

Manual Control Valve 8050

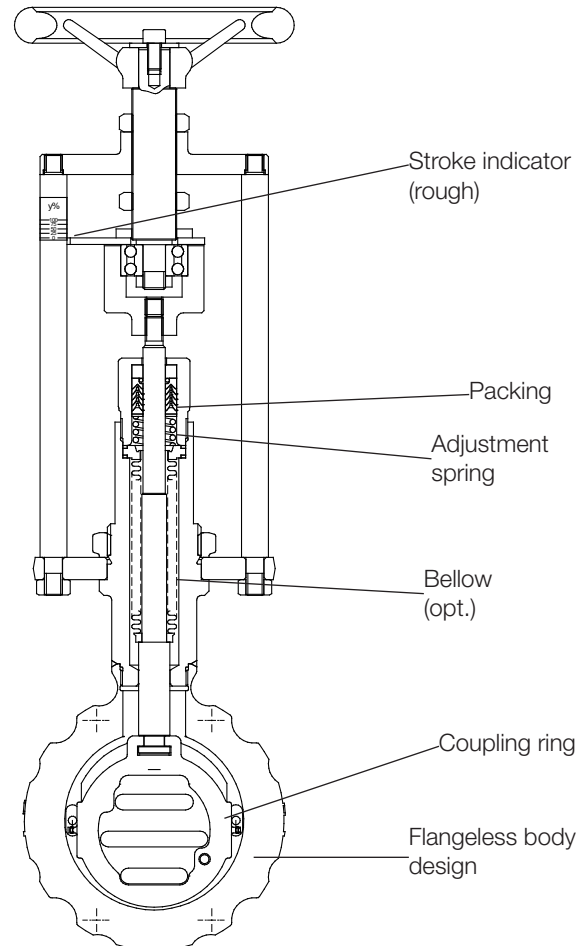
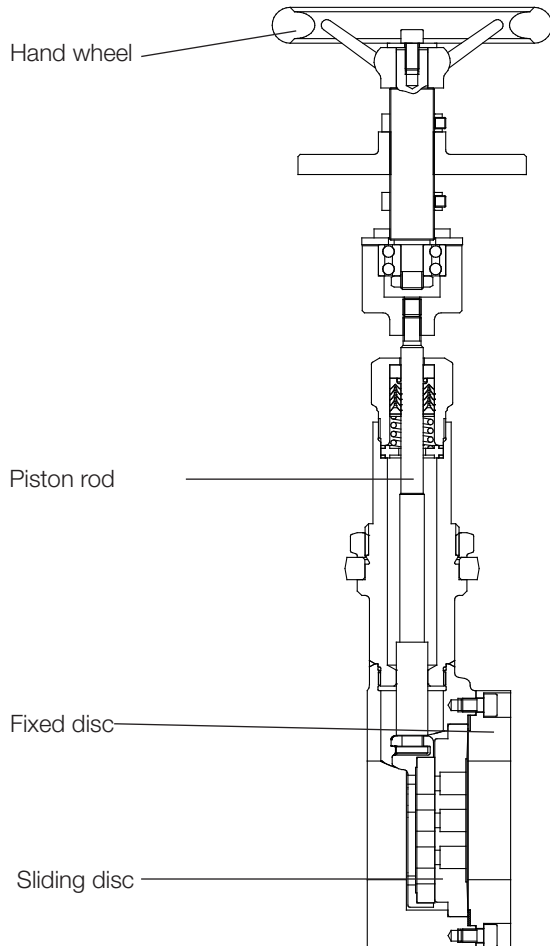
GS 3 series, DN 15 up to DN 250

Manual control valve for neutral through to highly aggressive media.

