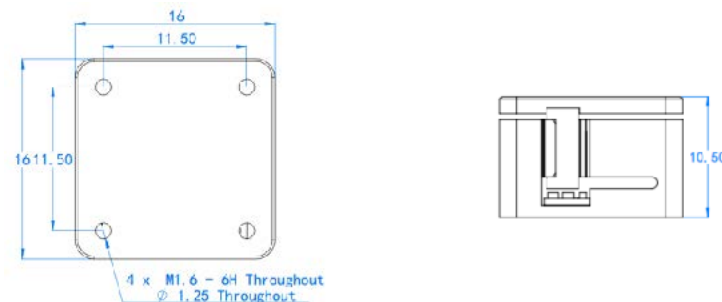


Linear16-x.HV

## Features

- Compact design, dimensions: 16\*16\*10.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 50 g & 1.5 N
- Long travel range: 3 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear16-x, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	16 × 16 mm × 10.5 mm			
2 Weight	10 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	3 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	50 g			
14 Dynamic force	1.5 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	3 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

# "16mm Series" – Linear16-z (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

Smallest linear stage with closed-loop control

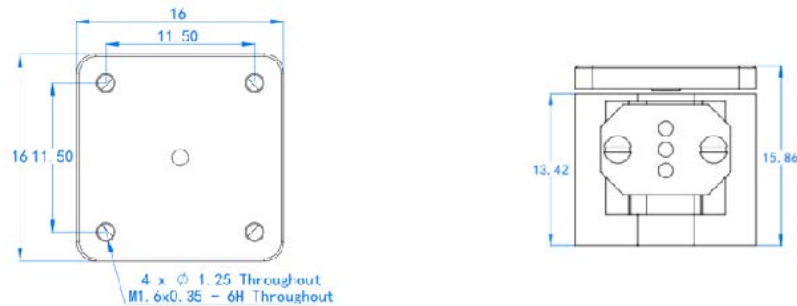


Linear16-z.HV

## Features

- Compact design, dimensions: Dia 16\*15.7 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 250 g & 3 N
- Long travel range: 3 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear16-z, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	16 × 16 mm × 16 mm			
2 Weight	12 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	3 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	250 g			
14 Dynamic force	3 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	3 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

# "25mm Series" – Linear25-x-Slim (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

Perfect Balance. A top-of-the-line solution that combines a compact size with excellent motion performance

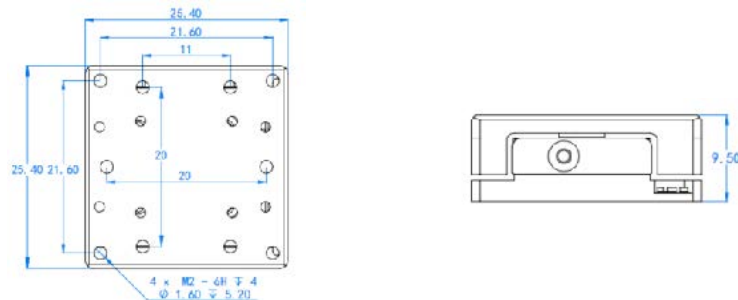


Linear25-x-Slim.HV

## Features

- Compact design, dimensions: 25.4\*25.4\*9.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 500 g & 2 N
- Long travel range: 6 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear25-x-Slim, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × hight	25.4 × 25.4 mm × 9.5 mm			
2	Weight	24 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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 - 4 pins, Sensor - 3 pins			
Motion					
10	Travel range	6 mm			
11	Max. Velocity @300 K	~ 3 mm/s			
12	Drive voltage	Max. 200 V			
13	Max. Load	500 g			
14	Dynamic force	2 N			
Sensor (closed loop)					
15	Position encoder	Resistive Sensor			
16	Encoder range	6 mm			
17	Sensor resolution	~ 150 nm			
18	Repeatability	1 - 2 um			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "25mm Series" – Linear25-x-Pro (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

High dynamic force & balance with closed-loop control

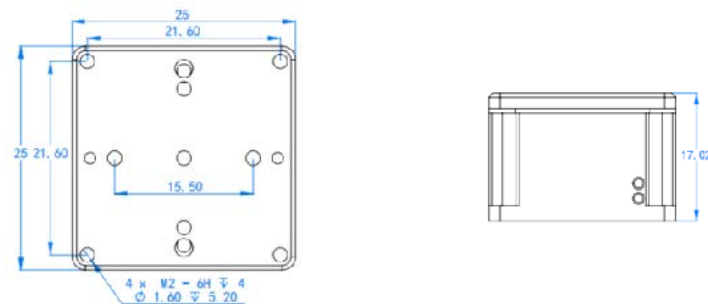


Linear25-x-Pro.HV

## Features

- Compact design, dimensions: 25\*25\*17 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 300 g & 3 N
- Long travel range: 6 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear25-x-Pro, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	25 × 25 mm × 17 mm			
2 Weight	28 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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 /4 pins (adv) , Sensor - 3 pins			
Motion				
10 Travel range	6 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	300 g			
14 Dynamic force	3 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	6 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

Piezoelectric Motion - LT

Piezoelectric Motion - LT



# "25mm Series" – Linear25-z (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

High-load linear stage with closed-loop control

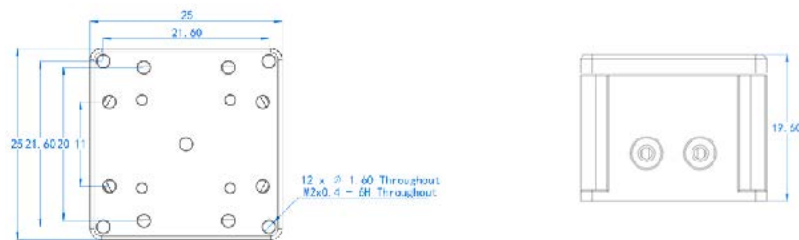


Linear25-z.HV

## Features

- Compact design, dimensions: 25\*25\*19.6 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 300 g & 3 N
- Long travel range: 6 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear25-z, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × hight	25 × 25 mm × 19.6 mm			
2 Weight	34 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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 /4 pins (adv) , Sensor - 3 pins			
Motion				
10 Travel range	6 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	300 g			
14 Dynamic force	3 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	6 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

# "25mm Series" – Linear25-z-LR (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

High-load linear stage with closed-loop control



Linear25-z-LR.HV

## Features

- Compact design, dimensions: 25\*25\*29.6 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 300 g & 3 N
- Long travel range: 16 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear25-z-LR, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × hight	25 × 25 mm × 29.6 mm			
2 Weight	34 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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 /4 pins (adv) , Sensor - 3 pins			
Motion				
10 Travel range	16 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	300 g			
14 Dynamic force	3 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	16 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "35mm Series" – Linear35-x-Slim (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

