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SAY61P03/MO	Electromotoric actuators 200 N for Combi valves VPI46 with a 15 mm stroke, Modbus RTU	A6V10628469	78
SAY81P03	Electromotoric actuator, 200 N, 15 mm, AC/DC 24 V, 3P, 30 s	A6V10628469	78
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SKB62UA	Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	88
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VVF32.80-100	2-port valve, flanged, PN10, DN80, kvs 100	N4402	93
VVF42.100-125	2-port valve, flanged, PN16, DN100, kvs 125	N4403	95
VVF42.100-125C	2-port valve, flanged, PN16, DN100, kvs 125, for Asian market	A6V10794157	98
VVF42.100-160	2-port valve, flanged, PN16, DN100, kvs 160	N4403	95
VVF42.100-160C	2-port valve, flanged, PN16, DN100, kvs 160, for Asian market	A6V10794157	98
VVF42.100-160K	2-port valve, flanged, DN100, kvs 160, pressure compensated	N4403	101
VVF42.100KC	2-port valve, flanged, DN100, pressure compensated	A6V10794157	103
VVF42.125-200	2-port valve, flanged, PN16, DN125, kvs 200	N4403	95
VVF42.125-200C	2-port valve, flanged, PN16, DN125, kvs 200, for Asian market	A6V10794157	98
VVF42.125-250	2-port valve, flanged, PN16, DN125, kvs 250	N4403	95
VVF42.125-250C	2-port valve, flanged, PN16, DN125, kvs 250, for Asian market	A6V10794157	98
VVF42.125-250K	2-port valve, flanged, DN125, kvs 250, pressure compensated	N4403	101
VVF42.125KC	2-port valve, flanged, DN125, pressure compensated	A6V10794157	103
VVF42.150-315	2-port valve, flanged, PN16, DN150, kvs 315	N4403	95
VVF42.150-315C	2-port valve, flanged, PN16, DN150, kvs 315, for Asian market	A6V10794157	98
VVF42.150-360K	2-port valve, flanged, DN150, kvs 360, pressure compensated	N4403	101
VVF42.150-400	2-port valve, flanged, PN16, DN150, kvs 400	N4403	95
VVF42.150-400C	2-port valve, flanged, PN16, DN150, kvs 400, for Asian market	A6V10794157	98

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VVF42.150KC	2-port valve, flanged, DN150, pressure compensated	A6V10794157	103
VVF42.15-1.6	2-port valve, flanged, PN16, DN15, kvs 1.6	N4403	95
VVF42.15-2.5	2-port valve, flanged, PN16, DN15, kvs 2.5	N4403	95
VVF42.15-4	2-port valve, flanged, PN16, DN15, kvs 4	N4403	95
VVF42.20-6.3	2-port valve, flanged, PN16, DN20, kvs 6.3	N4403	95
VVF42.25-10	2-port valve, flanged, PN16, DN25, kvs 10	N4403	95
VVF42.25-10C	2-port valve, flanged, PN16, DN25, kvs 10, for Asian market	A6V10794157	98
VVF42.25-6.3	2-port valve, flanged, PN16, DN25, kvs 6.3	N4403	95
VVF42.25-6.3C	2-port valve, flanged, PN16, DN25, kvs 6.3, for Asian market	A6V10794157	98
VVF42.32-16	2-port valve, flanged, PN16, DN32, kvs 16	N4403	95
VVF42.32-16C	2-port valve, flanged, PN16, DN32, kvs 16, for Asian market	A6V10794157	98
VVF42.40-16	2-port valve, flanged, PN16, DN40, kvs 16	N4403	95
VVF42.40-16C	2-port valve, flanged, PN16, DN40, kvs 16, for Asian market	A6V10794157	98
VVF42.40-25	2-port valve, flanged, PN16, DN40, kvs 25	N4403	95
VVF42.40-25C	2-port valve, flanged, PN16, DN40, kvs 25, for Asian market	A6V10794157	98
VVF42.50-31.5	2-port valve, flanged, PN16, DN50, kvs 31.5	N4403	95
VVF42.50-31.5C	2-port valve, flanged, PN16, DN50, kvs 31.5, for Asian market	A6V10794157	98
VVF42.50-40	2-port valve, flanged, PN16, DN50, kvs 40	N4403	95
VVF42.50-40C	2-port valve, flanged, PN16, DN50, kvs 40, for Asian market	A6V10794157	98
VVF42.50-40K	2-port valve, flanged, DN50, kvs 40, pressure compensated	N4403	101
VVF42.65-50	2-port valve, flanged, PN16, DN65, kvs 50	N4403	95
VVF42.65-50C	2-port valve, flanged, PN16, DN65, kvs 50, for Asian market	A6V10794157	98
VVF42.65-63	2-port valve, flanged, PN16, DN65, kvs 63	N4403	95
VVF42.65-63C	2-port valve, flanged, PN16, DN65, kvs 63, for Asian market	A6V10794157	98
VVF42.65-63K	2-port valve, flanged, DN65, kvs 63, pressure compensated	N4403	101
VVF42.65KC	2-port valve, flanged, DN65, pressure compensated	A6V10794157	103
VVF42.80-100	2-port valve, flanged, PN16, DN80, kvs 100	N4403	95
VVF42.80-100C	2-port valve, flanged, PN16, DN80, kvs 100, for Asian market	A6V10794157	98
VVF42.80-100K	2-port valve, flanged, DN80, kvs 100, pressure compensated	N4403	101
VVF42.80-80	2-port valve, flanged, PN16, DN80, kvs 80	N4403	95
VVF42.80-80C	2-port valve, flanged, PN16, DN80, kvs 80, for Asian market	A6V10794157	98
VVF42.80KC	2-port valve, flanged, DN80, pressure compensated	A6V10794157	103
VVF43.100-125	2-port seat valve, flanged, PN16, DN100, kvs 125	N4404	105
VVF43.100-150K	2-port seat valve, flanged, PN16, DN100, kvs 150, pressure compensated	N4404	107
VVF43.100-160	2-port seat valve, flanged, PN16, DN100, kvs 160	N4404	105
VVF43.125-200	2-port seat valve, flanged, PN16, DN125, kvs 200	N4404	105
VVF43.125-220K	2-port seat valve, flanged, PN16, DN125, kvs 220, pressure compensated	N4404	107
VVF43.125-250	2-port seat valve, flanged, PN16, DN125, kvs 250	N4404	105
VVF43.150-315	2-port seat valve, flanged, PN16, DN150, kvs 315	N4404	105
VVF43.150-315K	2-port seat valve, flanged, PN16, DN150, kvs 315, pressure compensated	N4404	107
VVF43.150-400	2-port seat valve, flanged, PN16, DN150, kvs 400	N4404	105
VVF43.200-450K	2-port seat valve, flanged, PN16, DN200, kvs 450, pressure compensated	N4404	107
VVF43.250-630K	2-port seat valve, flanged, PN16, DN250, kvs 630, pressure compensated	N4404	107
VVF43.65-50	2-port seat valve, flanged, PN16, DN65, kvs 50	N4404	105
VVF43.65-63	2-port seat valve, flanged, PN16, DN65, kvs 63	N4404	105
VVF43.65-63K	2-port seat valve, flanged, PN16, DN65, kvs 63, pressure compensated	N4404	107
VVF43.80-100	2-port seat valve, flanged, PN16, DN80, kvs 100	N4404	105
VVF43.80-100K	2-port seat valve, flanged, PN16, DN80, kvs 100, pressure compensated	N4404	107
VVF43.80-80	2-port seat valve, flanged, PN16, DN80, kvs 80	N4404	105
VVF47.100	2-port seat valve VVF47.100, DN100, kvs 160	N4419	108
VVF47.125	2-port seat valve VVF47.125, DN125, kvs 250	N4419	108
VVF47.150	2-port seat valve VVF47.150, DN150, kvs 315	N4419	108
VVF47.50	2-port seat valve VVF47.50, DN50, kvs 40	N4419	108
VVF47.65	2-port seat valve VVF47.65, DN65, kvs 63	N4419	108

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VVF53.100-160	2-port seat valve, flanged, PN25, DN100, kvs 160	N4405	109
VVF53.125-220K	2-port seat valve, flanged, PN25, DN125, kvs 220, pressure compensated	N4405	112
VVF53.125-250	2-port seat valve, flanged, PN25, DN125, kvs 250	N4405	109
VVF53.15-0.16	2-port seat valve, flanged, PN25, DN15, kvs 0.16	N4405	109
VVF53.15-0.2	2-port seat valve, flanged, PN25, DN15, kvs 0.2	N4405	109
VVF53.15-0.25	2-port seat valve, flanged, PN25, DN15, kvs 0.25	N4405	109
VVF53.15-0.32	2-port seat valve, flanged, PN25, DN15, kvs 0.32	N4405	109
VVF53.15-0.4	2-port seat valve, flanged, PN25, DN15, kvs 0.4	N4405	109
VVF53.15-0.5	2-port seat valve, flanged, PN25, DN15, kvs 0.5	N4405	109
VVF53.15-0.63	2-port seat valve, flanged, PN25, DN15, kvs 0.63	N4405	109
VVF53.15-0.8	2-port seat valve, flanged, PN25, DN15, kvs 0.8	N4405	109
VVF53.150-315K	2-port seat valve, flanged, PN25, DN150, kvs 315, pressure compensated	N4405	112
VVF53.150-400	2-port seat valve, flanged, PN25, DN150, kvs 360	N4405	109
VVF53.15-1	2-port seat valve, flanged, PN25, DN15, kvs 1	N4405	109
VVF53.15-1.25	2-port seat valve, flanged, PN25, DN15, kvs 1.25	N4405	109
VVF53.15-1.6	2-port seat valve, flanged, PN25, DN15, kvs 1.6	N4405	109
VVF53.15-2	2-port seat valve, flanged, PN25, DN15, kvs 2	N4405	109
VVF53.15-2.5	2-port seat valve, flanged, PN25, DN15, kvs 2.5	N4405	109
VVF53.15-3.2	2-port seat valve, flanged, PN25, DN15, kvs 3.2	N4405	109
VVF53.15-4	2-port seat valve, flanged, PN25, DN15, kvs 4	N4405	109
VVF53.200-450K	2-port seat valve, flanged, PN25, DN200, kvs 450, pressure compensated	N4405	112
VVF53.20-6.3	2-port seat valve, flanged, PN25, DN20, kvs 6.3	N4405	109
VVF53.250-630K	2-port seat valve, flanged, PN25, DN250, kvs 630, pressure compensated	N4405	112
VVF53.25-10	2-port seat valve, flanged, PN25, DN25, kvs 10	N4405	109
VVF53.25-5	2-port seat valve, flanged, PN25, DN25, kvs 5	N4405	109
VVF53.25-6.3	2-port seat valve, flanged, PN25, DN25, kvs 6.3	N4405	109
VVF53.25-8	2-port seat valve, flanged, PN25, DN25, kvs 8	N4405	109
VVF53.32-16	2-port seat valve, flanged, PN25, DN32, kvs 16	N4405	109
VVF53.40-12.5	2-port seat valve, flanged, PN25, DN40, kvs 12.5	N4405	109
VVF53.40-16	2-port seat valve, flanged, PN25, DN40, kvs 16	N4405	109
VVF53.40-20	2-port seat valve, flanged, PN25, DN40, kvs 20	N4405	109
VVF53.40-25	2-port seat valve, flanged, PN25, DN40, kvs 25	N4405	109
VVF53.50-31.5	2-port seat valve, flanged, PN25, DN50, kvs 31.5	N4405	109
VVF53.50-40	2-port seat valve, flanged, PN25, DN50, kvs 40	N4405	109
VVF53.50-40K	2-port seat valve, flanged, PN25, DN50, kvs 40, pressure compensated	N4405	112
VVF53.65-63	2-port seat valve, flanged, PN25, DN65, kvs 63	N4405	109
VVF53.65-63K	2-port seat valve, flanged, PN25, DN65, kvs 63, pressure compensated	N4405	112
VVF53.80-100	2-port seat valve, flanged, PN25, DN80, kvs 100	N4405	109
VVF53.80-100K	2-port seat valve, flanged, PN25, DN80, kvs 100, pressure compensated	N4405	112
VVF63.100-125	2-port valve, PN 40, DN 100, kvs 125, with flanged connections	A6V11459527	114
VVF63.100-150K	2-port seat valve, PN40, DN 100, kvs 150, with flanged connections, pressure compensated	A6V11459527	115
VVF63.125-200	2-port valve, PN 40, DN 125, kvs 200, with flanged connections	A6V11459527	114
VVF63.125-220K	2-port seat valve, PN40, DN 125, kvs 220, with flanged connections, pressure compensated	A6V11459527	115
VVF63.15-0.2	2-port valve, PN 40, DN 15, kvs 0.2, with flanged connections	A6V11459527	114
VVF63.15-0.32	2-port valves, PN 40, DN 15, kvs 0.32, with flanged connections	A6V11459527	114
VVF63.15-0.5	2-port valves, PN 40, DN 15, kvs 0.5, with flanged connections	A6V11459527	114
VVF63.15-0.8	2-port valves, PN 40, DN 15, kvs 0.8, with flanged connections	A6V11459527	114
VVF63.150-315	2-port valve, PN 40, DN 150, kvs 315, with flanged connections	A6V11459527	114
VVF63.150-315K	2-port seat valve, PN40, DN 150, kvs 280, with flanged connections, pressure compensated	A6V11459527	115

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VVF63.15-2	2-port valves, PN 40, DN 15, kvs 2, with flanged connections	A6V11459527	114
VVF63.15-3.2	2-port valve, PN 40, DN 15, kvs 3.2, with flanged connections	A6V11459527	114
VVF63.20-6.3	2-port valve, PN 40, DN 20, kvs 5, with flanged connections	A6V11459527	114
VVF63.25-5	2-port valve, PN 40, DN 25, kvs 5, with flanged connections	A6V11459527	114
VVF63.25-8	2-port valve, PN 40, DN 25, kvs 8, with flanged connections	A6V11459527	114
VVF63.32-16	2-port valve, PN 40, DN 32, kvs 15, with flanged connections	A6V11459527	114
VVF63.40-12.5	2-port valve, PN 40, DN 40, kvs 12.5, with flanged connections	A6V11459527	114
VVF63.40-20	2-port valve, PN 40, DN 40, kvs 20, with flanged connections	A6V11459527	114
VVF63.50-31.5	2-port valve, PN 40, DN 50, kvs 31.5, with flanged connections	A6V11459527	114
VVF63.50-40K	2-port valve, PN40, DN 50, kvs 36, with flanged connections, pressure compensated	A6V11459527	115
VVF63.65-50	2-port valve, PN 40, DN 65, kvs 50, with flanged connections	A6V11459527	114
VVF63.65-63K	2-port seat valve, PN40, DN 65, kvs 63, with flanged connections, pressure compensated	A6V11459527	115
VVF63.80-100K	2-port seat valve, PN40, DN 80, kvs 100, with flanged connections, pressure compensated	A6V11459527	115
VVF63.80-80	2-port valve, PN 40, DN 80, kvs 80, with flanged connections	A6V11459527	114
VVG41.11	2-port seat valve, external thread, PN16, DN15, kvs 0.63	N4363	131
VVG41.12	2-port seat valve, external thread, PN16, DN15, kvs 1	N4363	131
VVG41.13	2-port seat valve, external thread, PN16, DN15, kvs 1.6	N4363	131
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VVG41.15	2-port seat valve, external thread, PN16, DN15, kvs 4	N4363	131
VVG41.20	2-port seat valve, external thread, PN16, DN20, kvs 6.3	N4363	131
VVG41.25	2-port seat valve, external thread, PN16, DN25, kvs 10	N4363	131
VVG41.32	2-port seat valve, external thread, PN16, DN32, kvs 16	N4363	131
VVG41.40	2-port seat valve, external thread, PN16, DN40, kvs 25	N4363	131
VVG41.50	2-port seat valve, external thread, PN16, DN50, kvs 40	N4363	131
VVG44.15-0.25	2-port seat valve, external thread, PN16, DN15, kvs 0.25	N4364	133
VVG44.15-0.4	2-port seat valve, external thread, PN16, DN15, kvs 0.4	N4364	133
VVG44.15-0.63	2-port seat valve, external thread, PN16, DN15, kvs 0.63	N4364	133
VVG44.15-1	2-port seat valve, external thread, PN16, DN15, kvs 1	N4364	133
VVG44.15-1.6	2-port seat valve, external thread, PN16, DN15, kvs 1.6	N4364	133
VVG44.15-2.5	2-port seat valve, external thread, PN16, DN15, kvs 2.5	N4364	133
VVG44.15-4	2-port seat valve, external thread, PN16, DN15, kvs 4	N4364	133
VVG44.20-6.3	2-port seat valve, external thread, PN16, DN20, kvs 6.3	N4364	133
VVG44.25-10	2-port seat valve, external thread, PN16, DN25, kvs 10	N4364	133
VVG44.32-16	2-port seat valve, external thread, PN16, DN32, kvs 16	N4364	133
VVG44.40-25	2-port seat valve, external thread, PN16, DN40, kvs 25	N4364	133
VVG549.15-0.25	2-port seat valve, externally threaded, PN25, DN15, kvs 0.25	CA1Q4380	135
VVG549.15-0.4	2-port seat valve, externally threaded, PN25, DN15, kvs 0.4	CA1Q4380	135
VVG549.15-0.63	2-port seat valve, externally threaded, PN25, DN15, kvs 0.63	CA1Q4380	135
VVG549.15-1	2-port seat valve, externally threaded, PN25, DN15, kvs 1	CA1Q4380	135
VVG549.15-1.6	2-port seat valve, externally threaded, PN25, DN15, kvs 1.6	CA1Q4380	135
VVG549.15-2.5	2-port seat valve, externally threaded, PN25, DN15, kvs 2.5	CA1Q4380	135
VVG549.20-4K	2-port seat valve, externally threaded, PN25, DN20, kvs 4, pressure compensated	CA1Q4380	135
VVG549.25-6.3K	2-port seat valve, externally threaded, PN25, DN25, kvs 6.3, pressure compensated	CA1Q4380	135
VVI46.15/2	2-port zone valve, internally threaded, PN16, DN15, kvs 2.15	A6V10421629	128
VVI46.20/2	2-port zone valve, internally threaded, PN16, DN20, kvs 3.5	A6V10421629	128
VVI46.25/2	2-port zone valve, internally threaded, PN16, DN25, kvs 5	A6V10421629	128
VVP45.10-0.25	2-port seat valve, external thread, PN16, DN10, kvs 0.25	N4845	125
VVP45.10-0.4	2-port seat valve, external thread, PN16, DN10, kvs 0.4	N4845	125
VVP45.10-0.63	2-port seat valve, external thread, PN16, DN10, kvs 0.63	N4845	125
VVP45.10-1	2-port seat valve, external thread, PN16, DN10, kvs 1	N4845	125
VVP45.10-1.6	2-port seat valve, external thread, PN16, DN10, kvs 1.6	N4845	125

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VVP45.20-4	2-port seat valve, external thread, PN16, DN20, kvs 4	N4845	125
VVP45.20-4N	2-port seat valve, external thread, PN16, DN20, kvs 4	N4840	126
VVP45.25-10	2-port seat valve, external thread, PN16, DN25, kvs 10	N4845	125
VVP45.25-6.3	2-port seat valve, external thread, PN16, DN25, kvs 6.3	N4845	125
VVP45.25-6.3N	2-port seat valve, external thread, PN16, DN25, kvs 6.3	N4840	126
VVP45.32-16	2-port seat valve, external thread, PN16, DN32, kvs 16	N4845	125
VVP45.40-25	2-port seat valve, external thread, PN16, DN40, kvs 25	N4845	125
VVP47.10-0.25	2-port seat valve, external thread, PN16, DN10, kvs 0.25	N4847	127
VVP47.10-0.4	2-port seat valve, external thread, PN16, DN10 kvs 0.4	N4847	127
VVP47.10-0.63	2-port seat valve, external thread, PN16, DN10, kvs 0.63	N4847	127
VVP47.10-1	2-port seat valve, external thread, PN16, DN10, kvs 1	N4847	127
VVP47.10-1.6	2-port seat valve, external thread, PN16, DN10, kvs 1.6	N4847	127
VVP47.10-1.6S	2-port seat valve, external thread, PN16, DN10, kvs 1.6	N4847	127
VVP47.10-1S	2-port seat valve, external thread, PN16, DN10, kvs 1	N4847	127
VVP47.15-2.5	2-port seat valve, external thread, PN16, DN15, kvs 2.5	N4847	127
VVP47.20-4	2-port seat valve, external thread, PN16, DN20, kvs 4	N4847	127
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VWG41.10-0.25-0.65	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.25, kvs right 0.65	A6V10564480	229
VWG41.10-0.25-1.0	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.25, kvs right 1.0	A6V10564480	229
VWG41.10-0.25-1.3	6-port control ball valves, externally threaded, PN16, DN10	A6V10564480	229
VWG41.10-0.25-1.6	6-port control ball valves, externally threaded, PN16, DN10	A6V10564480	229
VWG41.10-0.25-1.9	6-port control ball valves, externally threaded, PN16, DN10	A6V10564480	229
VWG41.10-0.4-0.4	6-port control ball valves, externally threaded, PN16, DN10	A6V10564480	229
VWG41.10-0.4-0.65	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 0.65	A6V10564480	229
VWG41.10-0.4-1.0	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 1.0	A6V10564480	229
VWG41.10-0.4-1.3	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 1.3	A6V10564480	229
VWG41.10-0.4-1.6	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.4, kvs right 1.6	A6V10564480	229
VWG41.10-0.4-1.9	6-port control ball valves, externally threaded, PN16, DN10	A6V10564480	229
VWG41.10-0.65-0.65	6-port control ball valves, externally threaded, PN16, DN10	A6V10564480	229
VWG41.10-0.65-1.0	6-port control ball valves, externally threaded, PN16, DN10, kvs left 0.65, kvs right 1.0	A6V10564480	229
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	Slipper valves	239
	Butterfly valves	241
	Eccentric plug valves	249
Refrigerant valves	For expansion, hotgas and suction throttle applications	251
	2-port modulating pilot valve	254
	For refrigeration units and heat recovery	255
	For condensate control	256

											Recommended media											
		2-port valve	3-port valve	6-port valve	PN class	Type of connection	Silicon-free grease	Closed circuits	Open circuits	Permissible medium temperature [°C]	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	Refrigerants	Refrigerants (ammonia)
Int. Valves	EVG..	■			16	ET		■		1...120	■			■								
	EXG..		■		16	ET		■		1...120	■			■								
	EVF..	■			16	F		■		1...120	■			■								
	EXF..		■		16	F		■		1...120	■			■								
PICVs	VPD../VPE..	■			10	ET		■		1...90	■			■		■						
	VQI46../VQP46..	■			25	ET/IT		■		1...90	■			■		■						
	VPI46../VPP46..	■			25	ET/IT		■		1...120	■			■		■						
	VPF43../VPF44..	■			16	F	■	■		1...120	■			■		■						
	VPF53../VPF54..	■			25	F	■	■		1...120	■			■		■						
Globe valves	VDN../VEN../VUN..	■			10	ET		■		1...120	■			■		■						
	VD1..CLC	■			10	ET		■		1...110	■			■		■						
	VVP45..	■			16	ET		■		1...110	■			■		■						
	VXP45..		■		16	ET		■		1...110	■			■		■						
	VMP45..		■		16	ET		■		1...110	■			■		■						
	VVP47..	■			16	ET		■		1...110	■			■		■						
	VXP47..		■		16	ET		■		1...110	■			■		■						
	VMP47..		■		16	ET		■		1...110	■			■		■						
	VVG41..	■			16	ET	■	■	■	-25...150	■	■		■	■	■	■	■				
	VXG41..		■		16	ET	■	■	■	-25...150	■	■		■	■	■						
	VXG41..01[4]		■		16	ET	■	■	■	-25...150	■	■	■	■	■	■						
	VVG44..	■			16	ET	■	■		1...120	■			■		■						
	VXG44..		■		16	ET	■	■		1...120	■			■		■						
	VVG549..	■			25	ET		■		1...130	■	■		■	■	■						
	VVI46../2	■			16	IT		■		1...110	■			■		■						
	VXI46../2		■		16	IT		■		1...110	■			■		■						
	VVF22..	■			6	F	■	■		-10...130	■			■	■	■						
	VXF22..		■		6	F	■	■		-10...130	■			■	■	■						
	VVF32..	■			10	F	■	■		-10...150	■			■	■	■						
	VXF32..		■		10	F	■	■		-10...150	■			■	■	■						
	VVF42..	■			16	F	■	■		-10...150	■			■	■	■						
	VXF42..		■		16	F	■	■		-10...150	■			■	■	■						
	VVF43..	■			16	F	■	■	■	-20...220	■	■		■	■	■	■	■	■			
	VXF43..		■		16	F	■	■	■	-20...220	■	■		■	■	■			■			
	VVF53..	■			25	F	■	■	■	-20...220	■	■		■	■	■	■	■	■			
	VXF53..		■		25	F	■	■	■	-20...220	■	■		■	■	■			■			
	VVF63..	■			40	F		■	■	-25...220	■	■		■	■	■	■	■	■			
	VXF63..		■		40	F		■	■	-25...220	■	■		■	■	■			■			
Control ball valves	VET61..	■			40	ET	■	■		-10...120	■			■	■	■						
	VBG61..		■		40	ET	■	■		-10...120	■			■	■	■						
	VAI61..	■			40	IT	■	■		-10...120	■			■	■	■						
	VBI61..		■		40	IT	■	■		-10...120	■			■	■	■						
	VWG41..			■	16	ET/IT	■	■		1...90	■			■	■	■						
Magnetic valves	MXG461..	■	■		16	ET		■		1...130	■			■		■						
	MXG461..P	■	■		16	ET		■		1...130									■	■		
	MXG461B..	■	■		16	ET		■	■	-20...130	■	■	■	■		■						
	MXG461S..	■	■		16	ET		■	■	1...130	■	■		■		■						
	MXG462S..	■	■		16	ET		■	■	-20...130	■	■		■		■						
	MXF461..	■	■		16	F		■		1...130	■			■		■						
	MXF461..P	■	■		16	F		■		1...130									■	■		
	M3P..FY	■	■		16	F		■		1...120	■			■		■						
	M3P..FYP	■	■		16	F		■		1...120									■	■		
	MVF461H..	■			16	F		■		1...180	■			■	■	■	■	■				
Rotary valves	VBF21..		■		6	F		■		1...120				■	■							
	VKF41..	■			16	F		■		-10...120	■			■	■	■						
	VKF46..	■			16	F		■	■	-10...120	■	■		■		■						
	VET60..	■			40	ET	■	■		-10...120	■			■	■	■						
	VBG60..		■		40	ET	■	■		-10...120	■			■	■	■						
	VAI60..	■			40	IT	■	■		-10...120	■			■	■	■						
	VBI60..		■		40	IT	■	■		-10...120	■			■	■	■						
Refrigerant valves	M2FP03GX				32	–		■		-40...100											■	■
	M3FK..LX..		■		32	S		■		-40...120											■	
	M3FB..LX..		■		PS 43	S		■		-40...120											■	
	MVL661..	■			PS 45	S		■		-40...120											■	
	MVS661..N	■			63	W/S		■		-40...120											■	■

New: 5-year warranty on valves and actuators, damper actuators, and sensors.

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		
					■	■								EVG..	Int. Valves
					■	■								EXG..	
					■	■								EVF..	
					■	■								EXF..	
								■	■		■	■	■	VPD../VPE..	PICVs
					■	■	■ [5]		■		■	■	■	VQI46../VQP46..	
					■	■	■ [5]		■		■	■	■	VPI46../VPP46..	
■					■	■								VPF43../VPF44..	
■					■	■								VPF53../VPF54..	
								■						VDN../VEN../VUN..	Globe valves
							■		■		■	■	■	VD1..CLC	
■	■			■	■	■	■		■		■	■	■	VVP45..	
	■			■	■	■	■				■	■	■	VXP45..	
											■	■	■	VMP45..	
							■		■		■	■	■	VVP47..	
							■				■	■	■	VXP47..	
											■	■	■	VMP47..	
■	■	■		■	■	■								VVG41..	
	■	■		■	■	■								VXG41..	
	■	■		■	■	■								VXG41..01 [4]	
■	■	■		■	■	■								VVG44..	
	■	■		■	■	■								VXG44..	
■	■													VVG549..	
							■		■		■	■	■	VVI46../2	
							■		■		■	■	■	VXI46../2	
	■	■		■	■	■								VVF22..	
	■	■		■	■	■								VXF22..	
■	■	■		■	■	■								VVF32..	
	■	■		■	■	■								VXF32..	
■	■	■		■	■	■								VVF42..	
	■	■		■	■	■								VXF42..	
■	■	■		■	■	■								VVF43..	
	■	■		■	■	■								VXF43..	
■	■	■		■	■	■								VVF53..	
	■	■		■	■	■								VXF53..	
■	■	■		■	■	■								VVF63..	
	■	■		■	■	■								VXF63..	
				■	■	■			■		■	■	■	VET61..	Control ball valves
				■	■	■						■	■	VBG61..	
				■	■	■			■		■	■	■	VAI61..	
				■	■	■						■	■	VBI61..	
										■				VWG41..	
■		■		■	■	■								MXG461..	Magnetic valves
					■									MXG461..P	
		■		■	■									MXG461B..	
		■			■	■								MXG461S..	
		■			■	■								MXG462S..	
■		■		■	■	■								MXF461..	
					■									MXF461..P	
■		■		■	■	■								M3P..FY	
					■									M3P..FYP	
■	■	■		■	■	■								MVF461H..	
	■				■									VBF21..	Rotary valves
	■	■			■									VKF41..	
	■	■	■	■	■									VKF46..	
	■	■		■	■									VET60..	
	■	■		■	■									VBG60..	
	■	■		■	■									VAI60..	
	■	■		■	■									VBI60..	
		■												M2FP03GX	Refrigerant valves
		■												M3FK..LX..	
		■												M3FB..LX..	
		■												MVL661..	
		■												MVS661..N	

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

Intelligent Valves

Typical applications	Valve type	Operating voltage	Positioning signal	Interface
– Heating groups – Air handling units	**EVG4U10E.. DN15-50**	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	Modbus RTU over RS485 BACnet over UDP/IP Ethernet to building operator
	EVF4U20E.. DN65-125	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	Modbus RTU over RS485 BACnet over UDP/IP Ethernet to building operator

PN 16 Data sheet	1...120 °C A6V11444716	DN	k_{vs} [m³/h]	$\dot{V}_{min}$ [m³/h]	$\dot{V}_{100}$ [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]
	EVG4U10E015	15	4	0.45	1.5	1400	600
	EVG4U10E020	20	5	0.9	3	1400	600
	EVG4U10E025	25	10	1.35	4.5	1400	600
	EVG4U10E032	32	11	2.1	7	1000	600
	EVG4U10E040	40	26	3.45	11.5	800	600
	EVG4U10E050	50	30	5.4	18	600	600
	EVF4U20E065	65	55	9	30	1600	600
	EVF4U20E080	80	80	14.5	48	1600	600
	EVF4U20E100	100	113	22.5	75	1600	600
	EVF4U20E125	125	142	36	120	1600	600

Typical applications	Valve type	Operating voltage	Positioning signal	Interface
– Heating groups – Air handling units	**EXG4U10E.. DN15-50**	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	Modbus RTU over RS485 BACnet over UDP/IP Ethernet to building operator
	EXF4U20E.. DN65-100	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	Modbus RTU over RS485 BACnet over UDP/IP Ethernet to building operator

PN 16 1...120 °C		DN	k_{vs} [m³/h]	$\dot{V}_{min}$ [m³/h]	$\dot{V}_{100}$ [m³/h]	Δp_{max} [kPa]
	EXG4U10E015	15	3.7	0.36	1.2	200
	EXG4U10E020	20	4	0.6	2	200
	EXG4U10E025	25	8	0.96	3.2	200
	EXG4U10E032	32	10	1.5	5	200
	EXG4U10E040	40	18	2.4	8	200
	EXG4U10E050	50	26	3.6	12	200
	EXF4U20E065	65	55	6	20	150
	EXF4U20E080	80	80	9.6	32	75
	EXF4U20E100	100	113	15	50	125

ON/OFF applications

Typical applications	Actuators	Data sheet						4.5 mm		5 mm	
– Radiators – Chilled ceilings – Fan coil units	STA.. SUE21P	N4884 A6V11780777						100 N		100 N	
	Operating voltage	Positioning signal	Positioning time [s] STA	Positioning time [s] SUE21P							
	AC 230 V	2-position	210	12				STA23		SUE21P	
	AC/DC 24 V	2-position / PDM	270	–				STA73		–	
PN 25 1...90 °C	Without pressure testing points	With pressure testing points	DN	G [inch]	$\dot{V}_{min}$ [l/h]	$\dot{V}_{100}$ [l/h]	Δp_{min} [kPa]	Δp_{max} [kPa]	Δp_{min} [kPa]	Δp_{max} [kPa]	
Data sheet	A6V11877580										
	VQP46.10L0.5	VQP46.10L0.5Q	10	½	30	520	30	600	30	600	
	VQP46.15L0.5	VQP46.15L0.5Q	15	¾	30	520	28	600	28	600	
	VQP46.15F1.3	VQP46.15F1.3Q	15	¾	300	1300	28	600	28	600	
	VQP46.20F1.5	VQP46.20F1.5Q	20	1	320	1500	35	600	35	600	
	VQP46.25F1.8	VQP46.25F1.8Q	25	1 ¼	620	1800	31	600	31	600	
PN 25 1...90 °C	Without pressure testing points	With pressure testing points	DN	Rp [inch]	$\dot{V}_{min}$ [l/h]	$\dot{V}_{100}$ [l/h]	Δp_{min} [kPa]	Δp_{max} [kPa]	Δp_{min} [kPa]	Δp_{max} [kPa]	
Data sheet	A6V11877580										
	VQI46.15L0.5	VQI46.15L0.5Q	15	½	30	520	28	600	28	600	
	VQI46.15F1.3	VQI46.15F1.3Q	15	½	300	1300	28	600	28	600	
	VQI46.20F1.5	VQI46.20F1.5Q	20	¾	320	1500	35	600	35	600	
	VQI46.25F1.8	VQI46.25F1.8Q	25	1	620	1800	31	600	31	600	

Radiator applications

Typical applications	Actuators	Data sheet			4.5 mm	2.5 mm
– Radiators	RTN.. STA.. SSA..31/81/61.. SSA..HF SSA118..	N2111 N4884 A6V11858276 A6V11858278 A6V11858280			100 N	100 N
	Operating voltage	Positioning signal	Positioning time [s]			
	AC 230 V	2-position	210	–	STA23	–
		3-position	67.5	–	–	SSA331.00
	AC 24 V	3-position	67.5	–	–	SSA131.00
		0...10 V	270 [2]	–	STA63	–
	AC/DC 24 V	2-position / PDM	270	–	STA73	–
		0...10 V	25	–	–	SSA161.05
		4...20 mA	25	–	–	SSA151.05HF
		0...10 V	25	–	–	SSA161.05HF
		0...10 V	25	–	–	SSA161E.05HF[1]
		KNX S-/KNX PL-Link	50	–	–	SSA118.09HKN
				RTN51	–	–
				RTN71	–	–
				RTN81	–	–

PN 10 1...90 °C	DIN	DN	Rp/R	$\dot{V}$	$\dot{V}_{nom}$[3]			Δp_{min}	Δp_{max}	Δp_{min}	Δp_{max}	Δp_{min}	Δp_{max}
Data sheet	N2185		[inch]	[l/h]	[l/h]			[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]
	VPD110A-..[3]	10	Rp/R ⅜	25...318	45	90	145	6 [4]	200	8 [4]	200	10 [4]	200
	VPD115A-..	15	Rp/R ½	25...318	45	90	145	6 [4]	200	8 [4]	200	10 [4]	200
	VPD110B-200	10	Rp/R ⅜	95...483	200			20	200	20	200	20	200
	VPD115B-200	15	Rp/R ½	95...483	200			20	200	20	200	20	200
	VPE110A-..	10	Rp/R ⅜	25...318	45	90	145	6 [4]	200	8 [4]	200	10 [4]	200
	VPE115A-..	15	Rp/R ½	25...318	45	90	145	6 [4]	200	8 [4]	200	10 [4]	200
	VPE110B-200	10	Rp/R ⅜	95...483	200			20	200	20	200	20	200
	VPE115B-200	15	Rp/R ½	95...483	200			20	200	20	200	20	200

[1] Equal percentage valve characteristic
[2] In control mode (warm-up time) min. running time approx. 30 s/mm;
[3] .. = insert $\dot{V}_{nom}$ $\dot{V}_{nom}$ = factory setting = volumetric flow at 0.5 mm stroke or setting mark 3 of the presetting;
[4] Δp_{min} is valid for $\dot{V}_{nom}$ 45/90/145 l/h;
VPP46../VPI46..: Δp_{min} is for the $\dot{V}_{100}$. For lower flows please consult the data sheet.

