Technical data sheet R2..-S..

Open-close ball valve, 2-way, Internal thread

- **For open and closed cold and warm water systems**
- **For shut-off functions on the water side and 2-point controls in air handling units and heating systems**
- **Air bubble tight**

Type overview

Type	kvs [m³/h]	DN [ ]	Rp [”]	PN [ ]
R2015-S1	15	15	1/2	16
R2020-S2	32	20	3/4	16
R2025-S2	26	25	1	16
R2032-S3	32	32	1 1/4	16
R2040-S3	31	40	1 1/2	16
R2050-S4	49	50	2	16

Technical data

Functional data	Media	Cold and warm water, water with glycol up to max. 50% vol.
	Medium temperature	-10...120°C
	Medium temperature note	The allowed media temperature can be limited, depending on the type of actuator. Limitations can be found in the respective data sheets of the actuators.
	Rated pressure ps	1600 kPa
	Closing pressure Δps	1400 kPa
	Differential pressure Δpmax	1000 kPa
	Differential pressure note	200 kPa for low-noise operation
	Leakage rate	Leakage rate A, air-bubble-tight (EN 12266-1)
	Pipe connectors	Internal thread according to ISO 7-1
	Angle of rotation	90°
	Installation position	Upright to horizontal (in relation to the stem)
	Maintenance	Maintenance-free
Materials	Housing	Brass body nickel-plated
	Closing element	Stainless steel
	Stem	Stainless steel
	Stem seal	O-ring EPDM
	Valve seat	PTFE, O-ring EPDM

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 open-close ball valve is adjusted by a rotary actuator. The rotary actuator is connected by an open-close signal. Open the ball valve counterclockwise and close it clockwise.

Accessories

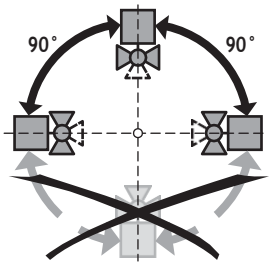
Mechanical accessories

Description	Type
Pipe connector to ballvalves DN 15 Rp 1/2“	ZR2315
Pipe connector to ballvalves DN 20 Rp 3/4“	ZR2320
Pipe connector to ballvalves DN 25 Rp 1“	ZR2325
Pipe connector to ballvalves DN 32 Rp 1 1/4“	ZR2332
Pipe connector to ballvalves DN 40 Rp 1 1/2“	ZR2340
Pipe connector to ballvalves DN 50 Rp 2“	ZR2350

Installation notes

Recommended installation positions

The ball valve can be installed upright to horizontal. The ball valve may not be installed in a hanging position, i.e. with the stem pointing downwards.



Water quality requirements

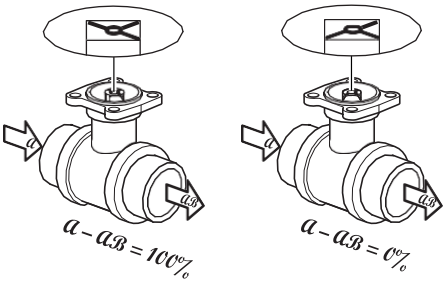
The water quality requirements specified in VDI 2035 must be adhered to.
Belimo valves are regulating devices. For the valves to function correctly in the long term, they must be kept free from particle debris (e.g. welding beads during installation work).
The installation of suitable strainer is recommended.

Maintenance

Ball valves and rotary actuators are maintenance-free.
Before any kind of service work is carried out on the actuator, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable). Any pumps in the part of the piping system concerned must also be switched off and the appropriate slide 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 ball valve and the rotary actuator have been properly reassembled in accordance with the instructions and the pipeline has been refilled in the proper manner.

