

MICOS

MOTION CONTROL & OPTICS **USA**

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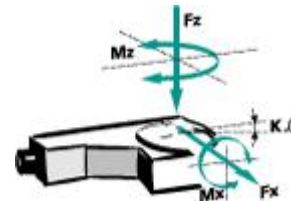
◀ 2.120 ▶ **Rotation Stage DT-120**

Positioners



Key features

- Clear aperture 120 mm
- Repeatability 0.001°
- Angular scale
- Preloaded worm drive for zero-backlash
- High precision double row ball bearings
- Precise, smooth continuous 360° motion
- Speed up to 50°/sec
- Load up to 40 kg
- Module combination



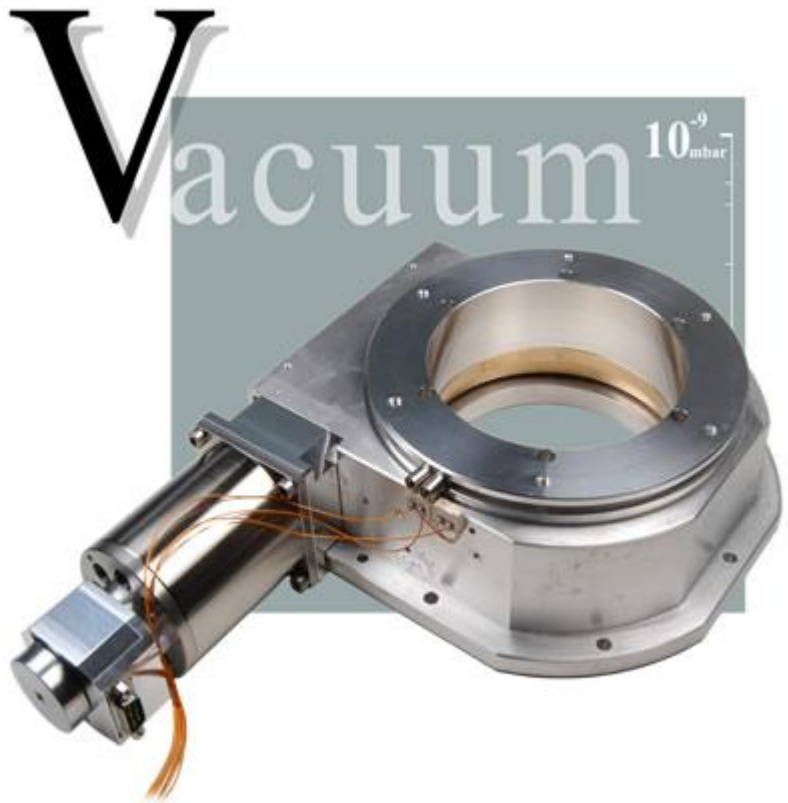
FACTS

Load Characteristics	Fx (N)	Fz (N)	Mx (Nm)	Mz (Nm)	ka (μrad/Nm)
DC-B-041	150	400	50	2.5	1
2Phase-070	150	400	50	2.5	1

DESCRIPTION

The **Rotation Stages DT-120** are mainly applied in the range of industrial linear, vision control, micro-laser application and for high-precision micro-handling. Especially significant is the large free centre hole diameter 120 mm

of the rotation stages of the structural series DT-120. The body is fabricated from a special, high-rigid, tempered Al-alloy. Two calibrated prestressed zero backlash precision-roller bearing couples guarantee smallest deviations of flatness and smooth move. A hardened and ground screw worm combined with a calibrated gear wheel guarantees a quiet smooth move. DT-120 with zero-backlash are delivered by MICOS. Standard the Rotation Stages DT-120 are equipped with two limit-, reference switches. The limit switch switch points can be user-friendly free configured. Drive variants such as DC- or 2-phase-micro-step (SMC-series) motors are available.



