

Sliding spool control valve with integrated positioner Series SG05/SG06



Type SG05



Type SG06

Design type	Sliding gate control valve with piston actuator with integrated positioner, with position indicator, Sandwich mounting version, NC
Overall length	according to EN558-1R20
Connection	Flanges DN15...DN150 according to EN1092-1 Form B, PN10-40
Materials	Housing Galvanized steel or rather Stainless steel 1.4408, PTFE packing with carbon filled, Actuating rod stainless steel 1.4571, Intermediate tube/Packaging tube Stainless steel 1.4571/1.4581, Actuator Chrome-plated brass Ø80 and Anodized aluminium Ø125, Actuator springs Stainless steel 1.4310 Ø80 and Spring steel wire C Plastic coated Ø125, visual position indicator polyamide
Sliding pair	Stainless steel/special carbon: Sealing washer fixed Stainless steel 1.4571 coated and Sealing washer movable Special carbon Stainless steel/SFC: Sealing washer fixed Stainless steel 1.4571 coated and Sealing washer movable SFC STN2: Sealing washer fixed and Sealing washer movable STN2
Leakage rate (% of Kvs)	Stainless steel/special carbon < 0,0001 Stainless steel/SFC < 0,0005 STN2 < 0,001
Mounting type	Installation in rigid piping system
Mounting position	any
Application range	gaseous and liquid media that do not attack the materials used
Medium temperature	Housing Galvanized steel: SG05 -10...350°C, SG06 -10...230°C Housing Stainless steel 1.4408: SG05 -60...350°C (SFC -60...300°C), SG06 -20...230°C
Ambient temperature	see positioner
Operating pressure	see tables
Control pressure	max. 10bar



Type code

		SG	05	-	50	-	W	WC	80	-	01	
	long Design type		05									
Type	short design		06									
Connection	DN15				15							
	DN20				20							
	DN25				25							
	DN32				32							
	DN40				40							
	DN50				50							
	DN65				65							
	DN80				80							
	DN100				100							
	DN125				125							
	DN150				150							
Housing material	Steel galvanized						U					
	Stainless steel 1.4408						W					
Sliding pair	Stainless steel/special carbon							WC				
	Stainless steel/SFC							WF				
	STN2							WN				
Actuator	Actuator 80								80			
	Actuator 125								125			
Special version	described in the item text										01,02,03....	
	Kvs values reduced to											
	Characteristic curve linear/equal percentage											
	Function spring opens NO											
	digital position controller type 8049, 4-wire											
	digital positioner type 8049, 2-wire											
	digital positioner type 8049, ASI version											
	digital positioner type 8049, 2-wire Ex version											
	P/P-Positioner Type 8047											
	I/P-Positioner Type 8047											
	I/P-Positioner Type 8047 EEx ib IIC T6 with plug connector M12x1											
	2 Inductive limit switch M12x1 10 ... 30 VDC PNP											
	2 Limit switch inductive M12x1 10 ... 55 VDC PNP/NPN											



