

# MICI 180

## Micrometer Screw Piezo Drive



*Motion up to 180  $\mu\text{m}$*



*High resonant frequency  
up to 580 Hz*



*Resolution to 0.4 nm*



*Can carry loads up to  
20 kgs*



The micrometer screw piezo drive MICI 180 is well suited for improving the positioning accuracy of linear stages.

The MICI 180 is a piezoelectrical actuator which, in combination with a micrometer screw is mounted onto a linear stage. Preadjustment is done by the measuring screw and the final fine adjustment is made by the MICI element. The piezoelectrical driven systems of the MICI series have been developed in a small and compact design, they offer a range of motion of 180  $\mu\text{m}$  in open loop. The resolution is in the sub-nm range.

The major advantage of the micrometer screw piezo drive MICI is that it can be easily installed into an existing system to achieve sub-nm resolution. The travel range of the micrometer screw should be shorter than the travel range of the linear stage.

### Variants:

- MICI 180
- MICI 180 SG

### Recommended Controller:

NV 200/D NET



E-730-820

### Applications

- Quality Control
- Automation
- Fine adjustment of optical components
- Micro assembly

# MICI 180

## Technical Data

		<i>Unit</i>	<i>MICI 180</i>	<i>MICI 180 SG</i>
Part #		-	S-704-00	S-704-01
Axis		-	Z	Z
Motion	open-loop ( $\pm 10\%$ )*	$\mu\text{m}$	180	180
	closed loop ( $\pm 0,2\%$ )*		-	144
Capacitance ( $\pm 20\%$ )**		$\mu\text{F}$	2.6	2.6
Integrated measurement system		-	-	SG
Resolution***	open-loop***	nm	0.4	0.4
	closed-loop***		-	4
Typ. Repeatability		nm	-	5
Typ. Non-Linearity		$\mu\text{m}$	-	0.1
Resonant frequency (w/o micrometer drive)		Hz	580	580
Stiffness		$\text{N}/\mu\text{m}$	0.61	0.61
Max. push forces		N	144	144
Max. pull forces		N	14	14
Voltage range		V	-20...+130	
Connectors	Voltage****	-	LEMO 0S.302	
	Sensor****	-	-	LEMO 0S.304
Cable length		m	1	1.2
Material		-	stainless steel	
Dimensions (l x w x h)		mm	64 x 27 x 35.4	
Weight (without micrometer drive)		g	165	170

***Disclaimer: MICI 180 Series is not available at the moment, please offer only with potential quantity.***

\* typical value measured with 0.3mV noise controller

\*\* typical value for small electrical field strength

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

\*\*\*\* digital Piezo with suffix ,D' comes with one 15 pins D-sub connector

For further product variations and recommended configurations, please contact our sales representatives.