

PASV

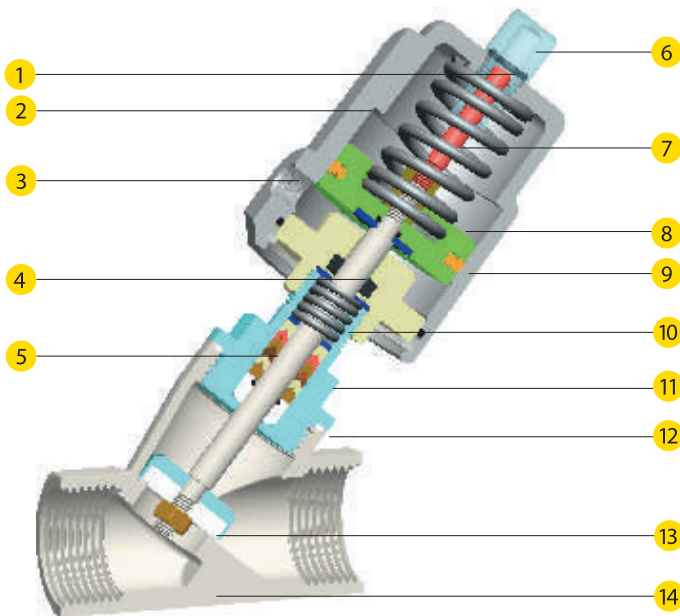
ANGLE SEAT VALVE



DESCRIPTION:

Highly complicated control mechanism for smaller requirements can be easily avoided by using Pennant's Angle Seat Piston Valves.

This high engineered product ensures linear actuation to lift a seal off its seat.



1) Indication Rod (Nylon) 2) Actuator (CF8) 3) Pilot Port (1/8") 4) Stem (AISI 316/304) 5) Stem Seal (PTFE) 6) Cap (PC) 7) Spring (Steel 65Mn) 8) Piston (Alu. alloy) 9) Piston Seal (Viton) 10) Seal Spring (AISI 304) 11) Connecting Piece (CF8M/CF8) 12) Body Seal (PTFE) 13) Seat (PTFE) 14) Body (CF8M/CF8)

The seat is set at an angle to provide the maximum possible flow when unseated.

Angle Seat Piston Valves are particularly suited to applications where high temperatures and large flowrates are required, such as steam or water. When used in reverse some models of Angle Seat Piston Valves will eliminate water hammer when operated.

PRINCIPLE

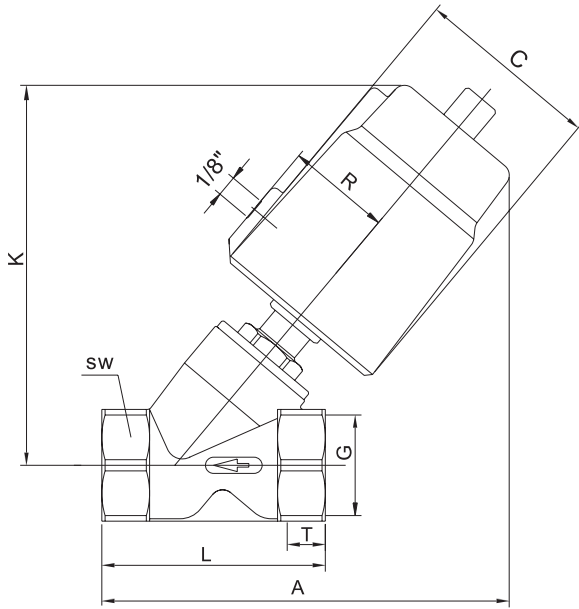
Valve is closed (open) with spring force. When the piston is actuated by compressed air, valve is open (closed). For the double acting type, the valve is open & closed by compressed air.

