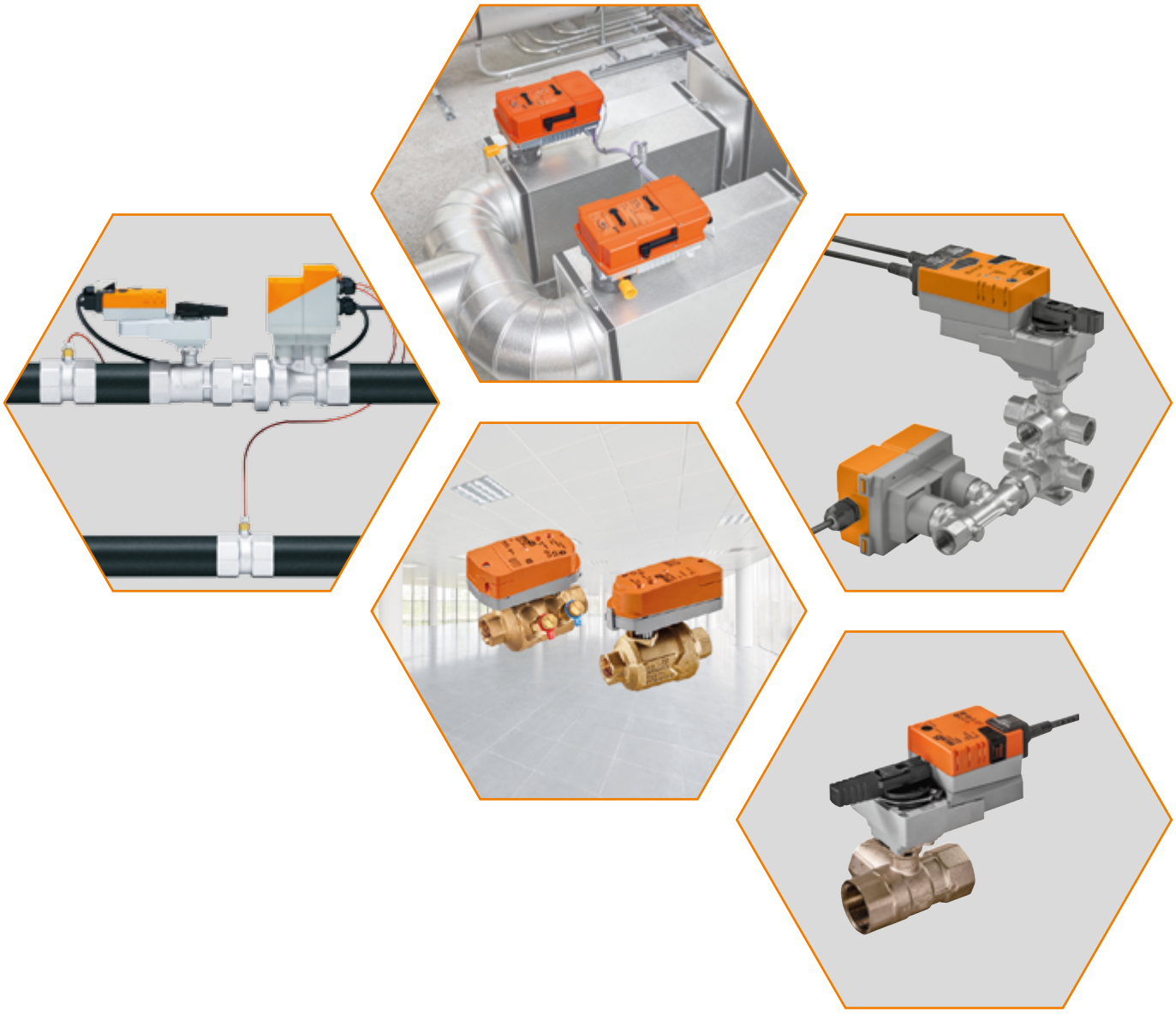
The complete product range for water applications

Edition 2019



BELIMO®

			Page
4	Control valves	Zone valves	3
5		Pressure-independent characterised control valves	13
6		Characterised control valves	19
7		Globe valves	29
8		Control butterfly valves	49
9	Shut-off and change-over valves	Ball valves	55
10		Potable water valves	65
11		Open-close and change-over butterfly valves	69
	Definitions		75

BELIMO
ZoneTight™

4

Zone valves

Maximum comfort, minimum consumption

2-way zone valve (QCV)	Internal thread	PN 16	DN 15/DN 20	4
3-way change-over ball valve (QCV)				5
2-way zone valve (QCV)	External thread			6
3-way change-over ball valve (QCV)				7
Pressure-independent characterised control valve (PIQCV)	Internal thread	PN 16	DN 15 – 25	8
Pressure-independent flow limiter valve (PIFLV)		PN 16	DN 15 – 25	9
6-way characterised control valve		PN 16	DN 15 – 25	10
Electronic pressure-independent 6-way characterised control valve		PN 16	DN 15/DN 20	11

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

Valve Sizer App

You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

Download on the App Store

GET IT ON Google Play

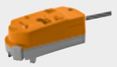
2-way characterised control valve (QCV) / Internal thread / PN 16

BELIMO

DN 15 / DN 20

Range of use	Closed water circuit (pH > 7)
Medium temperature	2...90 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Flow characteristic	A-AB, equal percentage
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators



CQ..

CQK..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Communication MP-Bus®	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor	Actuator type	DN 15 k_{vs} [m³/h]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
									0.09 – 1.2	C215Q-F	0.5 – 8	C220Q-K
									0.4 – 4.8	C215Q-J		
									Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Standard actuators [1]												
1 Nm	•	•				24 V	75 s	CQ24A	350	280	350	280
			•					CQ24A-SR	350	280	350	280
	•	•				230 V	75 s	CQ230A	350	280	350	280
				•		24 V	75 s	CQ24A-MPL	350	280	350	280
Actuator with emergency control function NC [2]												
1 Nm	•				⊣⊢	24 V	75 s	CQK24A	350	280	350	280
			•		⊣⊢			CQK24A-SR	350	280	350	280
	•				⊣⊢	230 V	75 s	CQK230A	350	280	350	280
Fast runners												
1 Nm	•	•				230 V	35 s	CQC230A	350	280	350	280
	•	•					15 s	CQD230A	350	280		
	•	•						CQD230A-20			350	280

[1] Standard actuators with connecting terminals present (e.g. CQ24A-T)
[2] Actuators with emergency control function NO present (e.g. CQK24A-O)

3-way change-over ball valve (QCV) / internal thread / PN 16

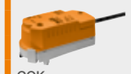
BELIMO

DN 15 / DN 20

Range of use	Closed water circuit (pH > 7)
Medium temperature	2...90 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators

CQ..



CQK..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor	Actuator type	DN 15 k_{vs} [m³/h]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
							2.5	C315Q-H	4	C320Q-J
							Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Standard actuators [1]										
1 Nm	•	•		24 V	75 s	CQ24A	350	280	350	280
	•	•		230 V	75 s	CQ230A	350	280	350	280
Actuator with emergency control function NC [2]										
1 Nm	•		⊣⊢	24 V	75 s	CQK24A	350	280	350	280
	•		⊣⊢	230 V	75 s	CQK230A	350	280	350	280
Fast runners										
1 Nm	•	•		230 V	35 s	CQC230A	350	280	350	280
	•	•			15 s	CQD230A	350	280		
	•	•				CQD230A-20			350	280

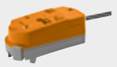
[1] Standard actuators with connecting terminals present (e.g. CQ24A-T)
[2] Actuators with emergency control function NO present (e.g. CQK24A-O)

2-way characterised control valve (QCV) / External thread / PN 16

DN 15 / DN 20

Range of use	Closed water circuit (pH > 7)
Medium temperature	2...90 °C
Pipe connection	External thread G (ISO 228-1)
Flow characteristic	A-AB, equal percentage
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators



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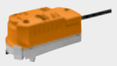
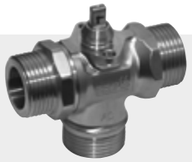


CQK..

Nominal torque	Open-close	3-point	Modulating (2 ... 10 V)	Communication MP-Bus®	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor	Actuator type	DN 15 k_{vs} [m³/h] 0.4 – 4.5	DN 15 Valve type C415Q-J	DN 20 k_{vs} [m³/h] 0.5 – 7.8	DN 20 Valve type C420Q-K
									Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Standard actuators [1]												
1 Nm	•	•				24 V	75 s	CQ24A	350	280	350	280
			•					CQ24A-SR	350	280	350	280
	•	•				230 V	75 s	CQ230A	350	280	350	280
				•		24 V	75 s	CQ24A-MPL	350	280	350	280
Actuator with emergency control function NC [2]												
1 Nm	•				⊣⊢	24 V	75 s	CQK24A	350	280	350	280
			•		⊣⊢			CQK24A-SR	350	280	350	280
	•				⊣⊢	230 V	75 s	CQK230A	350	280	350	280
Fast runners												
1 Nm	•	•				230 V	35 s	CQC230A	350	280	350	280
	•	•					15 s	CQD230A	350	280		
	•	•						CQD230A-20			350	280

[1] Standard actuators with connecting terminals present (e.g. CQ24A-T)
[2] Actuators with emergency control function NO present (e.g. CQK24A-O)

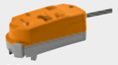
3-way change-over ball valve (QCV) / External thread / PN 16



DN 15 / DN 20

Range of use	Closed water circuit (pH > 7)
Medium temperature	2...90 °C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators



CQ..

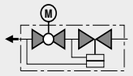
CQK..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor	Actuator type	DN 15 k_{vs} [m³/h] 2.3	DN 15 Valve type C515Q-H	DN 20 k_{vs} [m³/h] 3.6	DN 20 Valve type C520Q-J
							Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Standard actuators [1]										
1 Nm	•	•		24 V	75 s	CQ24A	350	280	350	280
	•	•		230 V	75 s	CQ230A	350	280	350	280
Actuator with emergency control function NC [2]										
1 Nm	•		⊣⊢	24 V	75 s	CQK24A	350	280	350	280
	•		⊣⊢	230 V	75 s	CQK230A	350	280	350	280
Fast runners										
1 Nm	•	•		230 V	35 s	CQC230A	350	280	350	280
	•	•			15 s	CQD230A	350	280		
	•	•				CQD230A-20			350	280

[1] Standard actuators with connecting terminals present (e.g. CQ24A-T)
[2] Actuators with emergency control function NO present (e.g. CQK24A-O)

Pressure-independent characterised control valve (PIQCV) / internal thread / PN 16

DN 15 – 25



C2..QP-..

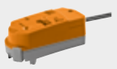
C2..QPT-..

Range of use	Closed water circuit (pH > 7)
Medium temperature	2...90 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Flow characteristic	A-AB, equal percentage
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators

DN 15		DN 20		DN 25	
V_{nom} [l/h]	Valve type	V_{nom} [l/h]	Valve type	V_{nom} [l/h]	Valve type
210	C215QP-B	980	C220QP-F	2100	C225QPT-G
	C215QPT-B		C220QPT-F		
420	C215QP-D				
	C215QPT-D				

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Communication MP-Bus®	Emergency control function	Nominal voltage AC/DC 24 V	Running time motor	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]
Standard actuators [1]														
1 Nm	•	•				24 V	75 s	CQ24A	700	350	700	350	700	350
			•					CQ24A-SR	700	350	700	350	700	350
	•	•				230 V	75 s	CQ230A	700	350	700	350	700	350
				•		24 V	75 s	CQ24A-MPL	700	350	700	350	700	350
Actuator with emergency control function NC [2]														
1 Nm	•				⊣⊢	24 V	75 s	CQK24A	700	350	700	350	700	350
			•		⊣⊢			CQK24A-SR	700	350	700	350	700	350
	•				⊣⊢	230 V	75 s	CQK230A	700	350	700	350	700	350
Fast runners														
1 Nm	•	•				230 V	35 s	CQC230A	700	350	700	350	700	350
	•	•					15 s	CQD230A	700	350	700	350	700	350



CQ..

CQK..

[1] Standard actuators with connecting terminals present (e.g. CQ24A-T)
[2] Actuators with emergency control function NO present (e.g. CQK24A-O)

Pressure-independent flow limiter valve (PIFLV) / Internal thread /PN 16

DN 15 – 25

C2..QFL-..

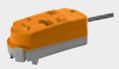
R225FL-..

Range of use	Closed water circuit (pH < 7)
Medium temperature	2...60 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)
Closing pressure	Δps: 520 kPa
Max. differential pressure	Δpmax: 280 kPa

Suitable actuators

DN 15		DN 20		DN 25	
Vnom [l/h]	Valve type	Vnom [l/h]	Valve type	Vnom [l/h]	Valve type
290	C215QFL-C	1200	C220QFL-F6	2650	R225FL-H2 [3]
470	C215QFL-D	1500	C220QFL-G0	3600	R225FL-J
650	C215QFL-E	1900	C220QFL-G		
940	C215QFL-F0 [3]	2350	C220QFL-H0		
1300	C215QFL-F	2900	C220QFL-H		

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V	Running time motor 90°	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]
Standard actuators [1]												
1 Nm	•	•		24 V	75 s	CQ24A	700	350	700	350		
	•	•		230 V	75 s	CQ230A	700	350	700	350		
5 Nm	•	•		24 V	90 s	LR24A					700	350
	•	•		230 V	90 s	LR230A					700	350
Actuator with emergency control function NC [2]												
1 Nm	•		⊣⊢	24 V	75 s	CQK24A	700	350	700	350		
	•		⊣⊢	230 V	75 s	CQK230A	700	350	700	350		



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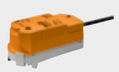
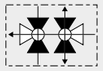


CQK..

[1] Standard actuators with connecting terminals present (e.g. CQ24A-T)
[2] Actuators with emergency control function NO present (e.g. CQK24A-O)
[3] Availability of goods and services 2nd Quarter 2019

BELIMO

DN 15 / DN 20



Range of use	Closed water circuit (pH > 7)
Medium temperature	6...80 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Linear flow characteristic	Sequence I:_0...30° Dead zone:_30...60° Sequence II:60...90°
Leakage rate	Leakage rate A, air bubble tight (EN 12266-1)

R30..-..-..-..