Threaded PICVs

Typical applications	Actuators	Data sheet
– Heating groups – Air handling units – Chilled ceilings – VAV – Fan coil units – Zone control	**STA..**	N4884
	SSA..31/81/61..	A6V11858276
	SSA..HF	A6V11858278
	SSA118..	A6V11858280
	SAY..P..	A6V10628469
	SUA21/3	A6V10446174
	SUA21/3P	A6V11780780
	SUE21P	A6V11780777

Operating voltage	Positioning signal	Positioning time [s] STA	SSA	SAY	4.5 mm 100 N	2.5 / 5 mm 100 N	15 mm 200 N
AC 230 V	3-position	–	67.5/135	30	–	**SSA331.00**	**SAY31P03**
	2-position	210	–	–	**STA23**	–	–
AC 24 V	0...10 V	270 [1]	–	30	**STA63**	–	–
AC/DC 24 V	3-position	–	67.5/135	30	–	**SSA131.00**	**SAY81P03**
	2-position/PDM	270	–	–	**STA73**	–	–
	0...10 V	–	25/50	30	–	**SSA161.05**	**SAY61P03**
	Modbus	–	–	30	–	–	**SAY61P03/MO**
	4...20 mA	–	25/50	–	–	**SSA151.05HF**	–
	0...10 V	–	25/50	–	–	**SSA161.05HF**	–
	0...10 V	–	25/50	–	–	**SSA161E.05HF** [1]	–
	KNX S-/KNX PL-Link	–	50/100	–	–	**SSA118.09HKN**	–

PN 25 1...120 °C	Without pressure-testing points	With pressure-testing points	DN	G [inch]	$\dot{V}_{min}$ [l/h]	$\dot{V}_{100}$ [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	½	30	200	16	600	16	600	–	–
	VPP46.10L0.4	**VPP46.10L0.4Q**	10	½	65	333	16	600	–	–	–	–
			10	½	65	370	–	–	16	600	–	–
	VPP46.15L0.2	**VPP46.15L0.2Q**	15	¾	30	200	19	600	19	600	–	–
	VPP46.15L0.6	**VPP46.15L0.6Q**	15	¾	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 ¼	204	1470	39	600	–	–	–	–
			25	1 ¼	250	1800	–	–	39	600	–	–
	VPP46.32F4	**VPP46.32F4Q**	32	1 ½	450	3270	28	600	–	–	–	–
			32	1 ½	550	4001	–	–	28	600	–	–

PN 25 1...120 °C	Without pressure-testing points	With pressure-testing points	DN	Rp [inch]	$\dot{V}_{min}$ [l/h]	$\dot{V}_{100}$ [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	½	30	200	19	600	19	600	–	–
	VPI46.15L0.6	**VPI46.15L0.6Q**	15	½	100	575	19	600	19	600	–	–
	VPI46.20F1.4	**VPI46.20F1.4Q**	20	¾	200	1190	22	600	–	–	–	–
			20	¾	220	1330	–	–	22	600	–	–
	VPI46.25F1.8	**VPI46.25F1.8Q**	25	1 ¼	204	1470	39	600	–	–	–	–
			25	1 ¼	250	1800	–	–	39	600	–	–
	VPI46.32F4	**VPI46.32F4Q**	32	1 ½	450	3270	28	600	–	–	–	–
			32	1 ½	550	4001	–	–	28	600	–	–
	–	**VPI46.40F9.5Q**	40	1 ½	1370	9500	–	–	–	–	25	600
	–	**VPI46.50F12Q**	50	2	1400	11500	–	–	–	–	36	600

[1] Equal percentage valve characteristic
[2] In control mode (warm-up time) min. running time approx. 30 s/mm;
[3] .. = insert $\dot{V}_{nom}$ $\dot{V}_{nom}$ = factory setting = volumetric flow at 0.5 mm stroke or setting mark 3 of the presetting;
[4] Δp_{min} is valid for $\dot{V}_{nom}$ 45/90/145 l/h;
VPP46../VPI46..: Δp_{min} is for the $\dot{V}_{100}$. For lower flows please consult the data sheet.

Flanged PICVs

Typical applications	Actuators	Data sheet
– District heating – Heating groups – Air handling units	**SAX..P..**	N4509
	SQV91P..	N4833
	SAV..P..	N4510

Operating voltage	Positioning signal	Positioning time [s] SAX	SQV	SAV	Spring return function [s]	20 mm 500 N	20 / 40 mm 1100 N	40 mm 1100 N
AC 230 V	3-position	30	–	120	–	**SAX31P03**	**–**	**SAV31P00**
	3-position	–	40/80	–	30	**–**	**SQV91P40** [1]	**–**
	3-position	–	40/80	–	30	**–**	**SQV91P30** [2]	**–**
AC/DC 24 V	3-position	30	–	120	–	**SAX81P03**	**–**	**SAV81P00**
	3-position	–	40/80	–	30	**–**	**SQV91P40** [1]	**–**
	3-position	–	40/80	–	30	**–**	**SQV91P30** [2]	**–**
	0...10 V, 4...20 mA	30	–	120	–	**SAX61P03**	**–**	**SAV61P00**
	0...10 V, 4...20 mA	–	40/80	–	30	**–**	**SQV91P40** [1]	**–**
	0...10 V, 4...20 mA	–	40/80	–	30	**–**	**SQV91P30** [2]	**–**
	Modbus	30	–	120	–	**SAX61P03/ MO**	**–**	**SAV61P00/ MO**

PN 16 Data sheet	1...120 °C A6V11466366	DN	$\dot{V}_{min}$ [m³/h]	$\dot{V}_{100}$ [m³/h]	Δp_{min} [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]
	VPF44.50F15	50	2.9	15.9	21.4	700/600	700/600	–
	VPF44.50F25	50	4.2	26.2	52.6	700/600	700/600	–
	VPF44.65F25	65	4	28	22	700/600	700/600	–
	VPF44.65F35	65	5.1	35.8	42.6	700/600	700/600	–
	VPF44.80F35	80	5.5	36.7	18	700/600	700/600	–
	VPF44.80F45	80	7.2	47.9	36.4	700/600	700/600	–
	VPF44.100F70	100	12.1	68	35	–	600	600
	VPF44.100F90	100	14.8	90	75	–	600	600
	VPF43.125F110	125	18.5	110	35	–	600	600
	VPF43.125F135	125	23	135	53	–	600	600
	VPF43.150F160	150	25.6	148	35	–	600	600
	VPF43.150F200	150	32	195	65	–	600	600
	VPF43.200F210 [3]	200	95	210	32	–	600	600
	VPF43.200F280 [3]	200	130	280	78	–	600	600

PN 25 Data sheet	1...120 °C N4316	DN	$\dot{V}_{min}$ [m³/h]	$\dot{V}_{100}$ [m³/h]	Δp_{min} [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]
	VPF54.50F16	50	2.3	15	20	600	600	–
	VPF54.50F25	50	4.3	25	50	600	600	–
	VPF54.65F24	65	4.4	24	25	600	600	–
	VPF54.65F35	65	6	35	55	600	600	–
	VPF54.80F35	80	5.3	34	25	600	600	–
	VPF54.80F45	80	7	43	50	600	600	–
	VPF54.100F70	100	12.1	68	35	–	600	600
	VPF54.100F90	100	14.8	90	75	–	600	600
	VPF53.125F110	125	18.5	110	35	–	600	600
	VPF53.125F135	125	23	135	53	–	600	600
	VPF53.150F160	150	25.6	148	35	–	600	600
	VPF53.150F200	150	32	195	65	–	600	600
	VPF53.200F210 [3]	200	95	210	32	–	600	600
	VPF53.200F280 [3]	200	130	280	78	–	600	600

[1] Fail-safe function: valve closed
[2] Fail-safe function: valve open
[3] max. medium temperature 110 °C
VPF43../VPF53..: Δp_{min} is for the $\dot{V}_{100}$. For lower flows please consult the data sheet.

Threaded globe valves

Typical applications	Actuators	Data sheet		RTN51/RTN51G	RTN71	RTN81
– Radiators	RTN..	N2111				
Typical applications	**Actuators**	**Data sheet**		4.5 mm	2.5 mm	4.5 mm
– Radiators	**STA..**	N4884		100 N	100 N	90 N
	SSA..31/81/61..	A6V11858276				
	SSA..HF	A6V11858278				
	SSA118..	A6V11858280				
	Operating voltage	**Positioning signal**	**Positioning time [s]**			
	AC 230 V	2-position	210	**STA23**	–	**STA23HD** [1]
		3-position	67.5	–	**SSA331.00**	–
	AC 24 V	3-position	67.5	–	**SSA131.00**	–
		0...10 V	270 [2]	**STA63**	–	–
	AC/DC 24 V	2-position/PDM	270	**STA73**	–	**STA73HD** [1]
		0...10 V	25	–	**SSA161.05**	–
		4...20 mA	25	–	**SSA151.05HF**	–
		0...10 V	25	–	**SSA161.05HF**	–
		0...10 V	25	–	**SSA161E.05HF** [3]	–
		KNX S-/KNX PL-Link	50	–	**SSA118.09HKN**	–
	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 ⅜	0.09...0.63	60	60	60
	VDN115	**VDN215**	15	Rp/R ½	0.10...0.89	60	60	60
	VDN120	**VDN220**	20	Rp/R ¾	0.31...1.41	60	60	60
	VEN110	**VEN210**	10	Rp/R ⅜	0.09...0.63	60	60	60
	VEN115	**VEN215**	15	Rp/R ½	0.10...0.89	60	60	60
	VEN120	**VEN220**	20	Rp/R ¾	0.31...1.41	60	60	60
	–	**VUN210**	10	Rp/R ⅜	0.14...0.60	60	60	60
	–	**VUN215**	15	Rp/R ½	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

[1] Optimized for floor heating systems
[2] In control mode (warm-up time) min. running time approx. 30 s/mm
[3] Equal percentage valve characteristic
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		4.5 mm	2.5 mm
– Chilled ceilings	STA..	N4884		100 N	100 N
	SSA..31/81/61..	A6V11858276			
	SSA..HF	A6V11858278			
	SSA118..	A6V11858280			
	Operating voltage	**Positioning signal**	**Positioning time [s]**		
	AC 230 V	2-position	210	**STA23**	–
		3-position	67.5	–	**SSA331.00**
	AC 24 V	3-position	67.5	–	**SSA131.00**
		0...10 V	270 [2]	**STA63**	–
	AC/DC 24 V	2-position/PDM	270	**STA73**	–
		0...10 V	25	–	**SSA161.05**
		4...20 mA	25	–	**SSA151.05HF**
		0...10 V	25	–	**SSA161.05HF**
		0...10 V	25	–	**SSA161E.05HF** [1]
		KNX S-/KNX PL-Link	50	–	**SSA118.09HKN**
	Normally Open/Normally Closed (for radiator valves)			**NC**	–

PN 10 1...110 °C		DN	Rp/R [inch]	k_v [l/h]	Δp_{max} [kPa]	Δp_{max} [kPa]
Data sheet	N2103					
	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

Union nuts for threaded valves [3]

	Type Set of 2	Type Set of 3	G [inch]	R, Rp [inch]	Material
	ALG132	**ALG133**	G ½B	R ⅜ (Outer thread)	Brass
	ALG142	**ALG143**	G ¾B	R ½ (Outer thread)	Brass
	ALG122	**ALG123**	G ¾B	Rp ⅜	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] Equal percentage valve characteristic
[2] In control mode (warm-up time) min. running time approx. 30 s/mm
[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

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 Data sheet	1...110 °C 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 1¼B	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 1¼B	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.. SFP.. SSP..	N4884 N4865 N4864			100 N	135 N	160 N
	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 Data sheet	1...110 °C N4847	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]
	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

VVP45..N with Serto compression fittings, k_{vs} = 2.5 / 4 / 6.3 m³/h
VVP45..S, VMP45..S with Conex® compression fittings, k_{vs} = 0.63 / 1 / 1.6 / 2.5 m³/h
VVP47..S, VMP47..S with Conex® compression fittings, k_{vs} = 0.63 / 1 / 1.6 / 2.5 m³/h
[1] .. = k_{vs} value
[2] In control mode (warm-up time) min. running time approx. 30 s/mm

Threaded globe valves

Typical applications	Actuators	Data sheet
– Floor heating – Fan coil units – Zone control	SFA.. SUA21/3 STA.. SSA31.04 [1]	N4863 A6V10446174 N4884 N4860

Operating voltage	Positioning signal	Positioning time [s]	Spring return function [s]	2.5 mm 200 N	2.5 mm 170 N	4.5 mm 100 N	2.5 mm 160 N
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	**SFA71/18**	–	–	–
	0...10 V	270 [3]	–	–	–	**STA63**	–
AC/DC 24 V	2-position/PDM	270	–	–	–	**STA73**	–

PN 16 Data sheet	1...110 °C N4842	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]	Δp_s [kPa]	Δp_{max} [kPa]
	VVI46.15/2	15	Rp ½	2	300	300	400	400	200	200	300	300
	VVI46.20/2	20	Rp ¾	3.5	300	300	400	400	200	200	300	300
	VVI46.25/2	25	Rp 1	5	250	250	250	250	150	150	230	230
	VXI46.15/2 [4]	15	Rp ½	2	–	300	–	400	–	200	–	300
	VXI46.20/2 [4]	20	Rp ¾	3.5	–	300	–	400	–	200	–	300
	VXI46.25/2 [4]	25	Rp 1	5	–	250	–	250	–	150	–	230
	VXI46.25T [5]	25	Rp 1	5	–	200	–	200	–	140	–	–

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	DC 0...10 V	2-position (On/Off)	2-position (On/Off)	2-position (On/Off)	2-position (On/Off)
		[STA.., NC]	[STA.., NC]	–	[STA.., NC]	–	[STA.., NC]	[STA.., NC]
		[STP.., NO]	–	[STP.., NO]	–	[STP.., NO]	[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**						
	15 m	**ASY23L150**						
Halogen-free cables	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
– District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units	**SAX..** **SKD..** **SKB..**	N4501 N4561 N4564

Operating voltage	Positioning signal	Positioning time [s] SAX	SKD	SKB	Spring return function [s] SKD	SKB	20 mm 800 N	1000 N	2800 N
AC 230 V	3-position	120	120	120	–	–	**SAX31.00**	**SKD32.50**	**SKB32.50**
	3-position	–	120	120	8	10	**–**	**SKD32.51**	**SKB32.51**
	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**
	3-position	–	120	120	8	10	**–**	**SKD82.51**	**SKB82.51**
	3-position	30	–	–	–	–	**SAX81.03**	**–**	**–**
	0...10 V, 4...20 mA	–	30	120	–	–	**–**	**SKD60**	**SKB60**
	0...10 V, 4...20 mA	–	30	120	15	10	**–**	**SKD62**	**SKB62**
AC/DC 24 V	0...10 V, 4...20 mA	30	–	–	–	–	**SAX61.03**	**–**	**–**
	Modbus	30	30	120	15	10	**SAX61.03/MO**	**SKD62/MO**	**SKB62/MO**

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**	**VXG41.1501**	15	G 1B	4	1600	800	1600	800	1600	800
	VVG41.20		**VXG41.20**	**VXG41.2001**	20	G 1¼B	6.3	1600	800	1600	800	1600	800
	VVG41.25		**VXG41.25**	**VXG41.2501**	25	G 1½B	10	1550	800	1600	800	1600	800
	VVG41.32		**VXG41.32**	**VXG41.3201**	32	G 2B	16	875	800	1275	800	1600	800
	VVG41.40		**VXG41.40**	**VXG41.4001**	40	G 2¼B	25	525	525	775	775	1600	800
	VVG41.50		**VXG41.50**	**VXG41.5001**	50	G 2¾B	40	300	300	450	450	1225	800

[1] SAX81..: AC/DC 24 V
[2] SAX.. max. 130 °C
VXG41.. valves contain only materials in contact with drinking water that comply with the UBA Positive List dated April 23, 2013, Categories B+C

Threaded globe valves

Typical applications	Actuators	Data sheet			5.5 mm		
– Boiler plants – Domestic hot water – Heating groups – Air handling units	SAS..	N4581			400N	400N	400N
	Operating voltage	Positioning signal	Positioning time [s]	Spring return function [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
		Modbus	30	14 (SSA61.33/MO)	SAS61.03/MO	SAS61.33/MO	–

PN 16	1...120 °C			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	N4364		N4464									
	VVG44.15-.. [1]		VXG44.15-..	15	G 1B	0.25 / 0.4 / 0.63	1600	400	1600	400	1600	400
	VVG44.15-..		VXG44.15-..	15	G 1B	1 / 1.6	725	400	725	400	725	400
	VVG44.15-..		VXG44.15-..	15	G 1B	2.5 / 4	400	400	400	400	400	400
	VVG44.20-6.3		VXG44.20-6.3	20	G 1¼B	6.3	750	400	750	400	750	400
	VVG44.25-10		VXG44.25-10	25	G 1½B	10	400	400	400	400	400	400
	VVG44.32-16		VXG44.32-16	32	G 2B	16	250	250	250	250	250	250
	VVG44.40-25		VXG44.40-25	40	G 2¼B	25	125	125	125	125	125	125

Typical applications	Actuators	Data sheet			5.5 mm
– Boiler plants – Heating groups – Air handling units	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			DN	G [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4845		N4845					
	VVP45.20-4		VXP45.20-4	20	G 1B	4	350	350
	VVP45.25-6.3		VXP45.25-6.3	25	G 1¼B	6.3	300	300
	VVP45.25-10		VXP45.25-10	25	G 1½B	10	300	300
	VVP45.32-16		VXP45.32-16	32	G 2B	16	175	175
	VVP45.40-25		VXP45.40-25	40	G 2¼B	25	75	75

Typical applications	Actuators	Data sheet			5.5 mm	
– District heating – Boiler plants	SAT..	N4584			300N	300N
	Operating voltage	Positioning signal	Positioning time [s]	Spring return function [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, 0...1000 Ω	15	8	–	SAT61.51
		Modbus	15	–	SAT61.008/MO	SAT61.51/MO

PN 25	1...130 °C	DN	G [inch]	k_{vs}	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4380							
	VVG549.15-.. [1]	15	G ¾B	0.25 / 0.4 / 0.63	2500	1200	2500	1200
	VVG549.15-..	15	G ¾B	1 / 1.6 / 2.5	2000	1200	2000	1200
	VVG549.20-4K	20	G 1B	4	1600	1200	1600	1200
	VVG549.25-6.3K	25	G 1¼B	6.3	1600	1200	1600	1200

[1] .. = insert k_{vs} value

Flanged globe valves

Typical applications	Actuators	Data sheet
– District heating	SAX..	N4501
– Boiler plants	SKD..	N4561
– Chiller plants	SKB..	N4564
– Domestic hot water	SKC..	N4566
	SAV..	CE1N4503
– Heating groups		
– Air handling units		

Operating voltage	Positioning signal	Positioning time [s] SA..	SKD	SKB/C	Spring return function [s] SKD	SKB/C	20 mm 800 N	20 mm 1000 N	20 mm 2800 N	40 mm 1600 N	40 mm 2800 N
AC 230 V	3-position	120	120	120	–	–	SAX31.00	SKD32.50	SKB32.50	SAV31.00	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	SAV81.00	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	–	–	–	–
	0...10 V, 4...20 mA	120	–	–	–	–	–	–	–	SAV61.00	–
	Modbus	30	30	120	15	10/20	SAX61.03/MO	SKD62/MO	SKB62/MO	SAV61.00/MO	SKC62/MO

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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4401	N4401												
	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	600	300	–	–
	VVF22.50-40	VXF22.50-40	50	40	350	300	450	300	600	300	600	300	–	–
	VVF22.65-63	VXF22.65-63	65	63	200	150	250	200	600	300	450	300	–	–
	VVF22.80-100	VXF22.80-100	80	100	125	75	175	125	450	300	250	225	–	–
	VVF22.100-160	VXF22.100-160	100	160	–	–	–	–	–	–	160	125	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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4402	N4402												
	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	1000	400	–	–
	VVF32.50-40	VXF32.50-40	50	40	350	300	450	400	1000	400	750	400	–	–
	VVF32.65-63	VXF32.65-63	65	63	200	150	250	200	700	400	450	400	–	–
	VVF32.80-100	VXF32.80-100	80	100	125	75	175	125	450	400	250	225	–	–
	VVF32.100-160	VXF32.100-160	100	160	–	–	–	–	–	–	160	125	300	250
	VVF32.125-250	VXF32.125-250	125	250	–	–	–	–	–	–	125	90	190	160
	VVF32.150-400	VXF32.150-400	150	400	–	–	–	–	–	–	80	60	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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4403	N4403												
	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	1250	400	–	–
	VVF42.50-..	VXF42.50-..	50	31.5 / 40	350	300	450	400	1200	400	750	400	–	–
	VVF42.65-..	VXF42.65-..	65	50 / 63	200	150	250	200	700	400	450	400	–	–
	VVF42.80-..	VXF42.80-..	80	80 / 100	125	75	175	125	450	400	250	225	–	–
	VVF42.100-..	VXF42.100-..	100	125 / 160	–	–	–	–	–	–	160	125	300	250
	VVF42.125-..	VXF42.125-..	125	200 / 250	–	–	–	–	–	–	125	90	190	160
	VVF42.150-..	VXF42.150-..	150	315 / 400	–	–	–	–	–	–	80	60	125	100
	VVF42.50-40K	–	50	40	1600	400	1600	400	1600	400	–	–	–	–
	VVF42.65-63K	–	65	63	1600	400	1600	400	1600	400	–	–	–	–
	VVF42.80-100K	–	80	100	1600	400	1600	400	1600	400	–	–	–	–
	VVF42.100-160K	–	100	160	–	–	–	–	–	–	1600	400	1600	400
	VVF42.125-250K	–	125	250	–	–	–	–	–	–	1600	400	1600	400
	VVF42.150-360K	–	150	360	–	–	–	–	–	–	1400	400	1600	400

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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4404	N4404												
	VVF43.65-50	VXF43.65-50	65	50	–	–	–	–	–	–	450	400	700	650
	VVF43.65-63	VXF43.65-63	65	63	–	–	–	–	–	–	450	400	700	650
	VVF43.80-80	VXF43.80-80	80	80	–	–	–	–	–	–	250	225	450	400
	VVF43.80-100	VXF43.80-100	80	100	–	–	–	–	–	–	250	225	450	400
	VVF43.100-125	VXF43.100-125	100	125	–	–	–	–	–	–	160	125	300	250
	VVF43.100-160	VXF43.100-160	100	160	–	–	–	–	–	–	160	125	300	250
	VVF43.125-200	VXF43.125-200	125	200	–	–	–	–	–	–	125	90	190	160
	VVF43.125-250	VXF43.125-250	125	250	–	–	–	–	–	–	125	90	190	160
	VVF43.150-315	VXF43.150-315	150	315	–	–	–	–	–	–	80	60	125	100
	VVF43.150-400	VXF43.150-400	150	400	–	–	–	–	–	–	80	60	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
[2] .. = insert k_{vs} value
[3] SAX.. max. 130 °C; VVF43.., VXF43..: For DN 15...50 and k_{vs} values ≤ 40 m³/h see V..F53..

Flanged globe valves

Typical applications	Actuators	Data sheet
– District heating	SAX..	N4501
– Boiler plants	SKD..	N4561
– Chiller plants	SKB..	N4564
– Domestic hot water	SKC..	N4566
	SAV..	CE1N4503
– Heating groups		
– Air handling units		

Operating voltage	Positioning signal	Positioning time [s] SA..	SKD	SKB/C	Spring return function [s] SKD	SKB/C	20 mm 800 N	20 mm 1000 N	20 mm 2800 N	40 mm 1600 N	40 mm 2800 N
AC 230 V	3-position	120	120	120	–	–	SAX31.00	SKD32.50	SKB32.50	SAV31.00	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	3-position	120	120	120	–	–	SAX81.00	SKD82.50	SKB82.50	SAV81.00	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	–	–	–	–
	0...10 V, 4...20 mA	120	–	–	–	–	–	–	–	SAV61.00	–
	Modbus	30	30	120	15	10/20	SAX61.03/MO	SKD62/MO	SKB62/MO	SAV61.00/MO	SKC62/MO

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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4405	N4405												
VVF53.15-.. [3]	–		15	0.16 / 0.2 / 0.25 / 0.32 / 0.4 / 0.5 / 0.63	2500	1200	2500	1200	2500	1200	–	–	–	–
VVF53.15-..	–		15	0.8 / 1 / 1.25 / 2 / 3.2	2500	1200	2500	1200	2500	1200	–	–	–	–
VVF53.15-..	VXF53.15-..		15	1.6 / 2.5 / 4	2500	1200	2500	1200	2500	1200	–	–	–	–
VVF53.20-6.3	VXF53.20-6.3		20	6.3	2500	1200	2500	1200	2500	1200	–	–	–	–
VVF53.25-..	–		25	5 / 8	1600	1200	2100	1200	2500	1200	–	–	–	–
VVF53.25-..	VXF53.25-..		25	6.3 / 10	1600	1200	2100	1200	2500	1200	–	–	–	–
VVF53.32-16	VXF53.32-16		32	16	900	750	1200	1100	2500	1200	–	–	–	–
VVF53.40-..	–		40	12.5 / 20	550	500	750	650	2000	1200	–	–	–	–
VVF53.40-..	VXF53.40-..		40	16 / 25	550	500	750	650	2000	1200	1250	1150	–	–
VVF53.50-31.5	–		50	31,5	350	300	450	400	1200	1150	750	700	–	–
VVF53.50-40	VXF53.50-40		50	40	350	300	450	400	1200	1150	750	700	–	–
VVF53.65-63	VXF53.65-63		65	63	–	–	–	–	–	–	450	400	700	650
VVF53.80-100	VXF53.80-100		80	100	–	–	–	–	–	–	250	225	450	400
VVF53.100-160	VXF53.100-160		100	160	–	–	–	–	–	–	160	125	300	250
VVF53.125-250	VXF53.125-250		125	250	–	–	–	–	–	–	125	90	190	160
VVF53.150-400	VXF53.150-400		150	400	–	–	–	–	–	–	80	60	125	100
VVF53.50-40K	–		50	36	–	–	2500	1250	2500	1250	–	–	–	–
VVF53.65-63K	–		65	63	–	–	–	–	–	–	–	–	2500	1250
VVF53.80-100K	–		80	100	–	–	–	–	–	–	–	–	2500	1250
VVF53.100-150K	–		100	150	–	–	–	–	–	–	–	–	2500	1250
VVF53.125-220K	–		125	220	–	–	–	–	–	–	–	–	2500	1250
VVF53.150-315K	–		150	315	–	–	–	–	–	–	–	–	2500	1250
VVF53.200-450K	–		200	450	–	–	–	–	–	–	–	–	1200	800
VVF53.250-630K	–		250	630	–	–	–	–	–	–	–	–	1200	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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	A6V11459527												
VVF63.15-0.2		15	0.2	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.15-0.32		15	0.32	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.15-0.5		15	0.5	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.15-0.8		15	0.8	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.15-1.25		15	1.25	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.15-2		15	2	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.15-3.2		15	3.2	–	–	4000	2000	4000	2000	–	–	–	–
VVF63.20-6.3		20	5	–	–	3500	2000	4000	2000	–	–	–	–
VVF63.25-5		25	5	–	–	2100	2000	4000	2000	–	–	–	–
VVF63.25-8		25	8	–	–	2100	2000	4000	2000	–	–	–	–
VVF63.32-16		32	15	–	–	1200	1100	3200	2000	–	–	–	–
VVF63.40-12.5		40	12.5	–	–	750	650	2000	1800	–	–	–	–
VVF63.40-20		40	20	–	–	750	650	2000	1800	–	–	–	–
VVF63.50-31.5		50	31.5	–	–	450	400	1200	1150	–	–	–	–
VVF63.65-50		65	50	–	–	–	–	–	–	–	–	700	650
VVF63.80-80		80	80	–	–	–	–	–	–	–	–	450	400
VVF63.100-125		100	125	–	–	–	–	–	–	–	–	300	250
VVF63.125-200		125	200	–	–	–	–	–	–	–	–	175	160
VVF63.150-315		150	315	–	–	–	–	–	–	–	–	125	100

[1] SAX81..: AC/DC 24 V [2] SAX.. max. 130 °C [3] .. = insert k_{vs} value

Flanged globe valves

Typical applications	Actuators	Data sheet
– District heating	SKD..	N4561
– Boiler plants	SKB..	N4564
– Chiller plants	SAV..	CE1N4503
– Domestic hot water	SKC..	N4566
– Heating groups		
– Air handling units		

Operating voltage	Positioning signal	Positioning time [s] SKD	SKB/C	SAV	Spring return function [s] SKD	SKB/C	20 mm 1000 N	20 mm 2800 N	40 mm 2800 N
AC 230 V	3-position	120	120	120	–	–	**SKD32.50**	**SKB32.50**	**SKC32.60**
	3-position	120	120	–	8	10/18	**SKD32.51**	**SKB32.51**	**SKC32.61**
	3-position	30	–	–	8	–	**SKD32.21**	**–**	**–**
AC 24 V	3-position	120	120	120	–	–	**SKD82.50**	**SKB82.50**	**SKC82.60**
	3-position	120	120	–	8	10/18	**SKD82.51**	**SKB82.51**	**SKC82.61**
	0...10 V, 4...20 mA	30	120	120	–	–	**SKD60**	**SKB60**	**SKC60**
	0...10 V, 4...20 mA	30	120	–	15	10/20	**SKD62**	**SKB62**	**SKC62**
	Modbus	30	120	120	15	10/20	**SKD62/MO**	**SKB62/MO**	**SKC62/MO**

PN 40 Data sheet	-25...220°C A6V11459527	DN	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
	VVF63.50-40K	50	36	–	1500	4000	2000	–	–
	VVF63.65-63K	65	63	–	–	–	–	4000	2000
	VVF63.80-100K	80	100	–	–	–	–	4000	2000
	VVF63.100-150K	100	150	–	–	–	–	4000	2000
	VVF63.125-220K	125	220	–	–	–	–	4000	2000
	VVF63.150-315K	150	315	–	–	–	–	4000	2000

PN 40 Data sheet	-25...220°C A6V11459527	DN	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
	VXF63.15-1.6	15	1.6	2000	200	2000	200	–	–
	VXF63.15-2.5	15	2.5	2000	200	2000	200	–	–
	VXF63.15-4	15	4	2000	200	2000	200	–	–
	VXF63.20-6.3	20	6.3	2000	200	2000	200	–	–
	VXF63.25-6.3	25	6.3	2000	200	2000	200	–	–
	VXF63.25-10	25	10	2000	200	2000	200	–	–
	VXF63.32-16	32	16	1100	200	2000	200	–	–
	VXF63.40-16	40	16	650	200	2000	200	–	–
	VXF63.40-25	40	25	650	200	2000	200	–	–
	VXF63.50-31.5	50	31.5	400	200	1150	200	–	–
	VXF63.65-50	65	50	–	–	–	–	650	200
	VXF63.80-80	80	80	–	–	–	–	400	200
	VXF63.100-125	100	125	–	–	–	–	250	150
	VXF63.125-200	125	200	–	–	–	–	160	100
	VXF63.150-315	150	315	–	–	–	–	100	70

Control ball valves

Typical applications	Actuators	Data sheet
– Domestic hot water	GQD..9A	N4659
– Heating groups	GSD..9A	A6V10636056
– Air handling units	GDB..9E	A6V10636150
– Chilled ceilings	GDB111.9E/KN	A6V10725318
– VAV	GMA..9E	N4658
– Fan coil units	GLB..9E	A6V10636203
– Zone control	GLD..9E	A6V11171770

Operating voltage	Positioning signal	Positioning time [s] G..D	G..B	GMA	Spring return function [s]	2 Nm	5 Nm	7 Nm	10 Nm GLB 8 Nm GLD
AC 100...240 V	2/3-position	–	150	–	–	–	GDB341.9E	–	GLB341.9E
AC 24 V	KNX S-/LTE-Mode, KNX PL-Link	–	150	–	–	–	GDB111.9E/KN	–	GLB111.9E/KN
	Modbus	–	150	–	–	–	GDB111.9E/MO	–	GLB111.9E/MO
AC/DC 24 V	3-position	30	–	90	15	GQD131.9A	–	GMA131.9E	–
	2/3-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
	Modbus	30	–	–	–	–	–	–	GLD161.9E/MO
	Modbus	–	150	90	–	–	GDB161.9E/MO	GMA161.9E/MO	GLB161.9E/MO

PN 40	-10...120 °C		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]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4211	N4211											
VAG61.15-..[1]	VBG61.15-..		15	G 1B	1.6/2.5/4/6.3	1400	350	1400	350	1400	350	1400	350
VAG61.15-..	–		15	G 1B	1	1400	350	1400	350	1400	350	1400	350
VAG61.20-..	VBG61.20-..		20	G 1¼B	4/6.3	1400	350	1400	350	1400	350	1400	350
VAG61.20-10	–		20	G 1¼B	10	1400	350	1400	350	1400	350	1400	350
VAG61.25-10	VBG61.25-10		25	G 1½B	10	1400	350	1400	350	1400	350	1400	350
VAG61.25-..	–		25	G 1½B	6.3/16	1400	350	1400	350	1400	350	1400	350
VAG61.32-10	–		32	G 2B	10	–	–	–	–	1000	350	1000	350
VAG61.32-16	VBG61.32-16		32	G 2B	16	–	–	–	–	1000	350	1000	350
VAG61.32-25	–		32	G 2B	25	–	–	–	–	1000	350	1000	350
VAG61.40-16	–		40	G 2¼B	16	–	–	–	–	800	350	800	350
VAG61.40-25	VBG61.40-25		40	G 2¼B	25	–	–	–	–	800	350	800	350
VAG61.40-40	–		40	G 2¼B	40	–	–	–	–	800	350	800	350
VAG61.50-25	–		50	G 2¾B	25	–	–	–	–	600	350	600	350
VAG61.50-40	VBG61.50-40		50	G 2¾B	40	–	–	–	–	600	350	600	350
VAG61.50-63	–		50	G 2¾B	63	–	–	–	–	600	350	600	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]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4211	N4211											
VAI61.15-..[1]			15	Rp ½	0.25/0.4/0.63/1.0	1400	350	1400	350	1400	350	–	350
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 1¼	10	–	–	–	–	1000	350	1000	350
VAI61.32-16	VBI61.32-16		32	Rp 1¼	16	–	–	–	–	1000	350	1000	350
VAI61.32-25	–		32	Rp 1¼	25	–	–	–	–	1000	350	1000	350
VAI61.40-16	–		40	Rp 1½	16	–	–	–	–	800	350	800	350
VAI61.40-25	VBI61.40-25		40	Rp 1½	25	–	–	–	–	800	350	800	350
VAI61.40-40	–		40	Rp 1½	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
– Heated and chilled ceilings	GSD..9A GDB..9E GDB111.9E/KN	A6V10636056 A6V10636150 A6V10725318

Operating voltage	Positioning signal	Positioning time [s] GSD	Positioning time [s] GDB	2 Nm	5 Nm	5 Nm	5 Nm
AC 100...240 V	2-position	–	150	–	GDB341.9E	–	–
AC 230 V	2-position	90	–	GSD341.9A	–	–	–
AC 24 V	KNX S-/LTE-Mode, KNX PL-Link	–	150	–	–	GDB111.9E/KN	–
AC/DC 24 V	2-position	30	150	GSD141.9A	GDB141.9E	–	–
	0/2...10 V	30	150	GSD161.9A	–	–	GDB161.9E
	Modbus	–	150	–	–	GDB111.9E/MO	GDB161.9E/MO

PN 16 Data sheet	5...90 °C A6V10564480	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]
	VWG41.10-0.25-0.4	10	0.25	0.4	–	200	–	200	–	200	–	200
	VWG41.10-0.25-0.65	10	0.25	0.65	–	200	–	200	–	200	–	200
	VWG41.10-0.25-1.0	10	0.25	1	–	200	–	200	–	200	–	200
	VWG41.10-0.25-1.3	10	0.25	1.3	–	200	–	200	–	200	–	200
	VWG41.10-0.25-1.6	10	0.25	1.6	–	200	–	200	–	200	–	200
	VWG41.10-0.25-1.9	10	0.25	1.9	–	200	–	200	–	200	–	200
	VWG41.10-0.4-0.4	10	0.4	0.4	–	200	–	200	–	200	–	200
	VWG41.10-0.4-0.65	10	0.4	0.65	–	200	–	200	–	200	–	200
	VWG41.10-0.4-1.0	10	0.4	1	–	200	–	200	–	200	–	200
	VWG41.10-0.4-1.3	10	0.4	1.3	–	200	–	200	–	200	–	200
	VWG41.10-0.4-1.6	10	0.4	1.6	–	200	–	200	–	200	–	200
	VWG41.10-0.4-1.9	10	0.4	1.9	–	200	–	200	–	200	–	200
	VWG41.10-0.65-0.65	10	0.65	0.65	–	200	–	200	–	200	–	200
	VWG41.10-0.65-1.0	10	0.65	1	–	200	–	200	–	200	–	200
	VWG41.10-0.65-1.3	10	0.65	1.3	–	200	–	200	–	200	–	200
	VWG41.10-0.65-1.6	10	0.65	1.6	–	200	–	200	–	200	–	200
	VWG41.10-0.65-1.9	10	0.65	1.9	–	200	–	200	–	200	–	200
	VWG41.10-1.0-1.0	10	1	1	–	200	–	200	–	200	–	200
	VWG41.10-1.0-1.3	10	1	1.3	–	200	–	200	–	200	–	200
	VWG41.10-1.0-1.6	10	1	1.6	–	200	–	200	–	200	–	200
	VWG41.10-1.0-1.9	10	1	1.9	–	200	–	200	–	200	–	200
	VWG41.10-1.3-1.3	10	1.3	1.3	–	200	–	200	–	200	–	200
	VWG41.10-1.3-1.6	10	1.3	1.6	–	200	–	200	–	200	–	200
	VWG41.10-1.3-1.9	10	1.3	1.9	–	200	–	200	–	200	–	200
	VWG41.10-1.6-1.6	10	1.6	1.6	–	200	–	200	–	200	–	200
	VWG41.10-1.6-1.9	10	1.6	1.9	–	200	–	200	–	200	–	200
	VWG41.10-1.9-1.9	10	1.9	1.9	–	200	–	200	–	200	–	200
	VWG41.20-0.25-2.5	20	0.25	2.5	–	–	–	200	–	200	–	200
	VWG41.20-0.25-3.45	20	0.25	3.45	–	–	–	200	–	200	–	200
	VWG41.20-0.25-4.25	20	0.25	4.25	–	–	–	200	–	200	–	200
	VWG41.20-0.4-2.5	20	0.4	2.5	–	–	–	200	–	200	–	200
	VWG41.20-0.4-3.45	20	0.4	3.45	–	–	–	200	–	200	–	200
	VWG41.20-0.4-4.25	20	0.4	4.25	–	–	–	200	–	200	–	200
	VWG41.20-0.65-2.5	20	0.65	2.5	–	–	–	200	–	200	–	200
	VWG41.20-0.65-3.45	20	0.65	3.45	–	–	–	200	–	200	–	200
	VWG41.20-0.65-4.25	20	0.65	4.25	–	–	–	200	–	200	–	200
	VWG41.20-1.0-2.5	20	1	2.5	–	–	–	200	–	200	–	200
	VWG41.20-1.0-3.45	20	1	3.45	–	–	–	200	–	200	–	200
	VWG41.20-1.0-4.25	20	1	4.25	–	–	–	200	–	200	–	200
	VWG41.20-1.3-2.5	20	1.3	2.5	–	–	–	200	–	200	–	200
	VWG41.20-1.3-3.45	20	1.3	3.45	–	–	–	200	–	200	–	200
	VWG41.20-1.3-4.25	20	1.3	4.25	–	–	–	200	–	200	–	200
	VWG41.20-1.6-2.5	20	1.6	2.5	–	–	–	200	–	200	–	200
	VWG41.20-1.6-3.45	20	1.6	3.45	–	–	–	200	–	200	–	200
	VWG41.20-1.6-4.25	20	1.6	4.25	–	–	–	200	–	200	–	200
	VWG41.20-2.5-2.5	20	2.5	2.5	–	–	–	200	–	200	–	200
	VWG41.20-2.5-3.45	20	2.5	3.45	–	–	–	200	–	200	–	200
	VWG41.20-2.5-4.25	20	2.5	4.25	–	–	–	200	–	200	–	200
	VWG41.20-3.45-3.45	20	3.45	3.45	–	–	–	200	–	200	–	200
	VWG41.20-4.25-4.25	20	4.25	4.25	–	–	–	200	–	200	–	200

