**Round PICMA® Multilayer Bender Actuators**

*All-Ceramic Bending Actuators with High Displacement*

**PD410**
- Displacement to 480 µm
- Fast response in the ms range
- Nanometer resolution
- Low operating voltage
- UHV-compatible to 10⁻⁹ hPa

**PICMA® multilayer bender elements with high reliability**
Operating voltage 0 to 60 V. Bidirectional displacement, bimorph design. Ceramic insulation, polymer free. UHV-compatible to 10⁻⁹ hPa, no outgassing, high bakeout temperature. Reliable even under extreme conditions.

**Fields of application**
Industry and research, vacuum. For medical technology, laser technology, sensor technology, automation tasks, pneumatic valves.

**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>Displacement</th>
<th>Dimensions OD × ID × TH</th>
<th>Blocking force</th>
<th>Electrical capacitance</th>
<th>Resonant frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD410.10</td>
<td>±240</td>
<td>44 mm × 7 mm × 0.65 mm</td>
<td>±16</td>
<td>2 × 9.5</td>
<td>1000</td>
</tr>
</tbody>
</table>

Displacement: Tolerance ±20%.
Blocking force: Tolerance ±20%.
Electrical capacitance: Measured at 1 Vpp, 1 kHz, RT, tolerance ±20 %.
Resonant frequency: Measured at 1 Vpp restraint with rotatable mounting on the outer circumference, tolerance ±20 %.
Piezo ceramic type: PIC252.
Standard connections: Solderable contacts (PD410.10) or PTFE-insulated stranded wires, UHV compatible, 100 mm, AWG 32, Ø 0.49 mm (PD410.11).
Operating voltage range: 0 to 60 (±30) V.
Operating temperature range: -20 to 150 °C.
Recommended mounting: Epoxy resin adhesive.
All specifications depend on actual clamping conditions and mechanical load applied.

Custom designs or different specifications on request.
PD410 round PICMA® Bender, dimensions in mm. ID, OD, TH, see data table.

Ordering Information

**Round PICMA® Bender actuators**

**PD410.10**
Round PICMA® multilayer piezo bending actuator, ±240 µm travel range

**Round PICMA® Bender actuators with PTFE-insulated stranded wires**

**PD410.11**
Round PICMA® multilayer piezo bending actuator, ±240 µm travel range, stranded wires

Custom designs or different specifications on request.