

# Low Temperature Sliding Gate Valve 8026

## GS 3 series - 1/2" up to 4"

**Pneumatic sliding gate valve optionally with integrated positioner for regulating or shutting off liquid and gaseous media for industrial low temperature applications**

- Space saving wafer type construction
- Lowest possible weight
- Quiet operation
- Fast response time
- Control of high differential pressures with small actuators
- Greatly reduced energy consumption rates due to short strokes and low actuating forces on the throttle element
- High Cv-values
- 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	
Nominal Sizes	1/2" - 4"	
Nominal pressure acc. DIN 2401 for flanges with facing type B	580 psi (fits also to 145 up to 365 psi)	1/2" - 4"
Nominal pressure acc. ANSI for flanges acc. ASME B 16.5 RF	ANSI 150	1/2" - 4"
Nominal pressure acc. JIS for „raised face“ flanges	ANSI 300	1/2" - 4"
	10K	1/2" -2"
	20K	1/2" - 1 1/2"
Fluid Temperature	down to -328°F	
Ambient temperature*	digital positioner +14°F up to +167°F analog positioner +5°F up to +140°F	
Flange gaskets (customer side)	ANSI B16.21 or DIN EN 1514-1 in the respective nominal pressure rating	
Leakage	Disc pair	
	Carbon-stainless steel	
% of Kvs	< 0,0001	
IEC 60534-4	IV-S1	
EN 12266-1	E	
Marking ATEX non electric	II 2G Ex h IIC T6...T1 X Gb II 2D Ex h IIIC 85°C...530°C X Db	
Specific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1	

\* Please consider the temperature limitation of the positioner!

\* With DN15 with reduction of less than 25%, different leakage rates possible.

K<sub>vs</sub>-values see data sheet 8001.

### Materials

Valve Body	Stainless steel CF8M
Body extension	Stainless steel 316 L
Bodycover	Stainless steel 316 L or 316 Ti
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

### Positioner

For technical information of our positioners please refer to the corresponding data sheets.

# Low Temperature Sliding Gate Valve 8026-GS3



## Pilot and operating pressures (for temperatures to -328°F)

digital positioner, Type 8049  
(also on-off valves and valves with other side-mounted positioner)

Actuator Size	20 in <sup>2</sup>		40 in <sup>2</sup>		80 in <sup>2</sup>	
Supply Pressure (psi)	65	80	44	58	44	65
Size	maximum pressure psi		maximum pressure psi		maximum pressure psi	
1/2"	479	479	479	479	-	-
3/4"	479	479	479	479	-	-
1"	479	479	479	479	-	-
1 1/4"	479	479	479	479	-	-
1 1/2"	479	479	479	479	-	-
2"	479	479	479	479	479	479
2 1/2"	479	479	479	479	479	479
3"	334	421	479	479	479	479
4"	218	232	363	450	479	479
Spring Configuration	Code 3 (Standard)	Code 4	Code 3 (Standard)	Code 4	Code 6 (Standard)	Code 8

Standard

Pressure limits DIN and ANSI in psi						
	ANSI 150 carbon steel	ANSI 150 stainless steel	ANSI 300 carbon steel	ANSI 300 stainless steel	PN16	PN40
P max.	284	276	741	719	232	580

p/p- and i/p-positioner, Type 8047

Actuator size	20 in <sup>2</sup>		40 in <sup>2</sup>		80 in <sup>2</sup>	
Spring Range (psi)	22 to 44	26 to 55	17 to 32	22 to 39	17 to 32	22 to 39
Supply Pressure (psi)	58	73	44	58	44	65
Size	maximum pressure psi					
1/2"	479	479	479	479	-	-
3/4"	479	479	479	479	-	-
1"	479	479	479	479	479	479
1 1/4"	479	479	479	479	479	479
1 1/2"	421	479	479	479	479	479
2"	247	305	421	479	479	479
2 1/2"	203	247	348	421	479	479
3"	116	145	203	247	421	479
4"	73	87	131	145	261	319
Spring Configuration	Code 3 (Standard)	Code 4	Code 3 (Standard)	Code 4	Code 3 (Standard)	Code 4

