

## Motion Control

Single Axis Stages

Multi-Axis Stages

Flexure Stage Accessories

Motorized Mirror Mounts

Rotation Stages

Drive Electronics & Auto-Alignment

Actuators & Adjusters

Brief Tutorials

# 2" (50mm) Travel: Cross Roller Bearing Stage and Micrometer Drive

### TravelMax™ Cross Roller Bearing Stage

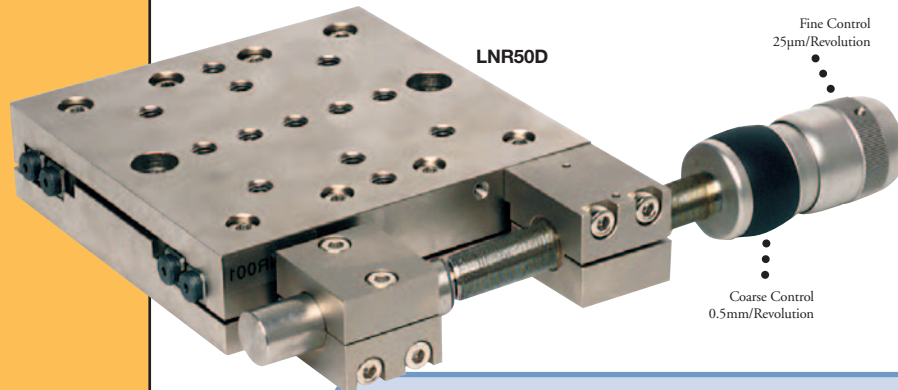
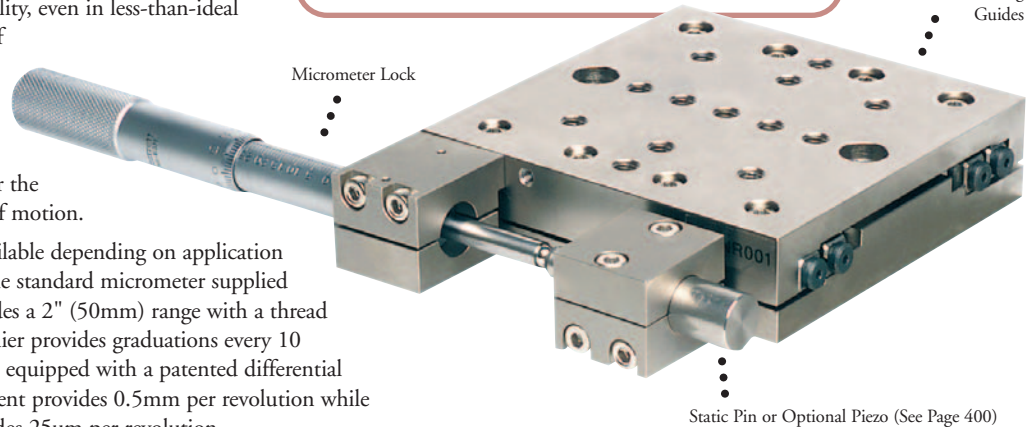
When stability, long travel, and high load capacity are crucial, the TravelMax™ series stages provide an ideal solution. The high-quality, cross roller bearing rails can carry loads up to 10 times more than equivalent-sized ball slides. The precision ground shafts provide excellent straight line accuracy and the alternately crossed rollers can handle force in any direction. The performance is further enhanced by utilizing thermally matched materials that ensure stability, even in less-than-ideal conditions. The rigidity of the all stainless steel construction, along with the heavy-duty cross roller bearings, provides uniform performance over the entire 2" (50mm) range of motion.

Two drive options are available depending on application requirements. The lockable standard micrometer supplied with the LNR50M provides a 2" (50mm) range with a thread pitch of 0.1mm. The vernier provides graduations every 10 microns. The LNR50D is equipped with a patented differential drive. The coarse adjustment provides 0.5mm per revolution while the fine adjustment provides 25µm per revolution.

