



SIEMENS

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Hinnad 2021

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Contents

1 Valves and actuators

- Overview and selection tools
- Actuators for globe and pressure independent combi valves (PICV)
- Globe and pressure independent combi valves (PICV)
- Actuators for rotary valves
- Rotary valves
- Refrigerant valves

2 Damper actuators

- Overview and selection tools
- Air damper actuators
- VAV controller
- Actuators for fire and smoke protection dampers

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
##N/A Single	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 7 Nm, spring return 90/15 s	N4614	284.00	222
417856498	Stem coupling for SKC..		37.18	83
428488060	Sealing gland complete, stem diameter 10 mm, sealing material EPDM		23.40	86
428488290	Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C		154.70	103
428488740	Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		24.83	107
466857598	Control unit		263.90	78
467956290	Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		46.54	86
467956300	Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C		195.00	95
7428400610	Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		37.44	95
8000060844			115.83	181
ADN10	Two-port seat lockshield valve, PN10, DN10, 0..1.8	N2107	15.99	121
ADN15	Two-port seat lockshield valve, PN10, DN15, kvs 0..2.5	N2107	16.77	121
ADN20	Two-port seat lockshield valve, PN10, DN20, kvs 0..3.0	N2107	22.62	121
AEN10	Angle lockshield valve, PN10, DN10, kvs 0..1.8	N2107	15.99	121
AEN15	Angle lockshield valve, PN10, DN15, kvs 0..2.5	N2107	16.77	121
AEN20	Angle lockshield valve, PN10, DN20, kvs 0..3.0	N2107	22.62	121
AL100	Retrofit adapter for installed 2W..., 3W..., 4W... valves	N4878	25.35	58
ALF41B100	Bypass extension, flanged connections, DN100	N4404	300.30	102
ALF41B125	Bypass extension, flanged connections, DN125	N4404	352.30	102
ALF41B15	Bypass extension, flanged connections, DN15	N4404	112.32	102
ALF41B150	Bypass extension, flanged connections, DN150	N4404	374.40	102
ALF41B25	Bypass extension, flanged connections, DN25	N4404	119.86	102
ALF41B40	Bypass extension, flanged connections, DN40	N4404	135.20	102
ALF41B50	Bypass extension, flanged connections, DN50	N4404	143.00	102
ALF41B65	Bypass extension, flanged connections, DN65	N4404	180.70	102
ALF41B80	Bypass extension, flanged connections, DN80	N4404	254.80	102
ALG122	Malleable cast iron fitting G ¾" / Rp ¾", set of 2	N4847	19.50	115
ALG123	Malleable cast iron fitting G ¾" / Rp ¾", set of 3	N4847	28.99	156
ALG13.152B	Brass fitting G ½" / Rp ½", set of 2		11.09	192
ALG132	Brass fitting G ½" / R ¾", set of 2	N4847	15.60	115
ALG133	Brass fitting G ½" / R ¾", set of 3	N4847	23.40	156
ALG142	Brass fitting G ¾" / R ½", set of 2	N4847	25.35	115
ALG143	Brass fitting G ¾" / R ½", set of 3	N4847	37.96	156
ALG15.152B	Brass fitting G 1" / Rp ½", set of 2		13.52	192
ALG15.202B	Brass fitting G 1" / Rp ¾", set of 2		24.05	192
ALG15.252B	Brass fitting G 1" / Rp 1", set of 2		32.63	192
ALG15/F	Flange fittings for VVG549.15		40.00	113
ALG152	Malleable cast iron fitting G 1" / Rp ½", set of 2	N4363	11.02	115
ALG152B	Brass fitting G 1" / Rp ½", 100°C, set of 2	N4363	18.20	115
ALG153	Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	16.38	156
ALG153B	Brass fitting G 1" / Rp ½", 100 °C, set of 3	N4463	27.30	156
ALG202	Malleable cast iron fitting G 1¼" / Rp ¾", set of 2	N4363	13.91	115
ALG202B	Brass fitting G 1¼" / Rp ¾", 100 °C, set of 2	N4363	27.04	115
ALG203	Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	21.19	156
ALG203B	Brass fitting G 1¼" / Rp ¾", 100 °C, set of 3	N4463	40.69	156
ALG252	Malleable cast iron fitting G 1½" / Rp 1", set of 2	N4363	16.38	115
ALG252B	Brass fitting G 1½" / Rp 1", 100 °C, set of 2	N4363	34.19	115
ALG253	Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	24.96	156
ALG253B	Brass fitting G 1½" / Rp 1", 100 °C, set of 3	N4463	51.09	156

Product no.	Product Title	Data sheet	Price (€)	Page
ALG322	Malleable cast iron fitting G 2" / Rp 1 1/4", set of 2	N4363	22.23	115
ALG322B	Brass fitting G 2" / Rp 1 1/4", 100 °C, set of 2	N4363	45.24	115
ALG323	Malleable cast iron fitting G 2" / Rp 1 1/4", set of 3	N4463	33.54	156
ALG323B	Brass fitting G 2" / Rp 1 1/4", 100 °C, set of 3	N4463	67.60	156
ALG402	Malleable cast iron fitting G 2 1/4" / Rp 1 1/2", set of 2	N4363	26.26	115
ALG402B	Brass fitting G 2 1/4" / Rp 1 1/2", 100 °C, set of 2	N4363	70.20	115
ALG403	Malleable cast iron fitting G 2 1/4" / Rp 1 1/2", set of 3	N4463	39.78	156
ALG403B	Brass fitting G 2 1/4" / Rp 1 1/2", 100 °C, set of 3	N4463	105.17	156
ALG502	Malleable cast iron fitting G 2 3/4" / Rp 2", set of 2	N4363	44.07	115
ALG502B	Brass fitting G 2 3/4" / Rp 2", 100 °C, set of 2	N4363	113.75	115
ALG503	Malleable cast iron fitting G 2 3/4" / Rp 2", set of 3	N4463	66.56	156
ALG503B	Brass fitting G 2 3/4" / Rp 2", 100 °C, set of 3	N4463	170.30	156
ALI10VWG41	Insulation cover for VWG41.10 6-Way ball valve		34.71	192
ALI15VAG60/61	Insulation Cover for VAG60/61, DN15		29.51	196
ALI15VAI60/61	Insulation cover for VAI60/61, DN15	CE1N4213	30.16	189
ALI15VBG60/61	Insulation Cover for VBG60/61, DN15		29.51	200
ALI15VBI60/61	Insulation cover for VBI60/61, DN15	CE1N4213	30.16	190
ALI20VAG60/61	Insulation Cover for VAG60/61, DN20		29.51	196
ALI20VAI60/61	Insulation cover for VAI60/61, DN20	CE1N4213	30.16	189
ALI20VBG60/61	Insulation Cover for VBG60/61, DN20		29.51	200
ALI20VBI60	Insulation cover for VBI60, DN20	CE1N4213	30.16	197
ALI20VBI61	Insulation cover for VBI61, DN20	CE1N4213	30.16	190
ALI20VWG41	Insulation cover for VWG41.20 6-Way ball valve	A6V10564480	45.24	192
ALI25VAG60/61	Insulation Cover for VAG60/61, DN25		29.51	196
ALI25VAI60/61	Insulation cover for VAI60/61, DN25	CE1N4213	30.16	189
ALI25VBG60/61	Insulation Cover for VBG60/61, DN25		29.51	200
ALI25VBI60/61	Insulation cover for VBI60/61, DN25	CE1N4213	30.16	190
ALI32VAG60/61	Insulation Cover for VAG60/61, DN32		35.49	196
ALI32VAI60/61	Insulation cover for VAI60/61, DN32	CE1N4213	36.14	189
ALI32VBG60/61	Insulation Cover for VBG60/61, DN32		35.49	200
ALI32VBI60/61	Insulation cover for VBI60/61, DN32	CE1N4213	36.14	190
ALI40VAG60/61	Insulation Cover for VAG60/61, DN40		36.92	196
ALI40VAI60/61	Insulation cover for VAI60/61, DN40	CE1N4213	37.83	189
ALI40VBG60/61	Insulation Cover for VBG60/61, DN40		36.92	200
ALI40VBI60/61	Insulation cover for VBI60/61, DN40	CE1N4213	37.83	190
ALI50VAG60/61	Insulation Cover for VAG60/61, DN50		42.12	196
ALI50VAI60/61	Insulation cover for VAI60/61, DN50	CE1N4213	42.90	189
ALI50VBG60/61	Insulation Cover for VBG60/61, DN50		42.12	200
ALI50VBI60/61	Insulation cover for VBI60/61, DN50	CE1N4213	42.90	190
ALN15.152B	Brass fitting G 1" / G 1/2", 5 °C - 90 °C, set of 2	A6V10564480	11.34	192
ALN15.202B	Brass fitting G 1" / G 3/4", 5 °C - 90 °C, set of 2	A6V10564480	22.62	192
ALP45	Spare nipples for VPI45..., set of 2, for VPI45..	CE1N4853	15.86	157
ALP48	Combined P/T port and drain ball valve with red ribbon	CE1N4853	34.71	157
ALS152	Steel fitting G 3/4", d=21.3 mm, set of 2		39.78	114
ALS202	Steel fitting G 1", d=26.8 mm, set of 2		42.38	114
ALS252	Steel fitting G 1 1/4", d=33.7 mm, set of 2		51.35	114
ASC1.6	Auxiliary switch for SKB6../SKC6../SKD6..	N4566	56.68	78
ASC10.51	Auxiliary switch for SA..31../SA..61../SA..81..	N4501	63.96	62
ASC36	Double auxiliary switch for SQL36E	N4505	150.80	184
ASC77.1E	External auxiliary switch assembly 1 switch	N4615	57.25	224
ASC77.2E	External auxiliary switch assembly 2 switches	N4615	79.52	224
ASC9.3	Double auxiliary switch for SKB/ C/ D32../82..	N4561	136.50	78
ASE1	Replacement electronic for MXG461..., MXF461.. and MXG461S..., DN15...32	N4455	432.90	144

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
ASE12	Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		432.90	103
ASE2	Replacement electronic for MXG461.., MXF461.., DN40...65	N4455	432.90	144
ASK30	Adapter to upgrade older Landis&Gyr valves	N4573	61.75	71
ASK31N	Mounting set for SAL.. onto VBF21..	N4502	65.65	182
ASK32N	Mounting set for SAL.. onto VBF21..	N4502	51.22	182
ASK33N	Mounting set for SAL.. onto VKF41..	N4502	100.10	182
ASK35N	Mounting set for SAL.. onto VKF45..	N4502	198.90	182
ASK39.1	Weathershield for SAX../SAL..	N4501	153.40	62
ASK39.2	Weathershild for SAS../SAT../SAK..		110.37	71
ASK46.1	Manual adjuster for VKF46.., DN40 to DN65	N4136	57.72	187
ASK46.2	Manual adjuster for VKF46.., DN80 to DN125	N4136	74.10	187
ASK46.3	Manual adjuster for VKF46.., DN150 to DN200	N4136	105.82	187
ASK46.4	Manual adjuster for VKF46.., DN250 to DN400	N4136	391.30	187
ASK50	Stroke inverter for SKD..	N4561	592.80	78
ASK51	Stroke inverter for SKB..	N4564	759.20	78
ASK55.2	Clamp for linkage (5...8 mm dia.)	N4698	20.96	237
ASK71.01	Accessory Kit, GEB/GMA		7.49	219
ASK71.03	Mounting Bracket, GM		5.23	237
ASK71.06	Standard Shaft Adapter, GM		27.77	237
ASK71.07	Mounting Bracket, GS		3.83	219
ASK71.1	Rotary/linear mounting kit for duct mounting	N4699	120.78	225
ASK71.11	Rotary/linear mounting kit for duct or frame mounting	N4697	138.86	224
ASK71.13	Rotary/linear mounting kit with lever and bracket	N4697	57.25	224
ASK71.14	Rotary/linear mounting kit with lever	N4697	76.37	224
ASK71.2	Rotary/linear mounting kit for frame mounting	N4699	196.50	225
ASK71.3	Rotary/linear mounting kit with lever	N4699	50.30	225
ASK71.4	Rotary/linear mounting kit with lever and bracket	N4699	63.67	225
ASK71.5	Rotary/linear mounting kit	N4698	56.33	232
ASK71.6	Rotary/linear mounting kit with bracket	N4698	78.60	232
ASK71.9	Universal lever	N4697	68.38	224
ASK72.1	Linear/rotary mounting kit with cardan joint	N4699	104.80	238
ASK72.2	Linear/rotary mounting kit with bracket	N4699	63.67	238
ASK72.3	Linear/rotary mounting kit with bracket	N4697	55.81	238
ASK73.1	Bracket for power pack	N4699	46.11	225
ASK73.2	Flexible bracket for power pack	N4699	154.58	225
ASK74.1	Special shaft adapter	N4699	50.57	225
ASK74.14	Shaft adapter, GS, square, 12mm		18.34	219
ASK74.15	Shaft adapter, GEB/GMA, square, 10mm, complete		18.86	219
ASK74.18	Shaft adapter, GM, square, 12mm		27.90	237
ASK74.7	Shaft extension	N4699	154.58	224
ASK75.1	Weather shield for rotary actuator	N4699	303.92	225
ASK77.2	Mounting kit for rotary actuators GMA..1E with spring-return		74.49	189
ASK77.3	Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		49.27	189
ASK78.10	Centering insert 12 mm dia.	N4698	4.44	232
ASK78.14	Centering insert 8 mm square	N4698	4.44	232
ASK78.3	Insert for small shaft dia.	N4698	4.44	232
ASK78.6	Centering insert 8 mm square	N4698	4.44	232
ASK78.7	Centering insert 10 mm square	N4698	5.93	232
ASK79.4	Duct tip for temperature monitor unit (72 °C)	N4697	48.21	247
ASK79.5	Duct tip for temperature monitor unit (95 °C)	N4697	48.21	247
ASP1.1	AC 230 V adapter for SQV..P..	N4833	145.60	76
ASR0.16N	Valve insert, kvs 0.16 m³/h	N4716	588.90	206
ASR0.4N	Valve insert, kvs 0.4 m³/h	N4716	670.80	206

Product no.	Product Title	Data sheet	Price (€)	Page
ASR1.0N	Valve insert, kvs 1 m³/h	N4716	760.50	206
ASR2.5N	Valve insert, kvs 2.5 m³/h	N4716	843.70	206
ASR61	Replacement electronic for MVL661.. and MVS661..N	N4714	410.80	206
AST20	Handheld tool for VAV compact controllers	A6V10631836	673.34	239
AST22	Interface Converter USB/PPS2	A6V11236956	699.54	239
ASV181.1E/3	VAV modular controller	N3545	250.21	246
ASY100	Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	N4864	7.14	62
ASY23L100	Connecting cable, 10 m, Type 1		49.92	58
ASY23L20	Connecting cable, 2 m, Type 1		8.81	58
ASY23L20LD	Connecting cable, 2 m, Type 1, LED		26.52	58
ASY23L30B	Connecting cable, 3 m, Type 4, black		14.69	58
ASY23L50	Connecting cable, 5 m, Type 1		22.10	58
ASY23L50B	Connecting cable, 5 m, Type 4, black		22.10	58
ASY23L50HF	Connecting cable, 5 m, Type 1, HF		27.82	58
ASY3L25	Connecting cable, 2.5 m, 3-position, AC 230 V		18.98	62
ASY3L45	Connecting cable, 4.5 m, 3-position, AC 230 V		25.22	62
ASY6AL20	Connecting cable, 0...10 V, Type 2, 2 m		79.56	58
ASY6L25	Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V		12.35	62
ASY6L45	Connecting cable, 4.5 m, DC 0..10 V, AC/DC 24 V		21.97	62
ASY8L25	Connecting cable, 2.5 m, 3-position, AC 24 V		12.35	62
ASY8L45	Connecting cable, 4.5 m, 3-position, AC 24 V		21.97	62
ASY99	Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..		7.14	62
ASZ36	Potentiometer 1000 Ohm for SQL36E..	N4505	390.00	184
ASZ6.6	Stem heating element for media < 0 °C	N4501	274.30	62
ASZ7.3	Potentiometer 0...1000 Ohm for SKB/ C/ D32../82..	N4564	280.80	78
ASZ7.31	Potentiometer 0...135 Ohm for SKB/ C/ D32../82..	N4564	280.80	78
ASZ7.32	Potentiometer 0...200 Ohm for SKB/ C/ D32../82..	N4564	280.80	78
ASZ7.5/1000	Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	270.40	62
AV301	Adapter for valves with M30 x 1.5	N2179	6.63	63
AV302	Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	N4884	6.63	63
AV303	Adapter for valves with M30 x 1, TA	N4884	6.63	63
AV304	Adapter various (5 pieces)	N4884	29.38	63
AV305	Standard adapter, M30x1,5	N4884	15.99	58
AV306	Higher sliding sleeve adapter (bayonet), 5 mm	N2100	3.17	58
AV52	Third-party valve adapter on Comap valve	N2100	30.42	63
AV53	Third-party valve adapter on Danfoss RA-N (RA2000)	N2100	10.14	63
AV533	Adapter for Danfoss RA2000, Plastic	N4884	11.77	63
AV54	Third-party valve adapter on Danfoss RAVL	N2100	22.88	63
AV55	Third-party valve adapter on Danfoss RAV	N2100	31.07	63
AV56	Third-party valve adapter on Giacomini valve	N2100	30.03	63
AV57	Third-party valve adapter on Herz valve	N2100	15.34	63
AV58	Third-party valve adapter on Oventrop M30x1	N2100	28.34	63
AV59	Adapter for Vaillant	N2100	25.74	63
AV60	Third-party valve adapter on TA to 2002	N2100	15.34	63
AV61	Third-party valve adapter on MMA Markaryd	N2100	15.34	63
AV63	Adapter for Giacomini	N4884	6.63	63
AV64	Adapter for Pettinaroli M28 x 1.5	N4884	29.38	63
AZX61.1	Funtion module for SA..61..., sequence control/changeover of acting direction	N4501	92.43	62
BPZ:GDB166.1E	Rotary air damper actuator, AC 24 V, DC 0...10 V, 5 Nm, 150 s, 2 auxiliary switches	N4634	146.72	227

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
EVF4U20E065	Intelligent Valve DN 65 as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement for a maximum flow of 30 m ³ /h	A6V11444716	3601.00	161
EVF4U20E080	Intelligent Valve DN 80 as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement for a maximum flow of 48 m ³ /h.	A6V11444716	3978.00	161
EVF4U20E100	Intelligent Valve DN 100 as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement with a maximum flow of 75 m ³ /h	A6V11444716	4615.00	161
EVF4U20E125	Intelligent Valve DN 125 as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement with a maximum flow of 120 m ³ /h	A6V11444716	5980.00	161
EVG4U10E015	Intelligent Valve DN15 as a sensor controlled pressure independent control valve PN16 with threaded connection including with flow and capacity measurement for a maximum flow of 1.5 m ³ /h.	A6V11444716	1170.00	163
EVG4U10E020	Intelligent Valve DN20 as a sensor controlled pressure independent control valve PN16 with threaded connection including with flow and capacity measurement for a maximum flow of 3 m ³ /h.	A6V11444716	1193.40	163
EVG4U10E025	Intelligent Valve DN25 as a sensor controlled pressure independent control valve PN16 with threaded connection including flow and capacity measurement for a maximum flow of 4.5 m ³ /h	A6V11444716	1225.90	163
EVG4U10E032	Intelligent Valve DN32 as a sensor controlled pressure independent control valve PN16 with threaded connection including with flow and capacity measurement for a maximum flow of 7 m ³ /h.	A6V11444716	1352.00	163
EVG4U10E040	Intelligent Valve DN 40 as a sensor controlled pressure independent control valve PN16 with threaded connection including with flow and capacity measurement for a maximum flow of 11.5 m ³ /h.	A6V11444716	1482.00	163
EVG4U10E050	Intelligent Valve DN 50 as a sensor controlled pressure independent control valve PN16 with threaded connection including with flow and capacity measurement for a maximum flow of 18 m ³ /h	A6V11444716	1651.00	163
EXF4U20E065	Intelligent Valve DN65 3-Port configuration as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement for flows up to 20 m ³ /h	A6V11444716	3887.00	162
EXF4U20E080	Intelligent Valve DN80 3-Port configuration as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement for flows up to 32 m ³ /h	A6V11444716	4147.00	162
EXF4U20E100	Intelligent Valve DN100 3-Port configuration as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement for flows up to 50 m ³ /h	A6V11444716	5135.00	162
EXG4U10E015	Intelligent Valve DN15 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement for flows up to 1.2 m ³ /h	A6V11444716	1207.70	165
EXG4U10E020	Intelligent Valve DN20 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement for flows up to 2 m ³ /h	A6V11444716	1246.70	165
EXG4U10E025	Intelligent Valve DN25 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement for flows up to 3.2 m ³ /h	A6V11444716	1298.70	165
EXG4U10E032	Intelligent Valve DN32 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement for flows up to 5 m ³ /h	A6V11444716	1430.00	165
EXG4U10E040	Intelligent Valve DN40 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement for flows up to 8 m ³ /h	A6V11444716	1664.00	165
EXG4U10E050	Intelligent Valve DN50 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement for flows up to 12 m ³ /h	A6V11444716	1950.00	165
GAP191.1E	Rotary air damper actuator, AC/DC 24 V, DC 0(2)...10 V/ 0(4)...20 mA, 6 Nm, 2 s	N4608	288.20	235

Product no.	Product Title	Data sheet	Price (€)	Page
GAP196.1E	Rotary air damper actuator, AC/DC 24 V, DC 0(2)...10 V/ 0(4)...20 mA, 6 Nm, 2 s, 2 auxiliary switches	N4608	323.57	235
GBB131.1E	Rotary air damper actuator, AC 24 V, 3-position, 25 Nm, 150 s	N4626	214.84	180
GBB135.1E	Rotary air damper actuator, AC 24 V, 3-position, 25 Nm, 150 s, 2 auxiliary switches, potentiometer	N4626	276.41	180
GBB136.1E	Rotary air damper actuator, AC 24 V, 3-position, 25 Nm, 150 s, 2 auxiliary switches	N4626	247.59	180
GBB161.1E	Rotary air damper actuator, AC 24 V, DC 0...10 V, 25 Nm, 150 s	N4626	296.06	180
GBB163.1E	Rotary air damper actuator, AC 24 V, DC 0...35 V adjustable, 25 Nm, 150 s	N4626	311.78	180
GBB164.1E	Rotary air damper actuator, AC 24 V, DC 0...35 V adjustable, 25 Nm, 150 s, 2 auxiliary switches	N4626	347.15	180
GBB166.1E	Rotary air damper actuator, AC 24 V, DC 0...10 V, 25 Nm, 150 s, 2 auxiliary switches	N4626	322.26	180
GBB331.1E	Rotary air damper actuator, AC 230 V, 3-position, 25 Nm, 150 s	N4626	214.84	180
GBB335.1E	Rotary air damper actuator, AC 230 V, 3-position, 25 Nm, 150 s, 2 auxiliary switches, potentiometer	N4626	276.41	180
GBB336.1E	Rotary air damper actuator, AC 230 V, 3-position, 25 Nm, 150 s, 2 auxiliary switches	N4626	247.59	180
GCA121.1E	Rotary air damper actuator, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s	N4613	306.54	223
GCA126.1E	Rotary air damper actuator, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches	N4613	343.22	223
GCA126.1E/09H	Rotary air damper actuator 2-position, AC/DC 24 V, 18 Nm, spring return 90/15 s, cable halogen-free	N4613	347.15	224
GCA131.1E	Rotary air damper actuator, AC/DC 24 V, 3-position, 18 Nm, spring return 90/15 s	N4613	332.74	223
GCA135.1E	Rotary air damper actuator, AC/DC 24 V, 3-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, potentiometer	N4613	394.31	223
GCA161.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 18 Nm, spring return 90/15 s	N4613	355.01	223
GCA161.1E/09H	Rotary air damper actuator AC/DC 24 V / DC 0...10 V, 18 Nm, spring return 90/15 s, potentiometer, cable halogen-free	N4613	356.32	224
GCA161.1E/MO	Rotary air damper actuator, AC/DC 24 V, Modbus RTU, 18 Nm, spring return 90/15 s	A6V101037201	438.85	223
GCA163.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 18 Nm, spring return 90/15 s	N4613	369.42	223
GCA164.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 18 Nm, spring return 90/15 s, 2 auxiliary switches	N4613	407.41	223
GCA166.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 18 Nm, spring return 90/15 s, 2 auxiliary switches	N4613	390.38	223
GCA321.1E	Rotary air damper actuator, AC 230 V, 2-position, 18 Nm, spring return 90/15 s	N4613	339.29	223
GCA326.1E	Rotary air damper actuator, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches	N4613	373.35	223
GDB111.1E/KN	Rotary air damper actuators 5 Nm, without spring return	A6V11566316	273.79	227
GDB111.1E/MO	Rotary air damper actuator, AC 24 V, 5 Nm with Modbus RTU communication	A6V10881141	260.69	227
GDB111.9E/KN	Electromotoric rotary actuator KNX for control ball valves up to DN25	A6V10725318	278.20	177
GDB141.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 5 Nm, 150 s	A6V10636149	117.51	227
GDB141.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC/DC 24 V, 2-position/3-position, 5 Nm, 150 s	A6V10636150	140.40	177
GDB142.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 5 Nm, 150 s, potentiometer	A6V10636149	179.47	227
GDB146.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 5 Nm, 150 s, 2 auxiliary switches	A6V10636149	144.10	227
GDB161.1E	Rotary air damper actuator, AC/DC 24 V, DC 0/2...10 V, 5 Nm, 150 s	A6V10636149	183.40	227

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
GDB161.2E	Linear air damper actuator, AC 24 V, DC 0...10 V, 125 N, 150 s	N4664	200.43	236
GDB161.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC/DC A6V10636150 24 V, DC 0/2...10 V, 5 Nm, 150 s		176.80	177
GDB163.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 5 Nm, 150 s	A6V10636149	197.81	227
GDB163.2E	Linear air damper actuator, AC 24 V, DC 0...35 V adjustable, 125 N, 150 s	N4664	217.46	236
GDB164.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 5 Nm, 150 s, 2 auxiliary switches	A6V10636149	224.01	227
GDB166.1E	Rotary air damper actuator, AC/DC 24 V, DC 0/2...10 V, 5 Nm, 150 s, 2 auxiliary switches	A6V10636149	209.60	227
GDB181.1E/3	VAV compact controller, AC 24 V, DC 0...10 V, 5 Nm, 150 s, 300 Pa	N3544	258.07	239
GDB181.1E/BA	VAV compact controller BACnet, AC 24 V, 5 Nm, 150 s, 300 Pa	A6V10631834	302.61	245
GDB181.1E/KN	VAV compact controller KNX, AC 24 V, 5 Nm, 150 s, 300 Pa	N3547	327.50	241
GDB181.1E/MO	VAV compact controller Modbus, AC 24 V, 5 Nm, 150 s, 300 Pa	A6V10631832	289.51	243
GDB341.1E	Rotary air damper actuator, AC 230 V, 2-position/3-position, 5 Nm, 150 s	A6V10636149	117.51	227
GDB341.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC 230 V, 2-position/3-position, 5 Nm, 150 s	A6V10636150	131.30	177
GDB346.1E	Rotary air damper actuator, AC 230 V, 2-position/3-position, 5 Nm, 150 s, 2 auxiliary switches	A6V10636149	144.10	227
GDB361.1E	Rotary air damper actuator, AC 230 V, DC 0/2...10 V, 5 Nm, 150 s	A6V10636149	220.08	227
GEB141.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	178.16	229
GEB142.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	238.42	229
GEB146.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	210.91	229
GEB161.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	260.69	229
GEB161.1E/MO	Rotary air damper actuator, AC 24 V, Modbus RTU, 15 Nm, 150 s without spring return	A6V101037253	344.53	229
GEB163.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	276.41	229
GEB164.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	306.54	229
GEB166.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	290.82	229
GEB331.1E	Rotary air damper actuator, AC 230 V, 3-position, 15 Nm, 150 s	N4621	243.66	229
GEB336.1E	Rotary air damper actuator, AC 230 V, 3-position, 15 Nm, 150 s, 2 auxiliary switches	N4621	288.20	229
GEB341.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	178.16	229
GEB346.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	210.91	229
GEB361.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	280.34	229
GGA126.1E/10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	N4617	292.13	251
GGA126.1E/12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	N4617	292.13	251
GGA126.1E/T10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	N4617	351.08	251
GGA126.1E/T12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	N4617	351.08	251
GGA326.1E/10	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	N4617	337.98	251
GGA326.1E/12	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	N4617	337.98	251
GGA326.1E/T10	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	N4617	395.62	251
GGA326.1E/T12	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	N4617	395.62	251

Product no.	Product Title	Data sheet	Price (€)	Page
GIB131.1E	Rotary air damper actuator, AC 24 V, 3-position, 35 Nm, 150 s	N4626	280.34	181
GIB135.1E	Rotary air damper actuator, AC 24 V, 3-position, 35 Nm, 150 s, 2 auxiliary switches, potentiometer	N4626	340.60	181
GIB136.1E	Rotary air damper actuator, AC 24 V, 3-position, 35 Nm, 150 s, 2 auxiliary switches	N4626	313.09	181
GIB161.1E	Rotary air damper actuator, AC 24 V, DC 0...10 V, 35 Nm, 150 s	N4626	361.56	181
GIB161.1E/MO	Rotary air damper actuator, AC 24 V, Modbus RTU, 35 Nm, 150 s without spring return	A6V101037253	446.71	181
GIB163.1E	Rotary air damper actuator, AC 24 V, DC 0...35 V adjustable, 35 Nm, 150 s	N4626	375.97	181
GIB164.1E	Rotary air damper actuator, AC 24 V, DC 0...35 V adjustable, 35 Nm, 150 s, 2 auxiliary switches	N4626	411.34	181
GIB166.1E	Rotary air damper actuator, AC 24 V, DC 0...10 V, 35 Nm, 150 s, 2 auxiliary switches	N4626	396.93	181
GIB331.1E	Rotary air damper actuator, AC 230 V, 3-position, 35 Nm, 150 s	N4626	280.34	181
GIB335.1E	Rotary air damper actuator, AC 230 V, 3-position, 35 Nm, 150 s, 2 auxiliary switches, potentiometer	N4626	340.60	181
GIB336.1E	Rotary air damper actuator, AC 230 V, 3-position, 35 Nm, 150 s, 2 auxiliary switches	N4626	313.09	181
GLB111.1E/KN	Rotary air damper actuators 10 Nm, without spring return	A6V11566316	315.71	228
GLB111.1E/MO	Rotary air damper actuator, AC 24 V, 10 Nm, 150 s with Modbus RTU communication	A6V10881141	302.61	228
GLB111.9E/MO	Electromotoric rotary actuator, AC 24 V, 10 Nm, 150 s with Modbus RTU	A6V10881143	319.80	179
GLB136.2E	Linear air damper actuator, AC 24 V, 3-position, 250 N, 150 s, 2 auxiliary switches	N4664	183.40	237
GLB141.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 10 Nm, 150 s	A6V10636202	138.86	228
GLB141.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC/DC 24 V, 2-position/3-position, 10 Nm, 150 s	A6V10636203	162.50	179
GLB142.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 10 Nm, 150 s, potentiometer	A6V10636202	200.43	228
GLB146.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 10 Nm, 150 s, 2 auxiliary switches	A6V10636202	163.75	228
GLB161.1E	Rotary air damper actuator, AC/DC 24 V, DC 0/2...10 V, 10 Nm, 150 s	A6V10636202	221.39	228
GLB161.2E	Linear air damper actuator, AC 24 V, DC 0...10 V, 250 N, 150 s	N4664	237.11	237
GLB161.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC/DC 24 V, DC 0/2...10 V, 10 Nm, 150 s	A6V10636203	223.60	179
GLB163.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 10 Nm, 150 s	A6V10636202	234.49	228
GLB164.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 10 Nm, 150 s, 2 auxiliary switches	A6V10636202	262.00	228
GLB166.1E	Rotary air damper actuator, AC/DC 24 V, DC 0/2...10 V, 10 Nm, 150 s, 2 auxiliary switches	A6V10636202	248.90	228
GLB181.1E/3	VAV compact controller, AC 24 V, DC 0...10 V, 10 Nm, 150 s, 300 Pa	N3544	290.82	239
GLB181.1E/BA	VAV compact controller BACnet, AC 24 V, 10 Nm, 150 s, 300 Pa	A6V10631834	335.36	245
GLB181.1E/KN	VAV compact controller KNX, AC 24 V, 10 Nm, 150 s, 300 Pa	N3547	360.25	241
GLB181.1E/MO	VAV compact controller Modbus, AC 24 V, 10 Nm, 150 s, 300 Pa	A6V10631832	324.88	243
GLB336.2E	Linear air damper actuator, AC 230 V, 3-position, 250 N, 150 s, 2 auxiliary switches	N4664	183.40	237
GLB341.1E	Rotary air damper actuator, AC 230 V, 2-position/3-position, 10 Nm, 150 s	A6V10636202	138.86	228
GLB341.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC 230 V, 2-position/3-position, 10 Nm, 150 s	A6V10636203	162.50	179
GLB346.1E	Rotary air damper actuator, AC 230 V, 2-position/3-position, 10 Nm, 150 s, 2 auxiliary switches	A6V10636202	163.75	228
GLB361.1E	Rotary air damper actuator, AC 230 V, DC 0/2...10 V, 10 Nm, 150 s	A6V10636202	264.62	228

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
GMA121.1E	Rotary air damper actuator, AC/DC 24 V, 2-position, 7 Nm, spring return 90/15 s	N4614	242.35	222
GMA121.9E	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, 2-position, 7 Nm, 90/15 s	N4658	266.50	178
GMA126.1E	Rotary air damper actuator, AC/DC 24 V, 2-position, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	276.41	222
GMA131.1E	Rotary air damper actuator, AC/DC 24 V, 3-position, 7 Nm, spring return 90/15 s	N4614	267.24	222
GMA131.9E	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, 3-position, 7 Nm, 90/15 s	N4658	287.30	178
GMA136.1E	Rotary air damper actuator, AC/DC 24 V, 3-position, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	298.68	222
GMA161.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 7 Nm, spring return 90/15 s	N4614	290.82	222
GMA161.1E/MO	Rotary air damper actuator, AC/DC 24 V, Modbus RTU, 7 Nm, spring return 90/15 s	A6V101037201	377.28	222
GMA161.9E	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, DC 0...10 V, 7 Nm, 90/15 s	N4658	339.30	178
GMA164.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	339.29	222
GMA166.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	323.57	222
GMA321.1E	Rotary air damper actuator, AC 230 V, 2-position, 7 Nm, spring return 90/15 s	N4614	267.24	222
GMA321.9E	Electromotoric rotary actuator with spring-return for ball valves, AC 230 V, 2-position, 7 Nm, 90/15 s	N4658	287.30	178
GMA326.1E	Rotary air damper actuator, AC 230 V, 2-position, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	298.68	222
GNA126.1E/12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	N4620	239.73	250
GNA126.1E/T10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	N4620	293.44	250
GNA126.1E/T12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	N4620	293.44	250
GNA326.1E/12	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12x12 mm	N4620	260.69	250
GNA326.1E/T10	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10x10 mm, with thermosensor	N4620	315.71	250
GNA326.1E/T12	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12x12 mm, with thermosensor	N4620	315.71	250
GNP191.1E	Rotary air damper actuator, AC/DC 24 V, DC 0(2)...10 V / 0(4)...20 mA, 6 Nm, 2 s, with electronic fail-save function	N4609	402.17	219
GNP196.1E	Rotary air damper actuator, AC/DC 24 V, DC 0(2)...10 V / 0(4)...20 mA, 6 Nm, 2 s, with electronic fail-save function, 2 auxiliary switches	N4609	432.30	219
GPC121.1A	Rotary air damper actuator, AC/DC 24 V, 2-position, 4 Nm, spring return 60/15 s	A6V10636100	196.50	221
GPC126.1A	Rotary air damper actuator, AC/DC 24 V, 2-position, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	229.25	221
GPC131.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 4 Nm, spring return 60/15 s	A6V10636100	196.50	221
GPC136.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	229.25	221
GPC161.1A	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 4 Nm, spring return 60/15 s	A6V10636100	256.76	221

Product no.	Product Title	Data sheet	Price (€)	Page
GPC166.1A	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	289.51	221
GPC321.1A	Rotary air damper actuator, AC 230 V, 2-position, 4 Nm, spring return 60/15 s	A6V10636100	214.84	221
GPC326.1A	Rotary air damper actuator, AC 230 V, 2-position, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	248.90	221
GPC361.1A	Rotary air damper actuator, AC 230 V, DC 0...10 V, 4 Nm, spring return 60/15 s	A6V10636100	317.02	221
GQD121.1A	Rotary air damper actuator, AC/DC 24 V, 2-position, 2 Nm, spring return 30/15 s	N4604	144.10	220
GQD121.9A	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, 2-position, 2 Nm, 30/15 s	N4659	158.60	175
GQD126.1A	Rotary air damper actuator, AC/DC 24 V, 2-position, 2 Nm, spring return 30/15 s, 2 auxiliary switches	N4604	166.37	220
GQD131.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 2 Nm, spring return 30/15 s	N4604	166.37	220
GQD131.9A	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, 3-position, 2 Nm, 30/15 s	N4659	244.40	175
GQD136.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 2 Nm, spring return, 30/15 s, 2 auxiliary switches	N4604	191.26	220
GQD161.1A	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 2 Nm, spring return 30/15 s	N4604	191.26	220
GQD161.9A	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, DC 0...10 V, 2 Nm, 30/15 s	N4659	269.10	175
GQD166.1A	Rotary air damper actuator, AC/DC 24 V, DC 0...10 V, 2 Nm, spring return 30/15 s, 2 auxiliary switches	N4604	213.53	220
GQD321.1A	Rotary air damper actuator, AC 230 V, 2-position, 2 Nm, spring return 30/15 s	N4604	144.10	220
GQD321.9A	Electromotoric rotary actuator with spring-return for ball valves, AC 230 V, 2-position, 2 Nm, 30/15 s	N4659	158.60	175
GQD326.1A	Rotary air damper actuator, AC 230 V, 2-position, 2 Nm, spring return 30/15 s, 2 auxiliary switches	N4604	166.37	220
GRA126.1E/10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	A6V10888424	200.43	248
GRA126.1E/12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	A6V10888424	200.43	248
GRA126.1E/T10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	A6V10888424	254.14	248
GRA126.1E/T12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	A6V10888424	254.14	248
GRA326.1E/10	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	A6V10888424	217.46	248
GRA326.1E/12	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	A6V10888424	217.46	248
GRA326.1E/T10	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	A6V10888424	271.17	248
GRA326.1E/T12	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	A6V10888424	271.17	248
GSD121.1A	Rotary air damper actuator, AC/DC 24 V, SPST, 2 Nm, 30 s	N4603	88.29	226
GSD126.1A	Rotary air damper actuator, AC/DC 24 V, SPST, 2 Nm, 30 s, 2 auxiliary switches	N4603	110.96	226
GSD141.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s	A6V10636055	111.48	226
GSD141.9A	Electromotoric rotary actuator without spring return for ball valves, AC/DC 24 V, On-Off, 2 Nm, 30 s	A6V10636056	104.52	176

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
GSD146.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s, 2 auxiliary switches	A6V10636055	137.55	226
GSD161.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s	A6V10636055	161.13	226
GSD161.9A	Electromotoric rotary actuators without spring return for ball valves, 2 Nm, 30s	A6V10636056	152.10	176
GSD166.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s, 2 auxiliary switches	A6V10636055	191.26	226
GSD321.1A	Rotary air damper actuator, AC 230 V, SPST, 2 Nm, 30 s	N4603	88.29	226
GSD326.1A	Rotary air damper actuator, AC 230 V, SPST, 2 Nm, 30 s, 2 auxiliary switches	N4603	110.96	226
GSD341.1A	Rotary air damper actuators, AC 240 V, 2 Nm, 30 s	A6V10636055	111.48	226
GSD341.9A	Electromotoric rotary actuator without spring return for ball valves, AC 230 V, On-Off, 2 Nm, 30 s	A6V10636056	104.52	176
GSD346.1A	Rotary air damper actuators, AC 240 V, 2 Nm, 30 s, 2 auxiliary switches	A6V10636055	137.55	226
GSD361.1A	Rotary air damper actuators, AC 240 V, 2 Nm, 30 s	A6V10636055	200.43	226
M2FP03GX	2-port modulating pilot valve with magnetic actuator, PN32, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs to control main valves	N4731	1127.10	205
M3FB15LX/A	Diverting/2-port refrigerant valve, solder connection, PN32, DN15, kvs 3, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4721	1599.00	209
M3FB15LX06/A	Diverting/2-port refrigerant valve, solder connection, PN32, DN15, kvs 0.6, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4721	1599.00	209
M3FB15LX15/A	Diverting/2-port refrigerant valve, solder connection, PN32, DN15, kvs 1.5, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4721	1599.00	209
M3FB20LX/A	Diverting/2-port refrigerant valve, solder connection, PN32, DN20, kvs 5, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4721	1911.00	209
M3FB25LX/A	Diverting/2-port refrigerant valve, solder connection, PN32, DN25, kvs 8, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4721	2301.00	209
M3FB32LX	Diverting/2-port refrigerant valve, solder connection, PN32, DN32, kvs 12, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4721	3081.00	209
M3FK15LX	Mixing/2-port refrigerant valve, solder connection, PN32, DN15, kvs 3, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4722	2054.00	210
M3FK25LX	Mixing/2-port refrigerant valve, solder connection, PN32, DN25, kvs 8, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4722	2496.00	210
M3FK32LX	Mixing/2-port refrigerant valve, solder connection, PN32, DN32, kvs 12, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4722	2847.00	210
M3FK40LX	Mixing/2-port refrigerant valve, solder connection, PN32, DN40, kvs 20, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4722	3523.00	210
M3FK50LX	Mixing/2-port refrigerant valve, solder connection, PN32, DN50, kvs 30, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs	N4722	3835.00	210
M3P100FY	Mixing/2-port magnetic control valve, flange, PN16, DN100, kvs 130, AC 24 V, DC 0/2...10 V / 4...20 mA	N4454	4056.00	138
M3P80FY	Mixing/2-port magnetic control valve, flange, PN16, DN80, kvs 80, AC 24 V, DC 0/2...10 V / 4...20 mA	N4454	3120.00	138
MVF461H15-0.6	2-port magnetic control valve, flange, PN16, DN15, kvs 0.6, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	1547.00	104
MVF461H15-1.5	2-port magnetic control valve, flange, PN16, DN15, kvs 1.5, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	1547.00	104
MVF461H15-3	2-port seat magnetic control valve, flange, PN16, DN15, kvs 3, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	1547.00	104
MVF461H20-5	2-port seat magnetic control valve, flange, PN16 DN20, kvs 5, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	1898.00	104
MVF461H25-8	2-port seat magnetic control valve, flange, PN16 DN25, kvs 8, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	2223.00	104
MVF461H32-12	2-port seat magnetic control valve, flange, PN16 DN32, kvs 12, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	2691.00	104
MVF461H40-20	2-port seat magnetic control valve, flange, PN16 DN40, kvs 20, AC / DC 24 V, DC 0/2...10 V / 0/4...20 mA	N4361	3211.00	104

Product no.	Product Title	Data sheet	Price (€)	Page
MVF461H50-30	2-port seat magnetic control valve, flange, PN16 DN50, kvs 30, AC / DC N4361 24 V, DC 0/2...10 V / 0/4...20 mA		3679.00	104
MVL661.15-0.4	2-port refrigerant valve, internal solder connection, DN15, kvs 0.4, AC / N4714 DC 24 V, DC 0/2...10 V / 0/4...20 mA		1271.40	206
MVL661.15-1.0	2-port refrigerant valve, internal solder connection, DN15, kvs 1.0, AC / N4714 DC 24 V, DC 0/2...10 V / 0/4...20 mA		1352.00	206
MVL661.20-2.5	2-port refrigerant valve, internal solder connection, DN20, kvs 2.5, AC / N4714 DC 24 V, DC 0/2...10 V / 0/4...20 mA		1482.00	206
MVL661.25-6.3	2-port refrigerant valve, internal solder connection, DN25, kvs 6.3, AC / N4714 DC 24 V, DC 0/2...10 V / 0/4...20 mA		1794.00	206
MVL661.32-10	2-port refrigerant valve, internal solder connection, DN32, kvs 10, AC / N4714 DC 24 V, DC 0/2...10 V / 0/4...20 mA		2106.00	206
MVL661.32-12	2-port refrigerant valve, internal solder connection, DN32, kvs 12, AC / N4714 DC 24 V, DC 0/2...10 V / 0/4...20 mA		2002.00	206
MVS661.25-0.4N	2-port refrigerant valve, solder connection, PN 63, DN25, kvs 0.4, N4717 AC/DC 24 V, DC 0/2...10 V / 0/4...20 mA		2028.00	207
MVS661.25-016N	2-port refrigerant valve, solder connection, PN 63, DN25, kvs 0.16, N4717 AC/DC 24 V, DC 0/2...10 V / 0/4...20 mA		1950.00	207
MVS661.25-1.0N	2-port refrigerant valve, solder connection, PN 63, DN25, kvs 1.0, N4717 AC/DC 24 V, DC 0/2...10 V / 0/4...20 mA		2106.00	207
MVS661.25-2.5N	2-port refrigerant valve, solder connection, PN 63, DN25, kvs 2.5, N4717 AC/DC 24 V, DC 0/2...10 V / 0/4...20 mA		2184.00	207
MVS661.25-6.3N	2-port refrigerant valve, solder connection, PN 63, DN25, kvs 6.3, N4717 AC/DC 24 V, DC 0/2...10 V / 0/4...20 mA		2275.00	207
MXF461.15-0.6	Mixing/2-port magnetic control valve, flange, PN16, DN15, kvs 0.6, AC N4455 / DC 24 V, DC 0/2...10 V / 4...20 mA		1168.70	139
MXF461.15-1.5	Mixing/2-port magnetic control valve, flange, PN16, DN15, kvs 1.5, AC N4455 / DC 24 V, DC 0/2...10 V / 4...20 mA		1168.70	139
MXF461.15-3.0	Mixing/2-port magnetic control valve, flange, PN16, DN15, kvs 3, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		1168.70	139
MXF461.20-5.0	Mixing/2-port magnetic control valve, flange, PN16, DN20, kvs 5, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		1290.90	139
MXF461.25-8.0	Mixing/2-port magnetic control valve, flange, PN16, DN25, kvs 8, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		1417.00	139
MXF461.32-12	Mixing/2-port magnetic control valve, flange, PN16, DN32, kvs 12, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		1547.00	139
MXF461.40-20	Mixing/2-port magnetic control valve, flange, PN16, DN40, kvs 20, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		1677.00	139
MXF461.50-30	Mixing/2-port magnetic control valve, flange, PN16, DN50, kvs 30, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		1937.00	139
MXF461.50-30P	Mixing/2-port control valve, flanged, PN16, DN50, kvs 30, AC / DC 24 V, 0/2...10 V, 4...20 mA, media cont. mineral oils N4455		2002.00	140
MXF461.65-50	Mixing/2-port magnetic control valve, flange, PN16, DN65, kvs 50, AC / N4455 DC 24 V, DC 0/2...10 V / 4...20 mA		2262.00	139
MXG461.15-0.6	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 0.6, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		995.80	154
MXG461.15-1.5	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 1.5, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		995.80	154
MXG461.15-3.0	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 3, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		994.50	154
MXG461.20-5.0	Mixing/2-port magnetic control valve, external thread, PN16, DN20, kvs 5, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		1071.20	154
MXG461.25-8.0	Mixing/2-port magnetic control valve, external thread, PN16, DN25, kvs 8, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		1193.40	154
MXG461.32-12	Mixing/2-port magnetic control valve, external thread, PN16, DN32, kvs 12, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		1289.60	154
MXG461.40-20	Mixing/2-port magnetic control valve, external thread, PN16, DN40, kvs 20, AC / DC 24 V, DC 0/2...10 V / 4...20 mA N4455		1391.00	154

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
MXG461.50-30	Mixing/2-port magnetic control valve, external thread, PN16, DN50, kvs 30, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4455	1456.00	154
MXG461B15-0.6	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 0.6, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	1859.00	142
MXG461B15-1.5	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 1.5, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	1859.00	142
MXG461B15-3	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 3, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	1859.00	142
MXG461B20-5	Mixing/2-port magnetic control valve, external thread, PN16, DN20, kvs 5, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	1976.00	142
MXG461B25-8	Mixing/2-port magnetic control valve, external thread, PN16, DN25, kvs 8, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	2080.00	142
MXG461B32-12	Mixing/2-port magnetic control valve, external thread, PN16, DN32, kvs 12, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	2262.00	142
MXG461B40-20	Mixing/2-port magnetic control valve, external thread, PN16, DN40, kvs 20, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	2626.00	142
MXG461B50-30	Mixing/2-port magnetic control valve, external thread, PN16, DN50, kvs 30, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4461	2873.00	142
MXG461S15-1.5	Mixing/2-port magnetic control valve, external thread, PN16, DN15, kvs 1.5, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4465	2119.00	145
MXG461S25-8.0	Mixing/2-port magnetic control valve, external thread, PN16, DN25, kvs 8, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4465	2249.00	145
MXG461S32-12	Mixing/2-port magnetic control valve, external thread, PN16, DN32, kvs 12, AC/ DC 24 V, DC 0/2...10 V / 4...20 mA	N4465	2496.00	145
RTN51	Thermostatic actuator, RAL 9016, matt	N2111	19.76	57
RTN71	Thermostatic actuator with remote sensor	N2111	75.40	57
RTN81	Thermostatic actuator with remote adjuster	N2111	81.64	57
SAL31.00T10	Electromotoric actuator, 10 Nm, 90°, AC 230 V, 3P	N4502	410.80	183
SAL31.00T20	Electromotoric actuator, 20 Nm, 90°, AC 230 V, 3P	N4502	542.10	183
SAL31.00T40	Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P	N4502	542.10	183
SAL31.03T10	Electromotoric actuator, 10 Nm, 90°, AC 230 V, 3P, 30 s	N4502	432.90	183
SAL61.00T10	Electromotoric actuator, 10 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	512.20	183
SAL61.00T20	Electromotoric actuator, 20 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	643.50	183
SAL61.00T40	Electromotoric actuator, 40 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	643.50	183
SAL61.03T10	Electromotoric actuator, 10 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	N4502	534.30	183
SAL81.00T10	Electromotoric actuator, 10 Nm, 90°, AC/DC 24 V, 3P	N4502	410.80	183
SAL81.00T20	Electromotoric actuator, 20 Nm, 90°, AC/DC 24 V, 3P	N4502	542.10	183
SAL81.00T40	Electromotoric actuator, 40 Nm, 90°, AC/DC 24 V, 3P	N4502	542.10	183
SAL81.03T10	Electromotoric actuator, 10 Nm, 90°, AC/DC 24 V, 3P, 30 s	N4502	432.90	183
SAS31.00	Electromotoric actuator, 400 N, 5.5 mm, AC 230 V, 3P, 120 s	N4581	252.20	72
SAS31.03	Electromotoric actuator, 400 N, 5.5 mm, AC 230 V, 3P, 30 s	N4581	252.20	72
SAS31.50	Electromotoric actuator, 400 N, 5.5 mm, AC 230 V, 3P, spring return function, 120 s	N4581	384.80	72
SAS31.53	Electromotoric actuator, 400 N, 5.5 mm, AC 230 V, 3P, spring return function, 30 s	N4581	384.80	72
SAS61.03	Electromotoric actuator, 400 N, 5.5 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	N4581	301.60	72
SAS61.03/MO	Electromotoric actuators 400 N for valves with 5.5 mm stroke, Modbus RTU	N4581	390.00	72
SAS61.33	Electromotoric actuator, 400 N, 5.5 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, spring return function, 30 s	N4581	462.80	72
SAS61.53	Electromotoric actuator, 400 N, 5.5 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, spring return function, 30 s	N4581	462.80	72

Product no.	Product Title	Data sheet	Price (€)	Page
SAS81.00	Electromotoric actuator, 400 N, 5.5 mm, AC/DC 24 V, 3P, 120 s	N4581	252.20	72
SAS81.03	Electromotoric actuator, 400 N, 5.5 mm, AC/DC 24 V, 3P, 30 s	N4581	252.20	72
SAS81.33	Electromotoric actuator, 400 N, 5.5 mm, AC/DC 24 V, 3P, spring return function, 30 s	N4581	388.70	72
SAT31.008	Electromotoric actuator, 300 N, 5.5 mm, AC 230 V, 3P, 8 s	N4584	257.40	71
SAT31.51	Electromotoric actuator, 300 N, 5.5 mm, AC 230 V, 3P, spring return function, 15 s	N4584	388.70	71
SAT61.008	Electromotoric actuator, 300 N, 5.5 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 8 s	N4584	301.60	71
SAT61.51	Electromotoric actuator, 300 N, 5.5 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, spring return function, 15 s	N4584	462.80	71
SAV31.00	Electromotoric actuator, 1600 N, 20/40 mm, AC 230 V, 3P	N4503	830.70	62
SAV31P00	Electromotoric actuator, 1100 N, 40 mm, AC 230 V, 3P, 120 s	N4510	815.10	157
SAV61.00	Electromotoric actuator, 1600 N, 20/40 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4503	903.50	62
SAV61P00	Electromotoric actuator, 1100 N, 40 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA / 0...1000 Ω, 120 s	N4510	821.60	157
SAV81.00	Electromotoric actuator, 1600 N, 20/40 mm, AC/DC 24 V, 3P	N4503	830.70	62
SAV81P00	Electromotoric actuator, 1100 N, 40 mm, AC/DC 24 V, 3P, 120 s	N4510	755.30	157
SAX31.00	Electromotoric actuator, 800 N, 20 mm, AC 230 V, 3P	N4501	427.70	76
SAX31.03	Electromotoric actuator, 800 N, 20 mm, AC 230 V, 3P, 30 s	N4501	448.50	76
SAX31P03	Electromotoric actuator, 500 N, 20 mm, AC 230 V, 3P, 30 s	N4509	416.00	75
SAX61.03	Electromotoric actuator, 800 N, 20 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	N4501	551.20	76
SAX61.03/MO	Electromotoric actuators 800 N for valve with 20 mm stroke, Modbus RTU	N4501	633.10	76
SAX61P03	Electromotoric actuator, 500 N, 20 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	N4509	509.60	75
SAX81.00	Electromotoric actuator, 800 N, 20 mm, AC/DC 24 V, 3P	N4501	427.70	76
SAX81.03	Electromotoric actuator, 800 N, 20 mm, AC/DC 24 V, 3P, 30 s	N4501	448.50	76
SAX81P03	Electromotoric actuator, 500 N, 20 mm, AC/DC 24 V, 3P, 30 s	N4509	416.00	75
SAY31P03	Electromotoric actuator, 200 N, 15 mm, AC 230 V, 3P, 30 s	A6V10628469	380.90	170
SAY61P03	Electromotoric actuator, 200 N, 15 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	A6V10628469	460.20	170
SAY81P03	Electromotoric actuator, 200 N, 15 mm, AC/DC 24 V, 3P, 30 s	A6V10628469	380.90	170
SEZ31.1	Auxiliary module, variable positioning time for SQL36E..	N4505	378.30	184
SEZ91.6	Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	119.73	144
SFA21/18	Electromotoric actuator, 200 N, 2.5 mm, AC 230 V, 2P	N4863	89.83	69
SFA71/18	Electromotoric actuator, 200 N, 2.5 mm, AC 24 V, 2P	N4863	89.83	69
SFP21/18	Electromotoric actuator, 135 N, 2.5 mm, AC 230 V, 2P	N4865	99.71	65
SKB32.50	Electrohydraulic actuator, 2800 N, 20 mm, AC 230 V, 3P	N4564	1145.30	80
SKB32.51	Electrohydraulic actuator, 2800 N, 20 mm, AC 230 V, 3P, spring return	N4564	1378.00	80
SKB60	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA	N4564	1246.70	81
SKB62	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4564	1482.00	81
SKB62U	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	1612.00	81
SKB62UA	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	1781.00	81
SKB82.50	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P	N4564	1145.30	80
SKB82.51	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, spring return	N4564	1378.00	80
SKC32.60	Electrohydraulic actuator, 2800 N, 40 mm, AC 230 V, 3P	N4566	1276.60	82
SKC32.61	Electrohydraulic actuator, 2800 N, 40 mm, AC 230 V, 3P, spring return	N4566	1495.00	82
SKC60	Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA	N4566	1391.00	83

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
SKC62	Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4566	1599.00	83
SKC62U	Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4566	1768.00	83
SKC62UA	Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4566	1950.00	83
SKC82.60	Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P	N4566	1276.60	82
SKC82.61	Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, spring return	N4566	1495.00	82
SKD32.21	Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P, spring return	N4561	873.60	84
SKD32.50	Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P	N4561	670.80	84
SKD32.51	Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P, spring return	N4561	833.30	84
SKD60	Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10V/4...20 mA	N4561	721.50	79
SKD62	Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4561	878.80	79
SKD62U	Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4561	965.90	79
SKD62UA	Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4561	1056.90	79
SKD82.50	Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P	N4561	670.80	84
SKD82.51	Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, spring return	N4561	833.30	84
SQL36E110	Electromotoric actuator, 400 Nm, 90°, AC 230 V, 3P	N4505	2691.00	184
SQL36E160	Electromotoric actuator, 1200 Nm, 90°, AC 230 V, 3P	N4505	8970.00	184
SQL36E50F04	Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P, F04 connection	N4505	1201.20	184
SQL36E50F05	Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P, F05 connection	N4505	1201.20	184
SQL36E65	Electromotoric actuator, 100 Nm, 90°, AC 230 V, 3P	N4505	1521.00	184
SQV91P30	Electromotoric actuator, 1100 N, 20/40 mm, AC/DC 24 V, 3P / DC 0...10 V / DC 4...20 mA, spring return function, retracted, 120 s	N4833	1202.50	77
SQV91P40	Electromotoric actuator, 1100 N, 20/40 mm, AC/DC 24 V, 3P / DC 0...10 V / DC 4...20 mA, spring return function, extended, 120 s	N4833	1202.50	77
SSA131.00	Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke	A6V11858276	84.50	64
SSA151.05HF	Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke	A6V11858278	136.50	64
SSA161.05	Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke	A6V11858276	115.70	64
SSA161.05HF	Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke	A6V11858278	136.50	64
SSA161E.05HF	Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke	A6V11858278	136.50	64
SSA31	Electromotoric actuator, 100 N, 2.5/5 mm, 1.5 m, AC 230 V, 3P	N4893	108.94	64
SSA31.04	Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 230 V, 3P, SPDT	N4860	118.43	66
SSA31.1	Electromotoric actuator, 100 N, 2.5/5 mm, 1.5 m, AC 230 V, 3P, auxiliary switch	N4893	170.30	64
SSA331.00	Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke	A6V11858276	97.50	64
SSA61	Electromotoric actuator, 100 N, 2.5/5 mm, AC/DC 24 V, 1.5 m, DC 0...10 V	N4893	137.80	64
SSA81	Electromotoric actuator, 100 N, 2.5/5 mm, 1.5 m, AC 24 V, 3P	N4893	94.12	64
SSA81.1	Electromotoric actuator, 100 N, 2.5/5 mm, 1.5 m, AC 24 V, 3P, auxiliary switch	N4893	178.10	64
SSB31	Electromotoric actuator, 200 N, 5.5 mm, AC 230 V, 1.5 m, 3P	N4891	128.44	70
SSB31.1	Electromotoric actuator, 200 N, 5.5 mm, AC 230 V, 1.5 m, 3P, auxiliary switch	N4891	182.00	70
SSB61	Electromotoric actuator, 200 N, 5.5 mm, AC/DC 24 V, 1.5 m, DC 0...10 V	N4891	163.80	70
SSB81	Electromotoric actuator, 200 N, 5.5 mm, AC 24 V, 1.5 m, 3P	N4891	111.93	70
SSB81.1	Electromotoric actuator, 200 N, 5.5 mm, AC 24 V, 1.5 m, 3P, auxiliary switch	N4891	172.90	70
SSC31	Electromotoric actuator, 300 N, for valves with 5.5 mm stroke	N4895	174.20	74
SSC61	Electromotoric actuator, 300 N, 5.5 mm, AC/DC 24 V, DC 0...10 V	N4895	245.70	74

