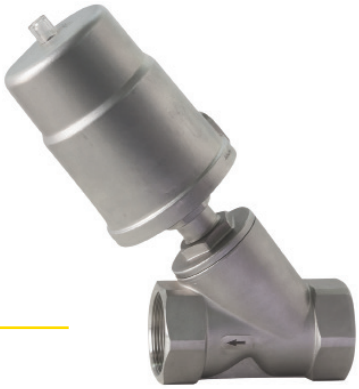
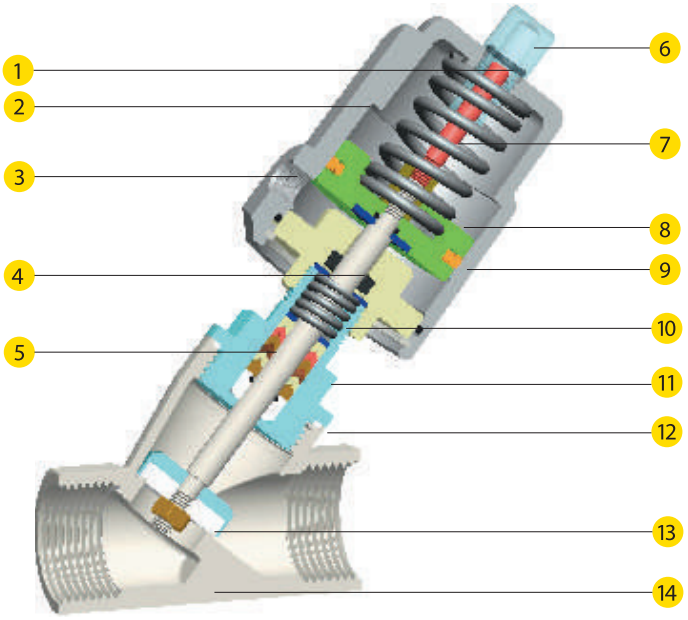
PASV

ANGLE SEAT VALVE



DESCRIPTION:

Pennant's Angle Seat Piston Valve is a pneumatically controlled valve with a piston actuator providing linear actuation to lift a seal off its seat. 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 valve 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 value is open & closed by compressed air.

ADVANTAGES:

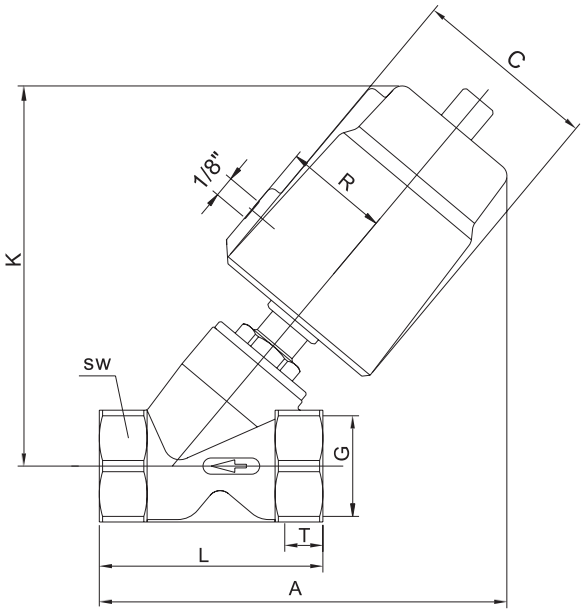
- Large flux, low resistance, no water – hammer
- Y- type shape enlarges the flowing section, which could raise the flux by 30% and make the flow smoother
- Steam adjusts and lubricates itself automatically, resulting in long life
- The cylinder is of stainless steel construction, lubricating automatically,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

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)

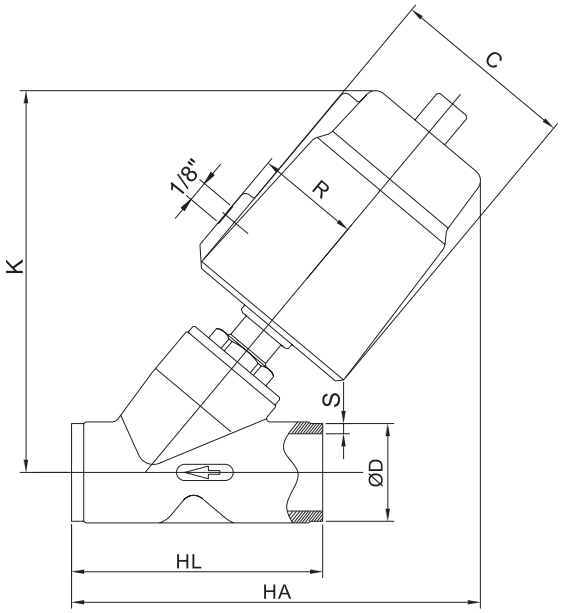
STANDARD:

