

Characterised control valve, 2-way, Flange, PN 16

- For closed cold and warm water systems
- For modulating control of air-handling and heating systems on the water side
- Air-bubble tight


Type overview

| Type | DN | kvs [m³/h] | PN | n(gl) | Sv min. |
|--------------|-----|---------------|----|-------|---------|
| R6065W63-S8 | 65 | 63 | 16 | 3.2 | 100 |
| R6080W100-S8 | 80 | 100 | 16 | 3.2 | 100 |
| R6100W160-S8 | 100 | 160 | 16 | 3.2 | 100 |
| R6125W250-S8 | 125 | 250 | 16 | 3.2 | 100 |
| R6150W320-S8 | 150 | 320 | 16 | 3.2 | 100 |

Technical data

| | | |
|------------------------|--|---|
| Functional data | Fluid | Cold and warm water, water with glycol up to max. 50% vol. |
| | Fluid temperature | -10...120°C [14...248°F] |
| | Close-off pressure Δp_s | 690 kPa |
| | Differential pressure Δp_{max} | 400 kPa |
| | Differential pressure note | 200 kPa for low-noise operation |
| | Flow characteristic | equal percentage (VDI/VDE 2178), optimised in the opening range |
| | Leakage rate | air-bubble tight, leakage rate A (EN 12266-1) |
| | Angle of rotation | 90° |
| | Angle of rotation note | Operating range 15...90° |
| | Pipe connection | Flange PN 16 according to EN 1092-2 |
| | Installation position | upright to horizontal (in relation to the stem) |
| | Servicing | maintenance-free |
| | Materials | Valve body |
| Body finish | | with protective paint |
| Closing element | | Stainless steel AISI 316 |
| Spindle | | Stainless steel AISI 304 |
| Spindle seal | | EPDM |
| Seat | | PTFE |
| Characterised disc | | stainless steel |

Safety notes



- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and must not 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

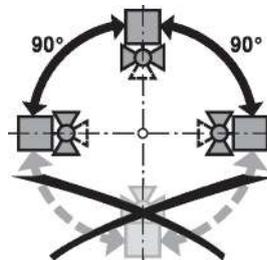
- Mode of operation** The characterised control valve is adjusted by a rotary actuator. The actuator is controlled by a commercially available modulating or 3-point control system and moves the ball of the valve – the throttling device – to the position dictated by the control signal. Open the characterised control valve counterclockwise and close it clockwise.
- Flow characteristic** Equal percentage flow control is ensured by the integrated characterising disc.

Accessories

| Electrical accessories | Description | Type |
|------------------------|-------------------------------|----------|
| | Stem heater flange F05 (30 W) | ZR24-F05 |