Product no.	Product Title	Data sheet	Price (€)	Page
SSC61.5	Electromotoric actuator, 300 N, 5.5 mm, AC/DC 24 V, DC 0...10 V, fail-safe	N4895	395.20	74
SSC81	Electromotoric actuator, 300 N, 5.5 mm, AC 24 V, 3P	N4895	162.50	74
SSD31	Electromotoric actuator, 250 N, 5.5 mm, 1.5 m, AC 230 V, 3P	N4861	148.20	73
SSP31	Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 230 V, 3P	N4864	128.83	68
SSP61	Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC/DC 24 V, DC 0...10 V	N4864	163.80	68
SSP81	Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 24 V, 3P	N4864	112.45	68
SSP81.04	Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 24 V, 3P	N4864	118.43	68
STA23	Electrothermal actuator, AC 230 V, NC, 2P, 1 m	N4884	46.15	59
STA23/00	Electrothermal actuator, AC 230 V, NC, 2P	N4884	40.69	59
STA23B/00	Electrothermal actuator, AC 230 V, NC, 2P, black	N4884	40.69	59
STA23HD	Electrothermal actuator, AC 230 V, HD, 2P, 0.8 m	N4884	41.34	59
STA63	Electrothermal actuator, AC 24 V, NC, DC 0...10 V	N4884	109.07	59
STA73	Electrothermal actuator, AC/DC 24 V, NC, 2P, PDM, 1 m	N4884	47.06	59
STA73/00	Electrothermal actuator, AC/DC 24 V, NC, 2P, PDM	N4884	41.47	59
STA73B/00	Electrothermal actuator, AC/DC 24 V, NC, 2P, PDM, black	N4884	41.47	59
STA73HD	Electrothermal actuator, AC/DC 24 V, HD, 2P, 0.8 m	N4884	42.12	59
STA73PR/00	Electrothermal actuator, AC/DC 24 V, NC, 2P, PDM, PR	N4884	49.14	59
STP23	Electrothermal actuator, AC 230 V, NO, 2P, 1 m	N4884	52.78	61
STP23/00	Electrothermal actuator, AC 230 V, NO, 2P	N4884	47.19	61
STP63	Electrothermal actuator, AC 24 V, NO, DC 0...10 V, 1 m	N4884	110.24	61
STP73	Electrothermal actuator, AC/DC 24 V, NO, 2P, 1 m	N4884	52.78	61
STP73/00	Electrothermal actuator, AC/DC 24 V, NO, 2P, PDM	N4884	47.19	61
SUA21/3	Electromotoric actuator, 170 N, 0.8m, AC 230 V, 2P	A6V10446174	28.60	67
VAG60.15-9	2-port open/close ball valve, PN40, DN15, kvs 10	N4214	84.89	201
VAG60.20-17	2-port open/close ball valve, PN40, DN20, kvs 17	N4214	94.90	201
VAG60.25-22	2-port open/close ball valve, PN40, DN25, kvs 22	N4214	123.63	201
VAG60.32-35	2-port open/close ball valve, PN40, DN32, kvs 35	N4214	175.50	201
VAG60.40-68	2-port open/close ball valve, PN40, DN40, kvs 68	N4214	211.90	201
VAG60.50-96	2-port open/close ball valve, PN40, DN50, kvs 96	N4214	292.50	201
VAG61.15-1	2-port ball valve, externally threaded, PN40, DN15, kvs 1.0	N4212	89.96	195
VAG61.15-1.6	2-port ball valve, externally threaded, PN40, DN15, kvs 1.6	N4212	89.96	195
VAG61.15-2.5	2-port ball valve, externally threaded, PN40, DN15, kvs 2.5	N4212	89.96	195
VAG61.15-4	2-port ball valve, externally threaded, PN40, DN15, kvs 4.0	N4212	89.96	195
VAG61.15-6.3	2-port ball valve, externally threaded, PN40, DN15, kvs 6.3	N4212	89.96	195
VAG61.20-10	2-port ball valve, externally threaded, PN40, DN20, kvs 10	N4212	102.44	195
VAG61.20-4	2-port ball valve, externally threaded, PN40, DN20, kvs 4.0	N4212	102.44	195
VAG61.20-6.3	2-port ball valve, externally threaded, PN40, DN20, kvs 6.3	N4212	102.44	195
VAG61.25-10	2-port ball valve, externally threaded, PN40, DN25, kvs 10	N4212	133.90	195
VAG61.25-16	2-port ball valve, externally threaded, PN40, DN25, kvs 16	N4212	133.90	195
VAG61.25-6.3	2-port ball valve, externally threaded, PN40, DN25, kvs 6.3	N4212	133.90	195
VAG61.32-10	2-port ball valve, externally threaded, PN40, DN32, kvs 10	N4212	187.20	195
VAG61.32-16	2-port ball valve, externally threaded, PN40, DN32, kvs 16	N4212	187.20	195
VAG61.32-25	2-port ball valve, externally threaded, PN40, DN32, kvs 25	N4212	187.20	195
VAG61.40-16	2-port ball valve, externally threaded, PN40, DN40, kvs 16	N4212	222.30	195
VAG61.40-25	2-port ball valve, externally threaded, PN40, DN40, kvs 25	N4212	222.30	195
VAG61.40-40	2-port ball valve, externally threaded, PN40, DN40, kvs 40	N4212	222.30	195
VAG61.50-25	2-port ball valve, externally threaded, PN40, DN50, kvs 25	N4212	302.90	195
VAG61.50-40	2-port ball valve, externally threaded, PN40, DN50, kvs 40	N4212	302.90	195
VAG61.50-63	2-port ball valve, externally threaded, PN40, DN50, kvs 63	N4212	302.90	195
VAI60.15-15	2-port ball valve, internally threaded, PN40, DN15, kvs 15	N4213	54.21	191
VAI60.20-22	2-port ball valve, internally threaded, PN40, DN20, kvs 22	N4213	65.13	191
VAI60.25-22	2-port ball valve, internally threaded, PN40, DN25, kvs 22	N4213	76.18	191

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
VAI60.32-35	2-port ball valve, internally threaded, PN40, DN32, kvs 35	N4213	113.88	191
VAI60.40-68	2-port ball valve, internally threaded, PN40, DN40, kvs 68	N4213	136.50	191
VAI60.50-96	2-port ball valve, internally threaded, PN40, DN50, kvs 96	N4213	219.70	191
VAI61.15-1	2-port ball valve, internal thread, PN40, DN15, kvs 1	N4211	76.18	188
VAI61.15-1.6	2-port ball valve, internal thread, PN40, DN15, kvs 1.6	N4211	76.18	188
VAI61.15-10	2-port ball valve, internal thread, PN40, DN15, kvs 10	N4211	76.18	188
VAI61.15-2.5	2-port ball valve, internal thread, PN40, DN15, kvs 2.5	N4211	76.18	188
VAI61.15-4	2-port ball valve, internal thread, PN40, DN15, kvs 4	N4211	76.18	188
VAI61.15-6.3	2-port ball valve, internal thread, PN40, DN15, kvs 6.3	N4211	76.18	188
VAI61.20-10	2-port ball valve, internal thread, PN40, DN20, kvs 10	N4211	89.05	188
VAI61.20-4	2-port ball valve, internal thread, PN40, DN20, kvs 4	N4211	89.05	188
VAI61.20-6.3	2-port ball valve, internal thread, PN40, DN20, kvs 6.3	N4211	89.05	188
VAI61.25-10	2-port ball valve, internal thread, PN40, DN25, kvs 10	N4211	109.46	188
VAI61.25-16	2-port ball valve, internal thread, PN40, DN25, kvs 16	N4211	109.46	188
VAI61.25-6.3	2-port ball valve, internal thread, PN40, DN25, kvs 6.3	N4211	109.46	188
VAI61.32-10	2-port ball valve, internal thread, PN40, DN32, kvs 10	N4211	157.30	188
VAI61.32-16	2-port ball valve, internal thread, PN40, DN32, kvs 16	N4211	157.30	188
VAI61.32-25	2-port ball valve, internal thread, PN40, DN32, kvs 25	N4211	157.30	188
VAI61.40-16	2-port ball valve, internal thread, PN40, DN40, kvs 16	N4211	188.50	188
VAI61.40-25	2-port ball valve, internal thread, PN40, DN40, kvs 25	N4211	188.50	188
VAI61.40-40	2-port ball valve, internal thread, PN40, DN40, kvs 40	N4211	188.50	188
VAI61.50-25	2-port ball valve, internal thread, PN40, DN50, kvs 25	N4211	244.40	188
VAI61.50-40	2-port ball valve, internal thread, PN40, DN50, kvs 40	N4211	244.40	188
VAI61.50-63	2-port ball valve, internal thread, PN40, DN50, kvs 63	N4211	244.40	188
VBF21.100	3-port slipper valve, flanged, PN6, DN100, kvs 160	N4241	638.30	185
VBF21.125	3-port slipper valve, flanged, PN6, DN125, kvs 550	N4241	1227.20	185
VBF21.150	3-port slipper valve, flanged, PN6, DN150, kvs 820	N4241	1625.00	185
VBF21.40	3-port slipper valve, flanged, PN6, DN40, kvs 25	N4241	193.70	185
VBF21.50	3-port slipper valve, flanged, PN6, DN50, kvs 40	N4241	262.60	185
VBF21.65	3-port slipper valve, flanged, PN6, DN65, kvs 63	N4241	332.80	185
VBF21.80	3-port slipper valve, flanged, PN6, DN80, kvs 100	N4241	434.20	185
VBG60.15-8T	3-port changeover ball valve, PN40, DN15, kvs 8	N4214	167.70	203
VBG60.20-13T	3-port changeover ball valve, PN40, DN20, kvs 13	N4214	195.00	203
VBG60.25-13T	3-port changeover ball valve, PN40, DN25, kvs 13	N4214	245.70	203
VBG60.32-25T	3-port changeover ball valve, PN40, DN32, kvs 25	N4214	352.30	203
VBG60.40-49T	3-port changeover ball valve, PN40, DN40, kvs 49	N4214	405.60	203
VBG60.50-73T	3-port changeover ball valve, PN40, DN50, kvs 73	N4214	520.00	203
VBG61.15-1.6	3-port ball valve, externally threaded, PN40, DN15, kvs 1.6	N4212	178.10	199
VBG61.15-2.5	3-port ball valve, externally threaded, PN40, DN15, kvs 2.5	N4212	178.10	199
VBG61.15-4	3-port ball valve, externally threaded, PN40, DN15, kvs 4.0	N4212	178.10	199
VBG61.15-6.3	3-port ball valve, externally threaded, PN40, DN15, kvs 6.3	N4212	178.10	199
VBG61.20-4	3-port ball valve, externally threaded, PN40, DN20, kvs 4.0	N4212	204.10	199
VBG61.20-6.3	3-port ball valve, externally threaded, PN40, DN20, kvs 6.3	N4212	204.10	199
VBG61.25-10	3-port ball valve, externally threaded, PN40, DN25, kvs 10	N4212	254.80	199
VBG61.32-16	3-port ball valve, externally threaded, PN40, DN32, kvs 16	N4212	365.30	199
VBG61.40-25	3-port ball valve, externally threaded, PN40, DN40, kvs 25	N4212	419.90	199
VBG61.50-40	3-port ball valve, externally threaded, PN40, DN50, kvs 40	N4212	529.10	199
VBI60.15-12T	Changeover ball valve, 3-port, PN40, DN15, kvs 12	N4213	96.59	198
VBI60.15-5L	Changeover ball valve, 3-port, PN40, DN15, kvs 5	N4213	82.42	198
VBI60.20-16T	Changeover ball valve, 3-port, PN40, DN20, kvs 16	N4213	109.59	198
VBI60.20-9L	Changeover ball valve, 3-port, PN40, DN20, kvs 9	N4213	96.59	198
VBI60.25-16T	Changeover ball valve, 3-port, PN40, DN25, kvs 16	N4213	137.80	198
VBI60.25-9L	Changeover ball valve, 3-port, PN40, DN25, kvs 9	N4213	119.60	198
VBI60.32-13L	Changeover ball valve, 3-port, PN40, DN32, kvs 13	N4213	171.60	198

Product no.	Product Title	Data sheet	Price (€)	Page
VBI60.32-25T	Changeover ball valve, 3-port, PN40, DN32, kvs 25	N4213	197.60	198
VBI60.40-25L	Changeover ball valve, 3-port, PN40, DN40, kvs 25	N4213	273.00	198
VBI60.40-49T	Changeover ball valve, 3-port, PN40, DN40, kvs 49	N4213	240.50	198
VBI60.50-37L	Changeover ball valve, 3-port, PN40, DN50, kvs 37	N4213	356.20	198
VBI60.50-73T	Changeover ball valve, 3-port, PN40, DN50, kvs 73	N4213	293.80	198
VBI61.15-1.6	3-port ball valve, internal thread, PN40, DN15, kvs 1	N4211	133.90	190
VBI61.15-2.5	3-port ball valve, internal thread, PN40, DN15, kvs 2.5	N4211	133.90	190
VBI61.15-4	3-port ball valve, internal thread, PN40, DN15, kvs 4	N4211	133.90	190
VBI61.15-6.3	3-port ball valve, internal thread, PN40, DN15, kvs 6.3	N4211	133.90	190
VBI61.20-4	3-port ball valve, internal thread, PN40, DN20, kvs 4	N4211	152.10	190
VBI61.20-6.3	3-port ball valve, internal thread, PN40, DN20, kvs 6.3	N4211	152.10	190
VBI61.25-10	3-port ball valve, internal thread, PN40, DN25, kvs 10	N4211	192.40	190
VBI61.32-16	3-port ball valve, internal thread, PN40, DN32, kvs 16	N4211	269.10	190
VBI61.40-25	3-port ball valve, internal thread, PN40, DN40, kvs 25	N4211	367.90	190
VBI61.50-40	3-port ball valve, internal thread, PN40, DN50, kvs 40	N4211	526.50	190
VBI61.50-63	3-port ball valve, internal thread, PN40, DN50, kvs 63	N4211	526.50	190
VD115CLC	2-port small valve, DIN, DN15, kv 0.25...1.9	N2103	22.62	123
VD120CLC	2-port small valve, DIN, DN20, kv 0.25...2.6	N2103	29.51	123
VD125CLC	2-port small valve, DIN, DN25, kv 0.25...2.6	N2103	36.14	123
VDN110	2-port radiator valve, DIN, 2-pipe system, PN10, DN10, kvs 0.09...0.63	N2105	18.07	117
VDN115	2-port radiator valve, DIN, 2-pipe system, PN10, DN15, kvs 0.10...0.89	N2105	20.54	117
VDN120	2-port radiator valve, DIN, 2-pipe system, PN10, DN20, kvs 0.31...1.41	N2105	30.16	117
VDN210	2-port radiator valve, NF, 2-pipe system, PN10, DN10, kvs 0.09...0.63	N2106	18.07	119
VDN215	2-port radiator valve, NF, 2-pipe system, PN10, DN15, kvs 0.10...0.89	N2106	20.54	119
VDN220	2-port radiator valve, NF, 2-pipe system, PN10, DN20, kvs 0.31...1.41	N2106	30.16	119
VEN110	Angle radiator valve, DIN, 2-pipe system, PN10, DN10, kv 0.09...0.63	N2105	18.07	117
VEN115	Angle radiator valve, DIN, 2-pipe system, PN10, DN15, kv 0.10...0.89	N2105	20.54	117
VEN120	Angle radiator valve, DIN, 2-pipe system, PN10, DN20, kv 0.31...1.41	N2105	30.16	117
VEN210	Angle radiator valve, NF, 2-pipe system, PN10, DN10, kvs 0.09...0.63	N2106	18.07	120
VEN215	Angle radiator valve, NF, 2-pipe system, PN10, DN15, kvs 0.10...0.89	N2106	20.54	120
VEN220	Angle radiator valve, NF, 2-pipe system, PN10, DN20, kvs 0.31...1.41	N2106	30.16	120
VKF46.100	Butterfly valve, flange, PN6/10/16, DN100, kvs 800, tight shutoff	N4136	481.00	187
VKF46.125	Butterfly valve, flange, PN6/10/16, DN125, kvs 1010, tight shutoff	N4136	570.70	187
VKF46.150	Butterfly valve, flange, PN6/10/16, DN150, kvs 2100, tight shutoff	N4136	777.40	187
VKF46.200	Butterfly valve, flange, PN6/10/16, DN200, kvs 4000, tight shutoff	N4136	1077.70	187
VKF46.250	Butterfly valve, flange, PN6/10/16, DN250, kvs 6400, tight shutoff	N4136	1313.00	187
VKF46.300	Butterfly valve, flange, PN6/10/16, DN300, kvs 8500, tight shutoff	N4136	1963.00	187
VKF46.350	Butterfly valve, flange, PN6/10/16, DN350, kvs 11500, tight shutoff	N4136	3237.00	187
VKF46.40	Butterfly valve, flange, PN6/10/16, DN40, kvs 50, tight shutoff	N4136	345.80	187
VKF46.400	Butterfly valve, flange, PN6/10/16, DN400, kvs 14500, tight shutoff	N4136	4212.00	187
VKF46.50	Butterfly valve, flange, PN6/10/16, DN50, kvs 85, tight shutoff	N4136	366.60	187
VKF46.500TS	Butterfly valve, flange, PN6/10/16, DN500, kvs 21000, tight shutoff	N4136	7995.00	187
VKF46.65	Butterfly valve, flange, PN6/10/16, DN65, kvs 215, tight shutoff	N4136	423.80	187
VKF46.80	Butterfly valve, flange, PN6/10/16, DN80, kvs 420, tight shutoff	N4136	444.60	187
VMP45.10-0.4	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.4	N4845	82.55	146
VMP45.10-0.63	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.63	N4845	80.73	146
VMP45.10-1	3-port seat valve with bypass, external thread, PN16, DN10, kvs 1	N4845	80.73	146
VMP45.10-1.6	3-port seat valve with bypass, external thread, PN16, DN10, kvs 1.6	N4845	80.73	146
VMP45.15-2.5	3-port seat valve with bypass, external thread, PN16, DN15, kvs 2.5	N4845	101.14	146
VMP45.20-4	3-port seat valve with bypass, external thread, PN16, DN20, kvs 4	N4845	123.89	146
VMP47.10-0.25	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.25	N4847	65.26	150
VMP47.10-0.4	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.4	N4847	63.83	150
VMP47.10-0.63	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.63	N4847	63.83	150
VMP47.10-1	3-port seat valve with bypass, external thread, PN16, DN10, kvs 1	N4847	63.83	150

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
VMP47.10-1.6	3-port seat valve with bypass, external thread, PN16, DN10, kvs 1.6	N4847	63.83	150
VMP47.15-2.5	3-port seat valve with bypass, external thread, PN16, DN15, kvs 2.5	N4847	78.78	150
VPD110B-200	2-port seat radiator valve, DIN, pressure compensated, dpw 10 kPa, PN10, DN10, 95...483 l/h	N2185	105.82	167
VPD115A-145	2-port seat radiator valve, DIN, pressure compensated, dpw 5 kPa, PN10, DN15, 86...318 l/h	N2185	116.48	167
VPD115A-45	2-port seat radiator valve, DIN, pressure compensated, dpw 5 kPa, PN10, DN15, 25...104 l/h	N2185	116.48	167
VPD115A-90	2-port seat radiator valve, DIN, pressure compensated, dpw 5 kPa, PN10, DN15, 57...185 l/h	N2185	116.48	167
VPD115B-200	2-port seat radiator valve, DIN, pressure compensated, dpw 10 kPa, PN10, DN15, 95...483 l/h	N2185	116.48	167
VPE115A-145	Angle radiator valve, DIN, pressure-compensated, dpw 5 kPa, PN10, DN15, 86...318 l/h	N2185	116.48	168
VPE115A-45	Angle radiator valve, DIN, pressure-compensated, dpw 5 kPa, PN10, DN15, 25...104 l/h	N2185	116.48	168
VPE115A-90	Angle radiator valve, DIN, pressure-compensated, dpw 5 kPa, PN10, DN15, 57...185 l/h	N2185	116.48	168
VPF43.100F70	Combi valve, flanged, PN16, DN100, 12.1...68 m3/h	N4315	2106.00	158
VPF43.100F90	Combi valve, flanged, PN16, DN100, 14.8...90 m3/h	N4315	2106.00	158
VPF43.125F110	Combi valve, flanged, PN16, DN125, 18.5...110 m3/h	N4315	6435.00	158
VPF43.125F135	Combi valve, flanged, PN16, DN125, 23...135 m3/h	N4315	6435.00	158
VPF43.150F160	Combi valve, flanged, PN16, DN150, 25.6...148 m3/h	N4315	6838.00	158
VPF43.150F200	Combi valve, flanged, PN16, DN150, 32...195 m3/h	N4315	6838.00	158
VPF43.50F16	Combi valve, flanged, PN16, DN50, 2.3...15 m3/h	N4315	1123.20	158
VPF43.50F25	Combi valve, flanged, PN16, DN50, 4.3...25 m3/h	N4315	1123.20	158
VPF43.65F24	Combi valve, flanged, PN16, DN65, 4.4...25 m3/h	N4315	1703.00	158
VPF43.65F35	Combi valve, flanged, PN16, DN65, 6...35 m3/h	N4315	1703.00	158
VPF43.80F35	Combi valve, flanged, PN16, DN80, 5.3...34 m3/h	N4315	1963.00	158
VPF43.80F45	Combi valve, flanged, PN16, DN80, 7...43 m3/h	N4315	1963.00	158
VPF53.100F70	Combi valve, flanged, PN25, DN100, 12.1...68 m3/h	N4316	2626.00	160
VPF53.100F90	Combi valve, flanged, PN25, DN100, 14.8...90 m3/h	N4316	2626.00	160
VPF53.125F110	Combi valve, flanged, PN25, DN125, 18.5...110 m3/h	N4316	8060.00	160
VPF53.125F135	Combi valve, flanged, PN25, DN125, 23...135 m3/h	N4316	8060.00	160
VPF53.150F160	Combi valve, flanged, PN25, DN150, 25.6...160 m3/h	N4316	8541.00	160
VPF53.150F200	Combi valve, flanged, PN25, DN150, 32...195 m3/h	N4316	8541.00	160
VPF53.50F16	Combi valve, flanged, PN25, DN50, 2.3...15 m3/h	N4316	1292.20	160
VPF53.50F25	Combi valve, flanged, PN25, DN50, 4.3...25 m3/h	N4316	1292.20	160
VPF53.65F24	Combi valve, flanged, PN25, DN65, 4.4...24 m3/h	N4316	2067.00	160
VPF53.65F35	Combi valve, flanged, PN25, DN65, 6...35 m3/h	N4316	2067.00	160
VPF53.80F35	Combi valve, flanged, PN25, DN80, 5.3...35 m3/h	N4316	2249.00	160
VPF53.80F45	Combi valve, flanged, PN25, DN80, 7...43 m3/h	N4316	2249.00	160
VPI46.15L0.2	Combi valves, PN25, DN15, 30...200 l/h	N4855	91.00	169
VPI46.15L0.2Q	Combi valves, PN25, DN15, 30...200 l/h, pressure test points	N4855	98.67	169
VPI46.15L0.6	Combi valves, PN25, DN15, 100...575 l/h	N4855	91.00	169
VPI46.15L0.6Q	Combi valves, PN25, DN15, 100...575 l/h, pressure test points	N4855	98.67	169
VPI46.20F1.4	Combi valves, PN25, DN20, 220...1330 l/h	N4855	106.47	169
VPI46.20F1.4Q	Combi valves, PN25, DN20, 220...1330 l/h, pressure test points	N4855	114.92	169
VPI46.25F1.8	Combi valves, PN25, DN25, 280...1800 l/h	N4855	131.30	169
VPI46.25F1.8Q	Combi valves, PN25, DN25, 280...1800 l/h, pressure test points	N4855	139.10	169
VPI46.32F4	Combi valves, PN25, DN32, 550...4000 l/h	N4855	236.60	169
VPI46.32F4Q	Combi valves, PN25, DN32, 550...4000 l/h, pressure test points	N4855	245.70	169
VPI46.40F9.5Q	Combi valves, PN25, DN40, 1370...9500 l/h, pressure test points	N4855	696.80	169
VPI46.50F12Q	Combi valves, PN25, DN50, 1400...11500 l/h, pressure test points	N4855	722.80	169
VPP46.10L0.2	Combi valves, PN25, DN10, 30...200 l/h	N4855	75.27	172

Product no.	Product Title	Data sheet	Price (€)	Page
VPP46.10L0.2Q	Combi valves, PN25, DN10, 30...200 l/h, pressure test points	N4855	87.10	172
VPP46.10L0.4Q	Combi valves, PN25, DN10, 65...370 l/h, pressure test points	N4855	89.70	172
VPP46.15L0.2	Combi valves, PN25, DN15, 30...200 l/h	N4855	87.10	172
VPP46.15L0.2Q	Combi valves, PN25, DN15, 30...200 l/h, pressure test points	N4855	94.90	172
VPP46.15L0.6	Combi valves, PN25, DN15, 100...575 l/h	N4855	87.10	172
VPP46.15L0.6Q	Combi valves, PN25, DN15, 100...575 l/h, pressure test points	N4855	94.90	172
VPP46.20F1.4	Combi valves, PN25, DN20, 220...1330 l/h	N4855	97.24	172
VPP46.20F1.4Q	Combi valves, PN25, DN20, 220...1330 l/h, pressure test points	N4855	102.57	172
VPP46.25F1.8	Combi valves, PN25, DN25, 280...1800 l/h	N4855	113.75	172
VPP46.25F1.8Q	Combi valves, PN25, DN25, 280...1800 l/h, pressure test points	N4855	121.94	172
VPP46.32F4	Combi valves, PN25, DN32, 550...4000 l/h	N4855	215.80	172
VPP46.32F4Q	Combi valves, PN25, DN32, 550...4000 l/h, pressure test points	N4855	224.90	172
VQP46.10L0.5Q	PICV, externally threaded, PN 25, DN 10, 30...520 l/h, pressure test points	A6V11877580	76.83	174
VQP46.15F1.3Q	PICV, externally threaded, PN 25, DN 15, 300...1300 l/h, pressure test points	A6V11877580	81.25	174
VQP46.20F1.5Q	PICV, externally threaded, PN 25, DN 20, 320...1500 l/h, pressure test points	A6V11877580	87.88	174
VUN210	Reverse angle radiator valve, NF, 2-pipe system, PN10, DN10, kvs 0.14...0.60	N2106	19.63	120
VUN215	Reverse angle radiator valve, NF, 2-pipe system, PN10, DN15, kvs 0.13...0.77	N2106	22.62	120
VVF22.100-160	2-port valve, flanged, PN6, DN100, kvs 160	N4401	1076.40	85
VVF22.25-10	2-port valve, flanged, PN6, DN25, kvs 10	N4401	234.00	85
VVF22.25-2.5	2-port valve, flanged, PN6, DN25, kvs 2.5	N4401	234.00	85
VVF22.25-4	2-port valve, flanged, PN6, DN25, kvs 4	N4401	234.00	85
VVF22.25-6.3	2-port valve, flanged, PN6, DN25, kvs 6.3	N4401	234.00	85
VVF22.40-16	2-port valve, flanged, PN6, DN40, kvs 16	N4401	274.30	85
VVF22.40-25	2-port valve, flanged, PN6, DN40, kvs 25	N4401	274.30	85
VVF22.50-40	2-port valve, flanged, PN6, DN50, kvs 40	N4401	343.20	85
VVF22.65-63	2-port valve, flanged, PN6, DN65, kvs 63	N4401	461.50	85
VVF22.80-100	2-port valve, flanged, PN6, DN80, kvs 100	N4401	663.00	85
VVF32.100-160	2-port valve, flanged, PN10, DN100, kvs 160	N4402	1250.60	87
VVF32.125-250	2-port valve, flanged, PN10, DN125, kvs 250	N4402	1560.00	87
VVF32.150-400	2-port valve, flanged, PN10, DN150, kvs 400	N4402	1963.00	87
VVF32.15-1.6	2-port valve, flanged, PN10, DN15, kvs 1.6	N4402	253.50	87
VVF32.15-2.5	2-port valve, flanged, PN10, DN15, kvs 2.5	N4402	253.50	87
VVF32.15-4	2-port valve, flanged, PN10, DN15, kvs 4	N4402	253.50	87
VVF32.25-10	2-port valve, flanged, PN10, DN25, kvs 10	N4402	296.40	87
VVF32.25-6.3	2-port valve, flanged, PN10, DN25, kvs 6.3	N4402	296.40	87
VVF32.40-16	2-port valve, flanged, PN10, DN40, kvs 16	N4402	360.10	87
VVF32.40-25	2-port valve, flanged, PN10, DN40, kvs 25	N4402	360.10	87
VVF32.50-40	2-port valve, flanged, PN10, DN50, kvs 40	N4402	455.00	87
VVF32.65-63	2-port valve, flanged, PN10, DN65, kvs 63	N4402	613.60	87
VVF32.80-100	2-port valve, flanged, PN10, DN80, kvs 100	N4402	826.80	87
VVF42.100-125	2-port valve, flanged, PN16, DN100, kvs 125	N4403	1469.00	92
VVF42.100-160	2-port valve, flanged, PN16, DN100, kvs 160	N4403	1469.00	92
VVF42.100-160K	2-port valve, flanged, DN100, kvs 160, pressure compensated	N4403	1885.00	93
VVF42.100KC	2-port valve, flanged, DN100, pressure compensated	A6V10794157	2158.00	94
VVF42.125-200	2-port valve, flanged, PN16, DN125, kvs 200	N4403	1859.00	92
VVF42.125-250	2-port valve, flanged, PN16, DN125, kvs 250	N4403	1859.00	92
VVF42.125-250K	2-port valve, flanged, DN125, kvs 250, pressure compensated	N4403	2496.00	93
VVF42.125KC	2-port valve, flanged, DN125, pressure compensated	A6V10794157	2925.00	94
VVF42.150-315	2-port valve, flanged, PN16, DN150, kvs 315	N4403	2288.00	92

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
VVF42.150-360K	2-port valve, flanged, DN150, kvs 360, pressure compensated	N4403	3393.00	93
VVF42.150-400	2-port valve, flanged, PN16, DN150, kvs 400	N4403	2288.00	92
VVF42.150KC	2-port valve, flanged, DN150, pressure compensated	A6V10794157	4069.00	94
VVF42.15-1.6	2-port valve, flanged, PN16, DN15, kvs 1.6	N4403	297.70	92
VVF42.15-2.5	2-port valve, flanged, PN16, DN15, kvs 2.5	N4403	297.70	92
VVF42.15-4	2-port valve, flanged, PN16, DN15, kvs 4	N4403	297.70	92
VVF42.20-6.3	2-port valve, flanged, PN16, DN20, kvs 6.3	N4403	321.10	92
VVF42.25-10	2-port valve, flanged, PN16, DN25, kvs 10	N4403	347.10	92
VVF42.25-6.3	2-port valve, flanged, PN16, DN25, kvs 6.3	N4403	347.10	92
VVF42.32-16	2-port valve, flanged, PN16, DN32, kvs 16	N4403	382.20	92
VVF42.40-16	2-port valve, flanged, PN16, DN40, kvs 16	N4403	423.80	92
VVF42.40-25	2-port valve, flanged, PN16, DN40, kvs 25	N4403	423.80	92
VVF42.50-31.5	2-port valve, flanged, PN16, DN50, kvs 31.5	N4403	533.00	92
VVF42.50-40	2-port valve, flanged, PN16, DN50, kvs 40	N4403	533.00	92
VVF42.50-40K	2-port valve, flanged, DN50, kvs 40, pressure compensated	N4403	859.30	93
VVF42.65-50	2-port valve, flanged, PN16, DN65, kvs 50	N4403	718.90	92
VVF42.65-63	2-port valve, flanged, PN16, DN65, kvs 63	N4403	718.90	92
VVF42.65-63K	2-port valve, flanged, DN65, kvs 63, pressure compensated	N4403	1041.30	93
VVF42.65KC	2-port valve, flanged, DN65, pressure compensated	A6V10794157	1203.80	94
VVF42.80-100	2-port valve, flanged, PN16, DN80, kvs 100	N4403	975.00	92
VVF42.80-100K	2-port valve, flanged, DN80, kvs 100, pressure compensated	N4403	1339.00	93
VVF42.80-80	2-port valve, flanged, PN16, DN80, kvs 80	N4403	975.00	92
VVF42.80KC	2-port valve, flanged, DN80, pressure compensated	A6V10794157	1560.00	94
VVF43.100-125	2-port seat valve, flanged, PN16, DN100, kvs 125	N4404	2197.00	95
VVF43.100-150K	2-port seat valve, flanged, PN16, DN100, kvs 150, pressure compensated	N4404	2522.00	97
VVF43.100-160	2-port seat valve, flanged, PN16, DN100, kvs 160	N4404	2197.00	95
VVF43.125-200	2-port seat valve, flanged, PN16, DN125, kvs 200	N4404	2977.00	95
VVF43.125-220K	2-port seat valve, flanged, PN16, DN125, kvs 220, pressure compensated	N4404	3445.00	97
VVF43.125-250	2-port seat valve, flanged, PN16, DN125, kvs 250	N4404	2977.00	95
VVF43.150-315	2-port seat valve, flanged, PN16, DN150, kvs 315	N4404	4147.00	95
VVF43.150-315K	2-port seat valve, flanged, PN16, DN150, kvs 315, pressure compensated	N4404	4771.00	97
VVF43.150-400	2-port seat valve, flanged, PN16, DN150, kvs 400	N4404	4147.00	95
VVF43.200-450K	2-port seat valve, flanged, PN16, DN200, kvs 450, pressure compensated	N4404	8125.00	97
VVF43.250-630K	2-port seat valve, flanged, PN16, DN250, kvs 630, pressure compensated	N4404	12155.00	97
VVF43.65-50	2-port seat valve, flanged, PN16, DN65, kvs 50	N4404	1228.50	95
VVF43.65-63	2-port seat valve, flanged, PN16, DN65, kvs 63	N4404	1228.50	95
VVF43.65-63K	2-port seat valve, flanged, PN16, DN65, kvs 63, pressure compensated	N4404	1560.00	97
VVF43.80-100	2-port seat valve, flanged, PN16, DN80, kvs 100	N4404	1586.00	95
VVF43.80-100K	2-port seat valve, flanged, PN16, DN80, kvs 100, pressure compensated	N4404	2054.00	97
VVF43.80-80	2-port seat valve, flanged, PN16, DN80, kvs 80	N4404	1586.00	95
VVF53.100-150K	2-port seat valve, flanged, PN25, DN100, kvs 150, pressure compensated	N4405	3094.00	102
VVF53.100-160	2-port seat valve, flanged, PN25, DN100, kvs 160	N4405	2678.00	98
VVF53.125-220K	2-port seat valve, flanged, PN25, DN125, kvs 220, pressure compensated	N4405	4212.00	102
VVF53.125-250	2-port seat valve, flanged, PN25, DN125, kvs 250	N4405	3640.00	98
VVF53.15-0.16	2-port seat valve, flanged, PN25, DN15, kvs 0.16	N4405	404.30	98
VVF53.15-0.2	2-port seat valve, flanged, PN25, DN15, kvs 0.2	N4405	404.30	98
VVF53.15-0.25	2-port seat valve, flanged, PN25, DN15, kvs 0.25	N4405	404.30	98

Product no.	Product Title	Data sheet	Price (€)	Page
VVF53.15-0.32	2-port seat valve, flanged, PN25, DN15, kvs 0.32	N4405	404.30	98
VVF53.15-0.4	2-port seat valve, flanged, PN25, DN15, kvs 0.4	N4405	404.30	98
VVF53.15-0.5	2-port seat valve, flanged, PN25, DN15, kvs 0.5	N4405	404.30	98
VVF53.15-0.63	2-port seat valve, flanged, PN25, DN15, kvs 0.63	N4405	404.30	98
VVF53.15-0.8	2-port seat valve, flanged, PN25, DN15, kvs 0.8	N4405	404.30	98
VVF53.150-315K	2-port seat valve, flanged, PN25, DN150, kvs 315, pressure compensated	N4405	5824.00	102
VVF53.150-400	2-port seat valve, flanged, PN25, DN150, kvs 360	N4405	5057.00	98
VVF53.15-1	2-port seat valve, flanged, PN25, DN15, kvs 1	N4405	404.30	98
VVF53.15-1.25	2-port seat valve, flanged, PN25, DN15, kvs 1.25	N4405	404.30	98
VVF53.15-1.6	2-port seat valve, flanged, PN25, DN15, kvs 1.6	N4405	404.30	98
VVF53.15-2	2-port seat valve, flanged, PN25, DN15, kvs 2	N4405	404.30	98
VVF53.15-2.5	2-port seat valve, flanged, PN25, DN15, kvs 2.5	N4405	404.30	98
VVF53.15-3.2	2-port seat valve, flanged, PN25, DN15, kvs 3.2	N4405	404.30	98
VVF53.15-4	2-port seat valve, flanged, PN25, DN15, kvs 4	N4405	404.30	98
VVF53.200-450K	2-port seat valve, flanged, PN25, DN200, kvs 450, pressure compensated	N4405	9737.00	102
VVF53.20-6.3	2-port seat valve, flanged, PN25, DN20, kvs 6.3	N4405	436.80	98
VVF53.250-630K	2-port seat valve, flanged, PN25, DN250, kvs 630, pressure compensated	N4405	14560.00	102
VVF53.25-10	2-port seat valve, flanged, PN25, DN25, kvs 10	N4405	465.40	98
VVF53.25-10J	2-port seat valve PN25 with flanged connections	N4405	582.40	98
VVF53.25-5	2-port seat valve, flanged, PN25, DN25, kvs 5	N4405	465.40	98
VVF53.25-6.3	2-port seat valve, flanged, PN25, DN25, kvs 6.3	N4405	465.40	98
VVF53.25-8	2-port seat valve, flanged, PN25, DN25, kvs 8	N4405	465.40	98
VVF53.32-16	2-port seat valve, flanged, PN25, DN32, kvs 16	N4405	573.30	98
VVF53.40-12.5	2-port seat valve, flanged, PN25, DN40, kvs 12.5	N4405	676.00	98
VVF53.40-16	2-port seat valve, flanged, PN25, DN40, kvs 16	N4405	676.00	98
VVF53.40-20	2-port seat valve, flanged, PN25, DN40, kvs 20	N4405	676.00	98
VVF53.40-25	2-port seat valve, flanged, PN25, DN40, kvs 25	N4405	676.00	98
VVF53.50-31.5	2-port seat valve, flanged, PN25, DN50, kvs 31.5	N4405	925.60	98
VVF53.50-40	2-port seat valve, flanged, PN25, DN50, kvs 40	N4405	925.60	98
VVF53.50-40K	2-port seat valve, flanged, PN25, DN50, kvs 40, pressure compensated	N4405	1155.70	102
VVF53.65-63	2-port seat valve, flanged, PN25, DN65, kvs 63	N4405	1495.00	98
VVF53.65-63K	2-port seat valve, flanged, PN25, DN65, kvs 63, pressure compensated	N4405	1807.00	102
VVF53.80-100	2-port seat valve, flanged, PN25, DN80, kvs 100	N4405	1963.00	98
VVF53.80-100K	2-port seat valve, flanged, PN25, DN80, kvs 100, pressure compensated	N4405	2340.00	102
VVG41.11	2-port seat valve, external thread, PN16, DN15, kvs 0.63	N4363	326.30	107
VVG41.12	2-port seat valve, external thread, PN16, DN15, kvs 1	N4363	326.30	107
VVG41.13	2-port seat valve, external thread, PN16, DN15, kvs 1.6	N4363	326.30	107
VVG41.14	2-port seat valve, external thread, PN16, DN15, kvs 2.5	N4363	326.30	107
VVG41.15	2-port seat valve, external thread, PN16, DN15, kvs 4	N4363	326.30	107
VVG41.15-1.6K	2-port seat valve, external thread, DN15, kvs 1.6		412.10	108
VVG41.15-2.5K	2-port seat valve, external thread, DN15, kvs 2.5		412.10	108
VVG41.15-4K	2-port seat valve, external thread, DN15, kvs 4		412.10	108
VVG41.20	2-port seat valve, external thread, PN16, DN20, kvs 6.3	N4363	377.00	107
VVG41.25	2-port seat valve, external thread, PN16, DN25, kvs 10	N4363	429.00	107
VVG41.32	2-port seat valve, external thread, PN16, DN32, kvs 16	N4363	477.10	107
VVG41.40	2-port seat valve, external thread, PN16, DN40, kvs 25	N4363	533.00	107
VVG41.50	2-port seat valve, external thread, PN16, DN50, kvs 40	N4363	595.40	107
VVG44.15-0.25	2-port seat valve, external thread, PN16, DN15, kvs 0.25	N4364	150.80	109
VVG44.15-0.4	2-port seat valve, external thread, PN16, DN15, kvs 0.4	N4364	150.80	109
VVG44.15-0.63	2-port seat valve, external thread, PN16, DN15, kvs 0.63	N4364	150.80	109

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
VVG44.15-1	2-port seat valve, external thread, PN16, DN15, kvs 1	N4364	150.80	109
VVG44.15-1.6	2-port seat valve, external thread, PN16, DN15, kvs 1.6	N4364	150.80	109
VVG44.15-2.5	2-port seat valve, external thread, PN16, DN15, kvs 2.5	N4364	150.80	109
VVG44.15-4	2-port seat valve, external thread, PN16, DN15, kvs 4	N4364	150.80	109
VVG44.20-6.3	2-port seat valve, external thread, PN16, DN20, kvs 6.3	N4364	158.60	109
VVG44.25-10	2-port seat valve, external thread, PN16, DN25, kvs 10	N4364	184.60	109
VVG44.32-16	2-port seat valve, external thread, PN16, DN32, kvs 16	N4364	249.60	109
VVG44.40-25	2-port seat valve, external thread, PN16, DN40, kvs 25	N4364	325.00	109
VVG549.15-0.25	2-port seat valve, externally threaded, PN25, DN15, kvs 0.25	CA1Q4380	121.81	113
VVG549.15-0.4	2-port seat valve, externally threaded, PN25, DN15, kvs 0.4	CA1Q4380	121.81	113
VVG549.15-0.63	2-port seat valve, externally threaded, PN25, DN15, kvs 0.63	CA1Q4380	121.81	113
VVG549.15-1	2-port seat valve, externally threaded, PN25, DN15, kvs 1	CA1Q4380	121.81	113
VVG549.15-1.6	2-port seat valve, externally threaded, PN25, DN15, kvs 1.6	CA1Q4380	121.81	113
VVG549.15-2.5	2-port seat valve, externally threaded, PN25, DN15, kvs 2.5	CA1Q4380	121.81	113
VVG549.20-4K	2-port seat valve, externally threaded, PN25, DN20, kvs 4, pressure compensated	CA1Q4380	159.90	113
VVG549.25-6.3K	2-port seat valve, externally threaded, PN25, DN25, kvs 6.3, pressure compensated	CA1Q4380	217.10	113
VVI46.15/2	2-port zone valve, internally threaded, PN16, DN15, kvs 2.15	A6V10421629	31.59	112
VVI46.20/2	2-port zone valve, internally threaded, PN16, DN20, kvs 3.5	A6V10421629	34.06	112
VVI46.25/2	2-port zone valve, internally threaded, PN16, DN25, kvs 5	A6V10421629	43.94	112
VVP45.10-0.25	2-port seat valve, external thread, PN16, DN10, kvs 0.25	N4845	54.60	106
VVP45.10-0.4	2-port seat valve, external thread, PN16, DN10, kvs 0.4	N4845	54.60	106
VVP45.10-0.63	2-port seat valve, external thread, PN16, DN10, kvs 0.63	N4845	54.60	106
VVP45.10-1	2-port seat valve, external thread, PN16, DN10, kvs 1	N4845	54.60	106
VVP45.10-1.6	2-port seat valve, external thread, PN16, DN10, kvs 1.6	N4845	54.60	106
VVP45.15-2.5	2-port seat valve, external thread, PN16, DN15, kvs 2.5	N4845	68.12	106
VVP45.20-4	2-port seat valve, external thread, PN16, DN20, kvs 4	N4845	82.29	106
VVP45.25-10	2-port seat valve, external thread, PN16, DN25, kvs 10	N4845	182.00	106
VVP45.25-6.3	2-port seat valve, external thread, PN16, DN25, kvs 6.3	N4845	139.10	106
VVP45.32-16	2-port seat valve, external thread, PN16, DN32, kvs 16	N4845	239.20	106
VVP45.40-25	2-port seat valve, external thread, PN16, DN40, kvs 25	N4845	313.30	106
VVP47.10-0.25	2-port seat valve, external thread, PN16, DN10, kvs 0.25	N4847	45.50	111
VVP47.10-0.4	2-port seat valve, external thread, PN16, DN10 kvs 0.4	N4847	45.50	111
VVP47.10-0.63	2-port seat valve, external thread, PN16, DN10, kvs 0.63	N4847	45.50	111
VVP47.10-1	2-port seat valve, external thread, PN16, DN10, kvs 1	N4847	45.50	111
VVP47.10-1.6	2-port seat valve, external thread, PN16, DN10, kvs 1.6	N4847	45.50	111
VVP47.15-2.5	2-port seat valve, external thread, PN16, DN15, kvs 2.5	N4847	54.08	111
VVP47.20-4	2-port seat valve, external thread, PN16, DN20, kvs 4	N4847	67.73	111
VWG41.10-0.25-0.4	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.25, kvs right 0.4	A6V10564480	185.90	193
VWG41.10-0.25-0.65	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.25, kvs right 0.65	A6V10564480	185.90	193
VWG41.10-0.25-1.0	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.25, kvs right 1.0	A6V10564480	185.90	193
VWG41.10-0.4-0.65	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 0.65	A6V10564480	185.90	193
VWG41.10-0.4-1.0	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 1.0	A6V10564480	185.90	193
VWG41.10-0.4-1.3	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 1.3	A6V10564480	185.90	193
VWG41.10-0.4-1.6	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 1.6	A6V10564480	185.90	193
VWG41.10-0.65-1.0	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.65, kvs right 1.0	A6V10564480	185.90	193

Product no.	Product Title	Data sheet	Price (€)	Page
VWG41.10-0.65-1.3	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.65, kvs right 1.3	A6V10564480	185.90	193
VWG41.10-0.65-1.6	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.65, kvs right 1.6	A6V10564480	185.90	193
VWG41.10-1.0-1.3	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.0, kvs right 1.3	A6V10564480	185.90	193
VWG41.10-1.0-1.6	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.0, kvs right 1.6	A6V10564480	185.90	193
VWG41.10-1.0-1.9	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.0, kvs right 1.9	A6V10564480	185.90	193
VWG41.10-1.3-1.6	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.3, kvs right 1.6	A6V10564480	185.90	193
VWG41.10-1.3-1.9	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.3, kvs right 1.9	A6V10564480	185.90	193
VWG41.10-1.6-1.9	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.6, kvs right 1.9	A6V10564480	185.90	193
VWG41.10-1.9-1.9	6-port control ball valves, externally threaded, PN16, DN10, kvs left 1.9, kvs right 1.9	A6V10564480	185.90	193
VWG41.20-0.25-0.4	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.25, kvs right 0.4	A6V10564480	239.20	194
VWG41.20-0.25-0.65	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.25, kvs right 0.65	A6V10564480	239.20	194
VWG41.20-0.25-1.0	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.25, kvs right 1.0	A6V10564480	239.20	194
VWG41.20-0.4-1.0	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.4, kvs right 1.0	A6V10564480	239.20	194
VWG41.20-0.4-1.3	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.4, kvs right 1.3	A6V10564480	239.20	194
VWG41.20-0.65-1.6	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.65, kvs right 1.6	A6V10564480	239.20	194
VWG41.20-0.65-2.5	6-port control ball valves, externally threaded, PN16, DN20, kvs left 0.65, kvs right 2.5	A6V10564480	239.20	194
VWG41.20-1.0-2.5	6-port control ball valves, externally threaded, PN16, DN20, kvs left 1.0, kvs right 2.5	A6V10564480	239.20	194
VWG41.20-1.6-2.5	6-port control ball valves, externally threaded, PN16, DN20, kvs left 1.6, kvs right 2.5	A6V10564480	239.20	194
VWG41.20-1.6-3.45	6-port control ball valves, externally threaded, PN16, DN20, kvs left 1.6, kvs right 3.45	A6V10564480	239.20	194
VWG41.20-2.5-3.45	6-port control ball valves, externally threaded, PN16, DN20, kvs left 2.5, kvs right 3.45	A6V10564480	239.20	194
VWG41.20-2.5-4.25	6-port control ball valves, externally threaded, PN16, DN20, kvs left 2.5, kvs right 4.25	A6V10564480	239.20	194
VWG41.20-4.25-4.25	6-port control ball valves, externally threaded, PN16, DN20, kvs left 4.25, kvs right 4.25	A6V10564480	239.20	194
VXF22.100-160	3-port valve, flanged, PN6, DN100, kvs 160	N4401	1076.40	124
VXF22.25-10	3-port valve, flanged, PN6, DN25, kvs 10	N4401	234.00	124
VXF22.25-2.5	3-port valve, flanged, PN6, DN25, kvs 2.5	N4401	234.00	124
VXF22.25-4	3-port valve, flanged, PN6, DN25, kvs 4	N4401	234.00	124
VXF22.25-6.3	3-port valve, flanged, PN6, DN25, kvs 6.3	N4401	234.00	124
VXF22.40-16	3-port valve, flanged, PN6, DN40, kvs 16	N4401	274.30	124
VXF22.40-25	3-port valve, flanged, PN6, DN40, kvs 25	N4401	274.30	124
VXF22.50-40	3-port valve, flanged, PN6, DN50, kvs 40	N4401	343.20	124
VXF22.65-63	3-port valve, flanged, PN6, DN65, kvs 63	N4401	461.50	124
VXF22.80-100	3-port valve, flanged, PN6, DN80, kvs 100	N4401	663.00	124
VXF32.100-160	3-port valve, flanged, PN10, DN100, kvs 160	N4402	1250.60	126
VXF32.125-250	3-port valve, flanged, PN10, DN125, kvs 250	N4402	1560.00	126
VXF32.150-400	3-port valve, flanged, PN10, DN150, kvs 400	N4402	1963.00	126

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
VXF32.15-1.6	3-port valve, flanged, PN10, DN15, kvs 1.6	N4402	253.50	126
VXF32.15-2.5	3-port valve, flanged, PN10, DN15, kvs 2.5	N4402	253.50	126
VXF32.15-4	3-port valve, flanged, PN10, DN15, kvs 4	N4402	253.50	126
VXF32.25-10	3-port valve, flanged, PN10, DN25, kvs 10	N4402	296.40	126
VXF32.25-6.3	3-port valve, flanged, PN10, DN25, kvs 6.3	N4402	296.40	126
VXF32.40-16	3-port valve, flanged, PN10, DN40, kvs 16	N4402	360.10	126
VXF32.40-25	3-port valve, flanged, PN10, DN40, kvs 25	N4402	360.10	126
VXF32.50-40	3-port valve, flanged, PN10, DN50, kvs 40	N4402	455.00	126
VXF32.65-63	3-port valve, flanged, PN10, DN65, kvs 63	N4402	613.60	126
VXF32.80-100	3-port valve, flanged, PN10, DN80, kvs 100	N4402	826.80	126
VXF42.100-125	3-port valve, flanged, PN16, DN100, kvs 125	N4403	1469.00	129
VXF42.100-160	3-port valve, flanged, PN16, DN100, kvs 160	N4403	1469.00	129
VXF42.125-200	3-port valve, flanged, PN16, DN125, kvs 200	N4403	1859.00	129
VXF42.125-250	3-port valve, flanged, PN16, DN125, kvs 250	N4403	1859.00	129
VXF42.150-315	3-port valve, flanged, PN16, DN150, kvs 315	N4403	2288.00	129
VXF42.150-400	3-port valve, flanged, PN16, DN150, kvs 400	N4403	2288.00	129
VXF42.15-1.6	3-port valve, flanged, PN16, DN15, kvs 1.6	N4403	297.70	129
VXF42.15-2.5	3-port valve, flanged, PN16, DN15, kvs 2.5	N4403	297.70	129
VXF42.15-4	3-port valve, flanged, PN16, DN15, kvs 4	N4403	297.70	129
VXF42.20-6.3	3-port valve, flanged, PN16, DN20, kvs 6.3	N4403	321.10	129
VXF42.25-10	3-port valve, flanged, PN16, DN25, kvs 10	N4403	347.10	129
VXF42.25-6.3	3-port valve, flanged, PN16, DN25, kvs 6.3	N4403	347.10	129
VXF42.32-16	3-port valve, flanged, PN16, DN32, kvs 16	N4403	382.20	129
VXF42.40-16	3-port valve, flanged, PN16, DN40, kvs 16	N4403	423.80	129
VXF42.40-25	3-port valve, flanged, PN16, DN40, kvs 25	N4403	423.80	129
VXF42.50-31.5	3-port valve, flanged, PN16, DN50, kvs 31.5	N4403	533.00	129
VXF42.50-40	3-port valve, flanged, PN16, DN50, kvs 40	N4403	533.00	129
VXF42.65-50	3-port valve, flanged, PN16, DN65, kvs 50	N4403	718.90	129
VXF42.65-63	3-port valve, flanged, PN16, DN65, kvs 63	N4403	718.90	129
VXF42.80-100	3-port valve, flanged, PN16, DN80, kvs 100	N4403	975.00	129
VXF42.80-80	3-port valve, flanged, PN16, DN80, kvs 80	N4403	975.00	129
VXF43.100-125	3-port seat valve, flanged, PN16, DN 100, kvs 125	N4404	2626.00	132
VXF43.100-160	3-port seat valve, flanged, PN16, DN 100, kvs 160	N4404	2626.00	132
VXF43.125-200	3-port seat valve, flanged, PN16, DN 125, kvs 200	N4404	3458.00	132
VXF43.125-250	3-port seat valve, flanged, PN16, DN 125, kvs 250	N4404	3458.00	132
VXF43.150-315	3-port seat valve, flanged, PN16, DN 150, kvs 315	N4404	4732.00	132
VXF43.150-400	3-port seat valve, flanged, PN16, DN 150, kvs 400	N4404	4732.00	132
VXF43.65-50	3-port seat valve, flanged, PN16, DN 65, kvs 50	N4404	1508.00	132
VXF43.65-63	3-port seat valve, flanged, PN16, DN 65, kvs 63	N4404	1508.00	132
VXF43.80-100	3-port seat valve, flanged, PN16, DN 80, kvs 100	N4404	1989.00	132
VXF43.80-80	3-port seat valve, flanged, PN16, DN 80, kvs 80	N4404	1989.00	132
VXF53.100-160	3-port seat valve, flanged, PN25, DN100, kvs 160	N4405	3211.00	135
VXF53.125-250	3-port seat valve, flanged, PN25, DN125, kvs 250	N4405	4225.00	135
VXF53.150-400	3-port seat valve, flanged, PN25, DN150, kvs 360	N4405	5772.00	135
VXF53.15-1.6	3-port seat valve, flanged, PN25, DN15, kvs 1.6	N4405	497.90	135
VXF53.15-2.5	3-port seat valve, flanged, PN25, DN15, kvs 2.5	N4405	497.90	135
VXF53.15-4	3-port seat valve, flanged, PN25, DN15, kvs 4	N4405	497.90	135
VXF53.20-6.3	3-port seat valve, flanged, PN25, DN20, kvs 6.3	N4405	544.70	135
VXF53.25-10	3-port seat valve, flanged, PN25, DN25, kvs 10	N4405	621.40	135
VXF53.25-6.3	3-port seat valve, flanged, PN25, DN25, kvs 6.3	N4405	621.40	135
VXF53.32-16	3-port seat valve, flanged, PN25, DN32, kvs 16	N4405	717.60	135
VXF53.40-16	3-port seat valve, flanged, PN25, DN40, kvs 16	N4405	786.50	135
VXF53.40-25	3-port seat valve, flanged, PN25, DN40, kvs 25	N4405	786.50	135
VXF53.50-40	3-port seat valve, flanged, PN25, DN50, kvs 40	N4405	1111.50	135

Product no.	Product Title	Data sheet	Price (€)	Page
VXF53.65-63	3-port seat valve, flanged, PN25, DN65, kvs 63	N4405	1872.00	135
VXF53.80-100	3-port seat valve, flanged, PN25, DN80, kvs 100	N4405	2418.00	135
VXG41.1301	3-port seat valve, external thread, PN16, DN15, kvs 1.6, tight bypass	N4463	326.30	153
VXG41.1401	3-port seat valve, external thread, PN16, DN15, kvs 2.5, tight bypass	N4463	326.30	153
VXG41.15	3-port seat valve, external thread, PN16, DN15, kvs 4	N4463	326.30	153
VXG41.20	3-port seat valve, external thread, PN16, DN20, kvs 6.3	N4463	377.00	153
VXG41.2001	3-port seat valve, external thread, PN16, DN20, kvs 6.3, tight bypass	N4463	432.90	153
VXG41.25	3-port seat valve, external thread, PN16, DN25, kvs 10	N4463	429.00	153
VXG41.2501	3-port seat valve, external thread, PN16, DN25, kvs 10, tight bypass	N4463	491.40	153
VXG41.32	3-port seat valve, external thread, PN16, DN32, kvs 16	N4463	477.10	153
VXG41.3201	3-port seat valve, external thread, PN16, DN32, kvs 16, tight bypass	N4463	547.30	153
VXG41.40	3-port seat valve, external thread, PN16, DN40, kvs 25	N4463	533.00	153
VXG41.4001	3-port seat valve, external thread, PN16, DN40, kvs 25, tight bypass	N4463	608.40	153
VXG41.50	3-port seat valve, external thread, PN16, DN50, kvs 40	N4463	595.40	153
VXG41.5001	3-port seat valve, external thread, PN16, DN50, kvs 40, tight bypass	N4463	686.40	153
VXG44.15-0.25	3-port seat valve, external thread, PN16, DN15, kvs 0.25	N4464	150.80	148
VXG44.15-0.4	3-port seat valve, external thread, PN16, DN15, kvs 0.4	N4464	150.80	148
VXG44.15-0.63	3-port seat valve, external thread, PN16, DN15, kvs 0.63	N4464	150.80	148
VXG44.15-1	3-port seat valve, external thread, PN16, DN15, kvs 1	N4464	150.80	148
VXG44.15-1.6	3-port seat valve, external thread, PN16, DN15, kvs 1.6	N4464	150.80	148
VXG44.15-2.5	3-port seat valve, external thread, PN16, DN15, kvs 2.5	N4464	150.80	148
VXG44.15-4	3-port seat valve, external thread, PN16, DN15, kvs 4	N4464	150.80	148
VXG44.20-6.3	3-port seat valve, external thread, PN16, DN20, kvs 6.3	N4464	158.60	148
VXG44.25-10	3-port seat valve, external thread, PN16, DN25, kvs 10	N4464	184.60	148
VXG44.32-16	3-port seat valve, external thread, PN16, DN32, kvs 16	N4464	249.60	148
VXG44.40-25	3-port seat valve, external thread, PN16, DN40, kvs 25	N4464	325.00	148
VXI46.15/2	3-port zone valve, internally threaded, PN16, DN15, kvs 2.15, kvs bypass 1.5	A6V10421629	34.97	151
VXI46.20/2	3-port zone valve, internally threaded, PN16, DN20, kvs 3.5, kvs bypass 2.5	A6V10421629	48.62	151
VXI46.25/2	3-port zone valve, internally threaded, PN16, DN25, kvs 5, kvs bypass 3.5	A6V10421629	74.75	151
VXP45.10-0.25	3-port seat valve, external thread, PN16, DN10, kvs 0.25	N4845	68.64	143
VXP45.10-0.4	3-port seat valve, external thread, PN16, DN10, kvs 0.4	N4845	68.64	143
VXP45.10-0.63	3-port seat valve, external thread, PN16, DN10, kvs 0.63	N4845	67.08	143
VXP45.10-1	3-port seat valve, external thread, PN16, DN10, kvs 1	N4845	67.08	143
VXP45.10-1.6	3-port seat valve, external thread, PN16, DN10, kvs 1.6	N4845	67.08	143
VXP45.15-2.5	3-port seat valve, external thread, PN16, DN15, kvs 2.5	N4845	80.47	143
VXP45.20-4	3-port seat valve, external thread, PN16, DN20, kvs 4	N4845	94.12	143
VXP45.25-10	3-port seat valve, external thread, PN16, DN25, kvs 10	N4845	187.20	143
VXP45.25-6.3	3-port seat valve, external thread, PN16, DN25, kvs 6.3	N4845	152.10	143
VXP45.32-16	3-port seat valve, external thread, PN16, DN32, kvs 16	N4845	252.20	143
VXP45.40-25	3-port seat valve, external thread, PN16, DN40, kvs 25	N4845	325.00	143
VXP47.10-0.25	3-port seat valve, external thread, PN16, DN10, kvs 0.25	N4847	54.99	149
VXP47.10-0.4	3-port seat valve, external thread, PN16, DN10, kvs 0.4	N4847	54.99	149
VXP47.10-0.63	3-port seat valve, external thread, PN16, DN10, kvs 0.63	N4847	53.43	149
VXP47.10-1	3-port seat valve, external thread, PN16, DN10, kvs 1	N4847	53.43	149
VXP47.10-1.6	3-port seat valve, external thread, PN16, DN10, kvs 1.6	N4847	53.43	149
VXP47.15-2.5	3-port seat valve, external thread, PN16, DN15, kvs 2.5	N4847	63.83	149
VXP47.20-4	3-port seat valve, external thread, PN16, DN20, kvs 4	N4847	75.14	149
Z155/100	Blanking flange, DN100		263.90	138
Z155/15F	Blanking flange, DN15		117.39	138
Z155/32F	Blanking flange, DN32		152.10	138
Z155/40	Blanking flange, DN40		163.80	138

