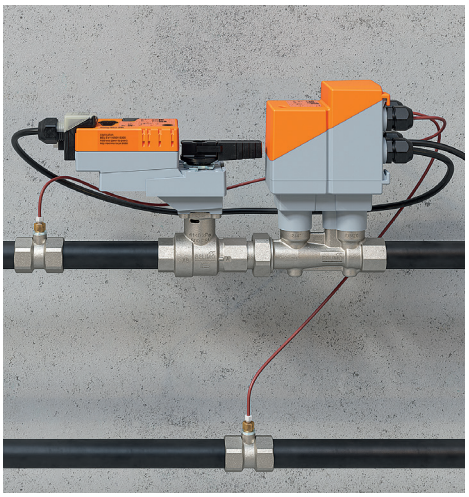


Efficiency and reliability in versatile applications.

The complete product range of water applications

Edition 2024

BELIMO

Table of contents

4

Zone valves

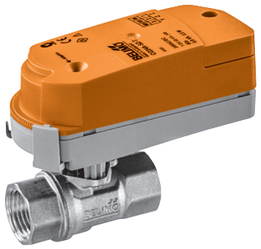
Maximum comfort, minimum consumption

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



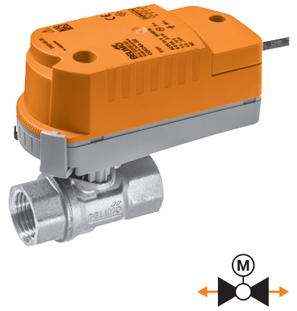
Field of use	Closed water circuit (pH >7)
Fluid temperature	2...90°C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating 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]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type	DN 25 k_{vs} [m³/h]	DN 25 Valve type
												0.09...1.2	C215Q-F	0.5...8	C220Q-K	0.5...7	C225Q-K
												0.4...4.8	C215Q-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]	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

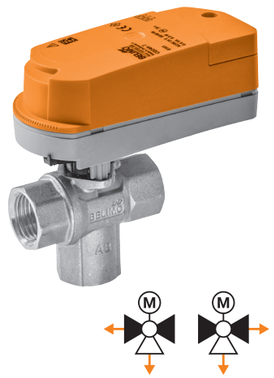
Suitable actuators	Nominal torque	Open/close	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 k_{vs} [m³/h]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type	DN 25 k_{vs} [m³/h]	DN 25 Valve type
									0.09...1.2	C215Q-F	0.5...8	C220Q-K	0.5...7	C225Q-K
									0.4...4.8	C215Q-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]	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]	520	280	520	280	520	280
				■			75 s	CQK24A-SZ.1	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.

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



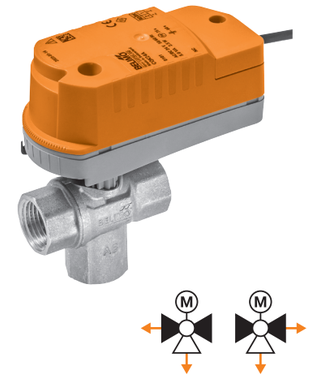
Suitable Actuators	Nominal torque	Open/close	3-point	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 k_{vs} [m³/h]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type	DN 25 k_{vs} [m³/h]	DN 25 Valve type
										2.5	C315Q-H	4	C320Q-J	4	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]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type	DN 25 k_{vs} [m³/h]	DN 25 Valve type
							2.5	C315Q-H	4	C320Q-J	4	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

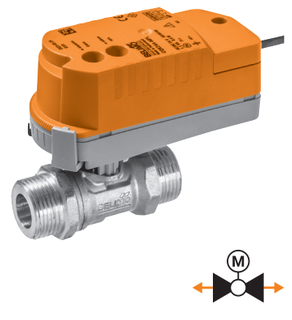
Field of use	Closed water circuit (pH >7)
Fluid temperature	2…90°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating 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]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
												0.4…4.5	C415Q-J	0.5…7.8	C420Q-K
												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-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



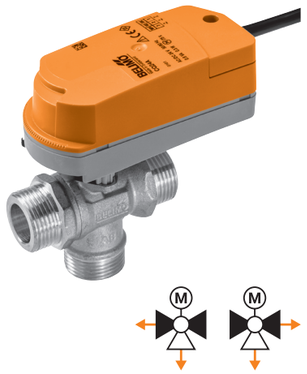
Field of use	Closed water circuit (pH >7)
Fluid temperature	2…90°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Flow characteristic	Equal percentage
Close-off pressure	Δp_s: 520 kPa
Max. differential pressure	Δp_{max}: 280 kPa
Permissible operating 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]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
									0.4…4.5	C415Q-J	0.5…7.8	C420Q-K
									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-SR [1]	520	280	520	280
			■				75 s	CQK24A-SR	520	280	520	280
				■			15 s	CQKD24A-SZ.1 [1]	520	280	520	280
				■			75 s	CQK24A-SZ.1	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.

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]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
										2.3	C515Q-H	3.6	C520Q-J
										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
		■	■					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

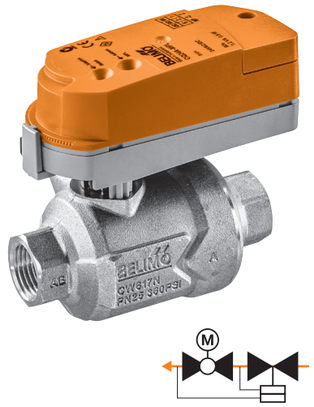
Suitable actuators	Nominal torque	Open/close	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 k_{vs} [m³/h]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
							2.3	C515Q-H	3.6	C520Q-J
							Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa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



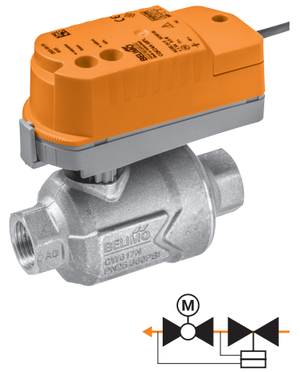
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'nom [l/h]	DN 15 Valve type	DN 20 V'nom [l/h]	DN 20 Valve type	DN 25 V'nom [l/h]	DN 25 Valve type
												210	C215QP-B	980	C220QP-F	2100	C225QPT-G
												420	C215QP-D		C220QPT-F		
													C215QPT-D				
												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
					■						CQ24A-SZ-T	1400	350	1400	350	1400	350
						■				75 s	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



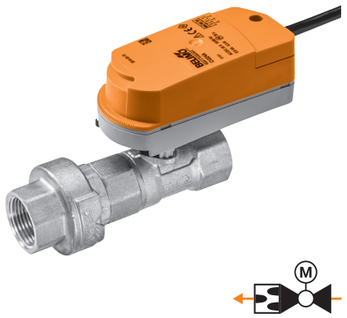
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Modulating (0.5...10 V)	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'nom [l/h]	DN 15 Valve type	DN 20 V'nom [l/h]	DN 20 Valve type	DN 25 V'nom [l/h]	DN 25 Valve type
										210	C215QP-B	980	C220QP-F	2100	C225QPT-G
										420	C215QP-D		C220QPT-F		
											C215QPT-D				
										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]	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.

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



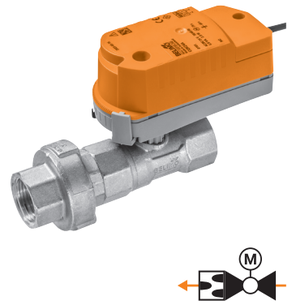
Suitable actuators	Nominal torque	Open/close	3-point	Communication MP-Bus	Communication Modbus	Communication BACnet	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'_{nom} [l/h]	DN 15 Valve type	DN 20 V'_{nom} [l/h]	DN 20 Valve type	DN 25 V'_{nom} [l/h]	DN 25 Valve type
										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

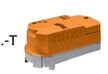
[1] Fast running actuators: observe the noise level according to the associated data sheet.

