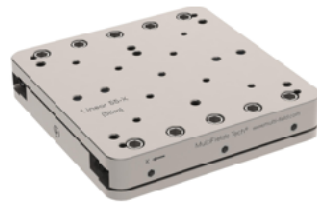


"55mm Series" – Linear55-x (closed-loop)

Low Temperature · Piezoelectric Motion- Linear Series

Max-load linear stage with closed-loop control

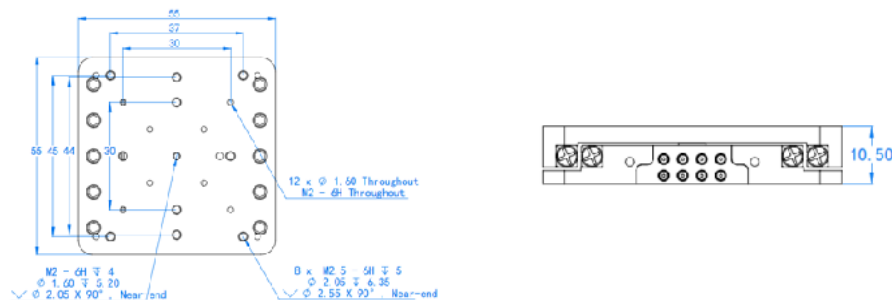


Linear55-x-Slim.HV

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 × height	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