Type Overview

Product no.	Product Title	Data sheet	Price (€)	Page
Z155/65	Blanking flange, DN65		193.70	138
Z155/80	Blanking flange, DN80		208.00	138
Z366	Stem heating element for media temperatures 0 °C, 30 W, AC 24 V		248.30	141
ZM100/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	180.70	205
ZM101/A	Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	232.70	205
ZM120/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	219.70	205
ZM121/A	Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	241.80	205
ZM200/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	330.20	205

Valves and actuators



Overview and selection tools		32
Actuators for globe and pressure independent combi valves (PICV)	Thermostatic head	57
	Electrothermal	58
	Electromotoric	62
	Electrohydraulic	78
Globe and pressure independent combi valves (PICV)	2-port flanged valves	85
	2-port threaded valves	105
	3-port flanged valves	124
	3-port threaded valves	141
	Flanged pressure independent combi valves	157
	Threaded pressure independent combi valves	163
Actuators for rotary valves	Rotary actuators	175
Rotary valves	Slipper valves	185
	Butterfly valves	186
	Ball valves	188
Refrigerant valves	2-port modulating pilot valve	205
	For expansion, hotgas and suction throttle applications	206
	For refrigeration units and heat recovery	208
	For condensate control	210

Valves and actuators

Overview and selection tools

											Recommended media												
		2-port valve	3-port valve	4-port valve	6-port valve	PN class	Type of connection	Silicon-free grease	Closed circuits	Open circuits	Chilled water	Cooling water ¹⁾	Drinking water	Low-temperature hot water	High-temperature hot water	Water glycol mixture	Saturated steam	Superheated steam	Heat transfer oil	Media containing mineral oils	Safety refrigerants	R744 (CO ₂)	R717 (ammonia)
Globe valves	VDN../VEN../VUN..	■				10	ET		■		■			■		■							
	VD1...CLC	■				10	ET		■		■			■		■							
	VVP45..	■				16	ET		■		■			■		■							
	VXP45..		■			16	ET		■		■			■		■							
	VMP45..		■			16	ET		■		■			■		■							
	VVP47..	■				16	ET		■		■			■		■							
	VXP47..		■			16	ET		■		■			■		■							
	VMP47..		■			16	ET		■		■			■		■							
	VVG41..	■				16	ET	■		■	■			■		■	■						
	VXG41..		■			16	ET	■		■	■	■		■		■							
	VXG41..01 ⁴⁾		■			16	ET	■		■	■	■		■		■							
	VVG44..	■				16	ET	■						■		■							
	VXG44..		■			16	ET	■						■		■							
	VVG549..	■				25	ET		■		■	■		■		■							
	VVI46../J2	■				16	IT				■			■		■							
	VXI46../J2		■			16	IT				■			■		■							
	VVF22..	■				6	F	■			■			■		■							
	VXF22..		■			6	F	■			■			■		■							
	VVF32..	■				10	F	■			■			■		■							
	VXF32..		■			10	F	■			■			■		■							
VVF42..	■				16	F	■			■			■		■								
VXF42..		■			16	F	■			■			■		■								
VVF43..	■				16	F	■		■	■			■		■	■		■					
VXF43..		■			16	F	■		■	■	■		■		■			■					
VVF53..	■				25	F			■	■	■		■		■	■		■					
VXF53..		■			25	F	■		■	■	■		■		■			■					
VVF61..	■				40	F			■	■	■		■		■	■		■					
VXF61..		■			40	F			■	■	■		■		■			■					
PICV	VPD../VPE..	■				10	ET				■			■		■							
	VPP46..	■				25	ET		■		■			■		■							
	VPI46..					25	IT				■			■		■							
	VPF43..	■				16	F	■		■			■		■								
	VPF53..	■				25	F				■			■		■							
Control ball valves	VAG61..	■				40	ET	■	■		■			■		■							
	VBG61..		■			40	ET	■	■		■			■		■							
	VAI61..	■				40	IT	■	■		■			■		■							
	VBI61..		■			40	IT	■	■		■			■		■							
	VWG41..				■	16	ET/IT	■	■		■			■		■							
Magnetic valves	MXG461..	■	■			16	ET		■		■			■		■							
	MXG461..P	■	■			16	ET		■		■			■		■			■	■			
	MXG461B..	■	■			16	ET		■	■	■	■		■		■							
	MXG461S..	■	■			16	ET		■	■	■			■		■							
	MXG462S..	■	■			16	ET		■	■	■			■		■							
	MXF461..	■	■			16	F				■			■		■							
	MXF461..P	■	■			16	F				■			■		■			■	■			
	M3P..FY	■	■			16	F				■			■		■							
	M3P..FYP	■	■			16	F				■			■		■			■	■			
MVF461H..	■				16	F		■		■			■		■	■							
Rotary valves	VBG31..		■			10	ET				■			■		■							
	VBI31..		■			10	IT		■		■			■		■							
	VCI31..			■		10	IT		■		■			■		■							
	VBF21..		■			6	F		■		■			■		■							
	VKF41..					16	F				■			■		■							
	VKF46..	■				16	F		■	■	■	■		■		■							
	VAG60..	■				40	ET	■			■			■		■							
	VBG60..		■			40	ET	■			■			■		■							
	VAI60..	■				40	IT	■			■			■		■							
VBI60..		■			40	IT	■	■		■			■		■								
Refrigerant valves	M2FP03GX					32	-		■												■		■
	M3FK..LX..		■			32	S		■											■			
	M3FB..LX..		■			PS 43	S		■											■			
	MVL661..	■				PS 45	S		■												■	■	
	MVS661..N	■				PS 53	W		■												■	■	■

Recommendation: water treatment according to VDI 2035

¹⁾ Open circuits; ²⁾ Not for drinking water circuit (open circuit) ³⁾ Variable air volume; ⁴⁾ Sealed bypass; ⁵⁾ As zone valve for floor heating systems
 IT = internally threaded connection, ET = externally threaded connection, F = flanged connection, S = soldered connection, W = welded connection

Permissible medium temperature [°C]	Generation				Distribution			Consumption/Use								
	District heating	Boiler plants	Chiller plants	Cooling towers ¹⁾	Domestic hot water ²⁾	Heating groups	Air handling units	Floor heating	Radiators	Chilled ceilings	Heated and chilled ceilings	VAV ³⁾	Fan coil units	Zone control		
-40															VDN../VEN../VUN..	Globe valves
-25															VD1../CLC	
-20															VVP45..	
-10															VXP45..	
0															VMP45..	
1															VVP47..	
...															VXP47..	
90															VMP47..	
100															VVG41..	
110															VVG41..	
120															VVG41..01 ⁴⁾	
130															VVG44..	
150															VVG44..	
180															VVG549..	
220															VVI46../2	
															VXI46../2	
															VVF22..	
															VXF22..	
															VVF32..	
															VXF32..	
															VVF42..	
															VXF42..	
															VVF43..	
															VXF43..	
															VVF53..	
															VXF53..	
															VVF61..	
															VXF61..	
															VPD../VPE..	PICV
															VPP46..	
															VPI46..	
															VPF43..	
															VPF53..	
															VAG61..	Control ball valves
															VBG61..	
															VAI61..	
															VBI61..	
															VWG41..	
															MXG461..	Magnetic valves
															MXG461..P	
															MXG461B..	
															MXG461S..	
															MXG462S..	
															MXF461..	
															MXF461..P	
															M3P..FY	
															M3P..FYP	
															MVF461H..	Rotary valves
															VBG31..	
															VBI31..	
															VCI31..	
															VBF21..	
															VKF41..	
															VKF46..	
															VAG60..	
															VBG60..	
															VAI60..	
															VBI60..	
															M2FP03GX	
															M3FK..LX..	Refrigerant valves
															M3FB..LX..	
															MVL661..	
															MVS661..N	

Valves and actuators

Overview and selection tools

Threaded globe valves

Typical applications	Actuators	Data sheet							
				RTN51/RTN51G	RTN71	RTN81			
Typical applications	Actuators	Data sheet		4.5 mm	2.5 mm	4.5 mm			
				100 N	100 N	90 N			
	STA..	N4884							
	SSA..	N4893							
	Operating voltage	Positioning signal	Positioning time [s]						
	AC 230 V	2-position	210	STA23	–	STA23HD ¹⁾			
		3-position	150	–	SSA31	–			
	AC 24 V	3-position	150	–	SSA81	–			
		0...10 V	270 ²⁾	STA63	–	–			
AC/DC 24 V	2-position/PDM	270	STA73	–	STA73HD ¹⁾				
	0...10 V	34	–	SSA61	–				
Normally open/normally closed (for radiator valves)			NC	–	NC				
PN 10	1...120 °C	DIN	NF	DN	Rp/R [inch]	k _v [m³/h]	Δp _{max} [kPa]	Δp _{max} [kPa]	Δp _{max} [kPa]
Data sheet		N2105	N2106						
		VDN110	VDN210	10	Rp/R 3/8	0.09...0.63	60	60	60
		VDN115	VDN215	15	Rp/R 1/2	0.10...0.89	60	60	60
		VDN120	VDN220	20	Rp/R 3/4	0.31...1.41	60	60	60
		VEN110	VEN210	10	Rp/R 3/8	0.09...0.63	60	60	60
		VEN115	VEN215	15	Rp/R 1/2	0.10...0.89	60	60	60
		VEN120	VEN220	20	Rp/R 3/4	0.31...1.41	60	60	60
		–	VUN210	10	Rp/R 3/8	0.14...0.60	60	60	60
		–	VUN215	15	Rp/R 1/2	0.13...0.77	60	60	60

Presettings for radiator valves VEN... VDN... VUN..

k_v values [m³/h] at the different preadjusted positions (XP=2K)

Control range with electromotoric and electrothermic actuators SSA... STA..		■	■	■	■	■	■	–
Control range with thermostatic head RTN..		■	■	■	■	■	■	■
Reference numbers for preadjustment		1	2	3	4	5	N	N (k _{vs})
VDN110/VDN210/VEN110/VEN210		0.072	0.17	0.24	0.28	0.37	0.43	0.63
VDN115/VDN215/VEN115/VEN215		0.07	0.17	0.28	0.36	0.45	0.50	0.89
VDN120/VDN220/VEN120/VEN220		0.22	0.35	0.44	0.52	0.60	0.71	1.41
VUN210		0.14	0.26	0.34	0.39	0.40	0.43	0.60
VUN215		0.13	0.22	0.30	0.39	0.45	0.50	0.77

Threaded globe valves

Typical applications – Chilled ceilings	Actuators	Data sheet			4.5 mm 100 N	2.5 mm 100 N
	STA..	N4884				
	SSA..	N4893				
	Operating voltage	Positioning signal	Positioning time [s]			
	AC 230 V	2-position	210	STA23	–	
		3-position	150	–	SSA31	
	AC 24 V	3-position	150	–	SSA81	
		0...10 V	270 ²⁾	STA63	–	
	AC/DC 24 V	2-position/PDM	270	STA73	–	
	0...10 V	34	–	SSA61		
Normally open/normally closed (for radiator valves)				NC	–	
PN 10	1...110 °C					
Data sheet	N2103	DN	Rp/R [inch]	k _v [l/h]	Δp _{max} [kPa]	Δp _{max} [kPa]
	VD115CLC	15	Rp/R ½	0.25...1.9	150	150
	VD120CLC	20	Rp/R ¾	0.25...2.6	150	150
	VD125CLC	25	Rp/R 1	0.25...2.6	150	150

¹⁾ Optimized for floor heating systems

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

k_v = nominal flow rate of cold water (5...30 °C) through the valve at the respective stroke and a differential pressure of 100 kPa (1 bar)
The selected k_v values of the radiator valves can be easily and precisely set on the valve head in 5 steps + N (fully open)

Threaded globe valves

Typical applications		Actuators		Data sheet			5.5 mm						
– Floor heating – Chilled ceilings – VAV – Fan coil units – Zone control		SSB..		N4891			200 N 		200 N 				
		Operating voltage		Positioning signal		Positioning time [s]	Auxiliary switch						
							SSB..1.1						
		AC 230 V		3-position		150	✓		SSB31		SSB31.1		
		AC 24 V		3-position		150	✓		SSB81		SSB81.1		
		AC/DC 24 V		0...10 V		75	–		SSB61		–		
PN 16		1...110 °C											
Data sheet		N4845		DN		G [inch]	k _{vs} [m³/h]	Δp _s [kPa]		Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	
  		VVP45.10-.. ¹⁾		10	G ½B	0.25 / 0.4 / 0.63 / 1 / 1.6	725		400	725	400		
		VVP45.15-2.5		15	G ¾B	2.5	350		350	350	350		
		VVP45.20-4		20	G 1B	4	350		350	350	350		
		VVP45.25-6.3		25	G 1 ¼B	6.3	300		300	300	300		
  		VXP45.10-..		10	G ½B	0.25 / 0.4 / 0.63 / 1 / 1.6	–		400	–	400		
		VXP45.15-2.5		15	G ¾B	2.5	–		350	–	350		
		VXP45.20-4		20	G 1B	4	–		350	–	350		
		VXP45.25-6.3		25	G 1 ¼B	6.3	–		300	–	300		
  		VMP45.10-..		10	G ½B	0.25 / 0.4 / 0.63 / 1	–		400	–	400		
		VMP45.10-1.6		10	G ½B	1.6	–		400	–	400		
		VMP45.15-2.5		15	G ¾B	2.5	–		350	–	350		
		VMP45.20-4		20	G 1B	4	–		350	–	350		
Typical applications		Actuators		Data sheet			4.5 mm		2.5 mm				
– Chilled ceilings – VAV – Fan coil units		STP..		N4884			100 N 		135 N 		160 N 		
		SFP..		N4865									
		SSP..		N4864									
		Operating voltage		Positioning signal		Positioning time [s]	Spring return function [s]						
		AC 230 V		2-position		210	–	STP23		–		–	
				2-position		10	30-50	–		SFP21/18		–	
				3-position		150	–	–		–		SSP31	
		AC 24 V		2-position		10	30-50	–		SFP71/18		–	
				3-position		43	–	–		–		SSP81.04	
				3-position		150	–	–		–		SSP81	
		0...10 V		270 ²⁾	–	STP63		–		–			
		AC/DC 24 V		2-position/PDM		270	–	STP73		–	–		
		0...10 V		34	–	–		–		SSP61			
PN 16		1...110 °C											
Data sheet		N4847		DN		G [inch]	k _{vs} [m³/h]	Δp _s [kPa]		Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	
  		VVP47.10-.. ¹⁾		10	G ½B	0.25 / 0.4	700		400	1000	400	1000	400
		VVP47.10-..		10	G ½B	0.63 / 1	250		250	500	400	500	400
		VVP47.10-1.6		10	G ½B	1.6	150		150	300	300	300	300
		VVP47.15-2.5		15	G ¾B	2.5	150		150	300	300	300	300
  		VVP47.20-4		20	G 1B	4	100		100	175	175	175	175
		VXP47.10-..		10	G ½B	0.25 / 0.4	–		400	–	400	–	400
		VXP47.10-..		10	G ½B	0.63 / 1	–		250	–	400	–	400
		VXP47.10-1.6		10	G ½B	1.6	–		150	–	300	–	300
  		VXP47.15-2.5		15	G ¾B	2.5	–		150	–	300	–	300
		VXP47.20-4		20	G 1B	4	–		100	–	175	–	175
		VMP47.10-..		10	G ½B	0.25 / 0.4	–		400	–	400	–	400
		VMP47.10-..		10	G ½B	0.63 / 1	–		250	–	400	–	400
		VMP47.10-1.6		10	G ½B	1.6	–		150	–	300	–	300
		VMP47.15-2.5		15	G ¾B	2.5	–		150	–	300	–	300

Union nuts for threaded valves

Union nuts for threaded valves

See page 7-7

VVP45..N with Serto compression fittings, $k_{vs} = 2.5 / 4 / 6.3 \text{ m}^3/\text{h}$

VVP45..S, VMP45..S with Conex® compression fittings, $k_{vs} = 0.63 / 1 / 1.6 / 2.5 \text{ m}^3/\text{h}$

VVP47..S, VMP47..S with Conex® compression fittings, $k_{vs} = 0.63 / 1 / 1.6 / 2.5 \text{ m}^3/\text{h}$
¹⁾ .. = k_{vs} value

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

Valves and actuators

Overview and selection tools

Threaded globe valves

Typical applications	Actuators	Data sheet	2.5 mm		4.5 mm	2.5 mm
– Floor heating – Fan coil units – Zone control	SFA.. SUA21/1 STA.. SSA31.04 ¹⁾	N4863 N4830 N4884 N4860	200 N	170 N	100 N	160 N
						
	Operating voltage	Positioning signal	Positioning time [s]	Spring return function [s]		
	AC 230 V	2-position	10	30-50	SFA21/18	–
		2-position	210	–	–	STA23
		2-position/SPST ²⁾	10	–	–	SUA21/3
		3-position/SPDT ²⁾	43	–	–	SSA31.04
	AC 24 V	2-position	10	30-50	SFA21/18	–
		0...10 V	270 ³⁾	–	–	STA63
	AC/DC 24 V	2-position/PDM	270	–	–	STA73
PN 16	1...110 °C	DN	Rp [inch]	k _{vs} [m ³ /h]	Δp _s [kPa]	Δp _{max} [kPa]
Data sheet	N4842					
	VVI46.15/2	15	Rp ½	2	300	300
	VVI46.20/2	20	Rp ¾	3.5	300	300
	VVI46.25/2	25	Rp 1	5	250	250
	VXI46.15/2 ⁴⁾	15	Rp ½	2	–	300
	VXI46.20/2 ⁴⁾	20	Rp ¾	3.5	–	300
	VXI46.25/2 ⁴⁾	25	Rp 1	5	–	250
	VXI46.25T ⁵⁾	25	Rp 1	5	–	200

Thermal actuators and connecting cables for combinable range, STx..3..

Color		White						Black
Equipped with		Function module DC 0...10 V		Auxiliary switch for STA	Auxiliary switch for STP	LED		–
Positioning signal		2-position (On/Off)	DC 0...10 V	2-position (On/Off)	2-position (On/Off)	2-position (On/Off)	2-position (On/Off)	2-position (On/Off)
		[STA..., NC]	[STA..., NC]	[STA..., NC]	[STP..., NO]	[STA..., NC]	[STP..., NO]	[STA..., NC]
		[STP..., NO]	–	–	–	–	–	[STP..., NO]
Standard PVC cables	1 m			ASA23U10	ASP23U10			
	2 m	ASY23L20	ASY6AL20	ASY6PL20		ASY23L20LD		
	3 m							ASY23L30B
	5 m	ASY23L50						ASY23L50B
	7 m	ASY23L70						
	10 m	ASY23L100						
Halogen-free cables	15 m	ASY23L150						
	2 m	ASY23L20HF	ASY6AL20HF	ASY6PL20HF				
	5 m	ASY23L50HF						
	10 m	ASY23L100HF						

Actuator

STA73/00	■	■		■		■	
STA23/00	■			■			
STP73/00	■		■		■	■	
STP23/00	■				■		
STA73PR/00 ⁶⁾	■			■		■	
STP73PR/00 ⁶⁾	■				■	■	
STA73MP/00 ⁷⁾	■	■		■		■	
STA23MP/00 ⁷⁾	■			■			
STA73B/00							■
STA23B/00							■

¹⁾ Not suited for radiator valves

²⁾ SPST = single-pole single-throw, SPDT = single-pole double-throw

³⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

⁴⁾ 70% k_{vs} in bypass, leakage rate in bypass 2...5% of k_{vs} value

⁵⁾ 100% k_{vs} in bypass, leakage rate in bypass 0.05% of k_{vs} value. For noiseless operation, the value of 100 kPa should not be exceeded.

⁶⁾ Actuators ideal for parallel running. Pulse duration modulation (PDM) in connection with Siemens room controllers of the Desigo™ range and room thermostats.

⁷⁾ Multipack with 50 actuators (OEM) NC: normally closed, NO: normally open

Threaded globe valves

Typical applications	Actuators	Data sheet	Spring return function [s]		20 mm		
– District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units	SAX..	N4501			800 N	1000 N	2800 N
	SKD..	N4561					
	SKB..	N4564					
	Operating voltage	Positioning signal	Positioning time [s]				
	AC 230 V	3-position	SAX	SKD	SKB	SKD	SKB
		3-position	120	120	120	–	–
		3-position	–	120	120	8	10
		3-position	30	–	–	–	–
	AC 24 V ¹⁾	3-position	–	30	–	8	–
		3-position	120	120	120	–	–
		3-position	–	120	120	8	10
		3-position	30	–	–	–	–
	0...10 V, 4...20 mA	0...10 V, 4...20 mA	–	30	120	–	–
		0...10 V, 4...20 mA	–	30	120	15	10
		0...10 V, 4...20 mA	30	–	–	–	–
		0...10 V, 4...20 mA	30	–	–	–	–
	AC/DC 24 V	0...10 V, 4...20 mA	30	–	–	–	–
SAX31.00			SKD32.50		SKB32.50		
–			SKD32.51		SKB32.51		
SAX31.03			–		–		
–			SKD32.21		–		
SAX81.00			SKD82.50		SKB82.50		
–			SKD82.51		SKB82.51		
SAX81.03			–		–		
–			SKD60		SKB60		
–			SKD62		SKB62		
SAX61.03			–		–		

PN 16	-25...150 °C ²⁾			DN	G [inch]	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
Data sheet	N4363		N4463									
	VVG41.11..12		–	15	G 1B	0.63 / 1	1600	800	1600	800	1600	800
	VVG41.13		VXG41.1301	15	G 1B	1.6	1600	800	1600	800	1600	800
	VVG41.14		VXG41.1401	15	G 1B	2.5	1600	800	1600	800	1600	800
	VVG41.15		VXG41.15	15	G 1B	4	1600	800	1600	800	1600	800
	VVG41.20		VXG41.20	20	G 1¼B	6.3	1600	800	1600	800	1600	800
	VVG41.25		VXG41.25	25	G 1½B	10	1550	800	1600	800	1600	800
	VVG41.32		VXG41.32	32	G 2B	16	875	800	1275	800	1600	800
	VVG41.40		VXG41.40	40	G 2¼B	25	525	525	775	775	1600	800
	VVG41.50		VXG41.50	50	G 2¾B	40	300	300	450	450	1225	800

Union nuts for threaded valves ³⁾

Type	Set of 2	Set of 3	G [inch]	R, Rp [inch]	Material
ALG132	ALG133		G ½B	R ¾ (externally threaded)	Brass
ALG142	ALG143		G ¾B	R ½ (externally threaded)	Brass
ALG122	ALG123		G ¾B	Rp ¾	Malleable cast iron
ALG152	ALG153		G 1B	Rp ½	Malleable cast iron
ALG152B	ALG153B		G 1B	Rp ½	Brass
ALG202	ALG203		G 1¼B	Rp ¾	Malleable cast iron
ALG202B	ALG203B		G 1¼B	Rp ¾	Brass
ALG252	ALG253		G 1½B	Rp 1	Malleable cast iron
ALG252B	ALG253B		G 1½B	Rp 1	Brass
ALG322	ALG323		G 2B	Rp 1¼	Malleable cast iron
ALG322B	ALG323B		G 2B	Rp 1¼	Brass
ALG402	ALG403		G 2¼B	Rp 1½	Malleable cast iron
ALG402B	ALG403B		G 2¼B	Rp 1½	Brass
ALG502	ALG503		G 2¾B	Rp 2	Malleable cast iron
ALG502B	ALG503B		G 2¾B	Rp 2	Brass
Type	Set of 2		G [inch]	Ø d [mm]	Material
ALS152			G ¾B	21.3	Steel, weldable
ALS202			G 1B	26.8	Steel, weldable
ALS252			G 1¼B	33.7	Steel, weldable

¹⁾ SAX81...: AC/DC 24 V;²⁾ SAX.. max. 130 °C;³⁾ Valve side: cylindrical thread G according to ISO 228-1, pipe side: ALG.. with cylindrical Rp- or tapered R-thread according to ISO 7-1 Pipe side: ALS.. with welded connection

Valves and actuators

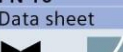
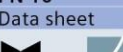
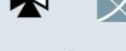
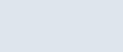
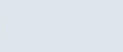
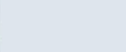
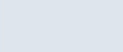
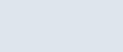
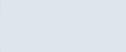
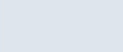
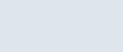
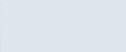
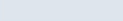
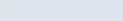
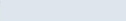
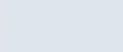
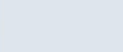
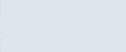
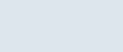
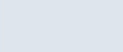
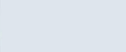
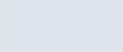
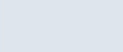
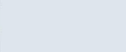
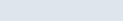
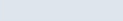
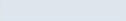
Overview and selection tools

Threaded globe valves

Typical applications – Boiler plants – Domestic hot water – Heating groups – Air handling units		Actuators		Data sheet		Spring return function [s]	400N		400N		400N	
		SAS..		N4581								
		Operating voltage		Positioning signal	Positioning time [s]							
		AC 230 V		3-position	120		–	SAS31.00	–	–		
				3-position	30		–	SAS31.03	–	–		
				3-position	120		28	–	SAS31.50	–		
				3-position	30		14	–	SAS31.53	–		
		AC/DC 24 V		0...10 V,	30		–	SAS61.03	–	–		
				4...20 mA,	30		14	–	–	SAS61.33		
				0...1000 Ω	30		14	–	SAS61.53	–		
3-position	120			–	SAS81.00	–	–					
3-position	30			–	SAS81.03	–	–					
3-position	30			14	–	SAS81.33	–					
PN 16		1...120 °C										
Data sheet		N4364										
												
VVG44.15-.. ¹⁾		VVG44.15-..		15	G 1 B	0.25 / 0.4 / 0.63	1600	400	1600	400	1600	400
VVG44.15-..		VVG44.15-..		15	G 1 B	1 / 1.6	725	400	725	400	725	400
VVG44.15-..		VVG44.15-..		15	G 1 B	2.5 / 4	400	400	400	400	400	400
VVG44.20-6.3		VVG44.20-6.3		20	G 1¼B	6.3	750	400	750	400	750	400
VVG44.25-10		VVG44.25-10		25	G 1½B	10	400	400	400	400	400	400
VVG44.32-16		VVG44.32-16		32	G 2B	16	250	250	250	250	250	250
VVG44.40-25		VVG44.40-25		40	G 2¼B	25	125	125	125	125	125	125
Typical applications – Boiler plants – Heating groups – Air handling units		Actuators		Data sheet				5.5 mm				
		SSC..		N4895				300 N				
		Operating voltage		Positioning signal	Positioning time [s]	Spring return function [s]						
		AC 230 V		3-position	150	–			SSC31			
		AC 24 V		3-position	150	–			SSC81			
		AC/DC 24 V		0...10 V	30	–			SSC61			
			0...10 V	30	30			SSC61.5				
PN 16		1...110 °C										
Data sheet		N4845										
												
VVP45.20-4		VVP45.20-4		20	G 1 B	4			350		350	
VVP45.25-6.3		VVP45.25-6.3		25	G 1¼B	6.3			300		300	
VVP45.25-10		VVP45.25-10		25	G 1½B	10			300		300	
VVP45.32-16		VVP45.32-16		32	G 2B	16			175		175	
VVP45.40-25		VVP45.40-25		40	G 2¼B	25			75		75	
Typical applications – District heating – Boiler plants		Actuators		Data sheet		Spring return function [s]	300N		300N			
		SAT..		N4584								
		Operating voltage		Positioning signal	Positioning time [s]							
		AC 230 V		3-position	8		–	SAT31.008	–			
				3-position	15		8	–	SAT31.51			
		AC/DC 24 V		0...10 V,	8		–	SAT61.008	–			
4...20 mA,	15			8	–	SAT61.51						
			0...1000 Ω									
PN 25		1...130 °C										
Data sheet		N4380										
												
VVG549.15-.. ¹⁾				15	G ¾B	0.25 / 0.4 / 0.63	2500	1200	2500	1200	1200	
VVG549.15-..				15	G ¾B	1 / 1.6 / 2.5	2000	1200	2000	1200	1200	
VVG549.20-4K				20	G 1B	5	1600	1200	1600	1200	1200	
VVG549.25-6.3K				25	G 1¼B	6.3	1600	1200	1600	1200	1200	

¹⁾ .. = insert k_{vs} value

Flanged globe valves

Typical applications		Actuators	Data sheet					Spring return function [s]	800 N		20 mm		2800 N		40 mm	
– District heating		SAX..	N4501					   	800 N		20 mm		2800 N		40 mm	
– Boiler plants		SKD..	N4561						1000 N							
– Chiller plants		SKB..	N4564													
– Domestic hot water		SKC..	N4566													
– Heating groups																
– Air handling units																
		Operating voltage	Positioning signal		Positioning time [s]											
		AC 230 V	3-position	120	120	120	–	–	SAX31.00	SKD32.50	SKB32.50	SKC32.60				
			3-position	–	120	120	8	10/18	–	SKD32.51	SKB32.51	SKC32.61				
			3-position	30	–	–	–	–	SAX31.03	–	–	–				
			3-position	–	30	–	8	–	–	SKD32.21	–	–				
		AC 24 V ¹⁾	3-position	120	120	120	–	–	SAX81.00	SKD82.50	SKB82.50	SKC82.60				
			3-position	–	120	120	8	10/18	–	SKD82.51	SKB82.51	SKC82.61				
			3-position	30	–	–	–	–	SAX81.03	–	–	–				
			0...10 V, 4...20 mA	–	30	120	–	–	–	SKD60	SKB60	SKC60				
			0...10 V, 4...20 mA	–	30	120	15	10/20	–	SKD62	SKB62	SKC62				
		AC/DC 24 V	0...10 V, 4...20 mA	30	–	–	–	–	SAX61.03	–	–	–				
PN 6	-10...130 °C				DN	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	
Data sheet	N4401		N4401		DN	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	
		VVF22.25-... ²⁾		VXF22.25-...	25	2.5 / 4 / 6.3 / 10		600	300	600	300	600	300	–	–	
		VVF22.40-...		VXF22.40-...	40	16 / 25		550	300	600	300	600	300	–	–	
		VVF22.50-40		VXF22.50-40	50	40		350	300	450	300	600	300	–	–	
		VVF22.65-63		VXF22.65-63	65	63		200	150	250	200	600	300	–	–	
		VVF22.80-100		VXF22.80-100	80	100		125	75	175	125	450	300	–	–	
		VVF22.100-160		VXF22.100-160	100	160		–	–	–	–	–	–	300	250	
PN 10	-10...150 °C ³⁾				DN	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	
Data sheet	N4402		N4402		DN	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	
		VVF32.15-... ²⁾		VXF32.15-...	15	1.6 / 2.5 / 4		1000	400	1000	400	1000	400	–	–	
		VVF32.25-...		VXF32.25-...	25	6.3 / 10		1000	400	1000	400	1000	400	–	–	
		VVF32.40-...		VXF32.40-...	40	16 / 25		550	400	750	400	1000	400	–	–	
		VVF32.50-40		VXF32.50-40	50	40		350	300	450	400	1000	400	–	–	
		VVF32.65-63		VXF32.65-63	65	63		200	150	250	200	700	400	–	–	
		VVF32.80-100		VXF32.80-100	80	100		125	75	175	125	450	400	–	–	
		VVF32.100-160		VXF32.100-160	100	160		–	–	–	–	–	–	300	250	
		VVF32.125-250		VXF32.125-250	125	250		–	–	–	–	–	–	190	160	
		VVF32.150-400		VXF32.150-400	150	400		–	–	–	–	–	–	125	100	
PN 16	-10...150 °C ³⁾				DN	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	
Data sheet	N4403		N4403		DN	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	
		VVF42.15-... ²⁾		VXF42.15-...	15	1.6 / 2.5 / 4		1600	400	1600	400	1600	400	–	–	
		VVF42.20-6.3		VXF42.20-6.3	20	6.3		1600	400	1600	400	1600	400	–	–	
		VVF42.25-...		VXF42.25-...	25	6.3 / 10		1600	400	1600	400	1600	400	–	–	
		VVF42.32-16		VXF42.32-16	32	16		900	400	1200	400	1600	400	–	–	
		VVF42.40-...		VXF42.40-...	40	16 / 25		550	400	750	400	1600	400	–	–	
		VVF42.50-...		VXF42.50-...	50	31.5 / 40		350	300	450	400	1200	400	–	–	
		VVF42.65-...		VXF42.65-...	65	50 / 63		200	150	250	200	700	400	–	–	
		VVF42.80-...		VXF42.80-...	80	80 / 100		125	75	175	125	450	400	–	–	
		VVF42.100-...		VXF42.100-...	100	125 / 160		–	–	–	–	–	–	300	250	
		VVF42.125-...		VXF42.125-...	125	200 / 250		–	–	–	–	–	–	190	160	
		VVF42.150-...		VXF42.150-...	150	315 / 400		–	–	–	–	–	–	125	100	
		VVF42.50-40K		VXF42.50-40K	50	40		1600	400	1600	400	1600	400	–	–	
		VVF42.65-63K		VXF42.65-63K	65	63		1600	400	1600	400	1600	400	–	–	
		VVF42.80-100K		VXF42.80-100K	80	100		1600	400	1600	400	1600	400	–	–	
		VVF42.100-160K		VXF42.100-160K	100	160		–	–	–	–	–	–	1600	400	
		VVF42.125-250K		VXF42.125-250K	125	250		–	–	–	–	–	–	1600	400	
		VVF42.150-360K		VXF42.150-360K	150	360		–	–	–	–	–	–	1600	400	

¹⁾ SAX81...: AC/DC 24 V²⁾ .. = insert k_{vs} value³⁾ SAX.. max. 130 °CVVF43..., VXF43...: For DN 15...50 and k_{vs} values ≤ 40 m³/h see V..F53..

Valves and actuators

Overview and selection tools

Flanged globe valves

Typical applications	Actuators	Data sheet						Spring return function [s]				
– District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units	SAX.. SKD.. SKB.. SKC..	N4501 N4561 N4564 N4566										
	Operating voltage	Positioning signal	Positioning time [s]									
	AC 230 V	3-position	120	120	120	–	–	SAX31.00	SKD32.50	SKB32.50	SKC32.60	
		3-position	–	120	120	8	10/18	–	SKD32.51	SKB32.51	SKC32.61	
		3-position	30	–	–	–	–	SAX31.03	–	–	–	
		3-position	–	30	–	8	–	–	SKD32.21	–	–	
	AC 24 V ¹⁾	3-position	120	120	120	–	–	SAX81.00	SKD82.50	SKB82.50	SKC82.60	
		3-position	–	120	120	8	10/18	–	SKD82.51	SKB82.51	SKC82.61	
		3-position	30	–	–	–	–	SAX81.03	–	–	–	
		0...10 V, 4...20 mA	–	30	120	–	–	–	SKD60	SKB60	SKC60	
		0...10 V, 4...20 mA	–	30	120	15	10/20	–	SKD62	SKB62	SKC62	
	AC/DC 24 V	0...10 V, 4...20 mA	30	–	–	–	–	SAX61.03	–	–	–	

PN 16	-20...220 °C				DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
Data sheet	N4404		N4404											
	VVF43.65-50		–	65	50	–	–	–	–	–	–	700	650	
	VVF43.65-63		VXF43.65-63	65	63	–	–	–	–	–	–	700	650	
	VVF43.80-80		–	80	80	–	–	–	–	–	–	450	400	
	VVF43.80-100		VXF43.80-100	80	100	–	–	–	–	–	–	450	400	
	VVF43.100-125		–	100	125	–	–	–	–	–	–	300	250	
	VVF43.100-160		VXF43.100-160	100	160	–	–	–	–	–	–	300	250	
	VVF43.125-200		–	125	200	–	–	–	–	–	–	190	160	
	VVF43.125-250		VXF43.125-250	125	250	–	–	–	–	–	–	190	160	
	VVF43.150-315		–	150	315	–	–	–	–	–	–	125	100	
	VVF43.150-400		VXF43.150-400	150	400	–	–	–	–	–	–	125	100	
	VVF43.65-63K		–	65	63	–	–	–	–	–	–	1600	800	
	VVF43.80-100K		–	80	100	–	–	–	–	–	–	1600	800	
	VVF43.100-150K		–	100	150	–	–	–	–	–	–	1600	800	
	VVF43.125-220K		–	125	220	–	–	–	–	–	–	1600	800	
	VVF43.150-315K		–	150	315	–	–	–	–	–	–	1600	800	
VVF43.200-450K	–	200	450	–	–	–	–	–	–	1200	800			
VVF43.250-630K	–	250	630	–	–	–	–	–	–	1000	800			

¹⁾ SAX81...: AC/DC 24 V

Flanged globe valves

Typical applications		Actuators		Data sheet				Spring return function [s]	800 N		20 mm		1000 N		2800 N		40 mm	
– District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units		SAX..		N4501										2800 N				
		SKD..		N4561														
		SKB..		N4564														
		SKC..		N4566														
		Operating voltage		Positioning signal		Positioning time [s]												
		AC 230 V		3-position		120	120	120	–	–	SAX31.00	SKD32.50	SKB32.50	SKC32.60				
				3-position		–	120	120	8	10/18	–	SKD32.51	SKB32.51	SKC32.61				
				3-position		30	–	–	–	–	SAX31.03	–	–	–				
				3-position		–	30	–	8	–	–	SKD32.21	–	–				
		AC 24 V ¹⁾		3-position		120	120	120	–	–	SAX81.00	SKD82.50	SKB82.50	SKC82.60				
				3-position		–	120	120	8	10/18	–	SKD82.51	SKB82.51	SKC82.61				
				3-position		30	–	–	–	–	SAX81.03	–	–	–				
				0...10 V, 4...20 mA		–	30	120	–	–	–	SKD60	SKB60	SKC60				
				0...10 V, 4...20 mA		–	30	120	15	10/20	–	SKD62	SKB62	SKC62				
		AC/DC 24 V		0...10 V, 4...20 mA		30	–	–	–	–	SAX61.03	–	–	–				
PN 25		-20...220 °C ²⁾				DN	k _{vs} [m³/h]			Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	
Data sheet		N4405		N4405														
				–		15	0.16/0.2/0.25/ 0.32/0.4/0.5/0.63			2500	1200	2500	1200	2500	1200	–	–	
				–		15	0.8/1/1.25/2/ 3.2			2500	1200	2500	1200	2500	1200	–	–	
				VXF53.15-...		15	1.6/2.5/4			2500	1200	2500	1200	2500	1200	–	–	
				VXF53.20-6.3		20	6.3			2500	1200	2500	1200	2500	1200	–	–	
				–		25	5/8			1600	1200	2100	1200	2500	1200	–	–	
				VXF53.25-...		25	6.3/10			1600	1200	2100	1200	2500	1200	–	–	
				VXF53.32-16		32	16			900	750	1200	1100	2500	1200	–	–	
				–		40	12.5/20			550	500	750	650	2000	1200	–	–	
				VXF53.40-...		40	16/25			550	500	750	650	2000	1200	–	–	
				–		50	31.5			350	300	450	400	1200	1150	–	–	
				VXF53.50-40		50	40			350	300	450	400	1200	1150	–	–	
				VXF53.65-63		65	63			–	–	–	–	–	–	700	650	
				VXF53.80-100		80	100			–	–	–	–	–	–	450	400	
				VXF53.100-160		100	160			–	–	–	–	–	–	300	250	
				VXF53.125-250		125	250			–	–	–	–	–	–	190	160	
				VXF53.150-400		150	400			–	–	–	–	–	–	125	100	
				–		50	36			–	–	2500	1250	2500	1250	–	–	
				–		65	63			–	–	–	–	–	–	2500	1250	
				–		80	100			–	–	–	–	–	–	2500	1250	
				–		100	150			–	–	–	–	–	–	2500	1250	
				–		125	220			–	–	–	–	–	–	2500	1250	
				–		150	315			–	–	–	–	–	–	2500	1250	
				–		200	450			–	–	–	–	–	–	1200	800	
				–		250	630			–	–	–	–	–	–	1000	800	
PN 40		-25...220 °C				DN	k _{vs} [m³/h]			Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	
Data sheet		N4382		N4482														
				–		15	0.19/0.3/0.45			–	–	4000	1600	4000	1600	–	–	
				–		15	0.7/1.2			–	–	4000	1600	4000	1600	–	–	
				VXF61.14..15 ⁴⁾		15	1.9/3			–	–	4000	1600	4000	1600	–	–	
				–								–	1200	–	1600			
				VXF61.23..25 ⁴⁾		25	3/5/7.5 5/7.5			–	–	2250	1600	4000	1600	–	–	
				–								–	1200	–	1600			
				VXF61.39..40 ⁴⁾		40	12/19			–	–	–	–	4000	1600	–	–	
				–								–	–	4000	1200			
				VXF61.49..50 ⁴⁾		50	19/31			–	–	–	–	4000	1600	–	–	
				–								–	–	–	1000			
				VXF61.65		65	49			–	–	–	–	–	–	4000	1000	
				–								–	–	–	–	800		
				VXF61.80		80	78			–	–	–	–	–	–	4000	700	
				–								–	–	–	–	500		
				VXF61.90		100	124			–	–	–	–	–	–	4000	450	
				–								–	–	–	–	300		
				VXF61.91		125	200			–	–	–	–	–	–	4000	300	
				–								–	–	–	–	200		
				VXF61.92		150	300			–	–	–	–	–	–	4000	200	
				–								–	–	–	–	125		

Valves and actuators

Overview and selection tools

Threaded PICVs

Typical applications – Radiators – Chilled ceilings – Fan coil units	Actuators		Data sheet						4.5 mm 100 N		2.5 mm 100 N			
	RTN.. STA.. SSA..		N2111 N4884 N4893											
	Operating voltage		Positioning signal		Positioning time [s]									
	AC 230 V		2-position 3-position		210 150				– –		STA23 –			
	AC 24 V		3-position 0...10 V		150 270 ¹⁾				– –		– STA63			
	AC/DC 24 V		2-position / PDM 0...10 V		270 34				– –		STA73 –			
									RTN51 RTN71 RTN81		– – –			
											– – –			
											– – –			
											– – –			
PN 10	1...90 °C	DIN	DN	Rp/R [inch]	V [l/h]	V _{nom} ²⁾ [l/h]		Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	
Data sheet		N2185												
		VPD110A-... ²⁾	10	Rp/R 3/8	25...318	45 90 145		6 ³⁾	200	8 ³⁾	200	10 ³⁾	200	
		VPD115A-...	15	Rp/R 1/2	25...318	45 90 145		6 ³⁾	200	8 ³⁾	200	10 ³⁾	200	
		VPD110B-200	10	Rp/R 3/8	95...483	200		20	200	20	200	20	200	
		VPD115B-200	15	Rp/R 1/2	95...483	200		20	200	20	200	20	200	
		VPE110A-...	10	Rp/R 3/8	25...318	45 90 145		6 ³⁾	200	8 ³⁾	200	10 ³⁾	200	
		VPE115A-...	15	Rp/R 1/2	25...318	45 90 145		6 ³⁾	200	8 ³⁾	200	10 ³⁾	200	
		VPE110B-200	10	Rp/R 3/8	95...483	200		20	200	20	200	20	200	
		VPE115B-200	15	Rp/R 1/2	95...483	200		20	200	20	200	20	200	
Typical applications – Heating groups – Air handling units – Chilled ceilings – VAV – Fan coil units – Zone control	Actuators		Data sheet						4.5 mm 100 N		2.5 / 5 mm 100 N		15 mm 200 N	
	STA.. SSA.. SAY..P..		N4884 N4893 A6V10628469											
	Operating voltage		Positioning signal		Positioning time [s]									
					STA/STP SSA SAY									
	AC 230 V		3-position 2-position		– 210				– STA23		SSA31 –		SAY31P03 –	
	AC 24 V		0...10 V		270 ¹⁾				– STA63		– –		SAY61P03 SAY81P03	
	AC/DC 24 V		3-position 2-position/PDM 0...10 V		– 270 –				150/300 – STA73 –		SSA81 – SSA61/SSA61EP		– – –	
					34/70				–					
PN 25	1...120 °C	Without pressure testing points	With pressure testing points	DN	G [inch]	V _{min} [l/h]	V ₁₀₀ [l/h]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	
Data sheet		N4855												
		VPP46.10L0.2	VPP46.10L0.2Q	10	1/2	30	200	16	600	16	600	–	–	
		VPP46.15L0.2	VPP46.15L0.2Q	15	3/4	30	200	19	600	19	600	–	–	
		VPP46.15L0.6	VPP46.15L0.6Q	15	3/4	100	575	19	600	19	600	–	–	
		VPP46.20F1.4	VPP46.20F1.4Q	20	1	200	1190	22	600	–	–	–	–	
				20	1	220	1330	–	–	22	600	–	–	
		VPP46.25F1.8	VPP46.25F1.8Q	25	1 1/4	204	1470	39	600	–	–	–	–	
				25	1 1/4	250	1800	–	–	39	600	–	–	
		VPP46.32F4	VPP46.32F4Q	32	1 1/2	450	3270	28	600	–	–	–	–	
			32	1 1/2	550	4001	–	–	28	600	–	–		
PN 25	1...120 °C	Without pressure testing points	With pressure testing points	DN	Rp [inch]	V _{min} [l/h]	V ₁₀₀ [l/h]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	
	Data sheet		N4855											
			VPI46.15L0.2	VPI46.15L0.2Q	15	1/2	30	200	19	600	19	600	–	–
			VPI46.15L0.6	VPI46.15L0.6Q	15	1/2	100	575	19	600	19	600	–	–
			VPI46.20F1.4	VPI46.20F1.4Q	20	3/4	200	1190	22	600	–	–	–	–
					20	3/4	220	1330	–	–	22	600	–	–
			VPI46.25F1.8	VPI46.25F1.8Q	25	1 1/4	204	1470	39	600	–	–	–	–
					25	1 1/4	250	1800	–	–	39	600	–	–
			VPI46.32F4	VPI46.32F4Q	32	1 1/2	450	3270	28	600	–	–	–	–
					32	1 1/2	550	4001	–	–	28	600	–	–
	–	VPI46.40F9.5Q	40	1 1/2	1370	9500	–	–	–	–	25	600		
	–	VPI46.50F12Q	50	2	1400	11500	–	–	–	–	36	600		

¹⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

²⁾ .. = insert V_{nom} V_{nom} = factory setting = volumetric flow at 0.5 mm stroke or setting mark 3 of the presetting

³⁾ Δp_{min} is valid for V_{nom} 45/90/145 l/h

VPP46../VPI46...: Δp_{min} is for the V₁₀₀. For lower flows please consult the datasheet.

Flanged PICVs

Typical applications	Actuators	Data sheet	20 mm	20 / 40 mm	40 mm
– District heating – Heating groups – Air handling units	SAX..P.. SQV91P.. SAV..P..	N4509 N4833 N4510	500 N 	1100 N 	1100 N 
	Operating voltage	Positioning signal	Positioning time [s]	Spring return function [s]	
	AC 230 V	3-position	SAX	SQV	SAV
		3-position	30	–	120
		3-position	–	40/80	–
		3-position	–	40/80	30
	AC/DC 24 V	3-position	30	–	120
		3-position	–	40/80	–
		3-position	–	40/80	30
		0...10 V, 4...20 mA	30	–	120
		0...10 V, 4...20 mA	–	40/80	–
		0...10 V, 4...20 mA	–	40/80	30
			SAX31P03	–	SAV31P00
			–	SQV91P40 ¹⁾	–
			–	SQV91P30 ²⁾	–
			–	–	SAV81P00
			–	SQV91P40 ¹⁾	–
			–	SQV91P30 ²⁾	–
			SAX61P03	–	SAV61P00
			–	SQV91P40 ¹⁾	–
			–	SQV91P30 ²⁾	–
PN 16	1...120 °C	DN	V _{min} [m³/h]	V ₁₀₀ [m³/h]	Δp _{min} [kPa]
Data sheet	N4315				Δp _{/Δp_{max}} [kPa]
	VPF43.50F16	50	2.3	15	20
	VPF43.50F25	50	4.3	25	50
	VPF43.65F24	65	4.4	24	25
	VPF43.65F35	65	6	35	55
	VPF43.80F35	80	5.3	34	25
	VPF43.80F45	80	7	43	50
	VPF43.100F70	100	12.1	68	35
	VPF43.100F90	100	14.8	90	70
	VPF43.125F110	125	18.5	110	35
	VPF43.125F135	125	23	135	53
	VPF43.150F160	150	25.6	148	35
	VPF43.150F200	150	32	195	65
PN 25	1...120 °C	DN	V _{min} [m³/h]	V ₁₀₀ [m³/h]	Δp _{min} [kPa]
Data sheet	N4316				Δp _{/Δp_{max}} [kPa]
	VPF53.50F16	50	2.3	15	35
	VPF53.50F25	50	4.3	25	70
	VPF53.65F24	65	4.4	24	35
	VPF53.65F35	65	6	35	70
	VPF53.80F35	80	5.3	34	35
	VPF53.80F45	80	7	43	70
	VPF53.100F70	100	12.1	68	35
	VPF53.100F90	100	14.8	90	75
	VPF53.125F110	125	18.5	110	35
	VPF53.125F135	125	23	135	53
	VPF53.150F160	150	25.6	148	35
	VPF53.150F200	150	32	195	65

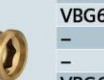
¹⁾ Fail-safe function: valve closed²⁾ Fail-safe function: valve openVPF43../VPF53...: Δp_{min} is for the V₁₀₀. For lower flows please consult the datasheet.

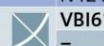
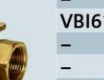
Valves and actuators

Overview and selection tools

Control ball valves

Typical applications	Actuators	Data sheet					Spring return function [s]	2 Nm	5 Nm	7 Nm	10 Nm GLB 8 Nm GLB	
– Domestic hot water – Heating groups – Air handling units – Chilled ceilings – VAV – Fan coil units – Zone control	GQD..9A	N4659										
	GSD..9A	A6V10636056										
	GDB..9E	A6V10636150										
	GDB111.9E/KN	A6V10725318										
	GMA..9E	N4658										
	GLB..9E	A6V10636203										
	GLD..9E	A6V11171770										
	Operating voltage	Positioning signal	Positioning time [s]									
			G..D	G..B	GMA							
AC 100...240 V	3-position	–	150	–	–	–	GDB341.9E	–	GLB341.9E			
AC 24 V	KNX S-/LTE-Mode, KNX PL-Link	150	–	–	–	–	GDB111.9E/ KN	–	–			
AC/DC 24 V	3-position	30	–	90	15	GQD131.9A	–	GMA131.9E	–			
	3-position	–	150	–	–	–	GDB141.9E	–	GLB141.9E			
	0...10 V	30	–	90	15	GQD161.9A	–	GMA161.9E	–			
	0/2...10 V	30	150	–	–	GSD161.9A	GDB161.9E	–	GLB161.9E			
	0/2...10 V	30	–	–	–	–	–	–	GLD161.9E			

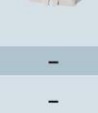
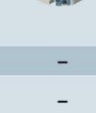
PN 40	-10...120 °C												
Data sheet	N4211			N4211	DN	G [Inch]	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
													
	VAG61.15-.. ¹⁾	VBG61.15-..	15	G 1 B	1.6/2.5/4/6.3	1400	350	1400	350	1400	350	1400	350
	VAG61.15-..	–	15	G 1 B	1	1400	350	1400	350	1400	350	1400	350
	VAG61.20-..	VBG61.20-..	20	G 1 ¼ B	4/6.3	1400	350	1400	350	1400	350	1400	350
	VAG61.20-10	–	20	G 1 ¼ B	10	1400	350	1400	350	1400	350	1400	350
	VAG61.25-10	VBG61.25-10	25	G 1 ½ B	10	1400	350	1400	350	1400	350	1400	350
	VAG61.25-..	–	25	G 1 ½ B	6.3/16	1400	350	1400	350	1400	350	1400	350
	VAG61.32-10	–	32	G 2 B	10	–	–	–	–	1000	350	1000	350
	VAG61.32-16	VBG61.32-16	32	G 2 B	16	–	–	–	–	1000	350	1000	350
	VAG61.32-25	–	32	G 2 B	25	–	–	–	–	1000	350	1000	350
	VAG61.40-16	–	40	G 2 ¼ B	16	–	–	–	–	800	350	800	350
	VAG61.40-25	VBG61.40-25	40	G 2 ¼ B	25	–	–	–	–	800	350	800	350
	VAG61.40-40	–	40	G 2 ¼ B	40	–	–	–	–	800	350	800	350
	VAG61.50-25	–	50	G 2 ¾ B	25	–	–	–	–	600	350	600	350
	VAG61.50-40	VBG61.50-40	50	G 2 ¾ B	40	–	–	–	–	600	350	600	350
	VAG61.50-63	–	50	G 2 ¾ B	63	–	–	–	–	600	350	600	350

PN 40	-10...120 °C												
Data sheet	N4211			N4211	DN	Rp [Inch]	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
													
	VAI61.15-.. ¹⁾	VBI61.15-..	15	Rp ½	1.6/2.5/4/6.3	1400	350	1400	350	1400	350	1400	350
	VAI61.15-..	–	15	Rp ½	1/10	1400	350	1400	350	1400	350	1400	350
	VAI61.20-..	VBI61.20-..	20	Rp ¾	4/6.3	1400	350	1400	350	1400	350	1400	350
	VAI61.20-10	–	20	Rp ¾	10	1400	350	1400	350	1400	350	1400	350
	VAI61.25-10	VBI61.25-10	25	Rp 1	10	1400	350	1400	350	1400	350	1400	350
	VAI61.25-..	–	25	Rp 1	6.3/16	1400	350	1400	350	1400	350	1400	350
	VAI61.32-10	–	32	Rp 1 ¼	10	–	–	–	–	1000	350	1000	350
	VAI61.32-16	VBI61.32-16	32	Rp 1 ¼	16	–	–	–	–	1000	350	1000	350
	VAI61.32-25	–	32	Rp 1 ¼	25	–	–	–	–	1000	350	1000	350
	VAI61.40-16	–	40	Rp 1 ½	16	–	–	–	–	800	350	800	350
	VAI61.40-25	VBI61.40-25	40	Rp 1 ½	25	–	–	–	–	800	350	800	350
	VAI61.40-40	–	40	Rp 1 ½	40	–	–	–	–	800	350	800	350
	VAI61.50-25	–	50	Rp 2	25	–	–	–	–	600	350	600	350
	VAI61.50-40	VBI61.50-40	50	Rp 2	40	–	–	–	–	600	350	600	350
	VAI61.50-63	VBI61.50-63	50	Rp 2	63	–	–	–	–	600	350	600	350

¹⁾ .. = insert k_{vs} value

VBG61../VBI61..: For noiseless operation, the Δp_{max} value of 200 kPa should not be exceeded

6-port control ball valves

Typical applications		Actuators		Data sheet		2 Nm		5 Nm		5 Nm		5 Nm			
– Heated and chilled ceilings		GSD..9A		A6V10636056											
		GDB341.9E		A6V10636150											
		GDB111.9E/KN		A6V10725318											
		GDB161.9E		A6V10636150											
		Operating voltage		Positioning signal		Positioning time [s]		–		GDB341.9E		–		–	
						GSD									
				AC 100...240 V		2-position		–		150					
				AC 24 V		KNX S-/LTE-Mode, KNX PL-Link		–		150				GDB111.9E/KN	
		AC/DC 24 V		0/2...10 V		30		150		GSD161.9A		–		GDB161.9E	
		AC/DC 24 V		2-position		30		–		GSD341.9A		–		–	
PN 16	5...90 °C	DN	k _{vs} left [m³/h]	k _{vs} right [m³/h]	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]	
Data sheet	A6V10564480														
	VWG41.10-0.25-0.4	10	0.25	0.4	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.25-0.65	10	0.25	0.65	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.25-1.0	10	0.25	1	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.4-0.65	10	0.4	0.65	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.4-1.0	10	0.4	1	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.4-1.3	10	0.4	1.3	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.4-1.6	10	0.4	1.6	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.65-1.0	10	0.65	1	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.65-1.3	10	0.65	1.3	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-0.65-1.6	10	0.65	1.6	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.0-1.3	10	1	1.3	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.0-1.6	10	1	1.6	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.0-1.9	10	1	1.9	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.3-1.6	10	1.3	1.6	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.3-1.9	10	1.3	1.9	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.6-1.9	10	1.6	1.9	–	200	–	200	–	200	–	200	–	200	
	VWG41.10-1.9-1.9	10	1.9	1.9	–	200	–	200	–	200	–	200	–	200	
	VWG41.20-0.25-0.4	20	0.25	0.4	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.25-0.65	20	0.25	0.65	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.25-1.0	20	0.25	1	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.4-1.0	20	0.4	1	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.4-1.3	20	0.4	1.3	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.4-1.6	20	0.4	1.6	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.65-1.0	20	0.65	1	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.65-1.6	20	0.65	1.6	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-0.65-2.5	20	0.65	2.5	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-1.0-1.6	20	1	1.6	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-1.0-2.5	20	1	2.5	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-1.6-2.5	20	1.6	2.5	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-1.6-3.45	20	1.6	3.45	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-2.5-3.45	20	2.5	3.45	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-2.5-4.25	20	2.5	4.25	–	–	–	200	–	200	–	200	–	200	
	VWG41.20-4.25-4.25	20	4.25	4.25	–	–	–	200	–	200	–	200	–	200	

Fittings for 6-port control ball valves

	Type	Description
	ALN15.152B	Fittings set made of brass for media temperatures up to 90 °C, consisting of 2x cap nuts 2x inserts with external threading per ISO 228-1 2x flat seals
	ALN15.202B	
	ALG13.152B	Fittings set made of brass for media temperatures up to 90 °C, consisting of 2x cap nuts with sleeves and insert per ISO 7-1 2x flat seals
	ALG15.152B	
	ALG15.202B	
	ALG15.252B	

