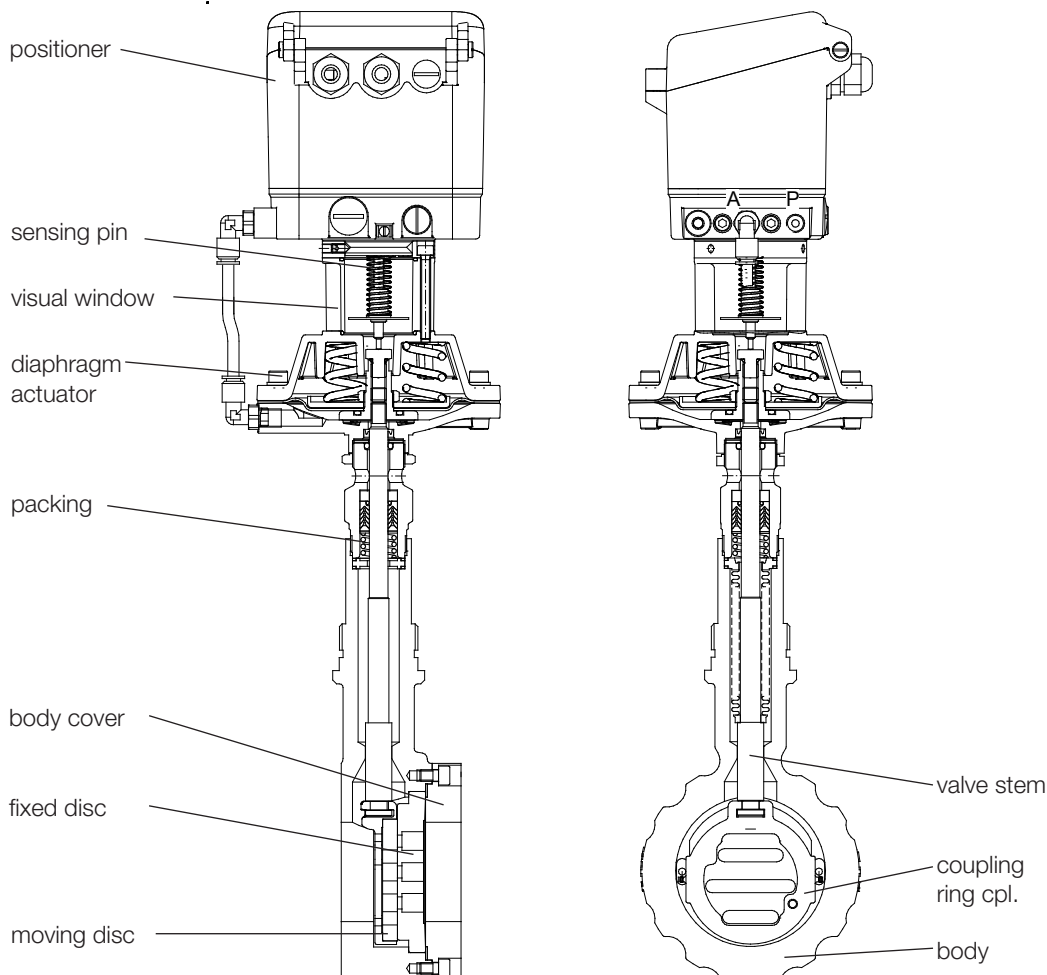


# Sliding Gate Valve 8028

## GS3 Series - 1/2" up to 6"

**Compact pneumatic sliding gate valve optionally with integrated positioner for regulating or shutting off liquid and gaseous media for industrial applications**

- Excellent control precision due to less friction at the actuator
- High rangeability of 40:1 linear / 80:1 equal percentage
- Control of high differential pressures with small actuators
- Without positioner also suitable for on/off applications
- Space saving wafer type construction
- Integrated positioner
- Lowest possible weight
- Quiet operation
- Fast response time
- Greatly reduced energy consumption rates due to short strokes and low actuating forces on the throttle elements
- Meets the requirements of TA-Luft 2021



