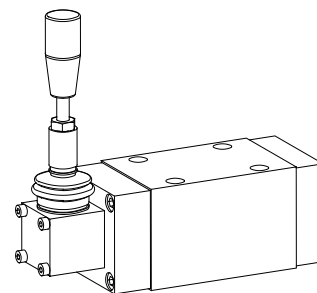


Poppet valve manually operated

- 2/2-, 3/2- and 3/4-way construction
- $Q_{max} = 80 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG10
ISO 4401-05

DESCRIPTION

Poppet valve, flanged design NG10 according to ISO 4401-05, available as a 2/2 or 3/2-way valve (normally open or closed) and as a 3/4-way valve (normally closed). The central functioning element of all directly controlled poppet valves in the NG10 series is the poppet valve cartridge NG10. See data sheet 1.11-2040.

FUNCTION

The valve is manual lever which in turn either opens or closes the poppet. The design of the poppet spool, which is equal in surface area on both sides and thus pressure balanced, means there are no undue opening and closing hydraulic forces. Due to this the oil flow through the poppet valve is possible in both directions. The valve is tight in both flow directions.

APPLICATION

Wandfluh poppet valves can be used anywhere absolutely leak tight closing functions are important. Completely sealed loading, gripping and clamping operations are all important functions which Wandfluh poppet valves can perform. Cartridge type poppet valves can be neatly accommodated in valve blocks. From a mechanical and functional point of view, poppet valves can replace slide valves at any time.

TYPE CODE

| | | | | | | | | |
|--------------------------------------|---|-----------------|--------------------------|-----------------------------|----|--------------------------|---|--------------------------|
| 2/2- or 3/2-way construction | A | H | <input type="checkbox"/> | 2 | 10 | <input type="checkbox"/> | # | <input type="checkbox"/> |
| 3/4-way construction | A | H | 3 | 4 | 10 | | # | <input type="checkbox"/> |
| International standard interface ISO | | | | | | | | |
| Lever | | | | | | | | |
| 2-way (connections) | | | | <input type="checkbox"/> 2 | | | | |
| 3-way (connections) | | | | <input type="checkbox"/> 3 | | | | |
| 2 position | | | | | | | | |
| 4 position | | | | | | | | |
| Nominal size 10 | | | | | | | | |
| Normally closed | | Level on A-side | | <input type="checkbox"/> 1a | | | | |
| Normally open | | Level on B-side | | <input type="checkbox"/> 0b | | | | |
| Design-Index (Subject to change) | | | | | | | | |

GENERAL SPECIFICATIONS

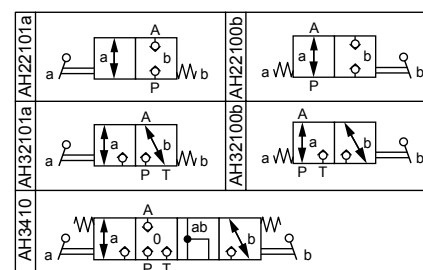
| | |
|-----------------------|--|
| Description | 2/2-, 3/2- and 3/4-way poppet valve |
| Nominal size | NG10 acc. to ISO 4401-05 |
| Construction | Direct operated poppet valve |
| Operations | manually operated |
| Mounting | Flange, 4 mounting holes for socket head screws M6x65 |
| Connections | Threaded connection plates Multi-flange subplates Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any, preferable horizontal |
| Fastening torque | $M_D = 9,5 \text{ Nm}$ (quality 8,8) |
| Weight: 2/2-, 3/2-way | $m = 3,6 \text{ kg}$ |
| 3/4-way | $m = 4,4 \text{ kg}$ |
| Volume flow direction | any (see characteristics) |

CONTROL MECHANICAL

| | |
|-------|---|
| Force | $F_{b \max} = 20-120 \text{ N}$ (depending on flow direction and pressure) |
| Angle | $\alpha_b = 11^\circ$ |