High-load linear stage with closed-loop control

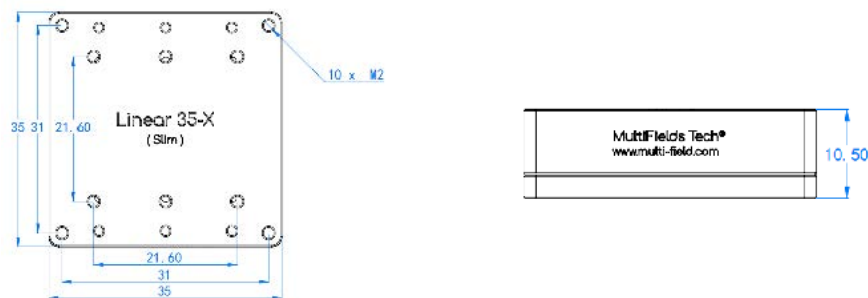


Linear35-x-Slim.HV

## Features

- Compact design, dimensions: 35\*35\*10.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 2500 g & 3 N
- Long travel range: 20 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear35-x-Slim, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	35 × 35 mm × 10.5 mm			
2 Weight	38 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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 - 3 pins, Sensor - 3 pins			
Motion				
10 Travel range	20 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	2500 g			
14 Dynamic force	3 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	20 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "55mm Series" – Linear55-x-Slim (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

Max-load linear stage with closed-loop control

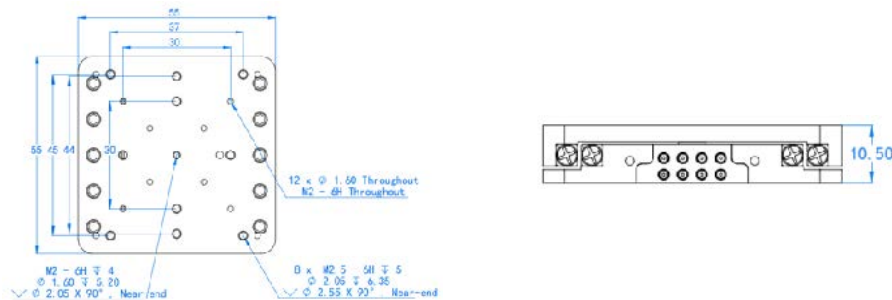


Linear55-x-Slim.HV

## Features

- Compact design, dimensions: 55\*55\*10.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 2500 g & 3 N
- Long travel range: 30 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear55-x-Slim, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × hight	55 × 55 mm × 10.5 mm			
2 Weight	130 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	30 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	2500 g			
14 Dynamic force	3 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	30 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "55mm Series" – Linear55-x-Pro (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

Best motion linear stage with closed-loop control

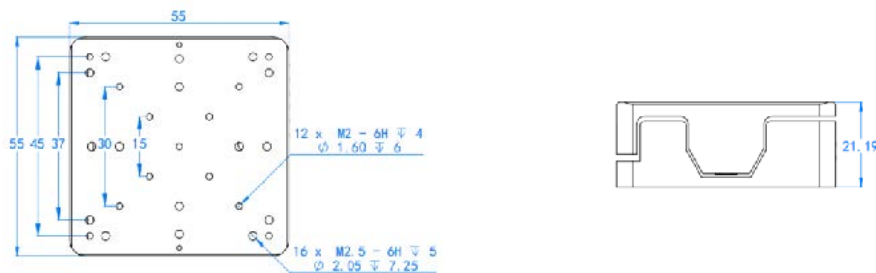


Linear55-x-Pro.HV

## Features

- Compact design, dimensions: 55\*55\*21.2 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high thrusts: 500 g & 5 N
- Long travel range: 25 mm
- Closed-loop control with position sensing up to 0.1 um resolution

## Dimension drawing



## Linear55-x-Pro, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × hight	55 × 55 mm × 21.2 mm			
2 Weight	200 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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 /7 pins (adv) , Sensor - 3 pins			
Motion				
10 Travel range	25 mm			
11 Max. Velocity @300 K	~ 2 mm/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	500 g			
14 Dynamic force	5 N			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	25 mm			
17 Sensor resolution	~ 150 nm			
18 Repeatability	1 - 2 um			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# Overview of "Rotator Series" Piezoelectric Motion Unit

Low Temperature - Piezoelectric Motion - Rotator Series

Choose your suitable MultiFields® "Rotator Series" product



Rotator16



Rotator25



Rotator25-optic



Rotator35

Series defined by size	"16mm Series"	"25mm Series"			"25mm Series"	"55mm Series"	Series defined by size
1 Work Environment	<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>				<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>		Work Environment 1
2 Dimensions	Dia 16*15.6 mm	25*25*16.5 mm			30*23*14.5 mm	35*35*16.5 mm	Dimensions 2
3 Travel Range	360 ° endless				360 ° endless		Travel Range 3
4 Max. Load	100 g	250 g			250 g	500 g	Max. Load 4
5 Dynamic Torque	0.4 Ncm	1.5 Ncm			1.5 Ncm	2.5 Ncm	Dynamic Torque 5
6 Max. Velocity @300 K	10 °/s	3 °/s			3 °/s	10 °/s	Max. Velocity @300 K 6
7 Encoder	Resistive Sensor				Resistive Sensor		Encoder 7
Sensor Range	270 °	320 °			320 °		Sensor Range
Sensor Resolution	10 m°				10 m°		Sensor Resolution
Sensor Repeatability	50 m°				50 m°		Sensor Repeatability
8 Drive Voltage	Max. 200 V				Max. 200 V		Drive Voltage 8
9 Pins	Drive - 2 pins Sensor - 3 pins	Drive - 2 pins Sensor - 3 pins			Drive - 2 pins Sensor - 3 pins		Pins 9
10 Main Body	Default: Pure Ti ULT: BeCu				Default: Pure Ti ULT: BeCu		Main Body 10
11 Weight	10 g	24 g			24 g	45 g	Weight 11

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "16mm Series" – Rotator16 (closed-loop)

Low Temperature · Piezoelectric Motion- Rotator Series

Smallest rotary stage with closed-loop control



Rotator16.HV

## Features

- Compact design, dimensions: Dia 16\*15.6 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high torque: 100 g & 0.4 Ncm
- Travel range: 360 ° endless
- Closed-loop control with position sensing up to 10 m° resolution

## Dimension drawing



## Rotator16, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × height	Dia 16 mm × 15.6 mm			
2	Weight	10 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK		✓	✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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			
Motion					
10	Travel range	360 ° endless			
11	Max. Velocity @300 K	~ 10 °/s			
12	Drive voltage	Max. 200 V			
13	Max. Load	100 g			
14	Dynamic torque	0.4 Ncm			
Sensor (closed loop)					
15	Position encoder	Resistive Sensor			
16	Encoder range	270 °			
17	Sensor resolution	10 m°			
18	Repeatability	~ 50 m°			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

