

Globe valve, 2-way, External thread

- For open and closed cold and warm water systems
- For water-side modulating control of air-handling and heating systems


Type overview

Type	DN []	G ["]	kvs [m ³ /h]	Stroke [mm]	PN []	Sv min. []
H411B	15	1 1/8	0.63	15	16	50
H412B	15	1 1/8	1	15	16	50
H413B	15	1 1/8	1.6	15	16	50
H414B	15	1 1/8	2.5	15	16	50
H415B	15	1 1/8	4	15	16	50
H420B	20	1 1/4	6.3	15	16	100
H425B	25	1 1/2	10	15	16	100
H432B	32	2	16	15	16	100
H440B	40	2 1/4	25	15	16	100
H450B	50	2 3/4	40	15	16	100

Technical data

Functional data	Media	Cold and warm water, water with glycol up to max. 50% vol.
	Medium temperature	5...120 °C
	Medium temperature note	-10 °C with stem heating
	Permissible pressure ps	1600 kPa
	Flow characteristic	equal percentage (VDI/VDE 2173) n(gl) = 3, optimised in the opening range
	Leakage rate	max. 0.05% of the kvs value
	Pipe connectors	External thread according to ISO 228
	Closing point	Top (▲)
	Installation position	Upright to horizontal (in relation to the stem)
	Maintenance	Maintenance-free
Materials	Housing	Red casting brass Rg5
	Closing element	Stainless steel
	Stem	Stainless steel
	Stem seal	EPDM O-ring
	Seat	Red casting brass Rg5 / Niro (Bypass)

Safety notes


- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The valve does not contain any parts that can be replaced or repaired by the user.
- The valve may not be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.

Product features

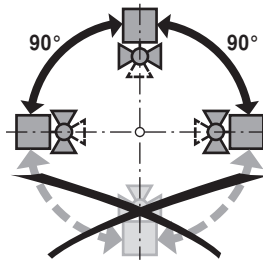
- Mode of operation** The globe valve is adjusted by a globe valve actuator. The actuators are connected by a commercially available modulating or 3-point control system and move the valve cone, which acts as a throttling device, into the opening position dictated by the positioning signal.
- Flow characteristic** An equal percentage flow characteristic is produced by the profile of the valve cone.

Accessories

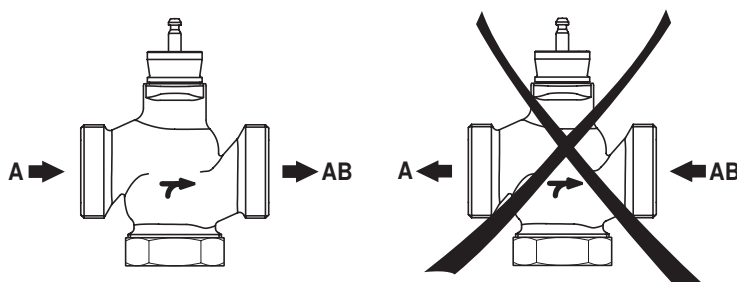
	Description	Type
Electrical accessories	Stem heating DN 15-50 (45W)	ZH24-1
	Description	Type
Mechanical accessories	Pipe connector, to globe valve DN 15 Rp 1/2"	ZH4515
	Pipe connector, to globe valve DN 20 Rp 3/4"	ZH4520
	Pipe connector, to globe valve DN 25 Rp 1"	ZH4525
	Pipe connector, to globe valve DN 32 Rp 1 1/4"	ZH4532
	Pipe connector, to globe valve DN 40 Rp 1 1/2"	ZH4540
	Pipe connector, to globe valve DN 50 Rp 2"	ZH4550

Installation notes

- Recommended installation positions** The globe valve may be mounted upright to horizontal. It is not permissible to mount the globe valves with the spindle pointing downwards.

