芯明天
COREMORROW

ISO 9001 QUALITY MANAGEMENT SYSTEM

Piezo Nanopositioning Stages

P63.X/P63.Z/P66.XY/P66.XZ/P63.XYZ

Features

- 1~3 axes
- Travel range to 8μm
- Max load 0.8kg
- Strain Sensors for High Accuracy

1–3 axes

P63 series piezo nanopositioning stages including X, Z, XY, XZ, XYZ versions are optional. Ultra-small size is easy to integrated equipment.

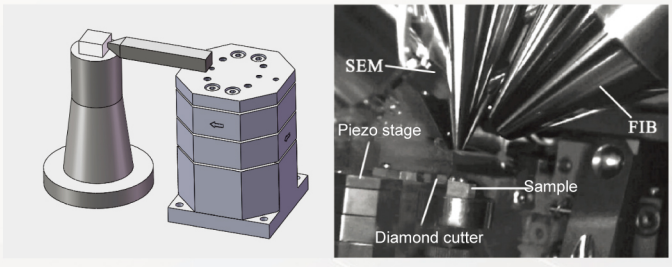
Small size, high precision quick response

The size of the P63 series three-dimensional version P63.XYZ is only 30×30×42mm, P63.XY version is only 30×30×21mm, very easy to integrate into scanning device.

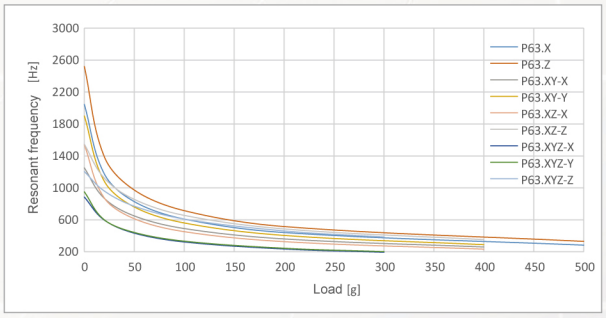
P63 is based on an ultra-fast piezo drive scanning stage design and is equipped with a strain sensing position sensor. This gives it higher motion linearity, long-term stability, phase fidelity, and a stronger, faster-response servo closed-loop control.

Examples of applications

P63.XYZ has been applied in cutting force testing experiments based on SEM on-line nanometer cutting platforms.



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

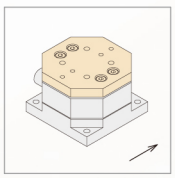
Technical data

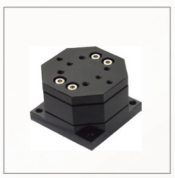
Models	End with S: Closed-loop End with K: Open-loop	P63.X7S P63.X7K	P63.Z7S P63.Z7K	P63.XY7S P63.XY7K	P63.XZ7S P63.XZ7K	P63.XYZ7S P63.XYZ7K	Units
Active axes		X	Z	X, Y	X, Z	X, Y, Z	
Nominal travel range(0~120V)		5.5	5.5	5.5/axis	5.5/axis	5.5/axis	μm±20%
Max travel range(-20~150V)		8	8	8/axis	8/axis	8/axis	μm±20%
Integrated sensor		SGS/-	SGS/-	SGS/-	SGS/-	SGS/-	
Closed/open loop resolution		0.2/0.1	0.2/0.1	0.2/0.1	0.2/0.1	0.2/0.1	nm
Closed-loop linearity		0.2/-	0.2/-	0.2/-	0.2/-	0.2/-	%F.S.
Repeatability		0.1/-	0.1/-	0.1/-	0.1/-	0.15/-	%F.S.
Pitch/Yaw/Roll		<5	<5	<10	<10	<15	μrad
Push/pull force capacity		10/2	12/2	8/2	9/2	7/2	N
Stiffness in motion direction		1.5	2	X1.2/Y1.4	X1.2/Z1.5	X0.9/Y1/Z1.2	N/μm±20%
Unloaded resonant frequency		2	2.5	X1.3/Y1.9	X1.5/Z1.6	X0.9/Y0.95/Z1.2	kHz±20%
Closed/open-loop unloaded Step time		1.5/0.3	1.5/0.3	1.5/0.3	1.5/0.3	1.5/0.3	ms±20%
Closed-loop Unloaded operating frequency	10% Travel	1000	1000	500	500	200	Hz±20%
	100% Travel	200	200	100	100	50	
Load capacity		0.8	0.8	0.5	0.5	0.4	kg
Electrical capacitance		0.8	0.8	0.8/axis	0.8/axis	0.8/axis	μF±20%
Material		Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
Mass		70	70	120	120	160	g±5%

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

Drawings

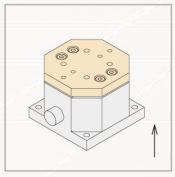
P63.X



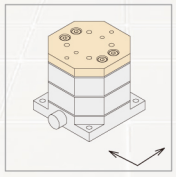


Models	L(mm)
P63.X	21
P63.Z	24
P63.XY	30
P63.XZ	33
P63.XYZ	42

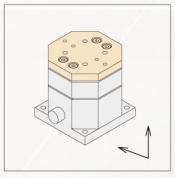
P63.Z



P63.XY



P63.XZ



P63.XYZ