

# H117P1N4 / H117E1N4

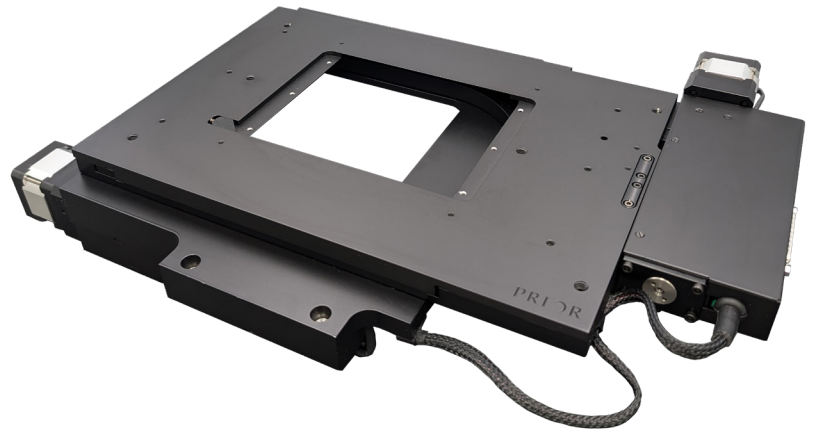
## Motorized high performance stages for inverted microscopes

The H117P1N4 and H117E1N4 inverted stages are designed for use with Nikon inverted microscopes and Prior's OpenStand-V imaging system development platform.

The flat top design facilitates compatibility with many stage top incubation systems and positioning of peripheral equipment around samples for complex imaging operations. The H117E1N4 also uses 0.1  $\mu\text{m}$  linear encoders for closed loop control and exceptional long-range repeatability.

Featuring Prior's patented Intelligent Scanning Technology (IST) to optimize stage accuracy, linearity and other performance characteristics, and being directly compatible with NanoScan SP Series piezo stages, the H117P1N4 and H117E1N4 are ideal for high end life science imaging.

Whilst the stages are typically configured with a 1 mm pitch ballscrew and 400 step motor for maximum resolution, alternative drive configurations focusing on speed may be available depending on your region.