Positioner



analog position controller
8047

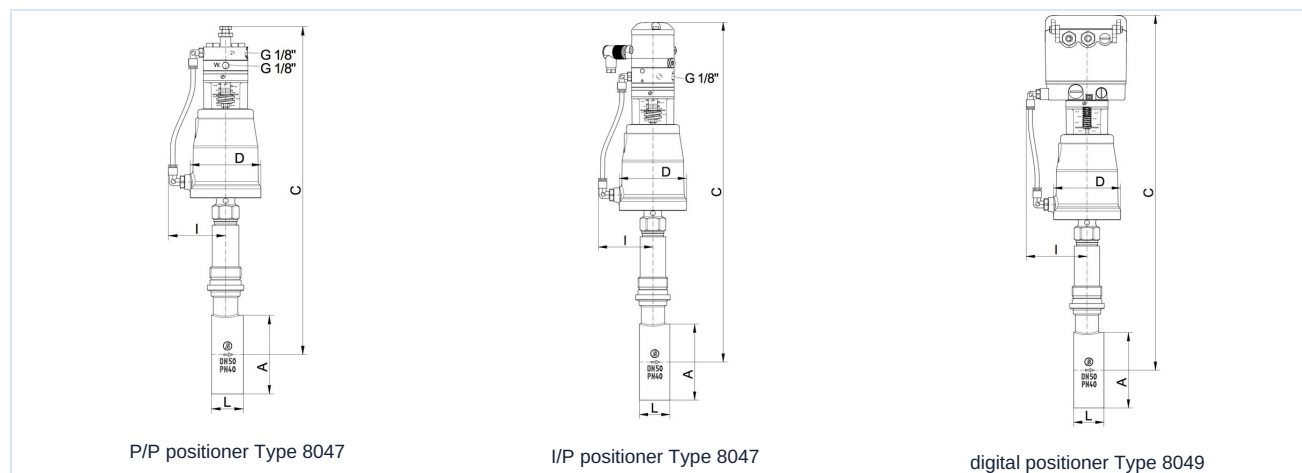


digital positioner
8049

analog position controller	
Control signal	pneumatic: 0,2...1bar electropneumatic: 0/4...20mA
Control pressure	3...6bar
Control medium	non-lubricated, dry compressed air or neutral gases, 5µm filtered
Ambient temperature	-20...+60°C
Control ratio	25:1
Hysteresis	< ±1%
Self air consumption	400...600 NI/h (depending on supply pressure)
Pressure port	G1/8"
Degree of protection	IP54 according to EN 60529
digital positioner	
Supply voltage	4-wire connection 24VDC 2-wire connection none
Burden voltage	4-wire connection 3,5V at 20mA 2-wire connection 6,2V at 20mA
Control signal	4-wire connection: 0/4 ... 20mA 2-wire connection: 4 ... 20mA
Control pressure	4-wire connection: 4 ... 6bar 2-wire connection: 4,5...6bar
Control medium	4-wire connection non-lubricated, dry compressed air or neutral gases, 40µm filtered 2-wire connection non-lubricated, dry compressed air or neutral gases, 5µm filtered
Ambient temperature	4-wire connection: -20...+75°C 2-wire connection: -10...+75°C
Control ratio	30:1
Self air consumption	none
Pressure port	G1/8"
Degree of protection	IP65 according to EN 60529
Accessories	Limit switch, visual position indicator, analog feedback module for digital controller



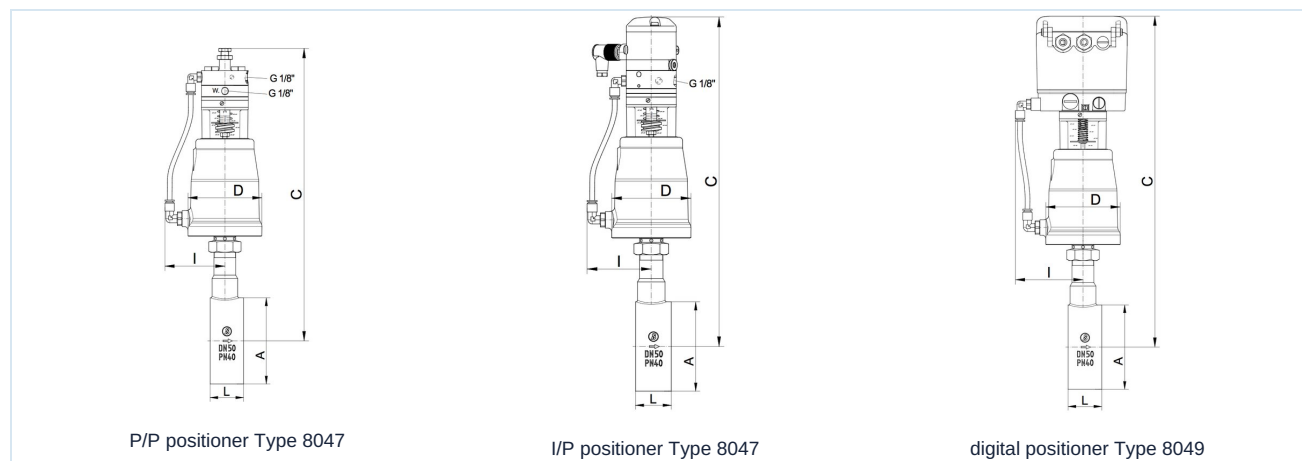
Dimensions SG05



Nominal size DN [mm]	Actuator Ø	A	C			D	I	L	Stroke	Weight [approx. kg]
			P/P regulator	I/P regulator	digital controller					
15	80	53	422	454	484	96	89,5	33	6	5,6
15	125	53	442	474	504	146	102,5	33	6	7,4
20	80	62	427	459	488	96	89,5	33	6	5,7
20	125	62	447	479	508	146	102,5	33	6	7,5
25	80	72	432	464	493	96	89,5	33	6	5,8
25	125	72	452	484	513	146	102,5	33	6	7,6
32	80	82	436	468	495	96	89,5	33	6	5,8
32	125	82	456	488	515	146	102,5	33	6	7,6
40	80	92	441	473	501	96	89,5	33	6	6
40	125	92	461	479	521	146	102,5	33	6	7,8
50	80	108	451	483	509	96	89,5	43	8	7,1
50	125	108	471	503	529	146	102,5	43	8	8,9
65	80	126	461	493	518	96	89,5	46	8	7,6
65	125	126	481	513	539	146	102,5	46	8	9,4
80	80	142	469	501	527	96	89,5	46	8	8,3
80	125	142	489	521	547	146	102,5	46	8	10,1
100	80	164	481	513	540	96	89,5	52	8,5	9,5
100	125	164	501	533	560	146	102,5	52	8,5	11,3
125	80	194	496	528	555	96	89,5	56	8,5	13,2
125	125	194	516	548	575	146	102,5	56	8,5	15
150	80	219	511	543	570	96	89,5	56	8,5	15,1
150	125	219	531	563	590	146	102,5	56	8,5	16,9