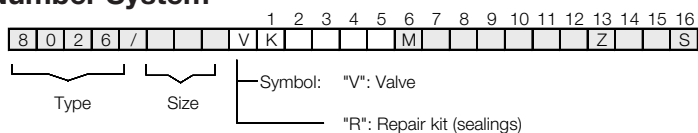
Standard

Pressure limits DIN and ANSI in psi						
	ANSI 150 carbon steel	ANSI 150 stainless steel	ANSI 300 carbon steel	ANSI 300 stainless steel	PN16	PN40
P max.	284	276	741	719	232	580

# Low Temperature Sliding Gate Valve 8026-GS3



## Ordering Number System



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

1. Valve type	2. Body design	3. Body material	4. Safety function	5. Actuator	6. Special version
K sliding gate valve with pneumatic actuator type 8026 (low temperature version)	E GS3-flangeless design acc. ANSI150 GS3 - flangeless design acc. ANSI 300 F GS3-flangeless design acc. DIN, 145 - 580 psi G	1 Stainless Steel CF8M	0 spring closes 1 spring opens	6 diaphragm actuator 20 in <sup>2</sup> (NPT) 7 diaphragm actuator 40 in <sup>2</sup> (NPT) 8 diaphragm actuator 80 in <sup>2</sup> (NPT)	M to state if some sections 7 - 16 are quoted
7. Springs	8. Stem sealing	9. Moving disc	10. Fixed disc	11. Cv-Values	12. Flow characteristic
- standard 4 8 springs 8 16 springs	- PTFE-packing self-adjusting (Standard) add. Stainless steel bellow 316 Ti (max. press. 480 psi) 1	- carbon B FUUY	- stainless steel/ Stellite	- 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% 6 red. to 20 % 7 red. to 12% 8 red. to 2% 9 red. to 0,4%	- linear 1 equal-%
13. Accessories	14. Positioners	15. Signalling equipment	16. Further special versions		
Z state, if in following sections accessories are quoted.	- without 1 p/p positioner Type 8047 3 i/p positioner Type 8047 6 i/p positioner Type 8047 Eex ib IIC T6 with plug connc. M12x1 8 i/p positioner with Type 8047 plug connc. M12x1 C digital positioner type 8049, 4-wire R digital positioner type 8049, 2-wire W digital positioner type 8049 ExPro, ATEX, IECEX K digital positioner type 8049 ExPro-FM with base plate in stainless steel; Ta = +14°F to +167°F; IS Class I Division 1, Groups A, B, C, D; T4 Entity; Class I Zone 0 AEx ia IIC T4 Entity, IP65 N digital positioner type 8049 IO-Link version Y „digital positioner type 8049 ExPro-FM with base plate in stainless steel; Ta = +14°F to +167°F; NI Class I Division 2, Groups A, B, C, D; T4 NIFW, IP65“	- without 0 2 limit switches M12x1 DC 10-30V PNP	S other special versions have to be quoted in letters!		

Ordering example: 8026/050VKE106M-----ZC  
sliding gate valve with pneumatic actuator type 8026 (low temperature version), 2", ANSI 150,  
body material stainless steel, spring closes, standard spring configuration (6 springs), actuator 20 in<sup>2</sup>, PTFE-packing,  
carbon unit, linear characteristic, digital positioner type 8049, 4-wire

