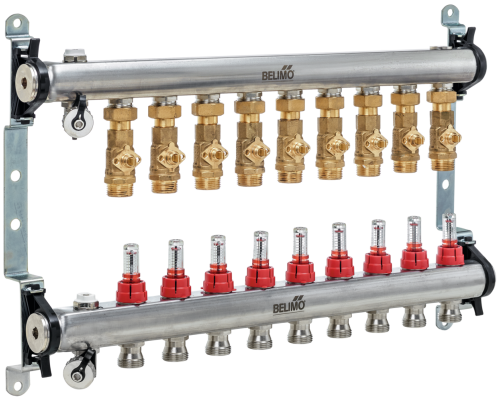
BELIMO

Technical data sheet EM-ECQ-..F

Belimo Energy Manifold

- For closed cold and warm water systems
- Snap-assembly of the actuator
- Flow setting variable
- Operating pressure 6 bar



Type Overview

Type	Zones
EM-ECQ-02F	2
EM-ECQ-03F	3
EM-ECQ-04F	4
EM-ECQ-05F	5
EM-ECQ-06F	6
EM-ECQ-07F	7
EM-ECQ-08F	8
EM-ECQ-09F	9
EM-ECQ-10F	10
EM-ECQ-11F	11
EM-ECQ-12F	12

Technical data

Functional data	Fluid	Cold and warm water, water with glycol up to max. 50% vol.
	Fluid temperature	2...70°C [36...158°F]
	Flow setting	0...5 l/min
	Leakage rate	air-bubble tight, leakage rate A (EN 12266-1)
	Installation position	upright to horizontal (in relation to the stem)
	Servicing	maintenance-free
Materials	Manifold	Stainless steel
	Valve body	Brass

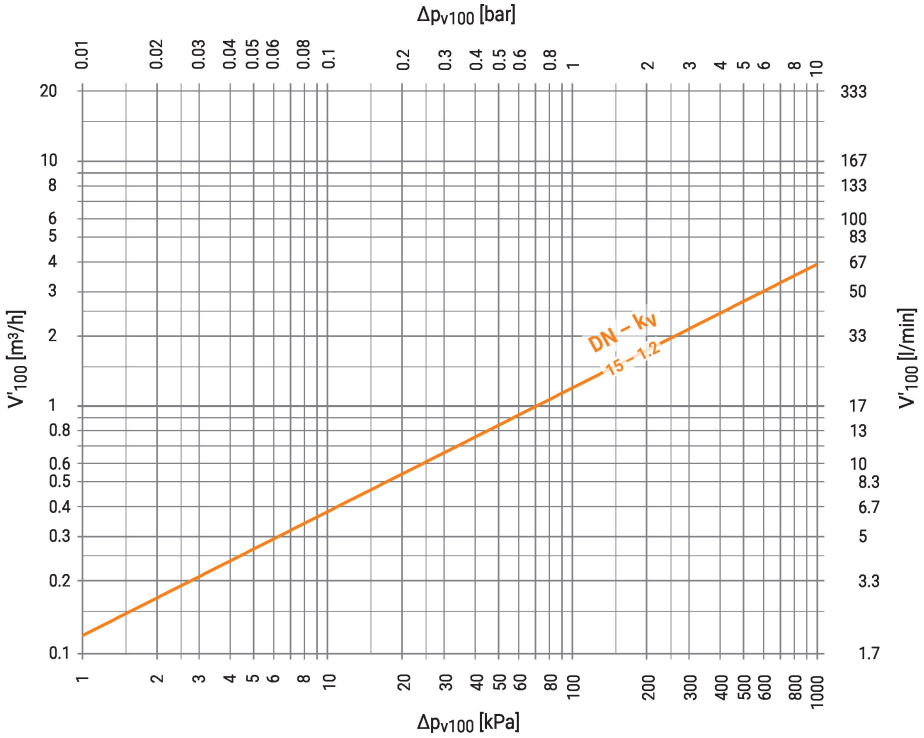
Safety notes

- This device 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.

