

DIRECTIONAL CONTROL VALVES SV-150 SERIES



PacSeal Hydraulics rotary SV-150 series directional control valves direct fluid flow to desired ports, with optional configurations utilizing one or two cylinder ports.

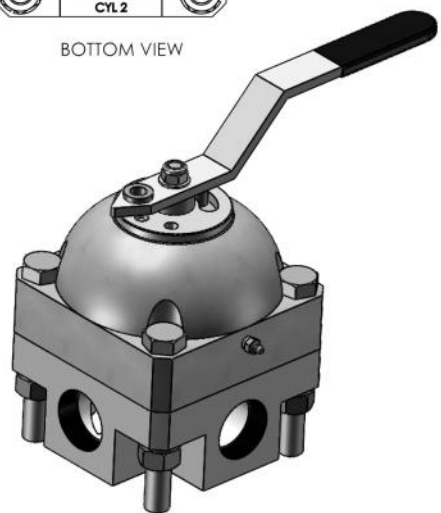
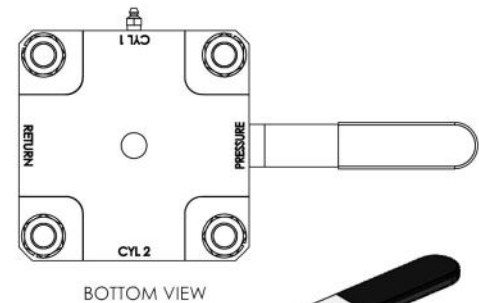
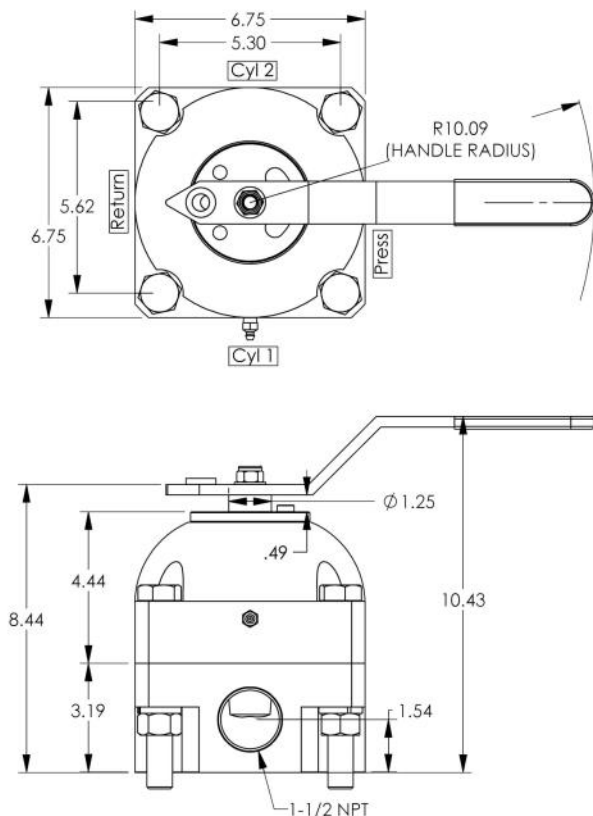
New improved design allows for low operating torque for 3000 psi and now 5000 psi operation.

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 blocks pressure and cylinder ports. 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 with 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.



Rev F

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(Continued from page 1)

OPTIONS AVAILABLE

Manual Operation

Detent positioned or spring centered.

Pneumatic or Hydraulic Actuator Cylinder Operation

Installed on a standard manual valve or SVX integral actuator providing remote control with manual override operation. 2, 3 or 4 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 a manifold.



Rotor Flow Pattern

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

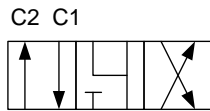
Selector—either position operates a cylinder port with the opposite port drained to tank, center position pressure and cylinder ports blocked

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

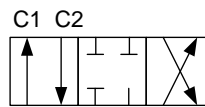
Open Center—either position operates a cylinder port with the opposite port drained to tank, center position pressure port to tank, cylinder ports blocked.

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

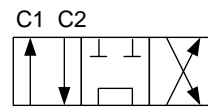
Dual Pressure— two pressure sources are selectable for one cylinder port.



