



Product feature

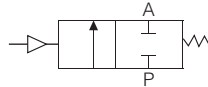
2/2-way Angle-Seat Valve
Pneumatically Operated,
for medium up to +180°C,
with Tri-Clamp Ends ends
port connection DN 15-65

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

Symbol

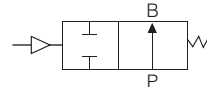
Control function A

(closed by spring force
in rest position)



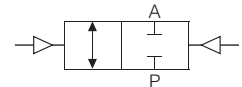
Control function B

(open in rest position)



Control function I

(double-acting actuator)



Ordering code

| | | | | | |
|-------------------------------|-----------------------------|-------------------------|-------------------------------|--------------------------|--------------------|
| PV500 | P | 015 | NC | <input type="checkbox"/> | S × 63mm |
| Model | | Nominal diameter | Control function | Body material | Acting type |
| PV500 | 500 Seires angle seat valve | 15 G1/2" 40 G1½" | NO Normally open | Blank S.S 304 (standard) | S Single acting |
| Actuator material code | | 20 G3/4" 50 G2" | NC Normally closed (standard) | 4 S.S 316 | D Double acting |
| P | Plastic actuator | 25 G1" 65 G2½" | | 5 S.S 316L | |
| S | S.S. Actuator | 32 G1¼" | | | |
| A | Aluminum actuator | | | | |

Actuator size

| Port size | Standard actuator size (mm) | | |
|-----------|-----------------------------|----------|----------|
| | PA | S.S. | AL |
| 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 |

Clamp specification: ISO 2852-1993 ISO/JIS is also available

PV500 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.

Maintenance free, compatible with various accessories, Direction indicating, stroke limiting or manual switching can be achieved conveniently.

Specifications

| Model Specification | Normally Closed | P015NC | P020NC | P025NC | P032NC | P040NC | P050NC | P065NC |
|----------------------------|---------------------------------------|-----------|--------|--------|--------|--------|--------|--------|
| | Normally Open | P015NO | P020NO | P025NO | P032NO | P040NO | P050NO | P065NO |
| Material of body/ Actuator | S.S304 316 /PA | | | | | | | |
| Operating method | Plunger pilot | | | | | | | |
| Ambient and fluid | Air, Water, Oil, Steam (50CTS Bellow) | | | | | | | |
| Port size | G1/2" | G3/4" | G1" | G1¼" | G1½" | G2" | G2½" | |
| Nominal diameter (mm) | 13 | 18 | 24 | 31 | 35 | 45 | 61 | |
| Kv (m³/h) | 4.2 | 9 | 19 | 33 | 42 | 59 | 90 | |
| Model Specification | Normally Closed | S015NC | S020NC | S025NC | S032NC | S040NC | S050NC | S065NC |
| | Normally Open | S015NO | S020NO | S025NO | S032NO | S040NO | S050NO | S065NO |
| Material of body/ Actuator | S.S304 316 /PA | | | | | | | |
| Seat seal | PTFE/FPM | | | | | | | |
| Stem seal | PTFE/FPM | | | | | | | |
| Piston seal | PTFE/FPM/NBR | | | | | | | |
| Temperature of medium | PTFE | -10~200°C | | | | | | |
| | FPM | -10~150°C | | | | | | |
| Installing | Downsteam/Upsteam | | | | | | | |

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.

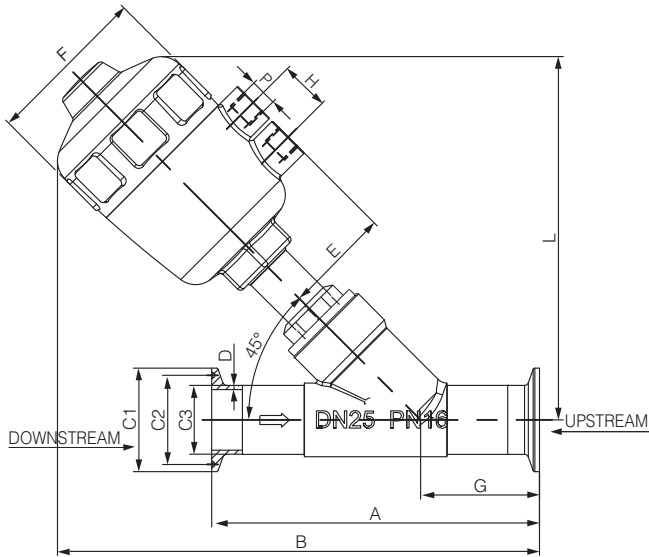
This pressure wave can cause major problems, from noise and vibration to pipe collapse. It is possible to reduce the effects of the water hammer pulses with accumulators, expansion tanks, surge tanks, and other features.

Designed to close againstflow. Will not chatter or produce water hammer. Operates smoothly and quietly.