DN 15			DN 20		
k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type	k_{vs} [m³/h] Sequence I	k_{vs} [m³/h] Sequence II	Valve type
0.25	0.25	R3015-P25-P25-B2			
	0.4	R3015-P25-P4-B2			
	0.63	R3015-P25-P63-B2			
	1	R3015-P25-1-B2			
	1.3	R3015-P25-1P3-B2			
	1.8	R3015-P25-1P8-B2			
0.4	0.25	R3015-P4-P25-B2			
	0.4	R3015-P4-P4-B2			
	0.63	R3015-P4-P63-B2			
	1	R3015-P4-1-B2			
	1.3	R3015-P4-1P3-B2			
	1.8	R3015-P4-1P8-B2			
0.63	0.25	R3015-P63-P25-B2			
	0.4	R3015-P63-P4-B2			
	0.63	R3015-P63-P63-B2			
	1	R3015-P63-1-B2		1.6	R3020-P63-1P6-B2
	1.3	R3015-P63-1P3-B2	0.63	2.5	R3020-P63-2P5-B2
	1.8	R3015-P64-1P8-B2		4	R3020-P63-4-B2
1	0.25	R3015-1-P25-B2		1.6	R3020-1-1P6-B2
	0.4	R3015-1-P4-B2	1	2.5	R3020-1-2P5-B2
	0.63	R3015-1-P63-B2		4	R3020-1-4-B2
	1	R3015-1-1-B2		0.63	R3020-1P6-P63-B2
	1.3	R3015-1-1P3-B2		1	R3020-1P6-1-B2
	1.8	R3015-1-1P8-B2	1.6	1.6	R3020-1P6-1P6-B2
1.3	0.25	R3015-1P3-P25-B2		2.5	R3020-1P6-2P5-B2
	0.4	R3015-1P3-P4-B2		4	R3020-1P6-4-B2
	0.63	R3015-1P3-P63-B2		0.63	R3020-2P5-P63-B2
	1	R3015-1P3-1-B2		1	R3020-2P5-1-B2
	1.3	R3015-1P3-1P3-B2	2.5	1.6	R3020-2P5-1P6-B2
	1.8	R3015-1P3-1P8-B2		2.5	R3020-2P5-2P5-B2
1.8	0.25	R3015-1P8-P25-B2		4	R3020-2P5-4-B2
	0.4	R3015-1P8-P4-B2		0.63	R3020-4-P63-B2
	0.63	R3015-1P8-P63-B2		1	R3020-4-1-B2
	1	R3015-1P8-1-B2	4	1.6	R3020-4-1P6-B2
	1.3	R3015-1P8-1P3-B2		2.5	R3020-4-2P5-B2
	1.8	R3015-1P8-1P8-B2		4	R3020-4-4-B2

Suitable actuators

LR..

Nominal torque	Modulating (2...10 V)	Modulating (2...10 V, variable)	MP-Bus® communication [1]	Nominal voltage 24 V AC/DC	Running time motor 90°	Actuator type	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
5 Nm	•			24 V	90 s	LR24A-SR	350	100	350	100
		•	•			LR24A-MP	350	100	350	100

Suitable actuators

NR..

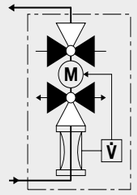
Nominal torque	Modulating (2...10 V)	Modulating (2...10 V, variable)	Communication MP-Bus®	Nominal voltage AC/DC 24 V	Running time motor 90°	Actuator type	DN 25 kvs [m3/h] Sequence I	DN 25 kvs [m3/h] Sequence II	DN 25 Valve type	Δp_s [kPa]	Δp_{max} [kPa]
							6.3	6.3	R3025-6P3-6P3-B3		
10 Nm	•			24 V	90 s	NR24A-SR				350	100
		•	•			NR24A-MP				350	100

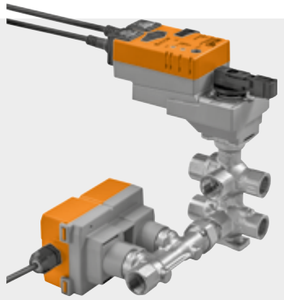
[1] Control, operating range, position feedback, running time and further functions are adjustable on MP types using PC-Tool.

BELIMO

DN 15 / DN 20

Range of use	Closed water circuit (pH > 7)
Medium temperature	6...80 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Flow characteristic	Linear
Leakage rate	Leakage rate A, air bubble tight (EN 12266-1)
Vmax	Freely adjustable 5... 100% of V_{nom}
Control, operating range, position feedback, running time and further functions are parameterisable with NFC-App and ZTH EU	





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

5

Pressure-independent characterised control valves

Complete transparency and highest efficiency

Belimo Energy Valve™	Internal thread	2-way	PN 16	DN 15 – 50	14
	Flange			DN 65 – 150	15
Electronic pressure-independent characterised control valves (EPIV)	Internal thread	2-way	PN 16	DN 15 – 50	16
	Flange			DN 65 – 150	17

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

Valve Sizer App

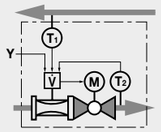
You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

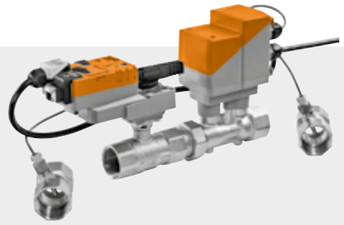
Download on the App Store

GET IT ON Google Play

DN 15 – 50

Range of use	Closed water circuit (pH > 7)
Medium temperature	–10...120 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Flow characteristic	Equal percentage (acc. to VDI/VDE 2178) Can be switched to linear
Leakage rate	A, air bubble tight (EN 12266-1)
V_{max}	Freely adjustable 30... 100% of V_{nom}
Completely parameterisable by means of integrated web server	
Optional with connection to the Belimo Cloud	
Sensor-guided flow-through or power control	
Delta-T manager for optimum differential temperature	





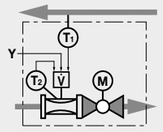
BELIMO CLOUD

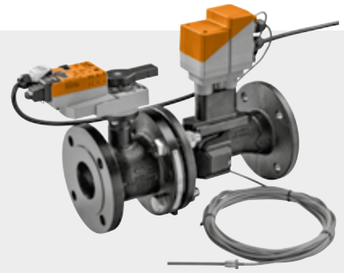
DN	Rp	V_{nom}	V_{nom}	Nominal voltage AC/DC 24 V	Modulating (2 ... 10 V, variable)	MP-Bus® communication	Communication BACnet®	Modbus communication	Glycol monitoring [1]	Valve type with actuator	Δp_s [kPa]	Δp_{max} [kPa]
With standard actuator												
15	1/2"	0.35 l/s	21 l/min	24 V	•	•	•	•		EV015R+BAC	1400	350
					•	•	•	•	•	EV015R+BAC1	1400	350
20	3/4"	0.65 l/s	39 l/min	24 V	•	•	•	•		EV020R+BAC	1400	350
					•	•	•	•	•	EV020R+BAC1	1400	350
25	1"	1.15 l/s	69 l/min	24 V	•	•	•	•		EV025R+BAC	1400	350
					•	•	•	•	•	EV025R+BAC1	1400	350
32	1 1/4"	1.8 l/s	108 l/min	24 V	•	•	•	•		EV032R+BAC	1400	350
					•	•	•	•	•	EV032R+BAC1	1400	350
40	1 1/2"	2.5 l/s	150 l/min	24 V	•	•	•	•		EV040R+BAC	1400	350
					•	•	•	•	•	EV040R+BAC1	1400	350
50	2"	4.8 l/s	288 l/min	24 V	•	•	•	•		EV050R+BAC	1400	350
					•	•	•	•	•	EV050R+BAC1	1400	350
With electrical emergency control function (SuperCap)												
15	1/2"	0.35 l/s	21 l/min	24 V	•	•	•	•		EV015R+KBAC	1400	350
					•	•	•	•	•	EV015R+KBAC1	1400	350
20	3/4"	0.65 l/s	39 l/min	24 V	•	•	•	•		EV020R+KBAC	1400	350
					•	•	•	•	•	EV020R+KBAC1	1400	350
25	1"	1.15 l/s	69 l/min	24 V	•	•	•	•		EV025R+KBAC	1400	350
					•	•	•	•	•	EV025R+KBAC1	1400	350
32	1 1/4"	1.8 l/s	108 l/min	24 V	•	•	•	•		EV032R+KBAC	1400	350
					•	•	•	•	•	EV032R+KBAC1	1400	350
40	1 1/2"	2.5 l/s	150 l/min	24 V	•	•	•	•		EV040R+KBAC	1400	350
					•	•	•	•	•	EV040R+KBAC1	1400	350
50	2"	4.8 l/s	288 l/min	24 V	•	•	•	•		EV050R+KBAC	1400	350
					•	•	•	•	•	EV050R+KBAC1	1400	350

[1] Optimum heat transfer can be ensured with the monitoring of the glycol content.

DN 65 – 150

Range of use	Closed water circuit (pH > 7)
Medium temperature	–10...120 °C
Pipe connection	Flange PN 16 (EN 1092-2)
Flow characteristic	Equal percentage (acc. to VDI/VDE 2178) Can be switched to linear
Leakage rate	A, air bubble tight (EN 12266-1)
V_{max}	Freely adjustable 45... 100% of V_{nom}
Completely parameterisable by means of integrated web server	
Optional with connection to the Belimo Cloud	
Sensor-guided flow-through or power control	
Delta-T manager for optimum differential temperature	



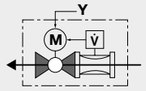


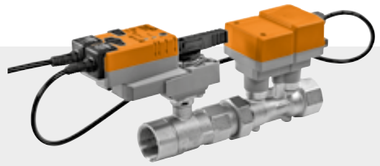
BELIMO CLOUD

DN	V_{nom}	V_{nom}	Nominal voltage AC/DC 24 V	Modulating (2 ... 10 V, variable)	MP-Bus® communication	Communication BACnet®	Modbus communication	Glycol monitoring [1]	Valve type with actuator	Δp_s [kPa]	Δp_{max} [kPa]
With standard actuator											
65	8 l/s	480 l/min	24 V	•	•	•	•		P6065W800EV-BAC	690	340
				•	•	•	•		EV065F+BAC [2]	690	340
				•	•	•	•	•	EV065F+BAC1 [2]	690	340
80	11 l/s	660 l/min	24 V	•	•	•	•		P6080W1100EV-BAC	690	340
				•	•	•	•		EV080F+BAC [2]	690	340
				•	•	•	•	•	EV080F+BAC1 [2]	690	340
100	20 l/s	1200 l/min	24 V	•	•	•	•		P6100W2000EV-BAC	690	340
				•	•	•	•		EV100F+BAC [2]	690	340
				•	•	•	•	•	EV100F+BAC1 [2]	690	340
125	31 l/s	1860 l/min	24 V	•	•	•	•		P6125W3100EV-BAC	690	340
				•	•	•	•		EV125F+BAC [2]	690	340
				•	•	•	•	•	EV125F+BAC1 [2]	690	340
150	45 l/s	2700 l/min	24 V	•	•	•	•		P6150W4500EV-BAC	690	340
				•	•	•	•		EV150F+BAC [2]	690	340
				•	•	•	•	•	EV150F+BAC1 [2]	690	340
With electrical emergency control function (SuperCap)											
65	8 l/s	480 l/min	24 V	•	•	•	•		P6065W800EV-KBAC	690	340
				•	•	•	•		EV065F+KBAC [2]	690	340
				•	•	•	•	•	EV065F+KBAC1 [2]	690	340
80	11 l/s	660 l/min	24 V	•	•	•	•		P6080W1100EV-KBAC	690	340
				•	•	•	•		EV080F+KBAC [2]	690	340
				•	•	•	•	•	EV080F+KBAC1 [2]	690	340
100	20 l/s	1200 l/min	24 V	•	•	•	•		P6100W2000EV-KBAC	690	340
				•	•	•	•		EV100F+KBAC [2]	690	340
				•	•	•	•	•	EV100F+KBAC1 [2]	690	340
125	31 l/s	1860 l/min	24 V	•	•	•	•		P6125W3100EV-KBAC	690	340
				•	•	•	•		EV125F+KBAC [2]	690	340
				•	•	•	•	•	EV125F+KBAC1 [2]	690	340
150	45 l/s	2700 l/min	24 V	•	•	•	•		P6150W4500EV-KBAC	690	340
				•	•	•	•		EV150F+KBAC [2]	690	340
				•	•	•	•	•	EV150F+KBAC1 [2]	690	340

[1] Optimum heat transfer can be ensured with the monitoring of the glycol content.
[2] The EV..F+(K)BAC types shall replace the P6..EV-(K)BAC types over the course of 2019. Please get in touch with your local BELIMO contact person should you have any questions.

