

## MIPOS 600SG OEM

### *Microscope objective/ lens positioning system*

#### **Concept:**

The systems of the MIPOS 600SG OEM series offer a nano positioning and scanning range up to 600  $\mu\text{m}$  in open loop operation, and 500  $\mu\text{m}$  in closed loop. They can be assembled with objectives with a diameter of up to 40 mm.

**piezosystem jena's** successful parallelogram design guarantees high parallel motion without influencing the optical axis. The precise positioning repeatability of the MIPOS 600SG OEM can be guaranteed by the use of the integrated measurement system. The design which includes integrated pre-load of the actuator offers high resonant frequency and highly parallel motion, and is available in an upside-down version for inverted microscopes. Due to the unique features of the MIPOS 600 series, fast scanning applications can be accurately realized with the shortest settling times.

#### **Specials:**

Adapter clamp rings for the nose piece are available separately. They allow for fast mounting and exchanging of the MIPOS system on the microscope without removing other objectives. These Flex-Adapters are available for all standard microscopes and allow the MIPOS series to be universally applicable. Parfocal tube extensions for each threading type are available as an accessory in different lengths.

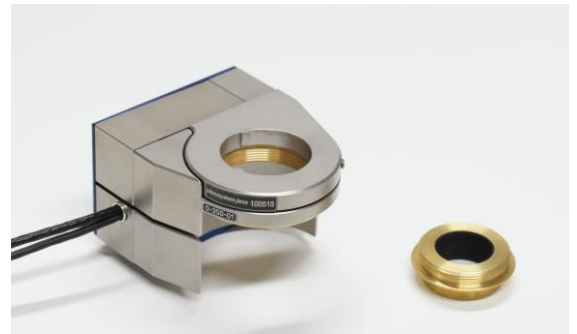


Image: MIPOS 600SG OEM

#### *Product highlights:*

- 600  $\mu\text{m}$  focusing range
- compact design
- high resonant frequency
- easy to attach on microscopes
- flexible use by Flex-Adapter
- integrated feedback sensor

#### *Applications:*

- surface scanning and analysis
- AFM microscopy
- biotechnology (e.g. cell scanning)
- beam focusing for printing processes
- semiconductor test equipment

## MIPOS 600SG OEM

0-380-01D

### Technical data:

<b>axis</b>	-	Z
<b>motion in open loop (<math>\pm 10\%</math>)*</b>	$\mu\text{m}$	600
<b>motion in closed loop (<math>\pm 0,2\%</math>)*</b>	$\mu\text{m}$	500
<b>capacitance (<math>\pm 20\%</math>**</b>	$\mu\text{F}$	21.0
<b>integrated measurement system</b>	-	strain gage
<b>resolution open loop ***</b>	nm	0.9
<b>resolution closed loop***</b>	nm	12
<b>typ. repeatability</b>	nm	13
<b>resonant frequency</b>	Hz	190
<b>additional load = 40g</b>	Hz	161
<b>additional load = 100g</b>	Hz	134
<b>additional load = 160g</b>	Hz	118
<b>stiffness</b>	N/ $\mu\text{m}$	0.144
<b>rotational error (full motion)</b>	$\mu\text{rad}$	<20
<b>voltage range</b>	V	-20...+130
<b>connector****</b>	<b>voltage</b>	-
	<b>sensor</b>	-
<b>cable length</b>	m	2
<b>material</b>	-	stainless steel
<b>dimensions (LxWxH)</b>	mm	60.5 x 50 x 40.1
<b>weight</b>	g	370
<b>max. lens diameter</b>	mm	40
<b>max. lens weight</b>	g	500
<b>option for standard microscopes</b>	-	yes
<b>option for inverse microscopes</b>	-	yes

\* typical value measured with EVD125 amplifier

\*\* typical value for small electrical field strength

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

\*\*\*\* in combination with a digital controller unit, the system comes with a Sub-D 15 connector. That part number is extended by the suffix "D"



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## MIPOS 600SG OEM

### Recommended configuration:

Actuator	<b>MIPOS 600SG OEM</b>
Amplifier/Controller	<b>d-Drive with EVD125</b>
	<b>30DV50</b>
	<b>30DV300</b>
	<b>NV120/1CLE</b>

The MIPOS series of micro lens and objective positioning systems offers a travel range from 20  $\mu\text{m}$  up to 600  $\mu\text{m}$  in z-axis. Available for standard and inverted microscopes.

More details under "objective lens positioning systems" [www.piezosystem.com](http://www.piezosystem.com)

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