Efficiency and reliability in versatile applications

The complete product range of water applications

Edition 2025

50 YEARS

Together to the Top.

BELIMO®

Table of contents

Control valves	Zone valves	5	4
	Pressure-independent characterised control valves	29	5
	Characterised control valves (CCV)	37	6
	Globe Valves	49	7
	Control butterfly valves	71	8
Open/close and changeover valves	Ball valves	79	9
	Potable water valves	89	10
	Open/close and changeover butterfly valves	93	11
Definitions	Formula symbols	99	

4

Zone valves

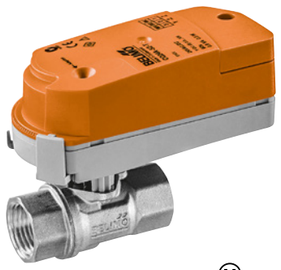
Maximum comfort, minimum consumption

Characterised control valve (QCV)	Internal thread	2-way	PN 25	**DN 15...25**	6
Changeover ball valve (QCV)		3-way			8
Characterised control valve (QCV)	External thread	2-way		**DN 15/20**	10
Changeover ball valve (QCV)		3-way			12
Pressure-independent characterised control valve (PIQCV)	Internal thread	2-way	PN 25	**DN 15...25**	14
Pressure-independent flow limiter valve (PIFLV)					16
Characterised Control Valve	Internal thread	6-way	PN 16	**DN 15**	18
				DN 20	22
				DN 25	24
Electronic pressure-independent characterised control valve (EPIV)				**DN 15/20**	25
Energy manifold				**2...12 zones**	26

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 15...25

Non fail-safe actuators



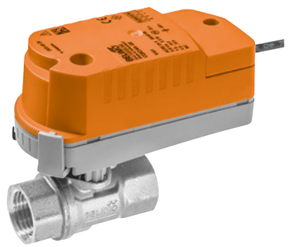
Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa

Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 0.09...1.2 Valve type C215Q-F	DN 15 K_{vs} [m³/h] 0.4...4.8 Valve type C215Q-J	DN 20 K_{vs} [m³/h] 0.5...8 Valve type C220Q-K	DN 25 K_{vs} [m³/h] 0.5...7 Valve type C225Q-K
												Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																			
CQ..	1 Nm	■	■						24 V	15 s	CQD24A [1]	520	280	520	280	520	280
		■	■							75 s	CQ24A	520	280	520	280	520	280
				■						15 s	CQD24A-SR [1]	520	280	520	280	520	280
				■						75 s	CQ24A-SR	520	280	520	280	520	280
					■					15 s	CQD24A-SZ [1]	520	280	520	280	520	280
					■					75 s	CQ24A-SZ	520	280	520	280	520	280
						■				15 s	CQD24A-MPL [1]	520	280	520	280	520	280
						■				75 s	CQ24A-MPL	520	280	520	280	520	280
							■	■			CQ24A-BAC	520	280	520	280	520	280
		■	■						230 V	15 s	CQD230A [1]	520	280	520	280	520	280
		■	■							35 s	CQC230A [1]	520	280	520	280	520	280
		■	■							75 s	CQ230A	520	280	520	280	520	280
Standard actuators with connecting terminals																			
CQ..-T	1 Nm	■	■						24 V	15 s	CQD24A-T [1]	520	280	520	280	520	280
		■	■							75 s	CQ24A-T	520	280	520	280	520	280
				■						15 s	CQD24A-SR-T [1]	520	280	520	280	520	280
				■						75 s	CQ24A-SR-T	520	280	520	280	520	280
					■					15 s	CQD24A-SZ-T [1]	520	280	520	280	520	280
					■						CQ24A-SZ-T	520	280	520	280	520	280
						■				75 s	CQ24A-MPL-T	520	280	520	280	520	280
		■	■						230 V		CQ230A-T	520	280	520	280	520	280

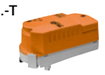
[1] Fast running actuators: observe the noise level according to the associated data sheet.

DN 15...25

Fail-safe actuators



Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa

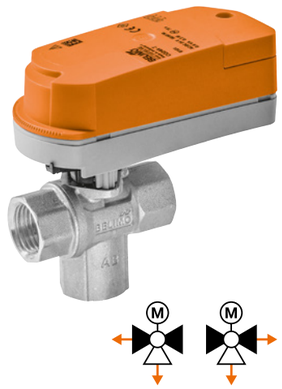
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 0.09...1.2 Valve type C215Q-F	DN 15 K_{vs} [m³/h] 0.4...4.8 Valve type C215Q-J	DN 20 K_{vs} [m³/h] 0.5...8 Valve type C220Q-K	DN 25 K_{vs} [m³/h] 0.5...7 Valve type C225Q-K
										Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Fail-safe actuators NC/NO [2]																			
CQK..	1 Nm	■					24 V	15 s	CQKD24A [1]	520	280	520	280	520	280
		■						75 s	CQK24A	520	280	520	280	520	280
			■					15 s	CQKD24A-SR [1]	520	280	520	280	520	280
			■					75 s	CQK24A-SR	520	280	520	280	520	280
				■				15 s	CQKD24A-SZ.1 [1] [3]	520	280	520	280	520	280
				■				75 s	CQK24A-SZ.1 [3]	520	280	520	280	520	280
					■				CQK24A-MPL	520	280	520	280	520	280
		■					230 V	15 s	CQKD230A [1]	520	280	520	280	520	280
		■						75 s	CQK230A	520	280	520	280	520	280
Fail-safe actuators NC/NO [2] with connecting terminals																			
CQK..-T 	1 Nm	■					24 V	75 s	CQK24A-T	520	280	520	280	520	280
			■						CQK24A-SR-T	520	280	520	280	520	280
					■				CQK24A-MPL-T	520	280	520	280	520	280
		■					230 V		CQK230A-T	520	280	520	280	520	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.
[2] Fail-safe actuator: The fail-safe position is NC (normally closed). The NO (normally open) version is available on request.
[3] Actuator is delivered in multipack with 36 pieces.

DN 15...25

Non fail-safe actuators

Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Close-off pressure	Δp_s: 280 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa



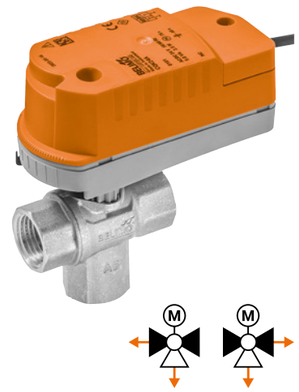
Suitable Actuators	Nominal torque	Open/close	3-point	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 2.5	DN 15 Valve type C315Q-H	DN 20 K_{vs} [m³/h] 4	DN 20 Valve type C320Q-J	DN 25 K_{vs} [m³/h] 4	DN 25 Valve type C325Q-J
										Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators															
CQ..	1 Nm	■	■				24 V	15 s	CQD24A [1]	280	280	280	280	280	280
		■	■					75 s	CQ24A	280	280	280	280	280	280
				■				15 s	CQD24A-MPL [1]	280	280	280	280	280	280
				■				75 s	CQ24A-MPL	280	280	280	280	280	280
					■	■			CQ24A-BAC	280	280	280	280	280	280
		■	■				230 V	15 s	CQD230A [1]	280	280	280	280	280	280
		■	■					35 s	CQC230A [1]	280	280	280	280	280	280
		■	■					75 s	CQ230A	280	280	280	280	280	280
Standard actuators with connecting terminals															
CQ..-T	1 Nm	■	■				24 V	15 s	CQD24A-T [1]	280	280	280	280	280	280
		■	■					75 s	CQ24A-T	280	280	280	280	280	280
				■					CQ24A-MPL-T	280	280	280	280	280	280
		■	■				230 V		CQ230A-T	280	280	280	280	280	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.

DN 15...25

Fail-safe actuators

Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Close-off pressure	Δp_s: 280 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa



Suitable actuators	Nominal torque	Open/close	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 2.5	DN 15 Valve type C315Q-H	DN 20 K_{vs} [m³/h] 4	DN 20 Valve type C320Q-J	DN 25 K_{vs} [m³/h] 4	DN 25 Valve type C325Q-J
							Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Fail-safe actuators NC/NO [2]												
CQK..	1 Nm	■		24 V	15 s	CQKD24A [1]	280	280	280	280	280	280
		■			75 s	CQK24A	280	280	280	280	280	280
			■		15 s	CQKD24A-MPL [1]	280	280	280	280	280	280
			■		75 s	CQK24A-MPL	280	280	280	280	280	280
		■		230 V	15 s	CQKD230A [1]	280	280	280	280	280	280
		■			75 s	CQK230A	280	280	280	280	280	280
Fail-safe actuators NC/NO [2] with connecting terminals												
CQK..-T	1 Nm	■		24 V	75 s	CQK24A-T	280	280	280	280	280	280
			■			CQK24A-MPL-T	280	280	280	280	280	280
		■		230 V		CQK230A-T	280	280	280	280	280	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.
[2] Fail-safe actuator: The fail-safe position is NC (normally closed). The NO (normally open) version is available on request.

DN 15/20

Non fail-safe actuators

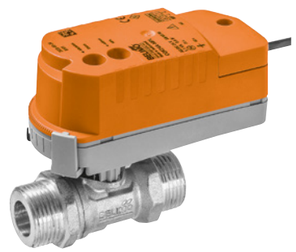
Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa

Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 0.4...4.5 Valve type C415Q-J Δp_s kPa	PN 25 DN 15 Δp_{max} kPa	PN 25 DN 20 K_{vs} [m³/h] 0.5...7.8 Valve type C420Q-K Δp_s kPa	PN 25 DN 20 Δp_{max} kPa
Standard actuators															
CQ..	1 Nm	■	■						24 V	15 s	CQD24A [1]	520	280	520	280
		■	■							75 s	CQ24A	520	280	520	280
				■						15 s	CQD24A-SR [1]	520	280	520	280
				■						75 s	CQ24A-SR	520	280	520	280
					■					15 s	CQD24A-SZ [1]	520	280	520	280
					■					75 s	CQ24A-SZ	520	280	520	280
						■				15 s	CQD24A-MPL [1]	520	280	520	280
						■				75 s	CQ24A-MPL	520	280	520	280
							■	■			CQ24A-BAC	520	280	520	280
		■	■						230 V	15 s	CQD230A [1]	520	280	520	280
		■	■							35 s	CQC230A [1]	520	280	520	280
		■	■							75 s	CQ230A	520	280	520	280
Standard actuators with connecting terminals															
CQ..-T	1 Nm	■	■						24 V	15 s	CQD24A-T [1]	520	280	520	280
		■	■							75 s	CQ24A-T	520	280	520	280
				■						15 s	CQD24A-SR-T [1]	520	280	520	280
				■						75 s	CQ24A-SR-T	520	280	520	280
					■					15 s	CQD24A-SZ-T [1]	520	280	520	280
					■					75 s	CQ24A-SZ-T	520	280	520	280
						■					CQ24A-MPL-T	520	280	520	280
		■	■						230 V		CQ230A-T	520	280	520	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.

DN 15/20

Fail-safe actuators



Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa

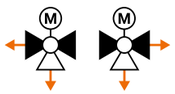
Suitable actuators	Nominal torque	Open/close	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 0.4...4.5 Valve type C415Q-J Δp_s kPa	PN 25 DN 15 Δp_{max} kPa	PN 25 DN 20 K_{vs} [m³/h] 0.5...7.8 Valve type C420Q-K Δp_s kPa	PN 25 DN 20 Δp_{max} kPa
Fail-safe actuators NC/NO [2]												
CQK..	1 Nm	■				24 V	15 s	CQKD24A [1]	520	280	520	280
		■					75 s	CQK24A	520	280	520	280
			■				15 s	CQKD24A-SR [1]	520	280	520	280
			■				75 s	CQK24A-SR	520	280	520	280
				■			15 s	CQKD24A-SZ.1 [1] [3]	520	280	520	280
				■			75 s	CQK24A-SZ.1 [3]	520	280	520	280
					■			CQK24A-MPL	520	280	520	280
		■				230 V	15 s	CQKD230A [1]	520	280	520	280
		■					75 s	CQK230A	520	280	520	280
Fail-safe actuators NC/NO [2] with connecting terminals												
CQK..-T	1 Nm	■				24 V	75 s	CQK24A-T	520	280	520	280
			■					CQK24A-SR-T	520	280	520	280
				■				CQK24A-MPL-T	520	280	520	280
		■				230 V		CQK230A-T	520	280	520	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.
[2] Fail-safe actuator: The fail-safe position is NC (normally closed). The NO (normally open) version is available on request.
[3] Actuator is delivered in multipack with 36 pieces.

DN 15/20

Non fail-safe actuators

Field of use	Closed water circuit (pH >7)
Fluid temperature	2…90°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Close-off pressure	Δp_s: 280 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa



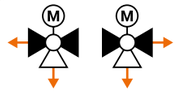
Suitable actuators		Nominal torque	Open/close	3-point	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 2.3 Valve type C515Q-H Δp_s kPa	Δp_{max} kPa	DN 20 K_{vs} [m³/h] 3.6 Valve type C520Q-J Δp_s kPa	Δp_{max} kPa
Standard actuators														
CQ..		1 Nm	■	■				24 V	15 s	CQD24A [1]	280	280	280	280
			■	■					75 s	CQ24A	280	280	280	280
					■				15 s	CQD24A-MPL [1]	280	280	280	280
					■				75 s	CQ24A-MPL	280	280	280	280
						■	■			CQ24A-BAC	280	280	280	280
			■	■				230 V	15 s	CQD230A [1]	280	280	280	280
			■	■					35 s	CQC230A [1]	280	280	280	280
			■	■					75 s	CQ230A	280	280	280	280
Standard actuators with connecting terminals														
CQ..-T		1 Nm	■	■				24 V	15 s	CQD24A-T [1]	280	280	280	280
			■	■					75 s	CQ24A-T	280	280	280	280
					■					CQ24A-MPL-T	280	280	280	280
			■	■				230 V		CQ230A-T	280	280	280	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.

DN 15/20

Fail-safe actuators

Field of use	Closed water circuit (pH >7)
Fluid temperature	2…90°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Close-off pressure	Δp_s: 280 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa



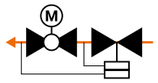
Suitable actuators		Nominal torque	Open/close	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 K_{vs} [m³/h] 2.3 Valve type C515Q-H Δp_s kPa	Δp_{max} kPa	DN 20 K_{vs} [m³/h] 3.6 Valve type C520Q-J Δp_s kPa	Δp_{max} kPa
Fail-safe actuators NC/NO [2]											
CQK..		1 Nm	■		24 V	15 s	CQKD24A [1]	280	280	280	280
			■			75 s	CQK24A	280	280	280	280
				■		15 s	CQKD24A-MPL [1]	280	280	280	280
				■		75 s	CQK24A-MPL	280	280	280	280
			■		230 V	15 s	CQKD230A [1]	280	280	280	280
			■			75 s	CQK230A	280	280	280	280
Fail-safe actuators NC/NO [2] with connecting terminals											
CQK..-T		1 Nm	■		24 V	75 s	CQK24A-T	280	280	280	280
				■			CQK24A-MPL-T	280	280	280	280
			■		230 V		CQK230A-T	280	280	280	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.
[2] Fail-safe actuator: The fail-safe position is NC (normally closed). The NO (normally open) version is available on request.

DN 15...25

Non fail-safe actuators

Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 1400 kPa
Max. differential pressure	Δp_{max}: 350 kPa
Permissible operating pressure	p_s: 1600 kPa



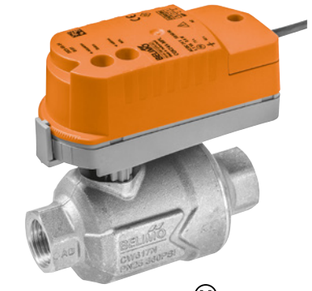
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'_{nom} [l/h] 210 Valve type C215QP-B / C215QPT-B; 420 C215QP-D / C215QPT-D	DN 20 V'_{nom} [l/h] 980 Valve type C220QP-F / C220QPT-F	DN 25 V'_{nom} [l/h] 2100 Valve type C225QPT-G
												Δp_s kPa / Δp_{max} kPa	Δp_s kPa / Δp_{max} kPa	Δp_s kPa / Δp_{max} kPa
Standard actuators														
CQ..	1 Nm	■	■						24 V	15 s	CQD24A [1]	1400 / 350	1400 / 350	1400 / 350
		■	■							75 s	CQ24A	1400 / 350	1400 / 350	1400 / 350
				■						15 s	CQD24A-SR [1]	1400 / 350	1400 / 350	1400 / 350
				■						75 s	CQ24A-SR	1400 / 350	1400 / 350	1400 / 350
					■					15 s	CQD24A-SZ [1]	1400 / 350	1400 / 350	1400 / 350
					■					75 s	CQ24A-SZ	1400 / 350	1400 / 350	1400 / 350
						■				15 s	CQD24A-MPL [1]	1400 / 350	1400 / 350	1400 / 350
						■				75 s	CQ24A-MPL	1400 / 350	1400 / 350	1400 / 350
							■	■			CQ24A-BAC	1400 / 350	1400 / 350	1400 / 350
		■	■						230 V	15 s	CQD230A [1]	1400 / 350	1400 / 350	1400 / 350
		■	■							35 s	CQC230A [1]	1400 / 350	1400 / 350	1400 / 350
		■	■							75 s	CQ230A	1400 / 350	1400 / 350	1400 / 350
Standard actuators with connecting terminals														
CQ..-T	1 Nm	■	■						24 V	15 s	CQD24A-T [1]	1400 / 350	1400 / 350	1400 / 350
		■	■							75 s	CQ24A-T	1400 / 350	1400 / 350	1400 / 350
				■						15 s	CQD24A-SR-T [1]	1400 / 350	1400 / 350	1400 / 350
				■						75 s	CQ24A-SR-T	1400 / 350	1400 / 350	1400 / 350
					■					15 s	CQD24A-SZ-T [1]	1400 / 350	1400 / 350	1400 / 350
					■					75 s	CQ24A-SZ-T	1400 / 350	1400 / 350	1400 / 350
						■					CQ24A-MPL-T	1400 / 350	1400 / 350	1400 / 350
		■	■						230 V		CQ230A-T	1400 / 350	1400 / 350	1400 / 350

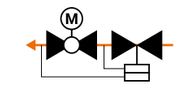
[1] Fast running actuators: observe the noise level according to the associated data sheet.

