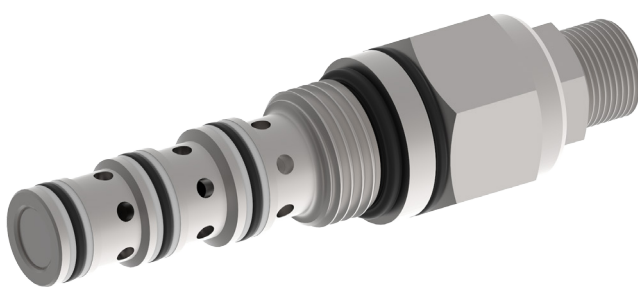


Directional valve 3-way/2-position

$Q_{max} = 46 \text{ l/min}$, $p_{max} = 350 \text{ bar}$

direct acting, spool type, hydraulic operation

Type series: DCPS-10-_-H-...



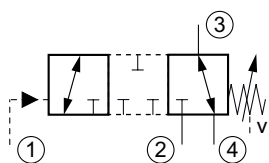
- Screw-in cartridge valve
- For cavity C1040
- All external parts zinc plated, chromited (CrVI-free)
- Installation in threaded port body type B1040
- Hardened precision fitted spool and sleeve provides reliable, long life
- Closed center transition
- The spring chamber is vented (V) to atmosphere
- This valve has a fixed or an adjustable bias spring
- A unibody cage construction provides very low hysteresis, dependable and reliable operation
- Adjustment screw can not be backed out of the valve

Description

This unit is a direct acting, screw-in cartridge style, spool type, hydraulic 3-way directional control element, requiring remote pilot actuation. This valve allows flow from port 3 to port 4 with a spring biased spool. Port 2 is blocked. The spool will shift when pilo-

ted at port 1 with sufficient pressure to overcome the spring bias and allow flow from port 3 to port 2. "V" spring chamber is vented to atmosphere. This valve shifts in a closed center position.

Symbol



Technical data

| General Characteristics | Description, value, unit |
|---|---|
| Function group | Directional valve |
| Function | 3-way/2-position |
| Design | Screw-in cartridge valve |
| Controls | hydraulic operation |
| Characteristic | direct acting, spool type |
| Transition/central position of spool/piston | zero or positive overlap (closed) |
| Construction size | SAE 10 / nominal size 8 |
| Thread size | 7/8-14 UNF-2A |
| Mounting attitude | unrestricted |
| Weight | 0.21 kg |
| Cavity acc. factory standard | For cavity C1040 |
| Tightening torque steel | 77.5 Nm |
| Tightening torque aluminium | 50.5 Nm |
| Tightening torque tolerance | ± 5 % |
| Minimum ambient temperature | - 40 °C |
| Maximum ambient temperature | + 120 °C |
| Surface protection | All external parts zinc plated, chromited (CrVI-free) |
| Available seal types | several seal types available, see ordering code |
| Seal kit order number | NBR: SKN-10452 / FKM: SKV-10452 |

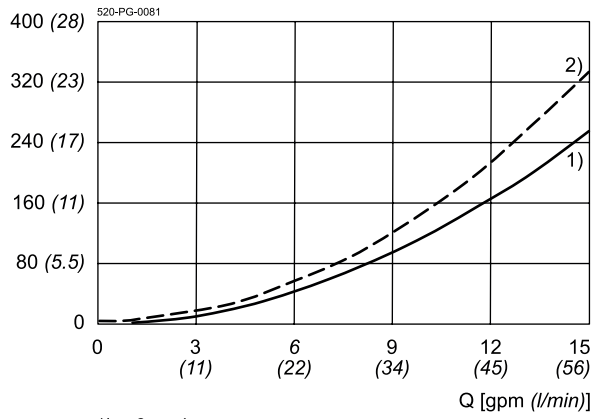
| Hydraulic Characteristics | Description, value, unit |
|--|---|
| Maximum operating pressure | 350 bar |
| Maximum flow rate | 46 l/min |
| Flow direction | see symbol |
| Hydraulic fluid | All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc. |
| Minimum fluid temperature | - 25 °C |
| Maximum fluid temperature | + 80 °C |
| Viscosity range | 10 ... 500 mm ² /s (cSt) |
| Recommended viscosity range | 20 ... 130 mm ² /s (cSt) |
| Minimum fluid cleanliness (cleanliness class according to ISO 4406:1999) | class 18/16/13 |
| Minimum set pressure | 5.3 bar |
| Maximum set pressure | 14 bar |
| Internal leakage flow rate | 82 cc/min at 350 bar |
| Pilot operating media | hydraulic fluid |

Performance graphs

measured with oil viscosity 28.5 mm²/s (cSt)