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

Low Temperature · Piezoelectric Motion- Rotator Series

Rotary stage with closed-loop control

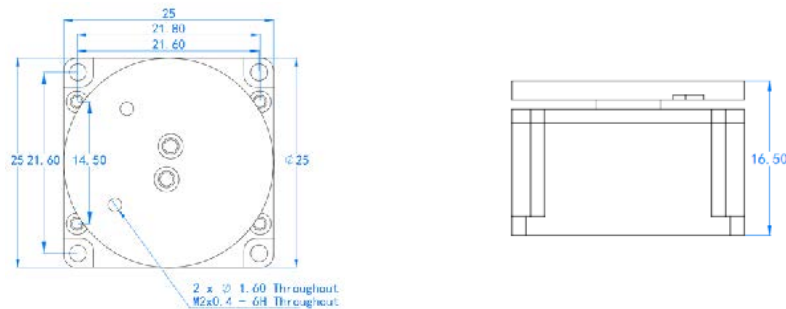


Rotator25.HV

## Features

- Compact design, dimensions: 25\*25\*16.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high torque: 250 g & 1.5 Ncm
- Travel range: 360 ° endless
- Closed-loop control with position sensing up to 10 m° resolution

## Dimension drawing



## Rotator25, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	25 × 25 mm × 16.5 mm			
2 Weight	24 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	360 ° endless			
11 Max. Velocity @300 K	~ 3 %/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	250 g			
14 Dynamic torque	1.5 Ncm			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	320 °			
17 Sensor resolution	10 m°			
18 Repeatability	~ 50 m°			



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

Low Temperature · Piezoelectric Motion- Rotator Series

Rotary stage with closed-loop control



Rotator25-optic.HV

## Features

- Compact design, dimensions: 30\*23\*14.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high torque: 250 g & 1.5 Ncm
- Travel range: 360 ° endless
- Closed-loop control with position sensing up to 10 m° resolution
- Aperture  $\Phi$  6 mm

## Dimension drawing



## Rotator25-optic, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	30 × 23 mm × 14.5 mm			
2 Weight	24 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	360 ° endless			
11 Max. Velocity @300 K	~ 3 °/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	250 g			
14 Dynamic torque	1.5 Ncm			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	320 °			
17 Sensor resolution	10 m°			
18 Repeatability	~ 50 m°			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "35mm Series" – Rotator35 (closed-loop)

Low Temperature · Piezoelectric Motion- Rotator Series

Rotary stage with closed-loop control

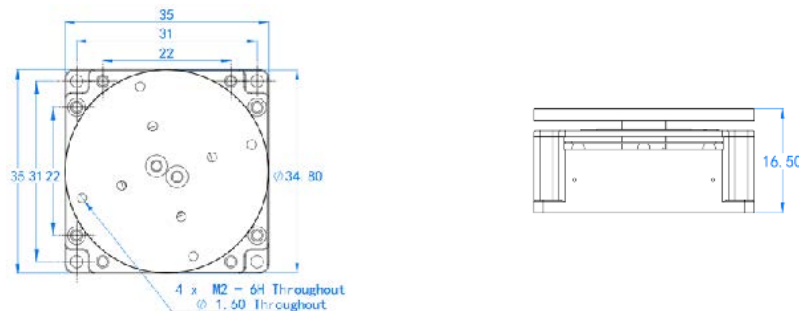


Rotator35.HV

## Features

- Compact design, dimensions: 35\*35\*16.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & high torque: 500 g & 2.5 Ncm
- Travel range: 360 ° endless
- Closed-loop control with position sensing up to 10 m° resolution

## Dimension drawing



## Rotator35, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	35 × 35 mm × 16.5 mm			
2 Weight	45 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	360 ° endless			
11 Max. Velocity @300 K	~ 10 °/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	500 g			
14 Dynamic torque	2.5 Ncm			
Sensor (closed loop)				
15 Position encoder	Resistive Sensor			
16 Encoder range	320 °			
17 Sensor resolution	10 m°			
18 Repeatability	~ 50 m°			

# Overview Of "Goniometer Series" Piezoelectric Motion Unit

Low Temperature Piezoelectric Motion - Goniometer Series

Choose your suitable MultiFields® "Goniometer Series" product



Goniometer25-theta



Goniometer25-phi



Goniometer35-theta



Goniometer35-phi

Series defined by size	"25mm Series"		"35mm Series"		Series defined by size
1 Work Environment	<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>		<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>		Work Environment 1
2 Dimensions	25*25*12.5 mm	25*25*12.5 mm	35*35*16 mm	35*35*16 mm	Dimensions 2
3 Rotation Center To Top Plate	41 mm	53.5 mm	50 mm	66 mm	Rotation Center To Top Plate 3
4 Travel Range	6.6 °	6 °	12 °	10 °	Travel Range 4
5 Max. Load	200 g	200 g	500 g	500 g	Max. Load 5
6 Dynamic Force	2.2 N	2.2 N	3 N	3 N	Dynamic Force 6
7 Encoder	Resistive Sensor		Resistive Sensor		Encoder 7
Sensor Range	6.6 °	6 °	12 °	10 °	Sensor Range
Sensor Resolution	0.2 m°		0.5 m°		Sensor Resolution
8 Drive Voltage	Max. 200 V	Max. 200 V	Max. 200 V	Max. 200 V	Drive Voltage 8
9 Pins	Driven - 2 pins; Sensor - 3 pins		Driven - 2 pins; Sensor - 3 pins		Pins 9
10 Main Body	Default: Pure Ti; ULT: BeCu		Default: Pure Ti; ULT: BeCu		Main Body 10
11 Weight	20 g	20 g	70 g	70 g	Weight 11

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "25mm Series" – Goniometer25-theta (closed-loop)

Low Temperature · Piezoelectric Motion- Goniometer Series

## Tilter stage with closed-loop control

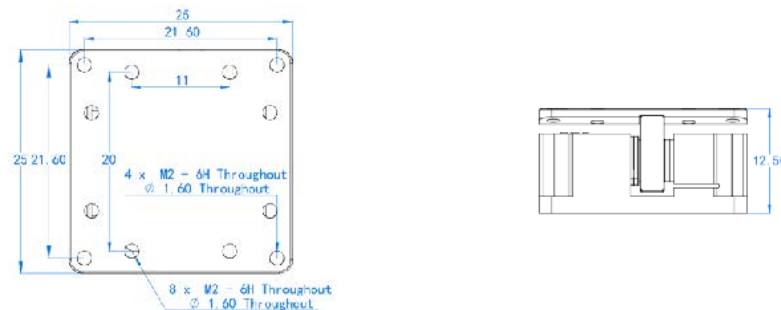


Goniometer25-theta.HV

### Features

- Compact design, dimensions: 25\*25\*12.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & rotation center to top plate: 200 g & 41 mm
- Long travel range: 6.6 °
- Closed-loop control with position sensing up to 0.2 m° resolution

### Dimension drawing



## Goniometer25-theta, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × height	25 × 25 mm × 12.5 mm			
2	Weight	20 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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			
Motion					
10	Travel range	~ 6.6 °			
11	Max. Velocity @300 K	~ 1 °/s			
12	Drive voltage	Max. 200 V			
13	Max. Load	200 g			
14	Dynamic force	2.2 N			
15	Rotation center to top plate	41 mm			
Sensor (closed loop)					
16	Position encoder	Resistive Sensor			
17	Encoder range	6.6 °			
18	Sensor resolution	0.2 m°			