DN 15...25

Fail-safe actuators

Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 1400 kPa
Max. differential pressure	Δp_{max}: 350 kPa
Permissible operating pressure	p_s: 1600 kPa



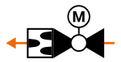


Suitable actuators	Nominal torque	Open/close	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'_{nom} [l/h] 210 Valve type C215QP-B / C215QPT-B; 420 C215QP-D / C215QPT-D	DN 20 V'_{nom} [l/h] 980 Valve type C220QP-F / C220QPT-F	DN 25 V'_{nom} [l/h] 2100 Valve type C225QPT-G
									Δp_s kPa / Δp_{max} kPa	Δp_s kPa / Δp_{max} kPa	Δp_s kPa / Δp_{max} kPa
Fail-safe actuators NC/NO [2]											
CQK..	1 Nm	■				24 V	15 s	CQKD24A [1]	1400 / 350	1400 / 350	1400 / 350
		■					75 s	CQK24A	1400 / 350	1400 / 350	1400 / 350
			■				15 s	CQKD24A-SR [1]	1400 / 350	1400 / 350	1400 / 350
			■				75 s	CQK24A-SR	1400 / 350	1400 / 350	1400 / 350
				■			15 s	CQKD24A-SZ.1 [1] [3]	1400 / 350	1400 / 350	1400 / 350
				■			75 s	CQK24A-SZ	1400 / 350	1400 / 350	1400 / 350
					■		15 s	CQKD24A-MPL [1]	1400 / 350	1400 / 350	1400 / 350
					■		75 s	CQK24A-MPL	1400 / 350	1400 / 350	1400 / 350
		■				230 V	15 s	CQKD230A [1]	1400 / 350	1400 / 350	1400 / 350
		■					75 s	CQK230A	1400 / 350	1400 / 350	1400 / 350
Fail-safe actuators NC/NO [2] with connecting terminals											
CQK..-T	1 Nm	■				24 V	75 s	CQK24A-T	1400 / 350	1400 / 350	1400 / 350
			■					CQK24A-SR-T	1400 / 350	1400 / 350	1400 / 350
					■			CQK24A-MPL-T	1400 / 350	1400 / 350	1400 / 350
		■				230 V		CQK230A-T	1400 / 350	1400 / 350	1400 / 350

[1] Fast running actuators: observe the noise level according to the associated data sheet.
[2] Fail-safe actuator: The fail-safe position is NC (normally closed). The NO (normally open) version is available on request.
[3] Actuator is delivered in multipack with 36 pieces.

DN 15...25

Non fail-safe actuators



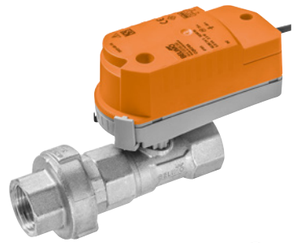
Field of use	Closed water circuit (pH >7)
Fluid temperature	2...60°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa

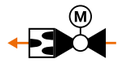
Suitable actuators	Nominal torque	Open/close	3-point	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'_{nom} [l/h]	DN 15 Valve type	DN 20 V'_{nom} [l/h]	DN 20 Valve type	DN 25 V'_{nom} [l/h]	DN 25 Valve type
										290	C215QFL-C	1200	C220QFL-F6		
										470	C215QFL-D	1500	C220QFL-G0		
										650	C215QFL-E	1900	C220QFL-G		
										940	C215QFL-F0	2350	C220QFL-H0	3600	R225FL-J
										1300	C215QFL-F	2900	C220QFL-H		
										Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators															
CQ..	1 Nm	■	■				24 V	15 s	CQD24A [1]	520	280	520	280		
		■	■					75 s	CQ24A	520	280	520	280		
				■				15 s	CQD24A-MPL [1]	520	280	520	280		
				■				75 s	CQ24A-MPL	520	280	520	280		
					■	■			CQ24A-BAC	520	280	520	280		
		■	■				230 V	15 s	CQD230A [1]	520	280	520	280		
		■	■					35 s	CQC230A [1]	520	280	520	280		
		■	■					75 s	CQ230A	520	280	520	280		
LR..	5 Nm	■	■				24 V	90 s	LR24A					520	280
		■	■				230 V		LR230A					520	280
Standard actuators with connecting terminals															
CQ..-T	1 Nm	■	■				24 V	15 s	CQD24A-T [1]	520	280	520	280		
		■	■					75 s	CQ24A-T	520	280	520	280		
				■					CQ24A-MPL-T	520	280	520	280		
		■	■				230 V	75 s	CQ230A-T	520	280	520	280		
	5 Nm	■	■				24 V	90 s	LR24A-TP					520	280
		■	■				230 V		LR230A-TP					520	280

[1] Fast running actuators: observe the noise level according to the associated data sheet.

DN 15...25

Fail-safe actuators





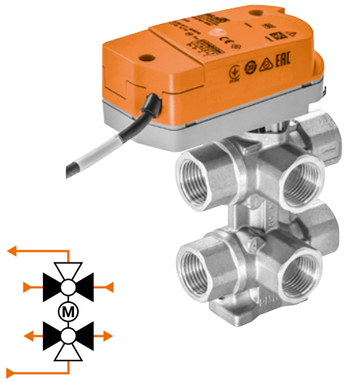
Field of use	Closed water circuit (pH >7)
Fluid temperature	2...60°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating pressure	p_s: 1600 kPa

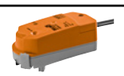
Suitable actuators	Nominal torque	Open/close	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'_{nom} [l/h]	DN 15 Valve type	DN 20 V'_{nom} [l/h]	DN 20 Valve type	DN 25 V'_{nom} [l/h]	DN 25 Valve type
							290	C215QFL-C	1200	C220QFL-F6		
							470	C215QFL-D	1500	C220QFL-G0		
							650	C215QFL-E	1900	C220QFL-G		
							940	C215QFL-F0	2350	C220QFL-H0	3600	R225FL-J
							1300	C215QFL-F	2900	C220QFL-H		
							Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Fail-safe actuators NC/NO [2]												
CQK..	1 Nm	■		24 V	15 s	CQKD24A [1]	520	280	520	280		
		■			75 s	CQK24A	520	280	520	280		
			■		15 s	CQKD24A-MPL [1]	520	280	520	280		
			■		75 s	CQK24A-MPL	520	280	520	280		
LRF..		■		230 V	15 s	CQKD230A [1]	520	280	520	280		
		■			75 s	CQK230A	520	280	520	280		
	4 Nm	■		24 V	75 s	LRF24					520	280
		■		230 V		LRF230					520	280
Fail-safe actuators NC/NO [2] with connecting terminals												
CQK..-T	1 Nm	■		24 V	75 s	CQK24A-T	520	280	520	280		
			■			CQK24A-MPL-T	520	280	520	280		
		■		230 V		CQK230A-T	520	280	520	280		

[1] Fast running actuators: observe the noise level according to the associated data sheet.
[2] Fail-safe actuator: The fail-safe position is NC (normally closed). The NO (normally open) version is available on request.

DN 15

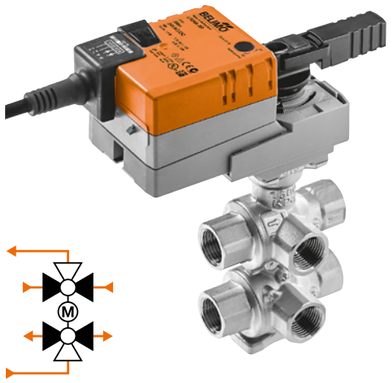
Field of use	Closed water circuit (pH >7)
Fluid temperature	6…80°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Linear: Sequence I: 0...30° Dead zone: 30…60° Sequence II: 60…90°
Close-off pressure	Δp_s: 350 kPa
Max. differential pressure	Δp_{max}: 100 kPa
Permissible operating pressure	p_s: 1600 kPa



Suitable actuators		Nominal torque	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	PN 16 DN 15 K_{vs} [m³/h] Sequence I	PN 16 DN 15 K_{vs} [m³/h] Sequence II	Valve type	PN 16 DN 15 K_{vs} [m³/h] Sequence I	PN 16 DN 15 K_{vs} [m³/h] Sequence II	Valve type	PN 16 DN 15 K_{vs} [m³/h] Sequence I	PN 16 DN 15 K_{vs} [m³/h] Sequence II	Valve type
												0.25	R3015-P25-P25-B1		0.25	R3015-P4-P25-B1		0.25	R3015-P63-P25-B1
											0.25	0.4	R3015-P25-P4-B1	0.4	0.4	R3015-P4-P4-B1	0.63	0.4	R3015-P63-P4-B1
												0.63	R3015-P25-P63-B1		0.63	R3015-P4-P63-B1		0.63	R3015-P63-P63-B1
											Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa	
Standard actuators																			
CQ.. 		1 Nm	■					24 V	75 s				CQ24A-SR	350	100	350	100	350	100
				■									CQ24A-SZ	350	100	350	100	350	100
					■								CQ24A-MPL	350	100	350	100	350	100
						■	■						CQ24A-BAC	350	100	350	100	350	100
Standard actuators with connecting terminals																			
CQ..-T		1 Nm	■					24 V	75 s				CQ24A-SR-T	350	100	350	100	350	100
				■									CQ24A-SZ-T	350	100	350	100	350	100
					■								CQ24A-MPL-T	350	100	350	100	350	100

DN 15

Field of use	Closed water circuit (pH >7)
Fluid temperature	6…80°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Linear: Sequence I: 0...30° Dead zone: 30…60° Sequence II: 60…90°
Close-off pressure	Δp_s: 350 kPa
Max. differential pressure	Δp_{max}: 100 kPa
Permissible operating pressure	p_s: 1600 kPa

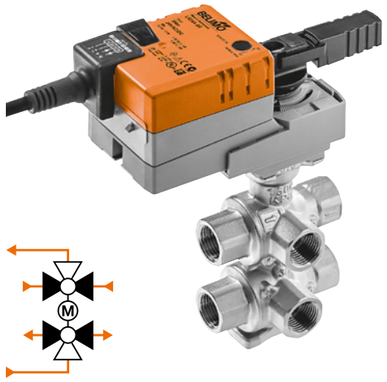


Suitable actuators	Nominal torque	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	PN 16 DN 15 K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type
												0.25	R3015-P25-P25-B2		0.25	R3015-P4-P25-B2		0.25	R3015-P63-P25-B2		0.25	R3015-1-P25-B2		0.25	R3015-1P3-P25-B2		0.25	R3015-1P8-P25-B2
												0.4	R3015-P25-P4-B2		0.4	R3015-P4-P4-B2		0.4	R3015-P63-P4-B2		0.4	R3015-1-P4-B2		0.4	R3015-1P3-P4-B2		0.4	R3015-1P8-P4-B2
												0.63	R3015-P25-P63-B2		0.63	R3015-P4-P63-B2		0.63	R3015-P63-P63-B2		0.63	R3015-1-P63-B2		0.63	R3015-1P3-P63-B2		0.63	R3015-1P8-P63-B2
												1	R3015-P25-1-B2		1	R3015-P4-1-B2		1	R3015-P63-1-B2		1	R3015-1-1-B2		1	R3015-1P3-1-B2		1	R3015-1P8-1-B2
												1.3	R3015-P25-1P3-B2		1.3	R3015-P4-1P3-B2		1.3	R3015-P63-1P3-B2		1.3	R3015-1-1P3-B2		1.3	R3015-1P3-1P3-B2		1.3	R3015-1P8-1P3-B2
												1.8	R3015-P25-1P8-B2		1.8	R3015-P4-1P8-B2		1.8	R3015-P63-1P8-B2		1.8	R3015-1-1P8-B2		1.8	R3015-1P3-1P8-B2		1.8	R3015-1P8-1P8-B2
											Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa
LR..	**Standard actuators**																											
	5 Nm	■						24 V	90 s	LR24A-SR	350	100		350	100		350	100		350	100		350	100		350	100	
			■							LR24A-SZ	350	100		350	100		350	100		350	100		350	100		350	100	
		■		■						LR24A-MP [1]	350	100		350	100		350	100		350	100		350	100		350	100	
VLR..		■		■	■	■				LR24A-MOD	350	100		350	100		350	100		350	100		350	100		350	100	
							■			LR24A-KNX	350	100		350	100		350	100		350	100		350	100		350	100	
		■			■	■				VLR24A-LP1	350	100		350	100		350	100		350	100		350	100		350	100	
LR..-T	**Standard actuators with connecting terminals**																											
		■								LR24A-SR-TP	350	100		350	100		350	100		350	100		350	100		350	100	
	5 Nm		■					24 V	90 s	LR24A-SZ-TP	350	100		350	100		350	100		350	100		350	100		350	100	
		■		■						LR24A-MP-TP [1]	350	100		350	100		350	100		350	100		350	100		350	100	

[1] Control, operating range, feedback, running time, and other functions configurable on MP types with Belimo Assistant 2.

DN 20

Field of use	Closed water circuit (pH >7)
Fluid temperature	6…80°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Linear: Sequence I: 0...30° Dead zone: 30…60° Sequence II: 60…90°
Close-off pressure	Δp_s: 350 kPa
Max. differential pressure	Δp_{max}: 100 kPa
Permissible operating pressure	p_s: 1600 kPa

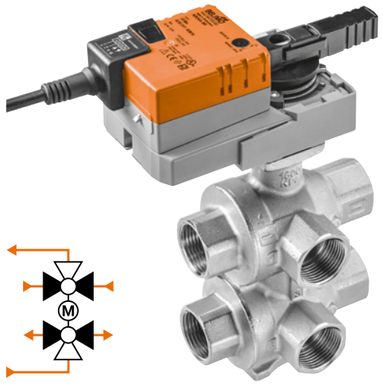


Suitable actuators	Nominal torque	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	PN 16 DN 20 K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	PN 16 DN 20 K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type
												0.63	R3020-P63-1P6-B2		1.6	R3020-1-1P6-B2		0.63	R3020-1P6-P63-B2		0.63	R3020-2P5-P63-B2		0.63	R3020-4-P63-B2
											0.63	1.6	R3020-P63-1P6-B2	1	1.6	R3020-1-1P6-B2	1.6	1	R3020-1P6-1-B2	2.5	1	R3020-2P5-1-B2	4	1	R3020-4-1-B2
												2.5	R3020-P63-2P5-B2		2.5	R3020-1-2P5-B2		1.6	R3020-1P6-1P6-B2		1.6	R3020-2P5-1P6-B2		1.6	R3020-4-1P6-B2
												4	R3020-P63-4-B2		4	R3020-1-4-B2		2.5	R3020-1P6-2P5-B2		2.5	R3020-2P5-2P5-B2		2.5	R3020-4-2P5-B2
																		4	R3020-1P6-4-B2		4	R3020-2P5-4-B2		4	R3020-4-4-B2
											Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa		Δp_s kPa	Δp_{max} kPa	
Standard actuators																									
LR..	5 Nm	■						24 V	90 s	LR24A-SR	350	100		350	100		350	100		350	100		350	100	
			■							LR24A-SZ	350	100		350	100		350	100		350	100		350	100	
		■		■						LR24A-MP [1]	350	100		350	100		350	100		350	100		350	100	
VLR..		■		■	■	■				LR24A-MOD	350	100		350	100		350	100		350	100		350	100	
							■			LR24A-KNX	350	100		350	100		350	100		350	100		350	100	
		■			■	■				VLR24A-LP1	350	100		350	100		350	100		350	100		350	100	
Standard actuators with connecting terminals																									
LR..-T	5 Nm	■						24 V	90 s	LR24A-SR-TP	350	100		350	100		350	100		350	100		350	100	
			■							LR24A-SZ-TP	350	100		350	100		350	100		350	100		350	100	
		■		■						LR24A-MP-TP [1]	350	100		350	100		350	100		350	100		350	100	

[1] Control, operating range, feedback, running time, and other functions are adjustable on MP types with Belimo Assistant 2

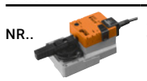
DN 25

Field of use	Closed water circuit (pH >7)
Fluid temperature	6…80°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Linear: Sequence I: 0...30° Dead zone: 30…60° Sequence II: 60…90°
Close-off pressure	Δp_s: 350 kPa
Max. differential pressure	Δp_{max}: 100 kPa
Permissible operating pressure	p_s: 1600 kPa



PN 16			
DN 25			
K_{vs} [m³/h] Sequence I	K_{vs} [m³/h] Sequence II	Valve type	
6.3	6.3	R3025-6P3-6P3-B3	
Δp_s kPa		Δp_{max} kPa	

Suitable actuators

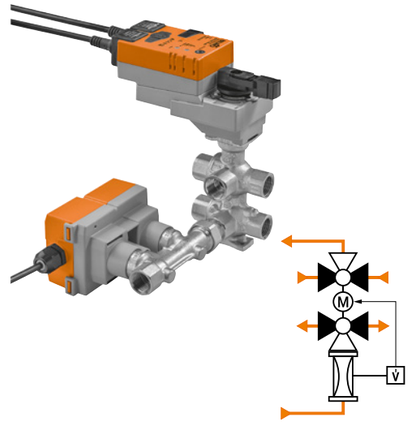
	Nominal torque	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	Δp_s kPa	Δp_{max} kPa
Standard actuators												
NR.. 	10 Nm	■						24 V	90 s	NR24A-SR	350	100
			■							NR24A-SZ	350	100
VNR..		■		■						NR24A-MP [1]	350	100
		■		■	■	■				NR24A-MOD	350	100
							■			NR24A-KNX	350	100
		■			■	■				VNR24A-LP1	350	100
Standard actuators with connecting terminals												
NR..-TP	10 Nm	■						24 V	90 s	NR24A-SR-TP	350	100

[1] Control, operating range, feedback, running time, and other functions are adjustable on MP types with Belimo Assistant 2

DN 15/20

Field of use	Closed water circuit (pH >7)
Fluid temperature	6…80°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Linear
Close-off pressure	Δp_s: 350 kPa
Max. differential pressure	Δp_{max}: 110 kPa
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 5…100% of V'_{nom}

Control, operating range, feedback, running time, and other functions configurable with Belimo Assistant 2 and ZTH EU



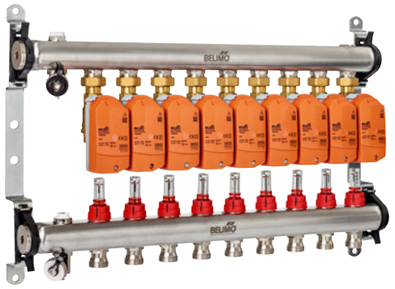
4

PN	DN	V'_{nom} [l/h]	V'_{max} low-noise [l/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication BACnet	Communication Modbus	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
16	**15**	1260	840	24 V	■	■	■	■	EP015R-R6+BAC	350	110
	20	2340	1620		■	■	■	■	EP020R-R6+BAC	350	110

The EP..R-R6+BAC valve types will be replaced over the course of the year by the new EP..R6+BAC types.

