

Pressure Regulator compact 8011

GS 3 series - DN 15 up to DN 150



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

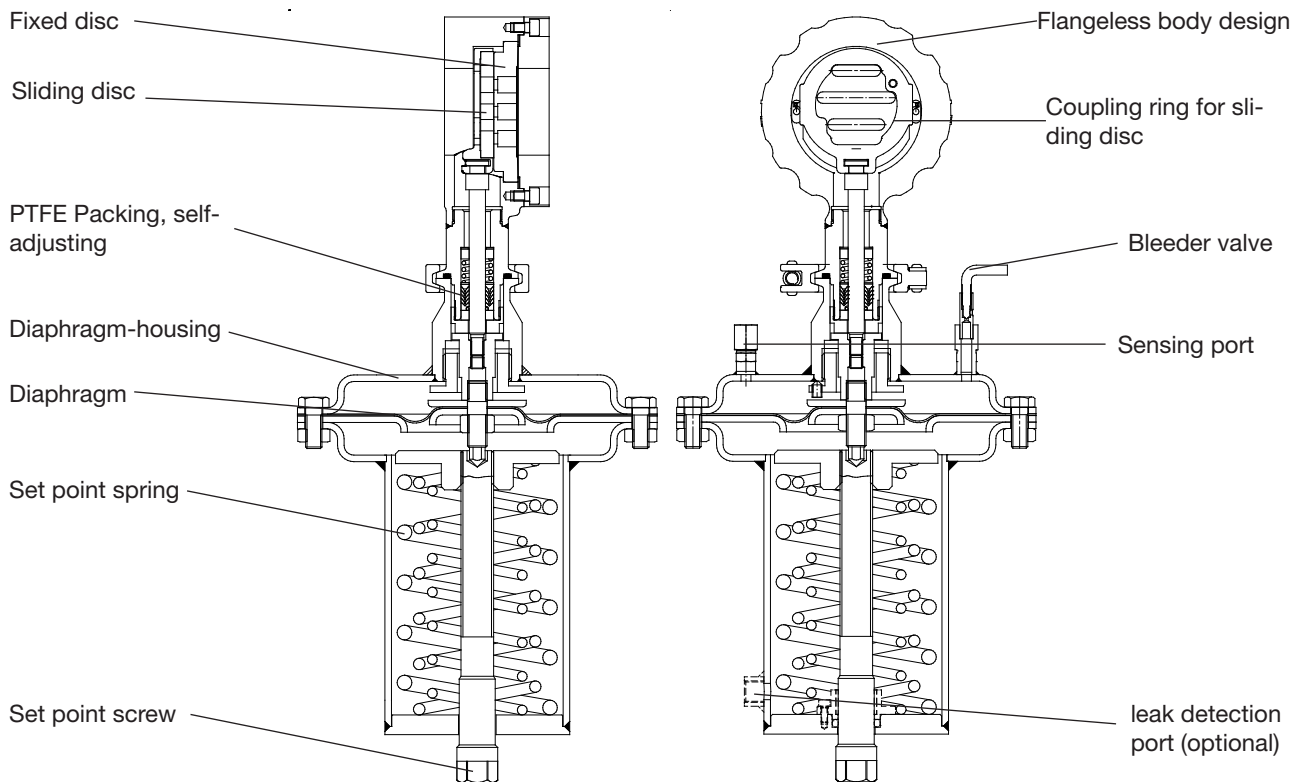
- Space saving wafer type design
- Lowest possible weight
- High Kvs-values



Technical Information

Body design	Flangeless, wafer-type construction more versions see on data-sheet 8010-GS1		
Nominal sizes	DN 15 to DN 150		
Nominal pressure acc. DIN 2401 for flanges with facing type B	PN 40 (fits also to PN 10-25)	DN 15 - DN 150	
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150 ANSI 300	DN 15 - DN 150 DN 15 - DN 150	
Nominal pressure acc. JIS for „raised face“ flanges	10K 20K	DN 15 - DN 50 DN 15 - DN 40	
Pressure range	0,3 up to 10 bar (see table)		
Media temperature	-60°C up to +230°C at special versions up to 300°C		
Max. ambient temperature	+80°C		
Max. working temperatures for the actuator	Diaphragm material CR: EPDM: EPDM (FDA): FKM:	-20°C up to +80°C -30°C up to +130°C -30°C up to +130°C -15°C up to +150°C	
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	D	E	E
Spezific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1		

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



Pressure Regulator compact 8011-GS3



without supply energy

Admissible differential pressures
(For temperatures of up to 120°C with PN-rating
up to 38°C with ANSI-rating)

Disc pair: carbon - stainless steel
SFC - stainless steel

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

Pressure range (bar) output pressure 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	32	32	36	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
DN 150	1,5	1,5	1,7	0,8

overflow (inlet pressure regulator)

Pressure range (bar) inlet pressure 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
DN 150	1,5	1,5	1,7	0,8

For temperatures of 120°C (PN) or
38°C (ANSI) and above:
obey application limits !

Disc pair: STN 2

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

Pressure range (bar) output pressure 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
DN 150	0,5	0,5	0,5	0,25

overflow (inlet pressure regulator)

Pressure range (bar) inlet pressure 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
DN 150	0,5	0,5	0,5	0,25

	Upper limits for admissible pressures in bar			
	PN16	PN40	ANSI150	ANSI 300
P max. carbon steel	16	40	19,6	51,1
P max. stainless steel			19,0	49,6

The actuator should be of a size that allows an adjustment at the upper limit of the pressure range.

