Linear rail platform designed for high moment loads

Haydon Kerk Motion Solutions introduces the BGS04 Linear Rail System—the first model in a new linear rail platform designed specifically for high moment loads. The roll, pitch, and yaw moment load capability of the BGS04 allows the system to maintain tight accuracy and repeatability even in applications requiring significant cantilevered loading.

At the heart of the BGS04 is a Haydon linear actuator driving a Kerk 303 stainless steel precision lead screw. The screw is coated with Black Ice TFE coating providing a permanent wear-resistant dry lubrication. The lead screw drives an anti-backlash nut embedded in a machined aluminum carriage mounted to a stainless steel ball rail. The result is a rigid, smooth operating motion system. Depending on the load requirements, the BGS04 linear rail is available with either the Size 11 (28mm) double stack or Size 17 (42mm) single stack hybrid linear actuator.

The BGS04 is carefully designed to maintain accuracy while moving heavy loads. Maximum roll, pitch, and yaw moments are 5.72 lb-ft (7.75Nm), 4.88 lb-ft (6.60Nm), and 5.68 lb-ft (7.70 Nm), respectively. Maximum horizontal load is 22 lb (100N). Lead screw resolution available for the BGS04 ranges from 0.025-in (0.635mm) to 1.00-in (25.40mm) per revolution.
When combined with a 200 step/rev stepper motor, linear positioning resolution is greatly enhanced to a range of 0.000125-in (0.003mm) to 0.005-in (0.127mm) per input pulse. Stroke length of the BGS04 is 1-in (25mm) to 18-in (460mm).

If the application requires the size 17 linear actuator, an IDEA drive system is an available option, resulting in an integrated linear rail, actuator, and programmable drive package. When integrated with an IDEA Drive, the system combines Haydon hybrid linear actuator technology with a fully programmable, integrated stepper motor drive.

By combining technologies into a single preassembled unit, Haydon Kerk Motion Solutions is able to improve system integration for the equipment OEM or end user. The overall cost for the customer also is lowered by offering a complete solution that eliminates the need for rotary-to-linear conversion resulting in simplified product development.

For more information, visit www.HaydonKerk.com [1]

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