MICOS

MOTION CONTROL & OPTICS   USA

MICOS USA • 15375 BARRANCA PARKWAY • STE G101 • IRVINE • CA 92618 • PHONE 949 480 0538 • FAX 949 480 0538
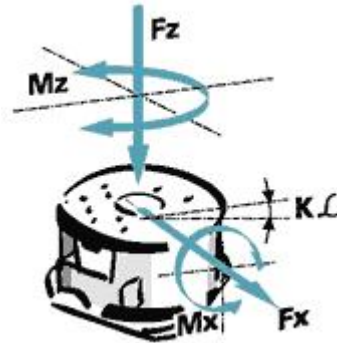
Ultra Precision Rotation Stage UPR-300

Direct Drives

Key features

- Torque motor
- Repeatability 0.0004°
- Angular glass scale
- High-precision ball bearings
- Speed up to 720°/sec
- Load up to 120 kg
- Module combination

FACTS

Load Characteristics	Fx (N)	Fz (N)	Mx (Nm)	Mz (Nm) (Peak)	Mz (Nm) (Con.)	ka (µrad/Nm)
TM-020	500	1200	200	93	20	80

DESCRIPTION

Rotation Stages of the structural series **UPR-300** 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

Calibrated, paired angular ball bearings guarantee a high central load capacity without breakdown torque. UPR - Rotation Stages are equipped with optical angular systems. Resolutions up to 0.0002° are standardly offered. For need of better positioning accuracies and larger free center

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.

hole additional angular systems are offered. The Rotation Stages are equipped with a contactless limit switch.

Technical data

Rotation Range (°)	360, endless
Worm Gear reduction	–
Accuracy (°)	+/- 0.001388
Repeatability (°)	+/- 0.0002
Reversal Error (°)	–
Velocity Range (°/sec)	0.001 ... 720
Flatness (µm)	+/- 1.5
Eccentricity (µm)	+/- 1.5
Wobble (µrad)	+/- 10

Speed max. (°/sec)	
TM-020	720

Resolution Closed-Loop (°)	
AE-010, Angular scale (25-times interpolation)	0.0002

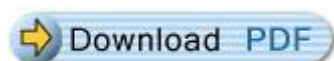| Winding Constant	
Torque constant (Nm/Ams)	3.33
Back EMF constant, peak value V/(rads/sec)	2.7
Electrical resistance at 80° (Ohm)	1.42
Electrical inductance (mH)	3.23
Continuous current at 80° (Ams)	6.32

Material	Special Aluminium, black anodized
Weight (kg)	26.7

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

UPR-300 Base & Motors

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Rotation range

ca. 250

8 holes Ø6.6, clr

150

250

ca. 250

150

250

Ø300

Ø280

angle encoder system connector

FM8W8 8-pin connector

15-pin sub-d

180

34

62

31

27,8

Ø310

10

4,2

2.00 / 52 holes M6 thd on □25 spacing depth: 8

Ø40, depth: 61.5

Ø15,5

200

TM-020

TM-020

TM-020

360°, endless

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