# "25mm Series" – Goniometer25-phi (closed-loop)

Low Temperature · Piezoelectric Motion- Goniometer Series

## Tilter stage with closed-loop control

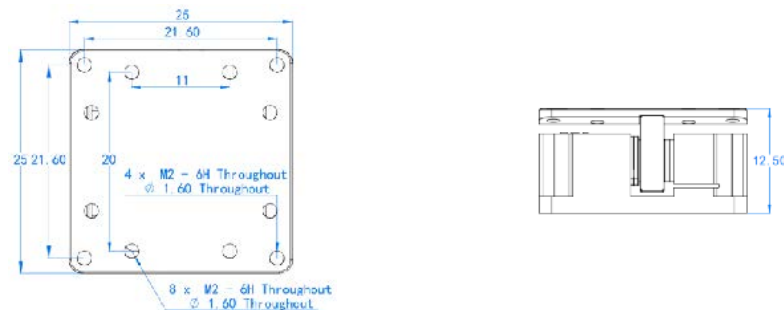


Goniometer25-phi.HV

### Features

- Compact design, dimensions: 25\*25\*12.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & rotation center to top plate: 200 g & 53.5 mm
- Long travel range: 6 °
- Closed-loop control with position sensing up to 0.2 m° resolution

### Dimension drawing



## Goniometer25-phi, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	25 × 25 mm × 12.5 mm			
2 Weight	20 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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			
Motion				
10 Travel range	~ 6 °			
11 Max. Velocity @300 K	~ 1 °/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	200 g			
14 Dynamic force	2.2 N			
15 Rotation center to top plate	53.5 mm			
Sensor (closed loop)				
16 Position encoder	Resistive Sensor			
17 Encoder range	6 °			
18 Sensor resolution	0.2 m°			

# "35mm Series" – Goniometer35-theta (closed-loop)

Low Temperature · Piezoelectric Motion- Goniometer Series

## Tilter stage with closed-loop control

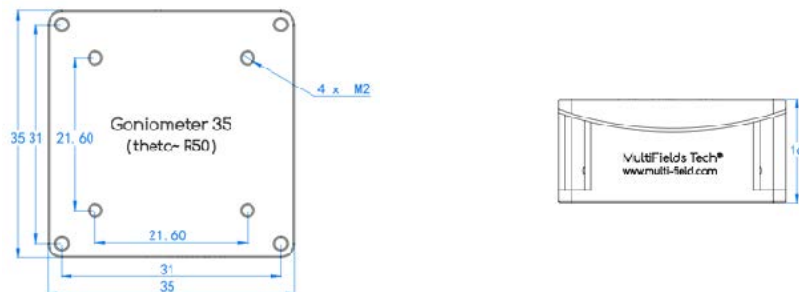


Goniometer35-theta.HV

### Features

- Compact design, dimensions: 35\*35\*16 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & rotation center to top plate: 500 g & 50 mm
- Long travel range: 12 °
- Closed-loop control with position sensing up to 0.5 m° resolution

### Dimension drawing



## Goniometer35-theta, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	35 × 35 mm × 16 mm			
2 Weight	70 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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	Driven - 2 pins, Sensor - 3 pins			
Motion				
10 Travel range	~ 12 °			
11 Max. Velocity @300 K	~ 1 °/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	500 g			
14 Dynamic force	3 N			
15 Rotation center to top plate	50 mm			
Sensor (closed loop)				
16 Position encoder	Resistive Sensor			
17 Encoder range	12 °			
18 Sensor resolution	0.5 m°			

# "35mm Series" – Goniometer35-phi (closed-loop)

Low Temperature · Piezoelectric Motion- Goniometer Series

Tilter stage with closed-loop control

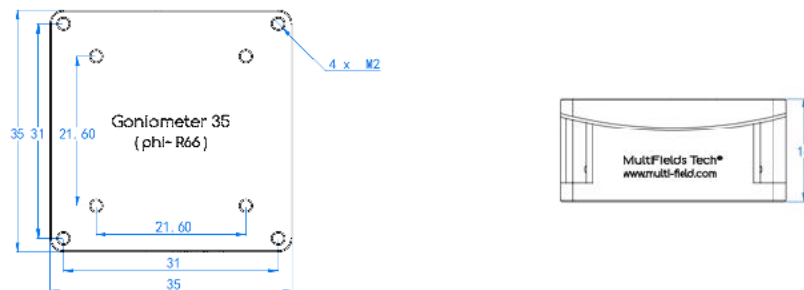


Goniometer35-phi.HV

## Features

- Compact design, dimensions: 35\*35\*16 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads & rotation center to top plate: 500 g & 66 mm
- Long travel range: 10°
- Closed-loop control with position sensing up to 0.5 m° resolution

## Dimension drawing



## Goniometer35-phi, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar				
1 Footprint × height	35 × 35 mm × 16 mm			
2 Weight	70 g			
Working Environment				
3 Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4 Option1 - 30 mK		✓		✓
5 Option2 - 2e-11 mbar			✓	✓
Materials				
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	Driven - 2 pins, Sensor - 3 pins			
Motion				
10 Travel range	~ 10°			
12 Max. Velocity @300 K	~ 1 °/s			
12 Drive voltage	Max. 200 V			
13 Max. Load	500 g			
14 Dynamic force	3 N			
15 Rotation center to top plate	66 mm			
Sensor (closed loop)				
16 Position encoder	Resistive Sensor			
17 Encoder range	12°			
18 Sensor resolution	0.5 m°			

# Overview of "Scanner Series" Piezoelectric Motion Unit

Low Temperature Piezoelectric Motion - Scanner Series

Choose your suitable MultiFields® "Scanner Series" product



Series defined by size	"16mm Series"			"25mm Series"			"55mm Series"			Series defined by size	
1 Work Environment	<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>						<ul style="list-style-type: none"> <li>• Default: 1.4 K ~ 400 K; 2e-7 mbar; 18 Tesla</li> <li>• Option1 - .ULT, lowest use temperature 30 mK;</li> <li>• Option2 - .UHV, highest vacuum environment 2E-11 mbar;</li> </ul>			Work Environment	1
2 Scanning Axes	X, Y	Z	X, Y			Z	X, Y	Z	Scanning Axes	2	
3 Dimensions	16*16*9 mm	16*16*6 mm	25*25*13.5 mm			25*25*12 mm	55*55*15 mm	55*55*16.5 mm	Dimensions	3	
4 Travel Range	30 um*30 um	30 um	55 um*55um			55 um	120 um*120 um	120 um	Travel Range	4	
5 Max. Load	100 g	100 g	200 g			200 g	500 g	500 g	Max. Load	5	
7 Linearity Error	Typical ~ 0.1 %						Typical ~ 0.1 %			Linearity Error	7
8 Repeatability	< 10 nm						< 10 nm			Repeatability	8
9 Drive Voltage	Max. 75 V @300K; Max. 180 V @4K						Max. 75 V @300 K; Max. 180 V @4 K			Drive Voltage	9
11 Resolution	0.5 nm	0.5 nm	0.8 nm			0.8 nm	2 nm	2 nm	Resolution	11	
12 Pins	4 pins	2 pins	4 pins			2 pins	4 pins	2 pins	Pins	12	
13 Main Body	Default: Pure Ti; ULT: BeCu						Default: Pure Ti; ULT: BeCu			Main Body	13
14 Weight	8 g	7g	23 g			20 g	150 g	100 g	Weight	14	

