NEU-MASTER®

PV400 Series
Angle Seat Valve(Piston Valve/Flange Ends)

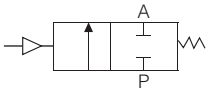
Product feature

2/2-way Angle-Seat Valve
Pneumatically Operated,
for medium up to +180℃,
with Flange ends
port connection DN 15-100

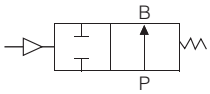
1. High flow rate;
2. Long life cycle;
3. NC and NO universal actuators with modular universal accessary program up to control heads;
4. Deliverable with flow direction below or above seat
5. Simple conversion of the circuit function.

Symbol

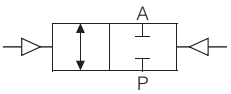
Control function A
(closed by spring force in rest position)



Control function B
(open in rest position)



Control function I
(double-acting actuator)



Ordering code

PV400 | **P** | **015** | **NC** | **□** | **S × 63mm**

Model

PV400	400 Seires angle seat valve

Actuator material code

P	Plastic actuator
S	S.S. Actuator
A	Aluminum actuator

Nominal diameter

15	G1/2"	50	G2"
20	G3/4"	65	G2½"
25	G1"	80	G3"
32	G1¼"	100	G4"
40	G1½"		

Control function

NO	Normally open
NC	Normally closed (standard)

Body material

Blank	S.S 304 (standard)
4	S.S 316
5	S.S 316L

Acting type

S	Single acting
D	Double acting

Actuator size

Port size	Standard actuator size (mm)		
	PA	S.S.	AL
DN10	40,50	40,50	40,50
DN15	40,50	40,50	40,50
DN20	50,63,80	50,63,90	50,63,80
DN25	50,63,80	50,63,90	50,63,80
DN32	63,80	63,90	63,80
DN40	63,80	63,90	63,80
DN50	63,80	63,90	63,80
DN65	80,100	90,125	80,100
DN80	100	125	100
DN100	125	125	125

Flange specification DIN2576(GB/T82.1)

PV400 Series plunger pilot angle seat valve is propelled by a piston actuator, either single acting or double acting. Actuators are made of three different materials, applicable to different working temperature:

2/2 Way stainless steel valve with big flow capacity V type seals ensure reliable and effective sealing.

Maintenence free, compatible with various accessories,

Direction indicating, stroke limiting or manual switching can be achieved conveniently.

Specifications

Model Specification		P015NC	P020NC	P025NC	P032NC	P040NC	P050NC	P065NC	P080NC	P100NC
	Normally Closed	P015NC	P020NC	P025NC	P032NC	P040NC	P050NC	P065NC	P080NC	P100NC
	Normally Open	P015NO	P020NO	P025NO	P032NO	P040NO	P050NO	P065NO	P080NO	P100NO
	Normally Closed	S015NC	S020NC	S025NC	S032NC	S040NC	S050NC	S065NC	S080NC	S100NC
	Normally Open	S015NO	S020NO	S025NO	S032NO	S040NO	S050NO	S065NO	S080NO	S100NO
Material of body/ Actuator		S.S304 316 /PA								
Seat seal		PTFE/FPM								
Stem seal		PTFE/FPM								
Piston seal		PTFE/FPM								
Tempreture of medium	PTFE	-10~200℃								
	FPM	-10~150℃								
Installing		Downsteam/Upsteam								
Operating method		Plunger pilot								
Ambient and fluid		Air, Water, Oil, Steam (50CTS Bellow)								
Port size		G1/2"	G3/4"	G1"	G1¼"	G1½"	G2"	G2½"	G3"	G4"
Nominal diameter (mm)		13	20	25	32	40	50	65	80	100
Kv (m^3/h)		4.2	8	19	27.5	42	55	90	115	200
Pressyre range (Mpa)		0~1.6	0~1.6	0~1.6	0~1.6	0~1.6	0~1.6	0~1.6	0~1.6	0~1.6
Min. control pressure (Mpa)		0.3	0.35	0.35	0.35	0.35	0.35	0.35	0.40	0.40
Executor dimension (mm)		40/50	50	50/63	63	63	63/80/90	80/90	100/125	125

