BUCHER hydraulics

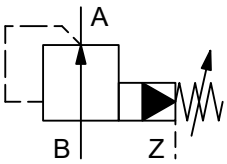
# Pressure valve
# Reducing function

$Q_{max}$ = 120 l/min, $p_{max}$ = 350 bar
Pilot operated, spool type, mechanically adjustable
Type series: DRPA-5D-10-...



- Screw-in cartridge valve for cavity DD
- All external parts with zinc-nickel plating according to DIN EN ISO 19598
- Installation in threaded port body type DDY-12
- 2-way with external oil drain
- Very stable operation
- Tightening torque not affecting the function
- Also available as stack valve
- Seated pilot stage

## Symbol




## Description

These two-stage pressure valves, series DRPA-5D-10-..., 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 drained with an additional connection. The pressure applied to the secondary connection has no influence on the setting of the valve. To obtain a reliable pressure setting over the entire pressure range, the overall pressure range is divided into different pressure levels. These valves are mainly used in certain mobile and industrial applications to reduce the system pressure. 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. For installation and further information, please refer to the section related data sheets.

## Technical data

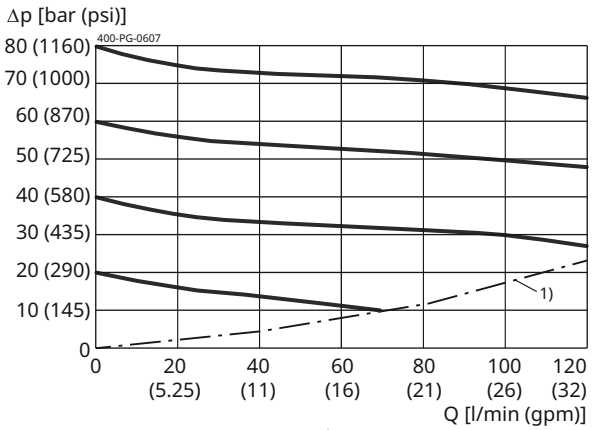
| General characteristics | Description, value, unit |
|---|---|
| Function group | pressure valve |
| Function | reducing function |
| Design | screw-in cartridge valve |
| Controls | mechanically adjustable |
| Characteristic | pilot operated, spool type |
| Construction size | NG 10 |
| Thread size | M24×1,5 |
| Mounting attitude | unrestricted |
| Weight | 0.23 kg |
| Cavity acc. factory standard | 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 | 120 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 |
| Pilot-oil consumption | A to Z: ca. 0.3 l/min |
| Minimum set pressure | 10 bar |
| Maximum set pressure | 350 bar |
| Pressure adjustment range | pressure range L: 1 turn. = ca. 13 bar<br>pressure range M: 1 turn = ca. 38 bar<br>pressure range N: 1 turn = ca. 65 bar |

## Performance graphs

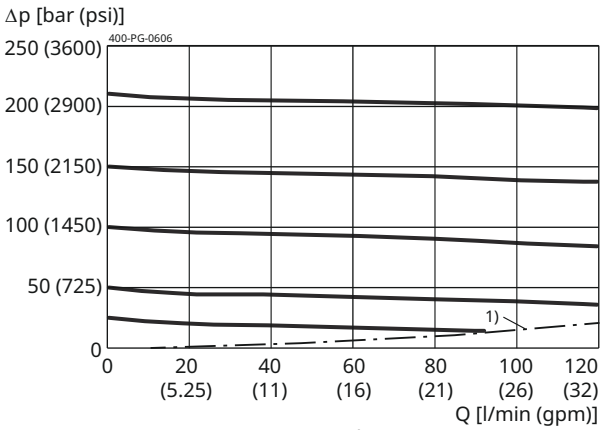
measured with oil viscosity 33.0 mm²/s (cSt)

