



SV-200 Valve Specifications **Table of Contents**

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All PacSeal Hydraulics' SV Directional Control Valves are designed with ShearFlo® metal-to-metal sealing technology. ShearFlo® sealing technology features:

- High cycle life and anti-wear design is suitable for critical service applications, including contaminated fluids.
- Leak proof, contaminant resistant metal-to-metal seal is accomplished by lapping and polishing hardened stainless steel sealing elements to exacting standards of finish and flatness.
- The sealing elements are spring preloaded and pressure energized, which maintains contact between the two sealing surfaces at all times.

All SV Valves are tested to PacSeal's strict quality control standards to ensure proper function and reliability. Every ShearFlo® sealing component in a repair kit is inspected to ensure trouble-free performance after field maintenance and repair.

PacSeal Hydraulics' rotary SV Directional Control Valves direct fluid flow to one or two cylinder ports, based on the selected rotor and detent combination, as specified in the "Valve Shift Options" table.

The SV valves' modular design accommodates various operator options (manual and remote with manual override) to suit the application at hand. The options available for manual operation are as follows:

- Detented (2 or 3-position)
- Pin Lock Detent (3-position)

The remote operator options with manual override are available in pneumatic or hydraulic with 2 or 3 positions using an Actuator Cylinder bracket mounted to valve.

Various valve porting options provide further customization using NPT or SAE ORB in the following body configurations:

- Inline
- Bottom

General Specifications

Port Size	2 in. NPT or SAE ORB
Working Pressure Options (Liquid)	2000 psi
Return Port Pressure	250 psi (Max) ¹
Proof Pressure	1.5X Working Pressure
Burst Pressure	2X Working Pressure
Cv Factor	50.0
Rated Flow	300 gpm
Temp Rating	-40 to 250°F
Leak Rate	0-1 drip/min.
Fluid Media	Hydraulic oil or lubricated water ²
Weight	See Installation Drawings

Materials

ShearFlo Rotor	Stainless Steel Hardened ²
ShearFlo Seal Rings	Special Alloy
Shaft	Stainless Steel
Body	Stainless Steel
Housing	Carbon Steel
Handle, Detent Disc and Spacers, Hardware	Plated Carbon Steel
O-rings	Buna-N (N), Viton (V), or EPR (E)
Backup Rings	Teflon

Valve Shift Options

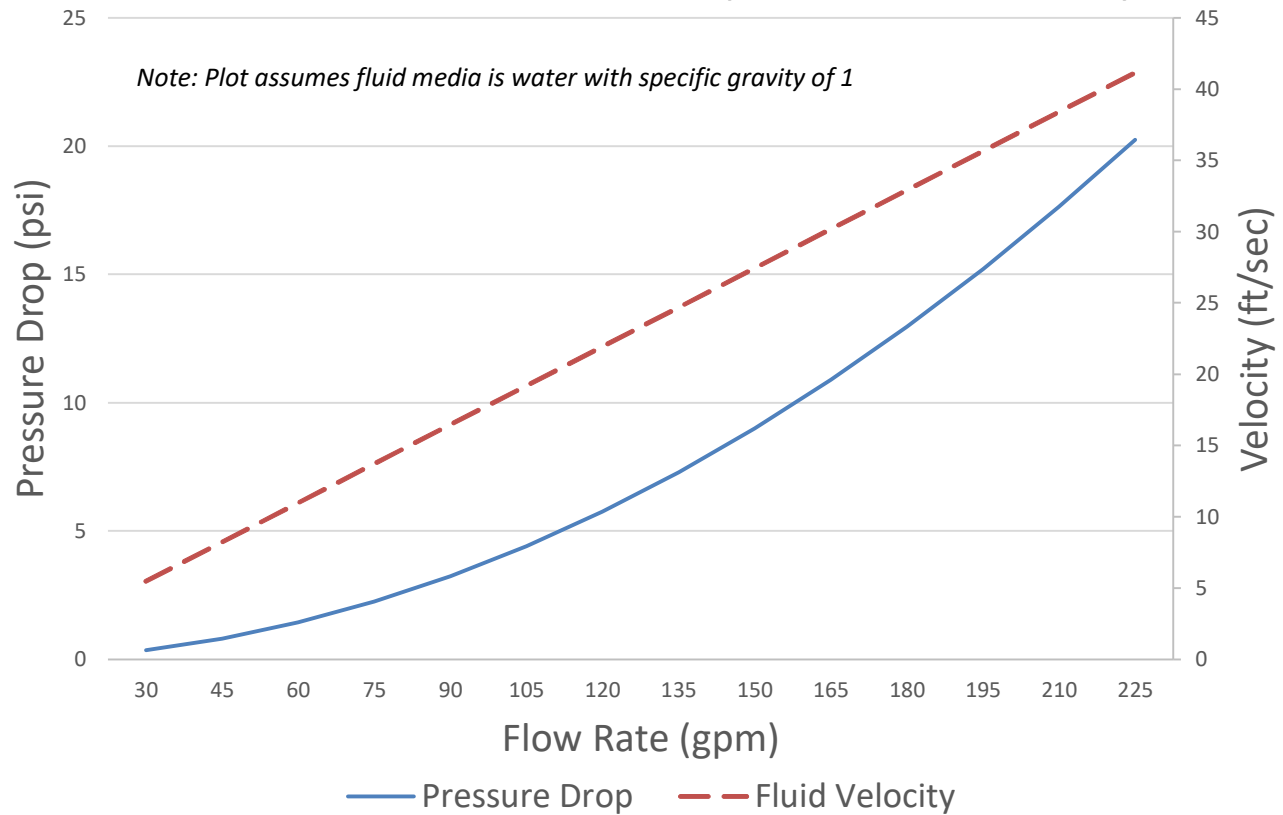
<u>Detent Pattern</u>	<u>Valve Options</u>
3-Position (4-way)	All options
2-Position 90° (4-way)	All options
2-Position 45° CW or CCW (3-way)	Selector, Manipulator, Open Center