ADVANTAGES:

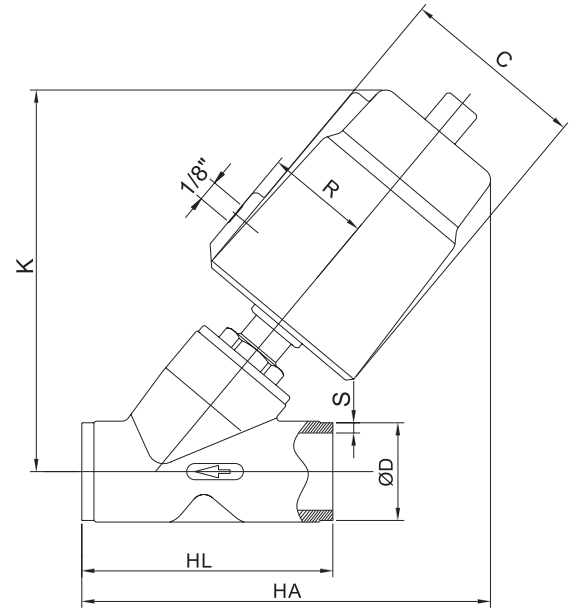
- Large flux, low resistance, no water – hammer
- Due to angular shape, there is negligible pressure drop across the valve
- Y- type shape enlarges the flowing section, which could raise the flux by 30% and make the flow smoother
- Steam adjusts and lubricates itself automatically, resulting in long life
- The cylinder is of stainless steel construction, lubricating automatically, allowing 360° free movement

STANDARD:

Fluid Pressure	Max. 1.6 Mpa (232 psi)
Control Pressure	0.3 – 0.8 Mpa (43.5 – 116 psi)
Control Fluid	Neutral Gas, Air
Body Material	CF8M/CF8
Seals Material	PTFE
Actuator Material	CF8
Actuator Size	1.57 inches, 1.96 inches, 2.48 inches, 3.54 inches, 4.92 inches
Applicable Fluid	Water, Alcohol, Oil, Fuel, Steam, Neutral gas or liquid, Organic solvent, Acid and Lye
Fluid Viscosity	Max. 600 mm ² /s
Fluid Temperature	-50 °F ~ 356 °F, 77 °F ~ 428 °F
Ambient Temperature	-50 °F ~ 176 °F
Control Type	Normally Closed, Normally Open
Connections	Threaded (BSP, NPT), Welded, Flanged, Tri- clamp



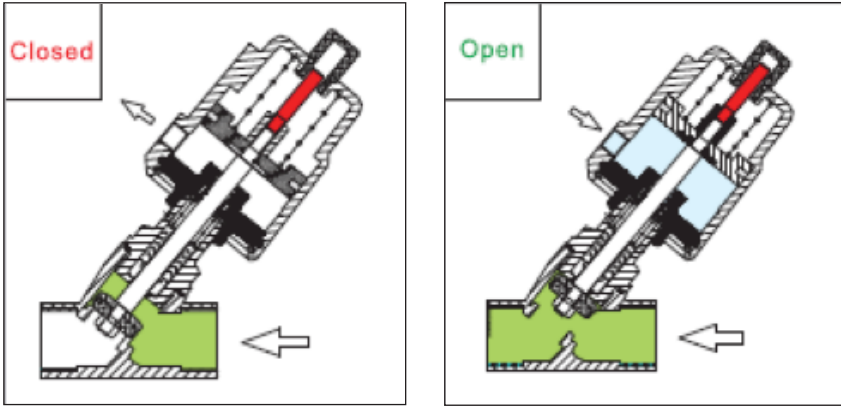
Threaded Connection



Welded Connection

DIMENSIONS IN MM:

