

## Directional seated valves type BVG, BVE, BVP and NBVP

The group of directional seated valves type BVG, BVE and BVP includes 2/2- and 3/2-way directional valves in two sizes. Size 1 valves feature a version with standard connection diagram NG 6 (type NBVP) and a version with 4/3-way function. They are designed as zero-leakage, cone seated valves. All ports are equally pressure-resistant due to an internal static pressure balance. The valves can be connected via pipes (type BVG), screwed onto self-manufactured base plates (type BVP) and industrial standard connection plates (type NBVP) or screwed into self-manufactured valve blocks as a screw-in valve (type BVE). The various actuation modes (type BVE with solenoid actuation only) enable use of these valves in a wide range of applications. Additional elements for ports P, R, A and B (e.g. orifices, check valves and restrictor check valves) can be incorporated in the valve block to tailor the range of possible applications to the special requirements of the customer.

### Features and benefits:

- Zero-leakage, cone seated construction
- Pressure switch can be directly mounted
- Complete system solution with compact hydraulic power packs made from the modular system
- ATEX-compliant version

### Intended applications:

- Machine tools
- Woodworking and processing machinery
- Testing machinery
- Jig construction



<b>Nomenclature:</b>	Directional seated valve, zero leakage
<b>Design:</b>	Individual valve for pipe connection Individual valve, Manifold mounting
<b>Actuation:</b>	Solenoid Hydraulic Pneumatic Manual
<b>p<sub>max</sub>:</b>	400 bar
<b>Q<sub>max</sub>:</b>	20... 300 lpm

## Design and order coding example

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

**Actuations:** Solenoid, hydraulic, pneumatic, manual

**Connection size or connection block**

**Additional elements**

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

**Function**

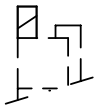
- 2/2-way directional valve (R, S), also available in version with lift monitoring (RK, SK)
- 3/2-way directional valve (Z, Y), also available in version with lift monitoring (ZK)
- 4/3-way directional valve (G, D)

**Basic type, size**

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

**Actuations:**

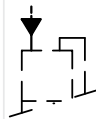
**Solenoid**



Solenoid voltages: 12V DC, 24V DC, 110V AC, 230V AC

- BVP 1, NBVP16 also available in ATEX-compliant version
- Version with M12 plug and 8-watt solenoid

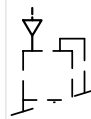
**Hydraulic**



Control pressure:

$p_{\text{contr. min}} = 24 \text{ bar}$   
 $p_{\text{contr. max}} = 320 \text{ bar}$

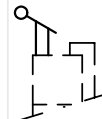
**Pneumatic**



Control pressure:

$p_{\text{contr. min}} = 2 \dots 3.5 \text{ bar}$   
 $p_{\text{contr. max}} = 15 \text{ bar}$

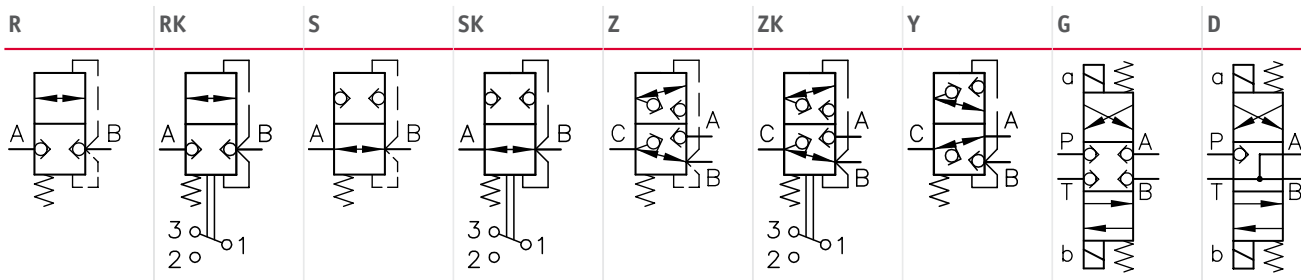
**Manual**



Actuation torque:

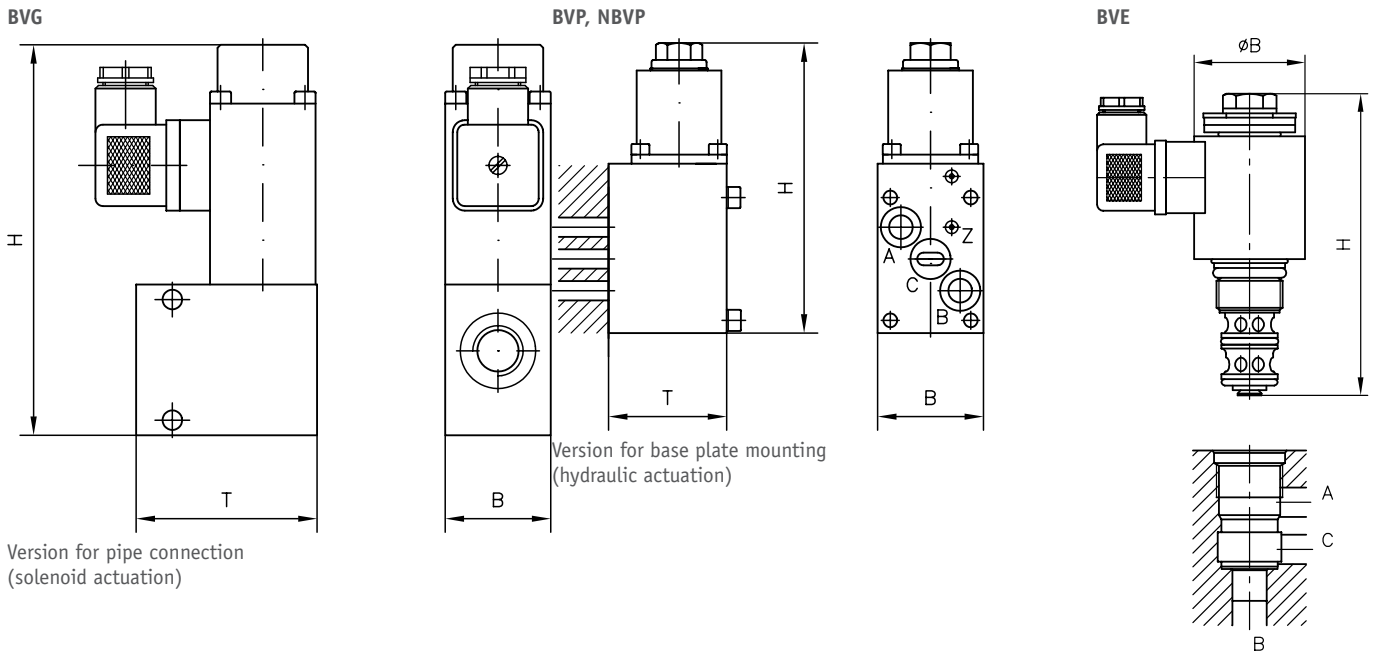
approx. 1.5... 3 Nm

**Function**



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

## General parameters and dimensions



Version for pipe connection  
(solenoid actuation)

Version for base plate mounting  
(hydraulic actuation)

	Q <sub>max</sub> [lpm]	p <sub>max</sub> [bar]	Ports (BSPP)	Dimensions [mm]			m <sub>max</sub> [kg]
				H <sub>max</sub>	B <sub>max</sub>	T <sub>max</sub>	
<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>					155	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 solenoid actuation GM.. and WGM

- BVE: screw-in 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: [D 7788](#)
- Type NZP: [D 7788 Z](#)
- Type BVH: [D 7788 BV](#)

#### Plugs:

- With LED etc.: [D 7163](#)
- With economy circuit: [D 7813](#), [D 7833](#)