Rotor Flow Options

<u>Rotor Configuration</u>	<u>Center Position</u>	<u>CW or CCW Position</u>
Manipulator	Cylinders drain to tank and pressure port blocked	Operates a cylinder port while the opposite port is returned to tank
Selector	Return port is open while cylinder and pressure ports are blocked	Operates a cylinder port while the opposite port is returned to tank
Bypass	Return port is open while cylinder and pressure ports are blocked	Operates a cylinder port while the opposite port is blocked
All Blocked	All ports blocked. Case Drain Required	Operates a cylinder port while the opposite port is returned to tank



SV-200 Valve Pressure Drop and Fluid Velocity



SV-200 Handle Torque (lb.-in.)

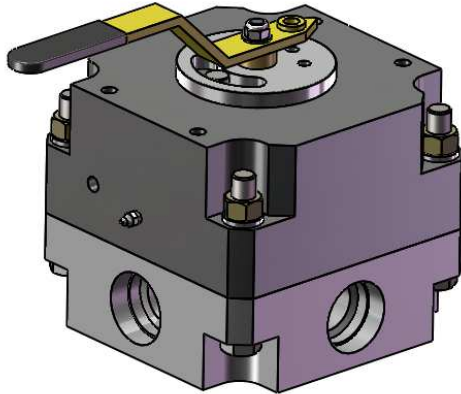
<u>Rotor Type</u>	<u>At 2000 psi Supply Pressure</u>
<i>Selector</i>	300

Model Code Configurator												
Basic Size	Port Size	Type of Ports	Pressure Rating (PSI)	Port Location	Bolts	Rotor Flow Pattern	Valve/Actuator Positions	Handle	O-Ring	Actuator Cylinder Add-on ²	Sensor Port Option	
SV200-	16 2"	N NPT S SAE	2 2000	I Inline / Side B Bottom	L Long	S Selector	1 3-Pos.	M Standard Manual	N Buna-N	None (leave empty)	None (leave empty)	
						O Open Center	2 2-Pos. 90°	R Actuator Cylinder	V Viton	-AL Air Cylinder, Left Mounted	-SP1 ³ Pressure Transducer (P Port)	
						M Manipulator	3 2-Pos. 45° CW	L Pin Lock Detent	E EPR	-AR Air Cylinder, Right Mounted	-SP2 ³ Pressure Transducer (C1, C2 Ports)	
						B Bypass	4 2-Pos. 45° CCW	W Wing Handle		-HL Hyd. Cylinder, Left Mounted -HR Hyd. Cylinder, Right Mounted	-SP3 ³ Pressure Transducer (P, C1, C2 Ports)	

