

TravelMax™ 2" Travel, Cross Roller Bearing Stage (Page 1 of 2)

TravelMax™ Cross Roller Bearing Stage

When stability, long travel, and high load capacity are crucial, the TravelMax™ series of stages provide an ideal solution. The precision-ground bearing rails 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" (50 mm) range of motion.

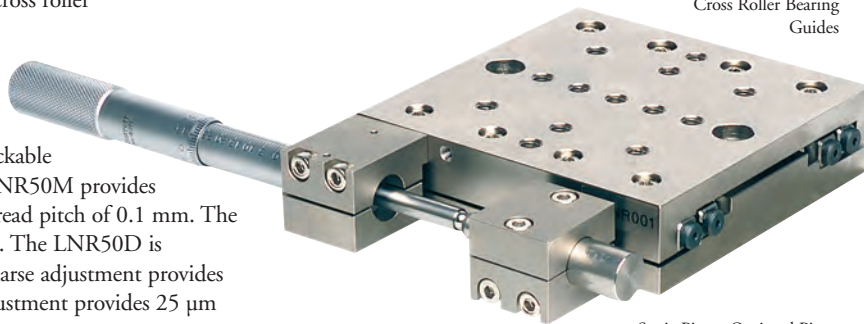
Two drive options are available to suit an array of application requirements. The lockable standard micrometer supplied with the LNR50M provides a 2" (50 mm) translation range with a thread pitch of 0.1 mm. The vernier provides graduations every 10 μm . The LNR50D is equipped with a differential drive. The coarse adjustment provides 0.5 mm per revolution while the fine adjustment provides 25 μm 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 (See page 530)
- 1/4"-20 (M6 x 1.0) Mounting Holes

LNR50M

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



Static Pin or Optional Piezo
(See next page)

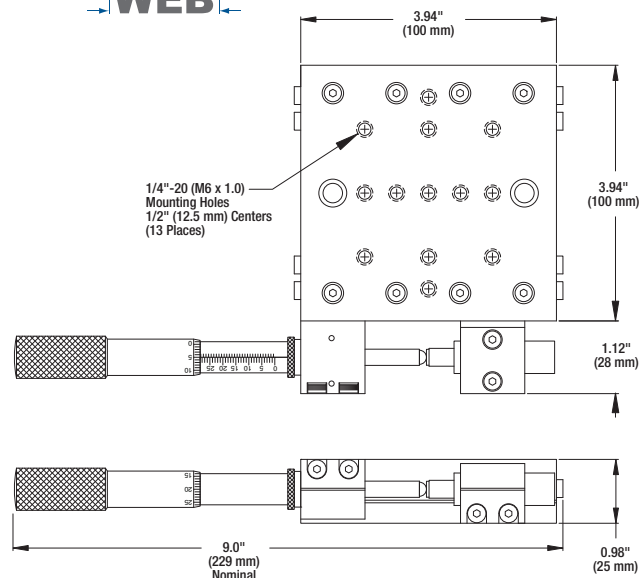
Micrometer Drive Specifications

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

Stage Specifications

- **Travel:** 2"
- **Horizontal Load Capacity:** 66 lbs (30 kg)
- **Vertical Load Capacity:** 22 lbs (10 kg)
- **Coarse Adjustment:** 0.5 mm/rev
- **Fine Adjustment:** 25 μm /rev
- **Weight with Drive:** 4.8 lbs (2.2 kg)
- **Angular Deviation:** ± 10 μm
- **Repeatability:** 0.8 μm

 **Mechanical**
Drawings Available on the
WEB



While the LNR series was designed to provide the stability and rigidity required for motorized operation, many customers have requested that the LNR series be made available with manual adjusters. On page 433, in the Motorized Stages chapter, you will find a series of motorized versions of the LNR series stage.