Pressure data sheet

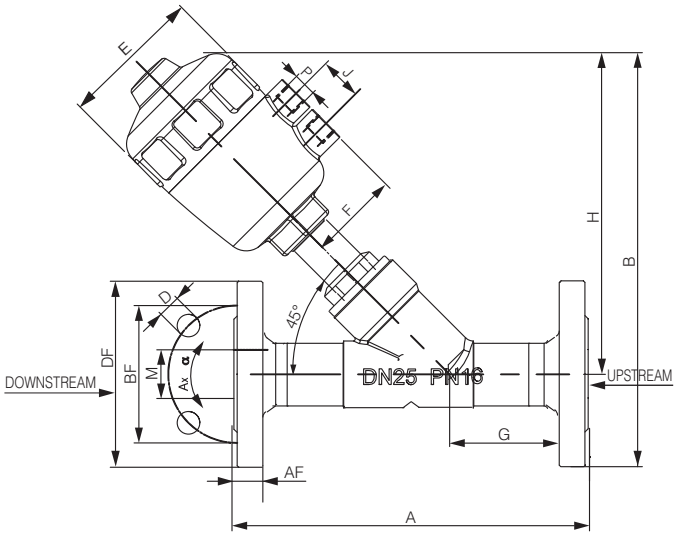
Control function	Acting type	Flow direction	Water hammer	Application
Normally closed	Single acting	Upstream	Yes	For compressible medium (such as gas and steam) and liquid of comparatively low pressure
		Downstream	No	For anti water hammer pipeline, bears certain pressure difference
	Double acting	Upstream	Yes	Reliable performance, bears pressure difference; valve closes automatically in case of an emergency.
		Downstream	No	For pipeline required of better anti water hammer, bears big pressure difference
Normally open		Upstream	Yes	For pipeline where valve keeps open. double acting & normally open when silencer comes off.
		Downstream	No	For pipeline where valve keeps open, anti water hammer, double acting & normally open when silencer comes off

Water hammer (or, more generally, fluid hammer) is a pressure surge or wave caused when a fluid (usually a liquid but sometimes also a gas) in motion is forced to stop or change direction suddenly (momentum change). A water hammer commonly occurs when a valve. closes suddenly at an end of a pipeline system, and a pressure wave propagates in the pipe. It is also called hydraulic shock.
This pressure wave can canse major problems, from noise and vibration to pipe collapse. It is possible to reduce the effects of the water hammer pulses with accumulators, expansion tanks, surge tanks, and other features.
Designed to close againstflow. Will not chatter or produce water hammer. Operates smoothly and quietly.

