Control Valve 8021

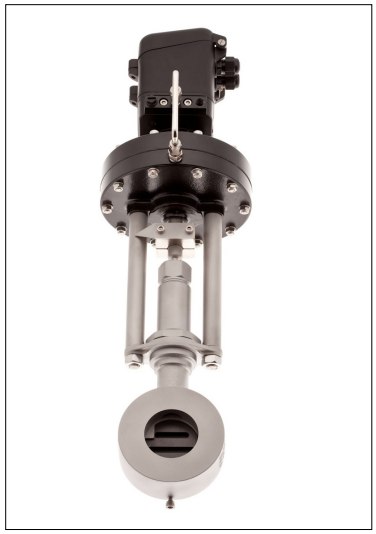
with integrated positioner

GS 1 series DN 15 up to DN 150

SCHUBERT & SALZER CONTROL SYSTEMS

Pneumatic control valve for the control of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Space saving wafer type construction
- Lowest possible weight
- Quiet operation
- Fast response time
- Control of high differential pressures with small actuators
- Greatly reduced energy consumption rates due to short strokes and low actuating forces on the throttle element
- High Kvs-(Cv)-values



Type 8021 with digitalpositioner, Type 8049

Technical Information

Body design	flangeless, wafer-type construction dimensions acc. DIN EN 558-1 series 20 for flanges acc. DIN EN 1092-1, form B more versions see data-sheet 8021-GS3	
Nominal size	DN 15 to DN 150	
Nominal pressure	PN 40 acc. DIN 2401 (also for flanges PN 10 to PN 25)	
Fluid temperature	carbon steel body -10℃ to +300℃ stainless steel body -60℃ to +350℃	
Ambient temperature*	-30℃ up to +100℃	
Rangeability / Characteristic analog positioner digital positioner	 30 : 1 40 : 1 linear / 80 : 1 equal percentage	
Leakage rate (% of Kvs-value)	sliding unit carbon-, stainless steel coated < 0.0001	sliding unit STN2 < 0.001

* Please consider the limitation of use of the positioner!

Kvs-values see data sheet 8001.

Materials

Body	Carbon steel 1.0570 /1.0619	Stainless steel 1.4571 /1.4581
Head section	Carbon steel 1.0570 /1.0619	Stainless steel 1.4571 /1.4581
Diaphragm housing	Aluminium, KTL- coated	
Actuator springs	Stainless steel 1.4310	
Packing	PTFE carbon filled (spring 1.4310)	
Actuating stem	Stainless steel 1.4571, roller burnished	
Bellows (optional)	Stainless steel 1.4571	
Fixed disc	Stainless steel 1.4571 coated	STN2 - disc
Sliding disc	Special carbon material	STN2 - disc
Coupling ring for disc	Stainless steel 1.4581	
Positioner Housing	Aluminium anodized, synthetic	

Positioner

For technical information of our positioners please refer to the corresponding data sheets.

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Control Valve 8021-GS1

with integrated p/p and i/p - positioner, Type 8047

Admissible Differential Pressure

(For temperatures of up to 120°C)

For temperatures of 120°C and above: obey application limits !

Disc pair: carbon - stainless steel

Diaphragm area	125 cm²				250 cm²			
Supply air (bar)	4		5		3		4	
	Admissible differential pressures in bar							
DN	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off
15	40	40	40	40	40	40	40	40
20	40	40	40	40	40	40	40	40
25	40	40	40	40	40	40	40	40
32	40	40	40	40	40	40	40	40
40	29	29	36	40	40	40	40	40
50	17	19	21	29	29	29	35	40
65	14	16	17	24	24	24	29	34
80	8	10	10	15	14	14	17	22
100	5	6	6	10	9	9	10	14
125	3	4	4	6	6	6	7	9
150	2	3	3	5	4	4	5	7
Spring configuration	3		4		3		4	

Standard

Disc pair: STN2

Diaphragm area	125 cm²				250 cm²			
Supply air (bar)	4		5		3		4	
	Admissible differential pressures in bar							
DN	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off
15	40	40	40	40	40	40	40	40
20	37	37	40	40	40	40	40	40
25	25	26	31	40	40	40	40	40
32	17	19	22	30	30	30	36	40
40	11	13	14	20	19	19	24	27
50	6	8	8	12	11	11	13	17
65	5	6	6	10	9	9	11	14
80	3	4	3,5	6	5	5	6	8
100	1,5	2	2	3	3	3	4	5
125	-	-	1,5	2	2	2	2,5	3,5
150	-	-	1	1,5	1,5	1,5	1,8	2,5
Spring configuration	3		4		3		4	

Standard

Control Valve 8021-GS1

with integrated digital positioner, Type 8049
(also on-off valves and valves wiht other side-mounted positioner)

Admissible Differential Pressure
(For temperatures of up to 120°C)

For temperatures of 120°C and above: obey application limits !