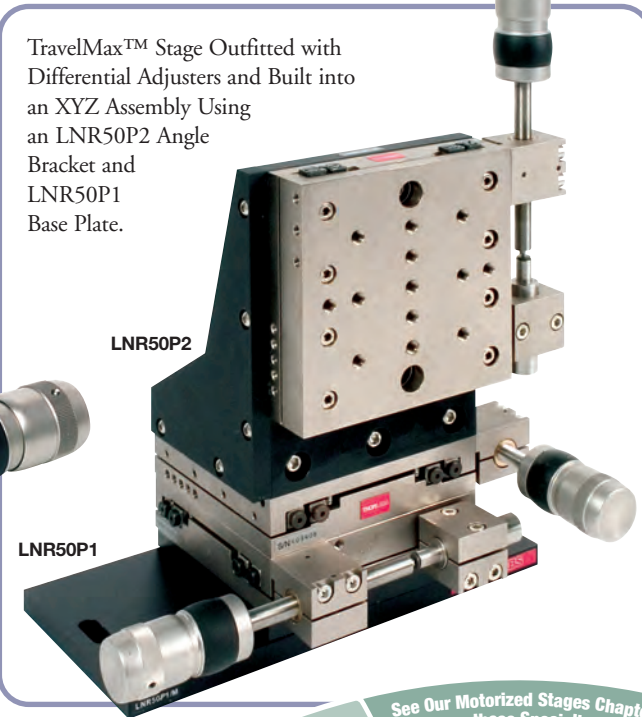
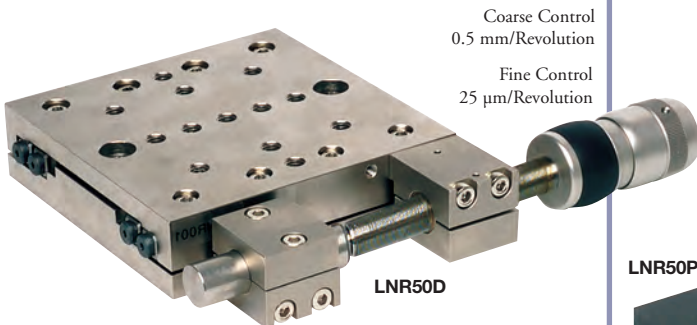
The modular design of the LNR50 family of stages allows optional elements (such as piezo actuators – see page 530) to be added to the platform within minutes, hence it is possible to upgrade your manually-controlled LNR series stage at some future point, if your needs change. The top and bottom surfaces of the LNR series stages are equipped with an array of 1/4"-20 (M6 x 1.0) tapped holes to maximize the mounting flexibility of components. The LNR50P1 baseplate and LNR50P2 angle bracket allow the LNR series to be configured in left- or right-handed XY or XYZ systems – see next page for ordering information on the base plate and angle bracket.

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Mounting Options and XYZ Configurability

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 x 1.0) tapped holes to maximize the mounting flexibility of components. The LNR50P1 Base Plate and LNR50P2 Angle Bracket allow the LNR series to be configured in left- or right-handed XY or XYZ systems using six cap head screws.

TravelMax™ Stage Outfitted with Differential Adjusters and Built into an XYZ Assembly Using an LNR50P2 Angle Bracket and LNR50P1 Base Plate.



Differential Adjuster Specifications

- Coarse Travel: 2"
- Coarse Adjustment: 0.5 mm per Revolution
- Fine Adjustment: 25 µm per Revolution

Manual Stages

See Our Motorized Stages Chapter for
Details on these Specialized Products

See Page 452

Motorized Stages

Motorized Stages

The LNR Series stages are also offered with high-performance stepper or DC motors. Complete specifications for our TravelMax™ stages outfitted with stepper and DC motors can be found on page 452.



TravelMax™ Base Plate

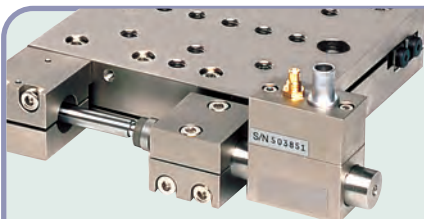


TravelMax™ Angle Bracket



Micrometer Drive TravelMax™ Stage

ITEM#	METRIC ITEM#	\$	£	€	RMB	DESCRIPTION
LNR50M	LNR50M/M	\$ 895.00	£ 620.50	€ 794.60	¥ 7,557.50	2" TravelMax™ Stage with Micrometer Drive
LNR50D	LNR50D/M	\$ 925.00	£ 641.30	€ 821.30	¥ 7,810.80	2" TravelMax™ Stage with Differential Drive
LNR50P1	LNR50P1/M	\$ 56.50	£ 39.20	€ 50.20	¥ 477.10	0.8" (20 mm) Thick TravelMax™ Series Adapter Plate
LNR50P2	LNR50P2/M	\$ 88.80	£ 61.60	€ 78.90	¥ 749.90	TravelMax™ Series Angle Mounting Bracket



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 530-532.