



Certified,
maintenance-free,
and future-proof.

Potable water valve application

Edition 2025-10/A

Preface

Thank you for your interest in our products. In this brochure, you will find application examples for the use of motorised 2-way open/close potable water valves. It also presents innovative Belimo products that you can use in your potable water applications. Our recommendations and notes are not a substitute for individual system planning.

All chapters are structured as follows:

- Schematic
- Application description
- Bill of material
- Belimo – features and benefits

You can find summarised tender texts starting from [page 14](#).

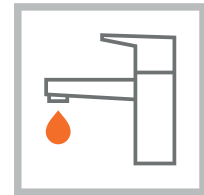


Product overview

Belimo offers certified 2-way open/close potable water valves in combination with compact rotary actuators, fail-safe or non fail-safe. This compact and maintenance-free unit ensures long and worry-free operation.

The benefits:

- Certified for application in potable water installations
- Future-proof thanks to the use of contemporary, dezincification resistant materials
- Maintenance-free use thanks to resistance against soiling and deposits
- Motorisation with proven standard actuators from Belimo



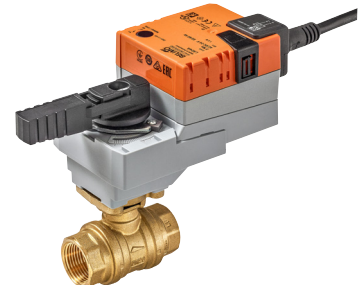
Open/close ball valve:

- Temperature range: suitable for potable water temperatures of 5...100°C
- Pressure resistance: approved for high nominal pressures up to PN 25/40
- Durable and tight: maintenance-free and air-bubble tight
- Material quality: modern, dezincification resistant materials (DZR/CR standard) for long-term safety and durability
- Certification: can be used throughout Europe thanks to comprehensive certifications (ACS, DVGW, WRAS, ÜA)



Motorisation:

- Compact and reliable: proven standard rotary actuators fail-safe or non fail-safe or fast running actuators
- Space-saving: available for DN 15 valves with the compact CQ.. actuator series
- Communicative actuator variants allow transparent operation
- Integration of sensors directly on the actuator



Device selection

Valve product range					Motorisation without fail-safe				Motorisation with fail-safe			
Product type from Belimo	DN	PN	RP [°]	K _{vs} [m³/h]	CQ..A	LR..A	NR..A	SR..A	CQK..A	LRF..	NRF..A	SRF..A
C215QPW-N	15	40	1/2	16	■	–	–	–	■	–	–	–
R215PW-N	15		1/2	16	–	■	–	–	–	■	–	–
R220PW-P	20		3/4	32	–	■	–	–	–	■	–	–
R225PW-Q	25		1	40	–	■	–	–	–	■	–	–
R232PW-Q	32	25	1 1/4	63	–	–	■	–	–	–	■	–
R240PW-R	40		1 1/2	100	–	–	–	■	–	–	–	■
R250PW-S	50		2	150	–	–	–	■	–	–	–	■

Legend

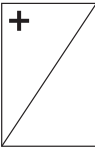
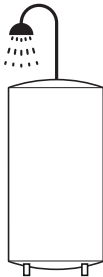
Products

Icon	Name
	2-way open/close potable water valves with rotary actuator

Sensors

Icon	Name	Icon	Name
	Temperature sensor		Leakage switch
	Occupancy switch		

Components

Icon	Name	Icon	Name
	Pump		Heat exchanger (fresh water station)
	Buffer storage tank		Potable water heater
	Procedure		

Lines

Line type	Name
	Cold potable water (green)
	Hot potable water (red dashed line)
	Hot potable water circulation line (purple)
	Low temperature hot water heating supply (red)
	Low temperature hot water heating return (blue)

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Low temperature hot water supply through cascade system