Disc pair: carbon - stainless steel

Diaghragm area	125 cm²		250 cm²	
Supply air (bar)	4,5	5,5	3	4
DN	Admissible differential pressures in bar			
15	40	40	40	40
20	40	40	40	40
25	40	40	40	40
32	40	40	40	40
40	40	40	40	40
50	40	40	40	40
65	37	40	40	40
80	23	29	40	40
100	15	16	24	25
125	10	11	16	16
150	7	7,5	13	15
Spring configuration	3	4	3	4

Standard

Disc pair: STN2

Diaphragm area	125 cm²		250 cm²	
Spring range (bar)	4,5	5,5	3	4
DN	Admissible differential pressures in bar			
15	40	40	40	40
20	40	40	40	40
25	40	40	40	40
32	40	40	40	40
40	26	27	27	27
50	18	20	31	38
65	15	16	26	31
80	9	9,5	15	19
100	5	5,5	9	11
125	3	3,5	6	7
150	2	2,5	4,5	5,5
Spring configuration	3	4	3	4

Standard

Applications limits for GS1-Valves made of stainless steel

PN 40

	Sliding unit: carbon - stainless steel, coated					
	max. admissible diff. pressures for GS1-valves					
DN	100°C	150°C	200°C	250°C	300°C	350°C
15 - 25	40	38	34	33	31	29
32	40	38	34	33	31	29
40	40	38	34	33	31	29
50	40	38	34	33	31	29
65	40	38	34	33	31	29
80	40	38	34	31	26	23
100	24	23	22	19	16	14
125	16	15	14	12	10	9,0
150	16	15	14	13	12	12

Sliding unit: carbon - STN2					
max. admissible diff. pressures for GS1-valves					
100°C	150°C	200°C	250°C	300°C	350°C
40	38	34	33	31	29
40	38	34	31	25	22
27	25	24	19	16	14
40	38	34	33	28	24
37	35	33	27	22	19
22	21	20	16	13	11
13	12	12	10	8,0	7,0
8,8	8,4	8,0	6,5	5,3	4,6
11	10	9,8	7,9	6,5	5,6

Limitation for valves in carbon steel: 300°C

Control Valve 8021-GS1
with integrated positioner

Ordering Number System

									1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
8	0	2	1	/				V	G					M							Z			S

Symbol: "V": Valve

"R": Repair kit (sealings)

1 - 5 : Please quote all 5 sections.
6 - 12: Quote only if required.

1. Type		2. Connection		3. Body material		4. Safety position		5. Actuator		6. Special versions		7. Springs		8. Stem sealing	
G	pneumatic control valve type 8021	0	flangeless design acc. DIN 2632-2635 (PN10-PN40)	0	carbon steel 1.0570 / 1.0619	0	spring closes	3	diaphragm 125 cm²	M	state, if further sections are quoted	-	standard	-	PTFE-packing, self adjusting (standard)
				1	stainless steel 1.4571/ 1.4581	1	spring opens	4	diaphragm 250 cm²			1	2 springs		
				8	hastelloy			5	diaphragm 500 cm²			2	4 springs	1	additional bellows 1.4571
												3	6 springs		
												4	8 springs		
												5	10 springs		
												D	spring set 0,2-1 bar		

