

Poppet valve

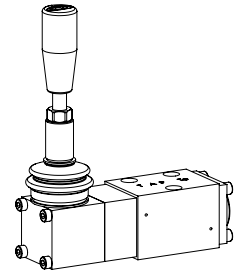
Flange construction

- ◆ hand operated
- ◆ 2/2-, 3/2- und 3/4-way
- ◆ normally open and normally closed
- ◆ $Q_{max} = 15 \text{ l/min}$
- ◆ $p_{max} = 350 \text{ bar}$

DESCRIPTION

Direct operated 2/2-, 3/2 and 3/4-way poppet valve in flange construction. By means of the hand lever, the poppet valve spool is opened or closed acting against the spring. Due to the poppet spool construction with pressure compensation on both sides, the flow through the valve is possible in both directions. The seat spool guide is sealed by means of an O-ring. The metallic sealing seat closes the valve virtually leak free.

NG4-Mini Wandfluh standard

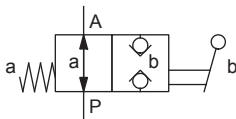


APPLICATION

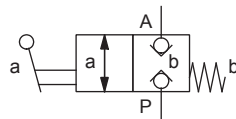
Poppet valves are used where tight closing functions of the valve are essential like leakage-free load holding, clamping or gripping. Miniature valves are used where both, reduced dimensions and weight are important.

SYMBOL

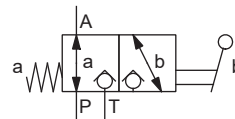
BH22040b



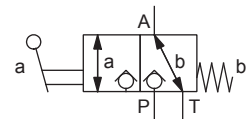
BH22041a



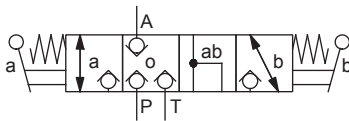
BH32040b



BH32041a



BH3404



TYPE CODE

2/2 or 3/2 way execution
3/4 way execution

B H ☐ 2 04 ☐ - ☐ # ☐
B H 3 4 04 - ☐ # ☐

Mounting interface according to Wandfluh standard

Hand lever

2 way (connections)
3 way (connections)

☐ 2
☐ 3

2 switching positions
4 switching positions

Nominal size 4-Mini

Normally closed
Normally open

Hand lever on A-side
Hand lever on B-side

☐ 1a
☐ 0b

Sealing material

NBR ☐
FKM (Viton) ☐ D1

Design index (subject to change)

1.11-5120

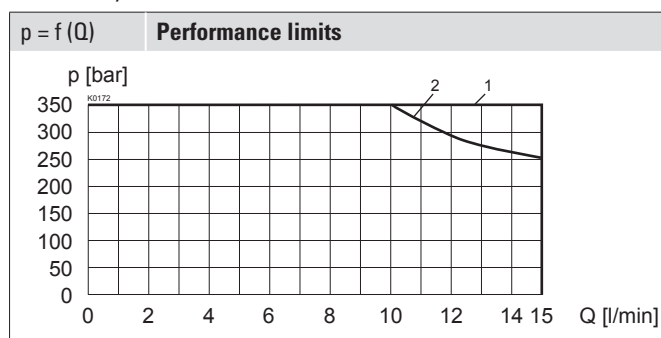
GENERAL SPECIFICATIONS

Designation	2/2-, 3/2- and 3/4-way poppet valve
Construction	Direct operated
Mounting	Flange construction
Nominal size	NG4-Mini according to Wandfluh standard
Actuation	Hand operated
Ambient temperature	-25...+70 °C (NBR) -20...+70 °C (FKM)
Weight	0,95 kg (2/2- and 3/2-way) 1,45 kg (3/4-way)
MTTFd	150 years

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{\max} = 350 \text{ bar}$
Maximum volume flow	$Q_{\max} = 15 \text{ l/min}$, see characteristic
Volume flow direction	Any (see characteristic)
Leakage oil	Seat tight, max. 0,05 ml / min (approx. 1 drop / min) at 30 cSt
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm ² /s...320 mm ² /s
Temperature range fluid	-20...+70 °C
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade $\beta_{10} \dots 16 \geq 75$, see data sheet 1.0-50

PERFORMANCE SPECIFICATIONS

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


Type	Flow direction			
	P - A	A - T	A - P	T - A
BH22041a	1	-	1	-
BH22040b	1	-	2	-
BH32041a	1	2	1	1
BH32040b	1	1	2	1
BH3404	1	1	1	1