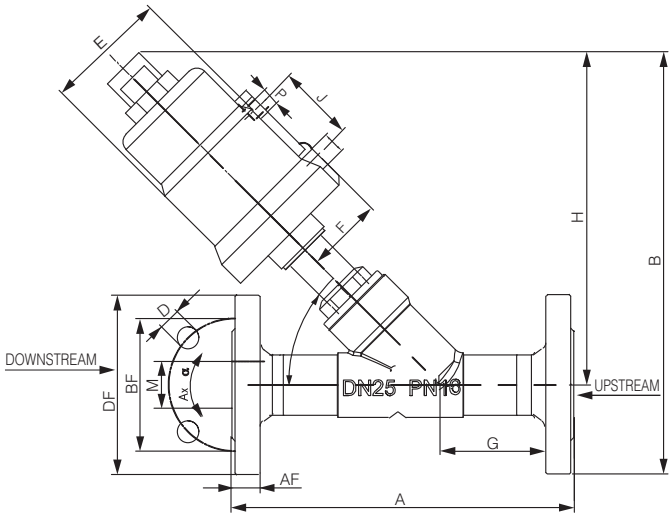
Port size	DN (mm)	Actuator (mm)	Single acting normally closed				Double acting normally closed				Normally open					
			Upstream		Downstream		Upstream		Downstream		Upstream		Downstream		Double acting assistant pressure MPa	Rest position pressure MPa
			Press. range MPa	Control press. MPa	Press. range MPa	Control press. MPa	Press. range MPa	Control press. MPa	Press. range MPa	Control press. MPa	Press. range MPa	Control press. MPa	Press. range MPa	Control press. MPa		
1/2"	DN15	40	0~1.6	0.3~0.45	0~1.1	0.3	0~1.6	0.3~0.45	0~1.6	≥0.3	0~1.6	0~1.6	0~1.6	0.2~0.4	≥0.4	0~0.2
		50	0~1.6	0.3~0.35	0~1.4	0.45	0~1.6	0.3~0.35	0~1.6	≥0.3	0~1.6	0~1.6	0~1.6	0.2~0.4	≥0.4	0~0.1
3/4"	DN20	50	0~1.6	0.3~0.4	0~1.4	0.45	0~1.6	0.3~0.4	0~1.6	≥0.3	0~1.6	0~1.2	0~1.6	0.3~0.65	0.3~0.4	0~0.2
		63	0~1.6	0.3~0.38	0~1.4	0.45	0~1.6	0.3~0.38	0~1.6	0.3~0.5	0~1.6	0~1.4	0~1.6	0.35~0.7	0.3~0.35	0~0.35
		80	0~1.6	0.2~0.35	0~1.4	0.4	0~1.6	0.2~0.35	0~1.6	0.3~0.4	0~1.6	0~1.4	0~1.6	0.35~0.7	0.3~0.4	0~0.5
		90 SS	0~1.6	0.2~0.3	0~1.4	0.35	0~1.6	0.2~0.3	0~1.6	0.3~0.4	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.4	0~0.4
1"	DN25	50	0~1.6	0.3~0.45	0~0.75	0.45	0~1.6	0.3~0.45	0~1.3	0.3~0.6	0~1.6	0~0.3	0~1.3	0.3~0.6	0.3~0.4	0~0.35
		63	0~1.6	0.3~0.35	0~1.4	0.5	0~1.6	0.3~0.35	0~1.6	0.3~0.4	0~1.6	0~1.6	0~1.6	0.35~0.6	0.3~0.55	0~0.35
		80	0~1.6	0.2~0.3	0~1.4	0.45	0~1.6	0.2~0.3	0~1.6	0.3~0.4	0~1.6	0~1.6	0~1.6	0.35~0.6	0.35~0.55	0~0.5
		90 SS	0~1.6	0.2~0.25	0~1.4	0.4	0~1.6	0.2~0.25	0~1.6	0.2~0.3	0~1.6	0~1.6	0~1.6	0.35~0.6	0.35~0.55	0~0.4
1-1/4	DN32	63	0~1.6	0.3~0.5	0~0.06	0.5	0~1.4	0.3~0.5	0~1.4	0.3~0.6	0~1.6	0~1.4	0~1.3	0.35~0.7	0.3~0.5	0~0.4
		80	0~1.6	0.2~0.45	0~1.4	0.6	0~1.6	0.2~0.45	0~1.6	0.3~0.5	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.55	0~0.5
		90 SS	0~1.6	0.2~0.35	0~1.6	0.65	0~1.6	0.2~0.35	0~1.6	0.2~0.4	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.55	0~0.4
1-1/2	DN40	63	0~1.6	0.3~0.6	0~0.05	0.5	0~1.1	0.3~0.6	0~1.3	0.3~0.7	0~1.6	0~1.4	0~0.65	0.35~0.7	0.3~0.6	0~0.4
		80	0~1.6	0.3~0.55	0~1.4	0.6	0~1.6	0.3~0.55	0~1.6	0.3~0.6	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.7	0~0.5
		90 SS	0~1.6	0.2~0.35	0~1.6	0.65	0~1.6	0.2~0.35	0~1.6	0.2~0.6	0~1.6	0~1.6	0~1.6	0.35~0.7	0.3~0.7	0~0.5
2"	DN50	63	0~1.0	0.3~0.65	0~0.35	0.5	0~0.9	0.3~0.65	0~0.8	0.35~0.8	0~1.0	0~0.6	0~0.6	0.35~0.7	0.35~0.7	0~0.8
		80	0~1.6	0.3~0.55	0~0.9	0.65	0~1.6	0.3~0.55	0~1.6	0.3~0.7	0~1.6	0~1.0	0~0.6	0.35~0.7	0.35~0.7	0~0.5
		90 SS	0~1.6	0.3~0.5	0~1.1	0.65	0~1.6	0.3~0.5	0~1.6	0.3~0.6	0~1.6	0~1.0	0~1.2	0.35~0.7	0.35~0.7	0~0.4
		100	0~1.6	0.25~0.4	0~1.4	0.65	0~0.9	0.25~0.4	0~1.6	0.3~0.6	0~1.6	0~1.4	0~1.4	0.35~0.7	0.35~0.7	0~0.4
		125 SS	0~1.6	0.2~0.3	0~1.6	0.65	0~1.6	0.2~0.3	0~1.6	0.3~0.4	0~1.6	0~1.4	0~1.4	0.35~0.7	0.35~0.7	0~0.5
2-1/2"	DN65	80	0~1.6	0.3~0.65	0~0.5	0.65	0~1.6	0.3~0.65	0~1.1	0.3~0.7	0~1.6	0~0.5	0~0.75	0.3~0.65	0.35~0.7	0~0.5
		90 SS	0~1.6	0.2~0.6	0~0.7	0.65	0~1.6	0.2~0.6	0~1.6	0.3~0.7	0~1.6	0~1.0	0~1.4	0.3~0.6	0.35~0.7	0~0.4
		100	0~1.6	0.3~0.45	0~0.8	0.65	0~1.6	0.3~0.45	0~1.6	0.3~0.55	0~1.6	0~1.0	0~0.8	0.35~0.7	0.35~0.7	0~0.4
		125 SS	0~1.6	0.2~0.7	0~0.9	0.65	0~1.6	0.2~0.7	0~1.6	0.2~0.55	0~1.6	0~1.4	0~1.4	0.3~0.7	0.35~0.7	0~0.5
3"	DN80	100	0~1.6	0.35~0.6	0~0.5	0.65	0~1.6	0.35~0.6	0~1.6	0.3~0.55	0~1.6	0~0.6	0~0.75	0.35~0.7	0.35~0.7	0~0.4
		125 SS	0~1.6	0.2~0.7	0~0.6	0.65	0~1.6	0.2~0.7	0~1.6	0.3~0.65	0~1.6	0~0.7	0~1.2	0.35~0.7	0.35~0.7	0~0.5
4"	DN100	125	0~1.6	0.2~0.7	0~0.6	0.65	0~1.6	0.2~0.7	0~1.6	0.3~0.65	0~1.6	0~0.7	0~1.2	0.35~0.7	0.35~0.7	0~0.5
		125 SS	0~1.6	0.2~0.7	0~0.6	0.65	0~1.6	0.2~0.7	0~1.6	0.3~0.65	0~1.6	0~0.7	0~1.2	0.35~0.7	0.35~0.7	0~0.5

