

MIPOS 500

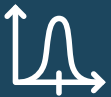
Lens Positioning System



500 μm Focusing Range



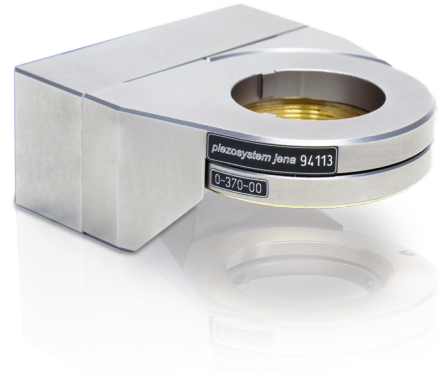
**Typ. Step Resolution 12 nm
in closed-loop**



**Resonant Frequency up to 230
Hz**



High Stiffness 0.27 N/ μm



The MIPOS 500 series provides a scanning range up to 500 μm in open-loop operation, and 400 μm in closed-loop. They can be assembled with objectives that have a diameter of up to 40 mm.

Parallelogram design guarantees high parallel motion without influencing the optical path. The precise positioning repeatability of the MIPOS 500 series can be guaranteed by the use of the optional integrated measurement system. The design includes an integrated preload of the actuator that offers high resonant frequency and highly parallel motion. The MIPOS 500 is also available in an upside down version for inverted microscopes.

Due to the unique features of the MIPOS 500 series, fast scanning applications can be accurately realized with the shortest settling times.

Variants:

- Inverse Version (UD)
- With strain gauge (SG)

Recommended Controller:
NV200/D Net

Applications

- Surface scanning and analysis
- AFM microscopy
- Biotechnology (e.g. cell scanning)
- Beam focusing for printing processes
- Semiconductor testing

MIPOS 500

Technical Data

		Unit	MIPOS 500	MIPOS 500 UD	MIPOS 500 SG	MIPOS 500 SG UD
Part # for thread	M25x0.75	-	O-350-00	O-360-00	O-350-01	O-360-01
	W0.8x1/36" (RMS)	-	O-354-00	O-364-00	O-354-01	O-364-01
	M26x0.75	-	O-355-00	O-365-00	O-355-01	O-365-01
	M27x0.75	-	O-356-00	O-366-00	O-356-01	O-366-01
	M32x0.75	-	O-357-00	O-367-00	O-357-01	O-367-01
Axis		-		Z		
Motion in open-loop (±10%)*		µm		500		
Motion in closed-loop (±0,2%)*		µm	-	-	400	
Capacitance (±20%)**		µF		21.0		
Integrated Measurement System		-	-		DMS	
Resolution open-loop ***		nm		0.9		
Resolution closed-loop ***		nm	-		12	
Typ. Repeatability		nm	-		17	12
Resonant Frequency	unloaded			230		
	additional load = 80g	Hz		180		
	additional load = 105g			170		
	additional load = 300g			110		
Stiffness		N/µm		0.27		
Rotational Error (full motion)		µrad		<20		
Voltage Range		V		-20...+130		
Connector ****	Voltage	-		LEMO 0S.302		
	Sensor	-	-		LEMO 0S.304	
Cable Length		m		1.0		1.2
Dimensions (LxWxH)		mm	60.5 x 50 x 36.4	0.2 x 50 x 35.5	60.5 x 50 x 40.1	62 x 50 x 41.5
Weight		g		105		150
Max. Lens Diameter		mm		40		
Max. Lens Weight		g		500		
Option for Standard Microscopes			yes	no	yes	no
Option for Inverse Microscopes			no	yes	no	yes

** typical value measured with 0.3 mV Controller

** typical value for small electrical field strength

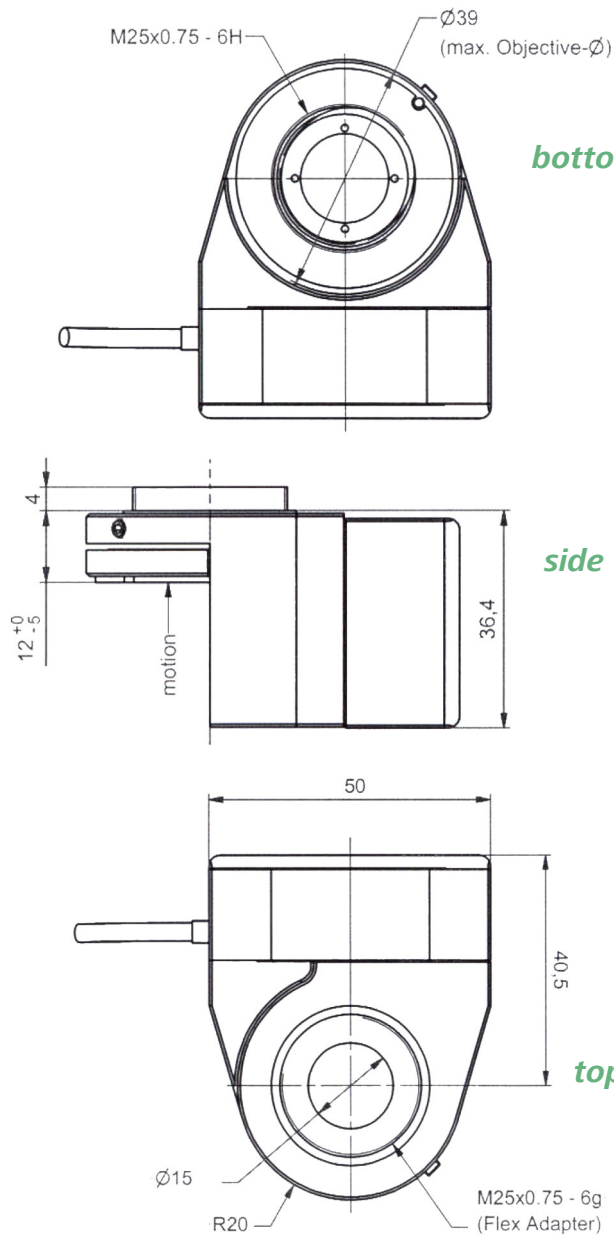
*** the resolution is only limited by the noise of the power amplifier and metrology

