

Piezoelectric Objective-Lens Positioning System MIPOS 100 PL

- **100 µm full adjustment range**
- **for microobjectives and lenses with diameter up to 40mm**
- **special preloaded version for high resonant frequency**
- **optional high resolution positioning feed back system inside**
- **easily installed on microscopes with Flex-Adapter**
- **parallelogram construction**
- **applicable in upright and inverse microscopes**

The series MIPOS 100 PL was developed for fine adjustment of micro objectives and object lenses. The maximum motion is 100 µm. The resolution of the MIPOS 100 PL systems is below 1nm in open loop. Optionally higher accuracy is guarantee by an integrated capacitive or strain gauge feed back sensor.

A special integrated pre-load design results in the following key advantages:

- very small angular deviation (<4µrad)
- highly parallel large range of motion
- high resonant frequency with mounted micro objective

The series MIPOS 100 PL was especially designed for heavy and large optical lenses.

Because of the special integrated pre-load the MIPOS 100 PL is able to reach ms settling time with all type of lenses. The MIPOS 100 PL series can be used for micro objectives with an outside diameter of up to 40mm!

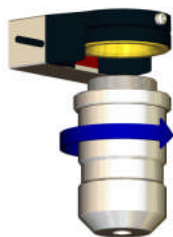
The MIPOS series is available with all standard threads for Zeiss, Leica, Nikon, Olympus etc.

Mounting this system on the microscope is very easy, you screw the Flex-Adapter thread-ring into the microscope and mount the MIPOS on this ring with a clamping-screw. Because of the small size, no other threads beside the MIPOS are blocked.

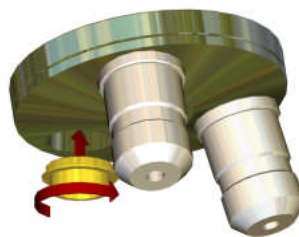


Pic: MIPOS 100 PL

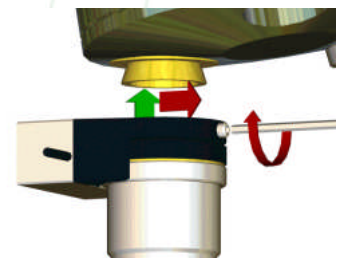
mounting instruction



1.) Screw your objective – lens into the MIPOS



2.) Screw the Flex-Adapter in the nosepiece of your microscope



3.) Set up the MIPOS on the Flex-Adapter and fasten the screw

technical details

series MIPOS 100 PL	MIPOS 100 PL	MIPOS 100 SG PL	MIPOS 100 CAP PL
part. no. :: M25x0.75 W 0.8x1/36" (RMS) M26x0.75 M27x0.75 M32x0.75	O-323-00 O-324-00 O-325-00 O-326-00 O-327-00	O-323-01 O-324-01 O-325-01 O-326-01 O-327-01	O-323-06 O-324-06 O-325-06 O-326-06 O-327-06
motion / travel [μm]** (open/closed loop)	140 / -	140/ 100	140/ 100
operating voltage [V]	-20...+130		
electrical capacitance ($\pm 20\%$) [μF]**	3.4		
integrated feedback sensor	-	strain gauge	capacitive
resonant frequency [Hz]**	700	700	700
with additional load =150g	300	300	300
resolution [nm]* (open/closed loop)	0.3 / -	0.3 / 3	0.3 / 3
typ. reproducibility [nm]**	-	30	10
typ. non-linearity [%]**	-	0.1	0.05
stiffness [N/ μm]	1.4	1.4	1.4
connector	voltage	LEMO 0S.302	LEMO 0S.302
	sensor	LEMO 0S.304	LEMO 0S.304
cable length [m]	1	1.2	1.6
tilt by full motion [μrad]**	<4	<4	<4
weight [g]	105	150	210

*measured with amplifier E-260-100

**typical value

***typical value for small signal strength

accessories: spacer ring

To eliminate the additional length by the different micro lenses caused by the MIPOS, piezosystem jena offers a wide range of spacer rings. By using the spacer ring all micro lenses work on the same level. No focus adjustment will be needed by turning the nosepiece. Spacer rings are available in different threads sizes.

Spacer ring for micro lens
part.no. O-30x-21
(x= thread type dependents)



quick objective-lens changing by FLEX-adapter

Screw the Flex-adapter into the microscope nosepiece. Put up the MIPOS onto the Flex-adapter and by fastening the screw the MIPOS is easily fixed.

