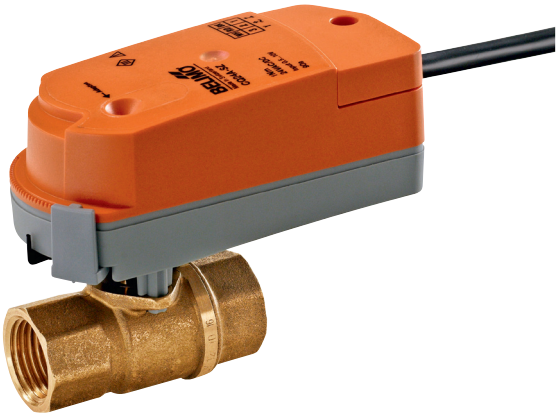
BELIMO

Technical data sheet C215Q/SZ (CQ24A-SZ)

2-way zone valves with rotary actuator
- **Nominal torque 1 Nm**
- **Nominal voltage AC/DC 24 V**
- **Control: modulating DC 0.5 V ... 10 V**
- **Internal thread**
- **Snap-assembly**



Technical data

Valve data	Media	Cold and hot water, water with glycol up to max. 50% vol.
	Medium temperature	6°C...80°C
	DN	15
	Rp	1/2 ”
	ps	1000 kPa
	Closing pressure Δps	230 kPa
	Differential pressure Δpmax	230 kPa
	kvmax	4.5 m³/h
	Pipe connections	Internal thread in accordance with ISO 7/1
Materials	Valve	Forged, brass body
	Flange sealing surface	Nickel-plated brass
	Stem	Chrome-plated brass
	Spindle bearing	O-ring EPDM
Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	0.3 W
	Power consumption at rest	0.15 W
	Power consumption for wire sizing	0.6 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm²
	Parallel operation	Yes
Functional data	Torque motor	1 Nm
	Positioning signal Y	DC 0.5...10 V
	Positioning signal Y note	Input impedance 100 kΩ
	Manual override	possible, through dismounting of actuator
	Running time motor	90 s (kvmax = 4.5)
	Sound power level motor max.	35 dB (A)
	Position indication	yes
	kvs (factory setting)	4 m³/h
	kvs setting	0.25 / 0.4 / 0.63 / 1 / 1.6 / 2.5 / 4 (4.5 without end stop clip)
Safety	Protection class IEC/EN	III Safety extra-low voltage
	Degree of protection IEC/EN	IP40
	EMC	CE in accordance with 2004/108/EC
	Certification IEC/EN	Certified to: IEC/EN 60730-1 and IEC/EN 60730-2-14
	Principle of operation	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Control pollution degree	3
	Ambient temperature	5°C...40°C
	Non-operating temperature	-7°C...50°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight approx.	0.3 kg

Safety notes

- The device 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.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

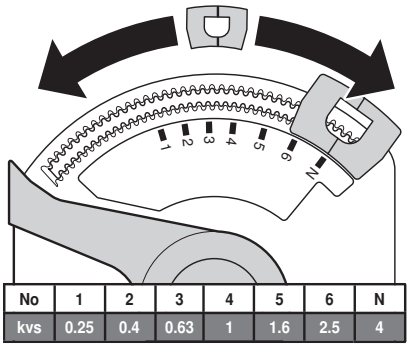
Direct mounting
Tool-free snap-assembly
The actuator can be plugged to the valve with hand pressure (Caution! vertical movement only). Pins must match the holes on the flange.
The mounting orientation in relation to the valve can be selected in 180° increments. (possible 2 x)

Manual override
Click out the actuator and rotate the valve stem with the help of the actuator.

Adjustable angle of rotation
The rotary actuator can be adjusted in 2.5° increments beginning with 86° (A, 100%). The scale corresponds to 5...100% of the kvs value. The kvs values are marked in the scale in 7 steps.

High functional reliability
The actuator is overload protected, requires no limit switches in intermediate positions and automatically stops when the end stop is reached (at rest).

kvs setting
Remove end stop clip and place at desired position (without end stop clip kvs = 4.5 m³/h).



