

Acvatix™

PICV PN16/PN25 with flanged connections

PN16: VPF43../VPF44.., PN25: VPF53../VPF54..



VPF44../VPF54..

VPF43../VPF53..

Pressure Independent Control Valves (PICV)

- With integrated pressure differential controller
- Valve body made of gray cast iron GJL-250 or nodular cast iron GJS-400
- Available in the range from DN 50 to 200
- Volumetric flow 15 to 280 m³/h nominal, with presetting
- Equipped with pressure test points P/T
- Can be equipped with SAX..P., SAV..P., SQV..P., SBX..P or SBV..P electromotoric actuators

Use

- For use in heating, ventilation and air conditioning systems, district heating, as a control valve
- For closed circuits

Type summary

| | Product number | Stock number | DN | H ₁₀₀ [mm] | V _{min} [m ³ /h] | V ₁₀₀ [m ³ /h] | ΔP _{min} [kPa] |
|---------------------------|----------------|--------------|-----|-----------------------|--------------------------------------|--------------------------------------|--|
| Standard flow rate | VPF44.50F15 | S55266-V174 | 50 | 20 | 3.7 | 14.3 | See "Standard flow rate" in Equipment combinations [► 4] |
| | VPF54.50F15 | S55266-V152 | | | | | |
| | VPF44.65F25 | S55266-V176 | 65 | | 4.5 | 24.4 | |
| | VPF54.65F25 | S55266-V154 | | | | | |
| | VPF44.80F35 | S55266-V178 | 80 | | 6.8 | 35.7 | |
| | VPF54.80F35 | S55266-V156 | | | | | |
| | VPF44.100F70 | S55266-V142 | 100 | 40 | 12.2 | 69.6 | |
| | VPF54.100F70 | S55266-V158 | | | | | |
| | VPF44.125F110 | S55266-V144 | 125 | | 15 | 112 | |
| | VPF54.125F110 | S55266-V180 | | | | | |
| | VPF44.150F150 | S55266-V146 | 150 | 43 | 19 | 150 | |
| | VPF54.150F150 | S55266-V182 | | | | | |
| | VPF43.200F210 | S55266-V148 | 200 | | 95 | 210 | |
| | VPF53.200F210 | S55266-V150 | | | | | |
| High flow rate | VPF44.50F25 | S55266-V175 | 50 | 20 | 5.7 | 24.6 | See "High flow rate" in Equipment combinations [► 4] |
| | VPF54.50F25 | S55266-V153 | | | | | |
| | VPF44.65F35 | S55266-V177 | 65 | | 6.4 | 37.7 | |
| | VPF54.65F35 | S55266-V155 | | | | | |
| | VPF44.80F45 | S55266-V179 | 80 | | 8.5 | 49.0 | |
| | VPF54.80F45 | S55266-V157 | | | | | |
| | VPF44.100F90 | S55266-V143 | 100 | 40 | 14.8 | 90.9 | |
| | VPF54.100F90 | S55266-V159 | | | | | |
| | VPF44.125F135 | S55266-V145 | 125 | | 18 | 132 | |
| | VPF54.125F135 | S55266-V181 | | | | | |
| | VPF44.150F200 | S55266-V147 | 150 | 43 | 26 | 208 | |
| | VPF54.150F200 | S55266-V183 | | | | | |
| | VPF43.200F280 | S55266-V149 | 200 | | 130 | 280 | |
| | VPF53.200F280 | S55266-V151 | | | | | |

Notes:

When valve installed with stem horizontally, the flow rate will reduce by about 5 %.

DN = Nominal size

H₁₀₀ = Nominal stroke

V₁₀₀ = Volumetric flow through fully open valve (H₁₀₀)

V_{\min} = Smallest pre-settable volumetric flow through fully open valve (H_{100})

ΔP_{\min} = Minimum differential pressure required across the valve's control path, so that the differential pressure regulator works reliably

Ordering

PICV valve, actuator must be ordered separately.

When ordering please specify the quantity, product name and type code.

Example:

| Product number | Stock number | Designation |
|----------------|--------------|-------------------------------------|
| VPF44.65F25 | S55266-V176 | PICV PN 16 with flanged connections |

Delivery

- PICVs, actuators and accessories are packed and supplied separately.
- The valves are supplied without counter-flanges and without flange gaskets.

Equipment combinations

| Valves | | | | Actuators | | | | | | | | | |
|--------------------|--------------------------------|-----|--------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-----------------------|
| | | | | SAX..P.. | | SQV..P.. | | SAV..P.. | | SBX..P.. | | SBV..P.. | |
| | | DN | H100 [mm] | Δp_{max} [kPa] | Δp_s [kPa] | Δp_{max} [kPa] | Δp_s [kPa] | Δp_{max} [kPa] | Δp_s [kPa] | Δp_{max} [kPa] | Δp_s [kPa] | Δp_{max} [kPa] | Δp_s [kPa] |
| Standard flow rate | VPF44.50F15 VPF54.50F15 | 50 | 20 | 600 | 700 | 600 | 700 | - | - | 600 | 700 | - | - |
| | VPF44.65F25 VPF54.65F25 | 65 | | | | | | | | | | | |
| | VPF44.80F35 VPF54.80F35 | 80 | | | | | | | | | | | |
| | VPF44.100F70 VPF54.100F70 | 100 | 40 | - | - | | | 600 | 700 | - | - | 600 | 700 |
| | VPF44.125F110 VPF54.125F110 | 125 | | | | 600 | | 600 | | | | | 600 |
| | VPF44.150F150 VPF54.150F150 | 150 | 43 | | | | | | | | | | |
| | VPF43.200F210 VPF53.200F210 | 200 | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| High flow rate | VPF44.50F25 VPF54.50F25 | 50 | 20 | 600 | 700 | 600 | 700 | - | - | 600 | 700 | - | - |
| | VPF44.65F35 VPF54.65F35 | 65 | | | | | | | | | | | |
| | VPF44.80F45 VPF54.80F45 | 80 | | | | | | | | | | | |
| | VPF44.100F90 VPF54.100F90 | 100 | 40 | - | - | | | 600 | 700 | - | - | 600 | 700 |
| | VPF44.125F135 VPF54.125F135 | 125 | | | | 600 | | 600 | | | | | 600 |
| | VPF44.150F200 VPF54.150F200 | 150 | 43 | | | | | | | | | | |
| | VPF43.200F280 VPF53.200F280 | 200 | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Note:

H_{100} = Nominal stroke

Δp_{max} = Maximum permissible differential pressure across valve's control path, valid for the entire actuating range of the motorized valve

Δp_s = Maximum permissible differential pressure at which the motorized valve will close securely against the pressure (close off pressure)

