Valves

	For closed cold and warm water systems, water with glycol up to max. 50 vol.%	For closed hot water and steam systems ($\Delta p/p_1$ <0.4), water with glycol up to max. 50 vol.%	For open and closed cold and warm water systems, water with glycol up to max. 50 vol.%	For closed cold, warm and hot water systems, water with glycol up to max. 50 vol.%	Permissible operating pressure [kPa]	Fluid temperature [°C]	DN	k_{vs} [m³/h]	Valve type	Suitable actuators: Standard actuators	Suitable actuators: Fast running actuators	Suitable actuators: Fail-safe actuators	
External thread / 2-way / PN 16													**Page 118**
	■		■		1600	−10…120	15…50	0.63…40	H4..B	■	■	■	
External thread / 3-way / PN 16													**Page 120**
	■		■		1600	−10…120	15…50	0.63…40	H5..B	■	■	■	
Flange / 2-way / PN 6													**Page 122**
	■				600	−10…120	15…100	0.63…145	H6..R	■	■	■	
Flange / 3-way / PN 6													**Page 124**
	■				600	−10…120	15…100	0.63…145	H7..R	■	■	■	
Flange / 2-way / PN 16													**Page 126**
	■				1600	−10…120	15…100	0.63…145	H6..N	■	■	■	
		■			1600 (120°C) 1400 (150°C)	5…150	15…150	0.4…320	H6..S	■	■	■	
Flange / 2-way / PN 16 partly pressure-balanced													**Page 130**
		■			1600 (120°C) 1400 (150°C)	5…150	40…150	25…320	H6..SP	■	■	■	
Flange / 3-way / PN 16													**Page 132**
	■				1600	−10…120	15…150	0.63…320	H7..N	■	■	■	
	■				1600 (120°C) 1400 (150°C)	5…150	15…150	4…145	H7..S [1]	■	■	■	
Flange / 2-way / PN 16 (large nominal diameters)													**Page 136**
	■				1600	5…120	200…250	630…1000	H6..W..	■			
Flange / 3-way / PN 16 (large nominal diameters)													**Page 137**
	■				1600	5…120	200…250	630…1000	H7..W..	■			
Flange / 2-way / PN 25													**Page 138**
		■			2500 (120°C) 2430 (150°C)	5…150	15…100	0.4…125	H6..X..	■	■	■	

[1] Can also be used as a diverting valve

Valves

	For closed cold and warm water systems, water with glycol up to max. 50 vol.%	For closed hot water and steam systems ($\Delta p/p_1$ <0.4), water with glycol up to max. 50 vol.%	For open and closed cold and warm water systems, water with glycol up to max. 50 vol.%	For closed cold, warm and hot water systems, water with glycol up to max. 50 vol.%	Permissible operating pressure [kPa]	Fluid temperature [°C]	DN	k_{vs} [m³/h]	Valve type	Suitable actuators: Standard actuators	Suitable actuators: Fast running actuators	Suitable actuators: Fail-safe actuators	
Flange / 3-way / PN 25													**Page 140**
	■			■	2500 (120°C) 2300 (200°C)	5…200	15…100	0.4…160	H7..X..	■	■	■	
Internal thread / 2-way / PN 25													**Page 142**
	■	■			2500	0…130	15…50	1.6…40	H2..S-..	■	■	■	
Internal thread / 3-way / PN 25													**Page 144**
	■	■			2500	0…130	15…50	1.6…40	H3..S-.. [1]	■	■	■	

[1] Can also be used as a diverting valve

Actuators

	Applications	Open/close	3-point	Communicative	Modulating (2…10 V)	Nominal voltage AC 230 V	Nominal voltage AC/DC 24 V	Actuating time per nominal stroke [s]	Actuating time, fail-safe [s]	Internal auxiliary switch	External auxiliary switch	Degree of protection IEC/EN	Nominal stroke [mm]	Actuator type
Standard actuators														
	Standard applications in HVAC systems. Consistent operating philosophy.	■	■	■	■	■	■	150 120 [2]			■	IP54	15 20 20 40 40	LV.. NV.. SV.. EV.. RV..
			■		■	■	■	82		2 [3]		IP65	65	GV..
Fast running actuators														
	For rapid and precise control of temperatures, e.g. for frost protection applications.			■	■		■	35			■	IP54	15 20 20 40	LVC.. NVC.. SVC.. EVC..
Standard fail-safe actuators														
	Strong actuator for applications in which safe movement to a predefined fail-safe position and a brief voltage bypass are necessary in the event of a voltage interruption.		■	■	■	■	■	150 35 [4]	35		■	IP54	20 32	NVK.. AVK..

[2] Only RV..
[3] Only GV12-230..
[4] Only NVKC..

Communicative actuators in chapter 13 from **page 236**

Maximum close-off and differential pressures [1]

Valve type	DN	k_{VS} [m³/h]	Stroke [mm]	Actuator type	LV..		NV..		SV..		AV..		EV..		RV..		GV..	
				Actuating force	500 N		1000 N		1500 N		2000 N		2500 N		4500 N		12 kN	
					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]
External thread / PN 16 / 120°C																		
H4..B H5..B	15	0.63…4	15		**1300**	**400**	1600	400	1600	400								
	20	6.3	15		**900**	**400**	1600	400	1600	400								
	25	10	15		**500**	**400**	1300	400	1600	400								
	32	16	15		**350**	**350**	**1000**	**400**	1600	400								
	40	25	15		150	150	**500**	**400**	900	400								
	50	40	15		70	70	300	300	**550**	**400**								
Flange / PN 6 / 120°C																		
H6..R H7..R	15	0.63…4	15		**600**	**400**	600	400	600	400								
	20	6.3	15		**600**	**400**	600	400	600	400								
	25	10	15		**500**	**400**	600	400	600	400								
	32	16	15		**350**	**350**	**600**	**400**	600	400								
	40	25	15		150	150	**500**	**400**	600	400								
	50	40	15		70	70	300	300	**550**	**400**								
	65	58	18				140	140	**280**	**280**								
	80	90	18				80	80	**160**	**160**								
	100	145	30								150	150	200	200	**450**	**400**		
Flange / PN 16 / 120°C [2]																		
H6..N H7..N	15	0.63…4	15		**1300**	**400**	1600	400	1600	400								
	20	6.3	15		**900**	**400**	1600	400	1600	400								
	25	10	15		**500**	**400**	1300	400	1600	400								
	32	16	15		**350**	**350**	**1000**	**400**	1600	400								
	40	25	15		150	150	**500**	**400**	900	400								
	50	40	15		70	70	300	300	**550**	**400**								
	65	58	18				140	140	**280**	**280**								
		63	30								400	400	**550**	**400**	1100	400		
	80	90	18				80	80	**160**	**160**								
		100	30								250	250	**350**	**350**	**700**	**400**		
	100	145	30								150	150	200	200	**450**	**400**		
	125	220	40										130	130	**290**	**290**		
	150	320	40										80	80	**190**	**190**		
Flange / PN 16 / 120°C																		
H6..W.. H7..W..	200	630	65														**310**	**60**
	250	1000	65														**190**	**60**
Flange / PN 16 / 150°C																		
H6..S	15	0.4…0.63	15		**1600**	**1000**	1600	1000	1600	1000								
		1…4	15		**800**	**800**	**1600**	**1000**	1600	1000								
	20	4…6.3	15		**800**	**800**	**1600**	**1000**	1600	1000								
	25	6.3…10	15		**450**	**450**	**1300**	**1000**	1600	1000								
	32	16	15		300	300	**950**	**950**	**1550**	**1000**								
	40	25	15		140	140	**500**	**500**	850	850								
	50	40	15		60	60	300	300	**500**	**500**								
	65	58	18				130	130	**250**	**250**								
		63	30								400	400	**550**	**550**	1100	1000		
	80	100	30								250	250	**350**	**350**	700	700		
	100	145	30								150	150	200	200	**450**	**450**		
	125	220	40										110	110	**250**	**250**		
	150	320	40										70	70	**180**	**180**		

[1] Please refer to the data sheets or notes for project planning for further technical data to be observed.
[2] Valves of the type H6..N and H7..N with nominal diameters DN 125 and DN 150 are only available as 3-way valves.