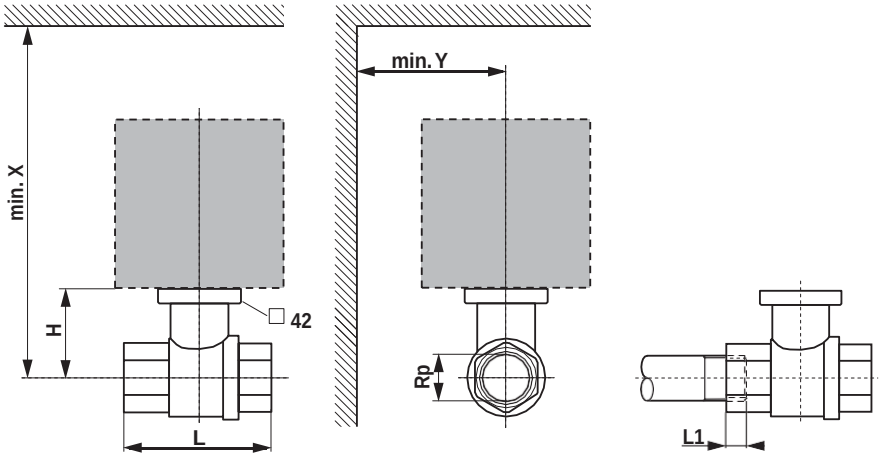
Flow direction

The direction of flow, specified by an arrow on the housing, is to be complied with, since otherwise the ball valve could become damaged. Please ensure that the ball is in the correct position (marking on the spindle).



Dimensions / Weight

Dimensional drawings



L1: Maximum screwing depth.
X/Y: Minimum distance with respect to the valve centre.
The actuator dimensions can be found on the respective actuator data sheet.

Type	DN [ ]	Rp [”]	L [mm]	L1 [mm]	H [mm]	X [mm]	Y [mm]	Weight approx. [kg]
R2015-S1	15	1/2	67	13	44	230	90	0.24
R2020-S2	20	3/4	78	14	46	235	90	0.42
R2025-S2	25	1	87	16	46	235	90	0.5
R2032-S3	32	1 1/4	105	19	50.5	240	90	0.85
R2040-S3	40	1 1/2	111	19	50.5	240	90	0.91
R2050-S4	50	2	125	22	56	245	90	1.35

Further documentation

- Overview Valve-actuator combinations
- Data sheets for actuators
- Installation instructions for actuators and/or ball valves
- General notes for project planning

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R2..-S..

R3..-S..

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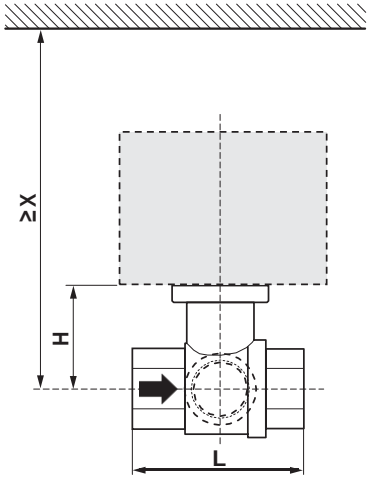
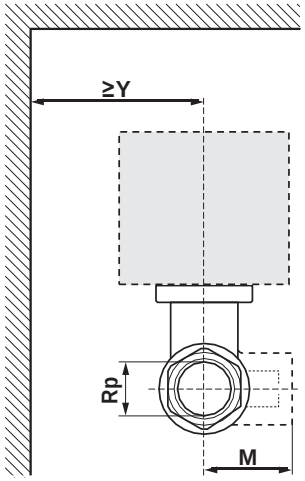
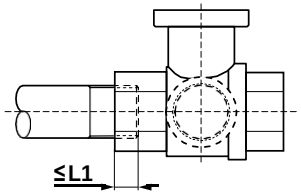