No	1	2	3	4	5	6	N
kvs	0.25	0.4	0.63	1	1.6	2.5	4

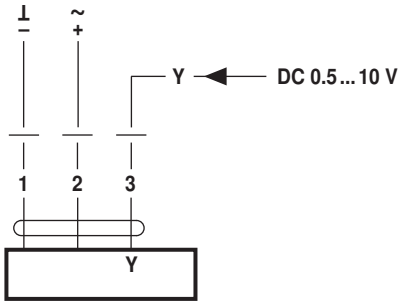
Accessories

	Description	Type
Mechanical accessories	Housing cover white	ZCQ-W
	Pipe connector for characterised control valve DN 15	ZR2315

Electrical installation

Wiring diagrams

AC/DC 24V, modulating



Cable colours:
1 = black
2 = red
3 = white

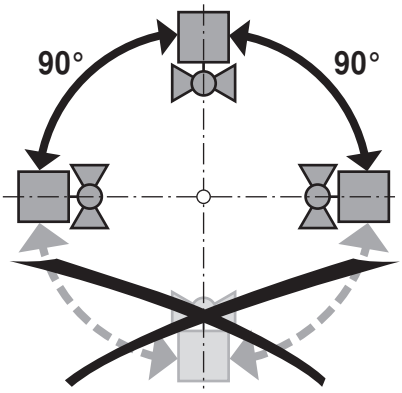
Indicators and operating elements

(1) Push-button and LED display yellow
Illuminated: Angle of rotation adaptation active
Press button: Triggers angle of rotation adaptation, followed by standard mode

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.



Installation notes

Water quality requirements

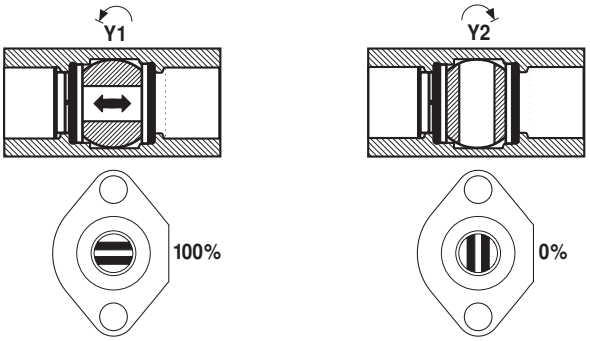
The water quality requirements specified in VDI 2035 must be adhered to.
Ball valves are regulating devices. The use of dirt filters is recommended in order to prolong their service life for performing control tasks.

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 disconnecting the electrical cable). Any pumps in the part of the pipeline element 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 ball valve and the rotary actuator have been properly reassembled in accordance with the instructions and the pipelines have been refilled in the proper manner.

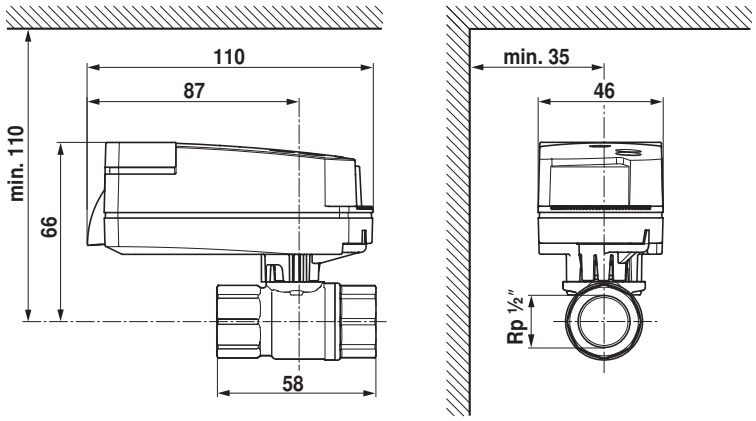
Flow direction

Flow possible in both directions.



