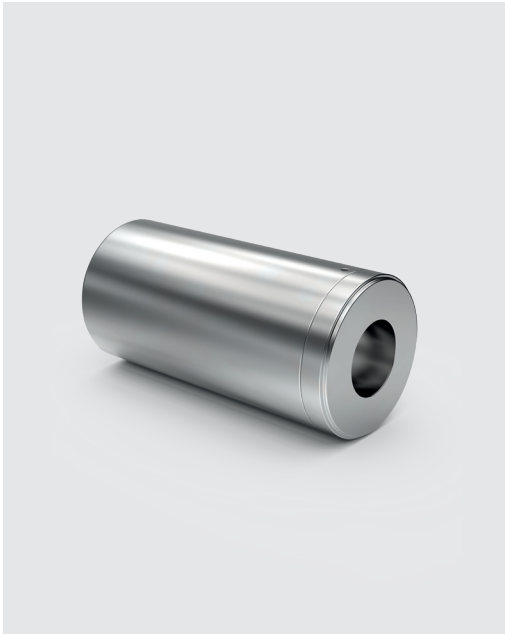


Type BPV

Back pressure regulator to guarantee a defined back pressure



> Type BPV, front view



> Type BPV, sectional view

Product features

- Prevents evaporation and cavitation and ensures smooth operation
- Forged housing material, carbon steel or stainless steel
- Special material possible
- Internal operation (no external energy source required)
- Easy to install
- Low maintenance

Application

- Maintaining the pressure in the flow recirculation or return line to the tank

Type BPV

Back pressure regulator to guarantee a defined back pressure

Technical data

| | |
|------------------------------------|--|
| Nominal diameter | DN 25–300 / NPS 1–12 |
| Pressure class | PN 16–400 / Class 150–2500 |
| Temperature (max.) | Up to 230 °C / 446 °F (other temperatures on request) |
| Housing material | 1.0460 / A105 1.0571 / LF2 1.4404 / F316L 1.4501 / F55 |
| Housing type | Forged |
| Media | Liquids of all kinds (water, oils, chemicals...) |
| Flanges | As intermediate flange version (Z version) or with integrated flanges (K version) |
| Number of stages (max.) | 1 |
| Number of controlled stages (max.) | 1 |
| Operation Range | Delta p up to max. 10 bar |

Type BPV

Back pressure regulator to guarantee a defined back pressure

Function

Even the optimal and sophisticated pressure reduction of the SCHROEDAHL automatic recirculation valves and control valves set extreme conditions limits in some installations.

SCHROEDAHL back pressure regulators type BPV are used in such cases.

They increase the distance to the evaporation pressure of the medium by generating a defined pressure difference. This prevents unwanted evaporation and cavitation and ensures smooth and gentle operation.

Careful adjustment of the operating parameters between minimum flow or control and back pressure valves ensures optimum system operation.

The pressure difference at the back pressure valve as specified in the design shifts the bushing (item 204) in the direction of flow against the pressure spring (item 237). This releases the throttle cross sections at the bushing until the specified pressure difference is attained.

Installation information

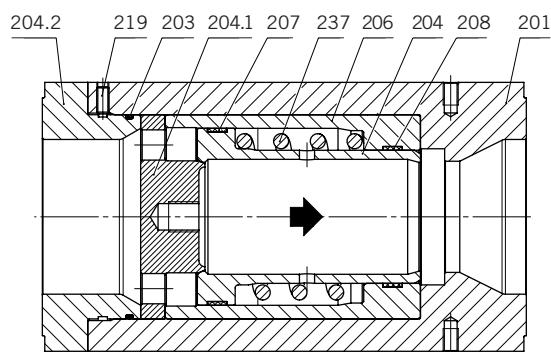
The BPV is used in the pipeline at the point where the highest pressure level is required. We recommend installation directly to the tank.