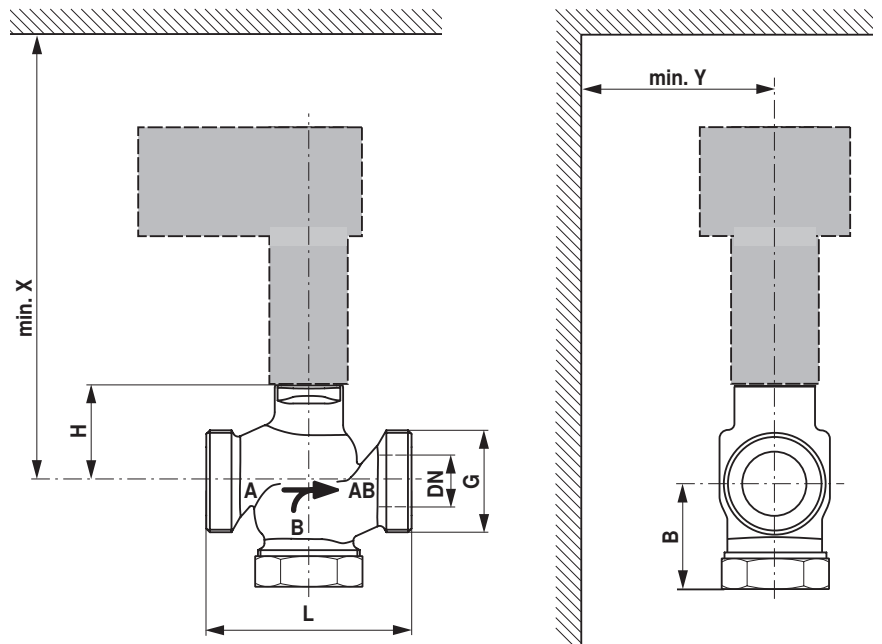


- Water quality requirements** The water quality requirements specified in VDI 2035 must be adhered to. Belimo valves are regulating devices. For the valves to function correctly in the long term, they must be kept free from particle debris (e.g. welding beads during installation work).
The installation of suitable strainer is recommended.
- Maintenance** Globe valves and globe valve actuators are maintenance-free.
Before any kind of service work is carried out on the actuator, it is essential to isolate the globe valve actuator from the power supply (by disconnecting the electrical cables if necessary). Any pumps in the part of the piping system concerned must also be switched off and the appropriate shut-off valves closed (allow everything to cool down first if necessary and reduce the system pressure to ambient pressure level).
The system must not be returned to service until the globe valve and the globe valve actuator have been mounted properly in accordance with the instructions and the pipes have been refilled in the proper manner.
- Flow direction** The direction of flow, specified by an arrow on the housing, is to be complied with, since otherwise the valve could become damaged.



Dimensions / Weight

Dimensional drawings



X/Y: Minimum distance with respect to the valve centre.
The actuator dimensions can be found on the respective actuator data sheet.

Type	DN []	G ["]	L [mm]	B [mm]	H [mm]	X [mm]	Y [mm]	Weight approx. [kg]
H411B	15	1 1/8	80	65	46	290	100	1.3
H412B	15	1 1/8	80	65	46	290	100	1.3
H413B	15	1 1/8	80	65	46	290	100	1.3
H414B	15	1 1/8	80	65	46	290	100	1.3
H415B	15	1 1/8	80	65	46	290	100	1.3
H420B	20	1 1/4	90	65	46	290	100	1.4
H425B	25	1 1/2	110	66	52	300	100	1.6
H432B	32	2	120	67	56	300	100	2.3
H440B	40	2 1/4	130	72	65	310	100	2.8
H450B	50	2 3/4	150	75	65	310	100	3.8

Further documentation

- Overview Valve-actuator combinations
- Data sheets for globe valve actuators
- Installation instructions for valves and/or globe valve actuators
- Notes for project planning 2-way and 3-way globe valves

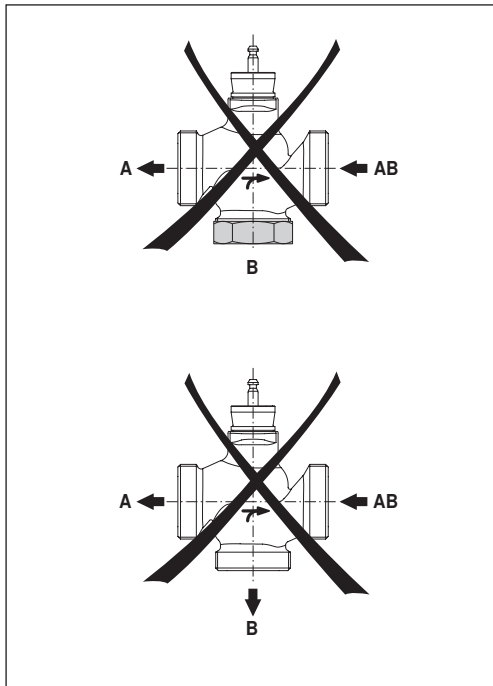
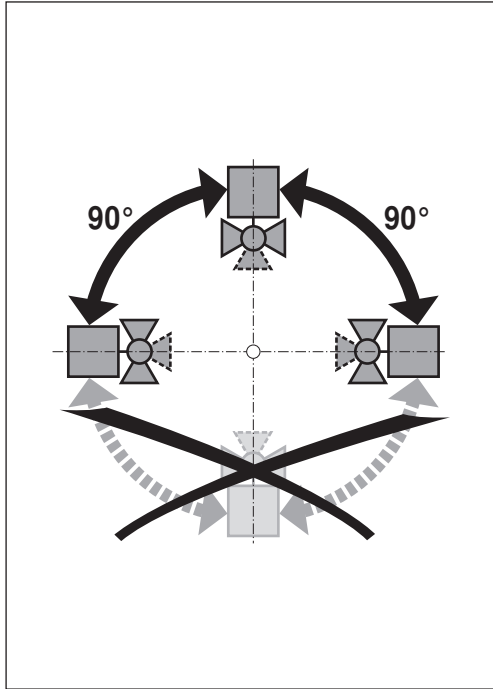
BELIMO



