Sliding Gate Motor Valve 8035

GS 3 series, DN 15 up to DN 250
Version NR2 with safety spring return

Technical Information

Design	wafer-type design for flanges acc. DIN EN 1092-1 Form B or ASME B16.5 RF further versions see data sheet 8035-GS1	
Nominal size	DN 15 up to DN 250	
Nominal pressure acc. DIN 2401 for flange with facing type B	PN 40 (fits also to PN 10-25) PN 100 PN 16 and PN 25	 DN 15 - DN 150 DN 15 - DN 80 DN 200 - DN 250
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150 ANSI 300 ANSI 600	DN 15 - DN 250 DN 15 - DN 150 DN 15 - DN 80
Nominal pressure acc. JIS for „raiced face“ flanges	10K 20K	DN 15 - DN 50 DN 15 - DN 40
Media temperature	Versions from -60°C up to +350°C	
ambient temperature	0°C up to +50°C	
Flange gaskets (customer side)	DIN EN 1514-1 or ANSI B16.21 in the respective nominal pressure rating	
Rangeability	30 : 1	
Leakage (% of Kvs) IEC 60534-4 EN122661	Disc pair Carbon-stainless steel < 0,0001 IV-S1 E	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	

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

Technical Information Motor Actuator

Actuating force	1,2 kN	3,0 kN
Type of duty acc. VDE 0530 with control electronics without control electronics	 S 4 - 30% ED S 1 - 100 % ED	 S 4 - 30% ED S 1 - 100 % ED
Net connections	24 V AC 110 V/120 V AC 230 V AC	24 V AC 110 V/120 V AC 230 V AC
Mounting position	motor not top-down	motor not top-down
Protection class	IP 54 (IP65 optional)	IP 54 (IP65 optional)
Power consumption 24V	21 W	21 W
Power consumption 230V	21 W	21 W
Power consumption 110 V/120 V	21 W	21 W
Stroking time at line break	2,9 - 3,5 sec.	2,9 - 3,5 sec.
Manual operation	by push buttons (electrical power required)	

Fluid temperature

Rating	PN40	PN 16	PN 100	ANSI 150	ANSI 300	ANSI 600
Body material cpl. stainless steel						
Tmin [°C]	-60	-60	-60	-29	-29	-29
Tmax [°C]	350	350	350	350	350	350
Body material cpl. carbon steel						
Tmin [°C]	-60	-60	-10	-20	-20	-10
Tmax [°C]	300	300	300	300	300	300

Materials

Body	Stainless steel 1.4408	Carbon steel 1.0619
Bodycover	Stainless steel 1.4571 or 1.4404	
Packing	PTFE (carbon filled), spring 1.4310	
Actuating stem	Stainless steel, roller burnished	
Bellow	Stainless steel 1.4571	
Fixed plate	Stainless steel 1.4571, plated	STN2-disc
Sliding disc	Standard: special carbon material	STN2-disc
Coupling ring for discs	Stainless steel 1.4581	

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Sliding Gate Motor Valve 8035-GS3

with safety spring return

Stroking Times

DN	Stroking times (sec.) with stroking speed	
	17,5 mm/min	3,4 mm/min
15	21	110
20	21	110
25	21	110
32	21	110
40	21	110
50	28	146
65	28	146
80	28	146
100	30	154
125	30	154
150	30	154
200	30	154
250	30	154

Options

	actuating force	
	1,2 kN	3 kN
limit switches	max. 2	max. 2
potentiometer	max. 2*	max. 2*
Nachlaufregler (analog)	yes	yes

* one potentiometer is required for positioner operation

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

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

DN	1,2 kN	3,0 kN	1,2 kN	3,0 kN
	max. differential pressures (bar)			
	Disc pair			
	carbon-stainless steel		STN 2	
15	102,1	102,1	76,6	102,1
20	93,7	102,1	59	102,1
25	78,5	88 (102,1)*	44,1	88 (102,1)*
32	64,3	102,1	32,8	86,4
40	48,6	88 (100)*	22,5	59,4
50	31,9	84,1	13,4	35,4
65	26,9	70,8	11	29
80	17,1	45	6,7	17,6
100	10,9	28,8	4,1	10,9
125	7,4	19,5	2,8	7,3
150	5,5	14,6	2	5,4
200	3,2	8,4	1,1	3
250	2	5,2	0,7	1,8