2...12 zones

Materials	Manifold: stainless steel Valve body: brass
Operating pressure	6 bar
Flow setting	0...5 l/min
Connection	G 1" (ISO 228) G 3/4" Euro cone



Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication BACnet	Communication Modbus	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	2 zones	3 zones	4 zones	5 zones	6 zones	7 zones	8 zones	9 zones	10 zones	11 zones	12 zones
												Manifold type	EM-ECQ-02F	EM-ECQ-03F	EM-ECQ-04F	EM-ECQ-05F	EM-ECQ-06F	EM-ECQ-07F	EM-ECQ-08F	EM-ECQ-09F	EM-ECQ-10F	EM-ECQ-11F	EM-ECQ-12F
Standard actuators																							
CQ..	1 Nm	■	■							24 V	75 s	CQ24A	■	■	■	■	■	■	■	■	■	■	■
				■								CQ24A-SR	■	■	■	■	■	■	■	■	■	■	■
					■							CQ24A-SZ	■	■	■	■	■	■	■	■	■	■	■
						■						CQ24A-MPL	■	■	■	■	■	■	■	■	■	■	■
							■	■				CQ24A-BAC	■	■	■	■	■	■	■	■	■	■	■
		■	■							230 V		CQ230A	■	■	■	■	■	■	■	■	■	■	■
Standard actuators with connecting terminals																							
CQ..A-T	1 Nm	■	■							24 V	75 s	CQ24A-T	■	■	■	■	■	■	■	■	■	■	■
				■								CQ24A-SR-T	■	■	■	■	■	■	■	■	■	■	■
					■							CQ24A-SZ-T	■	■	■	■	■	■	■	■	■	■	■
		■	■							230 V		CQ230A-T	■	■	■	■	■	■	■	■	■	■	■
Fail-safe actuators NC/NO																							
CQK..	1 Nm	■							■	24 V	75 s	CQK24A	■	■	■	■	■	■	■	■	■	■	■
				■					■			CQK24A-SR	■	■	■	■	■	■	■	■	■	■	■
					■				■			CQK24A-SZ.1 [1]	■	■	■	■	■	■	■	■	■	■	■
						■			■			CQK24A-MPL	■	■	■	■	■	■	■	■	■	■	■
		■							■	230 V		CQK230A	■	■	■	■	■	■	■	■	■	■	■
Fail-safe actuators NC/NO with connecting terminals																							
CQK..A-T	1 Nm	■							■	24 V	75 s	CQK24A-T	■	■	■	■	■	■	■	■	■	■	■
				■					■			CQK24A-SR-T	■	■	■	■	■	■	■	■	■	■	■
					■				■			CQK24A-MPL-T	■	■	■	■	■	■	■	■	■	■	■
		■							■	230 V		CQK230A-T	■	■	■	■	■	■	■	■	■	■	■

[1] Actuator is delivered in multipack with 36 pieces.

5

Pressure-independent characterised control valves

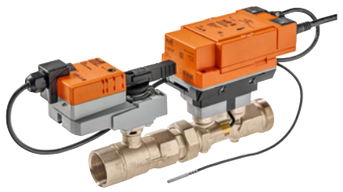
Complete transparency and highest efficiency

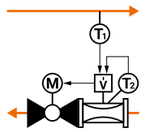
Belimo Energy Valve™

	Internal and external thread	2-way	PN 25	**DN 15...50**	30
				DN 15...50 (MID)	31
		3-way		**DN 15...50**	32
	Flange	2-way	PN 16	**DN 65...150**	33
Electronic pressure-independent characterised control valve (EPIV)	Internal and external thread	2-way	PN 25	**DN 15...50**	34
	Flange		PN 16	**DN 65...150**	35

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 15...50





Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Internal thread Rp (ISO 7-1) and External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 25...100% of V'_{nom}

Configurable using the integrated web server or Belimo Assistant 2

Optional connection to the Belimo Cloud

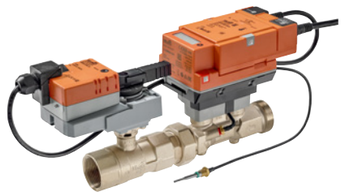
Sensor-operated flow rate, power or differential pressure control

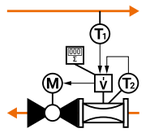
Delta-T manager for optimal differential temperatures

PN	DN	G	Rp	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Glycol monitoring [1]	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator															
25	**15**	3/4"	1/2"	0.42	25	1.5	24 V	■	■	■	■	■	**EV015R2+BAC**	1400	350
	20	1"	3/4"	0.69	41.7	2.5		■	■	■	■	■	**EV020R2+BAC**	1400	350
	25	1 1/4"	1"	0.97	58.3	3.5		■	■	■	■	■	**EV025R2+BAC**	1400	350
	32	1 1/2"	1 1/4"	1.67	100	6		■	■	■	■	■	**EV032R2+BAC**	1400	350
	40	2"	1 1/2"	2.78	166.7	10		■	■	■	■	■	**EV040R2+BAC**	1400	350
	50	2 1/2"	2"	4.17	250	15		■	■	■	■	■	**EV050R2+BAC**	1400	350
Fail-safe															
25	**15**	3/4"	1/2"	0.42	25	1.5	24 V	■	■	■	■	■	**EV015R2+KBAC**	1400	350
	20	1"	3/4"	0.69	41.7	2.5		■	■	■	■	■	**EV020R2+KBAC**	1400	350
	25	1 1/4"	1"	0.97	58.3	3.5		■	■	■	■	■	**EV025R2+KBAC**	1400	350
	32	1 1/2"	1 1/4"	1.67	100	6		■	■	■	■	■	**EV032R2+KBAC**	1400	350
	40	2"	1 1/2"	2.78	166.7	10		■	■	■	■	■	**EV040R2+KBAC**	1400	350
	50	2 1/2"	2"	4.17	250	15		■	■	■	■	■	**EV050R2+KBAC**	1400	350

[1] Optimum heat transfer can be ensured by glycol content monitoring.

DN 15...50 (MID)





Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Fluid temperature note	MID-certified 15...120°C
Pipe connection	Internal thread Rp (ISO 7-1) and External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 25...100% of V'_{nom}

The thermal energy meters meet the requirements of EN 1434 and have type approval according to the European Measuring Instruments Directive 2014/32/EU (MI-004) as a heat meter.

Configurable using the integrated web server or Belimo Assistant 2

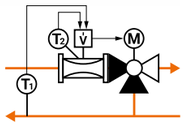
Optional connection to the Belimo Cloud

Sensor-operated flow rate, power or differential pressure control

Delta-T manager for optimal differential temperatures

PN	DN	G	Rp	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator														
25	**15**	3/4"	1/2"	0.42	25	1.5	24 V	■	■	■	■	**EV015R2+MID**	1400	350
	20	1"	3/4"	0.69	41.7	2.5		■	■	■	■	**EV020R2+MID**	1400	350
	25	1 1/4"	1"	0.97	58.3	3.5		■	■	■	■	**EV025R2+MID**	1400	350
	32	1 1/2"	1 1/4"	1.67	100	6		■	■	■	■	**EV032R2+MID**	1400	350
	40	2"	1 1/2"	2.78	166.7	10		■	■	■	■	**EV040R2+MID**	1400	350
	50	2 1/2"	2"	4.17	250	15		■	■	■	■	**EV050R2+MID**	1400	350

DN 15...50



Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Internal thread Rp (ISO 7-1) and External thread G (ISO 228-1)
Leakage rate	Control path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 25...100% of V'_{nom}

Configurable using the integrated web server or Belimo Assistant 2

Optional connection to the Belimo Cloud

Sensor-operated flow or power control

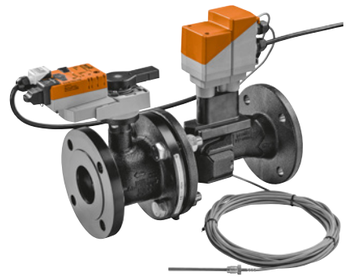
Delta-T manager for optimal differential temperatures

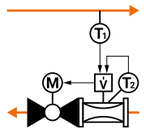
PN	DN	G	Rp	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Glycol monitoring [1]	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator															
25	**15**	3/4"	1/2"	0.42	25	1.5	24 V	■	■	■	■	■	**EV015R3+BAC**	1400	350
	20	1"	3/4"	0.69	41.7	2.5		■	■	■	■	■	**EV020R3+BAC**	1400	350
	25	1 1/4"	1"	0.97	58.3	3.5		■	■	■	■	■	**EV025R3+BAC**	1400	350
	32	1 1/2"	1 1/4"	1.67	100	6		■	■	■	■	■	**EV032R3+BAC**	1400	350
	40	2"	1 1/2"	2.78	166.7	10		■	■	■	■	■	**EV040R3+BAC**	1400	350
	50	2 1/2"	2"	4.17	250	15		■	■	■	■	■	**EV050R3+BAC**	1400	350

[1] Optimum heat transfer can be ensured by glycol content monitoring.

Note: 3-way Belimo Energy Valve™ with MID on request.

DN 65...150





Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange PN 16 (EN 1092-2)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 30...100% of V'_{nom}

Completely parametrisable by means of integrated web server

Optional connection to the Belimo Cloud

Sensor-operated flow or power control

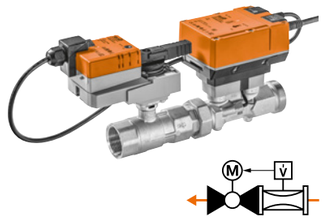
Delta-T manager for optimal differential temperatures

5

PN	DN	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Glycol monitoring [1]	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator													
16	**65**	8	480	28.8	24 V	■	■	■	■	■	**EV065F+BAC**	690	340
	80	11	660	39.6		■	■	■	■	■	**EV080F+BAC**	690	340
	100	20	1200	72		■	■	■	■	■	**EV100F+BAC**	690	340
	125	31	1860	111.6		■	■	■	■	■	**EV125F+BAC**	690	340
	150	45	2700	162		■	■	■	■	■	**EV150F+BAC**	690	340
Fail-safe													
16	**65**	8	480	28.8	24 V	■	■	■	■	■	**EV065F+KBAC**	690	340
	80	11	660	39.6		■	■	■	■	■	**EV080F+KBAC**	690	340
	100	20	1200	72		■	■	■	■	■	**EV100F+KBAC**	690	340
	125	31	1860	111.6		■	■	■	■	■	**EV125F+KBAC**	690	340
	150	45	2700	162		■	■	■	■	■	**EV150F+KBAC**	690	340

[1] Optimum heat transfer can be ensured by glycol content monitoring.

DN 15...50



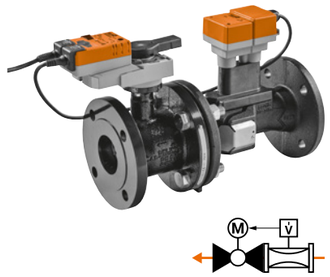
Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Internal thread Rp (ISO 7-1) and External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa
V'_{max}	Freely adjustable 25...100% of V'_{nom}

Control, operating range, feedback, and other functions configurable with Belimo Assistant 2

PN	DN	G	Rp	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Glycol monitoring [1]	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator															
25	**15**	3/4"	1/2"	0.42	25	1.5	24 V	■	■	■	■	■	EP015R2+BAC	1400	350
	20	1"	3/4"	0.69	41.7	2.5		■	■	■	■	■	EP020R2+BAC	1400	350
	25	1 1/4"	1"	0.97	58.3	3.5		■	■	■	■	■	EP025R2+BAC	1400	350
	32	1 1/2"	1 1/4"	1.67	100	6		■	■	■	■	■	EP032R2+BAC	1400	350
	40	2"	1 1/2"	2.78	166.7	10		■	■	■	■	■	EP040R2+BAC	1400	350
	50	2 1/2"	2"	4.17	250	15		■	■	■	■	■	EP050R2+BAC	1400	350
Fail-safe															
25	**15**	3/4"	1/2"	0.42	25	1.5	24 V	■	■	■	■	■	EP015R2+KBAC	1400	350
	20	1"	3/4"	0.69	41.7	2.5		■	■	■	■	■	EP020R2+KBAC	1400	350
	25	1 1/4"	1"	0.97	58.3	3.5		■	■	■	■	■	EP025R2+KBAC	1400	350
	32	1 1/2"	1 1/4"	1.67	100	6		■	■	■	■	■	EP032R2+KBAC	1400	350
	40	2"	1 1/2"	2.78	166.7	10		■	■	■	■	■	EP040R2+KBAC	1400	350
	50	2 1/2"	2"	4.17	250	15		■	■	■	■	■	EP050R2+KBAC	1400	350

[1] Optimum heat transfer can be ensured by glycol content monitoring.

DN 65...150



Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange PN 16 (EN 1092-2)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa
V'_{max}	Freely adjustable 30...100% of V'_{nom}

Control, operating range, feedback, and other functions configurable with Belimo Assistant 2

PN	DN	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator												
16	**65**	8	480	28.8	24 V	■	■			EP065F+MP	690	340
	80	11	660	39.6		■	■			EP080F+MP	690	340
	100	20	1200	72		■	■			EP100F+MP	690	340
	125	31	1860	111.6		■	■			EP125F+MP	690	340
	150	45	2700	162		■	■			EP150F+MP	690	340
Fail-safe												
16	**65**	8	480	28.8	24 V	■	■			EP065F+KMP	690	340
	80	11	660	39.6		■	■			EP080F+KMP	690	340
	100	20	1200	72		■	■			EP100F+KMP	690	340
	125	31	1860	111.6		■	■			EP125F+KMP	690	340
	150	45	2700	162		■	■			EP150F+KMP	690	340
With Modbus actuator												
16	**65**	8	480	28.8	24 V	■	■	■	■	EP065F+MOD	690	340
	80	11	660	39.6		■	■	■	■	EP080F+MOD	690	340
	100	20	1200	72		■	■	■	■	EP100F+MOD	690	340
	125	31	1860	111.6		■	■	■	■	EP125F+MOD	690	340
	150	45	2700	162		■	■	■	■	EP150F+MOD	690	340

6

Characterised control valves (CCV)

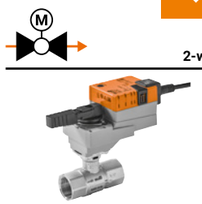
Reliable control of heating and cooling circuits

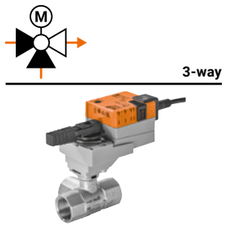
Internal thread	2-way – 3-way	PN 25	**DN 32...50**	38
		PN 40	**DN 15...25**	
External thread	2-way – 3-way	PN 25	**DN 32...50**	40
		PN 40	**DN 15...25**	
Flange	2-way – 3-way	PN 6	**DN 15...50**	42
	2-way	PN 16	**DN 65...150**	44
External thread	2-way / 130°	PN 40	**DN 10...20**	46

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 15...50

Field of use	2-way: closed and open water circuit (pH >7) 3-way: closed water circuit (pH >7)
Fluid temperature	–10...120°C [1]
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	2-way: air-bubble tight, leakage rate A (EN 12266-1) 3-way: control path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear (flow 70% of the K_{VS} value)
Permissible operating pressure	p_S: 1600 kPa





2-way	PN 40						PN 25					
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	0.25	R2015-P25-S1										
	0.4	R2015-P4-S1										
	0.63	R2015-P63-S1										
	1	R2015-1-S1										
	1.6	R2015-1P6-S1										
	2.5	R2015-2P5-S1	4	R2020-4-S2	6.3	R2025-6P3-S2						
	4	R2015-4-S1	6.3	R2020-6P3-S2	10	R2025-10-S2			16	R2040-16-S3	25	R2050-25-S4
	6.3	R2015-6P3-S1	8.6	R2020-8P6-S2	16	R2025-16-S2	16	R2032-16-S3	25	R2040-25-S3	40	R2050-40-S4

3-way												
	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	0.25	R3015-P25-S1										
	0.4	R3015-P4-S1										
	0.63	R3015-P63-S1										
	1	R3015-1-S1										
	1.6	R3015-1P6-S1										
	2.5	R3015-2P5-S1	4	R3020-4-S2	6.3	R3025-6P3-S2						
	4	R3015-4-S1	6.3	R3020-6P3-S2	10	R3025-10-S2	16	R3032-16-S3	16	R3040-16-S3	25	R3040-25-S4
											25	R3050-25-S4
											40	R3050-40-S4
											58	R3050-58-S4

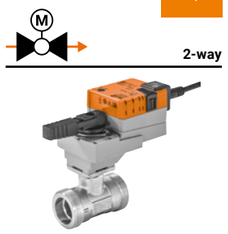
Suitable actuators

	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type		Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa
Compact actuators																								
TR.. TRY..	2 Nm	■	■			24 V	100 s		TR24 [3]		1400	350												
			■			230 V	105 s		TR230-3 [3]		1400	350												
				■		24 V	90 s		TR24-SR [3]		1400	350												
				■			35 s		TRY24-SR [3]		1400	350												
									Without auxiliary switch	With auxiliary switch														
Standard actuators																								
LR.. NR.. SR..	5 Nm	■	■			24 V	90 s		LR24A	..-S	1400	350	1400	350	1400	350								
		■	■			230 V			LR230A	..-S	1400	350	1400	350	1400	350								
				■		24 V			LR24A-SR		1400	350	1400	350	1400	350								
	10 Nm	■	■			24 V	90 s		NR24A	..-S	1400	350	1400	350	1400	350	1400	350	1400	350				
		■	■			230 V			NR230A	..-S	1400	350	1400	350	1400	350	1400	350	1400	350				
				■		24 V			NR24A-SR		1400	350	1400	350	1400	350	1400	350	1400	350				
TRC.. LRC.. NRC.. SRC..	20 Nm	■	■			24 V	90 s		SR24A	..-S	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350
		■	■			230 V			SR230A	..-S	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350
				■		24 V			SR24A-SR		1400	350	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350
Fast running actuators																								
TRF..	2 Nm			■		24 V	15 s		TRC24A-SR		1400	350												
	5 Nm			■		24 V	35 s		LRC24A-SR		1400	350	1400	350	1400	350								
	10 Nm			■		24 V	35 s		NRC24A-SR		1400	350	1400	350	1400	350	1400	350	1400	350				
	20 Nm			■		24 V	35 s		SRC24A-SR		1400	350	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350
LRF..									Actuator type NC		Actuator type NO													
									Without auxiliary switch	With 2 auxiliary switches	Without auxiliary switch	With 2 auxiliary switches												
Fail-safe actuators NC/NO																								
NRF.. SRF..	2.5 Nm			■	■	24 V	90 s	<25 s	TRF24-SR		..-O		1400	350										
	4 Nm			■	■	24 V	150 s	<20 s	LRF24-SR				1400	350	1400	350	1400	350						
	10 Nm			■	■	24 V	90 s	<20 s	NRF24A-SR	..-S2	..-O	..-S2-O	1400	350	1400	350	1400	350	1400	350	1400	350		
	20 Nm			■	■	24 V	90 s	<20 s	SRF24A-SR	..-S2	..-O	..-S2-O	1400	350	1400	350	1400	350	1400	350	1400	350	1400	350

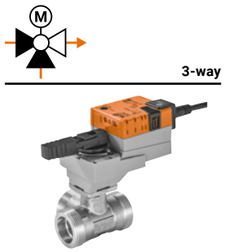
[1] Compact actuators TR../TRY.. only up to 100°C.
[2] Low-noise operation Δp_{max} = 200 kPa.
[3] If fluid temperature ≥100°C, then pipeline and valve must be insulated.

