

Change-over ball valves, 3-way,  
with internal thread

- For open and closed cold and warm water systems
- For switching functions on the water side and 2-point controls in AHU and heating systems
- Air bubble tight


**Overview of types**

Type	kvs [m <sup>3</sup> /h]	DN [mm]	Rp [“]	ps [kPa]
R3015-BL1	5.5	15	1/2	1600
R3020-BL2	11	20	3/4	1600
R3025-BL2	10	25	1	1600
R3032-BL2	9	32	1 1/4	1600
R3032-BL3	15	32	1 1/4	1600
R3040-BL3	14	40	1 1/2	1600
R3040-BL4	47	40	1 1/2	1600
R3050-BL3	24	50	2	1600
R3050-BL4	75	50	2	1600

**Technical data**

<b>Functional data</b>	Media	Cold and hot water, water with glycol up to max. 50% vol.
	Medium temperature	-10 °C ... 100 °C
	Medium temperature note	The allowed media temperature can be limited, depending on the type of actuator. The correct values can be found in the respective actuator sheets.
	Closing pressure $\Delta ps$	500 kPa
	Differential pressure $\Delta p_{max}$	350 kPa
	Differential pressure note	(200 kPa for low-noise operation)
	Leakage rate	A, Air bubble-tight (EN 12266-1)
	Pipe connectors	Internal thread in accordance with ISO 7/1
	Angle of rotation with limitation	90 ° (operating range 15 ... 90°)
	Installation position	Upright to horizontal (in relation to the spindle)
	Maintenance	Maintenance-free
	<b>Materials</b>	Valve
Valve cone		Chrome-plated brass
Spindle		Nickel-plated brass
Stem seal		O-ring EPDM
Valve seat		PTFE, O-Ring EPDM (DN20 Viton)

## Safety notes

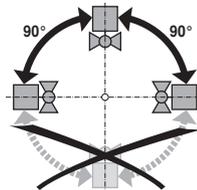
- The ball valve has been designed for use in stationary heating, ventilation and air-conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- The ball valve does not contain any parts that can be replaced or repaired by the user.
- The ball 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

**Principle of operation** The change-over ball valve is adjusted by a rotary actuator. The rotary actuator is connected by an open-close signal.

## Installation instructions

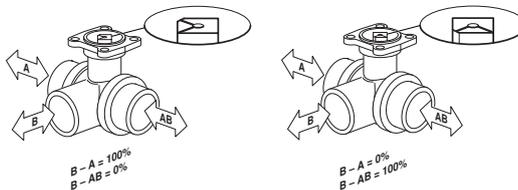
**Recommended installation positions** The ball valve can be installed upright to horizontal. The ball valve may not be installed in a hanging position, i.e. with the spindle pointing downwards.



**Water quality requirements** The water quality requirements specified in VDI 2035 must be adhered to. Characterised control valves are regulating devices. The use of dirt filters is recommended in order to prolong their service life as modulating instruments.

**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 characterised control 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** Please also ensure that the balls are in the correct position (marking on the spindle). The port designation AB is usually the constant with 3-way valves. Gate B is the constant for the BL version.

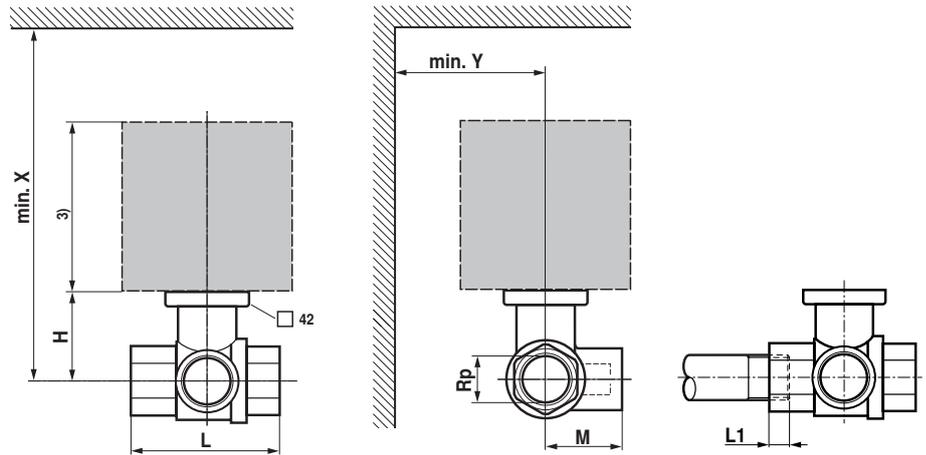


## Accessories

	Description	Data sheet name
<b>Mechanical accessories</b>	Pipe connector for characterised control valve DN 15	ZR2315
	Pipe connector for characterised control valve DN 20	ZR2320
	Pipe connector for characterised control valve DN 25	ZR2325
	Pipe connector for characterised control valve DN 32	ZR2332
	Pipe connector for characterised control valve DN 40	ZR2340
	Pipe connector for characterised control valve DN 50	ZR2350

## Dimensions / Weight

### Dimensional drawings



DN	Type	Weight approx. [kg]	Rp ["]	L [mm]	L1 [mm]	H [mm]	M [mm]	X [mm]	Y [mm]
15	R3015-BL1	0.45	1/2	67	13	44	36	230	90
20	R3020-BL2	0.6	3/4	78	14	46	41.5	235	90
25	R3025-BL2	0.9	1	87	16	46	45	235	90
32	R3032-BL2	1.2	1 1/4	105	19	46	55.5	240	90
32	R3032-BL3	1.3	1 1/4	105	19	50.5	55.5	240	90
40	R3040-BL3	1.5	1 1/2	111	19	50.5	56	240	90
40	R3040-BL4	1.8	1 1/2	122	19	62	66.5	250	90
50	R3050-BL3	2.4	2	125	22	56	68	245	90
50	R3050-BL4	2.8	2	142	22	68	79	262	90

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.

### Further documentation

- Complete overview «The complete product range of water solutions»
- Data sheets actuators
- Installation instructions for actuators and/or ball valves, respectively
- Notes for project planning (hydraulic characteristic curves and hydronic circuits, installation instructions, commissioning, maintenance, etc.)