DN 15 – 50

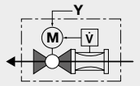


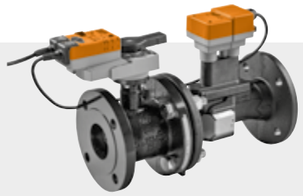


Range of use	Closed water circuit (pH > 7)
Medium temperature	–10...120 °C
Pipe connection	Internal thread Rp (ISO 7-1)
Flow characteristic	Equal percentage (acc. to VDI/VDE 2178) Can be switched to linear
Leakage rate	A, air bubble tight (EN 12266-1)
V_{max}	Freely adjustable 30... 100% of V_{nom}
Control, operating range, position feedback and further functions are parameterisable with PC-Tool	

DN	Rp	V_{nom}	V_{nom}	Nominal voltage AC/DC 24 V	Modulating (2... 10 V, variable)	MP-Bus® communication	Modbus communication	Communication BACnet®	Valve type with actuator	Δp_s [kPa]	Δp_{max} [kPa]
With standard actuator											
15	1/2"	0.35 l/s	21 l/min	24 V	•	•			EP015R+MP	1400	350
20	3/4"	0.65 l/s	39 l/min	24 V	•	•			EP020R+MP	1400	350
25	1"	1.15 l/s	69 l/min	24 V	•	•			EP025R+MP	1400	350
32	1 1/4"	1.8 l/s	108 l/min	24 V	•	•			EP032R+MP	1400	350
40	1 1/2"	2.5 l/s	150 l/min	24 V	•	•			EP040R+MP	1400	350
50	2"	4.8 l/s	288 l/min	24 V	•	•			EP050R+MP	1400	350
With electrical emergency control function (SuperCap)											
15	1/2"	0.35 l/s	21 l/min	24 V	•	•			EP015R+KMP	1400	350
20	3/4"	0.65 l/s	39 l/min	24 V	•	•			EP020R+KMP	1400	350
25	1"	1.15 l/s	69 l/min	24 V	•	•			EP025R+KMP	1400	350
32	1 1/4"	1.8 l/s	108 l/min	24 V	•	•			EP032R+KMP	1400	350
40	1 1/2"	2.5 l/s	150 l/min	24 V	•	•			EP040R+KMP	1400	350
50	2"	4.8 l/s	288 l/min	24 V	•	•			EP050R+KMP	1400	350
With Modbus actuator											
15	1/2"	0.35 l/s	21 l/min	24 V	•		•	•	EP015R+MOD	1400	350
20	3/4"	0.65 l/s	39 l/min	24 V	•		•	•	EP020R+MOD	1400	350
25	1"	1.15 l/s	69 l/min	24 V	•		•	•	EP025R+MOD	1400	350
32	1 1/4"	1.8 l/s	108 l/min	24 V	•		•	•	EP032R+MOD	1400	350
40	1 1/2"	2.5 l/s	150 l/min	24 V	•		•	•	EP040R+MOD	1400	350
50	2"	4.8 l/s	288 l/min	24 V	•		•	•	EP050R+MOD	1400	350

DN 65 – 150





Range of use	Closed water circuit (pH > 7)
Medium temperature	–10...120 °C
Pipe connection	Flange PN 16 (EN 1092-2)
Flow characteristic	Equal percentage (acc. to VDI/VDE 2178) Can be switched to linear
Leakage rate	A, air bubble tight (EN 12266-1)
V_{max}	Freely adjustable 45... 100% of V_{nom}
Control, operating range, position feedback and further functions are parameterisable with PC-Tool	

DN	V_{nom}	V_{nom}	Nominal voltage AC/DC 24 V	Modulating (2... 10 V, variable)	MP-Bus® communication	Modbus communication	Communication BACnet®	Valve type with actuator	Δp_s [kPa]	Δp_{max} [kPa]
With standard actuator										
65	8 l/s	480 l/min	24 V	•	•			P6065W800E-MP	690	340
				•	•			EP065F+MP [1)]	690	340
80	11 l/s	660 l/min	24 V	•	•			P6080W1100E-MP	690	340
				•	•			EP080F+MP [1)]	690	340
100	20 l/s	1200 l/min	24 V	•	•			P6100W2000E-MP	690	340
				•	•			EP100F+MP [1)]	690	340
125	31 l/s	1860 l/min	24 V	•	•			P6125W3100E-MP	690	340
				•	•			EP125F+MP [1)]	690	340
150	45 l/s	2700 l/min	24 V	•	•			P6150W4500E-MP	690	340
				•	•			EP150F+MP [1)]	690	340
With electrical emergency control function (SuperCap)										
65	8 l/s	480 l/min	24 V	•	•			P6065W800E-KMP	690	340
				•	•			EP065F+KMP [1)]	690	340
80	11 l/s	660 l/min	24 V	•	•			P6080W1100E-KMP	690	340
				•	•			EP080F+KMP [1)]	690	340
100	20 l/s	1200 l/min	24 V	•	•			P6100W2000E-KMP	690	340
				•	•			EP100F+KMP [1)]	690	340
125	31 l/s	1860 l/min	24 V	•	•			P6125W3100E-KMP	690	340
				•	•			EP125F+KMP [1)]	690	340
150	45 l/s	2700 l/min	24 V	•	•			P6150W4500E-KMP	690	340
				•	•			EP150F+KMP [1)]	690	340
With Modbus actuator										
65	8 l/s	480 l/min	24 V	•		•	•	P6065W800E-MOD	690	340
				•		•	•	EP065F+MOD [1)]	690	340
80	11 l/s	660 l/min	24 V	•		•	•	P6080W1100E-MOD	690	340
				•		•	•	EP080F+MOD [1)]	690	340
100	20 l/s	1200 l/min	24 V	•		•	•	P6100W2000E-MOD	690	340
				•		•	•	EP100F+MOD [1)]	690	340
125	31 l/s	1860 l/min	24 V	•		•	•	P6125W3100E-MOD	690	340
				•		•	•	EP125F+MOD [1)]	690	340
150	45 l/s	2700 l/min	24 V	•		•	•	P6150W4500E-MOD	690	340
				•		•	•	EP150F+MOD [1)]	690	340

[1)] The EP..F+(K)MP/MOD types shall replace the P6..E-(K)MP/MOD types over the course of 2019. Please get in touch with your local BELIMO contact person should you have any questions.

Subject to technical modifications

6

Characterised control valves (CCV)

Reliable control of
heating and cooling circuits

Internal thread	2-way	PN 16	DN 15 – 50	20
	3-way			
External thread	2-way	PN 16	DN 10 – 50	22
	3-way			
Flange	2-way	PN 6	DN 15 – 50	24
	3-way			
	2-way	PN 16	DN 65 – 150	26
External thread	2-way / 130 °C	PN 25	DN 10 – 20	28

**Refer to the data sheets or notes
for project planning for further technical data to be observed.**

Valve Sizer App

You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

Download on the App Store

GET IT ON Google Play

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BELIMO

Characterised control valves
Internal thread / PN 16

DN 15 – 50

Pipe connection	Internal thread Rp (ISO 7-1)
Medium temperature	–10...120 °C (small actuators TR../TRY.. only up to 100 °C)
Flow characteristic	A-AB equal percentage / B-AB linear (k_{vs} 70% of A-AB)
Leakage rate	Control path A–AB: leakage rate A, tight (EN 12266-1) / bypass B–AB: leakage class I

Closed and open water circuit (pH >7)

2-way

DN 15 k_{vs} [m³/h]	Valve type	DN 20 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
4	R2015-4-S1	6.3	R2020-6P3-S2
6.3	R2015-6P3-S1	8.6	R2020-8P6-S2

Closed water circuit (pH >7)

3-way

DN 15 k_{vs} [m³/h]	Valve type	DN 20 k_{vs} [m³/h]	Valve type
0.25	R3015-P25-S1		
0.4	R3015-P4-S1		
0.63	R3015-P63-S1		
1	R3015-1-S1		
1.6	R3015-1P6-S1		
2.5	R3015-2P5-S1	4	R3020-4-S2
4	R3015-4-S1	6.3	R3020-6P3-S2

DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type
6.3	R2025-6P3-S2						
10	R2025-10-S2			16	R2040-16-S3		
16	R2025-16-S2	16	R2032-16-S3	25	R2040-25-S3	25	R2050-25-S4
						40	R2050-40-S4

DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type
								25	R3050-25-S4
6.3	R3025-6P3-S2							40	R3050-40-S4
10	R3025-10-S2	16	R3032-16-S3	16	R3040-16-S3	25	R3040-25-S4	58	R3050-58-S4

Suitable actuators

Small and compact actuators

TR..
TRY..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
2 Nm	•	•			24 V	100 s		TR24 [2]	1400	350										
		•			230 V	105 s		TR230-3 [2]	1400	350										
			•		24 V	90 s		TR24-SR [2]	1400	350										
			•		24 V	35 s		TRY24-SR [2]	1400	350										

Standard actuators

LR..
NR..
SR..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type without auxiliary switch	with auxiliary switch	Δp_s [kPa]	Δp_{max} [1] [kPa]	Δp_s [kPa]	Δp_{max} [1] [kPa]
5 Nm	•	•			24 V	90 s		LR24A	..-S	1400	350	1400	350
	•	•			230 V			LR230A	..-S	1400	350	1400	350
			•		24 V			LR24A-SR		1400	350	1400	350
10 Nm	•	•			24 V	90 s		NR24A	..-S	1400	350	1400	350
	•	•			230 V			NR230A	..-S	1400	350	1400	350
			•		24 V			NR24A-SR		1400	350	1400	350
20 Nm	•	•			24 V	90 s		SR24A	..-S	1400	350	1400	350
	•	•			230 V			SR230A	..-S	1400	350	1400	350
			•		24 V			SR24A-SR		1400	350	1400	350

Continued next page

Continued from previous page

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]
1400	350								
1400	350								
1400	350								
1400	350	1400	350	1400	350				
1400	350	1400	350	1400	350				
1400	350	1400	350	1400	350				
1400	350	1400	350	1400	350	1400	350	1400	350
1400	350	1400	350	1400	350	1400	350	1400	350
1400	350	1400	350	1400	350	1400	350	1400	350

Fast runners and very fast runners

TRC..
LRC..
NRC..
SRC..

TRF..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
2 Nm			•		24 V	15 s		TRC24A-SR	1400	350										
5 Nm			•		24 V	35 s		LRC24A-SR	1400	350	1400	350								
10 Nm			•		24 V	45 s		NRC24A-SR	1400	350	1400	350								
20 Nm			•		24 V	35 s		SRC24A-SR	1400	350	1400	350								

Actuators with mechanical emergency control function

LRF..

NRF..
SRF..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 2 auxiliary switches	Actuator type NO without auxiliary switch	Actuator type NO with 2 auxiliary switches	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]
2 Nm			•	⊛	24 V	90 s	<25 s	TRF24-SR [2]		..-O		1400	350								
4 Nm			•	⊛	24 V	150 s	<20 s	LRF24-SR [2]				1400	350	1400	350						
10 Nm			•	⊛	24 V	90 s	<20 s	NRF24A-SR	..-S2	..-O	..-S2-O	1400	350	1400	350						
20 Nm			•	⊛	24 V	90 s	<20 s	SRF24A-SR	..-S2	..-O	..-S2-O	1400	350	1400	350	1400	350				

[1] Low-noise operation Δp_{max} = 200 kPa.
[2] If medium temperature ≥100 °C, then line and valve must be insulated.

Subject to technical modifications

DN 10 – 50

Pipe connection	External thread G (ISO 228-1)
Medium temperature	6...100 °C (DN 10 – 50: –10...5 °C with spindle heating) not with R4..K, R5..K, R538 and R548
Flow characteristic	A-AB equal percentage / B-AB linear (k_{vs} 70% of A-AB)
Leakage rate	Control path A–AB: leakage rate A, tight (EN 12266-1) / bypass B–AB: leakage class I

Closed and open water circuit (pH >7)

2-way

DN 10 k_{vs} [m³/h]	Valve type	DN 15 k_{vs} [m³/h]	Valve type
		0.63	R409
0.25	R405K	1	R410
0.4	R406K	1.6	R411
0.63	R407K	2.5	R412
1	R408K	4	R413
1.6	R409K	6.3	R414

Closed and open water circuit (pH >7)

3-way

DN 10 k_{vs} [m³/h]	Valve type	DN 15 k_{vs} [m³/h]	Valve type
		0.63	R509
0.25	R505K	1	R510
0.4	R506K	1.6	R511
0.63	R507K	2.5	R512
1	R508K	4	R513

DN 20 k_{vs} [m³/h]	Valve type	DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type
4	R417	6.3	R422						
6.3	R418	10	R423						
8.6	R419	16	R424	16	R431	16	R438	25	R448
						25	R439	40	R449

DN 20 k_{vs} [m³/h]	Valve type	DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type
4	R517	6.3	R522						
6.3	R518	10	R523	16	R531	16	R538	25	R548

Suitable actuators

Continued from previous page

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
Small and compact actuators																		
2 Nm	•	•			24 V	100 s		TR24	1400	200	1400	200	1400	200	1400	200	1400	200
		•			230 V	105 s		TR230-3	1400	200	1400	200	1400	200	1400	200	1400	200
			•		24 V	90 s		TR24-SR	1400	200	1400	200	1400	200	1400	200	1400	200
			•		24 V	35 s		TRY24-SR	1400	200	1400	200	1400	200	1400	200	1400	200
Standard actuators								Actuator type without auxiliary switch / with auxiliary switch										
5 Nm	•	•			24 V	90 s		LR24A / ..-S	1400	200	1400	200	1400	200	1400	200	1400	200
	•	•			230 V			LR230A / ..-S	1400	200	1400	200	1400	200	1400	200	1400	200
			•		24 V			LR24A-SR /	1400	200	1400	200	1400	200	1400	200	1400	200
10 Nm	•	•			24 V	90 s		NR24A / ..-S	1400	200	1400	200	1400	200	1400	200	1400	200
	•	•			230 V			NR230A / ..-S	1400	200	1400	200	1400	200	1400	200	1400	200
			•		24 V			NR24A-SR /	1400	200	1400	200	1400	200	1400	200	1400	200
20 Nm	•	•			24 V	90 s		SR24A / ..-S	1400	200	1400	200	1400	200	1400	200	1400	200
	•	•			230 V			SR230A / ..-S	1400	200	1400	200	1400	200	1400	200	1400	200
			•		24 V			SR24A-SR /	1400	200	1400	200	1400	200	1400	200	1400	200
Fast runners and very fast runners								Actuator type										
2 Nm			•		24 V	15 s		TRC24A-SR	1400	200	1400	200	1400	200	1400	200	1400	200
5 Nm			•		24 V	35 s		LRC24A-SR	1400	200	1400	200	1400	200	1400	200	1400	200
10 Nm			•		24 V	45 s		NRC24A-SR	1400	200	1400	200	1400	200	1400	200	1400	200
20 Nm			•		24 V	35 s		SRC24A-SR	1400	200	1400	200	1400	200	1400	200	1400	200
Actuators with mechanical emergency control function								Actuator type NC: without auxiliary switch / with 2 auxiliary switches; Actuator type NO: without auxiliary switch / with 2 auxiliary switches										
2 Nm			•		24 V	90 s	<25 s	TRF24-SR / / ..-O /	1400	200	1400	200	1400	200	1400	200	1400	200
4 Nm			•		24 V	150 s	<20 s	LRF24-SR	1400	200	1400	200	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

TR..
TRY..

