

Key Features

- Travel Range 250 mm x 450/800 mm
- Max. Speed 1 m/s
- High Accuracy
- Max. Load 500 N
- Fully Covered Machine Interior
- Ideal for Particle Generating Machining Processes



XY Stage

Concept and Design

In the design of the XY Stage EZ-0117, particular emphasis was placed on a cost-conscious design combined with high accuracy requirements.

The treads for the air bearings are covered with bellows that prevent the ingress of particles, making the EZ-0117 particularly suitable for particle-loaded applications. Despite being equipped with bellows, a high level of positioning accuracy is achieved.

Iron-core synchronous motors allow acceleration of up to 10 m/s^2 and a travel speed of up to 1 m/s.

The machine bed is made of granite. An interface plate is provided on the side of the cross table for the transmission of energy, signals and media. Both axes can be supplied separately with electrical and pneumatic energy. The end position is detected by inductive

sensors. The XY Stage is available in 2 sizes, with a travel range of 250 x 450 mm or 250 x 800 mm.

Other dimensions or extensions of the two-axis system are possible on request.

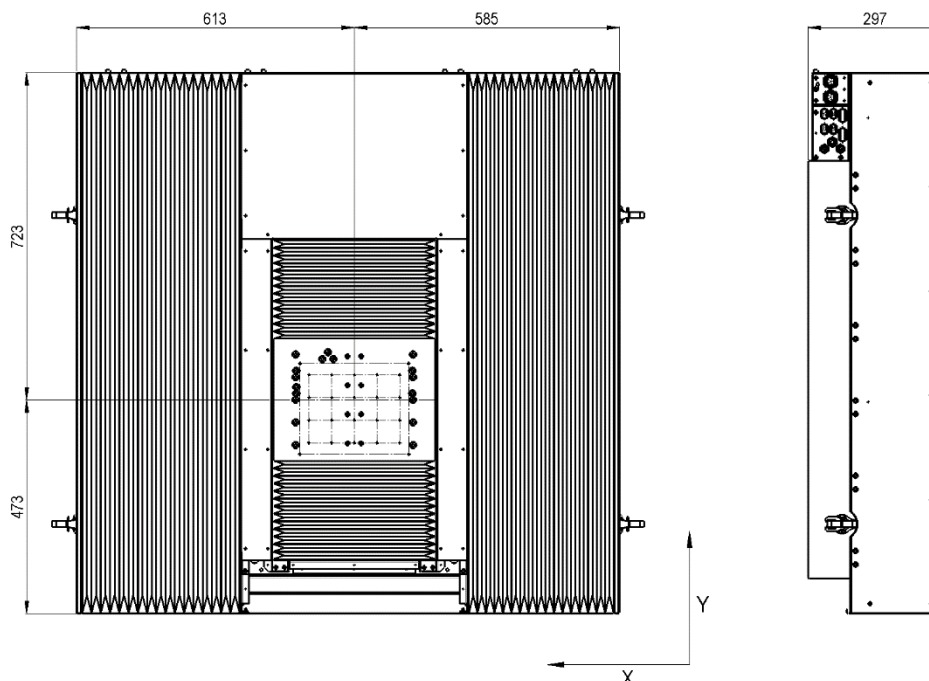
Applications

Positioning, scanning, exposure, laser engraving, laser processes in general.

Drive Control

We offer the EZ-0117 stage with the following drive controllers:

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



Specifications

Type	Unit	EZ-0117-450	EZ-0117-800
Article No.		0030823	0026390
Stroke	mm	250 x 450	250 x 800
Positioning Accuracy (non-compensated)	µm	± 2	± 2
Repeatability (bidirectional) ¹⁾	nm	± 75	± 75
Position Stability ¹⁾	nm	50	50
Vertical/Horizontal Straightness	µm	2	3
Pitch	µrad	20	20
Yaw	µrad	10	10
Max. Speed unloaded	m/s	1	1
Max. Acceleration unloaded	m/s ²	10	10
Mechanical Data	Unit	EZ-0117-450	EZ-0117-800
Mounting Position		horizontal	horizontal
Dimension LxWxH	mm	1,198 x 1,201 x 297	1,216 x 1,540 x 297
Max. Load in Z	N	500	500
Moving Mass Y	kg	18	18
Moving Mass X + Y	kg	80	80
Total Mass	kg	675	850
Encoder		EZ-0117-xxx	
Type ²⁾		incremental	
Sensor Signal		1Vpp , 20 µm signal period	
Drive	Unit	EZ-0117-xxx	
Type		3-phase, synchronous, iron-core	
Max. Voltage ph-ph	V _{AC}	400	
Continuous Force X/Y	N	640 / 320	
Peak Current X/Y	A	16 / 8	
Back-EMK ph-ph X/Y	V/m/s	76	
Force Constant	N/A	93	
Interfaces and Environment	Unit	EZ-0117-xxx	
Supply Pressure	bar	5	
Air Consumption	Sl/min	20	
MTBF	h	> 20,000	
Limit Switch		PNP	
Clean Room Suitability ³⁾		applicable	
Drive Control		EZ-0117-xxx	
Standard		Kollmorgen Servostar AKD / S300 / S700	
High End		ACS Controller with NanoPWM Drive/Triamec TSD 130	

1) measured with ACS amplifier

2) absolute encoder possible on request

3) without bellows, depending on detail design

Subject to technical modifications and typographical errors.

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