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

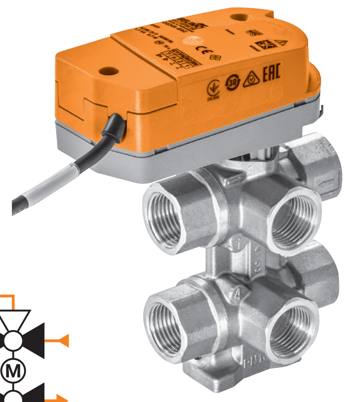


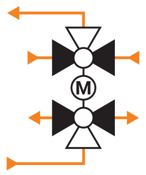
Suitable actuators	Nominal torque	Open/close	Communication MP-Bus	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Actuator type	PN 25 DN 15 V'_{nom} [l/h]	DN 15 Valve type	DN 20 V'_{nom} [l/h]	DN 20 Valve type	DN 25 V'_{nom} [l/h]	DN 25 Valve type
							Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} 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	90 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



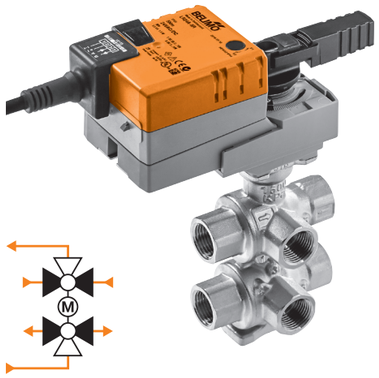


PN 16			PN 16					
DN 15			DN 15					
k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type	k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type	k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type
0.25	0.25	R3015-P25-P25-B1	0.4	0.25	R3015-P4-P25-B1	0.63	0.25	R3015-P63-P25-B1
	0.4	R3015-P25-P4-B1		0.4	R3015-P4-P4-B1		0.4	R3015-P63-P4-B1
	0.63	R3015-P25-P63-B1		0.63	R3015-P4-P63-B1		0.63	R3015-P63-P63-B1

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	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
CQ.. 	**Standard actuators**														
	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
CQ..-T 	**Standard actuators with connecting terminals**														
	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



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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	Δp_s kPa	Δp_{max} kPa	k_{VS} [m³/h] Sequence I	k_{VS} [m³/h] Sequence II	Valve type	Δp_s kPa	Δp_{max} kPa
	Standard actuators										0.25	0.25	R3015-P25-P25-B2	350	100	0.25	0.25	R3015-P4-P25-B2	350	100
												0.4	R3015-P25-P4-B2				0.4	R3015-P4-P4-B2		
												0.63	R3015-P25-P63-B2				0.63	R3015-P4-P63-B2		
												1	R3015-P25-1-B2				1	R3015-P4-1-B2		
												1.3	R3015-P25-1P3-B2				1.3	R3015-P4-1P3-B2		
												1.8	R3015-P25-1P8-B2				1.8	R3015-P4-1P8-B2		
LR..	5 Nm	■						24 V	90 s	LR24A-SR	350	100				350	100			
			■							LR24A-SZ	350	100				350	100			
		■		■						LR24A-MP [1]	350	100				350	100			
VLR..		■		■	■	■				LR24A-MOD	350	100				350	100			
							■			LR24A-KNX	350	100				350	100			
		■			■	■				VLR24A-LP1	350	100				350	100			
	Standard actuators with connecting terminals																			
	5 Nm	■						24 V	90 s	LR24A-SR-TP	350	100				350	100			
			■							LR24A-SZ-TP	350	100				350	100			
		■		■						LR24A-MP-TP [1]	350	100				350	100			

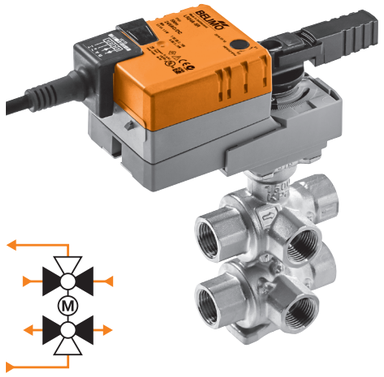
Suitable actuators	Nominal torque	Modulating (2…10 V)	Modulating (0.5…10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	PN 16 DN 15 k_{VS} [m³/h] Sequence I	k_{VS} [m³/h] Sequence II	Valve type	Δp_s kPa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

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	Δp_s kPa	Δp_{max} kPa	k_{VS} [m³/h] Sequence I	k_{VS} [m³/h] Sequence II	Valve type	Δp_s kPa	Δp_{max} kPa
	Standard actuators										0.25	0.25	R3015-1P3-P25-B2	350	100	0.25	0.25	R3015-1P8-P25-B2	350	100
												0.4	R3015-1P3-P4-B2				0.4	R3015-1P8-P4-B2		
												0.63	R3015-1P3-P63-B2				0.63	R3015-1P8-P63-B2		
												1	R3015-1P3-1-B2				1	R3015-1P8-1-B2		
												1.3	R3015-1P3-1P3-B2				1.3	R3015-1P8-1P3-B2		
												1.8	R3015-1P3-1P8-B2				1.8	R3015-1P8-1P8-B2		
LR..	5 Nm	■						24 V	90 s	LR24A-SR	350	100				350	100			
			■							LR24A-SZ	350	100				350	100			
		■		■						LR24A-MP [1]	350	100				350	100			
VLR..		■		■	■	■				LR24A-MOD	350	100				350	100			
							■			LR24A-KNX	350	100				350	100			
		■			■	■				VLR24A-LP1	350	100				350	100			
	Standard actuators with connecting terminals																			
	5 Nm	■						24 V	90 s	LR24A-SR-TP	350	100				350	100			
			■							LR24A-SZ-TP	350	100				350	100			
		■		■						LR24A-MP-TP [1]	350	100				350	100			

[1] Control, operating range, position feedback, running time and further functions are adjustable on MP types using PC-Tool

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



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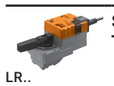
Suitable actuators	Nominal torque	Modulating (2…10 V)	Modulating (0.5…10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	PN 16 DN 20 k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type	Δp_s kPa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

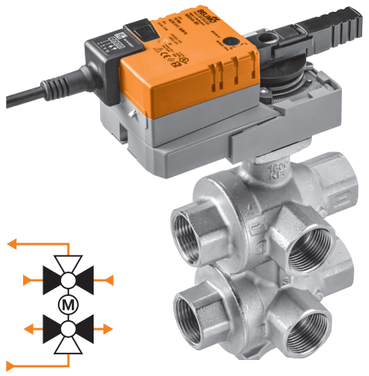
Suitable actuators	Nominal torque	Modulating (2…10 V)	Modulating (0.5…10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	PN 16 DN 20 k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type	Δp_s kPa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

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	Δp_s kPa	Δp_{max} kPa	k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type	Δp_s kPa	Δp_{max} kPa
Standard actuators																				
LR..	5 Nm	■						24 V	90 s	LR24A-SR	1.6	0.63	R3020-1P6-P63-B2	350	100	4	0.63	R3020-4-P63-B2	350	100
			■							LR24A-SZ		1	R3020-1P6-1-B2				1	R3020-4-1-B2		
		■		■						LR24A-MP [1]		1.6	R3020-1P6-1P6-B2				1.6	R3020-4-1P6-B2		
		■		■	■	■				LR24A-MOD		2.5	R3020-1P6-2P5-B2				2.5	R3020-4-2P5-B2		
							■			LR24A-KNX		4	R3020-1P6-4-B2				4	R3020-4-4-B2		
VLR..		■			■	■				VLR24A-LP1										
Standard actuators with connecting terminals																				
	5 Nm	■						24 V	90 s	LR24A-SR-TP	1.6	0.63	R3020-1P6-P63-B2	350	100	4	0.63	R3020-4-P63-B2	350	100
			■							LR24A-SZ-TP		1	R3020-1P6-1-B2				1	R3020-4-1-B2		
		■		■						LR24A-MP-TP [1]		1.6	R3020-1P6-1P6-B2				1.6	R3020-4-1P6-B2		
												2.5	R3020-1P6-2P5-B2				2.5	R3020-4-2P5-B2		
												4	R3020-1P6-4-B2				4	R3020-4-4-B2		