Fittings for 6-port control ball valves

	Type	Description
	ALN15.152B ALN15.202B	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
	ALG13.152B ALG15.152B ALG15.202B ALG15.252B	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

Magnetic valves

Typical applications	Valve type	Operating voltage	Positioning signal	Type suffix
– District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units	MXF461..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	P [1]
	M3P..FY..	AC 24 V	0...10 V, 4...20 mA	P [1]
	MVF461H..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	–
	MXG461..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	P [1]
	MXG461B..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	–
	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 Data sheet	1...130 °C N4455	DN	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Note
	MXF461.15-.. [2]	15	0,6 / 1,5 / 3	300	300	To be used as 2-port or mixing valves, not as diverting valves. Selectable valve characteristic: equal-percentage or linear.
	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 Data sheet	1...180 °C N4361	DN	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]
	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 Data sheet	1...130 °C N4455	DN	G [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]
	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 Data sheet	-20...130 °C N4461	DN	G [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]
	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 Data sheet	1...130 °C N4465	-20...130 °C N4466	DN	G [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Note
	MXG461S15-1.5	–	15	G 1B	1,5	300	300	To be used as 2-port or mixing valves, not as diverting valves. Selectable valve characteristic: equal-percentage or linear. [3]
	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	
	–	MXG462S40-20	40	G 2½B	20	600	600	
		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
MXG461B.. valves contain only materials in contact with drinking water that comply with the UBA Positive List dated April 23, 2013, Categories B+C

Slipper valves

Typical applications	Actuators	Data sheet		10 Nm	10 Nm
– Boiler plants – Heating groups	SAL..	N4502			
	Operating voltage	**Positioning signal**	**Positioning time [s]**		
	AC 230 V	3-position	120	**SAL31.00T10**	**SAL31.00T10**
		3-position	30	**SAL31.03T10**	**SAL31.03T10**
	AC/DC 24 V	3-position	120	**SAL81.00T10**	**SAL81.00T10**
		3-position	30	**SAL81.03T10**	**SAL81.03T10**
		0...10 V, 4...20 mA	120	**SAL61.00T10**	**SAL61.00T10**
		0...10 V, 4...20 mA	30	**SAL61.03T10**	**SAL61.03T10**
	Mounting set			**ASK32N**	**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

Butterfly valves

Typical applications	Actuators	Data sheet		Rotation angle 90°	
– Boiler plants – Chiller plants – Heating groups	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	Actuators	Data sheet		Rotation angle 90°						
– Boiler plants – Chiller plants – Cooling towers – Domestic hot water – Heating groups	SAL.. SQL36..	N4502 N4505		20 Nm	40 Nm	40 Nm		100 Nm	400 Nm	1200 Nm
	Operating voltage	Positioning signal	Positioning 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	–	–	–	–	–
	AC/DC 24 V	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]	Δp_s [kPa]	Δp_s [kPa]	Δp_s [kPa]	Δp_s [kPa]
Data sheet	N4136									
	VKF46.40	40	50	1600	–	1600	–	–	–	–
	VKF46.50	50	85	1600	–	1600	–	–	–	–
	VKF46.65	65	215	1600	–	1600	–	–	–	–
	VKF46.80	80	420	–	1600	–	1600	–	–	–
	VKF46.100	100	800	–	1200	–	1600	–	–	–
	VKF46.125	125	1010	–	800	–	1000	–	–	–
	VKF46.150	150	2100	–	–	–	–	1600	–	–
	VKF46.200	200	4000	–	–	–	–	1000	–	–
	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	Actuators	Data sheet
– Boiler plants	GDB..9E	A6V10636150
– Chiller plants	GQD..9A	N4659
– Domestic hot water	GSD..9A	N4655
– Heating groups	GMA..9E	N4658
	GLB..9E	A6V10636203

Operating voltage	Positioning signal	Positioning time [s] GQD/GSD	GMA	G..B	Spring return function [s]	2 Nm	5 Nm	7 Nm	10 Nm
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	–	–	GDB341.9E	–	GLB341.9E
AC/DC 24 V	2-position	30	90	–	15	GQD121.9A	–	GMA121.9E	–
	2-position	30	–	–	–	GSD141.9A	–	–	–
	2/3-position	–	–	150	–	–	GDB141.9E	–	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]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4213											
	VAG60.15-9	15	G 1B	9	1400	350	1400	350	1400	350	1400	350
	VAG60.20-17	20	G 1 ¼B	17	1400	350	1400	350	1400	350	1400	350
	VAG60.25-22	25	G 1 ½B	22	1400	350	1400	350	1400	350	1400	350
	VAG60.32-35	32	G 2B	35	–	–	–	–	1000	350	1000	350
	VAG60.40-68	40	G 2 ¼B	68	–	–	–	–	800	350	800	350
	VAG60.50-96	50	G 2 ¾B	96	–	–	–	–	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]	Δp_{max} [kPa]
Data sheet	N4213							
	VBG60.15-8T	15	G 1B	8	350	350	350	350
	VBG60.20-13T	20	G 1 ¼B	13	350	350	350	350
	VBG60.25-13T	25	G 1 ½B	13	350	350	350	350
	VBG60.32-25T	32	G 2B	25	–	–	350	350
	VBG60.40-49T	40	G 2 ¼B	49	–	–	350	350
	VBG60.50-73T	50	G 2 ¾B	73	–	–	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]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	N4213											
	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 1¼	35	–	–	–	–	1000	350	1000	350
	VAI60.40-68	40	Rp 1½	68	–	–	–	–	800	350	800	350
	VAI60.50-96	50	Rp 2	96	–	–	–	–	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]	Δp_{max} [kPa]
Data sheet	N4213							
	VBI60.15-12T	15	Rp ½	12	350	350	350	350
	VBI60.20-16T	20	Rp ¾	16	350	350	350	350
	VBI60.25-16T	25	Rp 1	16	350	350	350	350
	VBI60.32-25T	32	Rp 1¼	25	–	–	350	350
	VBI60.40-49T	40	Rp 1½	49	–	–	350	350
	VBI60.50-73T	50	Rp 2	73	–	–	350	350

PN 40	-10...120°C	DN	Rp [inch]	k_{vs} [m³/h]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]
Data sheet	N4213							
	VBI60.15-5L	15	Rp ½	5	350	350	350	350
	VBI60.20-9L	20	Rp ¾	9	350	350	350	350
	VBI60.25-9L	25	Rp 1	9	350	350	350	350
	VBI60.32-13L	32	Rp 1¼	13	–	–	350	350
	VBI60.40-25L	40	Rp 1½	25	–	–	350	350
	VBI60.50-37L	50	Rp 2	37	–	–	350	350

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..[1]	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	Minimum stroke setting
	MVS661..N[1]	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							
Data sheet	N4731					k_{vs} [m³/h]		Δp_{max} [kPa]
	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	⅝		0.4	0.25	2500
	MVL661.15-1.0	15	Sleeve	⅝		1	0.63	2500
	MVL661.20-2.5	20	Sleeve	⅞		2,5	1.6	2500
	MVL661.25-6.3	25	Sleeve	1⅛		6.3	4	2500
	MVL661.32-10	32	Sleeve	1⅜		10	6.3	1600
	MVL661.32-12	32	Sleeve	1⅜		12	7.6	200
PN 63	-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, solderable	22.4	33.7	0.16	0.1	2500
	MVS661.25-0.4N	25	Weldable, solderable	22.4	33.7	0.4	0.25	2500
	MVS661.25-1.0N	25	Weldable, solderable	22.4	33.7	1	0.63	2500
	MVS661.25-2.5N	25	Weldable, solderable	22.4	33.7	2.5	1.6	2500
	MVS661.25-6.3N	25	Weldable, solderable	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	⅝		0.6	200	800
	M3FK15LX15	15	Sleeve	⅝		1.5	200	800
	M3FK15LX	15	Sleeve	⅝		3	200	800
	M3FK20LX	20	Sleeve	⅞		5	200	800
	M3FK25LX	25	Sleeve	1⅛		8	200	800
	M3FK32LX	32	Sleeve	1⅜		12	200	800
	M3FK40LX	40	Sleeve	1⅝		20	200	800
	M3FK50LX	50	Sleeve	2⅛		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	⅝		0.6	2200	
	M3FB15LX15/A	15	Sleeve	⅝		1.5	2200	
	M3FB15LX/A	15	Sleeve	⅝		3	2200	
	M3FB20LX/A	20	Sleeve	⅞		5	1800	
	M3FB25LX/A	25	Sleeve	1⅛		8	1200	
	M3FB32LX	32	Sleeve	1⅜		12	800	

[1] Also available as ATEX Zone 2

Definitions

Abbr.	Term	Unit	Definition
Δp	Differential pressure	kPa	Pressure differential between plant sections.
Δp_{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.
Δp_{maxV}	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.
Δp_{min}	Minimum differential pressure	kPa	Minimum differential pressure required, so that the differential pressure regulator works reliably with combi valves. Δp_{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 $\dot{V}_{100}$.
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 value, at a given speed and a given pump medium.
H_{100}	Valve fully open		Stroke of fully open valve.
kPa	Unit of pressure	kPa	100 kPa = 1 bar = 10 mWC.
mWC	Meter water column	m	
k_V	Nominal flow	m³/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	m³/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.
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 control, a minimum valve authority of 0.25 is required. PV ≥ 0.5 is recommended for good controllability.
$\dot{Q}_{100}$	Rated capacity	kW	Plant's design capacity.
$\dot{V}_{100}$	Volumetric flow	m³/h	Volumetric flow with valve fully open (H_{100}).
$\dot{V}_{min}$	Minimum volumetric flow	m³/h	Smallest presettable volumetric flow through the fully open combi valve (H_{100}).
c	Specific heat capacity	kJ/kgK	
ρ	Specific density	kg/m³	

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 kVS value. This compensates for the flow resistance of the heat exchanger, so that the total volumetric flow $\dot{V}100$ 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 kvs value. This compensates for the flow resistance of the heat exchanger, so that the total flow amount $\dot{V}100$ 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.

Valve sizing and actuator selection

Basic hydronic circuit								
1 **Determine the type of hydronic circuit**	Throttling circuit	Injection circuit with 2-port valve	Mixing circuit		Mixing circuit with fixed premixing		Diverting circuit	Injection circuit with 3-port valve
— For valve sizing relevant variable flow path			Primary pump ✓	Primary pump ✗	Primary pump ✓	Primary pump ✗		

HVAC plants and consumers

Heating								
Surface/floor heating	–	■	–	–	■	■	–	outdated
Heating plant (primary)	–	■	■	■	■	■	outdated	outdated
Zone control, heating	–	■	–	–	–	–	–	outdated
Heating groups	–	■	■	■	■	■	–	–
Generation of heat energy	–	–	–	■	–	■	–	–
Heat exchanger water-water	■	uncommon	uncommon	–	–	–	uncommon	uncommon
Ventilation and air conditioning plants								
Air handling unit	■	■	■	■	–	–	outdated	outdated
Fan coil unit	■	–	–	–	–	–	outdated	outdated
Cooling coil	dehumidifying	■	–	–	–	–	uncommon	uncommon
Reheating coil	■	■	uncommon	uncommon	uncommon	uncommon	outdated	outdated
Preheating coil	–	■	uncommon	uncommon	uncommon	uncommon	–	outdated
VAV	■	–	–	–	–	–	outdated	outdated
Zone control	■	–	–	–	–	–	outdated	outdated
Chiller plants								
Surface/floor cooling	–	■	–	–	–	–	–	outdated
Generation of cooling energy	–	–	–	■	–	■	–	–
Cooling towers	■	–	–	–	–	–	outdated	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	–	–
Hot water								
Hot water directly	–	■	–	■	–	–	–	–

Header

Differential pressure header	pressurized	low-pressure	pressureless	low-pressure	pressureless	pressurized	
Volumetric flow	variable	variable				constant	

Valve sizing and selection: k_{vs} valves and actuators

1	**Determine the type of hydronic circuit**	Throttling circuit	Injection circuit with 2-port valve	Mixing circuit		Mixing circuit with fixed premixing		Diverting circuit	Injection circuit with 3-port valve
				Primary pump ✓	Primary pump ✗	Primary pump ✓	Primary pump ✗		
Determine volumetric flow $\dot{V}$									
2	Δp_{VR} or Δp_{MV}	Δp_{VR}		Δp_{MV}					
	typical range	10...200 kPa	10...200 kPa	2...5 kPa	5...15 kPa	2...5 kPa	5...15 kPa	10...50 kPa	2...5 kPa
	typical value	Use effective Δp_{VR} value		3 kPa	8 kPa	3 kPa	8 kPa	eff. value Δp_{MV}	3 kPa
3	**Determine Δp_{V100}**	$\Delta p_{V100} \geq \frac{\Delta p_{VR}}{2}$ $(P_V \geq 0.5)$		$\Delta p_{V100} \geq \Delta p_{MV}$ $(P_V \geq 0.5)$					
4	**Calculate $\dot{V}_{100}$**	Water without anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$				Water with anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100} \cdot 3600}{c \cdot \rho \cdot \Delta T}$			
5	**Determine k_{vs} value**	$k_V = \frac{\dot{V}_{100}}{\sqrt{\frac{\Delta p_{V100}}{100\ \text{kPa}}}}$ => $k_{VS} \geq 0.85 \cdot k_V$ value							
6	**Check resulting Δp_{V100}**	$\Delta p_{V100} = 100 \cdot \left(\frac{\dot{V}_{100}}{k_{VS}}\right)^2$							
Selection of valve and actuator									
7	**Select suitable valve series**	1. Type of valve (2-port, 3-port, 3-port with bypass) 2. Connections (flanged, threaded, soldered)				3. PN class 4. Nominal size DN		5. Max. / min. medium temperature 6. Medium	
8	**Check valve authority P_V**	$P_V = \frac{\Delta p_{V100}}{\Delta p_{VR}} \geq 0.25...0.8$		$P_V = \frac{\Delta p_{V100}}{\Delta p_{V100} + \Delta p_{MV}} \geq 0.25...0.8$					
9	**Select actuator**	1. Operating voltage 2. Positioning signal 3. Positioning time 4. Power fail reset function 5. Auxiliary functions							
10	**Check working range**	1. Differential pressure $\Delta p_{max} > \Delta p_{V0}$ 2. Closing pressure $\Delta p_s > H_0$							
11	**Selection**	Valve and suitable actuator							

Valve sizing and selection: Intelligent Valves, PICVs and actuators

1	**Determine the type of hydronic circuit**	Throttle circuit or injection system with 2-port valve 		
Determine volumetric flow $\dot{V}$				
2	**Determine $\dot{Q}_{100}$**	$\dot{Q}_{100}$		
3	**Determine ΔT**	ΔT		
4	**Calculate $\dot{V}$**	Water without anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$	Water with anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100} \cdot 3600}{c \cdot \rho \cdot \Delta T}$	
Select valve and actuator				
5	**Select suitable valve**	1. Type of valve (with / without P/T plugs) 4. Connection (flanged, threaded)	2. PN class 5. Nominal size DN	3. Max. / min. medium temperature 6. Medium
6	**Determine presetting**	Determine presetting using the volumetric flow / dial table in data sheet of the respective PICV		
7	**Select actuator for PICV**	1. Operating voltage 2. Positioning signal 3. Positioning time 4. Auxiliary functions		
8	**Check working range**	1. $\Delta p < \Delta p_{max}$ – maximum permissible differential pressure across the valve's control path, valid for the entire actuating range of the motorized valve 2. $\Delta p > \Delta p_{min}$ – minimum differential pressure required across the valve's control path, so that the differential pressure regulator works reliably		

Or just use the Acvatix slide ruler, the online tool for simple valve sizing, to find the right valve with actuator.

Or just install the Combi Valve Sizer on your smartphone to find the right PICV with actuator.

Air handling unit with cooling coil (cooling/de-humidification) and reheating coil, with PICVs

Plant data	Cooling coil	Heating coil
Cooling/heating power $\dot{Q}_{100}$	75 kW	65 kW
Supply temperature producer $\theta_{Producer}$	6 °C	55 °C
Temperatures Supply/Return θ_{Supply} / θ_{Return}	6/12 °C	50/35 °C
Temperature difference	6 K	20 K
Medium	Water	Water
Differential pressure Δp_{MV} without balancing valve	57 kPa	12 kPa
Shutoff head pump H_0 (resp. Δp_{V0})	18 mWC (180 kPa)	18 mWC (180 kPa)
Positioning signal	0...10 V	0...10 V

	Cooling coil	Reheating coil
1 Determine Volumetric flow $\dot{V}_{100}$		
$\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$ decisive temperature difference Constant 1.163: with density ρ = 1000 kg/m³, 3600 s/h and specific heat capacity c = 4.187 kJ/kg · K	$\dot{V}_{100} = \frac{75\ kW}{1.163 \cdot 6\ K} = 10.75\ m^3/h$ $\theta_{Return\ cooling\ coil} - \theta_{Producer} = (12 - 6)\ °C = 6\ K$	$\dot{V}_{100} = \frac{65\ kW}{1.163 \cdot 20\ K} = 2.79\ m^3/h$ $\theta_{Producer} - \theta_{Return\ heating\ coil} = (55 - 35)\ °C = 20\ K$
Hydronic circuit Δp_{MV} Differential pressure across variable flow path	Throttling circuit 	Injection circuit with 2-port valve
Distribution setup	Pressurized with variable volumetric flow (primary pump controlled)	

	Cooling coil	Reheating coil
2 Determine minimally required differential pressure Δp_{min} (from Data sheet)		

Cooling coil VPF43.50F16

VPF43.50F16 — **16 m³/h nominal**

$\dot{V}$ [m³/h]				2.5	3.2	3.8	4.5	5.3	6	6.8	7.5	8.3	9	9.8	10.5	11.3	12	12.8	13.5	14.3	**15**
Dial	Min.	0.2	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	2	2.2	2.4	2.6	2.8	3	32	3.4	3.6	3.8	**4**
Δp_{min} [kPa]				6.5	6.5	6.5	6.8	7.1	7.4	7.7	8.0	8.8	9.6	10.4	11.2	12.0	13.5	15.2	16.8	18.5	**20**

Reheating coil VPP46.32F4Q

VPP46.32F4, VPP46.32F4Q, VPI46.32F4, VPI46.32F4Q — **4000 l/h nominal**

$\dot{V}$ [l/h]					550	800	910	1110	1320	1520	1720	1930	2130	2330	2530	2740	2940	3140	3350	3550	3750	4001
Dial	Min.	0.2	0.4	0.5	0.6	0.8	1	1.2	1.4	1.6	1.8	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	3.8	Max.
Δp_{min} [kPa]					17.9	18	18.1	18.2	18.3	18.5	18.7	18.9	19.2	19.6	20.1	20.7	21.4	22.3	23.4	24.6	26	28

Δp_{min}	Δp_{min} = 11.5 kPa	Δp_{min} = 21 kPa
Presetting	Dial = 2.85	Dial = 2.85
Total resistance Δp_{VR} for primary pump	$\Delta p_{VR} = \Delta p_{MV} + \Delta p_{min}$ = 57 kPa + 11.5 kPa Δp_{VR} = 68.5 kPa (6.8 mWC)	$\Delta p_{VR} = \Delta p_{MV} + \Delta p_{min}$ = 12 kPa + 21 kPa Δp_{VR} = 33 kPa (3.3 mWC)
3 Select suitable valve type		
Type of valve	PICV (with linear characteristic)	PICV (with linear characteristic)
Connection type	Flange	External thread
Nominal pressure level PN	PN 16	PN 16
Selected valve	VPF43.50F16 (with measuring points)/ piping size DN 50	VPP46.32F4Q (with measuring points)/ piping size DN 32
4 Select valve actuator		
Actuator type	SAX.. with 20 mm stroke	SSA.. with 5 mm stroke
Operating voltage	AC 24 V	AC 24 V
Positioning signal	0...10 V	0...10 V
Positioning time	30 s	34 s
Spring return function	no	no
Additional functions	none	none
Select actuator	SAX61P03, with selectable characteristic ➞ equal percentage *fits well to cooling coil transfer characteristic*	SSA161E.05HF ➞ with equal percentage characteristic *fits well to reheating coil transfer characteristic*
Selection		
PICV	VPF43.50F16 (with measuring points)	VPP46.32F4Q (with measuring points)
Valve actuator	SAX61P03	SSA161E.05HF

Heating plant with low-pressure distribution, with k_{VS}-valves (3-port)

Plant data	Heating group 1	Heating group 2
Heating group power $\dot{Q}_{100}$	90 kW	60 kW
Supply temperature producer $\theta_{Producer}$	55 °C	55 °C
Temperatures Supply/Return $\theta_{Supply} / \theta_{Return}$	50/40 °C	35/28 °C
Temperature spread	see below	see below
Medium	Water	Water
Differential pressure Δp_{MV}	see below	see below
Shutoff head pump H_0 (resp. Δp_{V0})	4.5 mWC (45 kPa)	4.5 mWC (45 kPa)
Positioning signal	3-position	3-position

	Heating group 1	Heating group 2
1 Determine Volumetric flow $\dot{V}_{100}$		
$\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$ decisive temperature difference Constant 1.163: with density ρ = 1000 kg/m³, 3600 s/h and specific heat capacity c = 4.187 kJ/kg · K	$\dot{V}_{100} = \frac{90\ kW}{1.163 \cdot 15\ K} = 5.16\ m^3/h$ $\theta_{Producer} - \theta_{Return\ HG\ 1} = (55 - 40)\ °C = 15\ K$	$\dot{V}_{100} = \frac{60\ kW}{1.163 \cdot 27\ K} = 1.91\ m^3/h$ $\theta_{Producer} - \theta_{Return\ HG\ 2} = (55 - 28)\ °C = 27\ K$
2 Determine Differential pressure Δp_{v100}		
Hydronic circuit Δp_{MV} Differential pressure across variable flow path	Mixing circuit with pump 	Mixing circuit with fixed pre-mixing with pump
Distribution setup	low pressure	
Δp_{MV} typical range	2...5 kPa	
typical value	3 kPa	
Δp_{V100}	$\Delta p_{V100} \geq \Delta p_{MV}$ (resp. $P_V \geq 0.5$)	
Desired differential pressure	$\Delta p_{V100} \geq 3$ kPa	

	Heating group 1	Heating group 2
3 Determine desired flow k_V		
$k_V = \frac{\dot{V}_{100}}{\sqrt{\frac{\Delta p_{V100}}{100\ kPa}}}$	$k_V = \frac{5.16\ m^3/h}{\sqrt{\frac{3\ kPa}{100\ kPa}}} = 29.8\ m^3/h$	$k_V = \frac{1.91\ m^3/h}{\sqrt{\frac{3\ kPa}{100\ kPa}}} = 11.0\ m^3/h$
4 Select valve nominal flow rate k_{VS} and determine resulting differential pressure $\Delta p_{V100\ res}$		
$k_{VS} \geq 0.85 \cdot k_V$-value	$k_{VS} \geq 0.85 \cdot 29.8\ m^3/h = 25.3\ m^3/h$ selected: $k_{VS} = 25\ m^3/h$	$k_{VS} \geq 0.85 \cdot 11.0\ m^3/h = 9.4\ m^3/h$ selected: $k_{VS} = 10\ m^3/h$
resulting $\Delta p_{V100\ res}$ $\Delta p_{V100\ res} = 100\ kPa \cdot \left(\frac{\dot{V}_{100}}{k_{VS}}\right)^2$	$\Delta p_{V100\ res} = 100\ kPa \cdot \left(\frac{5.16\ m^3/h}{25\ m^3/h}\right)^2$ $\Delta p_{V100\ res} = 4.3\ kPa$	$\Delta p_{V100\ res} = 100\ kPa \cdot \left(\frac{1.91\ m^3/h}{10\ m^3/h}\right)^2$ $\Delta p_{V100\ res} = 3.6\ kPa$
5 Check valve authority P_V (control stability)		
$P_V = \frac{\Delta p_{V100\ res}}{\Delta p_{V100\ res} + \Delta p_{MV}}$ and $0.3 < P_V < 0.6$	$P_V = \frac{4.3\ kPa}{4.3\ kPa + 3\ kPa}$ $P_V = 0.59$	$P_V = \frac{3.6\ kPa}{3.6\ kPa + 3\ kPa}$ $P_V = 0.55$
6 Select suitable valve type		
Type of valve	3-port valve	3-port valve
Connection type	External thread	External thread
Nominal pressure level PN	PN 16	PN 16
Possible valve type(s)	VXG44.., VXG41..	VXG44.., VXG41..
Selected valve	VXG44.40-25 with $k_{VS} = 25\ m^3/h$ piping size DN 40 with linear characteristic	VXG44.25-10 with $k_{VS} = 10\ m^3/h$ piping size DN 25 with linear characteristic
7 Check valve working range		
Medium	VXG44 suitable for water	VXG44 suitable for water
Medium temperature	40 °C > 1 °C min. medium temperature 50 °C < 120 °C max. medium temperature	28 °C > 1 °C min. medium temperature 35 °C < 120 °C max. medium temperature
8 Select actuator		
Actuator type	SAS.. with 5.5 mm stroke	
Operating voltage	AC 230 V	
Positioning signal	3-point (open – 0 – close)	
Positioning time	30...120 s	
Spring return function	No	
Additional functions	Auxiliary switches, potentiometer, feedback signal available or included	
Selected actuator	SAS31.00	SAS31.00
9 Check actuator working range		
Differential pressure $\Delta p_{max} \geq \Delta p_{V0}\ (H_0)$	$\Delta p_{max} = 125\ kPa \geq 45\ kPa$	$\Delta p_{max} = 400\ kPa \geq 45\ kPa$
Closing pressure $\Delta p_S \geq \Delta p_{V0}\ (H_0)$	Not with 3-port valves	
Selected actuator	SAS31.00 positioning time 120 s, no spring return function, no additional functions, AC 230 V	
Selection		
Valve	VXG44.40-25 with $k_{VS} = 25\ m^3/h$	VXG44.25-10 with $k_{VS} = 10\ m^3/h$
Actuator	SAS31.00	SAS31.00

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.
Thermostatic actuator, RAL 9016, matt	Frost protection position Closing position	12...28	RAL 9016, matt	BPZ:RTN51	**RTN51**
Thermostatic actuator, RAL 9016, glossy	Frost protection position Closing position	12...28	RAL 9016, glossy	BPZ:RTN51G	**RTN51G**
Thermostatic actuator with remote sensor	Remote sensor Frost protection position Closing position	12...28	RAL 9016, matt	BPZ:RTN71	**RTN71**
Thermostatic actuator with remote adjuster	Remote sensor Frost protection position	8...28	RAL 9016, matt	BPZ:RTN81	**RTN81**

Actuators for globe and pressure independent control valves (PICV)
Electrothermal

STA..3

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

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 DC 0...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	Stock no.	Product no.
AC 230	210	2-position		S55174-A118	**STA23B/00**
AC 230	210	2-position		S55174-A114	**STA23MP/00**
AC 24 DC 24	270	2-position PDM		S55174-A117	**STA73B/00**
AC 24 DC 24	270	2-position PDM		S55174-A113	**STA73MP/00**

The given positioning time is related to the maximum stoke of 4.5 mm.
/00 = without cable
xxB = color black
xxMP = multi pack 50 pce

Connection cable for STA..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.
2-position	0		White	2	PVC	S55174-A123	**ASY23L20**
2-position	0		White	5	PVC	S55174-A126	**ASY23L50**
2-position	0		White	10	PVC	S55174-A129	**ASY23L100**
2-position	0		White	15	PVC	S55174-A130	**ASY23L150**
2-position	0		White	2	Halogen-free	S55174-A134	**ASY23L20HF**
2-position	0		White	5	Halogen-free	S55174-A135	**ASY23L50HF**
2-position	0		White	10	Halogen-free	S55174-A136	**ASY23L100HF**
DC 0...10 V	0		White	2	PVC	S55174-A137	**ASY6AL20**
DC 0...10 V	0		White	2	Halogen-free	S55174-A147	**ASY6AL20HF**
2-position	1		White	1	PVC	S55174-A153	**ASA23U10**
2-position	0	LED	White	2	PVC	S55174-A157	**ASY23L20LD**
2-position	0		Black	3	PVC	S55174-A131	**ASY23L30B**
2-position	0		Black	5	PVC	S55174-A132	**ASY23L50B**

Accessories for STA..3

Product Title	Data sheet	Stock no.	Product no.
Retrofit adapter for installed 2W..., 3W..., 4W... valves	N4878	BPZ:AL100	**AL100**
Standard adapter, M30x1,5	N4884	S55174-A169	**AV305**
Theft protection	N4884	S55174-A168	**AL431**

Connection cable for STP..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.
2-position	0		White	2	PVC	S55174-A123	**ASY23L20**
2-position	0		White	5	PVC	S55174-A126	**ASY23L50**
2-position	0		White	10	PVC	S55174-A129	**ASY23L100**
2-position	0		White	15	PVC	S55174-A130	**ASY23L150**
2-position	0		White	2	Halogen-free	S55174-A134	**ASY23L20HF**
2-position	0		White	5	Halogen-free	S55174-A135	**ASY23L50HF**
2-position	0		White	10	Halogen-free	S55174-A136	**ASY23L100HF**
DC 0...10 V	0		White	2	PVC	S55174-A140	**ASY6PL20**
DC 0...10 V	0		White	2	Halogen-free	S55174-A150	**ASY6PL20HF**
2-position	1		White	1	PVC	S55174-A155	**ASP23U10**
2-position	0	LED	White	2	PVC	S55174-A157	**ASY23L20LD**
2-position	0		Black	3	PVC	S55174-A131	**ASY23L30B**
2-position	0		Black	5	PVC	S55174-A132	**ASY23L50B**

Accessories for STP..3

Product Title	Data sheet	Stock no.	Product no.
Retrofit adapter for installed 2W..., 3W..., 4W... valves	N4878	BPZ:AL100	**AL100**
Standard adapter, M30x1,5	N4884	S55174-A169	**AV305**
Theft protection	N4884	S55174-A168	**AL431**

SSA..

Electromotoric actuators 100 N for valves with 1.2...6.5 mm stroke

For pressure independent combi valves (PICV), radiator valves, MiniCombi valves (MCV) and small globe valves.
Electromotoric actuators for modulating control in radiator, chilled ceiling, VAV and fan coil unit applications. With automatic stroke adaption, force-dependent switching off in the end position, LED position indication, feedback signal, and manual operation. Suited for use with Siemens PICV VPP46../VPI46.., Siemens radiator valves VDN../VEN../VUN.., Siemens MiniCombi valves VPD../VPE.., Siemens small valves VD1..CLC and on radiator valves with M30 x 1.5 connection without adapter (Heimeier, Cazzaniga, Oventrop M30x1.5, Honeywell-Braukmann, MNG, Junkers, Beulco new). Further valves of other manufacturers on request.

For fitting to the valve: Cap nut M30 x 1.5
1.2 mm minimal stroke required for self calibration

Data sheet	CE1N4893, A6V11858278, A6V11858276
Stroke	1.2 mm 6.5 mm
Positioning force	100 N
Degree of protection	IP54
Medium temperature	1...110 °C
Mounting position	360°
Warranty	5 Years

Range overview SSA..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC 230	3-position	6	1	1.5	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	0.8	1	1.5	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	0.8	0	1.5	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	2.5	0	1.5	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	2.5	0	1.5	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	2.5	0	1.5	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	2.5	0	1.5	S55180-A109	**SSA161E.05HF**
AC 230	3-position	7	0	1.5	S55180-A105	**SSA331.00**

Positioning time for 2.5 mm stroke.

Radiator valve actuator Zigbee

SSA911.01ZB

- Battery-powered radiator valve actuator
- Communication with SIEMENS Smart Home
- Zigbee wireless protocol
- Display with user interface
- Integrated temperature sensor
- Local temperature control algorithm
- 2x AA alkaline batteries
- M30 x 1.5 valve connection

Data sheet	A6V12789814
Positioning force	90 N
Stroke	5 mm
Communication	Zigbee
Degree of protection	IP20
Medium temperature	20...70 °C
Ambient humidity, operation	65 % r.h.
Dimensions (W x H x D)	55 x 68 x 86 mm
Operating voltage	3.0 V
Warranty	2 Years

Stock no.	Product no.
S55181-A103	**SSA911.01ZB**

Electromotoric actuators 100 N for valves with 1.2..6.5 mm stroke

SSA..KN

For pressure independent combi valves (PICV), radiator valves, MiniCombi valves (MCV) and small globe valves.
Electromotoric actuators with KNX S-Mode communication for radiator, chilled ceiling, VAV and fan coil unit applications. With automatic stroke adaption, force-dependent switching off in the end position, LED position indication, and manual operation. Suited for use with Siemens PICV VPP46../VPI46.., Siemens radiator valves VDN../VEN../VUN.., Siemens MiniCombi valves VPD../VPE.., Siemens small valves VD1..CLC and on radiator valves with M30 x 1.5 connection without adapter (Heimeier, Cazzaniga, Oventrop M30x1.5, Honeywell-Braukmann, MNG, Junkers, Beulco new). Further valves of other manufacturers on request.

For fitting to the valve: Cap nut M30 x 1.5

Data sheet	A6V11858280
Positioning force	100 N
Stroke	1.2 mm 6.5 mm
Positioning time	50/100 s
Communication	KNX-TP
Degree of protection	IP54
Medium temperature	1...110 °C
Ambient humidity, operation	5...85 % r.h.
Dimensions (W x H x D)	88.6 x 83.4 x 51.4 mm
Mounting position	360°
Warranty	5 Years

Range overview SSA..KN

Operating voltage [V]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
DC 21...30 24	0	1.5	S55180-A111	**SSA118.09HKN**

New Product

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
Auxiliary switch	0
Warranty	5 Years

Stock no.	Product no.
BPZ:SSA31.04	**SSA31.04**

Accessories for SSA31.04

Product Title	Data sheet	Stock no.	Product no.
Retaining screw for cable connector		BPZ:ASY98	**ASY98**

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

SFP21../SFP71..

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.
AC 230	9.8	Optional	1.8	BPZ:SFP21/18	**SFP21/18**
AC 24	9.8	Optional	1.8	BPZ:SFP71/18	**SFP71/18**

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

Accessories for SFP21../SFP71..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SFA21.../ SFA71.../ SFP21.../ SFP71...	N4863	BPZ:ASC2.1/18	**ASC2.1/18**

Actuators for globe and pressure independent control valves (PICV) Electromotoric

SUA..

Electromotive actuator 170N for zone valves, 100N for on/off PICVtive

Electromotive actuator without spring return SUA21/3 for VVI46..and VXI46..zone valves, SUA21/3P for VQI46.. and VQP46.. on/off PICVtive. 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]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 230	2-position (SPST)	6 VA at 50 Hz	0	No	0.8	S55176-A104	**SUA21/3**
AC 230	2-position (SPST)	6 VA at 50 Hz		No	0.8	S55176-A105	**SUA21/3P**

SUE..

Electromotoric actuator 100 N for combi valves

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

Positioning force	100 N
Stroke	5 mm
Nominal stroke	5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90°, horizontal; do not suspend
Warranty	5 Years

Range overview SUE..

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Cable length [m]	Stock no.	Product no.
AC 230	2-position (SPST)	6V VA at 50 Hz	No	0.8	S55176-A106	**SUE21P**

Electromotoric actuators 160 N for valves with 2.5 mm stroke

SSP..

- 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]	Auxiliary switch	Positioning signal	Positioning time [s]	Cable length [m]	Stock no.	Product no.
AC 230	6	0	3-position	150	1.5	BPZ:SSP31	**SSP31**
AC/DC 24	2.5	0	DC 0...10 V	34	1.5	BPZ:SSP61	**SSP61**
AC 24	0.8	0	3-position	150	1.5	BPZ:SSP81	**SSP81**
AC 24	0.8	0	3-position	43	1.5	BPZ:SSP81.04	**SSP81.04**

Positioning time for 2.5 mm stroke.

Accessories for SSP..

Product Title	Stock no.	Product no.
Retrofit adapter for installed 2W..., 3W..., 4W... valves	BPZ:AL100	**AL100**
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	**ASY3L25**
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	**ASY3L45**
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	**ASY6L25**
Connecting cable, 4.5 m, DC 0..10 V, AC/DC 24 V	BPZ:ASY6L45	**ASY6L45**
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V, halogen-free, VDE 0207-24	BPZ:ASY6L45HF	**ASY6L45HF**
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	**ASY8L25**
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	**ASY8L45**
Connecting cable, 4.5 m, 3-position, AC 24 V, halogen-free, VDE 0207-24	BPZ:ASY8L45HF	**ASY8L45HF**
Retaining screw for cable connector	BPZ:ASY98	**ASY98**
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	**ASY99**
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	**ASY100**

SFA21.. / SFA71..