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	−10...100°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	2-way: air-bubble tight, leakage rate A (EN 12266-1) 3-way: control path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear (flow 70% of the K_{VS} value)
Permissible operating pressure	p_S: 1600 kPa



2-way	PN 40						PN 25					
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	0.63	R409										
	1	R410										
	1.6	R411										
	2.5	R412	4	R417	6.3	R422						
	4	R413	6.3	R418	10	R423	16	R431	16	R438	25	R448
	6.3	R414	8.6	R419	16	R424			25	R439	40	R449

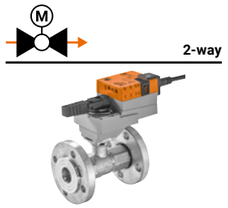


3-way												
	K_{VS} [m³/h]	Valve type										
	0.63	R509										
	1	R510										
	1.6	R511	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type						
	2.5	R512	4	R517	6.3	R522	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	4	R513	6.3	R518	10	R523	16	R531	16	R538	25	R548

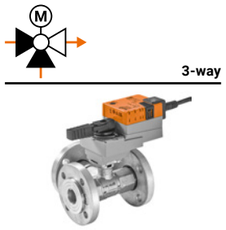
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type		Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Compact actuators																						
TR.. TRY..	2 Nm	■	■			24 V	100 s		TR24		1400	200	1400	200								
			■			230 V	105 s		TR230-3		1400	200	1400	200								
				■		24 V	90 s		TR24-SR		1400	200	1400	200								
				■			35 s		TRY24-SR		1400	200	1400	200								
									Without auxiliary switch	With auxiliary switch												
Standard actuators																						
LR.. NR.. SR..	5 Nm	■	■			24 V	90 s		LR24A	..-S	1400	200	1400	200	1400	200						
		■	■			230 V			LR230A	..-S	1400	200	1400	200	1400	200						
				■		24 V			LR24A-SR		1400	200	1400	200	1400	200						
	10 Nm	■	■			24 V	90 s		NR24A	..-S	1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
		■	■			230 V			NR230A	..-S	1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
				■		24 V			NR24A-SR		1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
TRC.. LRC.. NRC.. SRC..	20 Nm	■	■			24 V	90 s		SR24A	..-S	1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
		■	■			230 V			SR230A	..-S	1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
				■		24 V			SR24A-SR		1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
Fast running actuators																						
TRF..	2 Nm			■		24 V	15 s		TRC24A-SR		1400	200	1400	200								
	5 Nm			■		24 V	35 s		LRC24A-SR		1400	200	1400	200	1400	200						
	10 Nm			■		24 V	35 s		NRC24A-SR		1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
	20 Nm			■		24 V	35 s		SRC24A-SR		1400	200	1400	200	1400	200	1400	200	1400	200	1400	200
LRF..									Actuator type NC		Actuator type NO											
									Without auxiliary switch	With 2 auxiliary switches	Without auxiliary switch	With 2 auxiliary switches										
Fail-safe actuators NC/NO																						
NRF.. SRF..	2.5 Nm			■	■	24 V	90 s	<25 s	TRF24-SR		..-O		1400	200	1400	200						
	4 Nm			■	■	24 V	150 s	<20 s	LRF24-SR				1400	200	1400	200	1400	200				
	10 Nm			■	■	24 V	90 s	<20 s	NRF24A-SR	..-S2	..-O	..-S2-O	1400	200	1400	200	1400	200	1400	200	1400	200
	20 Nm			■	■	24 V	90 s	<20 s	SRF24A-SR	..-S2	..-O	..-S2-O	1400	200	1400	200	1400	200	1400	200	1400	200

DN 15...50

Field of use	2-way: closed and open water circuit (pH >7) 3-way: closed water circuit (pH >7)
Fluid temperature	–10...100°C
Pipe connection	Flange PN 6 (EN 1092-1/4)
Leakage rate	2-way: air-bubble tight, leakage rate A (EN 12266-1) 3-way: control path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear (flow rate 70% of K_{vs} value)
Permissible operating pressure	p_s: 600 kPa



2-way	PN 6								PN 6			
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	0.63	R6015RP63-B1										
	1	R6015R1-B1										
	1.6	R6015R1P6-B1										
	2.5	R6015R2P5-B1										
	4	R6015R4-B1	6.3	R6020R6P3-B1	10	R6025R10-B2	16	R6032R16-B3	25	R6040R25-B3	40	R6050R40-B3



3-way												
	K_{vs} [m³/h]	Valve type										
	0.63	R7015RP63-B1										
	1.6	R7015R1P6-B1	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	4	R7015R4-B1	6.3	R7020R6P3-B1	10	R7025R10-B2	16	R7032R16-B3	16	R7040R16-B3	25	R7050R25-B3

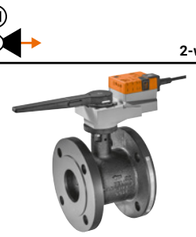
Suitable actuators

	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type		Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Compact actuators																						
TR.. TRY..	2 Nm	■	■			24 V	100 s		TR24		600	100	600	100								
			■			230 V	105 s		TR230-3		600	100	600	100								
				■		24 V	90 s		TR24-SR		600	100	600	100								
				■			35 s		TRY24-SR		600	100	600	100								
									Without auxiliary switch	With auxiliary switch												
Standard actuators																						
LR.. NR.. SR..	5 Nm	■	■			24 V			LR24A	..-S	600	100	600	100	600	100						
		■	■			230 V	90 s		LR230A	..-S	600	100	600	100	600	100						
				■		24 V			LR24A-SR		600	100	600	100	600	100						
	10 Nm	■	■			24 V			NR24A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
		■	■			230 V	90 s		NR230A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
				■		24 V			NR24A-SR		600	100	600	100	600	100	600	100	600	100	600	100
TRC.. LRC.. NRC.. SRC..	20 Nm	■	■			24 V			SR24A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
		■	■			230 V	90 s		SR230A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
				■		24 V			SR24A-SR		600	100	600	100	600	100	600	100	600	100	600	100
Fast running actuators																						
TRF..	2 Nm			■		24 V	15 s		TRC24A-SR		600	100	600	100								
	5 Nm			■		24 V	35 s		LRC24A-SR		600	100	600	100	600	100						
	10 Nm			■		24 V	35 s		NRC24A-SR		600	100	600	100	600	100	600	100	600	100	600	100
	20 Nm			■		24 V	35 s		SRC24A-SR		600	100	600	100	600	100	600	100	600	100	600	100
									Actuator type NC		Actuator type NO											
									Without auxiliary switch	With 2 auxiliary switches	Without auxiliary switch	With 2 auxiliary switches										
Fail-safe actuators NC/NO																						
LRF..	2.5 Nm			■	■	24 V	90 s	<25 s	TRF24-SR		..-O		600	100	600	100						
	4 Nm			■	■	24 V	150 s	<20 s	LRF24-SR				600	100	600	100	600	100				
NRF.. SRF..	10 Nm			■	■	24 V	90 s	<20 s	NRF24A-SR	..-S2	..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100
	20 Nm			■	■	24 V	90 s	<20 s	SRF24A-SR	..-S2	..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100

6

DN 65...150

Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange PN 16 (EN 1092-2)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 1600 kPa



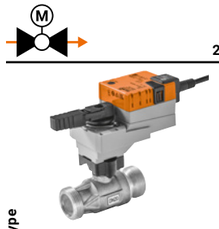
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	SPDT auxiliary switch	Actuator type	2-way	PN 16 DN 65 K_{vs} [m³/h]	DN 65 Valve type	DN 80 K_{vs} [m³/h]	DN 80 Valve type	PN 16 DN 100 K_{vs} [m³/h]	DN 100 Valve type	DN 125 K_{vs} [m³/h]	DN 125 Valve type	DN 150 K_{vs} [m³/h]	DN 150 Valve type
												63	R6065W63-S8	100	R6080W100-S8	160	R6100W160-S8	250	R6125W250-S8	320	R6150W320-S8
												Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa
Standard actuators																					
SR..	20 Nm	■	■			24 V	90 s			SR24A-5		690	400	690	400						
		■	■			230 V				SR230A-5		690	400	690	400						
				■		24 V				SR24A-SR-5		690	400	690	400						
				■		230 V				SR230A-SR-5		690	400	690	400						
		■	■			24 V	90 s			SR24P-5		690	400	690	400						
		■	■			230 V				SR230P-5		690	400	690	400						
				■		24 V				SR24P-SR-5		690	400	690	400						
				■		230 V				SR230P-SR-5		690	400	690	400						
GR..	40 Nm	■	■			24 V	150 s			GR24A-5 [2]		690	400	690	400	690	400	690	400	690	400
		■	■			230 V				GR230A-5 [2]		690	400	690	400	690	400	690	400	690	400
				■		24 V				GR24A-SR-5 [2]		690	400	690	400	690	400	690	400	690	400
Fast running actuators																					
SRC..	20 Nm			■		24 V	35 s			SRC24A-SR-5		690	400	690	400	690	400	690	400	690	400
Fail-safe actuators NC/NO										**Actuator type NC**	**Actuator type NO**										
SRF..	20 Nm	■			■	24 V	<75 s	<20 s		SRF24A-5	..-O	690	400	690	400						
		■			■				2	SRF24A-S2-5	..-O										
		■			■	230 V				SRFA-5	..-O	690	400	690	400						
		■			■				2	SRFA-S2-5	..-O										
GRK..				■	■	24 V	90 s	<20 s		SRF24A-SR-5	..-O	690	400	690	400						
				■	■				2	SRF24A-SR-S2-5	..-O										
	40 Nm	■			■	230 V	150 s			GRK24A-5		690	400	690	400	690	400	690	400	690	400
				■	■					GRK24A-SR-5		690	400	690	400	690	400	690	400	690	400

[1] Low-noise operation Δp_{max} = 200 kPa.
[2] The actuator types GR..-5 will be replaced by a new GR generation at the end of the year.

6

DN 10...20

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	2...130°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 2700 kPa



2-way	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	PN 40		PN 40			
	DN 10		DN 15		DN 20	
	0.3	R404DK				
	0.4	R405DK				
	0.63	R406DK	2.5	R412D	6.3	R417D
	1	R407DK	4	R413D	10	R418D
	1.6	R408DK	6.3	R414D	16	R419D
	2.5	R409DK				

Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Nominal torque running time	Actuator type	Δp_s kPa	Δp_{v100} kPa	Δp_{v0} kPa	Δp_s kPa	Δp_{v100} kPa	Δp_{v0} kPa	Δp_s kPa	Δp_{v100} kPa	Δp_{v0} kPa
Standard actuators																		
LR..	5 Nm	■	■			24 V	90 s		LR24A	1400	400	800	1400	400	800	1400	400	800
		■	■			230 V			LR230A	1400	400	800	1400	400	800	1400	400	800
LRC..				■		24 V			LR24A-SR	1400	400	800	1400	400	800	1400	400	800
Fast running actuators																		
	5 Nm			■			35 s		LRC24A-SR	1400	400	800	1400	400	800	1400	400	800
LRF..	**Actuators with fail-safeNC**																	
	4 Nm			■	■		150 s	<20 s	LRF24-SR [1]	1400	400	800	1400	400	800	1400	400	800

[1] If fluid temperature ≥100°C, then pipeline and valve must be insulated.

7

Globe Valves

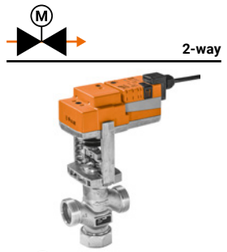
Energy-optimised control of steam and water circuits

External thread	2-way – 3-way	PN 16	**DN 15...50**	50
Flange	2-way – 3-way	PN 6	**DN 15...100**	52
	2-way – 3-way	PN 16 / ≤120°C	**DN 15...150**	54
	2-way – 3-way	PN 16 / ≤150°C	**DN 15...150**	56
	2-way	PN 16 partly pressure-balanced	**DN 40...150**	58
	2-way – 3-way	PN 16	**DN 200/250**	60
	2-way	PN 25	**DN 15...50**	62
	3-way	PN 25	**DN 15...100**	64
	2-way	PN 25 partly pressure-balanced	**DN 65...100**	66
Internal thread	2-way – 3-way	PN 25 stainless steel for special applications	**DN 15...50**	68

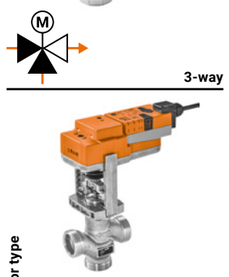
Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	2-way: max. 0.05% of K_{VS} value 3-way: control path A – AB: max. 0.05% of K_{VS} value / bypass B – AB: max. 1% of K_{VS} value
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear
Permissible operating pressure	p_S: 1600 kPa



2-way	PN 16					PN 16											
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50						
K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type						
0.63	H411B																
1	H412B																
1.6	H413B																
2.5	H414B																
4	H415B	6.3	H420B	10	H425B	16	H432B	25	H440B	40	H450B						



3-way																	
K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type						
1	H512B																
1.6	H513B																
2.5	H514B																
4	H515B	6.3	H520B	10	H525B	16	H532B	25	H540B	40	H550B						

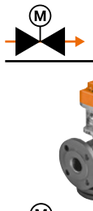
Suitable actuators

	Actuating force	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																						
LV.. NV.. SV..	500 N	150 s		■	■				24 V	LV24A-TPC	1300	400	900	400	500	400	350	350	150	150	70	70
				■	■				230 V	LV230A-TPC	1300	400	900	400	500	400	350	350	150	150	70	70
						■			24 V	LV24A-SR-TPC	1300	400	900	400	500	400	350	350	150	150	70	70
						■	■		24 V	LV24A-MP-TPC	1300	400	900	400	500	400	350	350	150	150	70	70
	1000 N	150 s		■	■				24 V	NV24A-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
				■	■				230 V	NV230A-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
						■			24 V	NV24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
						■	■		24 V	NV24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
	1500 N	150 s		■	■				24 V	SV24A-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400
				■	■				230 V	SV230A-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400
						■			24 V	SV24A-SR-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400
						■	■		24 V	SV24A-MP-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400
Fast running actuators																						
LVC.. NVC.. SVC..	500 N	35 s				■			24 V	LVC24A-SR-TPC	1300	400	900	400	500	400	350	350	150	150	70	70
						■	■			LVC24A-MP-TPC	1300	400	900	400	500	400	350	350	150	150	70	70
	1000 N	35 s				■			24 V	NVC24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
						■	■			NVC24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
	1500 N	35 s				■			24 V	SVC24A-SR-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400
						■	■			SVC24A-MP-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400
Fail-safe actuators NC/NO [2]																						
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
					■			■	230 V	NVK230A-3	1600	400	1600	400	1300	400	1000	400	500	400	300	300
						■		■	24 V	NVK24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
						■	■	■	24 V	NVK24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300
						■	■	■	24 V	NVKC24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 15...100

Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange PN 6 (ISO 7005-2)
Leakage rate	2-way: max. 0.05% of K_{VS} value 3-way: control path A – AB: max. 0.05% of K_{VS} value / bypass B – AB: max. 1% of K_{VS} value
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear
Permissible operating pressure	p_S: 600 kPa



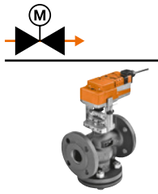
	PN 6																	
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100	
2-way	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	0.63	H611R																
	1	H612R																
	1.6	H613R																
	2.5	H614R																
	4	H615R	6.3	H620R	10	H625R	16	H632R	25	H640R	40	H650R	58	H664R	90	H679R	145	H6100R
3-way	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	0.63	H711R																
	1	H712R																
	1.6	H713R																
	2.5	H714R																
	4	H715R	6.3	H720R	10	H725R	16	H732R	25	H740R	40	H750R	58	H764R	90	H779R	145	H7100R

