

# Control Valve 8043

## with integrated positioner

### GS 3 series - 1/2" up to 10"



**Pneumatic control valve for control and switching of neutral through to highly aggressive media in process engineering, chemical industry and for plant equipment.**

- Integrated positioner
- Lowest possible weight
- Fast response
- High Cv-values
- Tight shut-off
- Lower cost piston actuator



#### 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" up to 4"		
Nominal pressure acc. EN 1333	580 psi (fits also to 145 up to 365 psi)	1/2" - 6"	
	235 psi	8" - 10"	
Nominal pressure acc. ASME B16.34	ANSI 150	1/2" - 10"	
	ANSI 300	1/2" - 6"	
Nominal pressure acc. JIS for raised face flanges	10K	1/2" - 2"	
	20K	1/2" - 1 1/2"	
Fluid Temperature	-76°F up to +662°F		
Ambient temperature*	-22°F up to +212°F		
Rangeability / Characteristic analog positioner digital positioner	25 : 1		
	30 : 1 linear / 60 : 1 equal percentage		
Leakage % of Kvs IEC 60534-4 EN 12266-1	Disc pair Carbon-stainless steel	Disc pair SFC	Disc pair STN 2
	< 0,0001 IV-S1 D	< 0,0005 IV-S1 E	< 0,001 IV E
Marking ATEX non electric	II 2G Ex h IIC T6...T1 X Gb II 2D Ex h IIIC 85°C...350°C X Db		
Specific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1		

#### Options

- Bellow (stainless steel)
- Position indicator
- External I/P-converter

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

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

Kvs-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 [°F]	-76	-76	-76	-20	-20	-20
Tmax [°F]	446	446	446	446	446	446
Body material cpl. carbon steel						
Tmin [°F]	-76	-76	14	-4	-4	14
Tmax [°F]	446	446	446	446	446	446

