

Change-over ball valves, 3-way, with flange PN 6

- For 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 (control path A - AB)



### Overview of types

| Type      | kvs<br>[m <sup>3</sup> /h] | DN<br>[mm] | ps<br>[kPa] |
|-----------|----------------------------|------------|-------------|
| R7015R-B1 | 15                         | 15         | 600         |
| R7020R-B1 | 32                         | 20         | 600         |
| R7025R-B2 | 26                         | 25         | 600         |
| R7032R-B3 | 32                         | 32         | 600         |
| R7040R-B3 | 31                         | 40         | 600         |
| R7050R-B3 | 49                         | 50         | 600         |

### 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.<br>(lower and higher temperatures on request) |
|                        | Closing pressure $\Delta ps$           | 600 kPa   |
|                        | Differential pressure $\Delta p_{max}$ | 100 kPa   |
|                        | Flow rate                              | Bypass B – AB: Approx. 50% of kvs value   |
|                        | Pipe connectors                        | Flange PN 6 (in accordance with EN 1092/1)  |
|                        | 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                                  | Forged, nickel-plated brass body  |
|                        | Valve cone                             | Chrome-plated brass   |
|                        | Spindle                                | Nickel-plated brass   |
|                        | Stem seal                              | O-ring EPDM   |
|                        | Valve seat                             | PTFE, O-Ring EPDM (DN20 Viton)  |
|                        | Flange                                 | DN 15 / 20: galvanised steel DN 25 ... 50: aluminium  |

### Safety notes



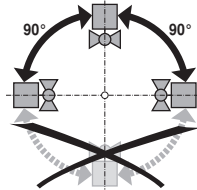
- The ball valve has been designed for use in stationary heating, ventilation and air-conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. 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 open-close ball valve is adjusted by a rotary actuator. The rotary actuator is connected by an open-close signal. Open the characterised control valve counterclockwise and close it clockwise.

## Installation instructions

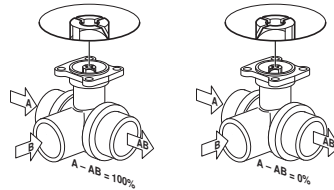
**Recommended installation positions** The ball valve can be installed upright to horizontal. The ball valve may not be installed in a hanging position, i.e. with the spindle pointing downwards.



**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.

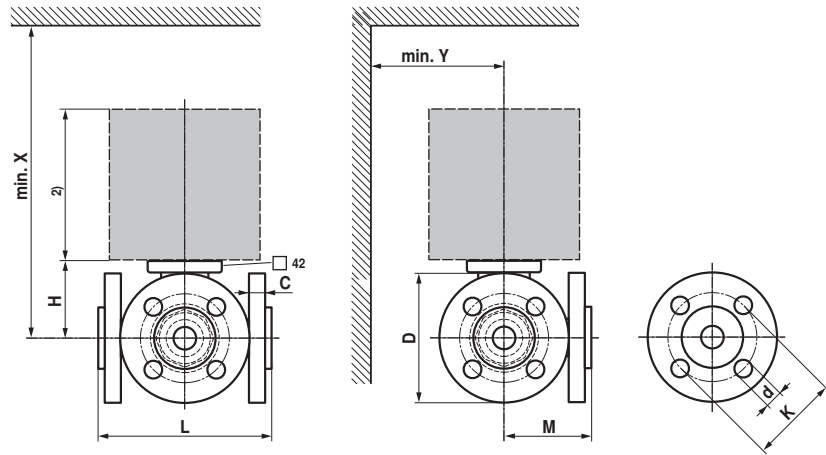
**Maintenance** Ball valves and rotary actuators are maintenance-free. Before any kind of service work is carried out on the actuator, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable). Any pumps in the part of the piping system concerned must also 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** 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



| DN | Type      | Weight approx.<br>[kg] | L<br>[mm] | H<br>[mm] | M<br>[mm] | X<br>[mm] | Y<br>[mm] |
|----|-----------|------------------------|-----------|-----------|-----------|-----------|-----------|
| 15 | R7015R-B1 | 1.8                    | 101.5     | 45        | 73        | 230       | 90        |
| 20 | R7020R-B1 | 2.4                    | 112       | 47.5      | 79        | 235       | 90        |
| 25 | R7025R-B2 | 2.5                    | 132       | 47.5      | 92        | 235       | 90        |
| 32 | R7032R-B3 | 3.4                    | 143.5     | 52        | 102.5     | 240       | 90        |
| 40 | R7040R-B3 | 4                      | 149.5     | 52        | 105       | 240       | 90        |
| 50 | R7050R-B3 | 5.6                    | 165       | 58        | 121       | 245       | 90        |

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.)



