



## SV-200 Valve Specifications Table of Contents

2. Specifications and Data Sheet
3. Specifications and Data Sheet, continued
4. Model Configurations Overview
5. Rotor Flow and Detent Disc 3-Position Options
6. Rotor Flow and Detent Disc 2-Position Options
7. General Assembly Overview
8. SV-200 Porting Options with Manual Operator Installation Drawing
9. SVX-200 with 2-Position 90° Direct Air/Hydraulic Actuation Installation & Assembly Drawing
10. SV-200 with Air Cylinder Actuator Installation & Assembly Drawing



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)
- Spring Centered (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 as follows:

- Actuator Cylinder bracket mounted to valve
- SVX Integral Actuator assembled atop the valve providing higher efficiency and immediate actuation

Various porting options provide further customization, as follows:

- Inline
- Bottom
- Subplate
- Manifold

General Specifications	
Port Size	2 in. NPT or SAE ORB
Working Pressure Options (Liquid)	2000 psi
Return Port Pressure	250 psi (Max) <sup>1</sup>
Proof Pressure	1.5X Working Pressure
Burst Pressure	2X Working Pressure
Cv Factor	50.0
Rated Flow	200 gpm
Temp Rating	-40 to 250°F
Fluid Media	Hydraulic oil or lubricated water <sup>2</sup>
Weight	See Installation Drawings
Materials	
ShearFlo Sealing Components (Rotor and Seal Rings)	Stainless Steel Hardened <sup>2</sup>
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

<sup>1</sup> Full rated pressure (3000 or 6000 psi) with All Blocked Rotor option

<sup>2</sup> For water based media, special alloy seal rings may be required - Contact PacSeal for details

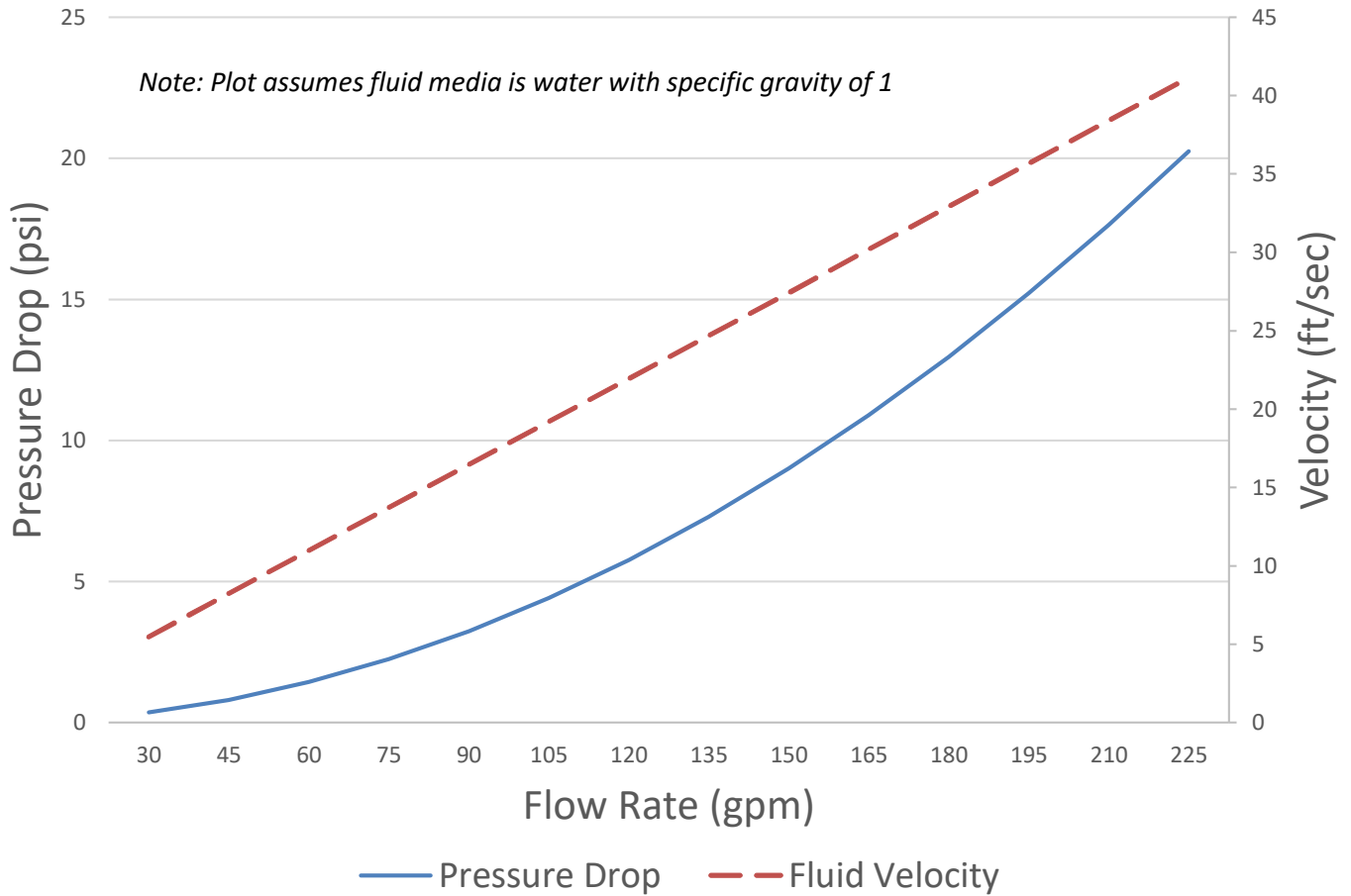
Valve Shift Options	
Detent Pattern	Valve Options
3-Position (4-way)	All options
2-Position 90° (4-way)	All options
2-Position 45° CW or CCW (3-way)	Selector, Manipulator, Open Center