Valves and actuators

Overview and selection tools

Magnetic valves

Typical applications		Valve type	Operating voltage	Positioning signal	Type suffix	
– District heating		MXF461..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	P ¹⁾	
– Boiler plants		M3P..FY..	AC 24 V	0...10 V, 4...20 mA	P ¹⁾	
– Chiller plants		MVF461H..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	–	
– Domestic hot water		MXG461..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	P ¹⁾	
– Heating groups		MXG461B..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	–	
– Air handling units		MXG461S..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	–	
		MXG462S..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	–	
PN 16	1...130 °C		DN	k _{vs} [m³/h]	Δp _s [kPa] Δp _{max} [kPa]	Note
Data sheet	N4455					
		MXF461.15-... ²⁾	15	0.6 / 1.5 / 3	300 300	
		MXF461.20-5.0	20	5	300 300	
		MXF461.25-8.0	25	8	300 300	
		MXF461.32-12	32	12	300 300	
		MXF461.40-20	40	20	300 300	
		MXF461.50-30	50	30	300 300	
		MXF461.65-50	65	50	300 300	
		1...120 °C				
		N4454				
		M3P80FY	80	80	300 300	
		M3P100FY	100	130	200 200	
PN 16	1...180 °C		DN	k _{vs} [m³/h]	Δp _s [kPa] Δp _{max} [kPa]	To be used as 2-port or mixing valves, not as diverting valves. Selectable valve characteristic: equal-percentage or linear.
Data sheet	N4361					
		MVF461H15-... ²⁾	15	0.6 / 1.5 / 3	1000 1000	
		MVF461H20-5	20	5	1000 1000	
		MVF461H25-8	25	8	1000 1000	
		MVF461H32-12	32	12	1000 1000	
		MVF461H40-20	40	20	1000 1000	
		MVF461H50-30	50	30	1000 1000	
PN 16	1...130 °C		DN	G [inch] k _{vs} [m³/h]	Δp _s [kPa] Δp _{max} [kPa]	
Data sheet	N4455					
		MXG461.15-... ²⁾	15	G 1B 0.6 / 1.5 / 3	300 300	
		MXG461.20-5.0	20	G 1¼B 5	300 300	
		MXG461.25-8.0	25	G 1½B 8	300 300	
		MXG461.32-12	32	G 2B 12	300 300	
		MXG461.40-20	40	G 2¼B 20	300 300	
		MXG461.50-30	50	G 2¾B 30	300 300	
PN 16	-20...130 °C		DN	G [inch] k _{vs} [m³/h]	Δp _s [kPa] Δp _{max} [kPa]	Note
Data sheet	N4461					
		MXG461B15-... ²⁾	15	G 1B 0.6 / 1.5 / 3	1000 1000	
		MXG461B20-5	20	G 1¼B 5	800 800	
		MXG461B25-8	25	G 1½B 8	700 700	
		MXG461B32-12	32	G 2B 12	600 600	
		MXG461B40-20	40	G 2¼B 20	600 600	
		MXG461B50-30	50	G 2¾B 30	600 600	
PN 16	1...130 °C		DN	G [inch] k _{vs} [m³/h]	Δp _s [kPa] Δp _{max} [kPa]	
Data sheet	N4465					
		MXG461S15-1.5	15	G 1B 1.5	300 300	
		MXG461S20-5.0	20	G 1¼B 5	300 300	
		MXG461S25-8.0	25	G 1½B 8	300 300	
		MXG461S32-12	32	G 2B 12	300 300	
		MXG462S50-30	50	G 2¾B 30	600 600	

¹⁾ P = media containing mineral oil

²⁾ .. = insert k_{vs} value

³⁾ Parts that are in contact with medium in stainless steel

Slipper valves						
Typical applications	Actuators	Data sheet		5 Nm	10 Nm	
– Boiler plants – Heating groups	SQK33..	N4506				
	SAL..	N4502				
	Operating voltage	Positioning signal	Positioning time [s]			
	AC 230 V		SQK33	SAL	SQK33.00	
		3-position	125	120		
	AC/DC 24 V	3-position	–	30	–	
		3-position	–	120	–	
		3-position	–	30	–	
0...10 V, 4...20 mA		–	120	–		
0...10 V, 4...20 mA		–	30	–		
Mounting set			ASK32	ASK31N		
PN 6	1...120 °C	DN	k_{vs} [m³/h]	Δp_{max} [kPa]	Δp_{max} [kPa]	
Data sheet	N4241					
 	VBF21.40	40	25	30	–	
	VBF21.50	50	40	30	–	
	VBF21.65	65	63	–	30	
	VBF21.80	80	100	–	30	
	VBF21.100	100	160	–	30	
	VBF21.125	125	550	–	30	
	VBF21.150	150	820	–	30	

Valves and actuators

Overview and selection tools

Butterfly valves

Typical applications – Boiler plants – Chiller plants – Heating groups	Actuators	Data sheet			Rotation angle 90°								
	SAL..	N4502			10 Nm		40 Nm						
		Operating voltage	Positioning signal	Positioning time [s]									
			AC 230 V	3-position	120	SAL31.00T10		SAL31.00T40					
				3-position	125	–		–					
			3-position	30	SAL31.03T10		–						
		AC/DC 24 V	3-position	120	SAL81.00T10		SAL81.00T40						
			3-position	30	SAL81.03T10		–						
			0...10 V, 4...20 mA	120	SAL61.00T10		SAL61.00T40						
			0...10 V, 4...20 mA	30	SAL61.03T10		–						
Mounting set				ASK33N		ASK33N							
PN 16	-10...120 °C		 	DN	k_{vs} [m³/h]	Δp_s [kPa]		Δp_s [kPa]					
Data sheet	N4131												
	VKF41.40	40				50	500		–				
	VKF41.50	50				80	500		–				
	VKF41.65	65				200	500		–				
	VKF41.80	80				400	500		–				
	VKF41.100	100				760	500		–				
	VKF41.125	125				1000	300		–				
	VKF41.150	150				2100	250		400				
	VKF41.200	200				4000	125		300				
Typical applications – Boiler plants – Chiller plants – Cooling towers – Domestic hot water – Heating groups	Actuators	Data sheet		20 Nm	40 Nm	Rotation angle 90°							
	SAL.. SQL36..	N4502 N4505				40 Nm		100 Nm	400 Nm	1200 Nm			
		Operating voltage	Positioning signal			time [s]							
			AC 230 V			3-position	6 ¹⁾	–	–	SQL36E65		–	–
						3-position	12 ¹⁾	–	–	–	SQL36E110	–	–
						3-position	24 ¹⁾	–	–	–	–	SQL36E160	–
						3-position	25	–	–	SQL36E50F04	SQL36E50F05	–	–
			3-position			120	SAL31.00T20	SAL31.00T40	–	–	–	–	
			3-position			120	SAL81.00T20	SAL81.00T40	–	–	–	–	
			0...10 V, 4...20 mA			120	SAL61.00T20	SAL61.00T40	–	–	–	–	
PN 16	-10...120 °C		 	DN	k_{vs} [m³/h]	Δp_s [kPa]		Δp_s [kPa]		Δp_s [kPa]			
Data sheet	N4136												
	VKF46.40	40				50	1600		–		–		
	VKF46.50	50				85	1600		–		–		
	VKF46.65	65				215	1600		–		–		
	VKF46.80	80				420	–	1600	–		–		
	VKF46.100	100				800	–	1200	–		–		
	VKF46.125	125				1010	–	800	–		–		
	VKF46.150	150				2100	–	–	–		–		
	VKF46.200	200				4000	–	–	1600		–		
	VKF46.250	250				6400	–	–	1000		–		
	VKF46.300	300				8500	–	–	1000		–		
	VKF46.350	350				11500	–	–	600		–		
	VKF46.400	400				14500	–	–	300		–		
	VKF46.450	450				20500	–	–	–		300		
	VKF46.500	500				21000	–	–	–		300		
	VKF46.600	600				29300	–	–	–		300		

¹⁾ With auxiliary module SEZ31.1 variable positioning time: SQL36E65: 30...180 s, SQL36E110: 60...360 s, SQL36E160: 120...720 s

Recommended maximum flow velocity:

VKF41...: < 4 m/s for water, see data sheet for details

VKF46...: 4.5 m/s for water, 60 m/s for gas

Changeover and open/close ball valves													
Typical applications – Boiler plants – Chiller plants – Domestic hot water – Heating groups	Actuators	Data sheet				Spring return function [s]	2 Nm		7 Nm		10 Nm		
	GQD..9A	N4659											
	GSD..9A	N4655											
	GMA..9E	N4658											
	GLB..9E	A6V10636203											
	Operating voltage	Positioning signal	Positioning time [s]										
			GQD/GSD	GMA	GLB								
	AC 230 V	2-position	30	90	–		15	GQD321.9A	GMA321.9E	–		–	
	2-position	30	–	–	–	GSD341.9A	–	–		–			
AC 100...240 V	2/3-position	–	–	150	–	–	–	–		GLB341.9E			
AC/DC 24 V	2-position	30	90	–	15	GQD121.9A	GMA121.9E	–		–			
	2-position	30	–	–	–	GSD141.9A	–	–		–			
	2/3-position	–	–	150	–	–	–	–		GLB141.9E			
PN 40	-10...120 °C		DN	G [Inch]	k _{vs} [m³/h]	Δp _s [kPa]		Δp _{max} [kPa]		Δp _s [kPa]		Δp _{max} [kPa]	
Data sheet	N4213					Δp _s [kPa]		Δp _{max} [kPa]		Δp _s [kPa]		Δp _{max} [kPa]	
	VAG60.15-9		15	G 1 B	9	1400	350	1400	350	1400	350	1400	350
	VAG60.20-17		20	G 1 ¼ B	17	1400	350	1400	350	1400	350	1400	350
	VAG60.25-22		25	G 1 ½ B	22	1400	350	1400	350	1400	350	1400	350
	VAG60.32-35		32	G 2 B	35	–	–	1000	350	1000	350	1000	350
	VAG60.40-68		40	G 2 ¼ B	68	–	–	800	350	800	350	800	350
	VAG60.50-96		50	G 2 ¾ B	96	–	–	600	350	600	350	600	350
PN 40	-10...120 °C		DN	G [Inch]	k _{vs} [m³/h]	Δp _{max} [kPa]		Δp _{max} [kPa]		Δp _{max} [kPa]			
Data sheet	N4213					Δp _{max} [kPa]		Δp _{max} [kPa]		Δp _{max} [kPa]			
	VBG60.15-8T		15	G 1 B	8	350	350	350	350	350	350		
	VBG60.20-13T		20	G 1 ¼ B	13	350	350	350	350	350	350		
	VBG60.25-13T		25	G 1 ½ B	13	350	350	350	350	350	350		
	VBG60.32-25T		32	G 2 B	25	–	–	350	350	350	350		
	VBG60.40-49T		40	G 2 ¼ B	49	–	–	350	350	350	350		
	VBG60.50-73T		50	G 2 ¾ B	73	–	–	350	350	350	350		
PN 40	-10...120 °C		DN	Rp [Inch]	k _{vs} [m³/h]	Δp _s [kPa]		Δp _{max} [kPa]		Δp _s [kPa]		Δp _{max} [kPa]	
Data sheet	N4213					Δp _s [kPa]		Δp _{max} [kPa]		Δp _s [kPa]		Δp _{max} [kPa]	
	VAI60.15-15		15	Rp ½	15	1400	350	1400	350	1400	350	1400	350
	VAI60.20-22		20	Rp ¾	22	1400	350	1400	350	1400	350	1400	350
	VAI60.25-22		25	Rp 1	22	1400	350	1400	350	1400	350	1400	350
	VAI60.32-35		32	Rp 1 ¼	35	–	–	1000	350	1000	350	1000	350
	VAI60.40-68		40	Rp 1 ½	68	–	–	800	350	800	350	800	350
	VAI60.50-96		50	Rp 2	96	–	–	600	350	600	350	600	350
PN 40	-10...120 °C		DN	Rp [Inch]	k _{vs} [m³/h]	Δp _{max} [kPa]		Δp _{max} [kPa]		Δp _{max} [kPa]			
Data sheet	N4213					Δp _{max} [kPa]		Δp _{max} [kPa]		Δp _{max} [kPa]			
	VBI60.15-12T		15	Rp ½	12	350	350	350	350	350	350		
	VBI60.20-16T		20	Rp ¾	16	350	350	350	350	350	350		
	VBI60.25-16T		25	Rp 1	16	350	350	350	350	350	350		
	VBI60.32-25T		32	Rp 1 ¼	25	–	–	350	350	350	350		
	VBI60.40-49T		40	Rp 1 ½	49	–	–	350	350	350	350		
	VBI60.50-73T		50	Rp 2	73	–	–	350	350	350	350		
PN 40	-10...120 °C		DN	Rp [Inch]	k _{vs} [m³/h]	Δp _{max} [kPa]		Δp _{max} [kPa]		Δp _{max} [kPa]			
Data sheet	N4213					Δp _{max} [kPa]		Δp _{max} [kPa]		Δp _{max} [kPa]			
	VBI60.15-5L		15	Rp ½	5	350	350	350	350	350	350		
	VBI60.20-9L		20	Rp ¾	9	350	350	350	350	350	350		
	VBI60.25-9L		25	Rp 1	9	350	350	350	350	350	350		
	VBI60.32-13L		32	Rp 1 ¼	13	–	–	350	350	350	350		
	VBI60.40-25L		40	Rp 1 ½	25	–	–	350	350	350	350		
	VBI60.50-37L		50	Rp 2	37	–	–	350	350	350	350		

Valves and actuators

Overview and selection tools

Refrigerant valves											
Typical applications		Valve	Operating voltage		Positioning signal			Auxiliary functions			
– Chiller plants		M2FP03GX	AC 24 V		0...10 V, 4...20 mA, 0...20 Phs			–			
		MVL661..	AC/DC 24 V		0...10 V, 2...10 V, 0...20 mA, 4...20 mA			Minimum stroke setting			
		MVS661..N	AC/DC 24 V		0...10 V, 2...10 V, 0...20 mA, 4...20 mA			Minimum stroke setting			
		M3FB..LX..	AC 24 V		0...10 V, 4...20 mA, 0...20 Phs			–			
		M3FK..LX..	AC 24 V		0...10 V, 4...20 mA, 0...20 Phs			–			
PN 32	-40...100 °C					k _{vs} [m³/h]		Δp _{max} [kPa]			
Data sheet	N4731										
	M2FP03GX		Pilot valve			0.3		1800			
PS 45	-40...120 °C		DN	Connection	Inner Ø [inch]	k _{vs} [m³/h]	k _{vs} reduced [m³/h]	Δp _{max} [kPa]			
Data sheet	N4714										
	MVL661.15-0.4		15	Sleeve	5⁄8	0.4	0.25	2500			
	MVL661.15-1.0		15	Sleeve	5⁄8	1	0.63	2500			
	MVL661.20-2.5		20	Sleeve	7⁄8	2.5	1.6	2500			
	MVL661.25-6.3		25	Sleeve	1 1⁄8	6.3	4	2500			
	MVL661.32-10		32	Sleeve	1 3⁄8	10	6.3	1600			
	MVL661.32-12		32	Sleeve	1 3⁄8	12	7.6	200			
PS 53	-40...120 °C		DN	Connection	Inner Ø [mm]	Outer Ø [mm]	k _{vs} [m³/h]	k _{vs} reduced [m³/h]	Δp _{max} [kPa]		
Data sheet	N4717										
	MVS661.25-016N		25	Weldable	22.4	33.7	0.16	0.1	2500		
	MVS661.25-0.4N		25	Weldable	22.4	33.7	0.4	0.25	2500		
	MVS661.25-1.0N		25	Weldable	22.4	33.7	1	0.63	2500		
	MVS661.25-2.5N		25	Weldable	22.4	33.7	2.5	1.6	2500		
	MVS661.25-6.3N		25	Weldable	22.4	33.7	6.3	4	2500		
PN 32	-40...120 °C		DN	Connection	Inner Ø [inch]	k _{vs} [m³/h]		Liquid Δp _{max} [kPa]		Gas Δp _{max} [kPa]	
Data sheet	N4722										
	M3FK15LX06		15	Sleeve	5⁄8	0.6		200		800	
	M3FK15LX15		15	Sleeve	5⁄8	1.5		200		800	
	M3FK15LX		15	Sleeve	5⁄8	3		200		800	
	M3FK20LX		20	Sleeve	7⁄8	5		200		800	
	M3FK25LX		25	Sleeve	1 1⁄8	8		200		800	
	M3FK32LX		32	Sleeve	1 3⁄8	12		200		800	
	M3FK40LX		40	Sleeve	1 5⁄8	20		200		800	
	M3FK50LX		50	Sleeve	2 1⁄8	30		200		800	
PS 43	-40...120 °C		DN	Connection	Inner Ø [inch]	k _{vs} [m³/h]		Δp _{max} [kPa]			
Data sheet	N4721										
	M3FB15LX06/A		15	Sleeve	5⁄8	0.6		2200			
	M3FB15LX15/A		15	Sleeve	5⁄8	1.5		2200			
	M3FB15LX/A		15	Sleeve	5⁄8	3		2200			
	M3FB20LX/A		20	Sleeve	7⁄8	5		1800			
	M3FB25LX/A		25	Sleeve	1 1⁄8	8		1200			
	M3FB32LX		32	Sleeve	1 3⁄8	12		800			

Definitions

Abbr.	Term	Unit	Definition
Δp	Differential pressure	kPa	Pressure differential between plant sections.
$\Delta p_{\max}$	Maximum differential pressure	kPa	Maximum permissible differential pressure across the valve's control path (when mixing), valid for the entire actuating range of the motorized valve.
$\Delta p_{\max V}$	Maximum differential pressure	kPa	Maximum permissible differential pressure across the valve's control path (when distributing), valid for the entire actuating range of the motorized valve.
$\Delta p_{\min}$	Minimum differential pressure	kPa	Minimum differential pressure required, so that the differential pressure regulator works reliably with combi valves. $\Delta p_{\min}$ depends on presetting position, see data sheet for details.
Δp_{V0}		kPa	Maximum differential pressure across the valve's closed control path.
Δp_{V100}	Differential pressure at nominal flow rate	kPa	Differential pressure across the fully open valve and the valve's control path by a volumetric flow V_{100} .
Δp_s	Closing pressure	kPa	For 2-port valves, maximum permissible differential pressure at which the motorized valve will close securely against the pressure (close off pressure). Only valid for 2-port valves.
Δp_{MV}		kPa	Differential pressure across the variable flow path. Often Δp_{MV} is not known, in which case typical values can be used.
Δp_{VR}		kPa	Differential pressure between flow and return.
ΔT	Temperature spread	K	Temperature differential between flow and return.
DN	Nominal size		Characteristic for matching parts of the piping system.
H_0	Shutoff head	m	The head generated by a pump at closed valve, at a given speed and a given pump medium.
kPa	Unit of pressure	kPa	100 kPa = 1 bar = 10 mWC
mWC	Meter water column	m	
k_v	Nominal flow	m ³ /h	Amount of cold water (5...30 °C) passing through the valve at the respective stroke and at a differential pressure of 100 kPa (1 bar).
k_{vs}	Nominal flow rate	m ³ /h	Nominal flow rate of cold water (5...30 °C) through the fully open valve (H_{100}) at a differential pressure of 100 kPa (1 bar).
	Spring return function		Shutoff in the event of a power failure.
PN	PN class		Characteristic relating to the combination of mechanical and dimensional properties of a component in the piping system.
PS	PS class		Maximum allowable pressure
Phs	Phase cut control signal	V	DC 0...20 V Phs
P_v	Valve authority		Ratio of differential pressure across fully open valve (H_{100}) and differential pressure across valve and variable flow path. To ensure correct control, a minimum valve authority of 0.25 is required.
Q_{100}	Rated capacity	kW	Plant's design capacity.
V_{100}	Volumetric flow	m ³ /h	Volumetric flow with valve fully open (H_{100}).
$V_{\min}$	Minimum volumetric flow	m ³ /h	Smallest presettable volumetric flow through the fully open combi valve (H_{100}).
ν	Kinematic viscosity	mm ² /s	In the case of kinematic viscosities ν up to 10 mm ² /s, no corrections are required. For the selection of actuating devices for kinematic viscosities ν above 10 mm ² /s, please contact your local Siemens branch office.
c	Specific heat capacity	kJ/kgK	
ρ	Specific density	kg/m ³	

Symbols

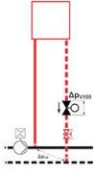
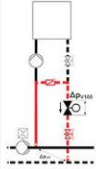
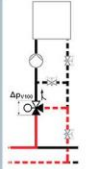
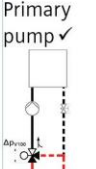
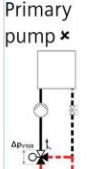
	3-port valve, control path with equal-percentage valve characteristic, bypass with linear valve characteristic.
	3-port valve, control path with equal-percentage valve characteristic, bypass with linear valve characteristic with 70% of the k_{vs} value. This compensates for the flow resistance of the heat exchanger, so that the total volumetric flow V_{100} remains as constant as possible.
	2-port valve, control path with equal-percentage valve characteristic.
	2-port valve or 6-port control ball valve in the respective control path with linear valve characteristic.
	3-port, control path and bypass with linear valve characteristic. Bypass with 70% of the k_{vs} value. This compensates for the flow resistance of the heat exchanger, so that the total flow amount V_{100} remains as constant as possible.
	3-port valve, control path and bypass with linear valve characteristic.
	3-port valve, control path and bypass with equal-percentage valve characteristic.

Valves and actuators

Overview and selection tools

Valve sizing and actuator selection

Basic hydraulic circuit

1	Determine the type of hydraulic circuit	Throttling circuit	Injection circuit with 2-port valve	Diverting circuit	Injection circuit with 3-port valve	Mixing circuit	Mixing circuit with fixed premixing
—	For valve sizing relevant variable flow path						

HVAC plants and consumers

Heating

Surface/floor heating	—	■	—	outdated	—	—	■	■
Heating plant (primary)	—	■	■	outdated	■	■	■	■
Zone control, heating	—	■	—	outdated	—	—	—	—
Heating group	—	■	—	—	■	■	■	■
Generation of heat energy	—	—	—	—	—	■	—	■
Heat exchanger water-water	■	uncommon	uncommon	uncommon	uncommon	—	—	—

Ventilation and air conditioning plants

Air handling unit (AHU)	■	■	■	outdated	■	■	—	—
Fan coil unit	■	—	■	outdated	—	—	—	—
Cooling coil	dehumidifying	—	dehumidifying	uncommon	—	—	—	—
Reheating coil	■	■	outdated	outdated	uncommon	uncommon	uncommon	uncommon
Preheating coil	—	■	—	outdated	uncommon	uncommon	uncommon	uncommon
VAV	■	—	■	outdated	—	—	—	—
Zone control	■	—	■	outdated	—	—	—	—

Chiller plants

Surface/floor cooling	—	■	—	outdated	—	—	—	—
Generation of cooling energy	—	—	—	—	—	■	—	■
Cooling towers	■	—	■	uncommon	—	—	—	—
Zone control, cooling	—	■	—	outdated	—	—	—	—

District heating and cooling

District heating, primary	■	uncommon	—	—	—	uncommon	—	uncommon
District heating, secondary	■	■	—	—	—	uncommon	—	uncommon
District cooling, primary	■	uncommon	—	—	—	uncommon	—	uncommon
District cooling, secondary	■	■	—	—	—	uncommon	—	uncommon

Domestic hot water (DHW)

DHW	—	■	—	—	—	■	—	—
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Header

Differential pressure header	pressurized		pressureless	
Volumetric flow	variable	constant	variable	

Determination of k_{VS} value

	Δp_{VR} or Δp_{MV}	Δp_{VR}		Δp_{MV}					
2	typical range	10...200 kPa	10...200 kPa	10...50 kPa	2...5 kPa	2...5 kPa	5...15 kPa	2...5 kPa	5...15 kPa
	typical value	Use effective Δp_{VR} value		35 kPa	3 kPa	3 kPa	8 kPa	3 kPa	8 kPa
3	Determine Δp_{V100}	$\Delta p_{V100} \geq \frac{\Delta p_{VR}}{2}$		$\Delta p_{V100} \geq \Delta p_{MV}$					
4	Calculate V_{100}	Water without anti-freeze	$V_{100} = \frac{Q_{100}}{1.163 \cdot \Delta T}$			Water with anti-freeze	$V_{100} = \frac{Q_{100} \cdot 3600}{c \cdot \rho \cdot \Delta T}$		
5	Determine k_{vs} value	$k_v = \frac{V_{100}}{\sqrt{\frac{\Delta p_{V100}}{100}}} \Rightarrow k_{vs} \geq 0.85 \cdot k_v \text{ value}$							
6	Check resulting Δp_{V100}	$\Delta p_{V100} = 100 \cdot \left(\frac{V_{100}}{k_{vs}} \right)^2$							

Selection of valve and actuator

7	Select suitable valve series	a) Type of valve (2-port, 3-port, 3-port with bypass) b) Connections (flanged, threaded, soldered)		c) PN class d) Nominal size DN	e) Max./min. medium temperature f) Medium
8	Check valve authority P_v (control stability)	$P_v = \frac{\Delta p_{v100}}{\Delta p_{vR}} \geq 0.25...0.8$		$P_v = \frac{\Delta p_{v100}}{\Delta p_{v100} + \Delta p_{mV}} \geq 0.25...0.8$	
9	Select actuator	a) Operating voltage	b) Positioning signal	c) Positioning time	d) Spring return function e) Auxiliar functions
10	Check working range	a) Differential pressure $\Delta p_{max} > \Delta p_{v0}$			b) Closing pressure $\Delta p_s > H_0$
11	Selection	Valve and suitable actuator			

Size and PICVs

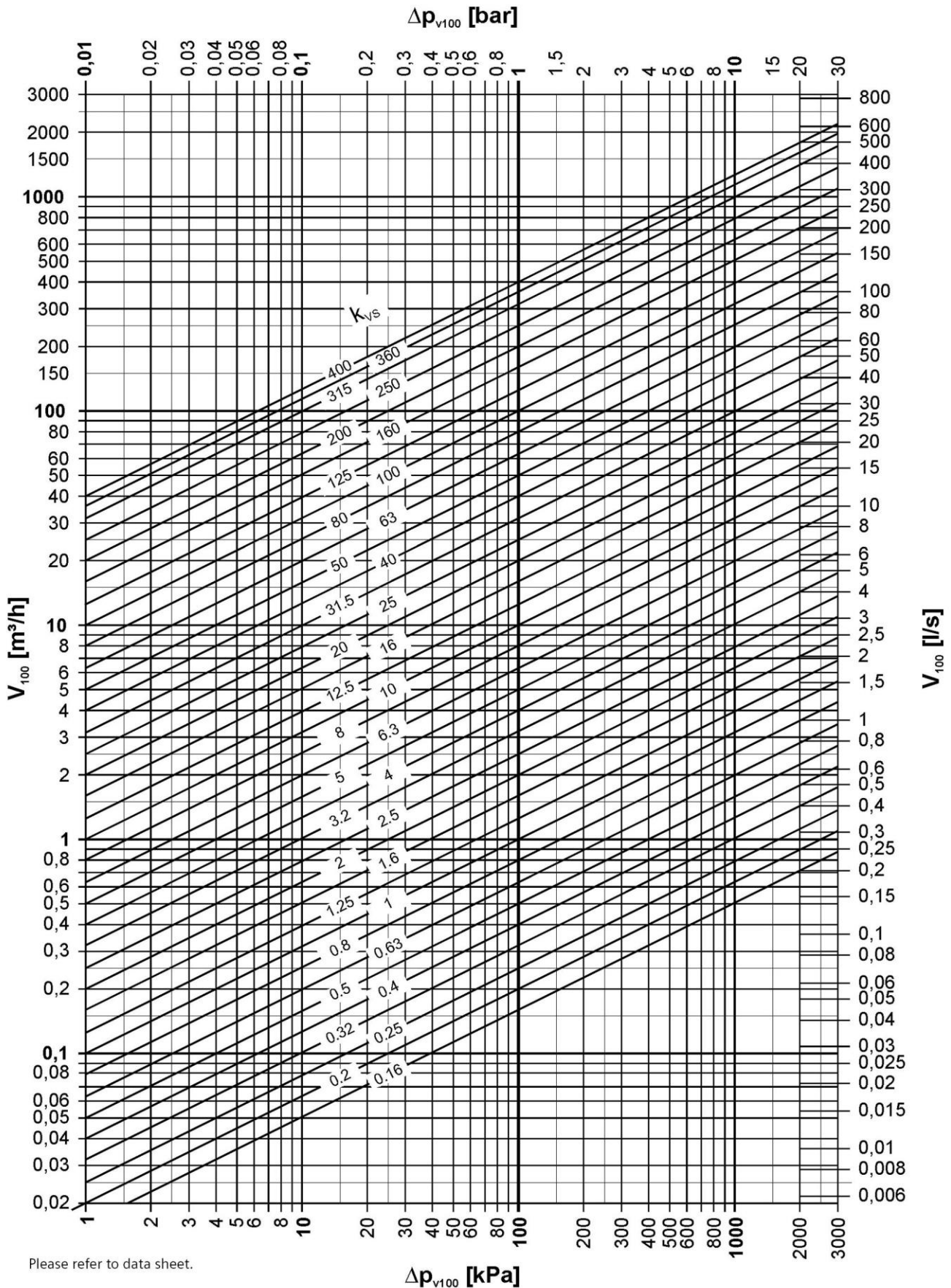
Determine volumetric flow V

1	Determine Q_{100}	Q_{100}
2	Determine ΔT	ΔT
3	Calculate V	Water without anti-freeze $V_{100} = \frac{Q_{100}}{1.163 \cdot \Delta T}$ Water with anti-freeze $V_{100} = \frac{Q_{100} \cdot 3600}{c \cdot \rho \cdot \Delta T}$

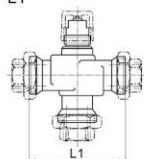
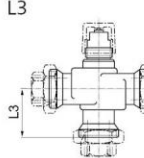
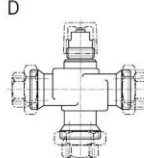
Select combi valve and actuator

4	Select suitable combi valve	a) Type of valve (with/without P/T plugs) d) Connection (flanged, threaded)	b) PN class e) Nominal size DN	c) Max./min. medium temperature f) Medium
5	Determine presetting	Determine presetting using the volumetric flow/dial table in data sheet of the respective combi valve		
6	Select actuator	a) Operating voltage b) Positioning signal c) Positioning time d) Auxiliary functions		
7	Check working range	a) $\Delta p < \Delta p_{max}$ – maximum permissible differential pressure across the valve's control path, valid for the entire actuating range of the motorized valve b) $\Delta p > \Delta p_{min}$ – minimum differential pressure required across the valve's control path, so that the differential pressure regulator works reliably		
8	Select actuator	Combi valve and suitable actuator		

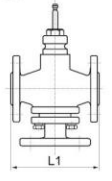
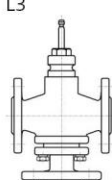
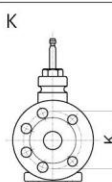
Sizing chart for flanged and threaded valves



Dimensions threaded valves [mm]

	Type	PN	DN10	DN15	DN20	DN25	DN32	DN40	DN50
	V..G41..	16	–	100	100	105	105	130	150
	V..G44..	16	–	100	100	105	105	130	–
	VVP45../VXP45..	16	60	65	80	80/105	105	130	–
	VVG55..	25	–	65	70	75	–	–	–
	VXG41..	16	–	50	50	52.5	52.5	65	75
	VXG44..	16	–	50	50	52.5	52.5	65	–
	VVP45../VXP45..	16	30	32.5	40	40/52.5	52.5	65	–
	V..G41..	16	–	G 1B	G 1¼B	G 1½B	G 2B	G 2¼B	G 2½B
	V..G44..	16	–	G 1B	G 1¼B	G 1½B	G 2B	G 2¼B	–
	VVP45../VXP45..	16	G ½B	G ¾B	G 1B	G 1¼B/G 1½B	G 2B	G 2¼B	–
	VVG55..	25	–	G ¾B	G 1B	G 1¼B	–	–	–

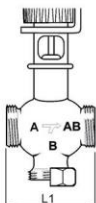
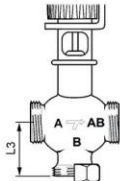
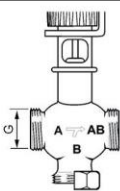
Dimensions flanged valves [mm]

	Type	PN	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
	V..F22..	6	–	–	150	–	180	200	240	260	300	–	–	–	–
	V..F32..	10	130	–	160	–	200	230	290	310	350	400	480	–	–
	V..F42..	16	130	150	160	180	200	230	290	310	350	400	480	–	–
	V..F43..	16	–	–	–	–	–	–	290	310	350	400	480	600	730
	V..F53..	25	130	150	160	180	200	230	290	310	350	400	480	600	730
	V..F61..	40	130	–	160	–	200	230	290	310	350	400	480	–	–
	VXF22..	6	–	–	75	–	90	100	120	130	150	–	–	–	–
	VXF32..	10	65	–	80	–	100	115	145	155	175	200	240	–	–
	VXF42..	16	65	75	80	90	100	115	145	155	175	200	240	–	–
	VXF43..	16	–	–	–	–	–	–	145	155	175	200	240	–	–
	VXF53..	25	65	75	80	90	100	115	145	155	175	200	240	–	–
	VXF61..	40	65	–	80	–	162	170	215	230	250	280	305	–	–
	V..F22..	6	–	–	75	–	100	110	130	150	170	–	–	–	–
	V..F32..	10	65	–	85	–	110	125	145	160	180	210	240	–	–
	V..F42..	16	65	75	85	100	110	125	145	160	180	210	240	–	–
	V..F43..	16	–	–	–	–	–	–	145	160	180	210	240	295	355
	V..F53..	25	65	75	85	100	110	125	145	160	190	220	250	–	–
	V..F61..	40	65	–	85	–	110	125	145	160	190	220	250	–	–
	V..F22..	6	–	–	11 (4x)	–	14 (4x)	14 (4x)	14 (4x)	19 (4x)	19 (4x)	–	–	–	–
	V..F32..	10	14 (4x)	–	14 (4x)	–	19 (4x)	19 (4x)	19 (4x)	19 (8x)	19 (8x)	19 (8x)	23 (8x)	–	–
	V..F42..	16	14 (4x)	14 (4x)	14 (4x)	19 (4x)	19 (4x)	19 (4x)	19 (4x)	19 (8x)	19 (8x)	19 (8x)	23 (8x)	–	–
	V..F43..	16	–	–	–	–	–	–	19 (4x)	19 (8x)	19 (8x)	19 (8x)	23 (8x)	22 (12x)	26 (12x)
	V..F53..	25	14 (4x)	14 (4x)	14 (4x)	19 (4x)	19 (4x)	19 (4x)	19 (8x)	19 (8x)	23 (8x)	28 (8x)	28 (8x)	26 (12x)	30 (12x)
	V..F61..	40	14 (4x)	–	14 (4x)	–	18 (4x)	18 (4x)	18 (8x)	22 (8x)	22 (8x)	26 (8x)	26 (8x)	–	–

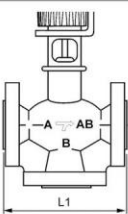
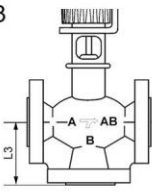
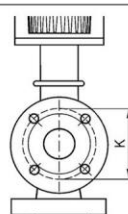
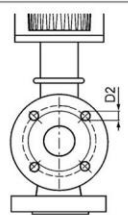
Valves and actuators

Overview and selection tools

Dimensions threaded valves [mm]

	Type	PN	DN15	DN20	DN25	DN32	DN40	DN50
	MXG461..	16	80	95	110	125	140	170
	MXG461S..	16	80	–	110	125	–	–
	MXG461B..	16	80	95	110	125	140	170
	MXG462S..	16	–	–	–	–	–	170
	MXG461..	16	42,5	52,5	56,5	67,5	80,5	93,5
	MXG461S..	16	42,5	–	56,5	67,5	–	–
	MXG461B..	16	42,5	52,5	56,5	67,5	80,5	93,5
	MXG462S..	16	–	–	–	–	–	93,5
	MXG461..	16	G1	G 1¼	G 1½	G2	G 2¼	G 2¾
	MXG461S..	16	G1	–	G1½	G2	–	–
	MXG461B..	16	G1	G 1¼	G 1½	G2	G 2¼	G 2¾
	MXG462S..	16	–	–	–	–	–	G 2¾

Dimensions flanged valves [mm]

	Type	PN	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
	MXF461..	16	130	150	160	180	200	230	290	–	–
	M3P..	16	–	–	–	–	–	–	–	310	350
	MVF461H..	16	130	150	160	180	200	230	–	–	–
	MXF461..	16	65	75	80	90	100	105	125	–	–
	M3P..	16	–	–	–	–	–	–	–	140	160
	MXF461..	16	65	75	85	100	110	125	145	–	–
	M3P..	16	–	–	–	–	–	–	–	160	180
	MVF461H..	16	65	75	85	100	110	125	–	–	–
	MXF461..	16	14 (4x)	14 (4x)	14 (4x)	18 (4x)	18 (4x)	18 (4x)	18 (4x)	–	–
	M3P..	16	–	–	–	–	–	–	–	19 (8x)	19 (8x)
	MVF461H..	16	14 (4x)	14 (4x)	14 (4x)	18 (4x)	18 (4x)	18 (4x)	–	–	–

Actuators for globe and pressure independent combi valves (PICV)

Thermostatic head

Accessories for thermostatic actuators RTN..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Adapter for valves of other manufacture	N2179	BPZ:AV..	AV..	

Thermostatic actuators

RTN..

Thermostatic actuators for controlling the room temperature. Setpoint adjustment with knob. Versions with shutoff and frost protection position.

Limit stops for minimum and maximum values or setpoint locking.

Mounts directly on Siemens radiator valves VDN../VEN../VUN../VPD../VPE..

Adapter for third-party valves, see overview AV..

The radiator valves can be closed with the thermostatic actuators RTN51.. and RTN71..



Data sheet	N2111
Warranty	5 Years

Range overview RTN..

Product Title	Design	Setpoint setting range [°C]	Surface treatment	Stock no.	Product no.	Price (€)
Thermostatic actuator, RAL 9016, matt	Frost protection position Closing position	12...28	RAL 9016, matt	BPZ:RTN51	RTN51	19.76
Thermostatic actuator with remote sensor	Remote sensor Frost protection position Closing position	12...28	RAL 9016, matt	BPZ:RTN71	RTN71	75.40
Thermostatic actuator with remote adjuster	Remote sensor Frost protection position	8...28	RAL 9016, matt	BPZ:RTN81	RTN81	81.64

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrothermal

Accessories for STA..3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Adapter for valves with M30 x 1.5	N2179	S55174-A159	AV301	6.63
Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	N4884	S55174-A160	AV302	6.63
Adapter for valves with M30 x 1, TA	N4884	S55174-A161	AV303	6.63
Adapter various (5 pieces)	N4884	S55174-A167	AV304	29.38
Standard adapter, M30x1,5	N4884	S55174-A169	AV305	15.99
Higher sliding sleeve adapter (bayonet), 5 mm	N2100	S55174-A171	AV306	3.17
Third-party valve adapter on Danfoss RA-N (RA2000)	N2100	BPZ:AV53	AV53	10.14
Adapter for Danfoss RA2000, Plastic	N4884	S55174-A164	AV533	11.77
Adapter for Vaillant	N2100	BPZ:AV59	AV59	25.74
Adapter for Giacomini	N4884	S55174-A165	AV63	6.63
Adapter for Pettinaroli M28 x 1.5	N4884	S55174-A166	AV64	29.38
Retrofit adapter for installed 2W..., 3W..., 4W... valves	N4878	BPZ:AL100	AL100	25.35

Connection cable for STA..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.	Price (€)
2-position	0		White	5	PVC	S55174-A126	ASY23L50	22.10
2-position	0		White	5	Halogen-free	S55174-A135	ASY23L50HF	27.82
2-position	0		White	10	PVC	S55174-A129	ASY23L100	49.92
2-position	0		White	2	PVC	S55174-A123	ASY23L20	8.81
2-position	0	LED	White	2	PVC	S55174-A157	ASY23L20LD	26.52
2-position	0		Black	3	PVC	S55174-A131	ASY23L30B	14.69
2-position	0		Black	5	PVC	S55174-A132	ASY23L50B	22.10
DC 0...10 V	0		White	2	PVC	S55174-A137	ASY6AL20	79.56

Actuators for globe and pressure independent combi valves (PICV)

Electrothermal

Electrothermal actuators with/ without connecting cable for radiator, small, and zone valves

STA..3



Electrothermal actuators, stem opened in a deenergized state, with or without connection cable for:

- Radiator valves VDN.., VEN.., VUN..
- MCV MiniCombiValves VPD.., VPE..
- Small valves VD1..CLC..
- Zone valves V..I46..
- Combi valves VPP46.., VPI46..
- Valves of other manufacturers

Actuators without connecting cable can be equipped with:

- Connecting cable up to 15 m, halogen-free up to 10 m
- Connecting cable with LED operation indicator
- Connecting cable with auxiliary switch or DC0... 10 V module

The given positioning time refers to the maximum stroke of 4.5 mm.

Data sheet	N4884
Stroke	4.5 mm
Degree of protection	IP54
Mounting position	Any, 360°
Power consumption	2.5 W
Warranty	5 Years

Range overview STA..3

Operating voltage [V]	Positioning time [s]	Positioning signal	Cable length [m]	Stock no.	Product no.	Price (€)
AC 230	210	2-position	1	S55174-A101	STA23	46.15
AC 230	210	2-position	0.8	S55174-A107	STA23HD	41.34
AC 24	270	2-position	0.8	S55174-A106	STA73HD	42.12
DC 24						
AC 24	270	2-position		S55174-A115	STA73PR/00	49.14
DC 24		PDM/parallel operation				
AC 230	210	2-position		S55174-A110	STA23/00	40.69
AC 230	210	2-position		S55174-A118	STA23B/00	40.69
AC 24	270	DC 0... 10 V	2	S55174-A104	STA63	109.07
AC 24	270	2-position	1	S55174-A100	STA73	47.06
DC 24		PDM				
AC 24	270	2-position		S55174-A109	STA73/00	41.47
DC 24		PDM				
AC 24	270	2-position		S55174-A117	STA73B/00	41.47
DC 24		PDM				

The given positioning time is related to the maximum stroke of 4.5 mm.

/00 = without cable

xxB = color black

xxMP = multi pack 50 pce

Accessories for STP..3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Adapter for valves with M30 x 1.5	N2179	S55174-A159	AV301	6.63
Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	N4884	S55174-A160	AV302	6.63
Adapter for valves with M30 x 1, TA	N4884	S55174-A161	AV303	6.63
Adapter various (5 pieces)	N4884	S55174-A167	AV304	29.38
Standard adapter, M30x1,5	N4884	S55174-A169	AV305	15.99
Higher sliding sleeve adapter (bayonet), 5 mm	N2100	S55174-A171	AV306	3.17
Third-party valve adapter on Danfoss RA-N (RA2000)	N2100	BPZ:AV53	AV53	10.14

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrothermal

Accessories for STP..3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Adapter for Danfoss RA2000, Plastic	N4884	S55174-A164	AV533	11.77
Adapter for Vaillant	N2100	BPZ:AV59	AV59	25.74
Adapter for Giacomini	N4884	S55174-A165	AV63	6.63
Adapter for Pettinaroli M28 x 1.5	N4884	S55174-A166	AV64	29.38
Retrofit adapter for installed 2W..., 3W..., 4W... valves	N4878	BPZ:AL100	AL100	25.35

Connection cable for STP..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.	Price (€)
2-position	0		White	5	PVC	S55174-A126	ASY23L50	22.10
2-position	0		White	5	Halogen-free	S55174-A135	ASY23L50HF	27.82
2-position	0		White	10	PVC	S55174-A129	ASY23L100	49.92
2-position	0		White	2	PVC	S55174-A123	ASY23L20	8.81
2-position	0	LED	White	2	PVC	S55174-A157	ASY23L20LD	26.52
2-position	0		Black	3	PVC	S55174-A131	ASY23L30B	14.69
2-position	0		Black	5	PVC	S55174-A132	ASY23L50B	22.10

Electrothermal actuators with and without connecting cable for small valves

STP..3

Electrothermal actuators, stem closed in a deenergized state, with or without connection cable for:

- Small valves V..P47..
- Valves of other manufacturers



Actuators without connecting cable can be equipped with:

- Connecting cable up to 15 m, halogen-free up to 10 m
- Connecting cable with LED operation indicator
- Connecting cable with auxiliary switch or DC 0...10 V module

Data sheet	N4884
Stroke	4.5 mm
Degree of protection	IP54
Mounting position	Any, 360°
Power consumption	2.5 W
Warranty	5 Years

Range overview STP..3

Operating voltage [V]	Positioning time [s]	Positioning signal	Cable length [m]	Stock no.	Product no.	Price (€)
AC 230	210	2-position	1	S55174-A103	STP23	52.78
AC 24	270	DC 0...10 V	2	S55174-A105	STP63	110.24
AC 24 DC 24	270	2-position PDM	1	S55174-A102	STP73	52.78
AC 230	210	2-position		S55174-A112	STP23/00	47.19
AC 24 DC 24	270	2-position PDM		S55174-A111	STP73/00	47.19

The given positioning time is related to the maximum stroke of 4.5 mm.

/00 = without cable

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAV..



Electromotoric actuators 1600 N for valves with 20/40 mm stroke

Electromotoric actuator for the operation of Siemens 2-port and 3-port valves, types VVF.. and VXF.. with 20/40 mm stroke as control and safety shut-off valves in heating, ventilation and air conditioning systems.

With manual adjuster and position indicator, status indication per LED.

Optional functions with auxiliary switches, potentiometer, functional module and stem heater.

Data sheet	N4503
Positioning force	1600 N
Stroke	40 mm
Degree of protection	IP54
Ambient temperature, operation	-5...55 °C
Medium temperature	-25...130 °C (150 °C)
Mounting position	Upright to horizontal, up to 150 °C with horizontal mounting position
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAV..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Spring return function	Positioning time [s]	Stock no.	Product no.	Price (€)
AC 230	6.5	3-position	No	120	S55150-A112	SAV31.00	830.70
AC 24	9.5	DC 0...10 V	No	120	S55150-A110	SAV61.00	903.50
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	7	3-position	No	120	S55150-A111	SAV81.00	830.70
DC 24							

Accessories for SAV..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51	63.96
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1	153.40
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6	274.30
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1	92.43
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000	270.40

Connection cable and terminal block connectors for SSA..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	N4864	BPZ:ASY100	ASY100	7.14
Connecting cable, 2.5 m, 3-position, AC 230 V		BPZ:ASY3L25	ASY3L25	18.98
Connecting cable, 4.5 m, 3-position, AC 230 V		BPZ:ASY3L45	ASY3L45	25.22
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V		BPZ:ASY6L25	ASY6L25	12.35
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V		BPZ:ASY6L45	ASY6L45	21.97
Connecting cable, 2.5 m, 3-position, AC 24 V		BPZ:ASY8L25	ASY8L25	12.35
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..		BPZ:ASY99	ASY99	7.14
Connecting cable, 4.5 m, 3-position, AC 24 V		BPZ:ASY8L45	ASY8L45	21.97

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Adapter for valves of other manufacture

AV..

For fitting actuators to radiator valves of other manufacture.

Data sheet N2179
Warranty 2 Years



Range overview AV..

Product Title	Stock no.	Product no.	Price (€)
Adapter for valves with M30 x 1.5	S55174-A159	AV301	6.63
Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	S55174-A160	AV302	6.63
Adapter for valves with M30 x 1, TA	S55174-A161	AV303	6.63
Adapter various (5 pieces)	S55174-A167	AV304	29.38
Third-party valve adapter on Danfoss RA-N (RA2000)	BPZ:AV53	AV53	10.14
Adapter for Danfoss RA2000, Plastic	S55174-A164	AV533	11.77
Third-party valve adapter on Giacomini valve	BPZ:AV56	AV56	30.03
Third-party valve adapter on Herz valve	BPZ:AV57	AV57	15.34
Third-party valve adapter on Oventrop M30x1	BPZ:AV58	AV58	28.34
Adapter for Vaillant	BPZ:AV59	AV59	25.74
Third-party valve adapter on TA to 2002	BPZ:AV60	AV60	15.34
Third-party valve adapter on MMA Markaryd	BPZ:AV61	AV61	15.34
Adapter for Giacomini	S55174-A165	AV63	6.63
Adapter for Pettinaroli M28 x 1.5	S55174-A166	AV64	29.38
Third-party valve adapter on Comap valve	BPZ:AV52	AV52	30.42
Third-party valve adapter on Danfoss RAVL	BPZ:AV54	AV54	22.88
Third-party valve adapter on Danfoss RAV	BPZ:AV55	AV55	31.07

Note:

Beulco: Not to be used with RTN..., for old make of Beulco distributors only

Oventrop: Introduced M30 x 1.5 in 2001 and requires no adapter

TA (Heimeier): Introduced M30 x 1.5 in 2003 and requires no adapter

Fitting the actuators to valves of other manufacture (M30 x 1.5) without adapter:

- Heimeier
- Junkers
- Honeywell Braukmann
- MNG
- Cazzaniga
- Oventrop M30 x 1.5 (from 2001)
- Beulco new

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSA..



Electromotoric actuators 100 N for valves with 2.5/5 mm stroke

For radiator valves, small valves and Combi valves

Electromotoric actuators for modulating or 3-position control of heating systems, chilled ceilings and terminal units. With automatic stroke adaption, force-dependent switching off in the end position, position indication, manual control and plug-in type connecting cable. Suited for use with Siemens radiator valves VDN../VEN../VUN../VPD../VPE.., Siemens small valves VD1..CLC and on radiator valves with M30 x 1.5 connection (Heimeier, Cazzaniga, Oventrop M30x1,5, Honeywell-Braukmann, MNG, Junkers, Beulco new). Further valves of other manufacture on request.

Suited for Siemens Combi valves VPP46../VPI46.. with 2.5 and 5 mm stroke.

For fitting to the valve: Cap nut M30 x 1.5

SSA61..: 1.5 mm minimal stroke required for self calibration

Data sheet	N4893
Stroke	2.5 mm
	5 mm
Positioning force	100 N
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview SSA..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Auxiliary switch	Cable length [m]	Stock no.	Product no.	Price (€)
AC 24	0.8	3-position	0	1.5	S55180-A106	SSA131.00	84.50
AC/DC 24	2.5	4...20 mA	0	1.5	S55180-A110	SSA151.05HF	136.50
AC/DC 24	2.5	DC 0...10 V	0	1.5	S55180-A107	SSA161.05	115.70
AC/DC 24	2.5	DC 0...10 V	0	1.5	S55180-A108	SSA161.05HF	136.50
AC/DC 24	2.5	DC 0...10 V	0	1.5	S55180-A109	SSA161E.05HF	136.50
230	7	3-position	0	1.5	S55180-A105	SSA331.00	97.50
AC 24	0.8	3-position	0	1.5	BPZ:SSA81	SSA81	94.12
AC 24	0.8	3-position	1	1.5	BPZ:SSA81.1	SSA81.1	178.10
AC 230	6	3-position	0	1.5	BPZ:SSA31	SSA31	108.94
AC 230	6	3-position	1	1.5	BPZ:SSA31.1	SSA31.1	170.30
AC 24	2.5	DC 0...10 V	0	1.5	BPZ:SSA61	SSA61	137.80
DC 24							

Positioning time for 2.5 mm stroke.

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 135 N for small valves V..P47..

##N/A Master

For small valves VVP47.., VXP47.. and VMP47..

Together with VVP47.., VXP47.. and VMP47.., they offer high-quality on/off control. Versions for AC 24 V and AC 230 V available. For on/off control of terminal units and heating and cooling zones. The actuators offer a low noise level, have a manual lever, power fail reset function (NC valve closed) and 1.8 m connecting cable. 1 auxiliary switch is available as an accessory item. The combination with a 3-port valve is suited for applications requiring tight shutoff in both valve end positions.



For fitting to the valve: Cap nut M30 x 1.5

Data sheet	N4865
Positioning force	135 N
Stroke	2.5 mm
Positioning time	10 s
Degree of protection	IP30
Mounting position	Upright to 85° inclined
Positioning signal	2-position
Warranty	5 Years

Range overview SFP21../SFP71..

Operating voltage [V]	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.	Price (€)
AC 230	9.8	Optional	1.8	BPZ:SFP21/18	SFP21/18	99.71

Auxiliary switch: Changeover contact AC 250 V, 3 A res., 2 A ind., adjustable switching point 50 %.

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSA31.04



Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 230 V, 3P, SPDT

For V..I46.. zone valves

Electromotoric actuators for 3-position or SPDT control of zone valves V..I46.. with internally threaded connections. For 3-position or SPDT (open/close) control of heating systems, domestic hot water storage tank charging as well as terminal units and zones. The actuators have automatic stroke adaption, force-dependent switching off in the end positions, position indication, manual control and 1.5 m connecting cable.

Not suitable for radiator valves (soft seal).

For fitting to the valve: Cap nut M30 x 1.5

Data sheet	N4860
Positioning force	160 N
Stroke	2.5 mm
Power consumption	6 VA
Positioning time	43 s
Cable length	1.5 m
Positioning signal	3-position SPDT
Degree of protection	IP40
Medium temperature	1...110 °C
Ambient humidity, operation	5...85 % r.h.
Mounting position	Upright to 90° inclined
Operating voltage	AC 230 V
Warranty	5 Years

	Stock no.	Product no.	Price (€)
	BPZ:SSA31.04	SSA31.04	118.43

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuator 150 N for zone valves

SUA..

Electromotoric actuators without spring return for VVI46.. and VXI46.. zone valves. Primarily used in heating, ventilation and air conditioning systems for water-based control of hot water and cold water.

- Heating and cooling zones
- Control valves for fan coil units
- Zone valve for floor heating via heating distributors (manifolds)
- Chilled ceiling units
- On/off control for domestic hot water boilers
- Shut off valve for wall mounted boiler applications



For fitting to the valve: plastic union nut M30 x 1.5

Positioning force	150 N
Stroke	2.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 85 ° horizontal, do not suspend
Warranty	5 Years

Range overview SUA..

Operating voltage [V]	Power consumption	Positioning signal	Spring return function	Cable length [m]	Stock no.	Product no.	Price (€)
AC 230	6 VA at 50 Hz	2-position (SPST)	No	0.8	S55176-A104	SUA21/3	28.60

Accessories for SSP..

Product Title	Stock no.	Product no.	Price (€)
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	ASY100	7.14
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	ASY3L25	18.98
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	ASY3L45	25.22
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	ASY6L25	12.35
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L45	ASY6L45	21.97
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	ASY8L25	12.35
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	ASY99	7.14
Retrofit adapter for installed 2W..., 3W..., 4W... valves	BPZ:AL100	AL100	25.35
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	ASY8L45	21.97

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSP..



Electromotoric actuators 160 N for valves with 2.5 mm stroke

- For small valves VVP47.., VXP47.. and VMP47..
- For retrofitting the small valves 2W.., 3W.. and 4W.. with adapter AL100.

Electromotoric actuators for modulating or 3-position control of small valves for terminal units and heating and cooling zones. With position indication, manual control, automatic stroke adaption, force-dependent switching off in the end positions and plug-in type connecting cable.

For fitting to the valve: Cap nut M30 x 1.5.
SSP81.., SSP61.. are CE, C-tick, UL and cUL listed.

Data sheet	N4864
Positioning force	160 N
Stroke	2.5 mm, max. 5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview SSP..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Cable length [m]	Stock no.	Product no.	Price (€)
AC 24	0.8	3-position	150	1.5	BPZ:SSP81	SSP81	112.45
AC 230	6	3-position	150	1.5	BPZ:SSP31	SSP31	128.83
AC 24 DC 24	2.5	DC 0...10 V	34	1.5	BPZ:SSP61	SSP61	163.80
AC 24	0.8	3-position	43	1.5	BPZ:SSP81.04	SSP81.04	118.43

Positioning time for 2.5 mm stroke.

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 200 N for small valves V..I46..

SFA21.. / SFA71..

For VVI46.. and VXI46.. zone valves, AC 24 V and AC 230 V versions.

Electromotoric actuators for on/off control of zone. For on/off control of terminal units and heating and cooling zones. The actuators are equipped with a manual lever, spring return facility (NO valve closed) and 1.8 m connecting cable. 1 auxiliary switch is available as an accessory item.



For fitting to the valve: Cap nut M30 x 1.5

Data sheet	N4863
Positioning force	200 N
Positioning signal	2-position
Positioning time	10 s
Stroke	2.5 mm
Degree of protection	IP30
Medium temperature	1...110 °C
Mounting position	Upright to 85° inclined
Warranty	5 Years

Range overview SFA21.. / SFA71..

Operating voltage [V]	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.	Price (€)
AC 24	12	Optional	1.8	BPZ:SFA71/18	SFA71/18	89.83
AC 230	12	Optional	1.8	BPZ:SFA21/18	SFA21/18	89.83

Auxiliary switch: Changeover contact AC 250 V, 3 A res., 2 A ind., adjustable switching point 50 %.

Accessories for SSB..

Product Title	Stock no.	Product no.	Price (€)
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	ASY100	7.14
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	ASY3L25	18.98
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	ASY3L45	25.22
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	ASY6L25	12.35
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L45	ASY6L45	21.97
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	ASY8L25	12.35
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	ASY99	7.14
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	ASY8L45	21.97

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSB..



Electromotoric actuators 200 N for valves with 5.5 mm stroke

For small valves V..P45..

Electromotoric actuators for modulating or 3-position control of small valves for terminal units and chilled ceilings. With position indication, manual control and plug-in type connecting cable 1.5 m. Automatic stroke adaption and force-dependent switching off in the end position.

For fitting to the valve: Cap nut G $\frac{3}{4}$ "

SSB61.., SSB81.. are CE, C-tick, UL and cUL listed.

Data sheet	N4891
Positioning force	200 N
Stroke	5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Ambient humidity, operation	5...85 % r.h.
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview SSB..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Auxiliary switch	Cable length [m]	Stock no.	Product no.	Price (€)
AC 24	0.8	3-position	0	1.5	BPZ:SSB81	SSB81	111.93
AC 230	6	3-position	0	1.5	BPZ:SSB31	SSB31	128.44
AC 230	6	3-position	1	1.5	BPZ:SSB31.1	SSB31.1	182.00
AC 24 DC 24	2.5	DC 0...10 V	0	1.5	BPZ:SSB61	SSB61	163.80
AC 24	0.8	3-position	1	1.5	BPZ:SSB81.1	SSB81.1	172.90

Auxiliary switch: Changeover contact AC 250 V, 1 A res., 0.5 A ind., adjustable switching point 0...100 %.

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 300 N for valves with 5.5 mm stroke

SAT..

Electromotoric actuators for the operation of Siemens 2-port valves VVG549.., kvs value 0.25-6.3 m³/h with 5.5 mm stroke as control valve in district heating applications. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches.



SA..61.. are UL listed.

Data sheet	N4584
Positioning force	300 N
Stroke	5.5 mm
Degree of protection	IP54
Medium temperature	1...150 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAT..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 230	5.0	3-position	8	No	S55158-A119	SAT31.008	257.40
AC 230	5.5	3-position	15	Yes (8 s)	S55158-A120	SAT31.51	388.70
AC 24 DC 24	6.4	DC 0...10 V DC 4...20 mA 0...1000 Ohm	15	Yes (8 s)	S55158-A118	SAT61.51	462.80
AC 24 DC 24	7.1	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	No	S55158-A117	SAT61.008	301.60

Accessories for SAT..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51	63.96
Weathershield for SAS../SAT../SAK..		S55845-Z155	ASK39.2	110.37
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	ASK30	61.75

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAS..

Electromotoric actuators 400 N for valves with 5.5 mm stroke



Electromotoric actuator for the operation of Siemens 2-port and 3-port valves, types VVG44.., VXG44.. and VVG549.. with 5.5 mm stroke as control and shut-off valves in heating, ventilation and air conditioning systems. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches.

SA..81.., SA..61.. are UL listed.

Data sheet	N4581
Positioning force	400 N
Stroke	5.5 mm
Degree of protection	IP54
Medium temperature	1...130 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAS..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 230	2.8	3-position	120	No	S55158-A106	SAS31.00	252.20
AC 230	3.5	3-position	120	Yes (28 s)	S55158-A108	SAS31.50	384.80
AC 230	5.5	3-position	30	Yes (14 s)	S55158-A109	SAS31.53	384.80
AC 24	6.0	Modbus RTU	30		S55158-A121	SAS61.03/MO	390.00
DC 24							
AC 24	5.9	DC 0...10 V	30	Yes (14 s)	S55158-A101	SAS61.33	462.80
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	5.8	DC 0...10 V	30	Yes (14 s)	S55158-A102	SAS61.53	462.80
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	3.4	3-position	30	Yes (14 s)	S55158-A105	SAS81.33	388.70
DC 24							
AC 230	3.5	3-position	30	No	S55158-A107	SAS31.03	252.20
AC 24	5.3	DC 0...10 V	30	No	S55158-A100	SAS61.03	301.60
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	2.2	3-position	120	No	S55158-A103	SAS81.00	252.20
DC 24							
AC 24	2.5	3-position	30	No	S55158-A104	SAS81.03	252.20
DC 24							

Accessories for SAS..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51	63.96
Weathershild for SAS../SAT../SAK..		S55845-Z155	ASK39.2	110.37
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	ASK30	61.75

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 250 N for combi valves VPI45..