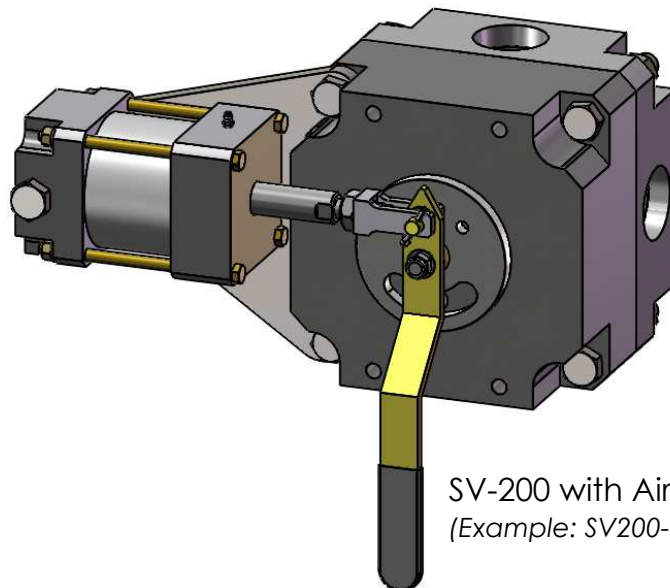
Notes: ¹ For Manifold Mount Option

² AAC-402L is the standard bracket mounted actuator

³ Pressure Transducer not included.



SV-200 Inline Ported
(Example: SV200-16N2ISS1MN)



SV-200 with Air Cylinder Actuator
(Example: SV200-16N2ISS1RN-AR)



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TITLE

