

Pressure Regulator compact 8011

GS 3 series 1/2" up to 6"



without supply energy

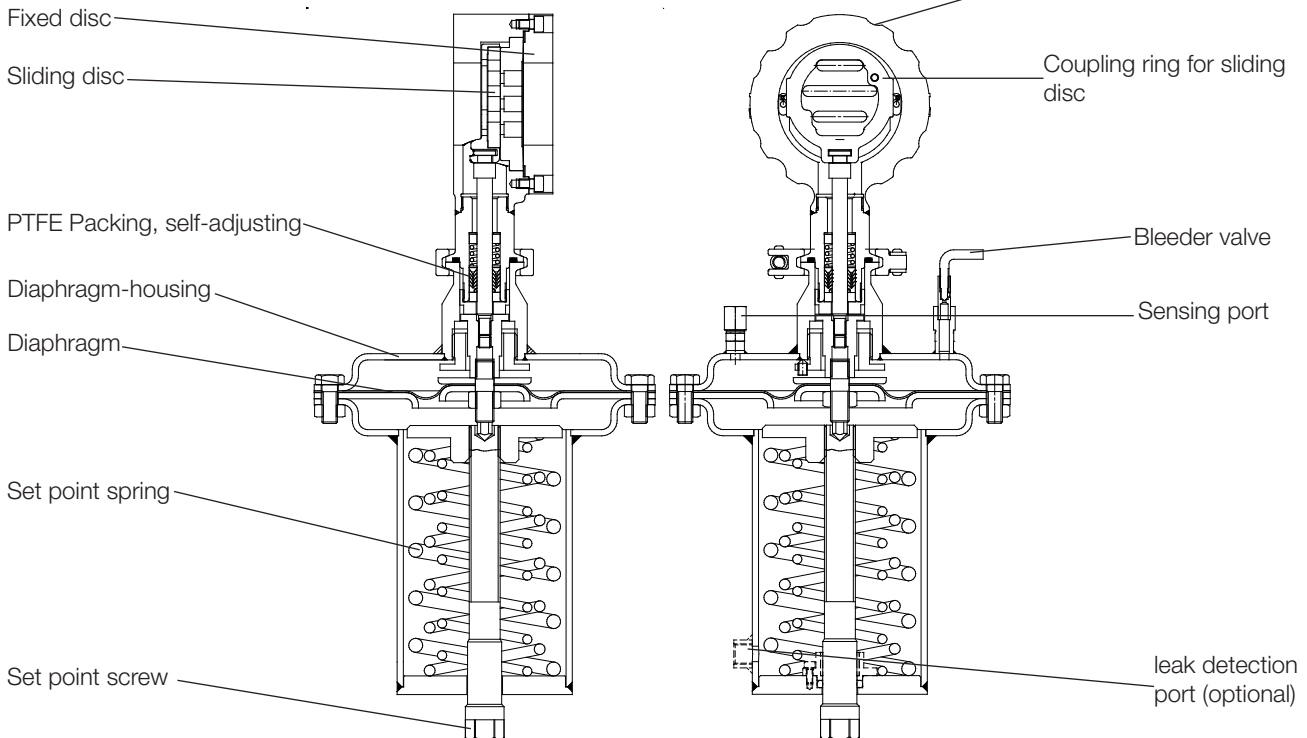
Self operated regulation of inlet and outlet pressures of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

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

Technical Information

Body design	ANSI flange wafer (self-aligning)		
Nominal sizes	1/2" - 6"		
Nominal pressure acc. DIN 2401 for flanges with facing type B	580 psi (fits also to 145-365 psi)	1/2" - 6"	
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150	1/2" - 6"	
Nominal pressure acc. JIS for "raiced face" flanges	ANSI 300	1/2" - 6"	
	10K	1/2" - 2"	
	20K	1/2" - 1 1/2"	
Pressure range	4,4 up to 145 psi (see table)		
Media temperature	-75°F up to +445°F at special versions up to 572°F		
Max. ambient temperature	+176°F		
Max. temperature for the actuator	Diaphragm material CR: -4°F up to +176°F EPDM: -22°F up to +266°F Viton: -5°F up to +302°F		
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

Cvs-values see data sheet 8001.



