

# DIRECTIONAL CONTROL VALVES

## SV-100 SERIES

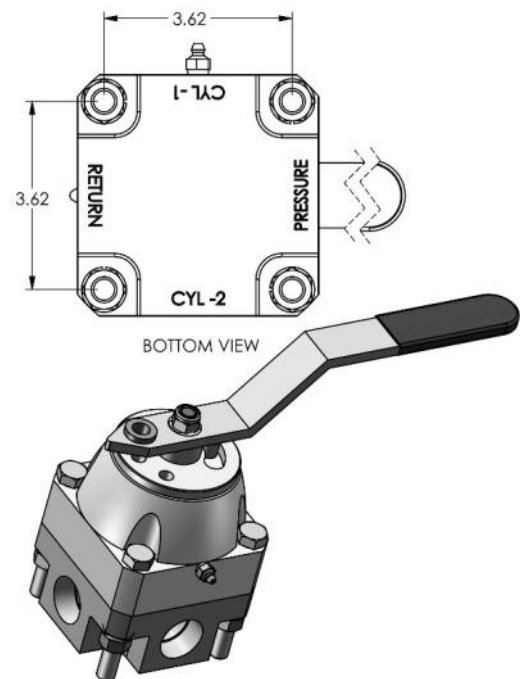
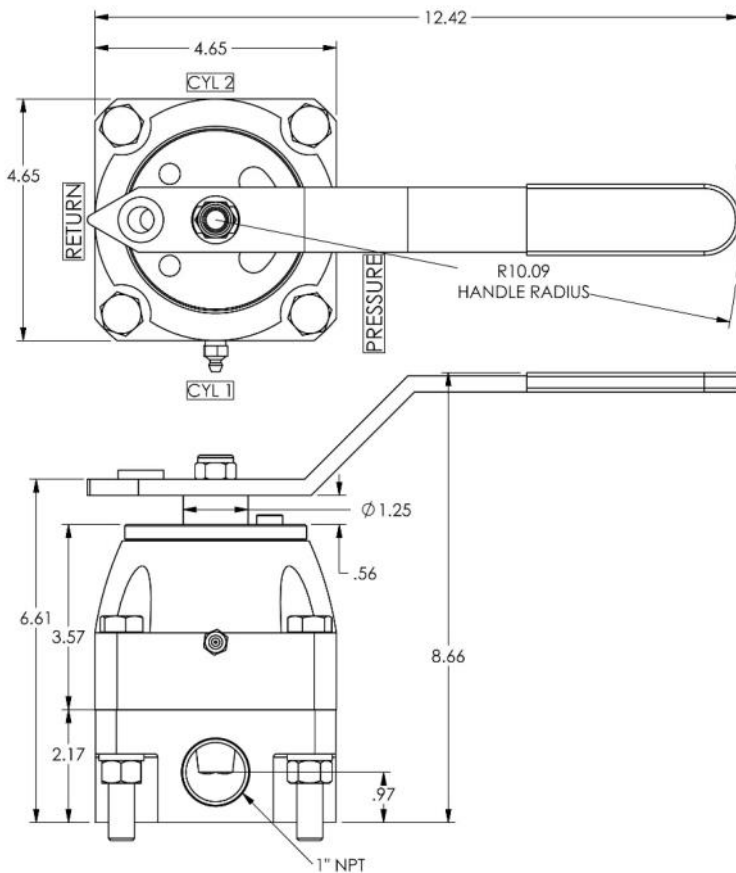


PacSeal Hydraulics rotary SV-100 series directional control valves direct fluid flow to desired ports, with optional configurations utilizing one or two cylinder ports.

Standard rotor configurations allow for interflow when shifting to be drained to tank through the constantly open return port. The block center rotor requires an additional case drain port on the housing since the return port is blocked in center position..

The dual pressure configuration allows for two inlet pressures (high and low) to be alternately directed to a single cylinder port. The tank return position connects the cylinder port to the constantly open return. The fourth position is pressure ports and cylinder port blocked. The primary application is for a single operating cylinder such as a rubber press with a gravity return for opening the press.