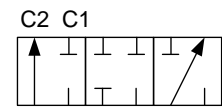
P R
4-WAY 3-POS
MANIPULATOR
3 position detent



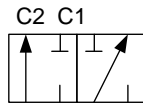
P R
4-WAY 3-POS
SELECTOR
3 position detent



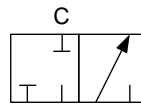
P R
4-WAY 3-POS
OPEN CENTER
3 position detent



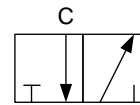
P R
4-WAY 3-POS
BYPASS
3 position detent



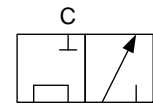
P R
4-WAY 2-POS
BYPASS
90° detent



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)

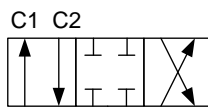
Detent Pattern

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

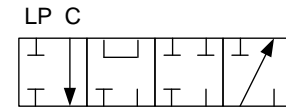
2-Position: Bypass, 90° (4 way)

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

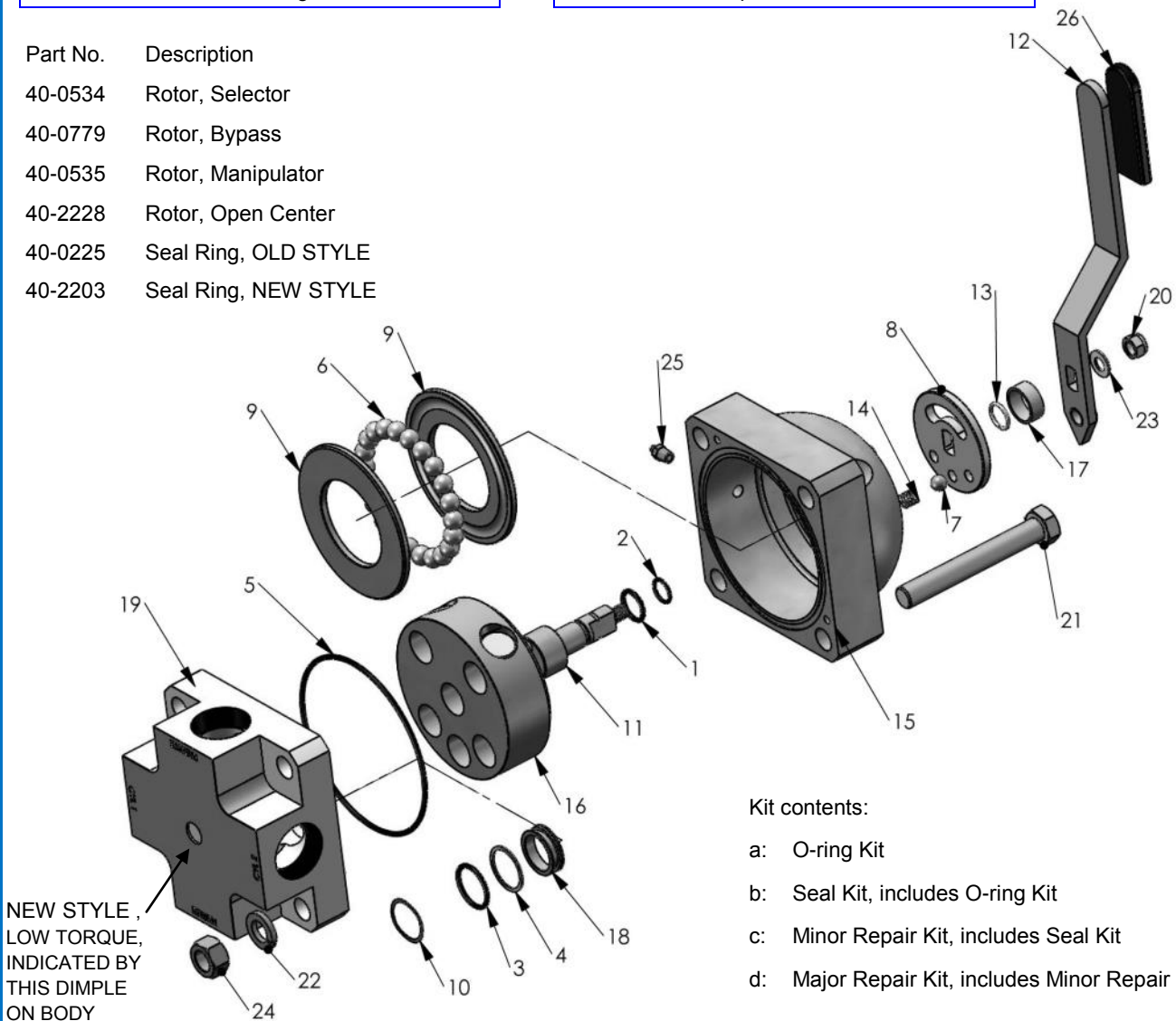


HP R
4-WAY 4-POS
DUAL PRESSURE

#	Part No.	Description	Qty	Kit
1	23-1122	O-Ring	1	a
2	23-1352	O-Ring	1	a
3	23-1417	O-Ring	3	a
4	23-1418	Back-Up Ring	3	a
5	23-1419	O-Ring	1	a
6	40-0092	Ball Bearing	22	d
7	40-0174	Detent Ball	1	
8	40-0180	Detent Disc	1	
9	40-0226	Thrust Washer	2	d
10	40-0239	Wave Spring	3	b
11	40-0276	Shaft	1	
12	40-0284	Handle	1	
13	40-0288	Retainer Ring	1	

#	Part No.	Description	Qty	Kit
14	40-0295	Spring,	1	
15	40-0354	Housing	1	
16	tabulated	Rotor	1	c
17	40-0773	Spacer	1	
18	tabulated	Seal Ring	3	b
19	40-2206	Body	1	
20	50-0093	Locknut	1	
21	50-0102	Bolt	4	
22	50-0105	Lockwasher	4	
23	50-0108	Washer	1	
24	50-0111	Nut	4	
25	50-0176	Grease Fitting	1	
26	50-0236	Grip	1	

- Part No. Description
- 40-0534 Rotor, Selector
- 40-0779 Rotor, Bypass
- 40-0535 Rotor, Manipulator
- 40-2228 Rotor, Open Center
- 40-0225 Seal Ring, OLD STYLE
- 40-2203 Seal Ring, NEW STYLE



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 NUMBERS FOR STANDARD VALVE ASSEMBLIES