9. Moving disc		10. Fixed disc		11. Kvs-values		12. Characte-ristic		13. Acces-sories		14. Positioner		15. Feedback		16. Special versions	
-	carbon	-	stainless steel	-	100% (stand.)	-	linear	Z	acces-sories	-	without	-	without	S	further special versions
9	STN2-disc		1.4571, coated	A	red. to 63%	1	equal percentage			1	p/p positioner Type 8047	0	2 ind. limit switches M12x1 DC 10-30V		
		1	STN2-disc	1	red. to 40%					3	i/p positioner Type 8047	5	2 ind. limit switches M12x1 DC 10-55V		
				B	red. to 25%					6	i/p positioner Type 8047 Eex ib IIC T6 with plug conn. M12x1	D	1 ind. limit switch M12x1 DC 10-30V		
				2	red. to 16%							6	1 ind. limit switch M12x1 DC 10-55V		
				C	red. to 10%					8	i/p positioner with plug conn. M12x1				
				3	red. to 6,3%					C	digital positioner, type 8049, 4 wire				
				4	red. to 2,5%					R	digital positioner, type 8049, 2 wire				
				5	red. to 1 %					T	digital positioner, type 8049, AS-i version				
				6	red. to 20%										
				7	red. to 12%					W	digital positioner, type 8049, 2 wire ex-version				
				8	red. to 2%										
				9	red. to 0,4%										

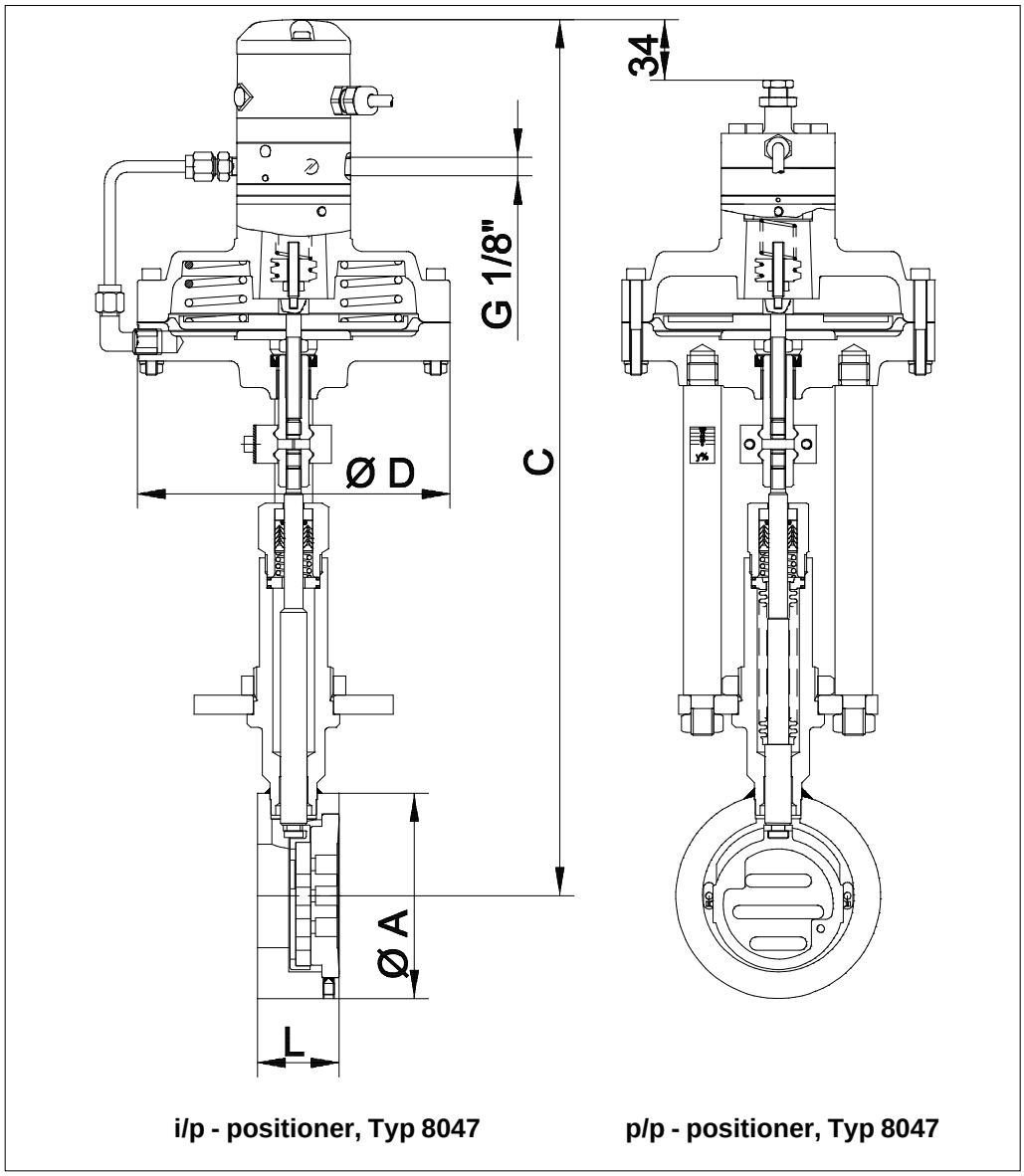
Ordering example: 8021/050VG0003M - - 91 - - Z3

