Sliding Gate Pressure Regulator 8011

GS 1 series, DN 15 up to DN 125

Self operated regulation of inlet and outlet pressures of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Space saving wafer type design
- Lowest possible weight
- High Kvs-values

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 on data-sheet 8011-GS3		
Nominal sizes	DN 15 to DN 125		
Nominal pressure	PN 40 acc. DIN 2401 also for flanges PN 10 to PN 25		
Pressure range	0,5 up to 10 bar (see table)		
Operating pressures	Limited to applications of category I of the Pressure Equipment Directive 2014/68/EU		
Media temperature	-60°C up to +230°C at special versions up to +300°C		
Max. ambient temperature	-20°C up to +80°C		
Flange gaskets (customer side)	DIN EN 1514-1 or ANSI B16.21 in the respective nominal pressure rating		
Max. working temperatures for the actuator	Diaphragm material CR: ,-20°C up to + 80°C EPDM: ,-30°C up to +130°C EPDM (FDA): ,-30°C up to +130°C FKM: ,-15°C up to +150°C		
Leakage % of Kvs IEC 60534-4 EN 12266-1	Disc pair Carbon-stainless steel < 0,0001 IV-S1 E	Disc pair SFC < 0,0005 IV-S1 F	Disc pair STN 2 < 0,001 IV F
Spezific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1 DIN EN ISO 15848-1 and VDI 2440		

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

Materials

Body	Stainless steel 1.4408		
Diaphragm housing	Stainless steel 1.4571		
Diaphragm	CR, EPDM, FKM, PTFE-foil		
Spring	Stainless steel 1.4310		
Stem	Stainless steel 1.4571, roller burnished		
Fixed disc	Stainless steel 1.4571, coated		STN2-disc
Sliding disc	Special carbon material	SFC-disc	STN2-disc
Coupling ring for disc	Stainless steel 1.4581		

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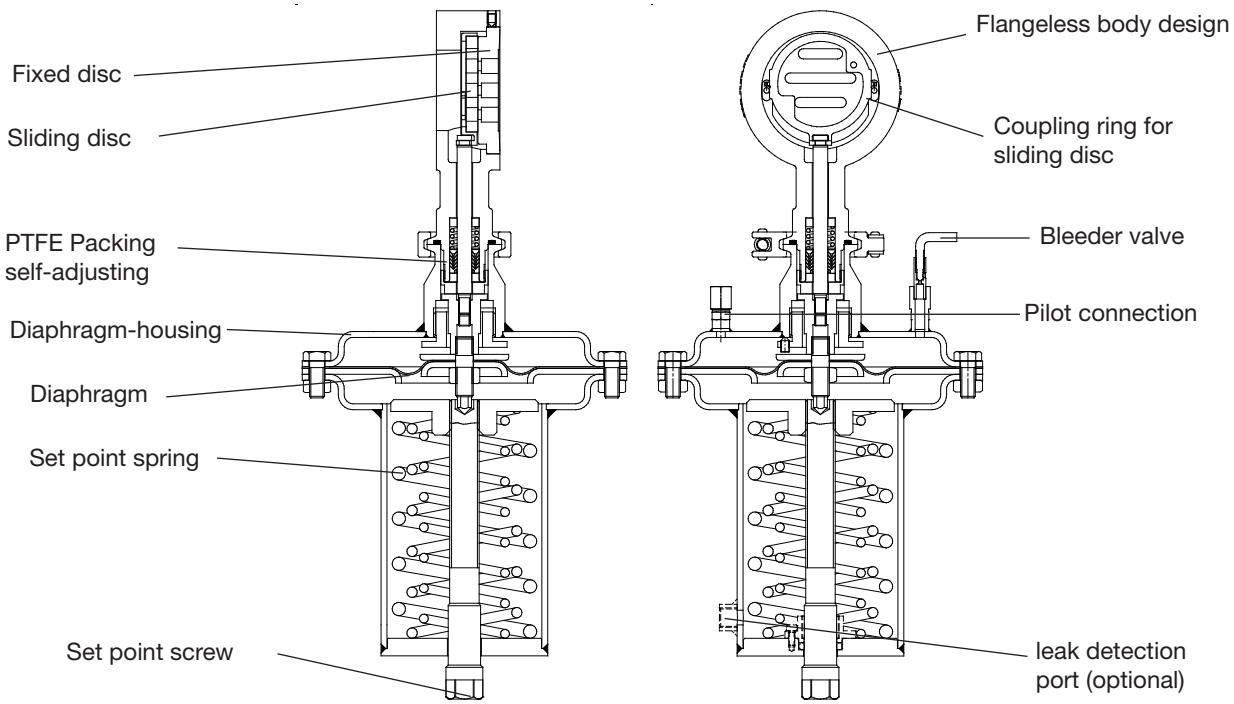
Sliding Gate Pressure Regulator 8011-GS1

without supply energy



Sliding Gate Pressure Regulator 8011-GS1

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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
SFC - stainless steel

