



••••• INNOVATION AT WORK FOR YOU •••••

NEW High-Flow, Very Low Pressure Drop, Bi-Directional Solenoid-Operated Poppet Valves — Models SV20-S38(M) and SV20-S39(P)

Models SV20-S38(M) normally-closed, and SV20-S39(P) normally-open bi-directional load-holding poppet-type valves can help to minimize heat generation and power loss. Both models can operate at flows up to 100 gpm/378 lpm and pressures up to 4250 psi/293 bar with a virtually flat pressure rise curve. The second-stage poppet cracks open at a minimum pressure requirement of only 5 psi/0.34 bar, and the valve reaches full flow while creating only 25 psi/1.72 bar pressure. Because of the large surface area of the poppets, flow forces are used to full advantage.

The pilot valve in these new 20-size models is similar to our SF08-20 and SF08-21 valves. So the standard 08-size “D” or “E” coils can be used, with any termination style currently available.

These new valves use the new VC20-S3 cavity with the variation “A” undercut of 1.813” diameter. See our website under “Technical Ref. Info.” pages 9.120.1-3. The undercut is a secondary machining operation. Port ① is the work/tank port, and ② is the pressure/inlet. Port ③ is typically drained to tank, or can be vented back to ① in a custom manifold housing. Since port ③ is generally a vent, you can create a redundant lock-out option by blocking this vent port. By using the 3-Way-Short cavity, there is a bigger seat diameter available thus creating the lower pressure drop compared to the SF20-2x series valves.



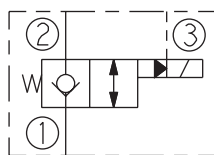
Since the SF08 tube is used on the pilot valve, any manual override available on the SF08-2x series is also available for these new 20-size valves. For the normally-closed SV20-S38, the “M” style override is available, and for the normally-open, SV20-S39 the “P”, “K” and “HP” type of overrides are available. The “P” option is a push button, the “K” option adds a knob, and the “HP” option adds a protective cap over the “P” option. This New “HP” cap prevents tampering as well as accidental activation.

The HydraForce high-performance standard is for pull-in current and continuous-duty operation of our solenoid valves at ±15% of nominal voltage. In order to maintain that, we are rating these valves for 4250 psi/ 293 bar and designating them as SVs, as compared to the 5000 psi/345 bar SF models.

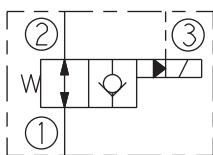
These new poppet-type valves are well suited for load-holding applications that require

low internal leakage, flow rates up to 100 gpm/378 lpm and *Extremely Low* pressure rise. One valve can now be used in applications that might previously have required both a poppet logic element and a pilot solenoid valve. This is another example of HydraForce continuing to support our customers with innovations and continuous improvements in cartridge valve technology.

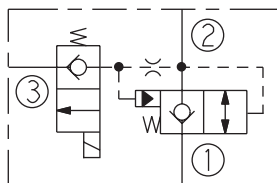
SV20-S38; N.C.



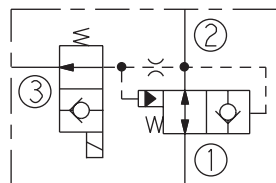
SV20-S39; N.O.



SV20-S38; Expanded



SV20-S39; Expanded



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[go to SV20-S39 catalog page](#)

See page 2 for Features/Benefits chart.

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NEW High-Flow, Very Low Pressure Drop, Bi-Directional Solenoid-Operated Poppet Valves — Models SV20-S38(M) and SV20-S39(P)

Features	Benefits
Flow rates of 100 gpm/378 lpm with a virtually flat pressure rise curve over the full flow range: 5 psi/0.34 bar to 25 psi/1.72 bar	High flow applications can now be done with one cartridge, reducing cost and manifold size. Flat pressure curve reduces heat generation and power loss in the hydraulic system.
Low-leakage poppet-style construction.	Can be used for load-holding, eliminating the need for additional cartridges, thus reducing system cost.
Manual override option available.	If there is an electrical failure, valve can be operated manually.
New "HP" coil nut is available for the push-style manual override.	Cap over the push actuator prevents accidental activation (similar to the "C" option on the relief adjustments).
Universal 08 size solenoid tube.	Any HydraForce 08-size coil can be used. Both "D" standard and "E" environmental coils can field-replaced and interchanged.
HydraForce releases a full range of standard models with three standard seal options.	Standard models can be used in a variety of applications and medias, eliminating the need for special products.
New standard VC20-S3, Variation 'A' cavity with undercut, released.	Undercut cavity cuts pressure drop in half.
Operating pressure to 4250 psi/293 bar.	Opens the door to new high-pressure applications.
Tested to 1 million cycles at full rated pressure.	Long life without wear or decreased performance over time.
Designed, inspected and tested to HydraForce Quality standards with 5-year warranty. (See full warranty statement in the catalog.)	Reduce warranty and return costs as well as peace of mind that the product will perform right from the start and will last.

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