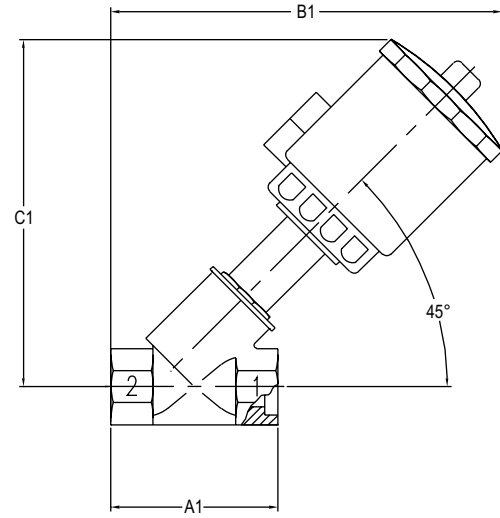




Series SAV Angle Seat Valves

Specifications - Installation and Operating Instructions



The **Series SAV Angle Seat Valve** offers a compact, low cost actuated valve package. The pneumatic, externally piloted, piston valve can be operated with air or liquids, and provides bubble tight shutoff and failsafe operation. Bronze and stainless steel body materials provide broad media compatibility and corrosion resistance. The Polyamide actuator housing resists corrosion for years of maintenancefree operation. The SAV can be used in most gas, liquid, steam, and corrosive applications. For ease of installation, the SAV actuator housing can be rotated 360 degrees.

Each SAV valve is manufactured with one of the following valve functions:

NC (Normally Closed)

These valves are designed for flow over the seat (port 1 to 2). Caution: Not recommended for waterhammer prevention.

NO (Normally Open)

These valves are designed for flow under the seat (port 2 to 1). Can be used to prevent waterhammer on valve closure in liquid applications.

BRONZE NPT DIMENSIONS

Port Connection	A1 (in)	B1 (in)	C1 (in)	Actuator Diameter (in)	NO CV	NC CV
1/2"	2.56	6.42	5.51	2.76	6.61	6.61
3/4"	2.95	6.81	5.79	2.76	12.18	12.18
1"	3.54	8.11	6.93	3.32	23.20	23.2
1-1/4"	4.33	10.04	8.66	3.32	33.06	33.64
1-1/2"	4.72	10.63	9.25	4.58	33.30	53.36
1-1/2"	4.72	12.05	10.67	4.58		53.94
2"	5.91	11.02	9.45	4.58		68.44
2"	5.91	12.44	10.87	5.54	53.94	77.72

SPECIFICATIONS

VALVE BODY

Service: Gases and liquids compatible with wetted materials.

Wetted Materials: Valve body: Bronze or AISI 316L SS; Plug and stem: AISI 316L SS; Stem O-ring: Viton®; Seat and seal: PTFE.

Temperature Limit: 32 to 140°F (0 to 60°C).

Line Sizes: 1/2 to 2".

Pressure Limits: See tables on next page.

Temperature Limits: 14 to 358°F (-10 to 180°C).

Flow Leakage: Meets ANSI Class VI.

ACTUATORS

Type: Piston/pneumatic spring.

Pilot Connections: NAMUR solenoid mounting pad.

Pilot Media: Air, water, inert gas.

Pressure Limits: See tables on next page.

Temperature Limit: 185°F (85°C).

STAINLESS STEEL NPT DIMENSIONS

Port Connection	A1 (in)	B1 (in)	C1 (in)	Actuator Diameter (in)	NO CV	NC CV
1/2"	3.35	7.48	6.14	2.76	6.61	6.61
3/4"	3.74	7.68	6.30	2.76	12.18	12.18
1"	4.13	8.62	7.17	3.32	23.2	23.2
1-1/4"	4.72	10.47	8.90	3.32	33.06	33.64
1-1/2"	5.12	10.67	9.06	4.58	33.30	53.36
1-1/2"	5.12	12.09	10.47	4.58		53.94
2"	5.91	11.22	9.45	4.58		68.44
2"	5.91	12.64	10.87	5.54	53.94	77.72