#### Rotor Flow Options

Rotor Configuration	Center Position	CW or CCW Position
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

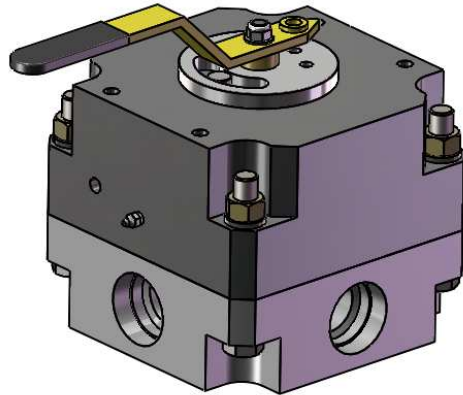


### SV-200 Handle Torque (lb.-in.)

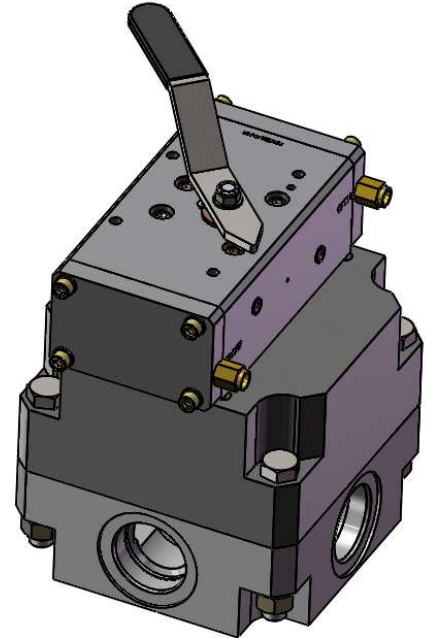
Rotor Type	At 2000 psi Supply Pressure
Selector	300

Model Code Configurator												
Basic Size	Port Size	Type of Ports	Pressure Rating (PSI)	Port Location	Bolts	Rotor Flow Pattern	Valve/Actuator Positions	Actuation Type	Handle	O-Ring	Actuator Cylinder Add-on <sup>4</sup>	Nameplate Add-on
SV200-	16 2"	N NPT	2 2000	I Inline/ Side	S Std Short	S Selector	1 3-Pos.	N/A (see add-on)	M Standard Manual	N Buna-N	None (leave empty)	None (leave empty)
		S SAE		B Bottom	L Long	O Open Center	2 2-Pos. 90°		R Actuator Cylinder	V Viton	-AL Air Cylinder, Left Mounted	-0 Blank
		M Manifold		P Panel Mount	M Manipulator	3 2-Pos. 45° CW	L Pin Lock Detent		E EPR	-AR Air Cylinder, Right Mounted		
				N None <sup>1</sup>	B Bypass	4 2-Pos. 45° CCW	W Wing Handle			-HL Hyd. Cylinder, Left Mounted		-HR Hyd. Cylinder, Right Mounted
SVX200-	16 2"	N NPT	2 2000	I Inline/ Side	N/A	S Selector	1 2-Pos. 90°	A Air - Direct Piloted	S Straight <sup>3</sup>	N Buna-N	N/A	None (leave empty)
		S SAE		B Bottom		O Open Center	2 2-Pos. 45° CW	H Hydraulic - Direct Piloted	W Wing <sup>3</sup>	V Viton		-0 Blank
		M Manifold		M Manipulator		5 2-Pos. 45° CCW	R Air - Solenoid Piloted	N Indicator <sup>2</sup>	E EPR			
				B Bypass		3 3-Pos. 90°	U Hydraulic - Solenoid Piloted					
						4 3-Pos. 90° - Spring Centered <sup>2</sup>	6 2-Pos. 45° CW - Spring Centered <sup>2</sup>	7 2-Pos. 45° CCW - Spring Centered <sup>2</sup>				