Schematic

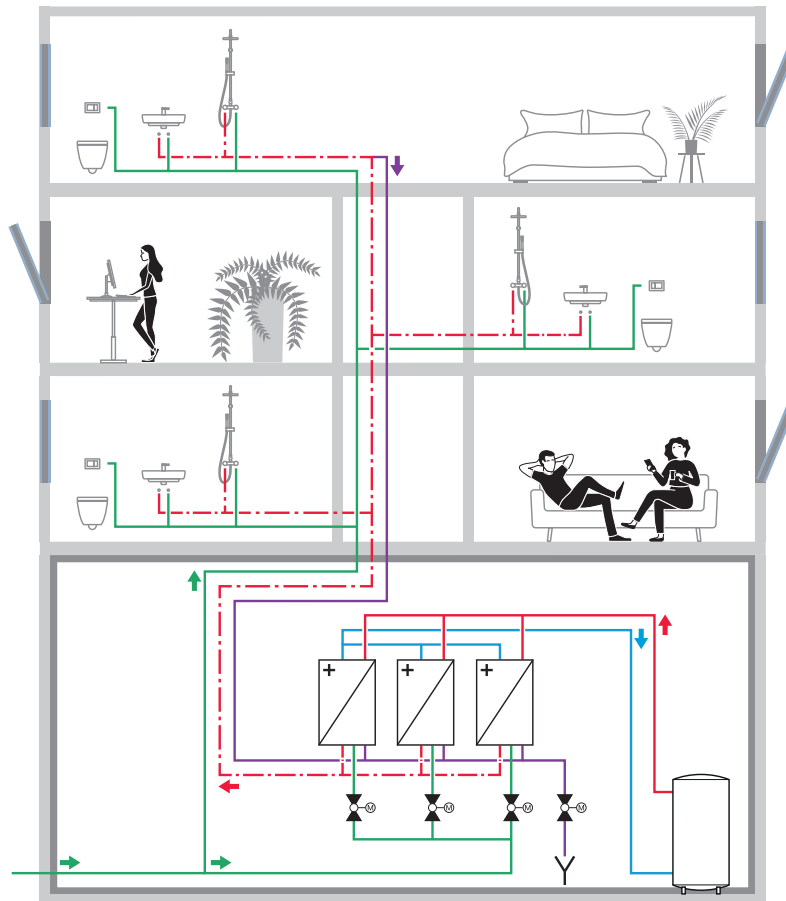


Illustration example

Application description

Motorised 2-way potable water valves are being increasingly used in conjunction with fresh water stations for heating potable water. Due to the increasing demand for hygienic and energy-efficient heating of potable water, these fresh water stations are being installed more and more frequently. A cascade connection controls the 2-way potable water valves and switches the fresh water stations on one after the other in a demand-controlled manner, thereby minimising energy consumption.

Fresh water stations:

- Demand-controlled heating of the required potable water and prevention of stagnation, thereby minimising the risk of legionella
- Hygienic low temperature hot water preparation without storage
- Flexible use: from detached houses and apartment blocks to larger infrastructure buildings

Buffer storage tank:

- Stores energy in the form of heating water without direct contact with the potable water supply
- Ensures a constant low temperature hot water supply

Cascade connection:

- Controls multiple fresh water stations in a set sequence and activates them as required with motorised 2-way potable water valves
- By using open/close potable water valves, fresh water stations can be switched according to the current low temperature hot water demand. This optimises energy use and avoids unnecessary generation

Bill of material

	Product type from Belimo	Description	Quantity
	R2..PW-.. + LR..A NR..A SR..A	2-way open/close ball valve, internal thread, DN 15...50, with rotary actuator 5...20 Nm	3

Belimo – features and benefits

Features	Benefits
Valves and actuators	
Fast running time of the actuators of 9 s	Fast potable water supply
MP-Bus, Modbus RTU, BACnet MS/TP, or conventional control	Transparent operational monitoring thanks to seamless integration into automation systems
Maintenance-free and 5-year warranty	Reliable product with Belimo support

