

2/2 WAY CONTROL PISTON ACTUATED VALVE WITH INTEGRATED POSITIONER, DN15 UP TO DN50 - STAINLESS STEEL -

PRODUCT HIGHLIGHTS

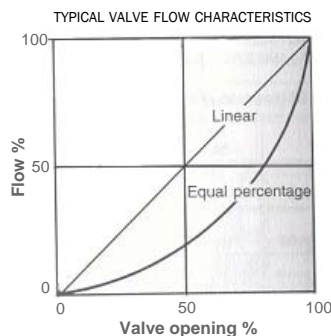
M&M's control piston valve is an analog proportional device. Stem position is controlled in a linear manner by changing the pilot media pressure inside the actuator. This pressure is function of the user's input signal to two solenoid valves, one called Inlet Solenoid Valve, the second one Outlet Solenoid Valve (please look at layout schematic below, **ITEMS #1** and **#2**).

A feedback signal (position type, obtained with a potentiometer, **ITEM #3**) is provided in order to continuously adjust stem position and, at the same time, flow through the valve.

Control PAV gives the customer the benefit of a more precise control over the system and a minimum air consumption with the same broad choice of sizes, orifices and materials of a standard Piston Actuated Valve.

Typical applications are:

- ▶▶ WATER TREATMENT
- ▶▶ PROCESS TEMPERATURE CONTROL
- ▶▶ FULLY AUTOMATIC SYSTEMS

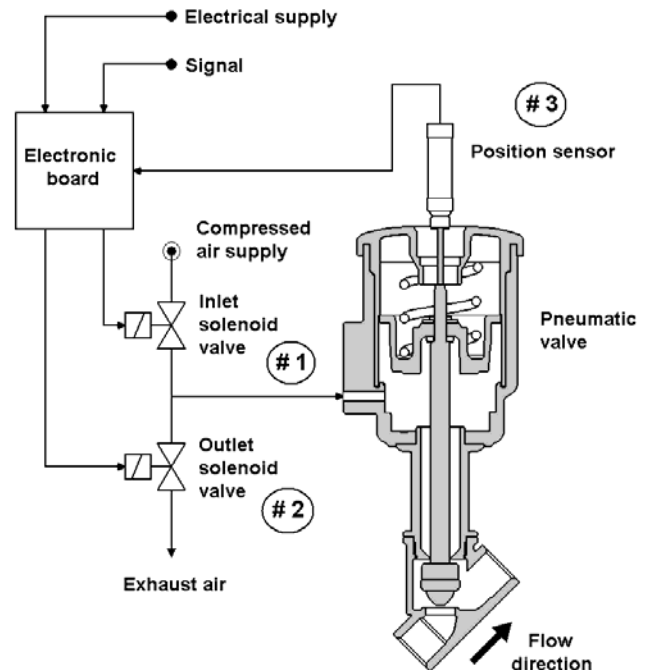


TECHNICAL SPECIFICATIONS

| |
|---|
| Media: water, oil, aggressive media and steam |
| Media temperature: $-10^{\circ}\text{C} \div +140^{\circ}\text{C}$ (2,6 barg for steam) |
| High temperature version up to 180°C available |
| Low friction stem seal (not available for HT version) |
| Ambient temperature: $-10^{\circ}\text{C} \div +60^{\circ}\text{C}$ |
| set point signal: $0 \div 10\text{V}$; $4 \div 20\text{mA}$ |
| Electrical supply: 24V DC |
| Flow characteristics: Linear or equal percentage |
| Protection class: IP65 |
| Set-up point: self-adjusted valve |
| Pilot media: dry and filtered air mesh ($25\ \mu\text{m}$) |
| Body material: cast AISI 316L (ASME SA351/351M GRADE CF3M) |
| Bonnet material: cast AISI 316L (ASME SA351/351M GRADE CF3M) |
| Actuator \varnothing : 63 - 90 |
| Actuator body material: Polyamide PA6 (reinforced fiberglass 30%) |
| Seal material: PTFE |
| Positioner enclosure: anodized aluminium (black) |
| Fail safe position: closed, maintained |
| Function: NO / NC |
| Electrical connections: DIN EN 175301-803 form A |
| Hysteresis: $< 1\%$ f.s. |
| Repeatability: $< 0,5\%$ f.s. |
| Minimum setpoint: $< 2\%$ f.s. |

TYPE: CONTROL PAV NC

Functional LAYOUT schematic



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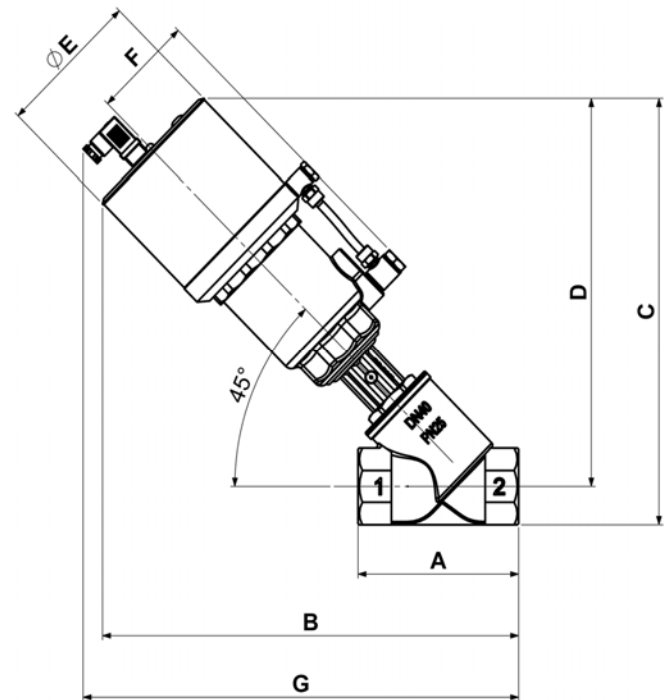
BENEFITS