### Δp = f (Q) Pressure drop-flow rate characteristic



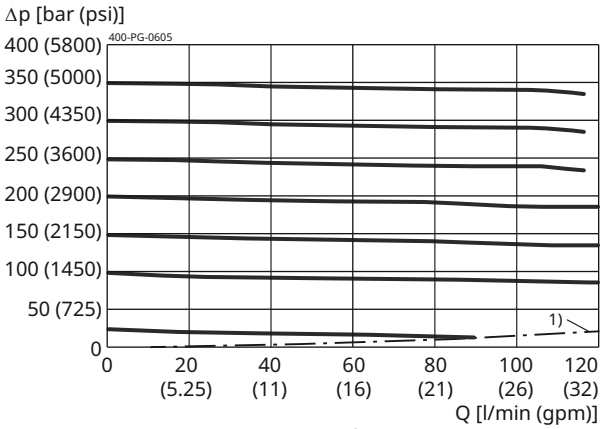

pressure range L: 10...65 bar (145...940 psi)
1) = Application limit

### Δp = f (Q) Pressure drop-flow rate characteristic




pressure range M: 10...210 bar (145...3000 psi)
1) = Application limit

### Δp = f (Q) Pressure drop-flow rate characteristic



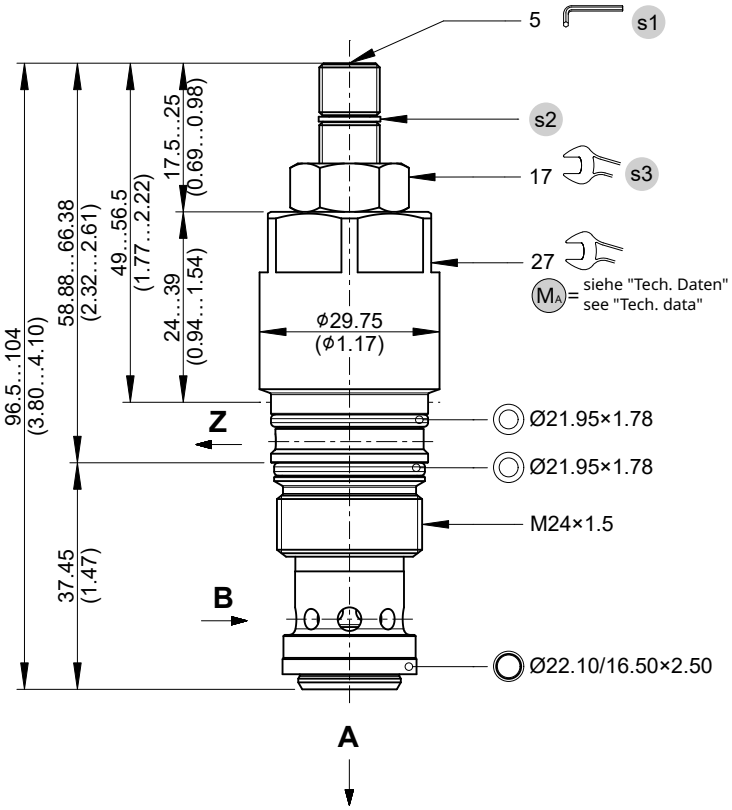

pressure range N: 10...350 bar (145...5000 psi)
1) = Application limit

## Installation

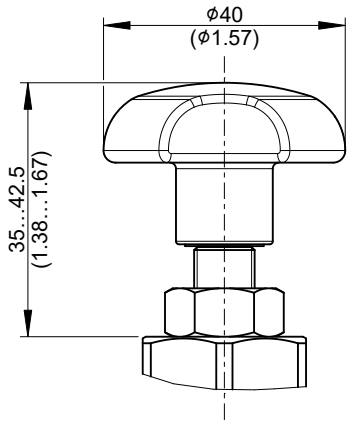
**Beispiel für die Masseinheit:**
**Exampel for the dimensional units:**

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

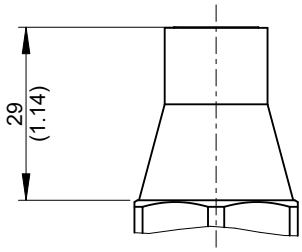
Version "S": Einstellschraube mit Innensechskant (Standard)
Version "S": adjustment screw with internal hexagon (standard)




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




Einstellschraube mit Sicherungskappe
adjustment screw with tamper-proof cap




**ATTENTION!**
Only qualified personnel with mechanical skills may carry out the following work:

- installation and, if necessary, adjustment.
- inspection and, if necessary, replacement of the seals shown in the illustration. New seals must only be installed after being oiled or greased (seal kit; see "Technical Data").

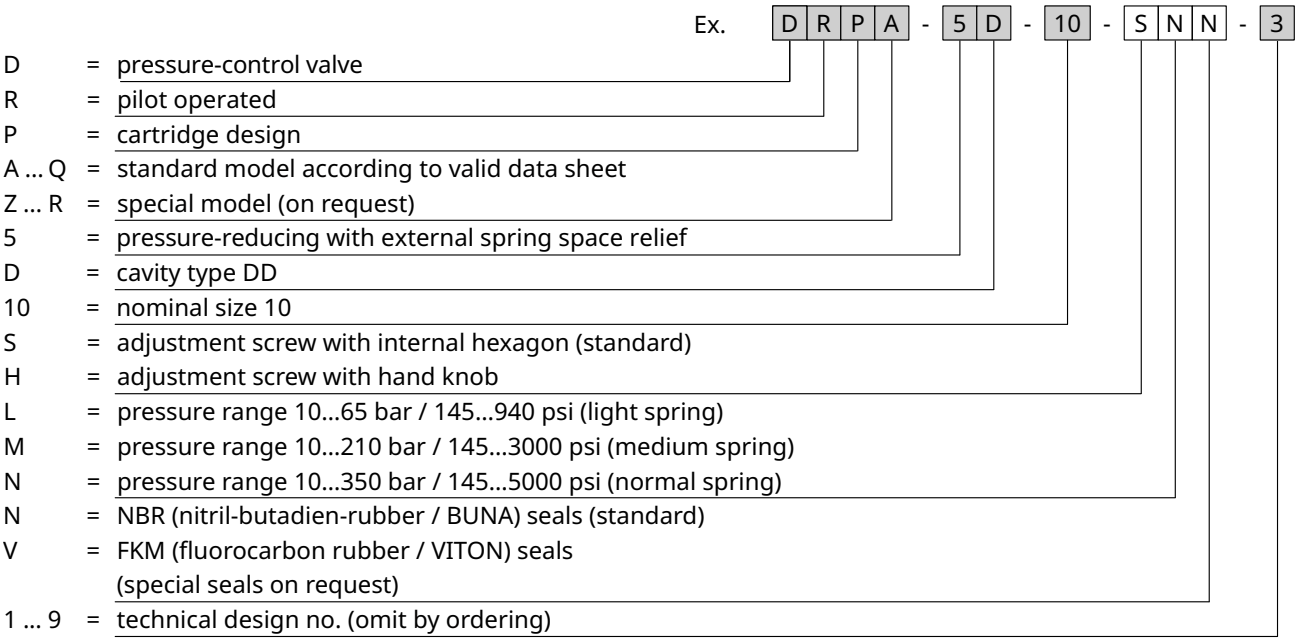
**NOTE!**

- Observe tightening torque MA .

**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!**
Valve settings can be sealed by fitting the tamper-proof cap. To fit the cap, the snap ring s2 has to be removed. Subsequent adjustment is only possible by destroying the tamper-proof cap.

## 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 |

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