[1] Control, operating range, feedback, running time and further functions are adjustable on MP types using PC-Tool

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	Δp_s kPa	Δp_{max} kPa
6.3	**6.3**	**R3025-6P3-6P3-B3**		

Suitable actuators

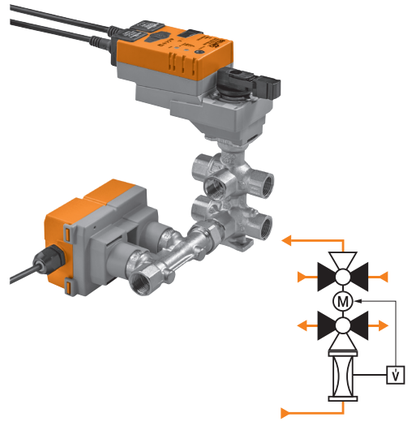
	Nominal torque	Modulating (2…10 V)	Modulating (0.5…10 V)	Communication MP-Bus	Communication Modbus	Communication BACnet	Communication KNX	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	Δp_s kPa	Δp_{max} kPa
 NR..	**Standard actuators**											
 VNR..	10 Nm	■						24 V	90 s	**NR24A-SR**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

[1] Control, operating range, feedback, running time and further functions are adjustable on MP types using PC-Tool

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}

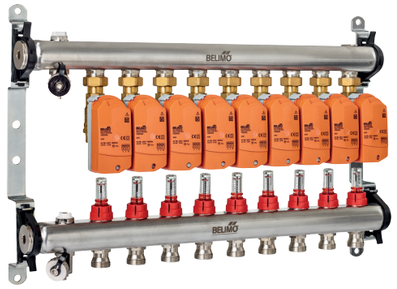
Control, operating range, feedback, running time and further functions are parametrisable with Belimo Assistant App (NFC) and ZTH EU



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

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 function	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**		■	■	■	■	■	■	■	■	■	■	■
					■				■			**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**		■	■	■	■	■	■	■	■	■	■	■

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

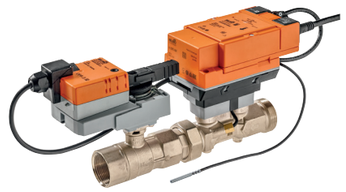
Field of use	Closed water circuit (pH >7)
Fluid temperature	–10…120°C
Pipe connection	Internal thread Rp (ISO 7-1) and External thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 25…100% of V'_{nom}

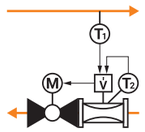
Completely parametrisable by means of integrated web server or Belimo Assistant App (NFC)

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	■	■	■	■	■	**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] By monitoring the glycol content, optimum system function can be ensured.

DN 15...50 (MID)

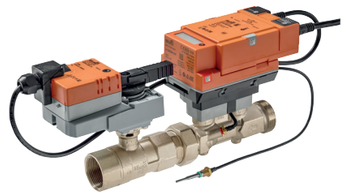
Field of use	Closed water circuit (pH >7)
Fluid temperature	–10…120°C
Fluid temperature note	MID certified 15...120°C
Pipe connection	Internal thread Rp (ISO 7-1) and external thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_s: 1600 kPa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

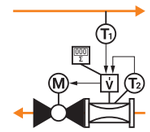
The thermal energy meters meet the requirements of EN 1434 and have type approval according to the European Measuring Instruments Directive 2014/32/EU (MI-004) as a heat meter.

Completely parametrisable using the integrated web server or Belimo Assistant App (NFC)

Optional connection to the Belimo Cloud

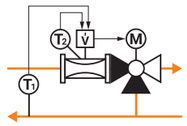
Sensor-operated flow or power control





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}

Completely parametrisable using the integrated web server or Belimo Assistant App (NFC)

Optional connection to the Belimo Cloud

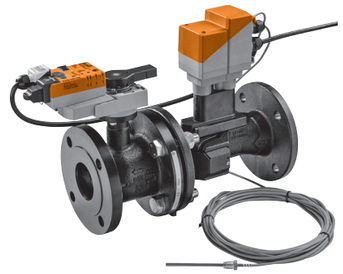
Sensor-operated flow or power control

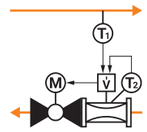
PN	DN	G	Rp	V'_{nom} [l/s]	V'_{nom} [l/min]	V'_{nom} [m³/h]	Nominal voltage AC/DC 24 V	Modulating (2...10 V, variable)	Communication MP-Bus	Communication Modbus	Communication BACnet	Glycol monitoring [1]	Valve type with actuator	Δp_s kPa	Δp_{max} kPa
With standard actuator															
25	**15**	3/4"	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] By monitoring the glycol content, optimum system function can be ensured.

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

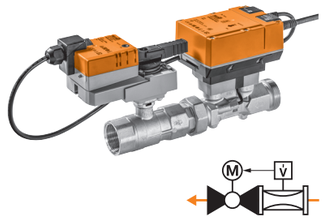
Delta T manager for optimal differential temperatures

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] By monitoring the glycol content, optimum system function can be ensured.

DN 15...50



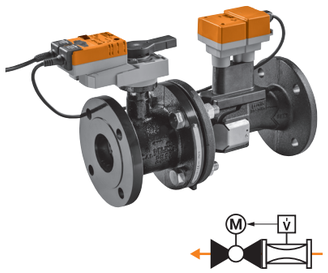
Field of use	Closed water circuit (pH >7)
Fluid temperature	–10...120°C
Pipe connection	Internal thread Rp (ISO 7-1) and external thread G (ISO 228-1)
Leakage rate	Air-bubble tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_s: 1600 kPa
V'_{max}	Freely adjustable 25...100% of V'_{nom}

Control, operating range, feedback and further functions are parametrisable with the Belimo Assistant App

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] By monitoring the glycol content, optimum system function can be ensured.

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, position feedback, running time and further functions are parametrisable with PC-Tool

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

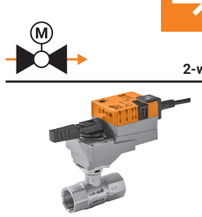
Internal thread	2-way – 3-way	PN 25	**DN 32...50**	38
		PN 40	**DN 15...25**	
External thread	2-way – 3-way	PN 25	**DN 32...50**	40
		PN 40	**DN 15...25**	
Flange	2-way – 3-way	PN 6	**DN 15...50**	42
	2-way	PN 16	**DN 65...150**	44
External thread	2-way	PN 40	**DN 10...20 (130°C)**	46

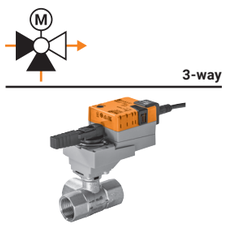
Please refer to the data sheets or notes for project planning for further technical data to be observed.