Technical data

Rotation Range (°)	360, endless
Worm gear reduction	320:1
Accuracy (°)	+/- 0.003 ... 0.02
Repeatability (°)	+/- 0.001 ... 0.002
Reversal Error (°)	0.01
Velocity Range (°/sec)	0.001 ... 50
Flatness (µm)	+/- 8
Eccentricity (µm)	+/- 8
Wobble (µrad)	+/- 80

Speed max. (°/ sec)	
<u>DC-B-041</u>	50
<u>2Phase-070</u>	15

Resolution Open-Loop (°)	
<u>2Phase-070</u>	0.0005625 (SMC) 0.005625 (FS)

Resolution Closed-Loop (°)	
<u>RE-010</u> , Rotary encoder feedback	0.0005625

Current (Amps) / Voltage (Volts)	
DC-B-041	3.8 24
2Phase-070	2.8 -

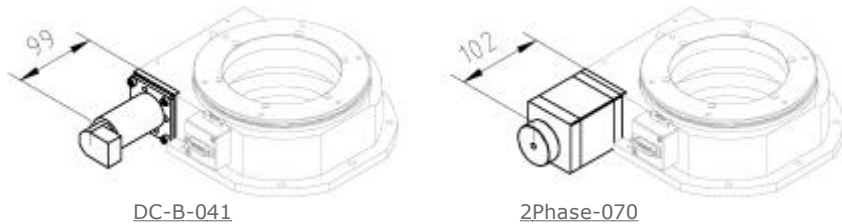
Material	Special Aluminium, black anodized
Weight (kg)	8

Note: (SMC): Micro-Step Mode, (FS): Full-Step 2/5Phase

More info: Detailed information, concerning the motor and connectors, see: Appendix

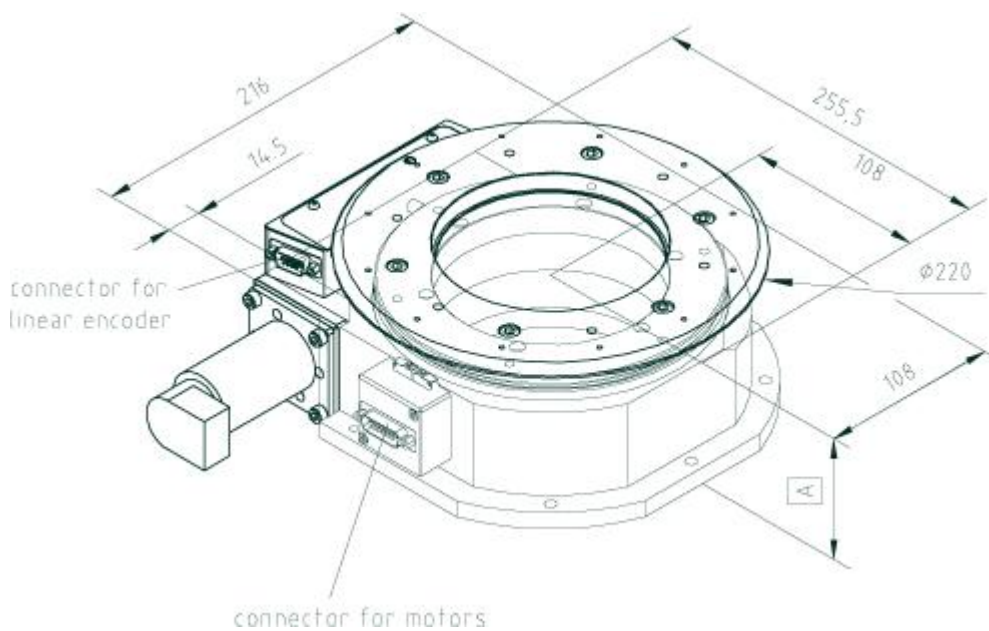
MOTION CONTROL Systems Positioners MiniPos DirectDrives Controllers ManPos Accessories Vacuum MAC PhotonX M A C

DT-120 Motors



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

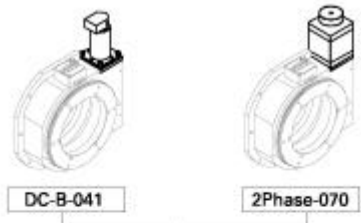
DT-120 Base



Travel range	A (mm)
Open-Loop	74.5
Closed-Loop	95

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



AE-070
360°, endless



DC-B-041 1
2Phase-070 2

without AE-070 0
AE-070, Angular scale 1

6445-9-		1	
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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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