Sub-Nanometer Resolution now Available in Direct-Drive Linear Motor Stages

New from PI, these ultra-precise stages are available with 0.2 nanometer linear encoders, ideal for high-end alignment, scanning and automation applications, in fields such as photonics, biotechnology, and laser optics.

AUBURN, Mass. (PRWEB) December 20, 2017 -- Motion and nanpositioning industry leader PI released a new precision feedback option for its linear stages equipped with direct-drive ironless 3-phase motors.

Absolute and Incremental Encoders, Excellent guiding accuracy: 4 to 9 inch travel range
The V-551 family of ultra-precision positioning stages models is equipped with precision crossed roller bearings featuring anti-crop cage assist and excellent guiding accuracy (1µm straightness / flatness per 100mm).

Two types of position feedback systems are available: absolute-measuring encoders providing 2 nanometers resolution and incremental encoders providing 0.2 nanometers resolution with effective 0.5nm minimum incremental motion at the stage platform.

Why ironless linear motors?
Ironless linear motors are used when high dynamics needs to be combined with extremely smooth motion. They are ideal for applications where extremely constant velocity is required, such as in optics inspection, metrology, photonics, interferometry, and semiconductor test equipment. The frictionless, zero-wear motor drives are also popular in fast automation applications, where reliability and maximum up-time are mission-critical.

Read Tech Blog, Performance of Direct-Drive Linear Motor Stages in Precision Positioning Applications >

Watch the Direct Drive Systems Video >

Specifications, Datasheet, More Information >

Standard and Custom
PI has in-house engineered solutions with over 4 decades of experience working with customers to provide products that meet application demands, and can quickly modify existing product designs or provide a fully customized OEM part to fit the exact requirements of the application.
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Online Web 2.0 Version
You can read the online version of this press release here.