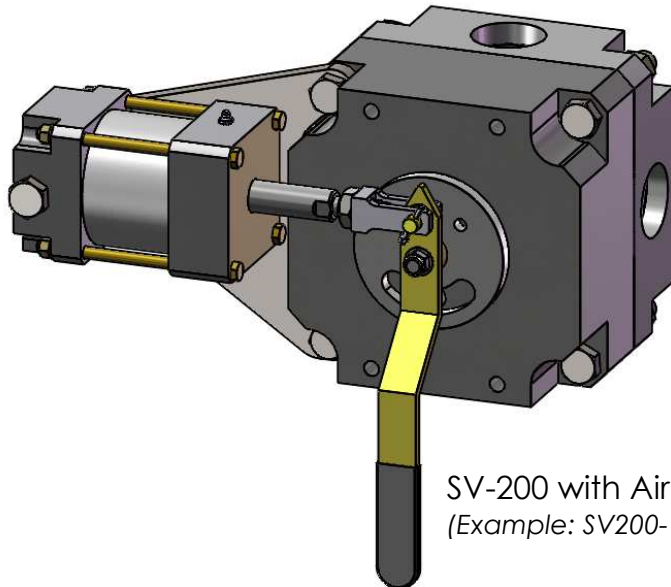
Notes: <sup>1</sup> For Manifold Mount Option  
<sup>2</sup> No manual override  
<sup>3</sup> Manual override to center position (3<sup>rd</sup> position for 2-Pos SVX Actuators)  
<sup>4</sup> AAC-402 is the standard bracket mounted actuator



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



SVX-200 with 2 Pos. 90° Air Actuation  
 (Example: SVX200-16N2IS1ASN)



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



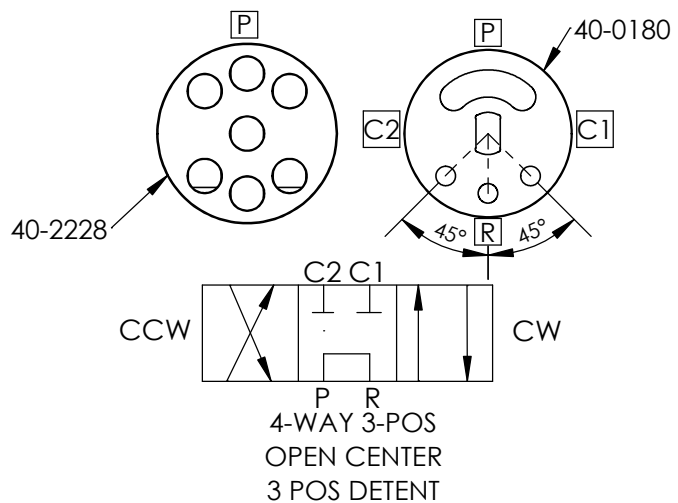
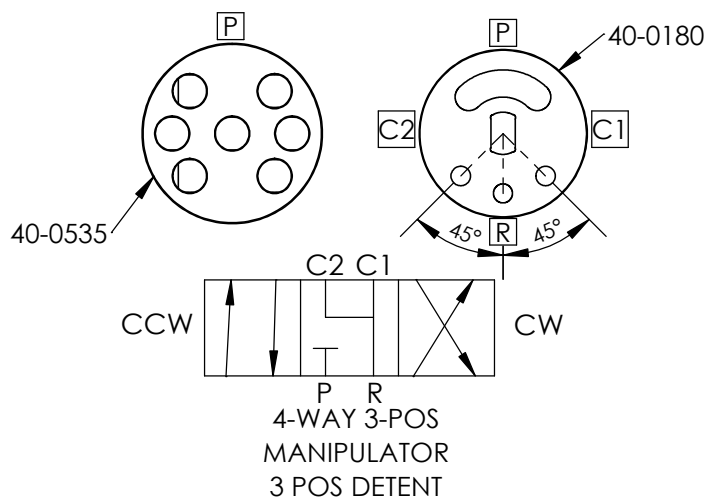
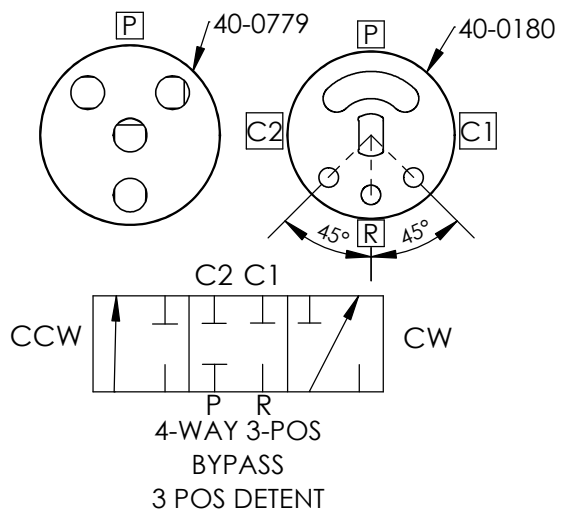
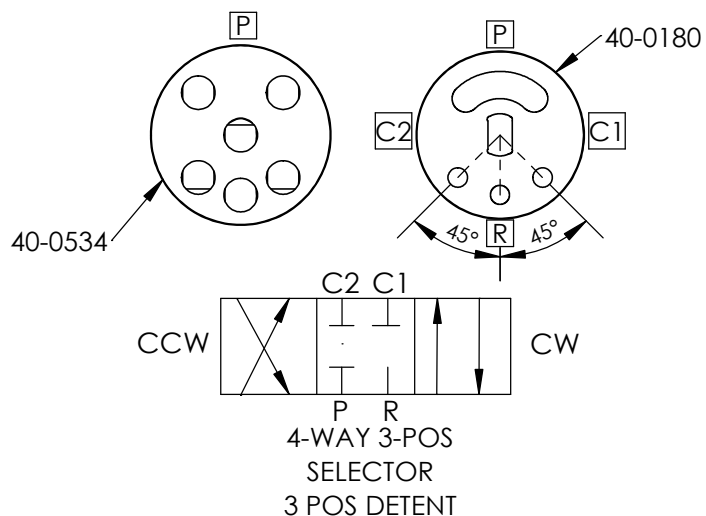
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TITLE  
**Model Configurations Overview**