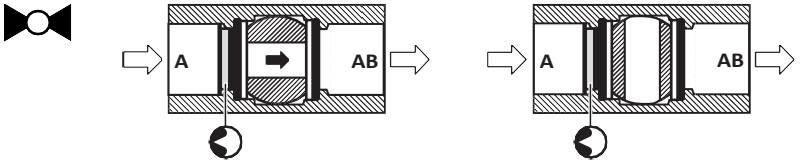




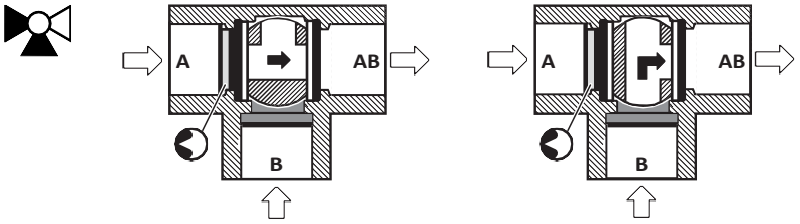
t	–10 ... +120°C
p_s	1600 kPa

		DN	Rp	mm				80°C		100°C		120°C						100°C		120°C					
								KR..		TR..		LR..A		NR..A		SR..A		TRF..		LRF..		NRF..A		SRF..A	
		mm	″	L	H	M	L1	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
R2015..-S1	R3015..-S1	15	½″	67	44	36	13	150	75	185	75	195	75	230	80	230	80	190	80	200	90	220	90	220	90
R2020..-S2	R3020..-S2	20	¾″	78	46	41.5	14					200	75	235	80	235	80			205	90	225	90	225	90
R2025..-S2	R3025..-S2	25	1″	87	46	45	16					200	75	235	80	235	80			205	90	225	90	225	90
R2032..-S3	R3032..-S3	32	1¼″	105	50.5	55.5	19							240	80	240	80					230	90	230	90
R2040..-S3	R3040..-S3	40	1½″	111	50.5	56	19							240	80	240	80					230	90	230	90
	R3040-25-S4	40	1½″	122	62	66.5	19									250	80							240	90
R2050..-S4	R3050..-S4	50	2″	125	56	68	22									245	80							235	90
	R3050-40-S4 R3050-58-S4	50	2″	142	68	79	22									262	80							252	90

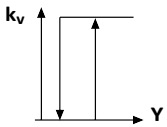
Δp_{vmax} <350kPa



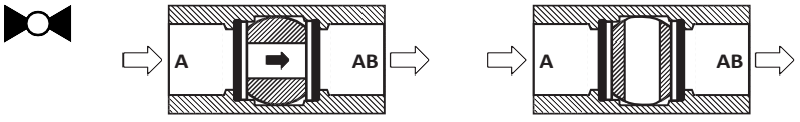
A → AB 100% A → AB 0%



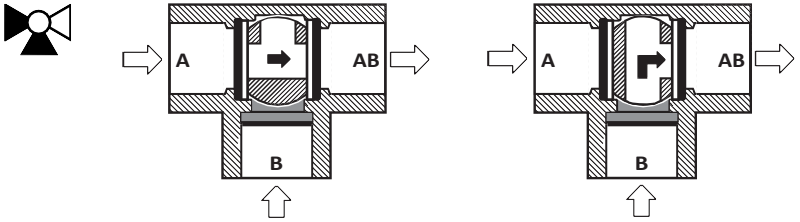
A → AB 100% A → AB 0%
B → AB 0% B → AB 100%



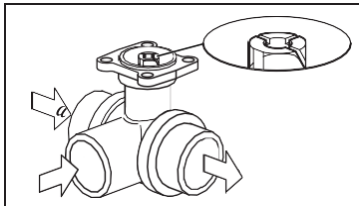
Δp_{vmax} <1000kPa

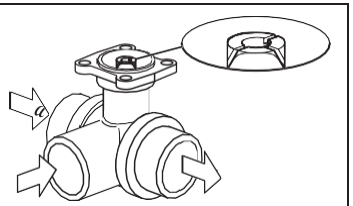


A → AB 100% A → AB 0%



A → AB 100% A → AB 0%
B → AB 0% B → AB 100%





	A → AB 100%	A → AB 0%
	B → AB 0%	B → AB 100%