Piezoelectric Motion - LT

Piezoelectric Motion - LT



# "16 mm Series" – Scanner16-xy

Low Temperature · Piezoelectric Motion- Scanner Series

Smallest scanner stage

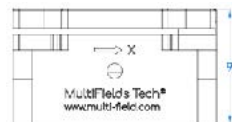
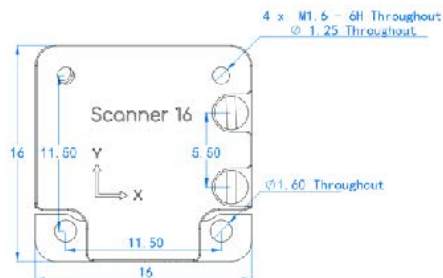


Scanner16-xy.HV

## Features

- Compact design, dimensions: 16\*16\*9 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads: 100 g
- Long travel range @300 K: 30\*30 um
- Position sensing up to 0.5 nm resolution

## Dimension drawing



## Scanner16-xy, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × height	16 × 16 mm × 9 mm			
2	Weight	8 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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	2 pins for each axis			
Motion					
10	Scanning Axes	X, Y			
11	Travel range @300 K	30 × 30 um			
12	Drive voltage	Max. 75 V @300 K Max. 180 V @4 K			
13	Max. Load	100 g			
14	Capacitance @300 K	1 uF			
15	Resolution	0.5 nm			
16	Linearity error	Typical ~ 0.1 %			
17	Repeatability	< 10 nm			

# "16 mm Series" – Scanner16-z

Low Temperature · Piezoelectric Motion- Scanner Series

Smallest scanner stage

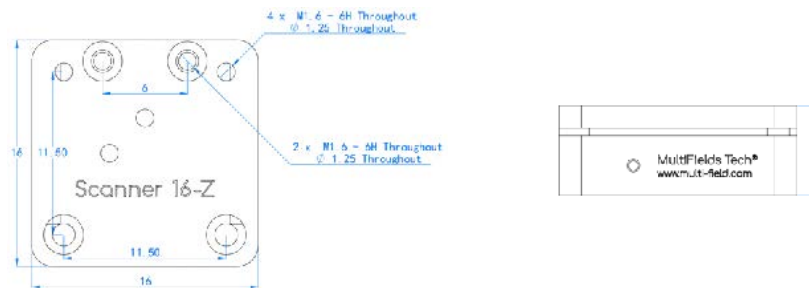


Scanner16-z.HV

## Features

- Compact design, dimensions: 16\*16\*6 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads: 100 g
- Long travel range @300 K: 30 um
- Position sensing up to 0.5 nm resolution

## Dimension drawing



## Scanner16-z, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × height	16 × 16 mm × 6 mm			
2	Weight	/			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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	2 pins			
Motion					
10	Scanning Axes	Z			
11	Travel range @300 K	30 um			
12	Drive voltage	Max. 75 V @300 K Max. 180 V @4 K			
13	Max. Load	100 g			
14	Capacitance @300 K	0.8 uF			
15	Resolution	0.5 nm			
16	Linearity error	Typical ~ 0.1 %			
17	Repeatability	< 10 nm			

# "25 mm Series" – Scanner25-xy

Low Temperature · Piezoelectric Motion- Scanner Series

## High-load scanner stage

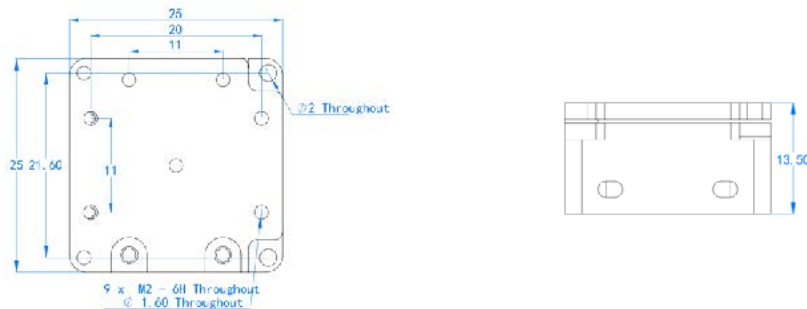


Scanner25-xy.HV

### Features

- Compact design, dimensions: 25\*25\*13.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads: 200 g
- Long travel range @300 K: 55\*55 um
- Position sensing up to 0.8 nm resolution

### Dimension drawing



## Scanner25-xy, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × height	25 × 25 mm × 13.5 mm			
2	Weight	23 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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	2 pins for each axis			
Motion					
10	Scanning Axes	X, Y			
11	Travel range @300 K	55 × 55 um			
12	Drive voltage	Max. 75 V @300 K Max. 180 V @4 K			
13	Max. Load	200 g			
14	Capacitance @300 K	4 uF			
15	Resolution	0.8 nm			
16	Linearity error	Typical ~ 0.1 %			
17	Repeatability	< 10 nm			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "25 mm Series" – Scanner25-z

Low Temperature · Piezoelectric Motion- Scanner Series

## High-load scanner stage

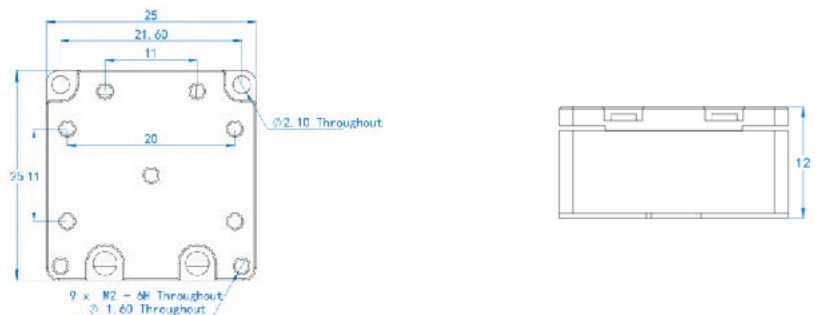


Scanner25-z.HV

### Features

- Compact design, dimensions: 25\*25\*12 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads: 200 g
- Long travel range @300 K: 55 um
- Position sensing up to 0.8 nm resolution

### Dimension drawing



## Scanner25-z, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × hight	25 × 25 mm × 12 mm			
2	Weight	20 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK		✓	✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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	2 pins			
Motion					
10	Scanning Axes	Z			
11	Travel range @300 K	55 um			
12	Drive voltage	Max. 75 V @300 K Max. 180 V @4 K			
13	Max. Load	200 g			
14	Capacitance @300 K	4.2 uF			
15	Resolution	0.8 nm			
16	Linearity error	Typical ~ 0.1 %			
17	Repeatability	< 10 nm			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "55 mm Series" – Scanner55-xy