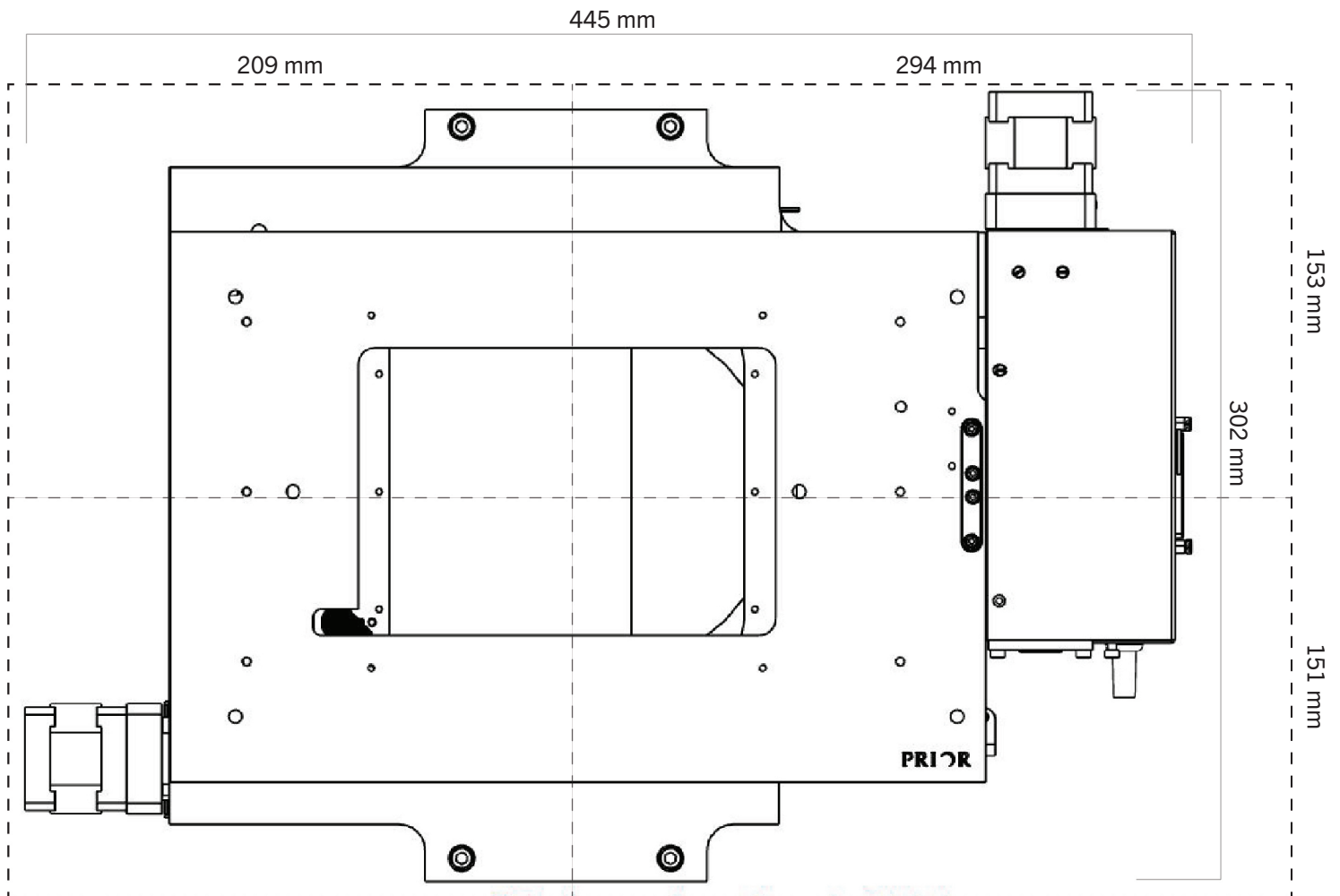
### Key Features

- Compatible with Nikon inverted microscopes and NIS elements software (appropriate package required).
- Flat top design for easy sample loading.
- Compatible with NanoScan SP series piezo stages, stage top incubators and other peripheral equipment.
- Optimized for resolution and repeatability.
- Intelligent Scanning Technology™ (U.S. Patent 7,330,307).

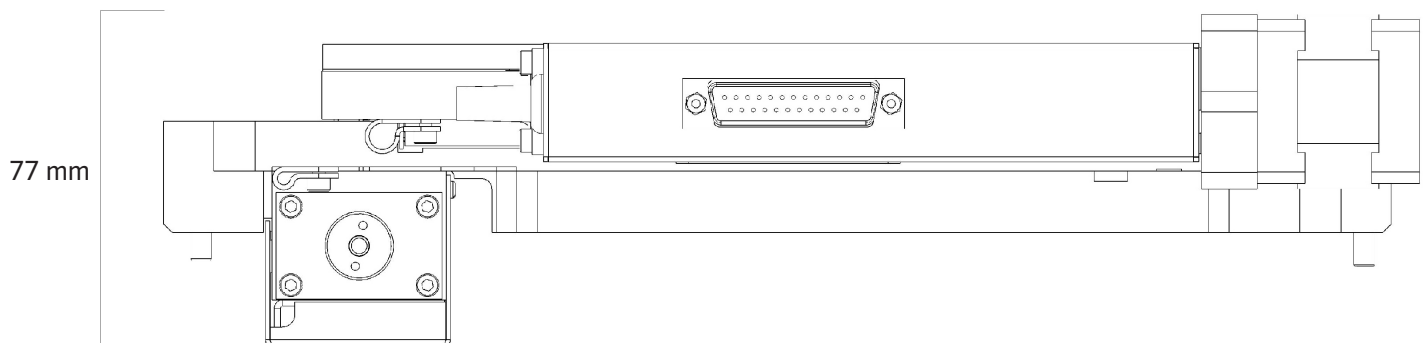
### Applications

- High content screening
- Confocal and super-resolution microscopy
- Multiphoton microscopy
- Fluorescence microscopy

## Dimensions\*



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



## Specifications

|                                           | H117P1N4       | H117E1N4               |
|-------------------------------------------|----------------|------------------------|
| Travel range                              | 114 mm x 75 mm | 114 mm x 75 mm         |
| Unidirectional repeatability <sup>1</sup> | <0.7 µm        | <0.6 µm                |
| Bidirectional repeatability <sup>1</sup>  | <2.2 µm        | <0.9 µm                |
| Metric accuracy <sup>1</sup>              | 0.17 µm/mm     | 0.09 µm/mm             |
| Full travel metric accuracy <sup>1</sup>  | <17.0 µm       | <9.0 µm                |
| Resolution <sup>2</sup>                   | 0.01 µm        | 0.1 µm                 |
| Squareness <sup>1</sup>                   | <40 arcsec     | <35 arcsec             |
| Maximum velocity <sup>3</sup>             | 15 mm/s        | 15 mm/s                |
| Maximum load                              | 10 kg          | 10 kg                  |
| Encoders                                  | No             | 0.1 µm linear encoders |
| Motor type                                | 400 step       | 400 step               |
| Screw pitch                               | 1 mm           | 1 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                                                                                                                                                                                |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| H117P1N4    | Flat top ProScan® stage for Nikon Ti2/Ti and OpenStand inverted microscopes with travel range 114 x 75 mm, 1 mm pitch ball screw and 400 step motors.                                      |
| H117E1N4    | Flat top ProScan® stage for Nikon Ti2/Ti and OpenStand inverted microscopes with travel range 114 x 75 mm, 1 mm pitch ball screw and 400 step motors. Encoded with 0.1 µm linear encoders. |

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