Δp_s = close-off pressure
Δp_{max} = maximum differential pressure

Value = recommended combinations Value = other possible combinations (data does not exempt the user from the obligation for testing in individual cases.)

Maximum close-off and differential pressures [1]

Valve type	DN	k_{VS} [m³/h]	Stroke [mm]	Actuator type	LV..		NV..		SV..		AV..		EV..		RV..		GV..	
				Actuating force	500 N		1000 N		1500 N		2000 N		2500 N		4500 N		12 kN	
					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]
Flange / PN 16 / 150°C																		
H7..S [2]	15	4	20				**1600**	**1000**	1600	1000								
	20	6.3	20				**1600**	**1000**	1600	1000								
	25	10	20				**1300**	**1000**	1600	1000								
	32	16	20				**900**	**900**	1500	1000								
	40	25	20				**500**	**500**	800	800								
	50	40	20				300	300	**500**	**500**								
	65	63	30								400	400	**500**	**500**	1100	1000		
	80	100	30								250	250	**350**	**350**	700	700		
	100	160	30								150	150	200	200	**450**	**450**		
	125	220	40										135	135	**310**	**310**		
	150	320	40										90	90	**220**	**220**		
Flange / PN 16 / 150°C / partly pressure-balanced																		
H6..SP	40	25	15				**1600**	**1000**	1600	1000								
	50	40	15				**1600**	**1000**	1600	1000								
	65	58	18				**1600**	**1000**	1600	1000								
	80	90	18				**1600**	**1000**	1600	1000								
	100	145	30								600	600	**600**	**600**				
	125	220	40										**600**	**600**				
	150	320	40										**600**	**600**				
Flange / PN 25 / 150°C																		
H6..X..S2	15	0.4…0.63	15		**2500**	**1000**	2500	1000	2500	1000								
		1…4	15		**800**	**800**	**2200**	**1000**	2500	1000								
	20	4	15		**800**	**800**	**2200**	**1000**	2500	1000								
		6.3	15		**600**	**600**	**1500**	**1000**	2500	1000								
	25	6.3…10	15		**450**	**450**	**1300**	**1000**	2100	1000								
	32	10…16	15		300	300	**900**	**900**	**1500**	**1000**								
	40	16…25	15		140	140	**500**	**500**	**850**	**850**								
	50	25…40	15		60	60	300	300	**500**	**500**								
Flange / PN 25 / 150°C / partly pressure-balanced																		
H6..X..SP2	65	58	18				**2100**	**1000**	2500	1000								
	80	90	18				**1600**	**1000**	2400	1000								
	100	125	18				**1000**	**1000**	1700	1000								
Flange / PN 25 / 200°C																		
H7..X..S2	15	4	20				**2200**	**1000**	2500	1000								
	20	6.3	20				**1500**	**1000**	2500	1000								
	25	10	20				**1300**	**1000**	2100	1000								
	32	16	20				900	900	**1500**	**1000**								
	40	25	20				500	500	**850**	**850**								
	50	40	20				300	300	**500**	**500**								
H7..X..S4	65	63	30								400	400	550	550	**1100**	**1000**		
	80	100	30								250	250	350	350	**700**	**700**		
	100	160	30								150	150	200	200	**450**	**450**		
Internal thread / PN 25 / 130°C																		
H2..S-.. H3..S-..	15	1.6	10		**650**	**650**	800	800										
	15	4	10		**650**	**650**	800	800										
	20	6.3	10		**650**	**650**	800	800										
	25	10	15		**380**	**380**	**600**	**600**										
H3..S-.. [3]	32	16	20				**550**	**550**										
	40	25	20				**450**	**450**	**700**	**700**								
	50	40	20				300	300	**500**	**500**								

[1] Please refer to the data sheets or notes for project planning for further technical data to be observed.
[2] When used as a diverting valve, the maximum values are reduced to a quarter.
[3] As a diverting valve, the maximum values are reduced to half.

Δp_s = close-off pressure
Δp_{max} = maximum differential pressure

Value = recommended combinations Value = other possible combinations (data does not exempt the user from the obligation for testing in individual cases.)

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	–10...120°C
Pipe connection	External thread G (ISO 228-1)
Leakage rate	Max. 0.05% of k_{VS} value
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 1600 kPa

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]	XXX	PN 16 DN 15 k_{VS} [m³/h]	DN 15 [1] Valve type	PN 16 DN 20 k_{VS} [m³/h]	DN 20 [1] Valve type	PN 16 DN 25 k_{VS} [m³/h]	DN 25 [1] Valve type	PN 16 DN 32 k_{VS} [m³/h]	DN 32 [1] Valve type	PN 16 DN 40 k_{VS} [m³/h]	DN 40 [1] Valve type	PN 16 DN 50 k_{VS} [m³/h]	DN 50 [1] Valve type
										0.63	H411B	6.3	H420B	10	H425B	16	H432B	25	H440B	40	H450B
										1	H412B										
										1.6	H413B										
										2.5	H414B										
										4	H415B										
									XXX	***.**		XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									[2]	+ /		+ /		+ /		+ /		+ /		+ /	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																					
LV.. NV.. SV..							24 V	LV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
	500 N	150 s	■	■			230 V	LV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	LV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
			■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
LVC.. NVC.. SVC..	1000 N	150 s	■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
			■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	150 s	■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
Fast running actuators																					
NVK.. NVKC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
Fail-safe actuators NC/NO [4]																					
				■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
	1000 N	150 s		■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Suitable pipe connectors [5]

	Rp	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	Type	ZH4515	ZH4520	ZH4525	ZH4532	ZH4540	ZH4550
	XXX/pc.	***.**	***.**	***.**	***.**	***.**	***.**

Order example:

H411B + NVK24A-3-TPC /Z
[1] [2] [3] [5]

Price = price each

Price = recommended combination

Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.
[5] Including all pipe connectors (2-way: unit price x 2)

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...50

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

									PN 16										PN 16			
									DN 15		DN 20		DN 25		DN 32		DN 40		DN 50			
									k_{VS} [m³/h]	1 Valve type	k_{VS} [m³/h]	1 Valve type	k_{VS} [m³/h]	1 Valve type	k_{VS} [m³/h]	1 Valve type	k_{VS} [m³/h]	1 Valve type	k_{VS} [m³/h]	1 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		
									XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**		
									2	+ /		+ /		+ /		+ /		+ /		+ /		
Suitable actuators	**Actuating force** [1]	**Actuating time per nominal stroke**	**Open/close**	**3-point**	**Modulating (2...10 V)**	**Fail-safe**	**Nominal voltage AC/DC 24 V AC 230 V**	**3 Actuator type**	**XXX**		**XXX**		**XXX**		**XXX**		**XXX**		**XXX**			
	Standard actuators																					
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
			■	■			230 V	LV230A-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
					■		24 V	LV24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
			■	■			24 V	NV24A-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
LVC.. NVC.. SVC..	1000 N	150 s	■	■			230 V	NV230A-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
					■		24 V	NV24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
	1500 N	150 s	■	■			24 V	SV24A-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
			■	■			230 V	SV230A-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
					■		24 V	SV24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
NVK.. NVKC..	**Fast running actuators**																					
	500 N	35 s			■		24 V	LVC24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
	Fail-safe actuators NC/NO [4]																					
	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
				■		■	230 V	NVK230A-3	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**	***.**		