Size	Actuator mm	C	R	K	Threaded Connection					Welded Connection									
					G	T	A	L	SW	DIN 1850-2				DIN 1850-3		SMS 3008			
										HA	HL	D	S	D	S	HA	HL	D	S
3/8"	40	1.99	1.06	8.31	3/8"	12	4.69	2.68	1.06	-	-	-	-	-	-	-	-	-	-
	50	2.36	1.3	4.88			5.16			-	-	-	-	-	-	-	-	-	-
1/2"	40	1.99	1.06	8.31	1/2"	15	4.69	2.68	1.06	4.65	2.76	0.75	0.06	0.79	0.08	5	2.95	0.71	0.04
	50	2.36	1.3	4.88			5.04			5.43									
3/4"	50	2.36	1.3	5.04	3/4"	16	5.35	2.95	1.26	5.31	3.23	0.91	0.06	0.94	0.08	5.71	3.74	0.98	0.05
1"	50	2.36	1.3	5.35	1"	17	5.71	3.54	1.57	5.91	3.94	1.14	0.06	1.18	0.08	6.5	5.12	1.26	0.05
	63	2.95	1.61	6.38			6.65			7.4									
	90AL	4.41	2.24	8.27			8.31			8.5						9.06			
	90	4.17	2.17	8.31			8.39			8.58						9.13			
1-1/4"	63	2.95	1.61	6.85	1-1/4"	21	7.36	4.57	1.97	7.32	4.92	1.38	0.06	1.42	0.08	7.87	5.71	1.33	0.05
	90AL	4.41	2.24	8.66			9.02			9.06						9.53			
	90	4.17	2.17	8.78			9.09			9.13						9.65			
1-1/2"	63	2.95	1.61	6.89	1-1/2"	21	7.36	4.57	2.2	7.48	5.12	1.61	0.06	1.65	0.08	8.27	6.3	1.5	0.05
	90AL	4.41	2.24	8.66			9.06			9.13						9.92			
	90	4.17	2.17	8.78			9.09			9.25						10.04			
2"	63	2.95	1.61	7.2	2"	22	7.91	5.43	2.72	8.11	6.1	2.09	0.06	2.13	0.08	8.82	6.89	2.01	0.05
	90AL	4.41	2.24	9.13			9.61			9.72						10.35			
	90	4.17	2.17	9.13			9.72			9.84						10.43			
2-1/2"	90AL	4.41	2.24	10.31	2-1/2"	26	11.1	7.01	3.35	-	-	-	-	-	-	-	-	-	-
	90	4.17	2.17	10.43			11.22			-						-			
	125AL	5.83	2.91	11.89			12.6			-						-			
3"	125AL	5.83	2.91	12.32	3"	27	14.65	8.27	3.94	-	-	-	-	-	-	-	-	-	-



APRESSURE DATA SHEET

Single Acting, Normally Closed - NC - Enter above seat

Size	Thread end	Orifice inch	Cv US gpm	Actuator		ΔP		Control Pressure	
				mm		psi		psi	
3/8"	G3/8"	0.51	4.39	40		0 - 232		44 - 65	
				50		0 - 232		44 - 51	
1/2"	G1/2"	0.51	5.43	40		0 - 232		44 - 65	
				50		0 - 232		44 - 51	
3/4"	G3/4"	0.71	10.98	50		0 - 232		44 - 58	
				50		0 - 232		44 - 65	
1"	G1"	0.94	20.92	50		0 - 232		44 - 65	
				63		0 - 232		44 - 51	
				63		0 - 232		44 - 80	
1-1/4"	G1-1/4"	1.22	26.7	90		0 - 232		36 - 51	
				63		0 - 232		44 - 94	
				90		0 - 232		36 - 58	
1-1/2"	G1-1/2"	1.38	38.03	63		0 - 232		44 - 102	
				90		0 - 232		36 - 65	
				90		0 - 232		36 - 87	
2"	G2"	1.77	61.04	90		0 - 232		44 - 58	
				125		0 - 232		44 - 102	
				125		0 - 232			
2-1/2"	G2-1/2"	2.4	95.49	90		0 - 232			
				125		0 - 232			
3"	G3"	3.15	146.81	125		0 - 232			