Actuator overview

| Type | Stock no. | Stroke | Pos. force | Operating voltage | Positioning signal | Spring return time | Spring return direction | Positioning time | LED | Manual adjuster | Extra functions | | |
|-------------------------------|-------------|----------------|------------|--------------------------------------|---|--------------------|---|-----------------------|-----|-----------------|-----------------|---|---|
| SAX31P03 | S55150-A118 | 20 mm | 500 N | AC 230 V | 3-position | - | - | 30 s | - | Push and fix | 1) | | |
| SAX61P03 | S55150-A114 | | | AC/DC 24 V | DC 0...10 V DC 4...20 mA 0...1000 Ω | - | - | 30 s | √ | | 2) 3) | | |
| SAX81P03 | S55150-A116 | | | 3-position | - | - | 30 s | - | 1) | | | | |
| SQV91P30 | S55150-A130 | 20 mm 40 mm | 1100 N | AC/DC 24 V AC 230 V ⁴⁾ | 3-position DC 0...10 V DC 4...20 mA | 30 s | Pull to open or push to close ⁵⁾ | < 120 s ⁵⁾ | √ | Turn and fix | 1) 6) | | |
| SQV91P40 | S55150-A131 | | | | | | | | | | | | |
| SAV31P00 | S55150-A121 | 40 mm | 1100 N | AC 230 V | 3-position | - | - | 120 s | - | Push and fix | 1) | | |
| SAV61P00 | S55150-A119 | | | AC/DC 24 V | DC 0...10 V DC 4...20 mA 0...1000 Ω | | | | √ | | 2) 3) | | |
| SAV81P00 | S55150-A120 | | | 3-position | - | | | | 1) | | | | |
| SAV61P00/ MO ⁷⁾ | S55150-A144 | 40 mm | 1100 N | AC/DC 24 V | Modbus RTU | - | - | 120 s | √ | Push and fix | 6) | | |
| SAX61P03/ MO ⁸⁾ | S55150-A143 | 20 mm | 500 N | AC/DC 24 V | Modbus RTU | - | - | 30 s | √ | Push and fix | 3) 6) | | |
| SBX31P | S55160-A110 | 20 mm | 700 N | AC 230 V | 3-position | - | - | 120 s | - | Turnkey | 9) | | |
| SBX61P | S55160-A111 | | | AC/DC 24 V | DC 0...10 V | | | | | | | - | - |
| SBX81P | S55160-A112 | | | 3-position | - | | | | | | | - | |
| SBV31P | S55160-A113 | 40 mm | 1600 N | AC 230 V | 3-position | - | - | 180 s | - | Turnkey | 9) | | |
| SBV61P | S55160-A114 | | | AC/DC 24 V | DC 0...10 V | | | | | | | - | - |
| SBV81P | S55160-A115 | | | 3-position | - | | | | | | | - | |

1) Optional accessories: Auxiliary switch, potentiometer

2) Position feedback, forced control, change of flow characteristic

3) Optional accessories: Auxiliary switch, sequence control, acting direction

4) Voltage adapter required, order separately



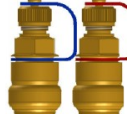
5) Selectable

6) Position feedback, forced control

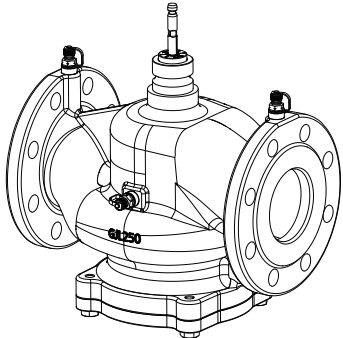
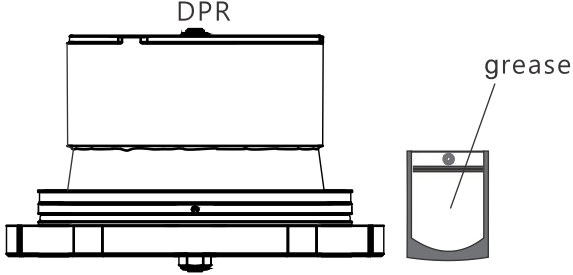
7) UL certified

8) UL certified and CE conform

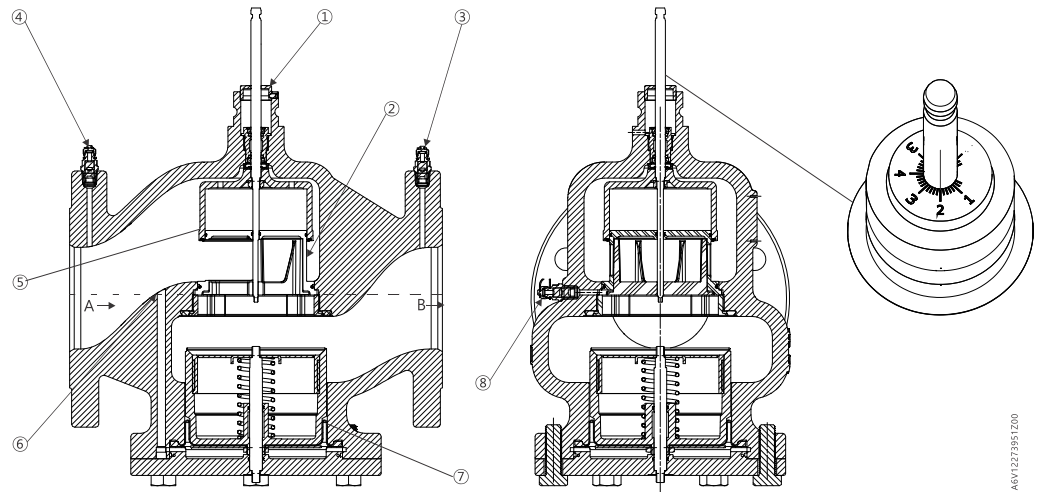
9) Optional accessories: 4...20 mA control signal with AZX420 function module

| Product no. | Order number | Designation | Description |
|---------------------------------|--------------|---|--|
| ALE10 | ALE10 |  | <p>Electronic manometer excluding measuring lines and measuring tips. Measuring range 0 .. 700 kPa. A differential pressure of more than 1000 kPa will destroy the pressure sensor.</p> <p>For measuring the differential pressure between p_1, and P_2/p_3 of the PICVs (see diagram under "Functional principle").</p> <p>Functions of the manometer:</p> <ul style="list-style-type: none"> • Start/stop • Automatic zero position • Backlit display • Display: Out - outside the measuring range • Holding function |
| ALE11 | ALE11 |  | <p>Measuring lines and straight measuring tips for use with Siemens PICVs.</p> <p>Equipped with G 1/8" connection with 2 x 40 mm needles.</p> |
| ALP45 | ALP45 |  | <p>Spare nipples P/T port (set of 2).</p> <p>Set contains 1 piece each with a red and blue ribbon.</p> <p>Port: External threads G 1/8" to ISO 228</p> <p>Connection to valve body: G 1/4" to ISO 228, including O-ring</p> <p>Length: 40 mm</p> |
| ALP46 (only for p_1, p_3) | S55264-V115 |  | <p>Blanking plugs for P/T ports</p> <p>Connection to valve body: G 1/4" to ISO 228, inclusive O-ring</p> |
| ALP47 (only for p_1, p_3) | S55264-V116 |  | <p>Drain ball valve inclusive O-ring</p> <p>Port: External threads G 1/2" to ISO 228</p> <p>Connection to valve body: G 1/4" to ISO 228, inclusive O-ring</p> <p>Length: 48 mm</p> |
| ALP48 (only for p_1, p_3) | S55264-V117 |  | <p>Combined P/T port and drain ball valve</p> <p>Port: External threads G 1/6" to ISO 228</p> <p>Connection to valve body: G 1/4" to ISO 228, inclusive O-ring</p> <p>Length: 80 mm</p> |
| ALP49 | S55264-V118 |  | <p>Long P/T ports (set of 2 pieces)</p> <p>Set contains 1 piece each with a red and blue ribbon.</p> <p>Port: External threads G 1/6" to ISO 228</p> <p>Connection to valve body: G 1/4" to ISO 228, inclusive O-ring</p> <p>Length: 120 mm</p> |