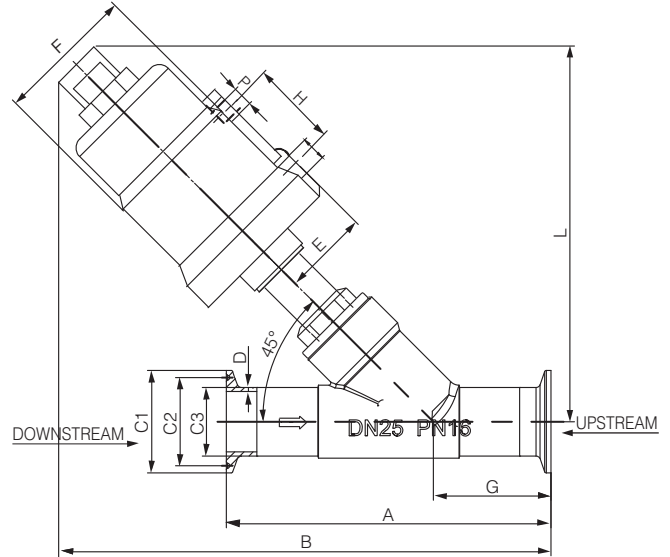
| Port size | DN (mm) | Actuator (mm) | Normally closed | | | | Normally closed | | | | Normally open | | | | | |
|-----------|---------|---------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|--------------------------------------|----------------------------|
| | | | 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 | | | | 0.2~0.4 | ≥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 | 0~0.5 | 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 | 0~1.6 | 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 |

Dimensions

Tri-clamp ends -- PV500P



Tri-clamp ends -- PV500S



Tri-clamp ends -- PV500P

| Port size | DN(mm) | Actuator(mm) | A | B | C1 | C2 | C3 | D | E | F | G | L | H | P |
|-----------|--------|--------------|-----|-----|------|------|------|-----|------|----|------|-----|----|------|
| 1/2" | DN15 | 50 | 133 | 188 | 50.5 | 43.5 | 20.5 | 2 | 64 | 44 | 49 | 115 | 24 | G1/4 |
| 3/4" | DN20 | 50 | 143 | 195 | 50.5 | 43.5 | 25.5 | 2.4 | 64 | 44 | 56.5 | 131 | 24 | G1/4 |
| 1" | DN25 | 50 | 143 | 206 | 50.5 | 43.5 | 31.3 | 2.4 | 64 | 44 | 58 | 138 | 24 | G1/4 |
| | | 63 | 143 | 238 | 50.5 | 43.5 | 31.3 | 2.4 | 79.5 | 54 | 58 | 166 | 24 | G1/4 |
| 1-1/4" | DN32 | 63 | 153 | 248 | 50.5 | 43.5 | 38.3 | 2.4 | 79.5 | 54 | 57.5 | 172 | 24 | G1/4 |
| 1-1/2" | DN40 | 63 | 182 | 252 | 64 | 56.5 | 47.2 | 2.6 | 79.5 | 54 | 69 | 174 | 24 | G1/4 |
| 2" | DN50 | 63 | 200 | 272 | 64 | 56.5 | 55.5 | 2.6 | 79.5 | 54 | 77.5 | 193 | 24 | G1/4 |
| | | 80 | 200 | 283 | 64 | 56.5 | 55.5 | 2.6 | 101 | 62 | 77.5 | 202 | 24 | G1/4 |
| 2-1/2" | DN65 | 80 | 232 | 310 | 91 | 83.5 | 68 | 2.6 | 101 | 62 | 90 | 209 | 24 | G1/4 |

Tri-clamp ends -- PV500S

| Port size | DN(mm) | Actuator(mm) | A | B | C1 | C2 | C3 | D | E | F | G | L | H | P |
|-----------|--------|--------------|-----|-----|------|------|------|-----|----|----|------|-----|----|------|
| 1/2" | DN15 | 50 | 133 | 202 | 50.5 | 43.5 | 20.5 | 2 | 56 | 35 | 49 | 142 | 38 | G1/8 |
| 3/4" | DN20 | 50 | 143 | 209 | 50.5 | 43.5 | 25.5 | 2.4 | 56 | 35 | 56.5 | 152 | 38 | G1/8 |
| 1" | DN25 | 50 | 143 | 227 | 50.5 | 43.5 | 31.3 | 2.4 | 56 | 35 | 58 | 155 | 38 | G1/8 |
| | | 63 | 143 | 237 | 50.5 | 43.5 | 31.3 | 2.4 | 70 | 43 | 58 | 176 | 44 | G1/8 |
| 1-1/4" | DN32 | 63 | 153 | 242 | 50.5 | 43.5 | 38.3 | 2.4 | 70 | 43 | 57.5 | 177 | 44 | G1/8 |
| 1-1/2" | DN40 | 63 | 182 | 245 | 64 | 56.5 | 47.2 | 2.6 | 70 | 43 | 69 | 182 | 44 | G1/8 |
| 2" | DN50 | 63 | 200 | 269 | 64 | 56.5 | 55.5 | 2.6 | 70 | 43 | 77.5 | 196 | 44 | G1/8 |
| | | 80/90 | 200 | 289 | 64 | 56.5 | 55.5 | 2.6 | 94 | 56 | 77.5 | 206 | 67 | G1/4 |
| 2-1/2" | DN65 | 80/90 | 232 | 320 | 91 | 83.5 | 68 | 2.6 | 94 | 56 | 90 | 215 | 67 | G1/4 |