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Admissible Pressure
(For temperatures of up to 250°F)

**For temperatures exceeding 250°F:
consider operation limits**

Carbon-stainless steel coated SFC-stainless steel coated

Maximum pressures for
pressure reducing valve (downstream pressure control)

Pressure range (psi) output pressure P2	60 to 145	30 to 75	15 to 35	4,4 to 17
Diaphragm: Diameter (inch)	8,65	8,65	8,65	8,65
Surface area (in ²)	6,2	12,4	27,3	27,3
1/2"	580	580	580	580
3/4"	580	580	580	550
1"	580	580	580	350
1 1/4"	465	465	520	230
1 1/2"	290	290	320	145
2"	160	160	175	80
2 1/2"	130	130	145	65
3"	75	75	85	40
4"	45	45	50	25
5"	30	30	35	15
6"	20	20	25	12

STN 2

Maximum pressures for
pressure reducing valve (downstream pressure control)

Pressure range (psi) output pressure P2	60 to 145	30 to 75	15 to 35	4,4 to 17
Diaphragm: Diameter (inch)	8,65	8,65	8,65	8,65
Surface area (in ²)	6,2	12,4	27,3	27,3
1/2"	580	580	580	305
3/4"	435	435	480	175
1"	275	275	305	115
1 1/4"	160	160	190	75
1 1/2"	100	100	115	50
2"	60	60	65	25
2 1/2"	45	45	50	20
3"	25	25	30	12
4"	15	15	17	7
5"	10	10	12	4
6"	7	7	7	4

back pressure (upstream pressure control)

Pressure range (psi) inlet pressure P1	60 to 145	30 to 75	15 to 35	4,4 to 17
Diaphragm: Diameter (inch)	8,65	8,65	8,65	8,65
Surface area (in ²)	6,2	12,4	27,3	27,3
1/2"	145	75	35	15
3/4"	145	75	35	15
1"	145	75	35	15
1 1/4"	145	75	35	15
1 1/2"	145	75	35	15
2"	145	75	35	15
2 1/2"	130	75	35	15
3"	75	75	35	15
4"	45	45	35	15
5"	30	30	35	15
6"	20	20	25	12

back pressure (upstream pressure control)

Pressure range (psi) inlet pressure P1	60 to 145	30 to 75	15 to 35	4,4 to 17
Diaphragm: Diameter (inch)	8,65	8,65	8,65	8,65
Surface area (in ²)	6,2	12,4	27,3	27,3
1/2"	145	75	35	17
3/4"	145	75	35	17
1"	145	75	35	17
1 1/4"	145	75	35	17
1 1/2"	100	75	35	17
2"	60	60	35	17
2 1/2"	45	45	35	17
3"	25	25	30	12
4"	15	15	17	7
5"	10	10	12	4
6"	7	7	7	4

	Pressure limits DIN and ANSI					
	PN16	PN40	PN100	ANSI 150	ANSI 300	ANSI 600
P max.	235	580	1450	235	580	1160

For best regulation, the lowest spring range that contains the pressure setpoint should be selected.

Materials

Body	Stainless steel 316 Ti		
Head section	Stainless steel 316 Ti		
Diaphragm housing	Stainless steel 316 Ti		
Diaphragm	CR, EPDM, FKM, PTFE-fc		
Spring	Stainless steel 301		
Stem	Stainless steel 316 Ti, roller burnished		
Fixed disc	Stainless steel 316 Ti, coated	SFC-disc	STN2-disc
Sliding disc	Special carbon material	SFC-disc	STN2-disc
Guide ring for sliding disc	Stainless steel 318		

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Pressure - Temperature ratings for GS3 Valves

ANSI #150

DN	Sliding unit: carbon/SFC - stainless steel, coated maximum pressures for GS3-valves (psi)				Sliding unit: STN2 maximum pressures for GS3-valves (psi)			
	210 °F	300 °F	400 °F	445 °F	210 °F	300 °F	400 °F	445 °F
1/2" - 5"	230	220	190	175	230	220	190	175
6"	230	220	190	175	230	220	190	160