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

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.
AC 230	12	Optional	1.8	BPZ:SFA21/18	**SFA21/18**
AC 24	12	Optional	1.8	BPZ:SFA71/18	**SFA71/18**

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

Accessories for SFA21.. / SFA71..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SFA21.../ SFA71.../ SFP21.../ SFP71...	N4863	BPZ:ASC2.1/18	**ASC2.1/18**

Electromotoric actuators 200 N for valves with 5.5 mm stroke

SSB..

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 G¾"
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]	Positioning signal	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC 230	3-position	6	0	1.5	BPZ:SSB31	**SSB31**
AC 230	3-position	6	1	1.5	BPZ:SSB31.1	**SSB31.1**
AC 24 DC 24	DC 0...10 V	2.5	0	1.5	BPZ:SSB61	**SSB61**
AC 24	3-position	0.8	0	1.5	BPZ:SSB81	**SSB81**
AC 24	3-position	0.8	1	1.5	BPZ:SSB81.1	**SSB81.1**

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

Accessories for SSB..

Product Title	Stock no.	Product no.
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	**ASY3L25**
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	**ASY3L45**
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	**ASY6L25**
Connecting cable, 4.5 m, DC 0..10 V, AC/DC 24 V	BPZ:ASY6L45	**ASY6L45**
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V, halogen-free, VDE 0207-24	BPZ:ASY6L45HF	**ASY6L45HF**
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	**ASY8L25**
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	**ASY8L45**
Connecting cable, 4.5 m, 3-position, AC 24 V, halogen-free, VDE 0207-24	BPZ:ASY8L45HF	**ASY8L45HF**
Retaining screw for cable connector	BPZ:ASY98	**ASY98**
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	**ASY99**
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	**ASY100**

Actuators for globe and pressure independent control 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]	Positioning signal	Power consumption [VA]	Auxiliary switch	Spring return function	Stock no.	Product no.
AC 230	3-position	6	0	No	BPZ:SSC31	**SSC31**
AC/DC 24	DC 0...10 V	2	0	No	BPZ:SSC61	**SSC61**
AC/DC 24	DC 0...10 V	2	0	Yes (15 s)	BPZ:SSC61.5	**SSC61.5**
AC 24	3-position	0.8	0	No	BPZ:SSC81	**SSC81**

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

Accessories for SSC..

Product Title	Data sheet	Stock no.	Product no.
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	**ASK30**

Electromotoric actuators 400 N for valves with 5.5 mm stroke SAS..

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]	Auxiliary switch	Positioning signal	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 230	2.8	0	3-position	120	No	S55158-A106	**SAS31.00**
AC 230	3.5	0	3-position	30	No	S55158-A107	**SAS31.03**
AC 230	3.5	0	3-position	120	Yes (28 s)	S55158-A108	**SAS31.50**
AC 230	5.5	0	3-position	30	Yes (14 s)	S55158-A109	**SAS31.53**
AC/DC 24	5.3	0	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	No	S55158-A100	**SAS61.03**
AC/DC 24	6.0	0	Modbus RTU	30		S55158-A121	**SAS61.03/MO**
AC/DC 24	5.9	0	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	Yes (14 s)	S55158-A101	**SAS61.33**
AC/DC 24	5.9		Modbus RTU	30	Yes (14 s)	S55158-A122	**SAS61.33/MO**
AC/DC 24	5.8	0	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	Yes (14 s)	S55158-A102	**SAS61.53**
AC/DC 24	2.2	0	3-position	120	No	S55158-A103	**SAS81.00**
AC/DC 24	2.5	0	3-position	30	No	S55158-A104	**SAS81.03**
AC/DC 24	3.4	0	3-position	30	Yes (14 s)	S55158-A105	**SAS81.33**

Accessories for SAS..

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

SAT..

Electromotoric actuators 300 N for valves with 5.5 mm stroke

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]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 230	3-position	5.0	8	No	S55158-A119	**SAT31.008**
AC 230	3-position	5.5	15	Yes (8 s)	S55158-A120	**SAT31.51**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	7.1	8	No	S55158-A117	**SAT61.008**
AC/DC 24	Modbus RTU	7.1	8	No	S55158-A123	**SAT61.008/MO**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	6.4	15	Yes (8 s)	S55158-A118	**SAT61.51**
AC/DC 24	Modbus RTU	6.4	15	Yes (8 s)	S55158-A124	**SAT61.51/MO**

Accessories for SAT..

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

Electromotoric actuators for seat valves

SBX..

For operation with Siemens 2-port and 3-port valves, types VVF47.., VXF47.. with 20 mm stroke as control valves in heating, ventilation and air conditioning systems

Data sheet	N4519
Positioning force	700 N
Nominal stroke	20 mm
Positioning time	120 s
Degree of protection	IP54
Ambient temperature, operation	-10...55 °C
Medium temperature	1...95 °C
Mounting position	Upright to horizontal
Warranty	5 Years
For customers in Asia / Australia	

Range overview SBX..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Stock no.	Product no.
AC 24	4...20 mA	5	S55160-A108	**SBX151.00**
AC 230	3-position	9	S55160-A102	**SBX31**
AC 24	DC 0...10 V	5	S55160-A100	**SBX61**
AC 24	3-position	4	S55160-A101	**SBX81**

Accessories for SBX..

Product Title	Data sheet	Stock no.	Product no.
Function module 4...20 mA for SBX61, SBV61	N4519	S55845-Z120	**AZX420**

New Product

Actuators for globe and pressure independent control 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 [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Positioning time [s]	Cable length [m]	Stock no.	Product no.
AC 230	3-position	3.5	Optional	120		S55150-A105	**SAX31.00**
AC 230	3-position	6	Optional	30		S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	Optional	30		S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	8.7	Optional	30	0.9	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	3.5	Optional	120		S55150-A102	**SAX81.00**
AC/DC 24	3-position	5	Optional	30		S55150-A103	**SAX81.03**

Accessories for SAX..

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

Electromotoric actuators 500 N for Combi valves VPF44../VPF54..

SAX..P..

Electromotoric actuator for the operation of Siemens Combi valves, types VPF44../VPF54.. 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...100 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SAX6..)
Warranty	5 Years

Range overview SAX..P..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Positioning time [s]	Stock no.	Product no.
AC 230	3-position	8	Optional	30	S55150-A118	**SAX31P03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	Optional	30	S55150-A114	**SAX61P03**
AC/DC 24	Modbus RTU	8	Optional	30	S55150-A143	**SAX61P03/MO**
AC/DC 24	3-position	5	Optional	30	S55150-A116	**SAX81P03**

Accessories for SAX..P

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

Actuators for globe and pressure independent control valves (PICV) Electromotoric

SAY..P..

Electromotoric actuators 200 N for Combi valves VPI46 with a 15 mm stroke

Electromotoric actuator for the operation of Siemens Combi valves, types VPI46.40F9.5Q and VPI46.50F12Q with 15 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches, potentiometer, functional module and stem heater.

Data sheet	A6V10628469
Positioning force	200 N
Stroke	15 mm
Spring return function	No
Degree of protection	IP54
Ambient temperature, operation	5...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SAY..P..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Positioning time [s]	Stock no.	Product no.
AC 230	3-position	6	Optional	30	S55150-A132	**SAY31P03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	Optional	30	S55150-A133	**SAY61P03**
AC/DC 24	Modbus RTU	8	0	30	S55150-A145	**SAY61P03/MO**
AC/DC 24	3-position	5	Optional	30	S55150-A134	**SAY81P03**

Accessories for SAY..P..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	**ASC10.51**
Funtion module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	**AZX61.1**

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

SAV..

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]	Positioning signal	Power consumption [VA]	Auxiliary switch	Spring return function	Positioning time [s]	Cable length [m]	Stock no.	Product no.
AC 230	3-position	6.5	Optional	No	120		S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	9.5	Optional	No	120		S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	9.5	Optional	No	120	0.9	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	7	Optional	No	120		S55150-A111	**SAV81.00**

Accessories for SAV..

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

SAV..P..

Electromotoric actuators 1100 N for Combi valves VPF44../VPF54../VPF43../VPF53..

Electromotoric actuators for the operation of Siemens combi valves of types VPF44../VPF54../VPF43../VPF53.. with 40 mm stroke as control and safety shut-off valves in ventilation, air conditioning, district heating and refrigerating systems. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches, potentiometer and functional module.

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

Data sheet	N4510
Positioning force	1100 N
Stroke	40 mm
Spring return function	No
Degree of protection	IP54
Ambient temperature, operation	5...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SAV..P..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Positioning time [s]	Stock no.	Product no.
AC 230	3-position	6.5	Optional	120	S55150-A121	**SAV31P00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	9.5	Optional	120	S55150-A119	**SAV61P00**
AC/DC 24	Modbus RTU	9.5	0	120	S55150-A144	**SAV61P00/MO**
AC/DC 24	3-position	7	Optional	120	S55150-A120	**SAV81P00**

Accessories for SAV..P

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

Electromotoric actuators 1100 N for Combi valves VPF43../53.. and VPF44../VPF54..

SQV..P..

Electromotoric actuators for the operation of Siemens Combi valves, types VPF43../53.. and VPF44../VPF54.. 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]	Positioning signal	Power consumption [VA]	Auxiliary switch	Spring return function	Stock no.	Product no.
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20	Optional	Yes (30 s) Stem retracted	S55150-A130	**SQV91P30**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20	Optional	Yes (30 s) Stem extended	S55150-A131	**SQV91P40**

Accessories for SQV..P

Product Title	Data sheet	Stock no.	Product no.
Double auxiliary switch for SQV..P..	N4833	S55845-Z137	**ASC10.42**
Potentiometer 0...1000 Ohm for SQV..P..	N4833	S55845-Z136	**ASZ7.6/1000**
AC 230 V adapter for SQV..P..	N4833	S55845-Z138	**ASP1.1**

Actuators for globe and pressure independent control valves (PICV)
Electromotoric

SBV..

For customers in Asia / Australia

Electromotoric actuators for seat valves

For operation with Siemens 2-port and 3-port valves, types VVF47.., VXF47.. with 40 mm stroke as control valves in heating, ventilation and air conditioning systems

Data sheet	N4519
Positioning force	1600 N
Stroke	40 mm
Positioning time	180 s
Degree of protection	IP54
Ambient temperature, operation	-10...55 °C
Medium temperature	1...95 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SBV..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Stock no.	Product no.
AC 24	4...20 mA	7	S55160-A109	**SBV151.00**
AC 230	3-position	9	S55160-A105	**SBV31**
AC 24	DC 0...10 V	7	S55160-A103	**SBV61**
AC 24	3-position	7	S55160-A104	**SBV81**

Accessories for SBV..

Product Title	Data sheet	Stock no.	Product no.
Function module 4...20 mA for SBX61, SBV61	N4519	S55845-Z120	**AZX420**

New Product

Electromotoric actuators 1600 N for PICV valves VPF44../VPF54../VPF43../VPF53..

SBV..P

Electromotoric actuator for the operation of Siemens PICV valves, types VPF44.., VPF43.., VPF54.. and VPF53.. with 40 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems.

Data sheet	A6V12232112
Positioning force	1600 N
Stroke	40 mm
Positioning time	180 s
Degree of protection	IP 54
Ambient humidity, operation	5...95 % r.h.
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SB..61P)
Warranty	5 Years
For customers in Asia / Australia	

Range overview SBV..P

Operating voltage [V]	Positioning signal	Stock no.	Product no.
AC 230	3-position	S55160-A113	**SBV31P**
AC 24	0...10 V	S55160-A114	**SBV61P**
AC 24	3-position	S55160-A115	**SBV81P**

Accessories for SBV..P

Product Title	Data sheet	Stock no.	Product no.
Function module 4...20 mA for SBX61, SBV61	N4519	S55845-Z120	**AZX420**

SBX..P

Electromotoric actuators 700 N for PICV valves VPF44../VPF54..

Electromotoric actuator for the operation of Siemens PICV, types VPF44../VPF54.. with 20 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems.

Data sheet	A6V12232112
Positioning force	700 N
Stroke	20 mm
Positioning time	120 s
Degree of protection	IP 54
Ambient humidity, operation	5...95 % r.h.
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SB..61P)
Warranty	5 Years

For customers in Asia / Australia

Range overview SBX..P

Operating voltage [V]	Positioning signal	Power consumption [VA]	Stock no.	Product no.
AC 230	3-position	9 VA / 9	S55160-A110	**SBX31P**
AC 24	0...10 V	5 VA / 7	S55160-A111	**SBX61P**
AC 24	3-position	4 VA / 7	S55160-A112	**SBX81P**

Accessories for SBX..P

Product Title	Data sheet	Stock no.	Product no.
Function module 4...20 mA for SBX61, SBV61	N4519	S55845-Z120	**AZX420**

New Product

Electrohydraulic actuators 1000 N for valves with 20 mm stroke

SKD32../SKD82..

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.
AC 230	16	3-position	Open 30 Close 10	Yes (8 s)	BPZ:SKD32.21	**SKD32.21**
AC 230	11	3-position	120	No	BPZ:SKD32.50	**SKD32.50**
AC 230	17	3-position	120	Yes (8 s)	BPZ:SKD32.51	**SKD32.51**
AC 24	9	3-position	120	No	BPZ:SKD82.50	**SKD82.50**
AC 24	9	3-position	120	No	BPZ:SKD82.50U	**SKD82.50U**
AC 24	14	3-position	120	Yes (8 s)	BPZ:SKD82.51	**SKD82.51**
AC 19.2...28.2 24	14	3-position	120	Yes (8 s)	BPZ:SKD82.51U	**SKD82.51U**

Actuators for globe and pressure independent control valves (PICV) Electrohydraulic

SKD60/SKD62..

Electrohydraulic actuators 1000 N for valves with 20 mm stroke

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.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	10	Open:30 Close:15	No	BPZ:SKD60	**SKD60**
AC 24 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	10	Open 30 Close:15	No	BPZ:SKD60U	**SKD60U**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	14	Open 30 Close 15	Yes	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62U	**SKD62U**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62UA	**SKD62UA**

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

Electrohydraulic actuators 2800 N for valves with 20 mm stroke

SKB32../SKB82..

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.
AC 230	3-position	10	120	No	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	16	120	Yes (10 s)	BPZ:SKB32.51	**SKB32.51**
AC 24	3-position	8	120	No	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	12	120	Yes (10 s)	BPZ:SKB82.51	**SKB82.51**
AC 24	3-position	8	120	No	BPZ:SKB82.50U	**SKB82.50U**
AC 19.2...28.2 24	3-position	12	120	Yes (10 s)	BPZ:SKB82.51U	**SKB82.51U**

Actuators for globe and pressure independent control valves (PICV) Electrohydraulic

SKB60/62..

Electrohydraulic actuators 2800 N for valves with 20 mm stroke

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.
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	10	Open:120 Close:10	No	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	14	Open 120 Close 10	Yes	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62U	**SKB62U**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62UA	**SKB62UA**

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

Electrohydraulic actuators 2800 N for valves with 40 mm stroke

SKC32../SKC82..

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.
AC 230	3-position	18	120	No	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	24	120	Yes (18 s)	BPZ:SKC32.61	**SKC32.61**
AC 24	3-position	15	120	No	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	19	120	Yes (18 s)	BPZ:SKC82.61	**SKC82.61**
AC 24	3-position	15	120	No	BPZ:SKC82.60U	**SKC82.60U**
AC 19.2...31.2 24	3-position	19	120	Yes (18 s)	BPZ:SKC82.61U	**SKC82.61U**

Actuators for globe and pressure independent control valves (PICV) Electrohydraulic

SKC60/SKC62..

Electrohydraulic actuators 2800 N for valves with 40 mm stroke

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.
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	17	Open:120 Close:20	No	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	21	Open 120 Close 20	Yes	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62U	**SKC62U**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62UA	**SKC62UA**

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

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

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SKB6../ SKC6../ SKD6..	N4566	BPZ:ASC1.6	**ASC1.6**
Double auxiliary switch for SKB/ C/ D32../82..	N4561	BPZ:ASC9.3	**ASC9.3**
Stroke inverter for SKD..	N4561	BPZ:ASK50	**ASK50**
Stroke inverter for SKB..	N4564	BPZ:ASK51	**ASK51**
Potentiometer 0...1000 Ohm for SKB/ C/ D32../82..	N4564	BPZ:ASZ7.3	**ASZ7.3**
Stem heating element for media < 0 °C	N4501	S55845-Z108	**ASZ6.6**

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, valve body	Cast iron EN-GJL-250
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN40: CrNi steel / bronze
PN class	PN 6
Warranty	5 Years

Range overview VVF22..

SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
300	600			300	600	300	600			25	2.5	S55200-V100	**VVF22.25-2.5**
300	600			300	600	300	600			25	4	S55200-V101	**VVF22.25-4**
300	600			300	600	300	600			25	6.3	S55200-V102	**VVF22.25-6.3**
300	600			300	600	300	600			25	10	S55200-V103	**VVF22.25-10**
300	550	300	600	300	600	300	600			40	16	S55200-V104	**VVF22.40-16**
300	550	300	600	300	600	300	600			40	25	S55200-V105	**VVF22.40-25**
300	350	300	600	300	450	300	600			50	40	S55200-V106	**VVF22.50-40**
150	200	300	450	200	250	300	600			65	63	S55200-V107	**VVF22.65-63**
75	125	225	250	125	175	300	450			80	100	S55200-V108	**VVF22.80-100**
		125	160					250	300	100	160	S55200-V109	**VVF22.100-160**

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

Replacement sealing glands for VVF22..

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

Combinable actuator for VVF22..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**

Combinable actuator for VVF22..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
400	1000			400	1000	400	1000			15	1.6	S55202-V100	**VVF32.15-1.6**
400	1000			400	1000	400	1000			15	2.5	S55202-V101	**VVF32.15-2.5**
400	1000			400	1000	400	1000			15	4	S55202-V102	**VVF32.15-4**
400	1000			400	1000	400	1000			25	6.3	S55202-V103	**VVF32.25-6.3**
400	1000			400	1000	400	1000			25	10	S55202-V104	**VVF32.25-10**
400	550	400	1000	400	750	400	1000			40	16	S55202-V105	**VVF32.40-16**
400	550	400	1000	400	750	400	1000			40	25	S55202-V106	**VVF32.40-25**
300	350	400	750	400	450	400	1000			50	40	S55202-V107	**VVF32.50-40**
150	200	400	450	200	250	400	700			65	63	S55202-V108	**VVF32.65-63**
75	125	225	250	125	175	400	450			80	100	S55202-V109	**VVF32.80-100**
		125	160					250	300	100	160	S55202-V110	**VVF32.100-160**
		90	125					160	190	125	250	S55202-V111	**VVF32.125-250**
		60	80					100	125	150	400	S55202-V112	**VVF32.150-400**

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

Replacement sealing glands for VVF32..

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

Combinable actuator for VVF32..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**

Combinable actuator for VVF32..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

2-port valves with flanged connections, PN 16

VVF42..

- 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, valve body	Cast iron EN-GJL-250
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VVF42..

SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
400	1600			400	1600	400	1600			15	1.6	S55204-V100	**VVF42.15-1.6**
400	1600			400	1600	400	1600			15	2.5	S55204-V101	**VVF42.15-2.5**
400	1600			400	1600	400	1600			15	4	S55204-V102	**VVF42.15-4**
400	1600			400	1600	400	1600			20	6.3	S55204-V103	**VVF42.20-6.3**
400	1600			400	1600	400	1600			25	6.3	S55204-V104	**VVF42.25-6.3**
400	1600			400	1600	400	1600			25	10	S55204-V105	**VVF42.25-10**
400	900			400	1200	400	1600			32	16	S55204-V106	**VVF42.32-16**
400	550	400	1250	400	750	400	1600			40	16	S55204-V107	**VVF42.40-16**
400	550	400	1250	400	750	400	1600			40	25	S55204-V108	**VVF42.40-25**
300	350	400	750	400	450	400	1200			50	31.5	S55204-V109	**VVF42.50-31.5**
300	350	400	750	400	450	400	1200			50	40	S55204-V110	**VVF42.50-40**
150	200	400	450	200	250	400	700			65	50	S55204-V111	**VVF42.65-50**
150	200	400	450	200	250	400	700			65	63	S55204-V112	**VVF42.65-63**
75	125	225	250	125	175	400	450			80	80	S55204-V113	**VVF42.80-80**
75	125	225	250	125	175	400	450			80	100	S55204-V114	**VVF42.80-100**
		125	160					250	300	100	125	S55204-V115	**VVF42.100-125**
		125	160					250	300	100	160	S55204-V116	**VVF42.100-160**
		90	125					160	190	125	200	S55204-V117	**VVF42.125-200**
		90	125					160	190	125	250	S55204-V118	**VVF42.125-250**
		60	80					100	125	150	315	S55204-V119	**VVF42.150-315**
		60	80					100	125	150	400	S55204-V120	**VVF42.150-400**

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

Replacement sealing glands for VVF42..

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

Combinable actuator for VVF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**

Combinable actuator for VVF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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

VVF42..C

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	A6V10794157
Stroke	to DN 80: 20 mm from DN 100: 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	to DN 40: >50 from DN 50: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN 25: CrNi steel / brass ≥ DN 32: CrNi steel / CrNi steel
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview VVF42..C

SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
400	1600			400	1600	400	1600			25	6.3	S55204-V148	**VVF42.25-6.3C**
400	1600			400	1600	400	1600			25	10	S55204-V149	**VVF42.25-10C**
400	900			400	1200	400	1600			32	16	S55204-V150	**VVF42.32-16C**
400	550	400	1250	400	750	400	1600			40	16	S55204-V151	**VVF42.40-16C**
400	550	400	1250	400	750	400	1600			40	25	S55204-V152	**VVF42.40-25C**
300	350	400	750	400	450	400	1200			50	31.5	S55204-V153	**VVF42.50-31.5C**
300	350	400	750	400	450	400	1200			50	40	S55204-V154	**VVF42.50-40C**
150	200	400	450	200	250	400	700			65	50	S55204-V155	**VVF42.65-50C**
150	200	400	450	200	250	400	700			65	63	S55204-V156	**VVF42.65-63C**
75	125	225	250	125	175	400	450			80	80	S55204-V157	**VVF42.80-80C**
75	125	225	250	125	175	400	450			80	100	S55204-V158	**VVF42.80-100C**
		125	160					250	300	100	125	S55204-V159	**VVF42.100-125C**
		125	160					250	300	100	160	S55204-V160	**VVF42.100-160C**
		90	125					160	190	125	200	S55204-V161	**VVF42.125-200C**
		90	125					160	190	125	250	S55204-V162	**VVF42.125-250C**
		60	80					100	125	150	315	S55204-V163	**VVF42.150-315C**
		60	80					100	125	150	400	S55204-V164	**VVF42.150-400C**

Replacement sealing glands for VVF42..C

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

Combinable actuator for VVF42..C

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

Combinable actuator for VVF42..C

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**

Combinable actuator for VVF42..C

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

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, valve body	Cast iron EN-GJL-250
Material, inside set	≥ DN 50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VVF42..K

SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
400	1600	400	1600	400	1600	400	1600			50	40	S55204-V121	**VVF42.50-40K**
400	1600	400	1600	400	1600	400	1600			65	63	S55204-V122	**VVF42.65-63K**
400	1600	400	1600	400	1600	400	1600			80	100	S55204-V123	**VVF42.80-100K**
		400	1600					400	1600	100	160	S55204-V124	**VVF42.100-160K**
		400	1600					400	1600	125	250	S55204-V125	**VVF42.125-250K**
		400	1400					400	1600	150	360	S55204-V126	**VVF42.150-360K**

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

Replacement sealing glands for VVF42..K

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**

Combinable actuator for VVF42..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**

Combinable actuator for VVF42..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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

VVF42..KC

- 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.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
800	1600			800	1600	800	1600			65	63	S55204-V182	**VVF42.65KC**
800	1600			800	1600	800	1600			80	100	S55204-V183	**VVF42.80KC**
		500	1600					800	1600	100	160	S55204-V184	**VVF42.100KC**
		500	1600					800	1600	125	220	S55204-V185	**VVF42.125KC**
		500	1400					800	1600	150	315	S55204-V186	**VVF42.150KC**

Replacement sealing glands for VVF42..KC

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

Combinable actuator for VVF42..KC

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**

Combinable actuator for VVF42..KC

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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, valve body	Cast iron EN-GJS-400-18-LT
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} [m³/h]	Stock no.	Product no.
400	450	650	700	65	50	S55206-V100	**VVF43.65-50**
400	450	650	700	65	63	S55206-V101	**VVF43.65-63**
225	250	400	450	80	80	S55206-V102	**VVF43.80-80**
225	250	400	450	80	100	S55206-V103	**VVF43.80-100**
125	160	250	300	100	125	S55206-V104	**VVF43.100-125**
125	160	250	300	100	160	S55206-V105	**VVF43.100-160**
90	125	160	175	125	200	S55206-V106	**VVF43.125-200**
90	125	160	175	125	250	S55206-V107	**VVF43.125-250**
60	80	100	125	150	315	S55206-V108	**VVF43.150-315**
60	80	100	125	150	400	S55206-V109	**VVF43.150-400**

Replacement sealing glands for VVF43..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	**7424200000**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	**7428400610**

Combinable actuator for VVF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**

Combinable actuator for VVF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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, valve body	Cast iron EN-GJS-400-18-LT
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} [m³/h]	Stock no.	Product no.
800	1600	65	63	S55206-V110	**VVF43.65-63K**
800	1600	80	100	S55206-V111	**VVF43.80-100K**
800	1600	100	150	S55206-V120	**VVF43.100-150K**
800	1600	125	220	S55206-V121	**VVF43.125-220K**
800	1600	150	315	S55206-V122	**VVF43.150-315K**
800	1200	200	450	S55206-V123	**VVF43.200-450K**
800	1000	250	630	S55206-V124	**VVF43.250-630K**

Replacement sealing glands for VVF43..K

Product Title	Data sheet	Stock no.	Product no.
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	**7424200000**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	**7428400610**
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C		BPZ:467956300	**467956300**

Combinable actuator for VVF43..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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

VVF47..

For customers in Asia / Australia

2-port seat valves PN16, flanged connections VVF47..

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

Data sheet	N4419
Leakage rate	0...0.1% of Kvs value
Medium temperature	1...95 °C
Valve characteristic	Equal percentage, Kvs 250/315 Linear
Rangeability	DN 50...150: > 50
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi/bronze
PN class	PN 16
Warranty	5 Years

Range overview VVF47..

SBX.. Δp_{max} [kPa]	SBX.. Δp_s [kPa]	SBV.. Δp_{max} [kPa]	SBV.. Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
300	300			50	40	S55220-V106	**VVF47.50**
175	175	300	400	65	63	S55220-V107	**VVF47.65**
100	100	250	250	80	100	S55220-V108	**VVF47.80**
		300	400	100	160	S55220-V109	**VVF47.100**
		300	400	125	250	S55220-V110	**VVF47.125**
		300	400	150	315	S55220-V111	**VVF47.150**

Combinable actuator for VVF47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	180	N4519	S55160-A105	**SBV31**
AC 230	3-position	120	N4519	S55160-A102	**SBX31**
AC 24	DC 0...10 V	180	N4519	S55160-A103	**SBV61**
AC 24	DC 0...10 V	120	N4519	S55160-A100	**SBX61**
AC 24	3-position	180	N4519	S55160-A104	**SBV81**
AC 24	3-position	120	N4519	S55160-A101	**SBX81**

2-port seat valve PN25 with flanged connections

VVF53..

- 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} ≤ 1,25 m³/h: >50 DN 15...150: >100
Permissible operating pressure	2500 kPa
Material, valve body	Cast iron EN-GJS-400-18-LT
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.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
1200	2500			1200	2500	1200	2500			15	0.16	S55208-V100	**VVF53.15-0.16**
1200	2500			1200	2500	1200	2500			15	0.2	S55208-V101	**VVF53.15-0.2**
1200	2500			1200	2500	1200	2500			15	0.25	S55208-V102	**VVF53.15-0.25**
1200	2500			1200	2500	1200	2500			15	0.32	S55208-V103	**VVF53.15-0.32**
1200	2500			1200	2500	1200	2500			15	0.4	S55208-V104	**VVF53.15-0.4**
1200	2500			1200	2500	1200	2500			15	0.5	S55208-V105	**VVF53.15-0.5**
1200	2500			1200	2500	1200	2500			15	0.63	S55208-V106	**VVF53.15-0.63**
1200	2500			1200	2500	1200	2500			15	0.8	S55208-V107	**VVF53.15-0.8**
1200	2500			1200	2500	1200	2500			15	1	S55208-V108	**VVF53.15-1**
1200	2500			1200	2500	1200	2500			15	1.25	S55208-V109	**VVF53.15-1.25**
1200	2500			1200	2500	1200	2500			15	1.6	S55208-V110	**VVF53.15-1.6**
1200	2500			1200	2500	1200	2500			15	2	S55208-V111	**VVF53.15-2**
1200	2500			1200	2500	1200	2500			15	2.5	S55208-V112	**VVF53.15-2.5**
1200	2500			1200	2500	1200	2500			15	3.2	S55208-V113	**VVF53.15-3.2**
1200	2500			1200	2500	1200	2500			15	4	S55208-V114	**VVF53.15-4**
1200	2500			1200	2500	1200	2500			20	6.3	S55208-V116	**VVF53.20-6.3**
1200	1600			1200	2100	1200	2500			25	10	S55208-V120	**VVF53.25-10**
1200	1600			1200	2100	1200	2500			25	5	S55208-V117	**VVF53.25-5**
1200	1600			1200	2100	1200	2500			25	6.3	S55208-V118	**VVF53.25-6.3**
1200	1600			1200	2100	1200	2500			25	8	S55208-V119	**VVF53.25-8**
750	900			1100	1200	1200	2500			32	16	S55208-V122	**VVF53.32-16**
500	550	1150	1250	650	750	1200	2000			40	12.5	S55208-V123	**VVF53.40-12.5**
500	550	1150	1250	650	750	1200	2000			40	16	S55208-V124	**VVF53.40-16**
500	550	1150	1250	650	750	1200	2000			40	20	S55208-V125	**VVF53.40-20**
500	550	1150	1250	650	750	1200	2000			40	25	S55208-V126	**VVF53.40-25**
300	350	700	750	400	450	1150	1200			50	31.5	S55208-V127	**VVF53.50-31.5**
300	350	700	750	400	450	1150	1200			50	40	S55208-V128	**VVF53.50-40**
		400	450					650	700	65	63	S55208-V129	**VVF53.65-63**
		225	250					400	450	80	100	S55208-V130	**VVF53.80-100**

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

Range overview VVF53..

SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	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.
		125	160					250	300	100	160	S55208-V131	**VVF53.100-160**
		90	125					160	175	125	250	S55208-V132	**VVF53.125-250**
		60	80					100	125	150	400	S55208-V133	**VVF53.150-400**

Replacement sealing glands for VVF53..

Product Title	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM	BPZ:428488060	**428488060**
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5	BPZ:7424200000	**7424200000**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM	S55845-Z150	**7428400610**

Combinable actuator for VVF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**

Combinable actuator for VVF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

Globe and pressure independent control valve (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, valve body	Cast iron EN-GJS-400-18-LT
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.
1250	2500	1250	2500			50	40	S55208-V134	**VVF53.50-40K**
				1250	2500	65	63	S55208-V135	**VVF53.65-63K**
				1250	2500	80	100	S55208-V136	**VVF53.80-100K**
				1250	2500	100	150	S55208-V158	**VVF53.100-150K**
				1250	2500	125	220	S55208-V159	**VVF53.125-220K**
				1250	2500	150	315	S55208-V160	**VVF53.150-315K**
				800	1200	200	450	S55208-V161	**VVF53.200-450K**
				800	1000	250	630	S55208-V162	**VVF53.250-630K**

Replacement sealing glands for VVF53..K

Product Title	Stock no.	Product no.
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5	BPZ:7424200000	**7424200000**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM	S55845-Z150	**7428400610**
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	**467956300**

Combinable actuator for VVF53..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**

Combinable actuator for VVF53..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

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

VVF63..

2-port valves, PN 40, 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

Data sheet	A6V11459527
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of kvs
Medium temperature	-20...220 °C
Valve characteristic	Equal percentage
Rangeability	Fluids - DN 15...40: > 50 Fluids - DN 50...150: > 100 Steam: > 50
Permissible operating pressure	4000 kPa
Material, inside set	Stainless steel
PN class	PN 40
Warranty	5 Years

Range overview VVF63..

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.
2000	4000	2000	4000			15	0.2	S55210-V100	**VVF63.15-0.2**
2000	4000	2000	4000			15	0.32	S55210-V101	**VVF63.15-0.32**
2000	4000	2000	4000			15	0.5	S55210-V102	**VVF63.15-0.5**
2000	4000	2000	4000			15	0.8	S55210-V103	**VVF63.15-0.8**
2000	4000	2000	4000			15	1.25	S55210-V104	**VVF63.15-1.25**
2000	4000	2000	4000			15	2	S55210-V105	**VVF63.15-2**
2000	4000	2000	4000			15	3.2	S55210-V106	**VVF63.15-3.2**
2000	3500	2000	4000			20	5	S55210-V107	**VVF63.20-6.3**
2000	2100	2000	4000			25	5	S55210-V108	**VVF63.25-5**
2000	2100	2000	4000			25	8	S55210-V109	**VVF63.25-8**
1100	1200	2000	3200			32	15	S55210-V110	**VVF63.32-16**
650	750	1800	2000			40	12.5	S55210-V111	**VVF63.40-12.5**
650	750	1800	2000			40	20	S55210-V112	**VVF63.40-20**
400	450	1150	1200			50	31.5	S55210-V113	**VVF63.50-31.5**
				650	700	65	50	S55210-V114	**VVF63.65-50**
				400	450	80	80	S55210-V115	**VVF63.80-80**
				250	300	100	125	S55210-V116	**VVF63.100-125**
				160	175	125	200	S55210-V117	**VVF63.125-200**
				100	125	150	315	S55210-V118	**VVF63.150-315**

2-port seat valve PN40 with flanged connections, pressure compensated

VVF63..K

- 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

Data sheet	A6V11459527
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
Rangeability	DN 50...100: > 100 DN 125...150: > 50
Permissible operating pressure	4000 kPa
Material, inside set	Stainless steel
PN class	PN 40
Warranty	5 Years

Range overview VVF63..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.
1500	4000	2000	4000			50	36	S55210-V119	**VVF63.50-40K**
				2000	4000	65	63	S55210-V120	**VVF63.65-63K**
				2000	4000	80	100	S55210-V121	**VVF63.80-100K**
				2000	4000	100	150	S55210-V122	**VVF63.100-150K**
				2000	4000	125	220	S55210-V123	**VVF63.125-220K**
				2000	4000	150	315	S55210-V124	**VVF63.150-315K**

Accessories for VVF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	**467956290**
Stem heating element for media < 0 °C	N4501	S55845-Z108	**ASZ6.6**

Replacement sealing glands for VVF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	**7428400610**
Sealing gland complete, stem diameter 14 mm, sealing material FEPM, up to 220 °C		S55846-Z114	**ALV14F32S**
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	**467956290**

Combinable actuator for VVF63..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**

Combinable actuator for VVF63..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62U	**SKD62U**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50U	**SKD82.50U**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 19.2...28.2 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51U	**SKD82.51U**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62U	**SKB62U**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50U	**SKB82.50U**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 19.2...28.2 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51U	**SKB82.51U**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62U	**SKC62U**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60U	**SKC82.60U**
AC 19.2...31.2 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61U	**SKC82.61U**

Modulating control valves with magnetic actuator, PN16, flanged

MVF461H..

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.
1000	1000	0.6	15	BPZ:MVF461H15-0.6	**MVF461H15-0.6**
1000	1000	1.5	15	BPZ:MVF461H15-1.5	**MVF461H15-1.5**
1000	1000	3	15	BPZ:MVF461H15-3	**MVF461H15-3**
1000	1000	5	20	BPZ:MVF461H20-5	**MVF461H20-5**
1000	1000	8	25	BPZ:MVF461H25-8	**MVF461H25-8**
1000	1000	12	32	BPZ:MVF461H32-12	**MVF461H32-12**
1000	1000	20	40	BPZ:MVF461H40-20	**MVF461H40-20**
1000	1000	30	50	BPZ:MVF461H50-30	**MVF461H50-30**

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

Accessories for MVF461..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		BPZ:ASE12	**ASE12**

VDN1..

2-port valves PN10, to DIN

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
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VDN1..

kv relation of Xp	Con-nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
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 ⅜"	60	10	0.63	BPZ:VDN110	**VDN110**
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 ½"	60	15	0.89	BPZ:VDN115	**VDN115**
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:VDN120	**VDN120**

VEN1..

Angle valves PN10, to DIN

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
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VEN1..

kv relation of Xp	Con-nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
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 ⅜"	60	10	0.63	BPZ:VEN110	**VEN110**
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 ½"	60	15	0.89	BPZ:VEN115	**VEN115**
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:VEN120	**VEN120**

Combinable actuator for VDN1../VEN1..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
				N2111	BPZ:RTN51	**RTN51**
				N4211	BPZ:RTN51G	**RTN51G**
				N2111	BPZ:RTN71	**RTN71**
				N2111	BPZ:RTN81	**RTN81**
DC 21...30 24		50/100	1.5	A6V11858280	S55180-A111	**SSA118.09HKN**
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	67.5	1.5	A6V11858276	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	25	1.5	A6V11858278	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858276	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A109	**SSA161E.05HF**
AC 230	3-position	67.5	1.5	A6V11858276	S55180-A105	**SSA331.00**
AC 230	2-position	210		N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210		N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	**STA73MP/00**

VDN2..

2-port seat 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 VDN2..

kv relation of Xp	Con-nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
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 ⅜"	60	10	0.63	BPZ:VDN210	**VDN210**
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**
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**

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	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
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 ⅜"	60	10	0.63	BPZ:VEN210	**VEN210**
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 ½"	60	15	0.89	BPZ:VEN215	**VEN215**
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:VEN220	**VEN220**

Reverse angle valves PN10, to NF

VUN2..

