

# Sliding Gate Motor Valve 8035

GS 3 series, 1/2" up to 10"

Version NR2 with safety spring return



## Technical Information

Body design	ANSI flange wafer (self-aligning) for flanges acc. ASME B16.5 RF or DIN EN 1092-1 Form B	
Nominal size	1/2" up to 10"	
Nominal pressure acc. DIN 2401 for flanges with facing type B	580 psi (fits also to 145-365 psi) 1450 psi 230 psi and 363 psi	1/2" - 6" 1/2" - 3" 8" - 10"
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150 ANSI 300 ANSI 600	1/2" - 10" 1/2" - 6" 1/2" - 3"
Nominal pressure acc. JIS for „raised face“ flanges	10K 20K	1/2" - 2" 1/2" - 1 1/2"
Flange gaskets (customer side)	ANSI B16.21 or DIN EN 1514-1 in the respective nominal pressure rating	
Media temperature	Versions from -76°F up to +662°F	
ambient temperature	+32°F up to +122°F	
Leakage	Disc pair Carbon-stainless steel	Disc pair STN 2
% of Kvs IEC 60534-4 EN 12266-1	< 0,0001 IV-S1 E	< 0,001 IV F
Specific 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<sub>vs</sub>-values see data sheet 8001.



## Technical Information Motor Actuator

Actuating force	270 lbf	660 lbf
Type of duty acc. VDE 0530		
with control electronics	S 4 - 30% ED	S 4 - 30% ED
without control electronics	S 1 - 100 % ED	S 1 - 100 % ED
Net connections	24 V AC	24 V AC
	110 V/120 V AC	110 V/120 V AC
	230 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 [°F]	-76	-76	-76	-20	-20	-20
Tmax [°F]	662	662	662	662	662	662
Body material cpl. carbon steel						
Tmin [°F]	-76	-76	14	-4	-4	14
Tmax [°F]	572	572	572	572	572	572

## Materials

Body	stainless steel CF8M	carbon steel ASTM A216 WCB
Bodycover	stainless steel 316 Ti or 316 L	
Packing	PTFE (carbon filled), spring SST 301	
Actuating stem	Stainless steel, roller burnished	
Bellow	Stainless steel 316 Ti	
Fixed plate	Stainless steel 316 Ti, plated	STN2-disc
Sliding disc	special carbon material	STN2-disc
Coupling ring for discs	Stainless steel 318	

# Sliding Gate Motor Valve 8035-GS3



with safety spring return

## Stroking Times

Size	Stroking times (sec.) with stroking speed	
	0,69 inch/min	0,13 inch/min
1/2"	21	110
3/4"	21	110
1"	21	110
1 1/4"	21	110
1 1/2"	21	110
2"	28	146
2 1/2"	28	146
3"	28	146
4"	30	154
5"	30	154
6"	30	154
8"	30	154
10"	30	154

## Options

	actuating force	
	270 lbf	660 lbf
limit switches	max. 2	max. 2
potentiometer	max. 2*	max. 2*
Nachlaufregler (analog)	yes	yes

\* one potentiometer is required for positioner operation

## Admissible Pressures

(For temperatures of up to 100°F for ANSI-classes and up to 250°F for PN-classes)

**For temperatures exceeding 100°F (ANSI) or 250°F (PN): consider operation limits**

Size	270 lbf	660 lbf	270 lbf	660 lbf
	max. pressures (psi)			
	sliding combination			
	carbon-stainless steel		STN 2	
1/2"	1480	1480	1110	1480
3/4"	1360	1480	855	1480
1"	1140	1276 (1480)*	640	1276 (1480)*
1 1/4"	930	1480	475	1255
1 1/2"	705	1276 (1450)*	325	860
2"	465	1220	195	515
2 1/2"	390	1025	160	420
3"	250	655	95	255
4"	160	420	60	160
5"	105	285	40	105
6"	80	210	30	80
8"	45	120	16	44
10"	30	75	10	26

\*figures in brackets for bodies of carbon steel

	Pressure limits ANSI and DIN in psi					
	ANSI150	ANSI 300	ANSI 600	PN16	PN40	PN100
P max. carbon steel	284	741	1480	232	580	1450
P max. stainless steel	276	719	1440			

