NEW Linear Motor, Direct Drive Precision Positioning Stage, LMS-180, shown with SMC Hydra Motion Controller
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PI PRESS RELEASE

20" Travel, Nanometer Resolution, High Dynamics: New Precise Motorized Linear Stage

PI's new family of industrial-class direct-drive positioners supports high-load and multi-axis combinations.

May 2017, Auburn, MA – Precision positioning systems industry leader PI (Physik Instrumente) has released an elevated version of its ironless linear motor stage, LMS-180, which is well-suited for precision automation applications in industry and research that require highly accurate linear motion over long travel with high load capacity.

High Speed, Precision, Load, and Durability
The LMS-180 linear stage family is available with five travel ranges from 6" (155mm) to 20" (508mm). Equipped with an ironless electromagnetic linear motor, the LMS-180 delivers smooth motion with 15 nanometers resolution and repeatability down to 0.05 microns. When driven with the SMC Hydra closed-loop motion controller, a maximum velocity of 19.7"/second (500mm/sec) is reached. Highly accurate position feedback is provided by an integrated direct-measuring incremental linear encoder with sine/cosine output. Recirculating ball bearings provide high-load capacity of 250N (56lbs) and durability at demanding repetitive cycle rates with high speeds.

Why Ironless Linear Motors?
Ironless, non-cogging linear motors provide very smooth motion, and a high dynamic velocity range along with rapid acceleration. They are ideal for applications where high resolution and 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 uptime are crucial.

Alternate Drive Options
The LMS-180 stage is also available in a modified version (LS-180) with a ballscrew drive and rotary stepper and servo motor options. The LS-180 stage provides even higher load capacity of 1,000N (224lbs), as well as higher push/pull forces. It is mounting compatible to the LMS-180 for easy assembly of multi-axis systems.

Specifications, Datasheets, More Information >
http://www.pi-usa.us/products/precision_positioning_pi-micos/Linear_Precision_Positioning_Stages_Mc.php#LMS180

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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About PI
PI is a leading manufacturer of air bearing stages, piezoelectric solutions, precision motion control equipment, and hexapod parallel-kinematics for semiconductor applications, photonics, bio-nano-technology and medical engineering. PI has been developing and manufacturing standard & custom precision products with piezoceramic and electromagnetic drives for 4 decades. The company has been ISO 9001 certified since 1994 and provides innovative, high-quality solutions for OEM and research. The PI group employs more than 1,000 people worldwide in 15 subsidiaries and R&D / engineering centers on 3 continents.

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