### Features

- Heavy Duty Cross Roller Bearings
- Thermally Matched Stainless Steel Construction
- Right-or Left-Handed XYZ Configurable
- Micrometer or Differential Drives
- Optional Piezo Actuators
- Extremely Long Life

**LNR50M**  
All-Stainless Steel  
50mm (2") Travel  
Translation Stage With  
Cross Roller Bearing  
Guides

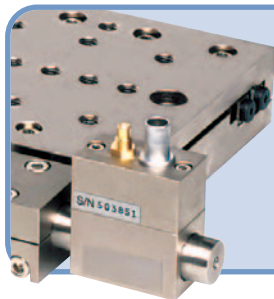
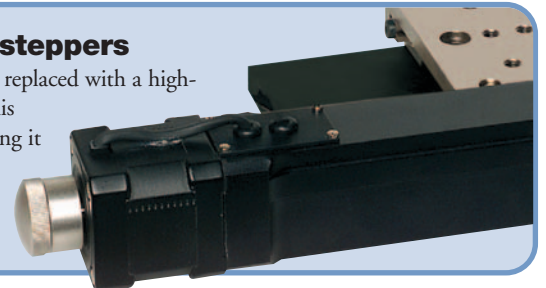


### Stage Specifications

- **Travel:** 50mm (2")
- **Horizontal Load Capacity:** 30kg (66lbs)
- **Vertical Load Capacity:** 10kg (22lbs)
- **Weight with Drive:** 2.2kg (5.0lbs)
- **Runout Over Full Range:** ±10µm

### Upgradeable to high-performance steppers

Simply by removing two screws, the manual drive can be replaced with a high-performance stepper motor offering 50nm resolution. This "quick-change" feature makes this a versatile stage, allowing it to be upgraded for applications that require automation. Complete specifications for our TravelMax™ stages outfitted with stepper motors can be found on page 270.



### Upgradeable to piezoelectric-assisted drives

Referring to the photograph at the top, the LNR50M stage includes a "static pin" that provides a stop for the manual drive. This pin is easily removable and can be replaced with a piezoelectric transducer to complement the manual drive, as shown on the left. Details of compatible piezo actuators can be found on pages 400-401.

**In Field, Left or Right Handed, and XYZ Configurable**

The TravelMax™ was designed with flexibility and functionality in mind. The top and bottom surfaces of the LNR series stages are equipped with a wide array of 1/4-20 (M6) tapped holes to maximize the mounting flexibility of components. The LNR50P1 base plate and LNR50P2 and angle bracket allow the LNR series to be configured in left- or right-handed XY or XYZ systems using six cap head screws.

