



## AIRGLIDE XY MOTION SYSTEM

### Description

The Airglide stacked XY system is ideal for stepping or scanning applications, its accuracy and straightness provide the ideal platform for metrology, inspection, or laser processing of LED or Semiconductor wafers. The Airglide can be packaged with a Dover proven controls solution or run with industry standard servo drive control hardware.

### Benefits

- Industry leading straightness ( $\pm 0.5 \mu\text{m}$ )
- $< 1 \mu\text{m}$  Accuracy (with 2 pt. comp)
- Velocity stability  $< 0.5\%$  while scanning
- Air bearing and brushless linear motor provides maintenance free operation

### Applications

The Dover Airglide platform uses ultra precision air bearing ways providing accurate, clean operation, and high reliability for high throughput applications. The wide base version provides additional stiffness and supports larger payloads.

The Airglide single axis and XY technology is field proven, and has been integrated into OEM process equipment for over 5 years. Primary operation is for accurate positioning of substrates for metrology, laser processing, and inspection. It can also be used to align parts for additive manufacturing.

The Airglide can be setup as an individual precision axis or stacked as an XY assembly. Additional pneumatic and signal cabling is available for customer enabling technology or axes.

Dover's optional complete motion rotary and z-theta products can be integrated with the Airglide XY along with a granite base with bridge.

### FOR IMMEDIATE ASSISTANCE

#### Dover

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## Specifications

Available travels ranging from 150 mm up to 1,000 mm

Model	AG-150	AG-200	AG-250	AG-300	AG-350	AG-400
Travel (mm)	150	200	250	300	350	400
Positional Accuracy ( $\pm \mu\text{m}$ ) <sup>1</sup>	2	2	2	2.5	3	3
Bi-directional Repeatability ( $\pm \mu\text{m}$ )	0.3					
Load Capacity (kg) <sup>2</sup>	40					
Pitch ( $\pm$ arc-seconds)	1	1	2	2	3	3
Yaw ( $\pm$ arc-seconds)	1.5					
Flatness ( $\pm \mu\text{m}$ )	0.75	0.75	0.75	0.75	1	1
Straightness ( $\pm \mu\text{m}$ )	0.5					
Maximum Acceleration ( $\text{m/s}^2$ ) <sup>3</sup>	5					
Maximum Velocity ( $\text{mm/s}$ ) <sup>3</sup>	1000					
Continuous Force (130°C, N)	76					
Peak Force (N)	240					
Continuous Power Rating (Watts)	131					

<sup>1</sup> 0.1  $\mu\text{m}$  resolution encoder; uncompensated accuracy. Measured 150mm above top plate.

<sup>2</sup> Please contact our Applications Engineers for loads exceeding 40kg.

<sup>3</sup> The maximum acceleration and velocity is encoder and load dependent.

## Dimensions

