HYDRAULIC JOYSTICKS

Built using proprietary Step Bore Technology, our hydraulic joysticks (JS446 and JSC446) provide up to 20 lpm flow with up to 50% less effort than conventional pilot valves, while maintaining precision hysteresis below 1%. We also use a superior cartridge design with a flat top plunger. These core technologies are offered in a wide variety of configurations (including foot pedals), and can be used on wheel loaders, cranes, dozers, excavators, skid steer loaders, telehandlers, etc.

JSC446 — a revolutionary compact design that delivers all the advantages of the JS446 in an incredibly compact size. Saves space in your cab and comes at a slightly lower cost.

ELECTRONIC JOYSTICKS

JSE — A revolutionary approach to electronic joysticks. Built using our twenty years of experience with hydraulic joysticks and designs that have been awarded multiple patents, our JSE gives you the best of both worlds.

The JSE combines what operators love about our JS446 with the ability to be digitally integrated and programmed to your needs. Unlike other electronic joysticks, operators experience the control and the feel of the system. And with multiple efforts available for each axis, we can customize your JSE specifically to your application.

The JSE has all the features, benefits and options of our hydraulic joysticks — but it can also output analog (0-5V) or digital (CANBUS) signals. There’s never been an electronic joystick like this one.

HANDLES

Our high-quality ergonomic handles have a feel designed to match the low efforts of our pilot valves. The switch and trigger options are also low effort, and ergonomically located on the handles. Wheel loaders typically use three hold coil detents and have a forewarning feel bumper. Dozer applications typically have one hold coil detent with a forewarning feel bumper. The electromagnetic hold coils allow the handle to go into a detented position.

The patented Hi-Lo forewarning feel bumper is set so the operator can get near full stroke without going into float or latched position. The Hi-Lo bumper makes sure that with a high initial load the operator knows he/she is about to go into float or detent, but lowers the force to almost nothing to assure the most latching force from the magnetic detents.

KEY FEATURES/BENEFITS:

- Low-effort design reduces operator fatigue
- High response delivers accuracy and control
- Aluminum body and cartridge design provide lower leakage and better quality control
- Low noise dampening
- High force bumper
- Easily configurable to deliver the optimum design for your specific application
- Standard and custom port sizes
- Multiple handle options and configurations
LOW-MASS CHECK VALVES

Our innovative line of low-mass check valves provides OEMs with low-shock solutions for a variety of system instability challenges. The direct-acting, hollow, parabolic poppet, with options for orificed back-flow, eliminates harmful pressure spikes while solving problems such as cylinder voiding, system chatter, and boom shutter. There are three varieties, focused mainly on mobile hydraulics applications: poppet style (CV-P), manifold style (CV-M), and a unique, patented disc style (CV-D). These are all available in multiple configurations and fitting types.

KEY FEATURES/BENEFITS:

- Solve system instability problems
- Solve system “noise” problems
- Low-mass = low-shock
- Both high and low pressure solutions
- Fit into adapter size

Our patented CV-D disc check is an innovative design with full pressure capability, very low leakage, lower pressure drop, low surge spike and high stability due to its low mass. It’s features also typically lead to the design of lower cost solutions. We offer multiple configurations with or without a fitting and currently offer four sizes (-12 through -24), with three cracking pressure settings (1, 5, and 65 psi).

Our poppet style inline check valves feature a length that is similar to standard fittings, have low pressure drop, low overshoot, and set right cracking pressure. Our manifold check valves are very stable due to the use of our low mass poppets, feature specialized ports to improve lines, and can be made from cast iron, ductile iron, or aluminum extruded bodies.

CUSTOM DESIGNED SOLUTIONS

One thing that differentiates us from our larger “catalog” competitors is the fact that we excel and thrive designing custom hydraulic solutions that are just right for your particular application. Need a specific curve for your pilot valve, or have unique requirements for your pressure relief valve? It’s not a problem for us!

EXAMPLE PROJECTS:

- High-flow proportional EH valves with quick and smooth response curves
- Implement actuation
- Pump displacement control
- Transmission clutch control