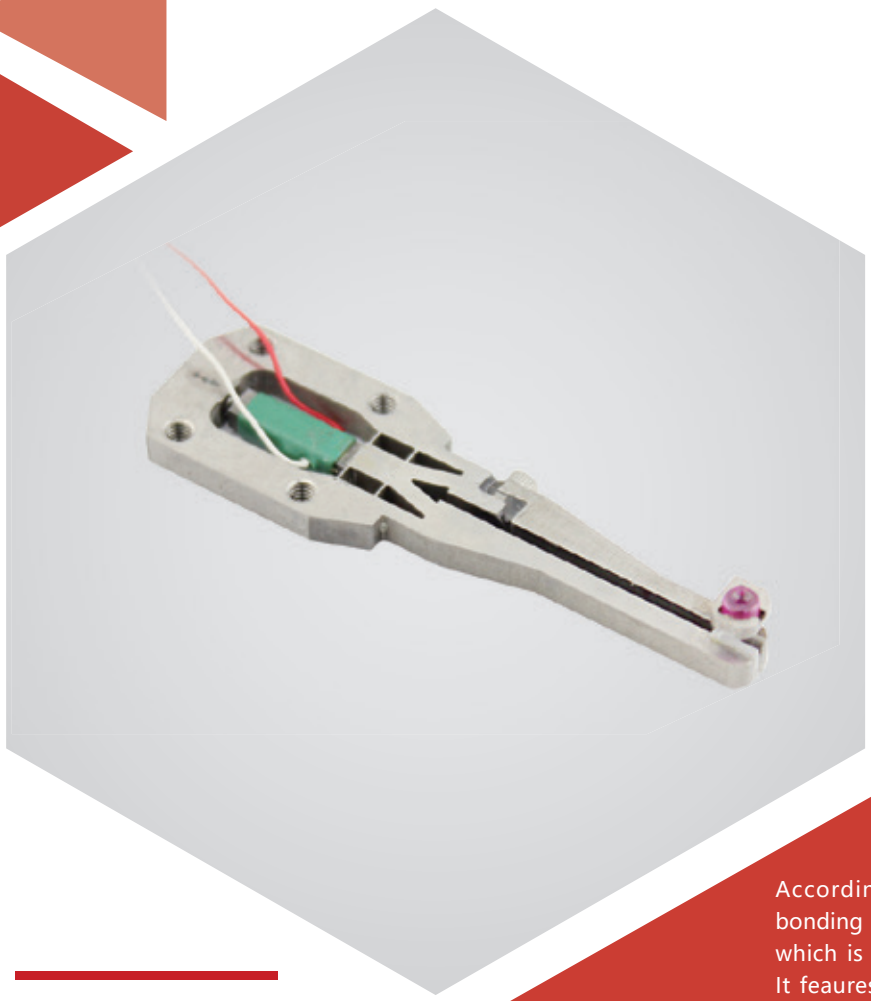
COREMORROW
Piezo Nano Motion

Make Your Motion and Control More Accurate!

X axis | XD002.90K

Piezo Clamps / Piezo Forceps



Introduction

According to the requirements of automatic wire bonding machine, CoreMorrow produces piezo clamp, which is designed and developed for clamping wire. It feaures a simple structure, fast response and high resolution.

Characteristics »

- X axis motion
- Displacement to ±50μm
- Sub-millisecond response time
- Resonant frequency to 1.5kHz
- Small size

Applications »

- Probe scanning
- Fiber stretching
- Micro-scanning
- Flow measurement technology
- Optical mirrors positioning
- Diamond turning
- laser cavity tuning
- Inkjet technology

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Technical Data »

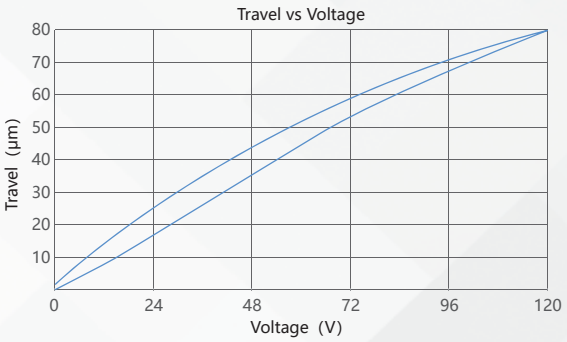
Type	XD002.90K	Unit
Active axes	X	
Travelrange(0~120V)	±40	μm±20%
Travel range(0~150V)	±50	μm±20%
Push/pull force capacity	10/1	N
Stiffness	0.04	N/μm±20%
Unloaded resonant frequency	1500	Hz±20%
Unloaded step time	0.7	ms±20%
Unloaded operating frequency	300	Hz
Load capacity	0.05	kg
El. capacitance	0.18	μF±20%
Material	Steel	
Mass	10	g±5%
Power-on jaw status	Open	
Operating temperature[1]	-20~80	℃
Cable length[2]	0.15	m±10mm
Voltage connector[2]	Bare wire	

Note: Max driving voltage could be -20V~150V, recommended voltage 0~120V for long-term and high-reliable operation to extend lifetime. Technical data is measured by CoreMorrow E00/E01 series piezo controller.
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.
[2] Custom cable length and connector is available.
Note: The parameters mentioned above are related to the test environment and test equipment.

Principle »

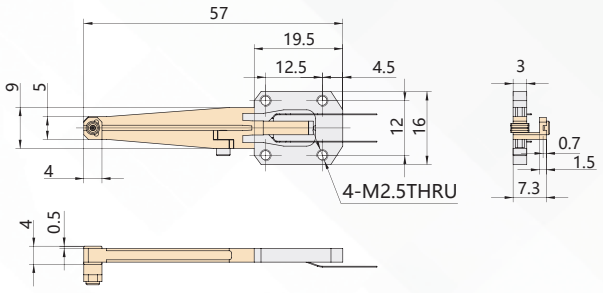
The structure of piezo clamp is composed of piezo stack, flexible mechanical structure, fixed jaw and adjustable jaw. Piezo stack is installed between clamping jaw and the base. When voltage is applied to piezo stack, the output displacement of the piezo stack is amplified by the lever arm of the clamping jaw and outputed in the top end of the clamp. Clamp closed. After the voltage is removed, the of clamp jaws return to initial position, and the clamp is opened to allow the lead to pass freely.

Curves »



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

Drawing »



Recommended Controllers »

E53.A
Small size, easy integration, open loop
1-channel output, Ave. current 60mA
Analog control

E63.C
Small volume, single channel, open loop
1-channel output, Ave. current 2.5mA
USB

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