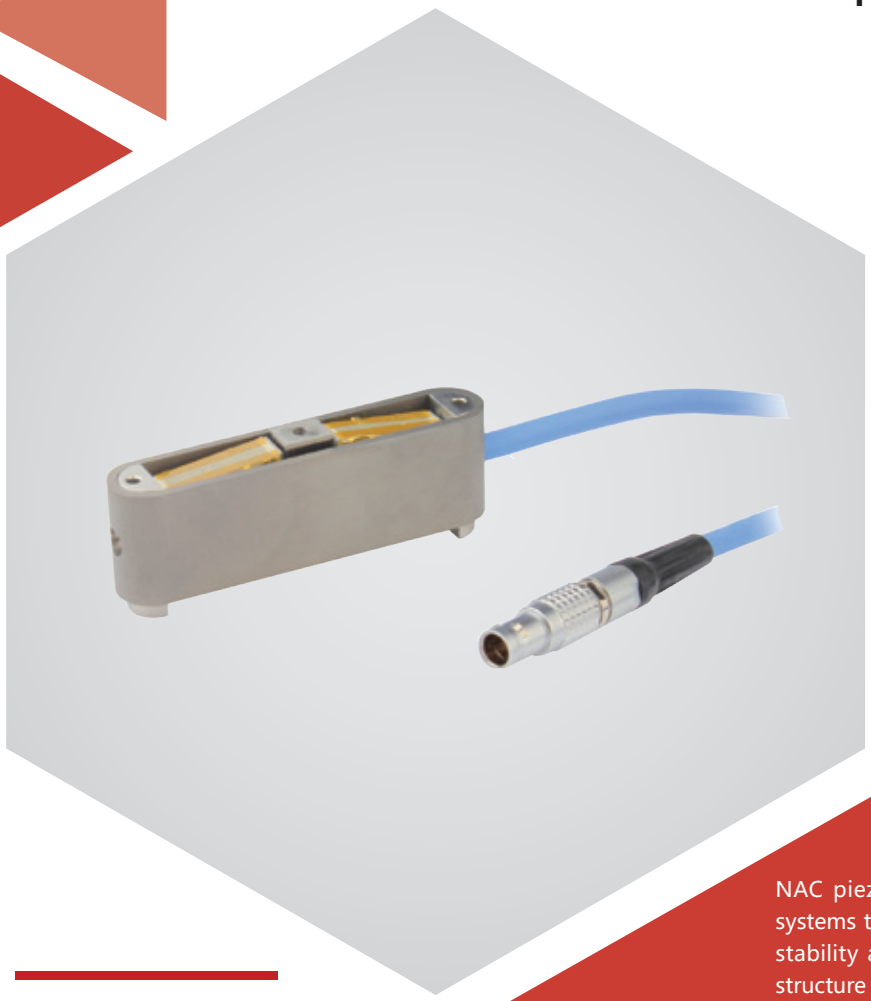
COREMORROW
Piezo Nano Motion

Make Your Motion and Control More Accurate!

X axis | NAC2641

Amplified Piezo Actuators



Introduction

NAC piezo amplified actuators are very suitable for systems that require lighter actuators with temperature stability and high resonance frequencies. The unique structure makes the actuator more compact.

Characteristics »

- Light weight, optimized rigidity
- High vacuum version is available
- Temperature stability
- Non magnetic
- Push and pull have the same level of performance
- High resonance frequency and thus large operating bandwidth

Applications »

- Nanometer positioning
- Biomedicine
- Microscope
- Precision finishing
- Vibration control
- Quick acting valve
- Optics

Harbin Core Tomorrow Science & Technology Co., Ltd.