Dimensions SG06



Nominal size DN [mm]	Actuator Ø	A	C Steel housing			C Stainless steel housing			D	I	L	Stroke	Weight [approx. kg]
			P/P regulator	I/P regulator	digital controller	P/P regulator	I/P regulator	digital controller					
15	80	53	349	381	406	236	358	383	96	80	33	6	4,9
15	125	53	369	401	426	346	378	403	146	105	33	6	6,7
20	80	62	354	386	411	331	363	388	96	80	33	6	5,0
20	125	62	374	406	431	351	383	408	146	105	33	6	6,8
25	80	72	359	391	415	336	368	393	96	80	33	6	5,1
25	125	72	379	411	436	356	388	413	146	105	33	6	6,9
32	80	82	362	394	419	340	372	397	96	80	33	6	5,1
32	125	82	382	414	439	360	392	417	146	105	33	6	6,9
40	80	92	367	399	424	345	377	402	96	80	33	6	5,3
40	125	92	387	419	444	365	402	422	146	105	33	6	7,1
50	80	108	368	400	425	368	400	425	96	80	43	8	6,4
50	125	108	388	420	445	388	420	445	146	105	43	8	8,2
65	80	126	377	409	434	377	409	434	96	80	46	8	8,7
65	125	126	397	429	454	397	429	454	146	105	46	8	7,6
80	80	142	385	417	442	385	417	442	96	80	46	8	9,4
80	125	142	405	427	462	405	427	462	146	105	46	8	8,8
100	80	164	398	430	455	398	430	455	96	80	52	8,5	10,6
100	125	164	418	450	475	418	450	475	146	105	52	8,5	10,6
125	80	194	419	451	476	419	451	476	96	80	56	8,5	12
125	125	194	439	471	496	439	471	496	146	105	56	8,5	12,5
150	80	219	465	497	522	465	497	522	96	80	56	8,5	15,1
150	125	219	485	517	542	485	517	542	146	105	56	8,5	16,9



Application limits - maximum permissible inlet pressures in bar*

Nominal size DN [mm]	Stainless steel/special carbon - Stainless steel/SFC						STN2					
	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15 - 25	40	36	31	28	26	24	40	36	31	28	26	24
32	40	36	31	28	26	24	40	36	31	28	25	22
40	40	36	31	28	26	24	27	26	24	19,5	16	14
50	40	36	31	28	26	24	40	36	31	28	26	24
65	40	36	31	28	26	24	38	36	31	28	23	19,5
80	40	36	31	28	26	23	22	21	20	16	13	11,5
100	25	24	22	19	16	14,5	13,5	12,5	12	9,8	8,1	7,0
125	16,5	15,5	15	12,5	10,5	9,5	8,9	8,4	8	6,5	5,3	4,6
150	16	16	16	16	13	11,5	11	10,5	9,8	7,9	6,5	5,6

*SFC max. 300°C, Type SG06 (short design): max. +230°C

Permissible differential pressures (for temperatures up to 120°C)* analog position controller

Nominal size DN [mm]	Actuator Ø	max. Differential pressure				Control pressure	
		Stainless steel/special carbon - Stainless steel/SFC		STN2			
		Control	Open/Close	Control	Open/Close	Stainless steel/special carbon	STN2
15	80	40	40	28,4	29,9	3,0 - 6	3,5 - 6
20		39,8	36,6	19,3	23	3,0 - 6	4,0 - 6
25		29,5	30,7	13,1	17,2	3,5 - 6	4,0 - 6
32		21,8	25,1	9,1	12,8	4,0 - 6	4,0 - 6
40		14,9	19	5,9	8,8	4,0 - 6	4,0 - 6
50		8,8	12,5	3,4	5,3	4,5 - 6	4,5 - 6
65		7,2	10,5	2,7	4,3	4,5 - 6	4,5 - 6
80		4,4	6,7	-	-	4,5 - 6	-
100		2,7	4,3	-	-	4,5 - 6	-
15	125	40	40	40	40	3,0 - 6	3,0 - 6
20		40	40	40	40	3,0 - 6	3,0 - 6
25		40	40	30,2	37,4	3,0 - 6	3,0 - 6
32		40	40	21	27,8	3,0 - 6	3,0 - 6
40		34,3	40	13,7	19,1	3,0 - 6	3,0 - 6
50		20,4	27,1	7,8	11,4	3,5 - 6	3,5 - 6
65		16,7	22,8	6,3	9,4	3,5 - 6	3,5 - 6
80		10,1	14,5	3,7	5,7	3,5 - 6	3,5 - 6
100		6,2	9,3	2,3	3,5	3,5 - 6	3,5 - 6
125		4,2	6,3	-	-	3,5 - 6	-
150		3,1	4,7	-	-	3,5 - 6	-