## Technical information

Body design	ANSI flange wafer (self-aligning) - for flanges acc. ASME B16.5 RF or DIN EN 1092-1 Form B - with threaded connection (only 580 psi in stainless steel; 1/2" up to 2")		
Nominal sizes	1/2" up to 4"		
Nominal pressure acc. EN 1333	580 psi (fits also to 145 up to 365 psi)	1/2" - 6"	
Nominal pressure acc. ASME B16.34	ANSI 150 ANSI 300	1/2" - 6" 1/2" - 6"	
Nominal pressure acc. JIS for raised face flanges	10K 20K	1/2" - 2" 1/2" - 1 1/2"	
Fluid Temperature	-76°F up to +662°F		
Ambient temperature* Rangeability / Characteristic	digital positioner +14°F up to +167°F		
digital positioner	40 : 1 linear / 80 : 1 equal percentage		
Flange gaskets (customer side)	ANSI B16.21 or DIN EN 1514-1 in the respective nominal pressure rating		
Leakage  % of Kvs IEC 60534-4 EN 12266-1	Disc pair Carbon-stainless steel < 0,0001 IV-S1 E	Disc pair SFC < 0,0005 IV-S1 F	Disc pair STN 2 < 0,001 IV F
Marking ATEX non electric	II 2G Ex h IIC T6...T1 X Gb II 2D Ex h IIIC 85°C...530°C X Db		
Spezific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1		

\* Please consider the limitation of use of the positioner!

## Fluid temperature

Rating	PN16	PN 40	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 carbon steel with stainless steel body cover						
Tmin [°F]	-76	-76	14	-4	-4	-4
Tmax [°F]	662	662	662	662	662	662

## Materials

Valve Body*	Stainless steel CF8M	Carbon steel ASTM A216 WCB
Bodycover*	Stainless steel 316 Ti or 316 L	
Diaphragm Casing	Aluminium, KTL-coated	
Actuator Springs	Stainless steel 301	
Packing	Carbon-filled PTFE (spring SST 301)	
Valve Stem	Stainless steel 316 Ti, roller burnished	
Fixed disc	Stainless steel 316 Ti, Stellite	
Sliding disc	special carbon material	SFC-disc (max. +572°C) STN2-disc

\* Further Materials such as Hastelloy, Duplex, Monel, Titan, Inconel, Incoloy, 1.4539 etc. on request

## Admissible Differential Pressure

**For temperatures of 248°F (PN)  
or 100,4°F (ANSI) and above:  
obey application limits !**

Size	Disc pair carbon/SFC-stainless steel coatet		Size	STN2-disc pair	
	max. working pressure (psi)	required pilot pressure (psi)		max. working pressure (psi)	required pilot pressure (psi)
1/2"	1480	47	1/2"	1070	47
3/4"	1315	47	3/4"	825	52
1"	1100	47	1"	605	58
1 1/4"	895	50	1 1/4"	445	62
1 1/2"	680	56	1 1/2"	300	66
2"	445	66	2"	185	73
2 1/2"	375	68	2 1/2"	150	75
3"	235	72	3"	92	76
4"	150	75	4"	58	78
5"	100	76	5"	37	78
6"	76	78	6"	27	79

