

SERIES 36/38 SECTIONAL DIRECTIONAL CONTROL VALVES INSTALLATION & USER GUIDE

SPECIFICATIONS:

- S36 Rated up to 12 GPM (45.4 lpm).
- S38 Rated up to 24 GPM (90.7 lpm).
- Rated for 3500 psi (241 bar) max.
- 100 psi (6.9 bar) max tank back-pressure
- Std. port sizes (consult factory for others):
 - Inlet/Outlet: #10 SAE (7/8-14)
 - S36 Work Ports: #8 SAE (3/4-16) (12 sections max)
 - S38 Work Ports: #10 SAE (7/8-14) (12 sections max)
- Coil Current: 1.00A Steady State (1.25A Inrush)
- 10-Micron filtration recommended.
- 85 inch-lbs tie-rod torque
- Weights:
 - Inlet/outlet: 6 lbs (2.7 kg).
 - Low spool section: 4lbs (1.8 kg).
 - High spool section: 6.5lbs (2.9 kg).

MOUNTING, ADJUSTMENT & ASSEMBLY INSTRUCTIONS:

- **Mounting** – Valve can be mounted in any orientation. Valve must be mounted on a flat surface. Special attention should be paid to not bend or twist the casting when mounting. Doing so may cause the valve to fail.
- **Relief Adjustment** – Relief setting is factory preset to 2000 psi, unless otherwise noted within model code. Relief valve can be set anywhere within the range of 200 psi to 3400 psi by switching out the relief spring to one of the following:
 - **Inlet pilot reliefs**
 - **300 - 1000 psi (21 - 69 bar)** – Use spring P/N: P1502.
 - **1000 - 1700 psi (69 - 117 bar)** – Use spring P/N: P1675.
 - **1700 - 3500 psi (117 - 241 bar)** – Use spring P/N: P1343.

To adjust relief pressure: Loosen the locking nut using an 11/16" wrench. Using a 3/16" allen wrench on the relief adjustment screw, one full turn clockwise will increase pressure by 200 psi [13.8 bar].
 - **Port Reliefs with "C" or "R" style relief**
 - **300-700 psi (21 - 48 bar)** – Use spring P/N: DC7594 (Yellow, .090" wire [2.29mm]).
 - **700-1400 psi (48 - 97 bar)** – Use spring P/N: P1270-360 (Orange).
 - **1400-2500 psi (97 - 172 bar)** – Use spring P/N: P1207 (Yellow, .119" wire [3.02mm]).
 - **2400-3000 psi (166 - 207 bar)** – Use spring P/N: P1279 (White).

To adjust relief pressure: First, loosen the black 1" hex jam nut with a 1" wrench. Using a 5/16" allen wrench on the relief adjustment screw one full turn clockwise will increase pressure by 200 psi. Factory relief setting will be stamped on the end cap.
- **Handle Assembly** – The majority of the handle(s) will be assembled to the valve section(s) out of the box.
 - **"H" Manual Handle:** The clevis and linkage will already be attached to the valve section. Screw the threaded end of the knob/handle assembly and tighten the locking nut using a 1/2" wrench..

FREQUENTLY ASKED QUESTIONS (FAQ):

Q: Can I paint my valve?

A: Painting valves is acceptable as long as the following precautions are taken:

- All ports must be plugged
- Valves with manual handles must have the rubber boot installed over the linkages before painting to prevent paint from collecting on the spool rod and linkage components.

Any paint on the spool rod may cause leakage when it chips off. Warranty is void if any valve is returned with paint on the spool rod or inside the ports.

Q: Can I plumb another valve downstream from this valve, using the outlet of this valve?

A: No. The outlet of this valve should be plumbed back to tank. If the valve is equipped with a power beyond section, plumb the power beyond port to supply downstream functions. With all coils de-energized, flow will continue through the power beyond section to downstream functions. The power beyond section coil will need to be energized to shut off power beyond flow and to operate the work sections.

FREQUENTLY ASKED QUESTIONS cont'd:

Q: What is the correct torque for the tie rod nuts?

A: The correct torque spec on the tie rod nuts is 85 inch pounds [9.6Nm]. Using a 1/2" socket and wrench, both nuts on each rod should be tightened at the same time to prevent bind in the section.

Q: Which Hydraulic Cartridge Valve should be installed in the Inlet/Outlet section?

A: The C300-00000 or C30M-00000 normally open cartridges should be installed in the inlet/outlet section. Compared to the standard work section cartridge, this cartridge will be longer.

Q: Which Hydraulic Cartridge Valve should be installed in the work sections?

A: The C100-00002 or C102-00000 normally closed cartridges should be installed in the work sections. Compared to the standard inlet/outlet section cartridge, this cartridge will be shorter.

Q: What is the maximum recommended torque for the Hydraulic Cartridge Valve?

A: 20 ft-lbs,[240 in-lbs], [27.1 Nm] .

Q: What is the maximum recommended torque for the coil retaining nut on the Hydraulic Cartridge Valve?

A: 5 ft-lbs,[60 in-lbs], [6.8 Nm] .

Q: Can I convert my valve to utilize "Power Beyond"?

A: Yes, this requires replacing the current end section with a standard center section and adding the power-beyond section. Adding a section to the stack will also require a longer tie rod kit. The porting on the power beyond section is #10 SAE (7/8-14). Please contact the factory for assistance.

Q: Can I convert my valve to operate in a "Closed" system?

A: Yes, replace the inlet cartridge with the 36CP cartridge cavity plug. If the valve is equipped with an inlet relief, the setting may need to be adjusted appropriately to match your pump settings. If your valve is equipped with automatic-unloading, it cannot be converted to closed center. Please contact the factory for assistance.