Tel: +86-451-86268790
Fax: +86-451-86267847
Email: info@coremorrow.com
Web: www.coremorrow.com
Headquarters: Building I2, No.191 Xuefu Road, Nangang District, Harbin
Shanghai Office: Building 2, No.608 Shengxia Road, Pudong District, Shanghai

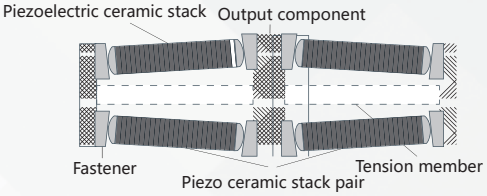
Technical Data »

Type	NAC2641	Units
Active axes	X	
Wide W×Leight L	14×70.5	mm±0.1
Height H1/H2	26.1/24.2	mm±0.3
Operating voltage	200	V
Displacement	±150	μm±15%
Stiffness(in the middleposition, up to 250N)	1.3	N/μm±15%
Blocking force	250	N
Mass(mechanism + lead)	84+60	g±10%
Unloaded resonant frequency	1700	Hz
El. capacitance	2×3.6	μF±15%
Operating temperature	-20~+150	℃

Note: Specified for room temperature and static operating.

Principle »

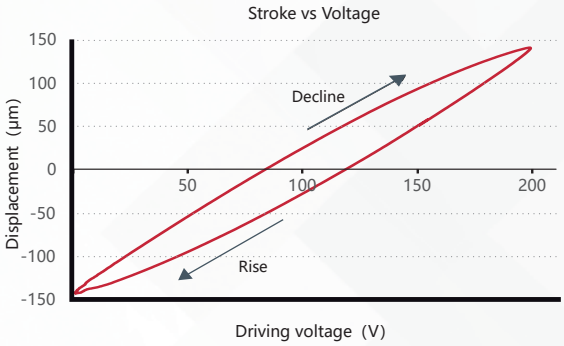
NAC piezo amplified actuators are based on four piezo stacks, in pairs connection. Each piezo stack is hinged at its end at a small angle. When the voltage applied to one pair of piezo stacks increases, the other pair voltage on the piezo stack decreases. This facilitates the movement of the output member in one direction. Be aware that in the case of free displacement, the tension in the piezo stack and the tension member remain almost constant. This means that the strain is directly derived from the piezo stack to the output. In addition, the structure will not withstand high bending forces, because it is not easy to fatigue.

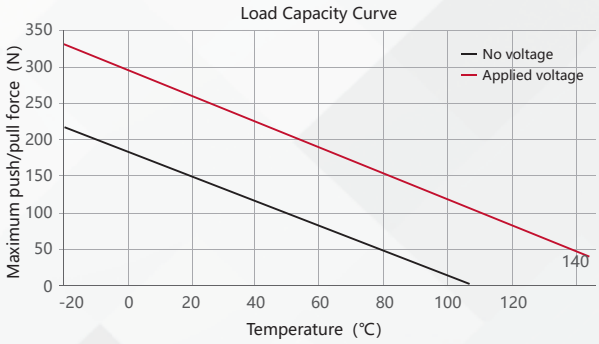


Warning: Avoid putting extra pressure on the actuator, for example:

- Push/pull and bend between two points of the fixed interface
- Lateral force and bend on the moving surface

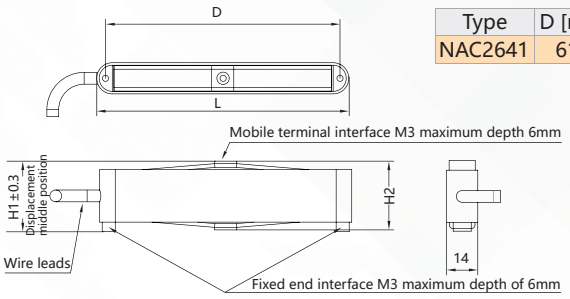
Curves »





Disclaimer: This data curve is a typical data curve for reference only. Performance data will vary from batch to batch.

Drawing »



Type	D [mm]
NAC2641	61.5

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

Harbin Core Tomorrow Science & Technology Co., Ltd.

Tel: +86-451-86268790
Fax: +86-451-86267847
Email: info@coremorrow.com
Web: www.coremorrow.com
Headquarters: Building I2, No.191 Xuefu Road, Nangang District, Harbin
Shanghai Office: Building 2, No.608 Shengxia Road, Pudong District, Shanghai