

Control Valve 8043

with integrated positioner GS3 series DN 15 up to DN 100



Pneumatic control valve with integrated positioner for control of neutral and aggressive fluids in process engineering, chemical industry and for plant equipment.

- Integrated positioner
- Lowest possible weight
- Fast response
- High Kvs- (Cv)- values
- Tight shut - off

Technical Information

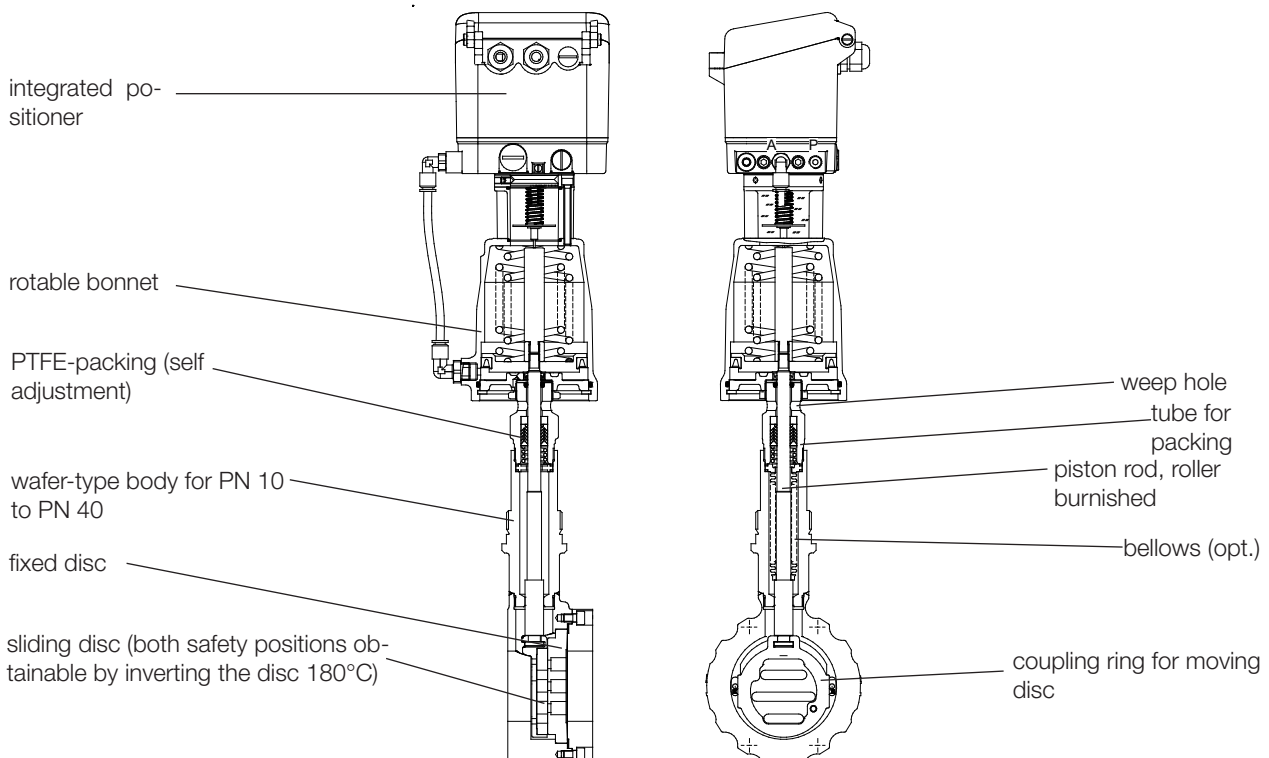
Design	wafer-type design further versions see data sheet 8043/44-GS1		
Nominal sizes	DN 15 - 100, 1/2" - 4"		
Nominal pressure acc. DIN 2401 for flanges with facing type B	PN 40 (fits also to PN 10-25)	DN 15 - DN 100	
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150 ANSI 300	DN 15 - DN 100 DN 15 - DN 100	
nominal pressure acc. JIS for "raiced face" flanges	10K 20K	DN 15 - DN 50 DN 15 - DN 40	
Fluid temperature	carbon steel body stainless steel body	-10°C up to +300°C -60°C up to +350°C	
Rangeability / Characteristic	analog positioner digital positioner		
	25 : 1 30 : 1		
Leakage rate (% of Kvs-value)	sliding unit carbon-stainless steel, coated < 0,0001	sliding unit SFC < 0,0005	sliding unit STN2 < 0,001



Options

- stainless steel bellows
- external i/p-converter
- position indicator

Kvs-values see data sheet 8001.



