



Hydraulic Solutions for Mobile Applications

VP170 Directional Control Valve
Proportional, Load-Sensing and
Pressure Compensating

Load-Sense Pressure Compensated Sectional Valve

More Productivity with Less Cost

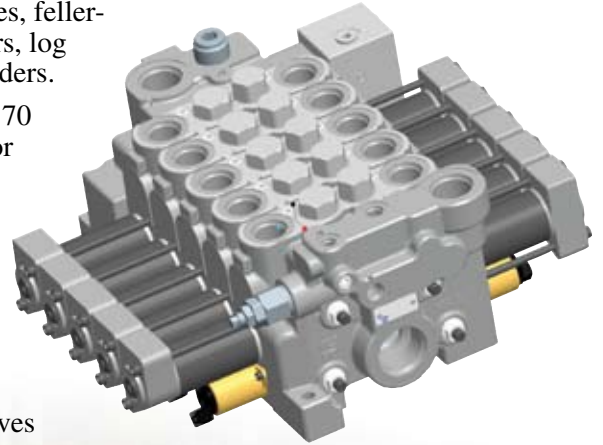
The world's leading supplier of motion control products, Parker Hannifin Corporation, announces the introduction of the VP170 Directional Control Valve. VP170 was designed to help address the challenges faced by mobile machine designers needing improved horsepower utilization, reduced fuel consumption and trouble-free operation.

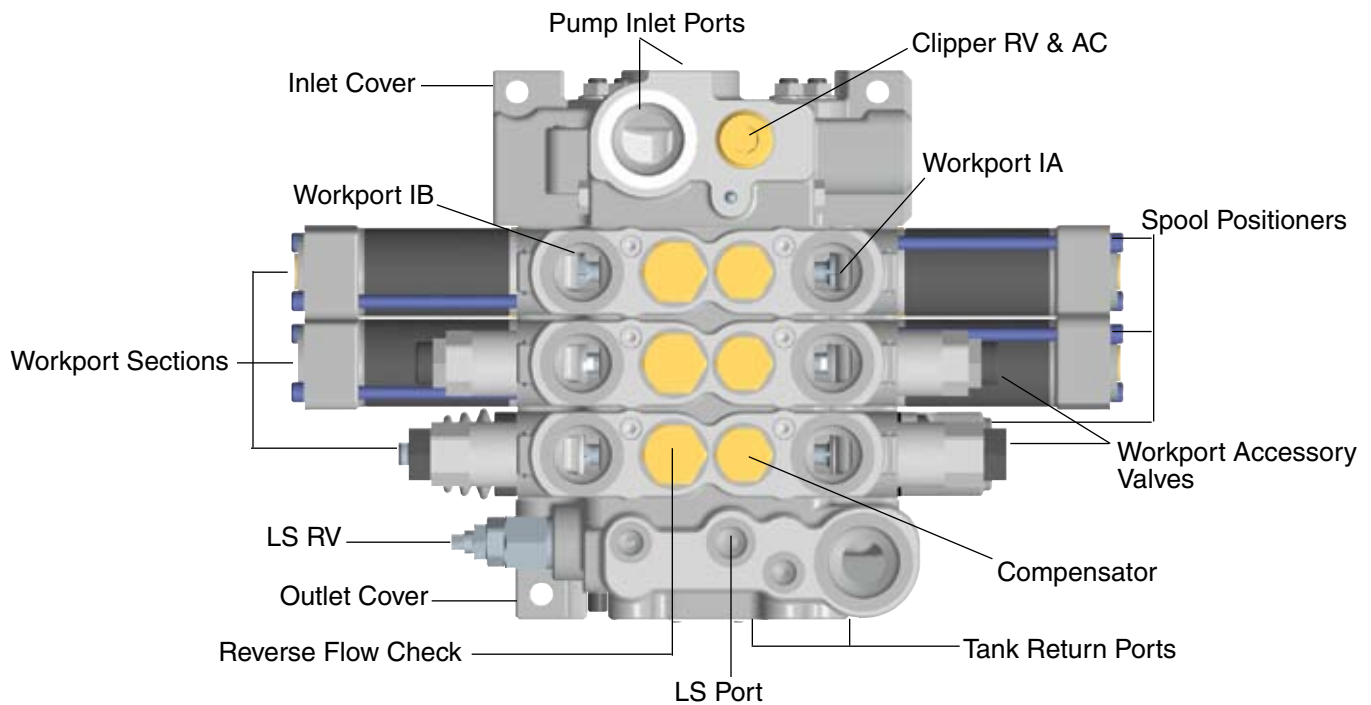


VP170 *Directional Control Valve*

The VP170 valve is an excellent choice for applications with pump input flows from 130-230 LPM (35-60 GPM). The VP170 uses contemporary flow-sharing technology to address the productivity problems associated with pump over-demand conditions. Targeting construction, forestry and refuse markets, these valves are ideal for wheel loaders, dozers, cranes, feller-bunchers, harvesters, forwarders, log loaders and automated-side loaders.