- ShearFlo® sealing technology ensures high cycle life for critical service applications even in contaminated fluids.
- Hardened stainless steel sealing elements are lapped and polished to exacting standards of finish and flatness which produces a leak proof, contaminant resistant metal-to-metal seal.
- The sealing elements are spring preloaded and pressure energized which maintains contact between the two sealing surfaces causing continuous lapping during use which eliminates small scratches.



(Continued from page 1)

**OPTIONS AVAILABLE**

**Manual Operation**

Detent positioned or spring centered

**Pneumatic or Hydraulic Actuator Cylinder**

Installed on a standard manual valve or SVX integral actuator providing remote control with manual override operation. 2 or 3 position actuators available.

**Body Porting Options**

Inline/Side and bottom ported are threaded NPT or SAE. Subplate & manifold mounted configurations have O-ring face seals for interfacing with manifold.

**Rotor Flow Pattern**

Selector—either position operates a cylinder port with the opposite port drained to tank, center position pressure and cylinder ports blocked

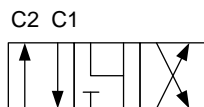
Manipulator—either position operates a cylinder port with the opposite port drained to tank, center position cylinders drain to tank and pressure port blocked

Bypass—either position pressurizes a cylinder port with the opposite port blocked, center position pressure and cylinder ports blocked

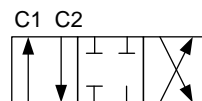
Open Center—either position operates a cylinder port with the opposite port drained to tank, center position pressure port to tank, cylinder ports blocked.

Block Center- either position operates a cylinder port with the opposite port drained to tank, all ports blocked in center position. (Case drain required)

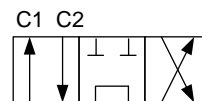
Dual Pressure— two pressure sources are selectable for one cylinder port.



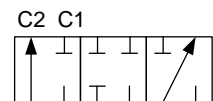
P R  
4-WAY 3-POS  
MANIPULATOR  
3 position detent



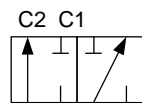
P R  
4-WAY 3-POS  
SELECTOR  
3 position detent



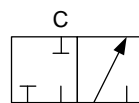
P R  
4-WAY 3-POS  
OPEN CENTER  
3 position detent



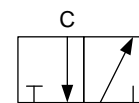
P R  
4-WAY 3-POS  
BYPASS  
3 position detent



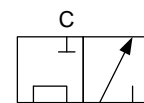
P R  
4-WAY 2-POS  
BYPASS  
90° detent



P R  
3-WAY 2-POS  
SELECTOR  
45° detent  
(cw or ccw)



P R  
3-WAY 2-POS  
MANIPULATOR  
45° detent  
(cw or ccw)



P R  
3-WAY 2-POS  
OPEN CENTER  
45° detent  
(cw or ccw)

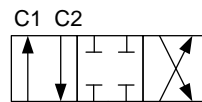
**Detent Pattern**

3-Position: Selector, Manipulator, Bypass, Open-Center

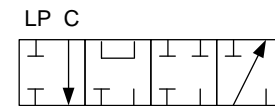
2-Position: Bypass, 90°(4 way)

2-Position: 45° Right (CW) or Left (CCW) (3 way)