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	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
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 ⅜"	60	10	0.6	BPZ:VUN210	**VUN210**
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 ½"	60	15	0.77	BPZ:VUN215	**VUN215**

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

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
				N2111	BPZ:RTN51	**RTN51**
				N4211	BPZ:RTN51G	**RTN51G**
				N2111	BPZ:RTN71	**RTN71**
				N2111	BPZ:RTN81	**RTN81**
DC 21...30 24		50/100	1.5	A6V11858280	S55180-A111	**SSA118.09HKN**
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	67.5	1.5	A6V11858276	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	25	1.5	A6V11858278	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858276	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A109	**SSA161E.05HF**
AC 230	3-position	67.5	1.5	A6V11858276	S55180-A105	**SSA331.00**
AC 230	2-position	210		N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210		N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	**STA73MP/00**

ATN4

Manual knob, white, for VDN../VEN../VUN../VPD../VPE..

For manual adjustment of valve.
The manual knobs are suited for use with all types of valves of the VDN.../VEN.../VUN../VPD... and VPE.. ranges.
ATN4 package contains 50 pieces

Data sheet	N2100
Warranty	2 Years

	Stock no.	Product no.
	BPZ:ATN4	**ATN4**

ATN4 package contains 50 pieces

AVN1..-1..

Compression fittings for copper and soft steel pipes

For connecting copper or soft steel pipes to valves of the VDN../VEN../VUN.. ranges and lockshield valves of the ADN.../AEN... ranges

Data sheet	N2100
Warranty	2 Years

Range overview AVN1..-1..

Pipe diameter [mm]	Stock no.	Product no.
15	BPZ:AVN15-15	**AVN15-15**

AVN15A..

Compression fittings plastic pipes with aluminum foil

For connecting plastic pipes to valves of the VDN../VEN../VUN.. ranges and lockshield valves of the ADN.../AEN... ranges

Data sheet	N2100
Warranty	5 Years

Range overview AVN15A..

Pipe diameter [mm]	Stock no.	Product no.
16	BPZ:AVN15A16	**AVN15A16**

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.
0...1.8	Rp/R ⅜"	60	10	0...1.8	BPZ:ADN10	**ADN10**
0...2.5	Rp/R ½"	60	15	0...2.5	BPZ:ADN15	**ADN15**
0...3	Rp/R ¾"	60	20	0...3	BPZ:ADN20	**ADN20**

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.
0...1.8	Rp/R ⅜"	60	10	0...1.8	BPZ:AEN10	**AEN10**
0...2.5	Rp/R ½"	60	15	0...2.5	BPZ:AEN15	**AEN15**
0...3	Rp/R ¾"	60	20	0...3	BPZ:AEN20	**AEN20**

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

VD1..CLC..

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

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
Material, valve body	Brass, nickel-plated
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.
0.25...1.9	Rp/R ½"	150	15	1.9	BPZ:VD115CLC	**VD115CLC**
0.25...2.6	Rp/R ¾"	150	20	2.6	BPZ:VD120CLC	**VD120CLC**
0.25...2.6	Rp/R 1"	150	25	2.6	BPZ:VD125CLC	**VD125CLC**

Combinable actuator for VD1..CLC..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
DC 21...30 24		50/100	1.5	A6V11858280	S55180-A111	**SSA118.09HKN**
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	67.5	1.5	A6V11858276	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	25	1.5	A6V11858278	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858276	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A109	**SSA161E.05HF**
AC 230	3-position	67.5	1.5	A6V11858276	S55180-A105	**SSA331.00**
AC 230	2-position	210		N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210		N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	**STA73MP/00**

2-port seat valves, PN16

VVP45..

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} [m³/h]	Stock no.	Product no.
G ½" B	400	725			10	0.25	BPZ:VVP45.10-0.25	**VVP45.10-0.25**
G ½" B	400	725			10	0.4	BPZ:VVP45.10-0.4	**VVP45.10-0.4**
G ½" B	400	725			10	0.63	BPZ:VVP45.10-0.63	**VVP45.10-0.63**
G ½" B	400	725			10	1	BPZ:VVP45.10-1	**VVP45.10-1**
G ½" B	400	725			10	1.6	BPZ:VVP45.10-1.6	**VVP45.10-1.6**
G ¾" B	350	350			15	2.5	BPZ:VVP45.15-2.5	**VVP45.15-2.5**
G 1" B	350	350	350	350	20	4	BPZ:VVP45.20-4	**VVP45.20-4**
G 1¼" B	300	300	300	300	25	6.3	BPZ:VVP45.25-6.3	**VVP45.25-6.3**
G 1½" B			300	300	25	10	BPZ:VVP45.25-10	**VVP45.25-10**
G 2" B			175	175	32	16	BPZ:VVP45.32-16	**VVP45.32-16**
G 2¼" B			75	75	40	25	BPZ:VVP45.40-25	**VVP45.40-25**

Combinable actuator for VVP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	150	N4891	BPZ:SSB31	**SSB31**
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	**SSB61**
AC 24	3-position	150	N4891	BPZ:SSB81	**SSB81**
AC 230	3-position	150	N4895	BPZ:SSC31	**SSC31**
AC/DC 24	DC 0...10 V	30	N4895	BPZ:SSC61	**SSC61**
AC/DC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	**SSC61.5**
AC 24	3-position	150	N4895	BPZ:SSC81	**SSC81**

VVP45..N

Threaded 2-port seat valves, PN16

In ventilation and air-conditioning systems for water-side terminal unit control in closed circuits, e.g. induction units, fan coil units, small reheaters and small re-coolers, for use in
- 2-pipe systems with one heat exchanger for heating and cooling
- 4-pipe systems with two separate heat exchangers for heating and cooling

With threaded connections to ISO 228-1.
For low temperature hot water, chilled water, water with anti-freeze.

Data sheet	N4840
Stroke	5.5 mm
Leakage rate	0...0.1 % of k_{vs} value
Medium	Water Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Equal percentage
Rangeability	> 50
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VVP45..N

Δp_{max} [kPa]	Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
400	550	15	2.5	BPZ:VVP45.15-2.5N	**VVP45.15-2.5N**
400	550	20	4	BPZ:VVP45.20-4N	**VVP45.20-4N**
400	500	25	6.3	BPZ:VVP45.25-6.3N	**VVP45.25-6.3N**

Combinable actuator for VVP45..N

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	150	N4895	BPZ:SSC31	**SSC31**
AC/DC 24	DC 0...10 V	30	N4895	BPZ:SSC61	**SSC61**
AC/DC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	**SSC61.5**
AC 24	3-position	150	N4895	BPZ:SSC81	**SSC81**

2-port valves, PN16

VVP47..

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
Material, valve body	Red brass CC491K (Rg5)
PN class	PN 16
Characteristic	linear
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.
400	700	400	1000	G ½" B	10	0.25	BPZ:VVP47.10-0.25	**VVP47.10-0.25**
400	700	400	1000	G ½" B	10	0.4	BPZ:VVP47.10-0.4	**VVP47.10-0.4**
250	250	400	500	G ½" B	10	0.63	BPZ:VVP47.10-0.63	**VVP47.10-0.63**
250	250	400	500	G ½" B	10	1	BPZ:VVP47.10-1	**VVP47.10-1**
150	150	300	300	G ½" B	10	1.6	BPZ:VVP47.10-1.6	**VVP47.10-1.6**
150	150	300	300	G ¾" B	15	2.5	BPZ:VVP47.15-2.5	**VVP47.15-2.5**
100	100	175	175	G 1" B	20	4	BPZ:VVP47.20-4	**VVP47.20-4**
250	250	400	500	G ½" B	10	1	BPZ:VVP47.10-1S	**VVP47.10-1S**
150	150	300	300	G ½" B	10	1.6	BPZ:VVP47.10-1.6S	**VVP47.10-1.6S**

VVP47..S for Conex compression fittings.

Combinable actuator for VVP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4865	BPZ:SFP21/18	**SFP21/18**
AC 24	2-position	10	N4865	BPZ:SFP71/18	**SFP71/18**
AC 230	3-position	150	N4864	BPZ:SSP31	**SSP31**
AC/DC 24	DC 0...10 V	34	N4864	BPZ:SSP61	**SSP61**
AC 24	3-position	150	N4864	BPZ:SSP81	**SSP81**

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, valve body	Hot-pressed brass
Material, inside set	Stainless steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VVI46..

Con-nect. thread	STA.. Δp_{max} [kPa]	STA.. Δp_s [kPa]	SFA.. Δp_{max} [kPa]	SFA.. Δp_s [kPa]	SUA21.. Δp_{max} [kPa]	SUA21.. Δp_s [kPa]	SSA 31.04 Δp_s [kPa]	SSA 31.04 Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
Rp ½"	200	200	300	300	400	400	300	300	15	2.15	S55249-V106	**VVI46.15/2**
Rp ¾"	200	200	300	300	400	400	300	300	20	3.5	S55249-V107	**VVI46.20/2**
Rp 1"	150	150	250	250	250	250	300	300	25	5	S55249-V108	**VVI46.25/2**

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

Combinable actuator for VVI46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4863	BPZ:SFA21/18	**SFA21/18**
AC 24	2-position	10	N4863	BPZ:SFA71/18	**SFA71/18**
AC 230	3-position SPDT	43	N4860	BPZ:SSA31.04	**SSA31.04**
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	**SUA21/3**
AC 230	2-position	210	N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210	N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270	N4884	S55174-A117	**STA73B/00**

2-port seat valves PN16 with internally threaded connections

C/VVI41..

- With internally threaded connections Rp.. to ISO 7-1
- For chilled water, low pressure hot water and saturated steam in open and closed circuits

Data sheet	N4362
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, valve body	Bronze CC491K (Rg5)
Material, inside set	CrNi Steel/ Rg 5 brass
PN class	PN 16
Absolute pressure p1 steam	150 kPa abs
Warranty	5 Years
For customers in Asia / Australia	

Range overview C/VVI41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SKD.. Δp_{max} [kPa]	SKD.. Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
Rp ½"	400	1600	400	1600	15	2.5	BPZ:C/VVI41.15-2.5	**C/VVI41.15-2.5**
Rp ½"	400	1600	400	1600	15	4	BPZ:C/VVI41.15-4	**C/VVI41.15-4**
Rp ¾"	400	1600	400	1600	20	6.3	BPZ:C/VVI41.20-6.3	**C/VVI41.20-6.3**
Rp 1"	400	1550	400	1600	25	10	BPZ:C/VVI41.25-10	**C/VVI41.25-10**
Rp 1¼"	400	875	400	1275	32	16	BPZ:C/VVI41.32-16	**C/VVI41.32-16**
Rp 1½"	400	525	400	775	40	25	BPZ:C/VVI41.40-25	**C/VVI41.40-25**
Rp 2"	300	300	400	450	50	40	BPZ:C/VVI41.50-40	**C/VVI41.50-40**

Replacement sealing glands for C/VVI41..

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

Combinable actuator for C/VVI41..

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

Combinable actuator for C/VVI41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**

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} [m³/h]	Stock no.	Product no.
G 1" B	800	1600	800	1600	800	1600	15	0.63	BPZ:VVG41.11	**VVG41.11**
G 1" B	800	1600	800	1600	800	1600	15	1	BPZ:VVG41.12	**VVG41.12**
G 1" B	800	1600	800	1600	800	1600	15	1.6	BPZ:VVG41.13	**VVG41.13**
G 1" B	800	1600	800	1600	800	1600	15	2.5	BPZ:VVG41.14	**VVG41.14**
G 1" B	800	1600	800	1600	800	1600	15	4	BPZ:VVG41.15	**VVG41.15**
G 1¼" B	800	1600	800	1600	800	1600	20	6.3	BPZ:VVG41.20	**VVG41.20**
G 1½" B	800	1550	800	1600	800	1600	25	10	BPZ:VVG41.25	**VVG41.25**
G 2" B	800	875	800	1275	800	1600	32	16	BPZ:VVG41.32	**VVG41.32**
G 2¼" B	525	525	775	775	800	1600	40	25	BPZ:VVG41.40	**VVG41.40**
G 2¾" B	300	300	450	450	800	1225	50	40	BPZ:VVG41.50	**VVG41.50**

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

Replacement sealing glands for VVG41..

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

Accessories for VVG41..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	**ALG..2**

Combinable actuator for VVG41..

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

Combinable actuator for VVG41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**

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..

DN	Con-nect. thread	SAS.. Δp_s [kPa]	SAS.. Δp_{max} [kPa]	k_{vs} [m³/h]	Stock no.	Product no.
15	G 1" B	1600	400	0.25	BPZ:VVG44.15-0.25	**VVG44.15-0.25**
15	G 1" B	1600	400	0.4	BPZ:VVG44.15-0.4	**VVG44.15-0.4**
15	G 1" B	1600	400	0.63	BPZ:VVG44.15-0.63	**VVG44.15-0.63**
15	G 1" B	725	400	1	BPZ:VVG44.15-1	**VVG44.15-1**
15	G 1" B	725	400	1.6	BPZ:VVG44.15-1.6	**VVG44.15-1.6**
15	G 1" B	400	400	2.5	BPZ:VVG44.15-2.5	**VVG44.15-2.5**
15	G 1" B	400	400	4	BPZ:VVG44.15-4	**VVG44.15-4**
20	G 1¼" B	750	400	6.3	BPZ:VVG44.20-6.3	**VVG44.20-6.3**
25	G 1½" B	400	400	10	BPZ:VVG44.25-10	**VVG44.25-10**
32	G 2" B	250	250	16	BPZ:VVG44.32-16	**VVG44.32-16**
40	G 2¼" B	125	125	25	BPZ:VVG44.40-25	**VVG44.40-25**

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

Accessories for VVG44..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	**ALG..2**

Combinable actuator for VVG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4581	S55158-A106	**SAS31.00**
AC 230	3-position	30	No	N4581	S55158-A107	**SAS31.03**
AC 230	3-position	120	Yes (28 s)	N4581	S55158-A108	**SAS31.50**
AC 230	3-position	30	Yes (14 s)	N4581	S55158-A109	**SAS31.53**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	No	N4581	S55158-A100	**SAS61.03**
AC/DC 24	Modbus RTU	30		N4581	S55158-A121	**SAS61.03/MO**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	Yes (14 s)	N4581	S55158-A101	**SAS61.33**
AC/DC 24	Modbus RTU	30	Yes (14 s)	N4581	S55158-A122	**SAS61.33/MO**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	Yes (14 s)	N4581	S55158-A102	**SAS61.53**

Combinable actuator for VVG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	3-position	120	No	N4581	S55158-A103	**SAS81.00**
AC/DC 24	3-position	30	No	N4581	S55158-A104	**SAS81.03**
AC/DC 24	3-position	30	Yes (14 s)	N4581	S55158-A105	**SAS81.33**

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} [m³/h]	Stock no.	Product no.
G ¾" B	2500	1200	2500	1200	15	0.25	BPZ:VVG549.15-0.25	**VVG549.15-0.25**
G ¾" B	2500	1200	2500	1200	15	0.4	BPZ:VVG549.15-0.4	**VVG549.15-0.4**
G ¾" B	2500	1200	2500	1200	15	0.63	BPZ:VVG549.15-0.63	**VVG549.15-0.63**
G ¾" B	1500	1200	2000	1200	15	1	BPZ:VVG549.15-1	**VVG549.15-1**
G ¾" B	1500	1200	2000	1200	15	1.6	BPZ:VVG549.15-1.6	**VVG549.15-1.6**
G ¾" B	1500	1200	2000	1200	15	2.5	BPZ:VVG549.15-2.5	**VVG549.15-2.5**
G 1" B	1600	1200	1600	1200	20	4	BPZ:VVG549.20-4K	**VVG549.20-4K**
G 1¼" B	1600	1200	1600	1200	25	6.3	BPZ:VVG549.25-6.3K	**VVG549.25-6.3K**

Accessories for VVG549..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	**ALG..2**
Fittings, pipeside with welding connection		BPZ:ALS..	**ALS..**

Combinable actuator for VVG549..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	8	No	N4584	S55158-A119	**SAT31.008**
AC 230	3-position	15	Yes (8 s)	N4584	S55158-A120	**SAT31.51**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	No	N4584	S55158-A117	**SAT61.008**
AC/DC 24	Modbus RTU	8	No	N4584	S55158-A123	**SAT61.008/MO**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	15	Yes (8 s)	N4584	S55158-A118	**SAT61.51**
AC/DC 24	Modbus RTU	15	Yes (8 s)	N4584	S55158-A124	**SAT61.51/MO**
AC 230	3-position	120	No	N4581	S55158-A106	**SAS31.00**
AC 230	3-position	30	No	N4581	S55158-A107	**SAS31.03**
AC 230	3-position	120	Yes (28 s)	N4581	S55158-A108	**SAS31.50**
AC 230	3-position	30	Yes (14 s)	N4581	S55158-A109	**SAS31.53**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	No	N4581	S55158-A100	**SAS61.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	Yes (14 s)	N4581	S55158-A101	**SAS61.33**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	Yes (14 s)	N4581	S55158-A102	**SAS61.53**

Combinable actuator for VVG549..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	3-position	120	No	N4581	S55158-A103	**SAS81.00**
AC/DC 24	3-position	30	No	N4581	S55158-A104	**SAS81.03**
AC/DC 24	3-position	30	Yes (14 s)	N4581	S55158-A105	**SAS81.33**

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.
G ¾ "	Rp ⅜	Malleable cast iron, phosphated	BPZ:ALG122	**ALG122**
G ½ "	R ⅜	Brass	BPZ:ALG132	**ALG132**
G ¾ "	R ½	Brass	BPZ:ALG142	**ALG142**
G 1 "	Rp ½	Malleable cast iron, phosphated	BPZ:ALG152	**ALG152**
G 1¼ "	Rp ¾	Malleable cast iron, phosphated	BPZ:ALG202	**ALG202**
G 1½ "	Rp 1	Malleable cast iron, phosphated	BPZ:ALG252	**ALG252**
G 2 "	Rp 1¼	Malleable cast iron, phosphated	BPZ:ALG322	**ALG322**
G 2¼ "	Rp 1½	Malleable cast iron, phosphated	BPZ:ALG402	**ALG402**
G 2¾ "	Rp 2	Malleable cast iron, phosphated	BPZ:ALG502	**ALG502**
G 1 "	Rp ½	Brass	S55846-Z100	**ALG152B**
G 1¼ "	Rp ¾	Brass	S55846-Z102	**ALG202B**
G 1½ "	Rp 1	Brass	S55846-Z104	**ALG252B**
G 2 "	Rp 1¼	Brass	S55846-Z106	**ALG322B**
G 2¼ "	Rp 1½	Brass	S55846-Z108	**ALG402B**
G 2¾ "	Rp 2	Brass	S55846-Z110	**ALG502B**

ALG132 and ALG142: pipe connecting thread externally threaded.
For the VMP45.. and VMP47.. valves, 2 sets of 2 fittings must be ordered

Fittings, pipeside with welding connection

ALS..

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.
21.3	G ¾	BPZ:ALS152	**ALS152**
26.8	G 1	BPZ:ALS202	**ALS202**
33.7	G 1¼	BPZ:ALS252	**ALS252**

Globe and pressure independent control valve (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 kvs 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, valve body	Cast iron EN-GJL-250
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 6
Warranty	5 Years

Range overview VXF22..

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

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

Replacement sealing glands for VXF22..

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

Combinable actuator for VXF22..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**

Combinable actuator for VXF22..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

Globe and pressure independent control valve (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 kvs 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.. Δp_{max} [kPa]	SAV.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
400		400	400		15	1.6	S55202-V113	**VXF32.15-1.6**
400		400	400		15	2.5	S55202-V114	**VXF32.15-2.5**
400		400	400		15	4	S55202-V115	**VXF32.15-4**
400		400	400		25	6.3	S55202-V116	**VXF32.25-6.3**
400		400	400		25	10	S55202-V117	**VXF32.25-10**
400	400	400	400		40	16	S55202-V118	**VXF32.40-16**
400	400	400	400		40	25	S55202-V119	**VXF32.40-25**
300	400	400	400		50	40	S55202-V120	**VXF32.50-40**
150	400	200	400		65	63	S55202-V121	**VXF32.65-63**
75	225	125	400		80	100	S55202-V122	**VXF32.80-100**
	125			250	100	160	S55202-V123	**VXF32.100-160**
	90			160	125	250	S55202-V124	**VXF32.125-250**
	60			100	150	400	S55202-V125	**VXF32.150-400**

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

Replacement sealing glands for VXF32..

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

Combinable actuator for VXF32..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**

Combinable actuator for VXF32..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

Globe and pressure independent control valve (PICV)
3-port flanged valves

VXF42..

3-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
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 32...150: >100
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJL-250
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VXF42..

SAX.. Δp_{max} [kPa]	SAV.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
400		400	400		15	1.6	S55204-V127	**VXF42.15-1.6**
400		400	400		15	2.5	S55204-V128	**VXF42.15-2.5**
400		400	400		15	4	S55204-V129	**VXF42.15-4**
400		400	400		20	6.3	S55204-V130	**VXF42.20-6.3**
400		400	400		25	6.3	S55204-V131	**VXF42.25-6.3**
400		400	400		25	10	S55204-V132	**VXF42.25-10**
400		400	400		32	16	S55204-V133	**VXF42.32-16**
400	400	400	400		40	16	S55204-V134	**VXF42.40-16**
400	400	400	400		40	25	S55204-V135	**VXF42.40-25**
300	400	400	400		50	31.5	S55204-V136	**VXF42.50-31.5**
300	400	400	400		50	40	S55204-V137	**VXF42.50-40**
150	400	200	400		65	50	S55204-V138	**VXF42.65-50**
150	400	200	400		65	63	S55204-V139	**VXF42.65-63**
75	225	125	400		80	80	S55204-V140	**VXF42.80-80**
75	225	125	400		80	100	S55204-V141	**VXF42.80-100**
	125			250	100	125	S55204-V142	**VXF42.100-125**
	125			250	100	160	S55204-V143	**VXF42.100-160**
	90			160	125	200	S55204-V144	**VXF42.125-200**
	90			160	125	250	S55204-V145	**VXF42.125-250**
	60			100	150	315	S55204-V146	**VXF42.150-315**
	60			100	150	400	S55204-V147	**VXF42.150-400**

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

Replacement sealing glands for VXF42..

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

Combinable actuator for VXF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**

Globe and pressure independent control valve (PICV)
3-port flanged valves

Combinable actuator for VXF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

3-port valves with flanged connections, PN 16

VXF42..C

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

Data sheet	A6V10794157
Stroke	to DN 80: 20 mm from DN 100: 40 mm
Leakage rate	0...0.02% of the kvs 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	to DN 40: >50 from DN 50: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN 25: CrNi steel / brass ≥ DN 32: CrNi steel / CrNi steel
PN class	PN 16
Warranty	5 Years
For customers in Asia / Australia	

Range overview VXF42..C

SAX.. Δp_{max} [kPa]	SAV.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
400		400	400		25	6.3	S55204-V165	**VXF42.25-6.3C**
400		400	400		25	10	S55204-V166	**VXF42.25-10C**
400		400	400		32	16	S55204-V167	**VXF42.32-16C**
400	400	400	400		40	16	S55204-V168	**VXF42.40-16C**
400	400	400	400		40	25	S55204-V169	**VXF42.40-25C**
300	400	400	400		50	31.5	S55204-V170	**VXF42.50-31.5C**
300	400	400	400		50	40	S55204-V171	**VXF42.50-40C**
150	400	200	400		65	50	S55204-V172	**VXF42.65-50C**
150	400	200	400		65	63	S55204-V173	**VXF42.65-63C**
75	225	125	400		80	80	S55204-V174	**VXF42.80-80C**
75	225	125	400		80	100	S55204-V175	**VXF42.80-100C**
	125			250	100	125	S55204-V176	**VXF42.100-125C**
	125			250	100	160	S55204-V177	**VXF42.100-160C**
	90			160	125	200	S55204-V178	**VXF42.125-200C**
	90			160	125	250	S55204-V179	**VXF42.125-250C**
	60			100	150	315	S55204-V180	**VXF42.150-315C**
	60			100	150	400	S55204-V181	**VXF42.150-400C**

Replacement sealing glands for VXF42..C

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

Combinable actuator for VXF42..C

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**

Combinable actuator for VXF42..C

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

Globe and pressure independent control valve (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, valve body	Cast iron EN-GJS-400-18-LT
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} [m³/h]	Stock no.	Product no.
400	650	65	50	S55206-V125	**VXF43.65-50**
400	650	65	63	S55206-V115	**VXF43.65-63**
225	400	80	80	S55206-V126	**VXF43.80-80**
225	400	80	100	S55206-V116	**VXF43.80-100**
125	250	100	125	S55206-V127	**VXF43.100-125**
125	250	100	160	S55206-V117	**VXF43.100-160**
90	160	125	200	S55206-V128	**VXF43.125-200**
90	160	125	250	S55206-V118	**VXF43.125-250**
60	100	150	315	S55206-V129	**VXF43.150-315**
60	100	150	400	S55206-V119	**VXF43.150-400**

Replacement sealing glands for VXF43..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	**7424200000**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	**7428400610**

Combinable actuator for VXF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**

Combinable actuator for VXF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

Bypass extension for VXF43..

Product Title	Data sheet	Stock no.	Product no.
Bypass extension, flanged connections, DN65	N4404	S55845-Z114	**ALF41B65**
Bypass extension, flanged connections, DN80	N4404	S55845-Z115	**ALF41B80**
Bypass extension, flanged connections, DN100	N4404	S55845-Z116	**ALF41B100**
Bypass extension, flanged connections, DN125	N4404	S55845-Z117	**ALF41B125**
Bypass extension, flanged connections, DN150	N4404	S55845-Z118	**ALF41B150**

VXF47..

3-port seat valves PN16, flanged connections VXF47..

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

Data sheet	N4419
Leakage rate	0...0.1% of Kvs value
Leakage rate bypass	0.5...2% of Kvs value
Medium temperature	1...95 °C
Valve characteristic	Throughport: equal percentage, Kvs 250/315 Linear Bypass: linear
Rangeability	DN 50...150: > 50
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi Steel/Bronze
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview VXF47..

SBX.. Δp_{max} [kPa]	SBV.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
300		50	40	S55220-V100	**VXF47.50**
175	300	65	63	S55220-V101	**VXF47.65**
100	250	80	100	S55220-V102	**VXF47.80**
	200	100	160	S55220-V103	**VXF47.100**
	100	125	250	S55220-V104	**VXF47.125**
	75	150	315	S55220-V105	**VXF47.150**

Combinable actuator for VXF47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	180	N4519	S55160-A105	**SBV31**
AC 230	3-position	120	N4519	S55160-A102	**SBX31**
AC 24	DC 0...10 V	180	N4519	S55160-A103	**SBV61**
AC 24	DC 0...10 V	120	N4519	S55160-A100	**SBX61**
AC 24	3-position	180	N4519	S55160-A104	**SBV81**
AC 24	3-position	120	N4519	S55160-A101	**SBX81**

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, valve body	Cast iron EN-GJS-400-18-LT
Material, inside set	Stainless steel
PN class	PN 16 / PN 25
Warranty	5 Years

Range overview VXF53..

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

Accessories for VXF53..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	**7424200000**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	**7428400610**

Combinable actuator for VXF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	120	No	N4503	S55150-A112	**SAV31.00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	**SAV61.00**
AC/DC 24	Modbus RTU	120	No	N4503	S55150-A141	**SAV61.00/MO**
AC/DC 24	3-position	120	No	N4503	S55150-A111	**SAV81.00**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**

Combinable actuator for VXF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**

Bypass extension for VXF53..

Product Title	Data sheet	Stock no.	Product no.
Bypass extension, flanged connections, DN15	N4404	S55845-Z110	**ALF41B15**
Bypass extension, flanged connections, DN25	N4404	S55845-Z111	**ALF41B25**
Bypass extension, flanged connections, DN40	N4404	S55845-Z112	**ALF41B40**
Bypass extension, flanged connections, DN50	N4404	S55845-Z113	**ALF41B50**

Globe and pressure independent control valve (PICV)
3-port flanged valves

VXF63..

3-port valves, PN40, 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

Data sheet	A6V11459527
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-25...220 °C
Valve characteristic	Equal percentage
Rangeability	>100
Permissible operating pressure	4000 kPa
Material, inside set	Stainless steel
PN class	PN 40
Warranty	5 Years

Range overview VXF63..

SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
200	200		15	1.6	S55210-V131	**VXF63.15-1.6**
200	200		15	2.5	S55210-V132	**VXF63.15-2.5**
200	200		15	4	S55210-V133	**VXF63.15-4**
200	200		20	6.3	S55210-V134	**VXF63.20-6.3**
200	200		25	10	S55210-V136	**VXF63.25-10**
200	200		25	6.3	S55210-V135	**VXF63.25-6.3**
200	200		32	16	S55210-V137	**VXF63.32-16**
200	200		40	16	S55210-V138	**VXF63.40-16**
200	200		40	25	S55210-V139	**VXF63.40-25**
200	200		50	31.5	S55210-V140	**VXF63.50-31.5**
		200	65	50	S55210-V141	**VXF63.65-50**
		200	80	80	S55210-V142	**VXF63.80-80**
		150	100	125	S55210-V143	**VXF63.100-125**
		100	125	200	S55210-V144	**VXF63.125-200**
		70	150	315	S55210-V145	**VXF63.150-315**

Accessories for VXF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	**467956290**
Stem heating element for media < 0 °C	N4501	S55845-Z108	**ASZ6.6**

Replacement sealing glands for VXF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	**428488060**
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	**7428400610**
Sealing gland complete, stem diameter 14 mm, sealing material FEPM, up to 220 °C		S55846-Z114	**ALV14F32S**
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	**467956290**

Combinable actuator for VXF63..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62U	**SKD62U**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50U	**SKD82.50U**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 19.2...28.2 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51U	**SKD82.51U**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62U	**SKB62U**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50U	**SKB82.50U**
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	**SKC32.60**
AC 19.2...28.2 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51U	**SKB82.51U**
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	**SKC32.61**
AC 24 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	**SKC60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	**SKC62**
AC 24	Modbus RTU	Open 120 Close 20	Yes	N4566	S55195-A128	**SKC62/MO**

Combinable actuator for VXF63..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62U	**SKC62U**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	**SKC62UA**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	**SKC82.60**
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	**SKC82.61**
AC 24	3-position	120	No	N4566	BPZ:SKC82.60U	**SKC82.60U**
AC 19.2...31.2 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61U	**SKC82.61U**

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..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.
300	300	0.6	15	BPZ:MXF461.15-0.6	**MXF461.15-0.6**
300	300	1.5	15	BPZ:MXF461.15-1.5	**MXF461.15-1.5**
300	300	3	15	BPZ:MXF461.15-3.0	**MXF461.15-3.0**
300	300	5	20	BPZ:MXF461.20-5.0	**MXF461.20-5.0**
300	300	8	25	BPZ:MXF461.25-8.0	**MXF461.25-8.0**
300	300	12	32	BPZ:MXF461.32-12	**MXF461.32-12**
300	300	20	40	BPZ:MXF461.40-20	**MXF461.40-20**
300	300	30	50	BPZ:MXF461.50-30	**MXF461.50-30**
300	300	50	65	BPZ:MXF461.65-50	**MXF461.65-50**

Δp_s for use as 2-port valve.

Accessories for MXF461..

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

Blanking flanges for MXF461..

Product Title	Stock no.	Product no.
Blanking flange, DN15	BPZ:Z155/15F	**Z155/15F**
Blanking flange, DN20	BPZ:Z155/20F	**Z155/20F**
Blanking flange, DN25	BPZ:Z155/25F	**Z155/25F**
Blanking flange, DN32	BPZ:Z155/32F	**Z155/32F**
Blanking flange, DN40	BPZ:Z155/40	**Z155/40**
Blanking flange, DN50	BPZ:Z155/50	**Z155/50**
Blanking flange, DN65	BPZ:Z155/65	**Z155/65**

Modulating control valves with magnetic actuator, PN16, flanged

M3P..FY..

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} [m³/h]	DN	Stock no.	Product no.
300	300	80	80	BPZ:M3P80FY	**M3P80FY**
200	200	130	100	BPZ:M3P100FY	**M3P100FY**

Δp_s for use as 2-port valve.

Accessories for M3P..FY..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for M3P..GY, M3P..FY, M2H..FY.., M3B..GY.., M2S..FY and M2FE..	N4348	BPZ:ZM150	**ZM150**
Replacement electronic for M3P..FY..	N4454	BPZ:ZM250	**ZM250**
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	**SEZ91.6**

Blanking flanges for M3P..FY..

Product Title	Stock no.	Product no.
Blanking flange, DN100	BPZ:Z155/100	**Z155/100**
Blanking flange, DN80	BPZ:Z155/80	**Z155/80**

VXP45..

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 [kvs/] 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

Range overview VXP45..

Con-nect. thread	SSB.. Δp_{max} [kPa]	SSC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
G ½" B	400		10	0.25	BPZ:VXP45.10-0.25	**VXP45.10-0.25**
G ½" B	400		10	0.4	BPZ:VXP45.10-0.4	**VXP45.10-0.4**
G ½" B	400		10	0.63	BPZ:VXP45.10-0.63	**VXP45.10-0.63**
G ½" B	400		10	1	BPZ:VXP45.10-1	**VXP45.10-1**
G ½" B	400		10	1.6	BPZ:VXP45.10-1.6	**VXP45.10-1.6**
G ¾" B	350		15	2.5	BPZ:VXP45.15-2.5	**VXP45.15-2.5**
G 1" B	350		20	4	BPZ:VXP45.20-4	**VXP45.20-4**
G 1¼" B	300		25	6.3	BPZ:VXP45.25-6.3	**VXP45.25-6.3**
G 1½" B		300	25	10	BPZ:VXP45.25-10	**VXP45.25-10**
G 2" B		175	32	16	BPZ:VXP45.32-16	**VXP45.32-16**
G 2¼" B		75	40	25	BPZ:VXP45.40-25	**VXP45.40-25**

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

Combinable actuator for VXP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	150		N4891	BPZ:SSB31	**SSB31**
AC 24 DC 24	DC 0...10 V	75		N4891	BPZ:SSB61	**SSB61**
AC 24	3-position	150		N4891	BPZ:SSB81	**SSB81**
AC 230	3-position	150	No	N4895	BPZ:SSC31	**SSC31**
AC/DC 24	DC 0...10 V	30	No	N4895	BPZ:SSC61	**SSC61**
AC/DC 24	DC 0...10 V	30	Yes (15 s)	N4895	BPZ:SSC61.5	**SSC61.5**
AC 24	3-position	150	No	N4895	BPZ:SSC81	**SSC81**

3-port seat valves with bypass, PN16 VMP45..

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.
G ½" B	400	10	0.25	BPZ:VMP45.10-0.25	**VMP45.10-0.25**
G ½" B	400	10	0.4	BPZ:VMP45.10-0.4	**VMP45.10-0.4**
G ½" B	400	10	0.63	BPZ:VMP45.10-0.63	**VMP45.10-0.63**
G ½" B	400	10	1	BPZ:VMP45.10-1	**VMP45.10-1**
G ½" B	400	10	1.6	BPZ:VMP45.10-1.6	**VMP45.10-1.6**
G ¾" B	350	15	2.5	BPZ:VMP45.15-2.5	**VMP45.15-2.5**
G 1" B	350	20	4	BPZ:VMP45.20-4	**VMP45.20-4**

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.
AC 230	3-position	150	N4891	BPZ:SSB31	**SSB31**
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	**SSB61**
AC 24	3-position	150	N4891	BPZ:SSB81	**SSB81**

VXP47..

3-port 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.

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
Material, valve body	Red brass CC491K (Rg5)
PN class	PN 16
Characteristic	linear
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.
G ½" B	400	400	10	0.25	BPZ:VXP47.10-0.25	**VXP47.10-0.25**
G ½" B	400	250	10	0.4	BPZ:VXP47.10-0.4	**VXP47.10-0.4**
G ½" B	400	250	10	0.63	BPZ:VXP47.10-0.63	**VXP47.10-0.63**
G ½" B	400	250	10	1	BPZ:VXP47.10-1	**VXP47.10-1**
G ½" B	300	150	10	1.6	BPZ:VXP47.10-1.6	**VXP47.10-1.6**
G ¾" B	300	150	15	2.5	BPZ:VXP47.15-2.5	**VXP47.15-2.5**
G 1" B	175	100	20	4	BPZ:VXP47.20-4	**VXP47.20-4**

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

Combinable actuator for VXP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4865	BPZ:SFP21/18	**SFP21/18**
AC 24	2-position	10	N4865	BPZ:SFP71/18	**SFP71/18**
AC 230	3-position	150	N4864	BPZ:SSP31	**SSP31**
AC/DC 24	DC 0...10 V	34	N4864	BPZ:SSP61	**SSP61**
AC 24	3-position	150	N4864	BPZ:SSP81	**SSP81**

3-port seat valves with bypass, PN16

VMP47..

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
Material, valve body	Red brass CC491K (Rg5)
PN class	PN 16
Characteristic	linear
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} [m³/h]	Stock no.	Product no.
G ½" B	400	400	10	0.25	BPZ:VMP47.10-0.25	**VMP47.10-0.25**
G ½" B	400	400	10	0.4	BPZ:VMP47.10-0.4	**VMP47.10-0.4**
G ½" B	400	250	10	0.63	BPZ:VMP47.10-0.63	**VMP47.10-0.63**
G ½" B	400	250	10	0.63	BPZ:VMP47.10-0.63S	**VMP47.10-0.63S**
G ½" B	400	250	10	1	BPZ:VMP47.10-1	**VMP47.10-1**
G ½" B	300	150	10	1.6	BPZ:VMP47.10-1.6	**VMP47.10-1.6**
G ¾" B	300	150	15	2.5	BPZ:VMP47.15-2.5	**VMP47.15-2.5**
W 1⅛-14"	300	150	15	2.5	BPZ:VMP47.15-2.5S	**VMP47.15-2.5S**

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.
AC 230	2-position	10	N4865	BPZ:SFP21/18	**SFP21/18**
AC 24	2-position	10	N4865	BPZ:SFP71/18	**SFP71/18**
AC 230	3-position	150	N4864	BPZ:SSP31	**SSP31**
AC/DC 24	DC 0...10 V	34	N4864	BPZ:SSP61	**SSP61**
AC 24	3-position	150	N4864	BPZ:SSP81	**SSP81**

VXI46../2

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

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, valve body	Hot-pressed brass
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.
Rp 1"	200	140	25	5.5	S55249-V112	**VXI46.25T/2**
Rp ½"	300	200	15	2.15	S55249-V109	**VXI46.15/2**
Rp ¾"	300	200	20	3.5	S55249-V110	**VXI46.20/2**
Rp 1"	250	150	25	5	S55249-V111	**VXI46.25/2**

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

Combinable actuator for VXI46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4863	BPZ:SFA21/18	**SFA21/18**
AC 24	2-position	10	N4863	BPZ:SFA71/18	**SFA71/18**
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	**SUA21/3**
AC 230	2-position	210	N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210	N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270	N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270	N4884	S55174-A113	**STA73MP/00**

3-port seat valves PN16 with internally threaded connections

C/VXI41..