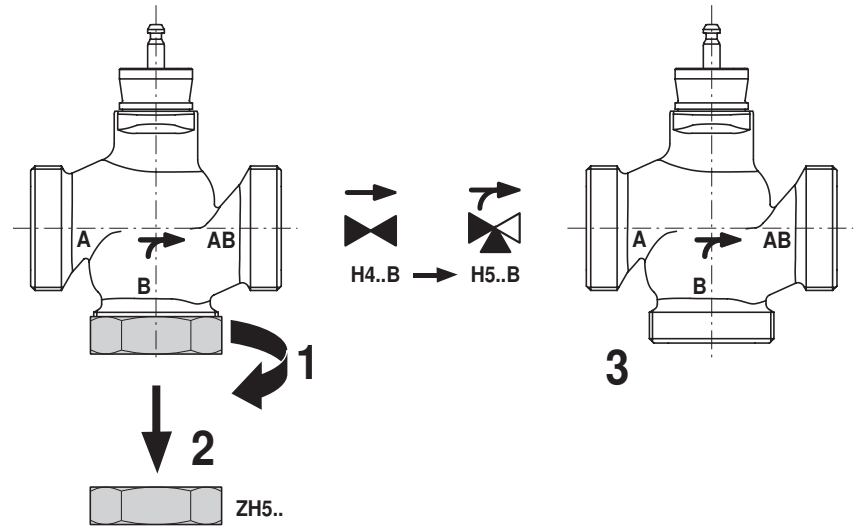
H4..B



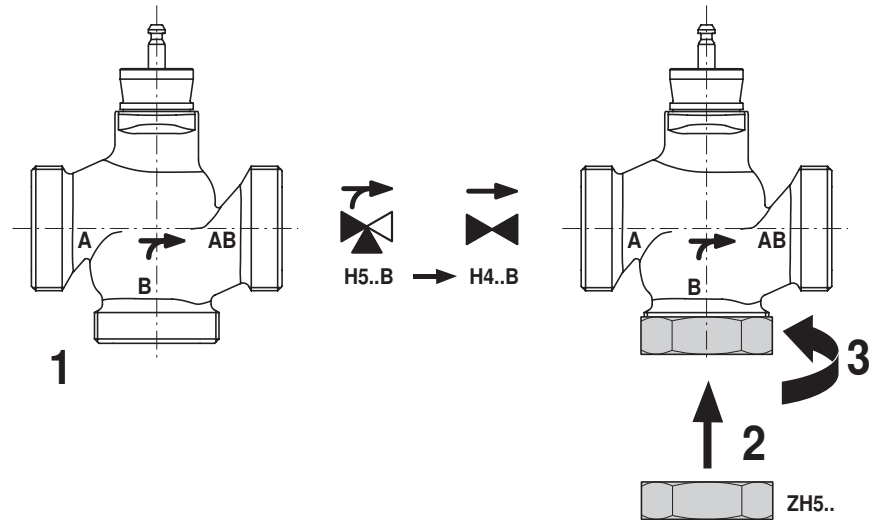
H5..B



H4..B → H5..B



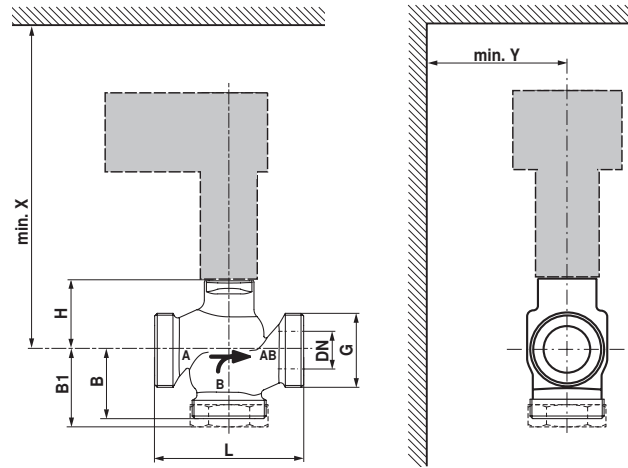
H5..B → H4..B



71554-00001.A



H4..B / H5..B



ps <1600 kPa (PN16) t= +5... +120°C		H4..B		H5..B		LV..A.. 500N		NV..A.. 1000N		SV..A.. 1500N						
DN	Hub / Stroke [mm]		B1 [mm]		B [mm]	Δps [kPa]	$\Delta pmax$ [kPa]	Δps [kPa]	$\Delta pmax$ [kPa]	Δps [kPa]	$\Delta pmax$ [kPa]	L [mm]	H [mm]	G [mm]	X [mm]	Y [mm]
15	15	H411B ... 15B	65	H511B ... 15B	55	1300	400	1600	400	1600	400	80	46	1 1/8	290	100
20	15	H420B	65	H520B	55	900	400	1600	400	1600	400	90	46	1 1/4	290	100
25	15	H425B	66	H525B	55	500	400	1300	400	1600	400	110	52	1 1/2	300	100
32	15	H432B	67	H532B	55	350	350	1000	400	1600	400	120	56	2	300	100
40	15	H440B	72	H540B	60	150	150	500	400	900	400	130	65	2 1/4	310	100
50	15	H450B	75	H550B	65	70	70	300	300	550	400	150	65	2 3/4	310	100