

## 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.**

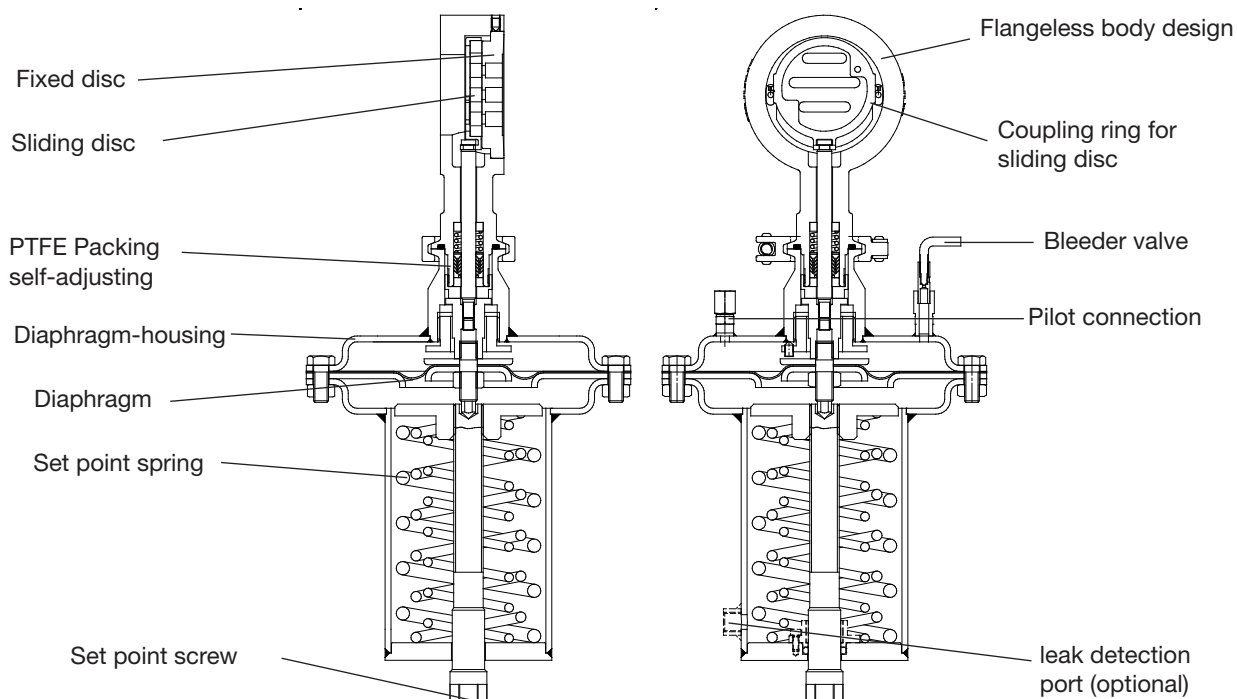
- Space saving wafer type design
- Lowest possible weight
- High Kvs-values

### 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)		
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: , -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	Disc pair Carbon-stainless steel  % of Kvs IEC 60534-4 EN 12266-1  IV-S1 D	Disc pair SFC  < 0,0005 IV-S1 E	Disc pair STN 2  < 0,001 IV E
Packing leakage	tested according to TA-Luft as defined in DIN EN ISO 15848-1 and VDI 2440		



Kvs-values see data sheet 8001



# Pressure Regulator compact 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 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 <sup>2</sup> )	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

### 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 <sup>2</sup> )	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

### 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 <sup>2</sup> )	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

### 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 <sup>2</sup> )	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

The actuator should be of a size that allows an adjustment at the upper limit of the pressure range. Further versions for higher differential pressure, other disc pairs or other pressure range are available upon request.

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## Applications limits for GS1-Valves

### PN 40

DN	Couple glissières: carbone/SFC - inox Pression max en bar pour vannes GS1				Couple glissières: STN 2 Pression max en bar pour vannes GS3 en inox			
	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	24
40	40	36	31	30	26	25	24	15
50	40	36	31	30	40	36	31	26
65	40	36	31	30	37	35	31	21
80	40	36	31	30	22	20	19	12
100	24	23	22	20	13	12	12	7
125	16	15	14	13	8	8	7	4

### Materials

Body	Stainless steel 1.4581 or 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		

# Pressure Regulator compact 8011-GS1

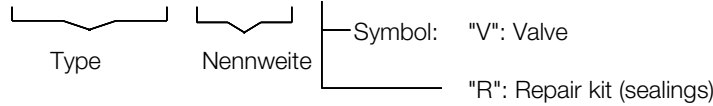


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## Ordering Number System

8	0	1	1	/				V	D	K						M						S
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1 - 5 : Please quote all 5 sections.  
 6 - 12: Quote only if required.



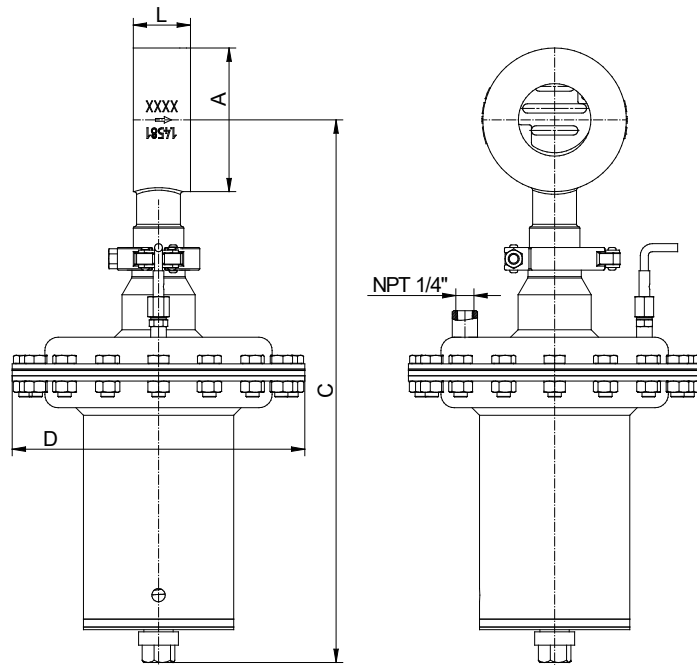
1. Function		2. Design		3. Body design		4. Materials body and actuator		5. Function		6. Pressure range	
D	Pressure regulator compact (Type 8011)	K	Compact design	0	GS1 - flangeless design acc. DIN, PN 10-PN 40	2	Completely stainless steel	0	Overflow valve	0	4 - 10 bar
						5	Completely stainless steel with controlling connection G 1/4"	1	Pressure regulator	1	2 - 5 bar
										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 sections are quoted	-	CR (Standard)	-	carbon material	-	stainless steel 1.4571	-	100 % (Stand.)	S	Quote for further special versions
		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 %		
		5	FKM + PTFE-foil					3	red. to 10 %		
		6	EPDM (FDA)					4	red. to 6,3 %		
								5	red. to 2,5 %		
								6	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	Ø A	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