

High Precision Vertical Elevator Stage from OES

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The AZ60-A Motorized Vertical Elevator Stage from Optimal Engineering Systems is a low profile, compact 183.7 mm x 80 mm x 38 mm ~ 42mm (raised), (7.232in x 3.150 in. x 1.496 ~ 1.654 in.) low cost, high resolution, wedge type, vertical elevator stage for applications requiring precise vertical positioning.

The 60 mm x 95 mm (2.362 in. x 3.740 in.) drilled and tapped stage has a vertical travel of 4 mm (0.157 in.). Six crossed roller guides and a precision ground 8 mm dia. 250 µm/turn lead ball screw provides smooth, straight (straightness to <5 µm) vertical motion, and parallelism (<20 µm to the mounting surface), and high resolutions to 1.25 µm (full step), 0.625 µm (1/2 step), and 0.125 µm (1/10 micro step), and repeatability to +/- 0.5 µm. Travel speeds are up to 2.5 mm/sec. Applications for the AZ60-A elevator stage include: Photonic alignment, wafer inspection, precision vertical alignment, laser marking, optical positioning, testing, inspection, assembly, sampling, laser drilling and machining in a broad range of industrial, medical, semiconductor, and research facilities.

The AZ60 - A Elevator Stage is constructed of black-anodized aluminum alloy and weighs just 1.14 kg (2.51lbs). A powerful 35 mm NEMA 14 1.8° 2-phase stepper motor has a double ended shaft with a knob for manual adjustments. This knob may be replaced with a quadrature encoder for position verification. The non-cantilevered moving wedge elevator stage has a load capacity of 7 kg (15.43 lbs) without concern for loss of parallelism, and the base plate has easy to access holes for mounting.