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Suitable pipe connectors [5]

Rp	**1/2"**	**3/4"**	**1"**	**1 1/4"**	**1 1/2"**	**2"**
Type	**ZH4515**	**ZH4520**	**ZH4525**	**ZH4532**	**ZH4540**	**ZH4550**
XXX/pc.	***.**	***.**	***.**	***.**	***.**	***.**

Order example:

H511B + NVK24A-3-TPC /Z
1 2 3 5

Price = price each

Price = recommended combination

Price = possible combination

1 Valve type
2 + Actuator fitted or / actuator supplied separately
3 Actuator type
4 Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.
5 Including all pipe connectors (3-way: unit price x 3)

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...100

Field of use	Closed water circuit (pH >7)
Fluid temperature	–10...120°C
Pipe connection	Flange PN 6 (ISO 7005-2)
Leakage rate	Max. 0.05% of k_{VS} value
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 600 kPa

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]		PN 6 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	PN 6 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 80 k_{VS} [m³/h]	DN 80 Valve type	DN 100 k_{VS} [m³/h]	DN 100 Valve type
									XXX	0.63	H611R	6.3	H620R	10	H625R	16	H632R	25	H640R	40	H650R	58	H664R	90	H679R	145	H6100R
										1	H612R																
										1.6	H613R																
										2.5	H614R																
										4	H615R																
									XXX	***.**		XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									[2]	+ /		+ /		+ /		+ /		+ /		+ /		+ /		+ /		/	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																											
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			230 V	LV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
					■		24 V	LV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1000 N	150 s	■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
	1500 N	150 s	■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
			■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
LVC.. NVC.. SVC..	2500 N	150 s	■	■			24 V	EV24A-TPC	***.**																		***.**
			■	■			230 V	EV230A-TPC	***.**																		***.**
					■		24 V	EV24A-SR-TPC	***.**																		***.**
	4500 N	120 s			■		24 V	RV24A-SR	***.**																		***.**
Fast running actuators																											
EVC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
	2500 N	35 s			■		24 V	EVC24A-SR	***.**																		***.**
Fail-safe actuators NC/NO [4]																											
NVK.. NVKC..	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
AVK..	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	***.**																		***.**
				■		■	230 V	AVK230A-3	***.**																		***.**
					■	■	24 V	AVK24A-SR-TPC	***.**																		***.**

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Order example:

H611R + NVK24A-3-TPC
1 2 3

Price = price each

Price = recommended combination

Price = possible combination

1 Valve type
2 + Actuator fitted or / actuator supplied separately
3 Actuator type
4 Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...100

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	3 Actuator type	XXX	PN 6 DN 15 k_{VS} [m³/h]	1 Valve type	DN 20 k_{VS} [m³/h]	1 Valve type	DN 25 k_{VS} [m³/h]	1 Valve type	DN 32 k_{VS} [m³/h]	1 Valve type	DN 40 k_{VS} [m³/h]	1 Valve type	PN 6 DN 50 k_{VS} [m³/h]	1 Valve type	DN 65 k_{VS} [m³/h]	1 Valve type	DN 80 k_{VS} [m³/h]	1 Valve type	DN 100 k_{VS} [m³/h]	1 Valve type
										0.63	H711R	6.3	H720R	10	H725R	16	H732R	25	H740R	40	H750R	58	H764R	90	H779R	145	H7100R
										1	H712R																
										1.6	H713R																
										2.5	H714R																
										4	H715R																
									XXX	***.**		XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									2	+ /		+ /		+ /		+ /		+ /		+ /		+ /		+ /		/	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																											
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			230 V	LV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
					■		24 V	LV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1000 N	150 s	■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
	1500 N	150 s	■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
			■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
LVC.. NVC.. SVC..	2500 N	150 s	■	■			24 V	EV24A-TPC	***.**																	***.**	
			■	■			230 V	EV230A-TPC	***.**																	***.**	
					■		24 V	EV24A-SR-TPC	***.**																	***.**	
	4500 N	120 s			■		24 V	RV24A-SR	***.**																	***.**	
Fast running actuators																											
EVC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
	2500 N	35 s			■		24 V	EVC24A-SR	***.**																	***.**	
Fail-safe actuators NC/NO [4]																											
NVK.. NVKC..	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**			
AVK..	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	***.**																	***.**	
				■		■	230 V	AVK230A-3	***.**																	***.**	
					■	■	24 V	AVK24A-SR-TPC	***.**																	***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Order example:

H711R + NVK24A-3-TPC
1 2 3

Price = price each

Price = recommended combination

Price = possible combination

1 Valve type
2 + Actuator fitted or / actuator supplied separately
3 Actuator type
4 Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...100

Field of use	Closed water circuit (pH >7)
Fluid temperature	–10...120°C
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	Max. 0.05% of k_{VS} value
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 1600 kPa

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]		PN 16 DN 15		PN 16 DN 20		DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100	
										k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type
										0.63	H611N																
										1	H612N																
										1.6	H613N																
										2.5	H614N																
										4	H615N	6.3	H620N	10	H625N	16	H632N	25	H640N	40	H650N	58	H664N	63	H665N	90	H679N	100	H680N	145	H6100N
									XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									[2]	+ /	XXX	+ /	XXX	+ /	XXX	+ /	XXX	+ /	XXX	+ /	XXX	+ /	XXX	/	XXX	+ /	XXX	/	XXX	/	XXX
Standard actuators																														
LV.. NV.. SV..							24 V	LV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**										
	500 N	150 s	■	■			230 V	LV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**										
					■		24 V	LV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**										
							24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
	1000 N	150 s	■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
							24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
	1500 N	150 s	■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
LVC.. NVC.. SVC..							24 V	EV24A-TPC	***.**															***.**		***.**		***.**	
	2500 N	150 s	■	■			230 V	EV230A-TPC	***.**															***.**		***.**		***.**	
					■		24 V	EV24A-SR-TPC	***.**															***.**		***.**		***.**	
	4500 N	120 s			■		24 V	RV24A-SR	***.**															***.**		***.**		***.**	
Fast running actuators																														
EVC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**										
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**				***.**				
	2500 N	35 s			■		24 V	EVC24A-SR	***.**															***.**		***.**		***.**	
Fail-safe actuators NC/NO [4]																														
NVK.. NVKC..				■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**				***.**				
	1000 N	150 s		■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**				***.**				
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**				***.**				
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**				***.**				
AVK..				■		■	AC 24 V	AVK24A-3-TPC	***.**															***.**		***.**		***.**	
	2000 N	150 s		■		■	230 V	AVK230A-3	***.**															***.**		***.**		***.**	
					■	■	24 V	AVK24A-SR-TPC	***.**															***.**		***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Order example:

H611N + NVK24A-3-TPC
[1] [2] [3]