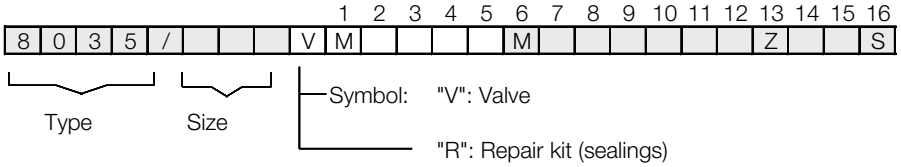
*figures in brackets for bodys of carbon steel

	Upper limits for admissible pressures in bar					
	PN16	PN40	PN100	ANSI150	ANSI 300	ANSI 600
P max. carbon steel	16	40	100	19,6	51,1	102,1
P max. stainless steel				19,0	49,6	99,3

Sliding Gate Motor Valve 8035-GS3

with safety spring return

Ordering Number System



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

1.	Function	2.	Body design	3.	Body material	4.	Security position	5.	Actuator	6.	Special versions	7.	Motor voltages
M	Control valve with motor actuator (type 8035)	E	GS3-flangeless design acc. ANSI 150	0	carbon steel 1.0619	0	spring closes	3	1,2 kN (safety spring return only)	M	to state, if some sections 7-16 are quoted	-	230 V 50 Hz (Standard)
						1	spring opens					1	24 V, 50 Hz
		F	GS3-flangeless design acc. ANSI 300	1	stainless steel 1.4408			5	3,0 kN (safety spring return only)	A	nut and nut acc. DIN EN1092-1	8	120 V, 60 Hz
		K	GS3-flangeless design acc. ANSI 600							C	groove and tongue acc. DIN EN1092-1		
		G	GS3-flangeless design acc. DIN PN10-PN40							E	2x lowered face acc. DIN EN1092-1		
		H	GS3-flangeless design acc. DIN PN100							H	lowered and raised face acc. DIN EN1092-1		

8.	Stem sealing	9.	Sliding disc	10.	Fixed disc	11.	Kvs-values	12.	Seat characteristics	13.	Accessories	14.	Limit switches
-	PTFE-V-shaped seal, self-adjusting (Standard)	-	carbon material	-	stainless steel 1.4571, coated	-	100 % (Stand.)	-	linear	Z	to state, if in sections 14 and 15 accessories are qouted	-	without
		9	STN2	1	STN2 (only in combination with the position „9“ STN2-disc)	A	red. to 63 %	1	equal percentage			1	one limit switch
1	additional stainless steel bellow 1.4571					1	red. to 40 %					2	two limit switches
						2	red. to 16 %						
						3	red. to 6.3 %						
						4	red. to 2.5 %						
						5	red. to 1 %						
						6	red. to 20%						
						7	red. to 12 %						
						8	red. to 2 %						
						9	red. to 0,4%						

15.	Feedback	16.	Special versions	17.	Stroking speed	18.	Special treatment	19.	Positioner
-	without	S	Other special versions / accessories	-	17,5 mm/min	-	Standard	-	without
1	Potentiometer 1000 Ohm			5	3,4 mm/min.			3	Positioner 0-10V
C	Stroke feedback for positioner 0/4 - 20mA							N	Positioner 4-20 mA
								M	Positioner 0-20 mA

Ordering Example:	8035/050VMG103M- - - - - -Z- -S5-3 GS-motor valve type 8035 with safety spring return, DN 50, PN 10/40, body material stainless steel 1.4571, spring to close, actuator 1.2 kN, 230 V, 50 Hz, PTFE-V-shaped seal, carbon material, stainless steel 1.4581, Kvs-value 100 %, Flow characteristic linear, actuator speed 3,4 mm/min. , positioner 0-10 V

