**Precision Programmable Stages For Semiconductor Wafers**

Now add the highest quality, precision motorized stage to your semiconductor inspection microscopes: the Prior H112. The H112 is perfect for scanning a wide range of semiconductor wafers, photo masks, flat panel displays, and printed circuit boards. The H112 can easily accommodate 12" (300 mm) wafers, and works with many robot arm wafer loaders. The H112 can also be used for transmitted light applications with a 250 x 250mm transmitted light travel area. A variety of sample holders are available and stage inserts can be customized for many applications.

**The H112 features:**
- Travel 302 mm x 302 mm (12" x 12")
- The H112 is available with stepper motors or D.C. servo motors for high speed applications
- Optional linear scales or rotary encoders provide precise and exact positioning, with repeatabilities to 0.1 μm and accuracies to 1 μm
- The step size (resolution) of the H112 stage can be as small as 0.1 μm, depending on stage and controller configuration
- The H112 is available with a 2 mm or 5 mm pitch ball screw
- Stages customized to fit virtually any 300 mm upright microscope or optical system

Prior stages have a well-deserved reputation for quality and repeatability. They are manufactured using the highest-quality components: crossed roller ways, zero backlash recirculating ball screws, X and Y limit switches, two high-precision stepper or servo motors even – a tough, scratch-resistant coating. Stages can be driven by the Prior ProScan series of motor controllers or compatible systems in existing OEM configurations. For the H112 and all its products, Prior provides full support and service – both direct and indirect – through a professional, knowledgeable and extensive dealer network.
H112

Standard Sample Holders

- 500-H221: Glass Plate
- 500-H233: Solid Aluminum Plate
- 500-H149: Chuck, Wafer, Spring Loaded for 300 mm Wafers
- 500-HHWC30S: Chuck, Wafer, Rotatable with steps for 200 and 300mm Wafers
- 500-HWC30V: Chuck, Wafer, Rotatable, with Vacuum for 300 mm Wafers
- 500-HWC112: Chuck, Wafer Pod, Vacuum

Ordering Information

- 500-H112/2ST: Stage with 2 mm pitch screws and step motors
- 500-H112/5ST: Stage with 5 mm pitch screws and step motors
- 500-H112/2DC: Stage with 2 mm pitch screws and DC servo motors
- 500-H112/5DC: Stage with 5 mm pitch screws and DC servo motors

/S Add linear scales
/E Add rotary encoders

12" x 12" PROGRAMMABLE, MOTORIZED STAGE FOR UPRIGHT MICROSCOPES

Dimensions in millimeters. Drawings shown with optional rotary encoders.

General Specifications

- Travel Range: 302 mm x 302 mm (12" x 12")
- Repeatability*: ± 4 μm
- ± 0.3 μm with linear scales
- Step Size (Resolution): 0.04 through 10μm
- Load Capacity: 25 kg (55 lbs)
- Motors: High precision stepper or D.C. servo
- Linear Slides: Crossed 4mm roller bearings
- Drive Screws: Zero backlash, recirculating ball screws; 2mm or 5mm pitch
- Limit Switches: X and Y standard

Stage Profile
Approximately 50 mm (2.0") with solid plate installed

Weight
14.5 kg (32 lbs)

Finish
Electrophoretic black plate

Accuracy
± 20 μm to ± 1 μm with linear scales

Speed*
Up to 400mm/sec.

Flatness
5μm

Angular Accuracy
±3 arc seconds

*Specifications valid only if used with Prior motor controller. Specifications subject to change without notice.

Prior Scientific Inc.
80 Reservoir Park Drive
Rockland, MA 02370
800-877-2234
781-878-8442
Fax: 781-878-8736

Prior Scientific Instruments, Ltd
Unit 4, Will rubbish Road, Fulham
Cambridge CB1 5ET, UK
Tel: (0 1223) 881711
Fax: (0 1223) 881710

email: info@prior.com • website: www.prior.com