

# MICOS

MOTION CONTROL & OPTICS **USA**

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Page

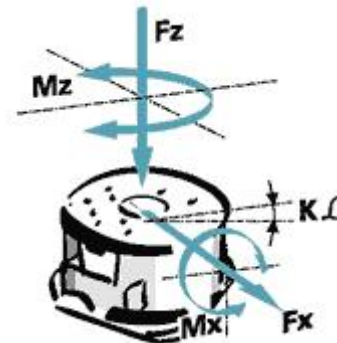
◀ 4.030 ▶ **Ultra Precision Rotation Stage UPR-160 F**

Direct Drives!



### Key features

- Free center hole 35 mm
- Torque motor
- Repeatability 0.0004°
- Angular scale
- High-precision ball bearings
- Speed up to 360°/sec
- Load up to 20 kg
- Module combination



### FACTS

Load Characteristics	Fx (N)	Fz (N)	Mx (Nm)	Mz (Nm) (Peak)	Mz (Nm) (Con.)	ka (μrad/Nm)
TM-010	80	200	100	5.89	0.97	1.5

### DESCRIPTION

Rotation Stages of the structural series **UPR-160 F** and UPR-300 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-160 F [detail]

UPR are directly driven by a torque motor. Mechanical transmissions become no longer necessary. So, with this better positioning accuracy, 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 systems. Resolutions up to 0.0004 are standard offered. The Rotation Stages are equipped with a contactless limit switch.



#### Technical data

<b>Rotation Range (°)</b>	<b>360, endless</b>
Worm Gear reduction	-
Accuracy (°)	+/- 0.005552
Repeatability (°)	+/- 0.0002
Reversal Error (°)	-
Velocity Range (°/sec)	0.02 ... 360
Flatness (µm)	+/- 2.5
Eccentricity (µm)	+/- 2.5
Wobble (µrad)	+/- 15

#### Speed max. (°/sec)

<u>TM-010</u>	360
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#### Resolution Closed-Loop (°)

<u>AE-050</u> , Angular scale (50-times interpolation)	0.0002
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#### Winding Constant

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

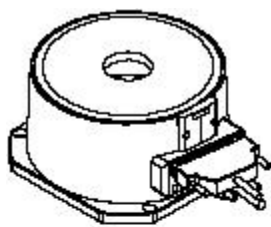
Material	Special Aluminium, black anodized
Weight (kg)	6

UPR-160 F Base & Motors

[Download PDF](#)

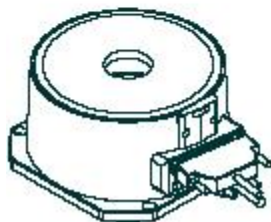
Rotation range  
360°, endless

UPR-160 F Ordering information



AE-050


360°, endless



TM-010

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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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