LINE AND PILOT PRESSURE CHARTS (psi)

NORMALLY CLOSED											
Valve Size	Actuator Diameter	Stainless Steel					Bronze				
		Max. Line Pressure	Max. Steam Pressure	Flow Direction	Min. Pilot Pressure	Max. Pilot Pressure	Max. Line Pressure	Max. Steam Pressure	Flow Direction	Min. Pilot Pressure	Max. Pilot Pressure
1/2	2.76"	230	150	Overseat	60	143	230	150	Overseat	60	143
3/4	2.76"	230	150	Overseat	60	143	230	150	Overseat	60	143
1	3.32"	230	150	Overseat	60	143	290	150	Overseat	60	143
1-1/4	3.32"	230	150	Overseat	60	114	230	150	Overseat	60	114
1-1/2	4.58"	230	150	Overseat	60	114	230	150	Overseat	60	114
1-1/2	4.58"	143	150	Overseat	60	114	230	150	Overseat	60	114
2	4.58"	232	150	Overseat	60	114	160	150	Overseat	60	114
2	5.54"	232	150	Overseat	60	114	220	150	Overseat	60	114

NORMALLY OPEN											
Valve Size	Actuator Diameter	Stainless Steel					Bronze				
		Max. Line Pressure	Max. Steam Pressure	Flow Direction	Min. Pilot Pressure	Max. Pilot Pressure	Max. Line Pressure	Max. Steam Pressure	Flow Direction	Min. Pilot Pressure	Max. Pilot Pressure
1/2	2.76"	230	150	Underseat	60	143	230	150	Underseat	60	143
3/4	2.76"	230	150	Underseat	60	143	290	150	Underseat	60	143
1	3.32"	230	150	Underseat	60	143	290	150	Underseat	60	143
1-1/4	3.32"	230	150	Underseat	60	114	230	150	Underseat	60	114
1-1/2	4.58"	230	150	Underseat	60	114	230	150	Underseat	60	114
2	5.54"	230	150	Underseat	60	114	220	150	Underseat	60	114

INSTALLATION

WARNING When working on the Actuator/Valve assembly, disconnect the air or power supply to the actuator. Spring return actuators/valves may change position if power fails or is removed. Never insert any object or body part into the valve body. Severe injury may occur.

1. Prior to Installation, be sure system is not under pressure and all scale and debris is free from piping system.
2. The valve can be installed in any position, with the direction of flow as indicated on the inlet/outlet ports by the connection numbers 1 and 2.
3. The actuator can be rotated 360 degrees in the direction indicated on the product label to facilitate easy pilot mounting connection.
4. Apply thread tape or sealant to pipe threads only.
5. Use hex flats on valve to secure the valve and pipe. Never tighten the valve by using the actuator to turn.
6. Pipework should be supported to prevent any stress on valve body.

OPERATION

1. Flow direction is from ports 2 to 1 for normally closed valves, For liquids, flow should be under the seat to prevent waterhammer.
2. Pilot pressure is from 22-150 psi, dependent on process pressure. Review pilot/media pressure relationship charts before initial system operation.
3. Optional Series PV Solenoid Pilot Valves can be installed for operation with 120 VAC power supply (other voltages available).

MAINTENANCE

The Series SAV requires no maintenance. Care should be taken to make sure that the ratings of the valve are not exceeded with respect to maximum pressures and temperatures, and that the media is compatible with all materials.

SPARE PARTS

The Series SAV valve is completely safe to disassemble in the field. A seal kit is available for all valves and actuator sizes comprising: piston lip seal, actuator steam O-ring, plug soft seal (PTFE), body seal and O-ring. Specify valve size and type when requesting a seal kit.

WARRANTY

The Series SAV is warranted from defects in materials or workmanship for (1) year from the date of purchase. If required, contact our customer service department for a Return Goods Authorization and send to:

Attn: Repair Department
 Dwyer Instruments, LCC
 102 Indiana Highway 212
 Michigan City, IN 46361

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