DPR assembly replacement

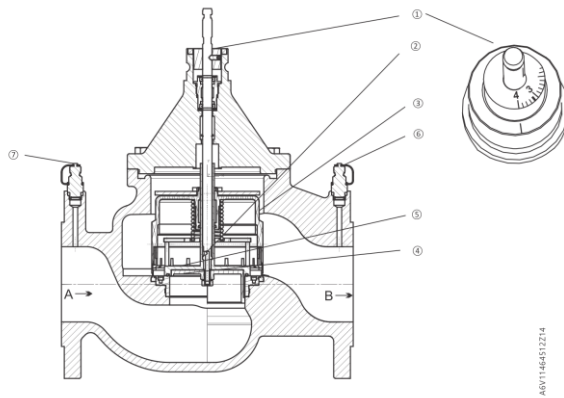
| | | |
|---|--|-------------|
|  |  | |
| VPF44.50F15 | ALR50F15 | S55264-V155 |
| VPF54.50F15 | | |
| VPF44.50F25 | ALR50F25 | S55264-V156 |
| VPF54.50F25 | | |
| VPF44.65F25 | ALR65F25-LP | S55264-V157 |
| VPF54.65F25 | ALR65F25-HP | S55264-V163 |
| VPF44.65F35 | ALR65F35-LP | S55264-V158 |
| VPF54.65F35 | ALR65F35-HP | S55264-V164 |
| VPF44.80F35 | ALR80F35 | S55264-V159 |
| VPF54.80F35 | | |
| VPF44.80F45 | ALR80F45 | S55264-V160 |
| VPF54.80F45 | | |
| VPF44.100F70 | ALR100F70 | S55264-V161 |
| VPF54.100F70 | | |
| VPF44.100F90 | ALR100F90 | S55264-V162 |
| VPF54.100F90 | | |

VPF44../VPF54..



| | |
|---|--|
| 1 | Ring with dial for presetting |
| 2 | Seat with variable presetting opening |
| 3 | Pressure test point (P/T) at outlet port B, blue ribbon, p_3 |
| 4 | Pressure test point (P/T) at inlet port A, red ribbon, p_1 |
| 5 | Control valve |
| 6 | Aperture for the differential pressure regulator is linked with inlet port A |
| 7 | Differential pressure controller - DPR |
| 8 | Pressure test point (P/T) at outlet of control valve, blue ribbon, p_2 |
| A | Inlet port A |
| B | Outlet port B |

VPF43../VPF53..



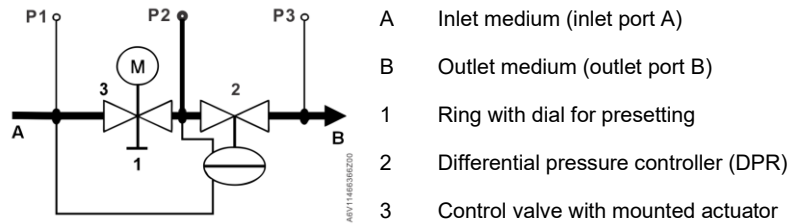
| | |
|---|--|
| 1 | Ring with dial for presetting |
| 2 | Aperture for the differential pressure controller is linked with outlet port B |
| 3 | Differential pressure controller |
| 4 | Plug with variable presetting opening |
| 5 | Control valve |
| 6 | Pressure test point (P/T) at outlet port B, blue ribbon, p_3 |
| 7 | Pressure test point (P/T) at inlet port A, red ribbon, p_1 |
| A | Inlet port A |
| B | Outlet port B |

Functional principle

The PICVs VPF43../VPF44../VPF53../VPF54.. combine three functions:

- a control valve for controlling the volumetric flow
- an adjustable mechanism with a dial for a pre-settable maximum volumetric flow
- a DPR for balancing pressure fluctuations in the hydraulic system respectively across the control valve

The mechanical series-connected differential pressure controller keeps the differential pressure ($p_1 - p_2$) constant across the control valve and thus the volumetric flow too. The desired maximum volumetric flow V_{100} can be preset with the adjusting mechanism. The controller (not shown) and the actuator regulate the volumetric flow and consequently the desired temperature in buildings, rooms or zones.



| | |
|-------|---|
| p_1 | P/T port with red ribbon, pressure test point at inlet port A of PICV |
| p_2 | P/T port with blue ribbon, pressure at outlet port of control valve (3) |
| p_3 | P/T port with blue ribbon, pressure test point at outlet port B of PICV |

Medium flow

The medium entering the PICV (inlet port A) first passes through the control valve (3) with a linear characteristic and a stroke of 20 mm (DN 50...80) respectively 40 mm (DN 100...125) and 43 mm (DN 150...200). The actuator (not shown here) opens or closes accurately the control valve. Then, the medium flows through the variable presetting opening which is connected to the ring with dial (1) for presetting the desired maximum volumetric flow V_{100} .

Before leaving the PICV (outlet port B), the medium passes through a built-in mechanical differential pressure controller. This differential pressure controller is the heart of the PICV and ensures that the selected volumetric flow is maintained across the whole working range and independent of the inlet pressure P_1 .

Pressure test points

The PICV VPF44../VPF54.. are equipped with three pressure test points (p_1 , p_3 , p_2) for measuring and monitoring the differential pressure across the control valve and PICV during commissioning or for analysis during operation. The PICV VPF43../VPF53.. are equipped with two pressure test points (p_1 , p_3) for measuring and monitoring the differential pressure across the valve during commissioning or operation. For that purpose, the electronic manometer ALE10 can be used.

Manual control

Only possible with mounted actuator.

Advantages

The advantages of PICVs are that:

- Once the flow limiter (presetting) is set to the desired nominal flow, the hydraulic circuit is self-balanced, even when changes to the system are made, such as additions.
- For any heat or cold demand the PICV with mounted actuator can be set to the desired volumetric flow and will be relatively constant regardless of pressure fluctuations in the system.