# Sliding Gate Motor Valve 8035-GS3



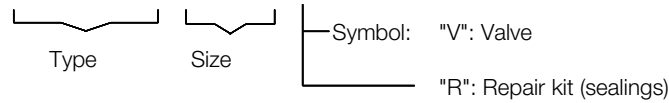
with safety spring return

## Ordering Number System

8 0 3 5 / V M M Z S

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

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 ASTM A216 WCB	0	Spring closes Spring opens	3	270 lbf (1,2 kN) safety spring return only	M	to state, if some sections 7-16 are quoted	-	230 V 50 Hz (Standard) 1 24 V 50 Hz 8 120 V, 60 Hz
		F	GS3 - flangeless design acc. ANSI 300	1	stainless steel CF8M			5	670 lbf (3,0 kN) safety spring return only				
		K	GS3 - flangeless design acc. ANSI 600										
		G	GS3 - flangeless design acc. DIN, 145-580 psi										
		H	GS3 - flangeless design acc. DIN, 1450 psi										
8.	Stem sealing	9.	Sliding disc	10.	Fixed disc	11.	Cv-values	12.	Seat characteristics	13.	Accessories	14.	Limit switches
-	PTFE-V-shaped seal, self-adjusting (Standard)	-	Carbon material	-	Stainless steel coated	-	100 % (Stand.)	-	linear	Z	to state, if in sections 14 and 15 accessories are quoted	-	without
1	Stainless steel bellow 316 Ti	9	STN2/STN3	1	STN2 - plate (only in combination with the pos. „9“)	A	red. to 63 % 1 red. to 40 % 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 %	1	equal percentage			1	one limit switch
				3	STN3 - plate (only in combination with the pos. „9“)							2	two limit switches
15.	Feedback	16.	Special versions	17.	Stroking speed	18.	Special treatment	19.	Positioner				
-	without	S	Other special versions/ accessories	-	0,69 inch/min.	-	Standard	-	without				
1	Potentiometer 1000 Ohm			5	0,13 inch/min.			3	Positioner 0-10 V				
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, 2", PN 10/40, body material stainless steel 316 Ti, spring to close, actuator 270 lbf, 230 V, 50 Hz, PTFE-V-shaped seal, carbon material, stainless steel 318, Cv-value 100 %, Flow characteristic linear, actuator speed 0,13 inch/min., positioner 0-10 V

# Sliding Gate Motor Valve 8035-GS3



with safety spring return

## 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.

### ANSI150

Size	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in stainless steel								max. admissible pressures for GS3-valves in stainless steel							
	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F
1/2" - 5"	275	265	235	215	200	175	150	120	275	265	235	215	200	175	150	120
6"	230	230	230	215	200	175	150	120	235	235	235	215	200	170	140	120
8"	230	230	230	215	200	175	150	120	150	145	120	110	100	80	65	55
10"	150	150	150	145	135	120	105	100	85	85	85	80	75	60	50	40

Limitation for SFC-sliding discs: 570°F

### ANSI300

Size	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in stainless steel								max. admissible pressures for GS3-valves in stainless steel							
	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F
1/2" - 2 1/2"	720	695	610	560	520	485	460	440	720	695	610	560	520	485	460	440
3"	695	695	610	560	520	485	460	440	530	530	530	505	480	390	320	275
4"	480	480	480	480	480	480	460	440	480	480	480	460	435	355	290	250
5"	335	335	335	335	335	335	335	335	320	320	320	305	290	235	190	165
6"	230	230	230	230	230	230	230	230	230	230	230	225	210	170	140	120
8"	230	230	230	145	135	120	105	100	230	230	220	200	180	155	140	130

Limitation for SFC-sliding discs: 570°F

### ANSI600

Size	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in stainless steel								max. admissible pressures for GS3-valves in stainless steel							
	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F
1/2" - 3/4"	1440	1395	1225	1115	1035	970	915	880	1440	1395	1225	1115	1035	970	915	880
1"	1275	1275	1225	1115	1015	925	830	785	1275	1275	1225	1115	1015	925	830	785
1 1/4"	1440	1395	1225	1115	1035	970	915	880	1440	1395	1225	1115	1035	970	915	875
1 1/2"	1275	1275	1225	1115	1015	925	830	785	1050	1050	1050	1000	950	770	630	545
2"	1440	1395	1225	1115	1035	970	915	880	1125	1125	1125	1070	1020	825	675	585
2 1/2"	1160	1160	1160	1115	1035	970	915	880	905	905	605	865	820	665	545	470
3"	695	695	695	695	695	695	695	645	530	530	530	505	480	390	320	275

Limitation for SFC-sliding discs: 570°F

### PN40

Size	Sliding unit: carbon/SFC - stainless steel, coated							Paarung: STN 2					
	maximum pressures for GS3-valves in stainless steel							maximum pressures for GS3-valves in stainless steel					
	210°F	300°F	390°F	480°F	570°F	660°F	210°F	300°F	390°F	480°F	570°F	660°F	
1/2"-1 1/4"	580	580	580	580	580	580	580	580	580	580	580	580	
1 1/2"	580	580	580	580	580	580	580	580	580	580	580	535	
2"	580	580	580	580	580	580	580	580	580	580	580	580	
2 1/2"	580	580	580	580	580	580	580	580	580	580	535	465	
3"	580	580	580	580	580	580	520	495	480	375	320	275	
4"	480	480	480	480	480	480	465	450	435	350	290	245	
5"	335	335	335	335	335	335	305	305	275	230	190	160	
6"	230	230	230	230	230	230	220	220	205	160	130	115	
8" (only PN16)	230	230	220	190	175	160	120	110	100	80	65	55	
10" (only PN16)	145	130	130	115	100	85	85	80	75	60	50	40	

