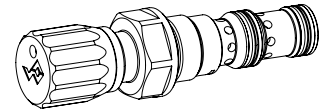


Pressure reducing cartridge

- ◆ pilot operated
- ◆ $p_{\max} = 400 \text{ bar}$
- ◆ $p_{N \text{ red max}} = 350 \text{ bar}$
- ◆ $Q_{\max} = 80 \text{ l/min}$

M22 x 1,5
ISO 7789



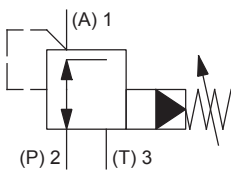
DESCRIPTION

Pilot operated pressure reducing valve in screw-in cartridge construction for cavity according to ISO 7789. The valve reduces the input pressure to an adjustable output pressure. Through the integrated pressure relief function, exceeding the reduced pressure as a result of external forces is avoided. The pressure reducing valve controls the pressure in port A (1). Through increasing the spring tension, the pressure in port A(1) rises. The valve operates practically independently of the pressure in port P (2). Pressure increase in port A (1) to above the adjusted value, e.g. through an active consumer, is avoided by discharging excess oil to the tank (3).

APPLICATION

The integrated pressure relief makes an additional pressure relief valve in the consumer line superfluous. In the case of several consumers, the pressure of the specific consumers can be individually adjusted by the pressure reducing valve. Pressure reducing valves are used to maintain the pressure in a consumer constant independent of pressure fluctuations on the supply side. The screw-in cartridge is perfectly suitable for installation in control blocks. For machining the cartridge cavity in steel and aluminum blocks, cavity tools are available (hire or purchase). Please refer to the data sheets in register 2.13.

SYMBOL



ACTUATION

| | |
|------------------|--|
| Actuation | Adjustment spindle M8 x 1 |
| Execution | S = blockable key adjustment D = blockable knob adjustment Optionally: K = lockable adjustment G = star handle adjustment → see Data sheet 2.0-50 |
| Actuation angle | $\alpha_b = 1800^\circ$ (5 rotations) |
| Actuation stroke | $S_b = 5 \text{ mm}$ |

TYPE CODE

| | | | | | | | | | | | | |
|----------------------------------|---------------------------------|---------------------------------------|----------------------------------|---|--------------------------|------|---|--------------------------|---|--------------------------|---|--------------------------|
| Pressure reducing valve | | | M | V | <input type="checkbox"/> | PM22 | - | <input type="checkbox"/> | - | <input type="checkbox"/> | # | <input type="checkbox"/> |
| Pilot operated | | | | | | | | | | | | |
| Type of adjustment | Key <input type="checkbox"/> | Control knob <input type="checkbox"/> | Cover <input type="checkbox"/> | | | | | | | | | |
| Screw-in cartridge M22 x 1,5 | | | | | | | | | | | | |
| Nominal pressure range p_N | 63 bar <input type="checkbox"/> | 160 bar <input type="checkbox"/> | 350 bar <input type="checkbox"/> | | | | | | | | | |
| Sealing material | NBR <input type="checkbox"/> | FKM (Viton) <input type="checkbox"/> | | | | | | | | | | |
| Design index (subject to change) | | | | | | | | | | | | |