LR..
NR..
SR..

TRC..
LRC..
NRC..
SRC..

TRF..

LRF..

NRF..
SRF..

Continued next page

Characterised control valves
Flange / PN 6

DN 15 – 50

Pipe connection	Flange PN 6 (EN 1092-1/4)
Medium temperature	–10...100 °C
Flow characteristic	A-AB equal percentage / B-AB linear (k_{VS} 70% of A-AB)
Leakage rate	Control path A–AB: leakage rate A, tight (EN 12266-1) / bypass B–AB: leakage class I

Closed and open water circuit (pH >7)

2-way

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

Closed water circuit (pH >7)

3-way

DN 15 k_{vs} [m³/h]	Valve type	DN 20 k_{vs} [m³/h]	Valve type	DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type
0.63	R7015RP63-B1										
1.6	R7015R1P6-B1										
4	R7015R4-B1	6.3	R7020R6P3-B1	10	R7025R10-B2	16	R7032R16-B3	16	R7040R16-B3	25	R7050R25-B3

Suitable actuators

Small and compact actuators

TR.. TRY..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
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								
			•		24 V	35 s		TRY24-SR	600	100	600	100								

Standard actuators

LR.. NR.. SR..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type without auxiliary switch	with auxiliary switch	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]
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
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 runners and very fast runners

TRC.. LRC.. NRC.. SRC..

TRF..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
2 Nm			•		24 V	15 s		TRC24A-SR	600	100	600	100								
5 Nm			•		24 V	35 s		LRC24A-SR	600	100	600	100	600	100						
10 Nm			•		24 V	45 s		NRC24A-SR	600	100	600	100	600	100	600	100	600	100	600	100
20 Nm			•		24 V	35 s		SRC24A-SR	600	100	600	100	600	100	600	100	600	100	600	100

Actuators with mechanical emergency control function

LRF..

NRF.. SRF..

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 2 auxiliary switches	Actuator type NO without auxiliary switch	Actuator type NO with 2 auxiliary switches	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]
2 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								
10 Nm			•	⊛	24 V	90 s	<20 s	NRF24A-SR	..-S2	..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100	600	100
20 Nm			•	⊛	24 V	90 s	<20 s	SRF24A-SR	..-S2	..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100	600	100

Continued next page

Continued from previous page

Characterised control valves
6

Subject to technical modifications

Characterised control valves
Flange / PN 16

DN 65 – 150

Pipe connection	Flange PN 16 (EN 1092-2)
Medium temperature	–10...120 °C
Flow characteristic	A-AB, equal percentage
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators

Closed water circuit (pH >7)

2-way

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Auxiliary switch SPDT	Actuator type	DN 65 k_{vs} [m³/h]	DN 65 Valve type	DN 80 k_{vs} [m³/h]	DN 80 Valve type	DN 100 k_{vs} [m³/h]	DN 100 Valve type	DN 125 k_{vs} [m³/h]	DN 125 Valve type	DN 150 k_{vs} [m³/h]	DN 150 Valve type
										63	R6065W63-S8	100	R6080W100-S8	160	R6100W160-S8	250	R6125W250-S8	320	R6150W320-S8
Standard actuators									**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]**
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						
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
Fast runners									**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]**
20 Nm			•		24 V	35 s			SRC24A-SR-5	690	400	690	400						

Actuators with emergency control function NC/NO

Nominal torque	Open-close	3-point	Modulating (2...10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Auxiliary switch SPDT	Actuator type NC	Actuator type NO	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]
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										
			•	✓	24 V	90 s	<20 s		SRF24A-SR-5	..-O	690	400	690	400						
			•	✓				2	SRF24A-SR-S2-5	..-O										
40 Nm	•			⊣⊢	24 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

✓ = actuators with mechanical emergency control function.
⊣⊢ = actuators with electrical emergency control function. The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator.

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

Continued next page

Continued from previous page

Characterised control valves
6

Subject to technical modifications

DN 10 – 20

Pipe connection	External thread G (ISO 228-1)
Medium temperature	2...130 °C
Flow characteristic	A-AB, equal percentage
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)
Z value min.	0.3 (EN 12266), cavitation factor with a fully open valve

Closed and open water circuit (pH >7)

2-way

DN 10 k_{vs} [m³/h]	DN 10 Valve type	DN 15 k_{vs} [m³/h]	DN 15 Valve type	DN 20 k_{vs} [m³/h]	DN 20 Valve type
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

Suitable actuators

LR..

Standard actuators	Nominal torque	Open-close	3-point	Modulating (2... 10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 10 Δp_s [kPa]	DN 10 Δp_{v100} [kPa]	DN 10 Δp_{v0} [kPa]	DN 15 Δp_s [kPa]	DN 15 Δp_{v100} [kPa]	DN 15 Δp_{v0} [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{v100} [kPa]	DN 20 Δp_{v0} [kPa]
	5 Nm	•	•			24 V	90 s		LR24A	1400	400	800	1400	400	800	1400	400	800
		•	•			230 V			LR230A	1400	400	800	1400	400	800	1400	400	800
				•		24 V			LR24A-SR	1400	400	800	1400	400	800	1400	400	800

LRC..

Fast runners and very fast runners	Nominal torque	Open-close	3-point	Modulating (2... 10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 10 Δp_s [kPa]	DN 10 Δp_{v100} [kPa]	DN 10 Δp_{v0} [kPa]	DN 15 Δp_s [kPa]	DN 15 Δp_{v100} [kPa]	DN 15 Δp_{v0} [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{v100} [kPa]	DN 20 Δp_{v0} [kPa]
	5 Nm			•		24 V	35 s		LRC24A-SR	1400	400	800	1400	400	800	1400	400	800

LRF..

Actuators with emergency control function NC	Nominal torque	Open-close	3-point	Modulating (2... 10 V)	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 10 Δp_s [kPa]	DN 10 Δp_{v100} [kPa]	DN 10 Δp_{v0} [kPa]	DN 15 Δp_s [kPa]	DN 15 Δp_{v100} [kPa]	DN 15 Δp_{v0} [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{v100} [kPa]	DN 20 Δp_{v0} [kPa]
	4 Nm			•	⟲	24 V	150 s	<20 s	LRF24-SR [1]	1400	400	800	1400	400	800	1400	400	800

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

Subject to technical modifications

7

Globe valves

Energy-optimised control of steam, cold water,
low temperature hot water and high temperature water circuits

External thread	PN 16	2-way 3-way	DN 15 – 50	30
Flange	PN 6	2-way 3-way	DN 15 – 100	32
	PN 16	2-way 3-way	DN 15 – 100 (≤120 °C) DN 15 – 150 (≤120 °C)	34
	PN 16	2-way 3-way	DN 15 – 150 (≤150 °C) DN 15 – 100 (≤150 °C)	36
	PN 16 partly pressure-balanced	2-way	DN 40 – 150	38
	PN 16	2-way 3-way	DN 200 / DN 250	40
	PN 25	2-way 3-way	DN 15 – 50 DN 15 – 100	42
	PN 25 partly pressure-balanced	2-way	DN 65 – 100	44
Internal thread	PN 25 / stainless steel for special applications	2-way 3-way	DN 15 – 50	48

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

Valve Sizer App

You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

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BELIMO

BELIMO

DN 15 – 50

Pipe connection	External thread G (ISO 228-1)
Medium temperature	5...120 °C (–10...5 °C with spindle heating)
Flow characteristic	A-AB equal percentage / B-AB linear
Leakage rate	Control path A-AB: max. 0.05% of k_{VS} value bypass B-AB: max. 1% of k_{VS} value
Media	Cold and hot water, water with glycol up to max. 50 vol. %

Closed and open water circuit (pH >7)

2-way

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	DN 32 k_{VS} [m³/h]	DN 32 Valve type	DN 40 k_{VS} [m³/h]	DN 40 Valve type	DN 50 k_{VS} [m³/h]	DN 50 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

Closed and open water circuit (pH >7)

3-way

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	DN 32 k_{VS} [m³/h]	DN 32 Valve type	DN 40 k_{VS} [m³/h]	DN 40 Valve type	DN 50 k_{VS} [m³/h]	DN 50 Valve type
0.63	H511B										
1	H512B										
1.6	H513B										
2.5	H514B										
4	H515B	6.3	H520B	10	H525B	16	H532B	25	H540B	40	H550B

Suitable actuators

LV..
NV..
SV..

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
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
			•	•				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

LVC..
NVC..
SVC..

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
Fast runners																					
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
					•	•		24 V	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
					•	•		24 V	SVC24A-MP-TPC	1600	400	1600	400	1600	400	1600	400	900	400	550	400

NVK..
NVKC..

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
Actuators with electrical emergency control function [2]																					
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC [3]	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 are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted. Closing point of the globe valves H..B is at top (valve stem extended).
[3] Nominal voltage AC 24 V

Globe valves
7

Subject to technical modifications

BELIMO

BELIMO

Globe valves
Flange / PN 6

DN 15 – 100

Pipe connection	Flange PN 6 (ISO 7005-2)
Medium temperature	5...120 °C (–10...5 °C with spindle heating)
Flow characteristic	A-AB equal percentage / B-AB linear
Leakage rate	Control path A–AB: max. 0.05% of k_{vs} value / Bypass B-AB: max. 1% of k_{vs} value
Media	Cold and hot water, water with glycol up to max. 50 vol. %

Closed cold and hot water systems

2-way

DN 15 k_{vs} [m³/h]	Valve type	DN 20 k_{vs} [m³/h]	Valve type
0.63	H611R		
1	H612R		
1.6	H613R		
2.5	H614R	6.3	H620R
4	H615R		

Closed cold and hot water systems

3-way

DN 15 k_{vs} [m³/h]	Valve type	DN 20 k_{vs} [m³/h]	Valve type
0.63	H711R		
1	H712R		
1.6	H713R		
2.5	H714R	6.3	H720R
4	H715R		

DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type	DN 65 k_{vs} [m³/h]	Valve type	DN 80 k_{vs} [m³/h]	Valve type	DN 100 k_{vs} [m³/h]	Valve type
10	H625R	16	H632R	25	H640R	40	H650R	58	H664R	90	H679R	145	H6100R

DN 25 k_{vs} [m³/h]	Valve type	DN 32 k_{vs} [m³/h]	Valve type	DN 40 k_{vs} [m³/h]	Valve type	DN 50 k_{vs} [m³/h]	Valve type	DN 65 k_{vs} [m³/h]	Valve type	DN 80 k_{vs} [m³/h]	Valve type	DN 100 k_{vs} [m³/h]	Valve type
10	H725R	16	H732R	25	H740R	40	H750R	58	H764R	90	H779R	145	H7100R

Suitable actuators

LV.. NV.. SV..

EV.. RV..

LVC.. NVC.. SVC..

EVC..

NVK.. NVKC..

AVK..

Standard actuators

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
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		
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

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Fast runners

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
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		
					•	•		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

Actuators with electrical emergency control function [2]

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC [3]	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
				•			⊣⊢	230 V	NVK230A-3	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
					•		⊣⊢	24 V	NVK24A-SR-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
					•	•	⊣⊢	24 V	NVK24A-MP-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
	35 s	35 s			•		⊣⊢	24 V	NVKC24A-SR-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
					•	•	⊣⊢	24 V	NVKC24A-MP-TPC	600	400	600	400	600	400	600	400	500	400	300	300	140	140	80	80		
2000 N	150 s	35 s		•			⊣⊢	24 V	AVK24A-3-TPC [3]																	150	150
				•			⊣⊢	230 V	AVK230A-3																	150	150
					•		⊣⊢	24 V	AVK24A-SR-TPC																	150	150
					•	•	⊣⊢	24 V	AVK24A-MP-TPC																	150	150

[1] Running times, control signal, stroke limitation and other functions are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted. Closing point of the globe valves H..R is at top (valve stem extended).
[3] Nominal voltage AC 24 V

Globe valves 7

BELIMO

DN 15 – 150

Pipe connection	Flange PN 16 (ISO 7005-2)
Medium temperature	5...120 °C (–10...5 °C with spindle heating)
Flow characteristic	A-AB equal percentage / B-AB linear
Leakage rate	Control path A-AB: max. 0.05% of k_{vs} value / bypass B-AB: max. 1% of k_{vs} value
Media	Cold and hot water, water with glycol up to max. 50 vol. %

Closed cold and hot water systems

2-way

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
0.63	H611N				
1	H612N				
1.6	H613N				
2.5	H614N				
4	H615N	6.3	H620N	10	H625N

Closed cold and hot water systems

3-way

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
0.63	H711N				
1	H712N				
1.6	H713N				
2.5	H714N				
4	H715N	6.3	H720N	10	H725N

DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type	DN 65 k_{vs} [m³/h]	DN 65 Valve type	DN 65 k_{vs} [m³/h]	DN 65 Valve type	DN 80 k_{vs} [m³/h]	DN 80 Valve type	DN 80 k_{vs} [m³/h]	DN 80 Valve type	DN 100 k_{vs} [m³/h]	DN 100 Valve type
16	H632N	25	H640N	40	H650N	58	H664N	63	H665N	90	H679N	100	H680N	145	H6100N

DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type	DN 65 k_{vs} [m³/h]	DN 65 Valve type	DN 65 k_{vs} [m³/h]	DN 65 Valve type	DN 80 k_{vs} [m³/h]	DN 80 Valve type	DN 80 k_{vs} [m³/h]	DN 80 Valve type	DN 100 k_{vs} [m³/h]	DN 100 Valve type	DN 125 k_{vs} [m³/h]	DN 125 Valve type	DN 150 k_{vs} [m³/h]	DN 150 Valve type
16	H732N	25	H740N	40	H750N	58	H764N	63	H765N	90	H779N	100	H780N	145	H7100N	220	H7125N	320	H7150N

Suitable actuators

LV.. NV.. SV..

EV.. RV..

LVC.. NVC.. SVC..

EVC..

NVK.. NVKC..

AVK..

