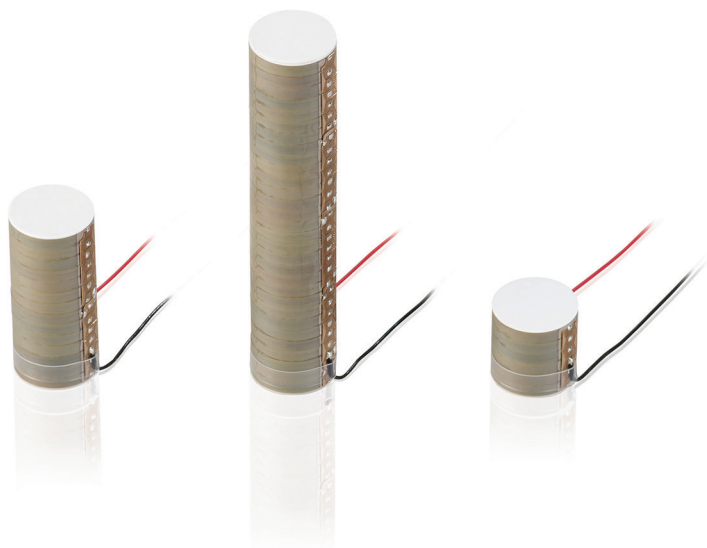


Round PICMA® Stack Multilayer Piezo Actuator

High Blocking Force



P-088

- Superior lifetime
- Ideal for dynamic operation
- Flexible, adaptable overall height
- OEM versions available without stranded wires
- UHV-compatible to 10^{-9} hPa

Multilayer stack actuators

The actuators are easily scaled, thanks to the stacked construction, flexible adaptation of the travel range is possible. The round cross section ensures easy integration. UHV-compatible to 10^{-9} hPa. The actuators do not outgas and can be baked out at high temperatures.

PICMA® piezo linear actuators

Low operating voltage -20 to 100 V. Ceramic insulation. High reliability, long lifetime.

Possible modifications

Different heights, fast mounting according to customer requirements. Variety of shapes. Precision-ground end plates for reduced tolerances Spherical tips.

Fields of application

Industry and research. For laser tuning, microdispensing, life sciences.

Specifications

	P-088.721	P-088.741	P-088.781	Unit	Tolerance
Dimensions OD × L	16 × 16	16 × 36	16 × 77	mm	
Nominal travel range	14	32	70	μm	-10 % / +20 %
Blocking force	7500	7500	7500	N	
Stiffness	535	235	105	N/μm	
Electrical capacitance	13	30	68	μF	±20 %
Resonant frequency	68	35	17	kHz	±20 %

Nominal travel range, blocking force and stiffness at 0 to 100 V.

Axial resonant frequency: Measured at $1 V_{pp}$, unloaded, unclamped. The value is halved for unilateral clamping.

Electrical capacitance: Measured at $1 V_{pp}$, 1 kHz, RT.

Piezo ceramic type: PIC252. ceramic end surfaces made of Al_2O_3 .

Standard connections: PTFE-insulated stranded wires, UHV compatible, 100 mm, AWG 28, \varnothing 0.69 mm. For optional solderable contacts without stranded wires, change the last digit of the product number to 0 (e.g., P-088.720).

Operating voltage range: -20 to 100 V.

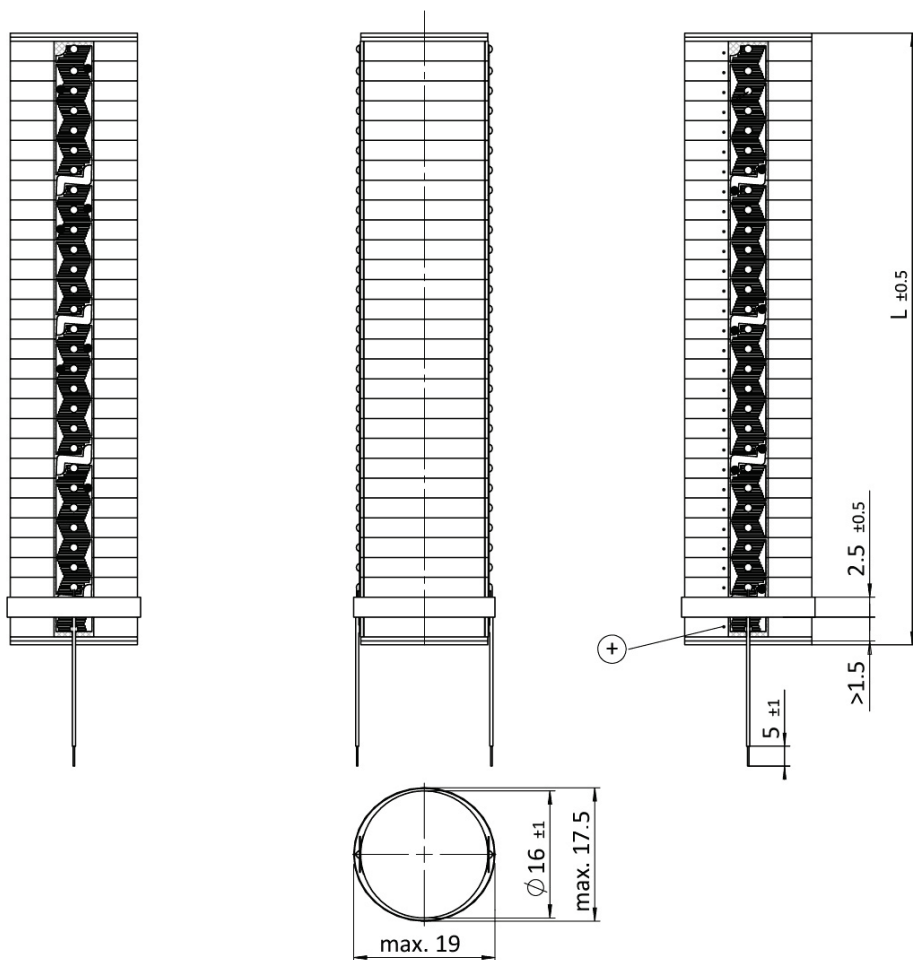
Operating temperature range: -40 to 150 °C.

Recommended preload for dynamic operation: 15 MPa.

Maximum preload for constant force: 30 MPa.

Ask about custom designs!

Drawings / images



P-088 PICMA® Stack multilayer piezo actuator, dimensions in mm. Length L, see data table.

Ordering Information

Actuators with PTFE-insulated stranded wires

P-088.721

PICMA® Stack multilayer piezo actuator, round cross section, 14 µm travel range, OD 16 mm × L 16 mm, stranded wires

P-088.741

PICMA® Stack multilayer piezo actuator, round cross section, 32 µm travel range, OD 16 mm × L 36 mm, stranded wires

P-088.781

PICMA® Stack multilayer piezo actuator, round cross section, 70 µm travel range, OD 16 mm × L 77 mm, stranded wires

Actuators with solderable contacts

P-088.720

PICMA® Stack multilayer piezo actuator, round cross section, 14 µm travel range, OD 16 mm × L 16 mm

P-088.740

PICMA® Stack multilayer piezo actuator, round cross section, 32 µm travel range, OD 16 mm × L 36 mm

P-088.780

PICMA® Stack multilayer piezo actuator, round cross section, 70 µm travel range, OD 16 mm × L 77 mm

Ask about custom designs!