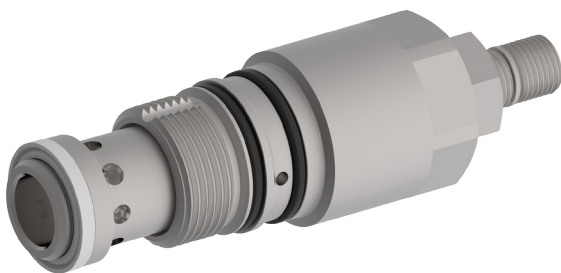


Pressure valve Relief function

$Q_{\max} = 140 \text{ l/min}$, $p_{\max} = 350 \text{ bar}$

mechanically adjustable, pilot operated, spool type

Type series: DVPA-2D-10-...



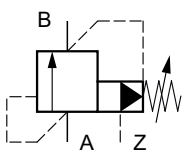
- Screw-in cartridge valve
- For cavity DD
- All external parts with zinc-nickel plating according to DIN EN ISO 19598
- With remote-control port
- Installation in threaded port body type DDY-12
- Seated pilot stage
- Very stable operation
- Responsive pressure adjustment
- Tightening torque not affecting the function

Description

These two-stage pressure relief valves, series DVPA-2D-..., are size 10, screw-in cartridge valves with a seated pilot stage and an M24×1.5 mounting thread. They are designed on the proven sliding-spool principle. The spring chamber is internally drained to port B. Port B should preferably be connected to the tank. To obtain a reliable pressure setting over the entire pressure range, the overall pressure range is divided into different pressure stages. Each pressure range corresponds to a particular spring that allows a certain maximum operating pressure to be set. The pressure

is set by means of an adjusting spindle. All external parts of the screw-in valves are zinc-nickel plated and are thus suitable for use in the harshest operating environments. These valves are mainly used in certain mobile and industrial applications to limit the system pressure. Using the remote-control port, these valves can be remotely controlled or unloaded. Please note that any tank or return-line pressures are additive to the setting. For self-assembly, please refer to the section related data sheets.

Symbol



Technical data

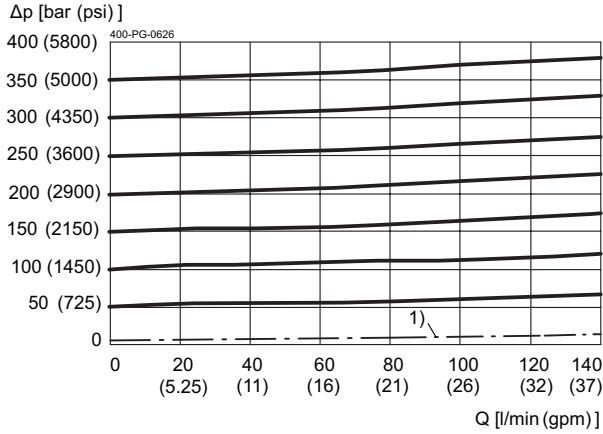
| General characteristics | Description, value, unit |
|------------------------------|---|
| Function group | Pressure valve |
| Function | Relief function |
| Design | Screw-in cartridge valve |
| Controls | mechanically adjustable |
| Characteristic | pilot operated, spool type |
| MTTFd value | 150 years |
| Construction size | NG 10 |
| Thread size | M24×1,5 |
| Mounting attitude | unrestricted |
| Weight | 0.23 kg |
| Cavity acc. factory standard | For cavity DD |
| Tightening torque steel | 65 Nm |
| Tightening torque aluminium | 50 Nm |
| Tightening torque tolerance | ± 10 % |
| Minimum ambient temperature | - 30 °C |
| Maximum ambient temperature | + 80 °C |
| Surface protection | All external parts with zinc-nickel plating according to DIN EN ISO 19598 |
| Sealing material | see ordering code |
| Seal kit order number | NBR: DS-216-N / FKM: DS-216-V |

| Hydraulic characteristics | Description, value, unit |
|--|---|
| Maximum operating pressure | 350 bar |
| Maximum flow rate | 140 l/min |
| Flow direction | see symbol |
| Hydraulic fluid | HL and HLP mineral oil according to DIN 51 524; other fluids on request! |
| Minimum fluid temperature | - 30 °C |
| Maximum fluid temperature | + 80 °C |
| Viscosity range | 10 ... 650 mm ² /s (cSt) |
| Recommended viscosity range | 15 ... 250 mm ² /s (cSt) |
| Minimum fluid cleanliness (cleanliness class according to ISO 4406:1999) | class 20/18/15 |
| Minimum set pressure | 10 bar |
| Maximum set pressure | 350 bar |
| Pressure adjustment range | pressure range L: 1 turn = ca. 13 bar pressure range M: 1 turn = ca. 38 bar pressure range N: 1 turn = ca. 65 bar |