Single Acting, Normally Closed - NC - Enter below seat

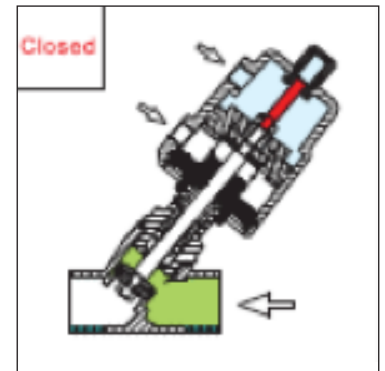
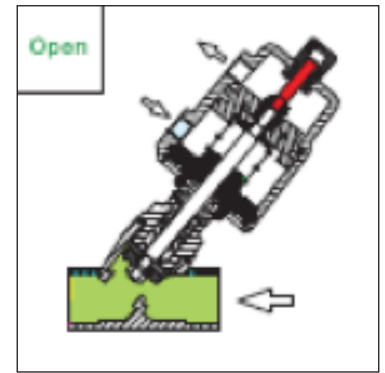
Size	Thread end	Orifice inch	Cv US gpm	Actuator		ΔP		Control Pressure	
				mm		psi		psi	
3/8"	G3/8"	0.51	4.39	40		0 - 160		44	
				50		0 - 203		44	
1/2"	G1/2"	0.51	5.43	40		0 - 160		44	
				50		0 - 203		44	
3/4"	G3/4"	0.71	10.98	50		0 - 203		44	
				50		0 - 58		44	
1"	G1"	0.94	20.92	63		0 - 203		65	
				90		0 - 232		73	
				63		0 - 87		65	
1-1/4"	G1-1/4"	1.22	26.7	90		0 - 232		73	
				63		0 - 73		65	
1-1/2"	G1-1/2"	1.38	38.03	90		0 - 232		73	
				90		0 - 145		73	
2"	G2"	1.38	61.04	90		0 - 102		73	
				125		0 - 131		87	
2-1/2"	G2-1/2"	2.4	95.49	90		0 - 87		87	
				125					
3"	G3"	3.15	146.81	125		0 - 87			

ΔPRESSURE DATA SHEET

Normally Open (No) – Enter Above Seat

Suitable when valve is to be kept open for prolonged periods;
By taking off the silencer, valve operation can be changed to double acting – No Type

Size	Thread end	Orifice	Cv	Actuator	ΔP	Control Pressure
		inch	US gpm	mm	psi	Psi
3/8"	G3/8"	0.51	4.39	50	0 - 232	> 44
1/2"	G1/2"	0.51	5.43	50	0 - 232	> 44
3/4"	G3/4"	0.71	10.98	50	0 - 174	> 44
1"	G1"	0.94	20.92	63	0 - 232	> 65
1 1/2"	G1-1/4"	1.22	26.7	63	0 - 203	> 65
1 1/2"	G1-1/2"	1.38	38.03	63	0 - 203	> 65
2"	G2"	1.77	61.04	63	0 - 116	> 65



Normally Open (No) – Enter Below Seat (No Water – Hammer)

Suitable for long time valve open demand, avoid water hammer.
Taking off the silencer, valve could be changed to double acting – NO type

Size	Thread end	Orifice	Kv	Actuator	ΔP	Control Pressure
		mm	m ³ /h	mm	MPa	MPa
DN10	G3/8"	13	3.8	50	0 - 1.6	0.2 - 0.4
DN15	G1/2"	13	4.7	50	0 - 1.6	0.2 - 0.4
DN20	G3/4"	18	9.5	50	0 - 1.6	0.2 - 0.6
DN25	G1"	24	18.1	50	0 - 1.3	0.2 - 0.6
				63	0 - 1.6	0.25 - 0.5
DN32	G1-1/4"	31	23.1	63	0 - 1.3	0.25 - 0.6
DN40	G1-1/2"	35	32.9	63	0 - 0.7	0.25 - 0.6
DN50	G2"	45	52.8	63	0 - 0.5	0.25 - 0.6
				90	0 - 1.2	0.25 - 0.6
DN65	G2-1/2"	61	82.6	125	0 - 1.4	0.25 - 0.7
DN80	G3"	80	127	125	0 - 1.2	0.25 - 0.7

