Voice coil-driven linear stages intended for high-speed positioning applications

The high-performance compact positioning voice coil-driven linear stages from MotiCont are used in positioning applications where high speed, high acceleration or high accuracy is required. The motorized linear stages are fully self-contained. Each stage utilizes one or two voice coil motor(s), a linear carriage system, an optical quadrature encoder feedback device and a home switch. The standard positioning resolutions of 1 micron through 30 microns are available for immediate delivery. Other resolutions are available upon request.

The voice coil actuators are the simplest type of electric motors to operate. The non-commuted motor construction increases reliability with no cogging. The direct coupling of the motor to the load allows for fast acceleration / deceleration and high speed operation with zero backlash.

The low moving mass also allows for high bandwidth servo loops. Range of motion is from 0.50” (12.7 mm) through 5.20” (132.1 mm). Continuous (stall) forces range from 1 lb (4.5 N) through 23.0 lb (102 N). The intermittent forces at 10% duty cycle are from 3.1 lb (13.8 N) through 73 lb (323 N).

The carriage system utilizes cross roller, recirculating or linear bearings depending on size and resolution.

Small footprint is ideal for compact positioning applications.

The optional spring ensures the return of carriage upon loss of power, making the

stage ideal for vertical or horizontal applications.

The stages may be stacked in XY, XZ and XYZ configurations.

There are more than 40 models to choose from.

www.moticont.com [1]

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Links:
[1] http://www.moticont.com