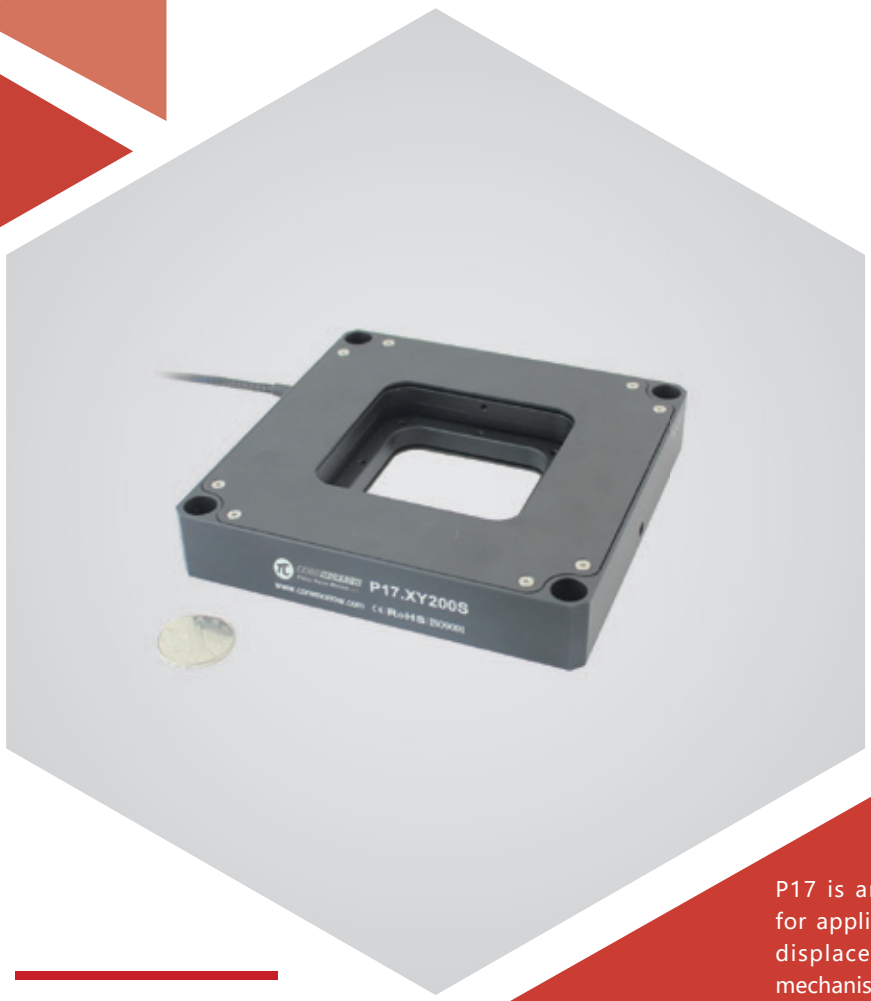
COREMORROW
Piezo Nano Motion

Make Your Motion and Control More Accurate!

# XY axes | P17.XY200S/K

## Piezo Nanopositioning Stages




## Introduction

P17 is an XY scanning stage specially developed for applications requiring large aperture and large displacement. The scanner adopts amplification mechanism and built-in high-reliability piezo actuators, which could realize the scanning range of 187.5μm. It has been widely used in the fields of precise positioning and scanning microscopy .

## Characteristics »

- Max stroke to 187.5μm
- Load capacity up to 1kg
- Aperture: 60×60mm
- Closed loop for high Repeatability
- Fast response time

## Applications »

- Scanning microscopy
- Surface inspection
- Micromanipulation
- Image processing and stabilization
- Wafer positioning
- Interference

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## Technical Data »

| Type / S-Closed loop K-Open loop | P17.XY200S | P17.XY200K | Units |
|---|---|---|---|
| Active axes | X, Y | X, Y | |
| Travel rang(0~120V) | 150/axis | 150/axis | μm±10% |
| Travel rang(0~150V) | 187.5/axis | 187.5/axis | μm±10% |
| Sensor | SGS | - | |
| Aperture | 60×60 | 60×60 | mm |
| Resolution | 5 | 1.5 | nm |
| Closed-loop linearity | 0.1 | - | %F.S. |
| Repeatability | 0.05 | - | %F.S. |
| Pitch/yaw/roll | <15 | <15 | μrad |
| Push/pull force capacity | 40/15 | 40/15 | N |
| Stiffness | X0.2/Y0.2 | X0.2/Y0.2 | N/μm±20% |
| Unloaded resonant frequency | X240/Y400 | X240/Y400 | Hz±20% |
| Closed-loop operating frequency (-3dB) | 25 (@28g load) | - | Hz±20% |
| Closed/open-loop unloaded step time | 30 | 5 | ms±20% |
| Load capacity | 1 | 1 | kg |
| El. capacitance | 3.6/axis | 3.6/axis | μF±20% |
| Operating temperature[1] | -20~80 | -20~80 | ℃ |
| Material | Steel, Al | Steel, Al | |
| Size(L×W×H) | 140×140×25 | 140×140×25 | mm |
| Mass | 660 | 660 | g±5% |
| Cable length[2] | 1.5 | 1.5 | m±10mm |
| Connector[2] | - | - | |

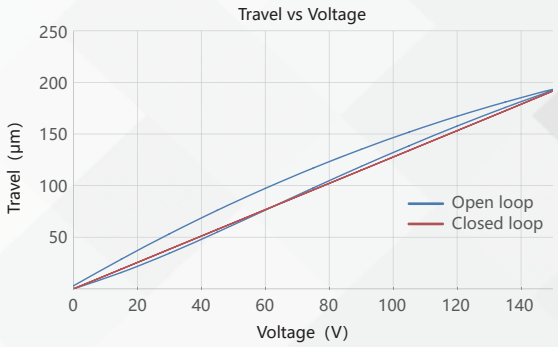
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation.Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

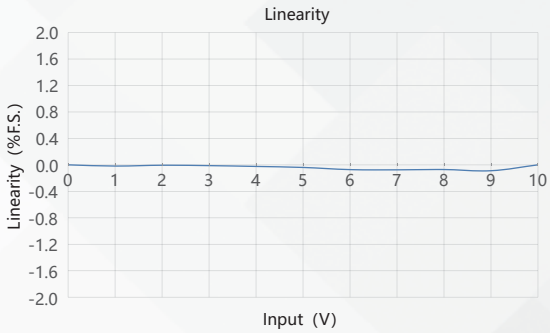
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20μm, and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

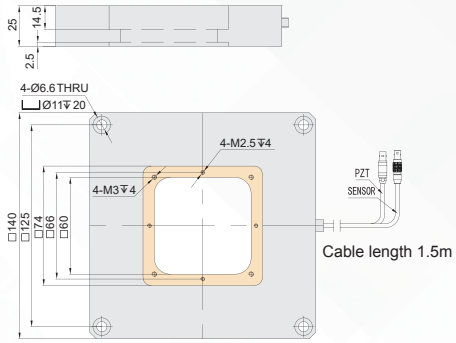
## Curves »




Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

## Drawing »




## Recommended Controllers »

**E01.D3**
LCD, membrane button, up to 625mA
RS-232/RS-422/USB interface
Software secondary development

**E70**
Small size, 70mA/channel
RS-232/RS-422/USB interface
Software secondary development

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