Actuator housing rotation 360°
Valves DN32 ÷ DN50 complying with 97/23 EC directive category I

OPTIONS

Connection options: screwed, flanged butt welding, socket welding and sanitary clamp
Seal material: PEEK

TYPE: CONTROL PAV NC



DIMENSIONS & WEIGHTS

| connection | act. ø | A | B | C | D | E | F | G | weight |
|-------------|--------|------|------|------|------|------|------|------|--------|
| [ISO 228 G] | mm | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [kg] |
| 1/2" | 63 | 65 | 273 | 267 | 253 | 107 | 92 | 288 | - |
| 3/4" | | 75 | 279 | 274 | 258 | | | 294 | - |
| 1" | | 90 | 293 | 287 | 267 | | | 308 | - |
| 1 1/4" | | 110 | 306 | 299 | 275 | | | 321 | - |
| 1 1/2" | | 120 | 311 | 307 | 280 | | | 326 | - |
| 2" | | 150 | 329 | 322 | 288 | | | 344 | - |
| 1" | 90 | 90 | 295 | 288 | 268 | 107 | 112 | 310 | - |
| 1 1/4" | | 110 | 308 | 300 | 275 | | | 323 | - |
| 1 1/2" | | 120 | 313 | 308 | 280 | | | 328 | - |
| 2" | | 150 | 332 | 324 | 290 | | | 347 | - |

SELECTION TABLE

| connection | orifice ø | act. ø | pilot pressure | | working pressure | flow direction |
|-------------|-----------|--------|----------------|-----------|------------------|----------------------|
| | | | min [bar] | max [bar] | | |
| [ISO 228 G] | [mm] | [mm] | | | max [bar] | |
| 1/2" | DN15 | 63 | 3 | 8 | 16 | ONLY 2 → 1 |
| 3/4" | DN20 | | | | 16 | |
| 1" | DN25 | | | | 11 | |
| 1 1/4" | DN32 | | | | 6 | |
| 1 1/2" | DN40 | | | | 4 | |
| 2" | DN50 | | | | 2.5 | |
| 1" | DN25 | 90 | 3.3 | 8 | 14 | |
| 1 1/4" | DN32 | | | | 12 | |
| 1 1/2" | DN40 | | | | 8 | |
| 2" | DN50 | | | | 6 | |

SELECTION CHART FOR STAINLESS STEEL CONTROL PISTON ACTUATED VALVE

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| | | | | | | | | | |
|-----------------------------|---|------------------------------|--|---|--|--|--|---|--|
| GENERAL | NOMINAL DIAMETER (DN) <input type="checkbox"/> 15 <input type="checkbox"/> 20 <input type="checkbox"/> 25 <input type="checkbox"/> 32 <input type="checkbox"/> 40 <input type="checkbox"/> 50 | | | | | | | | |
| | ACTUATOR SIZE <input type="checkbox"/> 63 <input type="checkbox"/> 90 | | | | | | | | |
| | <input type="checkbox"/> Gas | <input type="checkbox"/> NPT | <input type="checkbox"/> Butt-welding ISO65 ANSI B36.10 | <input type="checkbox"/> Butt-welding ISO 4200 | <input type="checkbox"/> Butt-welding DIN 11850 | <input type="checkbox"/> Socket-welding ISO65 ANSI B36.10 | <input type="checkbox"/> Clamp ISO 2852 | <input type="checkbox"/> Clamp ASME BPE | <input type="checkbox"/> Flange EN 1092 |
| PNEUMATIC POSITIONER | PLUG <input type="checkbox"/> Standard <input type="checkbox"/> Linear <input type="checkbox"/> Equi % | | | PROCESS TEMPERATURE <input type="checkbox"/> 140° C <input type="checkbox"/> 180° C | | FAIL SAFE POSITION <input type="checkbox"/> Closed <input type="checkbox"/> Maintained | | | |
| | FUNCTION <input type="checkbox"/> NC <input type="checkbox"/> NO | | SET-POINT <input type="checkbox"/> 0 ÷ 10V <input type="checkbox"/> 4 ÷ 20mA | | | | | | |
| | FLUID <input type="checkbox"/> Water <input type="checkbox"/> Saturated steam <input type="checkbox"/> Superheated steam <input type="checkbox"/> Gas ----- | | | | | DN (piping) <input type="checkbox"/> IN <input type="checkbox"/> OUT | | Q <input type="checkbox"/> Min m³/h (kg/h for steam) <input type="checkbox"/> Max m³/h | |
| | P1 <input type="checkbox"/> Min (bar) <input type="checkbox"/> Max (bar) | | P2 <input type="checkbox"/> Min (bar) <input type="checkbox"/> Max (bar) | | | | | | |