ANSI #300

DN	Sliding unit: carbon/SFC - stainless steel, coated maximum pressures for GS3-valves (psi)				Sliding unit: STN2 maximum pressures for GS3-valves (psi)			
	210 °F	300 °F	400 °F	445 °F	210 °F	300 °F	400 °F	445 °F
1/2" - 2 1/2"	580	550	510	480	580	550	510	480
3"	580	550	510	480	520	495	480	375
4"	480	450	420	390	480	450	420	350
5"	335	305	290	275	320	305	290	230
6"	230	220	205	190	230	220	205	160

Ordering Number System

8	0	1	1	/			V	D	K					M					S
Type				Size		Symbol: "V": Valve "R": Repair kit (sealings)													

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

1. Function	2. Design	3. Body design	4. Version	5. Function	6. Pressure range
D Pressure regulator compact (Type 8011)	K Compact design	E GS3 - flangeless design acc. ANSI 150 F GS3 - flangeless design acc. ANSI 300 G GS3 - flangeless design acc. DIN, 145psi - 580psi	2 Completely stainless steel 5 Completely stainless steel with controlling connection G 1/4"	0 Overflow valve 1 Pressure regulator	0 60 - 145 psi 1 30 - 75 psi 2 15 - 35 psi 3 7 - 17 psi

7. Special version	8. Diaphragm material	9. Sliding disc	10. Fixed disc	11. Kvs-values	12. Special versions
M To state, if further sections are quoted	- CR (Standard) 1 EPDM 2 FKM 3 CR + PTFE-foil 4 EPDM + PTFE-foil 5 FKM + PTFE-foil	- Carbon 9 STN2/STN3 S SFC	- Stainless steel/Stellite 1 STN 2 - plate (only in combination with the position "9") 3 STN 3 - plate (only in combination with the position "9")	- 100 % (Stand.) A red. to 63 % 1 red. to 40 % B red. to 25 % 2 red. to 16 % C red. to 10 % 3 red. to 6,3 % 4 red. to 2,5 % 5 red. to 1 % 7 red. to 12 % 8 red. to 2 %	S Quote for further special versions

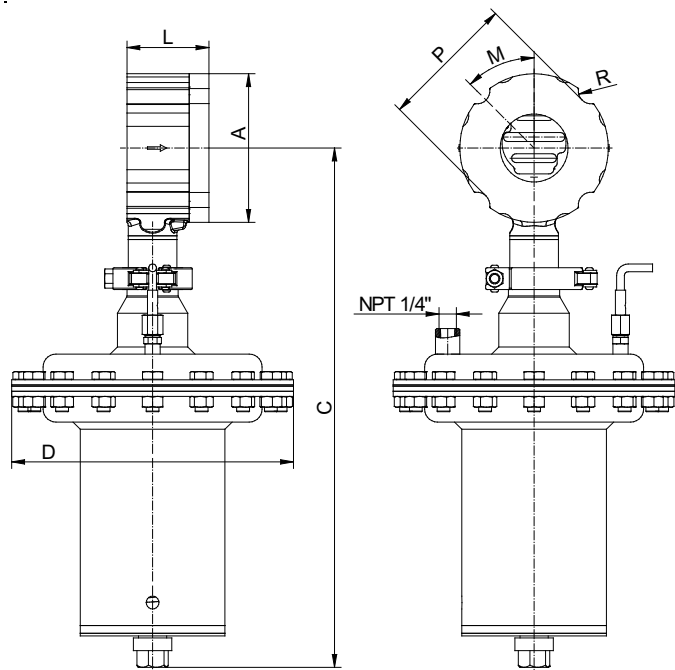
Ordering example: 8011/080VDKG210M1- -1
GS3-pressure regulator, 3", compact design, 145psi-580psi, completely stainless steel, spring cap closed, pressure regulator, pressure range 60-145 psi bar, diaphragm material EPDM, sliding disc carbon material, fixed disc, stainless steel 1.4571, reduced Cv-value (40%)