- With internally threaded connections Rp.. to ISO 7-1
- For chilled water, low pressure hot water in open and closed circuits

Data sheet	N4362
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value
Medium temperature	-25...150 °C
Valve characteristic	Throughport: equal-percentage Bypass: linear
Rangeability	DN 15: >50 DN 20...50: >100
Permissible operating pressure	1600 kPa
Material, valve body	Bronze CC491K (Rg5)
Material, inside set	CrNi Steel/ Rg 5 brass
PN class	PN 16
Warranty	5 Years
For customers in Asia / Australia	

Range overview C/VXI41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
Rp ½"	400	400	15	2.5	BPZ:C/VXI41.15-2.5	**C/VXI41.15-2.5**
Rp ½"	400	400	15	4	BPZ:C/VXI41.15-4	**C/VXI41.15-4**
Rp ¾"	400	400	20	6.3	BPZ:C/VXI41.20-6.3	**C/VXI41.20-6.3**
Rp 1"	400	400	25	10	BPZ:C/VXI41.25-10	**C/VXI41.25-10**
Rp 1¼"	400	400	32	16	BPZ:C/VXI41.32-16	**C/VXI41.32-16**
Rp 1½"	400	400	40	25	BPZ:C/VXI41.40-25	**C/VXI41.40-25**
Rp 2"	300	400	50	40	BPZ:C/VXI41.50-40	**C/VXI41.50-40**

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

Replacement sealing glands for C/VXI41..

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

Combinable actuator for C/VXI41..

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

Combinable actuator for C/VXI41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**

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} [m³/h]	Stock no.	Product no.
G 1" B	800	800	800	15	1.6	BPZ:VXG41.1301	**VXG41.1301**
G 1" B	800	800	800	15	2.5	BPZ:VXG41.1401	**VXG41.1401**
G 1" B	800	800	800	15	4	BPZ:VXG41.15	**VXG41.15**
G 1" B	800	800	800	15	4	VXG41.1501	**VXG41.1501**
G 1¼" B	800	800	800	20	6.3	BPZ:VXG41.20	**VXG41.20**
G 1¼" B	800	800	800	20	6.3	VXG41.2001	**VXG41.2001**
G 1½" B	800	800	800	25	10	BPZ:VXG41.25	**VXG41.25**
G 1½" B	800	800	800	25	10	VXG41.2501	**VXG41.2501**
G 2" B	800	800	800	32	16	BPZ:VXG41.32	**VXG41.32**
G 2" B	800	800	800	32	16	VXG41.3201	**VXG41.3201**
G 2¼" B	525	775	800	40	25	BPZ:VXG41.40	**VXG41.40**
G 2¼" B	525	775	800	40	25	VXG41.4001	**VXG41.4001**
G 2¾" B	300	450	800	50	40	BPZ:VXG41.50	**VXG41.50**
G 2¾" B	300	450	800	50	40	VXG41.5001	**VXG41.5001**

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.

Replacement sealing glands for VXG41..

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

Accessories for VXG41..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..3	**ALG..3**

Combinable actuator for VXG41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	no	N4501	S55150-A105	**SAX31.00**
AC 230	3-position	30	no	N4501	S55150-A106	**SAX31.03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	**SAX61.03**
AC/DC 24	Modbus RTU	30	No	N4501	S55150-A140	**SAX61.03/MO**
AC/DC 24	3-position	120	no	N4501	S55150-A102	**SAX81.00**
AC/DC 24	3-position	30	no	N4501	S55150-A103	**SAX81.03**
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	**SKD32.21**
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	**SKD32.50**
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	**SKD32.51**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	**SKD60**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	**SKD62**
AC 24	Modbus RTU	Open 30 Close 15	Yes	N4561	S55195-A129	**SKD62/MO**
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	**SKD62UA**
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	**SKD82.50**
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	**SKD82.51**
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	**SKB32.50**
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	**SKB32.51**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	**SKB60**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	**SKB62**
AC 24	Modbus RTU	Open 120 Close 10	Yes	N4564	S55195-A127	**SKB62/MO**
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	**SKB62UA**
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	**SKB82.50**
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	**SKB82.51**

3-port seat valves PN16 with externally threaded connections VXG44..

- 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.
G 1" B	400	15	0.25	BPZ:VXG44.15-0.25	**VXG44.15-0.25**
G 1" B	400	15	0.4	BPZ:VXG44.15-0.4	**VXG44.15-0.4**
G 1" B	400	15	0.63	BPZ:VXG44.15-0.63	**VXG44.15-0.63**
G 1" B	400	15	1	BPZ:VXG44.15-1	**VXG44.15-1**
G 1" B	400	15	1.6	BPZ:VXG44.15-1.6	**VXG44.15-1.6**
G 1" B	400	15	2.5	BPZ:VXG44.15-2.5	**VXG44.15-2.5**
G 1" B	400	15	4	BPZ:VXG44.15-4	**VXG44.15-4**
G 1¼" B	400	20	6.3	BPZ:VXG44.20-6.3	**VXG44.20-6.3**
G 1½" B	400	25	10	BPZ:VXG44.25-10	**VXG44.25-10**
G 2" B	250	32	16	BPZ:VXG44.32-16	**VXG44.32-16**
G 2¼" B	125	40	25	BPZ:VXG44.40-25	**VXG44.40-25**

Accessories for VXG44..

Product Title	Data sheet	Stock no.	Product no.
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.
AC 230	3-position	120	N4581	S55158-A106	**SAS31.00**
AC 230	3-position	30	N4581	S55158-A107	**SAS31.03**
AC 230	3-position	120	N4581	S55158-A108	**SAS31.50**
AC 230	3-position	30	N4581	S55158-A109	**SAS31.53**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A100	**SAS61.03**
AC/DC 24	Modbus RTU	30	N4581	S55158-A121	**SAS61.03/MO**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A101	**SAS61.33**
AC/DC 24	Modbus RTU	30	N4581	S55158-A122	**SAS61.33/MO**

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

Combinable actuator for VXG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A102	**SAS61.53**
AC/DC 24	3-position	120	N4581	S55158-A103	**SAS81.00**
AC/DC 24	3-position	30	N4581	S55158-A104	**SAS81.03**
AC/DC 24	3-position	30	N4581	S55158-A105	**SAS81.33**

Modulating control valves with magnetic actuator, PN16, external thread

MXG461..

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.
300	300	G 1" B	0.6	15	BPZ:MXG461.15-0.6	**MXG461.15-0.6**
300	300	G 1" B	1.5	15	BPZ:MXG461.15-1.5	**MXG461.15-1.5**
300	300	G 1" B	3	15	BPZ:MXG461.15-3.0	**MXG461.15-3.0**
300	300	G 1¼" B	5	20	BPZ:MXG461.20-5.0	**MXG461.20-5.0**
300	300	G 1½" B	8	25	BPZ:MXG461.25-8.0	**MXG461.25-8.0**
300	300	G 2" B	12	32	BPZ:MXG461.32-12	**MXG461.32-12**
300	300	G 2¼" B	20	40	BPZ:MXG461.40-20	**MXG461.40-20**
300	300	G 2¾" B	30	50	BPZ:MXG461.50-30	**MXG461.50-30**

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.
Replacement electronic for MXG461.., MXF461.. and MXG461S.., DN15...32	N4455	BPZ:ASE1	**ASE1**
Replacement electronic for MXG461.., MXF461.., DN40...65	N4455	BPZ:ASE2	**ASE2**
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	**SEZ91.6**
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	**ALG153**
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	**ALG203**

Accessories for MXG461..

Product Title	Data sheet	Stock no.	Product no.
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	**ALG253**
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	**ALG323**
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	**ALG403**
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	**ALG503**

Fittings: Set of 3

Product Title	Data sheet	Stock no.	Product no.
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	**ALG153**
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	**ALG203**
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	**ALG253**
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	**ALG323**
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	**ALG403**
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	**ALG503**

Modulating control valves with magnetic actuator, PN16, external thread, DVGW

MXG461B..

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
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	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.
1000	1000	G 1" B	0.6	15	BPZ:MXG461B15-0.6	**MXG461B15-0.6**
1000	1000	G 1" B	1.5	15	BPZ:MXG461B15-1.5	**MXG461B15-1.5**
1000	1000	G 1" B	3	15	BPZ:MXG461B15-3	**MXG461B15-3**
800	800	G 1¼" B	5	20	BPZ:MXG461B20-5	**MXG461B20-5**
700	700	G 1½" B	8	25	BPZ:MXG461B25-8	**MXG461B25-8**
600	600	G 2" B	12	32	BPZ:MXG461B32-12	**MXG461B32-12**
600	600	G 2¼" B	20	40	BPZ:MXG461B40-20	**MXG461B40-20**
600	600	G 2¾" B	30	50	BPZ:MXG461B50-30	**MXG461B50-30**

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.

Accessories for MXG461B..

Product Title	Data sheet	Stock no.	Product no.
Stem heating element for media temperatures 0 °C, 10 W, AC/DC 24 V		BPZ:Z366	**Z366**
Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		BPZ:ASE12	**ASE12**

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.
300	300	1.5	15	BPZ:MXG461S15-1.5	**MXG461S15-1.5**
300	300	5.0	20	BPZ:MXG461S20-5.0	**MXG461S20-5.0**
300	300	8.0	25	BPZ:MXG461S25-8.0	**MXG461S25-8.0**
300	300	12	32	BPZ:MXG461S32-12	**MXG461S32-12**

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.

Accessories for MXG461S..

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

MXG462S..

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

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.

MXG462S.. 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 valve, port B must be closed off with the cover supplied with the valve and a cap nut of the fitting.

Data sheet	N4466
PN class	PN 16
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 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	1600 kPa
Leakage rate	< 0.05 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	-20...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 MXG462S..

Δp_{max} [kPa]	Δp_s [kPa]	Con-nect. thread	k_{vs} [m³/h]	DN	Stock no.	Product no.
600	600	G 2¾" B	30	50	BPZ:MXG462S50-30	**MXG462S50-30**

Union fittings made of stainless steel must be delivered by thirds.
Δp_s for use as 2-port valve.
MXG462S.. valves with magnetic actuators are UL-listed.

Accessories for MXG462S..

Product Title	Data sheet	Stock no.	Product no.
Stem heating element for media temperatures 0 °C, 10 W, AC/DC 24 V		BPZ:Z366	**Z366**

Fittings, pipe-side with threaded connection

ALG..3

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.
G ¾ "	Rp ⅜	Malleable cast iron, phosphated	BPZ:ALG123	**ALG123**
G ½ "	R ⅜	Brass	BPZ:ALG133	**ALG133**
G ¾ "	R ½	Brass	BPZ:ALG143	**ALG143**
G 1 "	Rp ½	Malleable cast iron, phosphated	BPZ:ALG153	**ALG153**
G 1¼ "	Rp ¾	Malleable cast iron, phosphated	BPZ:ALG203	**ALG203**
G 1½ "	Rp 1	Malleable cast iron, phosphated	BPZ:ALG253	**ALG253**
G 2 "	Rp 1¼	Malleable cast iron, phosphated	BPZ:ALG323	**ALG323**
G 2¼ "	Rp 1½	Malleable cast iron, phosphated	BPZ:ALG403	**ALG403**
G 2¾ "	Rp 2	Malleable cast iron, phosphated	BPZ:ALG503	**ALG503**
G 1 "	Rp ½	Brass	S55846-Z101	**ALG153B**
G 1¼ "	Rp ¾	Brass	S55846-Z103	**ALG203B**
G 1½ "	Rp 1	Brass	S55846-Z105	**ALG253B**
G 2 "	Rp 1¼	Brass	S55846-Z107	**ALG323B**
G 2¼ "	Rp 1½	Brass	S55846-Z109	**ALG403B**
G 2¾ "	Rp 2	Brass	S55846-Z111	**ALG503B**

Fittings, pipeside with welding connection

ALS..

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.
21.3	G ¾	BPZ:ALS152	**ALS152**
26.8	G 1	BPZ:ALS202	**ALS202**
33.7	G 1¼	BPZ:ALS252	**ALS252**

Globe and pressure independent control valve (PICV)
Flanged pressure independent control valves

EVF..

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

- RS485 for Modbus RTU integration e.g. into Climatix
- 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
- 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 Modbus RTU
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
Control accuracy, volume flow	+/- 5 % (25...100 % V100)
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.
65	30	10	55			600	1600	S55300-M106	**EVF4U20E065**
80	48	16	80			600	1600	S55300-M107	**EVF4U20E080**
100	75	25	100	600	1600			S55300-M108	**EVF4U20E100**
125	120	40	142	600	1600			S55300-M109	**EVF4U20E125**

Accessories for EVF..

Product Title	Data sheet	Stock no.	Product no.
Control Valve Mounting Set PN16 for Intelligent Valve with flange connection	A6V11444716	BPZ:ALF4..	**ALF4..**
Pair of temperature sensors Pt1000, length 100 mm, ø 6 mm, type PL, cable length 2.5 m	A6V11444716	S55845-Z230	**EZU10-10025**
Pair of temperature sensors Pt1000, length 100 mm, ø 6 mm, type PL, cable length 6 m	A6V11444716	S55845-Z237	**EZU10-10060**
Wall mount socket for Intelligent Valve Controller Box ASE4U10E		S55845-Z234	**EZU-WA**
Spacer for mounting Intelligent Valve Controller Box ASE4U10E with a 25 mm distance on the flow sensor		S55845-Z236	**EZU-WB**
Ultrasonic Flow Sensor for Intelligent Valve, PN16, flanged connection	A6V11444716	BPZ:AVF4	**AVF4..**
Welding sleeve G ½", 45° to the pipe axis, with threaded hole G ½"		S55563-F122	**WZT-G12**
Welding sleeve G ½", 90° to the pipe axis, with threaded hole G ½"		LYU:WZT-GLG	**WZT-GLG**

Accessories for EXF..

Product Title	Data sheet	Stock no.	Product no.
Control Valve Mounting Set PN16 for Intelligent Valve with flange connection	A6V11444716	BPZ:ALF4..	**ALF4..**
Pair of temperature sensors Pt1000, length 100 mm, ø 6 mm, type PL, cable length 2.5 m	A6V11444716	S55845-Z230	**EZU10-10025**
Pair of temperature sensors Pt1000, length 100 mm, ø 6 mm, type PL, cable length 6 m	A6V11444716	S55845-Z237	**EZU10-10060**
Wall mount socket for Intelligent Valve Controller Box ASE4U10E		S55845-Z234	**EZU-WA**
Spacer for mounting Intelligent Valve Controller Box ASE4U10E with a 25 mm distance on the flow sensor		S55845-Z236	**EZU-WB**
Ultrasonic Flow Sensor for Intelligent Valve, PN16, flanged connection	A6V11444716	BPZ:AVF4	**AVF4..**
Welding sleeve G ½", 45° to the pipe axis, with threaded hole G ½"		S55563-F122	**WZT-G12**
Welding sleeve G ½", 90° to the pipe axis, with threaded hole G ½"		LYU:WZT-GLG	**WZT-GLG**

EXF..

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

- RS485 for Modbus RTU integration e.g. into Climatix
- 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 RS485 - Modbus RTU
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	+/- 5 % (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]	k_{vs} [m³/h]	SAX.. Δp_{max} [kPa]	Stock no.	Product no.
65	20	6	54	150	S55300-M117	**EXF4U20E065**
80	32	9.6	79	75	S55300-M118	**EXF4U20E080**
100	50	15	116	125	S55300-M119	**EXF4U20E100**

Pressure independent control valves (PICV) PN16 with flanged connections

VPF43..

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 Vmin [m³/h]	Vol. flow V [m³/h]	ΔP_{min} [kPa]	SAV..P Δp_{max} [kPa]	SAV..P Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
125	18.5	110	35	600	600	600	600	S55266-V108	**VPF43.125F110**
125	23	135	53	600	600	600	600	S55266-V109	**VPF43.125F135**
150	25.6	148	35	600	600	600	600	S55266-V110	**VPF43.150F160**
150	32	195	65	600	600	600	600	S55266-V111	**VPF43.150F200**
200	95	210	32	600	600	600	600	S55266-V148	**VPF43.200F210**
200	130	280	78	600	600	600	600	S55266-V149	**VPF43.200F280**

Further information to the actuators please see "Actuators for combi valves".
Check the datasheet for detailed dPmin values per presetting

VPF43../1

Pressure independent control 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	A6V11213406
Leakage rate	Class IV (0...0.01% of volumetric flow)
PN class	PN 16
Medium	Water Water with anti-freeze
Medium temperature	1...120 °C
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

For customer in Asia/Australia

Range overview VPF43../1

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	SAV..P Δp_{max} [kPa]	SAV..P Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
125	110	18.5	600	600	600	600	S55266-V128	**VPF43.125F110/1**
125	135	23	600	600	600	600	S55266-V134	**VPF43.125F135/1**
150	148	25.6	600	600	600	600	S55266-V129	**VPF43.150F160/1**
150	195	32	600	600	600	600	S55266-V135	**VPF43.150F200/1**

Accessories for VPF43..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VPF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	120	N4510	S55150-A121	**SAV31P00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	**SAV61P00**
AC/DC 24	Modbus RTU	120	N4510	S55150-A144	**SAV61P00/MO**

Combinable actuator for VPF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC/DC 24	3-position	120	N4510	S55150-A120	**SAV81P00**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	**SQV91P30**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	**SQV91P40**

Globe and pressure independent control valve (PICV)
Flanged pressure independent control valves

VPF44..

Pressure independent control valves (PICVs) PN16 with flanged connections

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

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 VPF44..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	ΔP_{min} [kPa]	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAX..P Δp_{max} [kPa]	SAX..P Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
50	14.3	3.7	25	600	700	600	700			600	700	S55266-V174	**VPF44.50F15**
50	24.6	5.7	55	600	700	600	700			600	700	S55266-V175	**VPF44.50F25**
65	24.4	4.5	32	600	700	600	700			600	700	S55266-V176	**VPF44.65F25**
65	37.7	6.4	50	600	700	600	700			600	700	S55266-V177	**VPF44.65F35**
80	35.7	6.8	22	600	700	600	700			600	700	S55266-V178	**VPF44.80F35**
80	49.9	8.5	40	600	700	600	700			600	700	S55266-V179	**VPF44.80F45**
100	69.6	12.2	33					600	700	600	700	S55266-V142	**VPF44.100F70**
100	90.9	14.8	45					600	700	600	700	S55266-V143	**VPF44.100F90**

Accessories for VPF44..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
DPR replacement for VPF44.100F70/VPF54.100F70		S55264-V161	**ALR100F70**
DPR replacement for VPF44.100F90/VPF54.100F90		S55264-V162	**ALR100F90**
DPR replacement for VPF44.50F15/VPF54.50F15		S55264-V155	**ALR50F15**
DPR replacement for VPF44.50F25/VPF54.50F25		S55264-V156	**ALR50F25**
DPR replacement for VPF44.65F25		S55264-V157	**ALR65F25-LP**
DPR replacement for VPF44.65F35		S55264-V158	**ALR65F35-LP**
DPR replacement for VPF44.80F35/VPF54.80F35		S55264-V159	**ALR80F35**
DPR replacement for VPF44.80F45/VPF54.80F45		S55264-V160	**ALR80F45**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VPF44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	30	N4509	S55150-A118	**SAX31P03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4509	S55150-A114	**SAX61P03**
AC/DC 24	Modbus RTU	30	N4509	S55150-A143	**SAX61P03/MO**
AC/DC 24	3-position	30	N4509	S55150-A116	**SAX81P03**
AC 230	3-position	120	N4510	S55150-A121	**SAV31P00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	**SAV61P00**
AC/DC 24	Modbus RTU	120	N4510	S55150-A144	**SAV61P00/MO**
AC/DC 24	3-position	120	N4510	S55150-A120	**SAV81P00**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	**SQV91P30**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	**SQV91P40**

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]	SAV..P Δp_{max} [kPa]	SAV..P Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
125	18.5	110	35	600	600	600	600	S55266-V120	**VPF53.125F110**
125	23	135	53	600	600	600	600	S55266-V121	**VPF53.125F135**
150	25.6	148	35	600	600	600	600	S55266-V122	**VPF53.150F160**
150	32	195	65	600	600	600	600	S55266-V123	**VPF53.150F200**
200	95		32	600	600	600	600	S55266-V150	**VPF53.200F210**
200	130		78	600	600	600	600	S55266-V151	**VPF53.200F280**

Further information to the actuators please see "Actuators for combi valves".
Check the datasheet for detailed dPmin values per presetting

Accessories for VPF53..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VPF53..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	120	N4510	S55150-A121	**SAV31P00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	**SAV61P00**
AC/DC 24	Modbus RTU	120	N4510	S55150-A144	**SAV61P00/MO**
AC/DC 24	3-position	120	N4510	S55150-A120	**SAV81P00**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	**SQV91P30**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	**SQV91P40**

Pressure independent control valves (PICVs) PN25 with flanged connections

VPF54..

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

Data sheet	A6V12273951
Leakage rate	Class IV (0...0.01% of volumetric flow)
Medium	Water Water with anti-freeze
Medium temperature	1...120 °C
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 VPF54..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	ΔP_{min} [kPa]	SAX..P Δp_{max} [kPa]	SAX..P Δp_s [kPa]	SAV..P Δp_{max} [kPa]	SAV..P Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
50	14.3	3.7	25	600	700			600	700	S55266-V152	**VPF54.50F15**
50	24.6	5.7	55	600	700			600	700	S55266-V153	**VPF54.50F25**
65	24.4	4.5	32	600	700			600	700	S55266-V154	**VPF54.65F25**
65	37.7	6.4	50	600	700			600	700	S55266-V155	**VPF54.65F35**
80	35.7	6.8	22	600	700			600	700	S55266-V156	**VPF54.80F35**
80	49.9	8.5	40	600	700			600	700	S55266-V157	**VPF54.80F45**
100	69.6	12.2	33			600	700	600	700	S55266-V158	**VPF54.100F70**
100	90.9	14.8	45			600	700	600	700	S55266-V159	**VPF54.100F90**

Accessories for VPF54..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
DPR replacement for VPF44.100F70/VPF54.100F70		S55264-V161	**ALR100F70**
DPR replacement for VPF44.100F90/VPF54.100F90		S55264-V162	**ALR100F90**
DPR replacement for VPF44.50F15/VPF54.50F15		S55264-V155	**ALR50F15**
DPR replacement for VPF44.50F25/VPF54.50F25		S55264-V156	**ALR50F25**
DPR replacement for VPF54.65F25		S55264-V163	**ALR65F25-HP**
DPR replacement for VPF44.65F25		S55264-V157	**ALR65F25-LP**
DPR replacement for VPF54.65F35		S55264-V164	**ALR65F35-HP**
DPR replacement for VPF44.65F35		S55264-V158	**ALR65F35-LP**
DPR replacement for VPF44.80F35/VPF54.80F35		S55264-V159	**ALR80F35**
DPR replacement for VPF44.80F45/VPF54.80F45		S55264-V160	**ALR80F45**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

New Product

Combinable actuator for VPF54..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	30	N4509	S55150-A118	**SAX31P03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4509	S55150-A114	**SAX61P03**
AC/DC 24	Modbus RTU	30	N4509	S55150-A143	**SAX61P03/MO**
AC/DC 24	3-position	30	N4509	S55150-A116	**SAX81P03**
AC 230	3-position	120	N4510	S55150-A121	**SAV31P00**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	**SAV61P00**
AC/DC 24	Modbus RTU	120	N4510	S55150-A144	**SAV61P00/MO**
AC/DC 24	3-position	120	N4510	S55150-A120	**SAV81P00**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	**SQV91P30**
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	**SQV91P40**

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

EVG..

- RS485 for Modbus RTU integration e.g. into Climatix
- 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 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 RS485 - Modbus RTU
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
Δp_{max}	600 kPa
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 5 % (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]	k_{vs} [m³/h]	GLA.. Δp_{max} [kPa]	GLA.. Δp_s [kPa]	Stock no.	Product no.
15	1.5	0.45	3.7	600	1400	S55300-M100	**EVG4U10E015**
20	3	0.9	5	600	1400	S55300-M101	**EVG4U10E020**
25	4.5	1.35	10	600	1400	S55300-M102	**EVG4U10E025**

Globe and pressure independent control valve (PICV)
Threaded pressure independent control valves

Range overview EVG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k_{vs} [m³/h]	GLA.. Δp_{max} [kPa]	GLA.. Δp_s [kPa]	Stock no.	Product no.
32	7	2.1	11	600	1000	S55300-M103	**EVG4U10E032**
40	11.5	3.5	26	600	800	S55300-M104	**EVG4U10E040**
50	18	5.4	30	600	600	S55300-M105	**EVG4U10E050**

Accessories for EVG..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	**ALG..2**
Control valve section PN16 for Intelligent Valve EVG4U10.. for line sizes DN 15...50 with outside threaded connection	A6V11444716	BPZ:AVG4..	**AVG4..VAG**
Protection pocket G ¼ B, M10x1, brass, Ø 5.2x40 mm, for temperature sensor Ø 5.2x26 mm	A6V11444716	S55845-Z231	**EZT-M40**
Pair of temperature sensors Pt1000, length 26.5 mm, ø 5.2 mm, type DS, with screw connector M10 × 1, cable length 1.5 m	A6V11444716	S55845-Z229	**EZU10-2615**
Wall mount socket for Intelligent Valve Controller Box ASE4U10E		S55845-Z234	**EZU-WA**
Spacer for mounting Intelligent Valve Controller Box ASE4U10E with a 25 mm distance on the flow sensor		S55845-Z236	**EZU-WB**
Ball valve Rp ½" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		S55563-F104	**WZT-K12**
Ball valve Rp ¾" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm		S55563-F120	**WZT-K34**
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		S55563-F119	**WZT-K1**
Welding sleeve with threaded hole for temperature sensor DS M10×1 mm		S55563-F121	**WZT-G10**
Strainer, inside threaded		BPZ:ALX..	**ALX..**
Insulation covers for ball valves		BPZ:ALI..	**ALI..**

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

EXG..

- RS485 for Modbus RTU integration e.g. into Climatix
- 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 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 RS485 - Modbus RTU
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
Δp_{max}	200 kPa
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 5 % (25...100 % V100)
Rangeability	1:100
Leakage rate	"Watertight" as per EN 60534-4 L/1, better than class 4 Bypass:
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
Packaging unit	Unit
Warranty	5 Years

Range overview EXG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k_{vs} [m³/h]	GLA.. Δp_{max} [kPa]	Stock no.	Product no.

Globe and pressure independent control valve (PICV)
Threaded pressure independent control valves

Range overview EXG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k_{vs} [m³/h]	GLA.. Δp_{max} [kPa]	Stock no.	Product no.
15	1.2	0.36	3.7	200	S55300-M111	**EXG4U10E015**
20	2	0.6	4	200	S55300-M112	**EXG4U10E020**
25	3.2	0.96	8	200	S55300-M113	**EXG4U10E025**
32	5	1.5	10	200	S55300-M114	**EXG4U10E032**
40	8	2.4	18	200	S55300-M115	**EXG4U10E040**
50	12	3.6	26	200	S55300-M116	**EXG4U10E050**

Accessories for EXG..

Product Title	Data sheet	Stock no.	Product no.
Protection pocket G ¼ B, M10x1, brass, Ø 5.2x40 mm, for temperature sensor Ø 5.2x26 mm	A6V11444716	S55845-Z231	**EZT-M40**
Pair of temperature sensors Pt1000, length 26.5 mm, ø 5.2 mm, type DS, with screw connector M10 × 1, cable length 1.5 m	A6V11444716	S55845-Z229	**EZU10-2615**
Wall mount socket for Intelligent Valve Controller Box ASE4U10E		S55845-Z234	**EZU-WA**
Spacer for mounting Intelligent Valve Controller Box ASE4U10E with a 25 mm distance on the flow sensor		S55845-Z236	**EZU-WB**
Ball valve Rp ½" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		S55563-F104	**WZT-K12**
Ball valve Rp ¾" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm		S55563-F120	**WZT-K34**
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		S55563-F119	**WZT-K1**
Welding sleeve with threaded hole for temperature sensor DS M10×1 mm		S55563-F121	**WZT-G10**
Strainer, inside threaded		BPZ:ALX..	**ALX..**
Insulation covers for ball valves		BPZ:ALI..	**ALI..**
Control valve section 3-Port PN16 for Intelligent Valve EXG4U10.. for line sizes DN 15...50 with outside threaded connection	A6V11444716	BPZ:AVG4..VBG	**AVG4..VBG**

2-port seat MiniCombiValves (PICV) VPD..

Combivalves 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.
10	Rp/R ⅜"	45	0.05	5	200	6	BPZ:VPD110A-45	**VPD110A-45**
10	Rp/R ⅜"	90	0.09	5	200	8	BPZ:VPD110A-90	**VPD110A-90**
10	Rp/R ⅜"	145	0.15	5	200	10	BPZ:VPD110A-145	**VPD110A-145**
15	Rp/R ½"	90	0.09	5	200	8	BPZ:VPD115A-90	**VPD115A-90**
15	Rp/R ½"	200	0.2	10	200	20	BPZ:VPD115B-200	**VPD115B-200**

VPE..

Angle MiniCombiValves (PICV)

Combivalves 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	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.
10	Rp/R ⅜"	45	0.05	5	200	6	BPZ:VPE110A-45	**VPE110A-45**
10	Rp/R ⅜"	90	0.09	5	200	8	BPZ:VPE110A-90	**VPE110A-90**
10	Rp/R ⅜"	145	0.15	5	200	10	BPZ:VPE110A-145	**VPE110A-145**
15	Rp/R ½"	45	0.05	5	200	6	BPZ:VPE115A-45	**VPE115A-45**
15	Rp/R ½"	90	0.09	5	200	8	BPZ:VPE115A-90	**VPE115A-90**
15	Rp/R ½"	145	0.15	5	200	10	BPZ:VPE115A-145	**VPE115A-145**
10	Rp/R ⅜"	200	0.2	10	200	20	BPZ:VPE110B-200	**VPE110B-200**
15	Rp/R ½"	200	0.2	10	200	20	BPZ:VPE115B-200	**VPE115B-200**

Combinable actuator for VPD.. / VPE..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
				N2111	BPZ:RTN51	**RTN51**
				N4211	BPZ:RTN51G	**RTN51G**
				N2111	BPZ:RTN71	**RTN71**
				N2111	BPZ:RTN81	**RTN81**
DC 21...30 24		50/100	1.5	A6V11858280	S55180-A111	**SSA118.09HKN**
AC 230	3-position	150	1.5	N4893	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	67.5	1.5	A6V11858276	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	25	1.5	A6V11858278	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858276	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	25	1.5	A6V11858278	S55180-A109	**SSA161E.05HF**
AC 230	3-position	67.5	1.5	A6V11858276	S55180-A105	**SSA331.00**

Combinable actuator for VPD.. / VPE..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
AC 230	2-position	210		N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210		N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	**STA73MP/00**

Seal insertion for VPD.. and VPE.. MiniCombiValves (MCV) AV100-VP1

Valve insert for use with all types of valves of the VPD.. and VPE.. ranges.

Data sheet	N2100
Warranty	2 Years

Stock no.	Product no.
BPZ:AV100-VP1	**AV100-VP1**

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	Con-nect. thread	Vol. flow V [l/h]	Vol. flow Vmin [l/h]	STA..3.. Δp_{max} [kPa]	STA..3.. ΔP_{min} [kPa]	SSA.. Δp_{max} [kPa]	SSA.. ΔP_{min} [kPa]	Stock no.	Product no.
10	G ½"	200	30	600	16	600	16	S55264-V101	**VPP46.10L0.2**
10	G ½"	200	30	600	16	600	16	S55264-V105	**VPP46.10L0.2Q**
10	G ½"	370	65	600	17	600	17	S55264-V131	**VPP46.10L0.4**
10	G ½"	370	65	600	17	600	17	S55264-V132	**VPP46.10L0.4Q**
15	G ¾"	200	30	600	16	600	16	S55264-V102	**VPP46.15L0.2**
15	G ¾"	200	30	600	16	600	16	S55264-V106	**VPP46.15L0.2Q**
15	G ¾"	575	100	600	19	600	19	S55264-V103	**VPP46.15L0.6**
15	G ¾"	575	100	600	19	600	19	S55264-V107	**VPP46.15L0.6Q**
20	G 1"	1330	220	600	21	600	22	S55264-V104	**VPP46.20F1.4**
20	G 1"	1330	220	600	21	600	22	S55264-V108	**VPP46.20F1.4Q**
25	G 1¼"	1800	280	600	39	600	39	S55264-V121	**VPP46.25F1.8**
25	G 1¼"	1800	280	600	39	600	39	S55264-V123	**VPP46.25F1.8Q**
32	G 1½"	4000	550	600	24	600	28	S55264-V122	**VPP46.32F4**
32	G 1½"	4000	550	600	24	600	28	S55264-V124	**VPP46.32F4Q**

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 dPmin values per presetting

Accessories for VPP46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
Black spare valve protection cap (set of 2 pieces)	A6V11877580	S55264-V153	**ALP53**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**

Accessories for VPP46..

Product Title	Data sheet	Stock no.	Product no.
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VPP46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 230	3-position	150 s	N4893	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	150 s	N4893	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	67.5 s	A6V11858276	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	25 s	A6V11858278	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	25 s	A6V11858276	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	25 s	A6V11858278	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	25 s	A6V11858278	S55180-A109	**SSA161E.05HF**
AC 230	3-position	67.5 s	A6V11858276	S55180-A105	**SSA331.00**
AC 230	2-position (SPST)	50 Hz:10 s 60 Hz:8.3 s	A6V10446174	S55176-A104	**SUA21/3**
AC 230	2-position (SPST)	10 s at 50 Hz 8.3 s at 60 Hz	A6V11780780	S55176-A105	**SUA21/3P**
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	**SUE21P**
AC 230	2-position	210 s	N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210 s	N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	**STA73MP/00**

VPI46..

Combi valves (PICV) PN25, internally threaded

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 Vmin [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.
15	Rp ½"	200	30	600	16	600	16	600	16			S55264-V109	**VPI46.15L0.2**
15	Rp ½"	200	30	600	16	600	16	600	16			S55264-V112	**VPI46.15L0.2Q**
15	Rp ½"	575	100	600	19	600	19	600	19			S55264-V110	**VPI46.15L0.6**
15	Rp ½"	575	100	600	19	600	19	600	19			S55264-V113	**VPI46.15L0.6Q**
20	Rp ¾"	1330	220			600	22	600	21			S55264-V111	**VPI46.20F1.4**
20	Rp ¾"	1330	220			600	22	600	21			S55264-V114	**VPI46.20F1.4Q**
25	Rp 1"	1800	280			600	39	600	39			S55264-V125	**VPI46.25F1.8**
25	Rp 1"	1800	280			600	39	600	39			S55264-V127	**VPI46.25F1.8Q**
32	Rp 1¼"	4000	550			600	28	600	24			S55264-V126	**VPI46.32F4**
32	Rp 1¼"	4000	550			600	28	600	24			S55264-V128	**VPI46.32F4Q**
40	Rp 1½"	9500	1370							600	25	S55264-V129	**VPI46.40F9.5Q**
50	Rp ½"	11500	1400							600	36	S55264-V130	**VPI46.50F12Q**

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 dPmin values per presetting

Accessories for VPI46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
Black spare valve protection cap (set of 2 pieces)	A6V11877580	S55264-V153	**ALP53**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**

Accessories for VPI46..

Product Title	Data sheet	Stock no.	Product no.
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VPI46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 230	3-position	150 s	N4893	BPZ:SSA31.1	**SSA31.1**
AC 24	3-position	150 s	N4893	BPZ:SSA81.1	**SSA81.1**
AC 24	3-position	67.5 s	A6V11858276	S55180-A106	**SSA131.00**
AC 24 DC 24	4...20 mA	25 s	A6V11858278	S55180-A110	**SSA151.05HF**
AC 24 DC 24	DC 0...10 V	25 s	A6V11858276	S55180-A107	**SSA161.05**
AC 24 DC 24	DC 0...10 V	25 s	A6V11858278	S55180-A108	**SSA161.05HF**
AC 24 DC 24	DC 0...10 V	25 s	A6V11858278	S55180-A109	**SSA161E.05HF**
AC 230	3-position	67.5 s	A6V11858276	S55180-A105	**SSA331.00**
AC 230	2-position (SPST)	50 Hz:10 s 60 Hz:8.3 s	A6V10446174	S55176-A104	**SUA21/3**
AC 230	2-position (SPST)	10 s at 50 Hz 8.3 s at 60 Hz	A6V11780780	S55176-A105	**SUA21/3P**
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	**SUE21P**
AC 230	2-position	210 s	N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210 s	N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	**STA73MP/00**
AC 230	3-position	30 s	A6V10628469	S55150-A132	**SAY31P03**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30 s	A6V10628469	S55150-A133	**SAY61P03**
AC/DC 24	3-position	30 s	A6V10628469	S55150-A134	**SAY81P03**

Globe and pressure independent control valve (PICV)
Threaded pressure independent control valves

VQP46..

