

H105 / HE05

High precision motorized stages for upright microscopes

The H105/2U and HE05/2U stages are designed for upright industrial microscopy and are compatible with Nikon microscopes. The H105/20L and HE05/20L stages in the series are compatible with Evident/Olympus MX series.

The H105 and HE05 stages have 154 x 154 mm travel specifically to enable complete imaging of 6-inch semiconductor wafers. The slim design simplifies integration into customized microscopes and other optomechanical assemblies, and enables the use of this stage for transmitted light applications.

Featuring Prior's patented Intelligent Scanning Technology (IST) to optimize stage accuracy, linearity and other performance characteristics in combination with a 2 mm ballscrew for speed, the H105 and HE05 are optimized for scanning industrial samples reliably and efficiently. The HE05 also uses 0.1 μ m linear encoders to provide enhanced repeatability and accuracy.



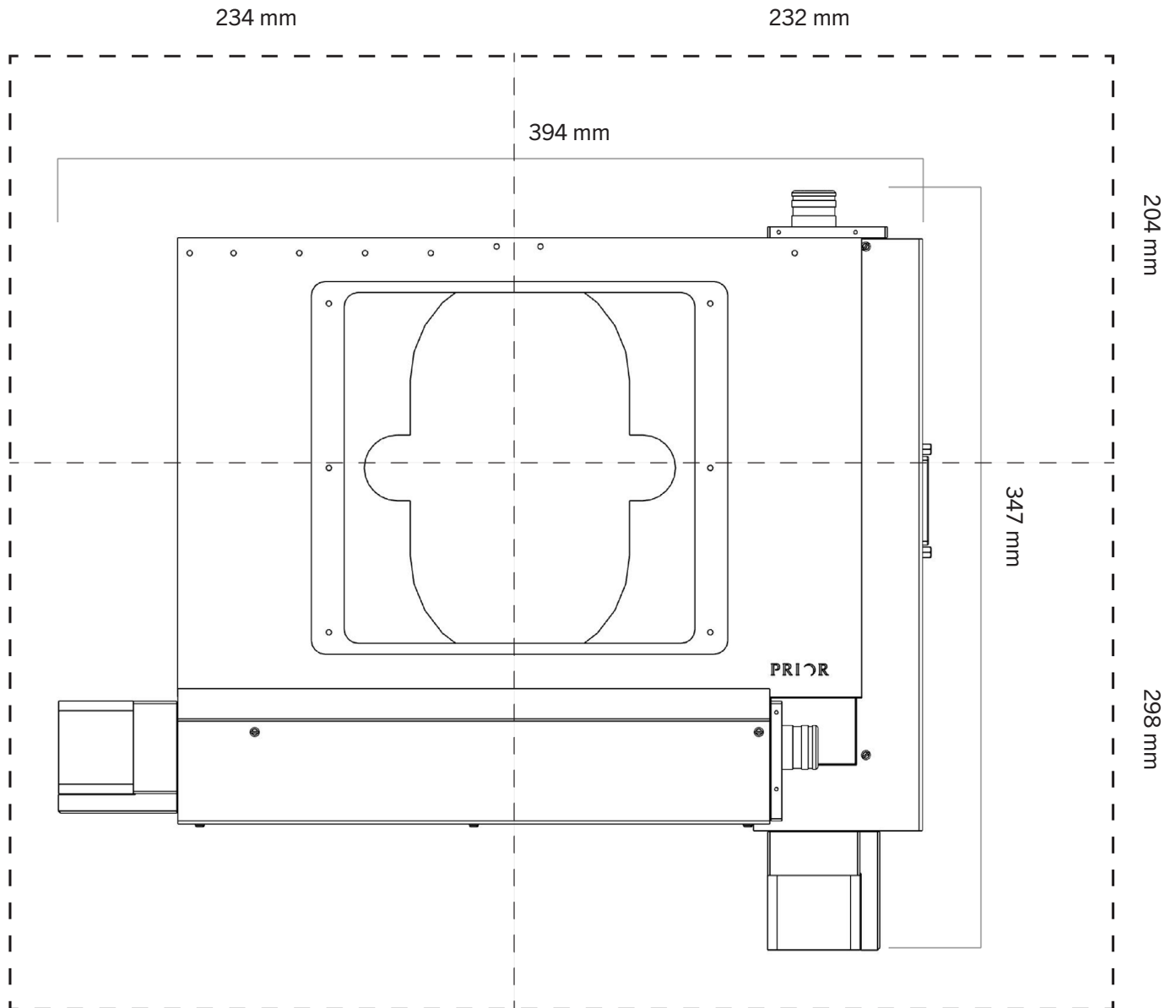
Key Features

- Easy to integrate into customized imaging solutions.
- Excellent combination of speed and accuracy.
- Travel range supports 6-inch wafers.
- Intelligent Scanning Technology™ (U.S. Patent 7,330,307).

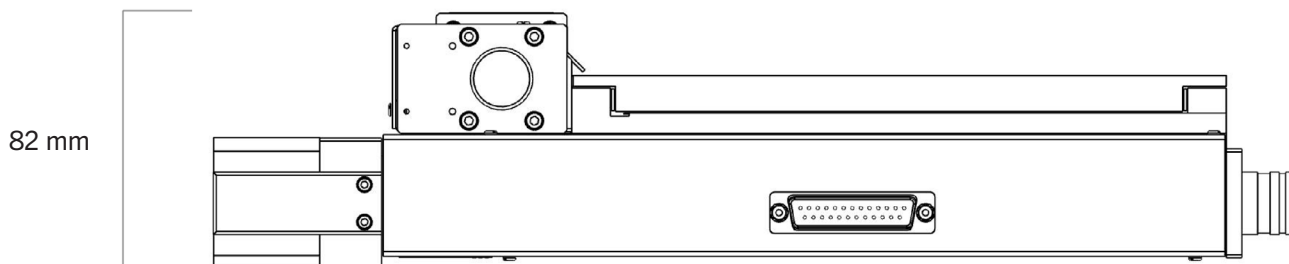
Applications

- Industrial microscopy
- Metrology
- Semiconductor inspection

Dimensions*