Standard actuators

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
500 N	150 s		•	•				24 V	LV24A-TPC	1300	400	900	400	500	400
			•	•				230 V	LV230A-TPC	1300	400	900	400	500	400
					•			24 V	LV24A-SR-TPC	1300	400	900	400	500	400
					•	•		24 V	LV24A-MP-TPC	1300	400	900	400	500	400
1000 N	150 s		•	•				24 V	NV24A-TPC	1600	400	1600	400	1300	400
			•	•				230 V	NV230A-TPC	1600	400	1600	400	1300	400
					•			24 V	NV24A-SR-TPC	1600	400	1600	400	1300	400
					•	•		24 V	NV24A-MP-TPC	1600	400	1600	400	1300	400
1500 N	150 s		•	•				24 V	SV24A-TPC	1600	400	1600	400	1600	400
			•	•				230 V	SV230A-TPC	1600	400	1600	400	1600	400
					•			24 V	SV24A-SR-TPC	1600	400	1600	400	1600	400
					•	•		24 V	SV24A-MP-TPC	1600	400	1600	400	1600	400
2500 N	150 s		•	•				24 V	EV24A-TPC						
			•	•				230 V	EV230A-TPC						
					•			24 V	EV24A-SR-TPC						
					•	•		24 V	EV24A-MP-TPC						
4500 N	120 s				•			24 V	RV24A-SR						

Fast runners

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
500 N	35 s				•			24 V	LVC24A-SR-TPC	1300	400	900	400	500	400
					•	•		24 V	LVC24A-MP-TPC	1300	400	900	400	500	400
1000 N	35 s				•			24 V	NVC24A-SR-TPC	1600	400	1600	400	1300	400
					•	•		24 V	NVC24A-MP-TPC	1600	400	1600	400	1300	400
1500 N	35 s				•			24 V	SVC24A-SR-TPC	1600	400	1600	400	1600	400
					•	•		24 V	SVC24A-MP-TPC	1600	400	1600	400	1600	400
2500 N	35 s				•			24 V	EVC24A-SR						

Actuators with electrical emergency control function [2]

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	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]
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC [3]	1600	400	1600	400	1300	400
				•			⊣⊢	230 V	NVK230A-3	1600	400	1600	400	1300	400
					•		⊣⊢	24 V	NVK24A-SR-TPC	1600	400	1600	400	1300	400
					•	•	⊣⊢	24 V	NVK24A-MP-TPC	1600	400	1600	400	1300	400
	35 s	35 s			•		⊣⊢	24 V	NVKC24A-SR-TPC	1600	400	1600	400	1300	400
					•	•	⊣⊢	24 V	NVKC24A-MP-TPC	1600	400	1600	400	1300	400
2000 N	150 s	35 s		•			⊣⊢	24 V	AVK24A-3-TPC [3]						
				•			⊣⊢	230 V	AVK230A-3						
					•		⊣⊢	24 V	AVK24A-SR-TPC						
					•	•	⊣⊢	24 V	AVK24A-MP-TPC						

[1] Running times, control signal, stroke limitation and other functions are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted. Closing point of the globe valves H..N is at top (valve stem extended).
[3] Nominal voltage AC 24 V

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Actuator type	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 65 Δp_s [kPa]	DN 65 Δp_{max} [kPa]	DN 80 Δp_s [kPa]	DN 80 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]
LV24A-TPC	350	350	150	150	70	70														
LV230A-TPC	350	350	150	150	70	70														
LV24A-SR-TPC	350	350	150	150	70	70														
LV24A-MP-TPC	350	350	150	150	70	70														
NV24A-TPC	1000	400	500	400	300	300	140	140			80	80								
NV230A-TPC	1000	400	500	400	300	300	140	140			80	80								
NV24A-SR-TPC	1000	400	500	400	300	300	140	140			80	80								
NV24A-MP-TPC	1000	400	500	400	300	300	140	140			80	80								
SV24A-TPC	1600	400	900	400	550	400	280	280			160	160								
SV230A-TPC	1600	400	900	400	550	400	280	280			160	160								
SV24A-SR-TPC	1600	400	900	400	550	400	280	280			160	160								
SV24A-MP-TPC	1600	400	900	400	550	400	280	280			160	160								
EV24A-TPC									550	400			350	350	200	200	130	130	80	80
EV230A-TPC									550	400			350	350	200	200	130	130	80	80
EV24A-SR-TPC									550	400			350	350	200	200	130	130	80	80
EV24A-MP-TPC									550	400			350	350	200	200	130	130	80	80
RV24A-SR									1100	400			700	400	450	400	290	290	190	190

Actuator type	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 65 Δp_s [kPa]	DN 65 Δp_{max} [kPa]	DN 80 Δp_s [kPa]	DN 80 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]
LVC24A-SR-TPC	350	350	150	150	70	70														
LVC24A-MP-TPC	350	350	150	150	70	70														
NVC24A-SR-TPC	1000	400	500	400	300	300	140	140			80	80								
NVC24A-MP-TPC	1000	400	500	400	300	300	140	140			80	80								
SVC24A-SR-TPC	1600	400	900	400	550	400	280	280			160	160								
SVC24A-MP-TPC	1600	400	900	400	550	400	280	280			160	160								
EVC24A-SR									550	400			350	350	200	200	130	130	80	80

Actuator type	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 65 Δp_s [kPa]	DN 65 Δp_{max} [kPa]	DN 80 Δp_s [kPa]	DN 80 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]
NVK24A-3-TPC [3]	1000	400	500	400	300	300	140	140			80	80								
NVK230A-3	1000	400	500	400	300	300	140	140			80	80								
NVK24A-SR-TPC	1000	400	500	400	300	300	140	140			80	80								
NVK24A-MP-TPC	1000	400	500	400	300	300	140	140			80	80								
NVKC24A-SR-TPC	1000	400	500	400	300	300	140	140			80	80								
NVKC24A-MP-TPC	1000	400	500	400	300	300	140	140			80	80								
AVK24A-3-TPC [3]									400	400			250	250	150	150				
AVK230A-3									400	400			250	250	150	150				
AVK24A-SR-TPC									400	400			250	250	150	150				
AVK24A-MP-TPC									400	400			250	250	150	150				

BELIMO
Globe valves
Flange / PN 16

BELIMO

BELIMO

Globe valves
Flange / 150 °C / PN 16

DN 15 – 150

Pipe connection	Flange PN 16 (ISO 7005-2)
Medium temperature	5...150 °C (120 °C to 1600 kPa, 150 °C to 1400 kPa)
Flow characteristic	A-AB equal percentage / B-AB linear
Leakage rate	Control path A-AB: max. 0.05% of k_{vs} value bypass B-AB: max. 1% of k_{vs} value
Media	For closed hot water and steam systems (Δp/p1 < 0.4), water with glycol up to max. 50 vol. %

Closed hot water and steam systems
in the non-critical range

	DN 15				DN 20	
			k_{vs} [m³/h]	Valve type		
			1	H612S		
			1.6	H613S		
2-way	k_{vs} [m³/h]	Valve type	2.5	H614S	k_{vs} [m³/h]	Valve type
	0.4	H610S	4	H619S	4	H619S
	0.63	H611S	4	H615S	6.3	H620S

Closed hot water and steam systems
in the non-critical range

3-way			k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
			4	H715S	6.3	H720S

DN 25		DN 32		DN 40		DN 50		DN 65		DN 65		DN 80		DN 100		DN 125		DN 150	
k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
6.3	H624S																		
10	H625S	16	H632S	25	H640S	40	H650S	58	H664S	63	H665S	100	H680S	145	H6100S	220	H6125S	320	H6150S
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				
10	H725S	16	H732S	25	H740S	40	H750S			63	H765S	100	H780S	160	H7100S				

Suitable actuators

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2... 10 V)	MP-Bus® communication [1]	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [kPa]	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 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 [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 runners																																			
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
Actuators with electrical emergency control function [3]																																			
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC [4]	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
				•			⊣⊢	230 V	NVK230A-3	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130								
					•		⊣⊢	24 V	NVK24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130								
					•	•	⊣⊢	24 V	NVK24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130								
	35 s	35 s			•		⊣⊢	24 V	NVKC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130										
					•	•	⊣⊢	24 V	NVKC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1300	1000	950	950	500	500	300	300	130	130								
2000 N	150 s	35 s		•			⊣⊢	24 V	AVK24A-3-TPC [4]																	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..

Continued next page

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[1] Running times, control signal, stroke limitation and other functions are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] For DN 15 only recommended with H610S and H611S.
[3] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted. Closing point of the globe valves H6..S is at bottom (valve stem retracted).
[4] Nominal voltage AC 24 V

Globe valves 7

Globe valves
Flange / 150 °C / PN 16 partly pressure-balanced

DN 40 – 150

Pipe connection	Flange PN 16 (ISO 7005-2)
Medium temperature	5...150 °C (120 °C to 1600 kPa, 150 °C to 1400 kPa)
Flow characteristic	A-AB, equal percentage
Leakage rate	Control path A–AB: max. 0.05% of k_{vs} value
Media	For closed hot water and steam systems (Δp/p1 < 0.4), water with glycol up to max. 50 vol. %

Suitable actuators

Closed hot water and steam systems in the non-critical range

										DN 40		DN 50		DN 65		DN 80		DN 100		DN 125		DN 150	
Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	2-way	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
										25	H640SP	40	H650SP	58	H664SP	90	H679SP	145	H6100SP	220	H6125SP	320	H6150SP

Standard actuators

NV.. SV..

EV.. RV..

NVC.. SVC..

EVC..

									Actuator type	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]	DN 125 Δps [kPa]	DN 125 Δpmax [kPa]	DN 150 Δps [kPa]	DN 150 Δpmax [kPa]
1000 N	150 s		•	•				24 V	NV24A-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
			•	•				230 V	NV230A-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
					•			24 V	NV24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
					•	•		24 V	NV24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
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
4500 N	120 s				•			24 V	RV24A-SR									600	600	600	600	600	600

Fast runners

									Actuator type	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]	DN 125 Δps [kPa]	DN 125 Δpmax [kPa]	DN 150 Δps [kPa]	DN 150 Δpmax [kPa]
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						
2500 N	35 s				•			24 V	EVC24A-SR									600	600	600	600	600	600

Actuators with electrical emergency control function [2]

NVK.. NVKC..

AVK..

									Actuator type	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]	DN 125 Δps [kPa]	DN 125 Δpmax [kPa]	DN 150 Δps [kPa]	DN 150 Δpmax [kPa]
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC [3]	1600	1000	1600	1000	1600	1000	1600	1000						
				•			⊣⊢	230 V	NVK230A-3	1600	1000	1600	1000	1600	1000	1600	1000						
					•		⊣⊢	24 V	NVK24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
					•	•	⊣⊢	24 V	NVK24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
	35 s	35 s			•		⊣⊢	24 V	NVKC24A-SR-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
					•	•	⊣⊢	24 V	NVKC24A-MP-TPC	1600	1000	1600	1000	1600	1000	1600	1000						
2000 N	150 s	35 s		•			⊣⊢	24 V	AVK24A-3-TPC [3]									600	600				
				•			⊣⊢	230 V	AVK230A-3									600	600				
					•		⊣⊢	24 V	AVK24A-SR-TPC									600	600				
					•	•	⊣⊢	24 V	AVK24A-MP-TPC									600	600				

[1] Running times, control signal, stroke limitation and other functions are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted. Closing point of the globe valves H6..SP is at bottom (valve stem retracted).
[3] Nominal voltage AC 24 V

Continued next page

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Globe valves 7

DN 200 / DN 250

Pipe connection	Flange PN 16 (ISO 7005-2)
Medium temperature	5...120 °C
Flow characteristic	2-way: A-AB equal percentage 3-way: A-AB linear / B-AB linear
Leakage rate	Control path A-AB: max. 0.05% of k_{VS} value / bypass B-AB: max. 1% of k_{VS} value
Media	Cold and hot water, water with glycol up to max. 50 vol. %

Closed cold and hot water systems

	DN 200		DN 250	
2-way	630	H6200W630-S7	1000	H6250W1000-S7

Closed cold and hot water systems

	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type
3-way	630	H7200W630-S7	1000	H7250W1000-S7

Suitable actuators

GV..

Standard actuators

Actuating force	Actuating time per nominal stroke	3-point	Modulating (2...10 V) [1]	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]
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.

Subject to technical modifications

Globe valves
7

BELIMO

BELIMO

DN 15 – 100

Pipe connection	Flange PN 25 (ISO 7005-2)
Medium temperature	5...200 °C (120 °C to 2500 kPa, H6..X..-S2: 150 °C to 2430 kPa, H7..X..-S2: 200 °C to 2300 kPa)
Flow characteristic	2-way: A-AB equal percentage 3-way: A-AB linear / B-AB linear
Leakage rate	Control path A-AB: max. 0.05% of k_{vs} value / bypass B-AB: max. 1% of k_{vs} value
Media	For closed hot water and steam systems (Δp/p1 < 0.4), water with glycol up to max. 50 vol. %

Closed hot water and steam systems
in the non-critical range

2-way

DN 15				DN 20	
k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
0.4	H6015XP4-S2	1	H6015X1-S2	4	H6020X4-S2
0.63	H6015XP63-S2	1.6	H6015X1P6-S2		
		2.5	H6015X2P5-S2		
		4	H6015X4-S2		

Closed cold water, warm water and hot water systems

3-way

DN 15	
k_{vs} [m³/h]	Valve type
4	H7015X4-S2

Suitable actuators

DN 20		DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100	
k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
6.3	H6020X6P3-S2	6.3	H6025X6P3-S2	10	H6032X10-S2	16	H6040X16-S2	25	H6050X25-S2						
		10	H6025X10-S2	16	H6032X16-S2	25	H6040X25-S2	40	H6050X40-S2						
6.3	H7020X6P3-S2	10	H7025X10-S2	16	H7032X16-S2	25	H7040X25-S2	40	H7050X40-S2	63	H7065X63-S4	100	H7080X100-S4	160	H7100X160-S4

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2... 10 V)	MP-Bus® communication[1]	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [kPa]	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]
Standard actuators																													
500 N	150 s		•	•				24 V	LV24A-TPC[2]	2500	1000	800	800	800	800	600	600	450	450	300	300	140	140	60	60				
			•	•				230 V	LV230A-TPC[2]	2500	1000	800	800	800	800	600	600	450	450	300	300	140	140	60	60				
					•			24 V	LV24A-SR-TPC[2]	2500	1000	800	800	800	800	600	600	450	450	300	300	140	140	60	60				
					•	•		24 V	LV24A-MP-TPC[2]	2500	1000	800	800	800	800	600	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				
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 runners																													
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				
2500 N	35 s				•			24 V	EVC24A-SR															550	550	350	350	200	200
Actuators with electrical emergency control function[3]																													
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC[4]	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				
2000 N	150 s	35 s		•			⊣⊢	24 V	AVK24A-3-TPC[4]															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 are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] Actuators LV..A.. possible only on valves H6.. .
[3] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted.
Closing point of the globe valves H6..X is at bottom (valve stem retracted), closing point of the globe valves H7..X is at top (valve stem extended).
[4] Nominal voltage AC 24 V

Continued next page

Continued from previous page

Globe valves
7

BELIMO

BELIMO

DN 65 – 100

Pipe connection	Flange PN 25 (ISO 7005-2)
Medium temperature	5...150 °C (120 °C to 2500 kPa, 150 °C to 2430 kPa)
Flow characteristic	A-AB, equal percentage
Leakage rate	Control path A–AB: max. 0.05% of k_{VS} value
Media	For closed hot water and steam systems (Δp/p1 < 0.4), water with glycol up to max. 50 vol. %

Suitable actuators

Closed hot water and steam systems in the non-critical range

2-way	DN 65		DN 80		DN 100	
	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type	k_{VS} [m³/h]	Valve type
	58	H6065X58-SP2	90	H6080X90-SP2	125	H6100X125-SP2

Standard actuators

NV..
SV..