2.2-530

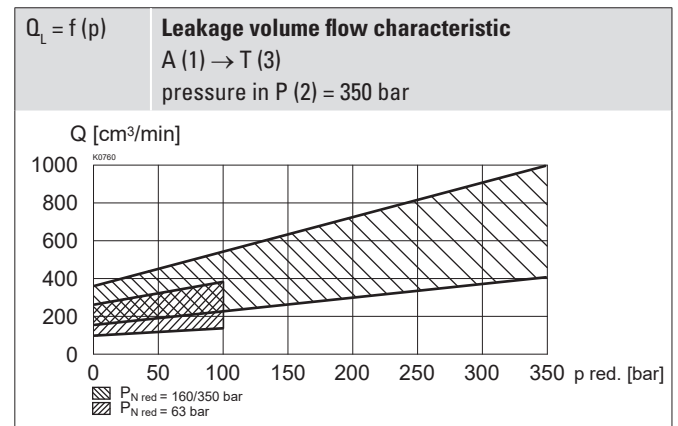
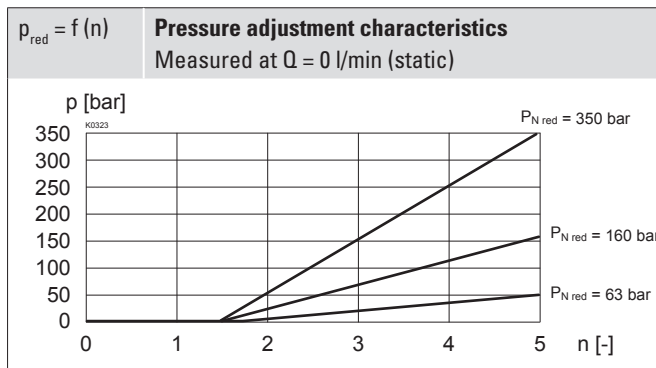
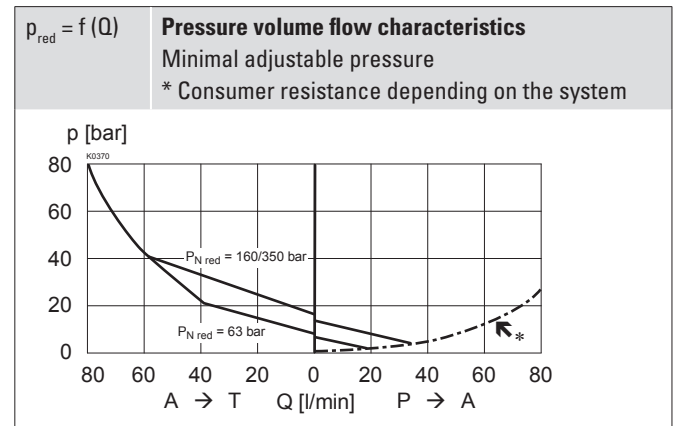
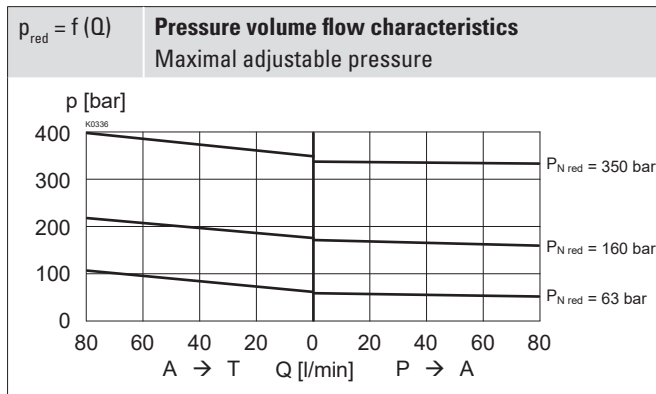
GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Designation | Pressure reducing valve |
| Construction | Pilot operated |
| Mounting | Screw-in cartridge construction |
| Nominal size | M22 x 1,5 according to ISO 7789 |
| Actuation | Manually |
| Ambient temperature | -25...+90 °C |
| Weight | 0,17 kg key adjustment 0,18 kg control knob adjustment 0,22 kg cover |
| MTTFd | 150 years |

HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Working pressure | $p_{max} = 400$ bar |
| Nominal pressure range | $P_{N\ red} = 63$ bar, 160 bar, 350 bar |
| Volume flow range | $Q = 0 \dots 80$ l/min |
| Leakage oil | See characteristics |
| Fluid | Mineral oil, other fluid on request |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Temperature range fluid | -25...+90 °C (NBR) -20...+90 °C (FKM) |
| Contamination efficiency | Class 18 / 16 / 13 |
| Filtration | Required filtration grade $\beta_{10 \dots 16} \geq 75$, see data sheet 1.0-50 |

PERFORMANCE SPECIFICATIONS

 Oil viscosity $\nu = 30$ mm²/s

SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

SURFACE TREATMENT

- ◆ The cartridge body made of steel is zinc-nickel coated
- ◆ The control knob is made of plastic

STANDARDS

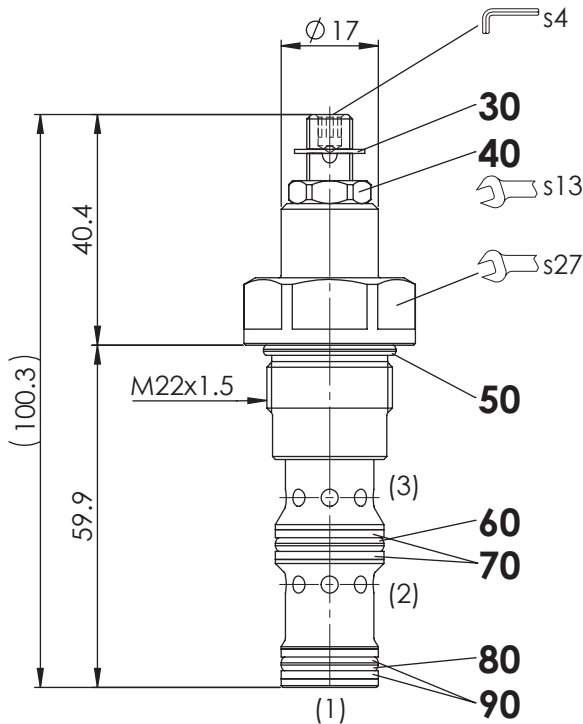
| | |
|--------------------------|----------|
| Cartridge cavity | ISO 7789 |
| Contamination efficiency | ISO 4406 |