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	40mm, 50mm, 63mm, 90mm, 125mm
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	-10°C ~ 180 °C, 25°~ 220 °C
Ambient Temperature	-10°C ~ 80 °C
Control Type	Normally Closed, Normally Open
Connections	Threaded (BSP, NPT), BW, Flanged, Tri- clamp

All Dimensions are in mm. weights in kg.



Threaded Connection

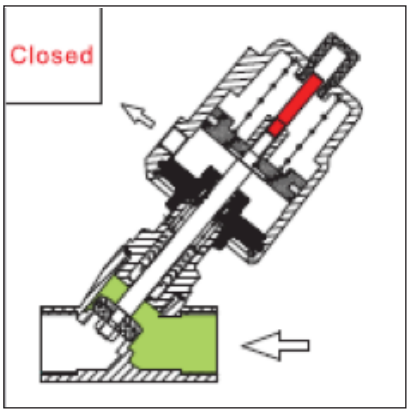


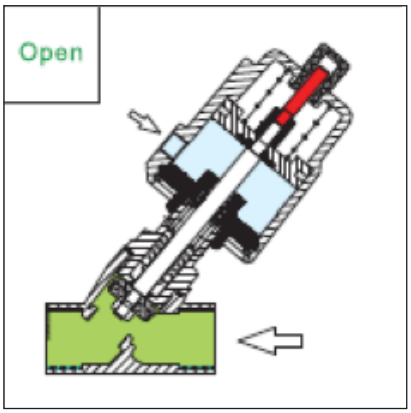
Welded Connection

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
DN10	40	50.5	27	211	3/8″	12	119	68	27	-	-	-	-	-	-	-	-	-	-
	50	60	33	124			131			-									
DN15	40	50.5	27	211	1/2″	15	119	68	27	118	70	19	1.5	20	2	127	75	18	1
	50	60	33	124			131			128						138			
DN20	50	60	33	128	3/4″	16	136	75	32	135	82	23	1.5	24	2	145	95	25	1.2
DN25	50	60	33	136	1″	17	145	90	40	150	100	29	1.5	30	2	165	130	32	1.2
	63	75	41	162			169			175						188			
	90AL	112	57	210			211			216						230			
	90	106	55	211			213			218						232			
DN32	63	75	41	174	1-1/4″	21	187	116	50	186	125	35	1.5	36	2	200	145	33.7	1.2
	90AL	112	57	220			229			230						242			
	90	106	55	223			231			232						245			
DN40	63	75	41	175	1-1/2″	21	187	116	56	190	130	41	1.5	42	2	210	160	38	1.2
	90AL	112	57	220			230			232						252			
	90	106	55	223			231			235						255			
DN50	63	75	41	183	2″	22	201	138	69	206	155	53	1.5	54	2	224	175	51	1.2
	90AL	112	57	232			244			247						263			
	90	106	55	232			247			250						265			
DN65	90AL	112	57	262	2-1/2″	26	282	178	85	-	-	-	-	-	-	-	-	-	-
	90	106	55	265			285			-									
	125AL	148	74	302			320			-									
DN80	125AL	148	74	313	3″	27	372	210	100	-	-	-	-	-	-	-	-	-	-

All Dimensions are in mm. weights in kg.





ΔPRESSURE DATA SHEET

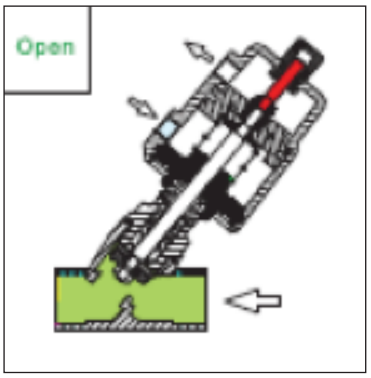
Single Acting, Normally Closed - NC - Enter above seat

