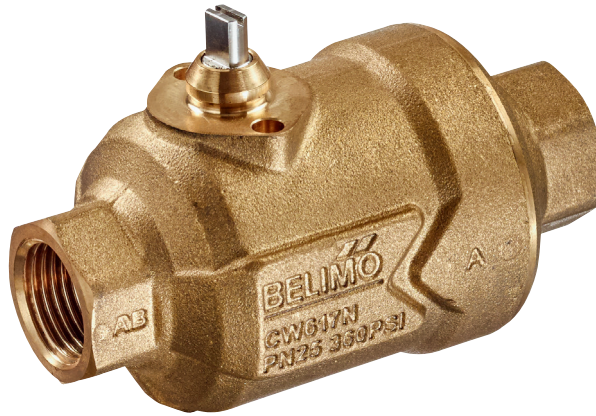


Pressure independent zone valve,  
2-way, Internal thread

- For closed cold and warm water systems
- For modulating control of air-handling and heating systems on the water side
- Snap-assembly of the actuator


**Type overview**

Type	DN	Rp	Vnom	PN	Sv min.
	[ ]	["]	[ l/h]	[ ]	[ ]
<b>C215QP-B</b>	15	1/2	210	25	100
<b>C215QP-D</b>	15	1/2	420	25	100
<b>C220QP-F</b>	20	3/4	980	25	100

**Technical data**

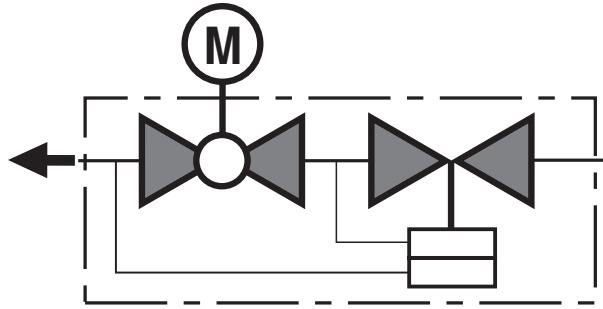
<b>Functional data</b>	Media	Cold and warm water, water with glycol up to max. 50% vol.
	Medium temperature	2...90°C
	Pressure value	16...350 kPa
	Permissible pressure ps	1600 kPa
	Closing pressure Δps	700 kPa
	Flow characteristic	equal percentage (VDI/VDE 2178), optimised in the opening range
	Pressure stability	With a pressure value of 16...350 kPa: ±10%
	Leakage rate	Leakage rate A, tight (EN 12266-1)
	Flow setting	see Installation instructions
	Pipe connectors	Internal thread according to ISO 7-1
	Angle of rotation	90° (Operating range 15...90°)
	Installation position	Upright to horizontal (in relation to the stem)
	Maintenance	Maintenance-free
	<b>Materials</b>	Housing
Closing element		Stainless steel
Stem		Stainless steel
Stem seal		O-ring EPDM
Valve seat		PTFE, O-ring EPDM
Diaphragm		EPDM
<b>Terms</b>	Abbreviations	Vnom = nominal flow with valve completely opened
		Vmax = maximum flow set by the angle of rotation limitation on the actuator

**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

- Principle of operation** The ball 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 positioning signal. Open the characterised control valve counterclockwise and close it clockwise.
- Flow characteristic** Equal percentage flow control is ensured by the special design of the ball.
- Constant flow volume** With a differential pressure of 16...350 kPa, a constant flow volume is achieved thanks to the integrated pressure regulating valve. Independent of the differential pressure through the valve, a valve authority of 1 is achieved. Even with pressure variations and in the partial load range, the flow rate remains constant with each respective opening position (angle of rotation) and ensures a steady control.



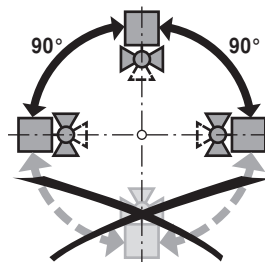
- Flow limitation** Instead of the electric actuator, the PIQCV-valve can also be operated with a flow limiter (see accessories). The flow limiter ensures that the heat exchanger is continuously supplied with a manually fixed amount of water.

## Accessories

	Description	Type
Mechanical accessories	Spindle extension CQ	ZCQ-E
	Flow limiter PIQCV	ZCQ-FL

## Installation notes

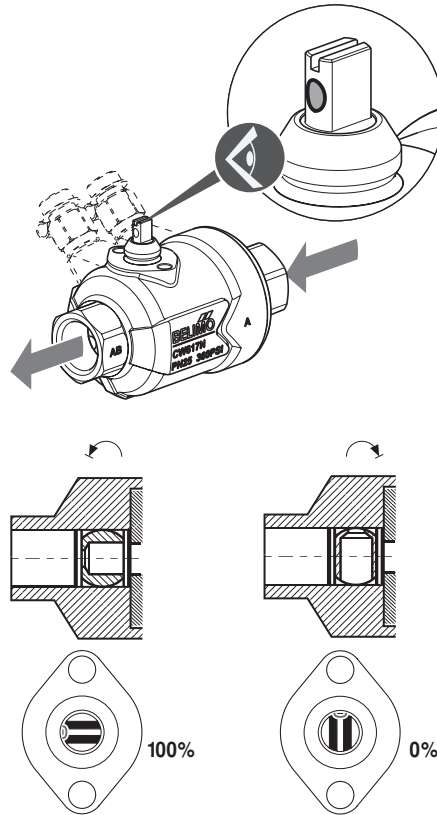
- Recommended installation positions** The ball valve can be installed upright to horizontal. The ball valve may not be installed in a hanging position, i.e. with the stem pointing downwards.