BELIMO

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





									PN 40		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
											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	R2032-16-S3	16	R2040-16-S3		
											6.3	R2015-6P3-S1	8.6	R2020-8P6-S2	16	R2025-16-S2	16	R2032-16-S3	25	R2040-25-S3	25	R2050-25-S4
																					40	R2050-40-S4
									3-way		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	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type					k_{VS} [m³/h]	Valve type
											4	R3015-4-S1	4	R3020-4-S2	6.3	R3025-6P3-S2	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	25	R3050-25-S4
													6.3	R3020-6P3-S2	10	R3025-10-S2	16	R3032-16-S3	16	R3040-16-S3	40	R3050-40-S4
																					58	R3050-58-S4
													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

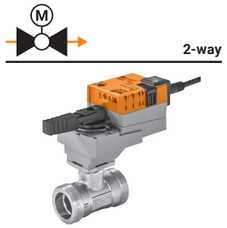
Suitable actuators

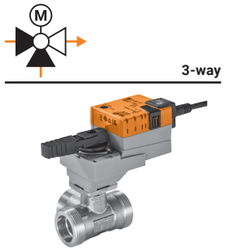
	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type													
Compact actuators																						
TR.. TRY.. 	2 Nm	■	■			24 V	100 s		TR24 [3]		1400	350										
			■			230 V	105 s		TR230-3 [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
						230 V			SR230A	..-S	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
Fast running actuators																						
	2 Nm			■		24 V	15 s		TRC24A-SR		1400	350										
TRF.. 	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
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			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		
	20 Nm			■	■	24 V	90 s	<20 s	SRF24A-SR	..-S2	..-O	..-S2-O	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





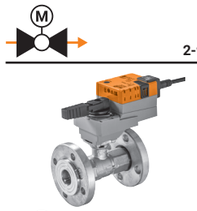
	PN 40		PN 40				PN 25					
	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
2-way	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type
	0.63	R409										
	1	R410										
	1.6	R411										
	2.5	R412										
	4	R413	4	R417	6.3	R422						
	6.3	R414	6.3	R418	10	R423	16	R431	16	R438	25	R448
			8.6	R419	16	R424	25	R439	25	R439	40	R449
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
	0.63	R509										
	1	R510										
	1.6	R511										
	2.5	R512										
	4	R513	4	R517	6.3	R522	16	R531	16	R538	25	R548
			6.3	R518	10	R523						

Suitable actuators

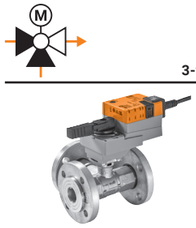
	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	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	
LRF..	20 Nm			■		24 V	35 s		SRC24A-SR		1400	200	1400	200	1400	200	1400	200	1400	200	1400	200	
										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	k_{VS} [m³/h]	Valve type
	0.63	R6015RP63-B1
	1	R6015R1-B1
	1.6	R6015R1P6-B1
	2.5	R6015R2P5-B1
	4	R6015R4-B1

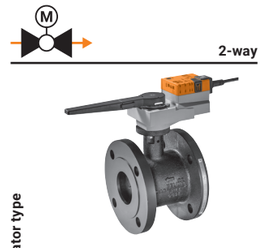


3-way	k_{VS} [m³/h]	Valve type
	0.63	R7015RP63-B1
	1.6	R7015R1P6-B1
	4	R7015R4-B1

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
										PN 6		PN 6									
										DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
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	90 s		LR24A	..-S	600	100	600	100	600	100					
		■	■			230 V			LR230A	..-S	600	100	600	100	600	100					
				■		24 V			LR24A-SR		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
				■		24 V			NR24A-SR		600	100	600	100	600	100	600	100	600	100	600	100
TRC.. LRC.. NRC.. SRC..	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
				■		24 V			SR24A-SR		600	100	600	100	600	100	600	100	600	100	600	100
Fast running actuators																					
	2 Nm			■		24 V	15 s		TRC24A-SR		600	100	600	100							
TRF..	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
LRF..	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							
Fail-safe actuators NC/NO										Without auxiliary switch	With 2 auxiliary switches			Without auxiliary switch	With 2 auxiliary switches						
NRF.. SRF..	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		
	10 Nm			■	■	24 V	90 s	<20 s	NRF24A-SR	..-S2		..-O		..-S2-O	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

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



2-way	PN 16		PN 16									
	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		
	63	R6065W63-S8	100	R6080W100-S8	160	R6100W160-S8	250	R6125W250-S8	320	R6150W320-S8		

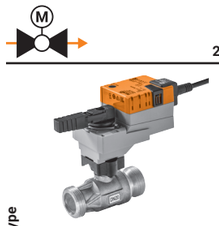
Suitable actuators	Nominal torque	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	SPDT auxiliary switch	Actuator type	Actuator type NC	Actuator type NO	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [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			690	400	690	400	690	400	690	400	690	400
		■	■			230 V				GR230A-5			690	400	690	400	690	400	690	400	690	400
				■		24 V				GR24A-SR-5			690	400	690	400	690	400	690	400	690	400
SRC..	**Fast running actuators**																					
	20 Nm			■		24 V	35 s			SRC24A-SR-5			690	400	690	400	690	400	690	400	690	400
SRF..	**Fail-safe actuators NC/NO**																					
	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

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



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	2-way	k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{v100} kPa	Δp_{v0} kPa	k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{v100} kPa	Δp_{v0} kPa	k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{v100} kPa	Δp_{v0} kPa
												PN 40					PN 40									
												DN 10					DN 15					DN 20				
												0.3	R404DK													
												0.4	R405DK													
												0.63	R406DK													
												1	R407DK				2.5	R412D				6.3	R417D			
												1.6	R408DK				4	R413D				10	R418D			
												2.5	R409DK				6.3	R414D				16	R419D			
	Standard actuators																									
LR..			■	■			24 V			LR24A		1400	400	800	1400	400	800	1400	400	800	1400	400	800		
		5 Nm	■	■			230 V	90 s		LR230A		1400	400	800	1400	400	800	1400	400	800	1400	400	800		
					■		24 V			LR24A-SR		1400	400	800	1400	400	800	1400	400	800	1400	400	800		
LRC..		**Fast running actuators**																								
		5 Nm			■			35 s		LRC24A-SR		1400	400	800	1400	400	800	1400	400	800	1400	400	800		
LRF..		**Fail-safe actuators NC**																								
		4 Nm			■	■		150 s	<20 s	LRF24-SR [1]		1400	400	800	1400	400	800	1400	400	800	1400	400	800		

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

7

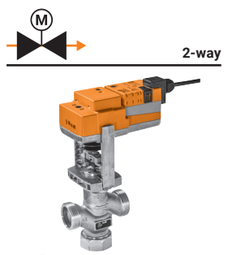
Globe valves

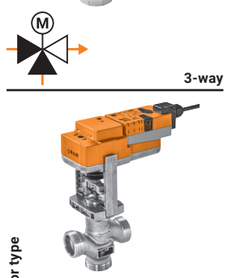
Energy-optimised control of steam, cold, warm and hot water circuits

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





	PN 16	PN 16				
	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
	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

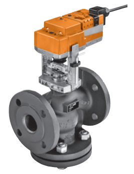
	Actuating force [1]	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s 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 can be adjusted with PC-Tool or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] Delivery condition: actuator stem retracted. Closing point of the globe valves H..B is at top (valve stem extended).

DN 15...100

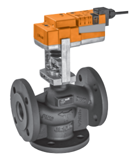
Field of use	Closed water circuit (pH >7)
Fluid temperature	−10...120°C
Pipe connection	Flange PN 6 (ISO 7005-2)
Leakage rate	2-way: max. 0.05% of k_{VS} value 3-way: control path A – AB: max. 0.05% of k_{VS} value / bypass B – AB: max. 1% of k_{VS} value
Flow characteristic	2-way: equal percentage 3-way: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

2-way

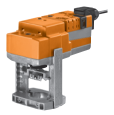
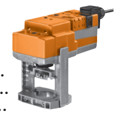


	PN 6								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
k_{VS} [m³/h]	Valve type	Valve type	Valve type	Valve type	Valve type	Valve type	Valve type	Valve type	Valve type
0.63	H611R								
1	H612R								
1.6	H613R								
2.5	H614R								
4	H615R								
		6.3 H620R	10 H625R	16 H632R	25 H640R	40 H650R	58 H664R	90 H679R	145 H6100R

3-way



k_{VS} [m³/h]	DN 15 Valve type	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
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

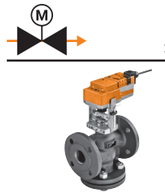
Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	DN 15 Δps kPa	DN 15 Δpmax kPa	DN 20 Δps kPa	DN 20 Δpmax kPa	DN 25 Δps kPa	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		
	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		
EV.. RV..	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
	4500 N	120 s				■			24 V	RV24A-SR																	450	400
	Fast running actuators																											
LVC.. NVC.. SVC..	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		
	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		
EVC..						■	■		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]																											
	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		
NVK.. NVKC..						■	■	■	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		
	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
AVK..						■	■	■	24 V	AVK24A-MP-TPC																	150	150

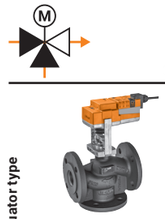
[1] Running times, control signal, stroke limitation and other functions for MP types can be adjusted with PC-Tool or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] Delivery condition: actuator stem retracted. Closing point of the globe valves H..B is at top (valve stem extended).

