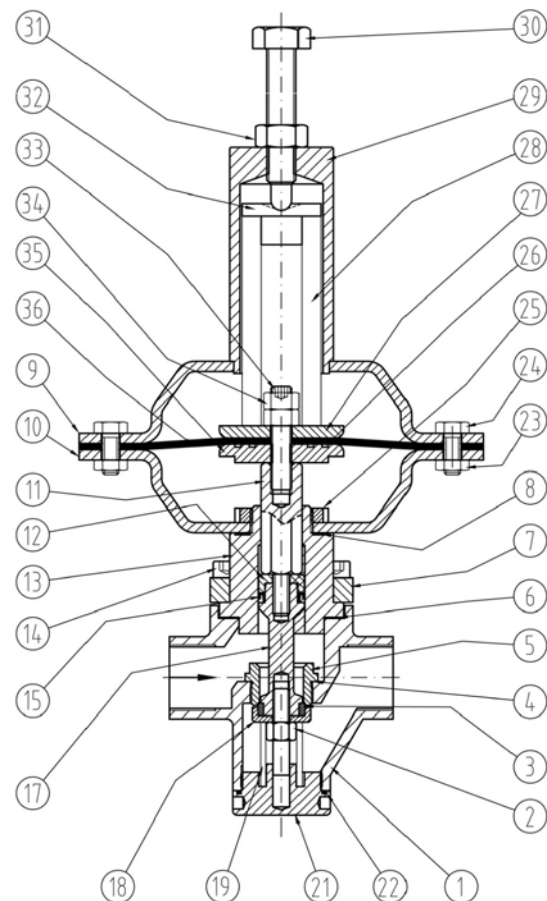


## Pressure Reducing Valve - Model PRV45

### BASIC INFORMATION

|                    |  |                            |  |
|--------------------|--|----------------------------|--|
| <b>Type</b>        | Self-operated pressure reducing valve with diaphragm | <b>Kv</b>                  | 2, 2.5 and 3.0 [m <sup>3</sup> /h]-[bar]       |
| <b>Operation</b>   | Valve tends to close when outlet pressure increases  | <b>Cv</b>                  | 2.3, 2.9 and 3.5 [gpm]-[psi]                   |
| <b>Model</b>       | PRV45  | <b>Temperature</b>         | -10 to 180° [°C]<br>14 to 356 [°F]             |
| <b>Connections</b> | Flanged (DIN - ANSI) or Threaded (BSP - NPT)         | <b>Inlet max. pressure</b> | 16 [barg]                                      |
| <b>Ends</b>        | RF – RF, NPT, BSP                                    | <b>Outlet pressure</b>     | 0,01 - 8 [barg]                                |
| <b>Ratings</b>     | PN16 (150#)  | <b>Suitable for</b>        | Steam, compressed air, water and neutral gases |
| <b>Sizes</b>       | DN15, DN20 and DN25 (1/2", 3/4" and 1")              |                            |  |

### PARTS



## MATERIALS

| REF. | PART               | MATERIAL                                      |  |
|------|--------------------|---|--|
|      |                    | ANSI / ASTM                                   | DIN / EN                                   |
| 1    | Body               | S.S. (AISI 316)<br>C.S. (A216WCB)             | S. S. (1.4408)<br>C.S. (1.0446)            |
| 2    | Seal screw         | S.S. (AISI 316L)                              | S.S. (1.4404)                              |
| 3    | <b>Seal</b>        | Graphite PTFE                                 | Graphite PTFE                              |
| 4    | Gasket             | PTFE (D-792)                                  | PTFE (53749)                               |
| 5    | Seat               | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 6    | <b>Gasket</b>      | Graphite PTFE                                 | Graphite PTFE                              |
| 7    | Valve cover        |   |  |
| 8    | <b>Gasket</b>      | PTFE (D-792)                                  | PTFE (53749)                               |
| 9    | Upper actuator     |   |  |
| 10   | Lower actuator     |   |  |
| 11   | Stem               | S.S. (AISI 316L)                              | S.S. (1.4404)                              |
| 12   | Bushing guide      | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 13   | Guide stem         | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 14   | Allen screw        | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 15   | <b>Gasket</b>      | Graphite PTFE                                 | Graphite PTFE                              |
| 17   | Stem               | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 18   | Guide seal         | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 19   | Seal spring        | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 21   | Lower cover        | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 22   | <b>Gasket</b>      | PTFE (D-792)                                  | PTFE (53749)                               |
| 23   | Nut                | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 24   | M8 Screw           | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 25   | Nut KM-6           | C.S. (AISI 1045)                              | C.S. (1.1191)                              |
| 26   | <b>O-ring</b>      | PTFE (D-792)<br>NBR (D-1418)                  | PTFE (53749)<br>NBR (1629)                 |
| 27   | Support spring     | C.S. (A1011)                                  | C.S. (1.0335)                              |
| 28   | Regulation spring  | C.S. (52SiCrNi5)                              | C.S. (1.7117)                              |
| 29   | Spring cover       | C.S. (AISI 1045)                              | C.S. (1.1191)                              |
| 30   | Regulation screw   | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 31   | Regulation nut     | S.S. (AISI 304L)                              | S. S.(1.4307)                              |
| 32   | Spring guide       | C.S. (AISI 1045)                              | C.S. (1.1191)                              |
| 33   | Screw              | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 34   | Nut                | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 35   | Lower support dia. | S. S. (AISI 304)                              | S.S (1.4301)                               |
| 36   | <b>Diaphragm</b>   | EPDM (D-1418)<br>EPDM + PTFE (D-1418 + D-792) | EPDM ((1629)<br>EPDM + PTFE (1620 + 53749) |

