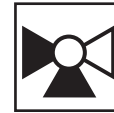


Selection		R3..BL Open/Close ball valves, 3-way					
k _{vs} [m ³ /h]	DN		Type	Suitable rotary actuator for Open/Close control			
	mm	Imp.					
4.5	15	1/2"	R315BL				
8.5	20	3/4"	R320BL				
9	25	1"	R325BL				
8	32	1 1/4"	R330BL				
15	32	1 1/4"	R332BL				
14	40	1 1/2"	R340BL				
17	50	2"	R350BL				



3-way
Open/Close ball valves
DN 15...50

Changeover functions of cold and hot water systems

Applications

Water-side changeover or 2-point control of cold and hot water circuits in heating or ventilation plants.

Mode of operation

The Open/Close ball valve is operated by a Type LR or NR rotary actuator. The actuator is controlled by an Open/Close signal.

Technical data		R3..BL Open/Close ball valves, 3-way	
Flow media	Cold and hot water, water with glycol up to 50% by volume		
Temperature of medium	+5 °C...110 °C (lower and higher temperatures to order)		
Rated pressure ps	4140 kPa (R315BL...R330BL) / 2760 kPa (R332BL...R350BL)		
Leakage rate	Air bubble-tight		
Pipe connections	Female screw to ISO7/1		
Diff. pressure Δp _{max}	1000 kPa (200 kPa for low-noise operation)		
Closing pressure Δp _s	1400 kPa		
Angle of rotation	90°		
Mounting position	Vertical to horizontal (referred to the spindle)		
Maintenance	Maintenance-free		
Materials			
Body	chromium-plated brass		
Ball	stainless steel		
Seal	PTFE		
Spindle	chromium-plated brass		
Spindle seal	EPDM		
Discbypass	TEFZEL		

Product features

Manual operation by lever after disengaging the gearing latch on the Type LR or NR rotary actuator.

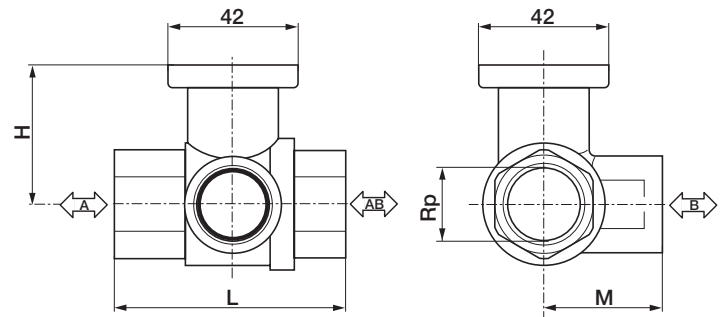
An order for an R3..BL Open/Close ball valve includes a suitable Type LR or NR rotary actuator.

Examples for ordering: (with LR230)

- Open/Close ball valve R315BL with LR230**
- Rotary actuator pre-assembled
- Order Code: R315BL+LR230
- Open/Close ball valve R315BL and LR230**
- Rotary actuator enclosed
- Order Code: R315BL/LR230

Dimensions R3..BL, Open/Close ball valves, 3-way

DN	Dimensions [mm]			Thread Rp	Max. Thread engagement [mm]	Weight [kg]	
	mm	Imp.	M				
15	1/2"	67	45	39	1/2"	13	0,45
20	3/4"	78	47.5	41.5	3/4"	13	0,6
25	1"	87	47.5	45	1"	17	0,9
32	1 1/4"	105	47.5	55.5	1 1/4"	19	1,2
32	1 1/4"	105	52	55.5	1 1/4"	19	1,3
40	1 1/2"	111	52	56	1 1/2"	19	1,5
50	2"	125	58	68	2"	22	2,4



Sizing table for Open/Close ball valves

Diff. pressures Δp ₁₀₀ [kPa]	0.1	1	3	10	k _{vs} [m ³ /h]	DN [mm]	3-way
Volumetric flow V̇ ₁₀₀ [m ³ /h]	0.14	0.45	0.78	1.42	4.5	15	R315BL
	0.27	0.85	1.47	2.69	8.5	20	R320BL
	0.28	0.90	1.56	2.85	9	25	R325BL
	0.25	0.80	1.39	2.53	8	32	R330BL
	0.47	1.50	2.60	4.74	15	32	R332BL
	0.44	1.40	2.42	4.43	14	40	R340BL
	0.54	1.70	2.94	5.38	17	50	R350BL