7

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





PN 16

2-way	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
	0.63	H611N																				
	1	H612N																				
	1.6	H613N																				
	2.5	H614N																				
	4	H615N	6.3	H620N	10	H625N	16	H632N	25	H640N	40	H650N	58	H664N	63	H665N	90	H679N	100	H680N	145	H6100N

PN 16

3-way	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
	0.63	H711N																				
	1	H712N																				
	1.6	H713N																				
	2.5	H714N																				
	4	H715N	6.3	H720N	10	H725N	16	H732N	25	H740N	40	H750N	58	H764N	63	H765N	90	H779N	100	H780N	145	H7100N	220	H7125N	320	H7150N

Suitable actuators

Actuating force [1]	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	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																																
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	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						
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																																
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]																																
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						
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				

LV..
NV..
SV..

EV..
RV..

LVC..
NVC..
SVC..

EVC..

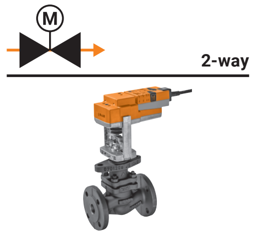
NVK..
NVKC..

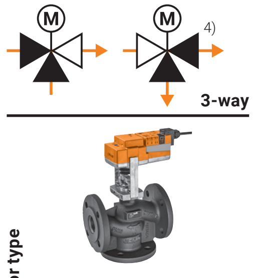
AVK..

[1] Running times, control signal, stroke limitation and other functions for MP types can be adjusted with PC-Tool or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] Delivery condition: actuator stem retracted. Closing point of the globe valves H..B is at top (valve stem extended).

DN 15...150

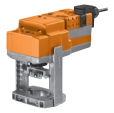
Field of use	Closed water circuit and steam circuit in the subcritical range (pH >7)
Fluid temperature	5...150°C (120°C to p_S 1600 kPa, 150°C to p_S 1400 kPa)
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	2-way: max. 0.05% of k_{VS} value 3-way: control path A – AB: max. 0.05% of k_{VS} value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





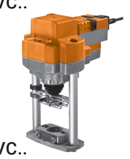
	PN 16			PN 16									
	DN 15	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 65	DN 80	DN 100	DN 125	DN 150
2-way: k_{VS} [m³/h] / Valve type	0.4 H610S 0.63 H611S	1 H612S 1.6 H613S 2.5 H614S 4 H615S	4 H619S 6.3 H620S	6.3 H624S 10 H625S	16 H632S	25 H640S	40 H650S	58 H664S	63 H665S	100 H680S	145 H6100S	220 H6125S	320 H6150S
3-way: k_{VS} [m³/h] / Valve type		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

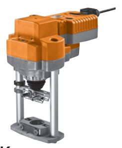

LV..
NV..
SV..


EV..
RV..


LVC..
NVC..
SVC..


EVC..


NVK..
NVKC..


AVK..

Actuating force [1]	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	DN 15 (0.4/0.63) Δp_s kPa	DN 15 (0.4/0.63) Δp_{max} kPa	DN 15 (1…4) Δp_s kPa	DN 15 (1…4) 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 (58) Δp_s kPa	DN 65 (58) Δp_{max} kPa	DN 65 (63) Δp_s kPa	DN 65 (63) 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																																			
500 N	150 s		■	■				24 V	LV24A-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60												
			■	■				230 V	LV230A-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60												
					■			24 V	LV24A-SR-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60												
					■	■		24 V	LV24A-MP-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60												
1000 N	150 s		■	■				24 V	NV24A-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
			■	■				230 V	NV230A-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
					■			24 V	NV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
					■	■		24 V	NV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
1500 N	150 s		■	■				24 V	SV24A-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500	250	250										
			■	■				230 V	SV230A-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500	250	250										
					■			24 V	SV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500	250	250										
					■	■		24 V	SV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500	250	250										
2500 N	150 s		■	■				24 V	EV24A-TPC																	550	550	350	350	200	200	110	110	70	70
			■	■				230 V	EV230A-TPC																	550	550	350	350	200	200	110	110	70	70
					■			24 V	EV24A-SR-TPC																	550	550	350	350	200	200	110	110	70	70
					■	■		24 V	EV24A-MP-TPC																	550	550	350	350	200	200	110	110	70	70
4500 N	120 s				■			24 V	RV24A-SR																	1100	1000	700	700	450	450	250	250	180	180
Fast running actuators																																			
500 N	35 s				■			24 V	LVC24A-SR-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60												
					■	■		24 V	LVC24A-MP-TPC [2]	1600	1000	800	800	800	800	450	450	300	300	140	140	60	60												
1000 N	35 s				■			24 V	NVC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
					■	■		24 V	NVC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
1500 N	35 s				■			24 V	SVC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500	250	250										
					■	■		24 V	SVC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000	1550	1000	850	850	500	500	250	250										
2500 N	35 s				■			24 V	EVC24A-SR																	550	550	350	350	200	200	110	110	70	70
Fail-safe actuators NC/NO [3]																																			
1000 N	150 s	35 s		■			■	24 V	NVK24A-3-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140	130	130										
				■			■	230 V	NVK230A-3	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140	130	130										
					■		■	24 V	NVK24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140	130	130										
					■	■	■	24 V	NVK24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140	130	130										
	35 s	35 s			■		■	24 V	NVKC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140	130	130										
					■	■	■	24 V	NVKC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	140	140	130	130										
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 can be adjusted with PC-Tool 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 spindle retracted. Closing point of the globe valves H..R is at top (valve stem extended).
[4] When used as a diverting valve, the maximum values are reduced to a quarter.

Subject to technical modifications

Subject to technical modifications

DN 40...150

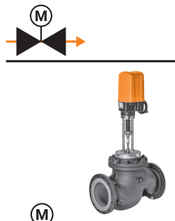
Field of use	Closed water circuit and steam circuit in the subcritical range (pH >7)
Fluid temperature	5...150°C (120°C to p_s 1600 kPa, 150°C to p_s 1400 kPa)
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	Max. 0.05% of k_{VS} value
Flow characteristic	Equal percentage

Suitable actuators		Actuating force [1]	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	PN 16 DN 40		PN 16 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
													25	H640SP	40	H650SP	58	H664SP	90	H679SP	145	H6100SP	220	H6125SP	320	H6150SP
													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																									
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	SV24A-SR-TPC		1600	1000	1600	1000	1600	1000	1600	1000						
							■	■		24 V	SV24A-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]																									
		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						
NVK.. NVKC..			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						
		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				
AVK..							■	■	■	24 V	AVK24A-MP-TPC										600	600				

[1] Running times, control signal, stroke limitation and other functions for MP types can be adjusted with PC-Tool 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. Closing point of the globe valves H..R is at top (valve stem extended).

