

# 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<sub>max</sub>:** 400 bar

**Q<sub>max</sub>:** 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<sub>contr. min</sub> = 24 bar  
p<sub>contr. max</sub> = 320 bar

#### Pneumatic



Control pressure::

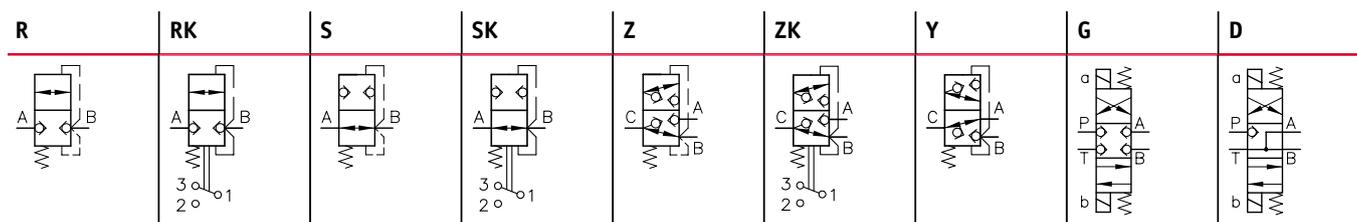
p<sub>contr. min</sub> = 2 ... 3.5 bar  
p<sub>contr. max</sub> = 15 bar

#### Manually



Actuation torque:  
approx. 1.5 ... 3 Nm

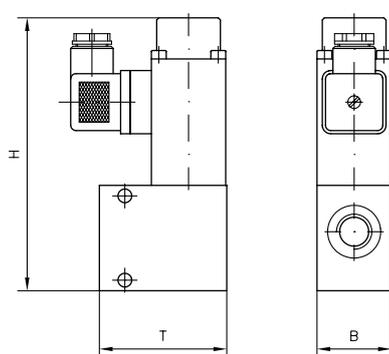
## Function



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

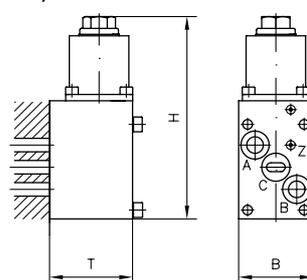
## General parameters and dimensions

### BVG



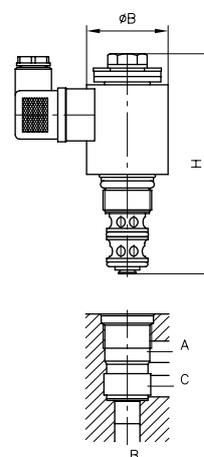
For pipe connection  
(solenoid actuation)

### BVP, NBVP



For manifold mounting  
(hydraulic actuation)

### BVE



	$Q_{max}$ [lpm]	$p_{max}$ [bar]	Ports (BSPP)	Dimensions [mm]			$m_{max}$ [kg]
				$H_{max}$	$B_{max}$	$T_{max}$	
<b>BVG 1</b>	20	400 / 250 <sup>1)</sup>	G 1/4, G 3/8	115 (130)	60	40	1.6
<b>BVP 1</b>					35	39	
<b>NBVP 16</b>	20	400 / 250 <sup>1)</sup>	NG 6	230	45	45	2.1
<b>BVG 3</b>	50	320	G 1/2	145	80	50	3.3
<b>BVP 3</b>					50	76	
<b>BVE 1</b>	20	500	-	121	37	-	0.4
<b>BVE 3</b>	70	400	-	122.5	45	-	0.7
<b>BVE 5</b>	300	400	-	206.5	72	-	1.5

<sup>1)</sup> 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**