Limitation for SFC-sliding discs: 570°F

### PN100

Size	Sliding unit: carbon/SFC - stainless steel, coated							Paarung: STN 2					
	maximum pressures for GS3-valves in stainless steel							maximum pressures for GS3-valves in stainless steel					
	210°F	300°F	390°F	480°F	570°F	660°F	210°F	300°F	390°F	480°F	570°F	660°F	
1/2"	1450	1450	1450	1350	1220	1145	1450	1450	1450	1350	1220	1145	
3/4"	1450	1450	1290	1175	1060	985	1450	1450	1290	1175	1060	985	
1"	1275	1175	1015	915	825	785	1275	1175	1015	915	825	785	
1 1/4"	1450	1350	1160	1060	945	900	1450	1350	1160	1060	945	870	
1 1/2"	1275	1175	1015	915	825	785	1045	1000	945	770	625	535	
2"	1450	1450	1450	1450	1450	1365	1115	1060	1015	810	665	580	
2 1/2"	1160	1160	1160	1145	1030	970	900	855	810	655	535	465	
3"	695	695	695	695	695	640	520	495	480	375	320	275	

Limitation for SFC-sliding discs: 570°F

# 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 actual power might allow it.

### ANSI150

Size	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in carbon steel								max. admissible pressures for GS3-valves in carbon steel							
	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F
1/2"-5"	285	280	255	230	200	175	150	120	285	280	255	230	200	175	150	120
6"	230	230	230	230	200	175	150	120	235	235	235	225	200	170	140	115
8"	230	230	230	230	200	175	150	120	150	145	120	110	100	80	65	55
10"	150	150	150	145	135	120	105	87	85	85	85	80	75	60	50	40

Limitation for SFC-sliding discs: 570°F

### ANSI300

Size	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in carbon steel								max. admissible pressures for GS3-valves in carbon steel							
	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F
1/2"-2"	740	725	675	655	635	610	565	535	740	725	675	655	635	610	565	535
2 1/2"	740	725	675	655	635	610	565	535	605	605	605	575	545	485	550	470
3"	695	695	675	655	635	610	565	535	530	530	530	505	480	390	319	275
4"	480	480	480	480	480	480	475	475	480	480	480	460	435	355	290	245
5"	335	335	335	335	335	335	330	330	320	320	320	305	290	235	191	155
6"	230	230	230	230	230	230	230	230	230	230	230	225	210	170	141	115
8"	230	230	220	200	180	155	140	130	150	145	120	110	100	65	65	55

Limitation for SFC-sliding discs: 570°F

### ANSI600

Size	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in carbon steel								max. admissible pressures for GS3-valves in carbon steel							
	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F	100°F	120°F	210°F	300°F	390°F	480°F	570°F	660°F
1/2"-1"	1480	1455	1350	1310	1270	1215	1155	1085	1480	1455	1350	1310	1270	1215	1155	1085
1 1/4"	1480	1455	1350	1310	1270	1215	1155	1085	1480	1455	1350	1310	1270	1215	1010	870
1 1/2"	1450	1450	1350	1310	1270	1215	1155	1085	1050	1050	1050	1000	950	770	630	535
2"	1450	1450	1350	1310	1270	1215	1155	1085	1125	1125	1125	1070	1020	825	675	580
2 1/2"	1160	1160	1160	1160	1160	1160	1155	1085	905	905	905	865	820	665	545	460
3"	695	695	695	695	695	695	695	635	530	530	530	535	480	390	320	275

Limitation for SFC-sliding discs: 570°F

### PN40

Size	Sliding unit: carbon/SFC - stainless steel, coated							Sliding unit: STN2						
	max. admissible pressures for GS3-valves in carbon steel							max. admissible pressures for GS3-valves in carbon steel						
	210°F	300°F	390°F	480°F	570°F	660°F	210°F	300°F	390°F	480°F	570°F	660°F		
1/2" - 2"	580	580	580	580	580	580	580	580	580	580	580	580		
2 1/2"	580	580	580	580	580	580	580	580	580	580	535	460		
3"	580	580	580	580	580	580	520	495	480	375	320	275		
4"	480	480	480	480	480	475	480	450	435	350	290	245		
5"	335	335	335	335	335	330	320	305	275	230	190	155		
6"	230	230	230	230	230	230	230	220	205	160	130	115		
8" (max 365 psi)	230	230	220	190	175	155	120	110	100	80	65	55		
10" (max 365 psi)	145	130	130	115	100	87	85	80	75	60	50	40		