DN 200/250

Field of use	Closed water circuit (pH >7)
Fluid temperature	5...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

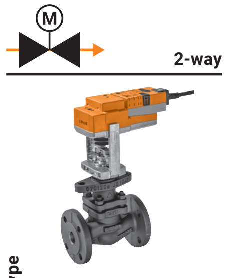
Suitable actuators

GV..	Actuating force [1]	Actuating time per nominal stroke	3-point	Modulating (2...10 V)	Nominal voltage AC/DC 24 V AC 230 V	Auxiliary switch SPDT	Actuator type	Δp_S kPa	Δp_{max} kPa	Δp_S kPa	Δp_{max} kPa
	Standard actuators										
	12000 N	82 s	■		230 V	2	GV12-230-3-T	310	60	190	60
				■	24 V		GV12-24-SR-T	310	60	190	60

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

DN 15...50

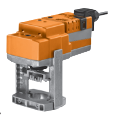
Field of use	Closed water circuit and steam circuit in the subcritical range (pH >7)
Fluid temperature	5...150°C (120°C to p_S 2500 kPa, 150°C to p_S 2430 kPa)
Pipe connection	Flange PN 25 (ISO 7005-2)
Leakage rate	Max. 0.05% of k_{VS} value
Flow characteristic	Equal percentage

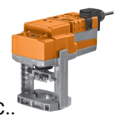


Valve types (PN 25):

	DN 15		DN 15		DN 20		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
			1	H6015X1-S2												
			1.6	H6015X1P6-S2												
	0.4	H6015XP4-S2	2.5	H6015X2P5-S2					6.3	H6025X6P3-S2	10	H6032X10-S2	16	H6040X16-S2	25	H6050X25-S2
	0.63	H6015XP63-S2	4	H6015X4-S2	4	H6020X4-S2	6.3	H6020X6P3-S2	10	H6025X10-S2	16	H6032X16-S2	25	H6040X25-S2	40	H6050X40-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	DN 15 Δps kPa	DN 15 Δpmax kPa	DN 15 Δps kPa	DN 15 Δpmax kPa	DN 20 Δps kPa	DN 20 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
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



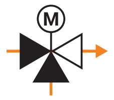


[1] Running times, control signal, stroke limitation and other functions for MP types can be adjusted with PC-Tool or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] Actuators LV..A.. possible only on valves H6..
[3] The fail-safe position NC/NO of all fail-safe actuators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

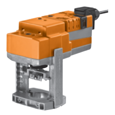
7

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

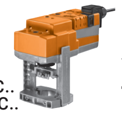


Suitable actuators

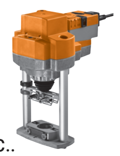


LV..
NV..
SV..

EV..
RV..



LVC..
NVC..
SVC..



EVC..

NVK..
NVKC..

AVK..

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 25 DN 15		DN 20		PN 25 DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100	
									3-way	k_{vs} [m³/h] 4	Valve type H7015X4-S2	k_{vs} [m³/h] 6.3	Valve type H7020X6P3-S2	k_{vs} [m³/h] 10	Valve type H7025X10-S2	k_{vs} [m³/h] 16	Valve type H7032X16-S2	k_{vs} [m³/h] 25	Valve type H7040X25-S2	k_{vs} [m³/h] 40	Valve type H7050X40-S2	k_{vs} [m³/h] 63	Valve type H7020X6P3-S2	k_{vs} [m³/h] 100	Valve type H7080X100-S4	k_{vs} [m³/h] 160	Valve type H7100X160-S4
										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																											
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						
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
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						
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]																											
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						
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 can be adjusted with PC-Tool 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. Closing point of the globe valves H..R is at top (valve stem extended).

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

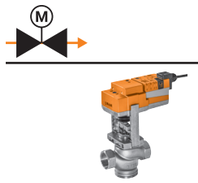
		Actuating force	Actuating time per nominal stroke	Actuating time for fail-safe	Open/close	3-point	Modulating (2...10 V)	Communication MP-Bus [1]	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	PN 25 DN 65 2-way k_{VS} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 25 DN 80 k_{VS} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 25 DN 100 k_{VS} [m³/h]	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						

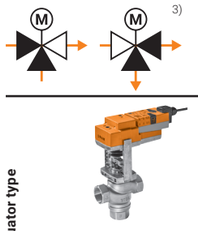
[1] Running times, control signal, stroke limitation and other functions for MP types can be adjusted with PC-Tool or service tool ZTH EU (delivery condition: modulating, operating range 2...10 V).
[2] The fail-safe position NC/NO of all fail-safe actuators can be adjusted on the actuator. Delivery condition: actuator stem retracted. Closing point of the globe valves H..R is at top (valve stem extended).

Subject to technical modifications

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





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

[1] Running times, control signal, stroke limitation and other functions for MP types can be adjusted with PC-Tool 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. Closing point of the globe valves H..R is at top (valve stem extended).
[3] When used as a diverting valve, the maximum values are reduced to a quarter.

8

Control butterfly valves

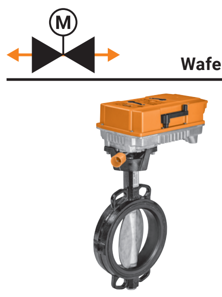
Fit for reliable control applications

Wafer type flange		PN 6, 10, 16	**DN 25...300**	72
	2-way	PN 10, 16	**DN 350**	74
		PN 16	**DN 400...700**	74
Lug type flange		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 150...300**	76

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

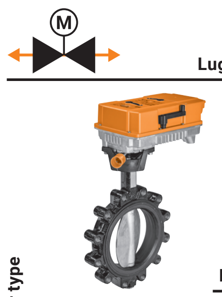
DN 25...300

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	–20...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 parametrisable with Belimo Assistant App: equal percentage or linear
Permissible operating pressure	p_S: 1600 kPa



Wafer type flange

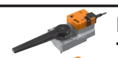
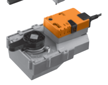
	PN 6, 10, 16			PN 6, 10, 16								
	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
k_{vs} [1] [m³/h]	24	25	27	30	50	75	150	260	400	820	1300	1740
Valve	D625N	D632N	D640N	D650N	D665N	D680N	D6100N [5]	D6125N [5]	D6150N [5]	D6200W	D6250W	D6300W



Lug type flange

	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_{vs} [1] [m³/h]	24	25	27	30	50	75	150	260	400	820	1300	1740
Valve	D625NL	D632NL	D640NL	D650NL	D665NL	D680NL	D6100NL [5]	D6125NL [5]	D6150NL [5]	D6200WL	D6250WL	D6300WL

Suitable actuators

	Nominal torque	Open/close	3-point	Modulating	Terminal connection	Fail-safe function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	SPDT auxiliary switch	Deg. of protection	Actuator type
Modulating actuators											
SR.. 	20 Nm	—	—	■	—	—	24 V	90 s		IP54	SR24A-SR-5
	20 Nm	—	—	■	—	—	230 V	90 s		IP54	SR230A-SR-5
GR..	40 Nm			■			24 V	150 s		IP54	GR24A-SR-5
DR.. 	<90 Nm	—	—	■	—	—	24 V	150 s		IP54	DR24A-SR-5 [4]
DR..	<90 Nm	—	—	■	—	—	24 V	150 s		IP54	DR24A-SR-7 [4]
Communicative actuators											
PR.. 	160 Nm	■	■	■	■	—	AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRCA-BAC-S2-T
PR..	160 Nm	■	■	■	■	—	AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRCA-BAC-S2-T-200
PR..	160 Nm	■	■	■	■		AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRCA-BAC-S2-T-250
PRK.. 	160 Nm	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRKCA-BAC-S2-T
PRK..	160 Nm	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRKCA-BAC-S2-T-200
PRK..	160 Nm	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRKCA-BAC-S2-T-250

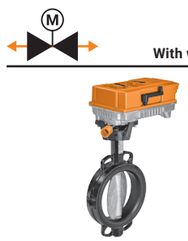
Actuator type	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
Linkage type											ZPR03 [3]		ZPR03 [3]		ZPR01 [3]		ZPR01		ZPR01		ZPR01		ZPR01	
	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa	Δp_s kPa	Δp_{max} kPa
SR24A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300														
SR230A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300														
GR24A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300	1200	300												
DR24A-SR-5 [4]											1200	300	1200	300										
DR24A-SR-7 [4]															1200	300								
PRCA-BAC-S2-T											1200	300	1200	300	1200	300	1200	300					1400	300
PRCA-BAC-S2-T-200																			1400	300				
PRCA-BAC-S2-T-250																					1400	300		
PRKCA-BAC-S2-T											1200	300	1200	300	1200	300	1200	300					1400	300
PRKCA-BAC-S2-T-200																			1400	300				
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] 30...120 s parametrisable with Belimo Assistant App (NFC)
[3] Linkage is only required in combination with a PR actuator.
[4] The actuator types DR.. will be replaced by the new types JR.. over the course of the year.
[5] The valve types D6..N(L) (DN 100...150) will be replaced by the new types D6..W(L) (DN 100...150) over the course of the year.