Maintenance, mounting positions, commissioning, installation instructions

Maintenance

- Ball valves and rotary actuators are both maintenance-free.
- Before any kind of service work is carried out on control devices of this type, it is essential to isolate the actuator from the power supply (by unplugging the power lead). Any pumps in the particular part of the piping system concerned must also be switched off and the appropriate isolating fittings closed (also allow everything to cool down first if necessary and reduce the pressure in the system to atmospheric).
- The systems must not be returned to service until the ball valve and the actuator have been properly re-installed and connected and the pipework has been refilled in the proper manner.

Subsequent removal

In the case of applications where subsequent removal of a ball valve will be necessary, it is advisable to make appropriate preparations beforehand. A typical example is the provision of extra detachable ZR23.. pipe connectors.

Disposal

When a control device (ball valve and actuator) has come to the end of its service life, the two parts must be dismantled and sorted into different materials before being disposed of.

Mounting positions, installation and commissioning

Separate supply

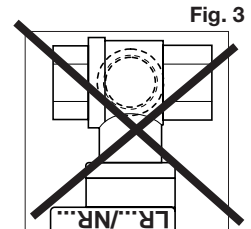
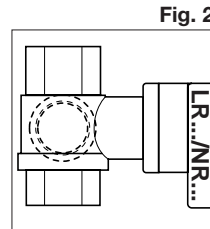
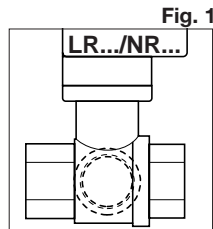
When a ball valve and rotary actuator are supplied separately, they can be assembled on-site.

No special tools are needed for assembly, and instructions will be found packed with the valve and actuator.

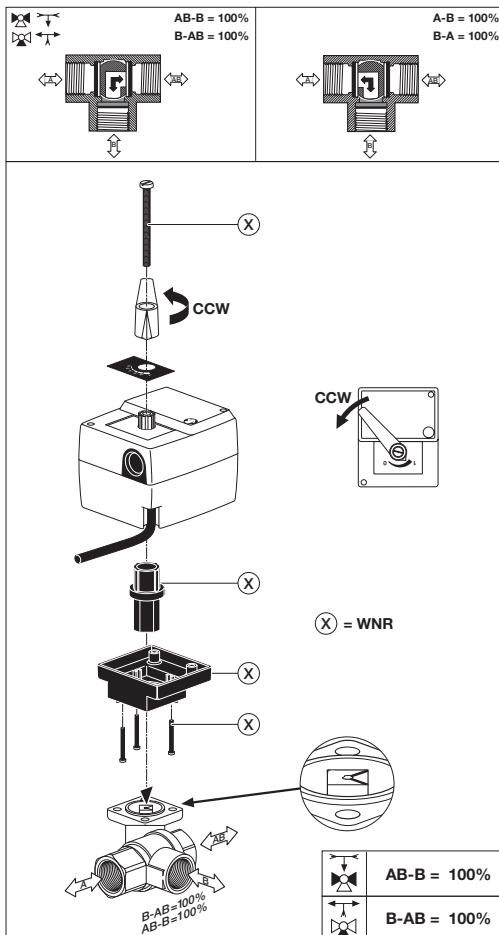
Commissioning must not be carried out until the ball valve and rotary actuator have been assembled in accordance with the instructions.

Recommended mounting positions

The ball valves may be mounted either **vertical** (Fig. 1) or **horizontal** (Fig. 2). However, mounting the ball valves with the spindle pointing downwards, i.e. **upside down** (Fig.3), is not recommended.



Installation instructions



Important

Use of Belimo control devices

The control devices described in this publication are intended for use in the closed water circuits of heating, ventilating and air-conditioning systems. Use of the control devices in conjunction with other liquid or gaseous fluids is not allowed.

Flow rates

The recognised rules should be applied when determining the flow characteristic of control devices.

Water quality requirements

The water quality requirements specified in VDI 2035 must be adhered to.