Price = price each

Price = recommended combination

Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...150

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]	XXX	PN 16 DN 15		DN 20		DN 25		DN 32		DN 40		DN 50		PN 16 DN 65		DN 80		DN 100		DN 125		DN 150	
										k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type
										0.4	H610S																				
										0.63	H611S																				
										1	H612S																				
										1.6	H613S																				
										2.5	H614S																				
										4	H615S	6.3	H620S	10	H625S	16	H632S	25	H640S	40	H650S	58	H664S	63	H665S	100	H680S	145	H6100S	220	H6125S	320	H6150S
										XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****	XXX	*****
									[2]	+ /		+ /		+ /		+ /		+ /		+ /		+ /		/		/		/		/	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																															
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC [2]	*****	*****		*****		*****		*****		*****		*****											
			■	■			230 V	LV230A-TPC [2]	*****	*****		*****		*****		*****		*****		*****											
					■		24 V	LV24A-SR-TPC [2]	*****	*****		*****		*****		*****		*****		*****											
			■	■			24 V	NV24A-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
	1000 N	150 s	■	■			230 V	NV230A-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
					■		24 V	NV24A-SR-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
	1500 N	150 s	■	■			24 V	SV24A-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
			■	■			230 V	SV230A-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
					■		24 V	SV24A-SR-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
LVC.. NVC.. SVC..	2500 N	150 s	■	■			24 V	EV24A-TPC	*****															*****		*****		*****		*****	
			■	■			230 V	EV230A-TPC	*****															*****		*****		*****		*****	
					■		24 V	EV24A-SR-TPC	*****															*****		*****		*****		*****	
	4500 N	120 s			■		24 V	RV24A-SR	*****															*****		*****		*****		*****	
Fast running actuators																															
EVC..	500 N	35 s			■		24 V	LVC24A-SR-TPC [2]	*****	*****		*****		*****		*****		*****		*****											
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	*****	*****		*****		*****		*****		*****		*****		*****									
	2500 N	35 s			■		24 V	EVC24A-SR	*****															*****		*****		*****		*****	
Fail-safe actuators NC/NO [4]																															
NVK.. NVKC..	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	*****	*****		*****		*****		*****		*****		*****											
				■		■	230 V	NVK230A-3	*****	*****		*****		*****		*****		*****		*****											
					■	■	24 V	NVK24A-SR-TPC	*****	*****		*****		*****		*****		*****		*****											
		35 s			■	■	24 V	NVKC24A-SR-TPC	*****	*****		*****		*****		*****		*****		*****											
AVK..	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	*****															*****		*****		*****			
				■		■	230 V	AVK230A-3	*****															*****		*****		*****			
					■	■	24 V	AVK24A-SR-TPC	*****															*****		*****		*****			

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.
[2] For DN 15 only recommended with H610S and H611S.

Order example:

H610S + NVK24A-3-TPC
[1] [2] [3]

Price = price each
Price = recommended combination
Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 40...150

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]	XXX	PN 16 DN 40 k_{VS} [m³/h]	DN 40 [1] Valve type	PN 16 DN 50 k_{VS} [m³/h]	DN 50 [1] Valve type	DN 65 k_{VS} [m³/h]	DN 65 [1] Valve type	DN 80 k_{VS} [m³/h]	DN 80 [1] Valve type	DN 100 k_{VS} [m³/h]	DN 100 [1] Valve type	DN 125 k_{VS} [m³/h]	DN 125 [1] Valve type	DN 150 k_{VS} [m³/h]	DN 150 [1] Valve type
										25	H640SP	40	H650SP	58	H664SP	90	H679SP	145	H6100SP	220	H6125SP	320	H6150SP
										XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									[2]	+ /		+ /		+ /		+ /		/		/		/	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																							
NV.. SV..	1000 N	150 s	■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**							
			■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**							
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
			■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**							
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
EV.. RV..	1500 N	150 s	■	■			24 V	EV24A-TPC	***.**									***.**		***.**		***.**	
			■	■			230 V	EV230A-TPC	***.**									***.**		***.**		***.**	
					■		24 V	EV24A-SR-TPC	***.**									***.**		***.**		***.**	
	4500 N	120 s			■		24 V	RV24A-SR	***.**									***.**		***.**		***.**	
Fast running actuators																							
NVC.. SVC..	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
	2500 N	35 s			■		24 V	EVC24A-SR	***.**									***.**		***.**		***.**	
Fail-safe actuators NC/NO [4]																							
NVK.. NVKC..	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**							
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**							
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
AVK..	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	***.**									***.**					
				■		■	230 V	AVK230A-3	***.**									***.**					
					■	■	24 V	AVK24A-SR-TPC	***.**									***.**					

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 117**.

Order example:

H640SP + NVK24A-3-TPC
[1] [2] [3]

Price = price each

Price = recommended combination

Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...150

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	[3] Actuator type	XXX	PN 16 DN 15	PN 16 DN 20	PN 16 DN 25	PN 16 DN 32	PN 16 DN 40	PN 16 DN 50	PN 16 DN 65	PN 16 DN 80	PN 16 DN 100	PN 16 DN 125	PN 16 DN 150
										k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type	k_{VS} [m³/h] [1] Valve type
										0.63 H711N										
										1 H712N										
										1.6 H713N										
										2.5 H714N										
										4 H715N	6.3 H720N	10 H725N	16 H732N	25 H740N	40 H750N	58 H764N	63 H765N	90 H779N	100 H780N	145 H7100N	220 H7125N	320 H7150N
									XXX	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
									[2]	+ /	+ /	+ /	+ /	+ /	+ /	+ /	/	+ /	/	/	/
									XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Standard actuators																						
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC	*****	*****	*****	*****	*****	*****	*****								
			■	■			230 V	LV230A-TPC	*****	*****	*****	*****	*****	*****	*****								
					■		24 V	LV24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****								
	1000 N	150 s	■	■			24 V	NV24A-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
					■		24 V	NV24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
	1500 N	150 s	■	■			24 V	SV24A-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
			■	■			230 V	SV230A-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
					■		24 V	SV24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
LVC.. NVC.. SVC..	2500 N	150 s	■	■			24 V	EV24A-TPC	*****								*****		*****	*****	*****	*****
			■	■			230 V	EV230A-TPC	*****								*****		*****	*****	*****	*****
					■		24 V	EV24A-SR-TPC	*****								*****		*****	*****	*****	*****
	4500 N	120 s			■		24 V	RV24A-SR	*****								*****		*****	*****	*****	*****
Fast running actuators																						
EVC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****								
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
	2500 N	35 s			■		24 V	EVC24A-SR	*****								*****		*****	*****	*****	*****
Fail-safe actuators NC/NO [4]																						
NVK.. NVKC..	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
				■		■	230 V	NVK230A-3	*****	*****	*****	*****	*****	*****	*****	*****		*****					
					■	■	24 V	NVK24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
		35 s			■	■	24 V	NVKC24A-SR-TPC	*****	*****	*****	*****	*****	*****	*****	*****		*****					
AVK..	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	*****								*****		*****	*****	*****	*****
				■		■	230 V	AVK230A-3	*****								*****		*****	*****	*****	*****
					■	■	24 V	AVK24A-SR-TPC	*****								*****		*****	*****	*****	*****

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Order example:

H711N + NVK24A-3-TPC
[1] [2] [3]

Price = price each

Price = recommended combination

Price = possible combination

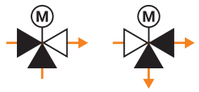
[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...100