On/Off PICV, PN 25, externally threaded

Presettable 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	Con-nect. thread	Vol. flow V [l/h]	Vol. flow Vmin [l/h]	STA..3.. Δp_{max} [kPa]	STA..3.. ΔP_{min} [kPa]	SUE..P Δp_{max} [kPa]	SUE..P ΔP_{min} [kPa]	Stock no.	Product no.
10	G ½"	520	30	600	30	600	30	S55264-V134	**VQP46.10L0.5**
10	G ½"	520	30	600	30	600	30	S55264-V133	**VQP46.10L0.5Q**
15	G ¾"	1300	300	600	28	600	28	S55264-V142	**VQP46.15F1.3**
15	G ¾"	1300	300	600	28	600	28	S55264-V141	**VQP46.15F1.3Q**
15	G ¾"	520	30	600	28	600	28	S55264-V138	**VQP46.15L0.5**
15	G ¾"	520	30	600	28	600	28	S55264-V137	**VQP46.15L0.5Q**
20	G 1"	1500	320	600	35	600	35	S55264-V146	**VQP46.20F1.5**
20	G 1"	1500	320	600	35	600	35	S55264-V145	**VQP46.20F1.5Q**
25	G 1¼"	1800	620	600	31	600	31	S55264-V150	**VQP46.25F1.8**
25	G 1¼"	1800	620	600	31	600	31	S55264-V149	**VQP46.25F1.8Q**

Accessories for VQP46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
Black spare valve protection cap (set of 2 pieces)	A6V11877580	S55264-V153	**ALP53**
DPR Replacement-Tool VQI46../VQP46..	A6V11877580	S55264-V154	**ALP54**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VQP46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	**SUE21P**
AC 230	2-position	210 s	N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210 s	N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	**STA73MP/00**

Globe and pressure independent control valve (PICV)
Threaded pressure independent control valves

VQI46..

On/Off PICV, PN 25, internally threaded

Presettable PICVs, PN 25, internally threaded for
- ventilation and air conditioning systems for waterside 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

Range overview VQI46..

DN	Con-nect. thread	Vol. flow V [l/h]	Vol. flow Vmin [l/h]	STA..3.. Δp_{max} [kPa]	STA..3.. ΔP_{min} [kPa]	SUE..P Δp_{max} [kPa]	SUE..P ΔP_{min} [kPa]	Stock no.	Product no.
15	Rp ½"	520	30	600	28	600	28	S55264-V136	**VQI46.15L0.5**
15	Rp ½"	520	30	600	28	600	28	S55264-V135	**VQI46.15L0.5Q**
15	Rp ½"	1300	300	600	28	600	28	S55264-V140	**VQI46.15F1.3**
15	Rp ½"	1300	300	600	28	600	28	S55264-V139	**VQI46.15F1.3Q**
20	Rp ¾"	1500	320	600	35	600	35	S55264-V144	**VQI46.20F1.5**
20	Rp ¾"	1500	320	600	35	600	35	S55264-V143	**VQI46.20F1.5Q**
25	G 1¼"	1800	620	600	31	600	31	S55264-V148	**VQI46.25F1.8**
25	Rp 1"	1800	620	600	31	600	31	S55264-V147	**VQI46.25F1.8Q**

Accessories for VQI46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	**ALE10**
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	**ALE11**
Spare nipples for VPI45.., set of 2, for VPI45..	CE1N4853	BPZ:ALP45	**ALP45**
Black spare valve protection cap (set of 2 pieces)	A6V11877580	S55264-V153	**ALP53**
DPR Replacement-Tool VQI46../VQP46..	A6V11877580	S55264-V154	**ALP54**
Blanking plug for P/T ports	CE1N4853	S55264-V115	**ALP46**
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	**ALP47**
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	**ALP48**
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	**ALP49**

Combinable actuator for VQI46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	**SUE21P**
AC 230	2-position	210 s	N4884	S55174-A118	**STA23B/00**
AC 230	2-position	210 s	N4884	S55174-A114	**STA23MP/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	**STA73B/00**
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	**STA73MP/00**

GQD..9A

Rotary actuators 2 Nm with spring return for ball valves

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]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24 DC 24	2-position	6.5 VA 4.5 W	0	Yes	0.9	BPZ:GQD121.9A	**GQD121.9A**
AC 24 DC 24	3-position	4 VA 2.5 W	0	Yes	0.9	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	4.5 VA 3 W	0	Yes	0.9	BPZ:GQD161.9A	**GQD161.9A**
AC 230	2-position	10 VA 4.5 W	0	Yes	0.9	BPZ:GQD321.9A	**GQD321.9A**

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

GSD..9A

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]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC/DC 24	On-Off (2 wire SPDT)	2 VA 1.5 W	0	No	0.9	BPZ:GSD141.9A	**GSD141.9A**
AC/DC 24	DC 0/2..10 V	2.4 VA 1.4 W	0	No	0.9	S55499-D232	**GSD161.9A**
AC 230	On-Off (2 wire SPDT)	12 VA 2 W	0	No	0.9	BPZ:GSD341.9A	**GSD341.9A**

GDB..9E

Electromotoric rotary actuators 5 Nm without spring return for ball valves

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

For customers in Asia / Australia please choose S55499-D383; S55499-D384; D55499-D397

Range overview GDB..9E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC/DC 24	2-position/3-position	2 VA 1 W	0	No	0.9	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	3 VA 1.5 W	0	No	0.9	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	5 VA 1.6 W	0	No	0.9	S55499-D384	**GDB341.9E**
AC/DC 24	2-position/3-position	2 VA 1 W	0	No	0.9	S55499-D200	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	3 VA 1.5 W	0	No	0.9	S55499-D275	**GDB161.9E**
AC 100...240	2-position/3-position	5 VA 1.6 W	0	No	0.9	S55499-D201	**GDB341.9E**
AC 24	KNX S-Mode or KNX PL-Link	3 VA 2.5 W	0	No	0.9	S55499-D203	**GDB111.9E/KN**
AC 24	Modbus RTU	3 VA 2.5 W	0	No	0.9	S55499-D202	**GDB111.9E/MO**
AC/DC 24	Modbus RTU	3 VA 2.5 W	0	No	0.9	S55499-D682	**GDB161.9E/MO**

New Product

Rotary actuators 7 Nm with spring return for ball valves

GMA..9E

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]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24 DC 24	2-position	5 VA 3.5 W	0	Yes	0.9	BPZ:GMA121.9E	**GMA121.9E**
AC 24 DC 24	2-position	5 VA 3.5 W	0	Yes	5	S55499-D680	**GMA121.9H**
AC 24 DC 24	3-position	5 VA 3.5 W	0	Yes	0.9	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	5 VA 3.5 W	0	Yes	0.9	BPZ:GMA161.9E	**GMA161.9E**
AC 24 DC 24	DC 0...10 V	5 VA 3.5 W	0	Yes	5	S55499-D679	**GMA161.9H**
AC 24 DC 24	Modbus RTU	5 VA 3.5 W	0	Yes	0.9	S55499-D683	**GMA161.9E/MO**
AC 230 DC 24	2-position	7 VA 4.5 W	0	Yes	0.9	BPZ:GMA321.9E	**GMA321.9E**

Rotary actuators for ball valves

GLD..9E

- For 2-port and 3-port control ball valves, internally threaded connections or externally threaded connections
- Connection cable 0.9 m

Data sheet	A6V11171770
Torque	8 Nm
Positioning time	30 s
Degree of protection	IP54
Dimensions (W x H x D)	101.2 x 112.4 x 143.2 mm
Warranty	5 Years

Range overview GLD..9E

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24 DC 24	DC 0/2...10 V	4.9 VA 1.8 W	No	0.9	S55499-D278	**GLD161.9E**
AC 24 DC 24	Modbus RTU	4.9 VA 1.8 W	No	0.9	S55499-D695	**GLD161.9E/MO**

New Product

GLB..9E

Electromotoric rotary actuators 10 Nm without spring return for ball valves

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

For customers in Asia / Australia please choose S55499-D391; S55499-D392; D55499-D402

Range overview GLB..9E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC/DC 24	2-position/3-position	3 VA 1.3 W	0	No	0.9	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	2.5 VA 1.5 W	0	No	0.9	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	5.8 VA 1.9 W	0	No	0.9	S55499-D392	**GLB341.9E**
AC/DC 24	2-position/3-position	3 VA 1.3 W	0	No	0.9	S55499-D204	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	2.5 VA 1.5 W	0	No	0.9	S55499-D277	**GLB161.9E**
AC 230	2-position/3-position	5.8 VA 1.9 W	0	No	0.9	S55499-D205	**GLB341.9E**
AC 24	KNX S-Mode or KNX PL-Link	3 VA 2.5 W	0	No	0.9	S55499-D207	**GLB111.9E/KN**
AC 24	Modbus RTU	3 VA 2.5 W	0	No	0.9	S55499-D206	**GLB111.9E/MO**
AC/DC 24	Modbus RTU	2.5 VA 1.5 W	0	No	0.9	S55499-D681	**GLB161.9E/MO**

New Product

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 m²
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]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24 DC 24...48	2-position/3-position	2.3 VA 1.1 W	0	No	0.9	S55499-D329	**GEB141.1E**
AC 24 DC 24...48	2-position/3-position	2.3 VA 1.1 W	0		0.9	S55499-D330	**GEB142.1E**
AC 24 DC 24...48	2-position/3-position	2.3 VA 1.1 W	2		0.9	S55499-D331	**GEB146.1E**
AC 24 DC 24...48	DC 0/2...10 V	2.5 VA 1.2 W	0	No	0.9	S55499-D332	**GEB161.1E**
AC/DC 24	Modbus RTU	2.8 VA 1.7 W Holding: 0.7 W	0	No	0.9	S55499-D663	**GEB161.1E/MO**
AC 24 DC 24...48	DC 0...35 V	2.5 VA 1.2 W	0		0.9	S55499-D333	**GEB163.1E**
AC 24 DC 24...48	DC 0...35 V	2.5 VA 1.2 W	2		0.9	S55499-D334	**GEB164.1E**
AC 24 DC 24...48	DC 0/2...10 V	2.5 VA 1.2 W	2		0.9	S55499-D335	**GEB166.1E**
AC 100...240	2-position/3-position	4 VA 1.6 W	0	No	0.9	S55499-D336	**GEB341.1E**
AC 100...240	2-position/3-position	4 VA 1.6 W	2		0.9	S55499-D337	**GEB346.1E**
AC 100...240	DC 0/2...10 V	3.4 VA 1.3 W	0		0.9	S55499-D338	**GEB361.1E**

Type GEB142.1E has a feedback potentiometer.

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 m²
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]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24	3-position	7 VA 7 W	0	No	0.9	BPZ:GIB131.1E	**GIB131.1E**
AC 24	3-position	7 VA 7 W	2		0.9	BPZ:GIB135.1E	**GIB135.1E**
AC 24	3-position	7 VA 7 W	2		0.9	BPZ:GIB136.1E	**GIB136.1E**
AC 24	DC 0...10 V	8 VA 8 W	0	No	0.9	BPZ:GIB161.1E	**GIB161.1E**
AC 24	Modbus RTU	8 VA 8 W	0		0.9	S55499-D299	**GIB161.1E/MO**
AC 24	DC 0...35 V Adjustable	8 VA 8 W	0		0.9	BPZ:GIB163.1E	**GIB163.1E**
AC 24	DC 0...35 V Adjustable	8 VA 8 W	2		0.9	BPZ:GIB164.1E	**GIB164.1E**
AC 24	DC 0...10 V	8 VA 8 W	2		0.9	BPZ:GIB166.1E	**GIB166.1E**
AC 230	3-position	5 VA 5 W	0	No	0.9	BPZ:GIB331.1E	**GIB331.1E**
AC 230	3-position	5 VA 5 W	2		0.9	BPZ:GIB335.1E	**GIB335.1E**
AC 230	3-position	5 VA 5 W	2		0.9	BPZ:GIB336.1E	**GIB336.1E**

Types GIB135.1E and 335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Accessories for GIB..1E

Product Title	Data sheet	Stock no.	Product no.
Standard Shaft Adapter, GM		S55859-Z117	**ASK71.06**
Shaft adapter, GM, square, 12mm		S55859-Z109	**ASK74.18**
Shaft adapter, GM, square, 10mm		S55859-Z110	**ASK74.19**
Shaft adapter, GM, square, 8mm		S55859-Z111	**ASK74.20**
Accessory Kit, GIB/GBB/GCA		S55859-Z102	**ASK71.02**
Mounting Bracket, GM		S55859-Z114	**ASK71.03**

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]	Positioning signal	Power consumption [VA]	Auxiliary switch	Positioning time [s]	Torque [Nm]	Stock no.	Product no.
AC 230	3-position	3.5	0	120	10	S55162-A108	**SAL31.00T10**
AC 230	3-position	5.5	0	30	10	S55162-A121	**SAL31.03T10/F05**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	7.5	0	30	10	S55162-A123	**SAL61.03T10/F05** **SAL81.03T10/F05**
AC/DC 24	3-position	5	0	30	10	S55162-A122	
AC 230	3-position	5.5	0	30	10	S55162-A109	**SAL31.03T10**
AC 230	3-position	4.5	0	120	20	S55162-A110	**SAL31.00T20**
AC 230	3-position	7	0	120	40	S55162-A111	**SAL31.00T40**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	5	0	120	10	S55162-A100	**SAL61.00T10**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	7.5	0	30	10	S55162-A101	**SAL61.03T10**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	6	0	120	20	S55162-A102	**SAL61.00T20**
AC/DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	9	0	120	40	S55162-A103	**SAL61.00T40**
AC/DC 24	3-position	3	0	120	10	S55162-A104	**SAL81.00T10**
AC/DC 24	3-position	5	0	30	10	S55162-A105	**SAL81.03T10**
AC/DC 24	3-position	4	0	120	20	S55162-A106	**SAL81.00T20**
AC/DC 24	3-position	6	0	120	40	S55162-A107	**SAL81.00T40**

New Product

Accessories for SAL..

Product Title	Data sheet	Stock no.	Product no.
SparePart-Kit SAL...	N4502	BPZ:8000060844	**8000060844**
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	**ASC10.51**
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	**ASZ7.5/1000**
Funtion module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	**AZX61.1**
Weathershield for SAX../SAL..	N4501	S55845-Z109	**ASK39.1**

Mounting sets for SAL..

Product Title	Data sheet	Stock no.	Product no.
Mounting set for SAL..T10 onto VBF21.., DN65..150 with ASK31N	N4502	S55845-Z100	**ASK31N**
Mounting set for SAL..T10 onto VBF21.., DN40..50 with ASK32N	N4502	S55845-Z211	**ASK32N**
Mounting set for SAL.. onto VKF41..	N4502	S55845-Z101	**ASK33N**
Mounting set for SAL.. onto VKF45..	N4502	S55845-Z102	**ASK35N**

Electromotoric actuators 40...1200 Nm for butterfly valves SQL36..

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]	Positioning signal	Power consumption [VA]	Positioning time [s]	Torque [Nm]	Stock no.	Product no.
AC 230	3-position	25	25	40	BPZ:SQL36E50F04	**SQL36E50F04**
AC 230	3-position	25	25	40	BPZ:SQL36E50F05	**SQL36E50F05**
AC 230	3-position	166	6	100	BPZ:SQL36E65	**SQL36E65**
AC 230	3-position	235	12	400	BPZ:SQL36E110	**SQL36E110**
AC 230	3-position	235	24	1200	BPZ:SQL36E160	**SQL36E160**

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.
Double auxiliary switch for SQL36E	N4505	BPZ:ASC36	**ASC36**
Potentiometer 1000 Ohm for SQL36E..	N4505	BPZ:ASZ36	**ASZ36**
Auxiliary module, variable positioning time for SQL36E..	N4505	BPZ:SEZ31.1	**SEZ31.1**

SQL..B..

Electromotoric actuators 25...2650 Nm for butterfly valves VKF42..

Electromotoric actuator for operation of VKF42.. butterfly valves as shutoff and control valves in heating, ventilation and air conditioning plants. No mounting kits required.
Flange connection to EN ISO 5211.

The actuators have built-in end switches. 1 double auxiliary switch.

Data sheet	N4520
Degree of protection	IP67
Medium temperature	-10...80 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SQL361..)
Warranty	5 Years

For customers in Asia / Australia

Range overview SQL..B..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Spring return function	Stock no.	Product no.
AC 220	2-position (SPDT)	45	No	S55164-A100	**SQL321B25**
AC 220	2-position (SPDT)	45	No	S55164-A101	**SQL321B50**
AC 220	DC 0...10 V	45	No	S55164-A102	**SQL361B50**
AC 220	2-position (SPDT)	91	No	S55164-A103	**SQL321B150**
AC 220	DC 0...10 V	91	No	S55164-A104	**SQL361B150**
AC 220	2-position (SPDT)	165	No	S55164-A105	**SQL321B270**
AC 220	DC 0...10 V	165	No	S55164-A106	**SQL361B270**
AC 220	2-position (SPDT)	194	No	S55164-A107	**SQL321B570**
AC 220	DC 0...10 V	194	No	S55164-A108	**SQL361B570**
AC 220	2-position (SPDT)	390	No	S55164-A109	**SQL321B1400**
AC 220	DC 0...10 V	390	No	S55164-A110	**SQL361B1400**
AC 220	2-position (SPDT)	436	No	S55164-A111	**SQL321B2650**
AC 220	DC 0...10 V	436	No	S55164-A112	**SQL361B2650**

Accessories for SQL..B..

Product Title	Data sheet	Stock no.	Product no.
Double auxiliary switch	N4520	S55845-Z122	**ASC10.21**

2-port contol ball valves for flanged connection

VAF41..

Ball valves for use in heating, cooling, ventilating and air conditioning systems as a control or shutoff valve.

Do not operate GBB331.1E, GBB131.1E, GIB331.1E and GIB131.1E actuators with 2-position control signal. It will damage these rotary actuators.

Data sheet	A6V11168935
Leakage rate	0...0.01 % of k_{vs} value
Medium	Water Water with anti-freeze
Medium temperature	2...80 °C
Ambient temperature, operation	-15...55 °C
Rangeability	≥ 200
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJS-450-15
Material, inside set	Stainless steel (SS304)
PN class	PN 16
Warranty	5 Years
For customers in Asia / Australia	

Range overview VAF41..

GIB..1E Δp_{max} [kPa]	GIB..1E Δp_s [kPa]	2 x GIB..1E Δp_{max} [kPa]	2 x GIB..1E Δp_s [kPa]	GEB..1E Δp_{max} [kPa]	GEB..1E Δp_s [kPa]	GCA.. Δp_{max} [kPa]	GCA.. Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
				400	400	400	400	65	63	S55232-V110	**VAF41.65-63/1**
						400	400	80	100	S55232-V111	**VAF41.80-100/1**
400	400							100	160	S55232-V107	**VAF41.100-160**
400	400							125	250	S55232-V108	**VAF41.125-250**
		400	400					150	360	S55232-V109	**VAF41.150-360**

Accessories for VAF41..

Product Title	Data sheet	Stock no.	Product no.
Ball valve mounting set, DN 65, DN 80, DN 100, DN 125	A6V11168935	S55845-Z203	**ASK77.21**
Ball valve mounting set, DN65, DN80	A6V11168935	S55845-Z252	**ASK77.23**
Ball valve mounting set, DN 150	A6V11168935	S55845-Z204	**ASK77.22**

Combinable actuator for VAF41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24...48	2-position/3-position	150	No	A6V11449860	S55499-D329	**GEB141.1E**
AC 24 DC 24...48	DC 0/2...10 V	150	No	A6V11449860	S55499-D332	**GEB161.1E**
AC 100...240	2-position/3-position	150	No	A6V11449860	S55499-D336	**GEB341.1E**
AC 24	3-position	150	No	N4626	BPZ:GIB131.1E	**GIB131.1E**
AC 24	DC 0...10 V	150	No	N4626	BPZ:GIB161.1E	**GIB161.1E**
AC 230	3-position	150	No	N4626	BPZ:GIB331.1E	**GIB331.1E**

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	N4211
Leakage rate	„Waterproof" as per EN 60534-4 L/1, better than class 5
Medium	Water Water with anti-freeze
Medium temperature	-10...120 °C
Valve characteristic	Equal-percentage
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 VAI61..

Con-nect. thread	GQD../ GSD..9A Δp_{max} [kPa]	GQD../ GSD..9A Δp_s [kPa]	GDB..9E Δp_{max} [kPa]	GDB..9E Δp_s [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GMA../G LB..9E Δp_s [kPa]	GLD..9E Δp_{max} [kPa]	GLD..9E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	0.25	S55230-V220	**VAI61.15-0.25**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	0.4	S55230-V221	**VAI61.15-0.4**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	0.63	S55230-V222	**VAI61.15-0.63**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	1	BPZ:VAI61.15-1	**VAI61.15-1**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	1.6	BPZ:VAI61.15-1.6	**VAI61.15-1.6**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	2.5	BPZ:VAI61.15-2.5	**VAI61.15-2.5**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	4	BPZ:VAI61.15-4	**VAI61.15-4**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	6.3	BPZ:VAI61.15-6.3	**VAI61.15-6.3**
Rp ½"	350	1400	350	1400	350	1400	350	1400	15	10	BPZ:VAI61.15-10	**VAI61.15-10**
Rp ¾"	350	1400	350	1400	350	1400	350	1400	20	4	BPZ:VAI61.20-4	**VAI61.20-4**
Rp ¾"	350	1400	350	1400	350	1400	350	1400	20	6.3	BPZ:VAI61.20-6.3	**VAI61.20-6.3**
Rp ¾"	350	1400	350	1400	350	1400	350	1400	20	10	BPZ:VAI61.20-10	**VAI61.20-10**
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	6.3	BPZ:VAI61.25-6.3	**VAI61.25-6.3**
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	10	BPZ:VAI61.25-10	**VAI61.25-10**
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	16	BPZ:VAI61.25-16	**VAI61.25-16**
Rp 1¼"					350	1000	350	1000	32	10	BPZ:VAI61.32-10	**VAI61.32-10**
Rp 1¼"					350	1000	350	1000	32	16	BPZ:VAI61.32-16	**VAI61.32-16**
Rp 1¼"					350	1000	350	1000	32	25	BPZ:VAI61.32-25	**VAI61.32-25**
Rp 1½"					350	800	350	800	40	16	BPZ:VAI61.40-16	**VAI61.40-16**
Rp 1½"					350	800	350	800	40	25	BPZ:VAI61.40-25	**VAI61.40-25**
Rp 1½"					350	800	350	800	40	40	BPZ:VAI61.40-40	**VAI61.40-40**
Rp 2"					350	600	350	600	50	25	BPZ:VAI61.50-25	**VAI61.50-25**
Rp 2"					350	600	350	600	50	40	BPZ:VAI61.50-40	**VAI61.50-40**
Rp 2"					350	600	350	600	50	63	BPZ:VAI61.50-63	**VAI61.50-63**

Accessories for VAI61..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	**ALJ100**
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**

New Product

Accessories for VAI61..

Product Title	Data sheet	Stock no.	Product no.
Insulation cover for VAI60/61, DN15	CE1N4213	BPZ:ALI15VAI60/61	**ALI15VAI60/61**
Insulation cover for VAI60/61, DN20	CE1N4213	BPZ:ALI20VAI60/61	**ALI20VAI60/61**
Insulation cover for VAI60/61, DN25	CE1N4213	BPZ:ALI25VAI60/61	**ALI25VAI60/61**
Insulation cover for VAI60/61, DN32	CE1N4213	BPZ:ALI32VAI60/61	**ALI32VAI60/61**
Insulation cover for VAI60/61, DN40	CE1N4213	BPZ:ALI40VAI60/61	**ALI40VAI60/61**
Insulation cover for VAI60/61, DN50	CE1N4213	BPZ:ALI50VAI60/61	**ALI50VAI60/61**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VAI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC/DC 24	2-position/3-position	150	No	A6V10636150_enAP	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150_enAP	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	150	No	A6V10636150_enAP	S55499-D384	**GDB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	**GDB161.9E**
AC 100...240	2-position/3-position	150	No	A6V10636150	S55499-D201	**GDB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636150	S55499-D682	**GDB161.9E/MO**
AC 24 DC 24	DC 0/2...10 V	30	No	A6V11171770	S55499-D278	**GLD161.9E**
AC 24 DC 24	Modbus RTU	30	No	A6V11171770	S55499-D695	**GLD161.9E/MO**
AC/DC 24	2-position/3-position	150	No	A6V10636203_enAP	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203_enAP	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203_enAP	S55499-D392	**GLB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	**GLB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636203	S55499-D681	**GLB161.9E/MO**
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	**GQD161.9A**

New Product

Combinable actuator for VAI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	**GMA161.9E**
AC 24 DC 24	Modbus RTU	Open:90 Close:15	Yes	N4658	S55499-D683	**GMA161.9E/MO**

For customers in Asia / Australia please choose S55499-D383; S55499-D384; S55499-D397; S55499-D391; S55499-D392; S55499-D402

3-port control ball valves, internally threaded, PN40

VBI61..

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.
Rp ½"	350	350	350	350	15	1.6	BPZ:VBI61.15-1.6	**VBI61.15-1.6**
Rp ½"	350	350	350	350	15	2.5	BPZ:VBI61.15-2.5	**VBI61.15-2.5**
Rp ½"	350	350	350	350	15	4	BPZ:VBI61.15-4	**VBI61.15-4**
Rp ½"	350	350	350	350	15	6.3	BPZ:VBI61.15-6.3	**VBI61.15-6.3**
Rp ¾"	350	350	350	350	20	4	BPZ:VBI61.20-4	**VBI61.20-4**
Rp ¾"	350	350	350	350	20	6.3	BPZ:VBI61.20-6.3	**VBI61.20-6.3**
Rp 1"	350	350	350	350	25	10	BPZ:VBI61.25-10	**VBI61.25-10**
Rp 1¼"			350	350	32	16	BPZ:VBI61.32-16	**VBI61.32-16**
Rp 1½"			350	350	40	25	BPZ:VBI61.40-25	**VBI61.40-25**
Rp 2"			350	350	50	40	BPZ:VBI61.50-40	**VBI61.50-40**
Rp 2"			350	350	50	63	BPZ:VBI61.50-63	**VBI61.50-63**

Accessories for VBI61..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	ALJ100
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Insulation cover for VBI60/61, DN15	CE1N4213	BPZ:ALI15VBI60/61	**ALI15VBI60/61**
Insulation cover for VBI61, DN20	CE1N4213	BPZ:ALI20VBI61	**ALI20VBI61**
Insulation cover for VBI60/61, DN25	CE1N4213	BPZ:ALI25VBI60/61	**ALI25VBI60/61**
Insulation cover for VBI60/61, DN32	CE1N4213	BPZ:ALI32VBI60/61	**ALI32VBI60/61**
Insulation cover for VBI60/61, DN40	CE1N4213	BPZ:ALI40VBI60/61	**ALI40VBI60/61**
Insulation cover for VBI60/61, DN50	CE1N4213	BPZ:ALI50VBI60/61	**ALI50VBI60/61**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**

Accessories for VBI61..

Product Title	Data sheet	Stock no.	Product no.
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VBI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC/DC 24	2-position/3-position	150	No	A6V10636150_enAP	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150_enAP	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	150	No	A6V10636150_enAP	S55499-D384	**GDB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	**GDB161.9E**
AC 100...240	2-position/3-position	150	No	A6V10636150	S55499-D201	**GDB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636150	S55499-D682	**GDB161.9E/MO**
AC 24 DC 24	DC 0/2...10 V	30	No	A6V11171770	S55499-D278	**GLD161.9E**
AC 24 DC 24	Modbus RTU	30	No	A6V11171770	S55499-D695	**GLD161.9E/MO**
AC/DC 24	2-position/3-position	150	No	A6V10636203_enAP	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203_enAP	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203_enAP	S55499-D392	**GLB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	**GLB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636203	S55499-D681	**GLB161.9E/MO**
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	**GQD161.9A**
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	**GMA161.9E**
AC 24 DC 24	Modbus RTU	Open:90 Close:15	Yes	N4658	S55499-D683	**GMA161.9E/MO**

For customers in Asia / Australia please choose S55499-D383; S55499-D384; S55499-D397; S55499-D391; S55499-D392; S55499-D402

New Product

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 L/1, 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 Δp_{max} [kPa]	GQD../ GSD..9A Δp_s [kPa]	GDB..9E Δp_{max} [kPa]	GDB..9E Δp_s [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GMA../GLB..9E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
Rp ½"	350	1400	350	1400	350	1400	15	15	BPZ:VAI60.15-15	**VAI60.15-15**
Rp ¾"	350	1400	350	1400	350	1400	20	22	BPZ:VAI60.20-22	**VAI60.20-22**
Rp 1"	350	1400	350	1400	350	1400	25	22	BPZ:VAI60.25-22	**VAI60.25-22**
Rp 1¼"					350	1000	32	35	BPZ:VAI60.32-35	**VAI60.32-35**
Rp 1½"					350	800	40	68	BPZ:VAI60.40-68	**VAI60.40-68**
Rp 2"					350	600	50	96	BPZ:VAI60.50-96	**VAI60.50-96**

Accessories for VAI60..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	ALJ100
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Insulation cover for VAI60/61, DN15	CE1N4213	BPZ:ALI15VAI60/61	**ALI15VAI60/61**
Insulation cover for VAI60/61, DN20	CE1N4213	BPZ:ALI20VAI60/61	**ALI20VAI60/61**
Insulation cover for VAI60/61, DN25	CE1N4213	BPZ:ALI25VAI60/61	**ALI25VAI60/61**
Insulation cover for VAI60/61, DN32	CE1N4213	BPZ:ALI32VAI60/61	**ALI32VAI60/61**
Insulation cover for VAI60/61, DN40	CE1N4213	BPZ:ALI40VAI60/61	**ALI40VAI60/61**
Insulation cover for VAI60/61, DN50	CE1N4213	BPZ:ALI50VAI60/61	**ALI50VAI60/61**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VAI60..

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

3-port changeover ball valve, internally threaded, PN40

VBI60..

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} [m³/h]	Stock no.	Product no.
Rp ½"	350	350	350	15	5	BPZ:VBI60.15-5L	**VBI60.15-5L**
Rp ½"	350	350	350	15	12	BPZ:VBI60.15-12T	**VBI60.15-12T**
Rp ¾"	350	350	350	20	9	BPZ:VBI60.20-9L	**VBI60.20-9L**
Rp ¾"	350	350	350	20	16	BPZ:VBI60.20-16T	**VBI60.20-16T**
Rp 1"	350	350	350	25	9	BPZ:VBI60.25-9L	**VBI60.25-9L**
Rp 1"	350	350	350	25	16	BPZ:VBI60.25-16T	**VBI60.25-16T**
Rp 1¼"			350	32	13	BPZ:VBI60.32-13L	**VBI60.32-13L**
Rp 1¼"			350	32	25	BPZ:VBI60.32-25T	**VBI60.32-25T**
Rp 1½"			350	40	25	BPZ:VBI60.40-25L	**VBI60.40-25L**
Rp 1½"			350	40	49	BPZ:VBI60.40-49T	**VBI60.40-49T**
Rp 2"			350	50	37	BPZ:VBI60.50-37L	**VBI60.50-37L**
Rp 2"			350	50	73	BPZ:VBI60.50-73T	**VBI60.50-73T**

Accessories for VBI60..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	ALJ100
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Insulation cover for VBI60/61, DN15	CE1N4213	BPZ:ALI15VBI60/61	**ALI15VBI60/61**
Insulation cover for VBI60, DN20	CE1N4213	BPZ:ALI20VBI60	**ALI20VBI60**
Insulation cover for VBI60/61, DN25	CE1N4213	BPZ:ALI25VBI60/61	**ALI25VBI60/61**
Insulation cover for VBI60/61, DN32	CE1N4213	BPZ:ALI32VBI60/61	**ALI32VBI60/61**
Insulation cover for VBI60/61, DN40	CE1N4213	BPZ:ALI40VBI60/61	**ALI40VBI60/61**
Insulation cover for VBI60/61, DN50	CE1N4213	BPZ:ALI50VBI60/61	**ALI50VBI60/61**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**

Accessories for VBI60..

Product Title	Data sheet	Stock no.	Product no.
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VBI60..

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

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 L/1, 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..9A Δp_{max} [kPa]	GQD../ GSD..9A Δp_s [kPa]	GDB..9E Δp_{max} [kPa]	GDB..9E Δp_s [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GMA../G LB..9E Δp_s [kPa]	GLD..9E Δp_{max} [kPa]	GLD..9E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
G 1" B	350	1400	350	1400	350	1400	350	1400	15	1	S55230-V100	**VAG61.15-1**
G 1" B	350	1400	350	1400	350	1400	350	1400	15	1.6	S55230-V101	**VAG61.15-1.6**
G 1" B	350	1400	350	1400	350	1400	350	1400	15	2.5	S55230-V102	**VAG61.15-2.5**
G 1" B	350	1400	350	1400	350	1400	350	1400	15	4	S55230-V103	**VAG61.15-4**
G 1" B	350	1400	350	1400	350	1400	350	1400	15	6.3	S55230-V104	**VAG61.15-6.3**
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	4	S55230-V105	**VAG61.20-4**
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	6.3	S55230-V106	**VAG61.20-6.3**
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	10	S55230-V107	**VAG61.20-10**
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	6.3	S55230-V108	**VAG61.25-6.3**
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	10	S55230-V109	**VAG61.25-10**
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	16	S55230-V110	**VAG61.25-16**
G 2" B					350	1000	350	1000	32	10	S55230-V111	**VAG61.32-10**
G 2" B					350	1000	350	1000	32	16	S55230-V112	**VAG61.32-16**
G 2" B					350	1000	350	1000	32	25	S55230-V113	**VAG61.32-25**
G 2¼" B					350	800	350	800	40	16	S55230-V114	**VAG61.40-16**
G 2¼" B					350	800	350	800	40	25	S55230-V115	**VAG61.40-25**
G 2¼" B					350	800	350	800	40	40	S55230-V116	**VAG61.40-40**
G 2¾" B					350	600	350	600	50	25	S55230-V117	**VAG61.50-25**
G 2¾" B					350	600	350	600	50	40	S55230-V118	**VAG61.50-40**
G 2¾" B					350	600	350	600	50	63	S55230-V119	**VAG61.50-63**

Accessories for VAG61..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	ALJ100
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**

Accessories for VAG61..

Product Title	Data sheet	Stock no.	Product no.
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VAG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC/DC 24	2-position/3-position	150	No	A6V10636150_enAP	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150_enAP	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	150	No	A6V10636150_enAP	S55499-D384	**GDB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	**GDB161.9E**
AC 100...240	2-position/3-position	150	No	A6V10636150	S55499-D201	**GDB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636150	S55499-D682	**GDB161.9E/MO**
AC 24 DC 24	DC 0/2...10 V	30	No	A6V11171770	S55499-D278	**GLD161.9E**
AC 24 DC 24	Modbus RTU	30	No	A6V11171770	S55499-D695	**GLD161.9E/MO**
AC/DC 24	2-position/3-position	150	No	A6V10636203_enAP	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203_enAP	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203_enAP	S55499-D392	**GLB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	**GLB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636203	S55499-D681	**GLB161.9E/MO**
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	**GQD161.9A**
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	**GMA161.9E**
AC 24 DC 24	Modbus RTU	Open:90 Close:15	Yes	N4658	S55499-D683	**GMA161.9E/MO**

For customers in Asia / Australia please choose S55499-D383; S55499-D384; S55499-D397; S55499-D391; S55499-D392; S55499-D402

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} [m³/h]	Stock no.	Product no.
G 1"	350	350	350	350	15	1.6	S55230-V120	**VBG61.15-1.6**
G 1"	350	350	350	350	15	2.5	S55230-V121	**VBG61.15-2.5**
G 1"	350	350	350	350	15	4	S55230-V122	**VBG61.15-4**
G 1"	350	350	350	350	15	6.3	S55230-V123	**VBG61.15-6.3**
G 1¼"	350	350	350	350	20	4	S55230-V124	**VBG61.20-4**
G 1¼"	350	350	350	350	20	6.3	S55230-V125	**VBG61.20-6.3**
G 1½"	350	350	350	350	25	10	S55230-V126	**VBG61.25-10**
G 2"			350	350	32	16	S55230-V127	**VBG61.32-16**
G 2¼"			350	350	40	25	S55230-V128	**VBG61.40-25**
G 2¾"			350	350	50	40	S55230-V129	**VBG61.50-40**

Accessories for VBG61..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	ALJ100
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VBG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC/DC 24	2-position/3-position	150	No	A6V10636150_enAP	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150_enAP	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	150	No	A6V10636150_enAP	S55499-D384	**GDB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	**GDB161.9E**
AC 100...240	2-position/3-position	150	No	A6V10636150	S55499-D201	**GDB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636150	S55499-D682	**GDB161.9E/MO**
AC 24 DC 24	DC 0/2...10 V	30	No	A6V11171770	S55499-D278	**GLD161.9E**
AC 24 DC 24	Modbus RTU	30	No	A6V11171770	S55499-D695	**GLD161.9E/MO**
AC/DC 24	2-position/3-position	150	No	A6V10636203_enAP	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203_enAP	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203_enAP	S55499-D392	**GLB341.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	**GLB341.9E**
AC/DC 24	Modbus RTU	150	No	A6V10636203	S55499-D681	**GLB161.9E/MO**
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	**GQD161.9A**
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	**GMA161.9E**
AC 24 DC 24	Modbus RTU	Open:90 Close:15	Yes	N4658	S55499-D683	**GMA161.9E/MO**

For customers in Asia / Australia please choose S55499-D383; S55499-D384; S55499-D397; S55499-D391; S55499-D392; S55499-D402

New Product

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]	Con-nect. thread	GDB..9E Δp_{max} [kPa]	Stock no.	Product no.
10	0.4	0.25	G ½"	200	S55230-V158	**VWG41.10-0.25-0.4**
10	0.65	0.25	G ½"	200	S55230-V159	**VWG41.10-0.25-0.65**
10	1	0.25	G ½"	200	S55230-V160	**VWG41.10-0.25-1.0**
10	1.3	0.25	G ½"	200	S55230-V175	**VWG41.10-0.25-1.3**
10	1.6	0.25	G ½"	200	S55230-V176	**VWG41.10-0.25-1.6**
10	1.9	0.25	G ½"	200	S55230-V177	**VWG41.10-0.25-1.9**
10	0.4	0.4	G ½"	200	S55230-V178	**VWG41.10-0.4-0.4**
10	0.65	0.4	G ½"	200	S55230-V161	**VWG41.10-0.4-0.65**
10	1	0.4	G ½"	200	S55230-V162	**VWG41.10-0.4-1.0**
10	1.3	0.4	G ½"	200	S55230-V163	**VWG41.10-0.4-1.3**
10	1.6	0.4	G ½"	200	S55230-V164	**VWG41.10-0.4-1.6**
10	1.9	0.4	G ½"	200	S55230-V179	**VWG41.10-0.4-1.9**
10	0.65	0.65	G ½"	200	S55230-V180	**VWG41.10-0.65-0.65**
10	1	0.65	G ½"	200	S55230-V165	**VWG41.10-0.65-1.0**
10	1.3	0.65	G ½"	200	S55230-V166	**VWG41.10-0.65-1.3**
10	1.6	0.65	G ½"	200	S55230-V167	**VWG41.10-0.65-1.6**
10	1.9	0.65	G ½"	200	S55230-V181	**VWG41.10-0.65-1.9**
10	1.0	1.0	G ½"	200	S55230-V182	**VWG41.10-1.0-1.0**
10	1.3	1	G ½"	200	S55230-V168	**VWG41.10-1.0-1.3**
10	1.6	1	G ½"	200	S55230-V169	**VWG41.10-1.0-1.6**
10	1.9	1	G ½"	200	S55230-V170	**VWG41.10-1.0-1.9**
10	1.3	1.3	G ½"	200	S55230-V183	**VWG41.10-1.3-1.3**
10	1.6	1.3	G ½"	200	S55230-V171	**VWG41.10-1.3-1.6**
10	1.9	1.3	G ½"	200	S55230-V172	**VWG41.10-1.3-1.9**
10	1.6	1.6	G ½"	200	S55230-V184	**VWG41.10-1.6-1.6**
10	1.9	1.6	G ½"	200	S55230-V173	**VWG41.10-1.6-1.9**
10	1.9	1.9	G ½"	200	S55230-V174	**VWG41.10-1.9-1.9**

Accessories for VWG41.10..