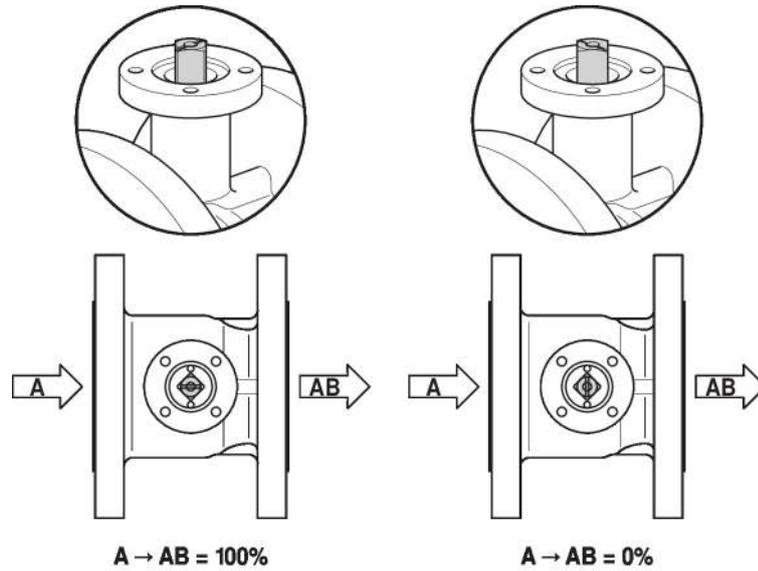
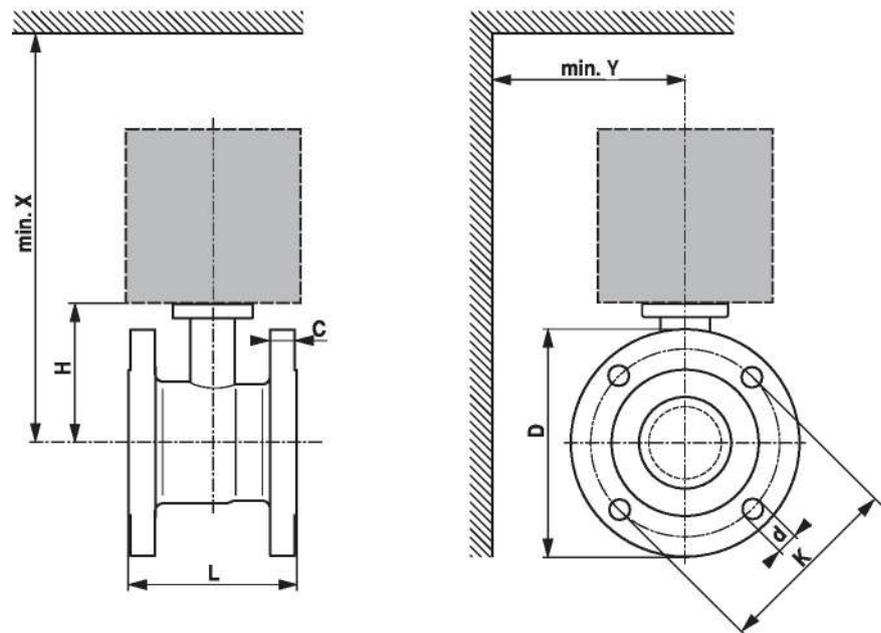
Installation notes

- 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 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 a suitable strainer is recommended.
- Spindle heater** In cold water applications and warm humid ambient air can cause condensation in the actuators. This can lead to corrosion in the gear box of the actuator and causes a breakdown of it. In such applications, the use of a spindle heater is provided. The spindle heater must be enabled only when the system is in operation, because it does not have temperature control.
- Servicing** Ball valves and rotary actuators are maintenance-free. Before any service work on the control element is carried out, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable if necessary). Any pumps in the part of the piping system concerned must also be switched off and the appropriate slide valves closed (allow all components to cool down first if necessary and always 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 correctly reassembled in accordance with the instructions and the pipeline has been refilled by professionally trained personnel.

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
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 | L [mm] | H [mm] | C [mm] | D [mm] | d [mm] | K [mm] | X [mm] | Y [mm] | kg |
|---------------------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
| R6065W63-S8 | 65 | 136.5 | 113 | 18.5 | 185 | 4 x 19 | 145 | 320 | 150 | 10 |
| R6080W100-S8 | 80 | 168 | 113 | 20.5 | 200 | 8 x 19 | 160 | 320 | 160 | 14 |
| R6100W160-S8 | 100 | 211 | 124 | 22 | 224 | 8 x 19 | 180 | 330 | 175 | 23 |
| R6125W250-S8 | 125 | 262.5 | 143 | 22 | 252 | 8 x 19 | 210 | 350 | 190 | 31 |
| R6150W320-S8 | 150 | 315 | 143 | 22 | 282 | 8 x 23 | 240 | 350 | 200 | 40 |

Further documentation

- The complete product range for water applications
- Data sheets for actuators
- Installation instructions for actuators and/or ball valves
- General notes for project planning