The modular design of the VP170 enables hardware to be added or removed, depending upon the application. For example, it can be configured for load-sense only, load-sense pressure compensation, and with or without induced-load protection. For added cost control, the VP170 uses all of the spool positioners, relief valves and tie bolts from other field-proven Parker valves.





Key Features and Benefits for Machine Designers

- Excellent machine controllability** — Individual pressure compensation in each work section delivers predictable metering with single and multi-function operation, regardless of changes in pressure or input flow. This enhances machine control, improves productivity and helps to make every operator an “expert” operator – all of which saves money. Also, this valve type lends itself to closed-loop control.
- Flexible design** — The modular design of the VP170 enables the machine designer to add or remove content to achieve a better “value match” with the machine requirements. For example, the VP170 is available as load-sense pressure compensated, load-sense only, and with or without induced-load protection. Also, a full line of spool positioners and port accessories is available.
- Enhanced machine productivity** — The VP170 incorporates flow-sharing technology. This means that during a pump over-demand condition the valve will automatically apportion the available pump flow to the selected functions, based upon control spool area openings. The selected functions will maintain their speed relationship, but at a lower overall speed. This automatic adjusting by the valve can improve machine productivity as much as 20% and reduce operator fatigue.
- Induced-load protection** — Is available for machines whose duty cycles might generate induced loads greater than the load-sense relief valve setting. This is an important option for valves with flow-sharing technology and has the benefit of maintaining machine productivity.
- Addresses cavitation and maintains system responsiveness** — A unique, optional low-pressure regeneration feature combats cavitation and the damage it causes to hydraulic components – reducing warranty costs as much as 15%. This device assures there is hydraulic oil in the loop at all times.
- Wide flow range** — Offers application potential across a family of machines. The VP170 can handle a pump input of 230 LPM (60 GPM) and work sections flows from 30-190 LPM (8-50 GPM).
- Ease of service** — The load-sense check, compensator and transition check are located on top of each work section making it a “service friendly” design.

- Improved system efficiency** — Optimized horsepower utilization and heat management are inherent with load-sense pressure compensated valves. This is because of a closer match between horsepower consumption and horsepower demand. Fuel savings between 30-50% can be achieved vs. open-center type systems. Also, better horsepower utilization may enable the use of a smaller, less costly engine.

Work Section Stress Analysis



The extensive use of Pro/ENGINEER® 3-D modeling and finite element analysis (FEA) in the VP170 design reduce your development time and costs, while improving reliability — decidedly more value.

*Parker is the global **leader** in motion and control technologies, **partnering** with its customers to increase their **productivity** and **profitability**.*



Parker Hannifin is a Fortune 300 company and the world's leading supplier of motion and control components and systems such as mobile hydraulic valves. The company posts over \$8 billion in sales annually, and serves 400,000 customers in 46 countries.

Parker is the first choice for mobile hydraulic valves, with extensive product lines and in-depth knowl-

edge of markets such as construction, aerial work platform, refuse, forestry, material handling, truck, mining, agriculture, and snow and ice. The company's experienced engineers and field sales teams assist customers at every stage of the design and build process, from selecting the right valve to optimizing its performance in an application.

Hydraulic Valve Division



Forest City, North Carolina



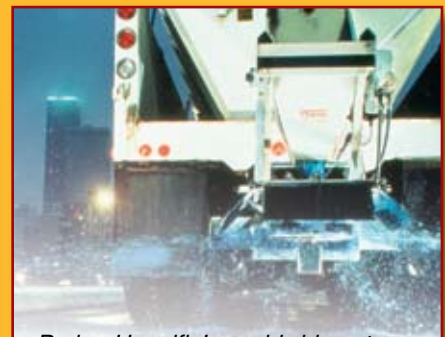
Hicksville, Ohio



Big Spring, Texas



Elyria, Ohio



Parker Hannifin's worldwide network of field sales engineers and distributors offer hands-on, local customer support.

*To locate a distributor by phone call **800-CPARKER (272-7537)***

*Visit us at **www.parker.com** to locate your nearest distributor for the VP170 valve, or for information on our entire valve line-up.*



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Bulletin HY14-2006/US,
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