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



Packing tested according to TA-Luft as defined in DIN EN ISO 15848-1 and VDI 2440



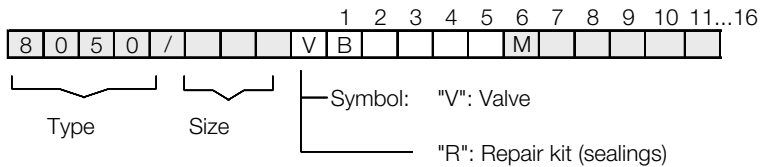
Technical Information

Body design	Flangeless, wafer-type construction more versions see on data-sheet 8050/51-GS1		
Nominal sizes	DN 15 to DN 250		
Nominal pressure acc. DIN 2401	PN 40 (fits also to PN 10-25)	DN 15 - DN 150	
	PN 100	DN 15 - DN 80	
	PN 16	DN 200 - DN 250	
Nominal pressure acc. ANSI	ANSI 150	DN15 - DN 250	
	ANSI 300	DN 15 - DN 150	
	ANSI 600	DN 15 - DN 80	
Media temperature	Carbon steel body	-10°C up to +300°C	
	Stainless steel body	-60°C up to +350°C (+300°C for SFC)	
Leakage rate (% of Kvs-value)	Disc pair	Disc pair	Disc pair
	Carbon-stainless steel < 0.0001	STN2 < 0.0005	STN2 < 0.001

Materials

Body	Stainless steel 1.4571 /1.4581 or 1.4408	Carbon steel 1.0570 /1.0619
Bodycover	Stainless steel 1.4571 /1.4581 or 1.4404 /1.4408	Carbon steel 1.0570
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 GS manual valve type 8050 (long design)	E GS3-flangeless design acc. ANSI 150 F GS3-flangeless design acc. ANSI 300 K GS3-flangeless design acc. ANSI 600 G GS2-flangeless design acc. DIN PN10-40 H GS3-flangeless design acc. DIN PN100	0 carbon steel 1.0570/1.0619 1 stainless steel 1.4571 / 1.4581 or 1.4404 / 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:	GS3-manual 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 max. admissible pressures for GS3-valves						Sliding unit: STN2 max. admissible pressures for GS3-valves					
	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	37	37
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	40	40	40	36	34	19
100	33	33	33	33	33	33	33	33	33	32	31	17
125	23	23	23	23	23	23	23	23	23	21	21	11
150	16	16	16	16	16	16	16	16	16	15	15	8
200 (only PN16)	16	16	15	13	12	11	-	-	-	-	-	-
250 (only PN16)	10	9	9	8	7	6	-	-	-	-	-	-

Limitation for SFC-sliding discs: 300°C

PN100

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves						Sliding unit: STN2 max. admissible pressures for GS3-valves					
	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								Sliding unit: STN2 max. admissible pressures for GS3-valves							
	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	-	-	-	-	-	-	-	-
250	10,4	10,4	10,4	9,9	9,4	8,4	7,4	6,8	-	-	-	-	-	-	-	-

Limitation for SFC-sliding discs: 300°C

ANSI300

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

Limitation for SFC-sliding discs: 300°C

ANSI600

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

Limitation for SFC-sliding discs: 300°C

PN100

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

Limitation for SFC-sliding discs: 300°C

ANSI150

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

Limitation for SFC-sliding discs: 300°C

ANSI300

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

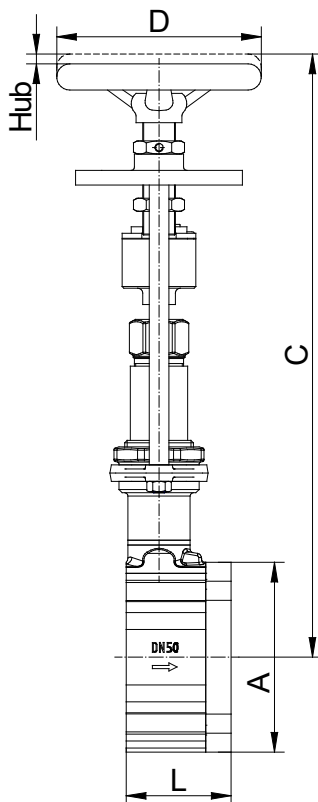
Limitation for SFC-sliding discs: 300°C

ANSI600

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

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	125	80	15	8,5
150	242	422	125	80	18,5	8,5
200	302	452	125	93	35	8,5
250	360	479	125	96	40,5	8,5

Dimensions in mm