

Scanning the field for ideas

Edited by Stephen Mraz

Injection system combines electric and hydraulic technologies

Hydraulically powered injection units are known for power, speed, and accuracy. Electric units cannot match the higher forces of their hydraulic counterparts, but are recognized for their modular designs, which are easier to maintain, cleaner, and offer greater energy efficiency.

The new Powershot injection system from Moog Inc., East Aurora, N.Y. (*www.moog.com*), combines hydraulic and electric technologies to get the best of each. It is a sealed, closedloop hydraulic actuator that requires no external power unit. A servo-proportional valve and accumulator provide closed-loop control of injection and decompression. A servomotor, or frequency drive, controls rotation of the plasticizing screw. The radial piston pump handles closedloop control of backpressure and recharges the accumulator for the next cycle. Unlike pure hydraulic systems, the main servomotor and radial piston pump are only turned on when needed during recovery, which reduces energy consumption.

The Moog Servo Controller System works with the customers' controller through a fieldbus. The compact unit can be installed with just a few connections, offering plug-and-play convenience.



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