

Directional seated valves type BVG, BVE, BVP and NBVP

The directional cone seated valves types BVG, BVE, and BVP are 2/2- and 3/2-way directional valves which are available in two sizes. Size 1 valves feature optionally a version with industrial standard connection pattern NG6 (type NBVP) and a version with 4/3-way function. All ports are equally pressure resistant due to an internal, static pressure balance. The valves may be connected directly via pipes (type BVG), mounted at customer furnished manifolds (type BVP and BVE) or industrial standard sub-plates (type NBVP). Various actuation modes (BVE only with solenoid actuation) enable use of these valves in a wide field of applications. Additional elements for ports P, R, A, and B (e.g. screw-in orifices, restrictor check valves) can be incorporated in the valve body and allow tailoring the valve exactly to the special requirements of the customer.

Features and benefits:

- Zero leakage seated cone design
- Pressure switch directly mounted
- Combination with compact hydraulic power packs result in cost efficient turn-key solutions
- Versions conforming ATEX

Intended applications:

- Machine tools
- Woodworking and processing machines
- Testing machines



Nomenclature: Directional seated valve, zero leakage

Design: Individual valve for pipe connection
Individual valve,
Manifold mounting

Actuation: Solenoid
Hydraulic
Pneumatic
Manual

p_{max}: 400 bar

Q_{max}: 20 ... 70 lpm

Design and order coding example

BVG1 - R /B2 - 1/4 - WGM 230

Actuations Solenoid, hydraulic, pneumatic, manually

Connection size or connection block

Additional elements

- Orifice in one port
- NBVP: Orifice and/or check valve in gallery P, orifice, restrictor check valve and/or pressure switch at A, B, return pressure stop in T

Function

- 2/2-way directional valve (R, S), also with lift monitoring (RK, SK)
- 3/2-way directional valve (Z, Y), also with lift monitoring (ZK)
- 4/3-way directional valve (G, D)

Basic type, size

Type BVG and BVP, size 1 and 3
Type BVE, size 1, 3 and 5
Type NBVP (with industrial standard connection pattern NG 6), size 1

Actuations:

Solenoid



Voltage of the actuation solenoids: 12V DC, 24V DC, 110V AC, 230V AC

- BVP 1, NBVP16 also available version conforming ATEX
- Version with M12-plug and 8-Watt-solenoid

Hydraulic



Control pressure:

p_{contr. min} = 24 bar
p_{contr. max} = 320 bar

Pneumatic



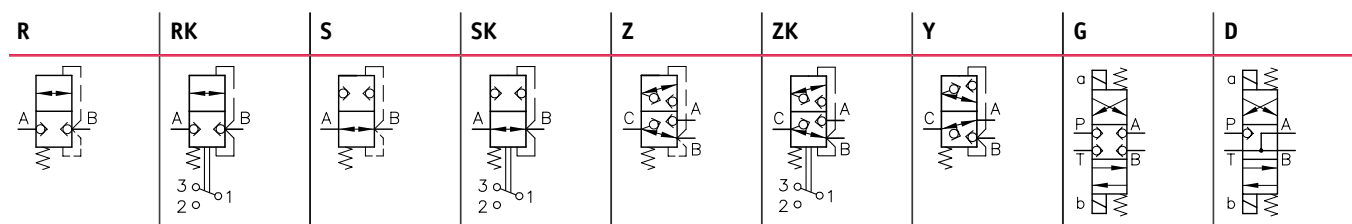
Control pressure::
p_{contr. min} = 2 ... 3.5 bar
p_{contr. max} = 15 bar

Manually



Actuation torque:
approx. 1.5 ... 3 Nm

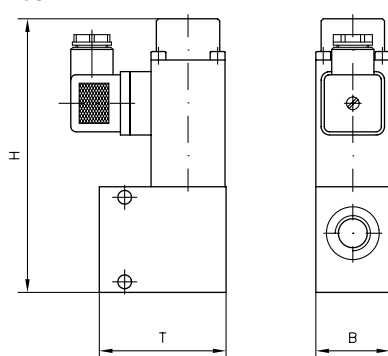
Function



- Additional flow pattern symbols available
- **G, D:** only type NBVP16

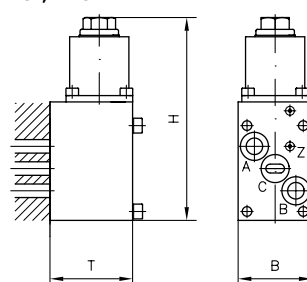
General parameters and dimensions

BVG



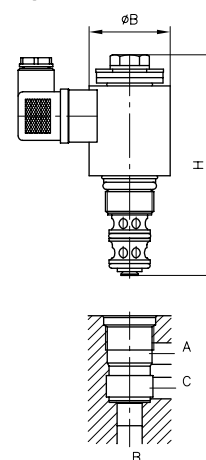
For pipe connection
(solenoid actuation)

BVP, NBVP



For manifold mounting
(hydraulic actuation)

BVE



| | Q _{max} [lpm] | p _{max} [bar] | Ports (BSPP) | Dimensions [mm] | | | m _{max} [kg] |
|----------------|------------------------|-------------------------|--------------|------------------|------------------|------------------|-----------------------|
| | | | | H _{max} | B _{max} | T _{max} | |
| BVG 1 | 20 | 400 / 250 ¹⁾ | G 1/4, G 3/8 | 115 (130) | 60 | 40 | 1.6 |
| BVP 1 | | | | | 35 | 39 | 1.0 |
| NBVP 16 | 20 | 400 / 250 ¹⁾ | NG 6 | 230 | 45 | 45 | 2.1 |
| BVG 3 | 50 | 320 | G 1/2 | 145 | 80 | 50 | 3.3 |
| BVP 3 | | | | | 50 | 76 | 2.4 |
| BVE 1 | 20 | 500 | - | 121 | 37 | - | 0.4 |
| BVE 3 | 70 | 400 | - | 122.5 | 45 | - | 0.7 |
| BVE 5 | 300 | 400 | - | 206.5 | 72 | - | 1.5 |

¹⁾ With electrical actuation: GM.. and WGM

- BVE 3: Cartridge valve, also available with connection block for pipe connection

Associated technical data sheets:

Directional seated valves

- Type BVG, BVP: **D 7400**
- Type BVG1, BVP1: **D 7765**
- Type BVE: **D 7921**
- Type NBVP: **D 7765 N**

Products:

- Type BA: **page**
- Type NZP: **page**
- Type BVH: **page**

Plugs:

- With LED etc.: **D 7163**
- With economy circuit: **D 7813, D 7833**