Performance graphs

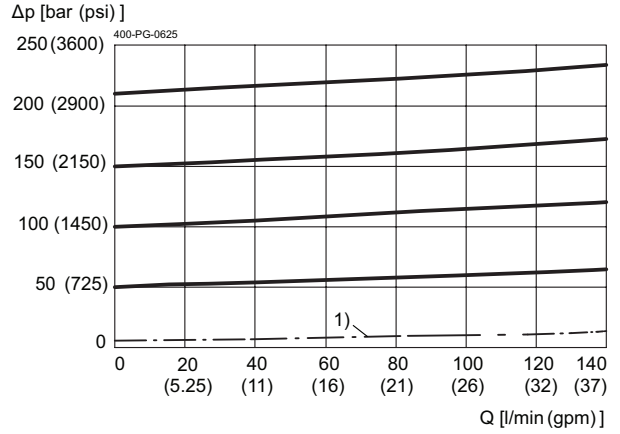
measured with oil viscosity 33.0 mm²/s (cSt)

$\Delta p = f(Q)$ Pressure drop-flow rate characteristic



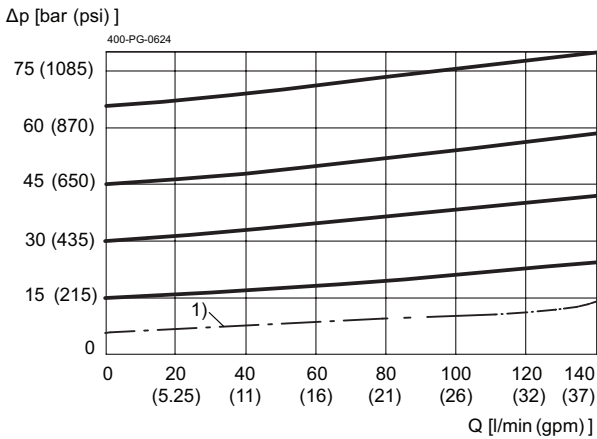
Druckeinstellung Typ N / pressure range type N
 $p_N = 210 \text{ bar (3000 psi)}$
 1) Einsatzgrenze / Application limit

$\Delta p = f(Q)$ Pressure drop-flow rate characteristic



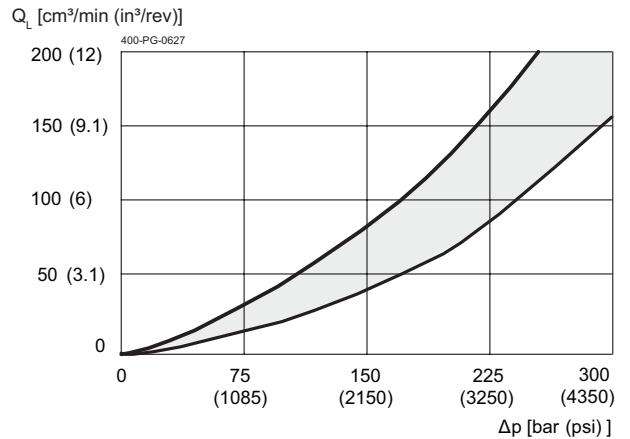
Druckeinstellung Typ M / pressure range type M
 $p_N = 210 \text{ bar (3000 psi)}$
 1) Einsatzgrenze / Application limit

$\Delta p = f(Q)$ Pressure drop-flow rate characteristic



Druckeinstellung Typ L / pressure range type L
 $p_N = 350 \text{ bar (5000 psi)}$
 1) Einsatzgrenze / Application limit