## 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

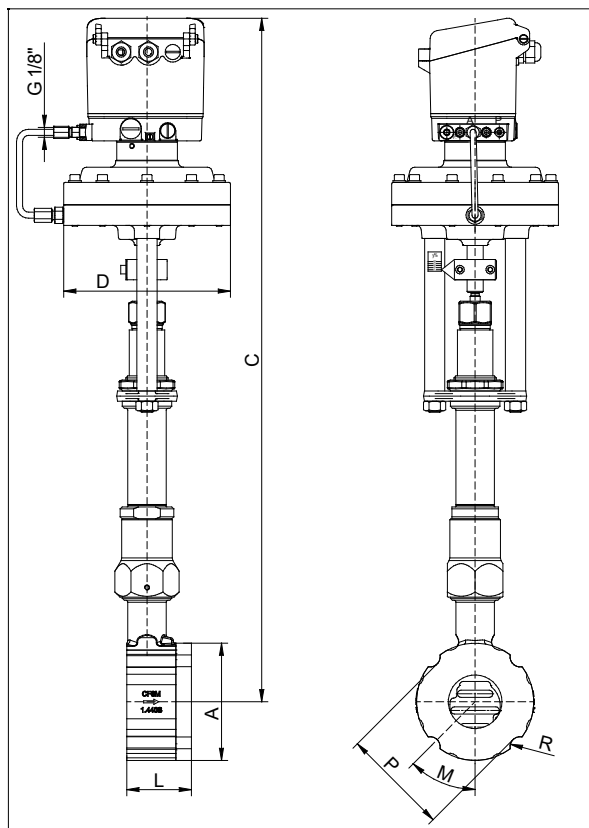
Limitation for SFC-sliding discs: 570°F

# Low Temperature Sliding Gate Valve 8026-GS3

with integrated digital positioner, Type 8049



## Dimensions and Weights



digital positioner  
Type 8049

Size	Ø A	C	K	Ø D for actuator		PN 40		ANSI 150		ANSI 300		R	L	Stroke	Weight (lbs) for actuator	
				D 125	D250	P	M	P	M	P	M				D 125	D 250
1/2"	2.5	25.8	23.45	6.5	8.75	2.1	1.75	1.9	1.75	2.1	1.75	0.3	2.2	0.24	24	29
3/4"	2.85	26	23.6	6.5	8.75	2.5	1.75	2.3	1.75	2.7	1.75	0.4	2.2	0.24	25	29
1"	3.25	26.2	23.8	6.5	8.75	2.85	1.75	2.65	1.75	2.85	1.75	0.4	2.2	0.24	26	30
1 1/4"	3.5	26.4	23.9	6.5	8.75	3.25	1.75	3.05	1.75	3.25	1.75	0.4	2.2	0.24	26	31
1 1/2"	3.9	26.55	24.1	6.5	8.75	3.7	1.75	3.45	1.75	3.7	1.75	0.4	2.2	0.24	27	32
2"	4.55	26.95	24.45	6.5	8.75	4.55	1.75	4.15	1.75	4.4	0.9	0.4	2.5	0.31	31	36
2 1/2"	5.45	27.35	24.8	6.5	8.75	5.1	0.9	4.9	1.75	5.1	0.9	0.4	2.7	0.31	35	40
3"	6	27.75	25.1	6.5	8.75	5.65	0.9	5.45	1.75	5.9	0.9	0.4	2.75	0.31	37	42
4"	7.25	28.15	25.65	6.5	8.75	6.45	0.9	6.95	0.9	7.15	0.9	0.4	2.95	0.33	45	50

