

Get More Control out of Your Electrohydraulic Controls with EHPV

Hydraulically Piloted Controls

Piloted hydraulic controls have a long history of use in many types of equipment. They allow remote location of control levers and joysticks in the cabin or at a ground control station. The technology relies on pilot lines that carry a signal from the control to the main valve which is typically centrally located on the machine. As the signal lines get longer, responsiveness and efficiency of the system suffer. Common complaints of the technology include poor accuracy and repeatability, high hysteresis (commonly 10-25%), inefficiency (due to pilot flow), and sluggishness in cold climates. These drawbacks can make the technology less than user friendly, requiring a high-degree of operator skill. Occasional users and rental fleet owners alike can appreciate a more advanced control solution.

Electrohydraulic Control

Electrohydraulic controls can overcome many of these limitations and allow more sophisticated control schemes. Moving the piloting element to the main control valve simplifies plumbing, reduces potential leak points, and increases both efficiency and responsiveness. EH control enables features like:

- Tuning/deadband compensation
- Control ramping
- Load compensation
- Electronic self-leveling
- Return-to-dig
- Electronic cylinder cushion
- Autonomous control

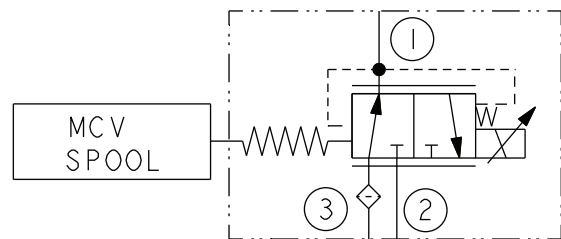
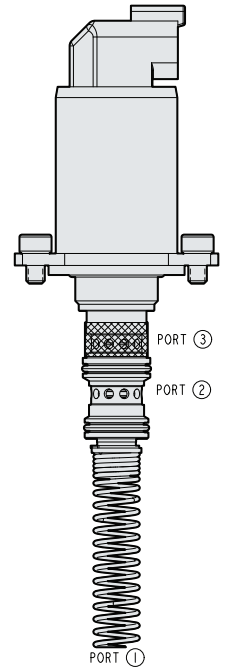


HydraForce EHPV

HydraForce's patent-pending EHPV90-G33 ElectroHydraulic Pilot Valve enhances EH control with a unique mechanical feedback mechanism. This feedback scheme brings controllability to a whole new level, dramatically improving hysteresis and control response.

Closing the Loop

HydraForce EHPV is built on our proven EHPV platform. HydraForce EHPV ElectroHydraulic Pressure Reducing valves provide highly accurate pressure control to pilot devices throughout the mobile equipment industry. EHPV adds mechanical feedback that communicates between the control and controlled device. The configuration achieves flow-force correction of the piloted spool and allows both ends to remain pressurized, stiffening the system and improving stroke response. EHPV performs favorably even compared to EH valves with LVDT position sensing, displaying hysteresis below 3% and response of 65 ms.



For detailed information and specifications, visit www.hydraforce.com or contact your local HydraForce representative at www.hydraforce.com/distributors/world.htm

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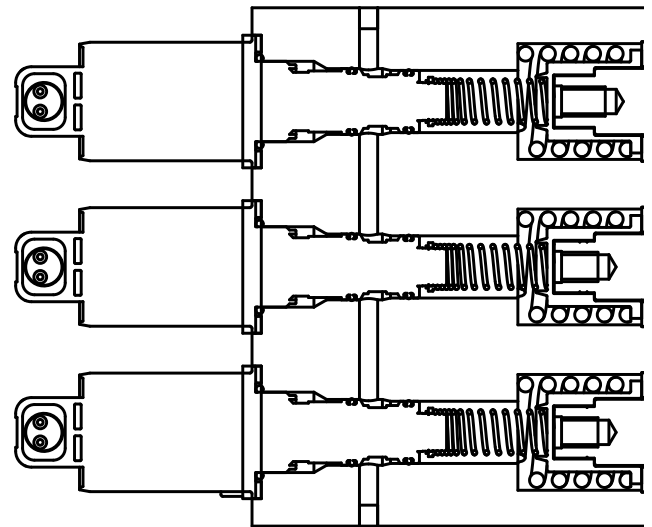
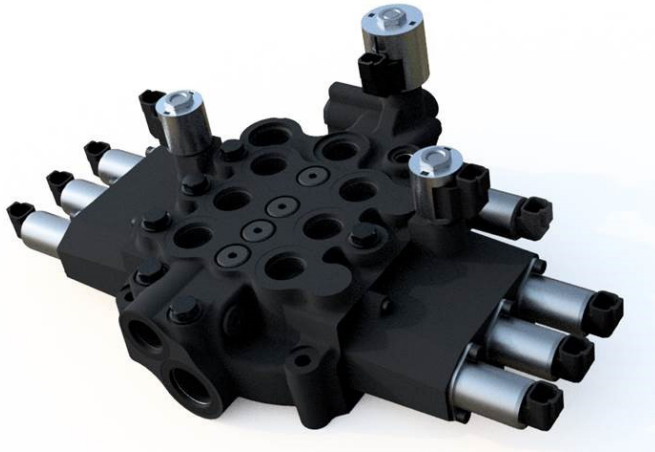
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ISO 9001

Member: British Fluid Power Association
and Verband Deutscher Maschinen-
und Anlagenbau e.V. (VDMA)
ISO 9001 & ISO 14001

ISO 9001

A Full Main-Control Valve for Compact Loaders

Paired with a three-section monoblock from Roquet, HydraForce can now offer a complete main control solution for skid-steer and compact loaders including boom, bucket, and auxiliary functions. This complete main control includes a function interlock valve for safety, main pump and work port reliefs, boom float feature, and a bolt-on boom suspension.



EHPV mechanical feedback couples the pilot and piloted elements to increase position accuracy and response.

Keep the Load in the Bucket with PbS™ Pressure-Balanced Suspension

The main control valve can also be equipped with HydraForce's patented PbS pressure-balanced boom suspension. PbS offers a more responsive load-adaptive suspension for compact loaders. Using the patented HPB08-E40 externally piloted pressure reducing/relieving valve, the suspension is able to dynamically match accumulator pressure to the bucket load.



HPB08-E40 pressure-balanced accumulator charge valve adapts to changing load providing seamless activation and preventing cylinder drift.