Field of use	Closed water circuit (pH >7)
Fluid temperature	5...150°C (120°C to p_S 1600 kPa, 150°C to p_S 1400 kPa)
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	Control path A – AB: max. 0.05% of k_{VS} value / bypass B – AB: max. 1% of k_{VS} value
Flow characteristic	Control path A – AB: equal percentage / bypass B – AB: linear
Permissible operating pressure	p_S: 1600 kPa



Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	[3] Actuator type	[2] XXX	PN 16 DN 15 k_{VS} [m³/h]	[1] Valve type	PN 16 DN 20 k_{VS} [m³/h]	[1] Valve type	DN 25 k_{VS} [m³/h]	[1] Valve type	DN 32 k_{VS} [m³/h]	[1] Valve type	DN 40 k_{VS} [m³/h]	[1] Valve type	DN 50 k_{VS} [m³/h]	[1] Valve type	DN 65 k_{VS} [m³/h]	[1] Valve type	DN 80 k_{VS} [m³/h]	[1] Valve type	DN 100 k_{VS} [m³/h]	[1] Valve type	DN 125 k_{VS} [m³/h]	[1] Valve type	DN 150 k_{VS} [m³/h]	[1] Valve type
										4	H715S	6.3	H720S	10	H725S	16	H732S	25	H740S	40	H750S	63	H765S	100	H780S	160	H7100S	220	H7125S	320	H7150S
									XXX	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
									[2]	+ /		+ /		+ /		+ /		+ /		+ /		/		/		/		/		/	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																															
NV.. SV..	1000 N	150 s	■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
			■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
			■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
	1500 N	150 s	■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
			■	■			24 V	EV24A-TPC	***.**													***.**		***.**		***.**		***.**		***.**	
	2500 N	150 s	■	■			230 V	EV230A-TPC	***.**													***.**		***.**		***.**		***.**		***.**	
					■		24 V	EV24A-SR-TPC	***.**													***.**		***.**		***.**		***.**		***.**	
NVC.. SVC..	4500 N	120 s			■		24 V	RV24A-SR	***.**													***.**		***.**		***.**		***.**		***.**	
Fast running actuators																															
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
NVK.. NVKC..	2500 N	35 s			■		24 V	EVC24A-SR	***.**													***.**		***.**		***.**		***.**		***.**	
Fail-safe actuators NC/NO [4]																															
	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
AVK..		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**											
	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	***.**													***.**		***.**		***.**					
				■		■	230 V	AVK230A-3	***.**													***.**		***.**		***.**					
					■	■	24 V	AVK24A-SR-TPC	***.**													***.**		***.**		***.**					

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 117** and observe reduced values when used as a diverting valve.

Order example:

H715S + NVK24A-3-TPC
[1] [2] [3]

Price = price each

Price = recommended combination

Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 200 / DN 250

Field of use	Closed water circuit (pH >7)
Fluid temperature	5...120°C
Pipe connection	Flange PN 16 (ISO 7005-2)
Leakage rate	Max. 0.05% of k_{VS} value
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 1600 kPa

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	3-point	Modulating (2...10 V)	Nominal voltage AC/DC 24 V AC 230 V	Auxiliary switch SPDT	Actuator type	XXX	PN 16 DN 200 k_{VS} [m³/h]	PN 16 DN 200 Valve type	PN 16 DN 250 k_{VS} [m³/h]	PN 16 DN 250 Valve type
									630	H6200W630-S7	1000	H6250W1000-S7
									XXX	***.**	XXX	***.**
									+		+	
GV..									XXX		XXX	
Standard actuators												
	12000 N	82 s	■		230 V	2	GV12-230-3-T	***.**	***.**		***.**	
				■	24 V		GV12-24-SR-T	***.**	***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Order numbers for combinations:

H6200+GV12-24-SR-T

H6200+GV12-230-3-T

H6250+GV12-24-SR-T

H6250+GV12-230-3-T

Price = price each

Price = recommended combination

Price = possible combination

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

DN 200 / DN 250

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	3-point	Modulating (2...10 V)	Nominal voltage AC/DC 24 V AC 230 V	Auxiliary switch SPDT	Actuator type	XXX	PN 16 DN 200 k_{VS} [m³/h]	PN 16 DN 200 Valve type	PN 16 DN 250 k_{VS} [m³/h]	PN 16 DN 250 Valve type
									630	H7200W630-S7	1000	H7250W1000-S7
									XXX	***.**	XXX	***.**
									+		+	
GV..									XXX		XXX	
Standard actuators												
	12000 N	82 s	■		230 V	2	GV12-230-3-T	***.**	***.**		***.**	
				■	24 V		GV12-24-SR-T	***.**	***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 116**.

Order numbers for combinations:

H7200+GV12-24-SR-T

H7200+GV12-230-3-T

H7250+GV12-24-SR-T

H7250+GV12-230-3-T

Price = price each

Price = recommended combination

Price = possible combination

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

DN 15...100

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]	XXX	PN 25 DN 15		PN 25 DN 20		DN 25		DN 32		DN 40		DN 50		DN 65		DN 80		DN 100	
										k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type	k_{VS} [m³/h]	[1] Valve type
										0.4	H6015XP4-S2																
										0.63	H6015XP63-S2																
										1	H6015X1-S2																
										1.6	H6015X1P6-S2																
										2.5	H6015X2P5-S2																
										4	H6015X4-S2	4	H6020X4-S2	6.3	H6025X6P3-S2	10	H6032X10-S2	25	H6040X25-S2	25	H6050X25-S2	58	H6065X58-SP2	90	H6080X90-SP2	125	H6100X125-SP2
									XXX	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									[2]	+ /		+ /		+ /		+ /		+ /		+ /		+ /		+ /		+ /	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																											
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC [2]	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			230 V	LV230A-TPC [2]	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
					■		24 V	LV24A-SR-TPC [2]	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
			■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1000 N	150 s	■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	150 s	■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
Fast running actuators																											
NVK.. NVKC..	500 N	35 s			■		24 V	LVC24A-SR-TPC [2]	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
Fail-safe actuators NC/NO [4]																											
	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 117**.
[2] For DN 15 only recommended with H6015XP4-S2 and H6015XP63-S2.

Order example:

H6015XP4-S2 + NVK24A-3-TPC
[1] [2] [3]

Price = price each
Price = recommended combination
Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...100

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

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	3 Actuator type	XXX	PN 25 DN 15 k_{VS} [m³/h]	1 Valve type	PN 25 DN 20 k_{VS} [m³/h]	1 Valve type	DN 25 k_{VS} [m³/h]	1 Valve type	DN 32 k_{VS} [m³/h]	1 Valve type	DN 40 k_{VS} [m³/h]	1 Valve type	DN 50 k_{VS} [m³/h]	1 Valve type	DN 65 k_{VS} [m³/h]	1 Valve type	DN 80 k_{VS} [m³/h]	1 Valve type	DN 100 k_{VS} [m³/h]	1 Valve type
										4	H7015X4-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
										XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
										2 + /		+ /		+ /		+ /		+ /		+ /		/		/		/	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																											
NV.. SV..	1000 N	150 s	■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			24 V	SV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1500 N	150 s	■	■			230 V	SV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
					■		24 V	SV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
			■	■			24 V	EV24A-TPC	***.**													***.**		***.**		***.**	
	2500 N	150 s	■	■			230 V	EV230A-TPC	***.**													***.**		***.**		***.**	
					■		24 V	EV24A-SR-TPC	***.**													***.**		***.**		***.**	
NVC.. SVC..	4500 N	120 s			■		24 V	RV24A-SR	***.**													***.**		***.**		***.**	
Fast running actuators																											
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
NVK.. NVKC..	2500 N	35 s			■		24 V	EVC24A-SR	***.**													***.**		***.**		***.**	
Fail-safe actuators NC/NO 4																											
	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
AVK..		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**							
	2000 N	150 s		■		■	AC 24 V	AVK24A-3-TPC	***.**													***.**		***.**		***.**	
				■		■	230 V	AVK230A-3	***.**													***.**		***.**		***.**	
					■	■	24 V	AVK24A-SR-TPC	***.**													***.**		***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 117**.