INSTALLATION NOTES

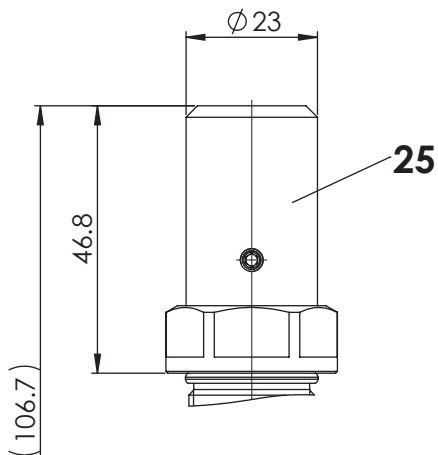
| | |
|-------------------|----------------------------------|
| Mounting type | Screw-in cartridge M22 x 1,5 |
| Mounting position | Any, preferably horizontal |
| Tightening torque | $M_D = 60$ Nm Screw-in cartridge |

DIMENSIONS

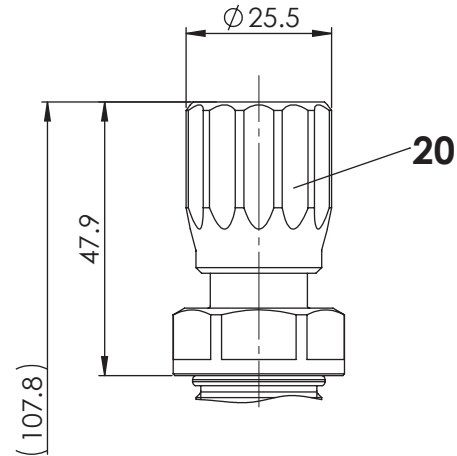
Key adjustment „S”



Cover „A”

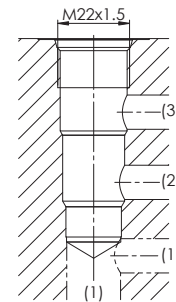


Control knob adjustment „D”



HYDRAULIC CONNECTION

Cavity drawing according to ISO 7789-22-04-0-98



Note!



For detailed cavity drawing and cavity tools see data sheet 2.13-1004

ACCESSORIES

| | |
|--|--------------------|
| Adjustment types for screw-in cartridges | Data sheet 2.0-50 |
| Flange body / sandwich plate NG4-Mini | Data sheet 2.2-620 |
| Flange body / sandwich plate NG6 | Data sheet 2.2-640 |
| Flange body / sandwich plate NG10 | Data sheet 2.2-660 |
| Threaded body | Data sheet 2.9-210 |
| Technical explanations | Data sheet 1.0-100 |
| Filtration | Data sheet 1.0-50 |

PARTS LIST

| Position | Article | Description |
|--------------------------------|------------|-------------------------|
| 20 | 114.2224 | Control knob |
| 25 | 032.0611 | Cover rd 23 / 3 x 35 |
| 30 | 193.1061 | Retainer rd 6 DIN 6799 |
| 40 | 153.1402 | Hexagon nut 0,5d M8 x 1 |
| | 251.2411 | Seal kit MVSPM22 |
| | 251.2417 | Seal kit MVSPM22 D1 |
| Seal kit consisting of: | | |
| 50 | O-ring | ID 18,77 x 1,78 |
| 60 | O-ring | ID 15,60 x 1,78 |
| 70 | Back. ring | PTFE rd 16,1 x 19 x 1,4 |
| 80 | O-ring | ID 14,00 x 1,78 |
| 90 | Back. ring | PTFE rd 14,1 x 17 x 1,4 |

Wandfluh AG Postfach CH-3714 Frutigen
Tel. +41 33 672 72 72 Fax +41 33 672 72 12 sales@wandfluh.com