



芯明天
COREMORROW

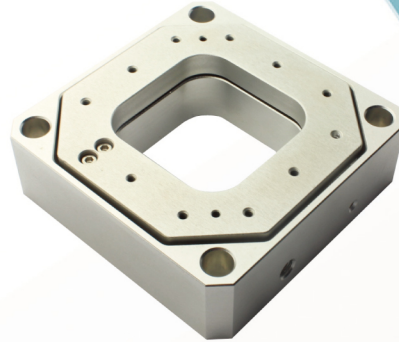


Piezo Nanopositioning Scanners

N12.X/N12.Z/N12.XY/N12.XZ/N12.XYZ

Features

- Max travel range 110μm
- Open/closed loop
- Aperture: 45×45mm
- Max load 0.7kg



1-3 axes

N12 series piezo nanopositioning stages including X, Z, XY, XZ, XYZ versions are optional.

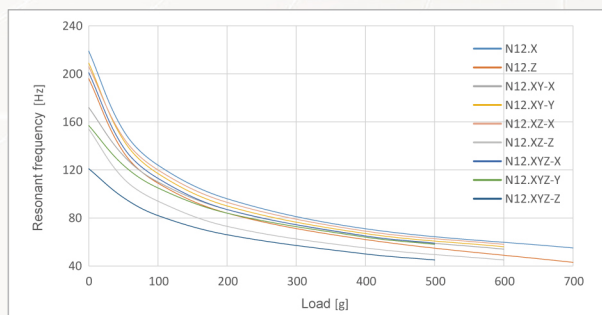
Closed-loop sensing positioning accuracy

N12 piezo nanopositioning scanner is equipped with a high-resolution sensor, which detects the position in real time and feeds it back to the piezo controller. The controller adjusts the voltage correction displacement through the PID algorithm to achieve high-precision positioning.

N12.XYZ piezo nanopositioning scanner Supporting CoreMorrow E72 Series piezo controller is applied to optical microscopy imaging to achieve XYZ axis precision scanning.



Frequency vs Loading



Recommend Controllers

E00/E01	E72	E53
1~3 channels Computer software, Analog input, Rotary knob Open/closed loop Ave. power: 35W/7W	1~3 channels Computer software, Analog input Open/closed loop Ave. power: 6W	1 channel Computer software, Analog input Open/closed loop Ave. power: 10W

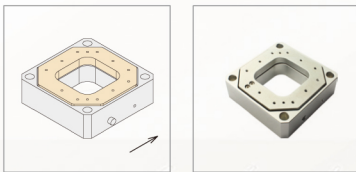
Technical data

Models	End with S: Closed-loop End with K: Open-loop	N12.X100S N12.X100K	N12.Z100S N12.Z100K	N12.XY100S N12.XY100K	N12.XZ100S N12.XZ100K	N12.XYZ100S N12.XYZ100K	Units
Active axes		X	Z	X, Y	X, Z	X, Y, Z	
Nominal travel range(0~120V)		80	80	80/axis	80/axis	80/axis	$\mu\text{m}\pm 20\%$
Max travel range(-20~150V)		110	110	110/axis	110/axis	110/axis	$\mu\text{m}\pm 20\%$
Integrated sensor		SGS/-	SGS/-	SGS/-	SGS/-	SGS/-	
Aperature		45x45	45x45	45x45	45x45	45x45	mm
Closed/open loop resolution		7/4	7/4	7/4	7/4	7/4	nm
Closed-loop linearity		0.1/-	0.1/-	0.1/-	0.1/-	0.15/-	%F.S.
Repeatability		0.04/-	0.04/-	0.05/-	0.05/-	0.1/-	%F.S.
Pitch/Yaw/Roll		<10	<10	<15	<15	<20	μrad
Push/pull force capacity		30/10	30/10	25/8	25/8	20/4	N
Stiffness in motion direction		0.3	0.3	X0.25/Y0.3	X0.3/Z0.25	X0.3/Y0.25/Z0.2	N/ $\mu\text{m}\pm 20\%$
Unloaded resonant frequency		230	200	X170/Y200	X200/Z150	X200/Y150/Z120	Hz $\pm 20\%$
Closed/open-loop unloaded Step time		10/0.8	10/0.8	15/0.8	15/0.8	30/0.8	ms $\pm 20\%$
Closed-loop Unloaded operating frequency	10% Travel	60	65	55	50	30	Hz $\pm 20\%$
	100% Travel	8	8	7	6	4	
Load capacity		0.7	0.7	0.7	0.7	0.5	kg
Electrical capacitance		1.8	1.8	1.8/axis	1.8/axis	1.8/axis	$\mu\text{F}\pm 20\%$
Material	Aluminum, Steel						
Mass		240	240	290	290	350	g $\pm 5\%$

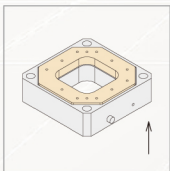
The technical data are measured by Coremorrow E00 series piezo controller.

Drawings

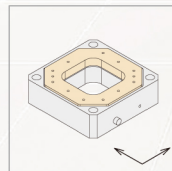
N12.X



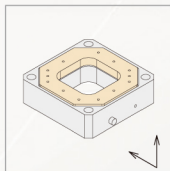
N12.Z



N12.XY



N12.XZ



N12.XYZ