*Outer dimensions are the maximum footprint of the stage when at the limits of travel.



Specifications

	H105/2	HE05/2
Travel range	154 x 154 mm	154 x 154 mm
Unidirectional repeatability ¹	<1.0 µm	<0.9 µm
Bidirectional repeatability ¹	<3.3 µm	<1.1 µm
Metric accuracy ¹	0.13 µm/mm	0.09 µm/mm
Full travel metric accuracy	<19.3 µm	<16.8 µm
Resolution ²	0.04 µm	0.1 µm
Squareness ¹	<50 arcsec	<40 arcsec
Maximum velocity ³	60 mm/s	60 mm/s
Maximum load	10 kg	10 kg
Encoders	No	0.1 µm linear encoder
Motor type	200 step	200 step
Screw pitch	2 mm	2 mm
Weight	5 kg	5 kg

1. As per Prior Scientific's test methodology, typical value.

2. Defined as the minimum motor step resolution for non-encoded stages, defined as the encoder resolution for encoded stages.

3. Defined as 2.5x the default velocity, true maximum velocity is dependent on sample mass.

Ordering Information

Part Number	Description
H105/2U	Motorized stage, 154 x 154 mm travel, 2 mm pitch ball screw and 200 step motors, generic model.
HE05/2U	Motorized stage, 154 x 154 mm travel, 2 mm pitch ball screw and 200 step motors, encoded, generic model.
H105/2OL	Motorized stage, 154 x 154 mm travel, 2 mm pitch ball screw and 200 step motors, Evident/Olympus MX series.
HE05/2OL	Motorized stage, 154 x 154 mm travel, 2 mm pitch ball screw and 200 step motors, encoded, Evident/Olympus MX series.

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