# Control Valve 8043-GS3

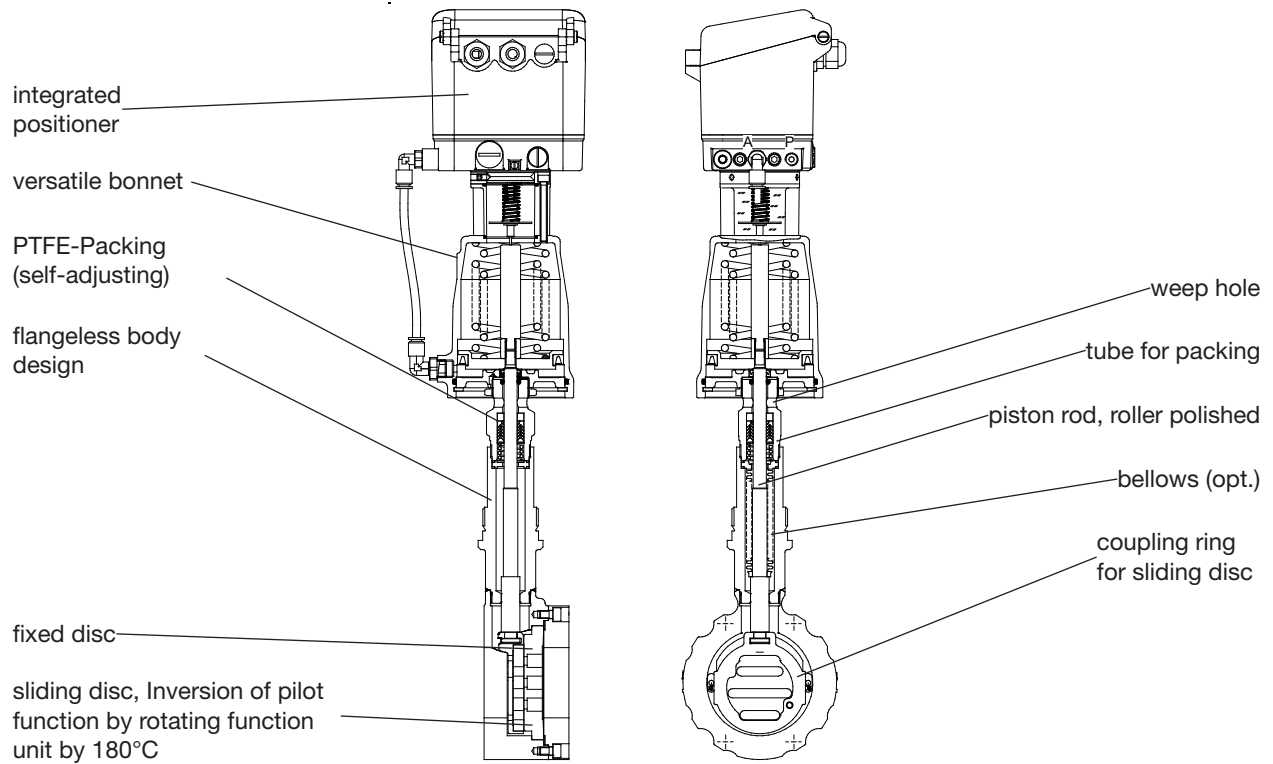
## with integrated positioner

### Positioner

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

### Materials

Body	stainless steel CF8M	carbon steel ASTM A216 WCB	
Bodycover	stainless steel 316 Ti		
Bonnet	brass plated (actuator $\varnothing$ 2", $\varnothing$ 3")		
	aluminium corrosion proof (actuator $\varnothing$ 5")		
Springs	stainless steel 304 (actuator $\varnothing$ 2", $\varnothing$ 3")		
	spring steel wire C, coated (actuator $\varnothing$ 5")		
Packing	PTFE (carbon filled), spring SST 301		
Actuating stem	stainless steel, roller burnished		
Bellow	stainless steel 316 Ti		
Fixed plate	stainless steel 316 Ti, stellite		STN2-disc
Sliding disc	standard: special carbon material	SFC-disc (max. +572°F)	STN2-disc
Coupling ring for discs	stainless steel 318		
Optical position indicator	PA Trogamid (transparent)		



# Control Valve 8043-GS3



with integrated positioner

## Admissible Pressures

(For temperatures of up to 100°F for ANSI-classes and up to 250°F for PN-classes)

### digital positioner, Type 8049

(also on-off valves and valves with other side-mounted positioner)

carbon - stainless steel coated

SFC - stainless steel coated

Size	actuator	max. differential pressure		min. pilot pressure
		control, on/off	(psi)	
1/2"	3"	740	50 - 85	
3/4"	3"	740	50 - 85	
1"	3"	740	50 - 85	
1 1/4"	3"	595	60 - 85	
1 1/2"	3"	440	60 - 85	
2"	3"	285	65 - 85	
2 1/2"	3"	235	65 - 85	
3"	3"	150	75 - 85	
4"	3"	95	75 - 85	
5"	3"	65	75 - 85	
6"	3"	50	75 - 85	

1/2"	5"	740	45 - 85
3/4"	5"	740	45 - 85
1"	5"	740	45 - 85
1 1/4"	5"	740	45 - 85
1 1/2"	5"	740	45 - 85
2"	5"	650	50 - 85
2 1/2"	5"	545	50 - 85
3"	5"	340	60 - 85
4"	5"	220	60 - 85
5"	5"	145	60 - 85
6"	5"	110	60 - 85
8"	5"	65	60 - 85
10"	5"	40	60 - 85

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

carbon - stainless steel coated

SFC - stainless steel coated

Size	actuator	max. differential pressure		min. pilot pressure
		control	on/off	
		(psi)	(psi)	
1/2"	3"	740	610	45 - 85
3/4"	3"	575	530	50 - 85
1"	3"	430	445	50 - 85
1 1/4"	3"	315	365	60 - 85
1 1/2"	3"	215	275	60 - 85
2"	3"	130	180	65 - 85
2 1/2"	3"	105	150	65 - 85
3"	3"	65	95	65 - 85
4"	3"	40	60	65 - 85

1/2"	5"	740	740	45 - 85
3/4"	5"	740	740	45 - 85
1"	5"	740	740	45 - 85
1 1/4"	5"	730	740	45 - 85
1 1/2"	5"	495	600	45 - 85
2"	5"	295	395	50 - 85
2 1/2"	5"	240	330	50 - 85
3"	5"	145	210	50 - 85
4"	5"	90	135	50 - 85
5"	5"	60	90	50 - 85
6"	5"	45	70	50 - 85

**For temperatures exceeding 100°F (ANSI) or 250°F (PN): consider operation limits**

### STN2

Size	actuator	max. differential pressure		min. pilot pressure
		control, on/off	(psi)	
1/2"	3"	720	50 - 85	
3/4"	3"	540	60 - 85	
1"	3"	395	60 - 85	
1 1/4"	3"	290	65 - 85	
1 1/2"	3"	195	65 - 85	
2"	3"	115	75 - 85	
2 1/2"	3"	95	75 - 85	
3"	3"	60	75 - 85	
4"	3"	35	75 - 85	
5"	3"	-	-	
6"	3"	-	-	

1/2"	5"	740	45 - 85
3/4"	5"	740	45 - 85
1"	5"	740	45 - 85
1 1/4"	5"	670	50 - 85
1 1/2"	5"	455	50 - 85
2"	5"	270	60 - 85
2 1/2"	5"	220	60 - 85
3"	5"	130	60 - 85
4"	5"	80	60 - 85
5"	5"	55	60 - 85
6"	5"	40	60 - 85
8"	5"	-	-
10"	5"	-	-