Constant flow regardless of pressure changes in the system reduces hydraulic interdependence between hydraulic groups and leads to a more stable control.

Notes: PICV can't be used as flow limiting valve without an actuator mounted on top.

Engineering Example

$$\dot{V} = \frac{Q[\text{kW}] \cdot 1000}{1.163 \cdot \Delta T[\text{K}]} \left[\frac{\text{l}}{\text{h}} \right]$$

Basis of design

1. Determine heat/cold demand Q [kW]
2. Determine temperature spread ΔT [K]
3. Calculate volumetric flow
4. Select suitable PICV VPF43../VPF44../VPF53../VPF54..
5. Determine dial setting using volumetric flow/dial presetting tables, see below.

Example

1. Heat demand Q = 150 kW
2. Temperature spread $\Delta T = 6$ K
3. Volumetric flow

$$\dot{V} = \frac{150 \text{ kW} \cdot 1000}{1.163 \cdot 6 \text{ K}} = 21'654 \text{ l/h} = 21.6 \text{ m}^3/\text{h}$$

Hint: You can also determine the volumetric flow using the valve slide rule.

4. PN class: PN 16
5. Select PICV VPF44., PN 16
Ideally, PICVs should be selected such that they operate at about 80% of their maximum flow, enabling them to deliver spare capacity, if required.
Selections:
VPF44.65F25 $\Delta p_{\min} = 25$ kPa
VPF44.65F35 $\Delta p_{\min} = 40.5$ kPa
6. Determine dial setting using volumetric flow/dial presetting tables:
VPF44.65F25 Volumetric flow 21.6 m³/h
Dial setting 3.7
VPF44.65F35 Volumetric flow 21.6 m³/h
Dial setting 2.5

Volumetric flow/dial presetting

Tables to determine the dial setting for a desired volumetric flow.

Δp_{\min} [kPa] based on volumetric flow; interpolate missing values.

| | |
|---|---|
| | Presetting range linear to VDI/VDE 2173 |
| - | Presetting range not permitted |

Standard flow rate

| VPF44.50F15/VPF54.50F15, 15 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 3.7 | 4.2 | 4.9 | 5.6 | 6.3 | 7.0 | 7.7 | 8.4 | 9.2 | 10.0 | 11.0 | 11.9 | 12.6 | 13.2 | 13.5 | 13.8 | 14.1 | 14.3 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 18 | 19 | 20 | 21 | 21 | 22 | 23 | 23 | 24 | 25 | 25 |

| VPF44.65F25/VPF54.65F25, 25 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 4.5 | 5.3 | 6.2 | 7.1 | 7.9 | 8.7 | 9.9 | 11.1 | 12.5 | 13.8 | 15.3 | 16.7 | 17.9 | 19.1 | 20.4 | 21.6 | 23.0 | 24.4 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 28 | 29 | 29 | 29 | 29 | 30 | 30 | 30 | 30 | 31 | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 32 |

| VPF44.80F35/VPF54.80F35, 35 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 6.8 | 8.4 | 9.6 | 10.7 | 12.2 | 13.7 | 15.5 | 17.3 | 19.4 | 21.4 | 23.3 | 25.1 | 27.2 | 29.3 | 31.2 | 33.2 | 34.5 | 35.7 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 18 | 19 | 19 | 19 | 19 | 20 | 20 | 20 | 20 | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 |

| VPF44.100F70/VPF54.100F70, 70 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 12.2 | 14.8 | 17.3 | 19.8 | 22.5 | 25.2 | 29.1 | 33.0 | 37.1 | 41.2 | 46.2 | 51.1 | 56.3 | 61.5 | 64.3 | 67.2 | 68.4 | 69.6 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 33 |

| VPF44.125F110/VPF54.125F110, 110 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|------|
| \dot{V} [m ³ /h] | - | - | - | 15 | 19 | 22 | 26 | 31 | 36 | 40 | 45 | 52 | 57 | 65 | 73 | 83 | 89 | 96 | 103 | 109 | 112 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 20 | 20 | 22 | 22 | 23 | 24 | 24 | 25 | 25 | 26 | 26 | 26 | 28 | 28 | 28 | 28 | 29 | 30 |

| VPF44.150F150/VPF54.150F150, 150 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| \dot{V} [m ³ /h] | - | - | - | 19 | 23 | 28 | 33 | 39 | 45 | 51 | 58 | 66 | 75 | 84 | 94 | 104 | 111 | 120 | 129 | 139 | 150 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 17 | 17 | 18 | 18 | 19 | 20 | 20 | 22 | 22 | 23 | 23 | 24 | 25 | 26 | 28 | 28 | 29 | 30 |

| VPF43.200F210/VPF53.200F210, 210 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| \dot{V} [m ³ /h] | - | - | - | - | - | 95 | 100 | 105 | 112 | 118 | 124 | 132 | 140 | 149 | 157 | 165 | 173 | 182 | 192 | 200 | 210 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | | | 11 | 12 | 12 | 14 | 15 | 16 | 17 | 19 | 21 | 22 | 24 | 26 | 27 | 29 | 30 | 32 |

High flow rate

| VPF44.50F25/VPF54.50F25, 25 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 5.7 | 6.9 | 7.8 | 8.8 | 9.9 | 11.1 | 12.3 | 13.5 | 15.0 | 16.5 | 18.1 | 19.7 | 21.0 | 22.2 | 22.9 | 23.5 | 24.0 | 24.6 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 30 | 32 | 33 | 35 | 36 | 38 | 39 | 41 | 42 | 44 | 45 | 47 | 48 | 50 | 51 | 53 | 54 | 55 |

| VPF44.65F35/VPF54.65F35, 35 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 6.4 | 7.8 | 8.8 | 10.1 | 11.2 | 12.3 | 14.2 | 16.1 | 18.1 | 20.2 | 22.4 | 24.6 | 26.5 | 28.5 | 30.6 | 32.7 | 35.2 | 37.7 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 30 | 32 | 33 | 34 | 35 | 36 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 46 | 47 | 48 | 49 | 50 |

| VPF44.80F45/VPF54.80F45, 45 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 8.5 | 10.5 | 12.2 | 13.9 | 16.0 | 18.0 | 20.2 | 22.4 | 24.7 | 27.0 | 30.2 | 33.4 | 36.5 | 39.6 | 42.5 | 45.4 | 47.2 | 49.0 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 22 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |

| VPF44.100F90/VPF54.100F90, 90 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|---|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| \dot{V} [m ³ /h] | - | - | - | 14.8 | 18.2 | 21.3 | 24.4 | 27.6 | 30.8 | 35.4 | 39.9 | 43.7 | 47.4 | 55.7 | 64.0 | 70.8 | 77.5 | 82.3 | 87.1 | 89.0 | 90.9 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 20 | 22 | 23 | 25 | 26 | 28 | 29 | 31 | 32 | 34 | 35 | 37 | 38 | 40 | 41 | 43 | 44 | 45 |

