

GS 1 series - DN 15 up to DN 150

Pneumatic sliding gate valve with integrated positioner for the control of liquid and gaseous media for industrial applications

- Space saving design and low weight
- Fast response due to short strokes
- High Kvs- (Cv)- values
- Tight shut- off even at higher temperatures
- No exposed moving parts
- No steady- state air consumption
- Operation independent of mounting position and supply pressure variations
- Not sensitive to vibration
- Instrument grade air not essential
- Software configurable flow characteristics
- Protection Class IP65
- Meets the requirements of TA-Luft 2021



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		
Nominal sizes	DN 15 to DN 150		
Nominal pressure	PN 40 according DIN 2401, also for flanges PN 10 - PN 25		
Fluid temperature	body 1.0619	-10°C to +230°C	
	body 1.4571	-20°C to +230°C optional -60°C to +230°C	
Ambient temperature*	digital positioner -10°C up to +75°C analog positioner -15°C up to +60°C		
Flange gaskets (customer side)	DIN EN 1514-1 or ANSI B16.21 in the respective nominal pressure rating		
Rangeability / Characteristic analog positioner digital positioner	25 : 1 30 : 1		
Leakage	Disc pair Carbon-stainless steel	Disc pair SFC	Disc pair STN 2
% of Kvs	< 0,0001	< 0,0005	< 0,001
IEC 60534-4	IV-S1	IV-S1	IV
EN 12266-1	E	F	F
Marking ATEX non electric	II 2G Ex h IIC T6...T1 X Gb II 2D Ex h IIIC 85°C...350°C X Db		
Packing leakage	ISO FE - BH - CC3 - SSA0 - t (-40°C / +350 °C) - PN40 - ISO 15848-1		

* Please consider the limitation of use of the positioner!

** With DN15 with reduction of less than 25%, different leakage rates possible.
Kvs-values see data sheet 8001.

Materials

Body	carbon steel 1.0619	stainless steel 1.4408
Bonnet	brass, chrome-plated (actuator Ø 80 mm), aluminium KTL-coated, (actuator Ø 125 mm)	
Actuator springs	stainless steel 1.4310 (actuator Ø 80 mm); spring steel wire C, plastic coated (actuator Ø 125 mm)	
Packing	PTFE carbon filled (spring 1.4310)	
Actuating stem	stainless steel 1.4571, roller burnished	
Bellows	stainless steel 1.4571	
Fixed disc	stainless steel 1.4581, coated	STN2 - disc
Sliding disc	special carbon material	SFC - disc STN2 - disc
Coupling ring for disc	stainless steel 1.4581	
Window for positioner indicator	PA Trogamid (clean)	

Positioner

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

digital positioner, Type 8049

(also on-off valves and valves with other side-mounted positioner)

Disc-pair: carbon - stainless steel coated
SFC - stainless steel coated

DN	actuator	max. differential pressures		pilot pressures
		control, on/off		
15	80	40		3,5 - 6
20	80	40		3,5 - 6
25	80	40		3,5 - 6
32	80	40		4,0 - 6
40	80	30,4		4,0 - 6
50	80	19,5		4,5 - 6
65	80	16,3		4,5 - 6
80	80	10,2		5,0 - 6
100	80	6,5		5,0 - 6
125	80	4,4		5,0 - 6
150	80	3,3		5,0 - 6

15	125	40		3,0 - 6
20	125	40		3,0 - 6
25	125	40		3,0 - 6
32	125	40		3,0 - 6
40	125	40		3,0 - 6
50	125	40		3,5 - 6
65	125	37,6		3,5 - 6
80	125	23,6		4,0 - 6
100	125	15		4,0 - 6
125	125	10,1		4,0 - 6
150	125	7,5		4,0 - 6

Disc pair: STN2

DN	actuator	max.differential pressures		pilot pressures
		control, on/off		
15	80	40		3,5 - 6
20	80	37,3		4,0 - 6
25	80	27,4		4,0 - 6
32	80	20,1		4,5 - 6
40	80	13,6		4,5 - 6
50	80	8		5,0 - 6
65	80	6,6		5,0 - 6
80	80	4		5,0 - 6
100	80	2,4		5,0 - 6