8

DN 350...700

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	–20…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	
With wafer types	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve
	3010	D6350N	4140	D6400N	5490	D6450N	7060	D6500N	10900	D6600N	11760	D6700N

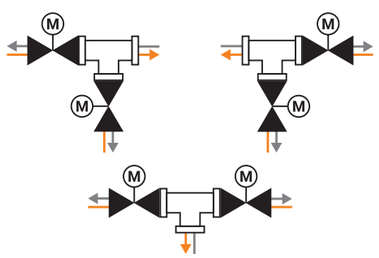
	PN 16	PN 16									
	DN 350	DN 400		DN 450		DN 500		DN 600		DN 700	
With lug types	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve	k_{vs} [1) [m³/h]	Valve
	3010	D6350NL	4140	D6400NL	5490	D6450NL	7060	D6500NL	10900	D6600NL	11760	D6700NL

Suitable actuators	Nominal torque	Modulating (2...10 V / 0.5...10 V)	Terminal connection	Nominal voltage AC 230 V	Running time motor 90°	Auxiliary switch SPDT	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		600	300			600	300											
	1000 Nm	■	■		55 s	2	IP67	SY7-230A-MF-T				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.

DN 150...300

Field of use	Closed and open water circuit (pH >7) for mixing and distribution applications
Fluid temperature	–20…120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) D7..WL/BAC additionally: ISO 7005-1 and EN 1092-1
Leakage rate	Tight, leakage rate A (EN 12266-1)
Flow characteristic	Characteristic curve parametrisable with Belimo Assistant App: 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° [3]	Auxiliary switch SPDT	Deg. 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	**150**	400	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7150NL/BAC [4] [5]	1200	300	ZD7150 [6]
		200	800	■	■	■	■	■		35 s	4	IP66 IP67	D7200WL/BAC [4]	1400	300	ZD7200 [6]
		250	1200	■	■	■	■	■		35 s	4	IP66 IP67	D7250WL/BAC [4]	1400	300	ZD7250 [6]
		300	1700	■	■	■	■	■		35 s	4	IP66 IP67	D7300WL/BAC [4]	1400	300	ZD7300 [6]

[1] For control applications with an opening angle 60% (parametrisable with the Belimo Assistant App (NFC)).
The maximum flow speed of 4 m/s may not be exceeded in the control butterfly valve.
[2] Parametrisable with Belimo Assistant App (NFC)
[3] 30...120 s parametrisable with Belimo Assistant App (NFC)
[4] T-piece is not included in scope of delivery.
[5] The control 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.

9

Ball valves

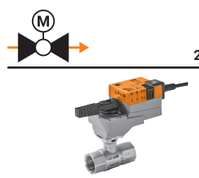
Open/close and changeover applications

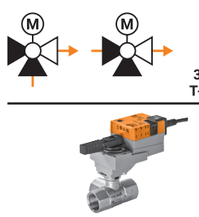
Internal thread	Open/close ball valves	2-way		PN 25, 40	**DN 15...50**	80
	Changeover ball valves	3-way	T-bore			
	Changeover ball valves	3-way	L-bore	PN 25, 40	**DN 15...50**	82
External thread	Open/close ball valves	2-way		PN 25, 40	**DN 15...50**	84
	Changeover ball valves	3-way	T-bore			
Flange	Open/close 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 k_{VS} value
Permissible operating pressure	p_S: 1600 kPa





		PN 40		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

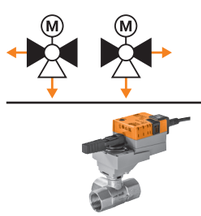
Suitable actuators	Nominal torque	Open/close	3-point	Fail-safe function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type	2-way Δp_S kPa	2-way Δp_{max} [2] kPa	3-way T-bore Δp_S kPa	3-way T-bore Δp_{max} [2] kPa
Compact actuators												
TR.. TRY..	2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

Suitable actuators	Nominal torque	2-way Δp_S kPa	2-way Δp_{max} [2] kPa	3-way T-bore Δp_S kPa	3-way T-bore 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												
Standard actuators													
LR.. NR.. SR..	5 Nm	1400	1000	1400	1000								
		1400	1000	1400	1000								
	10 Nm	1400	1000	1400	1000	1400	1000	1400	1000				
		1400	1000	1400	1000	1400	1000	1400	1000				
	20 Nm	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
		1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
Very fast running actuators													
LRQ.. NRQ.. SRQ..	4 Nm	1400	1000	1400	1000								
	8 Nm	1400	1000	1400	1000	1400	1000	1400	1000				
	16 Nm	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
Fail-safe actuators NC/NO													
TRF.. LRF..	2.5 Nm												
	4 Nm	1400	1000	1400	1000								
		1400	1000	1400	1000								
NRF.. SRF..	10 Nm	1400	1000	1400	1000	1400	1000	1400	1000				
		1400	1000	1400	1000	1400	1000	1400	1000				
	20 Nm	1400	1000	1400	1000	1400	1000	1400	1000	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

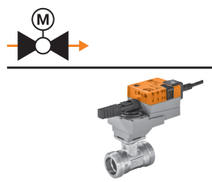


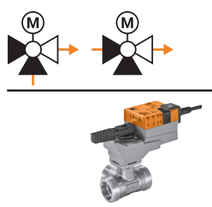
Suitable actuators	Nominal torque	Open/close	3-point	Fail-safe function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type	3-way L-bore	PN 40 DN 15 k_{vs} [m³/h]	Valve type	PN 40 DN 20 k_{vs} [m³/h]	Valve type	PN 40 DN 25 k_{vs} [m³/h]	Valve type	PN 25 DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type	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			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			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						
		■		■	230 V			LRF230	..-S	..-O	..-S-O	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		
		■		■	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		
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
		■		■	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

[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 k_{VS} value
Permissible operating pressure	p_S: 1600 kPa





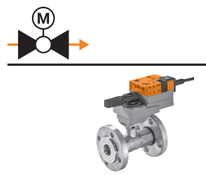
		PN 40		PN 40				PN 25					
		DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	2-way	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type
		8.6	R415	21	R420	26	R425	32	R432	32	R440	49	R450
	3-way T-bore	k_{VS} [m³/h]	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

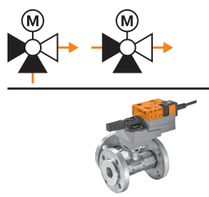
Suitable actuators	Nominal torque	Open/close	3-point	Fail-safe function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time fail-safe	Actuator type			Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s kPa	Δp_{max} [1] kPa	Δp_s 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	1400	400
		■	■		230 V			NR230A		..-S	1400	400	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	1400	400
		■	■		230 V			SR230A		..-S	1400	400	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	1400	400		
	16 Nm	■			24 V	9 s		SRQ24A			1400	400	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	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	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	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	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 k_{vs} value
Permissible operating pressure	p_S: 600 kPa





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

Suitable actuators

	Nominal torque	Open/close	3-point	Fail-safe function	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	600	100	600	100	600	100						
		■	■		230 V				LR230A	600	100	600	100	600	100						
	10 Nm	■	■		24 V	90 s			NR24A	600	100	600	100	600	100	600	100	600	100	600	100
		■	■		230 V				NR230A	600	100	600	100	600	100	600	100	600	100	600	100
	20 Nm	■	■		24 V	90 s			SR24A	600	100	600	100	600	100	600	100	600	100	600	100
		■	■		230 V				SR230A	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
		■		■	AC 24...240 V DC 24...125 V				NRFA	..-S2		..-O	..-S2-O	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
		■		■	AC 24...240 V DC 24...125 V				SRFA	..-S2		..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100

10

Potable water valves

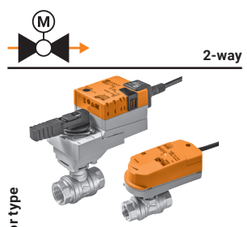
Certified in accordance with ACS, DVGW, WRAS, ÜA