Type BPV

Back pressure regulator to guarantee a defined back pressure

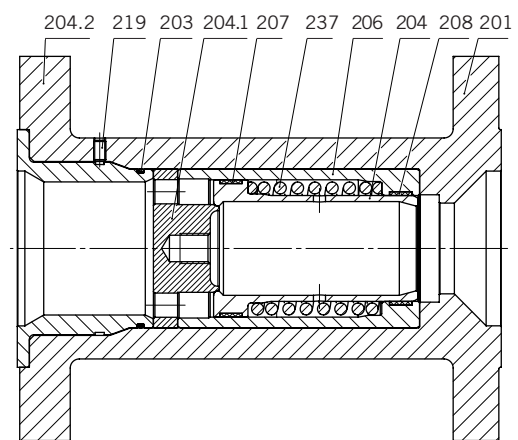
Sectional drawing

(z-type)



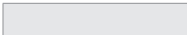
Sectional drawing

(k-type)



Parts list

| Pos. | Item | Material |
|---------------|-----------------------------------|----------|
| 201 | Housing | * |
| 203 | O-Ring | * |
| 204 | Control bushing | 1.4057 |
| 204.1 | Orifice plate | 1.4404 |
| 204.2 | Flange | * |
| 206 | Bushing | 1.4057 |
| 207 / 207.1** | O-Ring and glyd ring / guide ring | * |
| 208 / 208.1** | O-Ring and glyd ring / guide ring | * |
| 219 | Grub screw | 45H |
| 237 | Spring | 1.4310 |

 Recommended spare/wear parts

* Depending on customer requirements

** Depending on size and pressure rating

Parts list as an example of the standard configuration

Type BPV

Back pressure regulator to guarantee a defined back pressure

Dimensions EN (z-type)

| DN ₁ / DN ₂ | PN | Type | L (mm) | Ø (mm) |
|-----------------------------------|-----|------|--------|--------|
| 25 | 25 | 053 | 170 | 71 |
| | 40 | 054 | 170 | 71 |
| | 63 | 055 | 170 | 86 |
| | 100 | 056 | 170 | 86 |
| | 160 | 057 | 170 | 82 |
| | 250 | 058 | 170 | 83 |
| | 320 | 059 | 170 | 93 |
| | 400 | 050 | 170 | 105 |
| 32 | 25 | 063 | 170 | 82 |
| | 40 | 064 | 170 | 82 |
| | 63 | 065 | 170 | 88 |
| | 100 | 066 | 170 | 88 |
| | 160 | 067 | - | - |
| | 250 | 068 | - | - |
| | 320 | 069 | - | - |
| | 400 | 060 | - | - |
| 40 | 25 | 073 | 220 | 92 |
| | 40 | 074 | 220 | 92 |
| | 63 | 075 | 220 | 103 |
| | 100 | 076 | 220 | 103 |
| | 160 | 077 | 220 | 103 |
| | 250 | 078 | 220 | 109 |
| | 320 | 079 | 220 | 119 |
| | 400 | 070 | 220 | 135 |
| 50 | 25 | 083 | 220 | 107 |
| | 40 | 084 | 220 | 107 |
| | 63 | 085 | 220 | 113 |
| | 100 | 086 | 220 | 119 |
| | 160 | 087 | 220 | 119 |
| | 250 | 088 | 220 | 124 |
| | 320 | 089 | 220 | 134 |
| | 400 | 080 | 220 | 150 |
| 65 | 25 | 093 | 260 | 127 |
| | 40 | 094 | 260 | 127 |
| | 63 | 095 | 260 | 138 |
| | 100 | 096 | 260 | 144 |
| | 160 | 097 | 260 | 144 |
| | 250 | 098 | 260 | 154 |
| | 320 | 099 | 260 | 170 |
| | 400 | 090 | 260 | 192 |
| 80 | 25 | 103 | 260 | 142 |
| | 40 | 104 | 260 | 142 |
| | 63 | 105 | 260 | 148 |
| | 100 | 106 | 260 | 154 |
| | 160 | 107 | 260 | 154 |
| | 250 | 108 | 260 | 170 |
| | 320 | 109 | 260 | 190 |
| | 400 | 100 | 260 | 207 |
| 100 | 25 | 113 | 320 | 168 |
| | 40 | 114 | 320 | 168 |
| | 63 | 115 | 320 | 174 |
| | 100 | 116 | 320 | 180 |
| | 160 | 117 | 320 | 180 |
| | 250 | 118 | 320 | 202 |
| | 320 | 119 | 320 | 229 |
| | 400 | 110 | 320 | 256 |
| 125 | 25 | 123 | 320 | 194 |
| | 40 | 124 | 320 | 194 |
| | 63 | 125 | 320 | 210 |
| | 100 | 126 | 320 | 217 |
| | 160 | 127 | 320 | 217 |
| | 250 | 128 | 320 | 242 |
| | 320 | 129 | 320 | 274 |
| | 400 | 120 | 320 | 301 |
| 150 | 25 | 133 | 320 | 224 |
| | 40 | 134 | 320 | 224 |
| | 63 | 135 | 320 | 247 |
| | 100 | 136 | 320 | 257 |
| | 160 | 137 | 320 | 257 |
| | 250 | 138 | 320 | 284 |
| | 320 | 139 | 320 | 311 |
| | 400 | 130 | 320 | 348 |
| 200 | 25 | 153 | - | 284 |
| | 40 | 154 | - | 290 |
| | 63 | 155 | - | 309 |
| | 100 | 156 | - | 324 |
| | 160 | 157 | - | 324 |
| | 250 | 158 | - | 358 |
| | 320 | 159 | - | 398 |
| | 400 | 150 | - | 442 |