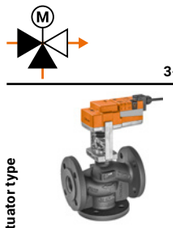
Suitable actuators	Actuating force	Actuating time per nominal stroke	Actuating time Fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	DN 15 Δps kPa	DN 15 Δpmax kPa	DN 20 Δps kPa	DN 20 Δpmax kPa	DN 25 Δps kPa	DN 25 Δpmax kPa	DN 32 Δps kPa	DN 32 Δpmax kPa	DN 40 Δps kPa	DN 40 Δpmax kPa	DN 50 Δps kPa	DN 50 Δpmax kPa	DN 65 Δps kPa	DN 65 Δpmax kPa	DN 80 Δps kPa	DN 80 Δpmax kPa	DN 100 Δps kPa	DN 100 Δpmax kPa
Standard actuators																												
LV.. NV.. SV..	500 N	150 s		■	■				24 V	LV24A-TPC	600	400	600	400	500	400	350	350	150	150	70	70						
				■	■				230 V	LV230A-TPC	600	400	600	400	500	400	350	350	150	150	70	70						
						■			24 V	LV24A-SR-TPC	600	400	600	400	500	400	350	350	150	150	70	70						
						■	■		24 V	LV24A-MP-TPC	600	400	600	400	500	400	350	350	150	150	70	70						
	1000 N	150 s		■	■				24 V	NV24A-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
				■	■				230 V	NV230A-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
						■			24 V	NV24A-SR-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
						■	■		24 V	NV24A-MP-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
EV.. RV..	1500 N	150 s		■	■				24 V	SV24A-TPC	600	400	600	400	600	400	600	400	600	400	550	400	280	280	160	160		
				■	■				230 V	SV230A-TPC	600	400	600	400	600	400	600	400	600	400	550	400	280	280	160	160		
						■			24 V	SV24A-SR-TPC	600	400	600	400	600	400	600	400	600	400	550	400	280	280	160	160		
						■	■		24 V	SV24A-MP-TPC	600	400	600	400	600	400	600	400	600	400	550	400	280	280	160	160		
	2500 N	150 s		■	■				24 V	EV24A-TPC																	200	200
				■	■				230 V	EV230A-TPC																	200	200
						■			24 V	EV24A-SR-TPC																	200	200
						■	■		24 V	EV24A-MP-TPC																	200	200
LVC.. NVC.. SVC..	4500 N	120 s				■			24 V	RV24A-SR																	450	400
Fast running actuators																												
	500 N	35 s				■			24 V	LVC24A-SR-TPC	600	400	600	400	500	400	350	350	150	150	70	70						
						■	■		24 V	LVC24A-MP-TPC	600	400	600	400	500	400	350	350	150	150	70	70						
	1000 N	35 s				■			24 V	NVC24A-SR-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
						■	■		24 V	NVC24A-MP-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
EVC..	1500 N	35 s				■			24 V	SVC24A-SR-TPC	600	400	600	400	600	400	600	400	600	400	550	400	280	280	160	160		
						■	■		24 V	SVC24A-MP-TPC	600	400	600	400	600	400	600	400	600	400	550	400	280	280	160	160		
	2500 N	35 s				■			24 V	EVC24A-SR																	200	200
Fail-safe actuators NC/NO [2]																												
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
					■			■	230 V	NVK230A-3	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
						■		■	24 V	NVK24A-SR-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
						■	■	■	24 V	NVK24A-MP-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
						■	■	■	24 V	NVKC24A-MP-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
AVK..	2000 N	150 s	35 s		■			■	24 V	AVK24A-3-TPC																	150	150
					■			■	230 V	AVK230A-3																	150	150
						■		■	24 V	AVK24A-SR-TPC																	150	150
						■	■	■	24 V	AVK24A-MP-TPC																	150	150

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 15...150

Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	2-way: max. 0.05% of K_{VS} value 3-way: control path A – AB: max. 0.05% of K_{VS} value / bypass B – AB: max. 1% of K_{VS} value
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear
Permissible operating pressure	p_S: 1600 kPa





2-way K_{VS} [m³/h]	Valve type	3-way K_{VS} [m³/h]	Valve type
0.63	H611N	0.63	H711N
1	H612N	1	H712N
1.6	H613N	1.6	H713N
2.5	H614N	2.5	H714N
4	H615N	4	H715N

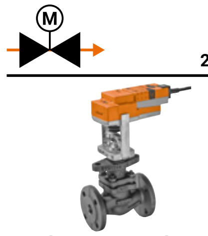
PN 16																															
DN 15		DN 20		DN 25		DN 32		DN 40		DN 50		DN 65				DN 80				DN 100		DN 125		DN 150	
K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
		6.3	H620N	10	H625N	16	H632N	25	H640N	40	H650N	58	H664N	63	H665N	90	H679N	100	H680N	145	H6100N				
																						220	H7125N	320	H7150N

Suitable actuators	Actuating force	Actuating time per nominal stroke	Actuating time Fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	DN 15 Δp_s kPa	DN 15 Δp_{max} kPa	DN 20 Δp_s kPa	DN 20 Δp_{max} kPa	DN 25 Δp_s kPa	DN 25 Δp_{max} kPa	DN 32 Δp_s kPa	DN 32 Δp_{max} kPa	DN 40 Δp_s kPa	DN 40 Δp_{max} kPa	DN 50 Δp_s kPa	DN 50 Δp_{max} kPa	DN 65 Δp_s kPa	DN 65 Δp_{max} kPa	DN 80 Δp_s kPa	DN 80 Δp_{max} kPa	DN 100 Δp_s kPa	DN 100 Δp_{max} kPa	DN 125 Δp_s kPa	DN 125 Δp_{max} kPa	DN 150 Δp_s kPa	DN 150 Δp_{max} kPa
Standard actuators																																
LV.. NV.. SV..	500 N	150 s		■	■				24 V	LV24A-TPC	1300	400	900	400	500	400	350	350	150	150	70	70										
				■	■				230 V	LV230A-TPC	1300	400	900	400	500	400	350	350	150	150	70	70										
						■			24 V	LV24A-SR-TPC	1300	400	900	400	500	400	350	350	150	150	70	70										
						■	■		24 V	LV24A-MP-TPC	1300	400	900	400	500	400	350	350	150	150	70	70										
EV.. RV..	1000 N	150 s		■	■				24 V	NV24A-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
				■	■				230 V	NV230A-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
						■			24 V	NV24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
						■	■		24 V	NV24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
	1500 N	150 s		■	■				24 V	SV24A-TPC	1600	400	1600	400	1600	400	1600	400	600	400	550	400	280	280			160	160				
				■	■				230 V	SV230A-TPC	1600	400	1600	400	1600	400	1600	400	600	400	550	400	280	280			160	160				
						■			24 V	SV24A-SR-TPC	1600	400	1600	400	1600	400	1600	400	600	400	550	400	280	280			160	160				
						■	■		24 V	SV24A-MP-TPC	1600	400	1600	400	1600	400	1600	400	600	400	550	400	280	280			160	160				
LVC.. NVC.. SVC..	2500 N	150 s		■	■				24 V	EV24A-TPC															550	400			350	350	200	200	130	130	80	80
				■	■				230 V	EV230A-TPC															550	400			350	350	200	200	130	130	80	80
						■			24 V	EV24A-SR-TPC															550	400			350	350	200	200	130	130	80	80
						■	■		24 V	EV24A-MP-TPC															550	400			350	350	200	200	130	130	80	80
	4500 N	120 s				■			24 V	RV24A-SR															700	400			700	400	450	400	290	290	190	190
Fast running actuators																																
EVC..	500 N	35 s				■			24 V	LVC24A-SR-TPC	1300	400	900	400	500	400	350	350	150	150	70	70										
						■	■		24 V	LVC24A-MP-TPC	1300	400	900	400	500	400	350	350	150	150	70	70										
	1000 N	35 s				■			24 V	NVC24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
						■	■		24 V	NVC24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
	1500 N	35 s				■			24 V	SVC24A-SR-TPC	1600	400	1600	400	1600	400	1600	400	600	400	550	400	280	280			160	160				
						■	■		24 V	SVC24A-MP-TPC	1600	400	1600	400	1600	400	1600	400	600	400	550	400	280	280			160	160				
	2500 N	35 s				■			24 V	EVC24A-SR															550	400			350	350	200	200	130	130	80	80
Fail-safe actuators NC/NO [2]																																
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
					■			■	230 V	NVK230A-3	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
						■		■	24 V	NVK24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
						■	■	■	24 V	NVK24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
						■	■	■	24 V	NVKC24A-MP-TPC	1600	400	1600	400	1300	400	1000	400	500	400	300	300	140	140			80	80				
AVK..	2000 N	150 s	35 s		■			■	24 V	AVK24A-3-TPC															400	400			250	250	150	150				
					■			■	230 V	AVK230A-3															400	400			250	250	150	150				
						■		■	24 V	AVK24A-SR-TPC															400	400			250	250	150	150				
						■	■	■	24 V	AVK24A-MP-TPC															400	400			250	250	150	150				

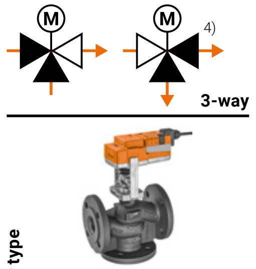
[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 15...150

Field of use	Closed water circuit and steam circuit in the subcritical range (pH >7)
Fluid temperature	5...150°C (120°C to p_S 1600 kPa, 150°C to p_S 1400 kPa)
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	2-way: max. 0.05% of K_{VS} value 3-way: control path A – AB: max. 0.05% of K_{VS} value / bypass B – AB: max. 1% of K_{VS} value
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear



2-way



3-way

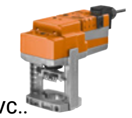
PN 16

Valve	DN 15		DN 15		DN 20		DN 25		DN 32		DN 40		DN 50		DN 65		DN 65		DN 80		DN 100		DN 125		DN 150	
	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
2-way			1	H612S																						
2-way			1.6	H613S																						
2-way	0.4	H610S	2.5	H614S	4	H619S	6.3	H624S																		
2-way	0.63	H611S	4	H615S	6.3	H620S	10	H625S	16	H632S	25	H640S	40	H650S	58	H664S	63	H665S	100	H680S	145	H6100S	220	H6125S	320	H6150S
3-way			4	H715S	6.3	H720S	10	H725S	16	H732S	25	H740S	40	H750S			63	H765S	100	H780S	160	H7100S	220	H7125S	320	H7150S

Suitable actuators

LV..
NV..
SV..

EV..
RV..



LVC..
NVC..
SVC..

EVC..

NVK..
NVKC..

AVK..

Actuating force	Actuating time per nominal stroke	Actuating time Fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type
Standard actuators									
500 N	150 s		■	■				24 V	LV24A-TPC [2]
			■	■				230 V	LV230A-TPC [2]
					■			24 V	LV24A-SR-TPC [2]
					■	■		24 V	LV24A-MP-TPC [2]
1000 N	150 s		■	■				24 V	NV24A-TPC
			■	■				230 V	NV230A-TPC
					■			24 V	NV24A-SR-TPC
					■	■		24 V	NV24A-MP-TPC
1500 N	150 s		■	■				24 V	SV24A-TPC
			■	■				230 V	SV230A-TPC
					■			24 V	SV24A-SR-TPC
					■	■		24 V	SV24A-MP-TPC
2500 N	150 s		■	■				24 V	EV24A-TPC
			■	■				230 V	EV230A-TPC
					■			24 V	EV24A-SR-TPC
					■	■		24 V	EV24A-MP-TPC
4500 N	120 s				■			24 V	RV24A-SR
Fast running actuators									
500 N	35 s				■			24 V	LVC24A-SR-TPC [2]
					■	■		24 V	LVC24A-MP-TPC [2]
1000 N	35 s				■			24 V	NVC24A-SR-TPC
					■	■		24 V	NVC24A-MP-TPC
1500 N	35 s				■			24 V	SVC24A-SR-TPC
					■	■		24 V	SVC24A-MP-TPC
2500 N	35 s				■			24 V	EVC24A-SR
Fail-safe actuators NC/NO [3]									
1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC
				■			■	230 V	NVK230A-3
					■		■	24 V	NVK24A-SR-TPC
					■	■	■	24 V	NVK24A-MP-TPC
	35 s	35 s			■		■	24 V	NVKC24A-SR-TPC
					■	■	■	24 V	NVKC24A-MP-TPC
2000 N	150 s	35 s		■			■	24 V	AVK24A-3-TPC
				■			■	230 V	AVK230A-3
					■		■	24 V	AVK24A-SR-TPC
					■	■	■	24 V	AVK24A-MP-TPC

Actuator type	DN 15 (H610S, H611S) Δp_s kPa	DN 15 (H610S, H611S) Δp_{max} kPa	DN 15 (H612S–H615S, H715S) Δp_s kPa	DN 15 (H612S–H615S, H715S) Δp_{max} kPa	DN 20 Δp_s kPa	DN 20 Δp_{max} kPa	DN 25 Δp_s kPa	DN 25 Δp_{max} kPa	DN 32 Δp_s kPa	DN 32 Δp_{max} kPa	DN 40 Δp_s kPa	DN 40 Δp_{max} kPa	DN 50 Δp_s kPa	DN 50 Δp_{max} kPa
Standard actuators														
LV24A-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60
LV230A-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60
LV24A-SR-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60
LV24A-MP-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60
NV24A-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300
NV230A-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300
NV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300
NV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300
SV24A-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500
SV230A-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500
SV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500
SV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500
EV24A-TPC														
EV230A-TPC														
EV24A-SR-TPC														
EV24A-MP-TPC														
RV24A-SR														
Fast running actuators														
LVC24A-SR-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60
LVC24A-MP-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60
NVC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300
NVC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300
SVC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500
SVC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500
EVC24A-SR														
Fail-safe actuators NC/NO [3]														
NVK24A-3-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140
NVK230A-3	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140
NVK24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140
NVK24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140
NVKC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140
NVKC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140
AVK24A-3-TPC														
AVK230A-3														
AVK24A-SR-TPC														
AVK24A-MP-TPC														

Actuator type	DN 65 (H664S) Δp_s kPa	DN 65 (H664S) Δp_{max} kPa	DN 65 (H665S, H765S) Δp_s kPa	DN 65 (H665S, H765S) Δp_{max} kPa	DN 80 Δp_s kPa	DN 80 Δp_{max} kPa	DN 100 Δp_s kPa	DN 100 Δp_{max} kPa	DN 125 Δp_s kPa	DN 125 Δp_{max} kPa	DN 150 Δp_s kPa	DN 150 Δp_{max} kPa
Standard actuators												
LV24A-TPC [2]												
LV230A-TPC [2]												
LV24A-SR-TPC [2]												
LV24A-MP-TPC [2]												
NV24A-TPC	130	130										
NV230A-TPC	130	130										
NV24A-SR-TPC	130	130										
NV24A-MP-TPC	130	130										
SV24A-TPC	250	250										
SV230A-TPC	250	250										
SV24A-SR-TPC	250	250										
SV24A-MP-TPC	250	250										
EV24A-TPC			550	550	350	350	200	200	110	110	70	70
EV230A-TPC			550	550	350	350	200	200	110	110	70	70
EV24A-SR-TPC			550	550	350	350	200	200	110	110	70	70
EV24A-MP-TPC			550	550	350	350	200	200	110	110	70	70
RV24A-SR			1100	1000	700	700	450	450	250	250	180	180
Fast running actuators												
LVC24A-SR-TPC [2]												
LVC24A-MP-TPC [2]												
NVC24A-SR-TPC	130	130										
NVC24A-MP-TPC	130	130										
SVC24A-SR-TPC	250	250										
SVC24A-MP-TPC	250	250										
EVC24A-SR			550	550	350	350	200	200	110	110	70	70
Fail-safe actuators NC/NO [3]												
NVK24A-3-TPC	130	130										
NVK230A-3	130	130										
NVK24A-SR-TPC	130	130										
NVK24A-MP-TPC	130	130										
NVKC24A-SR-TPC	130	130										
NVKC24A-MP-TPC	130	130										
AVK24A-3-TPC			400	400	250	250	150	150				
AVK230A-3			400	400	250	250	150	150				
AVK24A-SR-TPC			400	400	250	250	150	150				
AVK24A-MP-TPC			400	400	250	250	150	150				

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] For DN 15 only recommended with H610S and H611S.
[3] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.
[4] When used as a diverting valve, the maximum values are reduced to a quarter.

DN 40...150

Field of use	Closed water circuit and steam circuit in the subcritical range (pH >7)
Fluid temperature	5...150°C (120°C to p_s 1600 kPa, 150°C to p_s 1400 kPa)
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	Max. 0.05% of K_{VS} value
Flow characteristic	Equal percentage

Suitable actuators	Actuating force	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	PN 16 DN 40 2-way K_{VS} [m³/h] 25 Valve type H640SP Δp_s kPa	Δp_{max} kPa	DN 50 K_{VS} [m³/h] 40 Valve type H650SP Δp_s kPa	Δp_{max} kPa	DN 65 K_{VS} [m³/h] 58 Valve type H664SP Δp_s kPa	Δp_{max} kPa	PN 16 DN 80 K_{VS} [m³/h] 90 Valve type H679SP Δp_s kPa	Δp_{max} kPa	DN 100 K_{VS} [m³/h] 145 Valve type H6100SP Δp_s kPa	Δp_{max} kPa	DN 125 K_{VS} [m³/h] 220 Valve type H6125SP Δp_s kPa	Δp_{max} kPa	DN 150 K_{VS} [m³/h] 320 Valve type H6150SP Δp_s kPa	Δp_{max} kPa
Standard actuators																								
NV.. SV..	1000 N	150 s		■	■				24 V	NV24A-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
				■	■				230 V	NV230A-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■			24 V	NV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■	■		24 V	NV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
EV.. RV..	1500 N	150 s		■	■				24 V	SV24A-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
				■	■				230 V	SV230A-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■			24 V	SV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■	■		24 V	SV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
	2500 N	150 s		■	■				24 V	EV24A-TPC									600	600	600	600	600	600
				■	■				230 V	EV230A-TPC									600	600	600	600	600	600
						■			24 V	EV24A-SR-TPC									600	600	600	600	600	600
						■	■		24 V	EV24A-MP-TPC									600	600	600	600	600	600
NVC.. SVC..	4500 N	120 s				■			24 V	RV24A-SR									600	600	600	600	600	600
Fast running actuators																								
	1000 N	35 s				■			24 V	NVC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■	■		24 V	NVC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
	1500 N	35 s				■			24 V	SVC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■	■		24 V	SVC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
EVC..	2500 N	35 s				■			24 V	EVC24A-SR									600	600	600	600	600	600
Fail-safe actuators NC/NO [2]																								
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
					■			■	230 V	NVK230A-3	1600	1000	1600	1000	1600	1000	1600	1000						
						■		■	24 V	NVK24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■	■	■	24 V	NVK24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
						■	■	■	24 V	NVKC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
AVK..	2000 N	150 s	35 s		■			■	24 V	AVK24A-3-TPC									600	600				
					■			■	230 V	AVK230A-3									600	600				
						■		■	24 V	AVK24A-SR-TPC									600	600				
						■	■	■	24 V	AVK24A-MP-TPC									600	600				

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 200/250

Field of use	Closed water circuit (pH >7)
Fluid temperature	2-way: 5...120°C 3-way: −10...120°C
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	2-way: max. 0.05% of K_{VS} value 3-way: control path A – AB: max. 0.05% of K_{VS} value / bypass B – AB: max. 1% of K_{VS} value
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: linear / bypass B – AB: linear
Permissible operating pressure	p_S: 1600 kPa

	PN 16			
	DN 200		DN 250	
2-way	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	630	H6200W630-S7	1000	H6250W1000-S7
3-way	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type
	630	H7200W630-S7	1000	H7250W1000-S7

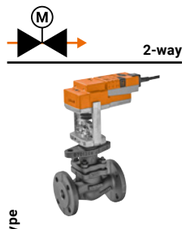
Suitable actuators	Actuating force	Actuating time per nominal stroke	3-point	Modulating (2...10 V)	Nominal voltage AC/DC 24 V AC 230 V	SPDT auxiliary switch	Actuator type	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators											
GV..	15000 N	82 s	■		230 V	2	GV12-230-3-T	420	250	270	250
				■	24 V		GV12-24-SR-T[1]	420	250	270	250

[1] Operating range can be switched 0.5...10 V / 2...10 V.