SIZE	REV
<b>A</b>	<b>2</b>
SHEET 4 OF 10	

Notes:

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



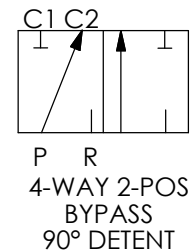
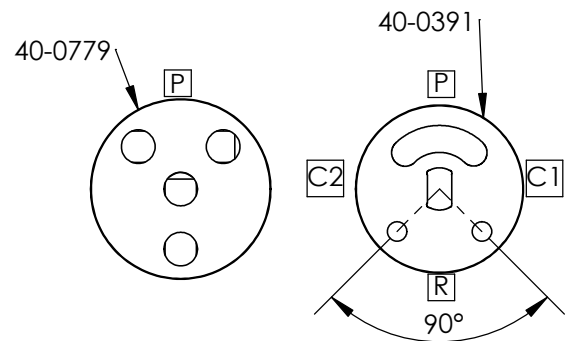
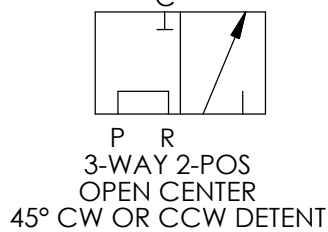
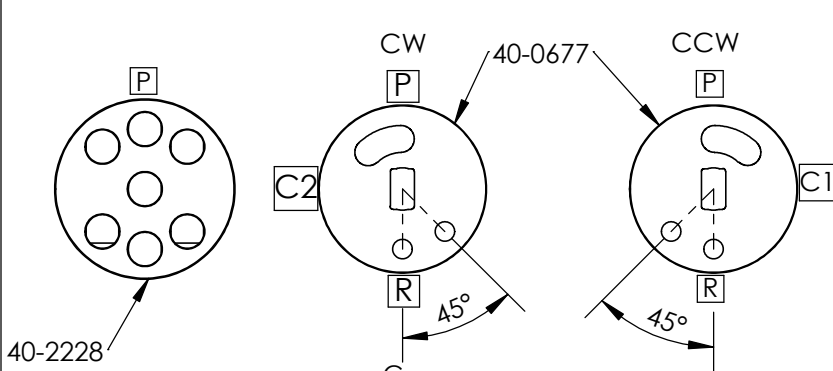
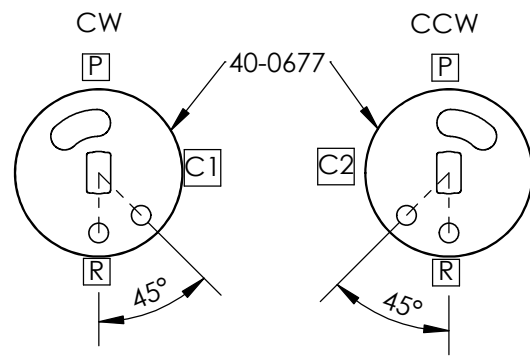
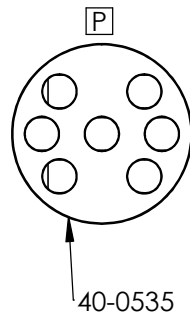
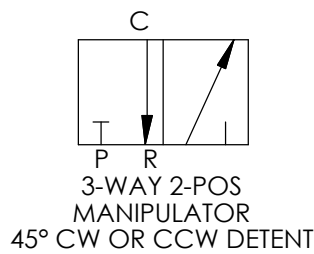
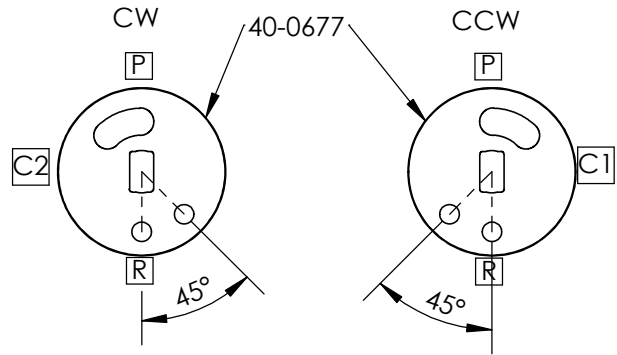
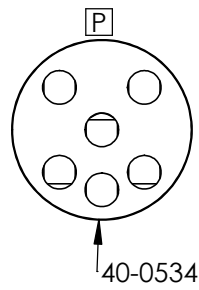
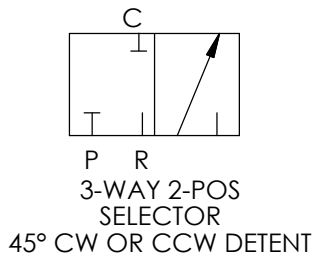
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**TITLE**  
**SV-200 Rotor Flow  
 and Detent Disc  
 3-Position Options**