Control Valve 8043-GS3

with integrated positioner



Admissible differential pressure
(For temperatures of up to 120°C)

**For temperatures of 120°C and above:
obey application limits !**

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

disc-pair: carbon - stainless steel coated
SFC - stainless steel coated

DN	actuator	max. differential pressure		min. pilot pressure
		control	on/off	
		(bar)	(bar)	(bar)
15	80	40	40	3,0 - 6
20	80	37	37	3,5 - 6
25	80	29	31	3,5 - 6
32	80	21	25	4,0 - 6
40	80	14	19	4,0 - 6
50	80	8	12	4,5 - 6
65	80	7	10	4,5 - 6
80	80	4	6	4,5 - 6
100	80	2,5	4	4,5 - 6
15	125	40	40	3,0 - 6
20	125	40	40	3,0 - 6
25	125	40	40	3,0 - 6
32	125	40	40	3,0 - 6
40	125	34	40	3,0 - 6
50	125	20	27	3,5 - 6
65	125	16	23	3,5 - 6
80	125	10	14	3,5 - 6
100	125	6	9	3,5 - 6

disc pair: STN2

DN	actuator	max. differential pressure		min. pilot pressure
		control	on/off	
		(bar)	(bar)	(bar)
15	80	28	30	3,5 - 6
20	80	19	23	4,0 - 6
25	80	13	17	4,0 - 6
32	80	9	13	4,0 - 6
40	80	5,5	8	4,0 - 6
50	80	3	5	4,5 - 6
65	80	2,5	4	4,5 - 6
80	80	-	-	-
100	80	-	-	-
15	125	40	40	3,0 - 6
20	125	40	40	3,0 - 6
25	125	30	38	3,0 - 6
32	125	21	28	3,0 - 6
40	125	13	19	3,0 - 6
50	125	7	11	3,5 - 6
65	125	6	9	3,5 - 6
80	125	3,5	5	3,5 - 6
100	125	2	3	3,5 - 6

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

disc-pair: carbon - stainless steel coated
SFC - stainless steel coated

DN	actuator	max. differential pressure		min. pilot pressure
		control, on/off		
		(bar)	(bar)	(bar)
15	80	40		3,5 - 6
20	80	40		3,5 - 6
25	80	40		3,5 - 6
32	80	40		4,0 - 6
40	80	30		4,0 - 6
50	80	19		4,5 - 6
65	80	16		4,5 - 6
80	80	10		5,0 - 6
100	80	6		5,0 - 6
15	125	40		3,0 - 6
20	125	40		3,0 - 6
25	125	40		3,0 - 6
32	125	40		3,0 - 6
40	125	40		3,0 - 6
50	125	40		3,5 - 6
65	125	37		3,5 - 6
80	125	23		4,0 - 6
100	125	14		4,0 - 6

disc pair: STN2

DN	actuator	max. differential pressure		min. pilot pressure
		control, on/off		
		(bar)	(bar)	(bar)
15	80	40		3,5 - 6
20	80	37		4,0 - 6
25	80	27		4,0 - 6
32	80	20		4,5 - 6
40	80	13		4,5 - 6
50	80	8		5,0 - 6
65	80	6		5,0 - 6
80	80	3,5		5,0 - 6
100	80	2		5,0 - 6
15	125	40		3,0 - 6
20	125	40		3,0 - 6
25	125	40		3,0 - 6
32	125	40		3,5 - 6
40	125	27		3,5 - 6
50	125	18		4,0 - 6
65	125	15		4,0 - 6
80	125	9		4,0 - 6
100	125	5,5		4,0 - 6

Control Valve 8043-GS3

with integrated positioner

Materials

Body	stainless steel 1.4581	carbon steel 1.0619
Intermediate pipe	stainless steel 1.4571	
Bonnet	brass plated (actuator ø 50 mm, ø 80 mm) aluminium corrosion proofed (actuator ø 125 mm)	
Springs	stainless steel 1.4301 (actuator ø 50 mm, ø 80 mm) spring steel wire C, coated (actuator ø 125 mm)	
Packing	PTFE carbon filled (spring 1.4310)	
Actuating stem	stainless steel, roller burnished	
Bellow	stainless steel 1.4571	
Fixed plate	Stainless steel 1.4571, plated	STN2-disc
Sliding disc	standard: special carbon material	SFC-disc STN2-disc
Coupling ring for discs	stainless steel 1.4581	
Optical position indicator	PA Trogamid (transparent)	

Positioner

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

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.

PN 40

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible diff. pressures for GS3-valves						Sliding unit: carbon - STN2 max. admissible diff. 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 - 65	40	38	35	32	28	24	40	38	35	32	28	24
80	40	38	35	32	28	24	36	34	33	26	22	19
100	33	31	29	27	25	24	33	31	29	24	20	17

Limitation for SFC-sliding discs: 300°C

ANSI #150

DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible diff. pressures for GS3-valves						Sliding unit: carbon - STN2 max. admissible diff. 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	16	15	13	12	10	8,5	16	15	13	12	10	8,5