STACK VALVE ASSEMBLY GUIDE:

Inlet Section:

Check the machined mounting surfaces of the sections, the section washers and o-rings are clean of contaminants. Install one split washer and 5/16" nut to each of the three tie rods. Insert each tie rod into the mounting foot bracket with the bracket feet pointing out. Install the three tie rods into the mating holes in the Inlet/Outlet valve section.

Work Sections:

Install the three thin washers [shims] packaged with the Work Section, on to the tie rods. Slide these shims against the machined side of the Inlet section. Check the work section o-rings are clean and free of contamination and installed into the Work Section. Slide the entire Work Section down the tie rods with the o-rings facing the machined side of the Inlet section. Repeat for the remaining Work Sections. Install the remaining foot bracket, split washers and nuts, then hand tighten.

Tighten the tie rod nuts to the correct torque setting: see "[What is the correct torque for the tie rod nuts?](#)" in the FAQ section. Be sure the mounting foot brackets are flat against the table while the nuts are tightened to the torque setting.

SAFETY PRECAUTIONS:

- It is the purchaser's responsibility to determine the suitability of any Brand Hydraulics Co. product for an intended application, and to ensure that it is installed in accordance with all federal, state, local, private safety and health regulations, codes and standards. Due to the unlimited variety of machines, vehicles and equipment on which our products can be used, it is impossible for Brand Hydraulics Co. to offer expert advice on the suitability of a product for a specific application. It is our customer's responsibility to undertake the appropriate precautions, testing and evaluation to prevent injury to the end-user.
- Overpressure may cause sudden and unexpected failure of a component in the hydraulic system, resulting in serious personal injury or death. Always use a gauge when adjusting a relief valve.

DIMENSIONAL DATA: inches & [millimeters]

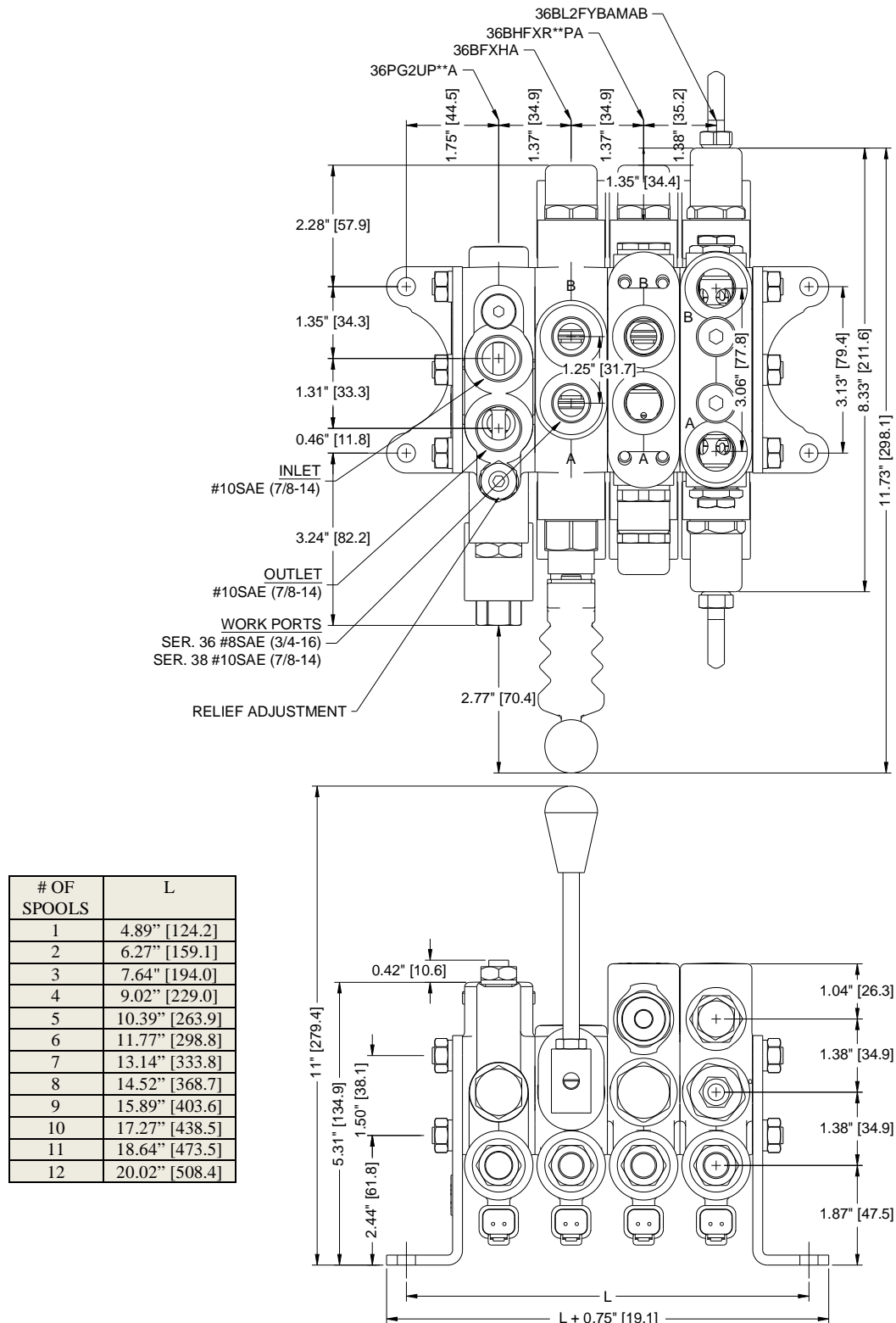


Figure 1: Dimensional data for various Series 36/38 valve sections in inches & [millimeters].