SSD..

Electromotoric actuators for modulating or 3-position control of combi valves VPI45.. for water-side control of hot and cooling water in heating, ventilation and air conditioning systems. With position indication, manual control and plug-in type connecting cables.
Available are actuators types for modulating control DC 0/2...10 V and DC 0...10 V (SSD61EP) for equal-percentage valve characteristic.



For fitting to the valve: Cap nut M30 x 1.5.

SSD81.., SSD61.. are CE, C-tick, UL and cUL listed.

The types SSD61.5 and SSD81.5 have the same housing and dimensions as the SSC.. actuators.

Data sheet	N4861
Positioning force	250 N
Stroke	5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90° inclined
Warranty	2 Years

Range overview actuators SSD..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Cable length [m]	Stock no.	Product no.	Price (€)
AC 230	6	3-position	150	1.5	BPZ:SSD31	SSD31	148.20

Accessories for SSD..

Product Title	Stock no.	Product no.	Price (€)
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	ASY100	7.14
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	ASY3L25	18.98
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	ASY3L45	25.22
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	ASY6L25	12.35
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L45	ASY6L45	21.97
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	ASY8L25	12.35
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	ASY99	7.14
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	ASY8L45	21.97

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSC..



Electromotoric actuator, 300 N, for valves with 5.5 mm stroke

Manual control with automatic reset to control mode. Overload-proof through force-dependent switching off in the end position. With plastic housing and cap nut for fitting on threaded valves with 5.5 mm stroke.

Data sheet	N4895
Positioning force	300 N
Stroke	5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SSC..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Spring return function	Stock no.	Product no.	Price (€)
AC 230	6	3-position	No	BPZ:SSC31	SSC31	174.20
AC 24	2	DC 0...10 V	No	BPZ:SSC61	SSC61	245.70
DC 24						
AC 24	2	DC 0...10 V	Yes (15 s)	BPZ:SSC61.5	SSC61.5	395.20
DC 24						
AC 24	0.8	3-position	No	BPZ:SSC81	SSC81	162.50

SSC61.5: Power consumption when connecting power for the first time 3 VA.

Accessories for SSC..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	ASK30	61.75

Accessories for SAX..P

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51	63.96
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1	153.40
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1	92.43
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000	270.40

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 500 N for Combi valves VPF43../53..

SAX..P..

Electromotoric actuator for the operation of Siemens Combi valves, types VPF43.. and VPF53.. with 20 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems. With manual adjuster and position indicator, status indication per LED. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches, potentiometer, functional module and stem heater.



SA..81P.., SA..61P.. are UL listed.

Data sheet	N4509
Positioning force	500 N
Stroke	20 mm
Degree of protection	IP54
Ambient temperature, operation	5...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SAX6..)
Warranty	5 Years

Range overview SAX..P..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Stock no.	Product no.	Price (€)
AC 230	8	3-position	30	S55150-A118	SAX31P03	416.00
AC 24 DC 24	8	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	S55150-A114	SAX61P03	509.60
AC 24 DC 24	5	3-position	30	S55150-A116	SAX81P03	416.00

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAX..



Electromotoric actuators 800 N for valve with 20 mm stroke

Electromotoric actuator for the operation of Siemens 2-port and 3-port valves, types VVF.., VVG.., VXF.. and VXG.. with 20 mm stroke as control and safety shut-off valves in heating, ventilation and air conditioning systems.

With manual adjuster and position indicator, status indication per LED.

Optional functions with auxiliary switches, potentiometer, functional module and stem heater.

Data sheet	N4501
Positioning force	800 N
Stroke	20 mm
Degree of protection	IP54
Ambient temperature, operation	-5...55 °C
Medium temperature	-25...130 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Spring return function	No
Warranty	5 Years

Range overview SAX..

Operating voltage	Power consumption [VA]	Positioning signal	Positioning time [s]	Cable length [m]	Stock no.	Product no.	Price (€)
AC 230 V	3.5	3-position	120		S55150-A105	SAX31.00	427.70
AC 230 V	6	3-position	30		S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	8	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30		S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3.5	3-position	120		S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	5	3-position	30		S55150-A103	SAX81.03	448.50
AC 24 DC 24	8.7	Modbus RTU	30	0.9	S55150-A140	SAX61.03/MO	633.10

Accessories for SAX..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51	63.96
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1	153.40
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6	274.30
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1	92.43
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000	270.40

Accessories for SQV..P

Product Title	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V adapter for SQV..P..	N4833	S55845-Z138	ASP1.1	145.60

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 1100 N for Combi valves VPF43../53..

SQV..P..

Electromotoric actuators for the operation of Siemens Combi valves, types VPF43.. and VPF53.. with 20/40 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems. With manual adjuster and position indicator, status indication per LED and with selectable positioning time (20 mm: 40, 60, 90 or 120 s, 40 mm: 80, 120, 180 or 240 s). Optional functions with auxiliary switches, potentiometer and AC 230 V power module.



Actuators SQV..P.. are UL-listed

Data sheet	N4833
Positioning force	1100 N
Stroke	20 mm 40 mm 43 mm
Positioning time	20 mm: 40 s 40 mm: 80 s
Degree of protection	IP66
Ambient temperature, operation	0...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V
Warranty	5 Years

Range overview SQV..P..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Spring return function	Stock no.	Product no.	Price (€)
AC 24	20	3-position	Yes (30 s)	S55150-A130	SQV91P30	1202.50
DC 24		DC 0...10 V DC 4...20 mA	Stem retracted			
AC 24	20	3-position	Yes (30 s)	S55150-A131	SQV91P40	1202.50
DC 24		DC 0...10 V DC 4...20 mA	Stem extended			

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

Accessories for SKD../SKB../SKC..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6	274.30
Control unit		BPZ:466857598	466857598	263.90
Auxiliary switch for SKB6../SKC6../SKD6..	N4566	BPZ:ASC1.6	ASC1.6	56.68
Double auxiliary switch for SKB/ C/ D32../82..	N4561	BPZ:ASC9.3	ASC9.3	136.50
Potentiometer 0...1000 Ohm for SKB/ C/ D32../82..	N4564	BPZ:ASZ7.3	ASZ7.3	280.80
Potentiometer 0...135 Ohm for SKB/ C/ D32../82..	N4564	BPZ:ASZ7.31	ASZ7.31	280.80
Potentiometer 0...200 Ohm for SKB/ C/ D32../82..	N4564	BPZ:ASZ7.32	ASZ7.32	280.80
Stroke inverter for SKD..	N4561	BPZ:ASK50	ASK50	592.80
Stroke inverter for SKB..	N4564	BPZ:ASK51	ASK51	759.20

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

Electrohydraulic actuators 1000 N for valves with 20 mm stroke

SKD60/SKD62..

Overload-proof through travel-dependent, electronic switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional function with one auxiliary switch. With manual control.

SKD..U, SKD..UA are UL listed. Control devices MK..5.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4561
Positioning force	1000 N
Stroke	20 mm
Position feedback	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Medium temperature	-25...150 °C
Ambient temperature, operation	-15...50 °C
Mounting position	Upright to horizontal
Warranty	5 Years



Range overview SKD60/SKD62..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	10	Open:30 Close:15	No	BPZ:SKD60	SKD60	721.50
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62	SKD62	878.80
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62UA	SKD62UA	1056.90
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62U	SKD62U	965.90

Actuators type ..UA provide additional functions: Signal inversion, stroke limitation, and adjustable starting point and operating range.

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

SKB32../SKB82..



Electrohydraulic actuators 2800 N for valves with 20 mm stroke

Overload-proof through travel-dependent, fixed switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional functions: one auxiliary switch or one potentiometer. With manual control.

SKB82..U are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4564
Positioning force	2800 N
Stroke	20 mm
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKB32../SKB82..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 230	3-position	10	120	No	BPZ:SKB32.50	SKB32.50	1145.30
AC 230	3-position	16	120	Yes (10 s)	BPZ:SKB32.51	SKB32.51	1378.00
AC 24	3-position	8	120	No	BPZ:SKB82.50	SKB82.50	1145.30
AC 24	3-position	12	120	Yes (10 s)	BPZ:SKB82.51	SKB82.51	1378.00

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

Electrohydraulic actuators 2800 N for valves with 20 mm stroke

SKB60/62..

Overload-proof through travel-dependent, electronic switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional function with one auxiliary switch. With manual control.

SKB..U, SKB..UA are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4564
Stroke	20 mm
Position feedback	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years



Range overview SKB60/SKB62..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	10	Open:120 Close:10	No	BPZ:SKB60	SKB60	1246.70
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62	SKB62	1482.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62UA	SKB62UA	1781.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62U	SKB62U	1612.00

Actuators type ..UA provide additional functions: Signal inversion, stroke limitation, and adjustable starting point and operating range.

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

SKC32../SKC82..

Electrohydraulic actuators 2800 N for valves with 40 mm stroke



Overload-proof through travel-dependent, fixed switching off in end position. With die-cast aluminium housing and yoke for valves with 40 mm stroke. Optional functions: one auxiliary switch or one potentiometer. With manual control.

SKC..U are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4566
Positioning force	2800 N
Stroke	40 mm
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKC32../SKC82..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 230	3-position	18	120	No	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	24	120	Yes (18 s)	BPZ:SKC32.61	SKC32.61	1495.00
AC 24	3-position	15	120	No	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	19	120	Yes (18 s)	BPZ:SKC82.61	SKC82.61	1495.00

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

Electrohydraulic actuators 2800 N for valves with 40 mm stroke

SKC60/SKC62..

Overload-proof through travel-dependent, electronic switching off in end position. With die-cast aluminium housing and yoke for valves with 40 mm stroke. Optional function with one auxiliary switch. With manual control.

SKC..U, SKC..UA are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4566
Stroke	40 mm
Position feedback	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years



Range overview SKC60/SKC62..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	17	Open:120 Close:20	No	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62UA	SKC62UA	1950.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open 120 Close 20	Yes (20 s)	BPZ:SKC62U	SKC62U	1768.00

Actuators type ..UA provide additional functions: Signal inversion, stroke limitation, and adjustable starting point and operating range.

Stem coupling for SKC..

417856498

Electrohydraulic actuators SKC.. require stem coupling, as stem diameter is new only 10 mm.

Warranty	2 Years
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Stock no.	Product no.	Price (€)
BPZ:417856498	417856498	37.18

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

SKD32../SKD82..



Electrohydraulic actuators 1000 N for valves with 20 mm stroke

Overload-proof through travel-dependent, fixed switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional functions: one auxiliary switch or one potentiometer. With manual control.

SKD..U are UL listed. Control devices MK..5.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4561
Positioning force	1000 N
Stroke	20 mm
Degree of protection	IP54
Medium temperature	-25...150 °C
Ambient temperature, operation	-15...50 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKD32../SKD82..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Spring return function	Stock no.	Product no.	Price (€)
AC 230	16	3-position	Open 30 Close 10	Yes (8 s)	BPZ:SKD32.21	SKD32.21	873.60
AC 230	11	3-position	120	No	BPZ:SKD32.50	SKD32.50	670.80
AC 230	17	3-position	120	Yes (8 s)	BPZ:SKD32.51	SKD32.51	833.30
AC 24	9	3-position	120	No	BPZ:SKD82.50	SKD82.50	670.80
AC 24	14	3-position	120	Yes (8 s)	BPZ:SKD82.51	SKD82.51	833.30

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port valves with flanged connections, PN6

VVF22..

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4401
Stroke	to DN80: 20 mm DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10...130 °C
Valve characteristic	Equal percentage
Rangeability	DN 25: >50 DN 40...100: >100
Permissible operating pressure	600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN40: CrNi steel / bronze
PN class	PN 6
Warranty	5 Years



Range overview VVF22..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.	Price (€)
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m³/h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
300	600			300	600	300	600			25	2.5	S55200-V100	VVF22.25-2.5	234.00
300	600			300	600	300	600			25	4	S55200-V101	VVF22.25-4	234.00
300	600			300	600	300	600			25	6.3	S55200-V102	VVF22.25-6.3	234.00
300	600			300	600	300	600			25	10	S55200-V103	VVF22.25-10	234.00
300	550	300	600	300	600	300	600			40	16	S55200-V104	VVF22.40-16	274.30
300	550	300	600	300	600	300	600			40	25	S55200-V105	VVF22.40-25	274.30
300	350	300	600	300	450	300	600			50	40	S55200-V106	VVF22.50-40	343.20
150	200	300	450	200	250	300	600			65	63	S55200-V107	VVF22.65-63	461.50
75	125	225	250	125	175	300	450			80	100	S55200-V108	VVF22.80-100	663.00
		125	160					250	300	100	160	S55200-V109	VVF22.100-160	1076.40

For media <0 °C, stem heating element ASZ6.6 is required.

Combinable actuator for VVF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for VVF22..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port valves with flanged connections, PN 10

VVF32..

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4402
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10... 150 °C
Valve characteristic	Equal percentage k _{vs} 250/400 linear
Rangeability	DN 15 .. 25: >50 DN 40...150: >100
Permissible operating pressure	1000 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 10
Warranty	5 Years



Range overview VVF32..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.	Price (€)
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m³/h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
400	1000			400	1000	400	1000			15	1.6	S55202-V100	VVF32.15-1.6	253.50
400	1000			400	1000	400	1000			15	2.5	S55202-V101	VVF32.15-2.5	253.50
400	1000			400	1000	400	1000			15	4	S55202-V102	VVF32.15-4	253.50
400	1000			400	1000	400	1000			25	6.3	S55202-V103	VVF32.25-6.3	296.40
400	1000			400	1000	400	1000			25	10	S55202-V104	VVF32.25-10	296.40
400	550	400	1000	400	750	400	1000			40	16	S55202-V105	VVF32.40-16	360.10
400	550	400	1000	400	750	400	1000			40	25	S55202-V106	VVF32.40-25	360.10
300	350	400	750	400	450	400	1000			50	40	S55202-V107	VVF32.50-40	455.00
150	200	400	450	200	250	400	700			65	63	S55202-V108	VVF32.65-63	613.60
75	125	225	250	125	175	400	450			80	100	S55202-V109	VVF32.80-100	826.80
		125	160					250	300	100	160	S55202-V110	VVF32.100-160	1250.60
		90	125					160	190	125	250	S55202-V111	VVF32.125-250	1560.00
		60	80					100	125	150	400	S55202-V112	VVF32.150-400	1963.00

For media < 0° C, stem heating element ASZ 6.6 is required.

Replacement sealing glands for C/VVF31..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Replacement sealing glands for VVF32..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for C/VVF40..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Replacement sealing glands for VVF42..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Replacement sealing glands for VVF42..K

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40

Combinable actuator for VVF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Combinable actuator for VVF42..K

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF42..K

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF42..



2-port valves with flanged connections, PN 16

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4403
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10... 150 °C
Valve characteristic	Equal percentage K _{vs} 250/400 linear
Rangeability	DN 15...25: >50 DN 32...150: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VVF42..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.	Price (€)
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m³/h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
400	1600			400	1600	400	1600			15	1.6	S55204-V100	VVF42.15-1.6	297.70
400	1600			400	1600	400	1600			15	2.5	S55204-V101	VVF42.15-2.5	297.70
400	1600			400	1600	400	1600			15	4	S55204-V102	VVF42.15-4	297.70
400	1600			400	1600	400	1600			20	6.3	S55204-V103	VVF42.20-6.3	321.10
400	1600			400	1600	400	1600			25	6.3	S55204-V104	VVF42.25-6.3	347.10
400	1600			400	1600	400	1600			25	10	S55204-V105	VVF42.25-10	347.10
400	900			400	1200	400	1600			32	16	S55204-V106	VVF42.32-16	382.20
400	550	400	1250	400	750	400	1600			40	16	S55204-V107	VVF42.40-16	423.80
400	550	400	1250	400	750	400	1600			40	25	S55204-V108	VVF42.40-25	423.80
300	350	400	750	400	450	400	1200			50	31.5	S55204-V109	VVF42.50-31.5	533.00
300	350	400	750	400	450	400	1200			50	40	S55204-V110	VVF42.50-40	533.00
150	200	400	450	200	250	400	700			65	50	S55204-V111	VVF42.65-50	718.90
150	200	400	450	200	250	400	700			65	63	S55204-V112	VVF42.65-63	718.90
75	125	225	250	125	175	400	450			80	80	S55204-V113	VVF42.80-80	975.00
75	125	225	250	125	175	400	450			80	100	S55204-V114	VVF42.80-100	975.00
		125	160					250	300	100	125	S55204-V115	VVF42.100-125	1469.00
		125	160					250	300	100	160	S55204-V116	VVF42.100-160	1469.00
		90	125					160	190	125	200	S55204-V117	VVF42.125-200	1859.00
		90	125					160	190	125	250	S55204-V118	VVF42.125-250	1859.00
		60	80					100	125	150	315	S55204-V119	VVF42.150-315	2288.00
		60	80					100	125	150	400	S55204-V120	VVF42.150-400	2288.00

For media < 0° C, stem heating element ASZ 6.6 is required.

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port valves pressure compensated with flanged connections, PN 16

VVF42..K

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4403
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-5... 150 °C
Valve characteristic	Equal percentage k _{vs} 250/360 linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	≥ DN 50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years



Range overview VVF42..K

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.	Price (€)
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m ³ /h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
400	1600	400	1600	400	1600	400	1600			65	63	S55204-V122	VVF42.65-63K	1041.30
400	1600	400	1600	400	1600	400	1600			50	40	S55204-V121	VVF42.50-40K	859.30
400	1600	400	1600	400	1600	400	1600			80	100	S55204-V123	VVF42.80-100K	1339.00
		400	1600					400	1600	100	160	S55204-V124	VVF42.100-160K	1885.00
		400	1600					400	1600	125	250	S55204-V125	VVF42.125-250K	2496.00
		400	1400					400	1600	150	360	S55204-V126	VVF42.150-360K	3393.00

For media < 0° C, stem heating element ASZ6.6 is required.

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF42..KC

2-port valves pressure compensated with flanged connections, PN 16

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	A6V10794157
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10... 150 °C
Valve characteristic	Equal percentage
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi steel / CrNi Steel
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview VVF42..KC

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	kvs	Stock no.	Product no.	Price (€)
$\Delta p_{\max}$	Δp_s	$\Delta p_{\max}$	Δp_s	$\Delta p_{\max}$	Δp_s	$\Delta p_{\max}$	Δp_s	$\Delta p_{\max}$	Δp_s		[m ³ /h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
		500	1600					800	1600	100	160	S55204-V184	VVF42.100KC	2158.00
		500	1600					800	1600	125	220	S55204-V185	VVF42.125KC	2925.00
		500	1400					800	1600	150	315	S55204-V186	VVF42.150KC	4069.00
800	1600			800	1600	800	1600			65	63	S55204-V182	VVF42.65KC	1203.80
800	1600			800	1600	800	1600			80	100	S55204-V183	VVF42.80KC	1560.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port seat valve PN16 with flanged connections

VVF43..

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated steam and superheated steam in open and closed circuits



Data sheet	N4404
Stroke	40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Equal percentage k_{vs} 250/400 linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel
PN class	PN 16
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF43..

SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	SKC.. Δp_{max} [kPa]	SKC.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
400	450	650	700	65	50	S55206-V100	VVF43.65-50	1228.50
400	450	650	700	65	63	S55206-V101	VVF43.65-63	1228.50
225	250	400	450	80	80	S55206-V102	VVF43.80-80	1586.00
225	250	400	450	80	100	S55206-V103	VVF43.80-100	1586.00
125	160	250	300	100	125	S55206-V104	VVF43.100-125	2197.00
125	160	250	300	100	160	S55206-V105	VVF43.100-160	2197.00
90	125	160	175	125	200	S55206-V106	VVF43.125-200	2977.00
90	125	160	175	125	250	S55206-V107	VVF43.125-250	2977.00
60	80	100	125	150	315	S55206-V108	VVF43.150-315	4147.00
60	80	100	125	150	400	S55206-V109	VVF43.150-400	4147.00

Replacement sealing glands for VVF43..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610	37.44
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40

Replacement sealing glands for VVF43..K

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610	37.44
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C		BPZ:467956300	467956300	195.00

Combinable actuator for VVF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24	DC 0...10 V	120	No	N4503	S55150-A110	SAV61.00	903.50
DC 24	DC 4...20 mA						
	0...1000 Ohm						
AC 24	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
DC 24							

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Combinable actuator for VVF43..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port seat valve PN16 with flanged connections, pressure compensated

VVF43..K

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated steam and superheated steam in open and closed circuits



Data sheet	N4404
Stroke	40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-5...220 °C
Valve characteristic	Equal percentage
	k_{vs} 250/360 linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel
PN class	PN 16
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF43..K

SKC.. Δp_{max} [kPa]	SKC.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
800	1600	65	63	S55206-V110	VVF43.65-63K	1560.00
800	1600	100	150	S55206-V120	VVF43.100-150K	2522.00
800	1600	125	220	S55206-V121	VVF43.125-220K	3445.00
800	1600	150	315	S55206-V122	VVF43.150-315K	4771.00
800	1200	200	450	S55206-V123	VVF43.200-450K	8125.00
800	1000	250	630	S55206-V124	VVF43.250-630K	12155.00
800	1600	80	100	S55206-V111	VVF43.80-100K	2054.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF53..



2-port seat valve PN25 with flanged connections

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated and superheated steam in open and closed circuits

When using valves of the V..F43.., V..F53.. lines with a stem heating element and a medium temperature of below -5 °C, the stem sealing gland must be replaced.

Data sheet	N4405
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Equal percentage k_{vs} 250/400 linear
Rangeability	DN 15, $k_{vs} \leq 1,25 \text{ m}^3/\text{h}$: >50 DN 15...150: >100
Permissible operating pressure	2500 kPa
Material, inside set	Stainless steel
PN class	PN 16 / PN 25
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF53..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k_{vs}	Stock no.	Product no.	Price (€)
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
1200	2500			1200	2500	1200	2500			15	0.16	S55208-V100	VVF53.15-0.16	404.30
		60	80					100	125	150	400	S55208-V133	VVF53.150-400	5057.00
1200	2500			1200	2500	1200	2500			15	0.2	S55208-V101	VVF53.15-0.2	404.30
1200	2500			1200	2500	1200	2500			15	0.25	S55208-V102	VVF53.15-0.25	404.30
1200	2500			1200	2500	1200	2500			15	0.32	S55208-V103	VVF53.15-0.32	404.30
1200	2500			1200	2500	1200	2500			15	0.4	S55208-V104	VVF53.15-0.4	404.30
1200	2500			1200	2500	1200	2500			15	0.5	S55208-V105	VVF53.15-0.5	404.30
1200	2500			1200	2500	1200	2500			15	0.63	S55208-V106	VVF53.15-0.63	404.30
1200	2500			1200	2500	1200	2500			15	0.8	S55208-V107	VVF53.15-0.8	404.30
1200	2500			1200	2500	1200	2500			15	1	S55208-V108	VVF53.15-1	404.30
1200	2500			1200	2500	1200	2500			15	1.25	S55208-V109	VVF53.15-1.25	404.30
1200	2500			1200	2500	1200	2500			15	1.6	S55208-V110	VVF53.15-1.6	404.30
1200	2500			1200	2500	1200	2500			15	2	S55208-V111	VVF53.15-2	404.30
1200	2500			1200	2500	1200	2500			15	2.5	S55208-V112	VVF53.15-2.5	404.30
1200	2500			1200	2500	1200	2500			15	3.2	S55208-V113	VVF53.15-3.2	404.30
1200	2500			1200	2500	1200	2500			15	4	S55208-V114	VVF53.15-4	404.30
1200	2500			1200	2500	1200	2500			20	6.3	S55208-V116	VVF53.20-6.3	436.80
1200	1600			1200	2100	1200	2500			25	5	S55208-V117	VVF53.25-5	465.40
1200	1600			1200	2100	1200	2500			25	6.3	S55208-V118	VVF53.25-6.3	465.40
1200	1600			1200	2100	1200	2500			25	8	S55208-V119	VVF53.25-8	465.40
1200	1600			1200	2100	1200	2500			25	10	S55208-V120	VVF53.25-10	465.40
										25	10	S55208-V120-A110	VVF53.25-10J	582.40
750	900			1100	1200	1200	2500			32	16	S55208-V122	VVF53.32-16	573.30
500	550	1150	1250	650	750	1200	2000			40	12.5	S55208-V123	VVF53.40-12.5	676.00
500	550	1150	1250	650	750	1200	2000			40	16	S55208-V124	VVF53.40-16	676.00
500	550	1150	1250	650	750	1200	2000			40	20	S55208-V125	VVF53.40-20	676.00
500	550	1150	1250	650	750	1200	2000			40	25	S55208-V126	VVF53.40-25	676.00
300	350	700	750	400	450	1150	1200			50	31.5	S55208-V127	VVF53.50-31.5	925.60
300	350	700	750	400	450	1150	1200			50	40	S55208-V128	VVF53.50-40	925.60

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Range overview VVF53..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.	Price (€)
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m ³ /h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
		400	450					650	700	65	63	S55208-V129	VVF53.65-63	1495.00
		225	250					400	450	80	100	S55208-V130	VVF53.80-100	1963.00
		125	160					250	300	100	160	S55208-V131	VVF53.100-160	2678.00
		90	125					160	175	125	250	S55208-V132	VVF53.125-250	3640.00

Replacement sealing glands for VVF53..

Product Title	Stock no.	Product no.	Price (€)
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM	S55845-Z150	7428400610	37.44
Sealing gland complete, stem diameter 10 mm, sealing material EPDM	BPZ:428488060	428488060	23.40

Replacement sealing glands for VVF53..K

Product Title	Stock no.	Product no.	Price (€)
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM	S55845-Z150	7428400610	37.44
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	467956300	195.00

Combinable actuator for VVF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Combinable actuator for VVF53..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF53..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF53..K

2-port seat valve PN25 with flanged connections, pressure compensated



- With flanged connections to ISO 7005.
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated steam and superheated steam in open and closed circuits.

Data sheet	N4405
Stroke	DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-5...220 °C
Valve characteristic	Equal percentage k_{vs} 220/315 linear
Rangeability	> 100
Permissible operating pressure	2500 kPa
Material, inside set	CrNi steel
PN class	PN 25
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF53..K

SKD.. Δp_{max} [kPa]	SKD.. Δp_s [kPa]	SKB.. Δp_{max} [kPa]	SKB.. Δp_s [kPa]	SKC.. Δp_{max} [kPa]	SKC.. Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
1250	2500	1250	2500			50	40	S55208-V134	VVF53.50-40K	1155.70
				1250	2500	65	63	S55208-V135	VVF53.65-63K	1807.00
				1250	2500	80	100	S55208-V136	VVF53.80-100K	2340.00
				1250	2500	100	150	S55208-V158	VVF53.100-150K	3094.00
				800	1200	200	450	S55208-V161	VVF53.200-450K	9737.00
				800	1000	250	630	S55208-V162	VVF53.250-630K	14560.00
				1250	2500	125	220	S55208-V159	VVF53.125-220K	4212.00
				1250	2500	150	315	S55208-V160	VVF53.150-315K	5824.00

Accessories for VVF43.. / VVF53..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Bypass extension, flanged connections, DN15	N4404	S55845-Z110	ALF41B15	112.32
Bypass extension, flanged connections, DN25	N4404	S55845-Z111	ALF41B25	119.86
Bypass extension, flanged connections, DN40	N4404	S55845-Z112	ALF41B40	135.20
Bypass extension, flanged connections, DN50	N4404	S55845-Z113	ALF41B50	143.00
Bypass extension, flanged connections, DN65	N4404	S55845-Z114	ALF41B65	180.70
Bypass extension, flanged connections, DN80	N4404	S55845-Z115	ALF41B80	254.80
Bypass extension, flanged connections, DN100	N4404	S55845-Z116	ALF41B100	300.30
Bypass extension, flanged connections, DN125	N4404	S55845-Z117	ALF41B125	352.30
Bypass extension, flanged connections, DN150	N4404	S55845-Z118	ALF41B150	374.40

Combinable actuator for VVF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for VVF61..

Product Title	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C	BPZ:428488290	428488290	154.70
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	467956300	195.00

Accessories for MVF461..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		BPZ:ASE12	ASE12	432.90

Valves and actuators

Globe and pressure independent combi valves (PICV)
2-port flanged valves

MVF461H..



Modulating control valves with magnetic actuator, PN16, flanged

2-port valves PN 16 with magnetic actuator for modulating control of high-temperature hot water or steam.

With positioning control, position feedback signal, spring return function and manual control.

Data sheet	N4361
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Positioning signal	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA DC 0...20 V Phs
Positioning time	< 2 s
Spring return function	A-> AB closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP31
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	Water < 120 °C: 1600 kPa Water > 120 °C: 1300 kPa Saturated steam: 900 kPa
Leakage rate	< 0.05% of k_{vs} value
Absolute pressure p1 steam	900 kPa abs
Medium temperature	1...180 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJS-400-18-LT
Material, inside set	CrNi steel
Warranty	5 Years

Scope of delivery: 1 blanking flange, 1 seal, screws, spring washers and nuts.

Range overview MVF461H..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
1000	1000	0.6	15	BPZ:MVF461H15-0.6	MVF461H15-0.6	1547.00
1000	1000	1.5	15	BPZ:MVF461H15-1.5	MVF461H15-1.5	1547.00
1000	1000	3	15	BPZ:MVF461H15-3	MVF461H15-3	1547.00
1000	1000	5	20	BPZ:MVF461H20-5	MVF461H20-5	1898.00
1000	1000	8	25	BPZ:MVF461H25-8	MVF461H25-8	2223.00
1000	1000	12	32	BPZ:MVF461H32-12	MVF461H32-12	2691.00
1000	1000	20	40	BPZ:MVF461H40-20	MVF461H40-20	3211.00
1000	1000	30	50	BPZ:MVF461H50-30	MVF461H50-30	3679.00

MVF.. valves with magnetic actuators are UL-listed.

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VVP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	150	N4895	BPZ:SSC31	SSC31	174.20
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61	SSC61	245.70
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	SSC61.5	395.20
AC 24	3-position	150	N4895	BPZ:SSC81	SSC81	162.50
AC 24	3-position	150	N4891	BPZ:SSB81	SSB81	111.93
AC 230	3-position	150	N4891	BPZ:SSB31	SSB31	128.44
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	SSB61	163.80

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VVP45..

2-port seat valves, PN16



2-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

V..P45.. valves are only used as mixing or 2-port valves, not as diverting valves.

V..P45..S are suitable for Conex® compression fittings.

VVP45..S and VMP45..S for k_{vs} values 0.63, 1, 1.6, 2.5 m³/h, datasheet N4854.

Data sheet	N4845
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	1...110 °C
Valve characteristic	Throughport up to k_{vs} 6.3: equal-percentage Throughport from k_{vs} 10: linear
Rangeability	From $k_{vs}>6.3$: >100 To $k_{vs}=6.3$: >50
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel / Rg5 / brass
Warranty	5 Years

Range overview VVP45..

Con-nect. thread	SSB.. Δp_{max} [kPa]	SSB.. Δp_s [kPa]	SSC.. Δp_s [kPa]	SSC.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G ½" B	400	725			10	0.25	BPZ:VVP45.10-0.25	VVP45.10-0.25	54.60
G ½" B	400	725			10	0.4	BPZ:VVP45.10-0.4	VVP45.10-0.4	54.60
G ½" B	400	725			10	0.63	BPZ:VVP45.10-0.63	VVP45.10-0.63	54.60
G ½" B	400	725			10	1	BPZ:VVP45.10-1	VVP45.10-1	54.60
G ½" B	400	725			10	1.6	BPZ:VVP45.10-1.6	VVP45.10-1.6	54.60
G ¾" B	350	350			15	2.5	BPZ:VVP45.15-2.5	VVP45.15-2.5	68.12
G 1" B	350	350	350	350	20	4	BPZ:VVP45.20-4	VVP45.20-4	82.29
G 1½" B			300	300	25	10	BPZ:VVP45.25-10	VVP45.25-10	182.00
G 1¼" B	300	300	300	300	25	6.3	BPZ:VVP45.25-6.3	VVP45.25-6.3	139.10
G 2" B			175	175	32	16	BPZ:VVP45.32-16	VVP45.32-16	239.20
G 2¼" B			75	75	40	25	BPZ:VVP45.40-25	VVP45.40-25	313.30

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port seat valves PN16 with externally threaded connections

VVG41..

- With threaded connections to ISO 228/1
- For cooling, chilled, low and high temperature water, brine and saturated and superheated steam in open and closed circuits



Data sheet	N4363
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	-25... 150 °C
Valve characteristic	Equal percentage
Rangeability	DN 15: >50 DN 20...50: >100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel
PN class	PN 16
Absolute pressure p1 steam	300 kPa abs
Warranty	5 Years

Range overview VVG41..

Con- nect. thread	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SKD.. Δp_{max} [kPa]	SKD.. Δp_s [kPa]	SKB.. Δp_{max} [kPa]	SKB.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1" B	800	1600	800	1600	800	1600	15	0.63	BPZ:VVG41.11	VVG41.11	326.30
G 1" B	800	1600	800	1600	800	1600	15	1	BPZ:VVG41.12	VVG41.12	326.30
G 1" B	800	1600	800	1600	800	1600	15	1.6	BPZ:VVG41.13	VVG41.13	326.30
G 1" B	800	1600	800	1600	800	1600	15	2.5	BPZ:VVG41.14	VVG41.14	326.30
G 1" B	800	1600	800	1600	800	1600	15	4	BPZ:VVG41.15	VVG41.15	326.30
G 1¼" B	800	1600	800	1600	800	1600	20	6.3	BPZ:VVG41.20	VVG41.20	377.00
G 1½" B	800	1550	800	1600	800	1600	25	10	BPZ:VVG41.25	VVG41.25	429.00
G 2" B	800	875	800	1275	800	1600	32	16	BPZ:VVG41.32	VVG41.32	477.10
G 2¼" B	525	525	775	775	800	1600	40	25	BPZ:VVG41.40	VVG41.40	533.00
G 2¾" B	300	300	450	450	800	1225	50	40	BPZ:VVG41.50	VVG41.50	595.40

ALG..2 fittings must be ordered as individual items and will be delivered separately.

Replacement sealing glands for VVG41..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		BPZ:428488740	428488740	24.83

Accessories for VVG41..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2	

Combinable actuator for VVG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VVG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00

VVG41.15-1.6K

2-port seat valve, external thread, DN15, kvs 1.6

Warranty

5 Years

Stock no.	Product no.	Price (€)
BPZ:VVG41.15-1.6K	VVG41.15-1.6K	412.10

VVG41.15-2.5K

2-port seat valve, external thread, DN15, kvs 2.5

Warranty

5 Years

Stock no.	Product no.	Price (€)
BPZ:VVG41.15-2.5K	VVG41.15-2.5K	412.10

VVG41.15-4K

2-port seat valve, external thread, DN15, kvs 4

Warranty

5 Years

Stock no.	Product no.	Price (€)
BPZ:VVG41.15-4K	VVG41.15-4K	412.10

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port seat valves PN16 with externally threaded connections

VVG44..

- With threaded connections to ISO 228/1
- For chilled water and low-temperature hot water in closed circuits



Data sheet	N4364
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	1...120 °C
Valve characteristic	Linear
Rangeability	From DN 20: >100 DN 15: >50...100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel / Rg5, brass
PN class	PN 16
Warranty	5 Years

Range overview VVG44..

Con- nect. thread	SAS.. Δp_s [kPa]	SAS.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1" B	1600	400	15	0.25	BPZ:VVG44.15-0.25	VVG44.15-0.25	150.80
G 1" B	1600	400	15	0.4	BPZ:VVG44.15-0.4	VVG44.15-0.4	150.80
G 1" B	1600	400	15	0.63	BPZ:VVG44.15-0.63	VVG44.15-0.63	150.80
G 1" B	725	400	15	1	BPZ:VVG44.15-1	VVG44.15-1	150.80
G 1" B	725	400	15	1.6	BPZ:VVG44.15-1.6	VVG44.15-1.6	150.80
G 1" B	400	400	15	2.5	BPZ:VVG44.15-2.5	VVG44.15-2.5	150.80
G 1" B	400	400	15	4	BPZ:VVG44.15-4	VVG44.15-4	150.80
G 1¼" B	750	400	20	6.3	BPZ:VVG44.20-6.3	VVG44.20-6.3	158.60
G 1½" B	400	400	25	10	BPZ:VVG44.25-10	VVG44.25-10	184.60
G 2" B	250	250	32	16	BPZ:VVG44.32-16	VVG44.32-16	249.60
G 2¼" B	125	125	40	25	BPZ:VVG44.40-25	VVG44.40-25	325.00

Fittings ALG..2 must be ordered as separate items and are also supplied as such.

Combinable actuator for VVG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	N4581	S55158-A106	SAS31.00	252.20
AC 230	3-position	120	N4581	S55158-A108	SAS31.50	384.80
AC 230	3-position	30	N4581	S55158-A109	SAS31.53	384.80
AC 24 DC 24	Modbus RTU	30	N4581	S55158-A121	SAS61.03/MO	390.00
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A101	SAS61.33	462.80
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A102	SAS61.53	462.80
AC 24 DC 24	3-position	30	N4581	S55158-A105	SAS81.33	388.70
AC 230	3-position	30	N4581	S55158-A107	SAS31.03	252.20

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VVG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A100	SAS61.03	301.60
AC 24 DC 24	3-position	120	N4581	S55158-A103	SAS81.00	252.20
AC 24 DC 24	3-position	30	N4581	S55158-A104	SAS81.03	252.20

Accessories for VVG44..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2	

Combinable actuator for VVP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	2-position	10	N4865	BPZ:SFP21/18	SFP21/18	99.71
AC 230	2-position	210	N4884	S55174-A103	STP23	52.78
AC 24	3-position	150	N4864	BPZ:SSP81	SSP81	112.45
AC 24 DC 24	2-position PDM	270	N4884	S55174-A102	STP73	52.78
AC 230	2-position	210	N4884	S55174-A112	STP23/00	47.19
AC 24 DC 24	2-position PDM	270	N4884	S55174-A111	STP73/00	47.19
AC 230	3-position	150	N4864	BPZ:SSP31	SSP31	128.83
AC 24 DC 24	DC 0...10 V	34	N4864	BPZ:SSP61	SSP61	163.80

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port valves, PN16

V..P47..

2-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

VXP47.. and VMP47.. 3-port valves are only used as mixing valves.
They are also suitable for SERTO® compression fittings.



Data sheet	N4847
Stroke	2.5 mm
Leakage rate	0...0.05 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Throughport: linear Bypass: linear
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel, brass
Warranty	5 Years

Range overview VVP47..

STP.. Δp_{max} [kPa]	STP.. Δp_s [kPa]	SFP../SSP.. Δp_{max} [kPa]	SFP../SSP.. Δp_s [kPa]	Con- nect. thread	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
400	700	400	1000	G ½" B	10	0.25	BPZ:VVP47.10-0.25	VVP47.10-0.25	45.50
400	700	400	1000	G ½" B	10	0.4	BPZ:VVP47.10-0.4	VVP47.10-0.4	45.50
250	250	400	500	G ½" B	10	0.63	BPZ:VVP47.10-0.63	VVP47.10-0.63	45.50
250	250	400	500	G ½" B	10	1	BPZ:VVP47.10-1	VVP47.10-1	45.50
150	150	300	300	G ½" B	10	1.6	BPZ:VVP47.10-1.6	VVP47.10-1.6	45.50
150	150	300	300	G ¾" B	15	2.5	BPZ:VVP47.15-2.5	VVP47.15-2.5	54.08
100	100	175	175	G 1" B	20	4	BPZ:VVP47.20-4	VVP47.20-4	67.73

VVP47..S for Conex compression fittings.

Combinable actuator for VVI46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24	2-position	10	N4863	BPZ:SFA71/18	SFA71/18	89.83
AC 230	2-position	210	N4884	S55174-A101	STA23	46.15
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	SUA21/3	28.60
AC 230	2-position	210	N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210	N4884	S55174-A118	STA23B/00	40.69
AC 24	2-position	270	N4884	S55174-A100	STA73	47.06
DC 24	PDM					
AC 24	2-position	270	N4884	S55174-A109	STA73/00	41.47
DC 24	PDM					
AC 24	2-position	270	N4884	S55174-A117	STA73B/00	41.47
DC 24	PDM					
AC 230	2-position	10	N4863	BPZ:SFA21/18	SFA21/18	89.83

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VVI46../2

2-port zone valves, internally threaded, PN16, on/off characteristic



2-port valves, internally threaded connections, for the control of zones or terminal units. Suitable media: water (to VDI 2035), water with anti-freeze.

Stroke	2.5 mm
Leakage rate	0...0.05% of rated valve capacity
Medium	Water
	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Non-linear (on/off)
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VVI46..

Con- nect. thread	STA.. $\Delta p_{\max}$ [kPa]	STA.. Δp_s [kPa]	SFA.. $\Delta p_{\max}$ [kPa]	SFA.. Δp_s [kPa]	SSA Δp_s [kPa]	SSA $\Delta p_{\max}$ [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
Rp 1/2"	200	200	300	300	200	200	15	2.15	S55249-V106	VVI46.15/2	31.59
Rp 3/4"	200	200	300	300	200	200	20	3.5	S55249-V107	VVI46.20/2	34.06
Rp 1"	150	150	250	250	200	200	25	5	S55249-V108	VVI46.25/2	43.94

To ensure noiseless operation, $\Delta p_{\max}$ should not exceed 100 kPa.

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

2-port seat valves, externally threaded, PN25

VVG549..

- With threaded connections to ISO 228/1
- For chilled water and low-temperature hot water in closed circuits, especially for district heat applications

Data sheet CA1Q4380
 Medium temperature 1...150 °C
 PN class PN 25
 Warranty 5 Years



Range overview VVG549..

Con-nect. thread	SAT.. Δp_s [kPa]	SAT.. Δp_{max} [kPa]	SAS.. Δp_s [kPa]	SAS.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G ¾" B	2500	1200	2500	1200	15	0.25	BPZ:VVG549.15-0.25	VVG549.15-0.25	121.81
G ¾" B	2500	1200	2500	1200	15	0.4	BPZ:VVG549.15-0.4	VVG549.15-0.4	121.81
G ¾" B	2500	1200	2500	1200	15	0.63	BPZ:VVG549.15-0.63	VVG549.15-0.63	121.81
G ¾" B	1500	1200	2000	1200	15	1	BPZ:VVG549.15-1	VVG549.15-1	121.81
G ¾" B	1500	1200	2000	1200	15	1.6	BPZ:VVG549.15-1.6	VVG549.15-1.6	121.81
G ¾" B	1500	1200	2000	1200	15	2.5	BPZ:VVG549.15-2.5	VVG549.15-2.5	121.81
G 1" B	1600	1200	1600	1200	20	4	BPZ:VVG549.20-4K	VVG549.20-4K	159.90
G 1¼" B	1600	1200	1600	1200	25	6.3	BPZ:VVG549.25-6.3K	VVG549.25-6.3K	217.10

Combinable actuator for VVG549..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	8	N4584	S55158-A119	SAT31.008	257.40
AC 230	3-position	15	N4584	S55158-A120	SAT31.51	388.70
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	15	N4584	S55158-A118	SAT61.51	462.80
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	N4584	S55158-A117	SAT61.008	301.60

Accessories for VVG549..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Fittings, pipeside with welding connection		BPZ:ALS..	ALS..	
Flange fittings for VVG549.15		FI2:ALG15/F	ALG15/F	40.00
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2	

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

ALS..



Fittings, pipeside with welding connection

Cylindric thread to ISO 228-1 on valve side. Welded connection on the pipe side.
Each ALS.. set consists of 2 cap nuts, 2 inserts and 2 flat seals.

Warranty

5 Years

Fittings with weldable connections: Set of 2

Pipe diameter [mm]	Connecting thread, valve side ["]	Stock no.	Product no.	Price (€)
21.3	G ¾	BPZ:ALS152	ALS152	39.78
26.8	G 1	BPZ:ALS202	ALS202	42.38
33.7	G 1¼	BPZ:ALS252	ALS252	51.35

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Fittings, pipe-side with threaded connection

ALG..2



Cylindric thread to ISO 228-1 on the valve side. Tapered R-externally or cylindrical Rp-internally threaded to ISO 7-1 on the pipe side.

Each fitting set ALG..2 consists of 2 cap nuts, 2 insert nuts and 2 flat seals.

Warranty

2 Years

Range overview ALG..2

Connecting thread, valve side	Connecting thread, pipe side	Material	Stock no.	Product no.	Price (€)
["]	["]				
G 3/4 "	Rp 3/8	Malleable cast iron, phosphated	BPZ:ALG122	ALG122	19.50
G 1/2 "	R 3/8	Brass	BPZ:ALG132	ALG132	15.60
G 1 "	Rp 1/2	Malleable cast iron, phosphated	BPZ:ALG152	ALG152	11.02
G 1 "	Rp 1/2	Brass	S55846-Z100	ALG152B	18.20
G 1 1/4 "	Rp 3/4	Malleable cast iron, phosphated	BPZ:ALG202	ALG202	13.91
G 1 1/2 "	Rp 1	Malleable cast iron, phosphated	BPZ:ALG252	ALG252	16.38
G 1 1/4 "	Rp 3/4	Brass	S55846-Z102	ALG202B	27.04
G 3/4 "	R 1/2	Brass	BPZ:ALG142	ALG142	25.35
G 1 1/2 "	Rp 1	Brass	S55846-Z104	ALG252B	34.19
G 2 "	Rp 1 1/4	Brass	S55846-Z106	ALG322B	45.24
G 2 1/4 "	Rp 1 1/2	Brass	S55846-Z108	ALG402B	70.20
G 2 3/4 "	Rp 2	Brass	S55846-Z110	ALG502B	113.75
G 2 "	Rp 1 1/4	Malleable cast iron, phosphated	BPZ:ALG322	ALG322	22.23
G 2 1/4 "	Rp 1 1/2	Malleable cast iron, phosphated	BPZ:ALG402	ALG402	26.26
G 2 3/4 "	Rp 2	Malleable cast iron, phosphated	BPZ:ALG502	ALG502	44.07

ALG132 and ALG142: pipe connecting thread externally threaded.

For the VMP45.. and VMP47.. valves, 2 sets of 2 fittings must be ordered

Combinable actuator for VDN1../MEN1..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.	Price (€)
				N2111	BPZ:RTN51	RTN51	19.76
AC 230	2-position	210	1	N4884	S55174-A101	STA23	46.15
AC 24	2-position	270		N4884	S55174-A115	STA73PR/00	49.14
DC 24	PDM/parallel operation						
AC 230	2-position	210		N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210		N4884	S55174-A118	STA23B/00	40.69
AC 24	DC 0... 10 V	270	2	N4884	S55174-A104	STA63	109.07
AC 24	3-position	150	1.5	N4893	BPZ:SSA81	SSA81	94.12
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1	178.10
				N2111	BPZ:RTN71	RTN71	75.40
AC 24	2-position	270	1	N4884	S55174-A100	STA73	47.06
DC 24	PDM						
AC 24	2-position	270		N4884	S55174-A109	STA73/00	41.47
DC 24	PDM						
				N2111	BPZ:RTN81	RTN81	81.64
AC 24	2-position	270		N4884	S55174-A117	STA73B/00	41.47
DC 24	PDM						

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VDN1../VEN1..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	150	1.5	N4893	BPZ:SSA31	SSA31	108.94
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1	170.30
AC 24 DC 24	DC 0...10 V	34	1.5	N4893	BPZ:SSA61	SSA61	137.80

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

2-port valves PN10, to DIN

VDN1..

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2105
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VDN1..

kv relation of Xp	Δp_{max} [kPa]	DN	Stock no.	Product no.	Price (€)
0.072...0.43 m³/h/ 2 K 0.057...0.33 m³/h/ 1.5 K 0.037...0.22 m³/h/ 1 K	60	10	BPZ:VDN110	VDN110	18.07
0.073...0.5 m³/h/ 2 K; 0.058...0.4 m³/h/ 1.5 K; 0.038...0.27 m³/h/ 1 K	60	15	BPZ:VDN115	VDN115	20.54
0.22...0.7 m³/h/ 2 K; 0.17...0.55 m³/h/ 1.5 K; 0.11...0.36 m³/h/ 1 K	60	20	BPZ:VDN120	VDN120	30.16

Angle valves PN10, to DIN

VEN1..

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2105
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VEN1..

kv relation of Xp	Δp_{max} [kPa]	DN	Stock no.	Product no.	Price (€)
0.072...0.43 m³/h/ 2 K; 0.057...0.33 m³/h/ 1.5 K; 0.037...0.22 m³/h/ 1 K	60	10	BPZ:VEN110	VEN110	18.07
0.073...0.5 m³/h/ 2 K; 0.058...0.4 m³/h/ 1.5 K; 0.038...0.27 m³/h/ 1 K	60	15	BPZ:VEN115	VEN115	20.54
0.22...0.7 m³/h/ 2 K; 0.17...0.55 m³/h/ 1.5 K; 0.11...0.36 m³/h/ 1 K	60	20	BPZ:VEN120	VEN120	30.16

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VDN2../VEN2../VUN2..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.	Price (€)
				N2111	BPZ:RTN51	RTN51	19.76
AC 230	2-position	210	1	N4884	S55174-A101	STA23	46.15
AC 24	2-position	270		N4884	S55174-A115	STA73PR/00	49.14
DC 24	PDM/parallel operation						
AC 230	2-position	210		N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210		N4884	S55174-A118	STA23B/00	40.69
AC 24	DC 0...10V	270	2	N4884	S55174-A104	STA63	109.07
AC 24	3-position	150	1.5	N4893	BPZ:SSA81	SSA81	94.12
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1	178.10
				N2111	BPZ:RTN71	RTN71	75.40
AC 24	2-position	270	1	N4884	S55174-A100	STA73	47.06
DC 24	PDM						
AC 24	2-position	270		N4884	S55174-A109	STA73/00	41.47
DC 24	PDM						
				N2111	BPZ:RTN81	RTN81	81.64
AC 24	2-position	270		N4884	S55174-A117	STA73B/00	41.47
DC 24	PDM						
AC 230	3-position	150	1.5	N4893	BPZ:SSA31	SSA31	108.94
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1	170.30
AC 24	DC 0...10 V	34	1.5	N4893	BPZ:SSA61	SSA61	137.80
DC 24							

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port seat valves PN10, to NF

VDN2..

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze

The valves can be combined with Siemens actuators RTN../SSA../STA..



Data sheet	N2106
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VDN2..

kv relation of Xp	Con- nect. thread	$\Delta p_{\max}$ [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
0.22...0.7 m³/h / 2 K; 0.17...0.55 m³/h / 1.5 K; 0.11...0.36 m³/h / 1 K	Rp/R ¾"	60	20	1.41	BPZ:VDN220	VDN220	30.16
0.072...0.43 m³/h / 2 K 0.057...0.33 m³/h / 1.5 K 0.037...0.22 m³/h / 1 K	Rp/R ⅝"	60	10	0.63	BPZ:VDN210	VDN210	18.07
0.073...0.50 m³/h / 2 K 0.058...0.40 m³/h / 1.5 K 0.038...0.27 m³/h / 1 K	Rp/R ½"	60	15	0.89	BPZ:VDN215	VDN215	20.54

Valves and actuators

Globe and pressure independent combi valves (PICV)
2-port threaded valves

VEN2..



Angle valves PN10, to NF

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze

The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2106
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VEN2..

kv relation of Xp	Con- nect. thread	$\Delta p_{\max}$ [kPa]	DN	kvs [m³/h]	Stock no.	Product no.	Price (€)
0.072...0.43 m³/h / 2 K 0.057...0.33 m³/h / 1.5 K 0.037...0.22 m³/h / 1 K	Rp/R 3/8"	60	10	0.63	BPZ:VEN210	VEN210	18.07
0.073...0.5 m³/h / 2 K; 0.058...0.4 m³/h / 1.5 K; 0.038...0.27 m³/h / 1 K	Rp/R 1/2"	60	15	0.89	BPZ:VEN215	VEN215	20.54
0.22...0.7 m³/h / 2 K; 0.17...0.55 m³/h / 1.5 K; 0.11...0.36 m³/h / 1 K	Rp/R 3/4"	60	20	1.41	BPZ:VEN220	VEN220	30.16

VUN2..



Reverse angle valves PN10, to NF

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze

The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2106
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VUN2..

kv relation of Xp	Con- nect. thread	$\Delta p_{\max}$ [kPa]	DN	kvs [m³/h]	Stock no.	Product no.	Price (€)
0.14...0.43 m³/h / 2 K; 0.12...0.37 m³/h / 1.5 K; 0.08...0.24 m³/h / 1 K	Rp/R 3/8"	60	10	0.6	BPZ:VUN210	VUN210	19.63
0.13...0.5 m³/h / 2 K; 0.11...0.43 m³/h / 1.5 K; 0.07...0.28 m³/h / 1 K	Rp/R 1/2"	60	15	0.77	BPZ:VUN215	VUN215	22.62

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

Two-port seat lockshield valves

ADN..

Lockshield valves with throttling function for hydraulic balancing and shut-off function when removing / replacing radiator.

Adjustable flow capacity

Data sheet	N2107
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
Valve design	Throughput
Warranty	5 Years



Range overview ADN..

K _v [m³/h]	Con- nect. thread	Δp _{max} [kPa]	DN	k _{vs} [m³/h]	Stock no.	Product no.	Price (€)
0...1.8	Rp/R 3/8"	60	10	0...1.8	BPZ:ADN10	ADN10	15.99
0...2.5	Rp/R 1/2"	60	15	0...2.5	BPZ:ADN15	ADN15	16.77
0...3	Rp/R 3/4"	60	20	0...3	BPZ:ADN20	ADN20	22.62

Angle lockshield valves

AEN..

Lockshield valves with throttling function for hydraulic balancing and shut-off function when removing / replacing radiator.

Adjustable flow capacity

Data sheet	N2107
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
Valve design	Angle
Warranty	5 Years



Range overview AEN..

K _v [m³/h]	Con- nect. thread	Δp _{max} [kPa]	DN	k _{vs} [m³/h]	Stock no.	Product no.	Price (€)
0...1.8	Rp/R 3/8"	60	10	0...1.8	BPZ:AEN10	AEN10	15.99
0...2.5	Rp/R 1/2"	60	15	0...2.5	BPZ:AEN15	AEN15	16.77
0...3	Rp/R 3/4"	60	20	0...3	BPZ:AEN20	AEN20	22.62

Combinable actuator for VD1..CLC..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	2-position	210	1	N4884	S55174-A101	STA23	46.15
AC 24	2-position	270		N4884	S55174-A115	STA73PR/00	49.14
DC 24	PDM/parallel operation						
AC 230	2-position	210		N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210		N4884	S55174-A118	STA23B/00	40.69
AC 24	DC 0...10 V	270	2	N4884	S55174-A104	STA63	109.07
AC 24	3-position	150	1.5	N4893	BPZ:SSA81	SSA81	94.12
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1	178.10

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VD1..CLC..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position PDM	270	1	N4884	S55174-A100	STA73	47.06
AC 24 DC 24	2-position PDM	270		N4884	S55174-A109	STA73/00	41.47
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	STA73B/00	41.47
AC 230	3-position	150	1.5	N4893	BPZ:SSA31	SSA31	108.94
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1	170.30
AC 24 DC 24	DC 0...10 V	34	1.5	N4893	BPZ:SSA61	SSA61	137.80

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port small valves PN10, DIN, 2.5 mm stroke

VD1..CLC..

Small valves with higher k_v -values, for use in ventilation and air conditioning systems for water-side control of chilled ceilings and terminal units in closed circuits. Adjustable flow capacity.
Permissible media: water (to VDI 2035), water with anti-freeze.



The valves can be combined with Siemens actuators SSA.../STA..

Data sheet	N2103
Stroke	2.5 mm
Medium temperature	1...110 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VD1..CLC..

K_v [m³/h]	Con- nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
0.25...1.9	Rp/R ½"	150	15	1.9	BPZ:VD115CLC	VD115CLC	22.62
0.25...2.6	Rp/R ¾"	150	20	2.6	BPZ:VD120CLC	VD120CLC	29.51
0.25...2.6	Rp/R 1"	150	25	2.6	BPZ:VD125CLC	VD125CLC	36.14

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF22..

3-port valves with flanged connections, PN 6



- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4401
Stroke	to DN80: 20 mm DN100: 40 mm
Leakage rate	0...0.02% of the k_{vs} value
Leakage rate bypass	0.5...2 % of the k_{vs} -value
Medium temperature	-10...130 °C
Valve characteristic	Through-port: equal percentage Through-port: k_{vs} 250/400 linear Bypass: linear
Rangeability	DN 25: >50 DN 40...100: >100
Permissible operating pressure	600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 6
Warranty	5 Years

Range overview VXF22..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]					
300		300	300		25	2.5	S55200-V110	VXF22.25-2.5	234.00
300		300	300		25	4	S55200-V111	VXF22.25-4	234.00
300		300	300		25	6.3	S55200-V112	VXF22.25-6.3	234.00
300	300	300	300		40	16	S55200-V114	VXF22.40-16	274.30
300		300	300		25	10	S55200-V113	VXF22.25-10	234.00
300	300	300	300		40	25	S55200-V115	VXF22.40-25	274.30
300	300	300	300		50	40	S55200-V116	VXF22.50-40	343.20
150	300	200	300		65	63	S55200-V117	VXF22.65-63	461.50
75	225	125	300		80	100	S55200-V118	VXF22.80-100	663.00
	125			250	100	160	S55200-V119	VXF22.100-160	1076.40

Δp_{max} -ratings are valid for mixing applications.

Combinable actuator for VXF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for VXF22..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF32..

3-port valves with flanged connections, PN10



- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4402
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the k_{vs} value
Leakage rate bypass	0.5...2 % of the k_{vs} -value
Medium temperature	-10...150 °C
Valve characteristic	Through-port: equal percentage Through-port: k_{vs} 250/400 linear Bypass: linear
Rangeability	DN 15 .. 25: >50 DN 40...150: >100
Permissible operating pressure	1000 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 10
Warranty	5 Years

Range overview VXF32..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]					
	60			100	150	400	S55202-V125	VXF32.150-400	1963.00
400		400	400		15	1.6	S55202-V113	VXF32.15-1.6	253.50
400		400	400		15	2.5	S55202-V114	VXF32.15-2.5	253.50
400		400	400		15	4	S55202-V115	VXF32.15-4	253.50
400		400	400		25	6.3	S55202-V116	VXF32.25-6.3	296.40
400		400	400		25	10	S55202-V117	VXF32.25-10	296.40
400	400	400	400		40	16	S55202-V118	VXF32.40-16	360.10
400	400	400	400		40	25	S55202-V119	VXF32.40-25	360.10
300	400	400	400		50	40	S55202-V120	VXF32.50-40	455.00
150	400	200	400		65	63	S55202-V121	VXF32.65-63	613.60
75	225	125	400		80	100	S55202-V122	VXF32.80-100	826.80
	125			250	100	160	S55202-V123	VXF32.100-160	1250.60
	90			160	125	250	S55202-V124	VXF32.125-250	1560.00

Δp_{max} -ratings are valid for mixing applications.

Combinable actuator for VXF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V	DC 0...10 V	30	no	N4501	S55150-A100	SAX61.03	551.20
DC 24 V	DC 4...20 mA 0...1000 Ohm						
AC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
DC 24 V							
AC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
DC 24 V							
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V	DC 0...10 V	120	No	N4503	S55150-A110	SAV61.00	903.50
DC 24 V	DC 4...20 mA 0...1000 Ohm						

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for C/VXF31..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Replacement sealing glands for VXF32..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

3-port valves with flanged connections, PN 16

VXF42..