Automated flushing for maintaining hygiene in potable water systems



Schematic

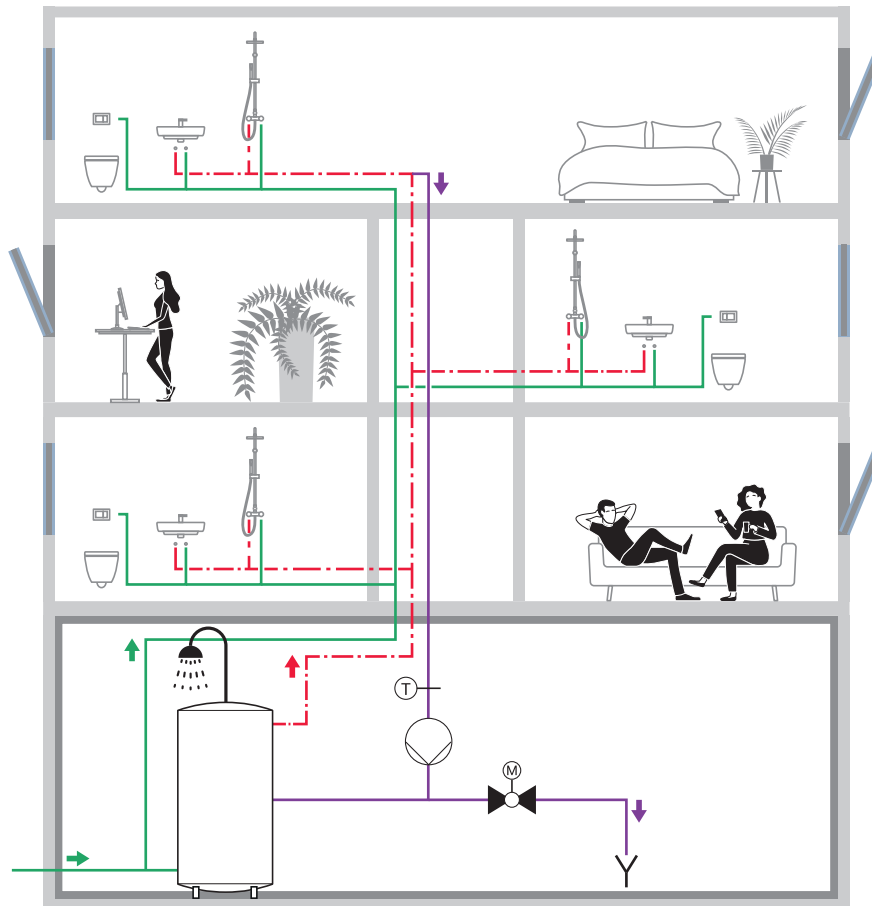


Illustration example

Application description

Motorised 2-way open/close potable water valves can be used to flush potable water lines in order to achieve a high standard of hygiene.

- Flushing potable water lines prevents deposits in the potable water lines and maintains water hygiene
- Targeted flushing processes remove stagnant water and prevent biofilms
- Automated flushing systems support a high standard of hygiene and reduce maintenance costs

Note:

The maximum permitted differential pressure ($\Delta p_{\max}$) of the potable water valves must be taken into account.

Bill of material

	Product type from Belimo	Description	Anzahl
	R2..PW-.. + LR..A NR..A SR..A	2-way open/close ball valve, internal thread, DN 15...50, with rotary actuator 5...20 Nm	1

Belimo – features and benefits

Properties	Benefits
Valves and actuators	
MP-Bus, Modbus RTU, BACnet MS/TP, or conventional control	Transparent operational monitoring thanks to seamless integration into automation systems
Fast running time of the actuators of 9 s	Efficient flushing process with fast running actuator
Tight-closing valve with leakage rate A (EN 12266-1)	No activation with zero load No energy loss with zero load
Lead-free, dezincification resistant brass (ISO 6509) as the valve material	Future-proof thanks to the use of contemporary, dezincification resistant materials
Maintenance-free and 5-year warranty	Reliable product with Belimo support

