

## one-dimensional translation stages PZ 400 OEM

- accurate parallel motion in one direction because of parallelogram principles
- easy adjustment
- motion without any mechanical play because of solid state hinges
- integrated lever transmission
- motion up to 400  $\mu\text{m}$
- easily combined with other piezoelectric systems (especially xy and tilting systems)
- easily combined with mechanical positioning systems
- precision pin holes for accurate adjustment



### applications:

- optics, fiber positioning,
- laser optics
- scanning systems
- micro manipulation

Due to the nature of the solid state flexure and parallelogram construction, the travel of these stages is without mechanical play. A much higher resolution, achievable with mechanical or electromechanical systems, is possible. The PZ series stages can be easily combined with XY-elements of the XYZ series or with tilting piezoelectric modules of the series PSH to give positioning in all degrees of freedom. Dynamic work is possible.

The elements of the series PZ can be equipped with measurement systems (strain gauge or capacitive sensors) that overcome the effect of hysteresis.

series PZ OEM part no.		unit	PZ 200 S-626-00	PZ 200 SG S-626-01	PZ 400 S-628-00	PZ 400 SG S-628-01
motion**	open loop	$\mu\text{m}$	200	200	400	400
	closed loop	$\mu\text{m}$	-	160	-	320
integrated feedback system		-	-	strain gauge	-	strain gauge
max. load		N	100	100	100	100
max. voltage		V	150	150	150	150
capacitance each dir. *** (20%)		nF	2500	2500	14400	14400
resolution	open loop*	nm	0.3	0.3	0.75	0.75
	closed loop*	nm	-	3.0	-	7.5
typ. repeatability		nm	-	45	-	47
typ. non-linearity		%	-	0.05	-	0.06
resonant frequency		Hz	625	625	295	295
stiffness		N/ $\mu\text{m}$	0.3	0.3	0.37	0.37
force generation		N	75	75	100	100
dimensions	length L	mm	50	50	66	66
	width B	mm	16	16	20	20
	height H	mm	17	17	24	24
thread		mm	M4-6H x 5	M4-6H x 5	M4-6H x 6	M4-6H x 6
connector	voltage	-	LEMO 0S.302	LEMO 0S.302	LEMO 0S.302	LEMO 0S.302
	sensor	-	-	LEMO 0S.304	-	LEMO 0S.304
weight		g	140	165	155	175

\* measured with E-103-18 amplifier

\*\* typical value measured with -10 to +150 V

\*\*\* typical value for small electrical field strength