15	125	40		3,0 - 6
20	125	40		3,0 - 6
25	125	40		3,0 - 6
32	125	40		3,5 - 6
40	125	27		3,5 - 6
50	125	18,5		4,0 - 6
65	125	15,1		4,0 - 6
80	125	9,1		4,0 - 6
100	125	5,6		4,0 - 6
125	125	3,8		4,0 - 6
150	125	2,8		4,0 - 6

Admissible differential pressure (For temperatures of up to 120°C)

p/p- und i/p-Stellungsregler, Typ 8047

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

Disc-pair: carbon - stainless steel coated
SFC - stainless steel coated

DN	actuator	max. differential pressures		pilot pressures
		Regelung	on/off	
15	80	40	40	3,0 - 6
20	80	39,8	36,6	3,5 - 6
25	80	29,5	30,7	3,5 - 6
32	80	21,8	25,1	4,0 - 6
40	80	14,9	19	4,0 - 6
50	80	8,8	12,5	4,5 - 6
65	80	7,2	10,5	4,5 - 6
80	80	4,4	6,7	4,5 - 6
100	80	2,7	4,3	4,5 - 6

15	125	40	40	3,0 - 6
20	125	40	40	3,0 - 6
25	125	40	40	3,0 - 6
32	125	40	40	3,0 - 6
40	125	34,3	40	3,0 - 6
50	125	20,4	27,1	3,5 - 6
65	125	16,7	22,8	3,5 - 6
80	125	10,1	14,5	3,5 - 6
100	125	6,2	9,3	3,5 - 6
125	125	4,2	6,3	3,5 - 6
150	125	3,1	4,7	3,5 - 6

Disc pair: STN2

DN	actuator	max.differential pressures		pilot pressures
		Regelung	on/off	
15	80	28,4	29,9	3,5 - 6
20	80	19,3	23	4,0 - 6
25	80	13,1	17,2	4,0 - 6
32	80	9,1	12,8	4,0 - 6
40	80	5,9	8,8	4,0 - 6
50	80	3,4	5,3	4,5 - 6
65	80	2,7	4,3	4,5 - 6
80	80	-	-	-
100	80	-	-	-

15	125	40	40	3,0 - 6
20	125	40	40	3,0 - 6
25	125	30,2	37,4	3,0 - 6
32	125	21	27,8	3,0 - 6
40	125	13,7	19,1	3,0 - 6
50	125	7,8	11,4	3,5 - 6
65	125	6,3	9,4	3,5 - 6
80	125	3,7	5,7	3,5 - 6
100	125	2,3	3,5	3,5 - 6

**Admissible differential pressure
(For temperatures of up to 120°C)**

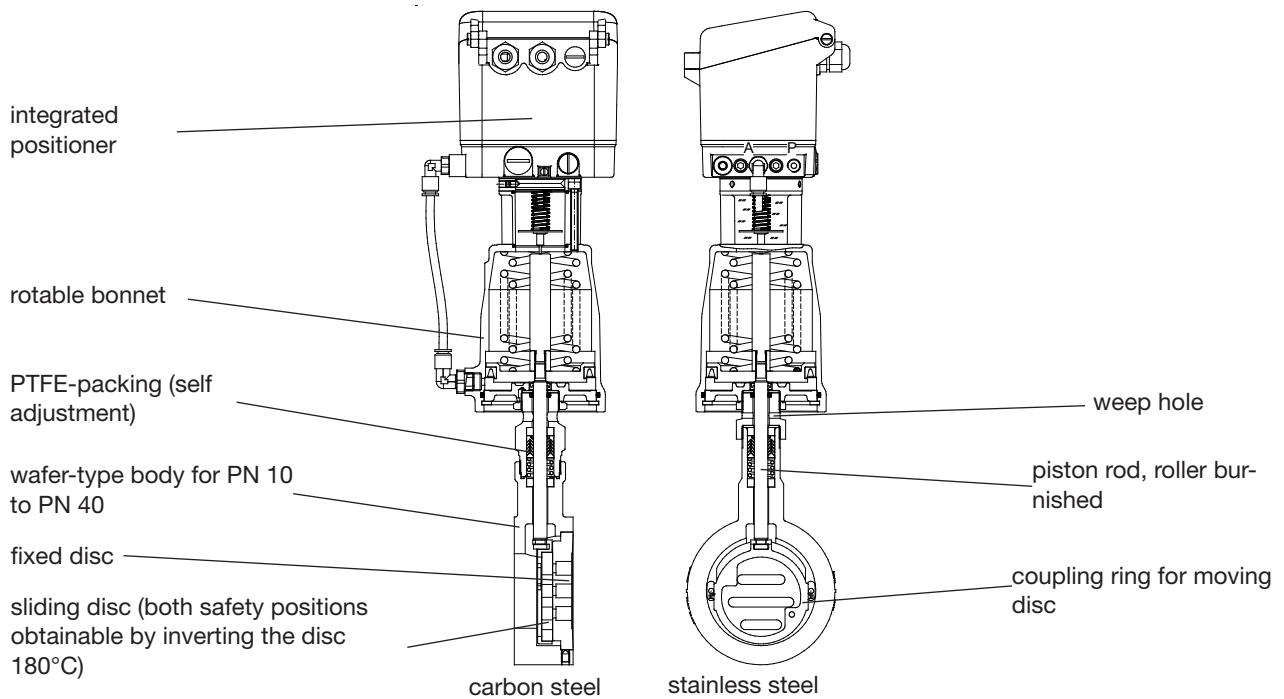
**For temperatures of 120°C and above:
obey application limits !**