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4403
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Leakage rate bypass	0.5...2 % of the kvs-value
Medium temperature	-10...150 °C
Valve characteristic	Through-port: equal percentage Through-port: kvs 250/400 linear Bypass: linear
Rangeability	DN 15...25: >50 DN 32...150: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years



Range overview VXF42..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	kvs	Stock no.	Product no.	Price (€)
$\Delta p_{\max}$	$\Delta p_{\max}$	$\Delta p_{\max}$	$\Delta p_{\max}$	$\Delta p_{\max}$		[m³/h]			
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]					
400		400	400		15	1.6	S55204-V127	VXF42.15-1.6	297.70
400		400	400		15	2.5	S55204-V128	VXF42.15-2.5	297.70
400		400	400		15	4	S55204-V129	VXF42.15-4	297.70
400		400	400		20	6.3	S55204-V130	VXF42.20-6.3	321.10
400		400	400		25	6.3	S55204-V131	VXF42.25-6.3	347.10
400		400	400		25	10	S55204-V132	VXF42.25-10	347.10
400		400	400		32	16	S55204-V133	VXF42.32-16	382.20
400	400	400	400		40	16	S55204-V134	VXF42.40-16	423.80
400	400	400	400		40	25	S55204-V135	VXF42.40-25	423.80
300	400	400	400		50	31.5	S55204-V136	VXF42.50-31.5	533.00
300	400	400	400		50	40	S55204-V137	VXF42.50-40	533.00
150	400	200	400		65	63	S55204-V139	VXF42.65-63	718.90
150	400	200	400		65	50	S55204-V138	VXF42.65-50	718.90
75	225	125	400		80	80	S55204-V140	VXF42.80-80	975.00
75	225	125	400		80	100	S55204-V141	VXF42.80-100	975.00
	125			250	100	125	S55204-V142	VXF42.100-125	1469.00
	125			250	100	160	S55204-V143	VXF42.100-160	1469.00
	90			160	125	200	S55204-V144	VXF42.125-200	1859.00
	90			160	125	250	S55204-V145	VXF42.125-250	1859.00
	60			100	150	315	S55204-V146	VXF42.150-315	2288.00
	60			100	150	400	S55204-V147	VXF42.150-400	2288.00

$\Delta p_{\max}$ -ratings are valid for mixing applications.

Combinable actuator for VXF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V	DC 0...10 V	30	no	N4501	S55150-A100	SAX61.03	551.20
DC 24 V	DC 4...20 mA						
	0...1000 Ohm						

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Replacement sealing glands for VXF42..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF43..



3-port seat valves PN16 with flanged connections

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils in open and closed circuits

When using valves of the V..F43.., V..F53.. lines with a stem heating element and a medium temperature of below -5 °C, the stem sealing gland must be replaced.

Data sheet	N4404
Stroke	40 mm
Leakage rate	0...0.01 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Through-port: equal percentage Through-port: k_{vs} 250/400 linear Bypass: linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel
PN class	PN 16
Warranty	5 Years

Range overview VXF43..

SAV.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
125	250	100	125	S55206-V127	VXF43.100-125	2626.00
90	160	125	200	S55206-V128	VXF43.125-200	3458.00
60	100	150	315	S55206-V129	VXF43.150-315	4732.00
400	650	65	50	S55206-V125	VXF43.65-50	1508.00
400	650	65	63	S55206-V115	VXF43.65-63	1508.00
225	400	80	80	S55206-V126	VXF43.80-80	1989.00
225	400	80	100	S55206-V116	VXF43.80-100	1989.00
125	250	100	160	S55206-V117	VXF43.100-160	2626.00
90	160	125	250	S55206-V118	VXF43.125-250	3458.00
60	100	150	400	S55206-V119	VXF43.150-400	4732.00

Bypass extension for VXF43..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Bypass extension, flanged connections, DN65	N4404	S55845-Z114	ALF41B65	180.70
Bypass extension, flanged connections, DN80	N4404	S55845-Z115	ALF41B80	254.80
Bypass extension, flanged connections, DN100	N4404	S55845-Z116	ALF41B100	300.30
Bypass extension, flanged connections, DN125	N4404	S55845-Z117	ALF41B125	352.30
Bypass extension, flanged connections, DN150	N4404	S55845-Z118	ALF41B150	374.40

Combinable actuator for VXF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24	DC 0...10 V	120	No	N4503	S55150-A110	SAV61.00	903.50
DC 24	DC 4...20 mA						
	0...1000 Ohm						
AC 24	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
DC 24							
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for VXF43..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610	37.44
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40

Accessories for VXF53..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610	37.44
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40

Bypass extension for VXF53..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Bypass extension, flanged connections, DN15	N4404	S55845-Z110	ALF41B15	112.32
Bypass extension, flanged connections, DN25	N4404	S55845-Z111	ALF41B25	119.86
Bypass extension, flanged connections, DN40	N4404	S55845-Z112	ALF41B40	135.20
Bypass extension, flanged connections, DN50	N4404	S55845-Z113	ALF41B50	143.00

Combinable actuator for VXF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00	830.70
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00	903.50
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00	830.70
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

3-port seat valves PN25 with flanged connections

VXF53..

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils in open and closed circuits



When using valves of the V..F43.., V..F53.. lines with a stem heating element and a medium temperature of below -5 °C, the stem sealing gland must be replaced.

Data sheet	N4405
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value; SAX...: 0.05 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Through-port: equal percentage Through-port: k_{vs} 250/400 linear Bypass: linear
Rangeability	>100
Permissible operating pressure	2500 kPa
Material, inside set	Stainless steel
PN class	PN 16 / PN 25
Warranty	5 Years

Range overview VXF53..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]					
1200		1200	1200		15	1.6	S55208-V140	VXF53.15-1.6	497.90
1200		1200	1200		15	2.5	S55208-V141	VXF53.15-2.5	497.90
1200		1200	1200		15	4	S55208-V142	VXF53.15-4	497.90
1200		1200	1200		20	6.3	S55208-V144	VXF53.20-6.3	544.70
1200		1200	1200		25	6.3	S55208-V145	VXF53.25-6.3	621.40
1200		1200	1200		25	10	S55208-V146	VXF53.25-10	621.40
750		1100	1200		32	16	S55208-V148	VXF53.32-16	717.60
500	1150	650	1200		40	16	S55208-V149	VXF53.40-16	786.50
500	1150	650	1200		40	25	S55208-V150	VXF53.40-25	786.50
300	700	400	1150		50	40	S55208-V152	VXF53.50-40	1111.50
	400			650	65	63	S55208-V153	VXF53.65-63	1872.00
	225			400	80	100	S55208-V154	VXF53.80-100	2418.00
	125			250	100	160	S55208-V155	VXF53.100-160	3211.00
	90			160	125	250	S55208-V156	VXF53.125-250	4225.00
	60			100	150	400	S55208-V157	VXF53.150-400	5772.00

Accessories for VXF43.. / VXF53..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Bypass extension, flanged connections, DN15	N4404	S55845-Z110	ALF41B15	112.32
Replacement sealing gland, stem diameter 10 mm, sealing material FEP		S55845-Z150	7428400610	37.44
Bypass extension, flanged connections, DN25	N4404	S55845-Z111	ALF41B25	119.86
Bypass extension, flanged connections, DN40	N4404	S55845-Z112	ALF41B40	135.20
Bypass extension, flanged connections, DN50	N4404	S55845-Z113	ALF41B50	143.00
Bypass extension, flanged connections, DN65	N4404	S55845-Z114	ALF41B65	180.70
Bypass extension, flanged connections, DN80	N4404	S55845-Z115	ALF41B80	254.80
Bypass extension, flanged connections, DN100	N4404	S55845-Z116	ALF41B100	300.30
Bypass extension, flanged connections, DN125	N4404	S55845-Z117	ALF41B125	352.30

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Accessories for VXF43.. / VXF53..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Bypass extension, flanged connections, DN150	N4404	S55845-Z118	ALF41B150	374.40
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060	23.40
Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C		BPZ:428488290	428488290	154.70

Combinable actuator for VXF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	Open:30 Close:10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60	1276.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61	1495.00
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60	1276.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61	1495.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60	1391.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62	1599.00
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA	1950.00

Replacement sealing glands for VXF61..

Product Title	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C	BPZ:428488290	428488290	154.70
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	467956300	195.00

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Replacement sealing glands for VXF61..2

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C		BPZ:428488290	428488290	154.70
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290	46.54
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C		BPZ:467956300	467956300	195.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

M3P..FY..



Modulating control valves with magnetic actuator, PN16, flanged

Mixing and 2-port valves with magnetic actuator for modulating control of chilled or low-pressure hot water systems with closed circuits. Flanged connections, with positioning control, position feedback signal, spring return function, manual control.

When used as a 2 port valve, inlet B (2) must be closed off with the Z155/.. blanking flange. M3P..FYP for media containing mineral oils (data sheet N4454)

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4454
PN class	PN 16
Operating voltage	AC 24 V
Positioning signal	DC 0...10 V DC 4...20 mA
Positioning time	Close: <2 s
Spring return function	1->3 closed
Position feedback	DC 0...10 V
Degree of protection	IP31
Ambient temperature, operation	2...50 °C
Mounting position	Upright to horizontal
Leakage rate	< 0.05 % of k_{vs} value
Leakage rate bypass	ca. 2 % of k_{vs} value
Medium temperature	1...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJL-HB215
Material, inside set	CrNi steel/brass
Warranty	5 Years

Scope of delivery: 1 blanking flange, 1 seal, screws, spring washers and nuts.

Range overview M3P..FY

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.	Price (€)
200	200	130	100	BPZ:M3P100FY	M3P100FY	4056.00
300	300	80	80	BPZ:M3P80FY	M3P80FY	3120.00

Δp_s for use as 2-port valve.

Blanking flanges for M3P..FY..

Product Title	Stock no.	Product no.	Price (€)
Blanking flange, DN100	BPZ:Z155/100	Z155/100	263.90
Blanking flange, DN80	BPZ:Z155/80	Z155/80	208.00

Blanking flanges for MXF461..

Product Title	Stock no.	Product no.	Price (€)
Blanking flange, DN40	BPZ:Z155/40	Z155/40	163.80
Blanking flange, DN65	BPZ:Z155/65	Z155/65	193.70
Blanking flange, DN15	BPZ:Z155/15F	Z155/15F	117.39
Blanking flange, DN32	BPZ:Z155/32F	Z155/32F	152.10

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Modulating control valves with magnetic actuator, PN16, flanged

MXF461..

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of chilled or low-temperature hot water systems in closed circuits. With positioning control, position feedback signal, spring return function and manual control.

When used as a 2 port valve, inlet B (2) must be closed off with the Z155/.. blanking flange.

MXF461..P valves for media containing mineral oils (data sheet N4455)

MXF461.. valves are UL listed



CAUTION!

Use valve only as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4455
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V DC 2...10 V DC 4...20 mA
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1000 kPa
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi steel/brass
Warranty	5 Years
Scope of delivery: 1 blanking flange, 1 seal, screws, spring washers and nuts.	

Range overview MXF461..

$\Delta p_{\max}$ [kPa]	Δp_s [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
300	300	0.6	15	BPZ:MXF461.15-0.6	MXF461.15-0.6	1168.70
300	300	1.5	15	BPZ:MXF461.15-1.5	MXF461.15-1.5	1168.70
300	300	3	15	BPZ:MXF461.15-3.0	MXF461.15-3.0	1168.70
300	300	5	20	BPZ:MXF461.20-5.0	MXF461.20-5.0	1290.90
300	300	8	25	BPZ:MXF461.25-8.0	MXF461.25-8.0	1417.00
300	300	12	32	BPZ:MXF461.32-12	MXF461.32-12	1547.00
300	300	20	40	BPZ:MXF461.40-20	MXF461.40-20	1677.00
300	300	30	50	BPZ:MXF461.50-30	MXF461.50-30	1937.00
300	300	50	65	BPZ:MXF461.65-50	MXF461.65-50	2262.00

Δp_s for use as 2-port valve.

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

MXF461..P



Modulating control valves with magnetic actuator, PN16, flanged, for media containing mineral oils

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of media containing mineral oils in closed circuits. With positioning control, position feedback signal, spring return function and manual control.

MXF461.. are standard valves
MXF461..M are silicon-free valve versions
MXF461.. valves are UL listed

When used as a 2-port valve, inlet B (2) must be closed off with the Z155/.. blanking flange.

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4455
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V
	DC 2...10 V
	DC 4...20 mA
Positioning time	< 2 s
Spring return function	A · AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1000 kPa (10 bar)
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Medium	Heat transfer oil
Valve characteristic	Equal-percentage
	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview MXF461..P

$\Delta p_{\max}$ [kPa]	Δp_s [kPa]	Con- nect. thread	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
300	300	Flange	30	50	BPZ:MXF461.50-30P	MXF461.50-30P	2002.00

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port threaded valves

Accessories for MXG461B..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Stem heating element for media temperatures 0 °C, 30 W, AC 24 V		BPZ:Z366	Z366	248.30
Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		BPZ:ASE12	ASE12	432.90

Valves and actuators

Globe and pressure independent combi valves (PICV)
3-port threaded valves
MXG461B..
Modulating control valves with magnetic actuator, PN16, external thread, DVGW

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of DHW (mains water, water in open circuits), chilled water or low-temperature hot water.

With positioning control, position feedback signal, spring return function and manual control.

MXG461B... valves are UL listed

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4461
PN class	PN 16
Operating voltage	AC 24 V DC 20...30 V DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA DC 0...20 V Phs
Positioning signal	
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP31
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1600 kPa
Leakage rate	< 0.05 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	-20...130 °C
Medium	Water
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Red brass CC491K (Rg5)
Material, inside set	CrNi steel
Product conformity	DVGW approved
Warranty	5 Years

Range overview MXG461B..

Δp_{max} [kPa]	Δp_s [kPa]	Con- nect. thread	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
1000	1000	G 1" B	0.6	15	BPZ:MXG461B15-0.6	MXG461B15-0.6	1859.00
600	600	G 2¾" B	30	50	BPZ:MXG461B50-30	MXG461B50-30	2873.00
1000	1000	G 1" B	1.5	15	BPZ:MXG461B15-1.5	MXG461B15-1.5	1859.00
1000	1000	G 1" B	3	15	BPZ:MXG461B15-3	MXG461B15-3	1859.00
800	800	G 1¼" B	5	20	BPZ:MXG461B20-5	MXG461B20-5	1976.00
700	700	G 1½" B	8	25	BPZ:MXG461B25-8	MXG461B25-8	2080.00
600	600	G 2" B	12	32	BPZ:MXG461B32-12	MXG461B32-12	2262.00
600	600	G 2¼" B	20	40	BPZ:MXG461B40-20	MXG461B40-20	2626.00

The fittings are made of bronze / brass and supplied with the valve.

Δp_s for use as 2-port valve.

MXG461B.. valves with magnetic actuators are UL-listed.

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

Combinable actuator for VXP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	150	N4895	BPZ:SSC31	SSC31	174.20
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61	SSC61	245.70
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	SSC61.5	395.20
AC 24	3-position	150	N4895	BPZ:SSC81	SSC81	162.50
AC 24	3-position	150	N4891	BPZ:SSB81	SSB81	111.93
AC 230	3-position	150	N4891	BPZ:SSB31	SSB31	128.44
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	SSB61	163.80

3-port seat valves, PN16

3-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

V..P45.. valves are only used as mixing or 2-port valves, not as diverting valves.

Data sheet	N4845
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0...0.02 % of k_{vs} value
Medium temperature	1...110 °C
Valve characteristic	Throughport up to k_{vs} 6.3: equal-percentage Throughport from [k_{vs} /] 10: linear Bypass: linear
Rangeability	From $k_{vs}>6,3$: >100 To $k_{vs}=6,3$: >50
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel / Rg5 / brass
PN class	PN 16
Warranty	5 Years

VXP45..



Range overview VXP45..

Con-nect. thread	SSB.. Δp_{max} [kPa]	SSC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
G 1/2" B	400		10	0.25	BPZ:VXP45.10-0.25	VXP45.10-0.25	68.64
G 1/2" B	400		10	0.4	BPZ:VXP45.10-0.4	VXP45.10-0.4	68.64
G 1/2" B	400		10	0.63	BPZ:VXP45.10-0.63	VXP45.10-0.63	67.08
G 1/2" B	400		10	1	BPZ:VXP45.10-1	VXP45.10-1	67.08
G 1/2" B	400		10	1.6	BPZ:VXP45.10-1.6	VXP45.10-1.6	67.08
G 3/4" B	350		15	2.5	BPZ:VXP45.15-2.5	VXP45.15-2.5	80.47
G 1" B	350		20	4	BPZ:VXP45.20-4	VXP45.20-4	94.12
G 1 1/4" B	300		25	6.3	BPZ:VXP45.25-6.3	VXP45.25-6.3	152.10
G 1 1/2" B		300	25	10	BPZ:VXP45.25-10	VXP45.25-10	187.20
G 2" B		175	32	16	BPZ:VXP45.32-16	VXP45.32-16	252.20
G 2 1/4" B		75	40	25	BPZ:VXP45.40-25	VXP45.40-25	325.00

70 % k_{vs} in bypass for all types.

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

Accessories for MXG461S..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6	119.73
Replacement electronic for MXG461.., MXF461.. and MXG461S.., DN15...32	N4455	BPZ:ASE1	ASE1	432.90
Replacement electronic for MXG461.., MXF461.., DN40...65	N4455	BPZ:ASE2	ASE2	432.90

Valves and actuators

Globe and pressure independent combi valves (PICV) 3-port threaded valves

Modulating control valves with magnetic actuator, PN16, external thread, stainless steel

MXG461S..



Mixing and 2-port valves with magnetic actuator for modulating control of general and industrial HVAC plants. For open and closed circuits. With positioning control, position feedback signal, spring return function and manual control.

MXG461S... valves are UL listed.

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve. When used as a 2-port seat valve, port B must be closed off by means of the supplied cover and the cap nut for the fitting.

Data sheet	N4465
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V DC 2...10 V DC 4...20 mA
Positioning time	< 2 s
Spring return function	A -> AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, inside set	CrNi steel
Warranty	5 Years

Range overview MXG461S..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
300	300	1.5	15	BPZ:MXG461S15-1.5	MXG461S15-1.5	2119.00
300	300	8.0	25	BPZ:MXG461S25-8.0	MXG461S25-8.0	2249.00
300	300	12	32	BPZ:MXG461S32-12	MXG461S32-12	2496.00

Union fittings made of stainless steel must delivered by thirds.

Δp_s for use as 2-port valve.

MXG461S.. valves with magnetic actuators are UL-listed.

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

V..P45..

3-port seat valves with bypass, PN16



3-port seat valves with bypass, with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

V..P45.. valves are only used as mixing valves, not as diverting valves.

Data sheet	N4845
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0...0.02 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Equal-percentage: Bypass: linear
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VMP45..

Con- nect. thread	SSB.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
G ½" B	400	10	1	BPZ:VMP45.10-1	VMP45.10-1	80.73
G ½" B	400	10	1.6	BPZ:VMP45.10-1.6	VMP45.10-1.6	80.73
G 1" B	350	20	4	BPZ:VMP45.20-4	VMP45.20-4	123.89
G ½" B	400	10	0.4	BPZ:VMP45.10-0.4	VMP45.10-0.4	82.55
G ¾" B	350	15	2.5	BPZ:VMP45.15-2.5	VMP45.15-2.5	101.14
G ½" B	400	10	0.63	BPZ:VMP45.10-0.63	VMP45.10-0.63	80.73

70 % k_{vs} in bypass for all types.

Combinable actuator for VMP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24	3-position	150	N4891	BPZ:SSB81	SSB81	111.93
AC 230	3-position	150	N4891	BPZ:SSB31	SSB31	128.44
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	SSB61	163.80

Accessories for VXG44..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Fittings, pipe-side with threaded connection		BPZ:ALG..3	ALG..3	

Combinable actuator for VXG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	N4581	S55158-A106	SAS31.00	252.20
AC 230	3-position	120	N4581	S55158-A108	SAS31.50	384.80
AC 230	3-position	30	N4581	S55158-A109	SAS31.53	384.80
AC 24 DC 24	Modbus RTU	30	N4581	S55158-A121	SAS61.03/MO	390.00
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A101	SAS61.33	462.80

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

Combinable actuator for VXG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A102	SAS61.53	462.80
AC 24 DC 24	3-position	30	N4581	S55158-A105	SAS81.33	388.70
AC 230	3-position	30	N4581	S55158-A107	SAS31.03	252.20
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A100	SAS61.03	301.60
AC 24 DC 24	3-position	120	N4581	S55158-A103	SAS81.00	252.20
AC 24 DC 24	3-position	30	N4581	S55158-A104	SAS81.03	252.20

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

VXG44..

3-port seat valves PN16 with externally threaded connections



• With threaded connections to ISO 228/1	
• For chilled water or low-temperature hot water in closed circuits	
Data sheet	N4464
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0...0.02 % of k_{vs} value
Medium temperature	1... 120 °C
Valve characteristic	Throughport: linear Bypass: linear
Rangeability	From DN 20: >100 DN 15: >50
Permissible operating pressure	1600 kPa
Material, valve body	Bronze CC491K (Rg5)
Material, inside set	CrNi steel/Rg5/brass
PN class	PN 16
Warranty	5 Years

Range overview VXG44..

Con- nect. thread	SAS.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
G 1" B	400	15	0.25	BPZ:VXG44.15-0.25	VXG44.15-0.25	150.80
G 1" B	400	15	0.4	BPZ:VXG44.15-0.4	VXG44.15-0.4	150.80
G 1" B	400	15	0.63	BPZ:VXG44.15-0.63	VXG44.15-0.63	150.80
G 1" B	400	15	1	BPZ:VXG44.15-1	VXG44.15-1	150.80
G 1" B	400	15	1.6	BPZ:VXG44.15-1.6	VXG44.15-1.6	150.80
G 1" B	400	15	2.5	BPZ:VXG44.15-2.5	VXG44.15-2.5	150.80
G 1" B	400	15	4	BPZ:VXG44.15-4	VXG44.15-4	150.80
G 1¼" B	400	20	6.3	BPZ:VXG44.20-6.3	VXG44.20-6.3	158.60
G 1½" B	400	25	10	BPZ:VXG44.25-10	VXG44.25-10	184.60
G 2" B	250	32	16	BPZ:VXG44.32-16	VXG44.32-16	249.60
G 2¼" B	125	40	25	BPZ:VXG44.40-25	VXG44.40-25	325.00

Combinable actuator for VXP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	2-position	10	N4865	BPZ:SFP21/18	SFP21/18	99.71
AC 230	2-position	210	N4884	S55174-A103	STP23	52.78
AC 24	3-position	150	N4864	BPZ:SSP81	SSP81	112.45
AC 24	DC 0... 10 V	270	N4884	S55174-A105	STP63	110.24
AC 24	2-position	270	N4884	S55174-A102	STP73	52.78
DC 24	PDM					
AC 230	2-position	210	N4884	S55174-A112	STP23/00	47.19
AC 24	2-position	270	N4884	S55174-A111	STP73/00	47.19
DC 24	PDM					
AC 230	3-position	150	N4864	BPZ:SSP31	SSP31	128.83
AC 24	DC 0... 10 V	34	N4864	BPZ:SSP61	SSP61	163.80
DC 24						

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

3-port valves, PN16

V..P47..

3-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.



VXP47.. and VMP47.. 3-port valves are only used as mixing valves.
They are also suitable for SERTO® compression fittings.

Data sheet	N4847
Stroke	2.5 mm
Leakage rate	0...0.05 % of k_{vs} value
Leakage rate bypass	0...0.05 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Throughport: linear Bypass: linear
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel, brass
Warranty	5 Years

Range overview VXP47..

Con- nect. thread	SFP../SSP.. Δp_{max} [kPa]	STP.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
G ½" B	400	400	10	0.25	BPZ:VXP47.10-0.25	VXP47.10-0.25	54.99
G ½" B	400	250	10	0.4	BPZ:VXP47.10-0.4	VXP47.10-0.4	54.99
G ½" B	400	250	10	0.63	BPZ:VXP47.10-0.63	VXP47.10-0.63	53.43
G ½" B	400	250	10	1	BPZ:VXP47.10-1	VXP47.10-1	53.43
G ½" B	300	150	10	1.6	BPZ:VXP47.10-1.6	VXP47.10-1.6	53.43
G ¾" B	300	150	15	2.5	BPZ:VXP47.15-2.5	VXP47.15-2.5	63.83
G 1" B	175	100	20	4	BPZ:VXP47.20-4	VXP47.20-4	75.14

70 % k_{vs} in bypass for all types.

Combinable actuator for VMP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	2-position	10	N4865	BPZ:SFP21/18	SFP21/18	99.71
AC 230	2-position	210	N4884	S55174-A103	STP23	52.78
AC 24	3-position	150	N4864	BPZ:SSP81	SSP81	112.45
AC 24	DC 0...10 V	270	N4884	S55174-A105	STP63	110.24
AC 24	2-position	270	N4884	S55174-A102	STP73	52.78
DC 24	PDM					
AC 230	2-position	210	N4884	S55174-A112	STP23/00	47.19
AC 24	2-position	270	N4884	S55174-A111	STP73/00	47.19
DC 24	PDM					
AC 230	3-position	150	N4864	BPZ:SSP31	SSP31	128.83
AC 24	DC 0...10 V	34	N4864	BPZ:SSP61	SSP61	163.80
DC 24						

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

V..P47..

3-port seat valves with bypass, PN16



3-port valves with bypass and threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

VXP47.. and VMP47.. 3-port valves are only used as mixing valves.

They are also suitable for SERTO® compression fittings.

Data sheet	N4847
Stroke	2.5 mm
Leakage rate	0...0.05 % of k_{vs} value
Leakage rate bypass	0...0.05 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Throughport: linear Bypass: linear
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel, brass
Warranty	5 Years

Range overview VMP47..

Con- nect. thread	SFP../SSP.. Δp_{max} [kPa]	STP.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1/2" B	400	400	10	0.25	BPZ:VMP47.10-0.25	VMP47.10-0.25	65.26
G 1/2" B	400	400	10	0.4	BPZ:VMP47.10-0.4	VMP47.10-0.4	63.83
G 1/2" B	400	250	10	0.63	BPZ:VMP47.10-0.63	VMP47.10-0.63	63.83
G 1/2" B	400	250	10	1	BPZ:VMP47.10-1	VMP47.10-1	63.83
G 1/2" B	300	150	10	1.6	BPZ:VMP47.10-1.6	VMP47.10-1.6	63.83
G 3/4" B	300	150	15	2.5	BPZ:VMP47.15-2.5	VMP47.15-2.5	78.78

70 % k_{vs} in bypass for all types.

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

3-port zone valves, PN16 with on/off characteristic

VXI46../2

3-port valves, internally threaded connections, for the control of zones or terminal units. Suitable media: water (to VDI 2035), water with anti-freeze.



Stroke	2.5 mm
Leakage rate	0...0.05% of k_{vs} value
Leakage rate bypass	2...5% of k_{vs} value
Medium	Water
	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Non-linear (on/off)
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VXI46..

Con- nect. thread	SFA.. Δp_{max} [kPa]	STA.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Rp 1/2"	300	200	15	2.15	S55249-V109	VXI46.15/2	34.97
Rp 3/4"	300	200	20	3.5	S55249-V110	VXI46.20/2	48.62
Rp 1"	250	150	25	5	S55249-V111	VXI46.25/2	74.75

To ensure noiseless operation, Δp_{max} should not exceed 100 kPa.

Accessories for VXG41..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Fittings, pipe-side with threaded connection		BPZ:ALG..3	ALG..3	

Combinable actuator for VXG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00	427.70
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03	448.50
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03	551.20
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00	427.70
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03	448.50
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO	633.10
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21	873.60
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50	670.80
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51	833.30
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50	670.80
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51	833.30
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60	721.50
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62	878.80

Valves and actuators

Globe and pressure independent combi valves (PICV)
3-port threaded valves

Combinable actuator for VXG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA	1056.90
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50	1145.30
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51	1378.00
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50	1145.30
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51	1378.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60	1246.70
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62	1482.00
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA	1781.00

Replacement sealing glands for VXG41..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		BPZ:428488740	428488740	24.83

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

3-port seat valves PN16 with externally threaded connections

VXG41..

- With threaded connections to ISO 228-1
- For drinking, cooling and chilled water, low and high temperature hot water and brine in open and closed circuits

VXG41..01 are DVGW approved

Data sheet	N4463
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	Standard version: 0.5...2 % of k_{vs} value Special version: 0...0.02 % of k_{vs} value (VXG41..01)
Valve characteristic	Throughport: equal-percentage Bypass: linear
Rangeability	DN 15: > 50 DN 20...50: > 100
Permissible operating pressure	1600 kPa
Material, valve body	Bronze CC499K (CuSn5Zn5Pb2)
Material, inside set	CrNi steel
PN class	PN 16
Warranty	5 Years



Range overview VXG41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1½" B	800	800	800	25	10	BPZ:VXG41.2501	VXG41.2501	491.40
G 2¼" B	525	775	800	40	25	BPZ:VXG41.4001	VXG41.4001	608.40
G 1" B	800	800	800	15	4	BPZ:VXG41.15	VXG41.15	326.30
G 1¼" B	800	800	800	20	6.3	BPZ:VXG41.2001	VXG41.2001	432.90
G 2¾" B	300	450	800	50	40	BPZ:VXG41.5001	VXG41.5001	686.40
G 1" B	800	800	800	15	1.6	BPZ:VXG41.1301	VXG41.1301	326.30
G 1" B	800	800	800	15	2.5	BPZ:VXG41.1401	VXG41.1401	326.30
G 1¼" B	800	800	800	20	6.3	BPZ:VXG41.20	VXG41.20	377.00
G 2" B	800	800	800	32	16	BPZ:VXG41.3201	VXG41.3201	547.30
G 1½" B	800	800	800	25	10	BPZ:VXG41.25	VXG41.25	429.00
G 2" B	800	800	800	32	16	BPZ:VXG41.32	VXG41.32	477.10
G 2¼" B	525	775	800	40	25	BPZ:VXG41.40	VXG41.40	533.00
G 2¾" B	300	450	800	50	40	BPZ:VXG41.50	VXG41.50	595.40

VXG41..01 are DVGW (drinking water) approved.

VXG41..01 are supplied with tight bypass

Δp_{max} -ratings are valid for mixing applications.

ALG..3 fittings must be ordered as individual items and will be delivered separately.

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

MXG461..



Modulating control valves with magnetic actuator, PN16, external thread

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of chilled or low-temperature hot water systems in closed circuits. With positioning control, position feedback signal, spring return function and manual control.

When used as a 2-port valve, port B must be closed off with the accessories (nut, cover, gasket) provided with the valve.

MXG461..P valves for media containing mineral oils (data sheet N4455)

MXG461.. valves are UL listed

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4455
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V
	DC 2...10 V
	DC 4...20 mA
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1000 kPa
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Valve characteristic	Equal-percentage
	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview MXG461..

Δp_{max} [kPa]	Δp_s [kPa]	Con- nect. thread	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
300	300	G 1" B	0.6	15	BPZ:MXG461.15-0.6	MXG461.15-0.6	995.80
300	300	G 1" B	1.5	15	BPZ:MXG461.15-1.5	MXG461.15-1.5	995.80
300	300	G 1" B	3	15	BPZ:MXG461.15-3.0	MXG461.15-3.0	994.50
300	300	G 1¼" B	5	20	BPZ:MXG461.20-5.0	MXG461.20-5.0	1071.20
300	300	G 1½" B	8	25	BPZ:MXG461.25-8.0	MXG461.25-8.0	1193.40
300	300	G 2" B	12	32	BPZ:MXG461.32-12	MXG461.32-12	1289.60
300	300	G 2¼" B	20	40	BPZ:MXG461.40-20	MXG461.40-20	1391.00
300	300	G 2¾" B	30	50	BPZ:MXG461.50-30	MXG461.50-30	1456.00

Fittings ALG..3 must be ordered as separate items and are also supplied as such.

Δp_s for use as 2-port valve

Accessories for MXG461..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	ALG153	16.38
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	ALG203	21.19
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6	119.73
Replacement electronic for MXG461.., MXF461.. and MXG461S.., DN 15...32	N4455	BPZ:ASE1	ASE1	432.90

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

Accessories for MXG461..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Replacement electronic for MXG461..., MXF461..., DN40...65	N4455	BPZ:ASE2	ASE2	432.90
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	ALG253	24.96
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	ALG323	33.54
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	ALG403	39.78
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	ALG503	66.56

Fittings: Set of 3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	ALG153	16.38
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	ALG203	21.19
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	ALG253	24.96
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	ALG323	33.54
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	ALG403	39.78
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	ALG503	66.56

Accessories for MXG461..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6	119.73

Fittings: Set of 3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	ALG153	16.38
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	ALG203	21.19
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	ALG253	24.96
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	ALG323	33.54
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	ALG403	39.78
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	ALG503	66.56

Fittings, pipeside with welding connection

Cylindric thread to ISO 228-1 on valve side. Welded connection on the pipe side.
Each ALS.. set consists of 2 cap nuts, 2 inserts and 2 flat seals.

Warranty

5 Years

ALS..



Fittings with weldable connections: Set of 2

Pipe diameter [mm]	Connecting thread, valve side ["]	Stock no.	Product no.	Price (€)
21.3	G ¾	BPZ:ALS152	ALS152	39.78
26.8	G 1	BPZ:ALS202	ALS202	42.38
33.7	G 1¼	BPZ:ALS252	ALS252	51.35

Valves and actuators

Globe and pressure independent combi valves (PICV)
3-port threaded valves
ALG..3**Fittings, pipe-side with threaded connection**

Cylindric thread to ISO 228-1 on the valve side. Tapered R-externally or cylindrical Rp-internally threaded to ISO 7-1 on the pipe side.

Each fitting set ALG..3 consists of 3 cap nuts, 3 insert nuts and 3 flat seals.

Warranty

2 Years

Range overview ALG..3

Connecting thread, valve side	Connecting thread, pipe side	Material	Stock no.	Product no.	Price (€)
["]	["]				
G ¾ "	Rp ¾	Malleable cast iron, phosphated	BPZ:ALG123	ALG123	28.99
G 1 "	Rp ½	Malleable cast iron, phosphated	BPZ:ALG153	ALG153	16.38
G 1¼ "	Rp ¾	Malleable cast iron, phosphated	BPZ:ALG203	ALG203	21.19
G 1 "	Rp ½	Brass	S55846-Z101	ALG153B	27.30
G ½ "	R ¾	Brass	BPZ:ALG133	ALG133	23.40
G 1¼ "	Rp ¾	Brass	S55846-Z103	ALG203B	40.69
G ¾ "	R ½	Brass	BPZ:ALG143	ALG143	37.96
G 1½ "	Rp 1	Brass	S55846-Z105	ALG253B	51.09
G 2 "	Rp 1¼	Brass	S55846-Z107	ALG323B	67.60
G 2¼ "	Rp 1½	Brass	S55846-Z109	ALG403B	105.17
G 1½ "	Rp 1	Malleable cast iron, phosphated	BPZ:ALG253	ALG253	24.96
G 2¾ "	Rp 2	Brass	S55846-Z111	ALG503B	170.30
G 2 "	Rp 1¼	Malleable cast iron, phosphated	BPZ:ALG323	ALG323	33.54
G 2¼ "	Rp 1½	Malleable cast iron, phosphated	BPZ:ALG403	ALG403	39.78
G 2¾ "	Rp 2	Malleable cast iron, phosphated	BPZ:ALG503	ALG503	66.56

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

Combinable actuator for VPF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	N4510	S55150-A121	SAV31P00	815.10
AC 24	DC 0...10 V	120	N4510	S55150-A119	SAV61P00	821.60
DC 24	DC 4...20 mA					
	0...1000 Ohm					
AC 24	3-position	120	N4510	S55150-A120	SAV81P00	755.30
DC 24						
AC 230	3-position	30	N4509	S55150-A118	SAX31P03	416.00
AC 24	DC 0...10 V	30	N4509	S55150-A114	SAX61P03	509.60
DC 24	DC 4...20 mA					
	0...1000 Ohm					
AC 24	3-position	30	N4509	S55150-A116	SAX81P03	416.00
DC 24						
AC 24	3-position	20 mm: 40	N4833	S55150-A130	SQV91P30	1202.50
DC 24	DC 0...10 V	40 mm: 80				
	DC 4...20 mA					
AC 24	3-position	20 mm: 40	N4833	S55150-A131	SQV91P40	1202.50
DC 24	DC 0...10 V	40 mm: 80				
	DC 4...20 mA					

Overview differential pressure

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Combi valve, flanged, PN16, DN50, 2.3...15 m ³ /h	N4315	S55266-V100	VPF43.50F16	1123.20
Combi valve, flanged, PN16, DN50, 4.3...25 m ³ /h	N4315	S55266-V101	VPF43.50F25	1123.20
Combi valve, flanged, PN16, DN65, 4.4...25 m ³ /h	N4315	S55266-V102	VPF43.65F24	1703.00
Combi valve, flanged, PN16, DN65, 6...35 m ³ /h	N4315	S55266-V103	VPF43.65F35	1703.00
Combi valve, flanged, PN16, DN80, 5.3...34 m ³ /h	N4315	S55266-V104	VPF43.80F35	1963.00
Combi valve, flanged, PN16, DN80, 7...43 m ³ /h	N4315	S55266-V105	VPF43.80F45	1963.00

Accessories for VPF43..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	ALP45	15.86
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48	34.71

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

VPF43..

Combi valves (PICV) PN16 with flanged connections



For use in heating, ventilating, air conditioning systems and district heating as a control valve in closed circuits.

Data sheet	N4315
Leakage rate	Class IV (0...0.01% of volumetric flow)
PN class	PN 16
Medium	Water
	Water with anti-freeze
Valve characteristic	Linear
Rangeability	1:100
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron
Material, inside set	Stainless steel, Brass (DZR)
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPF43..

DN	Vol. flow V _{min} [m³/h]	Vol. flow V [m³/h]	ΔP _{min} [kPa]	SAX..P Δp _{max} [kPa]	SAX..P Δp _s [kPa]	SQV..P Δp _{max} [kPa]	SQV..P Δp _s [kPa]	Stock no.	Product no.	Price (€)
100	12.1	68	35			600	600	S55266-V106	VPF43.100F70	2106.00
100	14.8	90	75			600	600	S55266-V107	VPF43.100F90	2106.00
125	18.5	110	35			600	600	S55266-V108	VPF43.125F110	6435.00
125	23	135	53			600	600	S55266-V109	VPF43.125F135	6435.00
150	25.6	148	35			600	600	S55266-V110	VPF43.150F160	6838.00
150	32	195	65			600	600	S55266-V111	VPF43.150F200	6838.00
50	2.3	15	20	600	600	600	600	S55266-V100	VPF43.50F16	1123.20
50	4.3	25	50	600	600	600	600	S55266-V101	VPF43.50F25	1123.20
65	4.4	25	25	600	600	600	600	S55266-V102	VPF43.65F24	1703.00
65	6	35	55	600	600	600	600	S55266-V103	VPF43.65F35	1703.00
80	5.3	34	25	600	600	600	600	S55266-V104	VPF43.80F35	1963.00
80	7	43	50	600	600	600	600	S55266-V105	VPF43.80F45	1963.00

Further information to the actuators please see "Actuators for combi valves".

Check the datasheet for detailed dP_{min} values per presetting

Combinable actuator for VPF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	N4510	S55150-A121	SAV31P00	815.10
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	SAV61P00	821.60
AC 24 DC 24	3-position	120	N4510	S55150-A120	SAV81P00	755.30
AC 230	3-position	30	N4509	S55150-A118	SAX31P03	416.00
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4509	S55150-A114	SAX61P03	509.60

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

Combinable actuator for VPF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	3-position	30	N4509	S55150-A116	SAX81P03	416.00
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	SQV91P30	1202.50
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	SQV91P40	1202.50

Overview differential pressure

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Combi valve, flanged, PN25, DN50, 2.3...15 m ³ /h	N4316	S55266-V112	VPF53.50F16	1292.20
Combi valve, flanged, PN25, DN50, 4.3...25 m ³ /h	N4316	S55266-V113	VPF53.50F25	1292.20
Combi valve, flanged, PN25, DN65, 4.4...24 m ³ /h	N4316	S55266-V114	VPF53.65F24	2067.00
Combi valve, flanged, PN25, DN65, 6...35 m ³ /h	N4316	S55266-V115	VPF53.65F35	2067.00
Combi valve, flanged, PN25, DN80, 5.3...35 m ³ /h	N4316	S55266-V116	VPF53.80F35	2249.00
Combi valve, flanged, PN25, DN80, 7...43 m ³ /h	N4316	S55266-V117	VPF53.80F45	2249.00

Accessories for VPF53..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	ALP45	15.86
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48	34.71

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

VPF53..



Combi valves (PICV) PN25 with flanged connections

For use in heating, ventilating, air conditioning systems and district heating as a control valve in closed circuits

Data sheet	N4316
Leakage rate	Class IV (0...0.01% of volumetric flow)
PN class	PN 25
Medium	Water
	Water with anti-freeze
Valve characteristic	Linear
Rangeability	1:100
Permissible operating pressure	2500 kPa
Material, valve body	Cast iron EN-GJS-400-15
Material, inside set	Stainless steel, Brass (DZR)
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPF53..

DN	Vol. flow Vmin [m³/h]	Vol. flow V [m³/h]	ΔP_{min} [kPa]	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAX.. P [kPa]	SAX.. P Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	SQV.. Δp_{max} [kPa]	SQV.. Δp_s [kPa]	SQV.. P [kPa]	SQV.. P Δp_s [kPa]	Stock no.	Product no.	Price (€)
100	12.1	68	35					600	600	600	600			S55266-V118	VPF53.100F70	2626.00
100	14.8	90	75					600	600	600	600			S55266-V119	VPF53.100F90	2626.00
125	18.5	110	35					600	600	600	600			S55266-V120	VPF53.125F110	8060.00
125	23	135	53					600	600	600	600			S55266-V121	VPF53.125F135	8060.00
150	25.6	148	35					600	600	600	600			S55266-V122	VPF53.150F160	8541.00
150	32	195	65					600	600	600	600			S55266-V123	VPF53.150F200	8541.00
50	2.3	15	20			600	600					600	600	S55266-V112	VPF53.50F16	1292.20
50	4.3	25	50	600	600					600	600			S55266-V113	VPF53.50F25	1292.20
65	4.4	25	25	600	600					600	600			S55266-V114	VPF53.65F24	2067.00
65	6	35	55	600	600					600	600			S55266-V115	VPF53.65F35	2067.00
80	5.3	34	25	600	600					600	600			S55266-V116	VPF53.80F35	2249.00
80	7	43	50	600	600					600	600			S55266-V117	VPF53.80F45	2249.00

Further information to the actuators please see "Actuators for combi valves".

Check the datasheet for detailed ΔP_{min} values per presetting

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

Intelligent Valve as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement.

EVF..



- Ethernet Daisychain for BACnet IP integration into Design
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator - a cloud-based application to manage fleet of sites
 - Power supply AC/DC 24 V
 - Control signal analog DC0/2..10V or 4..20mA
 - With flanged connections to ISO 7005/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
 - Volumetric flow 10'000...120'000 l/h

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K +/- 6% (25...100% V100)
Control accuracy, volume flow	
Rangeability	1:100
Leakage rate	0.03 % of kvs-value
Valve characteristic	selectable
Medium	Low-temperature hot water High-temperature hot water Chilled water
Medium temperature	1...120 °C
Material, inside set	Stainless steel
Warranty	5 Years

Range overview EVF..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k _{vs} [m³/h]	SAV.. Δp _{max} [kPa]	SAV.. Δp _s [kPa]	SAX.. Δp _{max} [kPa]	SAX.. Δp _s [kPa]	Stock no.	Product no.	Price (€)
65	30	10	55			600	1600	S55300-M106	EVF4U20E065	3601.00
80	48	16	80			600	1600	S55300-M107	EVF4U20E080	3978.00
100	75	25	100	600	1600			S55300-M108	EVF4U20E100	4615.00
125	120	40	142	600	1600			S55300-M109	EVF4U20E125	5980.00

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

EXF..


Intelligent Valve 3-Port configuration as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement

- Ethernet Daisychain for BACnet IP integration into Desigo
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator – a cloud-based application to manage fleet of sites
 - Power supply AC/DC 24 V
 - Control signal analog DC0/2...10V or 4...20mA
 - With flanged connections to ISO 7005/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
 - Volume flow 6000...50'000 l/h.

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog outputs, number	1
Analog outputs	1
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 6% (25...100% V100)
Rangeability	1:100
Leakage rate	0.03 % of kvs Bypass: 1...3 % of kvs
Valve characteristic	selectable
Medium	Low-temperature hot water High-temperature hot water Chilled water
Medium temperature	1...120 °C
Material, inside set	Stainless steel
Packaging unit	Unit
Warranty	5 Years

Range overview EXF..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	kvs [m³/h]	SAX.. Δp _{max} [kPa]	Stock no.	Product no.	Price (€)
65	20	6	54	150	S55300-M117	EXF4U20E065	3887.00
80	32	9.6	79	75	S55300-M118	EXF4U20E080	4147.00
100	50	15	116	125	S55300-M119	EXF4U20E100	5135.00

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Intelligent Valve - as a sensor controlled pressure independent control valve PN16 with threaded connection including flow and capacity measurement.

EVG..



- Ethernet Daisychain for BACnet IP integration into Design
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator – a cloud-based application to manage fleet of sites
 - Power supply AC/DC 24 V
 - Control signal analog DC 0/2...10 V or 4...20 mA
 - With threaded connections to ISO 228/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
 - Volumetric flow 500...18'000 l/h

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Power consumption	8.5 VA 5 W
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog outputs	1
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
$\Delta p_{\max}$	350 kPa
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 6% (25...100% V100)
Rangeability	1:100
Leakage rate	"Watertight" as per EN 60534-4 L/1, better than class 5
Valve characteristic	selectable
Medium	Low-temperature hot water High-temperature hot water Chilled water
Medium temperature	1...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass
Material, inside set	Brass
Warranty	5 Years

Range overview EVG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	kvs [m³/h]	GLA.. $\Delta p_{\max}$ [kPa]	GLA.. Δp_s [kPa]	Stock no.	Product no.	Price (€)
15	1.5	0.45	3.7	600	1400	S55300-M100	EVG4U10E015	1170.00
20	3	0.9	5	600	1400	S55300-M101	EVG4U10E020	1193.40
25	4.5	1.35	10	600	1400	S55300-M102	EVG4U10E025	1225.90

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Range overview EVG..

DN	Vol. flow V [m³/h]	Vol. flow V _{min} [m³/h]	k _{vs} [m³/h]	GLA.. Δp _{max} [kPa]	GLA.. Δp _s [kPa]	Stock no.	Product no.	Price (€)
32	7	2.1	11	600	1000	S55300-M103	EVG4U10E032	1352.00
40	11.5	3.5	26	600	800	S55300-M104	EVG4U10E040	1482.00
50	18	5.4	30	600	600	S55300-M105	EVG4U10E050	1651.00

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

Intelligent Valve 3-Port configuration as a sensor controlled pressure independent control valve PN16 threaded connection including flow and capacity measurement.

EXG..



- Ethernet Daisychain for BACnet IP integration into Design
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator – a cloud-based application to manage fleet of sites.
 - Power supply AC/DC 24 V
 - Control signal analog DC 0/2...10 V or 4...20 mA
 - With threaded connections to ISO 228/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
- Volumetric flow 360...12'000 l/h

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Power consumption	8.5 VA / 5 W
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog outputs, number	1
Analog outputs	1
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
$\Delta p_{\max}$	200 kPa
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 6% (25...100% V100)
Rangeability	1:100
Leakage rate	"Watertight" as per EN 60534-4 L1, better than class 4 Bypass: selectable
Valve characteristic	Low-temperature hot water High-temperature hot water Chilled water
Medium	1...120 °C
Medium temperature	1600 kPa
Permissible operating pressure	Brass
Material, valve body	Brass
Material, inside set	Unit
Packaging unit	5 Years
Warranty	

Range overview EXG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k_{vs} [m³/h]	GLA.. $\Delta p_{\max}$ [kPa]	Stock no.	Product no.	Price (€)
15	1.2	0.36	3.7	200	S55300-M111	EXG4U10E015	1207.70

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Range overview EXG..

DN	Vol. flow V [m³/h]	Vol. flow V _{min} [m³/h]	k _{vs} [m³/h]	GLA.. Δp _{max} [kPa]	Stock no.	Product no.	Price (€)
20	2	0.6	4	200	S55300-M112	EXG4U10E020	1246.70
25	3.2	0.96	8	200	S55300-M113	EXG4U10E025	1298.70
32	5	1.5	10	200	S55300-M114	EXG4U10E032	1430.00
40	8	2.4	18	200	S55300-M115	EXG4U10E040	1664.00
50	12	3.6	26	200	S55300-M116	EXG4U10E050	1950.00

Combinable actuator for VPD.. / VPE..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.	Price (€)
				N2111	BPZ:RTN51	RTN51	19.76
AC 230	2-position	210	1	N4884	S55174-A101	STA23	46.15
AC 24	2-position	270		N4884	S55174-A115	STA73PR/00	49.14
DC 24	PDM/parallel operation						
AC 230	2-position	210		N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210		N4884	S55174-A118	STA23B/00	40.69
AC 24	DC 0...10V	270	2	N4884	S55174-A104	STA63	109.07
AC 24	3-position	150	1.5	N4893	BPZ:SSA81	SSA81	94.12
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1	178.10
				N2111	BPZ:RTN71	RTN71	75.40
AC 24	2-position	270	1	N4884	S55174-A100	STA73	47.06
DC 24	PDM						
AC 24	2-position	270		N4884	S55174-A109	STA73/00	41.47
DC 24	PDM						
				N2111	BPZ:RTN81	RTN81	81.64
AC 24	2-position	270		N4884	S55174-A117	STA73B/00	41.47
DC 24	PDM						
AC 230	3-position	150	1.5	N4893	BPZ:SSA31	SSA31	108.94
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1	170.30
AC 24	DC 0...10 V	34	1.5	N4893	BPZ:SSA61	SSA61	137.80
DC 24							

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

2-port seat MiniCombiValves (PICV)

VPD..

Combi valves with presetting, PN 10, with connections according to EN215 for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits



Suitable media: Water (to VDI 2035), water with anti-freeze.

The valves can be operated with Siemens actuators type SSA.. / STA.. and thermostatic actuators RTN..

Data sheet	N2185
Stroke	2.5 mm
PN class	PN 10
Medium	Water with anti-freeze
Medium temperature	1...90 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
Material, inside set	EPDM
Warranty	5 Years

Range overview VPD..

DN	Con- nect. thread	Vol. flow V [l/h]	kv at 0.5 mm stroke [m³/h]	ΔP_w [kPa]	Δp_{max} [kPa]	ΔP_{min} [kPa]	Stock no.	Product no.	Price (€)
10	Rp/R 3/8"	200	0.2	10	200	20	BPZ:VPD110B-200	VPD110B-200	105.82
15	Rp/R 1/2"	145	0.15	5	200	10	BPZ:VPD115A-145	VPD115A-145	116.48
15	Rp/R 1/2"	45	0.05	5	200	6	BPZ:VPD115A-45	VPD115A-45	116.48
15	Rp/R 1/2"	90	0.09	5	200	8	BPZ:VPD115A-90	VPD115A-90	116.48
15	Rp/R 1/2"	200	0.2	10	200	20	BPZ:VPD115B-200	VPD115B-200	116.48

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VPE..



Angle MiniCombiValves (PICV)

Combi valves with presetting, PN 10, with connections according to EN215 for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits

Suitable media: Water (to VDI 2035), water with anti-freeze.

The valves can be operated with Siemens actuators type SSA.. / STA.. and thermostatic actuators RTN..

Data sheet	N2185
Stroke	2.5 mm
PN class	PN 10
Medium	Water with anti-freeze
Medium temperature	1...90 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
Material, inside set	EPDM
Warranty	5 Years

Range overview VPE..

DN	Connect. thread	Vol. flow V [l/h]	kv at 0.5 mm stroke [m ³ /h]	ΔP_w [kPa]	Δp_{max} [kPa]	ΔP_{min} [kPa]	Stock no.	Product no.	Price (€)
15	Rp/R ½"	145	0.15	5	200	10	BPZ:VPE115A-145	VPE115A-145	116.48
15	Rp/R ½"	45	0.05	5	200	6	BPZ:VPE115A-45	VPE115A-45	116.48
15	Rp/R ½"	90	0.09	5	200	8	BPZ:VPE115A-90	VPE115A-90	116.48

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Combi valves (PICV) PN25, internally threaded

VPI46..

Pre-adjustable Combi valves, PN 25, internally threaded for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30...11500 l/h. With or without differential pressure test points.



Data sheet	N4855
Stroke	Up to DN 15: 2.5 mm DN 20: 5 mm DN 25-32: 5.5 mm DN 40-50: 15 mm
Leakage rate	Class IV (0...0.01% of volumetric flow V_{100})
PN class	PN 25
Medium	Water Water with anti-freeze
Medium temperature	1...120 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	Linear
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant brass (DR), CW602N, stainless steel, PPS
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPI46..

DN	Con- nect. thread	Vol. flow V [l/h]	Vol. flow V _{min} [l/h]	SUA.. Δp_{max} [kPa]	SUA.. Δp_{min} [kPa]	SSA.. Δp_{max} [kPa]	SSA.. Δp_{min} [kPa]	STA...3 Δp_{max} [kPa]	STA...3 Δp_{min} [kPa]	SAY...P Δp_{max} [kPa]	SAY...P Δp_{min} [kPa]	Stock no.	Product no.	Price (€)
15	Rp 1/2"	200	30	600	16	600	16	600	16			S55264-V109	VPI46.15L0.2	91.00
15	Rp 1/2"	200	30	600	16	600	16	600	16			S55264-V112	VPI46.15L0.2Q	98.67
15	Rp 1/2"	575	100	600	19	600	19	600	19			S55264-V110	VPI46.15L0.6	91.00
15	Rp 1/2"	575	100	600	19	600	19	600	19			S55264-V113	VPI46.15L0.6Q	98.67
20	Rp 3/4"	1330	220			600	22	600	21			S55264-V111	VPI46.20F1.4	106.47
20	Rp 3/4"	1330	220			600	22	600	21			S55264-V114	VPI46.20F1.4Q	114.92
25	Rp 1"	1800	280			600	39	600	39			S55264-V125	VPI46.25F1.8	131.30
25	Rp 1"	1800	280			600	39	600	39			S55264-V127	VPI46.25F1.8Q	139.10
32	Rp 1 1/4"	4000	550			600	28	600	24			S55264-V126	VPI46.32F4	236.60
32	Rp 1 1/4"	4000	550			600	28	600	24			S55264-V128	VPI46.32F4Q	245.70
40	Rp 1 1/2"	9500	1370							600	25	S55264-V129	VPI46.40F9.5Q	696.80
50	Rp 1 1/2"	11500	1400							600	36	S55264-V130	VPI46.50F12Q	722.80

Further information to the actuators please see "Actuators for combi valves with 2.5 mm stroke" and "Actuators for combi valves with 2.5/5 mm stroke and radiator valves".

VPI46..Q: with testpoint.

Check the datasheet for detailed Δp_{min} values per presetting

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Actuators for valves VPI46..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Electromotoric actuator, 200 N, 15 mm, AC 230 V, 3P, 30 s	A6V10628469	S55150-A132	SAY31P03	380.90
Electromotoric actuator, 200 N, 15 mm, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	A6V10628469	S55150-A133	SAY61P03	460.20
Electromotoric actuator, 200 N, 15 mm, AC/DC 24 V, 3P, 30 s	A6V10628469	S55150-A134	SAY81P03	380.90

Accessories for VPI46..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	ALP45	15.86
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48	34.71

Combinable actuator for VPI46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24	3-position	67.5	A6V11858276	S55180-A106	SSA131.00	84.50
AC/DC 24	4...20 mA	25	A6V11858278	S55180-A110	SSA151.05HF	136.50
AC/DC 24	DC 0...10 V	25	A6V11858276	S55180-A107	SSA161.05	115.70
AC/DC 24	DC 0...10 V	25	A6V11858278	S55180-A108	SSA161.05HF	136.50
AC/DC 24	DC 0...10 V	25	A6V11858278	S55180-A109	SSA161E.05HF	136.50
230	3-position	67.5	A6V11858276	S55180-A105	SSA331.00	97.50
AC 230	3-position	30	A6V10628469	S55150-A132	SAY31P03	380.90
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	A6V10628469	S55150-A133	SAY61P03	460.20
AC 24 DC 24	3-position	30	A6V10628469	S55150-A134	SAY81P03	380.90
AC 230	2-position	210	N4884	S55174-A101	STA23	46.15
AC 24 DC 24	2-position PDM/parallel operation	270	N4884	S55174-A115	STA73PR/00	49.14
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	SUA21/3	28.60
AC 230	2-position	210	N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210	N4884	S55174-A118	STA23B/00	40.69
AC 24	DC 0...10 V	270	N4884	S55174-A104	STA63	109.07
AC 24	3-position	150	N4893	BPZ:SSA81	SSA81	94.12
AC 24	3-position	150	N4893	BPZ:SSA81.1	SSA81.1	178.10
AC 24 DC 24	2-position PDM	270	N4884	S55174-A100	STA73	47.06
AC 24 DC 24	2-position PDM	270	N4884	S55174-A109	STA73/00	41.47
AC 24 DC 24	2-position PDM	270	N4884	S55174-A117	STA73B/00	41.47
AC 230	3-position	150	N4893	BPZ:SSA31	SSA31	108.94
AC 230	3-position	150	N4893	BPZ:SSA31.1	SSA31.1	170.30
AC 24 DC 24	DC 0...10 V	34	N4893	BPZ:SSA61	SSA61	137.80

Overview differential pressures

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Combi valves, PN25, DN15, 30...200 l/h	N4855	S55264-V109	VPI46.15L0.2	91.00
Combi valves, PN25, DN15, 30...200 l/h, pressure test points	N4855	S55264-V112	VPI46.15L0.2Q	98.67
Combi valves, PN25, DN15, 100...575 l/h	N4855	S55264-V110	VPI46.15L0.6	91.00
Combi valves, PN25, DN15, 100...575 l/h, pressure test points	N4855	S55264-V113	VPI46.15L0.6Q	98.67
Combi valves, PN25, DN20, 220...1330 l/h	N4855	S55264-V111	VPI46.20F1.4	106.47

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

Overview differential pressures

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Combi valves, PN25, DN20, 220...1330 l/h, pressure test points	N4855	S55264-V114	VPI46.20F1.4Q	114.92
Combi valves, PN25, DN25, 280...1800 l/h	N4855	S55264-V125	VPI46.25F1.8	131.30
Combi valves, PN25, DN25, 280...1800 l/h, pressure test points	N4855	S55264-V127	VPI46.25F1.8Q	139.10
Combi valves, PN25, DN32, 550...4000 l/h	N4855	S55264-V126	VPI46.32F4	236.60
Combi valves, PN25, DN32, 550...4000 l/h, pressure test points	N4855	S55264-V128	VPI46.32F4Q	245.70
Combi valves, PN25, DN40, 1370...9500 l/h, pressure test points	N4855	S55264-V129	VPI46.40F9.5Q	696.80
Combi valves, PN25, DN50, 1400...11500 l/h, pressure test points	N4855	S55264-V130	VPI46.50F12Q	722.80

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VPP46..



Combi valves (PICV) PN25, externally threaded

Pre-adjustable Combi valves, PN 25, externally threaded for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30...4000 l/h. With or without differential pressure test points.

Data sheet	N4855
Stroke	Up to DN 15: 2.5 mm DN 20: 5 mm DN 25-32: 5.5 mm
Leakage rate	Class IV (0...0.01% of volumetric flow V_{100})
PN class	PN 25
Medium	Water Water with anti-freeze
Medium temperature	1...120 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	Linear
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant brass (DR), CW602N, stainless steel, PPS
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPP46..

DN	Connect. thread	Vol. flow V [l/h]	Vol. flow V _{min} [l/h]	STA...3.. Δp_{max} [kPa]	STA...3.. Δp_{min} [kPa]	SSA.. Δp_{max} [kPa]	SSA.. Δp_{min} [kPa]	Stock no.	Product no.	Price (€)
10	G 1/2"	200	30	600	16	600	16	S55264-V101	VPP46.10L0.2	75.27
10	G 1/2"	200	30	600	16	600	16	S55264-V105	VPP46.10L0.2Q	87.10
10	G 1/2"	370	65	600	17	600	17	S55264-V132	VPP46.10L0.4Q	89.70
15	G 3/4"	200	30	600	16	600	16	S55264-V102	VPP46.15L0.2	87.10
15	G 3/4"	200	30	600	16	600	16	S55264-V106	VPP46.15L0.2Q	94.90
15	G 3/4"	575	100	600	19	600	19	S55264-V103	VPP46.15L0.6	87.10
15	G 3/4"	575	100	600	19	600	19	S55264-V107	VPP46.15L0.6Q	94.90
20	G 1"	1330	220	600	21	600	22	S55264-V104	VPP46.20F1.4	97.24
20	G 1"	1330	220	600	21	600	22	S55264-V108	VPP46.20F1.4Q	102.57
25	G 1 1/4"	1800	280	600	39	600	39	S55264-V121	VPP46.25F1.8	113.75
25	G 1 1/4"	1800	280	600	39	600	39	S55264-V123	VPP46.25F1.8Q	121.94
32	G 1 1/2"	4000	550	600	24	600	28	S55264-V122	VPP46.32F4	215.80
32	G 1 1/2"	4000	550	600	24	600	28	S55264-V124	VPP46.32F4Q	224.90

Further information to the actuators please see "Actuators for combi valves with 2.5 mm stroke" and "Actuators for combi valves with 2.5 / 5 mm stroke and radiator valves".