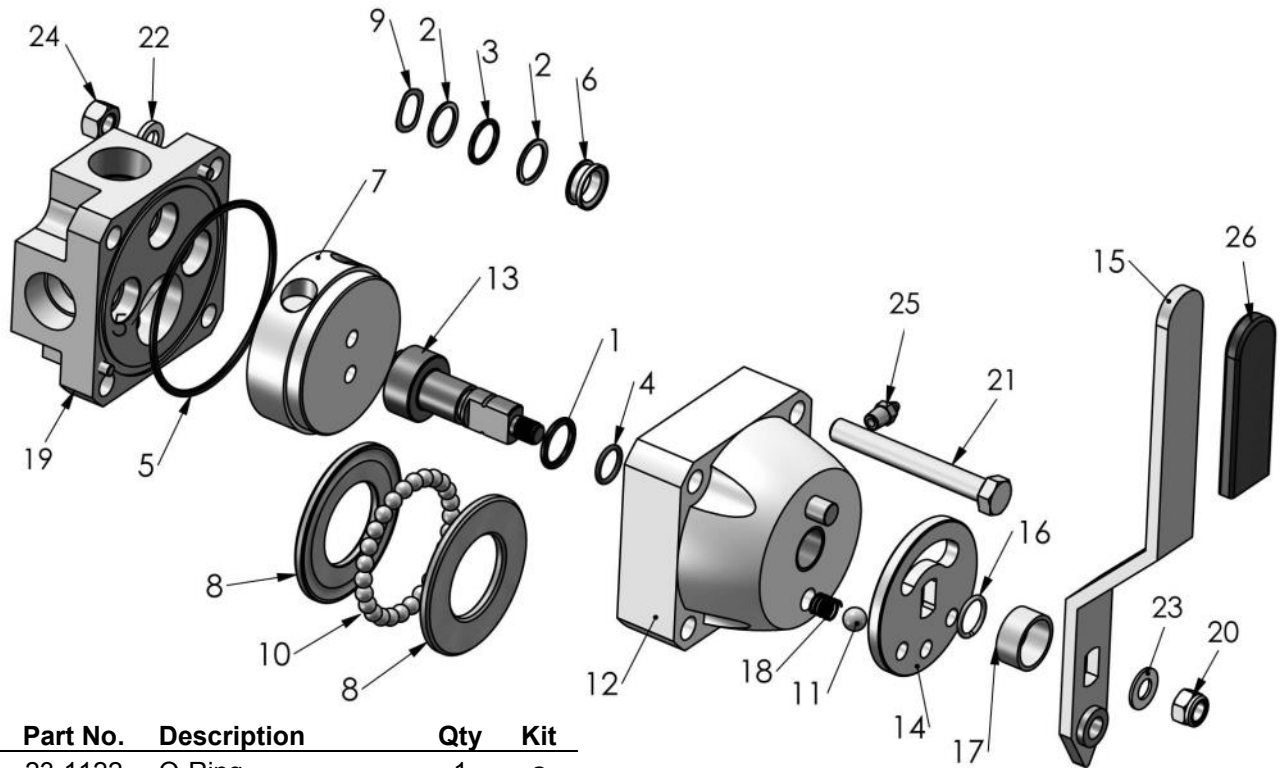
4-Position: Dual Pressure



P R  
4-WAY 3-POS  
BLOCK CENTER  
3 position detent



LP R  
4-WAY 4-POS  
DUAL PRESSURE



#	Part No.	Description	Qty	Kit
1	23-1122	O-Ring	1	a
2	23-1331	Back-Up Ring	6	a
3	23-1332	O-Ring	3	a
4	23-1352	O-Ring	1	a
5	23-1363	O-Ring	1	a
6	40-0007*	Seal Ring	3	b
7	Tabulated	Rotor	1	c
8	40-0009	Thrust Washer	2	d
9	40-0027	Wave Spring	3	b
10	40-0049	Ball Bearing	26	d
11	40-0174	Detent Ball	1	
12	40-0175	Housing	1	
13	40-0178	Shaft	1	
14	40-0180	Detent Disc	1	
15	40-0284	Handle, Remote	1	
16	40-0288	Retainer Ring	1	
17	40-0773	Spacer	1	
18	40-0295	Spring, Detent	1	
19	40-0982	Body, 1" NPT (inline)	1	
20	50-0093	Shaft Locknut	1	
21	50-0100	Body Bolt, Long	4	
22	50-0104	Lock Washer	4	
23	50-0108	Shaft Washer	1	
24	50-0110	Body Nut	4	
25	50-0176	Grease Fitting	1	
26	50-0236	Grip	1	

Kit contents:

- a: O-ring Kit
- b: Seal Kit, includes O-ring Kit
- c: Minor Repair Kit, includes Seal Kit
- d: Major Repair Kit, includes Minor Repair Kit