Model Configurations Overview

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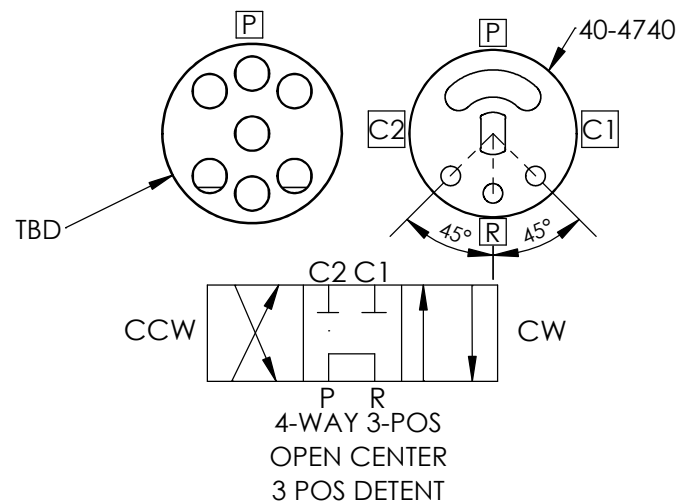
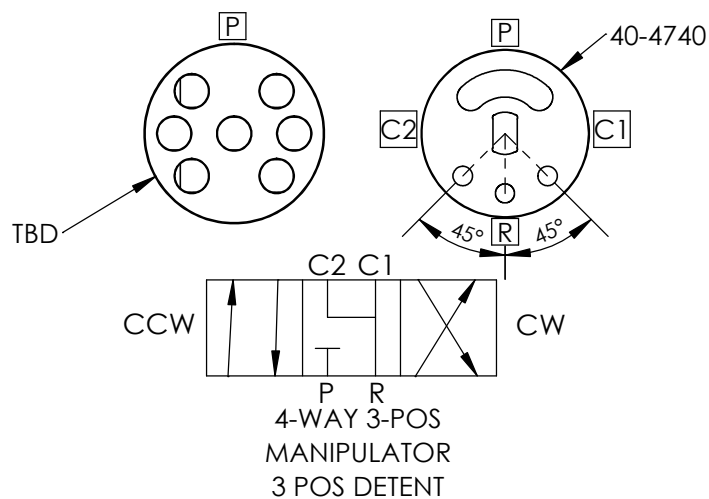
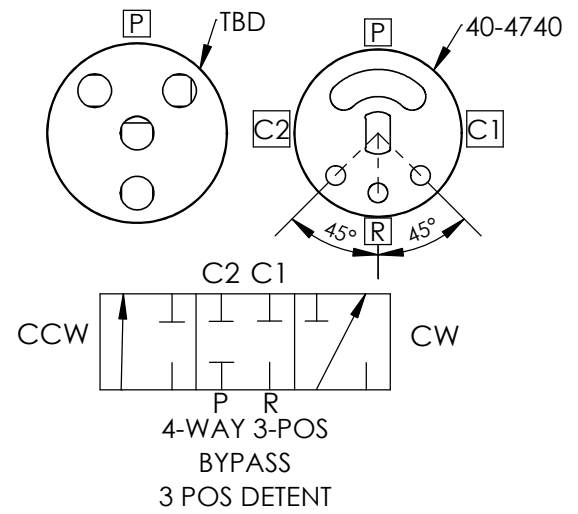
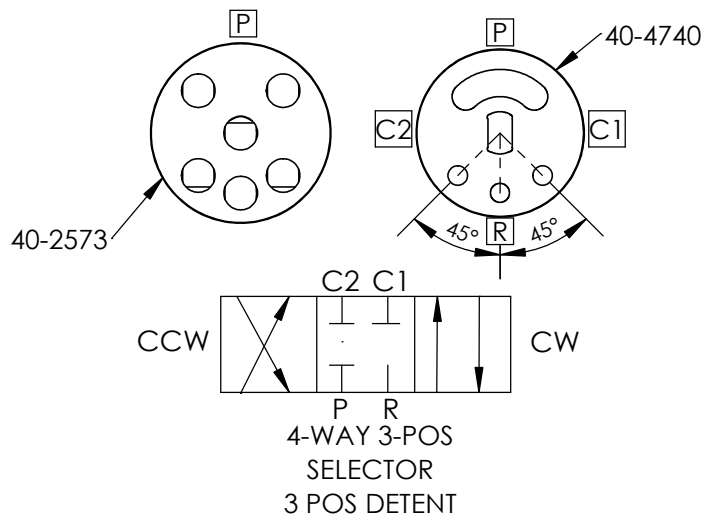
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Notes:

