

# Elevation Stage | PZS-90

The PZS-90 elevation stage is designed for applications with limited space conditions. Pre-loaded cross roller bearings assure smooth motion and high stiffness. The PZS-90 allows for a highly rigid XZ or XYZ setup without the need for adapter brackets when combined with the VT-50L series & PPS-60 series of linear stages. The PZS-90 stage is driven by a 2-phase stepper motor and is equipped with two mechanical limit switches. An optional linear encoder provides higher accuracy versus the open loop option. Versions capable of operation in vacuum (10<sup>-6</sup> mbar) are available. The PZS-90 is compatible with the MMC-200 controller.

## KEY FEATURES

- Travel range of 35 mm
- 100 nm closed loop resolution
- Load capacity up to 15 kg
- Steel cross roller bearing
- Integrated mechanical limit switches
- Vacuum versions available

## TECHNICAL DATA

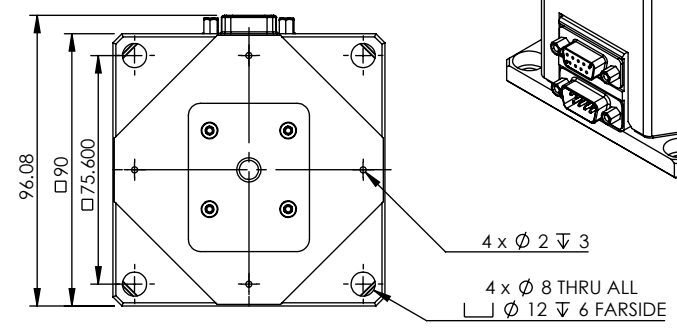
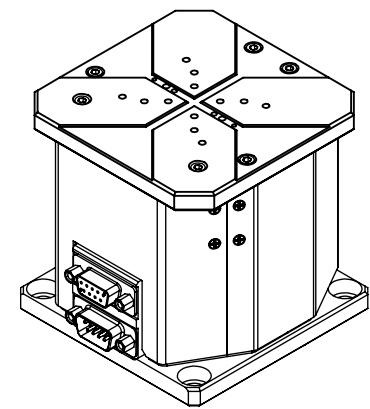
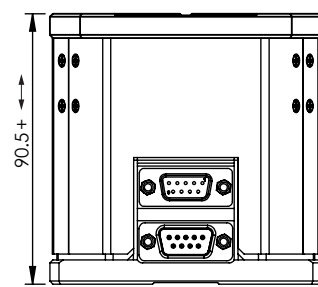
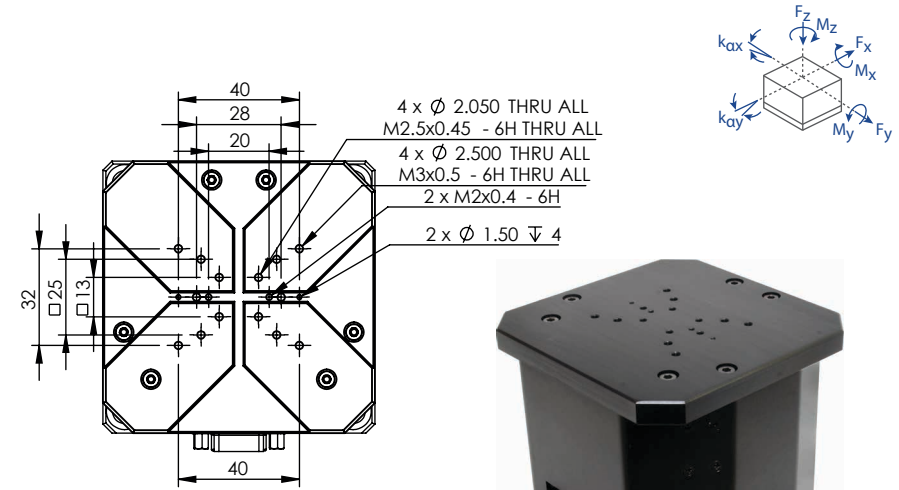
Travel range [mm]	35			
Straightness / Flatness [μm]	± 3			
Pitch [μrad]	± 200			
Yaw [μrad]	± 200			
Weight [kg]	1.145			
Motor option	2-Phase Stepper Motor			
Speed, max [mm/s]	10			
Encoder option	None (open loop)	Analog (1 V <sub>pp</sub> )	Digital (RS-422)	Digital Low Cost (RS-422)
Resolution, typical [μm]	0.5	0.1	0.1	0.5
Repeatability, bi-directional [μm]	± 2	± 0.1	± 0.1	± 1
Repeatability, uni-directional [μm]	0.5	0.1	0.1	1
Accuracy [μm]	± 15	± 1	± 1	± 3
Materials	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)			

## ORDERING INFORMATION

PZS-90- 1 1 1

<b>DRIVE</b>	Stepper Motor, SM-003 .....	1
<b>TRAVEL</b>	35mm .....	1
<b>ENCODER</b>	None .....	0
	Analog (1 V <sub>pp</sub> ) .....	2
	Digital (RS-422) .....	3
	Digital low cost, 0.5μm .....	4
<b>LIMIT SWITCH</b>	Mechanical .....	1
<b>ENVIRONMENT</b>	Atmospheric .....	0
	High Vacuum, 10 <sup>-6</sup> mbar .....	6

Load, max	F <sub>x</sub> [N]	F <sub>y</sub> [N]	F <sub>z</sub> [N]	M <sub>x</sub> [N-m]	M <sub>y</sub> [N-m]	M <sub>z</sub> [N-m]	k <sub>ax</sub> [μrad/N-m]	k <sub>ay</sub> [μrad/N-m]
SM-003	75	75	150	50	50	100	50	50



Specifications are subject to change without notice.