

## PZ 700 SI

### *compact 1-axis translation stage*

#### **concept:**

The *PZ 700 SI* enables highly accurate positioning of the z-axis. The *PZ 700 SI* is driven by multilayer piezo ceramics. By using those ceramics in solid state flexure systems, motion without mechanical play is guaranteed. Based on its design the *PZ 700 SI* is pre loaded and can be used dynamically.

#### **specials:**

The *PZ 700 SI* offers a long travel range of up to 700 µm and an inside aperture of 70 mm x 70 mm.

#### **interfaces:**

The *PZ 700 SI* is equipped with threaded holes on the top plate to for the mounting of different components. For mounting the system on a support element the *PZ 700 SI* contains four counter-sunk holes.

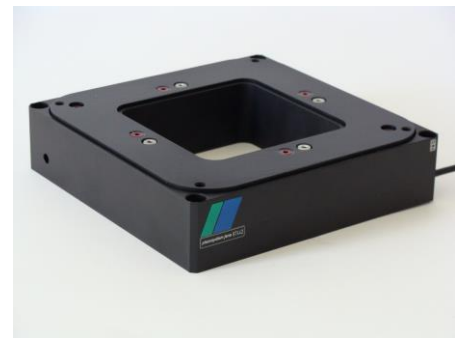


image: PZ 700 SI

#### *product highlights:*

- highly accurate and fast motion for high masses
- inside aperture
- generous travel range of up to 700 µm
- motion without mechanical play because of solid state hinges
- easily combined with other piezoelectrical systems

#### *applications:*

- metrology
- material testing

## PZ 700 SI

### technical data

linear positioning stage	unit	PZ 700 SI
<b>part no.:</b>		<b>S-605-90</b>
<b>axes</b>	-	Z
<b>motion open (<math>\pm 10\%</math>)/closed loop*</b>	$\mu\text{m}$	700/ -
<b>capacitance (<math>\pm 20\%</math>)**</b>	$\mu\text{F}$	34.8
<b>resolution (open/closed loop)***</b>	nm	1.4/ -
<b>feed back sensor</b>	-	-
<b>typ. repeatability</b>	nm	-
<b>typ. non-linearity</b>	%	-
<b>resonant frequency (unloaded)</b>		230
loaded with 100 g	Hz	185
loaded with 300 g		135
<b>max. push/pull forces</b>	N	280
<b>stiffness</b>	$\text{N}/\mu\text{m}$	0.4
<b>voltage range</b>	V	-20...130V
<b>connector</b>	-	LEMO 05.302
<b>cable length</b>	m	1
<b>operating temperature</b>	$^{\circ}\text{C}$	-20 $^{\circ}\text{C}$ ... +80 $^{\circ}\text{C}$
<b>material</b>	-	aluminum/stainless steel
<b>dimensions (LxWxH)</b>	mm	120x112x28
<b>inside aperture</b>	mm	66x66

\* typical value measured with NV 40/3 amplifier (closed loop: NV 40/3 CLE amplifier )

\*\* typical value for small electrical field strength

\*\*\* The resolution is only limited by the noise of the power amplifier and metrology.

Rights reserved to change specifications as progress occurs without notice!