



PRESS RELEASE

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Fast and Cost-Effective Linear Drive with Ultrasonic Piezomotors

*The U-264KSPA linear actuator from **PI (Physik Instrumente)** is a self-locking drive that has been optimised for being produced in large quantities from engineering thermoplastics.*

This product features a 200 mm travel range and a minimum incremental motion of 6 μm . A linear encoder with 0.6 μm resolution assures reliable position control and repeatable accuracy. With the drive technology of PILINE[®] ultrasonic piezo motors, velocities of up to 150 mm/s and a maximum holding force of 6 N can be achieved.

As piezomotors are self-locking at rest, no heat is generated and mechanical components such as brakes or gearhead can be dispensed with. As a result, the U-264KSPA ensures high positional stability. The stiff design, direct coupling and fast response times of the piezo ceramics allow for a highly dynamic start/stop behavior.

THE DRIVING FORCE OF POSITIONING SYSTEMS WITH PILINE[®] TECHNOLOGY

PILINE[®] linear drives dispense with the mechanical complexity of classical rotary motor/gear/leadscrew combinations in favor of costs and reliability. An integral part of the ultrasonic piezomotor is the piezo ceramics that is pretensioned against a movably guided runner via a coupling element. The piezo element is excited to high-frequency oscillations that cause the runner to move.

Preloading the piezoceramic actuators against the runner ensures self-locking of the drive when at rest and powered down. As a result, it does not consume any power, does not heat up, and keeps the position mechanically stable. Especially applications with a low duty cycle that are battery-operated or heat-sensitive benefit from these characteristics.

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