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	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]
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 runners

NVC..
SVC..

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	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]
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

Actuators with electrical emergency control function [2]

NVK..
NVKC..

Actuating force	Actuating time per nominal stroke	Actuating time for emergency control function	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication [1]	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Actuator type	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]
1000 N	150 s	35 s		•			⊣⊢	24 V	NVK24A-3-TPC [3]	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 are adjustable on MP types using PC-Tool or ZTH EU parameterizing device (delivery state: modulating, operating range 2 – 10 V).
[2] The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator. Delivery state: actuator spindle retracted. Closing point of the globe valves H6..X is at bottom (valve stem retracted).
[3] Nominal voltage AC 24 V

Globe valves
7

BELIMO

BELIMO

Stainless steel globe valves for special applications
Internal thread / PN 25

DN 15 – 50

Pipe connection	Internal thread (ISO 7-1)
Medium temperature	0...130 °C
Flow characteristic	A-AB equal percentage / B-AB linear
Leakage rate	Control path and bypass 0.02% of k_{vs} value
Media	Cold, warm and high temperature water water with glycol up to max. 50% vol.

Closed cold and hot water systems

2-way	DN 15		DN 20	
	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
	1.9	H2015X-S	4.4	H2020X-S

Closed cold and hot water systems

3-way	DN 15		DN 20	
	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
	1.9	H3015X-S	4.4	H3020X-S

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
8	H2025X-S	10	H2032X-S	20	H2040X-S	32	050X-S
8	H3025X-S	10	H3032X-S	20	H3040X-S	32	H3050X-S

Suitable actuators

LV..
NV..
SV..

LVC..
NVC..
SVC..

NVK..
NVKC..

Standard actuators

Actuating force 1)	Actuating time per nominal stroke	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication	Emergency control function	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]
500 N	150 s	•	•				24 V	LV24A-TPC	800	800	800	800	600	600						
		•	•				230 V	LV230A-TPC	800	800	800	800	600	600						
				•			24 V	LV24A-SR-TPC	800	800	800	800	600	600						
				•	•		24 V	LV24A-MP-TPC	800	800	800	800	600	600						
1000 N	150 s	•	•				24 V	NV24A-TPC							550	550	590	590	290	290
		•	•				230 V	NV230A-TPC							550	550	590	590	290	290
				•			24 V	NV24A-SR-TPC							550	550	590	590	290	290
				•	•		24 V	NV24A-MP-TPC							550	550	590	590	290	290
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 runners

Actuating force 1)	Actuating time per nominal stroke	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication	Emergency control function	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]
500 N	35 s			•			24 V	LVC24A-SR-TPC	800	800	800	800	600	600						
				•	•		24 V	LVC24A-MP-TPC					600	600						
1000 N	35 s			•			24 V	NVC24A-SR-TPC							550	550	590	590	290	290
				•	•		24 V	NVC24A-MP-TPC							550	550	590	590	290	290
1500 N	35 s			•			24 V	SVC24A-SR-TPC									700	700	500	500
				•	•		24 V	SVC24A-MP-TPC									700	700	500	500

Actuators with emergency control function NC/NO

Actuating force 1)	Actuating time per nominal stroke	Open-close	3-point	Modulating (2...10 V)	MP-Bus® communication	Emergency control function	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]
1000 N	150 s		•			⊣⊢	24 V	NVK24A-3-TPC 3)	800	800	800	800	600	600	550	550	590	590	290	290
			•			⊣⊢	230 V	NVK230A-3	800	800	800	800	600	600	550	550	590	590	290	290
				•		⊣⊢	24 V	NVK24A-SR-TPC	800	800	800	800	600	600	550	550	590	590	290	290
				•	•	⊣⊢	24 V	NVK24A-MP-TPC	800	800	800	800	600	600	550	550	590	590	290	290
	35 s			•		⊣⊢	24 V	NVKC24A-SR-TPC	800	800	800	800	600	600	550	550	590	590	290	290
				•	•	⊣⊢	24 V	NVKC24A-MP-TPC	800	800	800	800	600	600	550	550	590	590	290	290

Continued next page

Continued from previous page

Globe valves
7

Subject to technical modifications

8

Control butterfly valves

Fit for reliable control applications

Flange with: - Wafer types - Lug types	2-way	PN 6, 10, 16 / DN 25 – 300	50
		PN 10, 16 / DN 350 PN 16 / DN 400 – 700	52
Flange with: - Lug types	3-way	PN 16 / DN 150 – 300	54

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

Valve Sizer App

You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

Download on the App Store

GET IT ON Google Play

BELIMO

BELIMO

Control butterfly valves
Flange / 2-way

PN 6, 10, 16 / DN 25 – 300

Range of use	Closed and open water circuit (pH > 7)
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) D6..W/WL additionally: as per ISO 7005-1 and EN 1092-1
Medium temperature	–20...120 °C
Leakage rate	A, tight (EN 12266-1)
PN 6, 10, 16	DN 25 – 300 wafer types
PN 10, 16	DN 25 – 150 lug types
PN 16	DN 200 – 300 lug types

For control applications	k_{vs} [1] [m³/h]	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
		24	25	27	30	50	75	150	260	400	820	1300	1740
With wafer types		Type RK D625N	Type RK D632N	Type RK D640N	Type RK D650N	Type RK D665N	Type RK D680N	Type RK D6100N	Type RK D6125N	Type RK D6150N	Type RK D6200W	Type RK D6250W	Type RK D6300W
With lug types		Type RK D625NL	Type RK D632NL	Type RK D640NL	Type RK D650NL	Type RK D665NL	Type RK D680NL	Type RK D6100NL	Type RK D6125NL	Type RK D6150NL	Type RK D6200WL	Type RK D6250WL	Type RK D6300WL

Suitable actuators

	Nominal torque	Open-close	3-point	Modulating	Terminal connection	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Actuator type Modulating (2...10 V)	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Standard actuators																												
SR..	20 Nm	•	•	•			24 V	90 s		SR24A-SR-5	1200	300	1200	300	1200	300	1200	300										
				•			230 V			SR230A-SR-5	1200	300	1200	300	1200	300	1200	300										
	40 Nm	•		•			24 V	150 s		GR24A-SR-5	1200	300	1200	300	1200	300	1200	300	1200	300								
GR.. GRC..	<90 Nm	•		•			24 V	150 s		DR24A-SR-5									1200	300	1200	300							
				•			24 V			DR24A-SR-7											1200	300						
Fast runners										Actuator type modulating (2...10 V)	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]
DR..	160 Nm	•	•	•	•		AC 24...240 V DC 24...125 V	35 s [2]	2	PRCA-BAC-S2-T													1200 [4]	300	1200 [4]	300	1200 [3]	300
										PRCA-BAC-S2-T-200																	1200 [3]	300
PR..										PRCA-BAC-S2-T-250																		
Actuators with emergency control function NC/NO										Actuator type NC/NO	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]
PRK..	160 Nm	•	•	•	•	⊣⊢	AC 24...240 V DC 24...125 V	35 s [2]	2	PRKCA-BAC-S2-T													1200 [4]	300	1200 [4]	300	1200 [3]	300
										PRKCA-BAC-S2-T-200																	1200 [3]	300
										PRKCA-BAC-S2-T-250																		

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⊣⊢ = actuators with electrical emergency control function. The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator.

[1] For control applications with opening angle 60%. The maximum flow speed of 4 m/s may not be exceeded in the control valve.
[2] (30...120 s variable)

[3] Adapter ZPR01
[4] Adapter ZPR03

butterfly control valves
8

BELIMO

BELIMO

Control butterfly valves
Flange / 2-way

PN 10, 16 / DN 350
PN 16 / DN 400 – 700

Range of use	Closed and open water circuit (pH > 7)
Pipe connection	Flange (ISO 7005-2 and EN 1092-2)
Medium temperature	–20...120 °C
Leakage rate	A, tight (EN 12266-1)
PN 16	DN 350 – 700

For control applications k_{vs} [1] [m³/h]	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700
	3010	4140	5490	7060	10900	11760
With wafer types	Type RK D6350N	Type RK D6400N	Type RK D6450N	Type RK D6500N	Type RK D6600N	Type RK D6700N
With lug types	Type RK D6350NL	Type RK D6400NL	Type RK D6450NL	Type RK D6500N	Type RK D6600N	Type RK D6700N

Suitable actuators

Fast runners	Nominal torque	Modulating	Terminal connection	Nominal voltage AC 230V	Running time motor 90°	Auxiliary switch SPDT	Actuator type modulating (2...10 V)	Δps [kPa]		Δps [kPa]		Δps [kPa]		Δps [kPa]		Δps [kPa]		Δps [kPa]	
	650 Nm	•	•	230 V	31 s	2	SY6-230-MF-T	600	300	600 [2]	300								
	1000 Nm	•	•	230 V	55 s	2	SY7-230A-MF-T	1200 [5]	300	1000 [3]	300	600 [4]	300						
	1500 Nm	•	•	230 V	55 s	2	SY8-230A-MF-T					1000 [4]	300	600 [4]	300				
	2000 Nm	•	•	230 V	70 s	2	SY9-230A-MF-T							1000 [6]	300				
	2500 Nm	•	•	230 V	70 s	2	SY10-230A-MF-T									600 [7]	300		
	3500 Nm	•	•	230 V	70 s	2	SY12-230A-MF-T									1000 [7]	300	200 [8]	200

[1] For control applications with opening angle 60%. The maximum flow speed of 4 m/s may not be exceeded in the control valve.

[2] Adapter ZSY-401
[3] Adapter ZSY-701
[4] Adapter ZSY-702
[5] Adapter ZSY-703
[6] Adapter ZSY-901
[7] Adapter ZSY-902
[8] Adapter ZSY-903

Continued next page

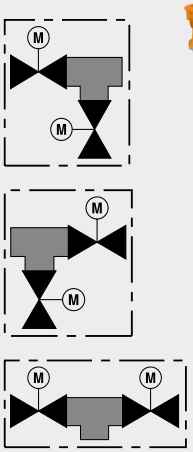
Continued from previous page

butterfly control valves
8

Subject to technical modifications

PN 16 / DN 150 – 300

Flange	In accordance with ISO 7005-2 and EN 1092-2 D7..WL/BAC additionally: as per ISO 7005-1 and EN 1092-1
Range of use	for change-over and control applications (mixing and distributing)
Medium temperature	–20...120 °C
Leakage rate	A, tight (EN 12266-1)
Communication	BACnet® MS/TP, Modbus RTU, MP-Bus® or conventional control
Control, opening angle limitation, running time and further functions are parameterisable with Belimo Assistant app	



DN	k_{vs} [m³/h] [1]	modulating (2...10 V / 0.5...10 V)	Communication BACnet® MS/TP	Modbus RTU communication	MP-Bus® communication	Nominal voltage	Running time motor 90° [2]	Auxiliary switch SPDT	Degree of protection	Type butterfly valve with actuator	Δp_s [kPa]	$\Delta p_{max.}$ [kPa]
With communicative actuators												
150	400	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7150NL/BAC [3]	1200	300
200	800	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7200WL/BAC [3]	1400	300
250	1200	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7250WL/BAC [3]	1400	300
300	1700	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7300WL/BAC [3]	1400	300

[1] For control applications with opening angle 60% (parameterisable with Belimo Assistant App):
- The maximum flow speed of 2.7 m/s may not be exceeded in the butterfly valve.