*At temperatures above 120°C observe application limits



Digital positioner*

Nominal size DN [mm]	Actuator Ø	max. Differential pressure		Control pressure	
		Stainless steel/special carbon - Stainless steel/SFC Control / Open/Close	STN2 Control / Open/Close	Stainless steel	STN2
15	80	40	40	3,0 - 6	3,5 - 6
20		40	37,3	3,0 - 6	4,0 - 6
25		40	27,4	3,5 - 6	4,0 - 6
32		40	20,1	3,5 - 6	4,5 - 6
40		30,4	13,6	4,0 - 6	4,5 - 6
50		19,5	8	4,5 - 6	5,0 - 6
65		16,3	6,6	4,5 - 6	5,0 - 6
80		10,2	4	5,0 - 6	5,0 - 6
100		6,5	2,4	5,0 - 6	5,0 - 6
125		4,4	-	5,0 - 6	-
150		3,3	-	5,0 - 6	-
15	125	40	40	2,5 - 6	2,5 - 6
20		40	40	2,5 - 6	2,5 - 6
25		40	40	2,5 - 6	3,0 - 6
32		40	40	2,5 - 6	3,5 - 6
40		40	27	3,0 - 6	3,5 - 6
50		40	18,5	3,5 - 6	4,0 - 6
65		37,6	15,1	3,5 - 6	4,0 - 6
80		23,6	9,1	4,0 - 6	4,0 - 6
100		15	5,6	4,0 - 6	4,0 - 6
125		10,1	3,8	4,0 - 6	4,0 - 6
150		7,5	2,8	4,0 - 6	4,0 - 6

*At temperatures above 120°C observe application limits

Kvs values

Nominal size DN [mm]	Characteristic curve	Kvs value [m³/h]												
		100%	63%	40%	25%	20%	16%	12%	10%	6,3%	2,5%	2%	1%	0,4%
15	linear	4	2,6	1,7	1,4	-	0,71	0,49	0,44	0,26	0,14	0,08	0,04	0,018
	equal percentage	1,7	-	1,1	-	0,35	-	-	-	0,1	-	-	-	-
20	linear	6,4	-	-	-	-	1	-	-	-	-	0,13	-	-
	equal percentage	3	-	1,5	-	-	-	-	-	-	-	-	-	-
25	linear	11	6,4	4	-	-	1,6	-	0,93	0,62	0,26	-	0,14	0,04
	equal percentage	5	-	2,4	-	1,1	-	-	-	0,35	-	-	-	-
32	linear	16	10	-	-	-	-	-	-	-	-	-	-	-
	equal percentage	8	4,7	-	-	-	-	-	-	-	-	-	-	-
40	linear	26	16	11	7	-	-	-	-	-	-	-	-	-
	equal percentage	11	8,5	-	2,75	-	-	-	-	-	-	-	-	-
50	linear	45	28	20	12	10	-	-	-	-	-	-	-	-
	equal percentage	19	12	-	-	-	3	-	-	-	-	-	-	-
65	linear	52	35	-	15	-	-	-	-	-	-	-	-	-
	equal percentage	30	-	-	8	-	-	-	-	-	-	-	-	-
80	linear	92	58	40	-	-	-	-	-	-	-	-	-	-
	equal percentage	48	35	-	-	-	-	-	-	-	-	-	-	-
100	linear	154	95	62	-	-	-	-	-	-	-	-	-	-
	equal percentage	77	48	-	-	-	-	-	-	-	-	-	-	-
125	linear	237	-	95	-	-	-	-	-	-	-	-	-	-
	equal percentage	116	-	-	-	-	-	-	-	-	-	-	-	-
150	linear	338	212	-	-	-	-	-	-	-	-	-	-	-
	equal percentage	147	90	-	-	-	-	-	-	-	-	-	-	-