VPP46..Q: with testpoint

Check the datasheet for detailed Δp_{min} values per presetting

Combinable actuator for VPP46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 24	3-position	67.5	A6V11858276	S55180-A106	SSA131.00	84.50
AC/DC 24	4...20 mA	25	A6V11858278	S55180-A110	SSA151.05HF	136.50
AC/DC 24	DC 0...10 V	25	A6V11858276	S55180-A107	SSA161.05	115.70
AC/DC 24	DC 0...10 V	25	A6V11858278	S55180-A108	SSA161.05HF	136.50
AC/DC 24	DC 0...10 V	25	A6V11858278	S55180-A109	SSA161E.05HF	136.50

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Combinable actuator for VPP46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
230	3-position	67.5	A6V11858276	S55180-A105	SSA331.00	97.50
AC 230	2-position	210	N4884	S55174-A101	STA23	46.15
AC 24	2-position	270	N4884	S55174-A115	STA73PR/00	49.14
DC 24	PDM/parallel operation					
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	SUA21/3	28.60
AC 230	2-position	210	N4884	S55174-A110	STA23/00	40.69
AC 230	2-position	210	N4884	S55174-A118	STA23B/00	40.69
AC 24	DC 0...10 V	270	N4884	S55174-A104	STA63	109.07
AC 24	3-position	150	N4893	BPZ:SSA81	SSA81	94.12
AC 24	3-position	150	N4893	BPZ:SSA81.1	SSA81.1	178.10
AC 24	2-position	270	N4884	S55174-A100	STA73	47.06
DC 24	PDM					
AC 24	2-position	270	N4884	S55174-A109	STA73/00	41.47
DC 24	PDM					
AC 24	2-position	270	N4884	S55174-A117	STA73B/00	41.47
DC 24	PDM					
AC 230	3-position	150	N4893	BPZ:SSA31	SSA31	108.94
AC 230	3-position	150	N4893	BPZ:SSA31.1	SSA31.1	170.30
AC 24	DC 0...10 V	34	N4893	BPZ:SSA61	SSA61	137.80
DC 24						

Accessories for VPP46..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	ALP45	15.86
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48	34.71

Overview differential pressures

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Combi valves, PN25, DN10, 30...200 l/h	N4855	S55264-V101	VPP46.10L0.2	75.27
Combi valves, PN25, DN10, 30...200 l/h, pressure test points	N4855	S55264-V105	VPP46.10L0.2Q	87.10
Combi valves, PN25, DN15, 30...200 l/h	N4855	S55264-V102	VPP46.15L0.2	87.10
Combi valves, PN25, DN15, 30...200 l/h, pressure test points	N4855	S55264-V106	VPP46.15L0.2Q	94.90
Combi valves, PN25, DN15, 100...575 l/h	N4855	S55264-V103	VPP46.15L0.6	87.10
Combi valves, PN25, DN15, 100...575 l/h, pressure test points	N4855	S55264-V107	VPP46.15L0.6Q	94.90
Combi valves, PN25, DN20, 220...1330 l/h	N4855	S55264-V104	VPP46.20F1.4	97.24
Combi valves, PN25, DN20, 220...1330 l/h, pressure test points	N4855	S55264-V108	VPP46.20F1.4Q	102.57
Combi valves, PN25, DN25, 280...1800 l/h	N4855	S55264-V121	VPP46.25F1.8	113.75
Combi valves, PN25, DN25, 280...1800 l/h, pressure test points	N4855	S55264-V123	VPP46.25F1.8Q	121.94
Combi valves, PN25, DN32, 550...4000 l/h	N4855	S55264-V122	VPP46.32F4	215.80
Combi valves, PN25, DN32, 550...4000 l/h, pressure test points	N4855	S55264-V124	VPP46.32F4Q	224.90

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VQP46..



Presetable PICVs, PN 25, externally threaded for

- ventilation and air conditioning systems for water side control and automatic hydraulic balancing of air after-treatment devices, such as fan convectors, induction units, and in heat exchangers for heating or cooling.
- heating systems for heating zones such as floor heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30... 1800 l/h. With or without pressure measuring points P/T.

Data sheet	A6V11877580
Stroke	4 mm
Leakage rate	Class IV, 0...0.01 % of kvs
PN class	PN 25
Medium	Low-temperature hot water Chilled water Water with anti-freeze
Medium temperature	1...90 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	On/Off
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, stainless steel, PPS
Mounting position	SUE21P: Horizontally up to 90° and not hanging STA...3...: Any position
Warranty	5 Years

DN	Connect. thread	Vol. flow V [l/h]	Vol. flow V _{min} [l/h]	Δp _{max} [kPa]	Δp _{min} [kPa]	STA...3.. Δp _{max} [kPa]	STA...3.. Δp _{min} [kPa]	Stock no.	Product no.	Price (€)
10	G ½"	520	30	600	30	600	30	S55264-V133	VQP46.10L0.5Q	76.83
15	G ¾"	1300	300	600	28	600	28	S55264-V141	VQP46.15F1.3Q	81.25
20	G 1"	1500	320	600	35	600	35	S55264-V145	VQP46.20F1.5Q	87.88

Rotary actuators 2 Nm with spring return for ball valves

GQD..9A

Electromotoric actuators for 3-position and modulating control, with spring-return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 2-port and 3-port valves, types VAI61../VBI61.., VAG61../VBG61.., VAI60../VBI60.. and VAG60../VBG60..



Data sheet	N4659
Torque	2 Nm
Positioning time	Opening with motor: 30 s Closing with spring: 15 s
Degree of protection	IP40
Dimensions (W x H x D)	75 x 113 x 136 mm
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (GQD161.9A)
Warranty	5 Years

Range overview GQD..9A

Operating voltage [V]	Power consumption	Positioning signal	Spring return function	Stock no.	Product no.	Price (€)
AC 24	6.5 VA	2-position	Yes	BPZ:GQD121.9A	GQD121.9A	158.60
DC 24	4.5 W					
AC 24	4 VA	3-position	Yes	BPZ:GQD131.9A	GQD131.9A	244.40
DC 24	2.5 W					
AC 230	10 VA	2-position	Yes	BPZ:GQD321.9A	GQD321.9A	158.60
DC 24	4.5 W					
AC 24	4.5 VA	DC 0...10 V	Yes	BPZ:GQD161.9A	GQD161.9A	269.10
DC 24	3 W					

Valves and actuators

Actuators for rotary valves

Rotary actuators

GSD..9A



Electromotoric rotary actuators without spring return for ball valves, 2 Nm, 30s

Electromotoric rotary actuators without spring return, for On-Off (2 wire SPDT) and modulating control, pre-wired with 0.9 m long connection cable, for the operation of Siemens 2-port and 3-port valves, types VAG61.., VAI61.., VBG61.. and VBI61..

Data sheet	A6V10636056
Torque	2 Nm
Positioning time	30 s
Degree of protection	IP40
Dimensions (W x H x D)	75 x 113 x 136 mm
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview GSD..9A

Operating voltage [V]	Power consumption	Positioning signal	Spring return function	Stock no.	Product no.	Price (€)
AC 24	2 VA	On-Off (2 wire SPDT)	No	BPZ:GSD141.9A	GSD141.9A	104.52
DC 24	1.5 W					
AC 24	2.4 VA	DC 0/2..10 V	No	S55499-D232	GSD161.9A	152.10
DC 24	1.4 W					
AC 230	12 VA	On-Off (2 wire SPDT)	No	BPZ:GSD341.9A	GSD341.9A	104.52
	2 W					

Electromotoric rotary actuators 5 Nm without spring return for ball valves

GDB..9E

Electromotoric actuators for 2-position/3-position and modulating control, without spring return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 6-port control ball valve VWG41.. and Siemens 2-port and 3-port valves, types VAG61.., VAI61.., VBG61.. and VBI61..



Data sheet	A6V10636150 / A6V10725318 / N4657
Torque	5 Nm
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	88 x 112 x 143 mm
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview GDB..9E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.	Price (€)
AC 24	3 VA 2.5 W	KNX S-Mode or KNX PL-Link	0	No	0.9	S55499-D203	GDB111.9E/KN	278.20
AC 24 DC 24	2 VA 1 W	2-position/3-position	0	No	0.9	S55499-D200	GDB141.9E	140.40
AC 24 DC 24	3 VA 1.5 W	DC 0/2...10 V	0	No	0.9	S55499-D275	GDB161.9E	176.80
AC 230	5 VA 1.6 W	2-position/3-position	0	No	0.9	S55499-D201	GDB341.9E	131.30

Valves and actuators

Actuators for rotary valves

Rotary actuators

GMA..9E

Rotary actuators 7 Nm with spring return for ball valves



Electromotoric actuators for 2-position, 3-position and modulating control, with spring-return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 2-port and 3-port valves, types VAG60../VBG60., VAI60../VBI60., VAG61../VBG61.. and VAI61../VBI61..

Data sheet

N4658

Torque

7 Nm

Positioning time

Opening with motor: 90 s

Closing with spring: 15 s

Degree of protection

IP54

Dimensions (W x H x D)

93 x 112 x 184 mm

Mounting position

Upright to horizontal

Warranty

5 Years

Range overview GMA..9E

Operating voltage [V]	Power consumption	Positioning signal	Spring return function	Stock no.	Product no.	Price (€)
AC 24	5 VA	2-position	Yes	BPZ:GMA121.9E	GMA121.9E	266.50
DC 24	3.5 W					
AC 24	5 VA	3-position	Yes	BPZ:GMA131.9E	GMA131.9E	287.30
DC 24	3.5 W					
AC 24	5 VA	DC 0...10 V	Yes	BPZ:GMA161.9E	GMA161.9E	339.30
DC 24	3.5 W					
AC 230	7 VA	2-position	Yes	BPZ:GMA321.9E	GMA321.9E	287.30
DC 24	4.5 W					

Electromotoric rotary actuators 10 Nm without spring return for ball valves

GLB..9E

Electromotoric actuators for 2-position/3-position and modulating control, without spring return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 2-port and 3-port valves, types VAG60../VBG60.., VAI60../VBI60.., VAG61../VBG61.., VAI61../VBI61.. and VWG41..

Torque	10 Nm
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	88 x 112 x 143 mm
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (GLB161.9E)
Warranty	5 Years



Range overview GLB..9E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.	Price (€)
AC 24	3 VA 2.5 W	Modbus RTU	0	No	0.9	S55499-D206	GLB111.9E/MO	319.80
AC 24 DC 24	3 VA 1.3 W	2-position/3-position	0	No	0.9	S55499-D204	GLB141.9E	162.50
AC 24 DC 24	2.5 VA 1.5 W	DC 0/2...10 V	0	No	0.9	S55499-D277	GLB161.9E	223.60
AC 230	5.8 VA 1.9 W	2-position/3-position	0	No	0.9	S55499-D205	GLB341.9E	162.50

Valves and actuators

Actuators for rotary valves

Rotary actuators

GBB..1E



Rotary air damper actuators 25 Nm, without spring return

- With self-centering shaft adapter for shaft dia. 8...25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626
Torque	25 Nm
Air damper area	4 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Rotary actuators 25 Nm for ball valves VAF41..

Range overview GBB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	7 VA 7 W	3-position	0	BPZ:GBB131.1E	GBB131.1E	214.84
AC 24	7 VA 7 W	3-position	2	BPZ:GBB135.1E	GBB135.1E	276.41
AC 24	7 VA 7 W	3-position	2	BPZ:GBB136.1E	GBB136.1E	247.59
AC 24	8 VA 8 W	DC 0...10 V	0	BPZ:GBB161.1E	GBB161.1E	296.06
AC 24	8 VA 8 W	DC 0...35 V Adjustable	0	BPZ:GBB163.1E	GBB163.1E	311.78
AC 24	8 VA 8 W	DC 0...35 V Adjustable	2	BPZ:GBB164.1E	GBB164.1E	347.15
AC 24	8 VA 8 W	DC 0...10 V	2	BPZ:GBB166.1E	GBB166.1E	322.26
AC 230	5 VA 5 W	3-position	0	BPZ:GBB331.1E	GBB331.1E	214.84
AC 230	5 VA 5 W	3-position	2	BPZ:GBB335.1E	GBB335.1E	276.41
AC 230	5 VA 5 W	3-position	2	BPZ:GBB336.1E	GBB336.1E	247.59

Types GBB135.1E and GBB335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Rotary air damper actuators 35 Nm, without spring return

GIB..1E

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626 / A6V101037253
Torque	35 Nm
Air damper area	6 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Rotary actuators 35 Nm for ball valves VAF41..



Range overview GIB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	7 VA 7 W	3-position	0	BPZ:GIB131.1E	GIB131.1E	280.34
AC 24	8 VA 8 W	Modbus RTU	0	S55499-D299	GIB161.1E/MO	446.71
AC 24	7 VA 7 W	3-position	2	BPZ:GIB135.1E	GIB135.1E	340.60
AC 24	7 VA 7 W	3-position	2	BPZ:GIB136.1E	GIB136.1E	313.09
AC 24	8 VA 8 W	DC 0...10 V	0	BPZ:GIB161.1E	GIB161.1E	361.56
AC 24	8 VA 8 W	DC 0...35 V Adjustable	0	BPZ:GIB163.1E	GIB163.1E	375.97
AC 24	8 VA 8 W	DC 0...35 V Adjustable	2	BPZ:GIB164.1E	GIB164.1E	411.34
AC 24	8 VA 8 W	DC 0...10 V	2	BPZ:GIB166.1E	GIB166.1E	396.93
AC 230	5 VA 5 W	3-position	0	BPZ:GIB331.1E	GIB331.1E	280.34
AC 230	5 VA 5 W	3-position	2	BPZ:GIB335.1E	GIB335.1E	340.60
AC 230	5 VA 5 W	3-position	2	BPZ:GIB336.1E	GIB336.1E	313.09

Types GIB135.1E and 335.1E have a feedback potentiometer.

Basic Documentation No.: Z4626

Accessories for SAL..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51	63.96
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1	153.40
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1	92.43
		BPZ:8000060844	8000060844	115.83
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000	270.40

Valves and actuators

Actuators for rotary valves

Rotary actuators

Mounting sets for SAL..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting set for SAL.. onto VBF21..	N4502	S55845-Z100	ASK31N	65.65
Mounting set for SAL.. onto VKF41..	N4502	S55845-Z101	ASK33N	100.10
Mounting set for SAL.. onto VBF21..	N4502	S55845-Z211	ASK32N	51.22
Mounting set for SAL.. onto VKF45..	N4502	S55845-Z102	ASK35N	198.90

Electromotoric actuators 10...40 Nm for slipper and butterfly valves

SAL..

Rotary actuator for the operation of 3-port slipper valves VBF21.. and butterfly valves VKF41.. + VKF46.. as control and safety shut-off valves in heating, ventilation and air conditioning systems.

With manual adjuster and position indicator, status indication per LED.

Optional functions with auxiliary switches, potentiometer, functional module and stem heater.



SA..81.., SA..61.. are UL listed.

Data sheet	N4502
Degree of protection	IP54
Medium temperature	-10...120 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAL..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Torque [Nm]	Stock no.	Product no.	Price (€)
AC 230	7	3-position	120	40	S55162-A111	SAL31.00T40	542.10
AC 24	5	DC 0...10 V	120	10	S55162-A100	SAL61.00T10	512.20
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	6	DC 0...10 V	120	20	S55162-A102	SAL61.00T20	643.50
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	7.5	DC 0...10 V	30	10	S55162-A101	SAL61.03T10	534.30
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	3	3-position	120	10	S55162-A104	SAL81.00T10	410.80
DC 24							
AC 230	3.5	3-position	120	10	S55162-A108	SAL31.00T10	410.80
AC 230	4.5	3-position	120	20	S55162-A110	SAL31.00T20	542.10
AC 230	5.5	3-position	30	10	S55162-A109	SAL31.03T10	432.90
AC 24	9	DC 0...10 V	120	40	S55162-A103	SAL61.00T40	643.50
DC 24		DC 4...20 mA					
		0...1000 Ohm					
AC 24	4	3-position	120	20	S55162-A106	SAL81.00T20	542.10
DC 24							
AC 24	6	3-position	120	40	S55162-A107	SAL81.00T40	542.10
DC 24							
AC 24	5	3-position	30	10	S55162-A105	SAL81.03T10	432.90
DC 24							

Valves and actuators

Actuators for rotary valves

Rotary actuators

SQL36..

Electromotoric actuators 40...1200 Nm for butterfly valves



With reversible asynchronous motor. Direct-acting manual control. Die-cast aluminium housing and plastic manual knob. For VKF46 butterfly valves from DN40 mm, no mounting kits required.

The actuators have built-in end switches. 1 double auxiliary switch, 1 potentiometer and 1 positioning time module (without SQL36E50..) can be retrofitted.

Data sheet	N4505
Degree of protection	IP67
Medium temperature	≤120 °C
Mounting position	Any
Warranty	5 Years

Range overview SQL36..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Torque [Nm]	Stock no.	Product no.	Price (€)
AC 230	166	3-position	6	100	BPZ:SQL36E65	SQL36E65	1521.00
AC 230	25	3-position	25	40	BPZ:SQL36E50F04	SQL36E50F04	1201.20
AC 230	25	3-position	25	40	BPZ:SQL36E50F05	SQL36E50F05	1201.20
AC 230	235	3-position	12	400	BPZ:SQL36E110	SQL36E110	2691.00
AC 230	235	3-position	24	1200	BPZ:SQL36E160	SQL36E160	8970.00

Running time with auxiliary module SEZ31.1: variable positioning time 30...180 s (SQL36E65), 60...360 s (SQL36E110) resp. 120...720 s (SQL36E160).

Accessories for SQL36E..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Auxiliary module, variable positioning time for SQL36E..	N4505	BPZ:SEZ31.1	SEZ31.1	378.30
Double auxiliary switch for SQL36E	N4505	BPZ:ASC36	ASC36	150.80
Potentiometer 1000 Ohm for SQL36E..	N4505	BPZ:ASZ36	ASZ36	390.00

3-port slipper valves PN 6 with flanged connections

- With flanged connections to ISO 7005
- For chilled or low-temperature hot water in closed circuits

VBF21.40 / VBF21.50 are shipped with manual adjuster.
VBF21..., DN40/50, with SQK34..., SQK84...: Direct mounting
VBF21..., DN40/50, with SQK33.00 requires mounting set ASK32



Data sheet	N4241
Medium temperature	1...120 °C
Valve characteristic	Linear
Permissible operating pressure	600 kPa
Material, inside set	< DN 100: CrNi steel/brass > DN 125: CrNi steel/Rg5
PN class	PN 6
Leakage rate	DN40...100: 0...0.1 % of k_{vs} value DN125...150: 0...0,5 % of k_{vs} value
Warranty	5 Years

Range overview VBF21..

SAL...T10 Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Required mounting set	Stock no.	Product no.	Price (€)
30	40	25	ASK32N	BPZ:VBF21.40	VBF21.40	193.70
30	50	40	ASK32N	BPZ:VBF21.50	VBF21.50	262.60
30	65	63	ASK31N	BPZ:VBF21.65	VBF21.65	332.80
30	80	100	ASK31N	BPZ:VBF21.80	VBF21.80	434.20
30	100	160	ASK31N	BPZ:VBF21.100	VBF21.100	638.30
30	125	550	ASK31N	BPZ:VBF21.125	VBF21.125	1227.20
30	150	820	ASK31N	BPZ:VBF21.150	VBF21.150	1625.00

DN40...50, series 02

DN65...150, series 01

Combinable actuator for VBF21..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120		N4502	S55162-A100	SAL61.00T10	512.20
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30		N4502	S55162-A101	SAL61.03T10	534.30
AC 24 DC 24	3-position	120		N4502	S55162-A104	SAL81.00T10	410.80
AC 230	3-position	120		N4502	S55162-A108	SAL31.00T10	410.80
AC 230	3-position	30		N4502	S55162-A109	SAL31.03T10	432.90
AC 24 DC 24	3-position	30		N4502	S55162-A105	SAL81.03T10	432.90

Valves and actuators

Rotary valves

Butterfly valves

Combinable actuator for VKF41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	N4502	S55162-A111	SAL31.00T40	542.10
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4502	S55162-A100	SAL61.00T10	512.20
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4502	S55162-A101	SAL61.03T10	534.30
AC 24 DC 24	3-position	120	N4502	S55162-A104	SAL81.00T10	410.80
AC 230	3-position	120	N4502	S55162-A108	SAL31.00T10	410.80
AC 230	3-position	30	N4502	S55162-A109	SAL31.03T10	432.90
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4502	S55162-A103	SAL61.00T40	643.50
AC 24 DC 24	3-position	120	N4502	S55162-A107	SAL81.00T40	542.10
AC 24 DC 24	3-position	30	N4502	S55162-A105	SAL81.03T10	432.90

Combinable actuator for VKF46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.	Price (€)
AC 230	3-position	120	N4502	S55162-A111	SAL31.00T40	542.10
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4502	S55162-A102	SAL61.00T20	643.50
AC 230	3-position	120	N4502	S55162-A110	SAL31.00T20	542.10
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4502	S55162-A103	SAL61.00T40	643.50
AC 24 DC 24	3-position	120	N4502	S55162-A106	SAL81.00T20	542.10
AC 24 DC 24	3-position	120	N4502	S55162-A107	SAL81.00T40	542.10
AC 230	3-position	6	N4505	BPZ:SQL36E65	SQL36E65	1521.00
AC 230	3-position	25	N4505	BPZ:SQL36E50F04	SQL36E50F04	1201.20
AC 230	3-position	25	N4505	BPZ:SQL36E50F05	SQL36E50F05	1201.20
AC 230	3-position	12	N4505	BPZ:SQL36E110	SQL36E110	2691.00
AC 230	3-position	24	N4505	BPZ:SQL36E160	SQL36E160	8970.00

Butterfly valves PN6/10/16 for flanged connections, with tight shutoff

VKF46..

- With EPDM seal for mounting between 2 flanges PN6, PN10 or NP16 to ISO 7005
- For chilled water, low-temperature hot water, DHW, cold water and fresh water in closed or open circuits

VKF46.450...600 PN 16 only

Data sheet	N4136
Material, inside set	From DN350: Nickel-plated steel To DN300: Stainless steel
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJS-400-15
PN class	PN 16
Warranty	5 Years



Range overview VKF46..

SAL..T20 Δp_s [kPa]	SAL..T40 Δp_s [kPa]	SQL36 E50F04 Δp_s [kPa]	SQL36 E50F05 Δp_s [kPa]	SQL36 E65 Δp_s [kPa]	SQL36 E110 Δp_s [kPa]	SQL36 E160 Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
1600		1600					40	50	BPZ:VKF46.40	VKF46.40	345.80
1600		1600					50	85	BPZ:VKF46.50	VKF46.50	366.60
							300	500	BPZ:VKF46.500	VKF46.500TS	7995.00
1600		1600					65	215	BPZ:VKF46.65	VKF46.65	423.80
	1600		1600				80	420	BPZ:VKF46.80	VKF46.80	444.60
	1200		1600				100	800	BPZ:VKF46.100	VKF46.100	481.00
	800		1000				125	1010	BPZ:VKF46.125	VKF46.125	570.70
				1600			150	2100	BPZ:VKF46.150	VKF46.150	777.40
				1000			200	4000	BPZ:VKF46.200	VKF46.200	1077.70
					1000		250	6400	BPZ:VKF46.250	VKF46.250	1313.00
					1000		300	8500	BPZ:VKF46.300	VKF46.300	1963.00
					600		350	11500	BPZ:VKF46.350	VKF46.350	3237.00
					300		400	14500	BPZ:VKF46.400	VKF46.400	4212.00

Manual adjuster for VKF46..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Manual adjuster for VKF46.., DN40 to DN65	N4136	BPZ:ASK46.1	ASK46.1	57.72
Manual adjuster for VKF46.., DN80 to DN125	N4136	BPZ:ASK46.2	ASK46.2	74.10
Manual adjuster for VKF46.., DN150 to DN200	N4136	BPZ:ASK46.3	ASK46.3	105.82
Manual adjuster for VKF46.., DN250 to DN400	N4136	BPZ:ASK46.4	ASK46.4	391.30

Valves and actuators

Rotary valves

Ball valves

VAI61..

2-port control ball valves, internally threaded, PN40



Internally threaded connections Rp.. as per ISO 7-1.

For use in heating, ventilating and air conditioning plants as a control valve.

For closed circuits.

Data sheet

Leakage rate

Medium

Medium temperature

Valve characteristic

Rangeability

Permissible operating pressure

Material, valve body

Material, inside set

PN class

Warranty

N4211

„Waterproof“ as per EN 60534-4 L/1, better than class 5

Water

Water with anti-freeze

-10...120 °C

Equal-percentage

> 500

1600 kPa

Brass

Brass UNS C35330 (DZR), chromium-plated

PN 40

5 Years

Range overview VAI61..

Con- nect. thread	GQD..9 GSD..9 A	GQD..9 GSD..9 A	GDB..9 E $\Delta p_{\max}$ [kPa]	GDB..9 E Δp_s [kPa]	GMA..9 GLB..9 E $\Delta p_{\max}$ [kPa]	GMA..9 GLB..9 E Δp_s [kPa]	GLD..9 E $\Delta p_{\max}$ [kPa]	GLD..9 E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	1	BPZ:VAI61.15-1	VAI61.15-1	76.18
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	2.5	BPZ:VAI61.15-2.5	VAI61.15-2.5	76.18
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	1.6	BPZ:VAI61.15-1.6	VAI61.15-1.6	76.18
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	4	BPZ:VAI61.15-4	VAI61.15-4	76.18
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	6.3	BPZ:VAI61.15-6.3	VAI61.15-6.3	76.18
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	10	BPZ:VAI61.15-10	VAI61.15-10	76.18
Rp ¾"	350	1400	350	1400	350	1400	350	1400	20	4	BPZ:VAI61.20-4	VAI61.20-4	89.05
Rp ¾"	350	1400	350	1400	350	1400	350	1400	20	6.3	BPZ:VAI61.20-6.3	VAI61.20-6.3	89.05
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	6.3	BPZ:VAI61.25-6.3	VAI61.25-6.3	109.46
Rp ¾"	350	1400	350	1400	350	1400	350	1400	20	10	BPZ:VAI61.20-10	VAI61.20-10	89.05
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	10	BPZ:VAI61.25-10	VAI61.25-10	109.46
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	16	BPZ:VAI61.25-16	VAI61.25-16	109.46
Rp 1¼"					350	1000	350	1000	32	10	BPZ:VAI61.32-10	VAI61.32-10	157.30
Rp 1¼"					350	1000	350	1000	32	16	BPZ:VAI61.32-16	VAI61.32-16	157.30
Rp 1¼"					350	1000	350	1000	32	25	BPZ:VAI61.32-25	VAI61.32-25	157.30
Rp 1½"					350	800	350	800	40	16	BPZ:VAI61.40-16	VAI61.40-16	188.50
Rp 1½"					350	800	350	800	40	25	BPZ:VAI61.40-25	VAI61.40-25	188.50
Rp 1½"					350	800	350	800	40	40	BPZ:VAI61.40-40	VAI61.40-40	188.50
Rp 2"					350	600	350	600	50	25	BPZ:VAI61.50-25	VAI61.50-25	244.40
Rp 2"					350	600	350	600	50	40	BPZ:VAI61.50-40	VAI61.50-40	244.40
Rp 2"					350	600	350	600	50	63	BPZ:VAI61.50-63	VAI61.50-63	244.40

Combinable actuator for VAI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3- position	150	No	A6V10636150	S55499-D200	GDB141.9E	140.40
AC 230	2-position/3- position	150	No	A6V10636150	S55499-D201	GDB341.9E	131.30
AC 24 DC 24	2-position/3- position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50

Combinable actuator for VAI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E	223.60
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A	244.40
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A	152.10
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A	269.10
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E	287.30
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E	339.30

Accessories for VAI61..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation cover for VAI60/61, DN15	CE1N4213	BPZ:ALI15VAI60/61	ALI15VAI60/61	30.16
Insulation cover for VAI60/61, DN20	CE1N4213	BPZ:ALI20VAI60/61	ALI20VAI60/61	30.16
Insulation cover for VAI60/61, DN25	CE1N4213	BPZ:ALI25VAI60/61	ALI25VAI60/61	30.16
Insulation cover for VAI60/61, DN32	CE1N4213	BPZ:ALI32VAI60/61	ALI32VAI60/61	36.14
Insulation cover for VAI60/61, DN40	CE1N4213	BPZ:ALI40VAI60/61	ALI40VAI60/61	37.83
Insulation cover for VAI60/61, DN50	CE1N4213	BPZ:ALI50VAI60/61	ALI50VAI60/61	42.90
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27

Combinable actuator for VBI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	GDB141.9E	140.40
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E	176.80
AC 230	2-position/3-position	150	No	A6V10636150	S55499-D201	GDB341.9E	131.30
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E	223.60
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A	244.40
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A	152.10
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A	269.10
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E	287.30
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E	339.30

Valves and actuators

Rotary valves

Ball valves

VBI61..

3-port control ball valves, internally threaded, PN40



Internally threaded connections Rp.. as per ISO 7-1.

For use in heating, ventilating and air conditioning plants as a control.

For closed circuits.

Data sheet	N4211
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	< 1 % of k_{vs} value
Medium	Water
	Water with anti-freeze
Medium temperature	-10...120 °C
Valve characteristic	Throughport: equal-percentage
	Bypass: linear
Rangeability	> 500
Permissible operating pressure	1600 kPa
Material, valve body	Brass
Material, inside set	Brass UNS C35330 (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBI61..

Con- nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GLD..9E Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Rp ½"	350	350	350	350	15	1.6	BPZ:VBI61.15-1.6	VBI61.15-1.6	133.90
Rp ½"	350	350	350	350	15	2.5	BPZ:VBI61.15-2.5	VBI61.15-2.5	133.90
Rp ½"	350	350	350	350	15	4	BPZ:VBI61.15-4	VBI61.15-4	133.90
Rp ½"	350	350	350	350	15	6.3	BPZ:VBI61.15-6.3	VBI61.15-6.3	133.90
Rp ¾"	350	350	350	350	20	4	BPZ:VBI61.20-4	VBI61.20-4	152.10
Rp ¾"	350	350	350	350	20	6.3	BPZ:VBI61.20-6.3	VBI61.20-6.3	152.10
Rp 1"	350	350	350	350	25	10	BPZ:VBI61.25-10	VBI61.25-10	192.40
Rp 1¼"			350	350	32	16	BPZ:VBI61.32-16	VBI61.32-16	269.10
Rp 1½"			350	350	40	25	BPZ:VBI61.40-25	VBI61.40-25	367.90
Rp 2"			350	350	50	40	BPZ:VBI61.50-40	VBI61.50-40	526.50
Rp 2"			350	350	50	63	BPZ:VBI61.50-63	VBI61.50-63	526.50

Accessories for VBI61..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation cover for VBI60/61, DN15	CE1N4213	BPZ:ALI15VBI60/61	ALI15VBI60/61	30.16
Insulation cover for VBI61, DN20	CE1N4213	BPZ:ALI20VBI61	ALI20VBI61	30.16
Insulation cover for VBI60/61, DN25	CE1N4213	BPZ:ALI25VBI60/61	ALI25VBI60/61	30.16
Insulation cover for VBI60/61, DN32	CE1N4213	BPZ:ALI32VBI60/61	ALI32VBI60/61	36.14
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27
Insulation cover for VBI60/61, DN40	CE1N4213	BPZ:ALI40VBI60/61	ALI40VBI60/61	37.83
Insulation cover for VBI60/61, DN50	CE1N4213	BPZ:ALI50VBI60/61	ALI50VBI60/61	42.90

2-port ball open/close valves, internally threaded, PN40

VAI60..

Internally threaded connections Rp.. as per ISO 7-1.

For use in heating, ventilating and air conditioning plants as open/close ball valves. For closed circuits.



Data sheet	N4213
Leakage rate	„Waterproof“ as per EN 60534-4 L1, better than class 5
Medium	Cooling water Chilled water Water with anti-freeze Low-temperature hot water High-temperature hot water
Medium temperature	-10... 120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAI60..

Con- nect. thread	GQD../ GSD../9A $\Delta p_{\max}$ [kPa]	GQD../ GSD../9A Δp_s [kPa]	GDB../9E $\Delta p_{\max}$ [kPa]	GDB../9E Δp_s [kPa]	GMA../ GLB../9E $\Delta p_{\max}$ [kPa]	GMA../G LB../9E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
Rp ½"	350	1400	350	1400	350	1400	15	15	BPZ:VAI60.15-15	VAI60.15-15	54.21
Rp ¾"	350	1400	350	1400	350	1400	20	22	BPZ:VAI60.20-22	VAI60.20-22	65.13
Rp 1"	350	1400	350	1400	350	1400	25	22	BPZ:VAI60.25-22	VAI60.25-22	76.18
Rp 1¼"					350	1000	32	35	BPZ:VAI60.32-35	VAI60.32-35	113.88
Rp 1½"					350	800	40	68	BPZ:VAI60.40-68	VAI60.40-68	136.50
Rp 2"					350	600	50	96	BPZ:VAI60.50-96	VAI60.50-96	219.70

Combinable actuator for VAI60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3- position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 230	2-position/3- position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A	158.60
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A	158.60
AC 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A	104.52
AC 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E	266.50
AC 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A	104.52
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E	287.30

Accessories for VAI60..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation cover for VAI60/61, DN15	CE1N4213	BPZ:ALI15VAI60/61	ALI15VAI60/61	30.16
Insulation cover for VAI60/61, DN20	CE1N4213	BPZ:ALI20VAI60/61	ALI20VAI60/61	30.16
Insulation cover for VAI60/61, DN25	CE1N4213	BPZ:ALI25VAI60/61	ALI25VAI60/61	30.16

Valves and actuators

Rotary valves

Ball valves

Accessories for VAI60..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation cover for VAI60/61, DN32	CE1N4213	BPZ:ALI32VAI60/61	ALI32VAI60/61	36.14
Insulation cover for VAI60/61, DN40	CE1N4213	BPZ:ALI40VAI60/61	ALI40VAI60/61	37.83
Insulation cover for VAI60/61, DN50	CE1N4213	BPZ:ALI50VAI60/61	ALI50VAI60/61	42.90
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27

Accessories for VWG41.20..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Brass fitting G 1" / Rp 1/2", set of 2		S55845-Z158	ALG15.152B	13.52
Brass fitting G 1" / Rp 3/4", set of 2		S55845-Z159	ALG15.202B	24.05
Brass fitting G 1" / Rp 1", set of 2		S55845-Z160	ALG15.252B	32.63
Insulation cover for VWG41.20 6-Way ball valve	A6V10564480	S55845-Z161	ALI20VWG41	45.24
Brass fitting G 1" / G 1/2", 5 °C - 90 °C, set of 2	A6V10564480	S55845-Z156	ALN15.152B	11.34
Brass fitting G 1" / G 3/4", 5 °C - 90 °C, set of 2	A6V10564480	S55845-Z157	ALN15.202B	22.62

Combinable actuator for VWG41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24	KNX S-Mode or KNX PL-Link	150	No	A6V10725318	S55499-D203	GDB111.9E/KN	278.20
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E	176.80
AC 230	2-position/3-position	150	No	A6V10636150	S55499-D201	GDB341.9E	131.30
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A	152.10
AC 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A	104.52

Accessories for VWG41.10..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Brass fitting G 1/2" / Rp 1/2", set of 2		S55845-Z195	ALG13.152B	11.09
Insulation cover for VWG41.10 6-Way ball valve		S55845-Z194	ALI10VWG41	34.71
Brass fittings, set of 2		BPZ:ALG15..2..	ALG1..2B	
Insulation covers for ball valves		BPZ:ALI..	ALI..	

6-port control ball valves, externally threaded, PN16, DN10**VWG41.10..**

Used in heated/chilled ceilings as control ball valve. For closed circuits.

- Control ball valve body made of hot-pressed brass CW617N
- Flat sealing, external threaded connections G..B, as per ISO 228-1
- Can be combined with standard electromotoric rotary actuators from the DAC product range for applications with additional functions (such as auxiliary switches, potentiometers)



Data sheet	A6V10564480
Leakage rate	"Air tight" per EN 12266-1, class A
Medium	Water with anti-freeze
	Water
	Low-temperature hot water
Medium temperature	5...90 °C
Permissible operating pressure	1600 kPa
Material, inside set	Brass CW614N, chrome plated
PN class	PN 16
Warranty	5 Years

Range overview VWG41.10..

DN	k _{vs} right [m³/h]	k _{vs} left [m³/h]	GDB..9E Δp _{max} [kPa]	Stock no.	Product no.	Price (€)
10	0.4	0.25	200	S55230-V158	VWG41.10-0.25-0.4	185.90
10	0.65	0.25	200	S55230-V159	VWG41.10-0.25-0.65	185.90
10	1	0.25	200	S55230-V160	VWG41.10-0.25-1.0	185.90
10	0.65	0.4	200	S55230-V161	VWG41.10-0.4-0.65	185.90
10	1	0.4	200	S55230-V162	VWG41.10-0.4-1.0	185.90
10	1.3	0.4	200	S55230-V163	VWG41.10-0.4-1.3	185.90
10	1.6	0.4	200	S55230-V164	VWG41.10-0.4-1.6	185.90
10	1	0.65	200	S55230-V165	VWG41.10-0.65-1.0	185.90
10	1.3	0.65	200	S55230-V166	VWG41.10-0.65-1.3	185.90
10	1.6	0.65	200	S55230-V167	VWG41.10-0.65-1.6	185.90
10	1.3	1	200	S55230-V168	VWG41.10-1.0-1.3	185.90
10	1.6	1	200	S55230-V169	VWG41.10-1.0-1.6	185.90
10	1.9	1	200	S55230-V170	VWG41.10-1.0-1.9	185.90
10	1.6	1.3	200	S55230-V171	VWG41.10-1.3-1.6	185.90
10	1.9	1.3	200	S55230-V172	VWG41.10-1.3-1.9	185.90
10	1.9	1.6	200	S55230-V173	VWG41.10-1.6-1.9	185.90
10	1.9	1.9	200	S55230-V174	VWG41.10-1.9-1.9	185.90

Valves and actuators

Rotary valves

Ball valves

VWG41.20..

6-port control ball valves, externally threaded, PN16, DN20



Used in heated/chilled ceilings as control ball valve. For closed circuits.

- Control ball valve body made of hot-pressed brass CW617N
- Flat sealing, external threaded connections G..B, as per ISO 228-1
- Can be combined with standard electromotoric rotary actuators from the DAC product range for applications with additional functions (such as auxiliary switches, potentiometers)

Data sheet

A6V10564480

Leakage rate

"Air tight" per EN 12266-1, class A

Medium

Water with anti-freeze

Water

Low-temperature hot water

Medium temperature

5...90 °C

Permissible operating pressure

1600 kPa

Material, inside set

Brass CW614N, chrome plated

PN class

PN 16

Warranty

5 Years

Range overview VWG41.20..

DN	k _{vs} right [m³/h]	k _{vs} left [m³/h]	GDB..9E Δp _{max} [kPa]	Stock no.	Product no.	Price (€)
20	0.4	0.25	200	S55230-V142	VWG41.20-0.25-0.4	239.20
20	0.65	0.25	200	S55230-V143	VWG41.20-0.25-0.65	239.20
20	1	0.25	200	S55230-V144	VWG41.20-0.25-1.0	239.20
20	1	0.4	200	S55230-V145	VWG41.20-0.4-1.0	239.20
20	1.3	0.4	200	S55230-V146	VWG41.20-0.4-1.3	239.20
20	1.6	0.65	200	S55230-V149	VWG41.20-0.65-1.6	239.20
20	2.5	0.65	200	S55230-V150	VWG41.20-0.65-2.5	239.20
20	2.5	1	200	S55230-V152	VWG41.20-1.0-2.5	239.20
20	2.5	1.6	200	S55230-V153	VWG41.20-1.6-2.5	239.20
20	3.45	1.6	200	S55230-V154	VWG41.20-1.6-3.45	239.20
20	3.45	2.5	200	S55230-V155	VWG41.20-2.5-3.45	239.20
20	4.25	2.5	200	S55230-V156	VWG41.20-2.5-4.25	239.20
20	4.25	4.25	200	S55230-V157	VWG41.20-4.25-4.25	239.20

2-port control ball valves, externally threaded, PN40**VAG61..**

For use in heating, ventilating and air conditioning plants as a control valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4212
Leakage rate	„Waterproof“ as per EN 60534-4 L1, better than class 5
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Brass CW602N (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAG61..

Con- nect. thread	GQD../ GSD..9 A $\Delta p_{\max}$ [kPa]	GQD../ GSD..9 A Δp_s [kPa]	GDB../9 E $\Delta p_{\max}$ [kPa]	GDB../9 E Δp_s [kPa]	GMA../ GLB../9 E $\Delta p_{\max}$ [kPa]	GMA../ GLB../9 E Δp_s [kPa]	GLD../9 E $\Delta p_{\max}$ [kPa]	GLD../9 E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.	Price (€)
G 1" B	350	1400	350	1400	350	1400	350	1400	15	1	S55230-V100	VAG61.15-1	89.96
G 1" B	350	1400	350	1400	350	1400	350	1400	15	1.6	S55230-V101	VAG61.15-1.6	89.96
G 1" B	350	1400	350	1400	350	1400	350	1400	15	2.5	S55230-V102	VAG61.15-2.5	89.96
G 1" B	350	1400	350	1400	350	1400	350	1400	15	4	S55230-V103	VAG61.15-4	89.96
G 1" B	350	1400	350	1400	350	1400	350	1400	15	6.3	S55230-V104	VAG61.15-6.3	89.96
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	4	S55230-V105	VAG61.20-4	102.44
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	6.3	S55230-V106	VAG61.20-6.3	102.44
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	10	S55230-V107	VAG61.20-10	102.44
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	6.3	S55230-V108	VAG61.25-6.3	133.90
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	10	S55230-V109	VAG61.25-10	133.90
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	16	S55230-V110	VAG61.25-16	133.90
G 2" B					350	1000	350	1000	32	10	S55230-V111	VAG61.32-10	187.20
G 2" B					350	1000	350	1000	32	16	S55230-V112	VAG61.32-16	187.20
G 2" B					350	1000	350	1000	32	25	S55230-V113	VAG61.32-25	187.20
G 2¼" B					350	800	350	800	40	16	S55230-V114	VAG61.40-16	222.30
G 2¼" B					350	800	350	800	40	25	S55230-V115	VAG61.40-25	222.30
G 2¼" B					350	800	350	800	40	40	S55230-V116	VAG61.40-40	222.30

Valves and actuators

Rotary valves

Ball valves

Range overview VAG61..

Con- nect. thread	GQD../ GSD../9 A	GQD../ GSD../9 A	GDB../9 E $\Delta p_{\max}$ [kPa]	GDB../9 E Δp_s [kPa]	GMA../ GLB../9 E $\Delta p_{\max}$ [kPa]	GMA../ GLB../9 E Δp_s [kPa]	GLD../9 E $\Delta p_{\max}$ [kPa]	GLD../9 E Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 2 $\frac{3}{4}$ " B					350	600	350	600	50	25	S55230-V117	VAG61.50-25	302.90
G 2 $\frac{3}{4}$ " B					350	600	350	600	50	40	S55230-V118	VAG61.50-40	302.90
G 2 $\frac{3}{4}$ " B					350	600	350	600	50	63	S55230-V119	VAG61.50-63	302.90

Combinable actuator for VAG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3- position	150	No	A6V10636150	S55499-D200	GDB141.9E	140.40
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E	176.80
AC 230	2-position/3- position	150	No	A6V10636150	S55499-D201	GDB341.9E	131.30
AC 24 DC 24	2-position/3- position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E	223.60
AC 230	2-position/3- position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A	244.40
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A	152.10
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A	269.10
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E	287.30
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E	339.30

Accessories for VAG61..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation Cover for VAG60/61, DN15		S55845-Z162	ALI15VAG60/61	29.51
Insulation Cover for VAG60/61, DN20		S55845-Z163	ALI20VAG60/61	29.51
Insulation Cover for VAG60/61, DN25		S55845-Z164	ALI25VAG60/61	29.51
Insulation Cover for VAG60/61, DN32		S55845-Z165	ALI32VAG60/61	35.49
Insulation Cover for VAG60/61, DN40		S55845-Z166	ALI40VAG60/61	36.92
Insulation Cover for VAG60/61, DN50		S55845-Z167	ALI50VAG60/61	42.12
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27

Combinable actuator for VBI60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A	158.60
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A	158.60
AC 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A	104.52
AC 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E	266.50
AC 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A	104.52
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E	287.30

Accessories for VBI60..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation cover for VBI60/61, DN15	CE1N4213	BPZ:ALI15VBI60/61	ALI15VBI60/61	30.16
Insulation cover for VBI60, DN20	CE1N4213	BPZ:ALI20VBI60	ALI20VBI60	30.16
Insulation cover for VBI60/61, DN25	CE1N4213	BPZ:ALI25VBI60/61	ALI25VBI60/61	30.16
Insulation cover for VBI60/61, DN32	CE1N4213	BPZ:ALI32VBI60/61	ALI32VBI60/61	36.14
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27
Insulation cover for VBI60/61, DN40	CE1N4213	BPZ:ALI40VBI60/61	ALI40VBI60/61	37.83
Insulation cover for VBI60/61, DN50	CE1N4213	BPZ:ALI50VBI60/61	ALI50VBI60/61	42.90

Valves and actuators

Rotary valves

Ball valves

VBI60..

3-port changeover ball valve, internally threaded, PN40



Internally threaded connections Rp.. as per ISO 7-1.

For use in heating, ventilating and air conditioning plants as changeover ball valves. For closed circuits.

Data sheet	N4213
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	< 1 % of k_{vs} value
Medium	Cooling water Chilled water Water with anti-freeze Low-temperature hot water High-temperature hot water
Medium temperature	-10... 120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBI60..

Con-nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
Rp 1/2"	350	350	350	15	12	BPZ:VBI60.15-12T	VBI60.15-12T	96.59
Rp 1/2"	350	350	350	15	5	BPZ:VBI60.15-5L	VBI60.15-5L	82.42
Rp 3/4"	350	350	350	20	16	BPZ:VBI60.20-16T	VBI60.20-16T	109.59
Rp 3/4"	350	350	350	20	9	BPZ:VBI60.20-9L	VBI60.20-9L	96.59
Rp 1"	350	350	350	25	16	BPZ:VBI60.25-16T	VBI60.25-16T	137.80
Rp 1"	350	350	350	25	9	BPZ:VBI60.25-9L	VBI60.25-9L	119.60
Rp 1 1/4"			350	32	13	BPZ:VBI60.32-13L	VBI60.32-13L	171.60
Rp 1 1/4"			350	32	25	BPZ:VBI60.32-25T	VBI60.32-25T	197.60
Rp 1 1/2"			350	40	25	BPZ:VBI60.40-25L	VBI60.40-25L	273.00
Rp 1 1/2"			350	40	49	BPZ:VBI60.40-49T	VBI60.40-49T	240.50
Rp 2"			350	50	37	BPZ:VBI60.50-37L	VBI60.50-37L	356.20
Rp 2"			350	50	73	BPZ:VBI60.50-73T	VBI60.50-73T	293.80

3-port control ball valves, externally threaded, PN40

VBG61..



For use in heating, ventilating and air conditioning plants as a control valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4212
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	< 1 % of k_{vs} value
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Brass CW602N (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBG61..

Con- nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GLD..9E Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1"	350	350	350	350	15	1.6	S55230-V120	VBG61.15-1.6	178.10
G 1"	350	350	350	350	15	2.5	S55230-V121	VBG61.15-2.5	178.10
G 1"	350	350	350	350	15	4	S55230-V122	VBG61.15-4	178.10
G 1"	350	350	350	350	15	6.3	S55230-V123	VBG61.15-6.3	178.10
G 1¼"	350	350	350	350	20	4	S55230-V124	VBG61.20-4	204.10
G 1¼"	350	350	350	350	20	6.3	S55230-V125	VBG61.20-6.3	204.10
G 1½"	350	350	350	350	25	10	S55230-V126	VBG61.25-10	254.80
G 2"			350	350	32	16	S55230-V127	VBG61.32-16	365.30
G 2¼"			350	350	40	25	S55230-V128	VBG61.40-25	419.90
G 2¾"			350	350	50	40	S55230-V129	VBG61.50-40	529.10

Combinable actuator for VBG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3- position	150	No	A6V10636150	S55499-D200	GDB141.9E	140.40
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E	176.80
AC 230	2-position/3- position	150	No	A6V10636150	S55499-D201	GDB341.9E	131.30
AC 24 DC 24	2-position/3- position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E	223.60
AC 230	2-position/3- position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A	244.40

Valves and actuators

Rotary valves

Ball valves

Combinable actuator for VBG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A	152.10
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A	269.10
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E	287.30
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E	339.30

Accessories for VBG61..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation Cover for VBG60/61, DN15		S55845-Z168	ALI15VBG60/61	29.51
Insulation Cover for VBG60/61, DN20		S55845-Z169	ALI20VBG60/61	29.51
Insulation Cover for VBG60/61, DN25		S55845-Z170	ALI25VBG60/61	29.51
Insulation Cover for VBG60/61, DN32		S55845-Z171	ALI32VBG60/61	35.49
Insulation Cover for VBG60/61, DN40		S55845-Z172	ALI40VBG60/61	36.92
Insulation Cover for VBG60/61, DN50		S55845-Z173	ALI50VBG60/61	42.12
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27

2-port open/close ball valves, externally threaded, PN40**VAG60..**

For use in heating, ventilating and air conditioning plants as open/close ball valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4214
Leakage rate	„Waterproof“ as per EN 60534-4 L1, better than class 5
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAG60..

Con- nect. thread	GQD../ GSD../9A $\Delta p_{\max}$ [kPa]	GQD../ GSD../9A Δp_s [kPa]	GDB../9E $\Delta p_{\max}$ [kPa]	GDB../9E Δp_s [kPa]	GMA../ GLB../9E $\Delta p_{\max}$ [kPa]	GMA../G LB../9E Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1" B	350	1400	350	1400	350	1400	15	9	S55230-V130	VAG60.15-9	84.89
G 1¼" B	350	1400	350	1400	350	1400	20	17	S55230-V131	VAG60.20-17	94.90
G 1½" B	350	1400	350	1400	350	1400	25	22	S55230-V132	VAG60.25-22	123.63
G 2" B					350	1000	32	35	S55230-V133	VAG60.32-35	175.50
G 2¼" B					350	800	40	68	S55230-V134	VAG60.40-68	211.90
G 2¾" B					350	600	50	96	S55230-V135	VAG60.50-96	292.50

Combinable actuator for VAG60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3- position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 230	2-position/3- position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A	158.60
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A	158.60
AC 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A	104.52
AC 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E	266.50
AC 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A	104.52
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E	287.30

Valves and actuators

Rotary valves

Ball valves

Accessories for VAG60..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation Cover for VAG60/61, DN15		S55845-Z162	ALI15VAG60/61	29.51
Insulation Cover for VAG60/61, DN20		S55845-Z163	ALI20VAG60/61	29.51
Insulation Cover for VAG60/61, DN25		S55845-Z164	ALI25VAG60/61	29.51
Insulation Cover for VAG60/61, DN32		S55845-Z165	ALI32VAG60/61	35.49
Insulation Cover for VAG60/61, DN40		S55845-Z166	ALI40VAG60/61	36.92
Insulation Cover for VAG60/61, DN50		S55845-Z167	ALI50VAG60/61	42.12
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27

3-port changeover ball valves, externally threaded, PN40

VBG60..



For use in heating, ventilating and air conditioning plants as changeover ball valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4214
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBG60..

Con- nect. thread	GDB..9E $\Delta p_{\max}$ [kPa]	GQD../ GSD..9A $\Delta p_{\max}$ [kPa]	GMA../ GLB..9E $\Delta p_{\max}$ [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.	Price (€)
G 1"	350	350	350	15	8	S55230-V136	VBG60.15-8T	167.70
G 1¼"	350	350	350	20	13	S55230-V137	VBG60.20-13T	195.00
G 1½"	350	350	350	25	13	S55230-V138	VBG60.25-13T	245.70
G 2"			350	32	25	S55230-V139	VBG60.32-25T	352.30
G 2¼"			350	40	49	S55230-V140	VBG60.40-49T	405.60
G 2¾"			350	50	73	S55230-V141	VBG60.50-73T	520.00

Combinable actuator for VBG60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.	Price (€)
AC 24 DC 24	2-position/3- position	150	No	A6V10636203	S55499-D204	GLB141.9E	162.50
AC 230	2-position/3- position	150	No	A6V10636203	S55499-D205	GLB341.9E	162.50
AC 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A	158.60
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A	158.60
AC 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A	104.52
AC 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E	266.50
AC 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A	104.52
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E	287.30

Valves and actuators

Rotary valves

Ball valves

Accessories for VBG60..

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Insulation Cover for VBG60/61, DN15		S55845-Z168	ALI15VBG60/61	29.51
Insulation Cover for VBG60/61, DN20		S55845-Z169	ALI20VBG60/61	29.51
Insulation Cover for VBG60/61, DN25		S55845-Z170	ALI25VBG60/61	29.51
Insulation Cover for VBG60/61, DN32		S55845-Z171	ALI32VBG60/61	35.49
Insulation Cover for VBG60/61, DN40		S55845-Z172	ALI40VBG60/61	36.92
Insulation Cover for VBG60/61, DN50		S55845-Z173	ALI50VBG60/61	42.12
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2	74.49
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3	49.27

Valves and actuators

Refrigerant valves

2-port modulating pilot valve

2-port modulating pilot valve with magnetic actuator, PN32, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 V Phs to control main valves

M2FP03GX



Hermetically sealed 2-port valve as a control valve for main valves from 2" to 5".

- PN32 with threaded connections
- For use with refrigerants such as R22, R134a, R404A, R407C, R507 and ammonia R717
- ZM electronics must be ordered separately (see below)

Data sheet	N4731
PN class	PN 32
Operating voltage	AC 24 V
Power consumption	13 VA
Positioning signal	DC 0...10 V DC 4...20 mA DC 0...20 V Phs
Positioning time	1 s
Spring return function	Closed
Degree of protection	IP54
Ambient temperature, operation	-40...50 °C
Mounting position	Any
Permissible operating pressure	3200 kPa
Leakage rate	0.25 % of kvs
Medium temperature	-40... 100 °C; -40...212 °F
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:200
Material, valve body	Steel
Material, inside set	CrNi steel
Δp_{max}	1800 kPa
k_{vs}	0.3 m³/h
Warranty	5 Years

	Stock no.	Product no.	Price (€)
	BPZ:M2FP03GX	M2FP03GX	1127.10

With types ZM101/A and ZM121/A, the DC 0...20 V Phs positioning signal is also possible without operating voltage.

Matching ZM.. electronics

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM100/A	ZM100/A	180.70
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	ZM101/A	232.70
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM120/A	ZM120/A	219.70
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	ZM121/A	241.80
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM200/A	ZM200/A	330.20

Valves and actuators

Refrigerant valves

For expansion, hotgas and suction throttle applications

MVL661...-



Modulating refrigerant valves with magnetic actuator, PS45, hermetically sealed, for safety refrigerants

Hermetically sealed 2-port valves for modulating control of chillers and heat pumps.

- Expansion, hot-gas and suction throttle applications with one type of valve
- PS45, stainless steel with soldering connections
- Integrated power electronic with precise position feedback signal
- For safety refrigerants such as R22, R134a, R404A, R407C, R410A, R507, and R744 (CO₂). Not suitable for inflammable refrigerants.

The MVL661...- refrigerant valve is used in conjunction with PolyCool for superheat control or Climatix for chiller control.

MVL661...- replaces M2FS..LX.., M2FE..L.. and MVL661.25.

MVL661...- are UL listed.

ASR61: Replacement electronics in the event of defective valve electronics.

Data sheet	N4714
Operating voltage	AC 24 V
	DC 20...30 V
Positioning signal	DC 0...10 V
	DC 2...10 V
	DC 0...20 mA
	DC 4...20 mA
Positioning time	< 1 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V
	DC 2...10 V
	DC 0...20 mA
	DC 4...20 mA
Degree of protection	IP65
Ambient temperature, operation	-25...55 °C
Mounting position	Upright to horizontal
Permissible operating pressure	4500 kPa
Leakage rate	< 0.002 % of k_{vs} value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Steel / CrNi steel
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview MVL661..

Δp_{max} [kPa]	k_{vs} [m ³ /h]	k_{vs} reduced [m ³ /h]	DN	Stock no.	Product no.	Price (€)
2500	0.4	0.25	15	BPZ:MVL661.15-0.4	MVL661.15-0.4	1271.40
2500	1	0.63	15	BPZ:MVL661.15-1.0	MVL661.15-1.0	1352.00
2500	2.5	1.6	20	BPZ:MVL661.20-2.5	MVL661.20-2.5	1482.00
2500	6.3	4	25	BPZ:MVL661.25-6.3	MVL661.25-6.3	1794.00
1600	10	6.3	32	S55320-M105	MVL661.32-10	2106.00
200	12	8	32	BPZ:MVL661.32-12	MVL661.32-12	2002.00

k_{vs} -reduced selectable with DIP switch.

MVL661.32-12 can only be used as a suction throttle valve.

Accessories for MVL661...- / MVS661..N

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Valve insert, k_{vs} 0.16 m ³ /h	N4716	BPZ:ASR0.16N	ASR0.16N	588.90
Valve insert, k_{vs} 0.4 m ³ /h	N4716	BPZ:ASR0.4N	ASR0.4N	670.80
Valve insert, k_{vs} 1 m ³ /h	N4716	BPZ:ASR1.0N	ASR1.0N	760.50
Valve insert, k_{vs} 2.5 m ³ /h	N4716	BPZ:ASR2.5N	ASR2.5N	843.70
Replacement electronic for MVL661.. and MVS661..N	N4714	BPZ:ASR61	ASR61	410.80

Modulating refrigerant valves with magnetic actuator, PN 63, hermetically sealed**MVS661..N**

Hermetically sealed 2-port valves for modulating control of refrigerant circuits including chillers and heat pumps.

- Expansion gas, flash gas and suction throttle applications with one type of valve
- PN 63, stainless steel with welding connections
- Integrated power electronic with precise position feedback signal
- For ammonia R717 and all standard refrigerants, noncorrosive gases/liquids and CO₂ (R744). It is not suited for use with inflammable refrigerants.

"An exchangeable ASR..N valve insert allows for different k_{vs} -values with the same type of DN25 valve. In the event of service, this insert can also be replaced on the plant.

MVS661..N are UL listed."

Data sheet	N4717
Operating voltage	AC 24 V DC 20...30 V
Power consumption	22 VA
Positioning signal	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Positioning time	<1 s
Spring return function	Closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP65
Ambient temperature, operation	-25...55 °C
Mounting position	Upright to horizontal
Permissible operating pressure	6300 kPa
Leakage rate	v_{s} -value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Steel / CrNi steel
Material, inside set	CrNi steel
Warranty	5 Years

Range overview MVS661..N

Δp_{max} [kPa]	k_{vs} [m ³ /h]	k_{vs} reduced [m ³ /h]	DN	Stock no.	Product no.	Price (€)
2500	0.4	0.25	25	BPZ:MVS661.25-0.4N	MVS661.25-0.4N	2028.00
2500	0.16	0.1	25	BPZ:MVS661.25-016N	MVS661.25-016N	1950.00
2500	1	0.63	25	BPZ:MVS661.25-1.0N	MVS661.25-1.0N	2106.00
2500	2.5	1.6	25	BPZ:MVS661.25-2.5N	MVS661.25-2.5N	2184.00
2500	6.3	4	25	BPZ:MVS661.25-6.3N	MVS661.25-6.3N	2275.00

k_{vs} -reduced selectable with DIP switch.