[2] (30…120 s variable)

[3] T-piece is not included in scope of delivery

Suitable T-pieces

T-piece for 3-way butterfly valve
Spheroidal cast iron
with fastening screws

DN	Suitable for DK: D7150NL/BAC	D7200WL/BAC	D7250WL/BAC	D7300WL/BAC	Type
150	•				ZD7150
200		•			ZD7200
250			•		ZD7250
300				•	ZD7300

Subject to technical modifications

9

Ball valves

Open-close and
change-over applications

Internal thread	2-way		PN 16	DN 15 – 50	56
	3-way	T-bore			
	3-way	L-bore	PN 16	DN 15 – 50	58
External thread	2-way		PN 16	DN 15 – 50	60
	3-way	T-bore			
Flange	2-way		PN 6	DN 15 – 50	62
	3-way	T-bore			

**Refer to the data sheets or notes
´note for project planning to be observed.**

BELIMO

Valve Sizer App

You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

Download on the App Store

GET IT ON Google Play

Open-close and change-over ball valves
Internal thread / PN 16

DN 15 – 50

Pipe connection	Internal thread Rp (ISO 7-1)
Medium temperature	–10...120 °C (small actuators TR../TRY.. only up to 100 °C)
Flow characteristic	A-AB equal percentage / B-AB linear (k_{vs} 50% of A-AB)
Leakage rate	Control path A–AB: leakage rate A, air bubble tight (EN 12266-1) / bypass B–AB: leakage class I

Closed and open water circuit (pH >7)

Closed water circuit (pH >7)

	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type	k_{vs} [m³/h]	Valve type
2-way	15	R2015-S1	32	R2020-S2	26	R2025-S2	32	R2032-S3	31	R2040-S3	49	R2050-S4
3-way / T-bore	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	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
Small and compact actuators																			
2 Nm	•	•		24 V	35 s		TRY24 [2]	1400	1000										
					100 s		TR24 [2]	1400	1000										
	•	•		230 V	35 s		TRY230 [2]	1400	1000										
Standard actuators							Actuator type without auxiliary switch / with auxiliary switch												
5 Nm	•	•		24 V	90 s		LR24A / ..-S	1400	1000	1400	1000	1400	1000						
	•	•		230 V			LR230A / ..-S	1400	1000	1400	1000	1400	1000						
10 Nm	•	•		24 V	90 s		NR24A / ..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
	•	•		230 V			NR230A / ..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
20 Nm	•	•		24 V	90 s		SR24A / ..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
	•	•		230 V			SR230A / ..-S	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
Very fast runners							Actuator type												
4 Nm	•	•		24 V	9 s		LRQ24A	1400	1000	1400	1000	1400	1000						
8 Nm	•	•		24 V	9 s		NRQ24A	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
16 Nm	•	•		24 V	9 s		SRQ24A	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
Actuators with mechanical emergency control function							Actuator type NC: without auxiliary switch / with 1 auxiliary switch; Actuator type NO: without auxiliary switch / with 1 auxiliary switch												
2 Nm	•		⊛	24 V	75 s	75 s	TRF24 [2] / ..-S / ..-O / ..-S-O	1400	1000										
	•		⊛	230 V	75 s	75 s	TRF230 [2] / ..-S / ..-O / ..-S-O	1400	1000										
4 Nm	•		⊛	24 V	<75 s	<20 s	LRF24 [2] / ..-S / ..-O / ..-S-O	1400	1000	1400	1000								
	•		⊛	230 V	<75 s	<20 s	LRF230 [2] / ..-S / ..-O / ..-S-O	1400	1000	1400	1000								
Actuators with mechanical emergency control function							Actuator type NC: without auxiliary switch / with 2 auxiliary switches; Actuator type NO: without auxiliary switch / with 2 auxiliary switches												
10 Nm	•		⊛	24 V	<75 s	<20 s	NRF24A / ..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
	•		⊛	AC 24...240 V DC 24...125 V	<75 s	<20 s	NRFA / ..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000		
20 Nm	•		⊛	24 V	<75 s	<20 s	SRF24A / ..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000
	•		⊛	AC 24...240 V DC 24...125 V	< 75 s	<20 s	SRFA / ..-S2 / ..-O / ..-S2-O	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000	1400	1000

TR.. TRY..

LR.. NR.. SR..

LRQ.. NRQ.. SRQ..

TRF..

LRF..

NRF.. SRF..

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[1] Low-noise operation Δp_{max} = 200 kPa.
[2] If medium temperature ≥100 °C, then line and valve must be insulated.

Ball valves
9

Change-over ball valves
Internal thread / PN 16

DN 15 – 50

Pipe connection	Internal thread Rp (ISO 7-1)
Medium temperature	–10...100 °C
Leakage rate	Leakage rate A, air bubble tight (EN 12266-1)

Suitable actuators

Closed and open water circuit (pH >7)

3-way L-bore

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	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	DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type
3-way L-bore								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

TR.. TRY..

Small and compact actuators

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
2 Nm	•	•		24 V	35 s		TRY24	500	350																
					100 s		TR24	500	350																
	•	•		230 V	35 s		TRY230	500	350																

LR.. NR.. SR..

Standard actuators

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type without auxiliary switch	Actuator type with auxiliary switch	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
5 Nm	•	•		24 V	90 s		LR24A	..-S	500	350	500	350	500	350	500	350										
	•	•		230 V			LR230A	..-S	500	350	500	350	500	350	500	350										
10 Nm	•	•		24 V	90 s		NR24A	..-S	500	350	500	350	500	350	500	350	500	350	500	350			500	350		
	•	•		230 V			NR230A	..-S	500	350	500	350	500	350	500	350	500	350	500	350			500	350		
20 Nm	•	•		24 V	90 s		SR24A	..-S	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350
	•	•		230 V			SR230A	..-S	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350

LRQ.. NRQ.. SRQ..

Very fast runners

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
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		

TRF..

Actuators with mechanical emergency control function

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 1 auxiliary switch	Actuator type NO without auxiliary switch	Actuator type NO with 1 auxiliary switch	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
2 Nm	•			24 V	75 s	75 s	TRF24	..-S	..-O	..-S-O	500	350																
	•			230 V	75 s	75 s	TRF230	..-S	..-O	..-S-O	500	350																
4 Nm	•			24 V	<75 s	<20 s	LRF24	..-S	..-O	..-S-O	500	350	500	350														
	•			230 V	<75 s	<20 s	LRF230	..-S	..-O	..-S-O	500	350	500	350														

LRF..

NRF.. SRF..

Actuators with mechanical emergency control function

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 2 auxiliary switches	Actuator type NO without auxiliary switch	Actuator type NO with 2 auxiliary switches	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
10 Nm	•			24 V	<75 s	<20 s	NRF24A	..-S2	..-O	..-S2-O	500	350	500	350	500	350	500	350					500	350				
	•			AC 24...240 V DC 24...125 V	<75 s	<20 s	NRFA	..-S2	..-O	..-S2-O	500	350	500	350	500	350	500	350					500	350				
20 Nm	•			24 V	<75 s	<20 s	SRF24A	..-S2	..-O	..-S2-O	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350
	•			AC 24...240 V DC 24...125 V	<75 s	<20 s	SRFA	..-S2	..-O	..-S2-O	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350	500	350

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

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Open-close and change-over ball valves
External thread / PN 16

DN 15 – 50

Pipe connection	External thread G (ISO 228-1)
Medium temperature	6...100 °C (–10...5 °C with spindle heating, not with R540, R550)
Flow characteristic	A-AB equal percentage / B-AB linear (k_{vs} 50% of A-AB)
Leakage rate	Control path A–AB: leakage rate A, air bubble tight (EN 12266-1) / bypass B–AB: leakage class I

Closed and open water circuit (pH >7)

2-way	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	DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type
	8.6	R415	21	R420	26	R425	32	R432	32	R440	49	R450

Closed and open water circuit (pH >7)

3-way / T-bore	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	DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type
	8.6	R515	21	R520	26	R525	32	R532	32	R540	49	R550

Suitable actuators

TR..
TRY..

Small and compact actuators

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
2 Nm	•	•		24 V	35 s		TRY24	1400	400	1400	400								
					100 s		TR24	1400	400	1400	400								
	•	•		230 V	35 s		TRY230	1400	400	1400	400								

LR..
NR..
SR..

Standard actuators

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type without auxiliary switch	Actuator type with auxiliary switch	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
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

LRQ..
NRQ..
SRQ..

Very fast runners

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
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	1400	400
16 Nm	•	•		24 V	9 s		SRQ24A	1400	400	1400	400	1400	400	1400	400	1400	400	1400	400

TRF..

Actuators with mechanical emergency control function

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 1 auxiliary switch	Actuator type NO without auxiliary switch	Actuator type NO with 1 auxiliary switch	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
2 Nm	•			24 V	75 s	75 s	TRF24	..-S	..-O	..-S-O	1400	400	1400	400								
	•			230 V	75 s	75 s	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	<75 s	<20 s	LRF230	..-S	..-O	..-S-O	1400	400	1400	400	1400	400						

LRF..

NRF..
SRF..

Actuators with mechanical emergency control function

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 2 auxiliary switches	Actuator type NO without auxiliary switch	Actuator type NO with 2 auxiliary switches	DN 15 Δp_s [kPa]	DN 15 Δp_{max} [1] [kPa]	DN 20 Δp_s [kPa]	DN 20 Δp_{max} [1] [kPa]	DN 25 Δp_s [kPa]	DN 25 Δp_{max} [1] [kPa]	DN 32 Δp_s [kPa]	DN 32 Δp_{max} [1] [kPa]	DN 40 Δp_s [kPa]	DN 40 Δp_{max} [1] [kPa]	DN 50 Δp_s [kPa]	DN 50 Δp_{max} [1] [kPa]
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	<75 s	<20 s	NRFA	..-S2	..-O	..-S2-O	1400	400	1400	400	1400	400	1400	400	1400	400	1400	400
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	<75 s	<20 s	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.

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Open-close and change-over ball valves
Flange / PN 6

DN 15 – 50

Pipe connection	Flange PN 6 (EN 1092-1/4)
Medium temperature	–10...100 °C
Flow characteristic	A-AB equal percentage / B-AB linear (k_{vs} 50% of A-AB)
Leakage rate	Control path A–AB: leakage rate A, air bubble tight (EN 12266-1) / bypass B–AB: leakage class I

Closed and open water circuit (pH >7)

2-way	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	DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type
	15	R6015R-B1	32	R6020R-B1	26	R6025R-B2	32	R6032R-B3	31	R6040R-B3	49	R6050R-B3

Closed water circuit (pH >7)

3-way / T-bore	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	DN 32 k_{vs} [m³/h]	DN 32 Valve type	DN 40 k_{vs} [m³/h]	DN 40 Valve type	DN 50 k_{vs} [m³/h]	DN 50 Valve type
	15	R7015R-B1	32	R7020R-B1	26	R7025R-B2	32	R7032R-B3	31	R7040R-B3	49	R7050R-B3

Suitable actuators

Small and compact actuators

TR..
TRY..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
2 Nm	•	•		24 V	35 s		TRY24	600	100	600	100								
					100 s		TR24	600	100	600	100								
	•	•		230 V	35 s		TRY230	600	100	600	100								

Standard actuators

LR..
NR..
SR..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type without auxiliary switch	Actuator type with auxiliary switch	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]
5 Nm	•	•		24 V	90 s		LR24A	..-S	600	100	600	100								
	•	•		230 V			LR230A	..-S	600	100	600	100								
10 Nm	•	•		24 V	90 s		NR24A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
	•	•		230 V			NR230A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
20 Nm	•	•		24 V	90 s		SR24A	..-S	600	100	600	100	600	100	600	100	600	100	600	100
	•	•		230 V			SR230A	..-S	600	100	600	100	600	100	600	100	600	100	600	100

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Continued from previous page

Very fast runners

LRQ..
NRQ..
SRQ..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	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]
4 Nm	•	•		24 V	9 s		LRQ24A	600	100	600	100								
8 Nm	•	•		24 V	9 s		NRQ24A	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		

Actuators with mechanical emergency control function

TRF..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 1 auxiliary switch	Actuator type NO without auxiliary switch	Actuator type NO with 1 auxiliary switch	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]
2 Nm	•		⊛	24 V	75 s	75 s	TRF24	..-S	..-O	..-S-O	600	100	600	100								
	•		⊛	230 V	75 s	75 s	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								
	•		⊛	230 V	<75 s	<20 s	LRF230	..-S	..-O	..-S-O	600	100	600	100								

Actuators with mechanical emergency control function

LRF..

NRF..
SRF..

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Running time emergency control function	Actuator type NC without auxiliary switch	Actuator type NC with 2 auxiliary switches	Actuator type NO without auxiliary switch	Actuator type NO with 2 auxiliary switches	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]
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	<75 s	<20 s	NRFA	..-S2	..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100		
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	<75 s	<20 s	SRFA	..-S2	..-O	..-S2-O	600	100	600	100	600	100	600	100	600	100		

Ball valves
9

10

Potable water valves

DVGW, ACS and WRAS-certified open-close ball valves

Rotary valves	2-way	PN 10	DN 15 – 50	66

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

BELIMO

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Potable water valves
Rotary valves / 2-way / PN 10

DN 15 – 50

Range of use	Potable water
Potable water certificate	DVGW Registration Number: DW-6102CM0126 ACS Registration Number: 15 ACC LY 056 WRAS Registration Number: 1609315
Medium temperature	–5...65 °C (Occasional elevation up to 90°C permissible only for a maximum time period of 1 h)
Pipe connection	Internal thread Rp (ISO 7-1)
Leakage rate	Leakage rate A, leak-proof (EN 12266-1)

Suitable actuators

NR..
SR..

GR..

NRF..
SRF..

GRK..