1. Rotor and Detent Disc Part No.'s displayed

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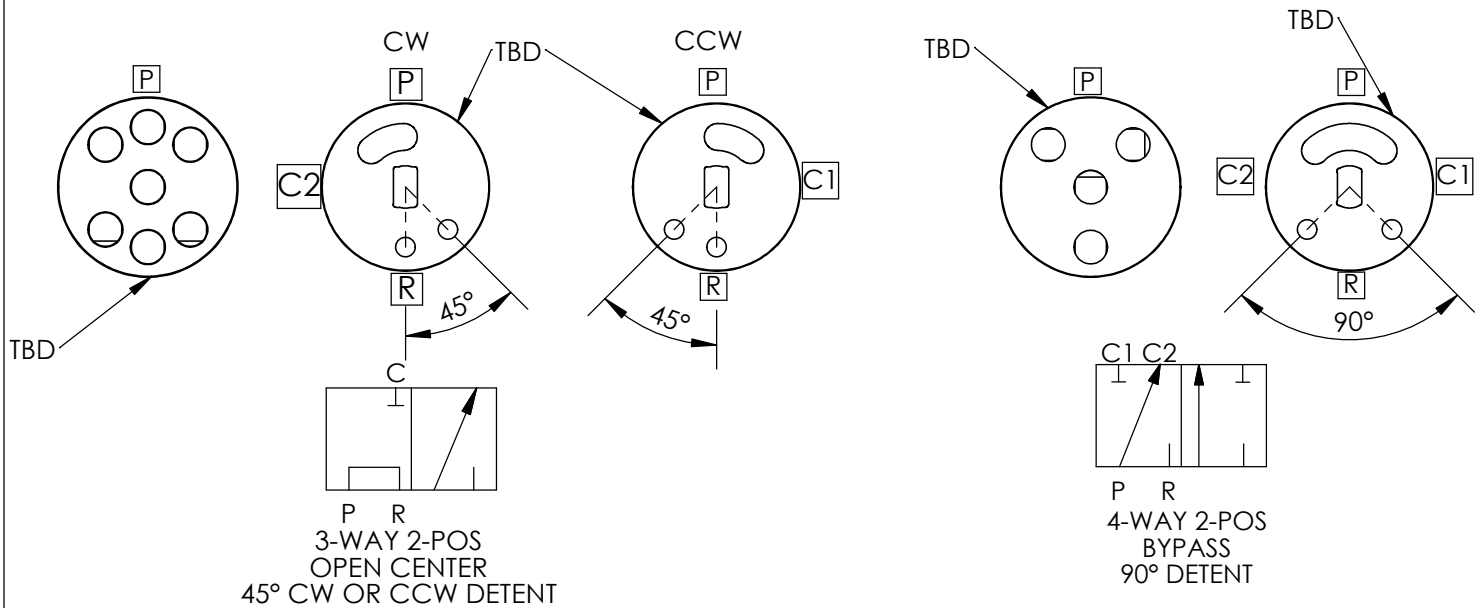
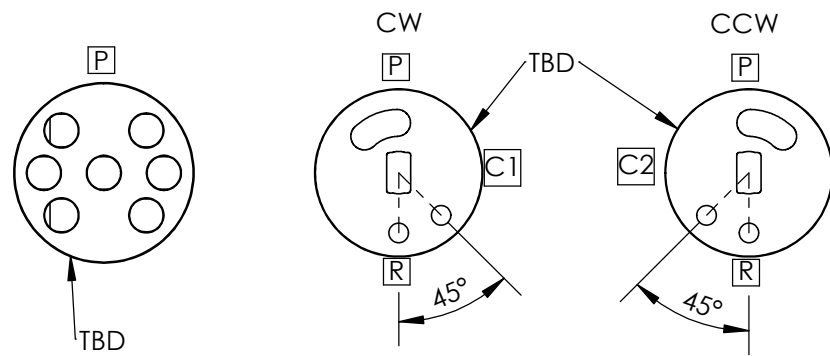
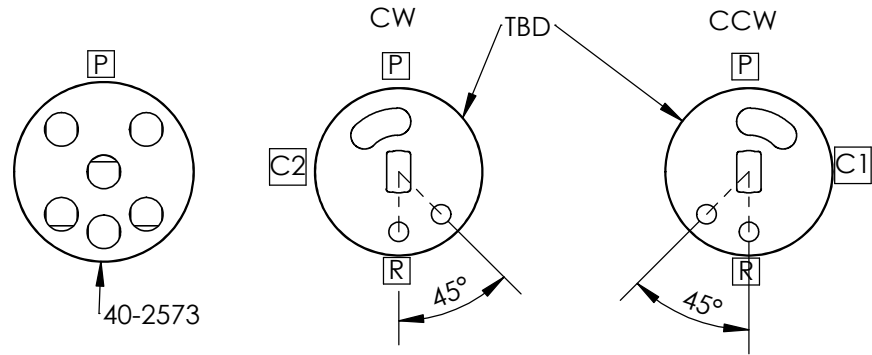
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**SV-200 Rotor Flow
and Detent Disc
3-Position Options**

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1. Rotor and Detent Disc Part No.'s displayed

