

Press Release

13th October 2009

First hygienic direct drive linear motor makes waves in wash down

Copley Motion Systems, inventor of the tubular linear motor will launch a new high performance direct drive linear motor at SPS/IPC/Drives this year in Nuremberg that is constructed entirely from stainless steel for use in the most demanding industrial environments.

The ServoTube Hygienic is constructed from precision machined austenitic stainless steel, with a smooth hygienic design that is free from dirt traps and suitable for use in the most demanding and corrosive industrial or aseptic environments.



The ServoTube Hygienic wash-down direct drive linear motor

Because there is no mechanical linkage between the fixed forcer body and the moving rod, there is no wear and its integrated field-replaceable polymer bearings require no lubrication. The position sensor is always accurate, and is protected from dirt or damage because it is built into the direct drive linear motor's body. This elemental design meets the DIN IP69K

ingress protection requirements, allowing the linear motor to be used in dirty or wet environments and to be cleaned with pressurised jet wash systems.

Direct drive motion also offers significant performance improvements compared to existing linear systems. High peak force and low inertia guarantees highly dynamic movements, and the ServoTube Hygienic offers 25 micron repeatability throughout the lifetime of the linear motor.

Marketing Director Steve Hickman commented, “The ServoTube Hygienic is the first linear actuator that can be used in the real-life wash-down applications our customers have to operate in. We believe that its IP69K ingress protection rating, non-corrosive all stainless construction and high speed actuation offers no-compromise linear motion for the most demanding hygienic and industrial processing environments.”

Whereas existing belt drive and ballscrew drive linear systems comprise several component parts, the ServoTube range of direct drive linear motors require only a standard Servo drive, and where applicable a linear rail to operate. This reduces system complexity, maintenance and saves space – because no servomotor or gearhead is required.

Electrically, the ServoTube Hygienic operates from a 3-phase 600V supply and provides a digital incremental encoder and commutation output for use with most standard digital servo drives.

Available from November, the ServoTube Hygienic will be initially available in two models that both offer +/-400 micron position accuracy and 25 micron repeatability. The XHB3804 and XHB3810 provide 744 and 1860N peak force capability and are capable of speeds of 4.7 and 2.6m/s respectively. Both models can be water cooled providing up to 70% extra continuous force for applications requiring high work rates, or for use in environments with a high ambient temperature.

The ServoTube Hygienic provides highly compact, high throughput moving rod linear actuation with integrated field replaceable polymer bearings to support the moving rod. For off-axis loads an external bearing rail can be used.

This specialised linear direct drive linear motor is suitable for applications including food and pharmaceutical processing and packaging, industrial plants, chemical processing, and any

environment where dirt, pressurised jet washing, and corrosive cleaning chemicals make standard linear actuation systems unsuitable.

About Copley Controls Corp.

Copley Controls Corp. is a worldwide leader in high power amplifiers and high performance motion solutions for OEMs in the semiconductor, medical, pharmaceutical and automated assembly/inspection industries. Headquartered in the US with a division in England (Copley Motion Systems LLC), Copley Controls has 20 years of experience in OEM partnerships. Our global commitment is backed with sales offices and local technical support in the US, Europe and Asia.

Copley Controls Corp. is a wholly owned subsidiary of Analogic Corporation.

www.copleycontrols.com

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