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Dimensions and Weights



Size	Weight in lb for pressure range (psi)			
	60 - 145	30 - 75	15 - 35	4.4 - 17
1/2"	24.5	24.5	22	20.5
3/4"	25	25	22.5	21
1"	27	27	24.5	23
1 1/4"	28	28	25.5	24
1 1/2"	29	29	26.5	24.5
2"	33.5	33.5	31	29.5
2 1/2"	37.5	37.5	35	33
3"	40	40	37.5	35.5
4"	48.5	48.5	46	44.5
5"	58	58	55.5	53.5
6"	66	66	63.5	62

Size	Ø A	D	C max.	Stroke	PN40			ANSI150			ANSI300			R	L
					P	M	Anzahl "R"	P	M	Number "R"	P	M	Number "R"		
1/2"	2.5	8.65	15.3	0.25	2.1	1.75	0.15	1.9	1.75	4	2.1	1.75	4	0.3	2.2
3/4"	2.85	8.65	15.45	0.25	2.5	1.75	0.15	2.3	1.75	4	2.7	1.75	4	0.4	2.2
1"	3.25	8.65	15.65	0.25	2.85	1.75	0.15	2.65	1.75	4	2.85	1.75	4	0.4	2.2
1 1/4"	3.5	8.65	15.8	0.25	3.25	1.75	0.15	3.05	1.75	4	3.25	1.75	4	0.4	2.2
1 1/2"	3.9	8.65	16	0.25	3.7	1.75	0.15	3.45	1.75	4	3.7	1.75	4	0.4	2.2
2"	4.55	8.65	16.4	0.3	4.55	1.75	0.15	4.15	1.75	4	4.4	0.9	8	0.4	2.5
2 1/2"	5.45	8.65	16.75	0.3	5.1	0.9	0.3	4.9	1.75	4	5.1	0.9	8	0.4	2.7
3"	6	8.65	17.1	0.3	5.65	0.9	0.3	5.45	1.75	4	5.9	0.9	8	0.4	2.75
4"	7.25	8.65	17.95	0.35	6.45	0.9	0.3	6.95	0.9	8	7.15	0.9	8	0.4	2.95
5"	8.35	8.65	18.5	0.35	7.65	0.9	0.3	7.65	0.9	8	8.35	- - -	0	0.65	3.15
6"	9.55	8.65	19	0.35	8.65	0.9	0.3	8.65	0.9	8	9.55	- - -	0	0.65	3.15

Dimensions in inch

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Ordering code		-	A	1	B	6	2	7	C	3	4	8	5	9
Size	Charact.	100 %	63 %	40 %	25 %	20%	16 %	12 %	10 %	6,3 %	2,5 %	2 %	1 %	0,4%
1/2"	(mod.) linear	4.6	3	2	1.6	-	0.82	0.57	0.51	0.3	0.16	0.09	0.05	-
	eq. perc.	2	-	1.3	-	-	-	-	-	0.12	-	-	-	-
3/4"	(mod.) lin.	7.4	-	-	-	-	1.16	-	-	-	-	0.15	-	-
	eq. perc.	3.5	-	-	-	-	-	-	-	-	-	-	-	-
1"	(mod.) linear	13	7.4	4.6	-	-	1.9	-	1.08	0.72	0.3	-	0.16	0.05
	eq. perc.	5.8	-	2.8	-	1.3	-	-	-	-	-	-	-	-
1 1/4"	(mod.) linear	19	12	-	-	-								
	eq. perc.	9.3	-	-	-	-								
1 1/2"	(mod.) lin.	30	19	13	8.1	-								
	eq. perc.	13	9.9	-	3.2	-								
2"	(mod.) linear	52	32	23	14	12								
	eq. perc.	22	14	-	-	-								
2 1/2"	(mod.) linear	60	41	-	17									
	eq. perc.	35	-	-	9.3									
3"	(mod.) linear	107	67	46										
	eq.perc.	56	41	-										
4"	(mod.) linear	179	110	72										
	eq.perc.	89	56	-										
5"	(mod.) linear	275	-	110										
	eq.perc.	135	-	-										
6"	(mod.) linear	392	246	-										
	eq.perc.	171	104	-										
8"	(mod.) linear	650	408	-										
	eq.perc.	-	-	-										
10"	(mod.) linear	1056												
	eq.perc.	-												