**Differential Adjuster Specifications**

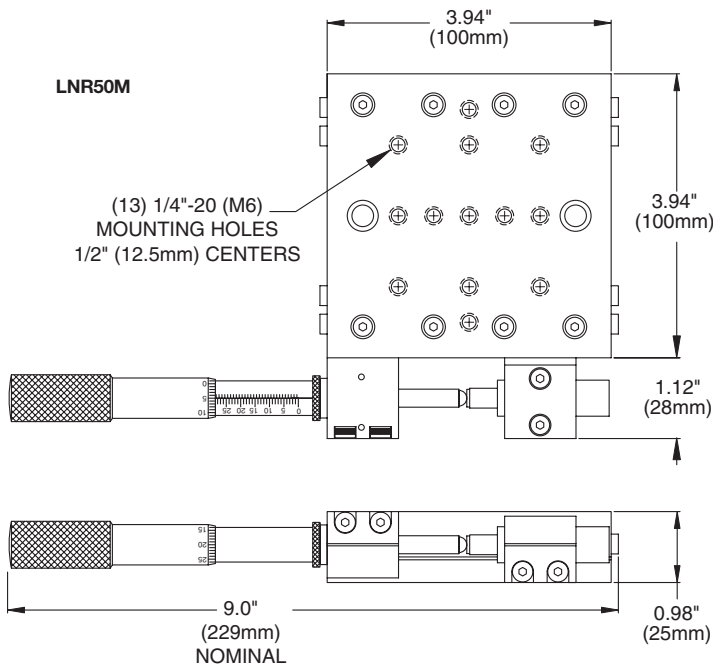
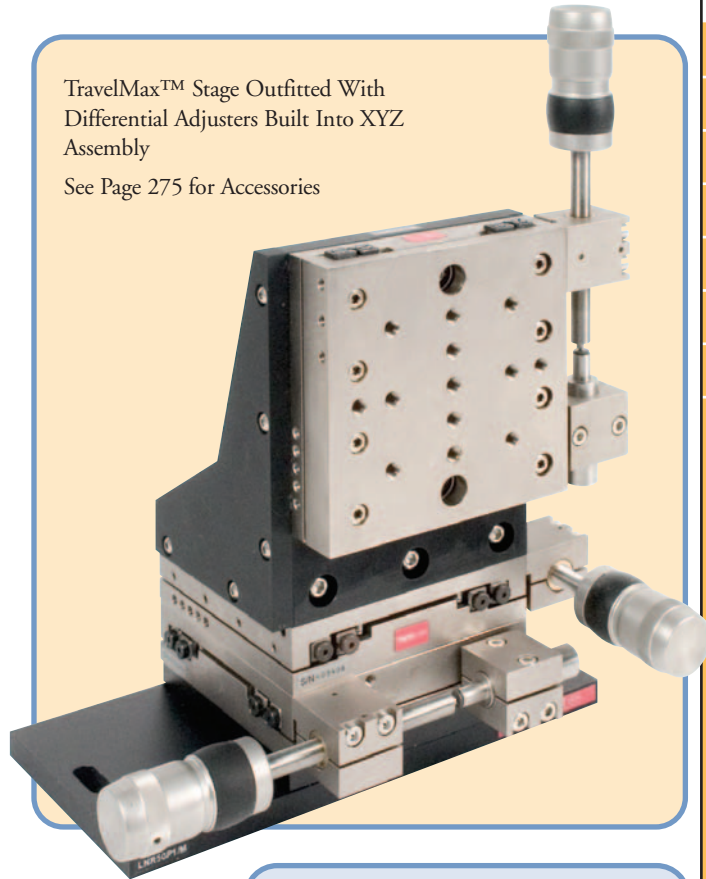
- **Coarse Travel:** 50mm (2")
- **Coarse Adjustment:** 0.5mm per Revolution
- **Fine Control:** 25µm per Revolution

**Micrometer Drive Specifications**

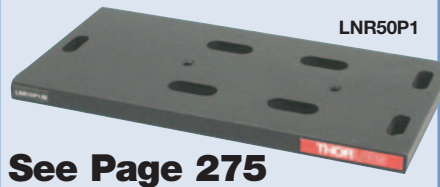
- **Travel:** 2" (50mm)
- **Venier Graduations:** 10µm
- **Micrometer Pitch:** 0.1mm
- **Micrometer Locking Mechanism:** Collet Style

TravelMax™ Stage Outfitted With Differential Adjusters Built Into XYZ Assembly

See Page 275 for Accessories



**Base Plate, TravelMax™ Series**



See Page 275

**Angle Bracket, TravelMax™ Series**



See Page 275

**Micrometer Drive TravelMax™ Stage**

ITEM#	METRIC ITEM#	\$	£	€	RMB	DESCRIPTION
LNR50M	LNR50M/M	\$1,271.00	£ 800.70	€ 1,182.00	¥ 12,138.10	50mm TravelMax™ Stage, Micrometer Drive
LNR50D	LNR50D/M	\$1,296.00	£ 816.50	€ 1,205.30	¥ 12,376.80	50mm TravelMax™ Stage, Differential Drive
LNR50P1	LNR50P1/M	\$ 59.50	£ 37.50	€ 55.30	¥ 568.20	20mm Thick TravelMax™ Series Adapter Plate
LNR50P2	LNR50P2/M	\$ 93.50	£ 58.90	€ 87.00	¥ 892.90	TravelMax™ Series Angle Mounting Bracket

- Single Axis Stages
- Multi-Axis Stages
- Flexure Stage Accessories
- Motorized Mirror Mounts
- Rotation Stages
- Drive Electronics & Auto-Alignment
- Actuators & Adjusters
- Brief Tutorials