	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 Valve 8028 - GS3

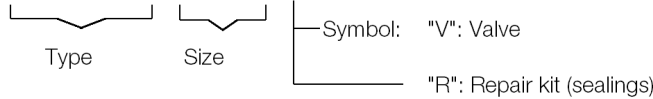


## Ordering Number System

8 0 2 8 / V D 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. Type		2. Connection		3. Body material		4. Safety position		5. Actuator			
D	sliding gate valve compact 8028, long version	E	GS3 flangeless design acc. ANSI 150	0	Carbon-Steel ASTM A216 WCB	0	spring closes	1	diaphragm 3"		
		F	GS3 flangeless design acc. ANSI 300	1	Stainless Steel CF8M	1	spring opens	2	diaphragm 3" with NPT-thread		
		K	GS3 flangeless design acc. ANSI 600								
		G	GS3-flangeless design acc. DIN, PN10-PN40								
		H	GS3-flangeless design acc. DIN, PN100								
		L	GS3 flangeless design acc. DIN, PN25								
		N	GS3-flangeless design acc. JIS-20K								
		R	GS3 version with inner thread acc. ISO 228-1 (G-thread), pressure rating PN40								
		U	GS3 version with inner NPT thread acc. ANSI B 1.20.1, pressure rating PN40								
6. Special versions		7. Springs		8. Stem sealing		9. Moving disc		10. Fixed disc			
M	state, if further sections are quoted	-	Standard	-	Standard	-	carbon material	-	standard coating, stainless steel 1.4571		
A	groove / groove acc. DIN EN 1092-1 or ANSI 16,5 small			1	additional metal bellow	S	Stainless steel, SFC				
C	groove and tongue acc. DIN EN 1092-1					9	STN2/STN3	1	STN2		
E	lowered face / lowered face acc. DIN EN 1092-1							3	STN3		
H	lowered face / raised face acc. DIN EN 1092-1										
11. KVs-values		12. Characteristic		13. Accessories		14. Positioner		15. Signal equipment		16. Special versions	
-	100% (Stand.)	-	linear	-	(here not applicable)	-	without positioner, prepared for 8049	-	without	S	see following positions
A	red. to 63%	1	equal%	Z	see following positions	C	digital positioner type 8049, 4-wire	1	1 limit switch (micro switch)		
1	red. to 40%			N	el. position indicator with plug connection; ingress protection of the body IP65	R	digital positioner type 8049, 2-wire	2	2 limit switch (micro switch)		
B	red. to 25%			M	el. position indicator with cable bushing; ingress protection of the body IP65	W	digital positioner type 8049 ExPro, ATEX, IECEX	8	2 Inductive Limit Switches IN 5121 10-36V DC		
2	red. to 16%			F	feedback-unit for proximity switch M12	K	digital positioner type 8049 ExPro-FM base plate in stainless steel; IS Cl. I Div. 1, Cl. I Zone 0 AEx ia	p	feedback module RM5 for positioner type 8049 with 2 integrated limit switches		
C	red. to 10%					Y	digital positioner type 8049 ExPro-FM base plate in stainless steel; NI Cl. I Div. 2	y	Feedback module RM4 for positioner type 8049 with 2 integrated limit switches acc. NAMUR (EN60947-5-6)		
3	red. to 6,3%					N	digital positioner type 8049 IO-Link version				
4	red. to 2,5%					A	without positioner, for on/off operation				
5	red. to 1%										
6	red. to 20%										
7	red. to 12%										
8	red. to 2%										
9	red. to 0,4%										

Ordering example:

8028/050VDG101M-----ZCP

sliding gate valve compact 8028, 2" (Kvs 45; Cv 52), long version, GS3-flangeless design acc. DIN, PN10-40, body material stainless steel, safety position spring closes, diaphragm 3" moving disc carbon steel, fixed disc stainless steel 1.4571 coated, characteristic linear, dig. positioner type 8049 4-wire, feedbackmodule RM5 for positioner type 8049 with two limiting value encoders.

## 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	-	-	-	-	-	-	-	-

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	-	-	-	-	-	-	

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

## 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.

### 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	65	65	55
10"	150	150	150	145	135	120	105	87	-	-	-	-	-	-	-	-

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" (only PN16)	230	230	220	190	175	155	120	110	100	80	65	55	
10" (only PN16)	145	130	130	115	100	87	-	-	-	-	-	-	