| VPF44.125F135/VPF54.125F135, 135 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|------|
| \dot{V} [m ³ /h] | - | - | - | 18 | 23 | 25 | 30 | 36 | 41 | 45 | 51 | 59 | 65 | 74 | 85 | 94 | 100 | 109 | 120 | 126 | 132 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 20 | 22 | 24 | 25 | 26 | 28 | 29 | 31 | 32 | 34 | 35 | 37 | 38 | 40 | 42 | 42 | 43 | 45 |

| VPF44.150F200/VPF54.150F200, 200 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| \dot{V} [m ³ /h] | - | - | - | 26 | 34 | 38 | 45 | 53 | 63 | 69 | 79 | 91 | 102 | 116 | 131 | 143 | 153 | 167 | 183 | 194 | 208 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | 20 | 20 | 22 | 24 | 24 | 26 | 28 | 32 | 36 | 36 | 38 | 40 | 42 | 44 | 45 | 48 | 48 | 50 |

| VPF43.200F280/VPF53.200F280, 280 m ³ /h nominal | | | | | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| \dot{V} [m ³ /h] | - | - | - | - | - | 130 | 137 | 145 | 153 | 162 | 170 | 180 | 189 | 199 | 209 | 220 | 232 | 243 | 256 | 267 | 280 |
| Dial | Min. | 0.2 | 0.4 | 0.6 | 0.8 | 1 | 1.2 | 1.4 | 1.6 | 1.8 | 2 | 2.2 | 2.4 | 2.6 | 2.8 | 3 | 3.2 | 3.4 | 3.6 | 3.8 | Max. |
| Δp_{\min} [kPa] | | | | | | 31 | 32 | 33 | 35 | 38 | 41 | 45 | 49 | 53 | 57 | 61 | 65 | 69 | 73 | 75 | 78 |

Notes: When valve installed with stem horizontally, the flow rate will reduce by about 5 %.

| Topic | Title | Document ID |
|-------------------------------------|--|--------------|
| Mounting and installation | VPF43../VPF44../ VPF53../VPF54.. Mounting instructions | A6V12190279 |
| Product environmental compatibility | VPF44../VPF54.. The product environmental declaration A5W00159028A contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). | A5W00159028A |
| | VPF43../VPF53.. The product environmental declaration CE1E4315en contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). | CE1E4315en |
| EU Conformity (CE) | VPF44../ VPF54.. | A5W00159722A |
| | VPF43../ VPF53.. | CE1T4315xx |

Related documents such as the environmental declarations, declarations of conformity, etc., can be downloaded from the following Internet address:

www.siemens.com/bt/download

Notes

Safety

⚠ CAUTION



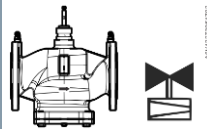
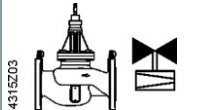
National safety regulations

Failure to comply with national safety regulations may result in personal injury and property damage.

- Observe national provisions and comply with the appropriate safety regulations.

Engineering

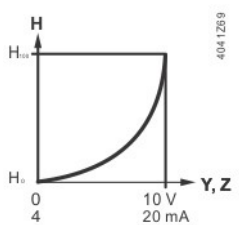
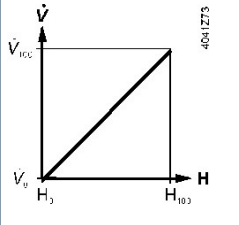
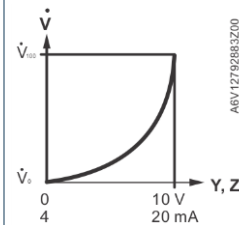
Valve and actuator combination

| Valve | Symbols / Direction of flow | Flow in control mode | Valve stem | |
|-------------------|---|----------------------|---------------|--------------|
| | | | Stem retracts | Stem extends |
| PICV VPF44../54.. |  | Variable | Valve closes | Valve opens |
| PICV VPF43../53.. |  | | | |

Valve and actuator combination

| SAX61P../SAV61P.. SQV91P.. | Actuator set to Direct acting | Actuator set to Reverse acting |
|-------------------------------|---|--------------------------------|
| | | |
| | Positioning signal Y: DC 0...10 V 4...20 mA Positioning signal Z: 0...1000 Ω | |
| Y, Z | Positioning signal | |
| V | Volumetric flow | |
| ————— | Acting direction: Direct | |
| - - - - - | Acting direction: Reverse | |

| SAX61P../SAV61P.. SQV91P.. | Actuator | VPF.. PICV | Actuator and VPF.. PICV combination |
|-------------------------------|---------------------------|------------|--|
| Log | | | |
| Lin | | | |
| Y, Z | Positioning signal | | |
| H | Stroke | | |
| V | Volumetric flow | | |
| ————— | Acting direction: Direct | | |
| - - - - - | Acting direction: Reverse | | |

| SB..61P | Actuator | VPF.. PICV | Actuator and VPF.. PICV combination |
|---------|---|--|---|
| |  |  |  |
| Y, Z | Positioning signal | | |
| H | Stroke | | |
| V | Volumetric flow | | |

⚠ WARNING




The direction of flow indicated (arrow on the valve body) is mandatory!

The valves should preferably be mounted in the return pipe where temperatures are lower (for heating circuits), and where the sealing gland is less affected by strain.

Valve's factory default position (without actuator) = CLOSED.

Symbol

| Symbol used in catalogs and application descriptions | Symbol used in diagrams |
|---|---|
|  | There are no standard symbols for PICVs in diagrams |

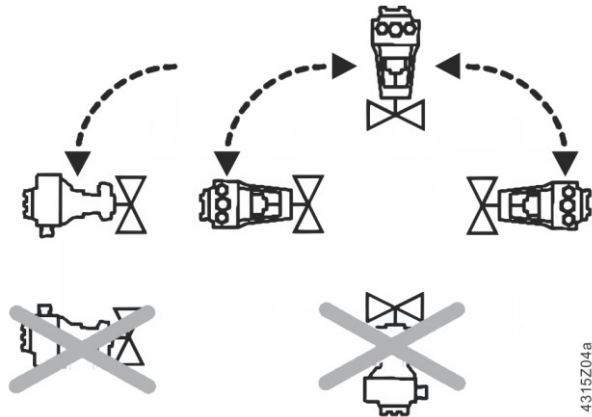
Recommendation

- A strainer or dirt trap should be fitted upstream of the valve to enhance reliability and service life.
- Remove dirt, welding beads etc. from valves and pipes.
- Do not insulate the actuator bracket, as air circulation must be ensured!
- If flow measurement section is used (VPF44../VPF54.. only), make sure the flow measuring device is installed in a low turbulence area. In general, use the $5 \times DN / 10 \times DN$ rule, whenever possible and maintain a distance of more than $10D$ from the pump.

Mounting

- PICV and actuator can easily be assembled on site. Neither special tools nor adjustments, besides flow rate presetting are required.
- The valve is supplied with Mounting Instructions A6V11464512.