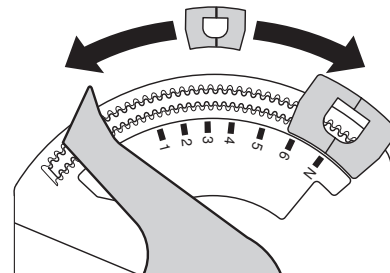
- Mounting position in the return** Installation in the return is recommended.
- Water quality requirements** The water quality requirements specified in VDI 2035 must be adhered to. Belimo valves are regulating devices. For the valves to function correctly in the long term, they must be kept free from particle debris (e.g. welding beads during installation work). The installation of suitable strainer is recommended.
- Maintenance** Ball valves and rotary actuators are maintenance-free. In the event of any service work on the final controlling device, 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 ball valve and the rotary actuator have been properly reassembled in accordance with the instructions and the pipeline has been refilled in the proper manner.

Installation notes

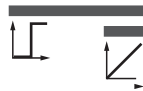
**Flow direction** The direction of flow, specified by an arrow on the housing, is to be complied with, since otherwise the ball valve could become damaged. Please ensure that the ball is in the correct position (marking on the spindle).



**kv setting** The angle of rotation of the actuator can be changed by clip in 2.5° increments. This is used to set the  $\dot{V}_{max}$ -value (maximum flow rate of the valve). Remove end stop clip and place at desired position.



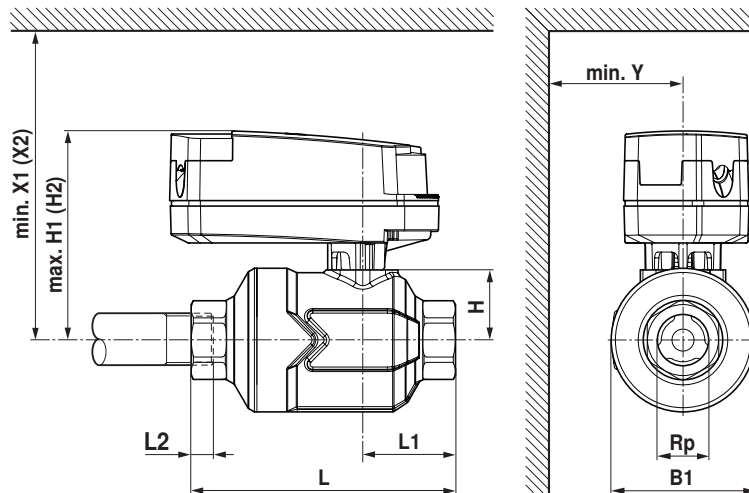
	Pos	1	2	3	3+	4-	4	4+	5-	5	5+	6-	6	6+	N-	N
C215QP(T)-B	max (l/h)	20	25	35	40	45	50	60	70	85	95	110	125	140	160	170
	max (l/s)	0.005	0.007	0.009	0.011	0.012	0.014	0.017	0.020	0.023	0.027	0.031	0.035	0.039	0.044	0.048
C215QP(T)-D	max (l/h)	45	60	80	90	100	115	130	150	170	190	210	240	260	290	310
	max (l/s)	0.012	0.016	0.022	0.025	0.028	0.032	0.037	0.042	0.047	0.053	0.059	0.066	0.073	0.080	0.086
C220QP(T)-F	max (l/h)	100	145	210	240	270	320	370	410	470	530	590	650	710	790	840
	max (l/s)	0.028	0.040	0.060	0.067	0.076	0.09	0.10	0.11	0.13	0.15	0.16	0.18	0.20	0.22	0.23



without end stop clip,  $V_{nom}$  see type overview

## Dimensions / Weight

### Dimensional drawings



H1/X1: without spindle extension CQ  
 H2/X2: with spindle extension CQ (ZCQ-E)  
 L2: Maximum screwing depth.

Type	DN [ ]	Rp ["]	L [ mm]	L1 [ mm]	L2 [ mm]	B1 [ mm]	H [ mm]	H1 [ mm]	H2 [ mm]	Y [ mm]	X1 [ mm]	X2 [ mm]	Weight approx. [ kg]
C215QP-B	15	1/2	96	34	13	52	26	80	112	40	125	155	0.7
C215QP-D	15	1/2	96	34	13	52	26	80	112	40	125	155	0.7
C220QP-F	20	3/4	106	39	14	63	31	85	117	45	130	165	1.1

### Further documentation

- Overview Valve-actuator combinations
- Data sheets for actuators CQ..
- Installation instruction for zone valves and actuators
- General notes for project planning