Limitation for SFC-sliding discs: 570°F

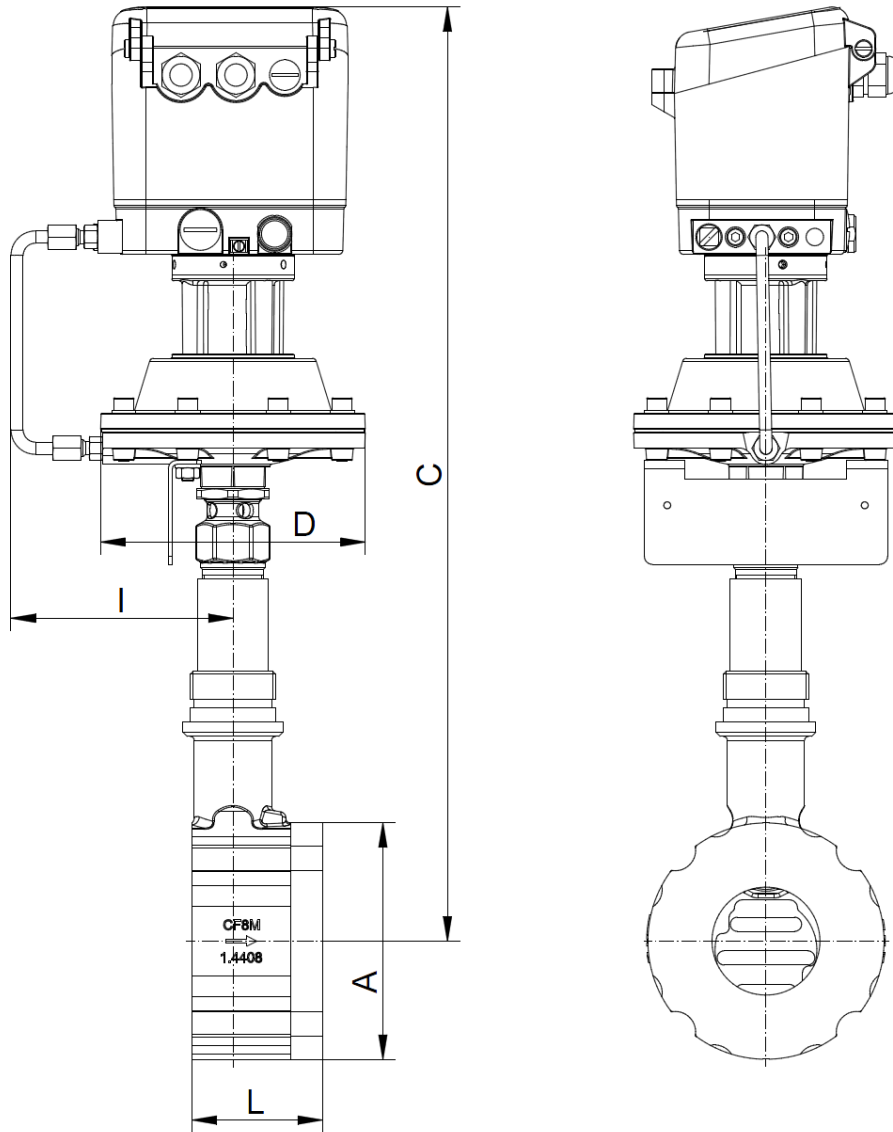
### PN100

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	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 Valve 8028 - GS3