$Q_L = f(I; \Delta p)$ Leakage flow rate

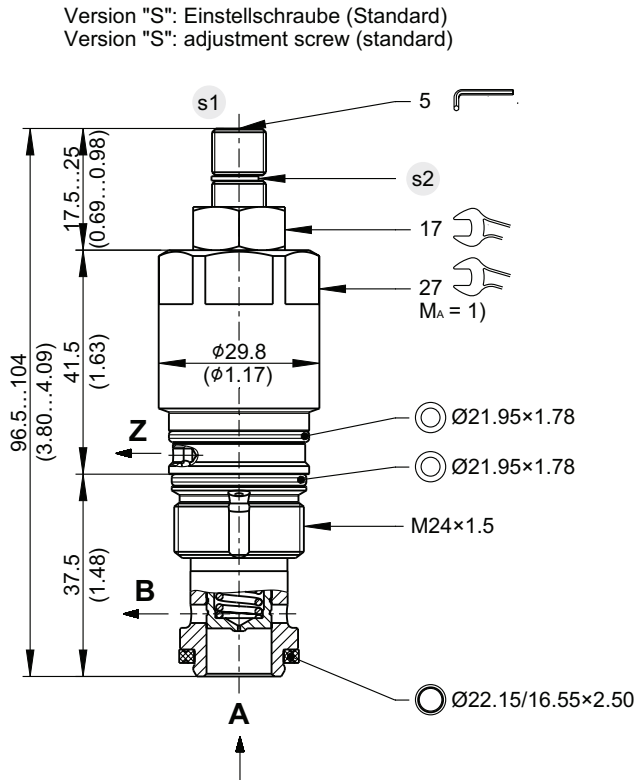


Vorsteuerung geschlossen / pilot control closed

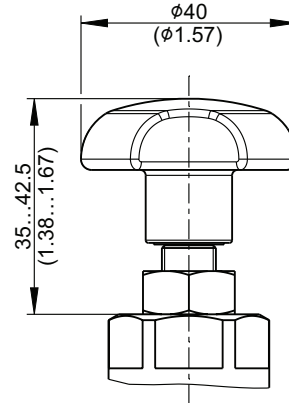
Dimensions and sectional view

Beispiel für die Masseinheit:
Example for the dimensional units:

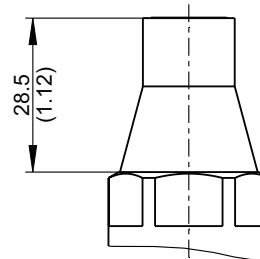
0.79 = 0.79 mm millimeter
(.031) = 0.031" inch



Version "H": Einstellschraube mit Handrad
Version "H": adjustment screw with handknob



Einstellschraube mit Sicherungskappe
adjustment screw with tamper-proof cap



Installation information



ATTENTION!

Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.



NOTE!

Set the required pressure with the adjusting screw (s1). After you have set the valve, lock the adjusting screw (s1) with the lock nut.



NOTE!

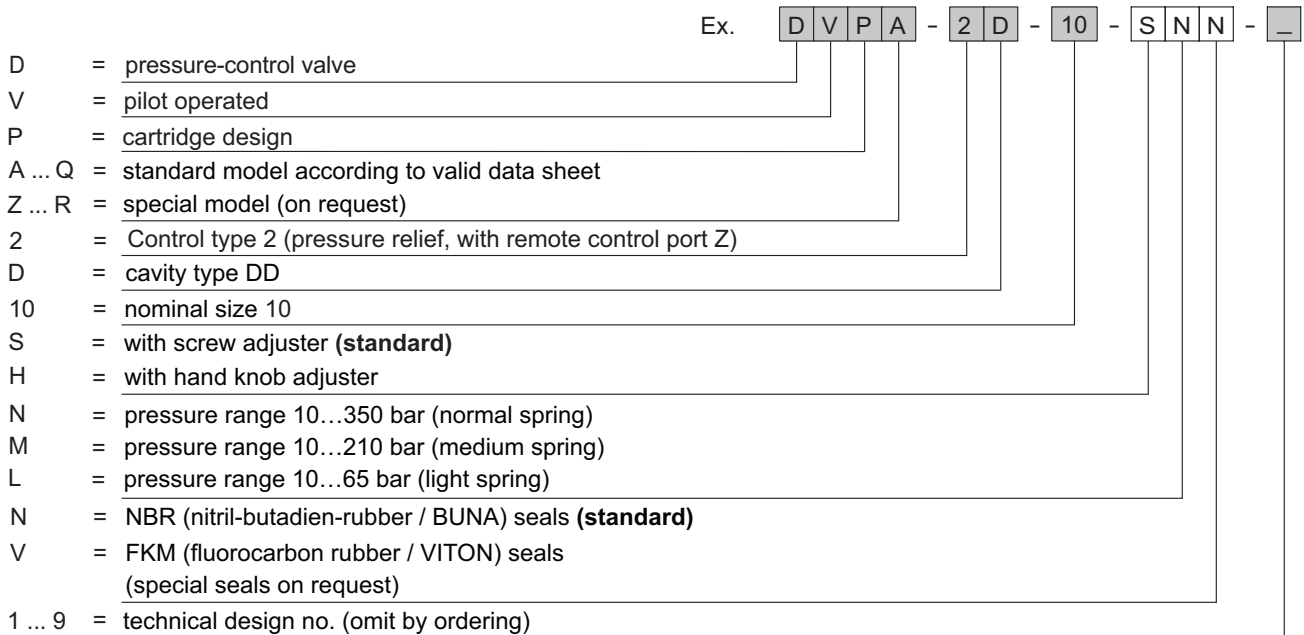
1) When fitting the screw-in cartridge valve, use the specified tightening torque. The value can be found in the chapter "Technical data".



NOTE!

The seals are not available individually. The seal kit order number can be found in the chapter "Technical data".

Ordering code



IMPORTANT!

When required, the tamper-proof cap (the adjustment seal) must be ordered separately in plain language.

Related data sheets

| Reference | Description |
|--------------|---------------------------|
| 400-P-040011 | Form tools |
| 400-P-060121 | Cavity DD |
| 400-P-740112 | Threaded port body DDY-12 |