Dimensions [mm]

Dimensional drawings



Further documentation

- Installation instructions for actuators and/or butterfly valves and rotary valves, respectively

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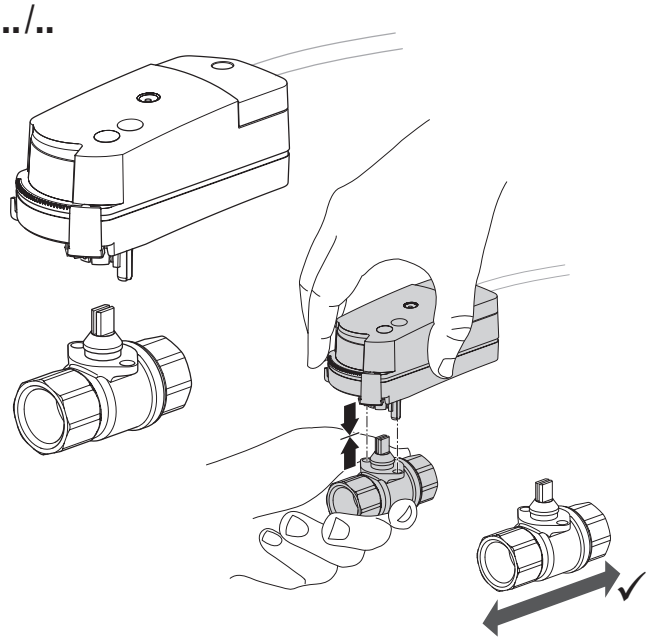

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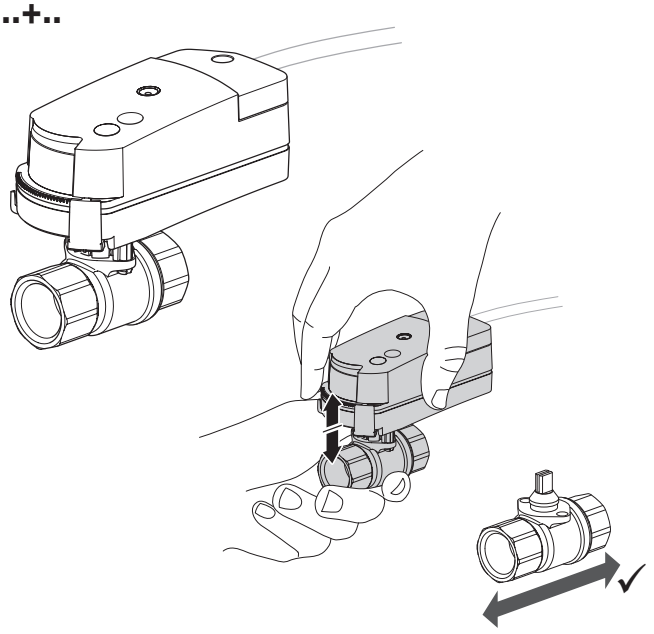