Automatic shut-off of the potable water supply in the event of leakage



Schematic

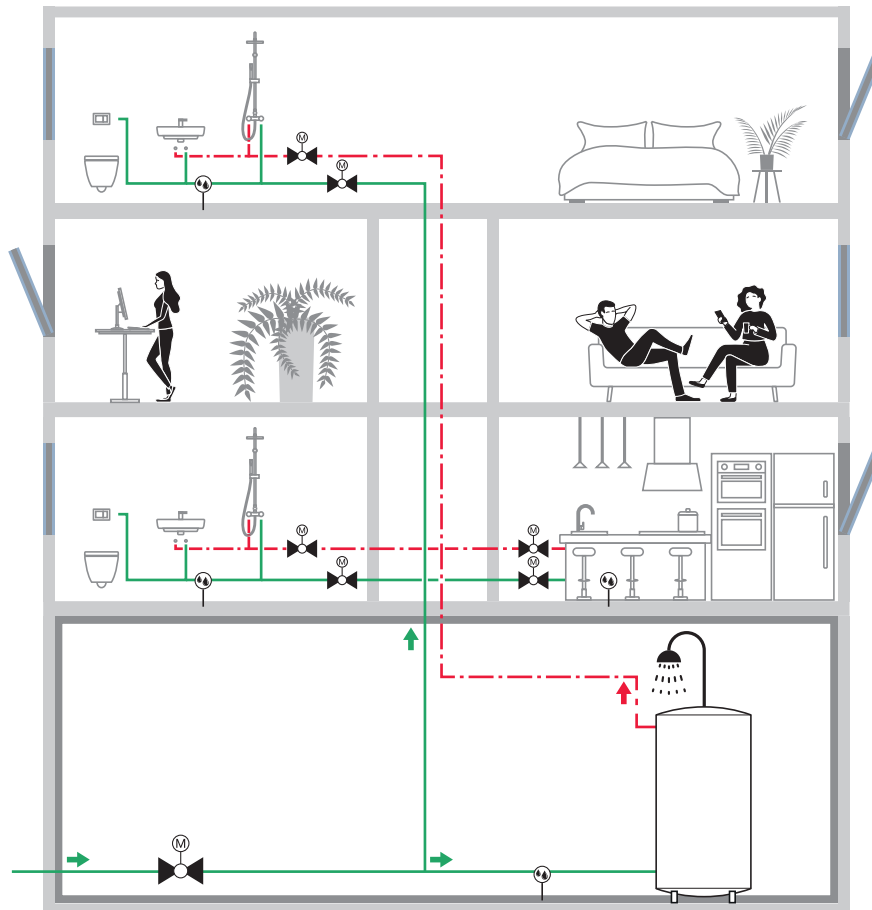


Illustration example

Application description

In the event of leakage, motorised 2-way open/close potable water valves can be used to automatically shut off the water supply.

- Leakage switches monitor the potable water system for possible leaks to prevent water damage
- If leakage is detected, an alarm is triggered immediately
- The motorised 2-way potable water valves react quickly to stop the flow of water and thus prevent further damage to the infrastructure
- This function is particularly valuable in residential buildings, industrial buildings, and critical infrastructure facilities

Bill of material

	Product type from Belimo	Description	Quantity
	C215QPW-N + CQK..A	2-way open/close ball valve, internal thread, DN 15, rotary actuator fail-safe 5...20 Nm	4
	R2..PW-... + LRF.. NRF..A SRF..A	2-way open/close ball valve, internal thread, DN 15...50, rotary actuator fail-safe 5...20 Nm	3
	22HL-10	Leakage switch active, automatic reset	4

Belimo – features and benefits

Features	Benefits
Valves and actuators	
Tight-closing valve with leakage rate A, tight (EN 12266-1)	No activation with zero load No energy loss with zero load
Fail-safe (adjustable 0...100%)	High operating safety
Compact overall structure of the CQ actuator	Ideal room utilisation and high level of freedom in design
Actuator with low power consumption	Reduction in energy costs
Fast running time of 9 s	Fast potable water supply
MP-Bus, Modbus RTU, BACnet MS/TP, or conventional control	Transparent operational monitoring thanks to seamless integration into automation systems
Maintenance-free and 5-year warranty	Reliable product with Belimo support
Sensors	
Robust housing with IP65 degree of protection	Easy selection and full flexibility for indoor and outdoor applications
Snap-on cover	Quick, easy and tool-free mounting
Spring loaded terminals	Quick installation and commissioning thanks to tool-free wiring and simple data point test
Mounting plate can be used as drilling template	Quick and easy installation

