

**PNEUMATIC CONTROL VALVES**  
**PNEUMATIC ANGLE TYPE INTERCEPTION VALVE**  
**PAV21**

**DESCRIPTION**

The PAV series angle seat interception valves are designed for use with steam, gases and other fluids used in the process industry. They are the efficient solution to fluid interception in applications where flexibility and affordable cost are required.

**MAIN FEATURES**

- Stainless steel body with high coefficient of flow.
- Resistance to corrosion.
- Low air consumption.
- Nylon rotational servo control.
- Self-centring plug with soft sealing.
- Live loading packing gland.



- OPTIONS:** Pilot solenoid valves.  
Inductive travel switch.
- USE:** Saturated steam, water and other fluids compatible with the construction.
- AIR SUPPLY:** 5 bar – 8 bar.
- ACTUATORS**
- CONNECTIONS:** PPI-63: G1/8" NPT;  
PPI-90: G1/4" NPT.
- AVAILABLE MODELS:** PAV21 - Pneumatic angle valve.
- SIZES:** 1/2" to 2".
- CONNECTIONS:** Threaded ISO 7/1 Rp.
- AMBIENT TEMPERATURE:** -10 °C to 80 °C.

| LIMITING CONDITIONS      |              |
|--------------------------|--------------|
| <b>Valve model</b>       | <b>PAV21</b> |
| Body design conditions   | PN16         |
| Max. working temperature | 200 °C       |
| Min. working temperature | - 10 °C      |

| CE MARKING – GROUP 2 (PED – European Directive) |                 |
|---|-----------------|
| <b>PN16</b>                                     | <b>Category</b> |
| 1/2" to 2"                                      | SEP             |

| FLOW RATE COEFFICIENTS |       |      |    |        |        |      |
|------------------------|-------|------|----|--------|--------|------|
|                        | SIZES |      |    |        |        |      |
|                        | 1/2"  | 3/4" | 1" | 1 1/4" | 1 1/2" | 2"   |
| <b>Kvs</b>             | 4,8   | 9,5  | 18 | 23,2   | 32,7   | 52,6 |

**MAX. PERMISSIBLE PRESS. DROP (bar)**  
Normally closed valve (fluid to open)  
Reverse action actuator (air signal to open)

| ACT. Type | AIR PRESSURE | SIZES |      |    |        |        |    |
|-----------|--------------|-------|------|----|--------|--------|----|
|           |              | 1/2"  | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| PPI-63    | 5 – 8 bar    | 16    | 16   | 14 | -      | -      | -  |
| PPI-90    | 5 – 8 bar    | -     | -    | -  | 16     | 16     | 10 |

Note: Waterhammer free design.

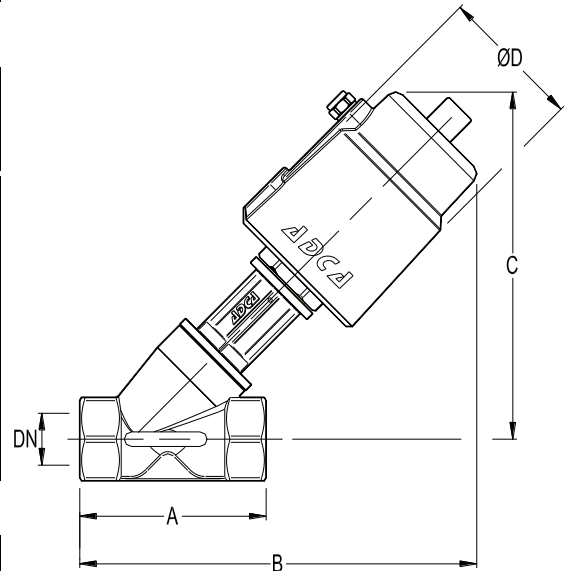
**MAX. PERMISSIBLE PRESS. DROP (bar)**  
Normally closed valve (fluid to close)  
Reverse action actuator (air signal to open)

| ACT. TYPE | AIR PRESSURE | SIZES |      |    |        |        |    |
|-----------|--------------|-------|------|----|--------|--------|----|
|           |              | 1/2"  | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| PPI-63    | 5 – 8 bar    | 16    | 16   | 16 | -      | -      | -  |
| PPI-63    | 6 – 8 bar    | 16    | 16   | 16 | -      | -      | -  |
| PPI-63    | 7 – 8 bar    | 16    | 16   | 16 | -      | -      | -  |
| PPI-90    | 5 – 8 bar    | -     | -    | -  | 16     | -      | -  |
| PPI-90    | 6 – 8 bar    | -     | -    | -  | 16     | 16     | -  |
| PPI-90    | 7 – 8 bar    | -     | -    | -  | 16     | 16     | 16 |

Note: not recommended when controlling liquids at high speed due to waterhammer occurrence.

**DIMENSIONS (mm)**

| SIZE   | A   | B   | C               |                 | ØD              |                 | WGT. w/PPI63 (kg) | WGT. w/PPI90 (kg) |
|--------|-----|-----|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|
|        |     |     | ACTUATOR PPI-63 | ACTUATOR PPI-90 | ACTUATOR PPI-63 | ACTUATOR PPI-90 |                   |                   |
| 1/2"   | 68  | 174 | 155             | 75              | 155             | 110             | 1,35              | 2,4               |
| 3/4"   | 75  | 182 | 158             | 75              | 158             | 110             | 1,45              | 2,5               |
| 1"     | 90  | 190 | 166             | 75              | 166             | 110             | 1,65              | 2,7               |
| 1 1/4" | 116 | 261 | 227             | 75              | 227             | 110             | 2,3               | 3,3               |
| 1 1/2" | 116 | 265 | 229             | 75              | 229             | 110             | 2,55              | 3,5               |
| 2"     | 138 | 282 | 238             | 75              | 238             | 110             | 3,6               | 4,7               |

