

PI flow limiter valve, 2-way, Internal thread

- For closed cold water systems
- For water-side on/off control of fan coil and cooling ceilings



### Type overview

Type	DN	Rp ["]	V <sup>nom</sup> [l/s]	V <sup>nom</sup> [l/h]	V <sup>nom</sup> [m³/h]	PN
C215QFL-C	15	1/2	0.08	290	0.29	25
C215QFL-D	15	1/2	0.13	470	0.47	25
C215QFL-E	15	1/2	0.18	650	0.65	25
C215QFL-F0	15	1/2	0.26	940	0.94	25
C215QFL-F	15	1/2	0.36	1300	1.3	25
C220QFL-F6	20	3/4	0.33	1200	1.2	25
C220QFL-G0	20	3/4	0.42	1500	1.5	25
C220QFL-G	20	3/4	0.52	1900	1.9	25
C220QFL-H0	20	3/4	0.65	2350	2.35	25
C220QFL-H	20	3/4	0.81	2900	2.9	25
R225FL-J	25	1	1.00	3600	3.6	25

### Technical data

<b>Functional data</b>	Fluid	Cold water
	Fluid temperature	2...60°C [36...140°F]
	Differential pressure	20...280 kPa
	Close-off pressure $\Delta p_s$	520 kPa
	Differential pressure note	50 kPa for low-noise operation
	Pressure stability	±5% (with a pressure value of 100...280 kPa)
	Leakage rate	air-bubble tight, leakage rate A (EN 12266-1)
	Flow setting	See installation instruction
	Angle of rotation	90°
	Pipe connection	Internal thread according to ISO 7-1
	Installation position	upright to horizontal (in relation to the stem)
	Servicing	maintenance-free
	<b>Materials</b>	Valve body
Closing element		Chrome-plated brass
Spindle		Brass (DN 15, 20) Nickel-plated brass (DN 25)
Spindle seal		EPDM O-ring
Seat		PTFE, O-ring EPDM
<b>Terms</b>	Abbreviations	V <sup>nom</sup> = nominal flow with valve completely opened

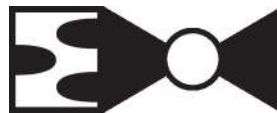
## Safety notes



- 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.
- When back flushing the valve, the differential pressure should not exceed 150 kPa.
- 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 open/close ball valve is adjusted by a rotary actuator. The actuator is connected by an open/close signal. The ball valve opens counterclockwise and closes clockwise.
- Constant flow volume** With a differential pressure of 20...280 kPa, a constant flow volume is achieved thanks to the integrated flow limiter. Even with pressure variations, the flow rate remains constant when open to an angle of 90° and ensures a steady control.

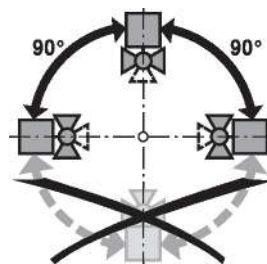


## Accessories

Mechanical accessories	Description	Type
	Spindle extension CQ	ZCQ-E
	Pipe connector for ball valve DN 15	ZR2315
	Pipe connector for ball valve DN 20	ZR2320
	Pipe connector for ball valve DN 25	ZR2325

## 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.



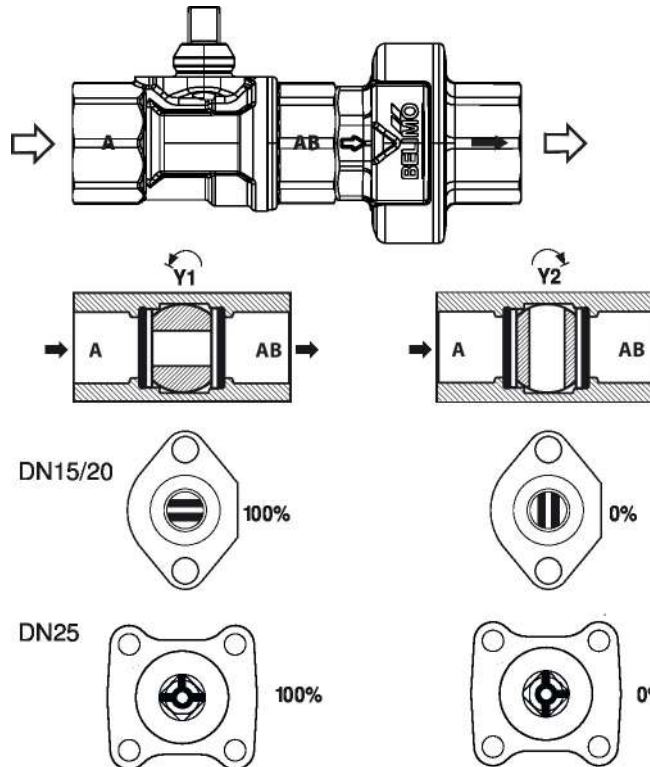
- Installation in return** Installation in the return is recommended.
- Water quality requirements** The water quality requirements specified in VDI 2035 must be adhered to. Belimo valves are regulating devices. For the valves to function correctly in the long term, they must be kept free from particle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

