

Key Features

- Linear Axis for Vertical Installation
- Slide 150 x 99 mm (l x w)
- Air Bearing Weight Compensation
- Absolute Measuring System
- Dynamic Linear Motor
- High Positioning Accuracy
- Compact Design
- Stackable



Air Bearing Linear Axis for Vertical Installation

Concept and Design

Compact design, high load capacity and very high positioning accuracy are the outstanding features of the linear axis EZ-2352-094V.

The air bearing axis is designed for small to medium strokes with loads up to 100 N. A pneumatic, air-bearing cylinder serves as a static counterweight.

The slide made of hard-coated aluminum is dynamically driven by an ironless synchronous motor (Tecnotion UM6). The preload is achieved by magnet assemblies. In the standard version, the axis is equipped with an absolute measuring system from Heidenhain (LIC4).

The linear axis is available with strokes of 20/40/60 mm, other lengths are possible on request, as well as a configuration with laterally arranged counterweight cylinders.

For the realization of simple cross tables, two axes can be stacked on top of each other.

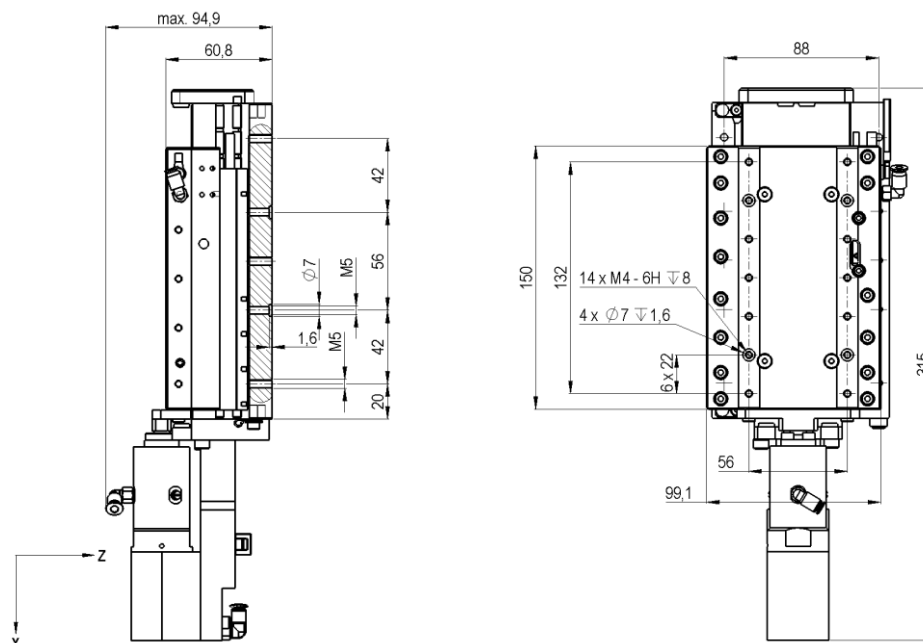
Applications

Electronics manufacturing, PCB manufacturing, inspection technology, non-contact 2D measurement, sensor and camera positioning for inspection, AOI (automatic optical inspection), automation processes. In general: applications with high demands on dynamics, precision, repeatability, smooth scan movements, short settling times.

Drive Control

We offer the linear axis EZ-2352-094V with the following drive controllers:

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



Specifications

| Type | Unit | Stroke 20 | Stroke 40 | Stroke 60 |
|---|------------------|-----------|-----------|-----------|
| Article No. | | 0036023 | 0030553 | 0031032 |
| Stroke | mm | 20 | 40 | 60 |
| Positioning Accuracy uncompensated | µm | 2 | 2 | 3 |
| Repeatability (bidirectional) ¹⁾ | nm | 100 | 100 | 100 |
| Position Stability ¹⁾ | nm | 30-100 | 30-100 | 30-100 |
| Straightness / Evenness | µm | 2 | 2 | 2 |
| Pitch | µrad | 5 | 10 | 15 |
| Yaw | µrad | 5 | 10 | 15 |
| Max. Speed unloaded | m/s | 2 | 2 | 2 |
| Max. Acceleration unloaded | m/s ² | 20 | 20 | 20 |

| Mechanical Data | Unit | Stroke 20 | Stroke 40 | Stroke 60 |
|-------------------------|------|--------------|----------------|--------------|
| Mounting Position | | vertical | vertical | vertical |
| Dimension LxWxH | mm | 315x114.5x95 | 355x106.5x80.5 | 395x112x80.5 |
| Max. Load | kg | 10 | 10 | 10 |
| Moment of Tilt around Y | Nm | 10 | 10 | 10 |
| Moment of Tilt around X | Nm | 5 | 5 | 5 |
| Moment of Tilt around Z | Nm | 3.5 | 3.5 | 3.5 |
| Moving Mass (slide) | kg | 1.5 | 1.5 | 1.5 |
| Total Mass | kg | 6 | 7 | 8 |

| Encoder | EZ-2352-xxx |
|--------------------|-------------|
| Type ²⁾ | absolute |
| Signal | EnDat 2.2 |

| Drive | Unit | EZ-2352-xxx |
|--------------------|------------------|--|
| Type | | synchronous, ironless |
| Max. Voltage ph-ph | V _{AC} | 3-phase up to 45 (60 V _{DC}) |
| Constant Force | N | 45 |
| Peak Force | N | 160 |
| Constant Current | A _{rms} | 1.2 |
| Peak Current | A _{rms} | 8 |
| Cable Length | m | 1 |

| Interfaces and Environment | Unit | EZ-2352-xxx |
|--------------------------------------|--------|-------------|
| Air Consumption | Sl/min | ~ 12 |
| Supply Pressure | bar | 5 |
| MTBF | h | > 20,000 |
| Limit Switch | | optional |
| Clean Room Suitability ²⁾ | | applicable |

| Drive Control | EZ-2352-xxx |
|---------------|--|
| Standard | Kollmorgen Servostar AKD / S300 / S700 |
| High end | ACS Controller, Triamec |

1) depending on drive control

2) depending on detail design

Subject to technical modifications and typographical errors