Subject to technical modifications

DN 15...50

Field of use	Closed water circuit and steam circuit in the subcritical range (pH >7)
Fluid temperature	5...150°C (120°C to p_s 2500 kPa, 150°C to p_s 2430 kPa)
Pipe connection	Flange PN 25 (ISO 7005-2)
Leakage rate	Max. 0.05% of K_{VS} value
Flow characteristic	Equal percentage

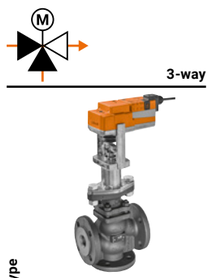


										PN 25								PN 25													
										DN 15				DN 20				DN 25		DN 32		DN 40		DN 50							
										K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type						
										0.4	H6015XP4-S2	1	H6015X1-S2	4	H6020X4-S2	6.3	H6020X6P3-S2	6.3	H6025X6P3-S2	10	H6032X10-S2	16	H6040X16-S2	25	H6050X25-S2						
										0.63	H6015XP63-S2	1.6	H6015X1P6-S2					10	H6025X10-S2	16	H6032X16-S2	25	H6040X25-S2	40	H6050X40-S2						
												2.5	H6015X2P5-S2																		
												4	H6015X4-S2																		
Suitable actuators	Actuating force	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																															
LV.. NV.. SV..	500 N	150 s		■	■				24 V	LV24A-TPC [2]	2500	1000	800	800	800	800	800	600	450	450	300	300	140	140	60	60					
				■	■				230 V	LV230A-TPC [2]	2500	1000	800	800	800	800	800	600	450	450	300	300	140	140	60	60					
						■			24 V	LV24A-SR-TPC [2]	2500	1000	800	800	800	800	800	600	450	450	300	300	140	140	60	60					
						■	■		24 V	LV24A-MP-TPC [2]	2500	1000	800	800	800	800	800	600	450	450	300	300	140	140	60	60					
	1000 N	150 s		■	■				24 V	NV24A-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
				■	■				230 V	NV230A-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
						■			24 V	NV24A-SR-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
						■	■		24 V	NV24A-MP-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
	1500 N	150 s		■	■				24 V	SV24A-TPC	2500	1000	2500	1000	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500					
				■	■				230 V	SV230A-TPC	2500	1000	2500	1000	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500					
						■			24 V	SV24A-SR-TPC	2500	1000	2500	1000	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500					
						■	■		24 V	SV24A-MP-TPC	2500	1000	2500	1000	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500					
Fast running actuators																															
LVC.. NVC.. SVC..	500 N	35 s				■			24 V	LVC24A-SR-TPC [2]	2500	1000	800	800	800	800	600	600	450	450	300	300	140	140	60	60					
						■	■		24 V	LVC24A-MP-TPC [2]	2500	1000	800	800	800	800	600	600	450	450	300	300	140	140	60	60					
	1000 N	35 s				■			24 V	NVC24A-SR-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
						■	■		24 V	NVC24A-MP-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
	1500 N	35 s				■			24 V	SVC24A-SR-TPC	2500	1000	2500	1000	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500					
						■	■		24 V	SVC24A-MP-TPC	2500	1000	2500	1000	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500					
Fail-safe actuators NC/NO [3]																															
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
					■			■	230 V	NVK230A-3	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
						■		■	24 V	NVK24A-SR-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
						■	■	■	24 V	NVK24A-MP-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					
						■	■	■	24 V	NVKC24A-MP-TPC	2500	1000	2200	1000	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300					

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] Actuators LV..A.. possible only on valves H6..
[3] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 15...100

Field of use	Closed water circuit (pH >7)
Fluid temperature	5...200°C (120°C to p_s 2500 kPa, 200°C to p_s 2300 kPa)
Pipe connection	Flange PN 25 (ISO 7005-2)
Leakage rate	Control path A – AB: max. 0.05% of K_{vs} value / bypass B – AB: max. 1% of K_{vs} value
Flow characteristic	Control path A – AB: linear / bypass B – AB: linear



	PN 25																					
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100	
3-way	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	4	H7015X4-S2	6.3	H7020X6P3-S2	10	H7025X10-S2	16	H7032X16-S2	25	H7040X25-S2	40	H7050X40-S2	63	H7020X6P3-S2	100	H7080X100-S4	160	H7100X160-S4

Suitable actuators	Actuating force	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																										
LV.. NV.. SV..	500 N	150 s		■	■				24 V	LV24A-TPC [2]	800	800	600	600	450	450	300	300	140	140	60	60						
				■	■				230 V	LV230A-TPC [2]	800	800	600	600	450	450	300	300	140	140	60	60						
						■			24 V	LV24A-SR-TPC [2]	800	800	600	600	450	450	300	300	140	140	60	60						
						■	■		24 V	LV24A-MP-TPC [2]	800	800	600	600	450	450	300	300	140	140	60	60						
	1000 N	150 s		■	■				24 V	NV24A-TPC	2200	1000	1000	1000	1300	1000	900	900	500	500	300	300						
				■	■				230 V	NV230A-TPC	2200	1000	1000	1000	1300	1000	900	900	500	500	300	300						
						■			24 V	NV24A-SR-TPC	2200	1000	1000	1000	1300	1000	900	900	500	500	300	300						
						■	■		24 V	NV24A-MP-TPC	2200	1000	1000	1000	1300	1000	900	900	500	500	300	300						
EV.. RV..	1500 N	150 s		■	■				24 V	SV24A-TPC	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500						
				■	■				230 V	SV230A-TPC	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500						
						■			24 V	SV24A-SR-TPC	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500						
						■	■		24 V	SV24A-MP-TPC	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500						
	2500 N	150 s		■	■				24 V	EV24A-TPC													550	550	350	350	200	200
				■	■				230 V	EV230A-TPC													550	550	350	350	200	200
						■			24 V	EV24A-SR-TPC													550	550	350	350	200	200
						■	■		24 V	EV24A-MP-TPC													550	550	350	350	200	200
LVC.. NVC.. SVC..	4500 N	120 s				■			24 V	RV24A-SR													1100	1000	700	700	450	450
Fast running actuators																										
	500 N	35 s				■			24 V	LVC24A-SR-TPC [2]	800	800	600	600	450	450	300	300	140	140	60	60						
						■	■		24 V	LVC24A-MP-TPC [2]	800	800	600	600	450	450	300	300	140	140	60	60						
EVC..	1000 N	35 s				■			24 V	NVC24A-SR-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
						■	■		24 V	NVC24A-MP-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
	1500 N	35 s				■			24 V	SVC24A-SR-TPC	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500						
						■	■		24 V	SVC24A-MP-TPC	2500	1000	2500	1000	2100	1000	1500	1000	850	850	500	500						
	2500 N	35 s				■			24 V	EVC24A-SR													550	550	350	350	200	200
Fail-safe actuators NC/NO [3]																										
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
					■			■	230 V	NVK230A-3	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
						■		■	24 V	NVK24A-SR-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
						■	■	■	24 V	NVK24A-MP-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
						■	■	■	24 V	NVKC24A-MP-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300						
AVK..	2000 N	150 s	35 s		■			■	24 V	AVK24A-3-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300	400	400	250	250	150	150
					■			■	230 V	AVK230A-3	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300	400	400	250	250	150	150
						■		■	24 V	AVK24A-SR-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300	400	400	250	250	150	150
						■	■	■	24 V	AVK24A-MP-TPC	2200	1000	1500	1000	1300	1000	900	900	500	500	300	300	400	400	250	250	150	150

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] For DN 15 only recommended with H610S and H611S.
[3] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 65...100

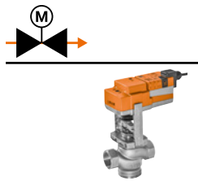
Field of use	Closed water circuit and steam circuit in the subcritical range (pH > 7) Flange PN 65 (ISO 7005-2)
Fluid temperature	5...150°C (120°C to p_S 2500 kPa, 150°C to p_S 2430 kPa)
Pipe connection	Flange PN 25 (ISO 7005-2)
Leakage rate	Max. 0.05% of K_{VS} value
Flow characteristic	Equal percentage

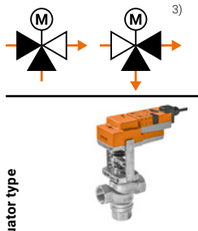
Suitable actuators	Actuating force	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	2-way K_{VS} [m³/h]	DN 65 PN 25 Valve type	Δp_s kPa	Δp_{max} kPa	DN 80 PN 25 K_{VS} [m³/h]	DN 80 PN 25 Valve type	Δp_s kPa	Δp_{max} kPa	DN 100 PN 25 K_{VS} [m³/h]	DN 100 PN 25 Valve type	Δp_s kPa	Δp_{max} kPa
											58	H6065X58-SP2			90	H6080X90-SP2			125	H6100X125-SP2		
Standard actuators																						
NV.. SV..	1000 N	150 s		■	■				24 V	NV24A-TPC	2100	1000	1600	1000	1000	1000						
				■	■				230 V	NV230A-TPC	2100	1000	1600	1000	1000	1000						
						■			24 V	NV24A-SR-TPC	2100	1000	1600	1000	1000	1000						
						■	■		24 V	NV24A-MP-TPC	2100	1000	1600	1000	1000	1000						
	1500 N	150 s		■	■				24 V	SV24A-TPC	2500	1000	2400	1000	1700	1000						
				■	■				230 V	SV230A-TPC	2500	1000	2400	1000	1700	1000						
						■			24 V	SV24A-SR-TPC	2500	1000	2400	1000	1700	1000						
						■	■		24 V	SV24A-MP-TPC	2500	1000	2400	1000	1700	1000						
Fast running actuators																						
NVC.. SVC..	1000 N	35 s				■			24 V	NVC24A-SR-TPC	2100	1000	1600	1000	1000	1000						
						■	■		24 V	NVC24A-MP-TPC	2100	1000	1600	1000	1000	1000						
	1500 N	35 s				■			24 V	SVC24A-SR-TPC	2500	1000	2400	1000	1700	1000						
						■	■		24 V	SVC24A-MP-TPC	2500	1000	2400	1000	1700	1000						
Fail-safe actuators NC/NO [2]																						
NVK.. NVKC..	1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	2100	1000	1600	1000	1000	1000						
					■			■	230 V	NVK230A-3	2100	1000	1600	1000	1000	1000						
						■		■	24 V	NVK24A-SR-TPC	2100	1000	1600	1000	1000	1000						
						■	■	■	24 V	NVK24A-MP-TPC	2100	1000	1600	1000	1000	1000						
		35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	2100	1000	1600	1000	1000	1000						
						■	■	■	24 V	NVKC24A-MP-TPC	2100	1000	1600	1000	1000	1000						

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	0...130°C
Pipe connection	Internal thread (ISO 7-1)
Leakage rate	2-way: max. 0.01% of K_{VS} value 3-way: control path A – AB: max. 0.02% of Kvs value / bypass B – AB: max. 0.02% of K_{VS} value
Flow characteristic	2-way: equal percentage 3-way: control path A – AB: equal percentage / bypass B – AB: linear
Permissible operating pressure	p_S: 2500 kPa





	PN 25												PN 25			
	DN 15				DN 20		DN 25		DN 32		DN 40		DN 50			
	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type	K_{VS} [m³/h]	Valve type		
2-way	1.6	H215S-G	4	H215S-J	6.3	H220S-K	10	H225S-L	16	H232S-M	25	H240S-N	40	H250S-P		
3-way	1.6	H315S-G	4	H315S-J	6.3	H320S-K	10	H325S-L	16	H332S-M	25	H340S-N	40	H350S-P		

Suitable actuators

Actuating force	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																						
500 N	150 s	■	■				24 V	LV24A-TPC	650	650	650	650	650	650								
		■	■				230 V	LV230A-TPC	650	650	650	650	650	650								
				■			24 V	LV24A-SR-TPC	650	650	650	650	650	650								
							24 V	LV24A-MP-TPC	650	650	650	650	650	650								
1000 N	150 s	■	■				24 V	NV24A-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
		■	■				230 V	NV230A-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
				■			24 V	NV24A-SR-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
							24 V	NV24A-MP-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
1500 N	150 s	■	■				24 V	SV24A-TPC											700	700	500	500
		■	■		■		230 V	SV230A-TPC											700	700	500	500
							24 V	SV24A-SR-TPC											700	700	500	500
				■			24 V	SV24A-MP-TPC											700	700	500	500
Fast running actuators																						
500 N	35 s			■			24 V	LVC24A-SR-TPC	650	650	650	650	650	650								
				■	■		24 V	LVC24A-MP-TPC	650	650	650	650	650	650								
1000 N	35 s			■			24 V	NVC24A-SR-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
				■	■		24 V	NVC24A-MP-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
1500 N	35 s			■			24 V	SVC24A-SR-TPC											700	700	500	500
				■	■		24 V	SVC24A-MP-TPC											700	700	500	500
Fail-safe actuators NC/NO [2]																						
1000 N	150 s		■			■	24 V	NVK24A-3-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
			■			■	230 V	NVK230A-3	800	800	800	800	800	800	600	600	550	550	450	450	300	300
				■		■	24 V	NVK24A-SR-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
				■	■	■	24 V	NVK24A-MP-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
	35 s			■		■	24 V	NVKC24A-SR-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300
				■	■	■	24 V	NVKC24A-MP-TPC	800	800	800	800	800	800	600	600	550	550	450	450	300	300

LV..
NV..
SV..

LVC..
NVC..
SVC..

NVK..
NVKC..

[1] Running times, control signal, stroke limitation, and other functions for MP types configurable with Belimo Assistant 2 or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted.
[3] When used as a diverting valve, the maximum values are reduced to a quarter.

8

Control butterfly valves

Fit for reliable control applications

Wafer types		PN 6, 10, 16	**DN 25...300**	72
	2-way	PN 10, 16	**DN 350**	74
		PN 16	**DN 400...700**	74
Lug types		PN 10, 16	**DN 25...150**	72
	2-way	PN 16	**DN 200...300**	72
		PN 16	**DN 350...700**	74
	3-way	PN 16	**DN 100...300**	76

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 25...300

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	DN 25...80: −10...120°C DN 100...150: −20...120°C DN 200...300: −10...120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) D6..W additionally: ISO 7005-1 and EN 1092-1
Leakage rate	Tight, leakage rate A (EN 12266-1)
Flow characteristic	DN 25...125: 0…60% opening angle: equal percentage DN 150...300: characteristic curve configurable with Belimo Assistant 2: equal percentage or linear
Permissible operating pressure	p_S: 1600 kPa

	PN 6, 10, 16																							
	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
Wafer types	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve
	24	D625N	25	D632N	27	D640N	30	D650N	50	D665N	75	D680N	220	D6100W	310	D6125W	550	D6150W	820	D6200W	1300	D6250W	1740	D6300W

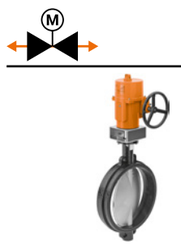
	PN 10, 16																							
	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
Lug types	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve	K_{vs} [m³/h] 1)	Valve
	24	D625NL	25	D632NL	27	D640NL	30	D650NL	50	D665NL	75	D680NL	220	D6100WL	310	D6125WL	550	D6150WL	820	D6200WL	1300	D6250WL	1740	D6300WL

Suitable actuators	Nominal torque	Open/close	3-point	Modulating	Terminal connection	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	SPDT auxiliary switch	Degree of protection	Actuator type	Linkage type																								
																		ZJR03 5)		ZJR03 5)		ZJR03 / ZPR03 5)		ZJR01 / ZPR03		ZJR01 / ZPR01		ZJR01 / ZPR01		ZPR01		ZPR01		ZPR01	
												Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa	Δps kPa	Δpmax kPa
Modulating actuators																																				
SR..	20 Nm			■			24 V	90 s		IP54	SR24A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300														
				■			230 V				SR230A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300														
GR..	40 Nm			■			24 V	150 s		IP54	GR24A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300	1200	300												
Communicative actuators																																				
JR..	90 Nm	■ 2)	■ 2)	■ 2)	■ 2)		AC 24...240 V DC 24...125 V	35 s 3)	2	IP66/ IP67	JRCA-BAC-S2-T							1200	300	1200	300	1200	300	1400	300	1400	300	1400	300						
PR..	160 Nm	■ 2)	■ 2)	■ 2)	■ 2)		AC 24...240 V DC 24...125 V	35 s 4)	2		PRCA-BAC-S2-T																							1400	300
		■ 2)	■ 2)	■ 2)	■ 2)						PRCA-BAC-S2-T-200																			1400	300				
		■ 2)	■ 2)	■ 2)	■ 2)						PRCA-BAC-S2-T-250																					1400	300		
Communicative fail-safe actuators NC/NO																																				
PRK..	160 Nm	■ 2)	■ 2)	■ 2)	■ 2)	■ 2)	AC 24...240 V DC 24...125 V	35 s 4)	2	IP66/ IP67	PRKCA-BAC-S2-T											1200	300	1200	300	1200	300	1200	300					1400	300
		■ 2)	■ 2)	■ 2)	■ 2)	■ 2)					PRKCA-BAC-S2-T-200																			1400	300				
		■ 2)	■ 2)	■ 2)	■ 2)	■ 2)					PRKCA-BAC-S2-T-250																					1400	300		

1) For control applications with an opening angle of 60%. The maximum flow speed of 4 m/s may not be exceeded in the control butterfly valve.
2) Configurable with Belimo Assistant 2.
3) 20...120 s configurable with Belimo Assistant 2.
4) 30...120 s configurable with Belimo Assistant 2.
5) Linkage is required only in combination with a JR or PR actuator.

