

MICOS

MOTION CONTROL & OPTICS **USA**

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Page

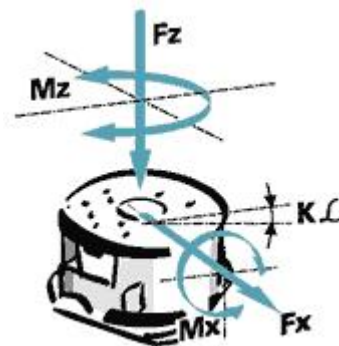
◀◀ 4.024 ▶▶ **Ultra Precision Rotation Stage UPR-100**

Direct Drives



Key features

- Torque motor
- Free center hole 20 mm diameter
- Repeatability 0.0002°
- Angular scale
- High-precision ball bearings
- Speed up to 360°/sec
- Load up to 3 kg
- Vacuum & Clean room compatibility
- Module combination



FACTS

Load Characteristics	Fx (N)	Fz (N)	Mx (Nm)	Mz (Nm) (Peak)	Mz (Nm) (Con.)	ka (μrad/Nm)
TM-030	15	30	5	0.5	0.25	-

DESCRIPTION

Ultra Precision Rotation Stages of the structural series UPR-100 and UPR-160 are employed for dynamical positioning. They are

mainly utilized in the field of semiconductor technology, for positioning systems of laser treatment, automation systems and robotic. All Rotation Stages of the structural series UPR are directly driven by a torque motor. Mechanical transmissions become no longer necessary. So, with this better positioning accuracies, higher dynamic accelerations and speeds can be achieved as in case of conventional drive systems. Calibrated, paired angular ball bearings guarantee a high central load capacity without breakdown torque. UPR - Rotation Stages are equipped with angular scale. Resolutions up to 0.0002° are standard offered. The Ultra Precision Rotation Stages are equipped with a contactless limit switch.



Technical data

Rotation Range ($^\circ$)	360, endless
Worm Gear reduction	-
Accuracy ($^\circ$)	+/- 0.00552
Repeatability ($^\circ$)	+/- 0.0002
Reversal Error ($^\circ$)	-
Velocity Range ($^\circ$ /sec)	0.02 ... 360
Flatness (μm)	+/- 2.5
Eccentricity (μm)	+/- 2.5
Wobble (μrad)	+/- 15

Speed max. ($^\circ$ /sec)

<u>TM-030</u>	360
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Resolution Closed-Loop ($^\circ$)

<u>AE-080</u> , Angular scale (50-times interpolation)	0.0002
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Winding Constant

Torque constant (Nm/Ams)	-
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Back EMF constant, peak value V/(rads/sec)	-
Electrical resistance at 80° (Ohm)	-
Electrical inductance (mH)	-
Continuous current at 80° (Ams)	-

Material	Special Aluminium, black anodized
Weight (kg)	1.2

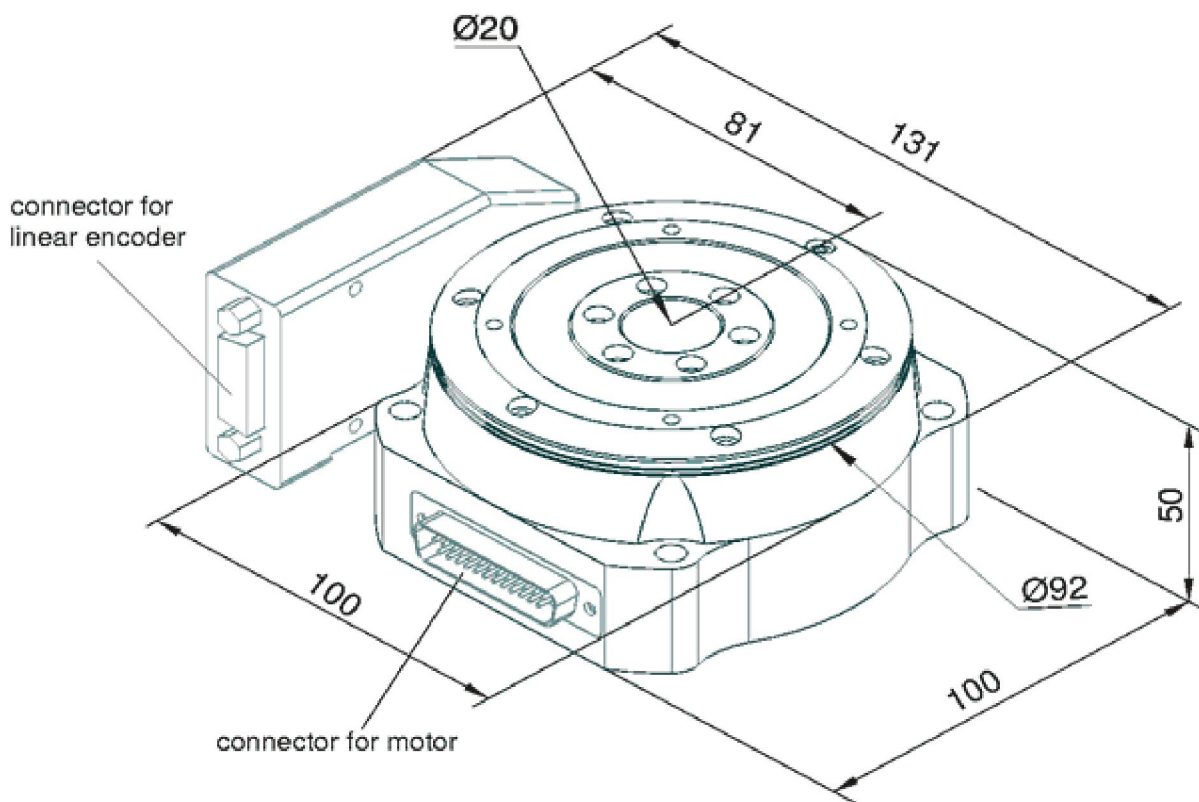
MOTION CONTROL Systems Positioners MiniPos DirectDrives Controllers ManPos Accessories Vacuum MAC PhotonX M A C

UPR-100 Base & Motors

Rotation range

360°, endless


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MOTION CONTROL Systems Positioners MiniPos DirectDrives Controllers ManPos Accessories Vacuum MAC PhotonX M A C

UPR-100 Ordering information

Ultra Precision Rotation Stage	Order-No.
UPR-100	6805-9-1111

Founded in 1990, MICOS specializes in the development, manufacturing and marketing of ultra-high precision positioning components and systems for research and industry. We are experts in vacuum, ultra-high vacuum, clean room, and extreme climate environments down to 77 Kelvin. 

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