

# Directional seated valves with various actuations

These directional seated valves use spring loaded balls as valve elements and therefore do not show any leakage. They are manifold mounting and are available with various actuations which always act on an angled lever pushing the valve element in the desired switching position.

The basic versions are designed as 2/2- and 3/2-way directional valves. 3/3-, 4/3-way functions are possible, if two valves are housed in one valve body, whereas 4/2-way functions require an additional intermediate plate. The enforced versions G39, G49, G..-22 are intended for pulsating, permanent load with frequent switching operations in the high pressure range.



These valves may be directly installed in pipe systems, when equipped with sub-plates enabling pipe connection. Many optional functions can be incorporated in these sub-plates e.g. pressure limiting valve or restrictor check valve for widen the field of application for this valve type. Valve banks of these valves are also available featuring several valves connected in parallel (see type VB).

**Nomenclature:** Directional seated valve, zero leakage

**Design:** Individual valve, manifold mounting combination with sub-plates for pipe connection

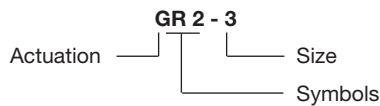
**Actuation:**

- Solenoid
- Pressure actuated
- Hydraulic
- Pneumatic
- Mechanical
- Roller
- Pin
- Manual
- Hand lever
- Adjusting knob

**p<sub>max</sub>:** 320 ... 700 bar

**Q<sub>max</sub>:** 6 ... 120 lpm

## Type coding:

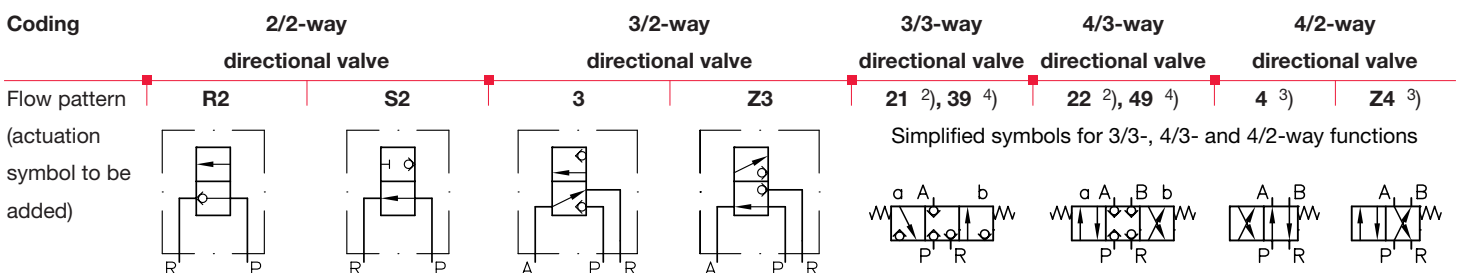


## Basic types and general parameters

Size	Flow Q <sub>max</sub> (lpm)	Basic type (actuation) and oper. pressure p <sub>max</sub> (bar)						Tapped ports P, R, A, B <sup>1)</sup> (BSPF)	
		Solenoid actuated		Pressure actuated		Mechanically actuated			
		G	WG	H	P	K	T		F
0	6	300 ... 500		500	-	-	-	500	G 1/4
1	12	350 ... 500 (700)		500 ... 700	400 ... 700	400 ... 700	400 ... 700	400 ... 700	G 1/4 and G 3/8
2, 22	25, 12	350 ... 500 (700)		500	400 ... 500	400 ... 500	400 ... 500	400 ... 500	G 3/8 and G 1/2
3	65	350 ... 400		400	350	-	350	-	G 1/2 and G 3/4
4	120	350		-	-	-	-	-	G 3/4 and G 1

- 1) When combined with sub-plate for pipe connection
- 2) Not for size 4
- 3) Only size 1
- 4) Only size 1 and 2