Orientation






Direction flow

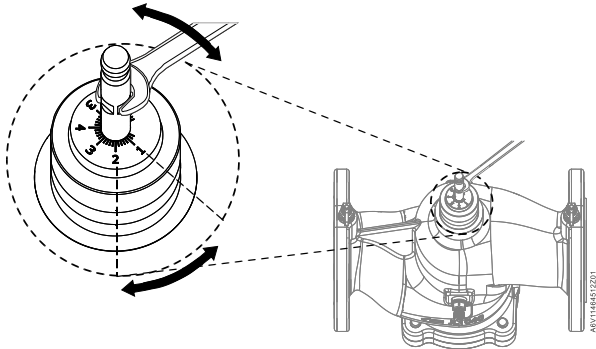
Pay attention to the valve's flow direction symbol during mounting.

Presetting

It is recommended to mount the actuator before the presetting is made.

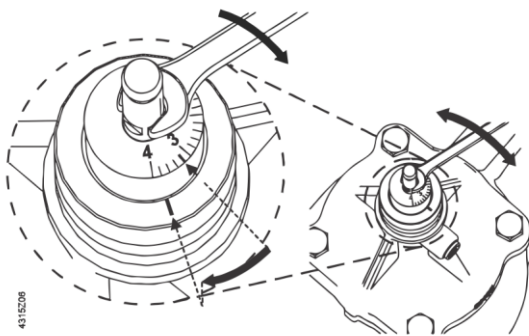
1. Mount actuator and fix valve neck coupling
2. Mount valve stem coupling and tighten slightly
3. Make presetting according to table under "Volumetric flow / dia presetting". Do NOT adjust presetting to a dial reading lower than "0.6".
4. Tighten stem coupling

VPF44../VPF54.. (  \dot{V} [m³/h],  8 mm)



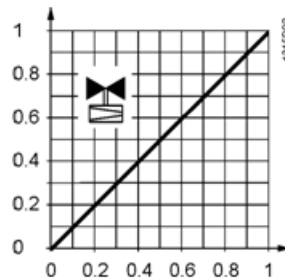
VPF44../VPF54.. has a symmetric pre-setting scale for easy commissioning. Identical pre-setting positions give identical flow rate.

VPF43../VPF53.. (  \dot{V} [m³/h],  8 mm)



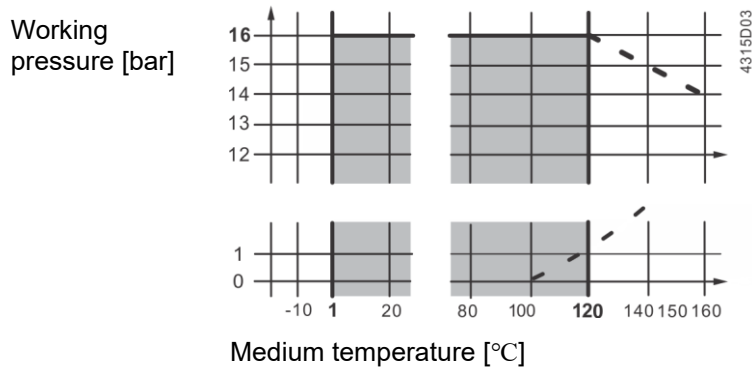
Valve characteristic

Volumetric flow V / V_{100}

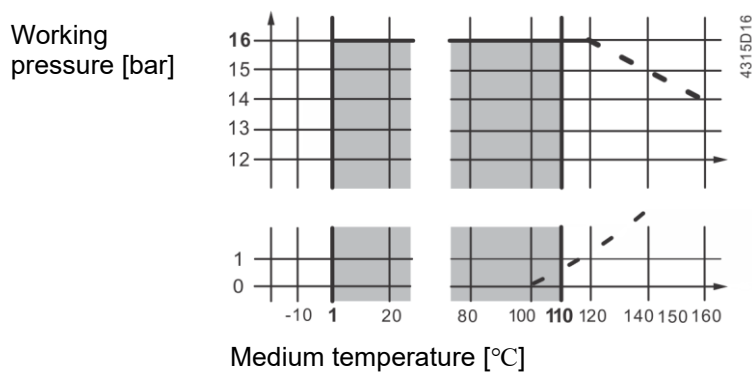


Stroke H / H_{100}

Working pressure and medium temperature
Medium temperature [°C] for VPF44../VPF54..



Medium temperature [°C] for VPF43../VPF53..



Working pressure and medium temperature staged as per ISO 7005.

| | |
|------------------|--|
| ⚠ WARNING | |
| | Current local legislation must be observed. |

Commissioning

| | |
|---------------|---|
| NOTICE | |
| | <ul style="list-style-type: none"> • Consequences The valves must be commissioned with the actuator correctly fitted. Strong pressure impacts can damage closed PICVs. • The valves must be open when flushing or pressure testing the system. Strong pressure impacts can damage closed PICVs. • Differential pressure P_{max} across the valve's control path is not allowed to exceed 600 kPa. • Valve's factory default position (without actuator) = CLOSED. |

Maintenance

All VPF.. PICVs are maintenance-free. Maintenance for VPF44../VPF54.. allows easy exchange of the differential pressure controller (DPR).

WARNING



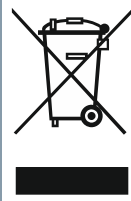
When performing service work on the valve or actuator:

- Switch off the pump and disconnect power supply.
- Close the shut-off valves in the piping network.
- Fully reduce pressure in the piping network and allow the pipes to cool down completely.
- Remove the electrical connections only if necessary.

Sealing gland

The stem sealing gland cannot be exchanged. In case of leakage the whole valve must be replaced.

Disposal



The valve is considered an electronic device for disposal in accordance with European guidelines and may not be disposed of as domestic waste.

- Dispose of the valve through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Warranty

Technical data on specific applications are valid only together with Siemens products listed under "Equipment combinations". Siemens rejects any and all warranties in the event that third-party products are used.

| Functional data | | | |
|--------------------------------|---|---|--|
| PN class | PN 16 / PN 25 as per EN 1333 | | |
| Permissible operating pressure | 1600 kPa (16 bar) / 2500 kPa (25 bar) as per ISO 7628 / EN 1333 | | |
| Valve characteristic | Linear as per VDI / VDE 2173 | | |
| Leakage rate | Class IV (0...0.01 % of volumetric flow V_{100}) to EN 1349 | | |
| Operating direction | Valve stem retracts (pushed down) to close Valve stem extends (pulled up) to open | | |
| Permissible media | Low temperature hot water, medium temperature hot water, chilled water, water with anti-freeze Recommendation: water treatment to VDI 2035 | | |
| Medium temperature | PN 16, PN 25 | DN 50...150: 1...120 °C DN 200 1...110 °C | |
| Rangeability | 1:100 | | |
| Average flow accuracy | ± 10 % | from Δp_{\min} up to 70 kPa from Δp_{\min} up to 105 kPa from Δp_{\min} up to 600 kPa | (DN 50...80) (DN 100...150) (DN 200) |
| | ± 5 % | from 70...600 kPa from 105...600 kPa | (DN 50...80) (DN 100...150) |
| Nominal stroke | DN 50, 65, 80: 20 mm DN 100, 125: 40 mm DN 150, 200: 43 mm | | |
| Low-noise operation | To operate the valve at a low noise level, a differential pressure of 150 kPa should not be exceeded. | | |