Order example:

H7015X4-S2 1 **+** 2 **NVK24A-3-TPC** 3

Price = price each

Price = recommended combination

Price = possible combination

1 Valve type
2 + Actuator fitted or / actuator supplied separately
3 Actuator type
4 Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Suitable accessories from **page 146**
Communicative actuators in chapter 13 from **page 236**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...50

Field of use	Closed and open water circuit (pH >7)
Fluid temperature	0...130°C
Pipe connection	Internal thread (ISO 7-1)
Leakage rate	Max. 0.01% of k_{vs} value
Flow characteristic	Equal percentage
Permissible operating pressure	p_S: 2500 kPa

Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	Actuator type [3]	XXX	PN 25 DN 15 k_{vs} [m³/h]	[1] Valve type	PN 25 DN 15 k_{vs} [m³/h]	[1] Valve type	DN 20 k_{vs} [m³/h]	[1] Valve type	DN 25 k_{vs} [m³/h]	[1] Valve type	DN 32 k_{vs} [m³/h]	[1] Valve type	DN 40 k_{vs} [m³/h]	[1] Valve type	DN 50 k_{vs} [m³/h]	[1] Valve type
										1.6	H215S-G	4	H215S-J	6.3	H220S-K	10	H225S-L	16	H232S-M	25	H240S-N	40	H250S-P
										XXX	*****.**	XXX	*****.**	XXX	*****.**	XXX	*****.**	XXX	*****.**	XXX	*****.**	XXX	*****.**
									[2]	+ /		+ /		+ /		+ /		+ /		+ /		+ /	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																							
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC	*****.**	***.**		***.**		***.**		***.**							
			■	■			230 V	LV230A-TPC	*****.**	***.**		***.**		***.**		***.**							
					■		24 V	LV24A-SR-TPC	*****.**	***.**		***.**		***.**		***.**							
LVC.. NVC.. SVC..	1000 N	150 s	■	■			24 V	NV24A-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
			■	■			230 V	NV230A-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	NV24A-SR-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	150 s	■	■			24 V	SV24A-TPC	*****.**											***.**		***.**	
			■	■			230 V	SV230A-TPC	*****.**											***.**		***.**	
					■		24 V	SV24A-SR-TPC	*****.**											***.**		***.**	
Fast running actuators																							
NVK.. NVKC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	*****.**	***.**		***.**		***.**		***.**							
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	*****.**											***.**		***.**	
Fail-safe actuators NC/NO [4]																							
	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
				■		■	230 V	NVK230A-3	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■	■	24 V	NVK24A-SR-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
		35 s			■	■	24 V	NVKC24A-SR-TPC	*****.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 117**.

Order example:

H215S-G [1] **+** [2] **LV24A-TPC** [3]

Price = price each

Price = recommended combination

Price = possible combination

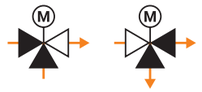
[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

DN 15...50

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



Suitable actuators	Actuating force [1]	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V	[3] Actuator type	XXX	PN 25 DN 15 k_{VS} [m³/h]	[1] Valve type	DN 20 k_{VS} [m³/h]	[1] Valve type	DN 25 k_{VS} [m³/h]	[1] Valve type	PN 25 DN 32 k_{VS} [m³/h]	[1] Valve type	DN 40 k_{VS} [m³/h]	[1] Valve type	DN 50 k_{VS} [m³/h]	[1] Valve type
										1.6	H315S-G	4	H315S-J	6.3	H320S-K	10	H325S-L	16	H332S-M	25	H340S-N	40	H350S-P
										XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**	XXX	***.**
									[2]	+ /		+ /		+ /		+ /		+ /		+ /		+ /	
									XXX	XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Standard actuators																							
LV.. NV.. SV..	500 N	150 s	■	■			24 V	LV24A-TPC	***.**	***.**		***.**		***.**		***.**							
			■	■			230 V	LV230A-TPC	***.**	***.**		***.**		***.**		***.**							
					■		24 V	LV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
			■	■			24 V	NV24A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
LVC.. NVC.. SVC..	1000 N	150 s	■	■			230 V	NV230A-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■		24 V	NV24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	150 s	■	■			24 V	SV24A-TPC	***.**											***.**		***.**	
			■	■			230 V	SV230A-TPC	***.**											***.**		***.**	
					■		24 V	SV24A-SR-TPC	***.**											***.**		***.**	
Fast running actuators																							
NVK.. NVKC..	500 N	35 s			■		24 V	LVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**							
	1000 N	35 s			■		24 V	NVC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
	1500 N	35 s			■		24 V	SVC24A-SR-TPC	***.**											***.**		***.**	
Fail-safe actuators NC/NO [4]																							
	1000 N	150 s		■		■	AC 24 V	NVK24A-3-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
				■		■	230 V	NVK230A-3	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
					■	■	24 V	NVK24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	
		35 s			■	■	24 V	NVKC24A-SR-TPC	***.**	***.**		***.**		***.**		***.**		***.**		***.**		***.**	

[1] Determine the actuating force of the required actuator using the close-off and differential pressure table on **page 117** and observe reduced values when used as a diverting valve.

Order example:

H315S-G + LV24A-TPC
[1] [2] [3]

Price = price each

Price = recommended combination

Price = possible combination

[1] Valve type
[2] + Actuator fitted or / actuator supplied separately
[3] Actuator type
[4] Fail-safe actuators:
The fail-safe position (NC = normally closed / NO = normally open) can be set on the actuator.

Close-off and differential pressure table from **page 116**
Actuators with operating range 0.5...10 V on request

List prices excl. VAT / 2023 – Subject to alterations in price and technical modifications

Control butterfly valves

Cold and warm water, water with glycol up to max. 50 vol.%	For open and closed cold and warm water systems	Tight, leakage rate A (EN 12266-1)	Permissible operating pressure [kPa]	Fluid temperature [°C]	DN	k_{vs} [m³/h]	Control butterfly valve type	Suitable actuators: Standard actuators	Suitable actuators: Fast running actuators	Suitable actuators: Fail-safe actuators	
Wafer type flange / 2-way											**Page 152**
■	■	■	1600	−20…120	25…150, 350…700	24…400, 3010…11760	D6..N	■	■	■	
					200…300	820…1740	D6..W		■	■	
Lug type flange / 2-way											**Page 156**
■	■	■	1600	−20…120	25…150, 350…700	24…400, 3010…11760	D6..NL	■	■	■	
					200…300	820…1740	D6..WL		■	■	
Lug type flange / 3-way											**Page 160**
■	■	■	1600	−20…120	150…300	400…1700	D7..L/BAC		■		

Actuators

Applications	Open/close	3-point	Modulating (2...10 V / 0.5...10 V)	Communicative	Nominal voltage AC 230 V	Nominal voltage AC/DC 24 V	Nominal voltage AC 24...240 V / DC 24...125 V	Running time motor 90° [s]	Running time fail-safe 90° [s]	Auxiliary switch SPDT	Degree of protection IEC/EN	Nominal torque [Nm]	Actuator type
Standard actuators													
Standard applications in HVAC systems.			■	■	■	■		90 150			IP54	20 40	SR..-5 GR..-5
			■	■	■	■		150			IP54	<90	DR..-5 DR..-7
Fast running actuators													
For rapid and precise control of temperatures.	■	■	■	■			■	35 (30...120 variable)		2	IP66/67	160	PR.. 1)
			■		■			31 55 55 70 70 70		2	IP67	650 1000 1500 2000 2500 3500	SY6.. SY7.. SY8.. SY9.. SY10.. SY12..

