

Key Features

- Air-Bearing Rotary Table with Direct Drive
- High Load Capacity
- Radial Runout < 0.15 µm
- 1,100 U/min in Standard Version
- 1 Vpp or with Interpolation (5x, 10x, 100x)



Rotary Table EZ-0570

Concept and Design

Due to its high load capacity (up to 2,200 N axial), the EZ-0570 rotary table is particularly suitable for high-precision positioning of heavy loads of up to 40 kg. Among its various applications, the rotary table is preferably used for measuring tasks with non-contact measuring systems. Equipped with a powerful iron-core torque motor, it can also handle dynamic applications. To further reduce axial and radial error motion, the rotary table can be operated with an ironless motor.

The measuring system (Numerik RIK4) features 18,000 lines and can optionally be supplied with interpolation factors of 5, 10, 50 or 100.

The rotor is magnetically preloaded and is clamped to the housing when the air supply is switched off, ensuring it remains fixed in position.

There are no restrictions regarding the installation orientation. Due to the materials used and the fact that

air bearings are generally operated without lubricants, the rotary table is suitable for use in clean rooms.

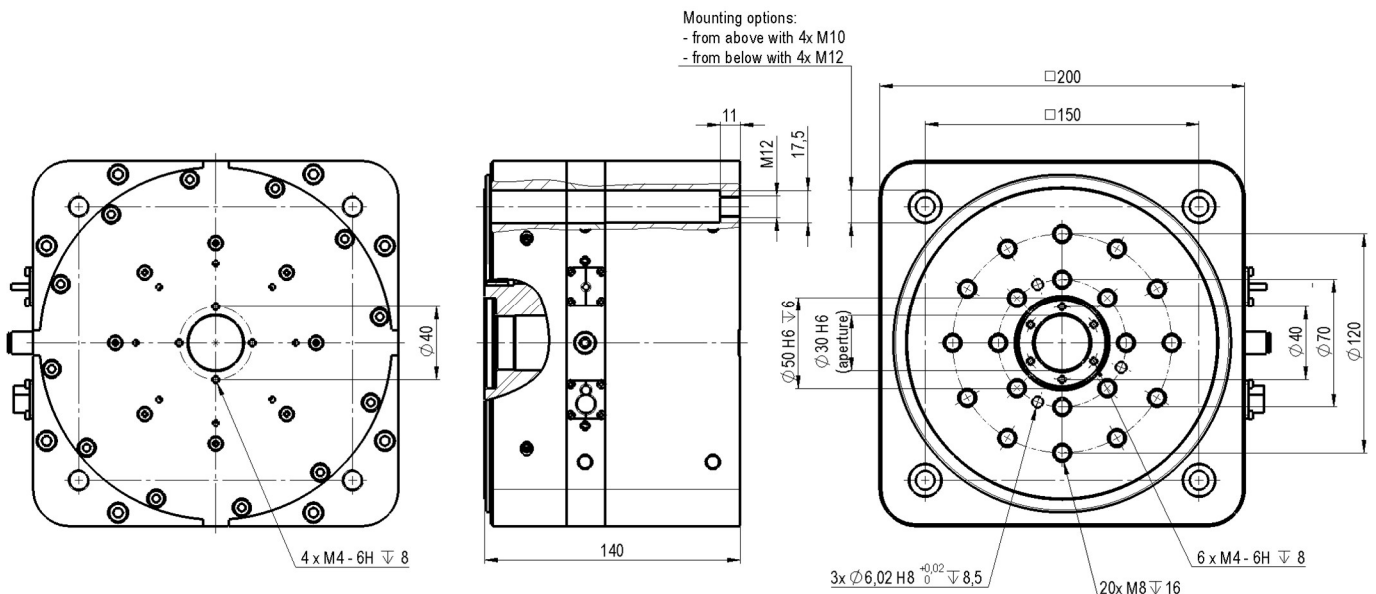
Applications

High-precision positioning and measuring systems, inspection technology, testing systems, applications with high demands on synchronization and/or repeatability of positioning.

Drive Control

We offer the rotary table EZ-0570 with the following drive controllers:

- Kollmorgen AKD P00606
- Kollmorgen Servostar S300 / S700
- ACS controller



Specifications

Type	Unit	Value
Turning Range	°	> 360 (unlimited)
Error Motion axial (in the center)	µm	< 0.15
Error Motion radial (at 20 mm height)	µm	< 0.15
Axial Runout (along radius 35 mm)	µm	2
Repeatability	arcsec / µrad	± 1.5 / ± 7.27
Angular Accuracy (uncompensated)	arcsec / µrad	± 30 / ± 145.44
Max. Speed ¹⁾	rpm	1,100
Mechanical Data		
Unit	Unit	Value
Mounting Position		unrestricted
Length x Width x Height	mm	200 x 200 x 140
Moving Mass (rotor)	kg	3
Total Mass	kg	15
Max. Load Capacity axial	N	2,200
Nominal Load Capacity axial push/pull	N	1,600
Max. Load Capacity radial	N	1,200
Nominal Load Capacity radial	N	950
Stiffness axial	N/µm	280
Stiffness radial	N/µm	100
Resistance Against Tilt	Nm/µrad	0.58
Max. Moment of Tilt	Nm	70
Inertial Moment	kg*m ²	0.019
Material		aluminum hardcoat/anodized
Encoder		
Value	Value	Value
Type		incremental
Lines per Revolution		9,000 / 18,000
Output Signal		1Vpp / RS422
Interpolation Options		5, 10, 50, 100-fold
Drive		
Unit	Unit	Value
Type		synchronous, iron-core
Intermediate Circuit Voltage	V _{DC}	max. 600
Nominal/Peak Torque	Nm	10 / 30
Nominal/Peak Current	A _{rms}	3.4 / 10
Interfaces and Environment		
Unit	Unit	Value
Supply Pressure	bar	5
Air Consumption	Sl/min	ca. 18
Cable Length	m	1
Clean Room Suitability		applicable
Drive Control		
Standard		Kollmorgen AKD P00606 / Servostar S300
High End		ACS controller

1) depending on interpolation value

Subject to technical modifications and typographical errors.

Datasheet version 3.0