Limitation for SFC-sliding discs: 570°F

### PN100

Size	Sliding unit: carbon/SFC - stainless steel, coated							Sliding unit: STN2						
	max. admissible pressures for GS3-valves in carbon steel							max. admissible pressures for GS3-valves in carbon steel						
	210°F	300°F	390°F	480°F	570°F	660°F	210°F	300°F	390°F	480°F	570°F	660°F		
1/2" - 3/4"	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450		
1"	1450	1450	1450	1450	1450	1365	1260	1450	1450	1450	1450	1365	1260	
1 1/4"	1450	1450	1450	1450	1450	1435	1450	1450	1450	1220	1000	870		
1 1/2"	1450	1450	1450	1450	1365	1260	1045	1000	945	770	625	535		
2"	1450	1450	1450	1450	1450	1360	1115	1060	1015	810	665	580		
2 1/2"	1160	1160	1160	1160	1160	1100	900	855	810	655	535	460		
3"	695	695	695	695	695	635	520	495	480	375	320	275		

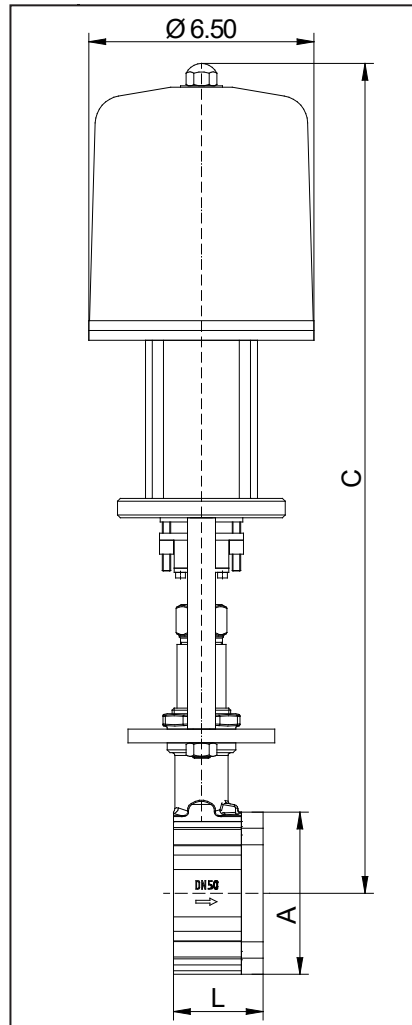
Limitation for SFC-sliding discs: 570°F

# Sliding Gate Motor Valve 8035-GS3



with safety spring return

## Dimensions and Weights



Size	ØA	C*	C*	L	Weight lbs	Stroke
		270 lbf	660 lbf			
1/2"	2.5	22.45	23.25	2.2	26.8	0.25
3/4"	2.85	22.65	23.45	2.2	27.3	0.25
1"	3.25	22.85	23.6	2.2	27.9	0.25
1 1/4"	3.5	23.05	23.8	2.2	28.4	0.25
1 1/2"	3.9	23.25	24	2.2	29	0.25
2"	4.55	23.6	24.4	2.5	32.3	0.3
2 1/2"	5.45	24	24.8	2.7	35.6	0.3
3"	6	24.2	25	2.75	38.3	0.3
4"	7.25	24.8	25.6	2.95	45.3	0.35
5"	8.35	25.4	26.2	3.15	50.4	0.35
6"	9.55	26	26.75	3.15	58.7	0.35
8"	11.9	27.15	27.95	3.65	95.9	0.35
10"	14.15	28.15	28.95	3.8	108	0.35

Dimensions in inch

\* For the motor actuator with integrated positioner C increases for 1,57 inches

# Sliding Gate Motor Valve 8035-GS3



## Flow Coefficients - Cv-values

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	0.021
	eq. perc.	2	-	1.3	-	0.4	-	-	-	0.12	-	-	-	-
3/4"	(mod.) lin.	7.4	-	-	-	-	1.16	-	-	-	-	0.15	-	-
	eq. perc.	3.5	-	1.7	-	-	-	-	-	-	-	-	-	-
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	-	-	-	0.41	-	-	-	-
1 1/4"	(mod.) linear	19	12	-	-	-	-	-	-	-	-	-	-	-
	eq. perc.	9.3	5.45	-	-	-	-	-	-	-	-	-	-	-
1"	(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	-	-	-	-	3.5	-	-	-	-	-	-
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.	329	-	-	-	-	-	-	-	-	-	-	-	-
10"	(mod.) linear	1056	667	-	-	-	-	-	-	-	-	-	-	-
	eq.perc.	-	-	-	-	-	-	-	-	-	-	-	-	-