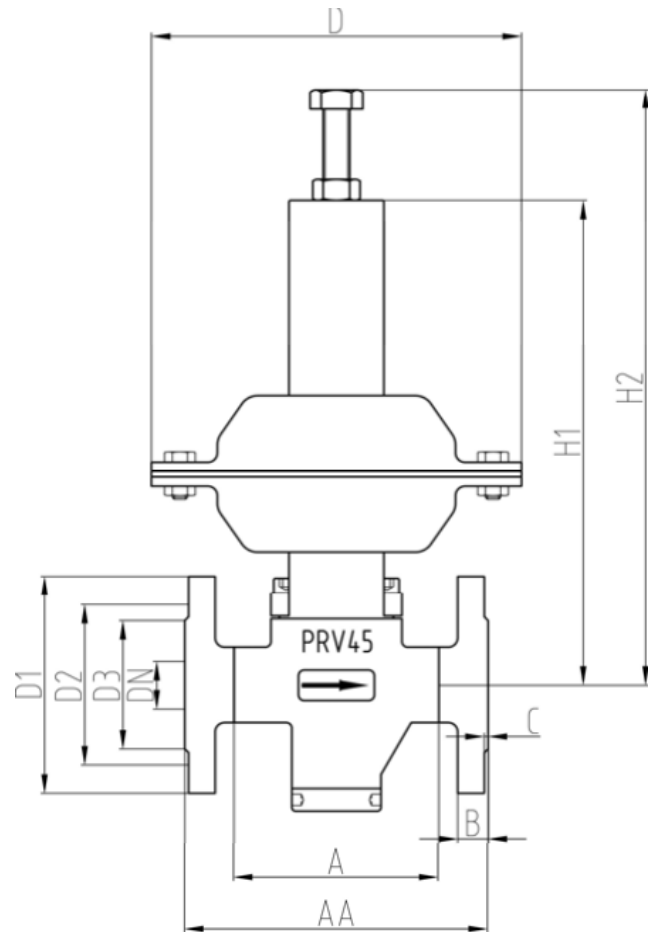
### Recommended spare parts

### STANDARD CONFIGURATIONS

|                              |     |     |     |
|------------------------------|-----|-----|-----|
| DN [mm]                      | 15  | 20  | 25  |
| Kv [m <sup>3</sup> /h]-[bar] | 2,0 | 2,5 | 3,5 |

|                |      |      |     |
|----------------|------|------|-----|
| NPS [inch]     | 1/2" | 3/4" | 1"  |
| Cv [gpm]-[psi] | 2,5  | 3    | 3,5 |

|                  |      |     |      |
|------------------|------|-----|------|
| AA [mm] EN       | 140  | 150 | 160  |
| AA [mm] ANSI 150 | 140  | 150 | 160  |
| H1 [mm]          | 135  | 135 | 135  |
| H2 [mm]          | 185  | 185 | 185  |
| D1 [mm] EN       | 95   | 105 | 115  |
| D1 [mm] ANSI 150 | 89   | 98  | 108  |
| D2 [mm] EN       | 65   | 75  | 85   |
| D2 [mm] ANSI 150 | 60,5 | 70  | 79.5 |
| D3 [mm] EN       | 45   | 58  | 68   |
| D3 [mm] ANSI 150 | 35   | 43  | 51   |
| B [mm] EN        | 16   | 16  | 16   |
| B [mm] ANSI 150  | 12   | 12  | 12   |
| C [mm]           | 2    | 2   | 2    |
| Nº Holes         | 4    | 4   | 4    |
| Ø [mm] EN        | 14   | 14  | 14   |
| Ø [mm] ANSI 150  | 16   | 16  | 16   |
| Weight [Kg]      | 8    | 8   | 8    |



IMPORTANT NOTE: Kv or CV reduced is available

In red color, sizes out of standards

### THREADED BSP OR NPT (FEMALE)

|                              |     |     |     |
|------------------------------|-----|-----|-----|
| DN [mm]                      | 15  | 20  | 25  |
| Kv [m <sup>3</sup> /h]-[bar] | 2,0 | 2,5 | 3,5 |
| Cv [gpm]-[psi]               | 2,5 | 3   | 3,5 |
| A [mm]                       | 108 | 108 | 108 |
| Weight [Kg]                  | 5   | 5   | 5   |