Product Title	Data sheet	Stock no.	Product no.
Brass fitting G ½" / Rp ½", set of 2		S55845-Z195	**ALG13.152B**
Insulation cover for VWG41.10 6-Way ball valve		S55845-Z194	**ALI10VWG41**

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]	Con-nect. thread	GDB..9E Δp_{max} [kPa]	Stock no.	Product no.
20	2.5	0.25	G 1"	200	S55230-V185	**VWG41.20-0.25-2.5**
20	3.45	0.25	G 1"	200	S55230-V186	**VWG41.20-0.25-3.45**
20	4.25	0.25	G 1"	200	S55230-V187	**VWG41.20-0.25-4.25**
20	2.5	0.4	G 1"	200	S55230-V188	**VWG41.20-0.4-2.5**
20	3.45	0.4	G 1"	200	S55230-V189	**VWG41.20-0.4-3.45**
20	4.25	0.4	G 1"	200	S55230-V190	**VWG41.20-0.4-4.25**
20	2.5	0.65	G 1"	200	S55230-V150	**VWG41.20-0.65-2.5**
20	3.45	0.65	G 1"	200	S55230-V191	**VWG41.20-0.65-3.45**
20	4.25	0.65	G 1"	200	S55230-V192	**VWG41.20-0.65-4.25**
20	2.5	1	G 1"	200	S55230-V152	**VWG41.20-1.0-2.5**
20	3.45	1.0	G 1"	200	S55230-V193	**VWG41.20-1.0-3.45**
20	4.25	1.0	G 1"	200	S55230-V194	**VWG41.20-1.0-4.25**
20	2.5	1.3	G 1"	200	S55230-V195	**VWG41.20-1.3-2.5**
20	3.45	1.3	G 1"	200	S55230-V196	**VWG41.20-1.3-3.45**
20	4.25	1.3	G 1"	200	S55230-V197	**VWG41.20-1.3-4.25**
20	2.5	1.6	G 1"	200	S55230-V153	**VWG41.20-1.6-2.5**
20	3.45	1.6	G 1"	200	S55230-V154	**VWG41.20-1.6-3.45**
20	4.25	1.6	G 1"	200	S55230-V198	**VWG41.20-1.6-4.25**
20	2.5	2.5	G 1"	200	S55230-V200	**VWG41.20-2.5-2.5**
20	3.45	2.5	G 1"	200	S55230-V155	**VWG41.20-2.5-3.45**
20	4.25	2.5	G 1"	200	S55230-V156	**VWG41.20-2.5-4.25**
20	3.45	3.45	G 1"	200	S55230-V201	**VWG41.20-3.45-3.45**
20	4.25	4.25	G 1"	200	S55230-V157	**VWG41.20-4.25-4.25**

Accessories for VWG41.20..

Product Title	Data sheet	Stock no.	Product no.
Brass fitting G 1" / G ½", 5 °C - 90 °C, set of 2	A6V10564480	S55845-Z156	**ALN15.152B**
Brass fitting G 1" / G ¾", 5 °C - 90 °C, set of 2	A6V10564480	S55845-Z157	**ALN15.202B**
Brass fitting G 1" / Rp ½", set of 2		S55845-Z158	**ALG15.152B**
Brass fitting G 1" / Rp ¾", set of 2		S55845-Z159	**ALG15.202B**
Brass fitting G 1" / Rp 1", set of 2		S55845-Z160	**ALG15.252B**
Insulation cover for VWG41.20 6-Way ball valve	A6V10564480	S55845-Z161	**ALI20VWG41**

Accessories for VWG41.20..

Product Title	Data sheet	Stock no.	Product no.
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**

Combinable actuator for VWG41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	**GSD341.9A**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	**GDB161.9E**
AC 100...240	2-position/3-position	150	No	A6V10636150	S55499-D201	**GDB341.9E**
AC 24	KNX S-Mode or KNX PL-Link	150	No	A6V10725318	S55499-D203	**GDB111.9E/KN**
AC/DC 24	Modbus RTU	150	No	A6V10636150	S55499-D682	**GDB161.9E/MO**

VAG60..

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

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 L/1, 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 Δp_{max} [kPa]	GQD../ GSD..9A Δp_s [kPa]	GDB..9E Δp_{max} [kPa]	GDB..9E Δp_s [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GMA../GL B..9E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
G 1" B	350	1400	350	1400	350	1400	15	9	S55230-V130	**VAG60.15-9**
G 1¼" B	350	1400	350	1400	350	1400	20	17	S55230-V131	**VAG60.20-17**
G 1½" B	350	1400	350	1400	350	1400	25	22	S55230-V132	**VAG60.25-22**
G 2" B					350	1000	32	35	S55230-V133	**VAG60.32-35**
G 2¼" B					350	800	40	68	S55230-V134	**VAG60.40-68**
G 2¾" B					350	600	50	96	S55230-V135	**VAG60.50-96**

Accessories for VAG60..

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	**ALJ100**
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

Combinable actuator for VAG60..

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

VBG60..

3-port changeover ball valves, externally threaded, PN40

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
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	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBG60..

Con-nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
G 1"	350	350	350	15	8	S55230-V136	**VBG60.15-8T**
G 1¼"	350	350	350	20	13	S55230-V137	**VBG60.20-13T**
G 1½"	350	350	350	25	13	S55230-V138	**VBG60.25-13T**
G 2"			350	32	25	S55230-V139	**VBG60.32-25T**
G 2¼"			350	40	49	S55230-V140	**VBG60.40-49T**
G 2¾"			350	50	73	S55230-V141	**VBG60.50-73T**

3-port changeover ball valves, PN 40

VBG60..L

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	A6V11974394
Angular rotation	90°
Leakage rate	„Waterproof" as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	1 % of kvs
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	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBG60..L

Con-nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
G 1"	350	350	350	15	5	S55230-V215	VBG60.15-5L
G 1¼" B	350	350	350	20	8	S55230-V202	**VBG60.20-8L**
G 1½"	350	350	350	25	9	S55230-V216	VBG60.25-9L
G 2"			350	32	13	S55230-V217	VBG60.32-13L
G 2¼"			350	40	25	S55230-V218	VBG60.40-25L
G 2¾"			350	50	37	S55230-V219	VBG60.50-37L

Accessories for VBG60..T/..L

Product Title	Data sheet	Stock no.	Product no.
Temperature Adapter		S55846-Z115	ALJ100
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**
Strainer, inside threaded, DN15		S55845-Z174	**ALX15**
Strainer, inside threaded, DN20		S55845-Z175	**ALX20**
Strainer, inside threaded, DN25		S55845-Z176	**ALX25**
Strainer, inside threaded, DN32		S55845-Z177	**ALX32**
Strainer, inside threaded, DN40		S55845-Z178	**ALX40**
Strainer, inside threaded, DN50		S55845-Z179	**ALX50**

New Product

Combinable actuator for VBG60..T/..L

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

VAI51..

2-port Ball valve, internal thread, PN25

Internally threaded connections Rp.. as per ISO7-1. For use in heating, ventilation, and air conditioning plants as a control valve. For close circuits.

Data sheet	A6V12170194
Angular rotation	90°
Leakage rate	<0.01 % of Kvs value
Medium temperature	-10...120 °C
Valve characteristic	Equal percentage
Permissible operating pressure	2500KPa
Material, valve body	Brass
PN class	PN 25
Warranty	5 Years

For customers in Asia / Australia

Range overview VAI51..

Con-nect. thread	GQD.. / GSD.. 9A Δp_{max} [kPa]	GQD.. / GSD.. 9A Δp_s [kPa]	GDB.. 9E Δp_{max} [kPa]	GDB.. 9E Δp_s [kPa]	GMA. ./ GLB.. 9E Δp_{max} [kPa]	GMA. .9E Δp_{max} [kPa]	GMA. ./GLB. .9E Δp_s [kPa]	GMA. .9E Δp_s [kPa]	GLB.. 9E Δp_{max} [kPa]	GLB.. 9E Δp_s [kPa]	GLD.. 9E Δp_{max} [kPa]	GLD.. 9E Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
Rp ½"	350	1400	350	1400	350		1400				350	1400	15	4	S55230-V203	**VAI51.15-4**
Rp ½"	350	1400	350	1400	350		1400				350	1400	15	6.3	S55230-V204	**VAI51.15-6.3**
Rp ¾"	350	1400	350	1400	350		1400				350	1400	20	10	S55230-V206	**VAI51.20-10**
Rp ¾"	350	1400	350	1400	350		1400				350	1400	20	6.3	S55230-V205	**VAI51.20-6.3**
Rp 1"	350	600	350	1400	350		1400				350	1400	25	10	S55230-V207	**VAI51.25-10**
Rp 1"	350	600	350	1400	350		1400				350	1400	25	16	S55230-V208	**VAI51.25-16**
Rp 1¼"					350		1000				350	1000	32	16	S55230-V209	**VAI51.32-16**
Rp 1¼"					350		1000				350	1000	32	25	S55230-V210	**VAI51.32-25**
Rp 1½"					350		800				350	800	40	25	S55230-V211	**VAI51.40-25**

Range overview VAI51..

Connect. thread	GQD.. / GSD.. 9A Δpmax [kPa]	GQD.. / GSD.. 9A Δps [kPa]	GDB.. 9E Δpmax [kPa]	GDB.. 9E Δps [kPa]	GMA. ./ GLB.. 9E Δpmax [kPa]	GMA. .9E Δpmax [kPa]	GMA. ./GLB. .9E Δps [kPa]	GMA. .9E Δps [kPa]	GLB.. 9E Δpmax [kPa]	GLB.. 9E Δps [kPa]	GLD.. 9E Δpmax [kPa]	GLD.. 9E Δps [kPa]	DN	kvs [m³/h]	Stock no.	Product no.
Rp 1½"					350		800				350	800	40	40	S55230-V212	**VAI51.40-40**
Rp 2"						350		400	350	600	350	400	50	40	S55230-V213	**VAI51.50-40**
Rp 2"						350		400	350	600	350	400	50	63	S55230-V214	**VAI51.50-63**

Accessories for VAI51..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**

Combinable actuator for VAI51..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC/DC 24	2-position/3-position	150	No	A6V10636150_enAP	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150_enAP	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	150	No	A6V10636150_enAP	S55499-D384	**GDB341.9E**
AC 24 DC 24	DC 0/2...10 V	30	No	A6V11171770	S55499-D278	**GLD161.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636203_enAP	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203_enAP	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203_enAP	S55499-D392	**GLB341.9E**
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	**GQD161.9A**
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	**GMA161.9E**

Accessories for VAI41..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	**ASK77.2**
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	**ASK77.3**
Mounting kits for rotary actuators with or without spring-return, for special types with switches or potentiometer		S55845-Z199	**ASK77.5**

Combinable actuator for VAI41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC/DC 24	DC 0/2..10 V	30	No	A6V10636056	S55499-D232	**GSD161.9A**
AC/DC 24	2-position/3-position	150	No	A6V10636150_enAP	S55499-D383	**GDB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636150_enAP	S55499-D397	**GDB161.9E**
AC 230	2-position/3-position	150	No	A6V10636150_enAP	S55499-D384	**GDB341.9E**
AC 24 DC 24	DC 0/2...10 V	30	No	A6V11171770	S55499-D278	**GLD161.9E**
AC/DC 24	2-position/3-position	150	No	A6V10636203_enAP	S55499-D391	**GLB141.9E**
AC/DC 24	DC 0/2...10 V	150	No	A6V10636203_enAP	S55499-D402	**GLB161.9E**
AC 230	2-position/3-position	150	No	A6V10636203_enAP	S55499-D392	**GLB341.9E**
AC 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	**GQD131.9A**
AC 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	**GQD161.9A**
AC 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	**GMA131.9E**
AC 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	**GMA161.9E**

M..B..

2-Port control ball valve and actuator combination, PN16 AC 24 V

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	A6V12170259
PN class	PN 16
Operating voltage	AC/DC 24 V
Positioning signal	DC 0/2..10 V
Positioning time	150 s
Position feedback	DC 0/2..10 V
Degree of protection	IP54
Permissible operating pressure	1600 kPa
Leakage rate	<0.01 % of Kvs value
Medium temperature	0...120 °C
Valve characteristic	Equal percentage
Material, valve body	Brass
Material, inside set	Stainless steel/PTFE+Graphite
Warranty	5 Years

For customers in Asia / Australia

Range overview M..B..

Δp_{max} [kPa]	Δp_s [kPa]	Con-nect. thread	k_{vs} [m³/h]	DN	Stock no.	Product no.
350	1400	Rp ½"	6.3	15	S55310-M113	**MDB461.15-6.3AI**
350	1400	Rp ¾"	10	20	S55310-M114	**MDB461.20-10AI**
350	1400	Rp 1"	16	25	S55310-M115	**MDB461.25-16AI**
350	1000	Rp 1¼"	25	32	S55310-M116	**MLB461.32-25AI**
350	800	Rp 1½"	40	40	S55310-M117	**MLB461.40-40AI**
350	600	Rp 2"	63	50	S55310-M118	**MLB461.50-63AI**

New Product

3-port slipper valves PN 6 with flanged connections

VBF21..

- 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, valve body	Cast iron EN-GJL-250
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.
30	40	25	ASK32N	BPZ:VBF21.40	**VBF21.40**
30	50	40	ASK32N	BPZ:VBF21.50	**VBF21.50**
30	65	63	ASK31N	BPZ:VBF21.65	**VBF21.65**
30	80	100	ASK31N	BPZ:VBF21.80	**VBF21.80**
30	100	160	ASK31N	BPZ:VBF21.100	**VBF21.100**
30	125	550	ASK31N	BPZ:VBF21.125	**VBF21.125**
30	150	820	ASK31N	BPZ:VBF21.150	**VBF21.150**

DN40...50, series 02
DN65...150, series 01

Mounting set for SAL..T10 onto VBF21.., DN65..150 with ASK31N

ASK31N

Data sheet	N4502
Warranty	2 Years

Stock no.	Product no.
S55845-Z100	**ASK31N**

ASK32N

Mounting set for SAL..T10 onto VBF21.., DN40..50 with ASK32N

Data sheet	N4502
Warranty	2 Years

Stock no.	Product no.
S55845-Z211	**ASK32N**

Combinable actuator for VBF21..

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

Butterfly valves PN6/10/16 for flanged connections

VKF41..

- With metallic tight-closing for mounting between 2 flanges PN6, PN10 or PN16 to ISO 7005
- For chilled and low-temperature hot water in closed circuits

SAL..T10, SAL..T40 require mounting set ASK33N

Data sheet	N4131
Material, inside set	Stainless steel
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJL-250
PN class	PN 16
Warranty	5 Years

Range overview VKF41..

SAL..T10 Δp_s [kPa]	SAL..T40 Δp_s [kPa]	DN	k_{vs} [m³/h]	Leakage rate	Required mounting set	Stock no.	Product no.
500		40	50	0.22% of k_{vs}	ASK33N	BPZ:VKF41.40	**VKF41.40**
500		50	80	0.14% of k_{vs}	ASK33N	BPZ:VKF41.50	**VKF41.50**
500		65	200	0.09% of k_{vs}	ASK33N	BPZ:VKF41.65	**VKF41.65**
500		80	400	0.06% of k_{vs}	ASK33N	BPZ:VKF41.80	**VKF41.80**
500		100	760	0.04% of k_{vs}	ASK33N	BPZ:VKF41.100	**VKF41.100**
300		125	1000	0.04% of k_{vs}	ASK33N	BPZ:VKF41.125	**VKF41.125**
250	400	150	2100	0.02% of k_{vs}	ASK33N	BPZ:VKF41.150	**VKF41.150**
125	300	200	4000	0.01% of k_{vs}	ASK33N	BPZ:VKF41.200	**VKF41.200**

Combinable actuator for VKF41..

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

VKF42..

Butterfly valves PN16 for flanged connections, with tight shutoff

Butterfly valve is used as motorized or shut-off valves in heating, ventilation and air conditioning systems applications.
- In open and closed circuits
- For 2-position (SPDT) or DC 0...10 V control signals
- For chiller and cooling tower sequencing circuits
- To open or close the flow to a heat exchanger or to complete plant sections

Data sheet	N4119
Angular rotation	90°
Leakage rate	A to ISO 5208 (tight-closing)
Medium	Water Water with anti-freeze
Medium temperature	-10...80 °C
Valve characteristic	Non-linear
Material, valve body	Cast iron
Material, inside set	Stainless steel Nodular cast iron EN-GJS-450-10 (QT450-10) Nylon coating
PN class	PN 16
Mounting position	Upright to horizontal
Required mounting set	Direct
Warranty	5 Years

Range overview VKF42..

SQL321 B25/ SQL361 B50 Δps [kPa]	SQL..B50 Δps [kPa]	SQL..B150 Δps [kPa]	SQL..B270 Δps [kPa]	SQL..B570 Δps [kPa]	SQL..B140 0 Δps [kPa]	SQL..B265 0 Δps [kPa]	DN	kvs [m³/h]	Stock no.	Product no.
700							50	65	S55237-V100	**VKF42.50**
700							65	140	S55237-V101	**VKF42.65**
700							80	210	S55237-V102	**VKF42.80**
	700						100	470	S55237-V103	**VKF42.100**
	700						125	750	S55237-V104	**VKF42.125**
		700					150	1250	S55237-V105	**VKF42.150**
		700					200	3100	S55237-V106	**VKF42.200**
			700				250	4050	S55237-V107	**VKF42.250**
				700			300	7500	S55237-V108	**VKF42.300**
				700			350	10250	S55237-V109	**VKF42.350**
					700		400	14100	S55237-V110	**VKF42.400**
					700		450	18500	S55237-V111	**VKF42.450**
						700	500	24000	S55237-V112	**VKF42.500**
						700	600	37000	S55237-V113	**VKF42.600**

Combinable actuator for VKF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 220	2-position (SPDT)	11	No	N4520	S55164-A100	**SQL321B25**
AC 220	2-position (SPDT)	19	No	N4520	S55164-A101	**SQL321B50**
AC 220	DC 0...10 V	19	No	N4520	S55164-A102	**SQL361B50**
AC 220	2-position (SPDT)	39	No	N4520	S55164-A103	**SQL321B150**
AC 220	DC 0...10 V	39	No	N4520	S55164-A104	**SQL361B150**
AC 220	2-position (SPDT)	39	No	N4520	S55164-A105	**SQL321B270**
AC 220	DC 0...10 V	39	No	N4520	S55164-A106	**SQL361B270**

Combinable actuator for VKF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 220	2-position (SPDT)	47	No	N4520	S55164-A107	**SQL321B570**
AC 220	DC 0...10 V	47	No	N4520	S55164-A108	**SQL361B570**
AC 220	2-position (SPDT)	47	No	N4520	S55164-A109	**SQL321B1400**
AC 220	DC 0...10 V	47	No	N4520	S55164-A110	**SQL361B1400**
AC 220	2-position (SPDT)	105	No	N4520	S55164-A111	**SQL321B2650**
AC 220	DC 0...10 V	105	No	N4520	S55164-A112	**SQL361B2650**

VKF46..

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

- 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} [m³/h]	Stock no.	Product no.
1600		1600					40	50	BPZ:VKF46.40	**VKF46.40**
1600		1600					65	215	BPZ:VKF46.65	**VKF46.65**
	1600		1600				80	420	BPZ:VKF46.80	**VKF46.80**
	800		1000				125	1010	BPZ:VKF46.125	**VKF46.125**
				1600			150	2100	BPZ:VKF46.150	**VKF46.150**
				1000			200	4000	BPZ:VKF46.200	**VKF46.200**
					1000		250	6400	BPZ:VKF46.250	**VKF46.250**
					600		350	11500	BPZ:VKF46.350	**VKF46.350**
					300		400	14500	BPZ:VKF46.400	**VKF46.400**
						300	450	20500	BPZ:VKF46.450	**VKF46.450**
						300	600	29300	BPZ:VKF46.600	**VKF46.600**

Combinable actuator for VKF46..

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

Manual adjuster for VKF46..

Product Title	Data sheet	Stock no.	Product no.
Manual override for VFW41../VFL41.., DN40 to DN65	A6V12436917	S55845-Z254	ASK41NF04SP
Manual override for VFW41../VFL41.., DN80 to DN125	A6V12436917	S55845-Z255	ASK41NF05SP
Manual override for VFW41../VFL41.., DN150 to DN200	A6V12436917	S55845-Z256	ASK41NF07SP
Manual override for VFW41../VFL41.., DN250 to DN400	A6V12436917	S55845-Z257	ASK41NF10SP
Manual adjuster for VKF46.., DN40 to DN65	N4136	BPZ:ASK46.1	**ASK46.1**
Manual adjuster for VKF46.., DN80 to DN125	N4136	BPZ:ASK46.2	**ASK46.2**
Manual adjuster for VKF46.., DN150 to DN200	N4136	BPZ:ASK46.3	**ASK46.3**
Manual adjuster for VKF46.., DN250 to DN400	N4136	BPZ:ASK46.4	**ASK46.4**

Accessories for VKF..

Product Title	Data sheet	Stock no.	Product no.
Buttefly valve mounting set DN80, DN100	N4119	S55845-Z153	**ASK77.10**
Buttefly valve mounting set DN125, DN150	N4119	S55845-Z154	**ASK77.11**
Ball valve mounting set, DN 65, DN 80, DN 100, DN 125	A6V11168935	S55845-Z203	**ASK77.21**
Buttefly valve mounting set DN50, DN65	N4119	S55845-Z152	**ASK77.9**
Ball valve mounting set, DN 150	A6V11168935	S55845-Z204	**ASK77.22**

Butterfly Valve, flange, PN 6/10/16, tight closing

VFW41..

Wafer type butterfly valve for fitting between PN 6, PN 10, PN 16 counter-flanges to ISO 7005. For use as motorized or manual control or shut-off valves in heating, ventilation and air conditioning systems.
In open and closed circuits, tight closing.

Data sheet	A6V101029242
Angular rotation	90°
Leakage rate	Tight closing
Medium	Water Water with anti-freeze
Medium temperature	–20...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJS-400-18-LT
Material, inside set	Stainless steel valve disc and shaft
PN class	PN 16
Warranty	5 Years

Range overview VFW41..

SAL..T20 Δp_s [kPa]	SAL..T40 Δp_s [kPa]	SQL36 E50F04 Δp_s [kPa]	SQL36 E50F05 Δp_s	SQL36 E65 Δp_s	SQL36 E110 Δp_s	SQL36 E160 Δp_s	DN	k_{vs} [m³/h]	Stock no.	Product no.
1600		1600					40	40	S55235-V138	VFW41.40
1600		1600					50	100	S55235-V139	VFW41.50
1600		1600					65	155	S55235-V140	VFW41.65
1600			1600				80	260	S55235-V141	VFW41.80
	1200		1600 kPa				100	520	S55235-V142	VFW41.100
	800		1000				125	820	S55235-V143	VFW41.125
				1600			150	1600	S55235-V144	VFW41.150
				1000			200	4000	S55235-V145	VFW41.200
					1000		250	4550	S55235-V146	VFW41.250
					600		300	7200	S55235-V147	VFW41.300
					300		350	10250	S55235-V148	VFW41.350
							400	14100	S55235-V160	VFW41.400

New Product

Range overview VFW41..

SAL..T20 Δp_s [kPa]	SAL..T40 Δp_s [kPa]	SQL36 E50F04 Δp_s [kPa]	SQL36 E50F05 Δp_s	SQL36 E65 Δp_s	SQL36 E110 Δp_s	SQL36 E160 Δp_s	DN	k_{vs} [m³/h]	Stock no.	Product no.
						300	450	18500	S55235-V161	VFW41.450
						300	500	24000	S55235-V162	VFW41.500
						300	600	31000	S55235-V163	VFW41.600

Combinable actuators for VFW41..

Product Title	Data sheet	Stock no.	Product no.
Electromotoric actuator, 20 Nm, 90°, AC 230 V, 3P	N4502	S55162-A110	**SAL31.00T20**
Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P	N4502	S55162-A111	**SAL31.00T40**
Electromotoric actuator, 20 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	S55162-A102	**SAL61.00T20**
Electromotoric actuator, 40 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	S55162-A103	**SAL61.00T40**
Electromotoric actuator, 20 Nm, 90°, AC/DC 24 V, 3P	N4502	S55162-A106	**SAL81.00T20**
Electromotoric actuator, 40 Nm, 90°, AC/DC 24 V, 3P	N4502	S55162-A107	**SAL81.00T40**
Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P, F04 connection	N4505	BPZ:SQL36E50F04	**SQL36E50F04**
Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P, F05 connection	N4505	BPZ:SQL36E50F05	**SQL36E50F05**
Electromotoric actuator, 100 Nm, 90°, AC 230 V, 3P	N4505	BPZ:SQL36E65	**SQL36E65**
Electromotoric actuator, 400 Nm, 90°, AC 230 V, 3P	N4505	BPZ:SQL36E110	**SQL36E110**
Electromotoric actuator, 1200 Nm, 90°, AC 230 V, 3P	N4505	BPZ:SQL36E160	**SQL36E160**

Manual adjuster for VFW41..

Product Title	Data sheet	Stock no.	Product no.
Manual override for VFW41../VFL41.., DN40 to DN65	A6V12436917	S55845-Z254	ASK41NF04SP
Manual override for VFW41../VFL41.., DN80 to DN125	A6V12436917	S55845-Z255	ASK41NF05SP
Manual override for VFW41../VFL41.., DN150 to DN200	A6V12436917	S55845-Z256	ASK41NF07SP
Manual override for VFW41../VFL41.., DN250 to DN400	A6V12436917	S55845-Z257	ASK41NF10SP

Butterfly Valves PN6/10/16 VFW41..

VFW41..U

Nodular cast iron housing EN-GJS-400-18-LT
DN 40...200
Kvs 40...4000 m3/h
For fitting between PN 6, PN 10, PN 16 counter-flanges to ISO 7005
Angle of rotation 90°
No maintenance required
Can be fitted with type SAL..T10/F05 electromotoric actuators

Data sheet	A6V101029254
Angular rotation	90°
Leakage rate	0.05 % of kvs
Medium	Water Water with anti-freeze Chilled water Low-temperature hot water High-temperature hot water Brine
Medium temperature	–20...120 °C
Valve characteristic	non-linear
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJS-400-18-LT
Material, inside set	Cast iron EN-GJS-400-18-LT
PN class	PN 6 PN 10 PN 16
Warranty	5 Years

Range overview VFW41..U

SAL..T10 Δp_s [kPa]	DN	k_{vs}	Stock no.	Product no.
500	40	40 m³/h	S55235-V168	VFW41.40U
500	50	100 m³/h	S55235-V169	VFW41.50U
500	65	155 m³/h	S55235-V170	VFW41.65U
500	80	260 m³/h	S55235-V171	VFW41.80U
500	100	520 m³/h	S55235-V172	VFW41.100U
300	125	820 m³/h	S55235-V173	VFW41.125U
250	150	1600 m³/h	S55235-V174	VFW41.150U
125	200	4000 m³/h	S55235-V175	VFW41.200U

Combinable actuators for VFW41..U

Product Title	Data sheet	Stock no.	Product no.
Electromotoric actuator, 10 Nm, 90°, AC 230 V, 3P, 30 s	N4502	S55162-A121	SAL31.03T10/F05
Electromotoric actuator, 10 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA, 30 s	N4502	S55162-A123	SAL61.03T10/F05
Electromotoric actuator, 10 Nm, 90°, AC/DC 24 V, 3P, 30 s	N4502	S55162-A122	SAL81.03T10/F05

Combinable actuators for VFL41..

Product Title	Data sheet	Stock no.	Product no.
Electromotoric actuator, 20 Nm, 90°, AC 230 V, 3P	N4502	S55162-A110	**SAL31.00T20**
Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P	N4502	S55162-A111	**SAL31.00T40**
Electromotoric actuator, 20 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	S55162-A102	**SAL61.00T20**
Electromotoric actuator, 40 Nm, 90°, AC/DC 24 V, DC 0...10 V / DC 4...20 mA	N4502	S55162-A103	**SAL61.00T40**
Electromotoric actuator, 20 Nm, 90°, AC/DC 24 V, 3P	N4502	S55162-A106	**SAL81.00T20**

New Product

Combinable actuators for VFL41..

Product Title	Data sheet	Stock no.	Product no.
Electromotoric actuator, 40 Nm, 90°, AC/DC 24 V, 3P	N4502	S55162-A107	**SAL81.00T40**
Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P, F04 connection	N4505	BPZ:SQL36E50F04	**SQL36E50F04**
Electromotoric actuator, 40 Nm, 90°, AC 230 V, 3P, F05 connection	N4505	BPZ:SQL36E50F05	**SQL36E50F05**
Electromotoric actuator, 100 Nm, 90°, AC 230 V, 3P	N4505	BPZ:SQL36E65	**SQL36E65**
Electromotoric actuator, 400 Nm, 90°, AC 230 V, 3P	N4505	BPZ:SQL36E110	**SQL36E110**
Electromotoric actuator, 1200 Nm, 90°, AC 230 V, 3P	N4505	BPZ:SQL36E160	**SQL36E160**

Manual adjuster for VFL41..

Product Title	Data sheet	Stock no.	Product no.
Manual override for VFW41../VFL41.., DN40 to DN65	A6V12436917	S55845-Z254	**ASK41NF04SP**
Manual override for VFW41../VFL41.., DN80 to DN125	A6V12436917	S55845-Z255	**ASK41NF05SP**
Manual override for VFW41../VFL41.., DN150 to DN200	A6V12436917	S55845-Z256	**ASK41NF07SP**
Manual override for VFW41../VFL41.., DN250 to DN400	A6V12436917	S55845-Z257	**ASK41NF10SP**

2-port zone valves & actuators, PN16

MVI422..

Control valve for use with terminal units for heating and colling zones. The actuators are equipped with a manual lever and spring return facility (valve closed).

Data sheet	A6V11932500
PN class	PN 16
Operating voltage	AC 230 V
Power consumption	6.5 VA
Positioning signal	2-position
Positioning time	Opening 15 s (motor-driven)
	Closing 10 s (spring force)
Degree of protection	IP40
Ambient temperature, operation	-10...55 °C
Mounting position	Upright up to 85 °C inclined
Permissible operating pressure	1600 kPa
Leakage rate	Tight shut-off (100 % airtight)
Medium temperature	1...95 °C
Material, inside set	Stainless/NBR
Warranty	5 Years
For customers in Asia / Australia	

Range overview MVI422..

Product Title	Δp_{max} [kPa]	Δp_s [kPa]	Stock no.	Product no.
2-port zone valves & actuators, PN16	350	350	S55310-M107	**MVI422.15**
2-port zone valves & actuators, PN16	350	350	S55310-M108	**MVI422.20**
2-port zone valves & actuators, PN16	350	350	S55310-M109	**MVI422.25**

3-port zone valves & actuators, PN16

MXI422..

Control valve for use with terminal units for heating and colling zones. The actuators are equipped with a manual lever and spring return facility (valve closed).

Data sheet	A6V11932500
PN class	PN 16
Operating voltage	AC 230 V
Power consumption	6.5 VA
Positioning signal	2-position
Positioning time	Opening 15 s (motor-driven)
	Closing 10 s (spring force)
Degree of protection	IP40
Ambient temperature, operation	-10...55 °C
Mounting position	Upright up to 85 °C inclined
Permissible operating pressure	1600 kPa
Leakage rate	Tight shut-off (100 % airtight)
Medium temperature	1...95 °C
Material, inside set	Stainless/NBR
Warranty	5 Years
For customers in Asia / Australia	

Range overview MXI422..

Product Title	Δp_{max} [kPa]	Δp_s [kPa]	Stock no.	Product no.
3-port zone valves & actuators, PN16	250	250	S55310-M110	**MXI422.15**
3-port zone valves & actuators, PN16	200	200	S55310-M111	**MXI422.20**
3-port zone valves & actuators, PN16	150	150	S55310-M112	**MXI422.25**

Accessories for MVI422.. /MXI422..

Product Title	Data sheet	Stock no.	Product no.
Waterproof shield for ASK 39.3		S55845-Z251	**ASK39.3**

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

MVL661..-..

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} [m³/h]	k_{vs} reduced [m³/h]	DN	Stock no.	Product no.
2500	0.4	0.25	15	BPZ:MVL661.15-0.4	**MVL661.15-0.4**
2500	1	0.63	15	BPZ:MVL661.15-1.0	**MVL661.15-1.0**
2500	2.5	1.6	20	BPZ:MVL661.20-2.5	**MVL661.20-2.5**
2500	6.3	4	25	BPZ:MVL661.25-6.3	**MVL661.25-6.3**
1600	10	6.3	32	S55320-M105	**MVL661.32-10**
200	12	8	32	BPZ:MVL661.32-12	**MVL661.32-12**

k_{vs}-reduced selectable with DIP switch.
MVL661.32-12 can only be used as a suction throttle valve.

MVS661..N

Modulating refrigerant valves with magnetic actuator, PN 63, hermetically sealed

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 CO_2 (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	$_{vs}$-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
Warranty	5 Years

Range overview MVS661..N

Δp_{max} [kPa]	k_{vs} [m³/h]	k_{vs} reduced [m³/h]	DN	Stock no.	Product no.
2500	0.16	0.1	25	BPZ:MVS661.25-016N	**MVS661.25-016N**
2500	0.4	0.25	25	BPZ:MVS661.25-0.4N	**MVS661.25-0.4N**
2500	1	0.63	25	BPZ:MVS661.25-1.0N	**MVS661.25-1.0N**
2500	2.5	1.6	25	BPZ:MVS661.25-2.5N	**MVS661.25-2.5N**
2500	6.3	4	25	BPZ:MVS661.25-6.3N	**MVS661.25-6.3N**

k_{vs}-reduced selectable with DIP switch.

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

Product Title	Data sheet	Stock no.	Product no.
Valve insert, kvs 0.16 m³/h	N4716	BPZ:ASR0.16N	**ASR0.16N**
Valve insert, kvs 0.4 m³/h	N4716	BPZ:ASR0.4N	**ASR0.4N**
Valve insert, kvs 1 m³/h	N4716	BPZ:ASR1.0N	**ASR1.0N**
Valve insert, kvs 2.5 m³/h	N4716	BPZ:ASR2.5N	**ASR2.5N**

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

Product Title	Data sheet	Stock no.	Product no.
Valve insert, kvs 6.3 m³/h	N4716	BPZ:ASR6.3N	**ASR6.3N**
Replacement electronic for MVL661.. and MVS661..N	N4714	BPZ:ASR61	**ASR61**
PTC conductive heating element		S55845-Z241	**ASR70**

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

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.
	BPZ:M2FP03GX	**M2FP03GX**

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.
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**
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	**ZM101/A**
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**
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	**ZM121/A**
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**
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM220/A	**ZM220/A**

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

M3FB..LX..

Hermetically sealed contol 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]	Δp_{max} [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.
26	2200	0.6	15	BPZ:M3FB15LX06/A	**M3FB15LX06/A**
26	2200	1.5	15	BPZ:M3FB15LX15/A	**M3FB15LX15/A**
26	2200	3	15	BPZ:M3FB15LX/A	**M3FB15LX/A**
26	1800	5	20	BPZ:M3FB20LX/A	**M3FB20LX/A**
40	1200	8	25	BPZ:M3FB25LX/A	**M3FB25LX/A**
40	800	12	32	BPZ:M3FB32LX	**M3FB32LX**

Δp_{max} across control port AB -> A.

Matching ZM.. electronics

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

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} [m³/h]	DN	Stock no.	Product no.
13	0.6	15	BPZ:M3FK15LX06	**M3FK15LX06**
13	1.5	15	BPZ:M3FK15LX15	**M3FK15LX15**
13	3	15	BPZ:M3FK15LX	**M3FK15LX**
16	5	20	BPZ:M3FK20LX	**M3FK20LX**
16	8	25	BPZ:M3FK25LX	**M3FK25LX**
20	12	32	BPZ:M3FK32LX	**M3FK32LX**
40	20	40	BPZ:M3FK40LX	**M3FK40LX**
40	30	50	BPZ:M3FK50LX	**M3FK50LX**

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.
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	**ZM101/A**
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	**ZM121/A**

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