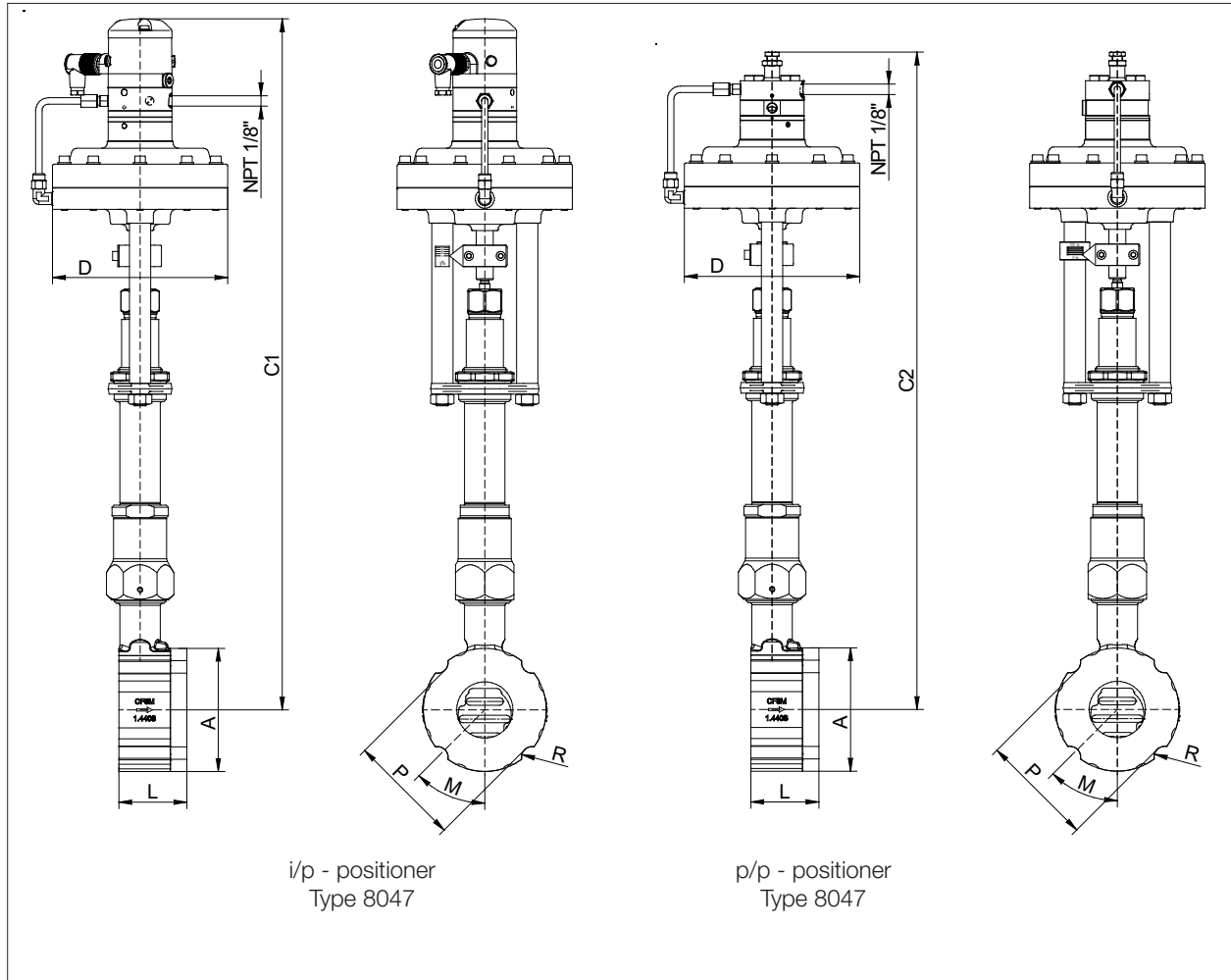
Dimensions in inch

# Low Temperature Sliding Gate Valve 8026-GS3

with integrated i/p and p/p positioner, Type 8047



## Dimensions and Weights



Size	Ø A	C1	C2	Ø D for actuator		PN 40		ANSI 150		ANSI 300		R	L	Stroke	Weight (lbs) for actuator	
				D 125	D250	P	M	P	M	P	M				D 125	D 250
1/2"	2.5	24.6	23.25	6.5	8.75	2.1	1.75	1.9	1.75	2.1	1.75	0.3	2.2	0.24	24	29
3/4"	2.85	24.8	23.45	6.5	8.75	2.5	1.75	2.3	1.75	2.7	1.75	0.4	2.2	0.24	25	29
1"	3.25	25	23.6	6.5	8.75	2.85	1.75	2.65	1.75	2.85	1.75	0.4	2.2	0.24	26	30
1 1/4"	3.5	25.2	23.8	6.5	8.75	3.25	1.75	3.05	1.75	3.25	1.75	0.4	2.2	0.24	26	31
1 1/2"	3.9	25.4	24	6.5	8.75	3.7	1.75	3.45	1.75	3.7	1.75	0.4	2.2	0.24	27	32
2"	4.55	25.8	24.4	6.5	8.75	4.15	1.75	4.15	1.75	4.4	0.9	0.4	2.5	0.31	31	36
2 1/2"	5.45	26.2	24.8	6.5	8.75	5.1	0.9	4.9	1.75	5.1	0.9	0.4	2.7	0.31	35	40
3"	6	26.55	25.2	6.5	8.75	5.65	0.9	5.45	1.75	5.9	0.9	0.4	2.75	0.31	37	42
4"	7.25	26.95	25.6	6.5	8.75	6.45	0.9	6.95	0.9	7.15	0.9	0.4	2.95	0.33	45	50

Dimensions in inch

# Low Temperature Sliding Gate Valve 8026-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.	-	-	-	-	-	-	-	-	-	-	-	-	-

Text and pictures are not binding. We reserve the right to alter the equipment.