<b>SIZE</b> <b>A</b>	<b>REV</b> <b>2</b>
SHEET 5 OF 10	

Notes:

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



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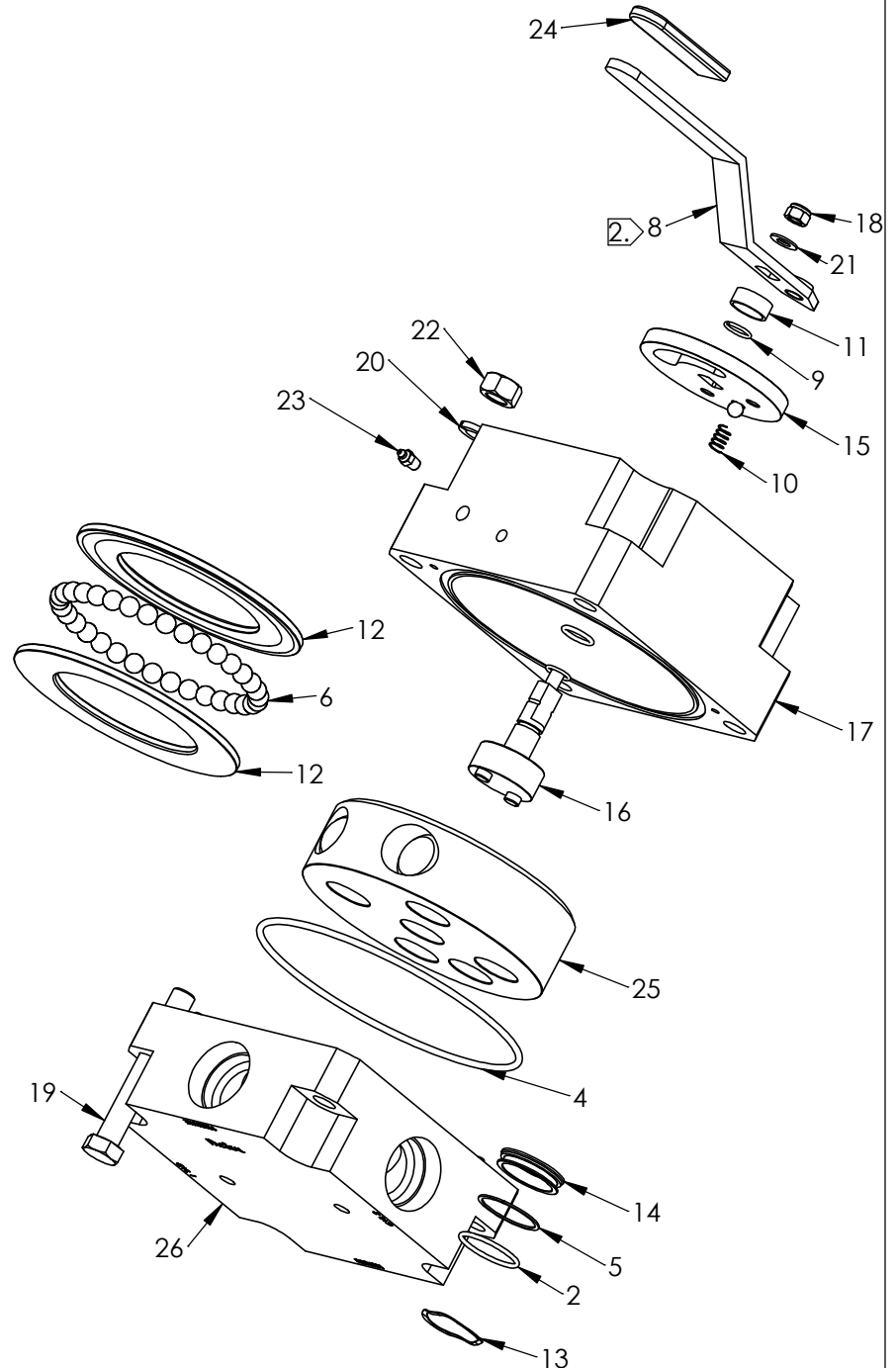
TITLE  
**SV-200 Rotor Flow and Detent Disc 2-Position Options**