Low Temperature · Piezoelectric Motion- Scanner Series

## High-load scanner stage

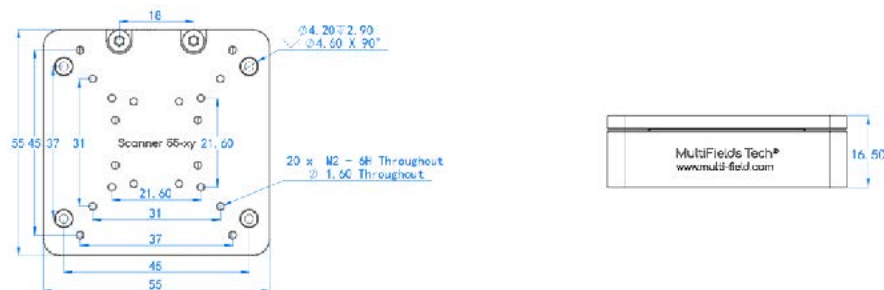


Scanner55-xy.HV

### Features

- Compact design, dimensions: 55\*55\*15 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads: 500 g
- Long travel range @300 K: 120\*120 um
- Position sensing up to 2 nm resolution

### Dimension drawing



## Scanner55-xy, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × height	55 × 55 mm × 15 mm			
2	Weight	150 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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	2 pins for each axis			
Motion					
10	Scanning Axes	X, Y			
11	Travel range @300 K	120 × 120 um			
12	Drive voltage	Max. 75 V @300 K Max. 180 V @4 K			
13	Max. Load	500 g			
14	Capacitance @300 K	7 uF			
15	Resolution	2 nm			
16	Linearity error	Typical ~ 0.1 %			
17	Repeatability	< 10 nm			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# "55 mm Series" – Scanner55-z

Low Temperature · Piezoelectric Motion- Scanner Series

## High-load scanner stage



Scanner55-z.HV

### Features

- Compact design, dimensions: 55\*55\*16.5 mm
- Ultra-high vacuum & very low temperature compatible: 2 E-11 mbar & 30 mK
- Non-magnetic material Composed of pure Ti & BeCu, compatible with the 18 Tesla magnetic field
- High loads: 500 g
- Long travel range @300 K: 120 um
- Position sensing up to 2 nm resolution

### Dimension drawing



## Scanner55-z, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

Optional Versions ⇨	.HV (default)	.ULT	.UHV	.ULT.UHV	
.HV version, default product; .ULT version, used at He3 or dilution cryogenics systems .UHV version, compatible with 2E-11 mbar					
1	Footprint × hight	55 × 55 mm × 16.5 mm			
2	Weight	100 g			
Working Environment					
3	Work environment	Temperature range: 1.4 ~ 400 K Vacuum: 2e-7 mbar Max. Magnetic field: 18 Tesla			
4	Option1 - 30 mK	✓		✓	
5	Option2 - 2e-11 mbar		✓	✓	
Materials					
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	2 pins			
Motion					
10	Scanning Axes	Z			
11	Travel range @300 K	120 um			
12	Drive voltage	Max. 75 V @300 K Max. 180 V @4 K			
13	Max. Load	500 g			
14	Capacitance @300 K	7 uF			
15	Resolution	2 nm			
16	Linearity error	Typical ~ 0.1 %			
17	Repeatability	< 10 nm			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# Motion Controller - NewtonLT.06

Low Temperature · Piezoelectric Motion Controller

6-channels closed-loop controller designed for low temperature piezoelectric motion units

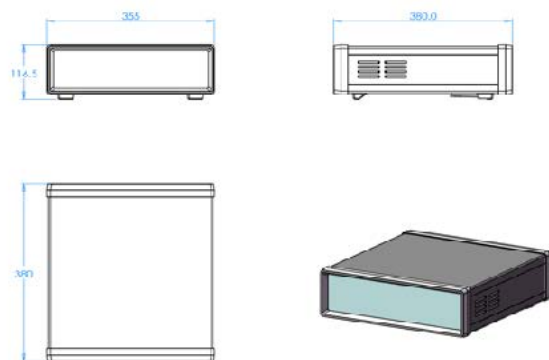


MC - NewtonLT.06

## Features

- 6-Channels closed-loop motion control output
- Compatible with low temperature Linear Stage, Goniometer, Rotator of MultiFields
- Maximum driving voltage 200 V; Maximum frequency 10 kHz
- Support key parameter customization
- LabVIEW Sub VI control program is provided to support users' independent use
- USB / GPIB computer remote control

## Dimension drawing



## Motion Controller - Newton.LT, Specification

\*All data below is measured with 50 ohm wires. Though there is no requirement on wires' conductance, we recommend resistance below 50 ohm.

		MotionCenter - Newton.LT
1	Compatible positioner	Linear Positioner, Rotator, Goniometer
2	Control mode	All channels closed-loop control
3	Size	19" / 3U
4	Work voltage & power	220 VAC & 60 W
5	Remote	Serial port
7	Output channels	6 channels
8	Max output voltage	-200 V ~ +200 V
9	Drive frequency range	1 ~ 10 kHz
10	Power for 1 channel	Max. 40 W
11	Slew rate	2 kV/us
12	GND in drive output	6 channels independent GND
13	Encoder	Resistive encoder
14	Sensor output voltage	DC 2.5 V
15	Resolution of read voltage	50 uF (18-bit)
17	Connectors	6 channels
18	Input resistance	10 kOhm
19	GND in sensor readout	6 channels independent GND
20	Electrical connector	D-sub 15 for each channel

# Scanner Controller - ArchimedesLT.03

Low Temperature · Piezoelectric Scanner Controller

3-channels Scanning motion controller designed for Low temperature scanner products

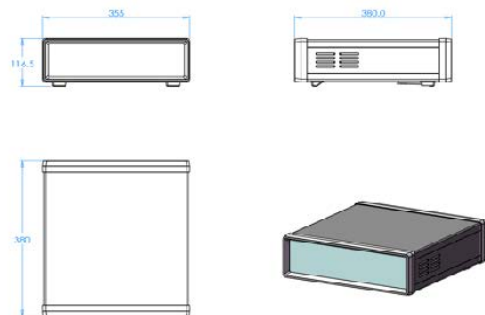


MC - ArchimedesLT.03

## Features

- 3 channels scanning motion controller
- Compatible with low temperature Linear Stage, Goniometer, Rotator of MultiFields
- Support external analogue control
- LabVIEW Sub VI control program is provided to support users' independent use
- COM / USB / GPIB computer remote control