Automatic shut-off of potable water lines when a building is unoccupied



Schematic

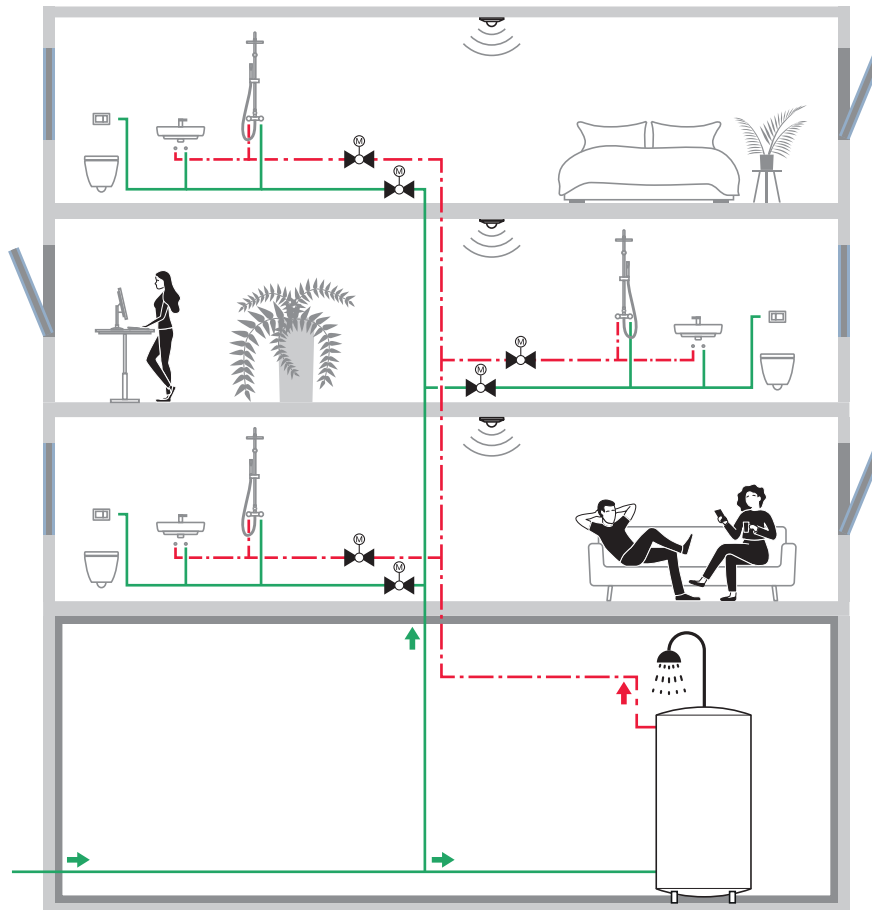


Illustration example

Application description

Motorised 2-way open/close potable water valves can be used to automatically shut off the potable water supply when the building is unoccupied in order to prevent leakage.

- Occupancy switches monitor the presence of people in the house
- The potable water supply is automatically shut off via motorised 2-way potable water valves in the event of prolonged absence from the building
- This functionality is particularly valuable in residential buildings, industrial buildings, and critical infrastructure facilities
- It protects the infrastructure from water damage when a building is unoccupied
- Safety is increased by preventing leakage, unnecessary water consumption, and tampering

Bill of material

	Product type from Belimo	Description	Anzahl
	C215QPW-N + CQK..A	2-way open/close ball valve, internal thread, DN 15, rotary actuator fail-safe 1 Nm	6

Belimo – features and benefits

Properties	Benefits
Valves and actuators	
Tightly sealed valve with leakage rate A, tight (EN 12266-1)	No activation with zero load No energy loss with zero load
Fail-safe (adjustable 0...100%)	High operating safety
Compact overall structure of the CQ actuator	Ideal room utilisation and high level of freedom in design
Actuator with low power consumption	Reduction in energy costs
Fast running time of 9 s	Fast potable water supply
MP-Bus, Modbus RTU, BACnet MS/TP, or conventional control	Transparent operational monitoring thanks to seamless integration into automation systems
Maintenance-free and 5-year warranty	Reliable product with Belimo support

Tender texts

Note: You will find the latest tender texts on our website.

Valves

C215QPW-N

2-way open/close ball valve

Fluid:	Potable water
Connection:	Internal thread
Nominal diameter:	DN 15
K _{VS} value:	16 m³/h
Fluid temperature:	5...100°C
Permissible operating pressure (p _s):	4000 kPa
Leakage rate:	A, air-bubble tight (EN 12266-1)
Valve body:	Lead-free and dezincification resistant brass (CW511L)
Closing element:	Lead-free and dezincification resistant brass (CW511L), chrome-plated
Spindle:	Lead-free and dezincification resistant brass (CW511L)
Spindle seal:	EPDM
Make:	Belimo
Type:	C215QPW-N



C215QPW-N

R2..PW-..