consult factory for other configurations

PRODUCT	OLD STYLE*	LOW TORQUE 3000 PSI	LOW TORQUE 5000 PSI	DUAL PRESSURE
ORING KIT	40-1749	40-2239	40-2239	40-1750
SEAL KIT	40-1537	40-2219	40-2219	40-1534
MINOR REPAIR KIT				
SELECTOR	40-1559	40-2220	40-2220	40-1704
MANIPULATOR	40-1561	40-2222	40-2222	
BYPASS	40-1766	40-2224	40-2224	
OPEN CENTER	N/A	40-2226	40-2226	
MAJOR REPAIR KIT				
SELECTOR	40-1558	40-2221	40-2221	40-1816
MANIPULATOR	40-1560	40-2223	40-2223	
BYPASS	40-1767	40-2225	40-2225	
OPEN CENTER	N/A	40-2227	40-2227	
VALVE ASSEMBLY				
SELECTOR	40-1527	40-2207	40-2102	40-1532
MANIPULATOR	40-1662	40-2233	N/A	
BYPASS (3-POS)	40-2134	40-2208	N/A	
OPEN CENTER	40-2024	40-2234	40-2218	

**OLD STYLE Valves are no longer built due to change in body design to provide low torque operation. Repair kits for ALL valves will always be supported.*

Model Number Scheme

Basic Size	Port Size	Type of Ports	Pressure Rating	Port Location	Bolts
SV-150	12 1-1/2"	N NPT	3 3000 psi	I Inline/Side	S Standard/Short L Long P Panel Mount
		S SAE			
		M Manifold	5 5000 psi	B Bottom	
		B Subplate			
SV-150DP		N NPT	3 3000 psi	I Inline/Side	S Standard/Short

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

Example: SV150 1" NPT Selector (40-2207) Model Number :

SV150 12 N 3 I L S 1 R N

**TORQUE VALUES—NEW STYLES
FT-LBS**

	<u>1500 PSI</u>	<u>3000 PSI</u>	<u>5000 PSI</u>
SEL, MAN, OC	30	42	54
	<u>1500 X 3000 PSI</u>	<u>3000 X 5000 PSI</u>	
BYPASS	54	90	

RATINGS

Standard Valve

Rated Flow: 180 gpm / 681 lpm
 Cv: 21
 Rated Pressure: 3000 / 5000 psi Liquid
 207 / 345 bar Liquid
 2000 psi Gas
 138 bar
 Weight: 65 lb / 29 kg

Dual Pressure Valve

Rated Flow: 90 gpm / 340 lpm
 Cv: 10
 Rated Pressure: 3000 psi Liquid
 207 bar Liquid
 Weight: 65 lb / 29 kg