Now you can reduce the number of valve cartridges needed in load-sensing circuits with our new dual-solenoid 5-way on-off or proportional directional valves.

The complete line of 5-way, 3-position cartridge valves is now available in standard 08 size and 10 size cartridges. Both the 57C/D and the 58C/D models feature a load-sense port which helps to simplify your hydraulic circuit while reducing your overall part count.

Until now, if the directional function of a hydraulic circuit required load-sensing capabilities, a load-shuttle network or series of load-sense check valves were required to isolate each individual load. Using our new 5-way on-off and proportional directional valves, you can reduce the number of cartridges needed in load-sensing circuits, especially where the load-holding can be done by the directional valve. In applications where safety requirements do not require that load-holding be performed by the actuator (i.e., when position does not need to be maintained over a long period of time and there are no overrunning load conditions) a closed-center 5-way valve can be used to eliminate pilot-operated check or counterbalance valves in the system.

When a 4-way solenoid or proportional directional valve is used in a load-sensing circuit, load-holding valves are required to isolate the load from the load-sense network when the function is not in use. These load-holding valves are necessary to prevent the load-induced pressure generated when the directional solenoid is de-energized (load-holding pressure) from acting on the compensator or leaking through the LS bleed, causing the function to drift. These 5-way solenoid and proportional directional valves automatically isolate the load from the load-sense network when they are de-energized (see Fig. 1). Load-holding valves are not needed unless there are overrunning load conditions that require the use of counterbalance valves.

### Dual Solenoid Valves, 5-Way, 3-Position, Spool-Type, with Load Sense Port

<table>
<thead>
<tr>
<th>Flow</th>
<th>On-Off Valves</th>
<th>Proportional Valves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model</td>
<td>Cat. Pg.</td>
</tr>
<tr>
<td>15 lpm/4 gpm</td>
<td>SV10-57C</td>
<td>1.580.1</td>
</tr>
<tr>
<td>15 lpm/4 gpm</td>
<td>SV10-57D</td>
<td>1.581.1</td>
</tr>
<tr>
<td>13 lpm/3.5 gpm</td>
<td>SV08-58C</td>
<td>1.583.1</td>
</tr>
<tr>
<td>30 lpm/8 gpm</td>
<td>SV10-58C</td>
<td>1.584.1</td>
</tr>
<tr>
<td>13 lpm/3.5 gpm</td>
<td>SV08-58D</td>
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continued on next page
Now you can reduce the number of valve cartridges needed in load-sensing circuits with our new dual-solenoid 5-way on-off or proportional directional valves.

In any application where there is a need for multiple functions to operate simultaneously, and a need for speed to remain independent of load pressure, a flow-on-demand type compensator can easily be connected to the load-sense line to provide consistent flow to the actuator (see Fig 2).

These valves can also be used with our CVD08 or CVD10 check valve discs. By simply extending the cavity pilot drill for the 57- or 58-style valve, the CVD can be installed below the cartridge valve (see Fig 3). This will save cost by eliminating the need for a load-sense check valve in a separate cavity. Overall system performance will be improved since the CVD delivers superior pressure-drop performance compared to a CV04-20 check valve at flows typical in a load-sense circuit. This results in lower losses in the load-sense network and a more accurate load signal to the compensator. Please note that a CVD cannot be used in the leg of a circuit that utilizes a flow-on-demand style compensator because the compensator needs to reference the load pressure between port 1 of the 5-way valve and the LS check.

### Valve Features
- All standard seal and coil options available.
- Optional waterproof E-Coils rated up to IP69K.
- Uses industry standard VC08-5 and VC10-5 cavities.
- Check Valve Discs (CVDs) in 08 and 10 sizes, can eliminate the need for separate check valves and their cavities.
- Manual Override option available on most models.
- Tested to 1 million cycles at full rated pressure.
- 5-year limited Warranty (See full warranty statement in the catalog or on our website.)
- Easily integrates with our robust line of electronic controls.

### Benefits
- Valves can be ordered to meet specific application needs.
- Reliability in the harshest, most severe operating conditions.
- No additional tooling costs required. Std. housings in stock.
- Reduces the number of cavities and tooling cost, while delivering lower pressure drop performance.
- In an electrical failure, valve can be operated manually.
- Long life without wear or decreased performance over time.
- Confidence, with the backing of the industry's leading manufacturer of hydraulic cartridge valves.
- Saves programming and integration time.

**Disclaimer:** Nothing in this document constitutes an implied warranty of merchantability or of fitness for a particular purpose.

The information contained in this document is provided for technical illustration purposes only and may not be used as a statement of suitability for use in any particular application. Each application is unique and prospective purchasers should conduct their own tests and studies to determine the fitness of HydraForce's products for their particular purposes and specific applications.