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Application limitations for GS3 valves in stainless steel

These pressure must not be exceeded for GS-valves from the GS3-series made of stainless steel, even though the actuator power might allow it.

PN40

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves						Sliding unit: STN 2 max. admissible pressures for GS3-valves					
	38°C	50°C	100°C	150°C	200°C	230°C	38°C	50°C	100°C	150°C	200°C	230°C
15-65	40	40	40	40	40	40	40	40	40	40	40	40
80	40	40	40	40	40	40	36	36	36	34	33	26
100	33	33	33	33	33	33	32	32	32	31	30	24
125	23	23	23	23	23	23	21	21	21	21	19	16
150	16	16	16	16	16	16	15	15	15	15	14	11

Limitation for SFC-sliding discs: 300°C

ANSI150

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves						Sliding unit: STN 2 max. admissible pressures for GS3-valves					
	38°C	50°C	100°C	150°C	200°C	230°C	38°C	50°C	100°C	150°C	200°C	230°C
15-125	19,0	18,4	16,2	14,8	13,7	12,7	19,0	18,4	16,2	14,8	13,7	12,7
150	16,0	16,0	16,0	14,8	13,7	12,7	16,2	16,2	16,2	14,8	13,7	12,7

Limitation for SFC-sliding discs: 300°C

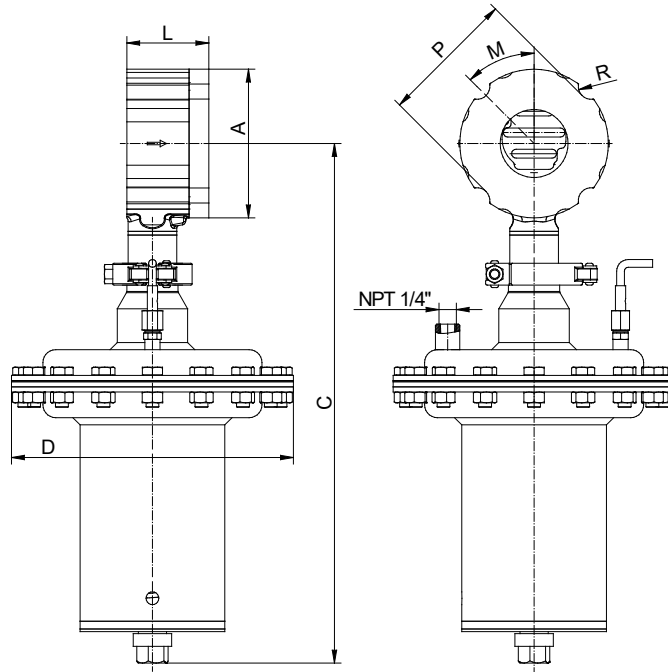
ANSI300

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves						Sliding unit: STN 2 max. admissible pressures for GS3-valves					
	38°C	50°C	100°C	150°C	200°C	230°C	38°C	50°C	100°C	150°C	200°C	230°C
15 - 65	49,6	48,1	42,2	38,5	35,7	34,3	49,6	48,1	42,2	38,5	35,7	34,3
80	48,0	48,0	42,2	38,5	35,7	34,3	36,6	36,6	36,6	34,8	33,0	29,0
100	33,0	33,0	33,0	33,0	33,0	33,0	33,0	33,0	33,0	31,7	30,1	26,5
125	23,0	23,0	23,0	23,0	23,0	23,0	22,0	22,0	22,0	21,0	19,9	17,5
150	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	15,4	14,6	12,9

Limitation for SFC-sliding discs: 300°C

without supply energy

Dimensions and Weights



DN	Weight in kg for pressure range (bar)			
	4 - 10	2 - 5	1 - 2.5	0.3 - 1.2
15	11,2	11,2	10,1	9,3
20	11,4	11,4	10,3	9,5
25	12,3	12,3	11,2	10,4
32	12,7	12,7	11,6	10,8
40	13,1	13,1	12	11,2
50	15,2	15,2	14,1	13,3
65	17	17	15,9	15,1
80	18,1	18,1	17	16,2
100	22,1	22,1	21	20,2
125	26,3	26,3	25,2	24,4
150	30	30	28,9	28,1

DN	Ø A	D	C max.	Stroke	PN40			ANSI150			ANSI300			R	L
					P	M	Number „R“	P	M	Number „R“	P	M	Number „R“		
15	64	220	389	6	53	45	4	48,8	45	4	53	45	4	8	56
20	72	220	393	6	63	45	4	58,2	45	4	68	45	4	10	56
25	82	220	398	6	73	45	4	67,6	45	4	73	45	4	10	56
32	89	220	401	6	83	45	4	77	45	4	83	45	4	10	56
40	99	220	406	6	94	45	4	87	45	4	94	45	4	10	56
50	116	220	416	8	115	45	4	106	45	4	112	22,5	8	10	64
65	138	220	425	8	129	22,5	8	125	45	4	129	22,5	8	10	68
80	153	220	434	8	144	22,5	8	138	45	4	150	22,5	8	10	70
100	184	220	456	8,5	164	22,5	8	176	22,5	8	182	22,5	8	10	75
125	212	220	470	8,5	194	22,5	8	194	22,5	8	212	---	0	0	80
150	242	220	483	8,5	220	22,5	8	220	22,5	8	242	---	0	0	80

Dimensions in mm