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

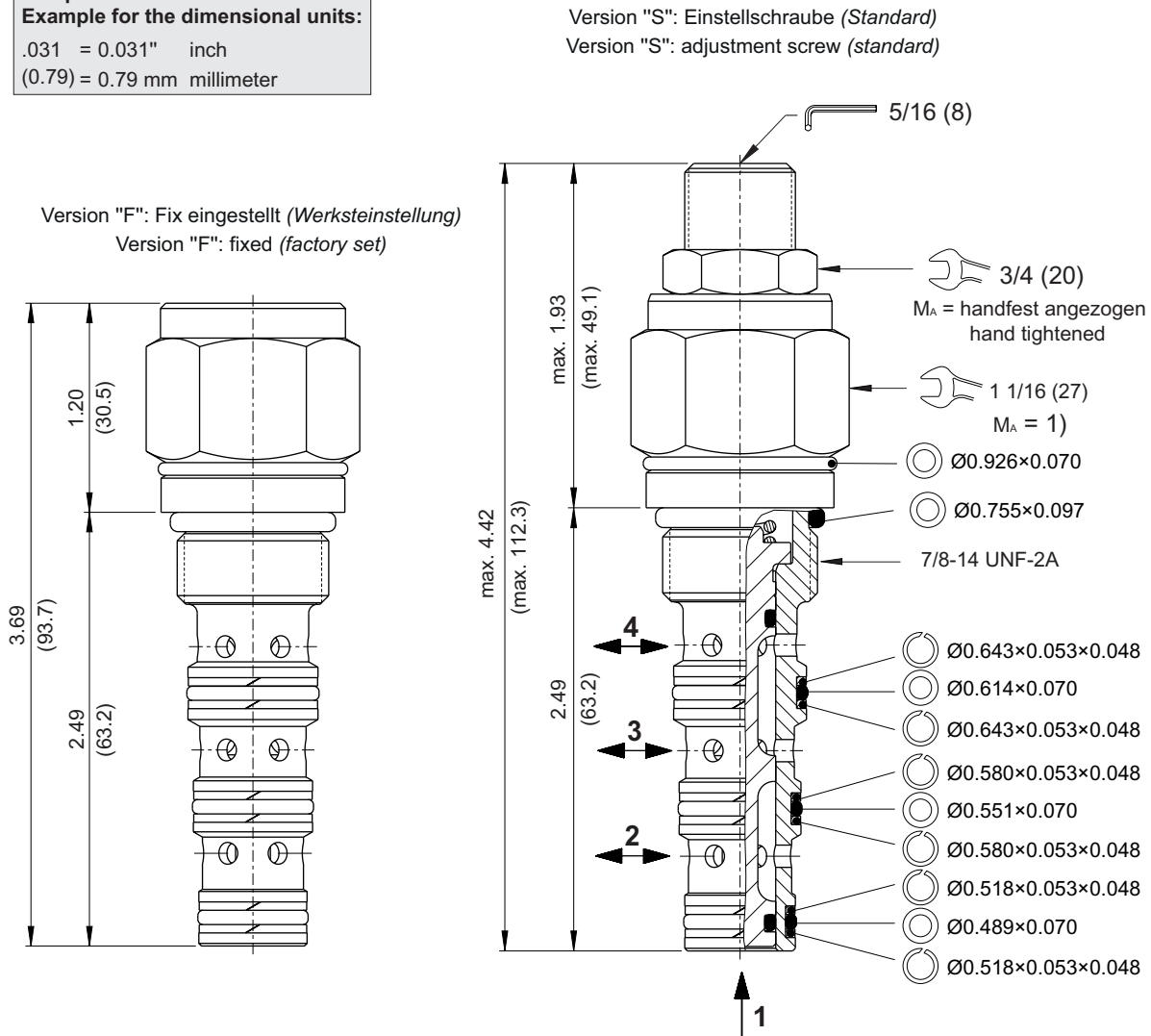
Δp [psi (bar)]



1) = 3 → 4
2) = 3 → 2

Dimensions and sectional view

Beispiel für die Masseinheit:
Example for the dimensional units:
.031 = 0.031" inch
(0.79) = 0.79 mm millimeter



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!

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

e.g. **DCPS** - **10** - **N** - **H** - **F** - **0** - **075**

- DCPS = directional control valve, direct acting, cartridge design
- 10 = nominal size SAE 10 / NG 08
- N = NBR (nitril-butadien-rubber / BUNA) seals (*standard*)
- V = FKM (fluorocarbon rubber / VITON) seals (*special seals - please consult BUCHER*)
- H = spool type "H"
- F = fixed (factory set)
- S = adjusting screw
- C = capped
- T = tamperproof
- K = handknob
- M = metal handknob
- 0 = screw-in cartridge only
- 06TA = line-mounting body aluminum SAE #06 ports
- 06TS = line-mounting body steel SAE #06 ports
- 08TA = line-mounting body aluminum SAE #08 ports
- 08TS = line-mounting body steel SAE #08 ports
- 075 = pressure setting bias spring 75 psi (fixed)
- 100 = pressure setting bias spring 100 psi (fixed)
- 200 = pressure range setting 75...200 psi (adjustable)

Related data sheets

| Reference | Description |
|--------------|----------------------------|
| 520-P-000050 | Form tools |
| 520-P-000420 | Cavity C1040 |
| 520-P-000421 | Threaded port body B1040 |
| 520-P-000500 | Adjustment Control Options |