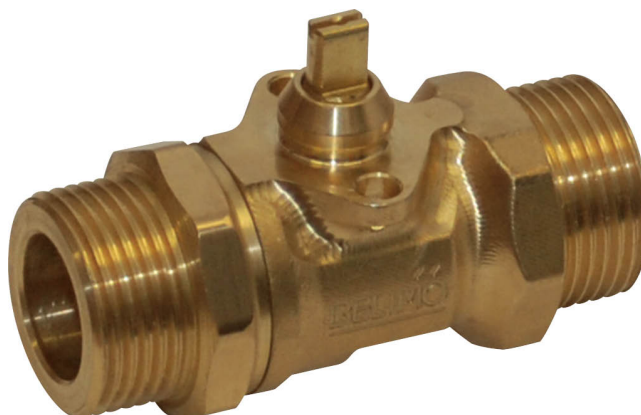


Zone valve, 2-way, External thread

- For closed cold and warm water systems
- For shut-off functions and modulating controls on the water side of air-handling units and heating systems.
- Snap-assembly of the actuator
- kvs variable


Type overview

| Type | DN | G ["] | kvs [m ³ /h] | PN |
|---------|----|----------|----------------------------|----|
| C415Q-J | 15 | 3/4 | 4.5 | 25 |
| C420Q-K | 20 | 3/4 | 7.8 | 25 |

Technical data

| Functional data | Fluid | Cold and warm water, water with glycol up to max. 50% vol. |
|--|------------|--|
| Fluid temperature | | 2...100°C |
| Fluid temperature note | | with actuator 2...90°C |
| Close-off pressure Δp_s | | 520 kPa |
| Differential pressure Δp_{max} | | 280 kPa |
| Differential pressure note | | 50 kPa for low-noise operation |
| Flow characteristic | | equal percentage, optimised in the opening range |
| Leakage rate | | air-bubble tight, leakage rate A (EN 12266-1) |
| Flow setting | | See installation instruction |
| Angle of rotation | | 90° |
| Angle of rotation note | | Operating range 15...90° |
| Pipe connection | | External thread according to ISO 228-1 |
| Installation position | | upright to horizontal (in relation to the stem) |
| Servicing | | maintenance-free |
| Materials | Valve body | Brass body |
| Closing element | | Chrome-plated brass |
| Stem | | Brass |
| Stem seal | | EPDM O-ring |
| Seat | | PTFE, O-ring EPDM |

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 ball valve is adjusted by a rotary actuator. The rotary actuator is controlled by an open/close signal or by a commercially available modulating or 3-point control system and moves the ball of the ball valve – the throttling device – to the position preset by the control signal. Open the ball valve is carried out counterclockwise and close it clockwise.

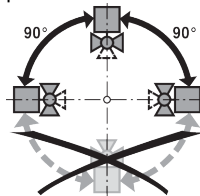
Simple direct mounting Tool-free snap assembly.
 The actuator can be plugged on the valve by hand (Caution! Just vertical movements). Pins must match the holes on the flange.
 The mounting orientation in relation to the valve can be selected in 180° increments. (Possible two times)

Accessories

| Mechanical accessories | Description | Type |
|------------------------|---|---------|
| | Spindle extension CQ | ZCQ-E |
| | Pipe connector for ball valve DN 15 Rp 1/2" | ZR4515Q |
| | Pipe connector for ball valve DN 20 Rp 3/4 | ZR4520Q |

Installation notes

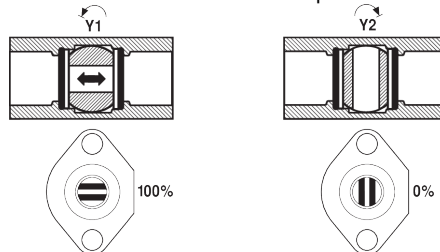
Recommended installation positions The ball valve can be installed upright to horizontal. The ball valve may not be installed in a hanging position, i.e. with the stem pointing downwards.



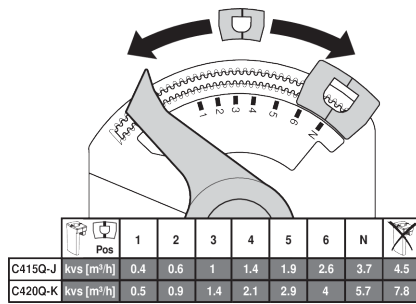
Water quality requirements The water quality requirements specified in VDI 2035 must be adhered to.
 Belimo valves are regulating devices. For the valves to function correctly in the long term, they must be kept free from particle debris (e.g. welding beads during installation work). The installation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

Servicing Ball valves and rotary actuators are maintenance-free.
 Before any service work on the final controlling device 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 Direction of flow in both directions possible.

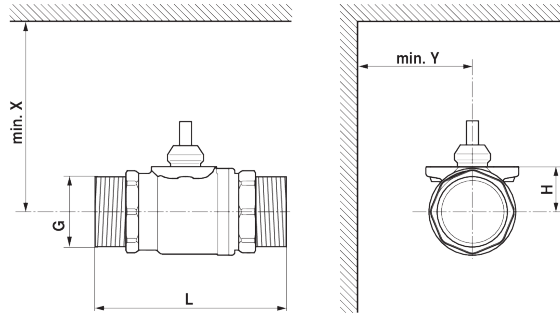


Flow setting The angle of rotation of the actuator can be changed by a clip in 2.5° increments. This is used to set the kvs value (maximum flow rate of the valve).
 Remove end stop clip and place at desired position.
 After every change of the flow setting by means of end stop clip, an adaptation must be triggered on the modulating actuators.



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 | G ["] | L [mm] | H [mm] | X [mm] | Y [mm] | kg |
|---------|----|----------|-----------|-----------|-----------|-----------|------|
| C415Q-J | 15 | 3/4 | 70 | 14.5 | 110 | 35 | 0.24 |
| C420Q-K | 20 | 3/4 | 76 | 16.5 | 110 | 35 | 0.28 |

Further documentation

- The complete product range for water applications
- Data sheets for actuators CQ..
- Installation instructions for zone valves and actuators
- General notes for project planning