EZ-4360 Motion System

EITZENBERGER
KINEMATIK MIT LUFT

Key Features

- Stroke Z 310 mm
- Turning Range C > 360° (unlimited)
- Max. Load Z 70 N
- Max. Load C 1,600 N
- Vibration Decoupling through Air Springs
- Ideal for Measuring Tasks on Rotating Test Objects

ZC-Motion System

Concept and Design

The ZC Motion System EZ-4360 was developed as kinematics for measuring rotationally symmetrical components.

The test object is positioned and rotated on a rotary table while the measuring head is moved vertically via a high-precision air-bearing axis.

The linear axis is weight-decoupled via a friction-free air-bearing cylinder and can carry a weight of up to 7 kg.

An important feature is the high-precision adjustment of the parallelism of the linear axis to the rotary axis.

The machine bed is made of granite. By resting the granite on air springs, excellent decoupling from the ground is achieved.

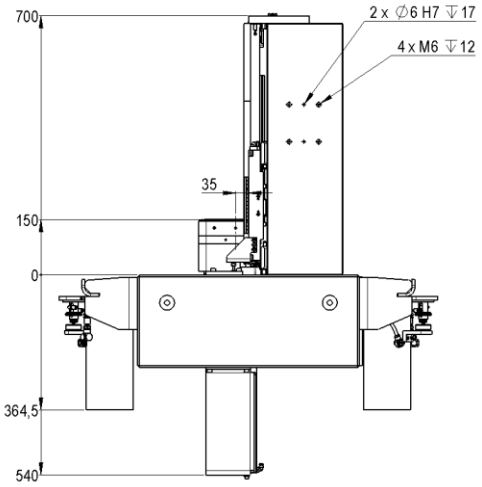
Applications

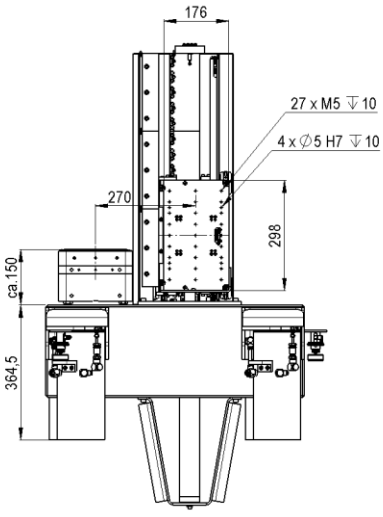
High-precision positioning tasks, measurement of rotationally symmetrical bodies

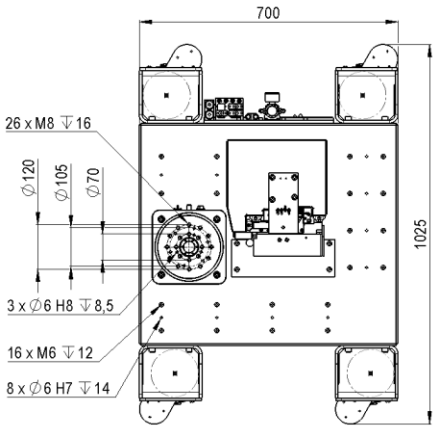
Drive Control

We offer the EZ-4360 linear axis with the following drive controllers:

- Kollmorgen Servostar AKD / S300 / S700
- ACS Controller with UDMpa Drive
- Triamec TSD130







Specifications

Type	Unit	Value
Stroke Z	mm	310
Rotation C	°	> 360 (unlimited)
Repeatability Z / C	µm	≤ 0.5
Position Accuracy Z	µm	≤ 0.2
Max. Speed Z	m/s	≥ 0.5
Max. Acceleration Z	m/s^2	≥ 3
Nomial Torque C	Nm	8
Max. Torque C	Nm	22

Mechanical Data	Unit	Value
Dimension (w x d x h)	mm	700 x 900 x 1,280
Max. Load Z	N	70
Max. Load C	N	1,600
Moving Mass Z	kg	8
Moving Mass C (rotor)	kg	ca. 3
Mass C (rotary table)	kg	18
Total Mass	t	0.5

Encoder		Value
Encoder Type Z		absolute
Sensor Signal Z		EnDat2.2
Encoder Type C		incremental
Lines / Signal per Revolution C		18,000 / RS422
Reference Signal C		TTL active high
Interpolation C		50-fold

Drive	Unit	Value
Drive Type Z		3-phase, synchronous, iron-less
Power Supply Z	V_{AC}	up to 300
Continuous/Max. Force Z	N	110 / 380
Nominal/Peak Current Z	A_{rms}	1.7 / 5.6
Drive Type C		synchronous, iron core
Intermediate Circuit Voltage C	V_{DC}	up to 600
Nominal/Peak Torque C	Nm	10 / 30
Nominal/Peak Current C	A_{rms}	3.4 / 10

Interfaces and Environment	Unit	Value
Supply Pressure Z-Axis/Compensation Cylinder/C-Axis	bar	5 / 1.8 / 4.5
Air Consumption Overall System	Sl/min	26
MTBF	h	> 20,000
Limit Switch Z		PNP
Clean Room Suitability [1)]		applicable

Drive Control		Value
Standard		Kollmorgen Servostar AKD / S300 / S700
High End		ACS Controller / Triamec

1) depending on detail design

Subject to technical modifications and typographical errors.

Datasheet version 2.0