

Key Features

- Slide 210 x 140 mm (l x w)
- Payload up to 10 kg
- Linear Encoder incremental or absolute
- Dynamic Linear Drive with up to 2 m/s
- High Positioning Accuracy
- Low Weight
- Stackable



Air-Bearing Linear Axis

Concept and Design

The EZ-2542 Linear Axis is designed for loads of up to 200 N. A key feature of the axis is the angular arrangement of the air-bearing surfaces, which enables the very compact design.

The slide is magnetically preloaded and dynamically driven by a Tecnotion UM9 N linear motor.

The standard version uses an incremental measuring system from RSF, absolute measuring devices from Renishaw or Heidenhain (LIC) are optionally available. The aluminum rail (hard anodized) is available in 3 standard lengths, customized lengths can be supplied upon request. To realize simple cross tables, two axes can be stacked on top of each other.

Applications

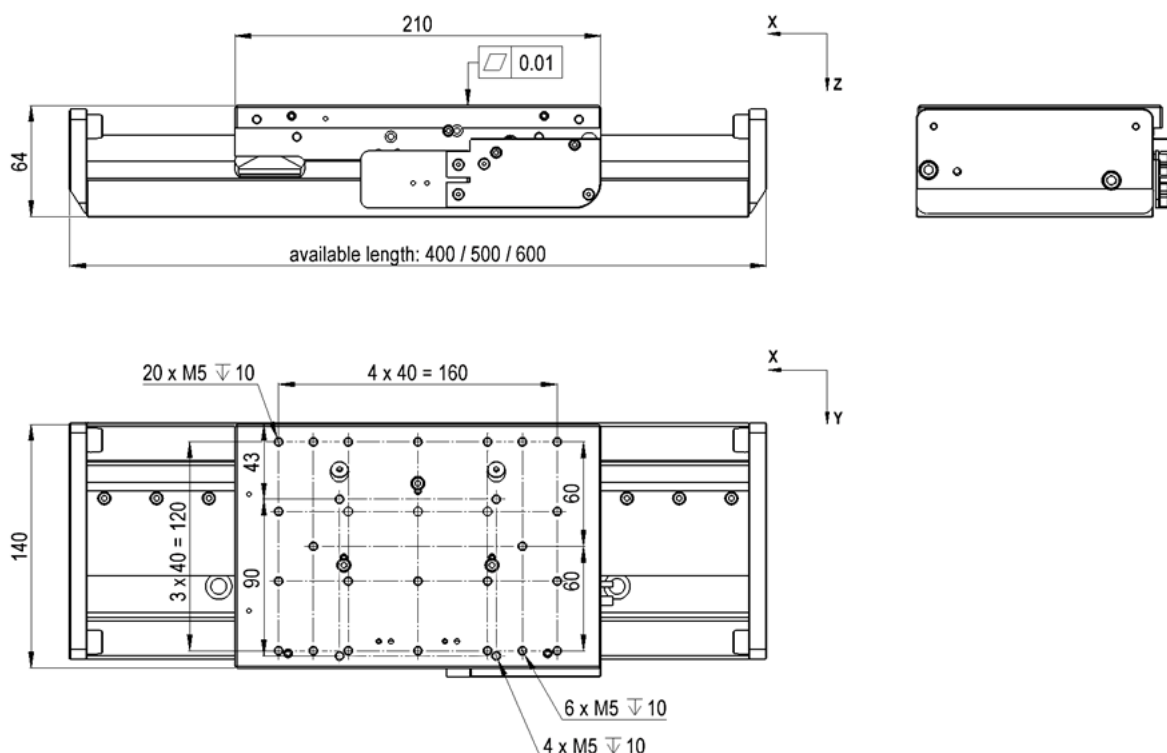
Electronics production, PCB manufacturing, test engineering, non-contact 2D-measurement, sensor and camera positioning for inspection, AOI (automated optical inspection), automation processes.

In general: Applications with high demands on dynamics, precision, repeatability, uniform scanning movements and short settling times.

Control System

We offer the EZ-2542 Linear Axis with the following drive controllers:

- Kollmorgen Servostar AKD / S300 / S700
- ACS controller with UDMpa drive
- Triamec TSD130



Specifications

Type	Unit	EZ-2542-150	EZ-2542-250	EZ-2542-350
Stroke	mm	150	250	350
Position Accuracy uncompensated	µm	1	1	1
Repeatability (bidirectional) ¹⁾	nm	50	50	50
Position Stability ¹⁾	nm	30-100	30-100	30-100
Vertical/Horizontal Straightness (XTZ/XTY)	µm	3	4	5
Pitch	µrad	20	25	40
Yaw	µrad	20	25	40
Max. Velocity without load	m/s	2	2	2
Max. Acceleration without load	m/s ²	30	30	30
Mechanical Data	Unit	EZ-2542-150	EZ-2542-250	EZ-2542-350
Mounting Position		unrestricted	unrestricted	unrestricted
Dimensions	mm	140x400x64	140x500x64	140x600x64
Max. Permissible Load	kg	10	10	10
Load Capacity vertical (Z)	N	200	200	200
Load Capacity lateral (Y)	N	100	100	100
Tilting Moment around Y	Nm	13	13	13
Tilting Moment around Z / X	Nm	8	8	8
Moving Mass (slide)	kg	2	2	2
Total Mass	kg	6.8	7.8	11.2
Encoder		EZ-2542-xxx		
Type ²⁾		incremental (= standard)		
Sensor Signal		1Vpp		
Drive	Unit	EZ-2542-xxx		
Type		3-phase, synchronous, ironless		
Max. Voltage ph-ph	V _{AC}	230 (300 V _{DC})		
Continuous Force	N	66		
Peak Force	N	225		
Continuous Current	A _{rms}	1.8		
Peak Current	A _{rms}	6.2		
Cable Length	m	1.5		
Environment and Interfaces	Unit	EZ-2542-xxx		
Air Consumption	l/min	4		
Supply Pressure	bar	5		
MTBF	h	> 20,000		
Limit Switch		optional (5V)		
Clean-Room Suitability ³⁾		applicable		
Drive Control		EZ-2542-xxx		
Standard		Kollmorgen Servostar AKD / S300 / S700		
High End		ACS controller, Triamec		

1) depending on the axis controller

2) absolute encoders are possible

3) depending on the design

Subject to technical modifications and typographical errors.