Dimensions EN (k-type): on request

Type BPV

Back pressure regulator to guarantee a defined back pressure

Dimensions ASME (z-type)

| DN ₁ / DN ₂ | PN | Type | L (mm) | Ø (mm) |
|-----------------------------------|------|------|--------|--------|
| NPS 1 | 150 | 053 | 170 | 63,5 |
| | 300 | 055 | - | 69,8 |
| | 600 | 056 | 170 | 69,8 |
| | 900 | 057 | 170 | 76,2 |
| | 1500 | 058 | 170 | 76,2 |
| | 2500 | 050 | 170 | 82,6 |
| NPS 1,25 | 150 | 063 | - | 73,2 |
| | 300 | 065 | 170 | 79,5 |
| | 600 | 066 | 170 | 79,5 |
| | 900 | 067 | - | 85,9 |
| | 1500 | 068 | 170 | 85,9 |
| | 2500 | 060 | 170 | 101,6 |
| NPS 1,5 | 150 | 073 | 170 | 82,9 |
| | 300 | 075 | 170 | 91,9 |
| | 600 | 076 | - | 91,9 |
| | 900 | 077 | 170 | 95,6 |
| | 1500 | 078 | 220 | 95,6 |
| | 2500 | 070 | 220 | 114,3 |
| NPS 2 | 150 | 083 | 220 | 101,6 |
| | 300 | 085 | 220 | 107,9 |
| | 600 | 086 | 220 | 107,9 |
| | 900 | 087 | 220 | 139,7 |
| | 1500 | 088 | - | 139,7 |
| | 2500 | 080 | 220 | 143,1 |
| NPS 2,5 | 150 | 093 | 220 | 120,5 |
| | 300 | 095 | - | 127 |
| | 600 | 096 | 220 | 127 |
| | 900 | 097 | 220 | 162,1 |
| | 1500 | 098 | 220 | 162,1 |
| | 2500 | 090 | 220 | 155,1 |
| NPS 3 | 150 | 103 | - | 133,3 |
| | 300 | 105 | 220 | 145,7 |
| | 600 | 106 | 260 | 145,7 |
| | 900 | 107 | - | 165,1 |
| | 1500 | 108 | 260 | 171,4 |
| | 2500 | 100 | 260 | 193,5 |

| DN ₁ / DN ₂ | PN | Type | L (mm) | Ø (mm) |
|-----------------------------------|------|------|--------|--------|
| NPS 4 | 150 | 113 | 320 | 171,4 |
| | 300 | 115 | 320 | 177,8 |
| | 600 | 116 | 320 | 190,5 |
| | 900 | 117 | 320 | 203,1 |
| | 1500 | 118 | 320 | 206,2 |
| | 2500 | 110 | 320 | 232 |
| NPS 5 | 150 | 123 | 320 | 193,5 |
| | 300 | 125 | 320 | 212,6 |
| | 600 | 126 | 320 | 238,3 |
| | 900 | 127 | 320 | 244,3 |
| | 1500 | 128 | 320 | 251 |
| | 2500 | 120 | 320 | 276,1 |
| NPS 6 | 150 | 123 | 320 | 218,9 |
| | 300 | 125 | 320 | 247,3 |
| | 600 | 126 | 320 | 263,7 |
| | 900 | 127 | 320 | 285,7 |
| | 1500 | 128 | 320 | 279,4 |
| | 2500 | 120 | 320 | 314,5 |
| NPS 8 | 150 | 123 | 320 | 279,1 |
| | 300 | 125 | 320 | 304,8 |
| | 600 | 126 | 320 | 318 |
| | 900 | 127 | 320 | 355,6 |
| | 1500 | 128 | 320 | 349,2 |
| | 2500 | 120 | 320 | 384,4 |

Dimensions ASME (k-type): on request