Dimensions

Flange ends -- PV400P



Flange ends -- PV400S



Flange ends -- PV400P

Port size	DN(mm)	Actuator(mm)	A	B	D	E	F	G	H	J	M	P	AF	BF	DF
1/2"	DN15	50	130	165	14	64	44	24	115	24	15	12	15	65	95
3/4"	DN20	50	130	185	14	64	44	25	131	24	18	12	15	75	102
1"	DN25	50	140	195	14	64	44	30	138	24	25	12	15	85	114
		63	140	225	14	79.5	54	30	166	24	25	12	15	85	114
1-1/4	DN32	63	150	240	18	79.5	54	30	172	24	30	12	17	100	133
1-1/2	DN40	63	180	245	18	79.5	54	45	174	24	36	12	17	110	143
2"	DN50	63	195	275	18	79.5	54	50	193	24	47	12	17	125	158
		80	195	285	18	101	62	50	202	24	47	12	17	125	158
2-1/2"	DN65	80	230	300	18	101	62	55	209	24	68	12	18	145	180
3"	DN80	100	240	365	18	125	71	70	268	30	80	12	20	160	194
4"	DN100	125	265	420	18	158	93	90	314	30	100	12	20	180	215

Flange ends -- PV400S

Port size	DN(mm)	Actuator(mm)	A	B	D	E	F	G	H	J	M	P	AF	BF	DF
1/2"	DN15	50	130	190	14	56	35	24	142	38	15	G1/8	15	65	95
3/4"	DN20	50	130	203	14	56	35	25	152	38	18	G1/8	15	75	102
1"	DN25	50	140	215	14	56	35	30	155	38	25	G1/8	15	85	114
		63	140	235	14	70	43	30	176	44	25	G1/8	15	85	114
1-1/4	DN32	63	150	245	18	70	43	30	177	44	30	G1/8	17	100	133
1-1/2	DN40	63	180	245	18	70	43	45	182	44	36	G1/8	17	110	143
2"	DN50	63	195	274	18	70	43	50	196	44	47	G1/8	17	125	158
		80/90	195	295	18	94	56	50	206	67	47	G1/4	17	125	158
2-1/2"	DN65	80/90	230	305	18	94	56	55	215	67	68	G1/4	18	145	180
3"	DN80	100	240	395	18	135	73	70	295	67	80	G1/4	20	160	194
4"	DN100	125	265	445	18	135	73	90	332	67	100	G1/4	20	180	215