2-way open/close ball valve

Fluid:	Potable water
Connection:	Internal thread
Nominal diameter:	DN 15...50
K _{VS} value:	16...150 m³/h
Fluid temperature:	5...100°C
Permissible operating pressure (p _s):	2500 kPa / 4000 kPa
Leakage rate:	A, air-bubble tight (EN 12266-1)
Valve body:	Lead-free and dezincification resistant brass (CW511L)
Closing element:	Lead-free and dezincification resistant brass (CW511L), chrome-plated
Spindle:	Lead-free and dezincification resistant brass (CW511L)
Spindle seal:	EPDM
Make:	Belimo
Type:	R2..PW-..



R2..PW-..

Actuators

CQ..

Rotary actuator for C215QPW-N potable water valves. Direct mounting on the potable water valve by snapping on. Overload protected and without end switch, current reduction in rest position.

Torque:	1 Nm
Nominal voltage:	AC/DC 24 V, AC 240 V
Control:	Open/close, 3-point, MP-Bus, Modbus, BACnet
Power consumption:	
– Operation	0.3...1 W
– Rest position	0.2...0.7 W
Connection:	Cable
Running time:	75 s
Degree of protection:	IP40
EMC:	CE according to 2014/30/EU
Make:	Belimo
Type:	CQ..



CQ..

CQK..A

Rotary actuator fail-safe for C215QPW-N potable water valves. Direct mounting on the potable water valve by snapping on. Overload protected and without end switch, current reduction in rest position.

Torque:	1 Nm
Nominal voltage:	AC/DC 24 V, AC 100...240 V
Control:	Open/close, MP-Bus
Power consumption:	
– Operation	2.5 W
– Rest position	0.5 W
Connection:	Cable
Running time:	75 s
Degree of protection:	IP40
EMC:	CE according to 2014/30/EU
Make:	Belimo
Type:	CQK..A



CQK..A

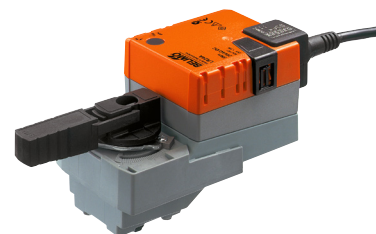
LR..A

Rotary actuator for adjusting R2..PW.. potable water valves with nominal diameters DN 15...25. Direct mounting on the ball valve with a central screw. The assembly tool is integrated in the add-on position indication. Installation orientation in relation to the ball valve can be selected in 90° steps. Overload protected and without end switch, current reduction in rest position.

Torque:	5 Nm
Nominal voltage:	AC/DC 24 V, AC 100...240 V
Control:	Open/close, 3-point, MP-Bus, Modbus, BACnet

Power consumption:	
– Operation:	1.5...2 W
– Rest position:	0.2...0.5 W
Connection:	Cable
Manual override:	With push button
Running time:	2.5...150 s
Degree of protection:	IP54
EMC:	CE according to 2014/30/EU

Make:	Belimo
Type:	LR..A

**LR..A****LRF..**

Rotary actuator fail-safe for adjusting R2..PW.. potable water valves with nominal diameters DN 15...25. Direct mounting on the ball valve with a central screw. Installation orientation in relation to the ball valve can be selected in 90° steps. Overload protected and without end switch, current reduction in rest position.

Torque:	4 Nm
Nominal voltage:	AC/DC 24 V, AC 100...240 V
Control:	Open/close, MP-Bus

Power consumption:	
– Operation	3.5...5 W
– Rest position	2...2.5 W
Connection:	Cable
Manual override:	With hand crank
Running time:	75 s
Degree of protection:	IP54
EMC:	CE according to 2014/30/EU

Make:	Belimo
Type:	LRF..

**LRF..**

NR..A

Rotary actuator for adjusting R2..PW-.. potable water valves up to nominal diameter DN 32. Direct mounting on the ball valve with a central screw. The assembly tool is integrated in the add-on position indication. Installation orientation in relation to the ball valve can be selected in 90° steps. Overload protected and without end switch, current reduction in rest position.

