

Directional seated valves type WN and WH

These directional seated valves type WN and WH use spring loaded balls as valve elements and therefore do not show any leakage. They are manifold mounting and are available in four sizes. These valves are very compact as the functional valve parts are partly integrated in the solenoid body. The basic versions are designed as 2/2- and 3/2-way directional valves. Whereas 3/3- , 4/3-way functions require two valves to be installed on one valve sub-plate.

Connection blocks can be flange-mounted to incorporate the valves into the pipe systems. Optional additional functions in the connection blocks (e.g. pressure-limiting or bypass check valve) extend the range of applications of this valve type. By combining two valves in one connection block, 3/3- and 4/3-way functions can be achieved.

The type WN (size 1 only) has a simpler design than the WH types (no moving seals and no separate solenoid discharge). Therefore the permissible operating pressure for these more cost-effective variants is lower than for the type WH.

It is possible to combine several valves connected in parallel in one valve bank (type BWN and BWH).

Features and benefits:

- Excellent price/performance ratio
- Compact design
- Directional seated valves with zero leakage
- Solenoid version with 8-watt technology

Intended applications:

- Machines for forestry and agricultural purposes
- Clamping, punching and jigs
- Clamping equipment, punching tools, jigs
- Process engineering systems



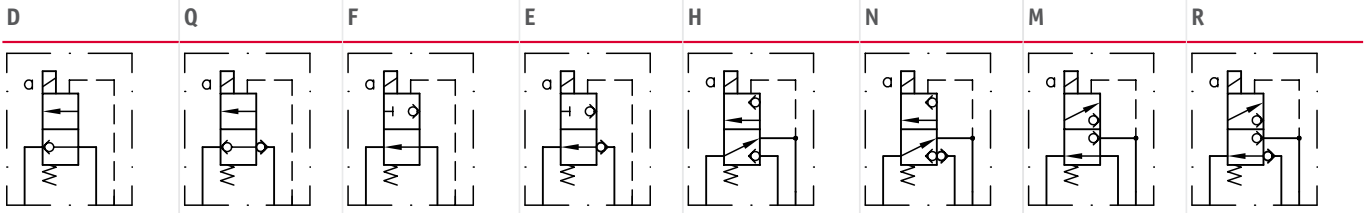
Nomenclature:	Directional seated valve, zero leakage
Design:	Individual valve, manifold mounting combination with connection blocks for pipe connection
Actuation:	Solenoid
p_{max}:	350 ... 450 bar
Q_{max}:	5 ... 60 lpm

Design and order coding example

WN1 H 1 - 1/4 - G24

WN1	H	1	- 1/4	- G24		
					Solenoid voltage	12V DC, 24V DC, 110V AC, 230V AC
						<ul style="list-style-type: none"> ■ Versions with M12-plug and 8-Watt solenoid
					Indiv. connection block	Port size G 1/4, G 3/8, G 1/2 (BSPP)
						<ul style="list-style-type: none"> ■ By-pass check valve or pressure limiting valve between P and R
					Additional elements	<ul style="list-style-type: none"> ■ Return pressure stop for port R ■ Check valve insert for port P ■ Pressure limiting valve
					Function	<ul style="list-style-type: none"> ■ 2/2-way directional valve (F, D, Q, E) ■ 3/2-way directional valve (H, R, M, N) ■ 3/3-way directional valve (J, U) ■ 4/2-way directional valve (W)
Basic type, size					Type WN, size 1	
					Type WH, size 1 to 4	

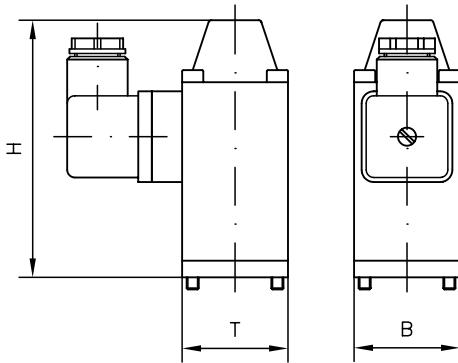
Function



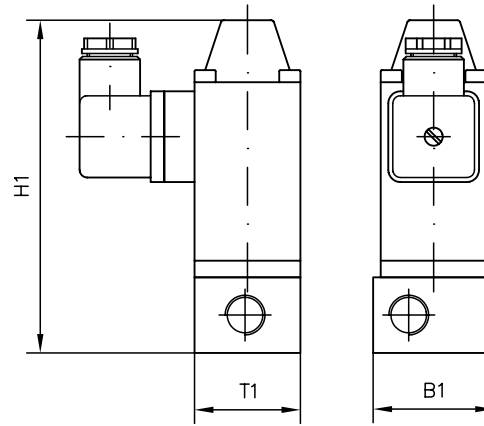
- Symbols show type WH
- Type WN 1 without de-pressuring duct for the solenoid (add. leakage duct is not necessary)

General parameters and dimensions

Individual valve



Valve with sub-plate for pipe connection



	Q_{\max} [lpm]	p_{\max} [bar]	Ports (BSPP)	Dimensions (individual valve) [mm]			m_{\max} [kg]	Dimensions (with sub-plate) [mm]			m [kg]
				H	B	T		H1	B1	T1	
WN 1	5	320 ... 350	G 1/4	86.5	35	35	0.6	111.5	40	35	0.9
WH 1	8	450	G 1/4	86.5	35	35	0.6	111.5	40	35	0.9
WH 2	15	350	G 1/4	97.0	35	35	0.65 ... 0.7	125	40	40	1.0
WH 3	30	350	G 3/8	95.5	45	45	1.2 ... 1.3	128	50	50	1.8
WH 4	60	350	G 1/2	118.0	60	60	2.7 ... 3.0	158 ... 173	70	70	3.6 ... 4.0

Associated technical data sheets:

- Directional seated valves type WN1, WH: [D 7470 A/1](#)

Valve banks:

- Type BWN1, BWH: [D 7470 B/1](#)

Plugs:

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