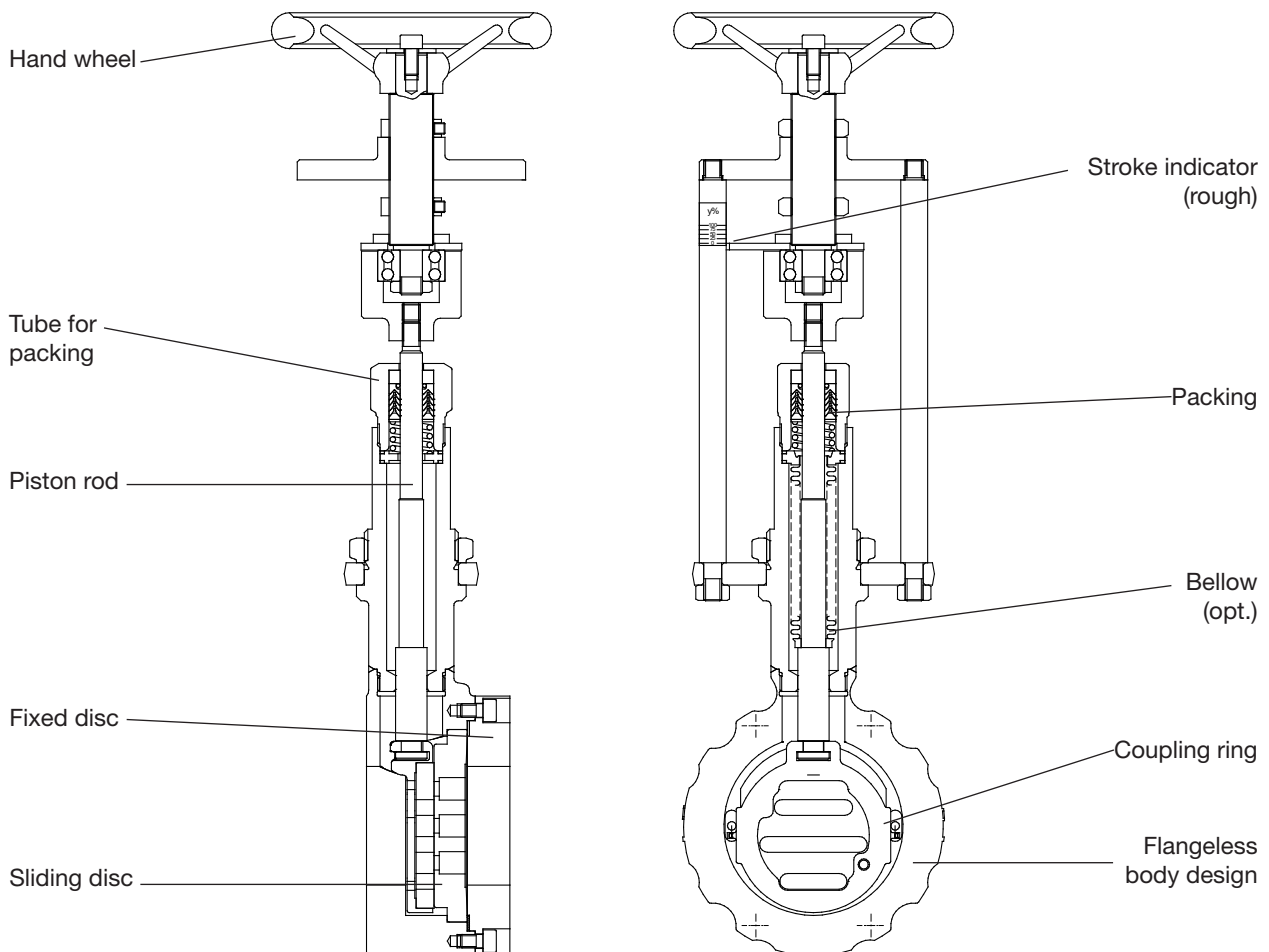


# Sliding Gate Valve 8050

## GS 3 series - DN 15 up to DN 250

**Manually operated sliding gate valve for regulating or shutting off liquid and gaseous media for industrial applications**

- Precise control by hand
- Lowest possible weight (especially in larger sizes)
- High Kvs-values
- High tightness
- Simple handling of high pressure differences
- Meets the requirements of TA-Luft 2021



## Technical Information

Body design	wafer-type design for flanges acc. DIN EN 1092-1 Form B or ASME B16.5 RF further versions see data sheet 8050-GS1		
Nominal sizes	DN 15 to DN 250		
Nominal pressure acc. DIN 2401	PN 40 (fits also to PN 10-25) PN 100 PN 16 and PN25	DN 15 - DN 150 DN 15 - DN 80 DN 200 - DN 250	
Nominal pressure acc. ANSI	ANSI 150 ANSI 300 ANSI 600	DN15 - DN 250 DN 15 - DN 150 DN 15 - DN 80	
Media temperature	Versions from -60°C up to +350°C		
Ambient temperature	-30°C up to +100°C		
Flange gaskets (customer side)	DIN EN 1514-1 or ANSI B16.21 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		
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.