**Servicing** Ball valves and rotary actuators are maintenance-free.

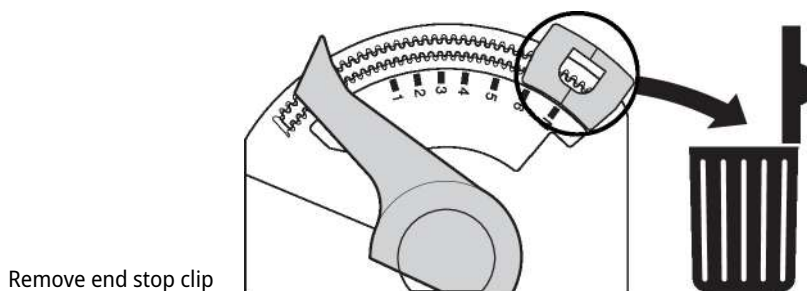
Before any service work on the control element is carried out, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable if necessary). Any pumps in the part of the piping system concerned must also be switched off and the appropriate slide valves closed (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).

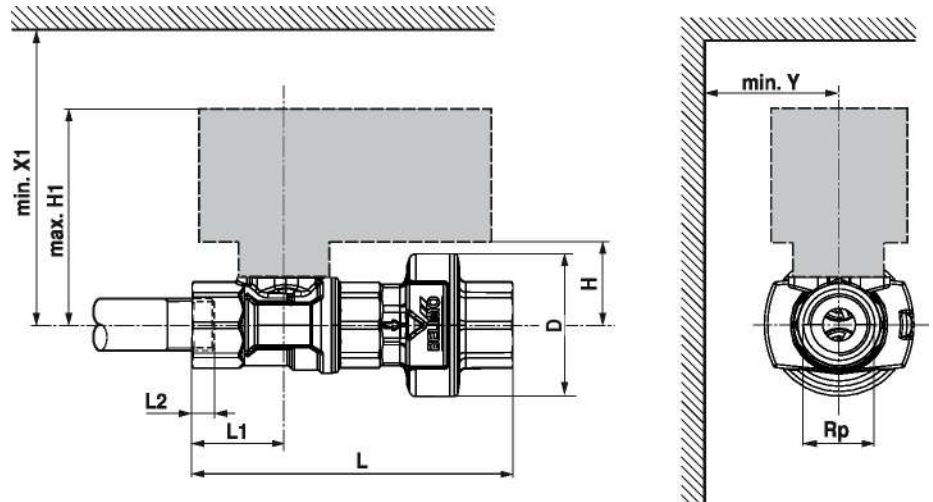


**Flow setting** At the CQ-actuator the end stop clip has to be removed. This in order to get the angle of rotation of 90°, which is needed for the open/close functionality.



## Dimensions

## Dimensional drawings



L2: Maximum screwing depth.

Type	DN	Rp ["]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	D [mm]	X1 [mm]	Y [mm]	 kg
C215QFL-C	15	1/2	100	29	13	24.5	69	44	110	35	0.34
C215QFL-D	15	1/2	100	29	13	24.5	69	44	110	35	0.34
C215QFL-E	15	1/2	100	29	13	24.5	69	44	110	35	0.34
C215QFL-F0	15	1/2	100	29	13	24.5	69	44	110	35	0.34
C215QFL-F	15	1/2	100	29	13	24.5	69	44	110	35	0.34
C220QFL-F6	20	3/4	111	35	14	26.5	71	46	110	35	0.45
C220QFL-G0	20	3/4	111	35	14	26.5	71	46	110	35	0.45
C220QFL-G	20	3/4	111	35	14	26.5	71	46	110	35	0.45
C220QFL-H0	20	3/4	111	35	14	26.5	71	46	110	35	0.45
C220QFL-H	20	3/4	111	35	14	26.5	71	46	110	35	0.45
R225FL-J	25	1	128	44	16	46	130	49	200	75	0.76