1) Parametrisable with the Belimo Assistant App (NFC)

Actuators

Applications	Open/close	3-point	Modulating (2...10 V / 0.5...10 V)	Communicative	Nominal voltage AC 230 V	Nominal voltage AC/DC 24 V	Nominal voltage AC 24...240 V / DC 24...125 V	Running time motor 90° [s]	Running time fail-safe 90° [s]	Auxiliary switch SPDT	Degree of protection IEC/EN	Nominal torque [Nm]	Actuator type
Fast running actuators, fail-safe													
Strong actuator for applications in which safe movement to a predefined fail-safe position and a brief voltage bypass are necessary in the event of a voltage interruption.	■	■	■	■			■	35 (30...120 variable)	30	2	IP66/67	160	PRK.. 1)

1) Parametrisable with the Belimo Assistant App (NFC)

Maximum close-off and differential pressures 2)

	Actuator type			SR..		GR..		DR..		PR..		SY6..		SY7..		SY8..		SY9..		SY10..		SY12..	
	Nominal torque			20 Nm		40 Nm		90 Nm		160 Nm		650 Nm		1000 Nm		1500 Nm		2000 Nm		2500 Nm		3500 Nm	
	Control butterfly valve type	DN	p_s [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
	2-way																						
D6..N D6..W	D6..N(L)	25	1600	**1200**	**300**	1200	300																
		32	1600	**1200**	**300**	1200	300																
		40	1600	**1200**	**300**	1200	300																
		50	1600	**1200**	**300**	1200	300																
		65	1600	**1200**	**300**	1200	300																
		80	1600			**1200**	**300**	1200	300	1200	300												
		100	1600					**1200**	**300**	1200	300												
		125	1600					**1200**	**300**	1200	300												
		150	1600							**1200**	**300**												
	D6..W(L)	200	1600							**1400**	**300**												
		250	1600							**1400**	**300**												
		300	1600							**1400**	**300**												
D6..NL D6..WL	D6..N(L)	350	1600									600	300	**1200**	**300**								
		400	1600									600	300	**1200**	**300**								
		450	1600											600	300	**1200**	**300**						
		500	1600													600	300	**1200**	**300**				
		600	1600																	600	300	**1000**	**300**
		700	1600																			**200**	**200**
	3-way																						
	D7..L/BAC	150	1600							**1200**	**300**												
		200	1600							**1400**	**300**												
		250	1600							**1400**	**300**												
D7..L/BAC		300	1600							**1400**	**300**												

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

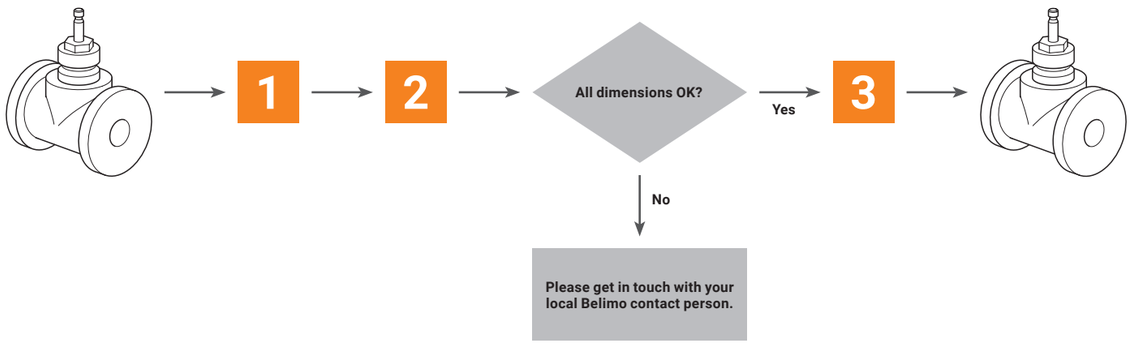
Δp_s = close-off pressure
Δp_{max} = maximum differential pressure

Value = recommended combinations   Value = other possible combinations (data does not exempt the user from the obligation for testing in individual cases.)

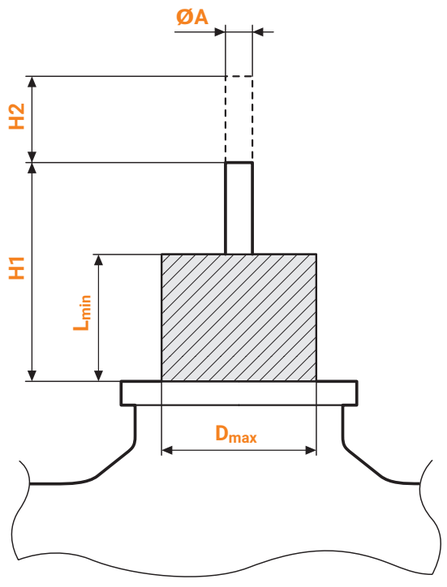
8

Belimo Retrofit with app or checklist

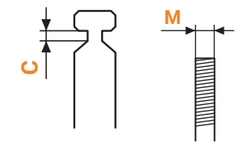
Belimo offers the right actuator solution for almost all valves and butterfly valves from other manufacturers and covers a wide range of nominal sizes. Using the Belimo RetroFIT App (**page 267**) is the quickest way to find out which valve types can be equipped and modernised with a Belimo actuator.
Perhaps you do not know the manufacturer and type of your valves? Then you simply find the right retrofit actuator using the following checklist. In just a few steps, you can then determine the dimensions and specifications required by your valve types. If you have any further questions, please get in touch with your local Belimo contact person.