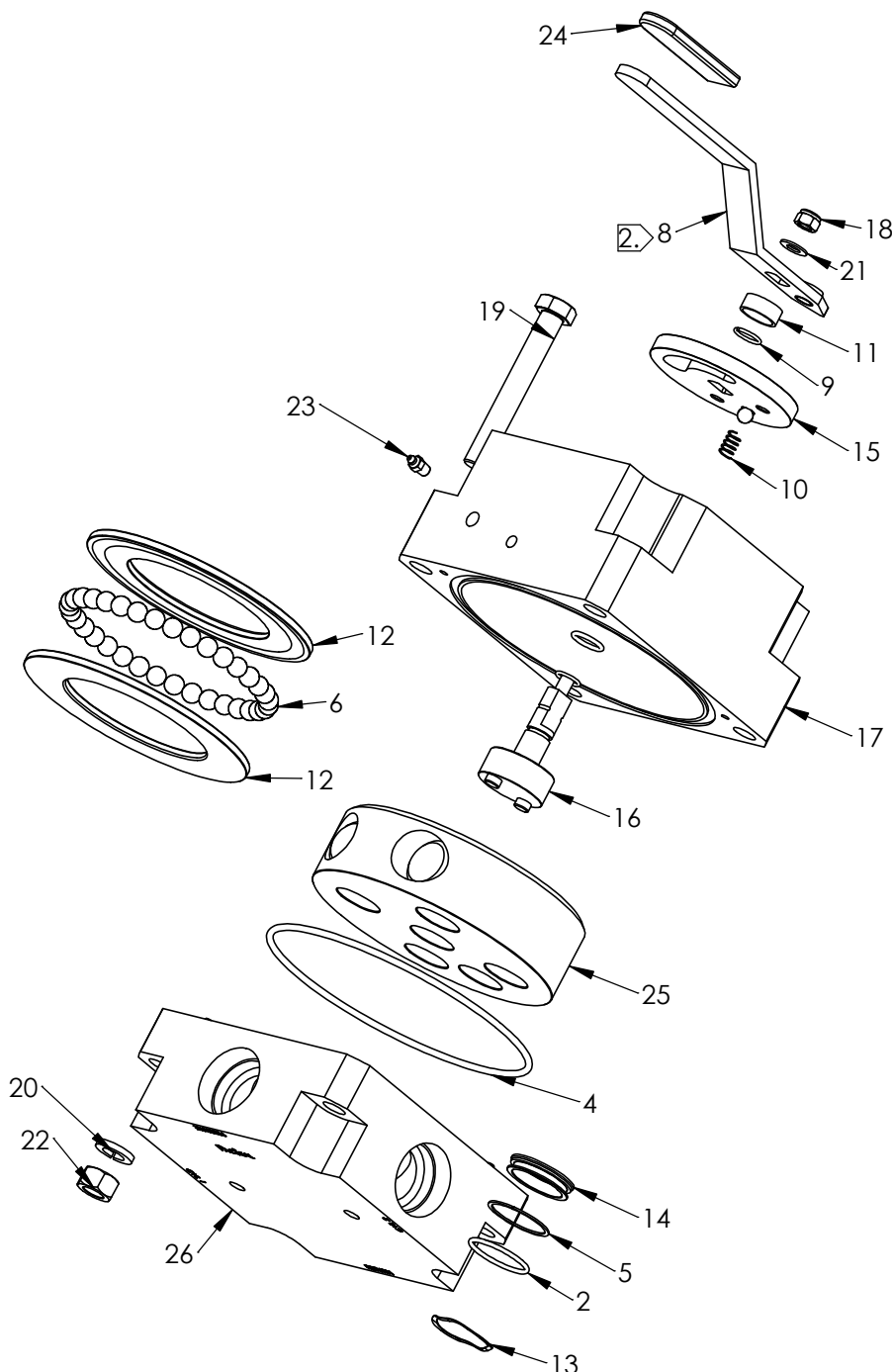


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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1122	O-Ring	1
2	23-1336	O-Ring	3
3	23-1352	O-Ring	1
4	23-1550	O-Ring	1
5	23-1551	Backup Ring	3
6	40-0092	Ball, Bearing	35
7	40-0174	Ball, Bearing	1
8	40-0284	Handle, Remote	1
9	40-0288	Retaining Ring	1
10	40-0295	Spring	1
11	40-0773	Spacer, Handle	1
12	40-2574	Thrust Washer	2
13	40-2598	Wave Spring	3
14	40-4467	Seal Ring	3
15	40-4740	Detent Disc	1
16	40-4741	Shaft	1
17	40-4743	Housing	1
18	50-0093	Nut, Shaft	1
19	50-0102	Bolt	4
20	50-0105	Lock Washer	4
21	50-0108	Washer, Shaft	1
22	50-0111	Hex Nut	4
23	50-0176	Grease Fitting	1
24	50-0236	Grip, Handle	1
25	Note 3	Rotor	1
26	Note 4	Body	1

Notes:

- Standard Inline Ported SV-200 shown for illustration purposes. (Refer to Model Configuration for options.)
- Remote Handle Option.
- See sheets 5-6 "Rotor and Detent Shift Options" for replacement parts.
- See sheet 8 "SV-200 Porting Options" for Body option part numbers.
- See sheets 9-13 for other operator and actuator options.
- Contact PacSeal for Viton or EPR O-rings.
- Refer to SV-200 Maintenance Instructions for more details.