Limitation for SFC-sliding discs: 300°C

ANSI #300

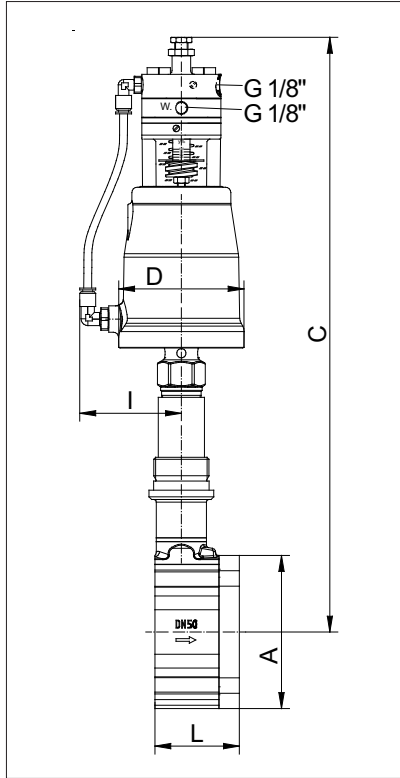
DN	Sliding unit: carbon/SFC - stainless steel, coated max. admissible pressures for GS3-valves						Sliding unit: STN2 max. admissible pressures for GS3-valves					
	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15 - 65	40	38	35	33	31	30	40	38	35	33	31	30
80	40	38	35	33	31	30	36	34	33	26	22	19
100	33	31	29	27	25	24	33	31	29	24	20	17

Limitation for SFC-sliding discs: 300°C

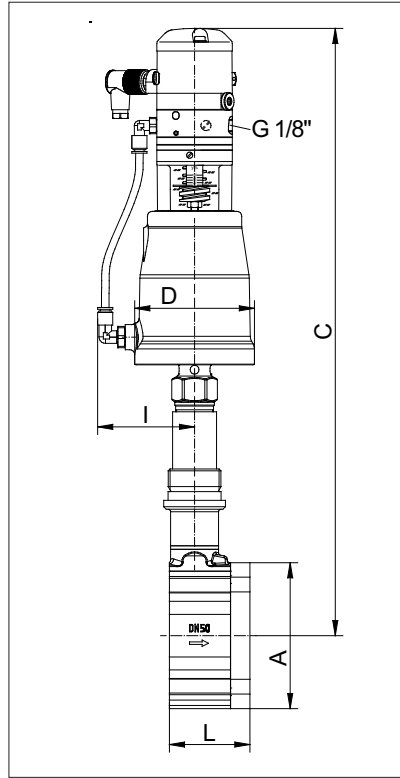
Control Valve 8043-GS3

with integrated positioner

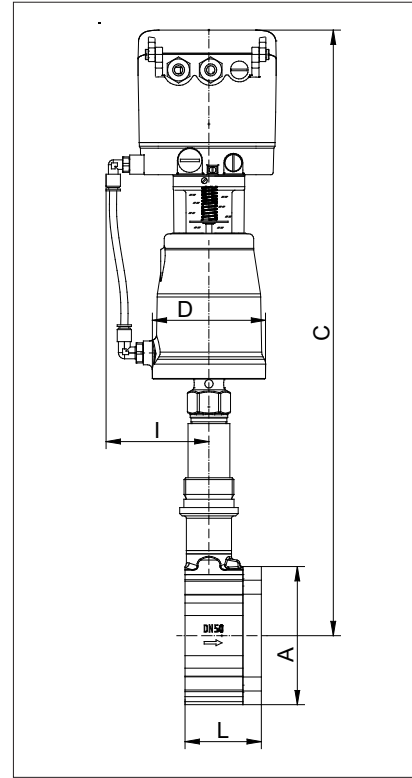
Dimensions and Weights



Type 8043 with p/p-positioner
Type 8047
with position indicator



Type 8043 with i/p-positioner
Type 8047
with position indicator



Type 8043 with digital positioner
Type 8049
with position indicator

DN	Actuator Ø	A	L	D	I	C			Stroke H	Weight (kg)
						p/p positioner	i/p positioner	digital positioner		
15	80	64	56	96	80	426	458	484	6	6,2
15	125	64	56	146	105	446	478	504	6	8
20	80	72	56	96	80	430	462	488	6	6,5
20	125	72	56	146	105	450	482	508	6	8,3
25	80	82	56	96	80	435	467	493	6	6,7
25	125	82	56	146	105	455	487	513	6	8,5
32	80	89	56	96	80	437	469	495	6	6,8
32	125	89	56	146	105	457	489	515	6	8,6
40	80	99	56	96	80	443	475	501	6	7,2
40	125	99	56	146	105	463	495	521	6	9
50	80	116	64	96	80	451	483	509	8	8,7
50	125	116	64	146	105	471	503	529	8	10,5
65	80	138	68	96	80	460	492	518	8	10,2
65	125	138	68	146	105	480	412	538	8	12
80	80	153	70	96	80	469	501	527	8	11,4
80	125	153	70	146	105	489	521	547	8	13,2
100	80	184	75	96	80	482	514	540	8,5	14,7
100	125	184	75	146	105	502	534	560	8,5	16,4

Dimension C „reduced design“ shortened by 25,4 mm

Dimensions in mm