* Tested in clean water conditions, represents the maximum deviation from the average measured flow

| Materials | |
|------------------|---|
| Valve body | DN50...100 (PN16): Gray cast iron GJL-250 DN50...100 (PN25), DN125...200 (PN16/PN25): Nodular cast iron GJS-400-18RT |
| Stem, spring | Stainless steel |
| Sleeve | Brass |
| Regulator | Stainless steel |
| Seals | EPDM |

| Norms and standards | | |
|---|--|--|
| VPF44../VPF54.. EU Conformity (CE) | | A5W00159722A |
| UKCA (VPF44../VPF54..) | | A5W00236773A |
| EAC conformity | | VPF43../VPF44../VPF53../VPF54.. Eurasia conformity |
| Pressure Equipment Directive | | PED 2014/68/EU |
| Pressure accessories | | Scope: Article 1, section 1 Definitions: Article 2, section 5 |
| Fluid group 2 (for VPF43../VPF53..) | DN 200 ³⁾ (PN 16, PN 25) | Without CE-marking as per article 4, section 3 (sound engineering practice) ¹⁾ |
| Fluid group 2 (for VPF44../VPF54..) | DN 50 (PN 16) | Without CE-marking as per article 4, section 3 (sound engineering practice) ¹⁾ |
| | DN 65...150 (PN 16) DN 50...125 (PN 25) | Category I, module A, with CE-marking, as per article 14, section 2 |
| | DN 150 (PN 25) | Category II, module A2, with CE-marking, as per article 14, section 2, notified body number 0035 |
| Environmental conformity | | The product environmental declaration CE1E4315en ²⁾ (for VPF43../ VPF53..), A5W00159028A ²⁾ (for VPF44../ VPF54..) contain data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). |
| <ol style="list-style-type: none"> 1. Valves where PS x DN < 1000, do not require special testing and cannot carry the CE label. 2. The documents can be downloaded from http://siemens.com/bt/download. 3. Warm water temperature not greater than 110°C, do not require special testing and cannot carry the CE label. | | |

| General ambient conditions | | | |
|----------------------------|----------------|-------------|----------------|
| | Operation | Transport | Storage |
| Temperature | 1...55 °C | -30...65 °C | -15...50 °C |
| Humidity | 5...95 % r. h. | <95 % r. h. | 5...95 % r. h. |

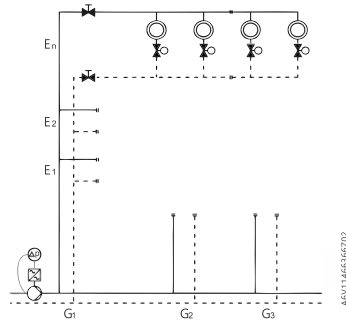
| Dimensions/weight | |
|-------------------------------------|--|
| Dimensions | See Dimensions [▶ 24] |
| Weight | See Dimensions [▶ 24] |
| Flange connections | ISO 7005-2 |
| Pressure test points (P / T points) | G ¼ inch (connection) 2 mm x 40 mm (measuring tips) |

Application examples

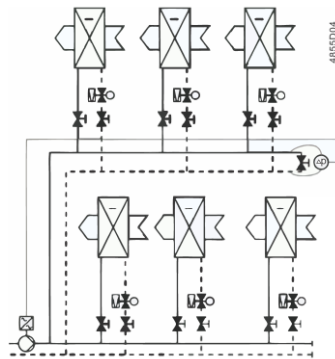
PICVs in HVAC systems combined with variable speed pumps provide even higher energy efficiency. When sizing the pump, it must be made certain that the most critical branch or consumer in the system – usually the remotest from the pump – gets enough pressure (pump head). Thus, it is recommended to use a variable speed pump in constant-pressure mode with end-point feedback, to maintain a minimum differential pressure across the critical valve.

Residential buildings

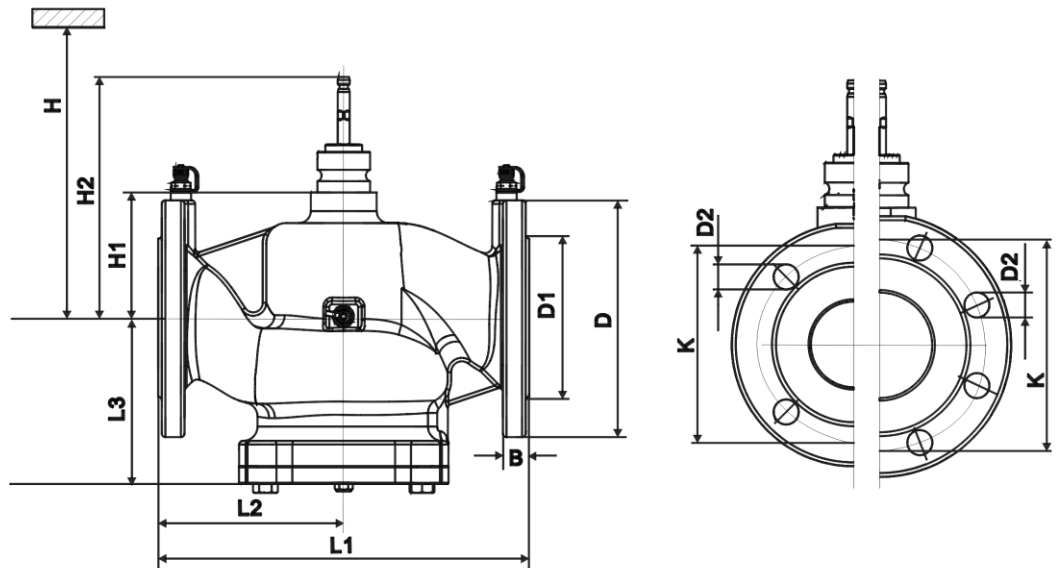
Residential buildings with for example self-contained flat heating systems:



E = Floor
 G = Group or zone Non-residential buildings
 Commercial buildings with for example Fan Coil Units or heat exchangers for heating or cooling