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 in stainless steel						Sliding unit: STN2 max. admissible pressures for GS3-valves in stainless steel					
	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15-32	40	40	40	40	40	40	40	40	40	40	40	40
40	40	40	40	40	40	40	40	40	40	40	40	37
50	40	40	40	40	40	40	40	40	40	40	40	40
65	40	40	40	40	40	40	40	40	40	40	37	32
80	40	40	40	40	40	40	36	34	33	26	22	19
100	33	33	33	33	33	33	32	31	30	24	20	17
125	23	23	23	23	23	23	21	21	19	16	13	11
150	16	16	16	16	16	16	15	15	14	11	9	8
200 (max. PN25)	16	16	15	13	12	11	8	7	6	5	4	3
250 (max. PN25)	10	9	9	8	7	6	5,7	5,4	5,1	4,1	3,4	2,9

Limitation for SFC-sliding discs: 300°C

PN100

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in stainless steel						Sliding unit: STN2 max. admissible pressures for GS3-valves in stainless steel					
	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15	100	100	100	93	84	79	100	100	100	93	84	79
20	100	100	89	81	73	68	100	100	89	81	73	68
25	88	81	70	63	57	54	88	81	70	63	57	54
32	100	93	80	73	65	62	100	93	80	73	65	60
40	88	81	70	63	57	54	72	69	65	53	43	37
50	100	100	100	100	100	94	77	73	70	56	46	40
65	80	80	80	79	71	67	62	59	56	45	37	32
80	48	48	48	48	48	44	36	34	33	26	22	19

Limitation for SFC-sliding discs: 300°C

ANSI150

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in stainless steel								Sliding unit: STN2 max. admissible pressures for GS3-valves in stainless steel							
	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C
15-125	19,0	18,4	16,2	14,8	13,7	12,1	10,2	8,4	19,0	18,4	16,2	14,8	13,7	12,1	10,2	8,4
150	16,0	16,0	16,0	14,8	13,7	12,1	10,2	8,4	16,2	16,2	16,2	14,8	13,7	11,8	9,7	8,4
200	16,0	16,0	16,0	14,8	13,7	12,1	10,2	8,4	10,5	10,0	8,3	7,6	6,9	5,5	4,5	3,9
250	10,4	10,4	10,4	9,9	9,4	8,4	7,4	6,8	5,7	5,7	5,7	5,4	5,1	4,1	3,4	2,6

Limitation for SFC-sliding discs: 300°C

ANSI300

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in stainless steel								Sliding unit: STN2 max. admissible pressures for GS3-valves in stainless steel							
	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C
15-65	49,6	48,1	42,2	38,5	35,7	33,4	31,6	30,3	49,6	48,1	42,2	38,5	35,7	33,4	31,6	30,3
80	48,0	48,0	42,2	38,5	35,7	33,4	31,6	30,3	36,6	36,6	36,6	34,8	33,0	26,8	22,0	19,0
100	33,0	33,0	33,0	33,0	33,0	33,0	31,6	30,3	33,0	33,0	33,0	31,7	30,1	24,4	20,1	17,3
125	23,0	23,0	23,0	23,0	23,0	23,0	23,0	23,0	22,0	22,0	22,0	21,0	19,9	16,1	13,2	11,5
150	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	15,4	14,6	11,8	9,7	8,4
200	16,0	16,0	16,0	14,8	13,7	12,1	10,2	8,4	10,5	10,0	8,3	7,6	6,9	5,5	4,5	3,9

Limitation for SFC-sliding discs: 300°C

ANSI600

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in stainless steel								Sliding unit: STN2 max. admissible pressures for GS3-valves in stainless steel							
	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C
15-20	99,3	96,2	84,4	77,0	71,3	66,8	63,2	60,7	99,3	96,2	84,4	77,0	71,3	66,8	63,2	60,7
25	88,0	88,0	84,4	77,0	70,1	63,7	57,3	54,2	88,0	88,0	84,4	77,0	70,1	63,7	57,3	54,2
32	99,3	96,2	84,4	77,0	71,3	66,8	63,2	60,7	99,3	96,2	84,4	77,0	71,3	66,8	63,2	60,2
40	88,0	88,0	84,4	77,0	70,1	63,7	57,3	54,2	72,5	72,5	72,5	69,0	65,5	53,1	43,6	37,7
50	99,3	96,2	84,4	77,0	71,3	66,8	63,2	60,7	77,7	77,7	77,7	73,9	70,2	56,9	46,7	40,4
65	80,0	80,0	80,0	77,0	71,3	66,8	63,2	60,7	62,5	62,5	41,7	59,5	56,4	45,8	37,6	32,5
80	48,0	48,0	48,0	48,0	48,0	48,0	48,0	44,5	36,6	36,6	36,6	34,8	33,0	26,8	22,0	19,0