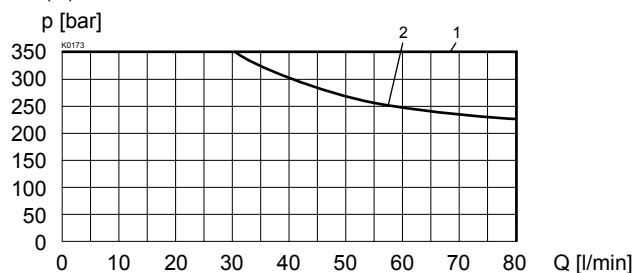
HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | $12 \text{ mm}^2/\text{s} \dots 320 \text{ mm}^2/\text{s}$ |
| Fluid temperature | -20 ... +70 °C |
| Working pressure | $p_{max} = 350 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 80 \text{ l/min}$ see characteristics |

SYMBOLS


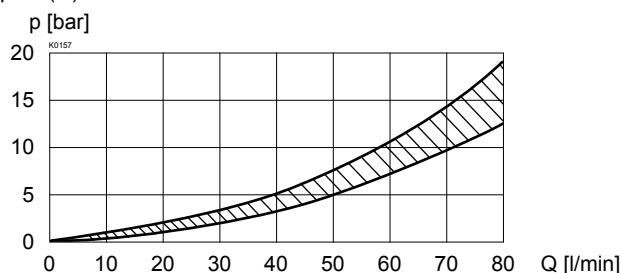
CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$p = f(Q)$ Performance limit



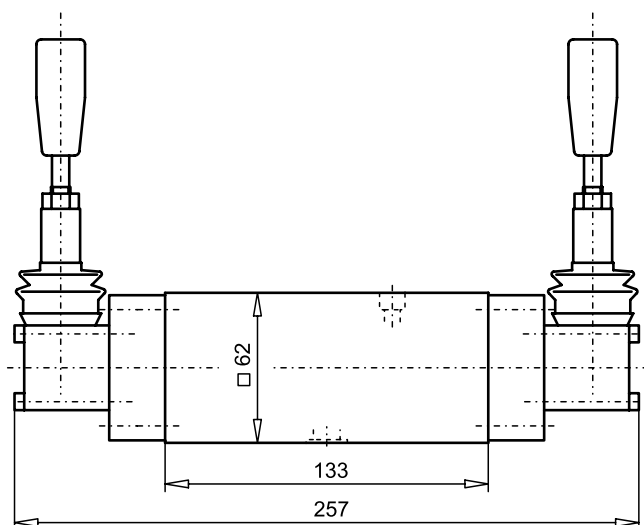
| Type | Flow direction | | | |
|----------|----------------|-------|-------|-------|
| | P - A | A - T | A - P | T - A |
| AH22101a | 1 | - | 1 | - |
| AH22100b | 1 | - | 2 | - |
| AH32101a | 1 | 2 | 1 | 1 |
| AH32100b | 1 | 1 | 2 | 1 |
| AH3410 | 1 | 1 | 1 | 1 |

$\Delta p = f(Q)$ Pressure loss/flow characteristics



DIMENSIONS

3/4-way poppet valve



PARTS LIST

| Position | Artikel | Beschreibung |
|----------|----------|-------------------------------------|
| 10 | 253.2000 | Manual pilot head BHII |
| 20 | 074.2813 | Flange |
| 40 | 059.2200 | Cover |
| 50 | 246.1140 | Socket head cap screw M4x40 DIN 912 |
| 55 | 246.3125 | Socket head cap screw M6x25 DIN 912 |
| 60 | 246.3121 | Socket head cap screw M6x20 DIN 912 |
| 70 | 160.2140 | O-ring ID 14x1,78 |

ACCESSORIES

Threaded connection plates, Multi-flange subplates and Longitudinal stacking system see Register 2.9

Technical explanation see data sheet 1.0-100

2/2-way poppet valve

3/2-way poppet valve