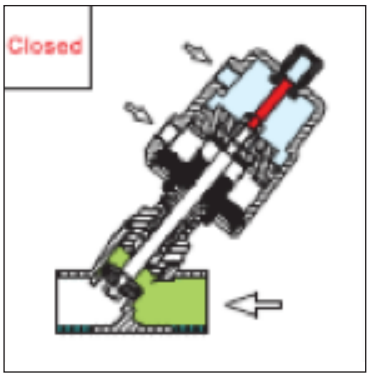
Size	Thread end	Orifice	Kv	Actuator	ΔP	Control Pressure
		mm	m^3/h	mm	MPa	MPa
DN10	G3/8″	13	3.8	40	0 - 1.6	0.3 - 0.45
				50	0 - 1.6	0.3 - 0.35
DN15	G1/2″	13	4.7	40	0 - 1.6	0.3 - 0.45
				50	0 - 1.6	0.3 - 0.35
DN20	G3/4″	18	9.5	50	0 - 1.6	0.3 - 0.4
DN25	G1″	24	18.1	50	0 - 1.6	0.3 - 0.45
				63	0 - 1.6	0.3 - 0.35
DN32	G1-1/4″	31	23.1	63	0 - 1.6	0.3 - 0.55
				90	0 - 1.6	0.25 - 0.35
DN40	G1-1/2″	35	32.9	63	0 - 1.6	0.3 - 0.65
				90	0 - 1.6	0.25 - 0.4
DN50	G2″	45	52.8	63	0 - 1.6	0.3 - 0.7
				90	0 - 1.6	0.25 - 0.45
DN65	G2-1/2″	61	82.6	90	0 - 1.6	0.25 - 0.6
				125	0 - 1.6	0.3 - 0.4
DN80	G3″	80	127	125	0 - 1.6	0.3 - 0.7

Single Acting, Normally Closed - NC - Enter below seat

Size	Thread end	Orifice	Kv	Actuator	ΔP	Control Pressure
		mm	m^3/h	mm	MPa	MPa
DN10	G3/8″	13	3.8	40	0 - 1.1	0.3
				50	0 - 1.4	0.3
DN15	G1/2″	13	4.7	40	0 - 1.1	0.3
				50	0 - 1.4	0.3
DN20	G3/4″	18	9.5	50	0 - 1.4	0.3
DN25	G1″	24	18.1	50	0 - 0.4	0.3
				63	0 - 1.4	0.45
				90	0 - 1.6	0.5
DN32	G1-1/4″	31	23.1	63	0 - 0.6	0.45
				90	0 - 1.6	0.5
DN40	G1-1/2″	35	32.9	63	0 - 0.5	0.45
				90	0 - 1.6	0.5
DN50	G2″	45	52.8	90	0 - 1.0	0.5
DN65	G2-1/2″	61	82.6	90	0 - 0.7	0.5
				125	0 - 0.9	0.6
DN80	G3″	80	127	125	0 - 0.6	0.6

ΔPRESSURE DATA SHEET

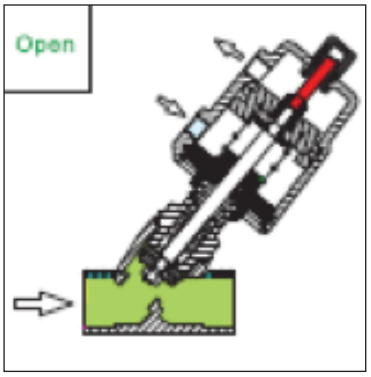


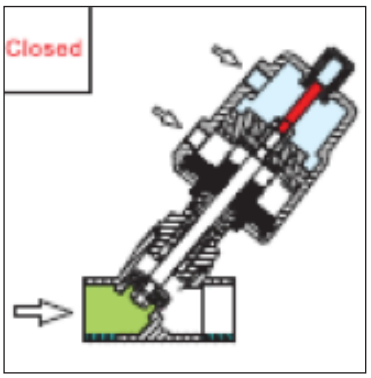


Normally Open (No) – Enter Above Seat

Suitable when valve is to be kept open for prolonged periods;
By taking off the silencer, valve operation cab 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	> 0.3
DN15	G1/2″	13	4.7	50	0 - 1.6	> 0.3
DN20	G3/4″	18	9.5	50	0 - 1.2	> 0.3
DN25	G1″	24	18.1	63	0 - 1.6	> 0.45
DN32	G1-1/4″	31	23.1	63	0 - 1.4	> 0.45
DN40	G1-1/2″	35	32.9	63	0 - 1.4	> 0.45
DN50	G2″	45	52.8	63	0 - 0.8	> 0.45





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

Suitable for long time value 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

All Dimensions are in mm. weights in kg.