Limitation for SFC-sliding discs: 300°C

Sliding Gate Motor Valve 8035-GS3

with safety spring return

Application limitations for GS3 valves in carbon steel

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

PN40

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in carbon steel						Sliding unit: STN2 max. admissible pressures for GS3-valves in carbon steel					
	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15-50	40	40	40	40	40	40	40	40	40	40	40	40
65	40	40	40	40	40	40	40	40	40	40	37	32
80	40	40	40	40	40	40	36	34	33	26	22	19
100	33	33	33	33	33	33	33	31	30	24	20	17
125	23	23	23	23	23	23	22	21	19	16	13	11
150	16	16	16	16	16	16	16	15	14	11	9	8
200 (max PN 25)	16	16	15	13	12	11	8	7	6	5	4	3
250 (max PN 25)	10	9	9	8	7	6	5,7	5,4	5,1	4,1	3,4	2,9

Limitation for SFC-sliding discs: 300°C

PN100

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in carbon steel						Sliding unit: STN2 max. admissible pressures for GS3-valves in carbon steel					
	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15 - 20	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	94	87	100	100	100	100	94	87
32	100	100	100	100	100	99	100	100	100	84	69	60
40	100	100	100	100	94	87	72	69	65	53	43	37
50	100	100	100	100	100	94	77	73	70	56	46	40
65	80	80	80	80	80	76	62	59	56	45	37	32
80	48	48	48	48	48	44	36	34	33	26	22	19

Limitation for SFC-sliding discs: 300°C

ANSI150

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in carbon steel								Sliding unit: STN2 max. admissible pressures for GS3-valves in carbon steel							
	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C
15-125	19,6	19,2	17,7	15,8	13,8	12,1	10,2	8,4	19,6	19,2	17,7	15,8	13,8	12,1	10,2	8,4
150	16,0	16,0	16,0	15,8	13,8	12,1	10,2	8,4	16,2	16,2	16,2	15,4	13,8	11,8	9,7	8,0
200	16,0	16,0	16,0	15,8	13,8	12,1	10,2	8,4	10,5	10,0	8,3	7,6	6,9	5,5	4,5	3,9
250	10,5	10,5	10,5	9,9	9,4	8,4	7,4	6,0	5,7	5,7	5,7	5,4	5,1	4,1	3,4	2,6

Limitation for SFC-sliding discs: 300°C

ANSI300

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in carbon steel								Sliding unit: STN2 max. admissible pressures for GS3-valves in carbon steel							
	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C
15-50	51,1	50,1	46,6	45,1	43,8	41,9	39,8	37,6	51,1	50,1	46,6	45,1	43,8	41,9	39,8	37,6
65	51,1	50,1	46,6	45,1	43,8	41,9	39,8	37,6	41,7	41,7	41,7	39,7	37,6	33,5	37,6	33,0
80	48,0	48,0	46,6	45,1	43,8	41,9	39,8	37,6	36,6	36,6	36,6	34,8	33,0	26,8	22,0	19,0
100	33,0	33,0	33,0	33,0	33,0	33,0	33,0	33,0	33,0	33,0	33,0	31,7	30,1	24,4	20,0	17,5
125	23,0	23,0	23,0	23,0	23,0	23,0	23,0	23,0	22,1	22,1	22,1	21,0	19,9	16,1	13,2	11,5
150	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	15,4	14,6	11,8	9,7	8,4
200	16,0	16,0	16,0	14,8	13,7	12,1	10,2	8,4	10,5	10,0	8,3	7,6	6,9	5,5	4,5	3,9