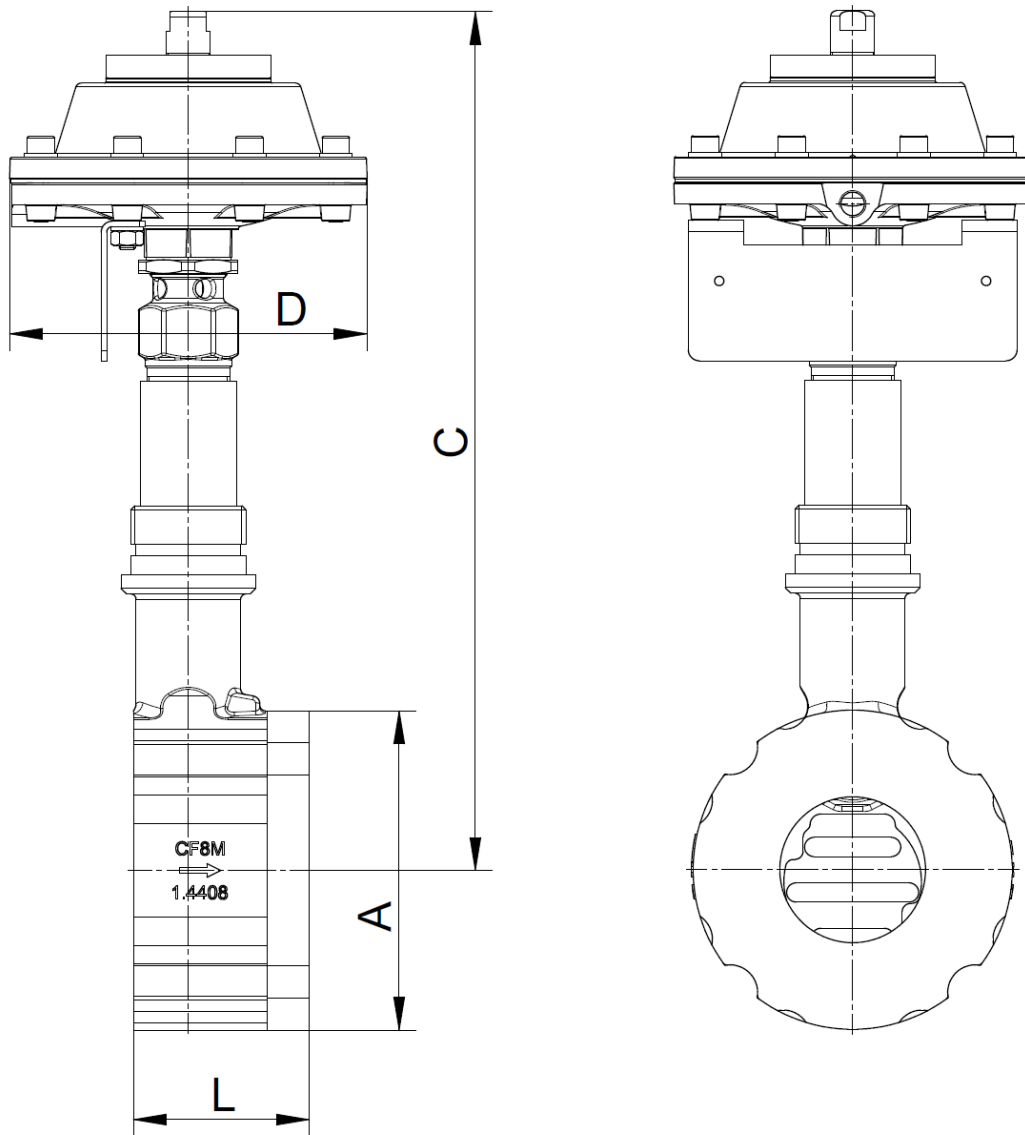
## Dimensions and Weights with digital positioner 8049 wafer-type construction



Size	A	C	D	I	L	Stroke H	Weight (lbs)
1/2"	2.52	16.93	5.12	4.49	2.2	0.24	9.5
3/4"	2.83	17.2	5.12	4.49	2.2	0.24	10
1"	3.23	17.32	5.12	4.49	2.2	0.24	10.5
1 1/4"	3.5	17.52	5.12	4.49	2.2	0.24	11
1 1/2"	3.9	17.72	5.12	4.49	2.2	0.24	11.5
2"	4.57	18.07	5.12	4.49	2.52	0.31	15
2 1/2"	5.43	18.43	5.12	4.49	2.68	0.31	18.5
3"	6.02	18.78	5.12	4.49	2.76	0.31	21
4"	7.24	19.29	5.12	4.49	2.95	0.33	28
5"	8.35	19.76	5.12	4.49	3.15	0.33	37.5
6"	9.53	20.47	5.12	4.49	3.15	0.33	45.5