**Actuator D80 double acting
without safety position
digital positioner, type 8049-4 wire**

DN	actuator	max.differential pressures	pilot pressures
		control, on/off	
15	80	40	3,5 - 6
20	80	37,3	4,0 - 6
25	80	27,4	4,0 - 6
32	80	20,1	4,5 - 6
40	80	13,6	4,5 - 6
50	80	8	5,0 - 6
65	80	6,6	5,0 - 6
80	80	4	5,0 - 6
100	80	2,4	5,0 - 6

**Actuator D125 double acting
without safety position
digital positioner, type 8049-4 wire**

DN	actuator	max.differential pressures	pilot pressures
		control, on/off	
15	125	40	3,0 - 6
20	125	40	3,0 - 6
25	125	40	3,0 - 6
32	125	40	3,5 - 6
40	125	27	3,5 - 6
50	125	18,5	4,0 - 6
65	125	15,1	4,0 - 6
80	125	9,1	4,0 - 6
100	125	5,6	4,0 - 6
125	125	3,8	4,0 - 6
150	125	2,8	4,0 - 6

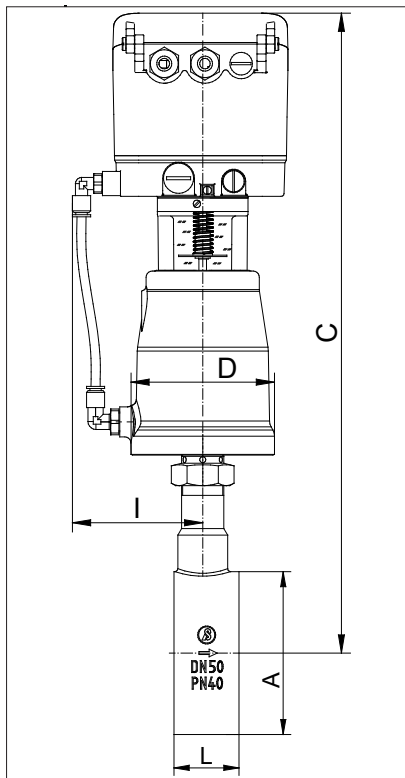


Applications limits for GS1-Valves

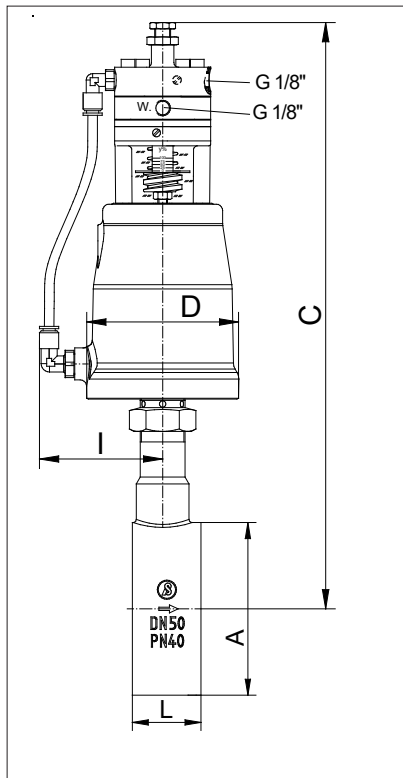
PN 40

DN	Sliding unit: carbon/SFC - stainless steel, coated				Sliding unit: STN2			
	max. adm. diff. pressures for GS1-valves				max. adm. diff. pressures for GS1-valves			
	100°C	150°C	200°C	230°C	100°C	150°C	200°C	230°C
15 - 25	40	36	31	30	40	36	31	30
32	40	36	31	30	40	36	31	30
40	40	36	31	30	27	26	24	21
50	40	36	31	30	40	36	31	30
65	40	36	31	30	38	36	31	30
80	40	36	31	30	22	21	20	17,5
100	25	24	22	20	13,5	12,5	12,0	10,5
125	16,5	15,5	15	13,5	8,9	8,4	8,0	7,0
150	16	16	16	16	11	10,5	9,8	8,6

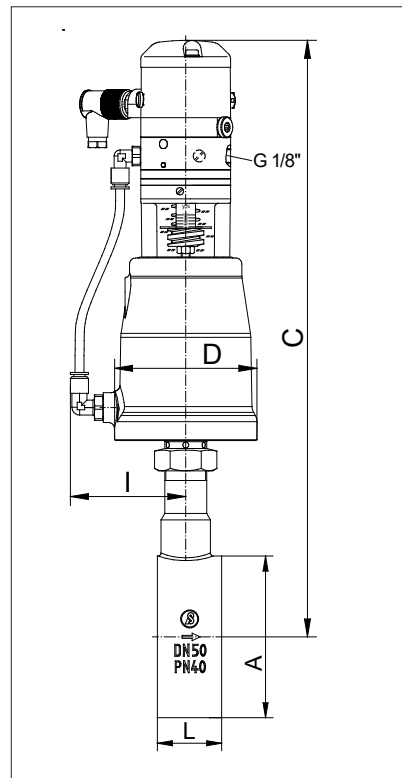
Dimensions and Weights



Type 8044 with digital positioner
Type 8049
with position indicator



Type 8044 with p/p-positioner