ACTUATION

Actuation	Hand lever
Actuation angle	$\alpha = 5^\circ$
Actuation force	$F_b = 20 - 120 \text{ N}$ (depending on flow direction and pressure)

STANDARDS

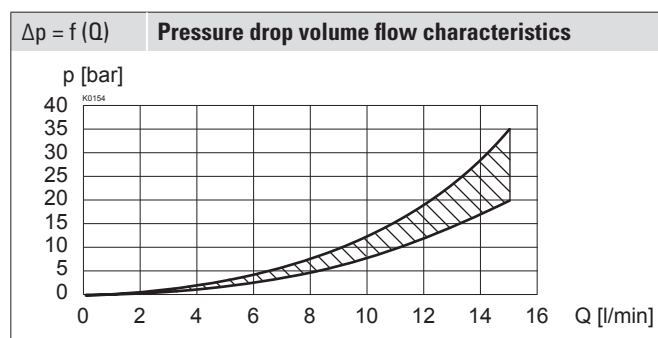
Mounting interface	Wandfluh standard
Contamination efficiency	ISO 4406

ACCESSORIES

Fixing screws	Data sheet 1.0-60
Threaded subplates	Data sheet 2.9-10
Multi-station subplates	Data sheet 2.9-50
Module type manifold blocks	Data sheet 2.9-90
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

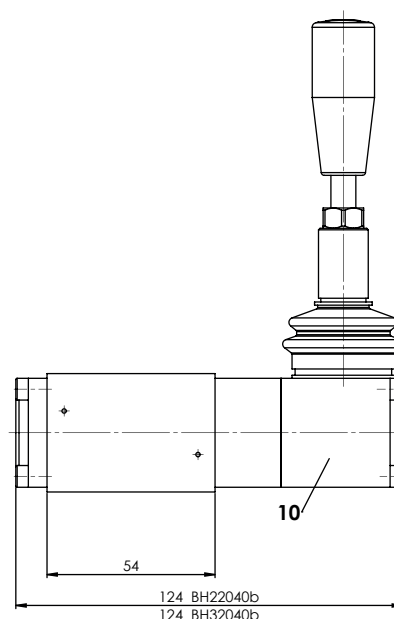
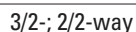
SURFACE TREATMENT

- ◆ The valve body is painted with a two component paint
- ◆ The hand lever housing, the screws and the cover are zinc coated

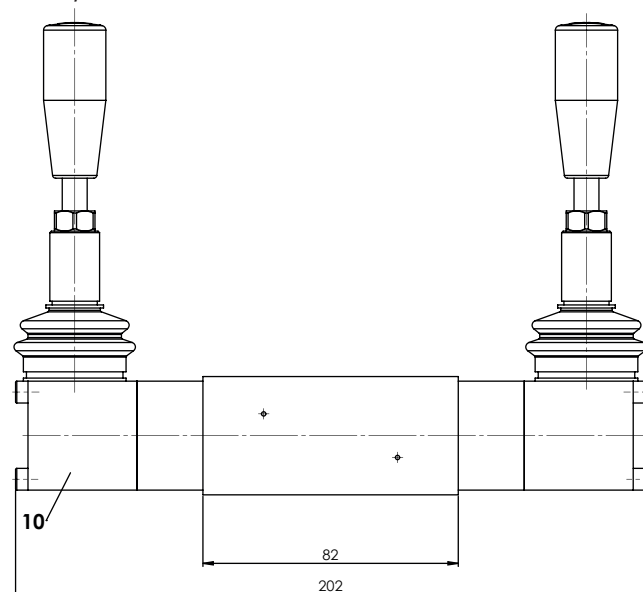


The central functioning element is the poppet valve cartridge NG4, data sheet 1.11-2020.

3/2-; 2/2-way



3/4-way



Position	Article	Description
10	253.2000	Hand control head BHII
20	074.2703	Flange square
40	057.4201	Cover
50	249.1007	Socket head screw M4 x 63 DIN 912
60	246.1113	Socket head screw M4 x 12 DIN 912
70	160.2052	O-ring ID 5,28 x 1,78 (NBR)
	160.6052	O-ring ID 5,28 x 1,78 (FKM)

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

Mounting type	Flange mounting 3 fixing holes for socket head screws M5 x 40
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_0 = 5,2 \text{ Nm}$ (screw quality 8.8, zinc coated)

Note!



The length of the fixing screw depends on the base material of the connection element.

HYDRAULIC CONNECTION