# Sliding Gate Valve 8028 - GS3

## Dimensions and Weights, On- / Off- Version wafer-type construction

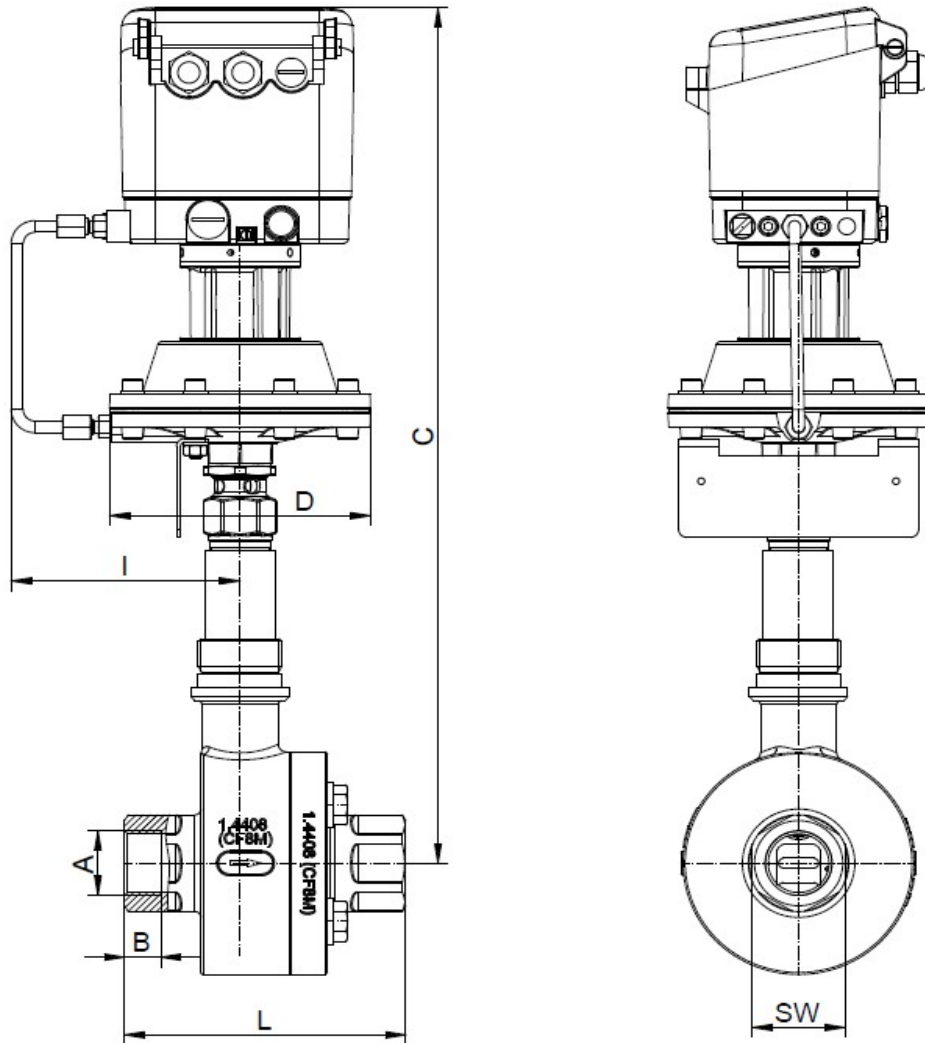


Size	A	C	D	L	Stroke H	Weight (lbs)
1/2"	2.52	11.14	5.12	2.2	0.24	7.5
3/4"	2.83	11.42	5.12	2.2	0.24	8
1"	3.23	11.54	5.12	2.2	0.24	8.5
1 1/4"	3.5	11.73	5.12	2.2	0.24	8.5
1 1/2"	3.9	11.93	5.12	2.2	0.24	9.5
2"	4.57	12.28	5.12	2.52	0.31	13
2 1/2"	5.43	12.64	5.12	2.68	0.31	16
3"	6.02	12.99	5.12	2.76	0.31	18.5
4"	7.24	13.5	5.12	2.95	0.33	26
5"	8.35	13.98	5.12	3.15	0.33	35
6"	9.53	14.69	5.12	3.15	0.33	43.5