Maximum admissible differential pressures for pressure regulator (output pressure regulator)

Pressure range (bar) output presssure P2	4 to 10	2 to 5	1 to 2,5	0,3 to 1,2
Diaphragm: Diameter (mm)	220	220	220	220
Surface area (cm^2)	40	80	176	176
DN 15	40	40	40	40
DN 20	40	40	40	38
DN 25	40	40	40	24
DN 32	31	31	31	16
DN 40	20	20	22	10
DN 50	11	11	12	5,6
DN 65	9	9	10	4,5
DN 80	5	5	6	2,6
DN 100	3,2	3,2	3,6	1,6
DN 125	2	2	2,4	1,1

overflower (inlet pressure regulator)

Pressure range (bar) inlet presssure P1	4 to 10	2 to 5	1 to 2,5	0,3 to 1,2
Diaphragm: Diameter (mm)	220	220	220	220
Surface area (cm^2)	40	80	176	176
DN 15	10	5	2,5	1,2
DN 20	10	5	2,5	1,2
DN 25	10	5	2,5	1,2
DN 32	10	5	2,5	1,2
DN 40	10	5	2,5	1,2
DN 50	10	5	2,5	1,2
DN 65	9	5	2,5	1,2
DN 80	5	5	2,5	1,2
DN 100	3,2	3,2	2,5	1,2
DN 125	2	2	2,4	1,0

Disc pair: STN 2

Maximum admissible differential pressures for pressure regulator (output pressure regulator)

Pressure range (bar) output presssure P2	4 to 10	2 to 5	1 to 2,5	0,3 to 1,2
Diaphragm: Diameter (mm)	220	220	220	220
Surface area (cm^2)	40	80	176	176
DN 15	40	40	40	21
DN 20	30	30	33	12
DN 25	19	19	21	8
DN 32	11	11	13	5
DN 40	7	7	8	3,3
DN 50	4	4	4,5	1,8
DN 65	3	3	3,5	1,5
DN 80	1,8	1,8	2	0,8
DN 100	1	1	1,2	0,5
DN 125	0,7	0,7	0,8	0,3

overflower (inlet pressure regulator)

Pressure range (bar) inlet presssure P1	4 to 10	2 to 5	1 to 2,5	0,3 to 1,2
Diaphragm: Diameter (mm)	220	220	220	220
Surface area (cm^2)	40	80	176	176
DN 15	10	5	2,5	1,2
DN 20	10	5	2,5	1,2
DN 25	10	5	2,5	1,2
DN 32	10	5	2,5	1,2
DN 40	7	5	2,5	1,2
DN 50	4	4	2,5	1,2
DN 65	3	3	2,5	1,2
DN 80	1,8	1,8	2	0,8
DN 100	1	1	1,2	0,5
DN 125	0,7	0,7	0,8	0,3

application limits according to Category I of the Pressure Equipment Directive 2014/68/EU

		Maximum permissible operating pressure in bar for applications of category I of the Pressure Equipment Directive 2014/68/EU										
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
Fluid group 1	gaseous	X	X	X	31,3	25,0	20,0	15,4	12,5	10,0	Not permissible	Not permissible
	liquid	X	X	X	62,5	50,0	40,0	30,8	25,0	20,0	16,0	13,3
Fluid group 2	gaseous	X	X	X	X	X	X	X	X	X	28,0	23,3
	liquid	X	X	X	X	X	X	X	X	X	X	X

X = No limit

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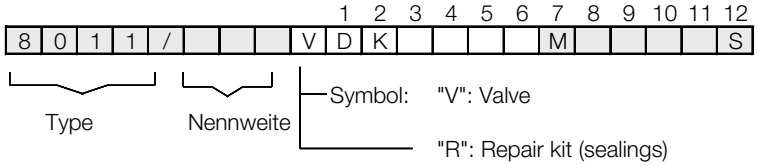
Applications limits for GS1-Valves

	Sliding unit: carbon/SFC - stainless steel, coated					
	max. admissible pressures for GS1-valves					
DN	100°C	150°C	200°C	250°C	300°C	350°C
15 - 25	40	36	31	28	26	24
32	40	36	31	28	26	24
40	40	36	31	28	26	24
50	40	36	31	28	26	24
65	40	36	31	28	26	24
80	40	36	31	28	26	24
100	25	24	22	19	16	14,5
125	16,5	15,5	15	12,5	10,5	9,5
150	16	16	16	16	13	11,5

