



PRESS RELEASE

16 October 2013

Voice Coil Linear Actuator to Complement PIMag™

Magnetic Direct Drives on the Rise: PI (Physik Instrumente) Complements its PIMag™ Series with a Further Voice Coil Linear Actuator

The V-900KPIC PIMag™ linear actuator from **PI** is a compact and cost-effective drive for dosing, testing and focusing applications. It is a 1.5 mm travel range and attains high scanning frequencies of several 100Hz and over 100 million cycles.

To achieve this performance, PI dispensed with mechanical components such as gear or guiding rails and combined a direct magnetic voice coil drive with flexure guiding. The wear-free flexure guiding system is based on the elastic deformation of metal joints, a principle which prevents lateral motion of the mechanical output and ensures high travel accuracy as well as a high lifetime. This type of guiding system has been used for some time in piezo-based nanopositioning systems, designed to perform several billion motion cycles in continuous operation. For closed-loop operation, the V-900KPIC is equipped with a linear encoder with 0.1 µm resolution.

MAGNETIC DIRECT DRIVES OF THE PIMAG™ SERIES

For applications requiring long travel ranges with high velocities or scanning frequencies, long operating times and a long lifetime, PI uses magnetic direct drives. Here, the system components are adapted, such as stator, actuator or electronics to the specific requirements. This individualisation of the drive system creates a substantial factor of success for piezo actuator systems in nanopositioning technology, also used for the PIMag™ series.

PI's experience in nanopositioning technology results in a profound knowledge concerning selection and use of digital control technology, guiding systems and fast communication interfaces.

For more information, contact **Warsash Scientific** on +61 2 9319 0122 or sales@warsash.com.au.