Type 8047
with position indicator



Type 8044 with i/p-positioner
Type 8047
with positioner indicator

DN	Actuator Ø	A	L	D	I	C carbon steel			C stainless steel body			Stroke H	Weight (kg)
						p/p positioner	i/p positioner	digital positioner	p/p positioner	i/p positioner	digital positioner		
15	80	53	33	96	80	349	381	406	236	358	383	6	4,9
15	125	53	33	146	105	369	401	426	346	378	403	6	6,7
20	80	62	33	96	80	354	386	411	331	363	388	6	5
20	125	62	33	146	105	374	406	431	351	383	408	6	6,8
25	80	72	33	96	80	359	391	415	336	368	393	6	5,1
25	125	72	33	146	105	379	411	436	356	388	413	6	6,9
32	80	82	33	96	80	362	394	419	340	372	397	6	5,1
32	125	82	33	146	105	382	414	439	360	392	417	6	6,9
40	80	92	33	96	80	367	399	424	345	377	402	6	5,3
40	125	92	33	146	105	387	419	444	365	402	422	6	7,1
50	80	108	43	96	80	368	400	425	368	400	425	8	6,4
50	125	108	43	146	105	388	420	445	388	420	445	8	8,2
65	80	126	46	96	80	377	409	434	377	409	434	8	6,9
65	125	126	46	146	105	397	429	454	397	429	454	8	8,7
80	80	142	46	96	80	385	417	442	385	417	442	8	7,6
80	125	142	46	146	105	405	427	462	405	427	462	8	9,4
100	80	164	52	96	80	398	430	455	398	430	455	8,5	8,8
100	125	164	52	146	105	418	450	475	418	450	475	8,5	10,6
125	80	194	56	96	80	419	451	476	419	451	476	8,5	10,6
125	125	194	56	146	105	439	471	496	439	471	496	8,5	12
150	80	219	56	96	80	465	497	522	465	497	522	8,5	12,5
150	125	219	56	146	105	485	517	542	485	517	542	8,5	13,9

Dimension C „reduced design“ shortened by 25,4 mm

Dimensions in mm