Limitation for SFC-sliding discs: 300°C

ANSI600

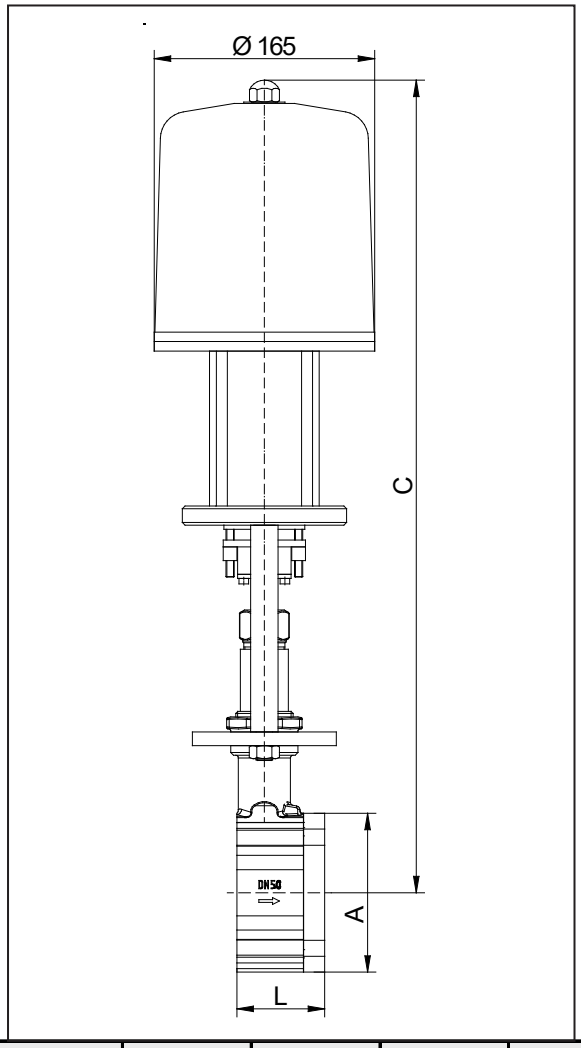
DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves in carbon steel								Sliding unit: STN2 max. admissible pressures for GS3-valves in carbon steel							
	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C
15-25	102,1	100,2	93,2	90,2	87,6	83,9	79,6	75,1	102,1	100,2	93,2	90,2	87,6	83,9	79,6	75,1
32	102,1	100,2	93,2	90,2	87,6	83,9	79,6	75,1	102,1	100,2	93,2	90,2	87,6	83,9	69,6	60,0
40	100,0	100,0	93,2	90,2	87,6	83,9	79,6	75,1	72,5	72,5	72,5	69,0	65,5	53,1	43,6	37,0
50	100,0	100,0	93,2	90,2	87,6	83,9	79,6	75,1	77,7	77,7	77,7	73,9	70,2	56,9	46,7	40,0
65	80,0	80,0	80,0	80,0	80,0	80,0	79,6	75,1	62,5	62,5	62,5	59,5	56,4	45,8	37,6	32,0
80	48,0	48,0	48,0	48,0	48,0	48,0	48,0	44,0	36,6	36,6	36,6	36,8	33,0	26,8	22,0	19,0

Limitation for SFC-sliding discs: 300°C

Sliding Gate Motor Valve 8035-GS3

with safety spring return

Dimensions and Weights



DN	ØA	C* 1.2 kN	C* 3.0 kN	L	Weight kg	Stroke
15	64	570	590	56	12,2	6
20	72	575	595	56	12,4	6
25	82	580	600	56	12,7	6
32	89	585	605	56	12,9	6
40	99	590	610	56	13,2	6
50	116	600	620	64	14,7	8
65	138	610	630	68	16,2	8
80	153	615	635	70	17,4	8
100	184	630	650	75	20,6	8,5
125	212	645	665	80	22,9	8,5
150	242	660	680	80	26,7	8,5
200	302	690	710	93	43,6	8,5
250	360	715	735	96	49,1	8,5

* For the motor actuator with integrated positioner C increases for 40 mm

Dimensions in mm