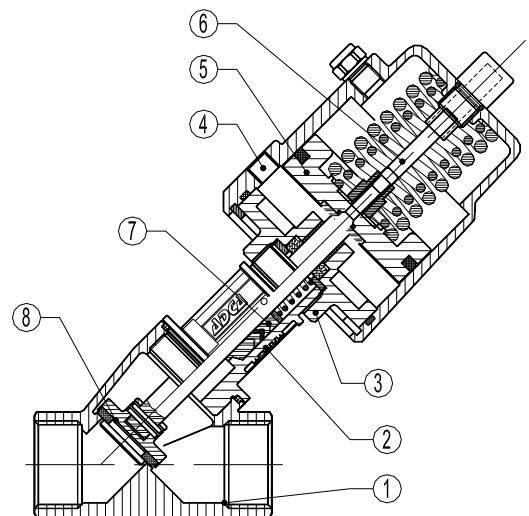


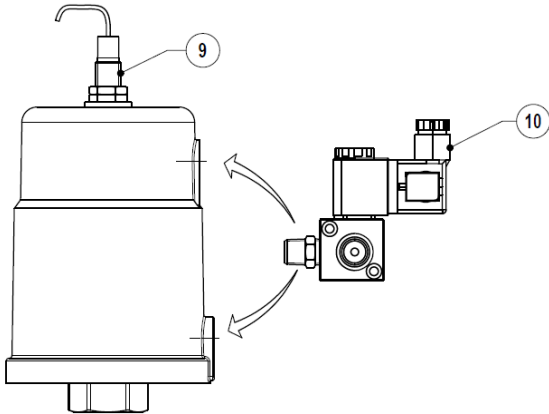
**MATERIALS**

| POS. Nº | DESIGNATION             | MATERIAL                      |
|---------|-------------------------|-------------------------------|
| 1       | Valve body              | CF8M / 1.4408                 |
| 2       | Bonnet                  | CF8 / 1.4308                  |
| 3       | Actuator flange         | CF8 / 1.4308                  |
| 4       | Actuator cover          | CF8 / 1.4308                  |
| 5       | Piston                  | Aluminium                     |
| 6       | Indication stem         | Plastic                       |
| 7       | * Packing               | PTFE/GR                       |
| 8       | * Valve plug            | AISI 316 / 1.4401;<br>PTFE/GR |
| 9       | ** Travel switch        | Metal                         |
| 10      | ** SV32C solenoid valve | Aluminium alloy               |

\* Available spare parts.

\*\* Optional.





**\*\* TRAVEL SWITCH**

The travel switch provides an electrical signal that indicates either the open or closed position of the valve. This signal is given by a non-contact electronic inductive proximity sensor.

| ORDERING CODES PAV21  |     |     |   |   |    |   |     |
|---|-----|-----|---|---|----|---|-----|
| <b>VALVE CODES</b>  | PAV | .21 | 1 | A | 15 | A | .X. |
| <b>Group designation</b>  |     |     |   |   |    |   |     |
| Pneumatic on-off angle valve  | PAV |     |   |   |    |   |     |
| <b>Valve model</b>  |     |     |   |   |    |   |     |
| Two way straight design, stainless steel construction                                     |     | .21 |   |   |    |   |     |
| <b>Valve plug</b>   |     |     |   |   |    |   |     |
| PT (on-off) – Soft (PTFE/GR)  |     |     | 1 |   |    |   |     |
| <b>Pipe connection</b>  |     |     |   |   |    |   |     |
| Female threaded ISO 7/1 Rp  |     |     |   | A |    |   |     |
| Female threaded NPT   |     |     |   | C |    |   |     |
| <b>Size</b>   |     |     |   |   |    |   |     |
| 1/2"  |     |     |   |   | 15 |   |     |
| 3/4"  |     |     |   |   | 20 |   |     |
| ...   |     |     |   |   |    |   |     |
| <b>Fluid direction</b>  |     |     |   |   |    |   |     |
| Fluid enters above the seat   |     |     |   |   |    | A |     |
| Fluid enters below the seat   |     |     |   |   |    | B |     |
| <b>Actuator</b>   |     |     |   |   |    |   | (1) |
| <b>Extras (3)</b>   |     |     |   |   |    |   |     |
| Full description or additional codes have to be added in case of non-standard combination |     |     |   |   |    |   | E   |

| ACTUATOR CODES (pneumatic)       | PI. |     |     |
|----------------------------------|-----|-----|-----|
| <b>Group designation</b>         |     |     |     |
| Piston linear actuator           | PI. |     |     |
| <b>Actuator size</b>             |     |     |     |
| Piston pneumatic actuator PPI 63 |     | .63 |     |
| Piston pneumatic actuator PPI 90 |     | .90 |     |
| <b>Actuator type</b>             |     |     |     |
| Direct action (air to close)     |     |     | .D  |
| Reverse action (air to open)     |     |     | .R  |
| <b>Actuator Construction</b>     |     |     |     |
| Stainless steel                  |     |     | (2) |

→ To be introduced on ".X.", if supplied in combination with the valve.

Example:

PAV valve, on-off soft plug, DN 15, fluid entering above the seat, complete with reverse action stainless steel actuator:

Code: PAV.211A15A.90.R

REMARKS:

- (1) – Indicate actuator type.
- (2) – Omitted if the standard valve is selected.

ADCATrol control valves are identified by a serial number on a nameplate, located on the actuator yoke. When ordering spares, always use that serial number. If the valve has non-standard extras the serial number also has an E (extras).