



# Low Cost, High Precision Alignment Stages

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Van Nuys, CA – Optimal Engineering Systems' (OES) low profile, XYθ (theta) stages are designed for high precision alignment applications. These stages move in an XY-plane and rotate around the center of the XY-plane. The terms alignment table, or XY-rotation stage are often used interchangeably with XYθ, or XY-theta stage. Available in 12 models, in two precision grades, these stages have linear travels from +/- 2 mm by +/- 2 mm (+/- 0.078 in by +/- 0.078 in) up to +/- 30 mm by +/- 30 mm (+/- 1.181 in by +/- 1.181 in). Additionally, XYθ (theta) stages can rotate around the center of the XY plane up to +/- 60. Four models of the XYθ (theta) stages have solid tables that are sized from 100 mm by 100 mm (3.937 in by 3.937 in) to 200 mm by 200 mm (7.874 in by 7.874 in), and eight stages, from 250 mm x 250 mm (9.843 in by 9.843 in) to 1500 mm by 1500 mm (59.055 in by 59.055 in), are hollow core (open frame) stages.



Available in Normal and Precision grades, these XYθ (theta) stages have preloaded cross roller bearings and typical Normal Repeated Positioning Accuracy is from +/- 1.75 μm to +/- 2.5 μm, and typical Precision Repeated Positioning Accuracy is from +/- 0.7 μm to +/- 1.0 μm.

Parallelism of these XYθ (theta) Stages is as low as 30 μm, and the larger stages can handle dynamic loads to 600 kg (1323 lbs). The stages' surfaces are treated to ensure durability and they are compatible with OES' line of Motion Controllers. XYθ (theta) Stages can be ordered with linear encoders for closed loop operation, customized to meet specific requirements, and complete ready to run alignment systems.