Rotary valves	Internal thread	2-way	PN 10	**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	Potable 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)
Potable water certificate	Certified in accordance with ACS, DVGW, WRAS, ÜA
Permissible operating pressure	p_S: 1600 kPa



Suitable actuators		Nominal torque	Open/close	3-point	Fail-safe function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Actuator type	2-way	PN 40 DN 15 k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 40 DN 15 k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 40 DN 20 k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 40 DN 25 k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 40 DN 32 k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 25 DN 40 k_{vs} [m³/h]	Valve type	Δp_s kPa	Δp_{max} kPa	PN 25 DN 50 k_{vs} [m³/h]	Valve type
											16	C215QPW-N			16	R215PW-N			32	R220PW-P			40	R220PW-Q			63	R220PW-R			100	R220PW-S			150	R250PW-S
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	200								
			■	■				1	NR24A-S																1600	200								
			■	■		230 V			NR230A [1]																1600	200								
			■	■					NR230A-S																1600	200								
SR..		40 Nm	■	■		24 V	90 s		SR24A																						1600	200	1600	200
			■	■					SR24A-S																						1600	200	1600	200
			■	■		230 V			SR230A [1]																						1600	200	1600	200
			■	■					SR230A-S																						1600	200	1600	200
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	200								
			■		■			2	NRFA-S2																1600	200								
NRF.. SRF..		20 Nm	■		■	24 V	75 s		SRF24A																						1600	200	1600	200
			■		■			2	SRF24A-S2																						1600	200	1600	200
			■		■	AC 24...240 V DC 24...125 V			SRFA																						1600	200	1600	200
			■		■			2	SRFA-S2																						1600	200	1600	200

[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

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

DN 25...300

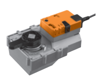
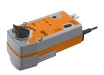
Field of use	Closed and open water circuit (pH >7)
Fluid temperature	−20...120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) D6..W additionally: ISO 7005-1 and EN 1092-1
Leakage rate	Tight, leakage rate A (EN 12266-1)
Permissible operating pressure	p_S: 1600 kPa

With wafer types

	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
	PN 6, 10, 16						PN 6, 10, 16																	
	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
With wafer types	50	D625N	55	D632N	65	D640N	100	D650N	170	D665N	260	D680N	520	D6100N [6]	880	D6125N [6]	1400	D6150N [6]	2200	D6200W	4200	D6250W	5700	D6300W

With lug types

	DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
	PN 10, 16						PN 10, 16												PN 16					
	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
With lug types	50	D625NL	55	D632NL	65	D640NL	100	D650NL	170	D665NL	260	D680NL	520	D6100NL [6]	880	D6125NL [6]	1400	D6150NL [6]	2200	D6200WL	4200	D6250WL	5700	D6300WL

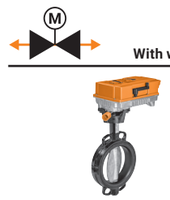
Suitable actuators	Nominal torque	Open/close	3-point	Communicative	Terminal connection	Fail-safe function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Deg. of protection	Actuator type	DN 25 Δp_s kPa	DN 25 Δp_{max} kPa	DN 32 Δp_s kPa	DN 32 Δp_{max} kPa	DN 40 Δp_s kPa	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	DN 200 Δp_s kPa	DN 200 Δp_{max} kPa	DN 250 Δp_s kPa	DN 250 Δp_{max} kPa	DN 300 Δp_s kPa	DN 300 Δp_{max} kPa
Linkage type																						ZPR03 [4]		ZPR03 [4]		ZPR01 [4]		ZPR01		ZPR01		ZPR01		ZPR01	
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												
	<90 Nm	■					24 V	150 s		IP54	DR24A-5 [5]											1200		1200	300										
		■					230 V				DR230A-5 [5]													1200	300										
		■					24 V				DR24A-7 [5]															1200	300								
DR.. DRC.. 		■					230 V				DR230A-7 [5]															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												
PR.. 	<90 Nm	■					24 V	35 s		IP54	DRC24A-5 [1] [5]											1200	300	1200	300										
		■					230 V				DRC230A-5 [1] [5]											1200	300	1200	300										
		■					24 V				DRC24A-7 [1] [5]															1200	300								
		■					230 V				DRC230A-7 [1] [5]															1200	300								
SRF.. 	160 Nm	■	■		■		AC 24...240 V DC 24...125 V	35 s [2]	2	IP66/ IP67	PRCA-S2-T											1200	300	1200	300	1200	300	1200	300					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		IP54	SRF24A-5	1200	300	1200	300	1200	300	1200		1200															
		■				■			2		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												
DRK.. 	<90 Nm	■				■	24 V	150 s		IP54	DRK24A-5											1200	300	1200	300										
		■				■					DRK24A-7															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 parametrisable with Belimo Assistant App (NFC)
[3] Parametrisable with Belimo Assistant App (NFC)
[4] Linkage is required only in combination with a PR actuator.
[5] The actuator types DR.. will be replaced by the new types JR.. over the course of the year.
[6] The valve types D6..N(L) (DN 100...150) will be replaced by the new types D6..W(L) (DN 100...150) over the course of the year.

11

DN 350...700

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	–20…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



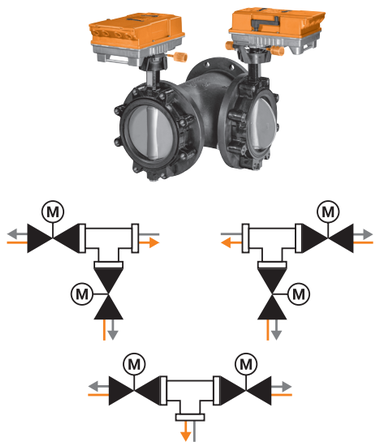
	PN 10, 16	PN 16											
	DN 350	DN 400		DN 450		DN 500		DN 600		DN 700			
With wafer types	k_{vmax} [m³/h]	Valve type		k_{vmax} [m³/h]	Valve type	k_{vmax} [m³/h]	Valve type			k_{vmax} [m³/h]	Valve type	k_{vmax} [m³/h]	Valve type
	10900	D6350N		14200	D6400N	18800	D6450N	24100	D6500N			37300	D6600N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

	PN 16	PN 16											
	DN 350	DN 400		DN 450		DN 500		DN 600		DN 700			
With 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
	10900	D6350NL		14200	D6400NL	18800	D6450NL	24100	D6500NL			37300	D6600NL	42800	D6700NL

Suitable actuators										Linkage type		ZSY-703		ZSY-401		ZSY-701		ZSY-702		ZSY-702		ZSY-901		ZSY-902		ZSY-903	
	Nominal torque	Open/close	3-point	Terminal connection	Nominal voltage AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Deg. of protection	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
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 150...300

Field of use	Closed and open water circuit (pH >7) for changeover applications
Fluid temperature	–20…120°C
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) 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



D7..L/BAC

With communicative actuator

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]	Auxiliary switch SPDT	Deg. of protection	Changeover butterfly valve type with actuator	Δp_S kPa	Δp_{max} kPa	T-piece type
16	**150**	1100	■	■	■	■	■	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7150NL/BAC [4] [5]	1200	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]

Suitable T-pieces

Spheroidal graphite cast iron with fastening screws

[1] For changeover applications. The maximum flow speed of 4 m/s may not be exceeded in the changeover butterfly valve.
[2] Parametrisable with Belimo Assistant App
[3] 30...120 s parametrisable with Belimo Assistant App (NFC)
[4] T-piece is not included in 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 with 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 delay 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 tightly, with reference to the particular leakage class.

p_s Permissible operating pressure

11

All inclusive.

Belimo ist Weltmarktführer in Entwicklung, Herstellung und Vertrieb von Feldgeräten zur energieeffizienten Regelung von Heizungs-, Lüftungs- und Klimaanlagen. Klappenantriebe, Regelventile, Sensoren und Zähler bilden dabei unser Kerngeschäft.

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