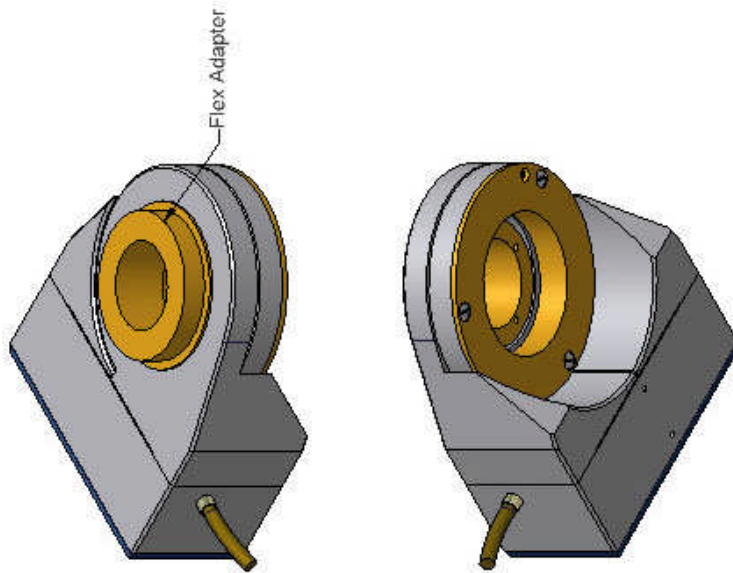


controller unit - configuration example :

pic.: Flex-adapter

amplifier NV 40/1 CLE (part. no: E-101-7X) for closed loop application – MIPOS 100 SG PL
part. no.: O-323-01 E; O-324-01 E; O-325-01 E; O-326-01 E; O-327-01 E and MIPOS 100 CAP PL
part. no.: O-323-06 E; O-324-06 E; O-325-06 E; O-326-06 E; O-327-06 E

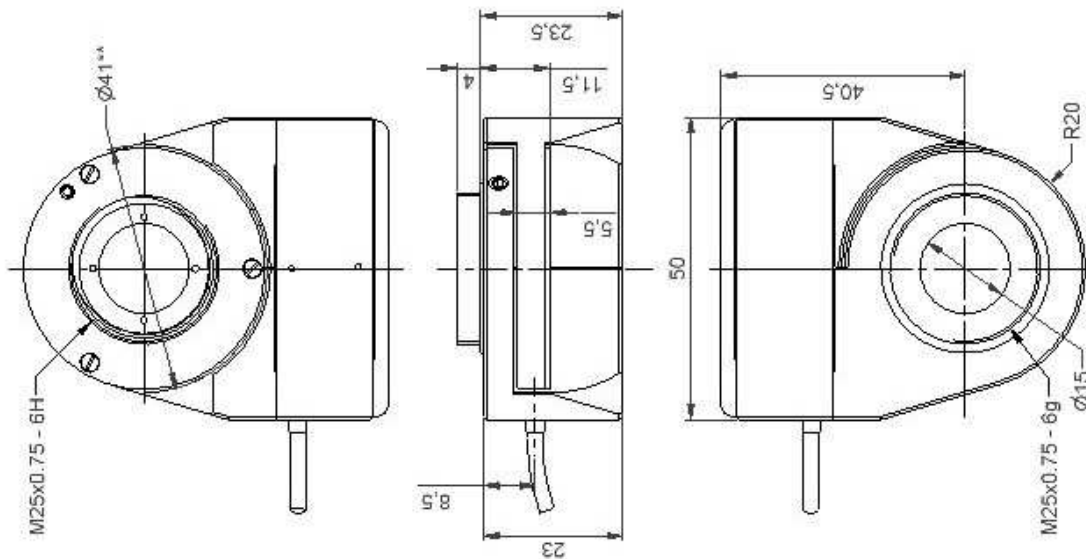
amplifier 12V40 SG (part. no: E-440-111) for closed loop Application – MIPOS 100 SG PL
part. no.: O-323-01; O-324-01; O-325-01; O-326-01; O-327-01