Valves and actuators

Refrigerant valves

For refrigeration units and heat recovery

Matching ZM.. electronics

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	ZM101/A	232.70
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	ZM121/A	241.80

Valves and actuators

Refrigerant valves

For refrigeration units and heat recovery

Modulating refrigerant valves with magnetic actuator, PS43, soldered connection, hermetically sealed

M3FB..LX..

Hermetically sealed control valves for modulating capacity control of refrigeration units and for heat recovery.

- PN40 with soldered CrNi steel connections
- For organic safety refrigerants such as R22, R134a, R404A, R407C, R410A, R507, etc. Not suitable for flammable refrigerants
- ZM electronics must be ordered separately (see accessories)

Modulating control valves for hot-gas control, without ZM.. electronics housing
For use with Staefa controllers (working range 4...8 V)



Data sheet	N4721
Operating voltage	AC 24 V
Positioning signal	DC 0...10 V DC 4...20 mA DC 0...20 V Phs
Positioning time	< 1 s
Spring return function	AB-> A closed
Degree of protection	IP54
Ambient temperature, operation	-40...50 °C
Mounting position	Any
Permissible operating pressure	4300 kPa
Leakage rate	< 0.05% of k_{vs} -value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:200
Material, valve body	Steel
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview M3FB..LX..

Power consumption [VA]	$\Delta p_{\max}$ [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.	Price (€)
26	2200	3	15	BPZ:M3FB15LX/A	M3FB15LX/A	1599.00
26	2200	0.6	15	BPZ:M3FB15LX06/A	M3FB15LX06/A	1599.00
26	2200	1.5	15	BPZ:M3FB15LX15/A	M3FB15LX15/A	1599.00
26	1800	5	20	BPZ:M3FB20LX/A	M3FB20LX/A	1911.00
40	1200	8	25	BPZ:M3FB25LX/A	M3FB25LX/A	2301.00
40	800	12	32	BPZ:M3FB32LX	M3FB32LX	3081.00

$\Delta p_{\max}$ across control port AB -> A.

Valves and actuators

Refrigerant valves

For condensate control

M3FK..LX..



Modulating refrigerant valves with magnetic actuator, PN32, solder connection, hermetically sealed

Hermetically sealed mixing or straight-through valves for modulating capacity control of condensers.

- PN32 with copper soldering connection
- For safety refrigerants such as R22, R134a, R404A, R407C, R507, etc.
- ZM electronics must be ordered separately (see below)

For use with Staefa controllers (working range 4...8 V)

Data sheet	N4722
PN class	PN 32
Operating voltage	AC 24 V
Positioning signal	DC 0...10 V DC 4...20 mA DC 0...20 V Phs
Positioning time	< 1 s
Spring return function	1-> 3 closed
Degree of protection	IP54
Ambient temperature, operation	-40...50 °C
Mounting position	Any
Permissible operating pressure	3200 kPa
Leakage rate	< 0.05% of k_{vs} -value
Leakage rate bypass	< 0.5% of k_{vs} -value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:200
Material, valve body	Steel
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview M3FK..LX..

Power consumption [VA]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.	Price (€)
16	8	25	BPZ:M3FK25LX	M3FK25LX	2496.00
13	3	15	BPZ:M3FK15LX	M3FK15LX	2054.00
20	12	32	BPZ:M3FK32LX	M3FK32LX	2847.00
40	20	40	BPZ:M3FK40LX	M3FK40LX	3523.00
40	30	50	BPZ:M3FK50LX	M3FK50LX	3835.00

With types ZM101/A and ZM121/A, the DC 0...20 V Phs positioning signal is also possible without operating voltage.

Matching ZM.. electronics

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	ZM101/A	232.70
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	ZM121/A	241.80

Damper actuators

2



Overview and selection tools	212
Air damper actuators	219
	Fast-running damper actuators with fail safe function
	Rotary damper actuators with spring return
	Rotary damper actuators non-spring return
	Rotary damper actuators with Modbus RTU communication
	Fast-running damper actuators fail-in-place
	Linear damper actuators
VAV controller	239
	VAV compact controllers
	VAV compact controllers with KNX PL-Link communication
	VAV compact controllers with Modbus RTU communication
	VAV compact controllers with BACnet MS/TP communication
	VAV modular controllers
Actuators for fire and smoke protection dampers	247
	Fire damper actuators

Damper actuators

Overview and selection tools

2

Actuators for HVAC applications

Actuators for HVAC applications	Control signal	Operating voltage	Standard model	Feedback potentiometer (1 kOhm)	Adjustable offset/span	Adjustable offset/span with two auxiliary switches	Feedback (1 kOhm) with two auxiliary switches	Two auxiliary switches	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)
	GQD series 2 Nm for approx. 0.3 m² damper area 30 s run time 15 s SR time	2-position	AC/DC 24 V	GQD121.1A	–	–	–	GQD126.1A	8...15	6...11
			AC 230 V	GQD321.1A	–	–	–	GQD326.1A		
		3-position	AC/DC 24 V	GQD131.1A	–	–	–	GQD136.1A		
		Modulating DC 0...10 V	AC/DC 24 V	GQD161.1A	–	–	–	GQD166.1A		
	GPC series 4 Nm for approx. 0.6 m² damper area 60 s run time 15 s SR time	2-position	AC/DC 24 V	GPC121.1A	–	–	–	GPC126.1A	8...15	6...11
			AC 230 V	GPC321.1A	–	–	–	GPC326.1A		
		3-position	AC/DC 24 V	GPC131.1A	–	–	–	GPC136.1A		
		Modulating DC 0...10 V	AC/DC 24 V	GPC161.1A	–	–	–	GPC166.1A		
	GNP series 6 Nm for approx. 1 m² damper area 2 s run time el. fail-safe function	2-position	AC/DC 24 V	GNP191.1E	–	–	–	GNP196.1E	6.4...20.5	6.4...13
		3-position								
		Modulating DC 0/2...10 V	AC/DC 24 V	GNP191.1E	–	–	–	GNP196.1E		
		0/4...20 mA								
	GMA series 7 Nm for approx. 1.5 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V	GMA121.1E	–	–	–	GMA126.1E	6.4...20.5	6.4...13
			AC 230 V	GMA321.1E	–	–	–	GMA326.1E		
		3-position	AC/DC 24 V	GMA131.1E	GMA132.1E	–	–	GMA136.1E		
		Modulating DC 0...10 V	AC/DC 24 V	GMA161.1E	–	GMA163.1E	GMA164.1E	GMA166.1E		
	GCA series 18 Nm for approx. 3 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V	GCA121.1E	–	–	–	GCA126.1E	8...25.6	6...18
			AC 230 V	GCA321.1E	–	–	–	GCA326.1E		
		3-position	AC/DC 24 V	GCA131.1E	–	–	GCA135.1E	–		
		Modulating DC 0...10 V	AC/DC 24 V	GCA161.1E	–	GCA163.1E	GCA164.1E	GCA166.1E		
		Modbus RTU	AC 24 V	GCA161.1E/MO	–	–	–	–		

Actuators for HVAC applications

Actuators for HVAC applications	Control signal	Operating voltage	Standard model	Feedback potentiometer (1 kOhm)	Adjustable offset/ span	Adjustable offset/ span with two auxiliary switches	Feedback (1 kOhm) with two auxiliary switches	Two auxiliary switches	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)
	GSD series 2 Nm for approx. 0.3 m² damper area 30 s run time	2-position	AC/DC 24 V	GSD141.1A	–	–	–	GSD146.1A	8...15	6...11
		3-position	AC 230 V	GSD341.1A	–	–	–	GSD346.1A		
		Modulating DC 0...10 V	AC/DC 24 V	GSD161.1A	–	–	–	GSD166.1A		
		Modulating DC 0...10 V	AC 230 V	GSD361.1A	–	–	–	–		
	GDB series 5 Nm for approx. 0.8 m² damper area 150 s run time	2-position	AC/DC 24 V	GDB141.1E	GDB142.1E	–	–	GDB146.1E	8...16	6...12.8
		3-position	AC 230 V	GDB341.1E	–	–	–	GDB346.1E		
		Modulating DC 0...10 V	AC/DC 24 V	GDB161.1E	–	GDB163.1E	GDB164.1E	GDB166.1E		
		Modbus RTU	AC 230 V	GDB361.1E	–	–	–	–		
	GLB series 10 Nm for approx. 1.5 m² damper area 150 s run time	2-position	AC/DC 24 V	GLB141.1E	GLB142.1E	–	–	GLB146.1E	8...16	6...12.8
		3-position	AC 230 V	GLB341.1E	–	–	–	GLB346.1E		
		Modulating DC 0...10 V	AC/DC 24 V	GLB161.1E	–	GLB163.1E	GLB164.1E	GLB166.1E		
		Modbus RTU	AC 230 V	GLB361.1E	–	–	–	–		
	GAP series 6 Nm for approx. 1 m² damper area 2 s run time	2-position	AC/DC 24 V	GAP191.1E	–	–	–	GAP196.1E	6.4...20.5	6.4...13
		3-position	AC/DC 24 V	GAP191.1E	–	–	–	GAP196.1E		
	GEB series 15 Nm for approx. 3 m² damper area 150 s run time	2-position	AC 24 V	GEB131.1E	GEB132.1E	–	–	GEB136.1E	6.4...20.5	6.4...13
		3-position	AC 230 V	GEB331.1E	GEB332.1E	–	–	GEB336.1E		
		Modulating DC 0...10 V	AC 24 V	GEB161.1E	–	GEB163.1E	GEB164.1E	GEB166.1E		
		Modbus RTU	AC 24 V	GEB161.1E/ MO	–	–	–	–		
	GBB series 25 Nm for approx. 4 m² damper area 150 s run time	3-position	AC 24 V	GBB131.1E	–	–	GBB135.1E	GBB136.1E	8...25.6	6...18
		3-position	AC 230 V	GBB331.1E	–	–	GBB335.1E	GBB336.1E		
		Modulating DC 0...10 V	AC 24 V	GBB161.1E	–	GBB163.1E	GBB164.1E	GBB166.1E		
	GIB series 35 Nm for approx. 6 m² damper area 150 s run time	3-position	AC 24 V	GIB131.1E	–	–	GIB135.1E	GIB136.1E	8...25.6	6...18
		3-position	AC 230 V	GIB331.1E	–	–	GIB335.1E	GIB336.1E		
		Modulating DC 0...10 V	AC 24 V	GIB161.1E	–	GIB163.1E	GIB164.1E	GIB166.1E		
		Modbus RTU	AC 24 V	GIB161.1E/ MO	–	–	–	–		
	GDB series 125 N for approx. 0.8 m² damper area 150 s run time	3-position	AC 24 V	GDB131.2E	–	–	–	GDB136.2E	–	–
		3-position	AC 230 V	GDB331.2E	–	–	–	GDB336.2E		
		Modulating DC 0...10 V	AC 24 V	GDB161.2E	–	GDB163.2E	–	–		
	GLB series 250 N for approx. 1.5 m² damper area 150 s run time	3-position	AC 24 V	GLB131.2E	–	–	–	GLB136.2E	–	–
		3-position	AC 230 V	GLB331.2E	–	–	–	GLB336.2E		
		Modulating DC 0...10 V	AC 24 V	GLB161.2E	–	GLB163.2E	–	–		

Damper actuators

Overview and selection tools

2

Actuators for fire and smoke protection dampers

Actuators for fire and smoke protection dampers	Control signal	Operating voltage	2 auxiliary switches	2 auxiliary switches and thermal cut-out	Dimensions, square damper shaft (mm)
 GRA actuator 4 Nm for approx. 0.6 m² damper area 90 s running time 15 s spring return time	2-position	AC/DC 24 V AC 230 V	GRA126.1E/... ¹⁾ GRA326.1E/... ¹⁾	GRA126.1E/T... ¹⁾ GRA326.1E/T... ¹⁾	10, 12
 GNA actuator 9/7 Nm for approx. 1 m² damper area 90 s running time 15 s spring return time	2-position	AC/DC 24 V AC 230 V	GNA126.1E/... ¹⁾ GNA326.1E/... ¹⁾	GNA126.1E/T... ¹⁾ GNA326.1E/T... ¹⁾	10, 12
 GGA actuator 18 Nm for approx. 2.5 m² damper area 90 s running time 15 s spring return time	2-position	AC/DC 24 V AC 230 V	GGA126.1E/... ¹⁾ GGA326.1E/... ¹⁾	GGA126.1E/T... ¹⁾ GGA326.1E/T... ¹⁾	10, 12

¹⁾ .. = insert dimension of damper shaft square (mm)

Actuators for air volume controllers

Actuators for air volume controllers 300 Pa application range	Control signal	Operating voltage	Standard model	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)
 GDB 300 Pa VAV compact controller 5 Nm for approx. 0.8 m² damper area 150 s running time	3-position Modulating DC 0/2...10 V KNX S-Mode, KNX LTE-Mode, KNX PL-Link Modbus RTU BACnet MS/TP	AC 24 V	GDB181.1E/3 GDB181.1E/KN GDB181.1E/MO GDB181.1E/BA	8...16	6...12.8
 GLB 300 Pa VAV compact controller 10 Nm for approx. 1.5 m² damper area 150 s running time	3-position Modulating DC 0/2...10 V KNX S-Mode, KNX LTE-Mode, KNX PL-Link Modbus RTU BACnet MS/TP	AC 24 V	GLB181.1E/3 GLB181.1E/KN GLB181.1E/MO GLB181.1E/BA	8...16	6...12.8
 ASV 300 Pa VAV modular controller	3-position Modulating DC 0/2...10 V	AC 24 V	ASV181.1E/3	—	—

Actuators for railway applications

Actuators for railway applications		Control signal	Operating voltage	Standard model	Feedback potentiometer	2 integrated auxiliary switches	Rotary direction switch
	GDD series 5 Nm 30 s run time	Modulating DC 0/2...10 V	DC 24 V	GDD161.1E/RW	–	–	Yes
		2-position 3-position		GDD141.1E/RW	GDD142.1E/RW	GDD146.1E/RW	
	GDA series 5 Nm 90 s run time	Modulating DC 0/2...10 V	DC 24 V	GDA161.1E/RW	–	–	Yes
		2-position 3-position		GDA141.1E/RW	GDA142.1E/RW	GDA146.1E/RW	
	GLD series 8 Nm 30 s run time	Modulating DC 0/2...10 V	DC 24 V	GLD161.1E/RW	–	–	Yes
		2-position 3-position		GLD141.1E/RW	GLD142.1E/RW	GLD146.1E/RW	
	GLA series 10 Nm 90 s run time	Modulating DC 0/2...10 V	DC 24 V	GLA161.1E/RW	–	–	Yes
		2-position 3-position		GLA141.1E/RW	GLA142.1E/RW	GLA146.1E/RW	

Damper actuators

Overview and selection tools

2

Accessories for actuators

Description	GDB/ GLB	GEB/ GMA	GCA/GIB GBB	Type reference
 Rotary to linear set with lever Allows a direct-coupled actuator to provide a linear drive; can be used to simultaneously drive a set of opposing or adjacent dampers with a single actuator.	■			ASK71.5
 Rotary to linear set with lever Allows a direct-coupled actuator to provide an auxiliary linear drive; can be used to simultaneously drive a set of opposing or adjacent dampers with a single actuator.		■	■	ASK71.13 ASK71.3
 Rotary to linear set with lever and angle bracket For use in applications where the actuator can be rigidly surface-mounted and a linear stroke output is required.	■			ASK71.6
 Rotary to linear set with lever and mounting plate For use in applications where the actuator can be rigidly surface-mounted and a linear stroke output is required.		■	■	ASK71.14 ASK71.4
 Universal lever For use with all OpenAir rotary to linear kits for linear applications requiring connection to damper louver shaft when joint connection is not possible. For 8 to 25.6 mm round.	■	■	■	ASK71.9
 Tandem mounting bracket Tandem mounting bracket for 2-position and 3-position GCA/GIB models Tandem mounting bracket for modulating GCA/GIB models		■	■ ■	ASK73.3 ASK73.1 ASK73.2
 Rotary to linear set for duct mounting For airstream applications and where a foot-mounted actuator can be used. Includes crank arm, Teflon support-bearing ring, and mounting fasteners. Rotary to linear set for duct and frame mounting	■	■	■	ASK71.6 ASK71.1 ASK71.11

Description	GDB/ GLB	GEB/ GMA	GCA/GIB GBB	Type reference
 Rotary to linear set for frame mounting For direct mounting to damper frame. Includes a crank arm to generate a linear stroke, a Teflon support-bearing ring to minimize side-loading on the actuator's output bearing, and other mounting fasteners. Rotary to linear set for duct and frame mounting			■	ASK71.2 ASK71.11
 Special shaft adapter • Up to 27 mm shaft diameter Note: When used with a GIB, accepts shaft diameters from 19 to 27 mm			■	ASK74.1
 Actuator shaft insert for small shaft diameters • Up to 10 mm diameter	■			ASK78.3
 Weathershield Includes cover, gasket and screws.	■	■	■ ■ ■	ASK75.3 ASK75.1 ASK75.4 ASK75.6 ASK75.5 ASK75.2
 Shaft extension		■	■	ASK74.7
 Setting unit for VAV compact controller for GDB/GLB/ASV181.1E/xx	■			AST20
 Interface converter for VAV compact controller Interface converter for use with GDB/GLB/ASV181.1E/xx	■			AST11

Damper actuators

Overview and selection tools

2

Description	GDB/ GLB	GEB/ GMA	GCA/GIB GBB	Type reference
 External auxiliary switches External auxiliary switch kit, attachable to GCA, GMA, GEB, GBB und GIB rotary actuators - 1 external auxiliary switch - 2 external auxiliary switches		■ ■	■ ■	ASC77.1E ASC77.2E
 Shaft inserts for GDB/GLB...1 - Round 1/2" - Square 8 x 8 mm - Square 8 x 8 mm fix - Square 10 x 10 mm - Round 10 mm - Round 12 mm - D-profile fix	■ ■ ■ ■ ■ ■ ■			ASK78.5 ASK78.6 ASK78.14 ASK78.7 ASK78.9 ASK78.10 ASK78.12

For accessories and spare parts for air damper actuators, please order data sheet:

N4697 (GMA/GEB)

N4698 (GDB/GLB)

N4699 (GCA/GBB/GIB)

Damper actuators
Air damper actuators
Fast-running damper actuators with fail safe function

2

Mounting Bracket, GS

ASK71.07

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z118	ASK71.07	3.83

Rotary air damper actuators 6 Nm, with electronic fail-save function

GNP..1E

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4609
Torque	6 Nm
Air damper area	1 m ²
Positioning time	Opening with motor: 2 s Closing with Super Cap: 2 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	5 Years



Range overview GNP..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	20 VA	DC 0(2)...10 V	0	BPZ:GNP191.1E	GNP191.1E	402.17
DC 24	13 W	0(4)...20 mA				
AC 24	20 VA	DC 0(2)...10 V	2	BPZ:GNP196.1E	GNP196.1E	432.30
DC 24	13 W	0(4)...20 mA				

Accessory Kit, GEB/GMA

ASK71.01

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z101	ASK71.01	7.49

Shaft adapter, GS, square, 12mm

ASK74.14

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z105	ASK74.14	18.34

Shaft adapter, GEB/GMA, square, 10mm, complete

ASK74.15

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z106	ASK74.15	18.86

Damper actuators

Air damper actuators

Rotary damper actuators with spring return

2

GQD..1A



Rotary air damper actuators 2 Nm, with spring return

- For shaft dia 8...15 mm, square 6...11 mm, min. shaft length 20 mm
- With housing made of plastic and 0.9 m connecting cable

Data sheet	N4604
Torque	2 Nm
Air damper area	0.3 m ²
Positioning time	Open with motor: 30 s Closing with spring: 15 s
Cable length	0.9 m
Degree of protection	IP40
Dimensions (W x H x D)	73 x 122 x 63 mm
Warranty	5 Years

Range overview GQD..1A

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	4 VA	3-position	2	BPZ:GQD136.1A	GQD136.1A	191.26
DC 24	2.5 W					
AC 24	4.5 VA	DC 0...10 V	2	BPZ:GQD166.1A	GQD166.1A	213.53
DC 24	3 W					
AC 24	6.5 VA	2-position	0	BPZ:GQD121.1A	GQD121.1A	144.10
DC 24	4.5 W					
AC 24	6.5 VA	2-position	2	BPZ:GQD126.1A	GQD126.1A	166.37
DC 24	4.5 W					
AC 24	4 VA	3-position	0	BPZ:GQD131.1A	GQD131.1A	166.37
DC 24	2.5 W					
AC 24	4.5 VA	DC 0...10 V	0	BPZ:GQD161.1A	GQD161.1A	191.26
DC 24	3 W					
AC 230	10 VA	2-position	0	BPZ:GQD321.1A	GQD321.1A	144.10
	4.5 W					
AC 230	10 VA	2-position	2	BPZ:GQD326.1A	GQD326.1A	166.37
	4.5 W					

GPC..1



2

Rotary air damper actuators 4 Nm, with spring return

- With self-centering shaft adapter for shaft dia. 8...15 mm, square 6...11 mm, min. shaft length 20 mm
- With position indication
- Emergency function with spring return
- With 0.9 m connecting cable

Data sheet	A6V10636100
Torque	4 Nm
Air damper area	0.6 m ²
Positioning time	Open with motor: 60 s Closing with spring: 15 s
Degree of protection	IP54
Dimensions (W x H x D)	72 x 124 x 63 mm
Warranty	5 Years

Range overview GPC..1

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Spring return function	Stock no.	Product no.	Price (€)
AC 24 DC 24	4.3 VA 2.7 W	2-position	0	Yes	S55499-D233	GPC121.1A	196.50
AC 24 DC 24	4.3 VA 2.7 W	2-position	2	Yes	S55499-D234	GPC126.1A	229.25
AC 24 DC 24	4.3 VA 2.7 W	3-position	0	Yes	S55499-D235	GPC131.1A	196.50
AC 24 DC 24	4.3 VA 2.7 W	3-position	2	Yes	S55499-D236	GPC136.1A	229.25
AC 24 DC 24	3.7 VA 2.2 W	DC 0...10 V	0	Yes	S55499-D237	GPC161.1A	256.76
AC 24 DC 24	3.7 VA 2.2 W	DC 0...10 V	2	Yes	S55499-D238	GPC166.1A	289.51
AC 230	6.9 VA 2.9 W	2-position	0	Yes	S55499-D239	GPC321.1A	214.84
AC 230	6.9 VA 2.9 W	2-position	2	Yes	S55499-D240	GPC326.1A	248.90
AC 230	6.7 VA 2.9 W	DC 0...10 V	0	Yes	S55499-D241	GPC361.1A	317.02

Damper actuators

Air damper actuators

Rotary damper actuators with spring return

2

GMA..1E



Rotary air damper actuators 7 Nm, with spring return

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet

N4614 / A6V101037201

Torque

7 Nm

Air damper area

1.5 m²

Positioning time

Opening with motor: 90 s

Closing with spring: 15 s

Degree of protection

IP54

Dimensions (W x H x D)

81 x 192 x 63 mm

Warranty

5 Years

Range overview GMA..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Spring return function	Stock no.	Product no.	Price (€)
AC 24	5 VA	DC 0...35 V	0	Yes	BPZ:GMA163.1E	##N/A Single	284.00
DC 24	3.5 W	Adjustable					
AC 24	5 VA	2-position	0	Yes	BPZ:GMA121.1E	GMA121.1E	242.35
DC 24	3.5 W						
AC 24	5 VA	Modbus RTU	0	Yes	S55499-D300	GMA161.1E/MO	377.28
DC 24	3.5 W						
AC 24	5 VA	DC 0...35 V	2	Yes	BPZ:GMA164.1E	GMA164.1E	339.29
DC 24	3.5 W	Adjustable					
AC 24	5 VA	2-position	2	Yes	BPZ:GMA126.1E	GMA126.1E	276.41
DC 24	3.5 W						
AC 24	5 VA	3-position	0	Yes	BPZ:GMA131.1E	GMA131.1E	267.24
DC 24	3.5 W						
AC 24	5 VA	3-position	2	Yes	BPZ:GMA136.1E	GMA136.1E	298.68
DC 24	3.5 W						
AC 24	5 VA	DC 0...10 V	0	Yes	BPZ:GMA161.1E	GMA161.1E	290.82
DC 24	3.5 W						
AC 24	5 VA	DC 0...10 V	2	Yes	BPZ:GMA166.1E	GMA166.1E	323.57
DC 24	3.5 W						
AC 230	7 VA	2-position	0	Yes	BPZ:GMA321.1E	GMA321.1E	267.24
	4.5 W						
AC 230	7 VA	2-position	2	Yes	BPZ:GMA326.1E	GMA326.1E	298.68
	4.5 W						

Type GMA132.1E has a feedback potentiometer.

Basic Documentation No.: Z4614

GCA..1E



2

Rotary air damper actuators 18 Nm, with spring return

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4613 / A6V101037201
Torque	18 Nm
Air damper area	3 m ²
Positioning time	Opening with motor: 90 s Closing with spring: 15 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Range overview GCA..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24 DC 24	7 VA 5 W	2-position	0	BPZ:GCA121.1E	GCA121.1E	306.54
AC 24 DC 24	7 VA 5 W	Modbus RTU	0	S55499-D301	GCA161.1E/MO	438.85
AC 24 DC 24	7 VA 5 W	2-position	2	BPZ:GCA126.1E	GCA126.1E	343.22
AC 24 DC 24	7 VA 5 W	3-position	0	BPZ:GCA131.1E	GCA131.1E	332.74
AC 24 DC 24	7 VA 5 W	3-position	2	BPZ:GCA135.1E	GCA135.1E	394.31
AC 24 DC 24	7 VA 5 W	DC 0...10 V	0	BPZ:GCA161.1E	GCA161.1E	355.01
AC 24 DC 24	7 VA 5 W	DC 0...35 V Adjustable	0	BPZ:GCA163.1E	GCA163.1E	369.42
AC 24 DC 24	7 VA 5 W	DC 0...35 V Adjustable	2	BPZ:GCA164.1E	GCA164.1E	407.41
AC 24 DC 24	7 VA 5 W	DC 0...10 V	2	BPZ:GCA166.1E	GCA166.1E	390.38
AC 230	8 VA 6 W	2-position	0	BPZ:GCA321.1E	GCA321.1E	339.29
AC 230	8 VA 6 W	2-position	2	BPZ:GCA326.1E	GCA326.1E	373.35

Type GCA135.1E has a feedback potentiometer.
Basic Documentation No.: Z4613

Damper actuators

Air damper actuators

Rotary damper actuators with spring return

2

GCA126.1E/09H



Rotary air damper actuator 2-position, AC/DC 24 V, 18 Nm, spring return 90/15 s, cable halogen-free

– With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm

Data sheet	N4613
Torque	18 Nm
Air damper area	3 m ²
Angular rotation	90°
Power consumption	7 VA
	5 W
Positioning time	Open:90 s
	Close:15 s
Cable length	0.7 m
Positioning signal	2-position
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Operating voltage	AC 24 V
	DC 24 V
Auxiliary switch	0
Warranty	5 Years

Stock no.	Product no.	Price (€)
S55499-D153	GCA126.1E/09H	347.15

GCA161.1E/09H



Rotary air damper actuator AC/DC 24 V / DC 0...10 V, 18 Nm, spring return 90/15 s, potentiometer, cable halogen-free

– With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm

Data sheet	N4613
Torque	18 Nm
Air damper area	3 m ²
Angular rotation	90°
Power consumption	7 VA
	5 W
Positioning time	Open:90 s
	Close:15 s
Cable length	0.7 m
Positioning signal	DC 0...10 V
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Operating voltage	AC 24 V
	DC 24 V
Auxiliary switch	0
Warranty	5 Years

Stock no.	Product no.	Price (€)
S55499-D154	GCA161.1E/09H	356.32

Accessories for rotary air damper actuators GMA..1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting Bracket, GS		S55859-Z118	ASK71.07	3.83
Accessory Kit, GEB/GMA		S55859-Z101	ASK71.01	7.49
Shaft adapter, GS, square, 12mm		S55859-Z105	ASK74.14	18.34
Shaft adapter, GEB/GMA, square, 10mm, complete		S55859-Z106	ASK74.15	18.86
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E	57.25

Damper actuators
Air damper actuators
Rotary damper actuators with spring return

2

Accessories for rotary air damper actuators GMA..1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E	79.52
Rotary/linear mounting kit for duct or frame mounting	N4697	BPZ:ASK71.11	ASK71.11	138.86
Rotary/linear mounting kit with lever and bracket	N4697	BPZ:ASK71.13	ASK71.13	57.25
Rotary/linear mounting kit with lever	N4697	BPZ:ASK71.14	ASK71.14	76.37
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7	154.58

Accessories for rotary air damper actuators GCA..1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting Bracket, GM		S55859-Z114	ASK71.03	5.23
Standard Shaft Adapter, GM		S55859-Z117	ASK71.06	27.77
Shaft adapter, GM, square, 12mm		S55859-Z109	ASK74.18	27.90
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E	57.25
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E	79.52
Rotary/linear mounting kit for duct mounting	N4699	BPZ:ASK71.1	ASK71.1	120.78
Rotary/linear mounting kit for frame mounting	N4699	BPZ:ASK71.2	ASK71.2	196.50
Rotary/linear mounting kit with lever	N4699	BPZ:ASK71.3	ASK71.3	50.30
Rotary/linear mounting kit with lever and bracket	N4699	BPZ:ASK71.4	ASK71.4	63.67
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38
Flexible bracket for power pack	N4699	BPZ:ASK73.2	ASK73.2	154.58
Special shaft adapter	N4699	BPZ:ASK74.1	ASK74.1	50.57
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7	154.58
Bracket for power pack	N4699	BPZ:ASK73.1	ASK73.1	46.11
Weather shield for rotary actuator	N4699	BPZ:ASK75.1	ASK75.1	303.92

Caution!

- ASK73.1 is only valid for GCA12..1E, GCA13..1E, GCA32..1E
- ASK73.2 is only valid for GCA16..1E

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

2

GSD..1A



Rotary air damper actuators 2 Nm, without spring return

- Operate direct driven zone dampers used to control air flow in ducts specifically to address two position domestic and light commercial barrel damper applications.
- For shaft dia 8...15 mm, square 6...11 mm, min. shaft length 20 mm
- With housing made of plastic and 0.9 m connecting cable

Data sheet	N4603
Torque	2 Nm
Air damper area	0.3 m ²
Positioning time	30 s
Cable length	0.9 m
Degree of protection	IP40
Dimensions (W x H x D)	73 x 122 x 63 mm
Warranty	5 Years

Range overview GSD..1A

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	2 VA	SPST	0	BPZ:GSD121.1A	GSD121.1A	88.29
DC 24	1.5 W					
AC 24	2 VA	SPST	2	BPZ:GSD126.1A	GSD126.1A	110.96
DC 24	1.5 W					
AC 24	2.2 VA	Open-close / three-position	0	S55499-D281	GSD141.1A	111.48
DC 24...48	1.2 W					
AC 24	2.2 VA	Open-close / three-position	2	S55499-D227	GSD146.1A	137.55
DC 24...48	1.2 W					
AC 24	2,4 VA	DC 0/2...10 V	0	S55499-D228	GSD161.1A	161.13
DC 24...48	1,4 W					
AC 24	2,4 VA	DC 0/2...10 V	2	S55499-D229	GSD166.1A	191.26
DC 24...48	1,4 W					
AC 230	12 VA	SPST	0	BPZ:GSD321.1A	GSD321.1A	88.29
	2 W					
AC 230	12 VA	SPST	2	BPZ:GSD326.1A	GSD326.1A	110.96
	2 W					
AC 100...240	4,5 VA	Open-close / three-position	0	S55499-D282	GSD341.1A	111.48
	1,8 W					
AC 100...240	4,5 VA	Open-close / three-position	2	S55499-D230	GSD346.1A	137.55
	1,8 W					
AC 100...240	3,7 VA	DC 0/2...10 V	0	S55499-D231	GSD361.1A	200.43
	1,4 W					

Rotary air damper actuators 5 Nm, without spring return

- For shaft dia. 8..16 mm, square 6...12 mm, min. shaft length 30 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	A6V10636149 / A6V10881141
Torque	5 Nm
Air damper area	0.8 m²
Positioning time	150 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	68 x 137 x 59.5 mm
Warranty	5 Years

GDB..1..



2

Range overview GDB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	3 VA 2 W	DC 0...10 V	2	BPZ:GDB166.1E	BPZ:GDB166.1E	146.72
AC 24	3.0 VA 2.5 W	KNX TP	0	S55499-D190	GDB111.1E/KN	273.79
AC 24	3 VA 2.5 W	Modbus RTU	0	S55499-D191	GDB111.1E/MO	260.69
AC 24 DC 24	2.5 VA 1.1 W	2-position/3-position	0	S55499-D184	GDB141.1E	117.51
AC 24 DC 24	2.5 VA 1.1 W	2-position/3-position	0	S55499-D185	GDB142.1E	179.47
AC 24 DC 24	2.5 VA 1.1 W	2-position/3-position	2	S55499-D186	GDB146.1E	144.10
AC 24 DC 24	2.1 VA 1.2 W	DC 0...35 V Adjustable	2	S55499-D268	GDB164.1E	224.01
AC 24 DC 24	3.3 VA 1.3 W	DC 0/2...10 V	2	S55499-D269	GDB166.1E	209.60
AC 230	5 VA 1.6 W	2-position/3-position	0	S55499-D187	GDB341.1E	117.51
AC 230	5 VA 1.6 W	2-position/3-position	2	S55499-D188	GDB346.1E	144.10
AC 230	2.1 VA 1.2 W	DC 0/2...10 V	0	S55499-D189	GDB361.1E	220.08
AC 24 DC 24	2.1 VA 1.2 W	DC 0/2...10 V	0	S55499-D266	GDB161.1E	183.40
AC 24 DC 24	2.1 VA 1.2 W	DC 0...35 V Adjustable	0	S55499-D267	GDB163.1E	197.81

Type GDB142.1E has a feedback potentiometer.

Type GDB161.1H has a cable length of 5m.

Basic Documentation No.: A6V10636139.

Additional variants of actuators can be configured in Product Configurator.

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

GLB..1..



Rotary air damper actuators 10 Nm, without spring return

- For shaft dia. 8..16 mm, square 6...12 mm, min. shaft length 30 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	A6V10636202 / A6V10881141
Torque	10 Nm
Air damper area	1.5 m ²
Positioning time	150 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	68 x 137 x 59.5 mm
Warranty	5 Years

Range overview GLB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	3.0 VA 2.5 W	KNX TP	0	S55499-D198	GLB111.1E/KN	315.71
AC 24	3 VA 2.5 W	Modbus RTU	0	S55499-D199	GLB111.1E/MO	302.61
AC 24 DC 24	2 VA 1.3 W	2-position/3-position	0	S55499-D192	GLB141.1E	138.86
AC 24 DC 24	2 VA 1.3 W	2-position/3-position	0	S55499-D193	GLB142.1E	200.43
AC 24 DC 24	2 VA 1.3 W	2-position/3-position	2	S55499-D194	GLB146.1E	163.75
AC 24 DC 24	2.5 VA 1.5 W	DC 0/2...10 V	0	S55499-D270	GLB161.1E	221.39
AC 24 DC 24	2.5 VA 1.5 W	DC 0...35 V Adjustable	2	S55499-D272	GLB164.1E	262.00
AC 230	5.8 VA 1.9 W	2-position/3-position	0	S55499-D195	GLB341.1E	138.86
AC 230	5.8 VA 1.9 W	2-position/3-position	2	S55499-D196	GLB346.1E	163.75
AC 230	4 VA 1.6 W	DC 0/2...10 V	0	S55499-D197	GLB361.1E	264.62
AC 24 DC 24	2.5 VA 1.5 W	DC 0...35 V Adjustable	0	S55499-D271	GLB163.1E	234.49
AC 24 DC 24	2.5 VA 1.5 W	DC 0/2...10 V	2	S55499-D273	GLB166.1E	248.90

Type GLB142.1E has a feedback potentiometer.

Basic Documentation No.: A6V10636196.

Additional variants of actuators can be configured in Product Configurator.

Rotary air damper actuators 15 Nm, without spring return

GEB..1E

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4621 / A6V101037253
Torque	15 Nm
Air damper area	3 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	2 Years



Range overview GEB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	6 VA 5.5 W	Modbus RTU	0	S55499-D298	GEB161.1E/MO	344.53
AC 230	3 VA 3 W	3-position	0	BPZ:GEB331.1E	GEB331.1E	243.66
AC 230	3 VA 3 W	3-position	2	BPZ:GEB336.1E	GEB336.1E	288.20

Types GEB132.1E and 332.1E have a feedback potentiometer.
Basic Documentation No.: Z4621

Rotary air damper actuators 20 Nm, without spring return

GEB..1E / GEB..9E

- With self-centering shaft adapter for shaft dia. 8...20.5 mm, square 8...14.5 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	A6V11449860
Torque	20 Nm
Air damper area	4 m ²
Angular rotation	90°
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	82 x 192 x 63 mm
Warranty	5 Years



Range overview GEB..1E / GEB..9E

Operating voltage [V]	Power consumption	Positioning signal [V]	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24 DC 24...48	2.3 VA 1.1 W		0	S55499-D329	GEB141.1E	178.16
AC 24 DC 24...48	2.3 VA 1.1 W		0	S55499-D330	GEB142.1E	238.42
AC 24 DC 24...48	2.3 VA 1.1 W		2	S55499-D331	GEB146.1E	210.91
AC 24 DC 24...48	2.5 VA 1.2 W	DC 0/2...10	0	S55499-D332	GEB161.1E	260.69

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

2

Range overview GEB..1E / GEB..9E

Operating voltage [V]	Power consumption	Positioning signal [V]	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24 DC 24...48	2.5 VA 1.2 W	DC 0...35	0	S55499-D333	GEB163.1E	276.41
AC 24 DC 24...48	2.5 VA 1.2 W	DC 0...35	2	S55499-D334	GEB164.1E	306.54
AC 24 DC 24...48	2.5 VA 1.2 W	DC 0/2...10	2	S55499-D335	GEB166.1E	290.82
AC 100...240	4 VA 1.6 W		0	S55499-D336	GEB341.1E	178.16
AC 100...240	4 VA 1.6 W		2	S55499-D337	GEB346.1E	210.91
AC 100...240	3.4 VA 1.3 W	DC 0/2...10	0	S55499-D338	GEB361.1E	280.34

Rotary air damper actuators 25 Nm, without spring return

GBB..1E

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626
Torque	25 Nm
Air damper area	4 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years



Rotary actuators 25 Nm for ball valves VAF41..

Range overview GBB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	7 VA 7 W	3-position	0	BPZ:GBB131.1E	GBB131.1E	214.84
AC 24	7 VA 7 W	3-position	2	BPZ:GBB135.1E	GBB135.1E	276.41
AC 24	7 VA 7 W	3-position	2	BPZ:GBB136.1E	GBB136.1E	247.59
AC 24	8 VA 8 W	DC 0...10 V	0	BPZ:GBB161.1E	GBB161.1E	296.06
AC 24	8 VA 8 W	DC 0...35 V Adjustable	0	BPZ:GBB163.1E	GBB163.1E	311.78
AC 24	8 VA 8 W	DC 0...35 V Adjustable	2	BPZ:GBB164.1E	GBB164.1E	347.15
AC 24	8 VA 8 W	DC 0...10 V	2	BPZ:GBB166.1E	GBB166.1E	322.26
AC 230	5 VA 5 W	3-position	0	BPZ:GBB331.1E	GBB331.1E	214.84
AC 230	5 VA 5 W	3-position	2	BPZ:GBB335.1E	GBB335.1E	276.41
AC 230	5 VA 5 W	3-position	2	BPZ:GBB336.1E	GBB336.1E	247.59

Types GBB135.1E and GBB335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

GIB..1E



Rotary air damper actuators 35 Nm, without spring return

- With self-centering shaft adapter for shaft dia. 8...25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626 / A6V101037253
Torque	35 Nm
Air damper area	6 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Rotary actuators 35 Nm for ball valves VAF41..

Range overview GIB..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	7 VA 7 W	3-position	0	BPZ:GIB131.1E	GIB131.1E	280.34
AC 24	8 VA 8 W	Modbus RTU	0	S55499-D299	GIB161.1E/MO	446.71
AC 24	7 VA 7 W	3-position	2	BPZ:GIB135.1E	GIB135.1E	340.60
AC 24	7 VA 7 W	3-position	2	BPZ:GIB136.1E	GIB136.1E	313.09
AC 24	8 VA 8 W	DC 0...10 V	0	BPZ:GIB161.1E	GIB161.1E	361.56
AC 24	8 VA 8 W	DC 0...35 V Adjustable	0	BPZ:GIB163.1E	GIB163.1E	375.97
AC 24	8 VA 8 W	DC 0...35 V Adjustable	2	BPZ:GIB164.1E	GIB164.1E	411.34
AC 24	8 VA 8 W	DC 0...10 V	2	BPZ:GIB166.1E	GIB166.1E	396.93
AC 230	5 VA 5 W	3-position	0	BPZ:GIB331.1E	GIB331.1E	280.34
AC 230	5 VA 5 W	3-position	2	BPZ:GIB335.1E	GIB335.1E	340.60
AC 230	5 VA 5 W	3-position	2	BPZ:GIB336.1E	GIB336.1E	313.09

Types GIB135.1E and 335.1E have a feedback potentiometer.

Basic Documentation No.: Z4626

Accessories for rotary air damper actuators GDB..1E and GLB..1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14	4.44
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6	4.44
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7	5.93
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5	56.33
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6	78.60
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38

Damper actuators
Air damper actuators
Rotary damper actuators non-spring return

2

Accessories for rotary air damper actuators GEB..1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting Bracket, GS		S55859-Z118	ASK71.07	3.83
Accessory Kit, GEB/GMA		S55859-Z101	ASK71.01	7.49
Shaft adapter, GS, square, 12mm		S55859-Z105	ASK74.14	18.34
Shaft adapter, GEB/GMA, square, 10mm, complete		S55859-Z106	ASK74.15	18.86
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E	57.25
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E	79.52
Rotary/linear mounting kit for duct or frame mounting	N4697	BPZ:ASK71.11	ASK71.11	138.86
Rotary/linear mounting kit with lever and bracket	N4697	BPZ:ASK71.13	ASK71.13	57.25
Rotary/linear mounting kit with lever	N4697	BPZ:ASK71.14	ASK71.14	76.37
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7	154.58

Accessories for rotary air damper actuators GBB..1E and GIB..1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting Bracket, GM		S55859-Z114	ASK71.03	5.23
Standard Shaft Adapter, GM		S55859-Z117	ASK71.06	27.77
Shaft adapter, GM, square, 12mm		S55859-Z109	ASK74.18	27.90
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E	57.25
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E	79.52
Rotary/linear mounting kit for duct mounting	N4699	BPZ:ASK71.1	ASK71.1	120.78
Rotary/linear mounting kit for frame mounting	N4699	BPZ:ASK71.2	ASK71.2	196.50
Rotary/linear mounting kit with lever	N4699	BPZ:ASK71.3	ASK71.3	50.30
Rotary/linear mounting kit with lever and bracket	N4699	BPZ:ASK71.4	ASK71.4	63.67
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38
Flexible bracket for power pack	N4699	BPZ:ASK73.2	ASK73.2	154.58
Special shaft adapter	N4699	BPZ:ASK74.1	ASK74.1	50.57
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7	154.58
Bracket for power pack	N4699	BPZ:ASK73.1	ASK73.1	46.11
Weather shield for rotary actuator	N4699	BPZ:ASK75.1	ASK75.1	303.92

Caution!

- ASK73.1 is only valid for GIB13..1E and GIB33..1E
- ASK73.2 is only valid for GIB16..1E

Damper actuators

Air damper actuators

Rotary damper actuators with Modbus RTU communication

2

Accessories for rotary damper actuators with Modbus RTU communication

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14	4.44
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6	4.44
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7	5.93
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5	56.33
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6	78.60
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38

Damper actuators
Air damper actuators
Fast-running damper actuators fail-in-place

2

Rotary air damper actuators 6 Nm, without electronic fail-save function

GAP..1E

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4608
Torque	6 Nm
Air damper area	1 m ²
Positioning time	2 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	5 Years



Range overview GAP..1E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	30 VA	DC 0(2)...10 V	0	BPZ:GAP191.1E	GAP191.1E	288.20
DC 24	22 W	0(4)...20 mA				
AC 24	30 VA	DC 0(2)...10 V	2	BPZ:GAP196.1E	GAP196.1E	323.57
DC 24	22 W	0(4)...20 mA				

Mounting Bracket, GS

ASK71.07

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z118	ASK71.07	3.83

Accessory Kit, GEB/GMA

ASK71.01

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z101	ASK71.01	7.49

Shaft adapter, GS, square, 12mm

ASK74.14

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z105	ASK74.14	18.34

Shaft adapter, GEB/GMA, square, 10mm, complete

ASK74.15

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z106	ASK74.15	18.86

Damper actuators

Air damper actuators

Linear damper actuators

2

GDB..2E



Linear air damper actuators 125 N, without spring return

- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	N4664
Force	125 N
Air damper area	0.8 m ²
Nominal stroke	60 mm
Positioning time	150 s
Degree of protection	IP40
Dimensions (W x H x D)	68 x 152 x 59 mm
Warranty	5 Years

Range overview GDB..2E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	3 VA 2 W	DC 0...10 V	0	BPZ:GDB161.2E	GDB161.2E	200.43
AC 24	3 VA 2 W	DC 0...35 V Adjustable	0	BPZ:GDB163.2E	GDB163.2E	217.46

Basic Documentation No.: Z4664.

Linear air damper actuators 250 N, without spring return

- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	N4664
Force	250 N
Air damper area	1.5 m ²
Nominal stroke	60 mm
Positioning time	150 s
Degree of protection	IP40
Dimensions (W x H x D)	68 x 152 x 59 mm
Warranty	5 Years



Range overview GLB..2E

Operating voltage [V]	Power consumption	Positioning signal	Auxiliary switch	Stock no.	Product no.	Price (€)
AC 24	2 VA 1 W	3-position	2	BPZ:GLB136.2E	GLB136.2E	183.40
AC 24	3 VA 2 W	DC 0...10 V	0	BPZ:GLB161.2E	GLB161.2E	237.11
AC 230	2 VA 1 W	3-position	2	BPZ:GLB336.2E	GLB336.2E	183.40

Basis Documentation No.: Z4664.

Mounting Bracket, GM

ASK71.03

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z114	ASK71.03	5.23

Standard Shaft Adapter, GM

ASK71.06

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z117	ASK71.06	27.77

Shaft adapter, GM, square, 12mm

ASK74.18

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z109	ASK74.18	27.90

Accessories for linear air damper actuators GDB..2E and GLB..2E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Clamp for linkage (5...8 mm dia.)	N4698	BPZ:ASK55.2	ASK55.2	20.96

Damper actuators

Air damper actuators

Linear damper actuators

2

Accessories for linear air damper actuator GEB...2E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting Bracket, GS		S55859-Z118	ASK71.07	3.83
Shaft adapter, GS, square, 12mm		S55859-Z105	ASK74.14	18.34
Shaft adapter, GEB/GMA, square, 10mm, complete		S55859-Z106	ASK74.15	18.86
Linear/rotary mounting kit with bracket	N4697	BPZ:ASK72.3	ASK72.3	55.81

Accessories for linear air damper actuator GBB...2E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Linear/rotary mounting kit with cardan joint	N4699	BPZ:ASK72.1	ASK72.1	104.80
Linear/rotary mounting kit with bracket	N4699	BPZ:ASK72.2	ASK72.2	63.67

VAV compact controller

G..B181.1E/3

- Compact controller for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Forced close-off function in DC 2...10 V operation
- Optionally configurable as VAV compact controller or as damper actuator/differential pressure sensor unit
- Prewired with a 0.9 m connecting cable

Data sheet	N3544
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years



Range overview G..B181.1E/3

Operating voltage [V]	Torque [Nm]	Power consumption	Air damper area [m²]	Stock no.	Product no.	Price (€)
AC 24	5	3 VA 2.5 W	0.8	BPZ:GDB181.1E/3	GDB181.1E/3	258.07
AC 24	10	3 VA 2.5 W	1.5	BPZ:GLB181.1E/3	GLB181.1E/3	290.82

Basic Documentation No.: P3544.

Accessories for G..B181.1E/3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14	4.44
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6	4.44
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7	5.93
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20	673.34
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22	699.54
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5	56.33
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6	78.60
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38

Damper actuators

VAV controller

VAV compact controllers with KNX PL-Link communication

2

Accessories for G..B181.1E/KN

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14	4.44
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6	4.44
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7	5.93
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20	673.34
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22	699.54
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5	56.33
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6	78.60
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38

VAV compact controllers with KNX PL-Link communication

G..B181.1E/KN



2

VAV compact controller KNX

- Compact controller with KNX communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m cable and a 0.9 m cable

Data sheet	N3547
Positioning time	150 s
Communication	KNX S-Mode KNX LTE-Mode KNX PL-Link
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/KN

Torque [Nm]	Operating voltage [V]	Power consumption	Air damper area [m²]	Stock no.	Product no.	Price (€)
5	AC 24	3 VA 2.5 W	0.8	S55499-D134	GDB181.1E/KN	327.50
10	AC 24	3 VA 2.5 W	1.5	S55499-D135	GLB181.1E/KN	360.25

GDB181.EMKN packaging unit 18 pieces.

Basic Documentation No.: P3547

Damper actuators

VAV controller

VAV compact controllers with Modbus RTU communication

2

Accessories for G..B181.1E/MO

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14	4.44
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6	4.44
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7	5.93
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20	673.34
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22	699.54
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5	56.33
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6	78.60
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38

VAV compact controllers with Modbus RTU communication

VAV compact controller Modbus

G..B181.1E/MO

- Networked compact controller with Modbus RTU communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m connecting cable and a 0.9 m bus cable



2

Data sheet	A6V10631832
Positioning time	150 s
Communication	Modbus RTU
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/MO

Torque [Nm]	Operating voltage [V]	Power consumption	Air damper area [m ²]	Stock no.	Product no.	Price (€)
10	AC 24	3 VA 2.5 W	1.5	S55499-D167	GLB181.1E/MO	324.88
5	AC 24	3 VA 2.5 W	0.8	S55499-D166	GDB181.1E/MO	289.51

Damper actuators

VAV controller

VAV compact controllers with BACnet MS/TP communication

2

Accessories for G..B181.1E/BA

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14	4.44
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3	4.44
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6	4.44
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7	5.93
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20	673.34
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22	699.54
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5	56.33
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6	78.60
Universal lever	N4697	BPZ:ASK71.9	ASK71.9	68.38

VAV compact controllers with BACnet MS/TP communication

VAV compact controller BACnet

G..B181.1E/BA

- Networked compact controller with BACnet MS/TP (BTL-listed) communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m connecting cable and a 0.9 m bus cable



2

Data sheet	A6V10631834
Positioning time	150 s
Communication	BACnet MS/TP
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/BA

Torque [Nm]	Operating voltage [V]	Power consumption	Air damper area [m ²]	Stock no.	Product no.	Price (€)
5	AC 24	3 VA 2.5 W	0.8	S55499-D168	GDB181.1E/BA	302.61
10	AC 24	3 VA 2.5 W	1.5	S55499-D169	GLB181.1E/BA	335.36

GDB181.EMBA packaging unit 18 pieces

Damper actuators

VAV controller

VAV modular controllers

2

Accessories for ASV181.1E/3

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20	673.34
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22	699.54

ASV181.1E/3



VAV modular controller

- Modular controller for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor and digitally configurable air volume controller
- For connection to an OpenAir™ family 3-position air damper actuator with high torque or safety functions
- Prewired with a 0.9 m cable and a 0.3 m connecting cable

Data sheet	N3545
Angular rotation	90°
Power consumption	1 VA
	0.5 W
Positioning time	150 s
Positioning signal	DC 0...10 V
	DC 2...10 V
	3-position
Degree of protection	IP54
Medium temperature	0...50 °C
Dimensions (W x H x D)	68 x 144 x 45 mm
Operating voltage	AC 24 V
Warranty	2 Years

	Stock no.	Product no.	Price (€)
	BPZ:ASV181.1E/3	ASV181.1E/3	250.21

Damper actuators

Actuators for fire and smoke protection dampers

Fire damper actuators

2

Accessories for GRA..26.1E

Product Title	Data sheet	Stock no.	Product no.	Price (€)
Mounting Bracket, GS		S55859-Z118	ASK71.07	3.83
Shaft adapter, GS, square, 12mm		S55859-Z105	ASK74.14	18.34
Shaft adapter, GEB/GMA, square, 10mm, complete		S55859-Z106	ASK74.15	18.86
Duct tip for temperature monitor unit (95 °C)	N4697	BPZ:ASK79.5	ASK79.5	48.21
Duct tip for temperature monitor unit (72 °C)	N4697	BPZ:ASK79.4	ASK79.4	48.21

New Product

Damper actuators

Actuators for fire and smoke protection dampers

Fire damper actuators

2

GRA..26.1E



Actuators for fire protection dampers

- Rotary type
- 2-position
- Spring return to failsafe position
- Temperature monitoring unit (for 72 °C)
- Fixed auxiliary switches for switching points 5 ° and 80 °
- Rigid connection between actuator and damper square shafts (10x10, 12x12)
- Manual setting
- Position indicator
- Robust, lightweight all metal housing made from die-cast aluminium and 0.9 m connecting cable
- Degree of protection: Temperature monitoring unit IP54 / Actuator IP54

Data sheet	A6V10888424
Torque	4 Nm
Air damper area	0.6 m ²
Positioning time	Open with motor: 90 s Close with spring return: 15 s
Connection cable	Supply: 2 x 0.75 mm ² / auxiliary switch: 6 x 0.75 mm ²
Degree of protection	IP54
Medium temperature	≤72 °C
Dimensions (W x H x D)	81 x 178 x 63 mm
Warranty	5 Years

Range overview GRA..26.1E

Operating voltage [V]	Power consumption	Positioning signal	Cable length [m]	Shaft linkage [mm]	Stock no.	Product no.	Price (€)
AC 24	5 VA	2-position	0.9	10 x 10	S55499-D294	GRA126.1E/10	200.43
DC 24	3.5 W						
AC 24	5 VA	2-position	0.9	12 x 12	S55499-D296	GRA126.1E/12	200.43
DC 24	3.5 W						
AC 24	5 VA	2-position	0.9	10 x 10	S55499-D290	GRA126.1E/T10	254.14
DC 24	3.5 W						
AC 24	5 VA	2-position	0.9	12 x 12	S55499-D292	GRA126.1E/T12	254.14
DC 24	3.5 W						
AC 230	7 VA 4.5 W	2-position	0.9	10 x 10	S55499-D295	GRA326.1E/10	217.46
AC 230	7 VA 4.5 W	2-position	0.9	12 x 12	S55499-D297	GRA326.1E/12	217.46
AC 230	7 VA 4.5 W	2-position	0.9	10 x 10	S55499-D291	GRA326.1E/T10	271.17
AC 230	7 VA 4.5 W	2-position	0.9	12 x 12	S55499-D293	GRA326.1E/T12	271.17

The 2 final figures of the classification correspond to the square of axis in mm.
Types GRA../T10 and GRA../T12 are equipped with a temperature monitoring unit.

ASK71.07

Mounting Bracket, GS

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z118	ASK71.07	3.83

Damper actuators
Actuators for fire and smoke protection dampers
Fire damper actuators

2

Shaft adapter, GS, square, 12mm **ASK74.14**

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z105	ASK74.14	18.34

Shaft adapter, GEB/GMA, square, 10mm, complete **ASK74.15**

Warranty 2 Years

Stock no.	Product no.	Price (€)
S55859-Z106	ASK74.15	18.86

Damper actuators

Actuators for fire and smoke protection dampers

Fire damper actuators

2

GNA...26.1E



Actuators for fire protection dampers

- Rotary type
- 2-position
- Spring return to failsafe position
- Temperature monitoring unit (for 72 °C)
- Fixed auxiliary switches for switching points 5 ° and 80 °
- Rigid connection between actuator and damper square shafts (10 x 10, 12 x 12)
- Manual setting
- Position indicator
- Robust, lightweight all metal housing made from die-cast aluminium and 0.9 m connecting cable
- Degree of protection: Temperature monitoring unit IP54 / Actuator IP54

Data sheet	N4620
Torque	9 Nm
Air damper area	1 m ²
Positioning time	Open with motor: 90 s Close with spring return: 15 s
Connection cable	Supply: 2 x 0.75 mm ² / auxiliary switch: 6 x 0.75 mm ²
Degree of protection	IP54
Dimensions (W x H x D)	81 x 178 x 63 mm
Warranty	5 Years

Range overview GNA...26.1E with or without temperature monitoring unit

Operating voltage [V]	Power consumption	Positioning signal	Shaft linkage [mm]	Stock no.	Product no.	Price (€)
AC 24	5 VA	2-position	10 x 10	BPZ:GNA126.1E/T10	GNA126.1E/T10	293.44
DC 24	3.5 W					
AC 230	7 VA 4.5 W	2-position	10 x 10	BPZ:GNA326.1E/T10	GNA326.1E/T10	315.71
AC 24	5 VA	2-position	12 x 12	BPZ:GNA126.1E/12	GNA126.1E/12	239.73
DC 24	3.5 W					
AC 24	7 VA	2-position	12 x 12	BPZ:GNA126.1E/T12	GNA126.1E/T12	293.44
DC 24	4.5 W					
AC 230	7 VA 4.5 W	2-position	12 x 12	BPZ:GNA326.1E/T12	GNA326.1E/T12	315.71
AC 230	7 VA 4.5 W	2-position	12 x 12	BPZ:GNA326.1E/12	GNA326.1E/12	260.69

The 2 final figures of the classification correspond to the square of axis in mm.

Types GNA.../T10 and GNA.../T12 are equipped with a temperature monitoring unit.

Actuators for fire protection dampers

GGA..26.1E

- Rotary type
- 2-position
- Spring return to failsafe position
- Temperature monitoring unit (for 72 °C)
- Fixed auxiliary switches for switching points 5° and 80°
- Rigid connection between actuator and damper square shafts (10 x 10, 12 x 12)
- Manual setting
- Position indicator
- Robust, lightweight all metal housing made from die-cast aluminium and 0.9 m connecting cable
- Degree of protection: Temperature monitoring unit IP54 / Actuator IP54



Data sheet	N4617
Torque	18 Nm
Air damper area	2.5 m ²
Positioning time	Open with motor: 90 s Close with spring return 15 s
Connection cable	Supply: 2 x 0.75 mm ² / auxiliary switch: 6 x 0.75 mm ²
Degree of protection	IP54
Medium temperature	≤72 °C
Dimensions (W x H x D)	100 x 264 x 71 mm
Warranty	5 Years

Range overview GGA..26.1E with or without temperature monitoring unit

Operating voltage [V]	Power consumption	Positioning signal	Shaft linkage [mm]	Stock no.	Product no.	Price (€)
AC 230	8 VA 6 W	2-position	10 x 10	BPZ:GGA326.1E/10	GGA326.1E/10	337.98
AC 230	8 VA 6 W	2-position	10 x 10	BPZ:GGA326.1E/T10	GGA326.1E/T10	395.62
AC 230	8 VA 6 W	2-position	12 x 12	BPZ:GGA326.1E/T12	GGA326.1E/T12	395.62
AC 24 DC 24	7 VA 5 W	2-position	10 x 10	BPZ:GGA126.1E/10	GGA126.1E/10	292.13
AC 24 DC 24	7 VA 5 W	2-position	12 x 12	BPZ:GGA126.1E/12	GGA126.1E/12	292.13
AC 24 DC 24	7 VA 5 W	2-position	10 x 10	BPZ:GGA126.1E/T10	GGA126.1E/T10	351.08
AC 24 DC 24	7 VA 5 W	2-position	12 x 12	BPZ:GGA126.1E/T12	GGA126.1E/T12	351.08
AC 230	8 VA 6 W	2-position	12 x 12	BPZ:GGA326.1E/12	GGA326.1E/12	337.98

The 2 final figures of the classification correspond to the square of axis in mm.
Types GGA../T10 and GGA../T12 are equipped with a temperature monitoring unit.