GS-control valve type 8021 with pneumatic actuator, DN 50, PN 10/40, body material carbon steel, spring closes, actuator 125 cm², PTFE-V-shaped seal, STN2-disc and plate, Kvs-value 100 %, Flow characteristic linear, integrated i/p positioner

Control Valve 8021-GS1

with integrated p/p and i/p - positioner, Type 8047

Dimensions and Weights



i/p - positioner, Typ 8047 **p/p - positioner, Typ 8047**

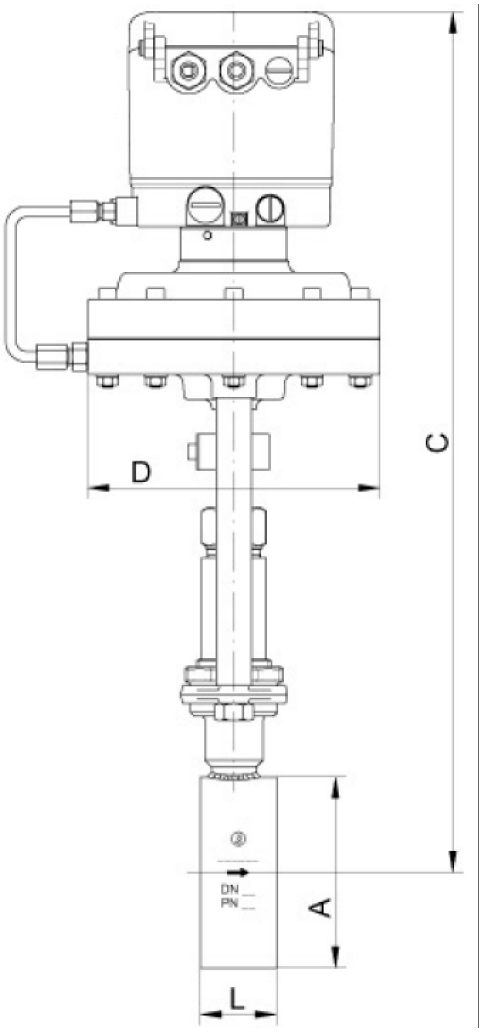
DN	Ø A	C*	Ø D Actuator		L	Stroke	Weight Actuator	
			D 125	D 250			D 125	D 250
15	53	430	165	222	33	6	6,9	9,1
20	62	435	165	222	33	6	7,0	9,2
25	72	440	165	222	33	6	7,2	9,4
32	82	445	165	222	33	6	7,5	9,7
40	92	450	165	222	33	6	7,7	9,9
50	108	460	165	222	43	8	8,9	11,1
65	127	470	165	222	46	8	9,7	11,9
80	142	480	165	222	46	8	10,3	12,5
100	164	490	165	222	52	8,5	11,8	14,0
125	194	505	165	222	56	8,5	14,0	16,2
150	219	520	165	222	56	8,5	15,5	17,7

Dimensions in mm

Control Valve 8021-GS1

with integrated digital positioner, Type 8049

Dimensions and Weights



digital positioner ,Type 8049

DN	ØA	C	D Actuator		L	Stroke	Weight kg
			125	250			
15	53	460	165	222	33	6	6,9
20	62	465	165	222	33	6	7
25	72	470	165	222	33	6	7,2
32	82	475	165	222	33	6	7,5
40	92	480	165	222	33	6	7,7
50	108	490	165	222	43	8	8,9
65	127	500	165	222	46	8	9,7
80	142	510	165	222	46	8	10,3
100	164	520	165	222	52	8,5	11,8
125	194	535	165	222	56	8,5	15,5
150	219	550	165	222	56	8,5	17,4

Dimensions in mm