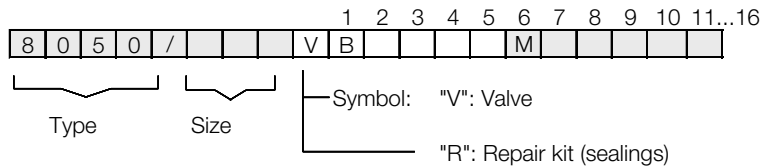
## Fluid temperature

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 carbon steel with stainless steel body cover						
Tmin [°C]	-60	-60	-10	-20	-20	-20
Tmax [°C]	350	350	350	350	350	350

## Materials

Body	Stainless steel 1.4408	Carbon steel 1.0619
Bodycover	Stainless steel 1.4404 or 316L	
Packing	PTFE (Carbon filled), spring 1.4310	
Actuating stem	Stainless steel 1.4571, roller burnished	
Bellows	Stainless steel 1.4571	
Fixed disc	Stainless steel 1.4571, coated	STN2-disc
Sliding disc	Special carbon material	SFC-disc STN2-disc
Guide ring for sliding disc	Stainless steel 1.4571	

## Ordering Number System



1 - 5 : Please quote all 5 sections.  
6 - 16: Quote only if required.

1. Type	2. Connection	3. Body material	4.	5. Actuator	6. Special versions
B sliding gate valve, long design (type 8050)	E GS3-flangeless design acc. ANSI 150 F GS3-flangeless design acc. ANSI 300 K GS3-flangeless design acc. ANSI 600 G GS3-flangeless design acc. DIN PN10-40 H GS3-flangeless design acc. DIN PN100	0 carbon steel 1.0619 1 stainless steel 1.4408	- without significance	5 manually operated	M special versions (Pos. 7-16) A nut and nut acc. DIN EN1092-1 C nut and tongue acc. DIN EN1092-1 E 2x lowered face acc. DIN EN1092-1 H lowered and raised face acc. DIN EN1092-1
7.	8. Stem sealing	9. Moving disc	10. Fixed disc	11. Kvs-values	12. Characteristic
- without significance	- PTFE-packing, self adjusting (standard) 1 additional bellows 1.4571	- carbon material 9 STN2 S SFC	- stainless steel 1.4571 1 STN2 (only in combination with the position „9“ STN2-disc)	- 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 percentage

Ordering example:	8050/125VBG1-5:	sliding gate valve type 8050, DN 125, PN10/40, stainless steel, manual operation
	8050/125VBG1-5M-1:	dto., but with bellow

## 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						Sliding unit: STN2					
	max. admissible pressures for GS3-valves in stainless steel						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						Sliding unit: STN2					
	max. admissible pressures for GS3-valves in stainless steel						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								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in stainless steel								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								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in stainless steel								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								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in stainless steel								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

## 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						Sliding unit: STN2					
	max. admissible pressures for GS3-valves in carbon steel						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	37	32	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						Sliding unit: STN2					
	max. admissible pressures for GS3-valves in carbon steel						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	100	94	87	100	100	100	94	87
32	100	100	100	100	100	99	100	100	100	84	69	60
40	100	100	100	100	100	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								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in carbon steel								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								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in carbon steel								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

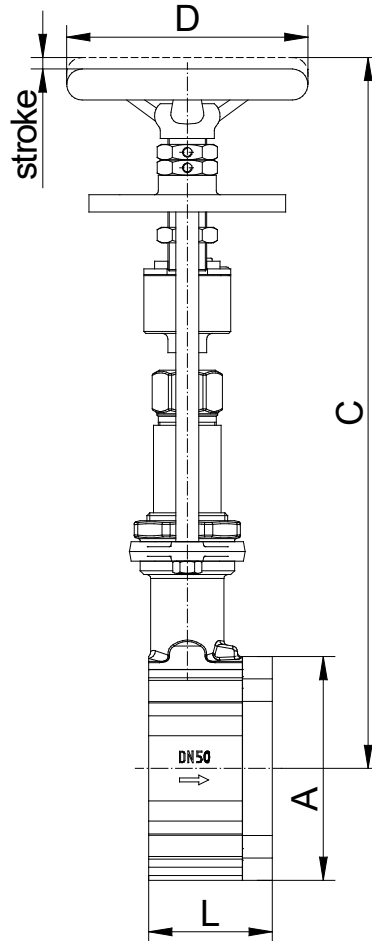
Limitation for SFC-sliding discs: 300°C

### ANSI600

DN	Sliding unit: carbon/SFC - stainless steel, coated								Sliding unit: STN2							
	max. admissible pressures for GS3-valves in carbon steel								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

## Dimensions and Weights



DN	A	C max	D	L	Weight kg	Stroke H
15	64	332	125	56	4	6
20	72	337	125	56	4,3	6
25	82	342	125	56	4,6	6
32	89	344	125	56	4,8	6
40	99	347	125	56	5,1	6
50	116	362	125	64	6,6	8
65	138	372	125	68	8,1	8
80	153	377	125	70	9,3	8
100	184	392	125	75	12,5	8,5
125	212	407	200	80	15	8,5
150	242	422	200	80	18,5	8,5
200	302	452	200	93	35	8,5
250	360	479	200	96	40,5	8,5

Dimensions in mm