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TITLE

SV-200
General Assembly
Overview

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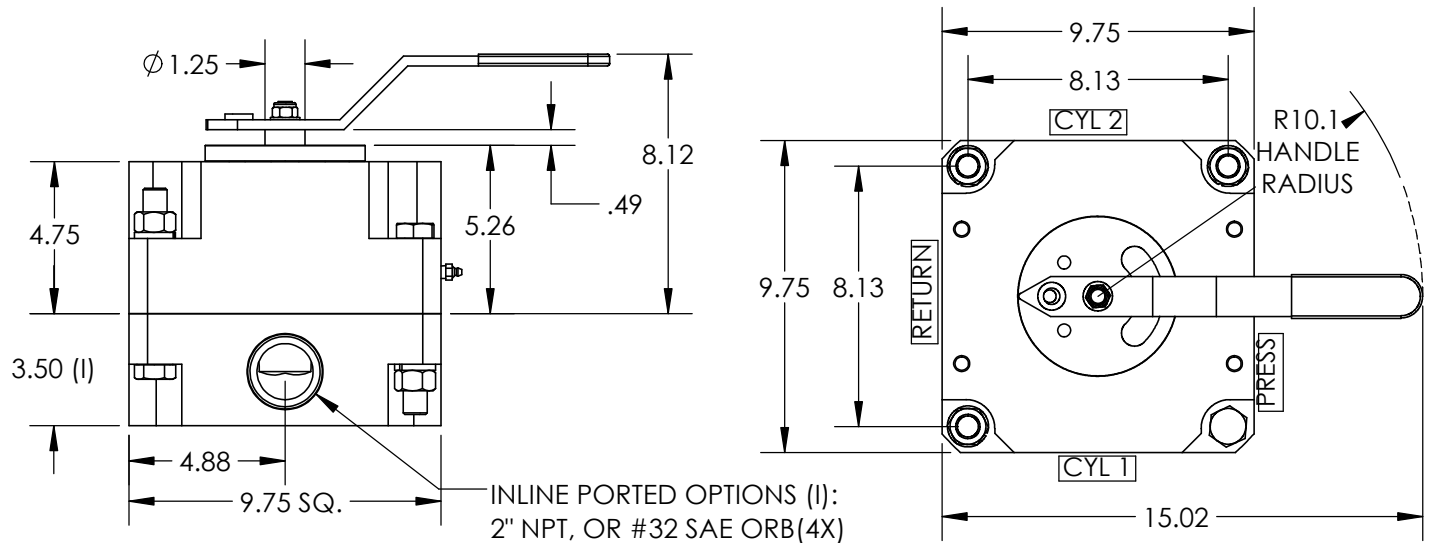
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NPT or SAE Inline Ported (I) with Manual Operator



Body Option Part Numbers		
Body Type	NPT Body Part No.	SAE Body Part No.
Inline (I)	40-5043	40-4457
Inline(I) w/ Sensor Ports (-SP)	40-2569	TBD
Bottom (B)	TBD	TBD
Manifold (M)	TBD	
Subplate (S)	TBD	

Weight (lb.) of Manual Valve Porting Option	
Inline (I)	169
Bottom (B)	TBD
Manifold (M)	TBD
Subplate (S)	TBD