## Dimension drawing



## Scanner Controller - Archimedes.LT, Specification

		Motion Center - Archimedes.LT
1	Compatible positioner	MultiFields Low Temperature Scanner Series Products
2	Size	19" / 3U
3	Work voltage & power	220 VAC & 60 W
4	Remote	Serial port
5	Output channels	3 channels
6	Max output voltage	0 - 150 V
7	Scanning Voltage Offset	Programmable Offset
8	Slew rate	1000 V/ms
9	Resolution of output generation	20 bits
10	Output noise	Below 5 mVpp
11	Connectors	BNC, 50 Ohme
User Control - analogue control		
12	DC in voltage	-5 to 5 V
13	Input connector	BNC, 50 Ohme
14	Gain	15

Piezoelectric Motion - LT




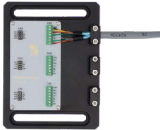
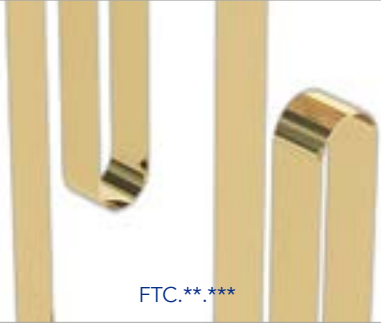


Piezoelectric Motion - LT



Product Family of LT · Piezoelectric Motion Accessories

Accessories product line.

Table, Accessories Line of Piezoelectric Motion @LT

	Adapt Plate				Flexible Thermal Connection		Tool Box	
Category								
	Interconnect	Vertical Orientation	Installation Plate	PinsPlate	FTC.**,***		PM.LT.ToolBox.Basic	PM.LT.ToolBox.Pro
Application	Used to mount positioner with cross-mounting of different series positioner	Used to mount positioner with vertical orientation	Used to directly connect on an optic table for positioner	Used to directly connect on an optic table for positioner	Used to keep sample cold when piezoelectric positioner moving in vacuum environment		Basic version of ToolBox	Pro version of ToolBox

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# Adapter Plate - Guidance for MultiFields Low Temperature Piezoelectric Positioners Interconnect

Positioner on the topside ↓	Linear16-z	Linear16-x	Linear25	Linear35	Linear55	Rotator16			Rotator25	Rotator35	Goniometer25	Gonimeter35	Scanner16	Scanner25	Scanner55
Linear16-z			AP.LT.L16z	AP.LT.L16z	AP.LT.L16z				AP.LT.L16z	AP.LT.L16z	AP.LT.L16z			AP.LT.L16z	AP.LT.L16z
Linear16-x	✓	✓	✓	✓	✓				✓	✓	✓	✓		AP.LT.L16x	AP.LT.L16x
Linear25			✓	✓	✓					✓	*	*		*	✓
Linear35				✓	✓							*			✓
Linear55					✓										
Rotator16									AP.LT.R16	AP.LT.R16	AP.LT.R16	AP.LT.R16			
Rotator25			✓	✓	✓					*	*	*		*	✓
Rotator35				✓	✓							*			✓
Goniometer25			✓	✓	✓					✓	✓	*		*	✓
Gonimeter35				✓	✓							✓			✓
Scanner16	✓	✓	AP.LT.S16	AP.LT.S16	AP.LT.S16							AP.LT.S16	AP.LT.S16	AP.LT.S16	AP.LT.S16
Scanner25			✓	✓	✓						✓	✓			
Scanner55					✓										
Positioner on the bottom ⇨	Linear16-z	Linear16	Linear25	Linear35	Linear55	Rotator16			Rotator25	Rotator35	Goniometer25	Gonimeter35	Scanner16	Scanner25	Scanner55

This table gives a comprehensive guide for two same or different positioners connect to each other. The left column positioners are selected on topside, while the top row positioners are selected as the bottom one.

There are three conditions when two MultiFields Positioners Mount together, including

- (1) ✓ do not need extra plate to connect.
- (2) \* do not need extra plate to connect. Though this mounting form is workable in specific cases, we don't recommend this connection arrangement.
- (3) " AP.LT.\*\*\*\* " the part name of adapter plates needed to connect with each other.
- (4) "Blank-cell", means this mounting form should be avoid.

Piezoelectric Motion - LT

Piezoelectric Motion - LT

# Accessories - Adapter Plate - Interconnect

Piezoelectric Motion - Low temperature series - Accessories

Adapter plates designed for MultiFields piezoelectric motion units



## Adapter Plates for MultiFields Piezoelectric Positioners

	Part Name	Discription
Linear16-z	AP.LT.L16z	Adapter Plate Used to mount Linear16-z on other MultiFields positioners
Linear16-x	AP.LT.L16x	Adapter Plate Used to mount Linear16-x on other MultiFields positioners
Rotator16	AP.LT.R16	Adapter Plate Used to mount Rotator16 on other MultiFields positioners
Scanner16	AP.LT.L25	Adapter Plate Used to mount Scanner16 on other MultiFields positioners

Adapter Plates are Used to Mount MultiFields Piezoelectric Positioners with Cross-mounting of Different Series Positioners. 1. All the adapter plates are fabricated by pure Ti metal.  
2. Non-magnetic screws are included when you purchase the adapter plate set.

## Accessories - Adapter Plate - Vertical Orientation

Piezoelectric Motion - Low temperature series - Accessories

Adapter plates designed for mounting MultiFields motion units with vertical orientation



Adapter Plates are Used to Mount MultiFields Piezoelectric Positioners with Vertical Orientation.

1. All the adapter plates are fabricated by pure Ti metal.
2. Non-magnetic screws are included when you purchase the adapter plate set.
3. All the positioners, which are able to be used when it is tilted 90°, have been listed following. The absent ones mean they are not recommended to be tilted by 90°

Adapter Plates for MultiFields Piezoelectric Positioners

	Part Name	Discription
Linear16-z	APLT.L16z-v	Adapter Plates Used to Title Linear16-z by 90°
Linear16-x	APLT.L16x-v	Adapter Plates Used to Title Linear16-z by 90°
Rotator16	APLT.R16-v	Adapter Plates Used to Title Rotator16 by 90°
Linear25	APLT.L25-v	Adapter Plates Used to Title Linear25 by 90°
Linear35	APLT.L35-v	Adapter Plates Used to Title Linear35 by 90°
Linear55	APLT.L55-v	Adapter Plates Used to Title Linear55 by 90°
Rotator25	APLT.R25-v	Adapter Plates Used to Title Rotator25 by 90°
Rotator25.Optic	APLT.R25.Optic-v	Adapter Plates Used to Title Rotator25.Optic by 90°
Rotator35	APLT.R35-v	Adapter Plates Used to Title Rotator35 by 90°
Goniometer25	APLT.G25-v	Adapter Plates Used to Title Goniometer25 by 90°
Goniometer35	APLT.G35-v	Adapter Plates Used to Title Goniometer35 by 90°