Part No.	Description
40-0008	Rotor, Selector
40-0130	Rotor, Bypass
40-0223	Rotor, Manipulator
40-0358	Rotor, Open Center

**Model Number Scheme**

Basic Size	Port Size	Type of Ports	Pressure Rating	Port Location	Bolts
<b>SV-100</b>	6 3/4"	<b>N</b> NPT	2 1500 psi	<b>I</b> Inline/Side	<b>S</b> Standard/Short <b>L</b> Long <b>P</b> Panel Mount
		<b>S</b> SAE			
	8 1"	<b>M</b> Manifold	3 3000 psi	<b>B</b> Bottom	
		<b>B</b> Subplate			
<b>SV-100DP</b>	6 3/4"	<b>N</b> NPT	3 3000 psi	<b>I</b> Inline/Side	<b>S</b> Standard/Short

Rotor Flow Pattern		Detent Shift Pattern		Handle		O-Ring Temp Rating	
<b>S</b> Selector		<b>1</b> 3 position		<b>M</b> Standard manual <b>R</b> Actuator Cylinder <b>S</b> Spring centered		<b>N</b> BUNA-N -30/+250 °F <b>V</b> Viton -15/+400 °F <b>E</b> EPR -70/+250 °F	
<b>O</b> Open Center		<b>2</b> 2 position 90°					
<b>A</b> Block Center		<b>3</b> 2 position 45° cw					
<b>M</b> Manipulator		<b>4</b> 2 position 45° ccw					
<b>B</b> Bypass				<b>M</b> Standard manual			
<b>D</b> Dual Pressure		<b>5</b> 4 position					

Example: SV100 1" NPT Selector (40-1521) Model Number :

<b>SV100</b>	<b>8</b>	<b>N</b>	<b>3</b>	<b>I</b>	<b>L</b>	<b>S</b>	<b>1</b>	<b>M</b>	<b>N</b>
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PRODUCT	SV-100		SV-100DP	SV-100 / 6K	
	3/4"	1"		3/4"	1"
<b>O-RING KIT</b>	40-1852		40-1853	40-1854	
<b>SEAL KIT</b>	40-1512		40-1533	40-1797	
<b>MINOR REPAIR KIT</b>					
<b>SELECTOR</b>	40-1511		40-1687	40-1798	
<b>MANIPULATOR</b>	40-1554			40-1799	
<b>BYPASS</b>	40-1539			40-1800	
<b>MAJOR REPAIR KIT</b>					
<b>SELECTOR</b>	40-1510		40-1688	40-1801	
<b>MANIPULATOR</b>	40-1576			40-1802	
<b>BYPASS</b>	40-1577			40-1803	
<b>VALVE ASSEMBLY</b>					
<b>SELECTOR</b>	40-1531	40-1521	40-1525	40-1804	40-2072
<b>MANIPULATOR</b>	40-1746	40-1552		40-1805	40-1796
<b>BYPASS (2-POS)</b>	40-1781	40-2011		40-1806	40-1775
<b>SEL (SPRG CTR)</b>	40-1791	40-1765		N/A	N/A
<b>MANIP (SPRG CTR)</b>	N/A	40-1792		N/A	N/A

RATINGS	
<b>Standard Valve</b>	
Rated Flow:	75 gpm / 284 lpm
Cv:	9.2
Rated Pressure:	3000 / 6000 psi Liquid 207 / 414 bar Liquid 2000 / 4000 psi Gas 138 / 276 bar
Weight:	23 lb / 10 kg
<b>Dual Pressure Valve</b>	
Rated Flow:	30 gpm / 114 lpm
Cv:	3.2
Rated Pressure:	3000 psi Liquid 207 bar Liquid
Weight:	23 lb / 10 kg
<b>Spring Centered Valve</b>	
Rated Flow:	75 gpm / 284 lpm
Cv:	9.2
Working Pressure:	1500 psi Liquid/Gas 207 bar Liquid/Gas
Weight:	23 lb / 10 kg

Standard configurations shown here; contact factory for other models and part numbers.