## PRESSURE RANGE AND ACTUATOR SIZE

|                                 |            |            |            |            |
|---------------------------------|------------|------------|------------|------------|
| <b>D [mm]</b>                   | <b>295</b> | <b>230</b> | <b>195</b> | <b>175</b> |
| <b>Pressure range [bar]</b>     | 0,01 – 0,2 | 0, - 1     | 0,5 - 2    | 1 - 8      |
| <b>Section [cm<sup>2</sup>]</b> | 420        | 240        | 120        | 80         |

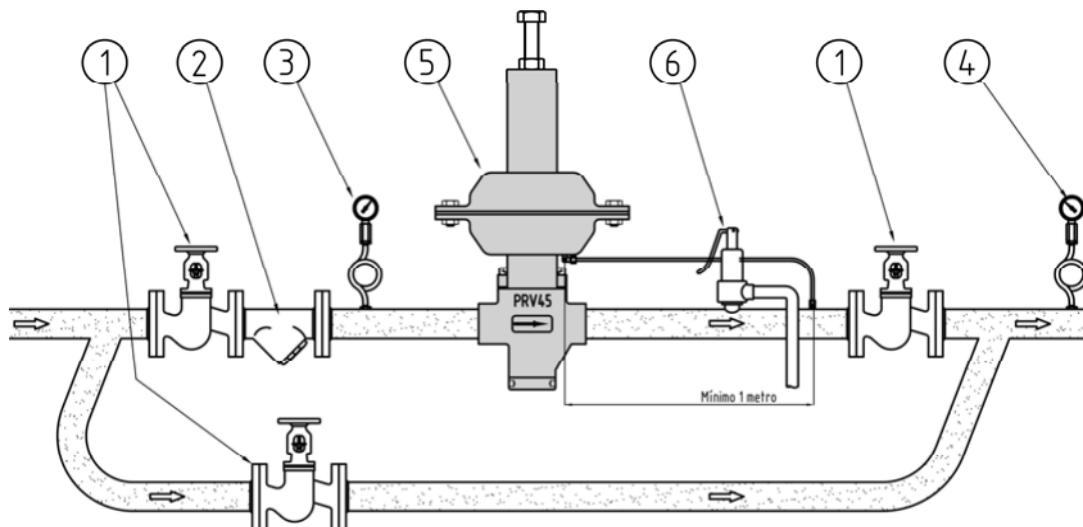
## OPERATION

PRV45 valve should be installed in horizontal pipe and respecting the fluid flow direction must match the arrow on the valve body.

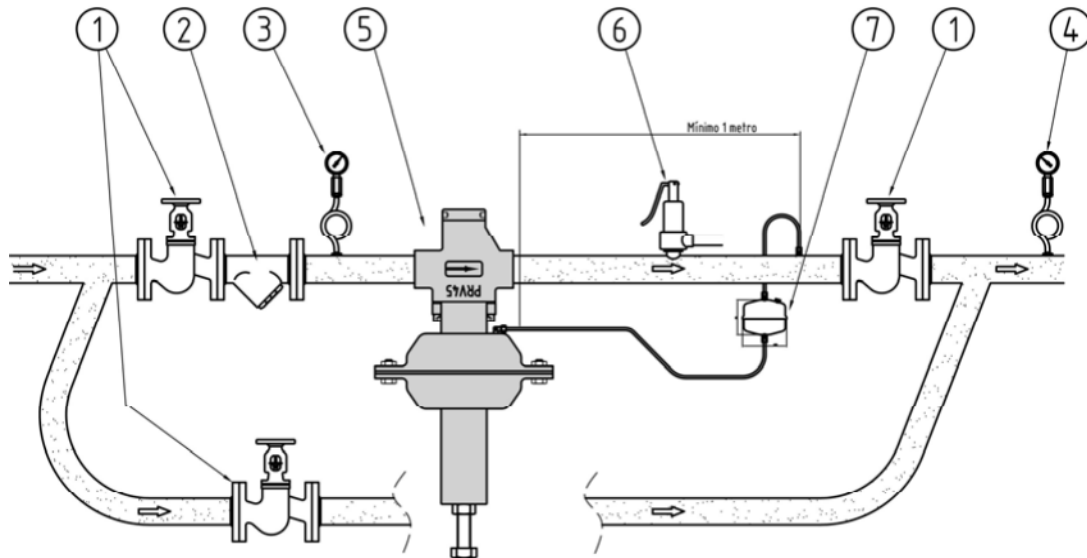
Steam installations, the actuator must be installed in low position. Condensate tank is essential when temperatures above 120°C to protect the diaphragm from overheating. The tank is always placed in the highest point of the pipe.

The strainer (item 2) must be installed upstream of the regulator to protect seal and diaphragm and avoid excessive maintenance. Remember to leave enough space to remove and clean it.

## STANDARD INSTALLATIONS



TYPICAL INSTALLATION FOR LIQUIDS AND NEUTRAL GASES



TYPICAL INSTALLATION FOR STEAM (WITH CONDENSATING POT)

- 1. Check Valve
- 1a. Check Valve
- 1b. Check Valve
- 2. Filter
- 3. Inlet pressure gauge
- 4. Pressure reducing valve PRV
- 5. Safety valve
- 6. Outlet pressure gauge



ATEX approved

**Disclaimer**

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