DN 350...700

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2)
Leakage rate	Tight, leakage rate A (EN 12266-1)
Flow characteristic	0...60% opening angle: equal percentage
Permissible operating pressure	p_S: 1600 kPa



	PN 10, 16	PN 16				
	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700
Wafer types	K_{vs} [1) m^3/h] / Valve	K_{vs} [1) m^3/h] / Valve	K_{vs} [1) m^3/h] / Valve	K_{vs} [1) m^3/h] / Valve	K_{vs} [1) m^3/h] / Valve	K_{vs} [1) m^3/h] / Valve
	3010 / D6350N	4140 / D6400N	5490 / D6450N	7060 / D6500N	10900 / D6600N	11760 / D6700N

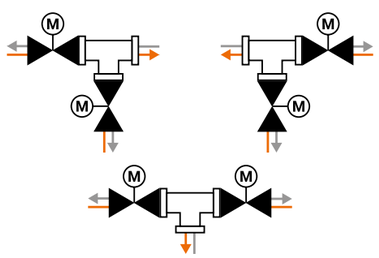
	PN 16	PN 16				
	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700
Lug types	K_{vs} [m^3/h] / Valve	K_{vs} [m^3/h] / Valve	K_{vs} [m^3/h] / Valve	K_{vs} [m^3/h] / Valve	K_{vs} [m^3/h] / Valve	K_{vs} [m^3/h] / Valve
	3010 / D6350NL [2)]	4140 / D6400NL [2)]	5490 / D6450NL [2)]	7060 / D6500NL	10900 / D6600NL	11760 / D6700NL

Suitable actuators	Nominal torque	Modulating (2...10 V / 0.5...10 V)	Terminal connection	Nominal voltage AC 230 V	Running time motor 90°	SPDT auxiliary switch	Degree of protection	Actuator type	Linkage type		ZSY-703		ZSY-401		ZSY-701		ZSY-702		ZSY-702		ZSY-901		ZSY-902		ZSY-903	
									Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Modulating actuators																												
SY..	650 Nm	■	■	230 V	31 s	2	IP67	SY6-230-MF-T [3)]	600	300			600	300														
	1000 Nm	■	■		55 s	2	IP67	SY7-230A-MF-T [3)]			1200	300			1200	300	600	300										
	1500 Nm	■	■		55 s	2	IP67	SY8-230A-MF-T									1200	300	600	300								
	2000 Nm	■	■		70 s	2	IP67	SY9-230A-MF-T													1200	300						
	2500 Nm	■	■		70 s	2	IP67	SY10-230A-MF-T															600	300				
	3500 Nm	■	■		70 s	2	IP67	SY12-230A-MF-T															1000	300	200	200		

[1)] For control applications with an opening angle of 60%. The maximum flow speed of 4 m/s may not be exceeded in the control butterfly valve.
[2)] The control butterfly valve types D6350...450NL will be replaced by the new types D6350...450WL over the course of the year.
[3)] The actuator types SY6.. and SY7.. will be replaced by the new types QR.. and YR.. over the course of the year.

DN 100...300

Field of use	Closed and open water circuit (pH >7) for mixing and distribution applications
Fluid temperature	−10...120°C D7..WL/BAC DN 100...150: −20...120°C
Pipe connection	Flange (ISO 7005-1/2, EN 1092-1/2)
Leakage rate	Tight, leakage rate A (EN 12266-1)
Flow characteristic	Characteristic curve configurable with the Belimo Assistant 2: control path A – AB: Equal percentage and bypass B – AB: equal percentage inverted or control path A – AB: linear and bypass B – AB: linear inverted
Permissible operating pressure	p_s: 1600 kPa



	PN	DN	K_{vs} [m³/h] [1]	Open/close [2]	Modulating (2...10 V / 0.5...10 V) [2]	Communication BACnet MS/TP [2]	Communication Modbus RTU [2]	Communication MP-Bus [2]	Nominal voltage	Running time motor 90°	SPDT auxiliary switch	Degree of protection	Control butterfly valve type with actuator	Δp_s kPa	Δp_{max} kPa	Suitable T-pieces Spheroidal graphite cast iron with fastening screws T-piece type
	With communicative actuator															
D7..L/BAC	16	**100**	160	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s [3]	2	IP66/IP67	**D7100WL/BAC** [5]	1400	300	**ZD7100** [6]
		125	280	■	■	■	■	■		35 s [3]	2	IP66/IP67	**D7125WL/BAC** [5]	1400	300	**ZD7125** [6]
		150	380	■	■	■	■	■		35 s [3]	2	IP66/IP67	**D7150WL/BAC** [5]	1400	300	**ZD7150** [6]
		200	800	■	■	■	■	■		35 s [4]	4	IP66/IP67	**D7200WL/BAC** [5]	1400	300	**ZD7200** [6]
		250	1200	■	■	■	■	■		35 s [4]	4	IP66/IP67	**D7250WL/BAC** [5]	1400	300	**ZD7250** [6]
		300	1700	■	■	■	■	■		35 s [4]	4	IP66/IP67	**D7300WL/BAC** [5]	1400	300	**ZD7300** [6]

[1] For control applications with opening angle 60% (configurable with Belimo Assistant 2).
The maximum flow speed of 4 m/s may not be exceeded in the control butterfly valve.
[2] Configurable with Belimo Assistant 2.
[3] 20...120 s configurable with Belimo Assistant 2.
[4] 30...120 s configurable with Belimo Assistant 2.
[5] T-piece is not included in scope of delivery.
[6] The necessary fastening screws and nuts are included in the scope of delivery.

9

Ball valves

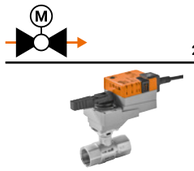
Open/close and changeover applications

Internal thread	Open/close ball valves	2-way		PN 25, 40	**DN 15...50**	80
	Changeover ball valves	3-way	T-bore	PN 25, 40	**DN 15...50**	80
			L-bore	PN 25, 40	**DN 15...50**	82
External thread	Open/close ball valves	2-way		PN 25, 40	**DN 15...50**	84
	Changeover ball valves	3-way	T-bore			
Flange	Open/close ball valves	2-way		PN 6	**DN 15...50**	86
	Changeover ball valves	3-way	T-bore			

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 15...50

Field of use	2-way: closed and open water circuit (pH >7) 3-way: closed water circuit (pH >7)
Fluid temperature	–10...120°C [1]
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	2-way: air-bubble tight, leakage rate A (EN 12266-1) 3-way: path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Flow	3-way: bypass B – AB: approx. 50% of the K_{vs} value
Permissible operating pressure	p_s: 1600 kPa



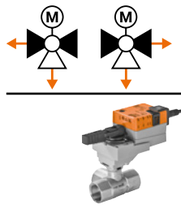
	PN 40						PN 25					
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
2-way	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	15	R2015-S1	32	R2020-S2	26	R2025-S2	32	R2032-S3	31	R2040-S3	49	R2050-S4
3-way T-bore	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	15	R3015-S1	32	R3020-S2	26	R3025-S2	32	R3032-S3	31	R3040-S3	49	R3050-S4

Suitable actuators	Nominal torque	Open/close	3-point	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type		Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa	Δp_s kPa	Δp_{max} [2] kPa
Compact actuators																					
TR.. TRY..	2 Nm	■	■		24 V	100 s		TR24 [3]		1400	1000										
		■	■			35 s		TRY24 [3]		1400	1000										
		■	■		230 V	35 s		TRY230 [3]		1400	1000										
								Without auxiliary switch	With auxiliary switch												
Standard actuators																					
LR.. NR.. SR..	5 Nm	■	■		24 V	90 s		LR24A	..-S	1400	1000	1400	1000	1400	1000						
		■	■		230 V			LR230A	..-S	1400	1000	1400	1000	1400	1000						
	10 Nm	■	■		24 V	90 s		NR24A	..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
		■	■		230 V			NR230A	..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
	20 Nm	■	■		24 V	90 s		SR24A	..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
		■	■		230 V			SR230A	..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
Very fast running actuators																					
LRQ.. NRQ.. SRQ..	4 Nm	■			24 V	9 s		LRQ24A		1400	1000	1400	1000	1400	1000						
	8 Nm	■			24 V	9 s		NRQ24A		1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
	16 Nm	■			24 V	9 s		SRQ24A		1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
								Actuator type NC	Actuator type NO												
								Without auxiliary switch / With 1 auxiliary switch	Without auxiliary switch / With 1 auxiliary switch												
Fail-safe actuators NC/NO																					
TRF..	2.5 Nm	■		■	24 V	75 s	<75 s	TRF24 [3]	..-S / ..-O / ..-S-O	1400	1000										
		■		■	230 V			TRF230 [3]	..-S / ..-O / ..-S-O	1400	1000										
LRF..	4 Nm	■		■	24 V	75 s	<20 s	LRF24 [3]	..-S / ..-O / ..-S-O	1400	1000	1400	1000	1400	1000						
		■		■	230 V			LRF230 [3]	..-S / ..-O / ..-S-O	1400	1000	1400	1000	1400	1000						
								Without auxiliary switch / With 2 auxiliary switches / Without auxiliary switch / With 2 auxiliary switches													
NRF.. SRF..	10 Nm	■		■	24 V	75 s	<20 s	NRF24A	..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
		■		■	AC 24...240 V DC 24...125 V			NRFA	..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
	20 Nm	■		■	24 V	75 s	<20 s	SRF24A	..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
		■		■	AC 24...240 V DC 24...125 V			SRFA	..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000

[1] Compact actuators TR../TRY.. only up to 100°C.
[2] Low-noise operation Δp_{max} = 200 kPa.
[3] If fluid temperature ≥100°C, then pipeline and valve must be insulated.

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	−10...100°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa

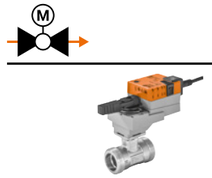


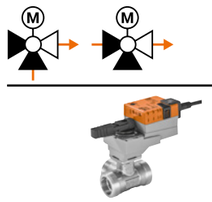
Suitable actuators	Nominal torque	Open/close	3-point	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type		3-way L-bore	PN 40 DN 15 K_{vs} [m³/h]	Valve type	DN 20 K_{vs} [m³/h]	Valve type	DN 25 K_{vs} [m³/h]	Valve type	PN 25 DN 32 K_{vs} [m³/h]	Valve type	DN 32 K_{vs} [m³/h]	Valve type	DN 40 K_{vs} [m³/h]	Valve type	DN 40 K_{vs} [m³/h]	Valve type	DN 50 K_{vs} [m³/h]	Valve type	DN 50 K_{vs} [m³/h]	Valve type
											5.5	R3015-BL1	11	R3020-BL2	10	R3025-BL2	9	R3032-BL2	15	R3032-BL3	14	R3040-BL3	47	R3040-BL4	24	R3050-BL3	75	R3050-BL4
											Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{ma} [1] x kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa
Compact actuators																												
TR.. TRY..	2 Nm	■	■		24 V	100 s		TR24			500	350																
		■	■			35 s		TRY24			500	350																
		■	■		230 V	35 s		TRY230			500	350																
								Without auxiliary switch	With auxiliary switch																			
Standard actuators																												
LR.. NR.. SR..	5 Nm	■	■		24 V	90 s		LR24A	..-S		500	350	500	350	500	350												
		■	■		230 V			LR230A	..-S		500	350	500	350	500	350												
	10 Nm	■	■		24 V	90 s		NR24A	..-S		500	350	500	350	500	350	500	350	500	350	500	350			500	350		
		■	■		230 V			NR230A	..-S		500	350	500	350	500	350	500	350	500	350	500	350			500	350		
	20 Nm	■	■		24 V	90 s		SR24A	..-S		500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350
		■	■		230 V			SR230A	..-S		500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350
Very fast running actuators																												
LRQ.. NRQ.. SRQ..	4 Nm	■			24 V	9 s		LRQ24A			500	350	500	350	500	350	500	350										
	8 Nm	■			24 V	9 s		NRQ24A			500	350	500	350	500	350	500	350	500	350	500	350						
	16 Nm	■			24 V	9 s		SRQ24A			500	350	500	350	500	350	500	350	500	350	500	350			500	350		
								Actuator type NC		Actuator type NO																		
								Without auxiliary switch	With 1 auxiliary switch	Without auxiliary switch / With 1 auxiliary switch																		
Fail-safe actuators NC/NO																												
TRF..	2.5 Nm	■		■	24 V	75 s	<75 s	TRF24	..-S	..-O / ..-S-O	500	350																
		■		■	230 V			TRF230	..-S	..-O / ..-S-O	500	350																
	4 Nm	■		■	24 V	75 s	<20 s	LRF24	..-S	..-O / ..-S-O	500	350	500	350	500	350	500	350										
		■		■	230 V			LRF230	..-S	..-O / ..-S-O	500	350	500	350	500	350	500	350										
								Without auxiliary switch	With 2 auxiliary switches	Without auxiliary switch / With 2 auxiliary switches																		
LRF..	10 Nm	■		■	24 V	75 s	<20 s	NRF24A	..-S2	..-O / ..-S2-O	500	350	500	350	500	350	500	350	500	350	500	350			500	350		
		■		■	AC 24...240 V DC 24...125 V			NRFA	..-S2	..-O / ..-S2-O	500	350	500	350	500	350	500	350	500	350	500	350			500	350		
NRF.. SRF..	20 Nm	■		■	24 V	75 s	<20 s	SRF24A	..-S2	..-O / ..-S2-O	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350
		■		■	AC 24...240 V DC 24...125 V			SRFA	..-S2	..-O / ..-S2-O	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350

[1] Low-noise operation Δp_{max} = 200 kPa.

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	−10...100°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	2-way: air-bubble tight, leakage rate A (EN 12266-1) 3-way: path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Flow	3-way: bypass B – AB: approx. 50% of the K_{vs} value
Permissible operating pressure	p_S: 1600 kPa



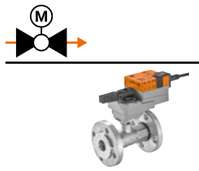


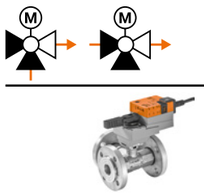
								PN 40						PN 25					
								DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
							2-way	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
								8.6	R415	21	R420	26	R425	32	R432	32	R440	49	R450
							3-way T-bore	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
								8.6	R515	21	R520	26	R525	32	R532	32	R540	49	R550
Suitable actuators	**Nominal torque**	**Open/close**	**3-point**	**Fail-safe**	**Nominal voltage AC/DC 24 V AC 230 V**	**Running time motor 90°**	**Running time fail-safe**	**Actuator type**											
										Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa
Compact actuators																			
TR.. TRY..	2 Nm	■	■		24 V	100 s		TR24		1400	400	1400	400						
		■	■			35 s		TRY24		1400	400	1400	400						
		■	■		230 V	35 s		TRY230		1400	400	1400	400						
								Without auxiliary switch	**With auxiliary switch**										
Standard actuators																			
LR.. NR.. SR..	5 Nm	■	■		24 V	90 s		LR24A	..-S	1400	400	1400	400	1400	400				
		■	■		230 V			LR230A	..-S	1400	400	1400	400	1400	400				
	10 Nm	■	■		24 V	90 s		NR24A	..-S	1400	400	1400	400	1400	400	1400	400	1400	400
		■	■		230 V			NR230A	..-S	1400	400	1400	400	1400	400	1400	400	1400	400
	20 Nm	■	■		24 V	90 s		SR24A	..-S	1400	400	1400	400	1400	400	1400	400	1400	400
		■	■		230 V			SR230A	..-S	1400	400	1400	400	1400	400	1400	400	1400	400
Very fast running actuators																			
LRQ.. NRQ.. SRQ..	4 Nm	■			24 V	9 s		LRQ24A		1400	400	1400	400	1400	400				
	8 Nm	■			24 V	9 s		NRQ24A		1400	400	1400	400	1400	400	1400	400		
	16 Nm	■			24 V	9 s		SRQ24A		1400	400	1400	400	1400	400	1400	400	1400	400
								Actuator type NC		**Actuator type NO**									
								Without auxiliary switch	**With 1 auxiliary switch**	**Without auxiliary switch**	**With 1 auxiliary switch**								
Fail-safe actuators NC/NO																			
TRF..	2.5 Nm	■		■	24 V	75 s	<75 s	TRF24	..-S	..-O	..-S-O	1400	400	1400	400				
		■		■	230 V			TRF230	..-S	..-O	..-S-O	1400	400	1400	400				
	4 Nm	■		■	24 V	75 s	<20 s	LRF24	..-S	..-O	..-S-O	1400	400	1400	400	1400	400		
		■		■	230 V			LRF230	..-S	..-O	..-S-O	1400	400	1400	400	1400	400		
								Without auxiliary switch	**With 1 auxiliary switch**	**Without auxiliary switch**	**With 1 auxiliary switch**								
LRF..	10 Nm	■		■	24 V	75 s	<20 s	NRF24A	..-S2	..-O	..-S2-O	1400	400	1400	400	1400	400	1400	400
		■		■	AC 24...240 V DC 24...125 V			NRFA	..-S2	..-O	..-S2-O	1400	400	1400	400	1400	400	1400	400
NRF.. SRF..	20 Nm	■		■	24 V	75 s	<20 s	SRF24A	..-S2	..-O	..-S2-O	1400	400	1400	400	1400	400	1400	400
		■		■	AC 24...240 V DC 24...125 V			SRFA	..-S2	..-O	..-S2-O	1400	400	1400	400	1400	400	1400	400

[1] Low-noise operation Δp_{max} = 200 kPa.