Torque:	10 Nm
Nominal voltage:	AC/DC 24 V, AC 100...240 V
Control:	Open/close, 3-point, MP-Bus, Modbus, BACnet
Power consumption:	
– Operation:	2...3 W
– Rest position:	0.2...0.6 W
Connection:	Cable
Manual override:	With push button
Running time:	90 s
Degree of protection	IP54
EMC:	CE according to 2014/30/EU

Make:	Belimo
Type:	NR..A

**NR..A****NRF..A**

Rotary actuator fail-safe for adjusting R2..PW-.. potable water valves up to nominal diameter DN 32. Direct mounting on the ball valve with a central screw. Installation orientation in relation to the ball valve can be selected in 90° steps. Overload protected and without end switch, current reduction in rest position.

Torque:	10 Nm
Nominal voltage:	AC 24...240 V, DC 24...125 V
Control:	Open/close, 3-point, MP-Bus

Power consumption:	
– Operation:	6 W
– Rest position:	2.5 W
Connection:	Cable
Manual override:	With hand crank
Running time:	75 s
Degree of protection	IP54
EMC:	CE according to 2014/30/EU

Make:	Belimo
Type:	NRF..A

**NRF..A**

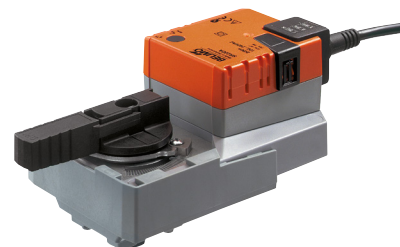
SR..A

Rotary actuator for adjusting R2..PW.. potable water valves up to nominal diameter DN 50. Direct mounting on the ball valve with a central screw. The assembly tool is integrated in the add-on position indication. Installation orientation in relation to the ball valve can be selected in 90° steps. Overload protected and without end switch, current reduction in rest position.

Torque:	20 Nm
Nominal voltage:	AC/DC 24 V, AC 100...240 V
Control:	Open/close, 3-point, MP-Bus, Modbus, BACnet

Power consumption:	
– Operation:	2.5...3 W
– Rest position:	0.2...0.6 W
Connection:	Cable
Manual override:	With push button
Running time:	90 s
Degree of protection:	IP54
EMC:	CE according to 2014/30/EU

Make:	Belimo
Type:	SR..A

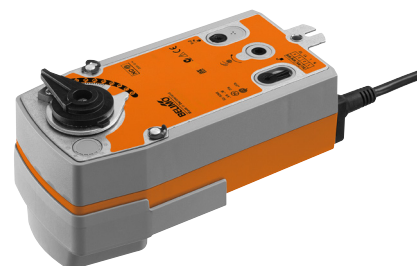
**SR..A****SRF..A**

Rotary actuator fail-safe for adjusting R2..PW.. potable water valves up to nominal diameter DN 50. Direct mounting on the ball valve with a central screw. Installation orientation in relation to the ball valve can be selected in 90° steps. Overload protected and without end switch, current reduction in rest position.

Torque:	20 Nm
Nominal voltage:	AC/DC 24 V, AC 24...240 V, DC 24...125 V
Control:	Open/close, MP-Bus, Modbus, BACnet

Power consumption:	
– Operation:	5...7 W
– Rest position:	2.5...3.5 W
Connection:	Cable
Manual override:	With hand crank
Running time:	75 s
Degree of protection:	IP54
EMC:	CE according to 2014/30/EU

Make:	Belimo
Type:	SRF..A

**SRF..A**

All inclusive

Belimo is the global market leader in the development, production, and sales of field devices for the energy-efficient control of heating, ventilation and air-conditioning systems. The focus of our core business is on damper actuators, control valves, sensors and meters.

Always focusing on customer value, we deliver more than only products. We offer you the complete product range for the regulation and control of HVAC systems from a single source. At the same time, we rely on tested Swiss quality with a five-year warranty. Our worldwide representatives in over 80 countries guarantee short delivery times and comprehensive support through the entire product life. Belimo does indeed include everything.

The "small" Belimo devices have a big impact on comfort, energy efficiency, safety, installation and maintenance.

In short: Small devices, big impact.



5-year warranty



On site around the globe



Complete product range



Tested quality



Short delivery times



Comprehensive support



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