

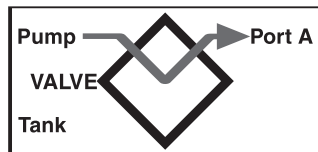
Valve Selection

Choosing the Right Valve

- Step 1-** Select the hydraulic cylinder that best suits the application. See pages 6-8.
- Step 2-** Select the series of hydraulic pump with adequate oil output and reservoir capacity to power cylinder. See pages 38-41. Check speed chart on page 6.
- Step 3-** Select pump within series with the valve option that is best matches cylinder, pump and application. See pages 44-51.

CONSIDERATIONS:

- Will the valve be used with single- or double-acting cylinders?
- Will the valve be mounted on the pump, away from the pump or directly into the hydraulic lines?
- Will the valve be manually-operated or is remote control preferred?
- Is independent control of multiple cylinders, or hydraulics tools preferred?
- What directional control and pressure control valve functions are needed for the application?



Basic types include manually operated, air or solenoid operated and pilot operated. Special application valves for pre-stressing and post-tensioning are also offered. Consult selection chart on page 44 for listings of all Power Team valves.

DIRECTIONAL CONTROL VALVES

Description	Position 1	Position 2	Center Position
2-way, 2-position (For control of single-acting cylinders)			
3-way, 2-position (For control of single-acting cylinders)			
3-way, 3-position (For control of single-acting cylinders)			

IN-LINE HYDRAULIC VALVES

Load Lowering Valve – Provides precision metering for controlled return of the cylinder piston.

Sequence Valve – Used when a cylinder in a multiple cylinder application must advance before any other.

Pressure Reducing Valve – Permits independent pressure control to two or more clamping systems operated by a single power source.

Shut-off Valve – For fine metering of hydraulic oil. Several may be used to control multiple single-acting cylinders.

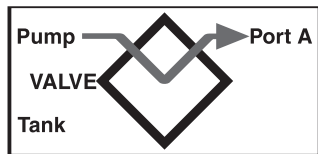
Check Valve – Permits flow of hydraulic oil in one direction only.

Pressure Relief Valve – Used at remote locations in a hydraulic circuit where maximum pressure requirements are less than the setting of the basic overload valve in the pump.

Metering Valve – Restricts surges by restricting flow to a certain level; when flow subsides, valve reopens automatically. For systems using large cylinders or extended lengths of hose.

Pressure Regulator Valve – Permits adjustment of operating pressures at various values below the relief valve setting of the pump.

Relief Valve – Protects a hydraulic system against over pressurization.



DIRECTIONAL CONTROL VALVES

Basic types include manually operated, air or solenoid operated and pilot operated. Special application valves for pre-stressing and post-tensioning are also offered. Consult selection chart on page 44 for listings of all Power Team valves.

<p>3/4-way, 2 position (For control of single- or double-acting cylinders)</p>		<p>Oil goes to the “extend” side of the cylinder. The oil from the “retract” side returns to reservoir. Cylinder holds with pump shut off.</p>		<p>Oil goes to the “retract” side of the cylinder, oil from the “extend” side returns to reservoir.</p>	
<p>3/4-way, 3 position (For control of double-acting cylinders)</p>		<p>Oil goes to the “extend” side of the cylinder, oil from the “retract” side returns to reservoir. Cylinder holds with pump shut off.</p>		<p>Oil goes to the “retract” side of the cylinder, oil from the “extend” side returns to reservoir.</p>	<p>Holds pressure even if pump is running. Oil from pump goes through valve, back to reservoir.</p>
<p>Other Valve Characteristics</p>					
		<p>Tandem Center – Cylinder ports are blocked, oil from pump goes to reservoir. Used when pump remains running Example: gasoline-driven pumps.</p>		<p>Closed Center – Generally used when running multiple valves in series from one pump.</p>	<p>Open Center – Used when holding is not a requirement, as when running two separate hydraulic tools such as cutters and crimpers.</p>