# Sliding Gate Valve 8028 - GS3

## Dimensions and Weights with digital positioner 8049 with threaded connections

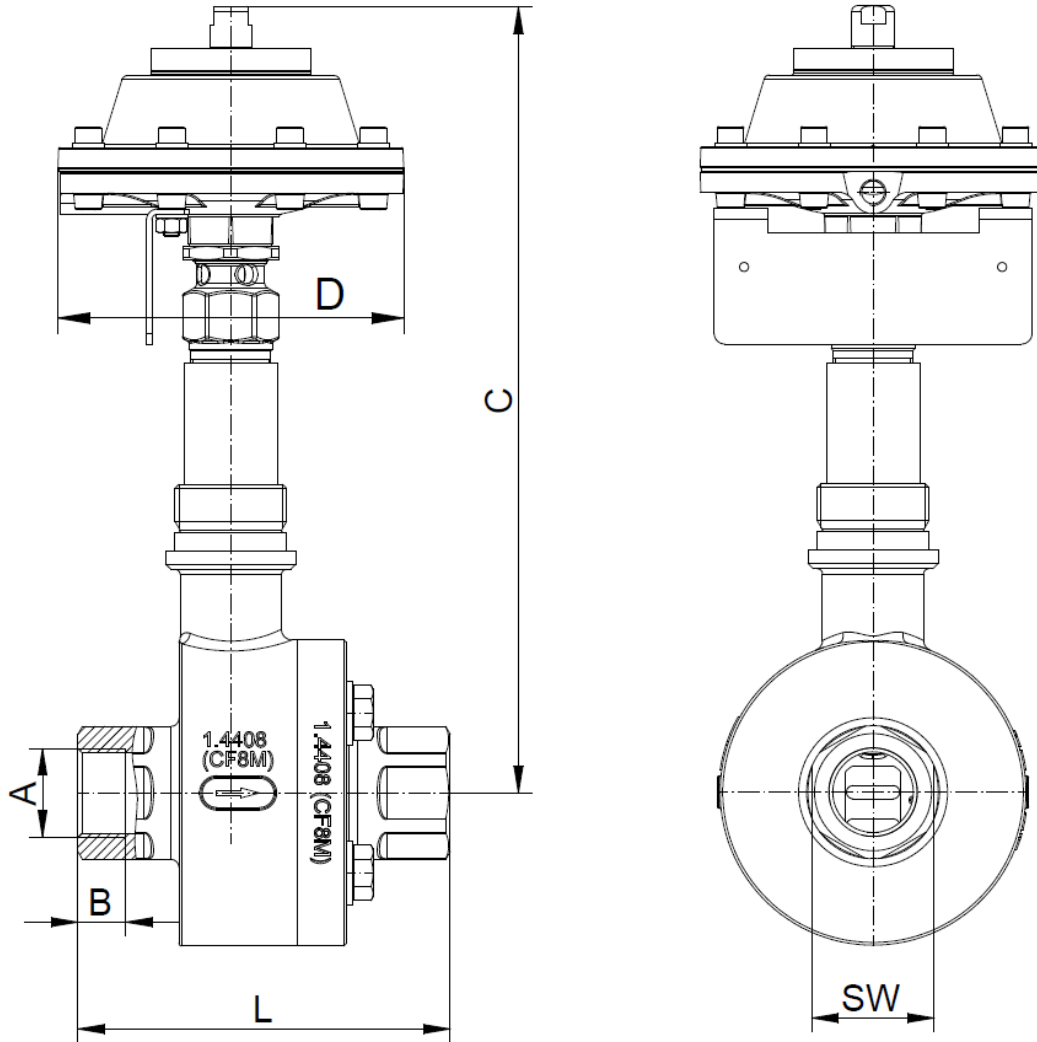


Size	A (G/NPT)	B		C	D	I	L	SW	Stroke H	Weight (lbs)
		G	NPT							
1/2"	1/2"	0,6	0,54	11,14	5,12	4,49	5	1,2	0,25	6,6
3/4"	3/4"	0,6	0,56	11,42	5,12	4,49	5	1,5	0,25	7,6
1"	1"	0,7	0,66	11,54	5,12	4,49	5,5	1,8	0,25	10
1 1/4"	1 1/4"	0,7	0,68	11,73	5,12	4,49	5,5	2,2	0,25	10,7
1 1/2"	1 1/2"	0,7	0,68	11,93	5,12	4,49	6	2,5	0,25	12
2"	2"	0,7	0,7	12,28	5,12	4,49	6	2,9	0,3	14,6

dimensions in inch

# Sliding Gate Valve 8028 - GS3

## Dimensions and Weights, On- / Off- Version with threaded connections



Size	A (G/NPT)	B		C	D	L	SW	Stroke H	Weight (lbs)
		G	NPT						
1/2"	1/2"	0,6	0,54	11,14	5,12	5	1,2	0,25	12,3
3/4"	3/4"	0,6	0,56	11,42	5,12	5	1,5	0,25	14,6
1"	1"	0,7	0,66	11,54	5,12	5,5	1,8	0,25	19,8
1 1/4"	1 1/4"	0,7	0,68	11,73	5,12	5,5	2,2	0,25	21,4
1 1/2"	1 1/2"	0,7	0,68	11,93	5,12	6	2,5	0,25	24,3
2"	2"	0,7	0,7	12,28	5,12	6	2,9	0,3	30

dimensions in inch

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## 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 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	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-