SIZE <b>A</b>	REV <b>2</b>
SHEET 6 OF 10	

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	34
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:

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

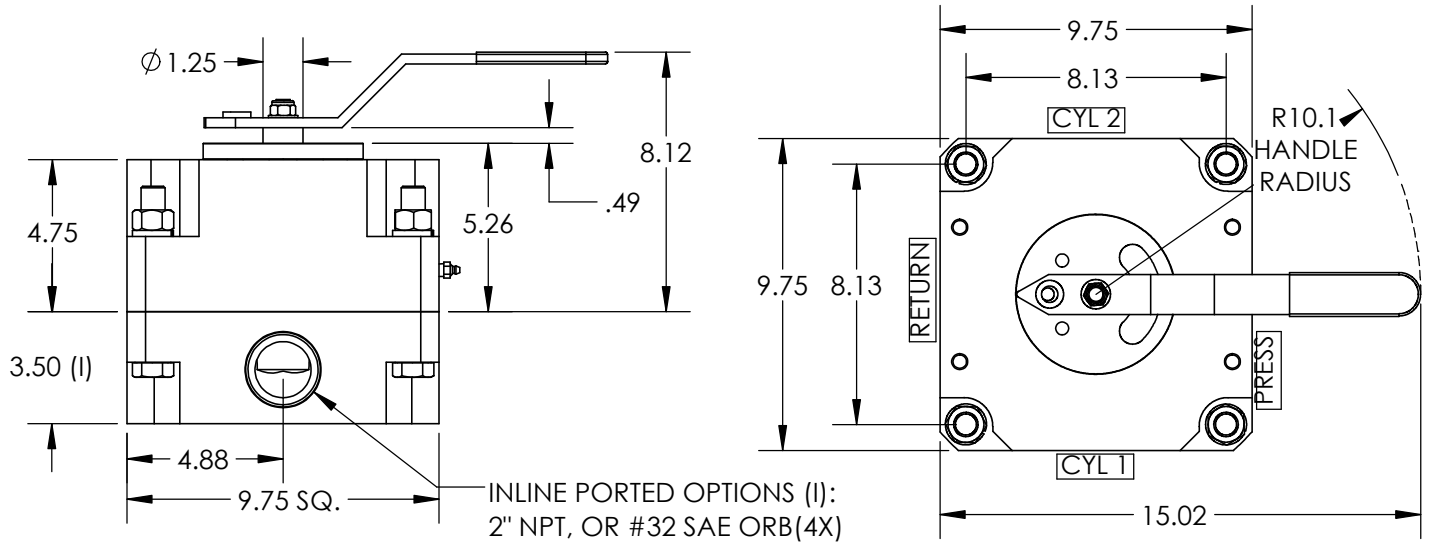


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**TITLE** SV-200  
**General Assembly Overview**

<b>SIZE</b>	<b>REV</b>
<b>A</b>	<b>2</b>
SHEET 7 OF 10	

**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)	40-2569	40-4457
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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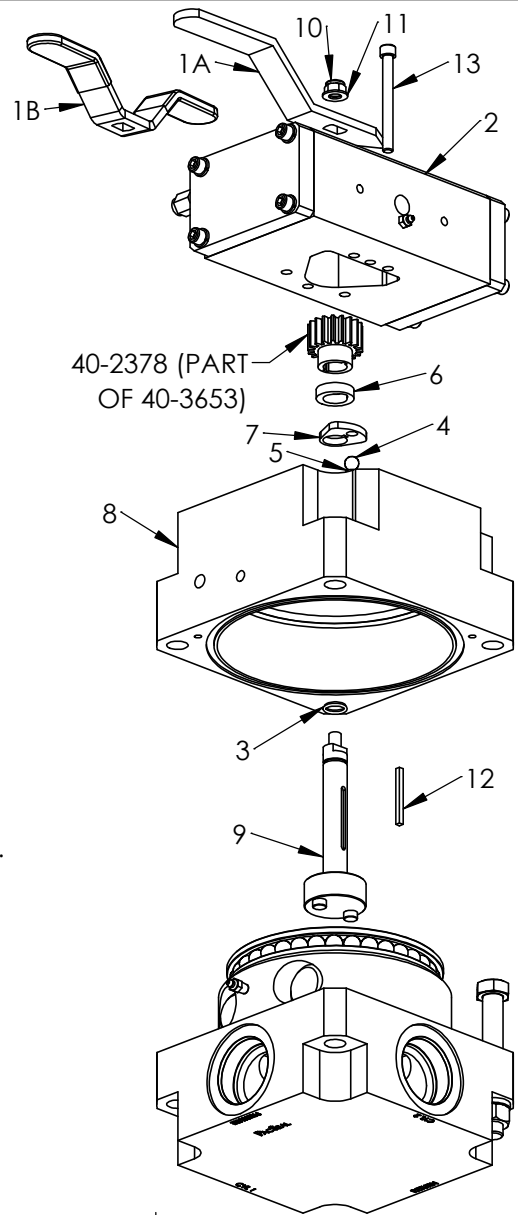
TITLE  
**SV-200 Porting Options  
 with Manual Operator  
 Installation Drawing**