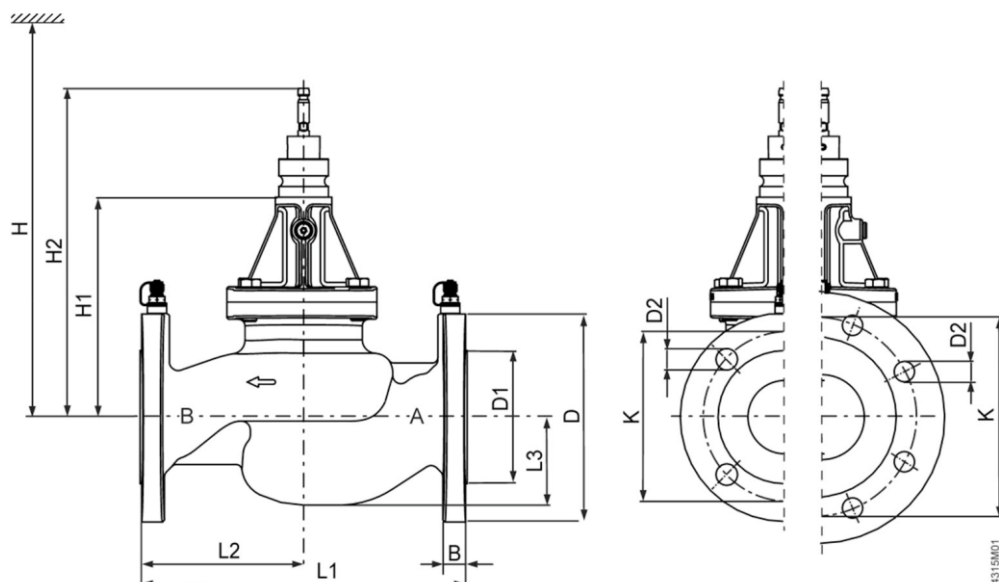


Dimensions in mm: VPF44../VPF54..



| Product no. | DN | B | Ø D | Ø D1 | Ø D2 | L1 | L2 | L3 | Ø K | H1 | H2 | H | | | | | Weight |
|-------------|-----|----|-----|------|---------|-----|-----|-------|-----|-------|-------|--------|--------|--------|--------|--------|--------|
| | | | | | | | | | | | | SAX..P | SAV..P | SQV..P | SBX..P | SBV..P | |
| | | | | | | | | | | | | [mm] | [mm] | [mm] | [mm] | [mm] | |
| VPF44.. | 50 | 17 | 165 | 99 | 19 (4x) | 230 | 115 | 115 | 125 | 102.5 | 199 | 545 | - | 492 | 608.5 | - | 15 |
| | 65 | 17 | 185 | 118 | 19 (4x) | 290 | 145 | 122 | 145 | 104 | 200.5 | 546 | - | 493 | 610 | - | 19 |
| | 80 | 19 | 200 | 132 | 19 (8x) | 310 | 155 | 139 | 160 | 104.5 | 201 | 547 | - | 494 | 610.5 | - | 28 |
| | 100 | 21 | 220 | 156 | 19 (8x) | 350 | 175 | 174.5 | 180 | 169 | 285.5 | - | 637 | 557 | - | 735 | 49 |
| | 125 | 19 | 250 | 184 | 19 (8x) | 400 | 200 | 203 | 210 | 203.5 | 320 | - | 670 | 600 | - | 769.5 | 77 |
| | 150 | 19 | 285 | 211 | 23 (8x) | 480 | 240 | 233 | 240 | 197 | 316.5 | - | 660 | 590 | - | 763 | 110 |
| VPF54.. | 50 | 16 | 165 | 99 | 19 (4x) | 230 | 115 | 115 | 125 | 102.5 | 199 | 545 | - | 492 | 608.5 | - | 15 |
| | 65 | 16 | 185 | 118 | 19 (8x) | 290 | 145 | 122 | 145 | 104 | 200.5 | 546 | - | 493 | 610 | - | 20 |
| | 80 | 16 | 200 | 132 | 19 (8x) | 310 | 155 | 139 | 160 | 104.5 | 201 | 547 | - | 494 | 610.5 | - | 29 |
| | 100 | 16 | 235 | 156 | 23 (8x) | 350 | 175 | 174.5 | 190 | 169 | 285.5 | - | 637 | 557 | - | 735 | 50 |
| | 125 | 19 | 270 | 184 | 28 (8x) | 400 | 200 | 203 | 220 | 203.5 | 320 | - | 670 | 600 | - | 769.5 | 79 |
| | 150 | 20 | 300 | 211 | 28 (8x) | 480 | 240 | 233 | 250 | 197 | 316.5 | - | 660 | 590 | - | 763 | 115 |

Dimensions in mm: VPF43../VPF53..



| Product number | DN | B | Ø D | Ø D1 | Ø D2 | L1 | L2 | L3 | Ø K | H1 | H2 | H | | | Weight |
|----------------|-----|----|-----|------|----------|-----|-----|-----|-----|-----|-----|--------|--------|--------|--------|
| | | | | | | | | | | | | SAV..P | SQV..P | SBV..P | |
| | | | | | | | | | | | | [mm] | [mm] | [mm] | |
| VPF43.. | 200 | 28 | 380 | 266 | 23 (12x) | 600 | 300 | 300 | 295 | 401 | 521 | 870 | 790 | 967 | 175 |
| VPF53.. | 200 | 28 | 380 | 274 | 28 (12x) | 600 | 300 | 300 | 310 | 401 | 521 | 870 | 790 | 967 | 175 |

Note:

- DN = Nominal size
- H = Total actuator height plus minimum distance to the wall or the ceiling for mounting, connection, operation, maintenance etc.
- H1 = Dimension from the pipe center to install the actuator (upper edge)
- H2 = Valve in the «OPEN» position means that the valve stem is fully extended.

Revision numbers

| Product number | Valid from rev. no. | Product number | Valid from rev. no. |
|----------------|---------------------|----------------|---------------------|
| VPF44.50F15 | ..B | VPF44.50F25 | ..B |
| VPF44.65F25 | ..B | VPF44.65F35 | ..B |
| VPF44.80F35 | ..B | VPF44.80F45 | ..B |
| VPF44.100F70 | ..A | VPF44.100F90 | ..A |
| VPF44.125F110 | ..A | VPF44.125F135 | ..A |
| VPF44.150F150 | ..A | VPF44.150F200 | ..A |
| VPF43.200F210 | ..A | VPF43.200F280 | ..A |
| VPF54.50F15 | ..A | VPF54.50F25 | ..A |
| VPF54.65F25 | ..A | VPF54.65F35 | ..A |
| VPF54.80F35 | ..A | VPF54.80F45 | ..A |
| VPF54.100F70 | ..A | VPF54.100F90 | ..A |
| VPF54.125F110 | ..A | VPF54.125F135 | ..A |
| VPF54.150F150 | ..A | VPF54.150F200 | ..A |
| VPF43.200F210 | ..A | VPF43.200F280 | ..A |

Issued by
Siemens Switzerland Ltd
Smart Infrastructure
Global Headquarters
Theilerstrasse 1a
CH-6300 Zug
+41 58 724 2424
www.siemens.com/buildingtechnologies

© Siemens 2019
Technical specifications and availability subject to change without notice.

Document ID A6V12792883_enAP_b
Edition 2023-09-22