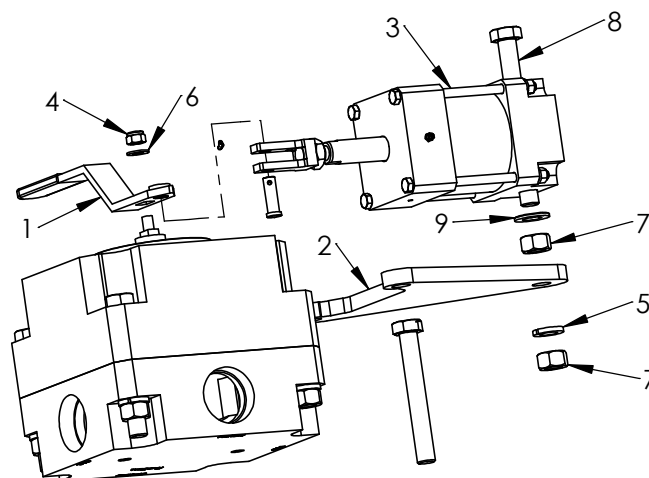
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TITLE	SV-200 Porting Options with Manual Operator Installation Drawing
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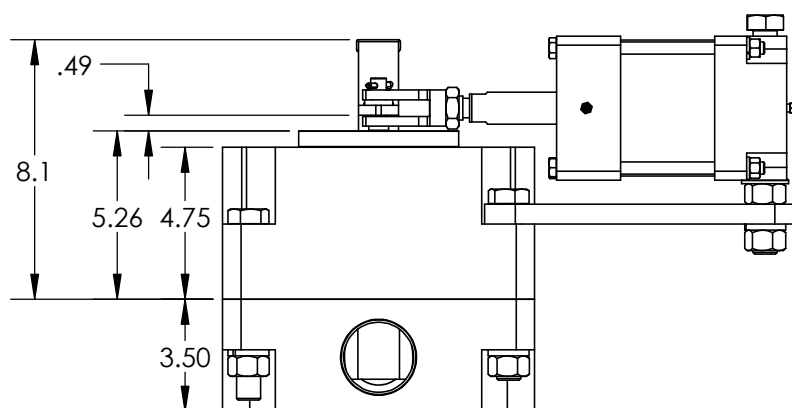
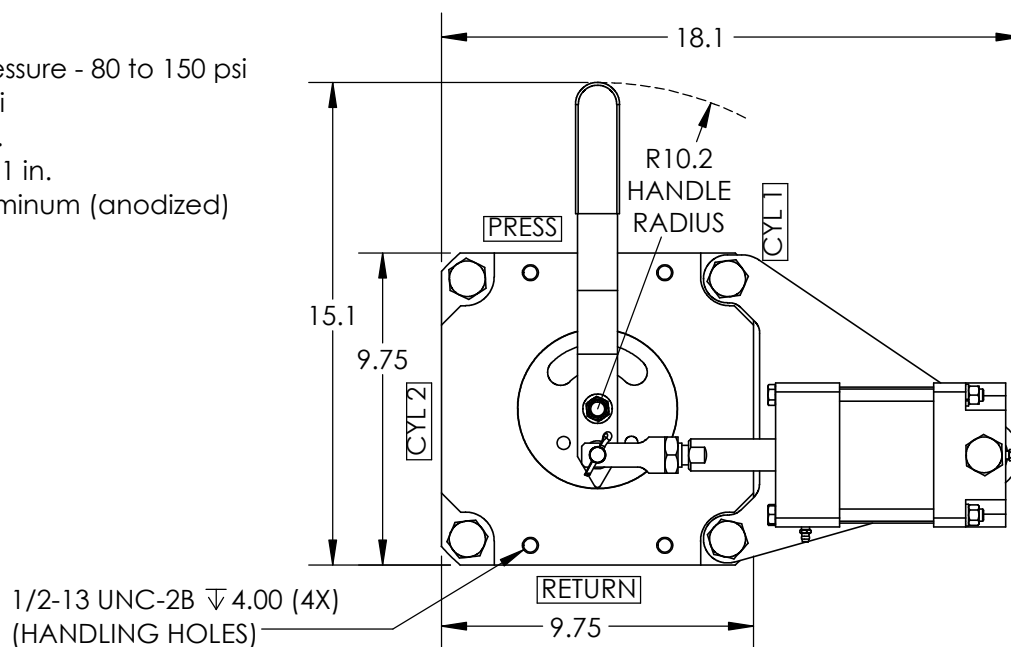
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-0284	Handle, Remote	1
2	40-4770	Bracket, SV-200	1
3	40-4771	Air Actuator Cylinder Assembly, AAC-402L	1
4	50-0093	Nut, Shaft	1
5	50-0105	Lock Washer	5
6	50-0108	Washer, Shaft	1
7	50-0111	Hex Nut	6
8	50-0658	Hex Hd Bolt	1
9	50-0659	Washer, Flat (3/4" Bolt)	1



Notes:

1. Model displays Right Mounted Air Cylinder Actuator
2. Cylinder Positions - 2
3. Cylinder Air working pressure - 80 to 150 psi
4. Cylinder Rating - 250 psi
5. Cylinder Stroke - 2.13 in.
6. Cylinder Bore/Rod - 4 x 1 in.
7. Actuator Material - Aluminum (anodized)



Weight (lb.) of Valve Porting Options

Inline (I)	91
Bottom (B)	91
Manifold (M)	80
Subplate (S)	102



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TITLE

**SV-200 Air
Cylinder Actuator**

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