DN 15...50

Field of use	2-way: closed and open water circuit (pH >7) 3-way: closed water circuit (pH >7)
Fluid temperature	−10...100°C
Pipe connection	Flange PN 6 (EN 1092-1/4)
Leakage rate	2-way: air-bubble tight, leakage rate A (EN 12266-1) 3-way: path A – AB: air-bubble tight, leakage rate A (EN 12266-1) / bypass B – AB: leakage class I
Flow	3-way: bypass B – AB: approx. 50% of the K_{vs} value
Permissible operating pressure	p_S: 600 kPa





	PN 6											
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
2-way	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	15	R6015R-B1	32	R6020R-B1	26	R6025R-B2	32	R6032R-B3	31	R6040R-B3	49	R6050R-B3
3-way T-bore	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type	K_{vs} [m³/h]	Valve type
	15	R7015R-B1	32	R7020R-B1	26	R7025R-B2	32	R7032R-B3	31	R7040R-B3	49	R7050R-B3

Suitable actuators

	Nominal torque	Open/close	3-point	Fail-safe	Nominal voltage AC/DC 24 V	AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type			Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Compact actuators																							
TR.. TRY..	2 Nm	■	■		24 V		35 s		TR24			600	100	600	100								
		■	■				100 s		TRY24			600	100	600	100								
		■	■		230 V		35 s		TRY230			600	100	600	100								
									Without auxiliary switch		With auxiliary switch												
Standard actuators																							
LR.. NR.. SR..	5 Nm	■	■		24 V		90 s		LR24A		..-S	600	100	600	100	600	100						
		■	■		230 V				LR230A		..-S	600	100	600	100	600	100						
	10 Nm	■	■		24 V		90 s		NR24A		..-S	600	100	600	100	600	100	600	100	600	100	600	100
		■	■		230 V				NR230A		..-S	600	100	600	100	600	100	600	100	600	100	600	100
	20 Nm	■	■		24 V		90 s		SR24A		..-S	600	100	600	100	600	100	600	100	600	100	600	100
		■	■		230 V				SR230A		..-S	600	100	600	100	600	100	600	100	600	100	600	100
Very fast running actuators																							
LRQ.. NRQ.. SRQ..	4 Nm	■			24 V		9 s		LRQ24A			600	100	600	100	600	100						
	8 Nm	■			24 V		9 s		NRQ24A			600	100	600	100	600	100	600	100	600	100		
	16 Nm	■			24 V		9 s		SRQ24A			600	100	600	100	600	100	600	100	600	100	600	100
									Actuator type NC		Actuator type NO												
									Without auxiliary switch	With 1 auxiliary switch	Without auxiliary switch / With 1 auxiliary switch												
Fail-safe actuators NC/NO																							
TRF..	2.5 Nm	■		■	24 V		75 s	<75 s	TRF24	..-S	..-O / ..-S-O	600	100	600	100								
		■		■	230 V				TRF230	..-S	..-O / ..-S-O	600	100	600	100								
	4 Nm	■		■	24 V		75 s	<20 s	LRF24	..-S	..-O / ..-S-O	600	100	600	100	600	100						
		■		■	230 V				LRF230	..-S	..-O / ..-S-O	600	100	600	100	600	100						
									Without auxiliary switch	With 2 auxiliary switches	Without auxiliary switch / With 2 auxiliary switches												
LRF..	10 Nm	■		■	24 V		75 s	<20 s	NRF24A	..-S2	..-O / ..-S2-O	600	100	600	100	600	100	600	100	600	100	600	100
		■		■	AC 24...240 V DC 24...125 V				NRFA	..-S2	..-O / ..-S2-O	600	100	600	100	600	100	600	100	600	100	600	100
NRF.. SRF..	20 Nm	■		■	24 V		75 s	<20 s	SRF24A	..-S2	..-O / ..-S2-O	600	100	600	100	600	100	600	100	600	100	600	100
		■		■	AC 24...240 V DC 24...125 V				SRFA	..-S2	..-O / ..-S2-O	600	100	600	100	600	100	600	100	600	100	600	100

10

Potable water valves

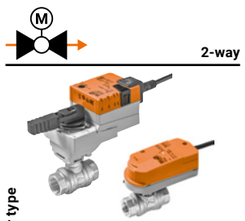
Certified in accordance with ACS, DVGW, WRAS, ÜA

Rotary valves	Internal thread	2-way	PN 25/40	**DN 15...50**	90

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 15...50

Field of use	Drinking water applications (open/close)
Fluid temperature	5...100°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Drinking water certificate	ACS, DVGW, WRAS, ÜA



Suitable actuators	Nominal torque	Open/close	3-point	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	SPDT auxiliary switch	Actuator type	PN 40 DN 15 2-way K_{vs} [m³/h] 16	PN 40 DN 15 Valve type	PN 40 DN 15 K_{vs} [m³/h] 16	PN 40 DN 15 Valve type	PN 40 DN 20 K_{vs} [m³/h] 32	PN 40 DN 20 Valve type	PN 40 DN 25 K_{vs} [m³/h] 40	PN 40 DN 25 Valve type	PN 40 DN 32 K_{vs} [m³/h] 63	PN 40 DN 32 Valve type	PN 25 DN 40 K_{vs} [m³/h] 100	PN 25 DN 40 Valve type	PN 25 DN 50 K_{vs} [m³/h] 150	PN 25 DN 50 Valve type
									Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																						
CQ..	10 Nm	■	■		24 V	75 s		CQ24A	1600	200												
		■	■		230 V		1	CQ230A	1600	200												
LR.. NR..	20 Nm	■	■		24 V	90 s		LR24A			1600	200	1600	200	1600	200						
		■	■				1	LR24A-S			1600	200	1600	200	1600	200						
		■	■		230 V			LR230A			1600	200	1600	200	1600	200						
		■	■				1	LR230A-S			1600	200	1600	200	1600	200						
	40 Nm	■	■		24 V	90 s		NR24A									1600	170				
		■	■				1	NR24A-S									1600	170				
		■	■		230 V			NR230A [1]									1600	170				
		■	■					NR230A-S									1600	170				
SR..	40 Nm	■	■		24 V	90 s		SR24A											1600	170	1600	130
		■	■					SR24A-S											1600	170	1600	130
		■	■		230 V			SR230A [1]											1600	170	1600	130
		■	■					SR230A-S											1600	170	1600	130
Fail-safe actuators NC/NO																						
CQK..	1 Nm	■		■	24 V	75 s		CQK24A	1600	200												
		■		■	230 V			CQK230A	1600	200												
LRF..	4 Nm	■		■	24 V	75 s		LRF24			1600	200	1600	200	1600	200						
		■		■			1	LRF24-S			1600	200	1600	200	1600	200						
		■		■	230 V			LRF230			1600	200	1600	200	1600	200						
		■		■			1	LRF230-S			1600	200	1600	200	1600	200						
	10 Nm	■		■	AC 24...240 V DC 24...125 V	75 s		NRFA									1600	170				
		■		■			2	NRFA-S2									1600	170				
NRF.. SRF..	20 Nm	■		■	24 V	75 s		SRF24A											1600	170	1600	130
		■		■			2	SRF24A-S2											1600	170	1600	130
		■		■	AC 24...240 V DC 24...125 V			SRFA											1600	170	1600	130
		■		■			2	SRFA-S2											1600	170	1600	130

[1] Actuators NR230A and SR230A are also available as fast running actuators on request.

11

Open/close and changeover butterfly valves

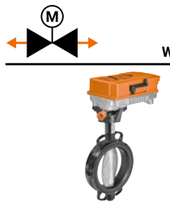
Open/close and changeover applications

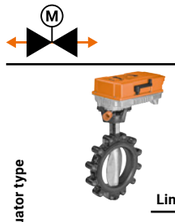
Wafer types		PN 6, 10, 16	**DN 25...300**	94
	2-way	PN 10, 16	**DN 350**	96
		PN 16	**DN 400...700**	96
Lug types		PN 10, 16	**DN 25...150**	94
	2-way	PN 16	**DN 200...300**	94
		PN 16	**DN 350...700**	96
	3-way	PN 16	**DN 100...300**	98
Definitions	Formula symbols			99

Please refer to the data sheets or notes for project planning for further technical data to be observed.

DN 25...300

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	DN 25...80: –10...120°C DN 100...150: –20...120°C DN 200...300: –10...120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) D6..W additionally: ISO 7005-1 and EN 1092-1
Leakage rate	Tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa





Wafer types	PN 6, 10, 16												PN 6, 10, 16											
	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type
	50	D625N	55	D632N	65	D640N	100	D650N	170	D665N	260	D680N	690	D6100W	990	D6125W	1780	D6150W	2200	D6200W	4200	D6250W	5700	D6300W

Lug types	PN 10, 16												PN 10, 16						PN 16					
	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type	K_{vmax} [m³/h]	Valve type
	50	D625NL	55	D632NL	65	D640NL	100	D650NL	170	D665NL	260	D680NL	690	D6100WL	990	D6125WL	1780	D6150WL	2200	D6200WL	4200	D6250WL	5700	D6300WL

Suitable actuators	Nominal torque	Open/close	3-point	Communicative	Terminal connection	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	SPDT auxiliary switch	Degree of protection	Actuator type	Linkage type	ZJR03 [4]		ZJR03 [4]		ZJR03 / ZPR03 [4]		ZJR03 / ZPR03		ZJR01 / ZPR01		ZJR01 / ZPR01		ZPR01		ZPR01		ZPR01	
													Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Standard actuators																														
SR..	20 Nm	■	■				24 V	90 s		IP54	SR24A-5		1200	300	1200	300	1200	300	1200	300	1200	300								
		■	■				230 V				SR230A-5		1200	300	1200	300	1200	300	1200	300	1200	300								
GR.. GRC..	40 Nm	■					24 V	150 s		IP54	GR24A-5		1200	300	1200	300	1200	300	1200	300	1200	300	1200	300						
		■					230 V				GR230A-5		1200	300	1200	300	1200	300	1200	300	1200	300	1200	300						
Fast running actuators																														
	40 Nm	■					24 V	35 s		IP54	GRC24A-5 [1]		1200	300	1200	300	1200	300	1200	300	1200	300	1200	300						
		■					230 V				GRC230A-5 [1]		1200	300	1200	300	1200	300	1200	300	1200	300	1200	300						
JR..	90 Nm	■	■		■		AC 24...240 V DC 24...125 V	35 s	2	IP66/ IP67	JRCA-S2-T				1200	300	1200	300	1200	300	1400	300	1400	300	1400	300						
SRF..	160 Nm	■	■		■		AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRCA-S2-T																				1400	300
		■	■		■						PRCA-S2-T-200																1400	300		
		■	■		■						PRCA-S2-T-250																		1400	300
Fail-safe actuators NC/NO																														
GRK..	20 Nm	■				■	24 V	75 s	2	IP54	SRF24A-5		1200	300	1200	300	1200	300	1200		1200									
		■				■					SRF24A-S2-5		1200	300	1200	300	1200	300	1200		1200									
		■				■	AC 24...240 V DC 24...125 V				SRFA-5		1200	300	1200	300	1200	300	1200		1200									
		■				■			2		SRFA-S2-5		1200	300	1200	300	1200	300	1200		1200									
	40 Nm	■				■	4 V	150 s		IP54	GRK24A-5		1200	300	1200	300	1200	300	1200		1200		1200	300						
PRK..	160 Nm	■ [3]	■ [3]	■	■	■	AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRKCA-BAC-S2-T												1200	300	1200	300	1200	300	1200	300	1400	300
		■ [3]	■ [3]	■	■	■					PRKCA-BAC-S2-T-200																1400	300		
		■ [3]	■ [3]	■	■	■					PRKCA-BAC-S2-T-250																		1400	300

[1] These products are also available as IP66 variant with protective housing.
[2] 30...120 s configurable with Belimo Assistant 2.
[3] Configurable with Belimo Assistant 2.
[4] Linkage is required only in combination with a JR or PR actuator

DN 350...700

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	–10...120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2)
Leakage rate	Tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa

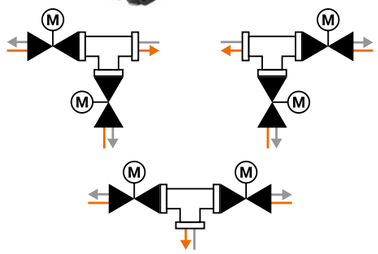
	PN 10, 16	PN 16					
	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700
Wafer types	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type
	10900 / D6350N	14200 / D6400N	18800 / D6450N	24100 / D6500N	37300 / D6600N	42800 / D6700N

	PN 16	PN 16					
	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700
Lug types	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type	K_{vmax} [m³/h] / Valve type
	10900 / D6350NL	14200 / D6400NL	18800 / D6450NL	24100 / D6500NL	37300 / D6600NL	42800 / D6700NL

Suitable actuators	Nominal torque	Open/close	3-point	Terminal connection	Nominal voltage AC 230 V	Running time motor 90°	SPDT auxiliary switch	Degree of protection	Actuator type	Linkage type		ZSY-703		ZSY-401		ZSY-701		ZSY-702		ZSY-702		ZSY-901		ZSY-902		ZSY-903	
											Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
Fast running actuators																													
SY..	650 Nm	■	■	■	230 V	31 s	2	IP67	SY6-230-3-T		600	300			600	300													
	1000 Nm	■	■	■		55 s	2	IP67	SY7-230A-3-T				1200	300			1200	300	600	300									
	1500 Nm	■	■	■		55 s	2	IP67	SY8-230A-3-T										1200	300	600	300							
	2000 Nm	■	■	■		70 s	2	IP67	SY9-230A-3-T														1200	300					
	2500 Nm	■	■	■		70 s	2	IP67	SY10-230A-3-T																600	300			
	3500 Nm	■	■	■		70 s	2	IP67	SY12-230A-3-T																1000	300	200	200

DN 100...300

Field of use	Closed and open water circuit (pH >7) for changeover applications
Fluid temperature	−10...120°C D7..WL/BAC DN 100...150: −20...120°C
Pipe connection	Flange (ISO 7005-1/2 and EN 1092-1/2) D7..WL/BAC additionally: ISO 7005-1 and EN 1092-1
Leakage rate	Tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa



Suitable T-pieces

Spheroidal graphite cast iron with fastening screws

PN	DN	K_{vmax} [m³/h] [1]	Open/close [2]	Modulating (2...10 V / 0.5...10 V) [2]	Communication BACnet MS/TP [2]	Communication Modbus RTU [2]	Communication MP-Bus [2]	Nominal voltage	Running time motor 90° [3]	SPDT auxiliary switch	Degree of protection	Changeover butterfly valve type with actuator	Δp_s kPa	Δp_{max} kPa	T-piece type
With communicative actuator															
D7..L/BAC															
16	**100**	530	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s	4	IP66/ IP67	D7100NL/BAC [4) 5)]	1400	300	ZD7100 [6)]
	125	950	■	■	■	■	■		35 s	4	IP66/ IP67	D7125WL/BAC [4)]	1400	300	ZD7125 [6)]
	150	1380	■	■	■	■	■		35 s	4	IP66/ IP67	D7150WL/BAC [4)]	1400	300	ZD7150 [6)]
	200	1800	■	■	■	■	■		35 s	4	IP66/ IP67	D7200WL/BAC [4)]	1400	300	ZD7200 [6)]
	250	3000	■	■	■	■	■		35 s	4	IP66/ IP67	D7250WL/BAC [4)]	1400	300	ZD7250 [6)]
	300	4700	■	■	■	■	■		35 s	4	IP66/ IP67	D7300WL/BAC [4)]	1400	300	ZD7300 [6)]

[1)] For changeover applications. The maximum flow speed of 4 m/s may not be exceeded in the changeover butterfly valve.
[2)] Configurable with Belimo Assistant 2.
[3)] 30...120 s configurable with Belimo Assistant 2.
[4)] The T-piece is not included in the scope of delivery.
[5)] The changeover butterfly valve type with actuator D7150NL/BAC will be replaced by the new type D7150WL/BAC over the course of the year.
[6)] The necessary fastening screws and nuts are included in the scope of delivery.

Definitions

Formula symbols

K_v The flow coefficient K_v [m³/h] is the specific flow of a valve at a defined angle with reference to 100 kPa (1 bar).
The k_v value changes, depending on the valve position.
The flow coefficient is determined for a water temperature of 5...40°C.

K_{vs} The Kv value in reference to the nominal angle is referred to as the K_{vs} value. The nominal angle defines the maximum valve opening and is specified by the manufacturer.
Characterised control valves (CCV):
Flow coefficient at 100% valve opening (90° angle of rotation)
Zone valves (QCV):
Flow coefficient with corresponding position of the end stop clip (variable)
Globe valves:
Flow coefficient at 100% valve opening
Butterfly valves:
Flow coefficient at 60% valve opening for control application

$$K_{VS} = \frac{V'_{100}}{\sqrt{\frac{\Delta p_{v100}}{100}}}$$

Δpv_{100} : [kPa]
V'_{100} : [m³/h]
K_{vs} : [m³/h]

K_{vmax} Flow coefficient for 100% opened butterfly valve for open/close and changeover application.

V'_{nom} Maximum possible flow rate of a pressure-independent valve, catalogue value, delivery condition.

V'_{max} Set maximum flow of a pressure-independent valve with the greatest control signal, e.g. 10 V.

Δp_{max} Maximum permissible differential pressure for long service life across control path A – AB, with reference to the whole opening range.

Δp_{v100} (R4..D(K)) Maximum permissible differential pressure for long service life with valve completely open.

Δp_{v0} (R4..D(K)) Maximum permissible differential pressure for long service life with closed valve.

Δp_s Maximum close-off pressure at which the valve can still seal tight, with reference to the particular leakage class.

p_s Permissible operating pressure

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

EN – 2025 – Subject to technical modifications

BELIMO Automation AG
Brunnenbachstrasse 1, 8340 Hinwil, Switzerland
+41 43 843 61 11, info@belimo.ch, www.belimo.com