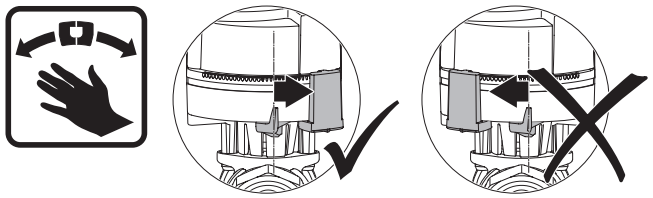

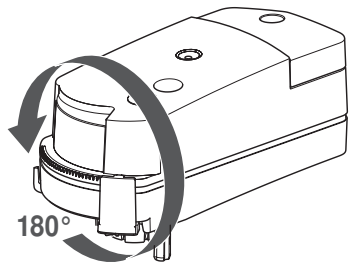

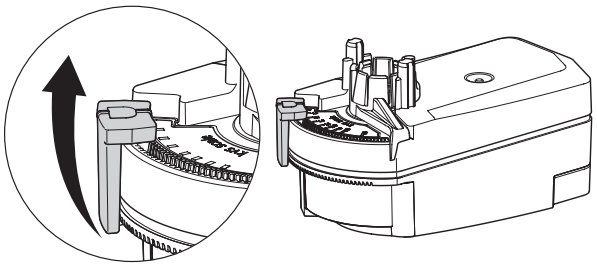

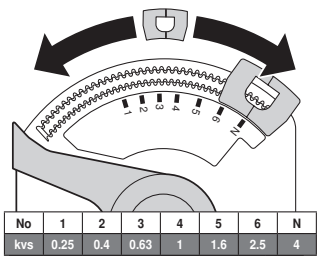

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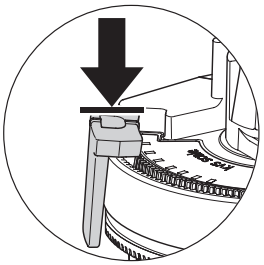
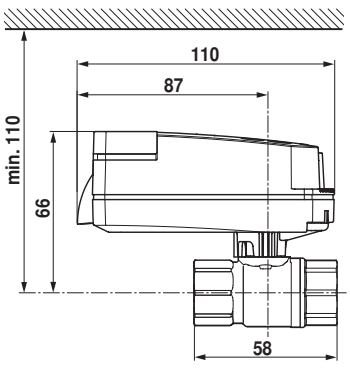
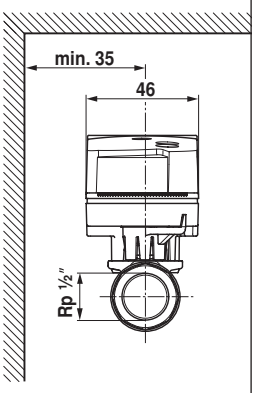
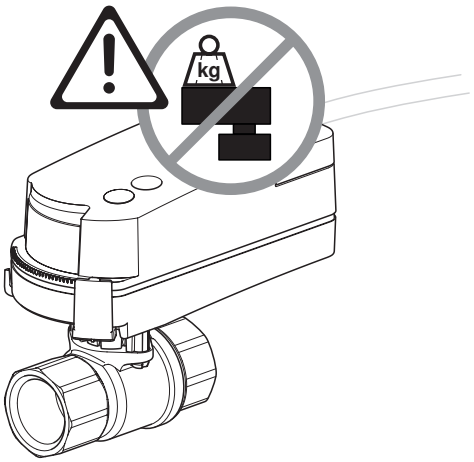
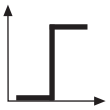


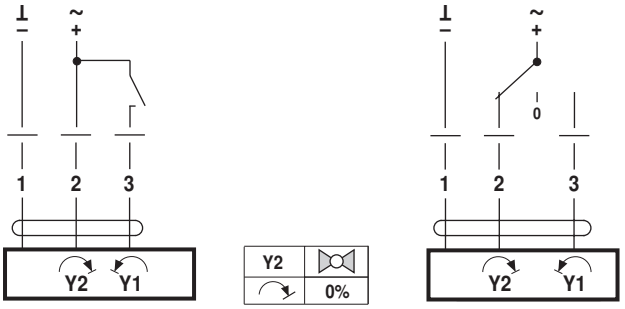




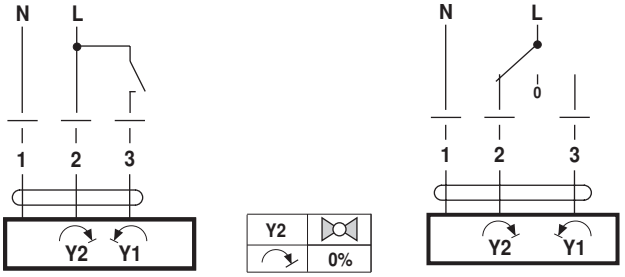


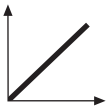


AC 24 V / DC 24 V



AC 100 ... 240 V ⚠





AC 24 V / DC 24 V