

Motion Control

Single Axis Stages

Multi-Axis Stages

Flexure Stage Accessories

Motorized Mirror Mounts

Rotation Stages

Drive Electronics & Auto-Alignment

Actuators & Adjusters

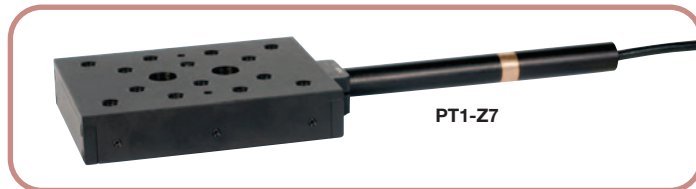
Brief Tutorials

1" (25mm) Motorized Translation Stages

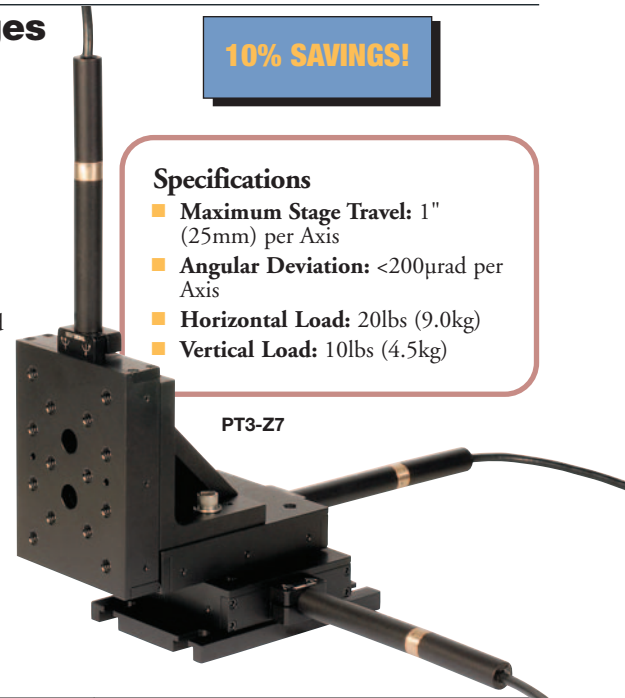
Features

- Optical Encoder with 12,288 Pulses/Rev & 256:1 Gear Head for High Torque
- Built-In Limit Switches
- Right-Handed Configuration, Field Changeable to Left Handed

The PT3-Z7 and the PT1-Z7 motorized stages provide a 1" (25mm) total travel range. The motorized actuators allow sub-micron control and provide position feedback via an optical encoder. A 12V DC servo motor and gear head rotate the 0.5mm pitch leadscrew that drives the stage, built-in limit switches provide overdrive protection. Thorlabs' motorized actuators are one of the smallest that are commercially available – see below for details. Combining these actuators with our compact high-precision translation stages results in an extremely compact sub-micron translator.



PT1-Z7



PT3-Z7

10% SAVINGS!

Specifications

- **Maximum Stage Travel:** 1" (25mm) per Axis
- **Angular Deviation:** <200µrad per Axis
- **Horizontal Load:** 20lbs (9.0kg)
- **Vertical Load:** 10lbs (4.5kg)

ITEM#	METRIC ITEM#	\$	£	€	RMB	DESCRIPTION
PT1-Z7	PT1/M-Z7	\$ 675.00	£ 425.30	€ 627,80	¥ 6,446.30	Single-Axis Motorized Translation Stage, 1" Travel
PT3-Z7	PT3/M-Z7	\$ 2,070.00	£ 1,304.10	€ 1,925,10	¥ 19,768.50	Three-Axis Motorized XYZ Translation Stage, 1" Travel

Motorized Actuators, DC Servo-Motor

Specifications

- **Models:** Z706, Z712, Z712B, and Z725B
- **Travel Range:** 6, 12, and 25mm (0.24", 0.5", and 1")
- **Minimum Incremental Motion:** ~0.05µm
- **Motor Type:** 12V DC Servo-Motor
- **Encoder:**
 - Motor-Mounted Rotary Encoder
 - 12,288 Counts/Rev of Leadscrew
- **Limit Switches:** Electromechanical
- **Backlash:** <8µm
- **Speed Range:** 50-425µm/s
- **Gear Reduction:** 256:1
- **Leadscrew Pitch:** 0.5mm
- **Axial Load Capacity:** 45N

Features

- 3 Travel Ranges Available
- High-Precision Rotary Encoder
- 12V DC Servo-Motor
- Precision-Limit Switches to Prevent Damage
- Compatible With Most Standard Controllers/Drivers



Our new Z-series motorized actuators provide reliable motion control in a lightweight, durable, and compact package. Three travel options – 6mm (0.24"), 12mm (0.5"), and 25mm (1.0") – allow the Z-Series actuators to serve as drop-in replacements for manual actuators in many of our popular optomechanical mounts and positioners. The Z-Series motorized actuators utilize a 12V DC servomotor and gear head for the drive elements. These features, along with a high-resolution optical encoder (12,288 counts/rev), ensure extremely small incremental movements (approximately 0.05µm). Vacuum versions are available (see page 404).

NEW
TDC001 MOTOR DRIVER

For More Details See Page 352



ITEM#	\$	£	€	RMB	DESCRIPTION
Z706	\$ 467.50	£ 294.50	€ 434,80	¥ 4,464.60	1/4"-80 Threaded Barrel, 6mm Travel Motorized Actuator
Z712	\$ 469.50	£ 295.80	€ 436,60	¥ 4,483.70	1/4"-80 Threaded Barrel, 12mm Travel Motorized Actuator
Z712B	\$ 460.00	£ 289.80	€ 427,80	¥ 4,393.00	3/8" Mounting Barrel, 12mm Travel Motorized Actuator
Z725B	\$ 490.00	£ 308.70	€ 455,70	¥ 4,679.50	3/8" Mounting Barrel, 25mm Travel Motorized Actuator

Both Imperial and Metric parts are equivalent.

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