Limitation for SFC-sliding discs: 300°C

	Sliding unit: carbon - STN2					
	max. admissible pressures for GS1-valves					
DN	100°C	150°C	200°C	250°C	300°C	350°C
15 - 25	40	36	31	28	26	24
32	40	36	31	28	25	22
40	27	26	24	19,5	16	14
50	40	36	31	28	26	24
65	38	36	31	28	23	19,5
80	22	21	20	16	13	11,5
100	13,5	12,5	12,0	9,8	8,1	7,0
125	8,9	8,4	8,0	6,5	5,3	4,6
150	11	10,5	9,8	7,9	6,5	5,6

Ordering Number System



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

1.	Function	2.	Design	3.	Body design	4.	Materials body and actuator	5.	Function	6.	Pressure range
D	Pressure regulator compact (Type 8011)	K	Compact design	0	GS1 - flangel-ess design acc. DIN, PN 10-PN 40	2	Completely stainless steel	0	Overflow valve	0	4 - 10 bar
										1	2 - 5 bar
						5	Completely stainless steel with controlling connection G 1/4“	1	Pressure regulator	2	1 - 2,5 bar
										3	0,5 - 1,2 bar

7.	Special version	8.	Diaphragm material	9.	Sliding disc	10.	Fixed disc	11.	Kvs-values	12.	Special versions
M	To state, if further sec-tions are quoted	-	CR (Standard)	-	carbon material	-	stainless steel 1.4571	-	100 % (Stand.)	S	Quote for further special ver-sions
		1	EPDM	9	STN2	1	STN2	A	red. to 63 %		
		2	FKM	S	SFC			1	red. to 40 %		
		3	CR + PTFE-foil					B	red. to 25 %		
		4	EPDM + PTFE-foil					2	red. to 16 %		
								C	red. to 10 %		
		5	FKM + PTFE-foil					3	red. to 6,3 %		
		6	EPDM (FDA)					4	red. to 2,5 %		
								5	red. to 1 %		
								7	red. to 12 %		
								8	red. to 2 %		

Ordering example: 8011/080VDK0210M1- -1
GS1-pressure regulator, DN80, compact design, PN 10/40, completely stainless steel, pressure regulator, pressure range 4-10 bar, diaphragm material EPDM, sliding disc carbon material, fixed disc stainless steel 1.4571, reduced Kvs-value (40 %)

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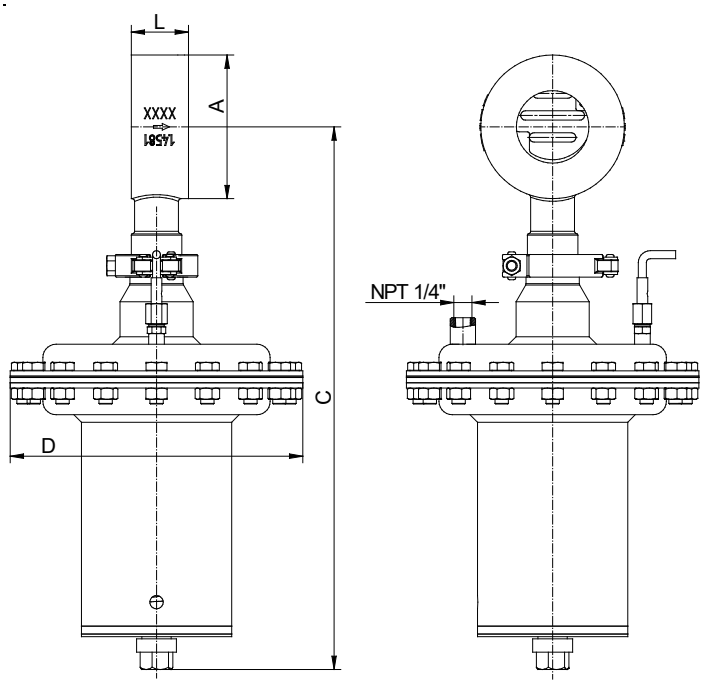
Dimensions and Weights



DN	Weight in kg for pressure range (bar)			
	4 - 10	2 - 5	1 - 2.5	0.3 - 1.2
15	10,3	10,3	9,2	8,4
20	10,4	10,4	9,3	8,5
25	10,7	10,7	9,6	8,9
32	11	11	9,9	9,1
40	11,3	11,3	10,2	9,4
50	12,5	12,5	11,4	10,6
65	13,8	13,8	12,7	11,9
80	14,6	14,6	13,5	12,7
100	17,4	17,4	16,3	15,5
125	21	21	19,9	19,1

DN	ØA	D	C max.	Stroke	L
15	53	220	389	6	33
20	62	220	393	6	33
25	72	220	398	6	33
32	82	220	401	6	33
40	92	220	406	6	33
50	108	220	416	8	43
65	127	220	425	8	46
80	142	220	434	8	46
100	164	220	456	8,5	52
125	194	220	470	8,5	56

Dimensions in mm

Text and pictures are not binding. We reserve the right, to alter the equipment.