Standard actuators

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Actuator type	DN 15 k_{vs} [m³/h] 28 Valve type EXT-R215-B3-PW Δp_s [kPa]	DN 15 Δp_{max} [kPa]	DN 20 k_{vs} [m³/h] 42 Valve type EXT-R220-B3-PW Δp_s [kPa]	DN 20 Δp_{max} [kPa]	DN 25 k_{vs} [m³/h] 70 Valve type EXT-R225-B3-PW Δp_s [kPa]	DN 25 Δp_{max} [kPa]	DN 32 k_{vs} [m³/h] 80 Valve type EXT-R232-B4-PW Δp_s [kPa]	DN 32 Δp_{max} [kPa]	DN 40 k_{vs} [m³/h] 125 Valve type EXT-R240-B4-PW Δp_s [kPa]	DN 40 Δp_{max} [kPa]	DN 50 k_{vs} [m³/h] 179 Valve type EXT-R250-B5-PW Δp_s [kPa]	DN 50 Δp_{max} [kPa]
10 Nm	•	•		24 V	90 s		NR24A	1000	1000	1000	1000	1000	1000						
						•	NR24A-S	1000	1000	1000	1000	1000	1000						
				230 V			NR230A [1]	1000	1000	1000	1000	1000	1000						
						•	NR230A-S	1000	1000	1000	1000	1000	1000						
20 Nm	•	•		24 V	90 s		SR24A							1000	1000	1000	1000		
						•	SR24A-S							1000	1000	1000	1000		
				230 V			SR230A [1]							1000	1000	1000	1000		
						•	SR230A-S							1000	1000	1000	1000		
40 Nm	•	•		24 V	150 s		GR24A-5											1000	1000
				230 V			GR230A-5											1000	1000

Actuators with emergency control function NC/NO

Nominal torque	Open-close	3-point	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	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]
10 Nm	•		⊛	24 V	75 s		NRF24A	1000	1000	1000	1000	1000	1000						
							NRF24A-O	1000	1000	1000	1000	1000	1000						
	•		⊛	24 V	75 s	•	NRF24A-S2	1000	1000	1000	1000	1000	1000						
							NRF24A-S2-O	1000	1000	1000	1000	1000	1000						
	•		⊛	24...240 V AC 24...125 V DC	75 s		NRFA	1000	1000	1000	1000	1000	1000						
							NRFA-O	1000	1000	1000	1000	1000	1000						
	•		⊛	24...240 V AC 24...125 V DC	75 s	•	NRFA-S2	1000	1000	1000	1000	1000	1000						
							NRFA-S2-O	1000	1000	1000	1000	1000	1000						
20 Nm	•		⊛	24 V	75 s		SRF24A							1000	1000	1000	1000		
							SRF24A-O							1000	1000	1000	1000		
	•		⊛	24 V	75 s	•	SRF24A-S2							1000	1000	1000	1000		
							SRF24A-S2-O							1000	1000	1000	1000		
	•		⊛	24...240 V AC 24...125 V DC	75 s		SRFA							1000	1000	1000	1000		
							SRFA-O							1000	1000	1000	1000		
	•		⊛	24...240 V AC 24...125 V DC	75 s	•	SRFA-S2							1000	1000	1000	1000		
							SRFA-S2-O							1000	1000	1000	1000		
40 Nm	•		⊣⊢	24 V	150 s		GRK24A-5											1000	1000

[1] Actuators NR230A and SR230A are also available in fast runner version on request.

Continued next page

Continued from previous page

Potable water valves
10

11

Open-close and change-over butterfly valves

Open-close and
change-over applications

Flange with: - Wafer type - Lug types	2-way	PN 6, 10, 16 / DN 25 – 300	70
		PN 10, 16 / DN 350 – 700	66
Flang with: - Lug type	3-way	PN 16 / DN 150 – 300	68

**Refer to the data sheets or notes
for project planning for further technical data to be observed.**

Valve Sizer App

You can easily find the suitable valve and the right actuator for your application with the convenient App for valve design. Install the App via "AppStore" or "Google Play". The QR codes take you there directly.

Download on the App Store

GET IT ON Google Play

BELIMO

BELIMO

Open-close butterfly valves
Flange / 2-way

PN 6, 10, 16 / DN 25 – 300

Range of use	Closed and open water circuit (pH > 7)
Pipe connection	Flange (ISO 7005-2 and EN 1092-2) D6..W/WL additionally: as per ISO 7005-1 and EN 1092-1
Medium temperature	–20...120 °C
Leakage rate	A, tight (EN 12266-1)
PN 6, 10, 16	DN 25 – 300 wafer types
PN 10, 16	DN 25 – 150 lug types
PN 16	DN 200 – 300 lug types

For Open-Close applications k_{vmax} [m³/h]	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
	50	55	65	100	170	260	520	880	1400	2200	4200	5700
With wafer types	Type AK D625N	Type AK D632N	Type AK D640N	Type AK D650N	Type AK D665N	Type AK D680N	Type AK D6100N	Type AK D6125N	Type AK D6150N	Type AK D6200W	Type AK D6250W	Type AK D6300W
With lug types	Type AK D625NL	Type AK D632NL	Type AK D640NL	Type AK D650NL	Type AK D665NL	Type AK D680NL	Type AK D6100NL	Type AK D6125NL	Type AK D6150NL	Type AK D6200WL	Type AK D6250WL	Type AK D6300WL

Suitable actuators

Standard actuators

	Nominal torque	Open-close	3-point	Terminal connection	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Actuator type open-close / 3-point	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
SR..	20 Nm	•	•			24 V	90 s		SR24A-5	1200	300	1200	300	1200	300
						230 V			SR230A-5	1200	300	1200	300	1200	300
	40 Nm	•				24 V	150 s		GR24A-5	1200	300	1200	300	1200	300
						230 V			GR230A-5	1200	300	1200	300	1200	300
GR.. GRC..	<90 Nm	•				24 V	150 s		DR24A-5						
						230 V			DR230A-5						
						24 V			DR24A-7						
						230 V			DR230A-7						

Fast runners

	Nominal torque	Open-close	3-point	Terminal connection	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Actuator type open-close / 3-point	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
DR.. DRC..	40 Nm	•				24 V	35 s		GRC24A-5 [1]	1200	300	1200	300	1200	300
						230 V			GRC230A-5 [1]	1200	300	1200	300	1200	300
	<90 Nm	•				24 V	35 s		DRC24A-5 [1]						
						230 V			DRC230A-5 [1]						
						24 V			DRC24A-7 [1]						
						230 V			DRC230A-7 [1]						
PR..	160 Nm	•	•	•		AC 24...240 V DC 24...125 V	35 s [2]	2	PRCA-S2-T						
								2	PRCA-S2-T-200						
								2	PRCA-S2-T-250						

Actuators with emergency control function NC

	Nominal torque	Open-close	3-point	Terminal connection	Emergency control function	Nominal voltage AC/DC 24 V AC 230 V	Running time motor 90°	Auxiliary switch SPDT	Actuator type NC	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
SRF..	20 Nm	•				24 V	75 s		SRF24A-5	1200	300	1200	300	1200	300
								2	SRF24A-S2-5	1200	300	1200	300	1200	300
GRK..						AC 24...240 V DC 24...125 V	75 s		SRFA-5	1200	300	1200	300	1200	300
								2	SRFA-S2-5	1200	300	1200	300	1200	300
DRK..	40 Nm	•			⊣⊢	24 V	150 s		GRK24A-5	1200	300	1200	300	1200	300
	<90 Nm	•			⊣⊢	24 V	150 s		DRK24A-5						
					⊣⊢				DRK24A-7						
PRK..	160 Nm	•	•	•	⊣⊢	AC 24...240 V DC 24...125 V	35 s [3]	2	PRKCA-BAC-S2-T						
								2	PRKCA-BAC-S2-T-200						
									PRKCA-BAC-S2-T-250						

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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
SR24A-5	1200 300	1200 300	1200 300	1200 300	1200 300							
SR230A-5	1200 300	1200 300	1200 300	1200 300	1200 300							
GR24A-5	1200 300	1200 300	1200 300	1200 300	1200 300	1200 300						
GR230A-5	1200 300	1200 300	1200 300	1200 300	1200 300	1200 300						
DR24A-5						1200	1200 300					
DR230A-5							1200 300					
DR24A-7								1200 300				
DR230A-7								1200 300				

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
GRC24A-5 [1]	1200 300	1200 300	1200 300	1200 300	1200 300	1200 300						
GRC230A-5 [1]	1200 300	1200 300	1200 300	1200 300	1200 300	1200 300						
DRC24A-5 [1]						1200 300	1200 300					
DRC230A-5 [1]						1200 300	1200 300					
DRC24A-7 [1]								1200 300				
DRC230A-7 [1]								1200 300				
PRCA-S2-T						1200 [5] 300	1200 [5] 300	1200 [4] 300	1200 [4] 300			1400 [4] 300
PRCA-S2-T-200										1400 [4] 300		
PRCA-S2-T-250											1400 [4] 300	

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
SRF24A-5	1200	1200	1200	1200	1200							
SRF24A-S2-5	1200	1200	1200	1200	1200							
SRFA-5	1200	1200	1200	1200	1200							
SRFA-S2-5	1200	1200	1200	1200	1200							
GRK24A-5	1200	1200	1200	1200	1200	1200 300						
DRK24A-5						1200 300	1200 300					
DRK24A-7								1200 300				
PRKCA-BAC-S2-T						1200 [4] 300	1200 [4] 300	1200 [3] 300	1200 [3] 300			1400 [3] 300
PRKCA-BAC-S2-T-200										1400 [3] 300		
PRKCA-BAC-S2-T-250											1400 [3] 300	

⊣⊢ = actuators with mechanical emergency control function.
⊣⊢ = actuators with electrical emergency control function. The emergency setting position NC/NO of all ⊣⊢ actuators can be adjusted on the actuator.

[1] These products are also available as IP66 variant with protective housing.
[2] (30...120 s variable)

[3] Adapter ZPR01
[4] Adapter ZPR03

Open-close and change-over butterfly valves
11

Subject to technical modifications

BELIMO

BELIMO

Open-close butterfly valves
Flange / 2-way

PN 10, 16 / DN 350
PN 16 / DN 400 – 700

Range of use	Closed and open water circuit (pH > 7)
Pipe connection	Flange (ISO 7005-2 and EN 1092-2)
Medium temperature	–20...120 °C
Leakage rate	A, tight (EN 12266-1)
PN 16	DN 350 – 700

For Open-Close applications k_{vmax} [m³/h]	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700
	10900	14200	18800	24100	37300	42800
With wafer types	Type AK D6350N	Type AK D6400N	Type AK D6450N	Type AK D6500N	Type AK D6600N	Type AK D6700N
With lug types	Type AK D6350NL	Type AK D6400NL	Type AK D6450NL	Type AK D6500N	Type AK D6600N	Type AK D6700N

Suitable actuators

SY..

Fast runners	Nominal torque	Open-close	3-point	Terminal connection	Nominal voltage AC 230V	Running time motor 90°	Auxiliary switch SPDT	Actuator type open-close / 3-point	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]
	650 Nm	•	•	•	230 V	31 s	2	SY6-230-3-T	600	300	600 [2]	300						
	1000 Nm	•	•	•	230 V	55 s	2	SY7-230A-3-T	1200 [5]	300	1000 [3]	300	600 [4]	300				
	1500 Nm	•	•	•	230 V	55 s	2	SY8-230A-3-T					1000 [4]	300	600 [4]	300		
	2000 Nm	•	•	•	230 V	70 s	2	SY9-230A-3-T							1000 [6]	300		
	2500 Nm	•	•	•	230 V	70 s	2	SY10-230A-3-T									600 [7]	300
	3500 Nm	•	•	•	230 V	70 s	2	SY12-230A-3-T									1000 [7]	300

[1] with 60% opening angle

[2] Adapter ZSY-401
[3] Adapter ZSY-701
[4] Adapter ZSY-702
[5] Adapter ZSY-703
[6] Adapter ZSY-901
[7] Adapter ZSY-902
[8] Adapter ZSY-903

Continued next page

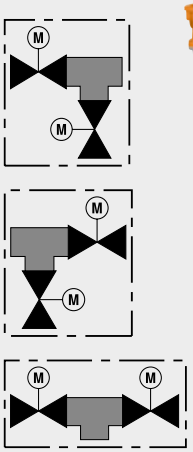
Continued from previous page

Open-close and change-over butterfly valves
11

Subject to technical modifications

PN 16 / DN 150 – 300

Flange	In accordance with ISO 7005-2 and EN 1092-2 D7..WL/BAC additionally: as per ISO 7005-1 and EN 1092-1
Range of use	for change-over and control applications (mixing and diverting)
Medium temperature	–20...120 °C
Leakage rate	A, tight (EN 12266-1)
Communication	BACnet® MS/TP, Modbus RTU, MP-Bus® or conventional control
Control, opening angle limitation, running time and further functions are parameterisable with Belimo Assistant app	



DN	k_{vmax} [m³/h] [1]	Open-close	modulating (2...10 V / 0.5...10 V)	Communication BACnet® MS/TP	Modbus RTU communication	MP-Bus® communication	Nominal voltage	Running time motor 90° [2]	Auxiliary switch SPDT	Degree of protection	Change-over butterfly valve with actuator type	Δp_s [kPa]	$\Delta p_{max.}$ [kPa]
With communicative actuators													
150	1100	•	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7150NL/BAC [3]	1200	300
200	1800	•	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7200WL/BAC [3]	1400	300
250	3000	•	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7250WL/BAC [3]	1400	300
300	4700	•	•	•	•	•	AC 24...240 V DC 24...125 V	35 s	4	IP66 IP67	D7300WL/BAC [3]	1400	300

[1] For change-over applications:
- The maximum flow speed of 4 m/s may not be exceeded in the butterfly valve.

[2] (30…120 s variable)
[3] T-piece is not included in scope of delivery

Suitable T-pieces

T-piece for 3-way butterfly valve
Spheroidal cast iron
with fastening screws

DN	Suitable for DK: D7150NL/BAC	D7200WL/BAC	D7250WL/BAC	D7300WL/BAC	Type
150	•				ZD7150
200		•			ZD7200
250			•		ZD7250
300				•	ZD7300

Subject to technical modifications

k_v	The flow coefficient k_v [m^3/h] is the specific volume flow of a valve with a defined delay 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 delay angle is referred to as the kvs value. The nominal delay angle defines the maximum valve opening and is specified by the manufacturer. Characterised control valve (CCV): Flow coefficient at 100% valve opening (90° angle of rotation) Zone valve (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_{vmax}	Flow coefficient for 100% opened butterfly valve for open-close and change-over application.
$\dot{V}_{nom}$	Greatest possible flow rate of a pressure-independent valve, catalogue value, status upon delivery.
$\dot{V}_{max}$	Maximum flow rate of a pressure-independent valve which has been set with the greatest positioning signal, e.g. 10 V.
Δp_{max}	Maximum permitted pressure differnece for long service life across control gate A – AB, with reference to the whole opening range.
Δp_{v100} (R4..D(K))	Maximum permissible differential pressure for long service life with valve fully open.
Δp_{v0} (R4..D(K))	Maximum permissible differential pressure for long service life with closed valve.
Δp_s	Maximum closing pressure at which the valve can still seal tightly, with reference to the particular leakage class.

$$k_{vs} = \frac{\dot{V}_{100}}{\sqrt{\frac{\Delta p_{v100}}{100}}}$$

Δp_{v100} [kPa]

$\dot{V}_{100}$ [m^3/h]

k_{vs} [m^3/h]

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