1 Dimensions checklist



Tables for stems



C	M	M1	M2
		DN 15...50	DN 65...150
		M6	M8
		M8	M8x1.0
		M10	M10
		1/4" 28 UNF	M12x1.25
		1/4" 32 UNF	M16x1.5
		3/8" 28 UNF	1/4" 28 UNF
			1/4" 32 UNF
			3/8" 28 UNF
			7/16" 20 UNF
			1/2" 20 UNF

2 Check dimensions and determine actuating force

DN 15...50

Actuator family	D_{max} [mm]	L_{min} [mm]	H1 [mm]	H2 [mm]	ØA [mm]	C [mm]	M	Actuating force	DN 15	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80
LV..								500 N	■	■	■	■	■		
NV.. / NVK..	≤45	≥15	≥42	5...20	5...12	>2.5	See **M1**	1000 N	■	■	■	■	■		
SV..								1500 N	■	■	■	■	■	■	■
Values to be checked															

DN 65...150

Actuator family	D_{max} [mm]	L_{min} [mm]	H1 [mm]	H2 [mm]	ØA [mm]	C [mm]	M	Actuating force	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
SVL..				5...50				1500 N	■	■	■	■	■		
AVK..	≤60	≥30	≥59	5...32	6...16	>3.5	See **M2**	2000 N	■	■	■	■	■	■	
EV..				5...50				2500 N			■	■	■	■	
RV..								4500 N			■	■	■	■	■
Values to be checked															

■ Recommended ■ Available

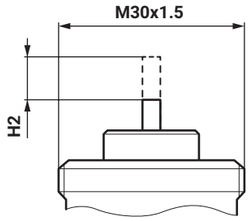
3 Actuator selection

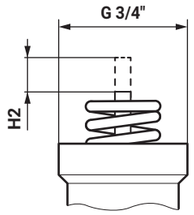
Actuator family	Actuator type	XXX	Actuating force		Nominal stroke	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Communicative	Fail-safe	Nominal voltage AC/DC 24 V AC 230 V
					Standard actuators							
LV..	**LV24A-RE**	******	**500 N**	20 mm	200 s		■	■				24 V
	LV230A-RE	******					■	■				230 V
NV.. / NVK..	**NV24A-RE**	******	**1000 N**	20 mm	150 s		■	■				24 V
	NV230A-RE	******					■	■				230 V
SV..	**SV24A-RE**	******	**1500 N**	20 mm	150 s		■	■				24 V
	SV230A-RE	******					■	■				230 V
SVL..	**SVL230A-RE**	******		50 mm			■	■				
EV..	**EV24A-RE**	******	**2500 N**	50 mm	188 s		■	■				24 V
	EV230A-RE	******					■	■				230 V
					Fail-safe actuators							
NV.. / NVK..	**NVK24A-3-RE**	******	**1000 N**	20 mm	150 s			■			■	AC 24 V
	NVK230A-3-RE	******						■			■	230 V
AVK..	**AVK24A-3-RE** [1]	******	**2000 N**	32 mm	150 s			■			■	AC 24 V
	AVK230A-3-RE [1]	******						■			■	230 V
					Parametrisable actuators							
LV..	**LV24A-MP-RE**	******	**500 N**	20 mm	200 s				■	■		24 V
NV.. / NVK..	**NV24A-MP-RE**	******	**1000 N**	20 mm	150 s				■	■		24 V
	NVC24A-MP-RE	******			35 s				■	■		
	NVK24A-MP-RE	******			150 s				■	■	■	
	NVKC24A-MP-RE	******			35 s				■	■	■	
SV..	**SV24A-MP-RE**	******	**1500 N**	20 mm	150 s				■	■		24 V
	SVC24A-MP-RE	******			35 s				■	■		
SVL..	**SVL24A-MP-RE**	******		50 mm	150 s				■	■		
AVK..	**AVK24A-MP-RE** [1]	******	**2000 N**	32 mm	150 s				■	■	■	24 V
EV..	**EV24A-MP-RE**	******	**2500 N**	50 mm	188 s				■	■		24 V
	EVC24A-MF-RE [2]	******			44 s				■			
RV..	**RV24A-MF-RE** [2]	******	**4500 N**	50 mm	150 s				■			24 V

[1] Actuators AVK.. with maximum stroke 32 mm
[2] Multifunctional, parametrisable, non-bus-capable actuators

Valve interface and actuators

Belimo offers various motorisation solutions for short stroke globe valves with actuator mounting G 3/4" or thread M30x1.5. Using the Belimo RetroFIT App (**page 267**) is the quickest way to find out which valve types can be equipped and modernised with a Belimo actuator.
This overview shows at a glance the most common fastenings and our most popular retrofit actuators for short stroke globe valve modernisation. If you have any further questions, please get in touch with your local Belimo contact person.





The H2 value corresponds to the nominal stroke value.

Actuating force	Nominal stroke	Actuating time per nominal stroke	Open/close	3-point	Modulating (2...10 V)	Nominal voltage AC 24 V AC 230 V	Fastening	Terminal connection	Actuator type	XXX
500 N	5.5 mm	35 s			■	AC/DC 24 V	G 3/4"		NRYD24-SR-SI	***.**
				■		24 V			NRYD24-3-SI	***.**
				■		230 V			NRYD230-3-SI	***.**
500 N	5.5 mm	140 s			■	AC/DC 24 V	G 3/4"	■	NRDVX24-SR-T-SI	***.**
					■		M30x1.5	■	NRDVX24-SR-T-CA	***.**
				■		24 V	G 3/4"	■	NRDVX24-3-T-SI	***.**
				■		230 V		■	NRDVX230-3-T-SI	***.**
				■		24 V	M30x1.5	■	NRDVX24-3-T-CA	***.**
				■		230 V		■	NRDVX230-3-T-CA	***.**
			■						NRDVX230-1-CA	***.**

Auxiliary switch

	Type	XXX/pc.
Auxiliary switch 1 x SPDT For 3-point actuators with screw terminals 1 mA...3 (0.5) A, AC 250 V Adjustable switching point 0...100% Cable gland for 2 cables Not for modulating or open/close actuators	SNR2	***.**

Belimo Retrofit with app or checklist

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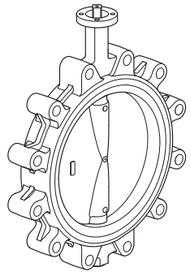
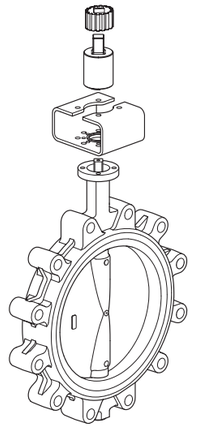


1 → 2 → Retrofit actuator family and linkage found? → Yes → 3

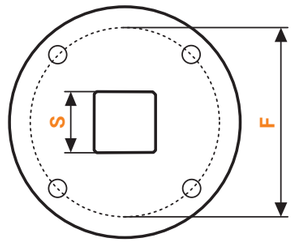
No → Please get in touch with your local Belimo contact person.



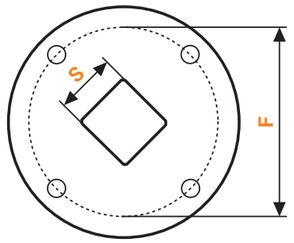
1. Design and dimensions checklist
2. Selection table of actuator family and linkages
3. Actuator selection

1 Design and dimensions checklist

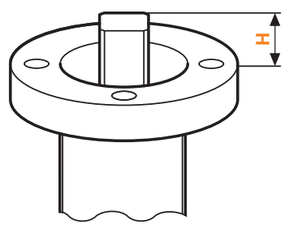
F	Flange
F04	= 42 mm
F05	= 50 mm
F07	= 70 mm
F10	= 102 mm

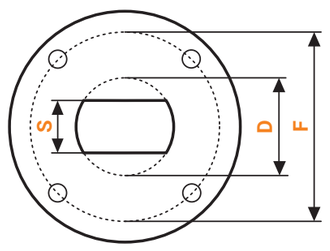


Square Selection table **page 276**

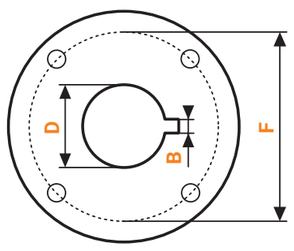


Square 45° offset Selection table **page 277**





Flat head Selection table **page 278**



Wedge groove Selection table **page 278**