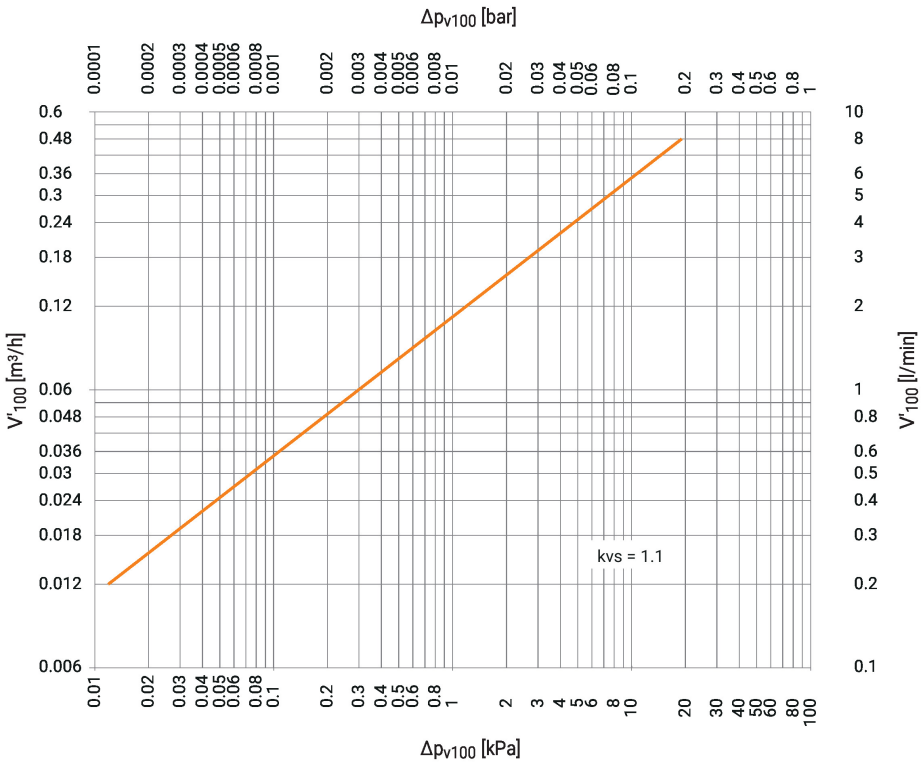
Product features

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.

Pressure loss Ball valve



Flow limiter



Accessories

Electrical accessories

Description	Type
Rotary actuator (ZoneTight), AC/DC 24 V, Open/close, 3-point, 75 s	CQ24A
Rotary actuator (ZoneTight), AC/DC 24 V, BACnet MS/TP, Modbus RTU, 75 s	CQ24A-BAC
Rotary actuator (ZoneTight), AC/DC 24 V, MP-Bus, 75 s	CQ24A-MPL
Rotary actuator (ZoneTight), AC/DC 24 V, 2...10 V, 75 s	CQ24A-SR
Rotary actuator (ZoneTight), AC/DC 24 V, 0.5...10 V, 75 s	CQ24A-SZ
Rotary actuator (ZoneTight), AC 100...240 V, Open/close, 3-point, 75 s	CQ230A
Rotary actuator fail-safe (ZoneTight), AC/DC 24 V, Open/close, 75 s	CQK24A
Rotary actuator fail-safe (ZoneTight), AC/DC 24 V, MP-Bus, 75 s	CQK24A-MPL
Rotary actuator fail-safe (ZoneTight), AC/DC 24 V, 2...10 V, 75 s	CQK24A-SR
Rotary actuator fail-safe (ZoneTight), AC 100...240 V, Open/close, 75 s	CQK230A

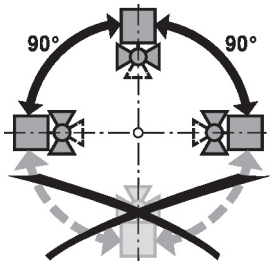
Mechanical accessories

Description	Type
Open/close valve kit, 1" angled 90°	EXT-TT-1A
Open/close valve kit, 1" straight	EXT-TT-1B
Open/close valve kit for thermal energy meter, 1" angled 90°	EXT-TT-1C
Open/close valve kit for thermal energy meter, 1" straight	EXT-TT-1D
Cabinet for Belimo Energy Manifold, for max. 5 zones	Z-EM-C600
Cabinet for Belimo Energy Manifold, for max. 7 zones	Z-EM-C750
Cabinet for Belimo Energy Manifold, for max. 11 zones	Z-EM-C900
Cabinet for Belimo Energy Manifold, for max. 12 zones	Z-EM-C1050
Cabinet for Belimo Energy Manifold, for max. 12 zones	Z-EM-C1200

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.

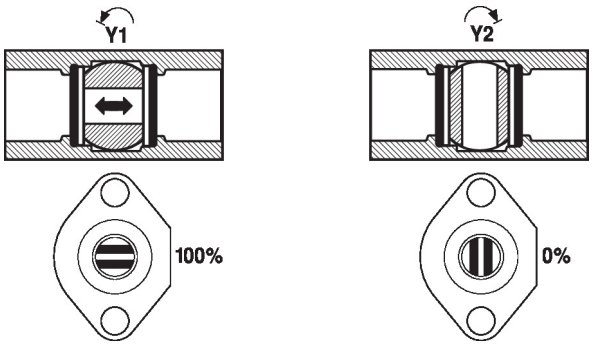
Servicing

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.