## Symbols



Actuations

Solenoid		Pressure		Mechanical		Manual	
G	WG	hydraulic H	pneumatical P	roller K	pin T	hand lever F	turn knob D
<b>Solenoid voltage:</b>		<b>Control pressure <math>p_{contr\ max}</math> (bar)</b>		<b>Shifting force (N)</b>		<b>Shifting force (N)</b>	<b>Shifting torque (Ncm)</b>
12V DC, 24V DC (type G)		400 ... 700	15	25 ... 80	51 ... 20	25 ... 80	45 ... 98
230V AC 50/60 Hz (type WG)		<b>Control pressure <math>p_{contr\ min}</math> (bar)</b>		<b>Shifting travel (mm)</b>		<b>Shifting travel (mm)</b>	
other voltage on request!		9 ... 16	2.5 ... 4	10.5 ... 30	4 and 5	20.5 ... 45	

Additional versions

- Individual valve with orifice insert, check valve insert in port P and/or return pressure stop in port R
- Sub-plate with restrictor check valve or pressure limiting valve between ports P and R
- Sub-plate for pipe connection with Graetz-circuitry via check valves enabling arbitrary flow direction
- 2/2- and 3/2-directional seated valves, size 1, with connection hole pattern conforming CETOP3 or ISO 4401, nom. size 6 <sup>7)</sup>
- Directional seated valve with actuation solenoids 24V DC also available conforming ATEX <sup>7)</sup>

<sup>5)</sup> Figures apply for solenoid actuation  
<sup>6)</sup> Individual valve with sub-plate  
<sup>7)</sup> See also "Additional information"

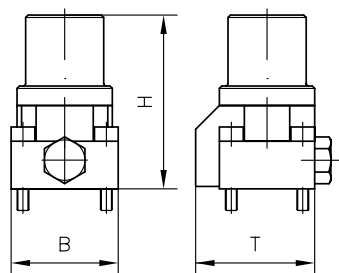
Order examples

**PR 2-1**  
 Directional seated valve, pneumatically actuated, flow pattern R2, size 1

**G 3-2-3/8-G24**  
 Directional seated valve, solenoid actuated, flow pattern 3, size 2, sub-plate for pipe connection G 3/8 (BSPP), solenoid voltage 24V DC

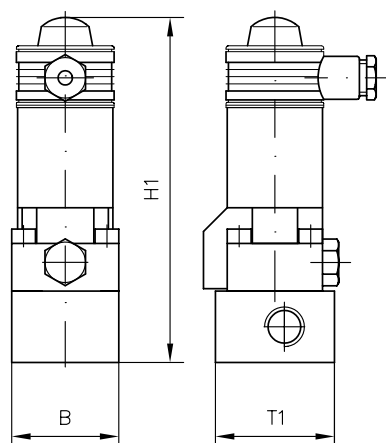
Dimensions

Individual valve (see order example)



Size	H <sub>max</sub> <sup>5)</sup>	H1 <sub>max</sub> <sup>5)</sup>	B	T <sub>max</sub>	T1	m <sub>max</sub> (kg) <sup>6)</sup>	
			2/2- and 3/2-way				
			3/3- and 4/3-way				
0	90.5	110.5	36	75	41.5	40	0.8/1.0
1	115	145	45	92	50	50	1.4/1.9
2, 22	126.5, 134.5	156.5, 161.5	56, 56	116, 116	62.5, 67.5	56, 56	2.9/3.9, 3.0/4.0
3	162	202	70	144	91.5	70	5.9/7.1
4	226	226	80	162	127	125	16.3/20.1

Valve with sub-plate (see order example)



All dimensions in mm, subject to change without notice!

Additional information

- Directional seated valves D 7300
- Valve banks type VB D 7302
- Plug with LED etc. D 7163
- Plug with economy circuit D 7813, D 7833
- Directional seated valves with industrial standard connection pattern (CETOP3, NG6) D 7300 N
- Directional valves with lift monitoring D 7300 H
- See also section "Devices for special applications" (Devices for explosion hazardous areas, conforming ATEX; Devices for up to 700 bar)

For page and section of the devices additionally listed, see type index