SIZE	REV
<b>A</b>	<b>2</b>
SHEET 8 OF 10	



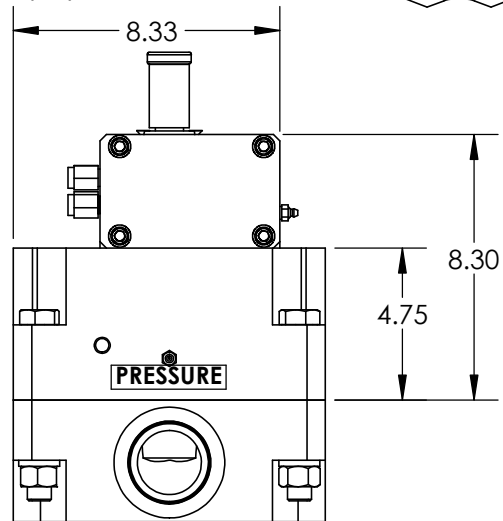
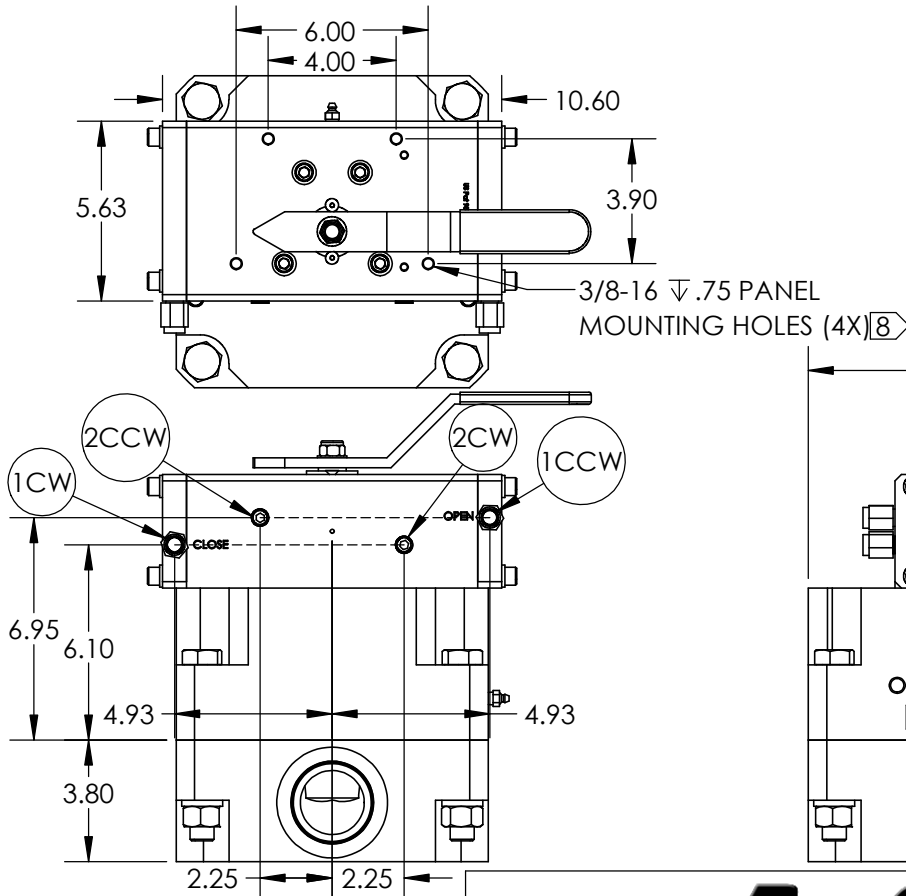
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1A	40-1447	Straight Handle	1
1B	40-3251	Wing Handle	1
2A	40-3653	Air Actuator Assy	1
2B	40-4582	Hyd Actuator Assy	1
3	23-1352	O-Ring	1
4	40-0174	Ball, Bearing	1
5	40-0295	Spring	1
6	40-2299	Shaft Bushing	1
7	40-2381	Detent	1
8	40-4744	Housing	1
9	40-4745	Shaft	1
10	50-0093	Nut, Shaft	1
11	50-0108	Washer, Shaft	1
12	50-0507	Key	1
13	50-0526	SHCS	4

1/4 NPT Air Inlet Porting Location Options	
Clockwise (CW) Option #	Counter-Clockwise (CCW) Option #
1CW	1CCW
2CW	2CCW



Notes:

1. Model displays SVX with 2-Position 90° Direct Air or Hydraulic actuation.
2. Center (3rd) position is accomplished with manual override.
3. Air Actuator working pressure - 80 to 150 psi
4. Hydraulic Actuator working pressure - 800 to 1500 psi
5. Actuator material - anodized aluminum (carbon steel is special)
6. Retrofitting an existing valve is not an option.
7. Solenoid piloted porting option not shown.
8. Panel mounting holes provided for models released after September 2023.