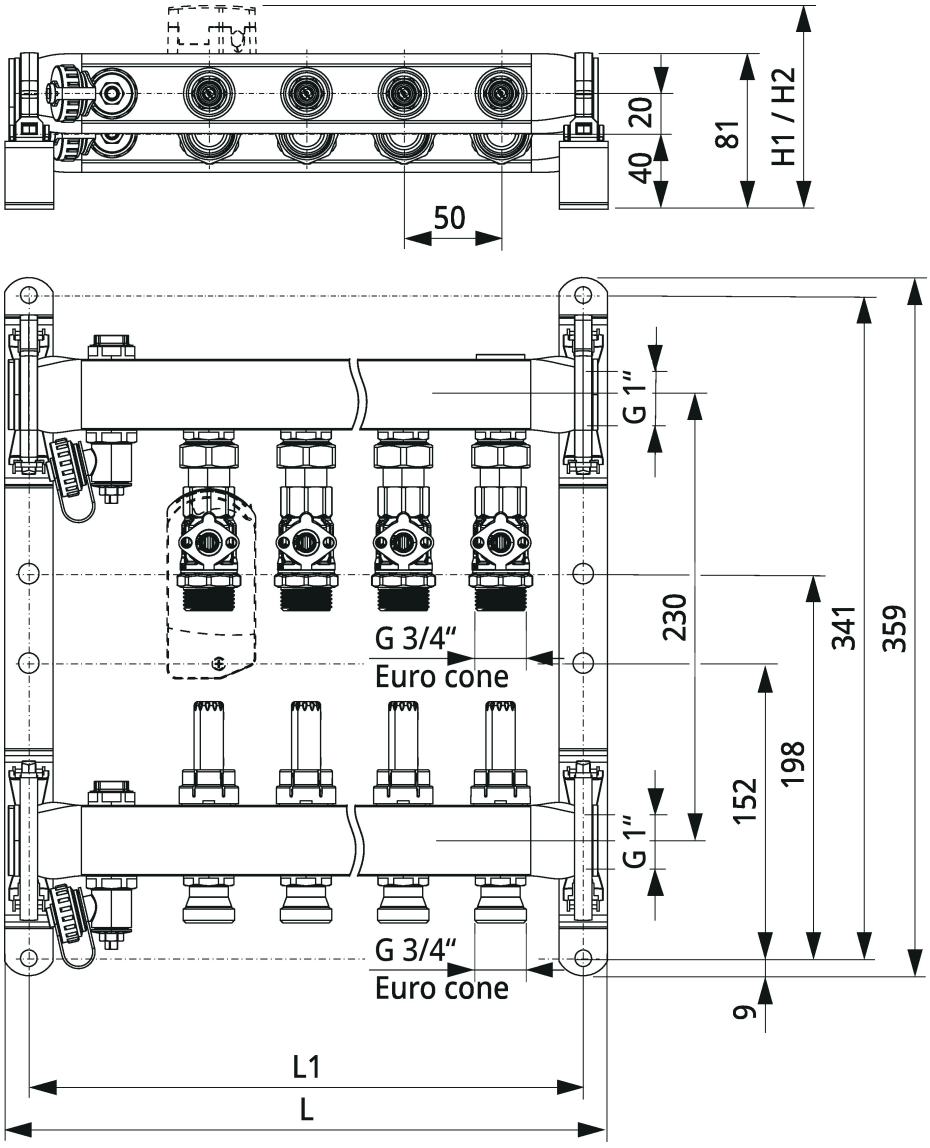
Flow direction



Flow setting The flow rate can be adjusted with the flow limiter between 0...5 l/min.

Dimensions

Dimensional drawings



The actuator dimensions correspond to H1 (CQ.....A..) 105 mm and H2 (CQK...A..) 109 mm.

Type	Zones	L [mm]	L1 [mm]	Weight
EM-ECQ-02F	2	211	186	2.3 kg
EM-ECQ-03F	3	261	236	2.9 kg
EM-ECQ-04F	4	311	286	3.4 kg
EM-ECQ-05F	5	361	336	4.0 kg
EM-ECQ-06F	6	411	386	4.6 kg

Type	Zones	L [mm]	L1 [mm]	Weight
EM-ECQ-07F	7	461	436	5.2 kg
EM-ECQ-08F	8	511	486	5.7 kg
EM-ECQ-09F	9	561	536	6.3 kg
EM-ECQ-10F	10	611	586	6.9 kg
EM-ECQ-11F	11	661	636	7.5 kg
EM-ECQ-12F	12	711	686	8.1 kg

Further documentation

- Data sheets for actuators CQ..
- Installation instructions for zone valves and actuators
- General notes for project planning