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

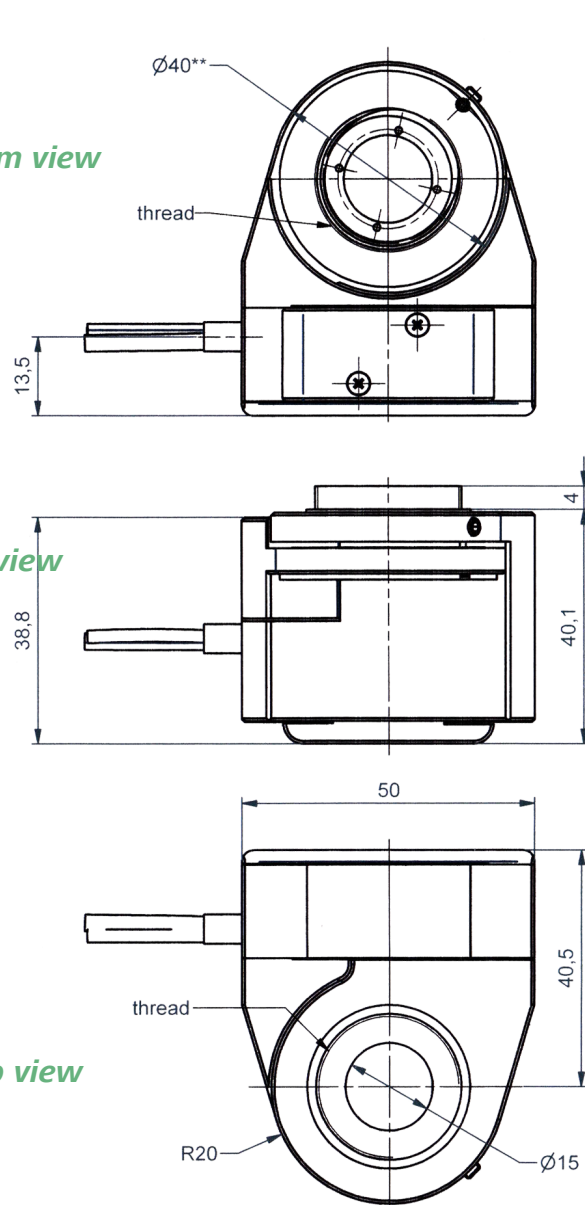
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Technical Drawing

Standard



SG

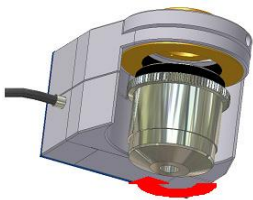
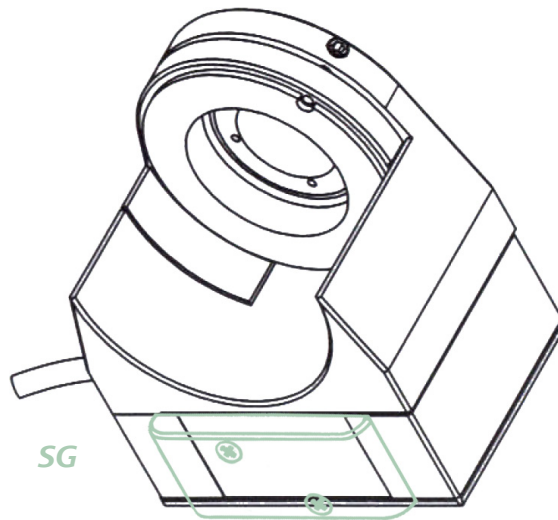


Dimensions given in mm.

MIPOS 500

Technical drawing

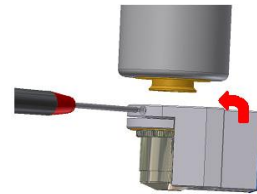
Standard



1. Screw the objective into the MIPOS.



2. Screw the flex-adapter into the microscope.



3. Clamp the MIPOS on the flex-adapter using the attachment.

Rights reserved to change specifications as progress occurs without notice.

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