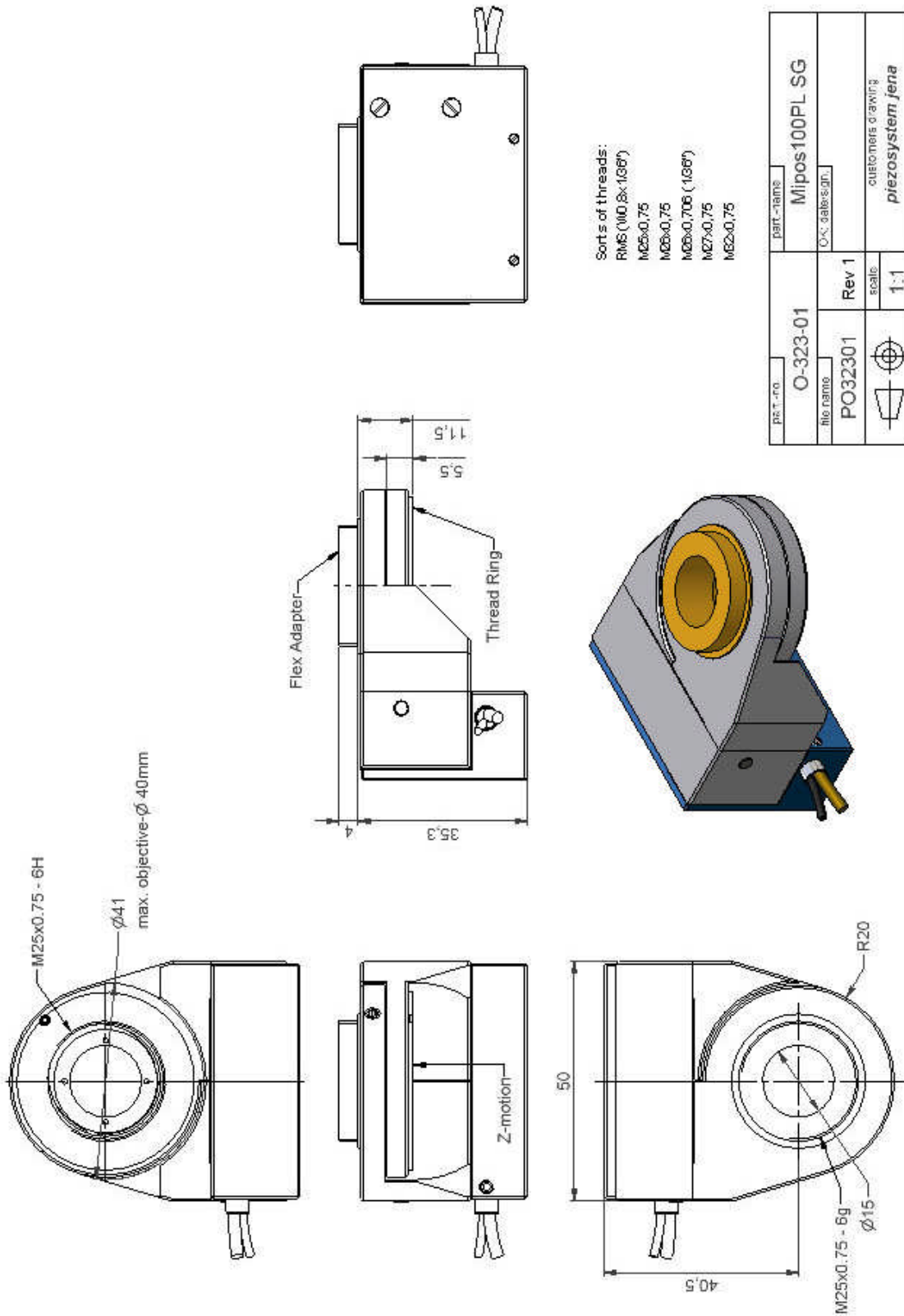


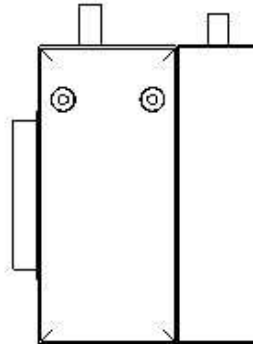
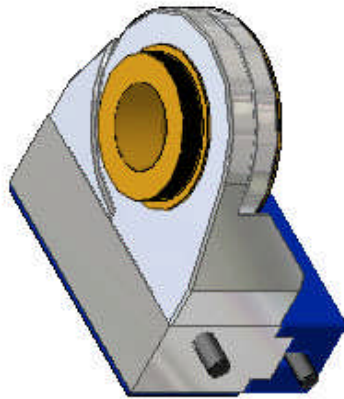
** max. objective- \varnothing 40mm
Standart cable length 1m



part.-no.	O-323-00	part. name	Mipos 100 PL M25
file name	PO32300	CAD date & gn	
		REV 1	customer drawing
		scale	1:1
			piezosystem jena

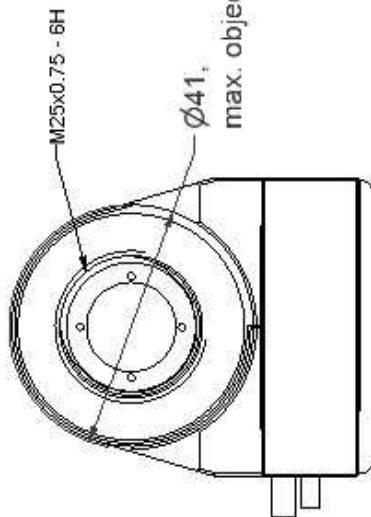
Sorts of threads:
RMS (M0,8x1/32")
M5x0,75
M6x0,75
M6x0,706 (1/32")
M7x0,75
M8x0,75







part no.	O-323-06	dist. name	Mipos 100 PL CAP
file name	PO32306	OK date sig 1	
drawing	 	scale	1:1
		customer drawing	piezosystemjena



max. objective diameter 40mm