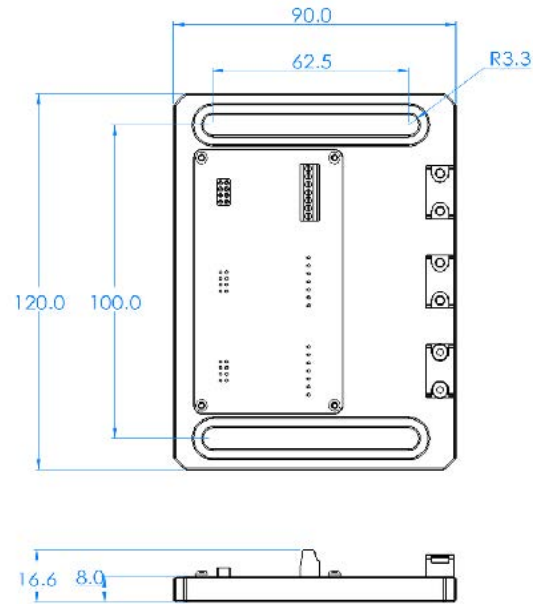
Piezoelectric Motion - LT

Piezoelectric Motion - LT

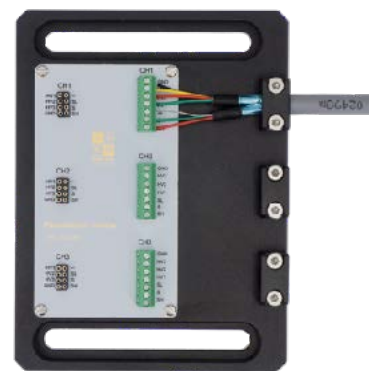
## Accessories - Adapter Plate - PinsPlate

Piezoelectric Motion - Low temperature series - Accessories

An adapter for MultiFields LT Motion Units to directly connect on an optic table.



AP.LT.PinsPlate

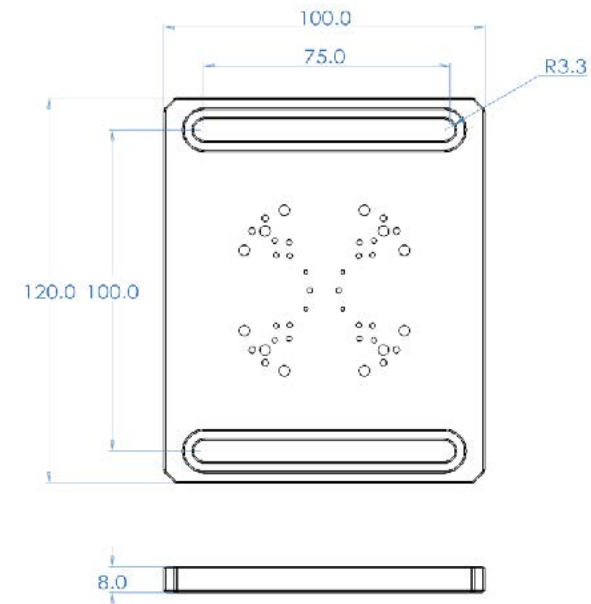


\* Real photos of AP.LT.PinsPlate, the cable in photo is PMC.cable supplied by MultiFields

## Accessories - Adapter Plate - Installation Plate

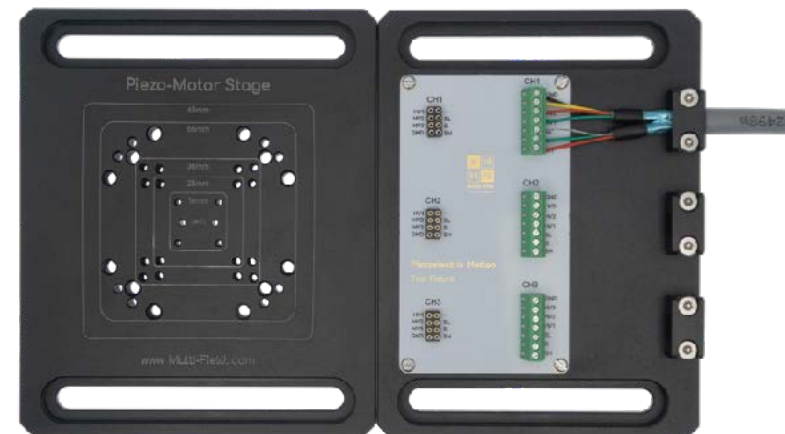
Piezoelectric Motion - Low temperature series - Accessories

An adapter for MultiFields LT Motion positioners to directly connect on an optic table.



AP.LT.InstPlate

\*the plate almost compatible with all the piezoelectric motion products of MultiFields.



\*Real photos, a combination of adapter AP.LT.InstPlate (left) and AP.LT.PinPlate (right)

# Accessories - Flexible Thermal Connection

Piezoelectric Motion - Low temperature series - Accessories

Built-in scan pattern & touch-screen directly control every channel



Flexible thermal connection set are used to keep sample cold when piezoelectric positions moving in vacuum environment . Higher thermal conductivity is always welcomed in low temperature experiments for a lower base temperature. And a flexible structure guarantees the device won't consumes excessive load capacity.

1. All the adapter plates are fabricated by pure non-magnetic metal.
2. Non-magnetic screws are included when you purchase the flexible thermal connection set.

## Flexible Thermal Connection Set for Positioners

	FTC16.***	FTC25.***	FTC35.***	FTC55.***
Description	Designed for 16mm Linear and Scanner series stack	Designed for 25mm Linear and Scanner Series Stack	Designed for 35mm Linear, Goniometer and Scanner Series Stack	Designed for 55mm Linear and Scanner Series Stack
Size & Dimensions				
Footprint base plate	16 × 16 mm	25 × 25mm	35 × 35mm	55 × 55mm
Footprint top plate	16 × 16 mm	25 × 25mm	35 × 35mm	55 × 55mm
thickness, base plate	2.5 mm			
Thickness, top plate	4 mm			
Length copper coupling foil	35 mm; 65 mm; 100 mm version			
Working Conditions				
Temperature range	10 mK to 420 K			
Pressure conditions	Ambient, HV, UHV			
Use in magnetic field	max. 18 Tesla			
Cernox Sensor & Heater				
Temperature Range	1.6 K to 420 K			
Wires	Thermometers, 4 Pins; Heater, 2pins; Pure copper wires,36 awg			
Heater Resistance	25 Ohm			
Heater Power	Max. 50W			
Thermal Conductivity @300 K	FTC**.035mm, 40 mW/K FTC**.065mm, 29 mW/K FTC**.100mm, 16 mW/K			

Piezoelectric Motion - LT

Piezoelectric Motion - LT

## Accessories - ToolBox.Basic

Piezoelectric Motion - Low temperature series - Accessories

The basic version of ToolBox is supplied



PM.LT.ToolBox.Basic



### ToolBox.Basic-2

items	Specification	Quantity
1 Screws -BeCu	Compatible with 30 mK & 18 Tesla M1.6, M2 suitable	One set
2 Connectors	Compatible with 30 mK & 18 Tesla	One set
	PA - standard 2pins, 3pins and 4pins	
	Peek - UHV compatible 4pins - BeCu pins, Peek main body	
3 Tools	Multifunction screw driver Tweezers	One set
4 USB-Driver	Manual, software etc.	1 pc

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