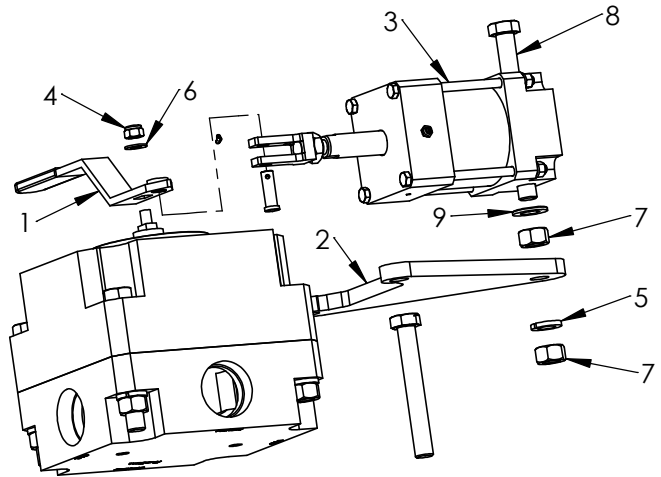


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TITLE: SVX-200 2-Position 90° Direct Air/Hyd. Actuation Installation and Assembly Drawing

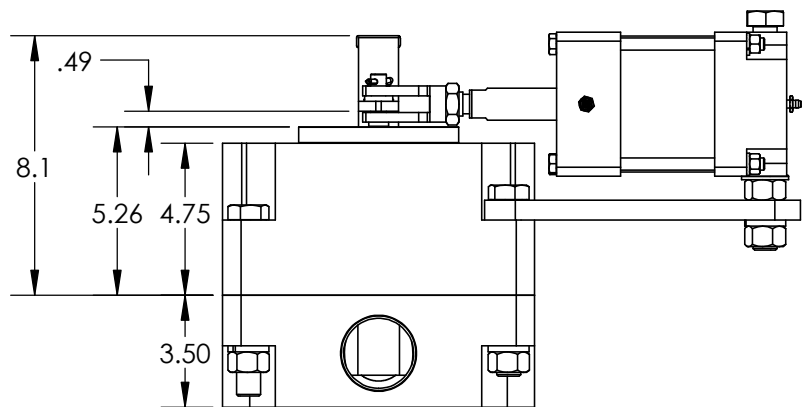
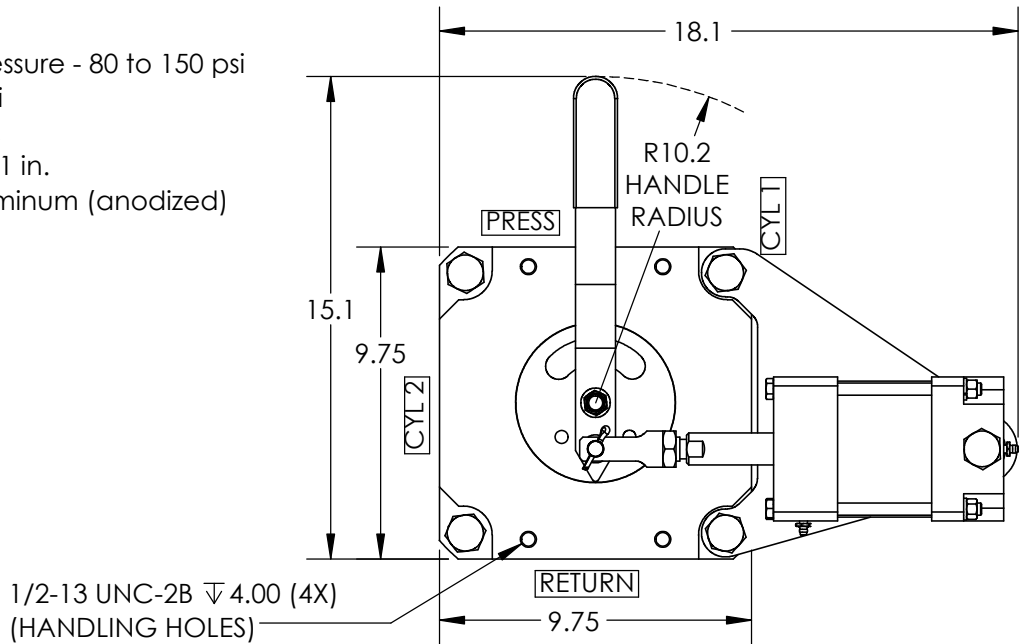
SIZE	REV
<b>A</b>	<b>2</b>
SHEET 9 OF 10	

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**

SIZE <b>A</b>	REV <b>2</b>
SHEET 10 OF 10	