	Pressure limits ANSI and DIN in psi			
	ANSI150	ANSI 300	PN16	PN40
P max. carbon steel	284	741	232	580
P max. stainless steel	276	719		

### STN 2

Size	actuator	max. differential pressure		min. pilot pressure
		control	on/off	
		(psi)	(psi)	
1/2"	3"	410	435	50 - 85
3/4"	3"	280	335	60 - 85
1"	3"	190	250	60 - 85
1 1/4"	3"	130	185	60 - 85
1 1/2"	3"	85	130	60 - 85
2"	3"	50	75	65 - 85
2 1/2"	3"	40	60	65 - 85
3"	3"	-	-	-
4"	3"	-	-	-

1/2"	5"	740	740	45 - 85
3/4"	5"	645	725	45 - 85
1"	5"	440	540	45 - 85
1 1/4"	5"	305	405	45 - 85
1 1/2"	5"	200	275	45 - 85
2"	5"	115	165	50 - 85
2 1/2"	5"	90	135	50 - 85
3"	5"	55	85	50 - 85
4"	5"	35	50	50 - 85
5"	5"	-	-	-
6"	5"	-	-	-

	Pressure limits ANSI and DIN in psi			
	ANSI150	ANSI 300	PN16	PN40
P max. carbon steel	284	741	232	580
P max. stainless steel	276	719		

# Control Valve 8043-GS3



with integrated positioner

## Admissible Pressures

(For temperatures of up to 100°F for ANSI-classes and up to 250°F for PN-classes)

**For temperatures exceeding 100°F (ANSI) or 250°F (PN): consider operation limits**

## Actuator 3" double acting

without safety position

digital positioner, type 8049-4 wire

Nominal size	Max. differential pressure at actual pilot pressure [psi]															
	Disc pair: carbon/SFC-stainless steel coated								Disc pair: STN							
	37	44	51	58	66	73	80	87	37	44	51	58	66	73	80	87
1/2"	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740	740
3/4"	740	740	740	740	740	740	740	740	671	740	740	740	740	740	740	740
1"	740	740	740	740	740	740	740	740	492	606	719	740	740	740	740	740
1 1/4"	736	740	740	740	740	740	740	740	360	444	527	611	694	740	740	740
1 1/2"	546	672	740	740	740	740	740	740	244	301	358	414	471	527	584	640
2"	350	431	512	593	675	740	740	740	144	177	211	244	278	311	344	378
2 1/2"	293	361	429	496	564	632	700	740	118	145	172	199	227	254	281	309
3"	184	226	269	312	354	397	440	482	71	87	103	120	136	153	169	186
4"	116	143	171	198	225	252	279	306	43	54	64	74	84	94	104	115
5"	79	97	115	133	152	170	188	207	29	36	42	49	56	63	69	76
6"	58	72	85	99	113	126	140	153	21	26	31	36	41	46	51	56
8"	34	41	49	57	65	73	81	89	-	-	-	-	-	-	-	-
10"	20	25	30	35	40	45	49	54	-	-	-	-	-	-	-	-

	Pressure limits ANSI and DIN in psi			
	ANSI150	ANSI 300	PN16	PN40
P max. carbon steel	284	741	232	580
P max. stainless steel	276	719		

## Actuator 5" double acting

without safety position

digital positioner, type 8049-4 wire

Nominal size	Max. differential pressure at actual pilot pressure [psi]															
	Disc pair: carbon/SFC-stainless steel coated								Disc pair: STN							
	37	44	51	58	66	73	80	87	37	44	51	58	66	73	80	87
1/2"	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741
3/4"	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741
1"	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741
1 1/4"	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741	741
1 1/2"	741	741	741	741	741	741	741	741	647	741	741	741	741	741	741	741
2"	741	741	741	741	741	741	741	741	382	464	547	629	711	741	741	741
2 1/2"	741	741	741	741	741	741	741	741	312	380	447	514	582	649	717	741
3"	487	592	696	696	696	696	696	696	188	229	269	310	350	391	431	472
4"	309	376	443	479	479	479	479	479	117	142	167	192	217	242	267	292
5"	209	254	299	334	334	334	334	334	78	95	111	128	145	161	178	195
6"	156	189	223	232	232	232	232	232	58	70	82	95	107	119	132	144
8"	90	110	129	148	168	187	206	226	-	-	-	-	-	-	-	-
10"	56	68	80	92	103	115	127	139	-	-	-	-	-	-	-	-

	Pressure limits ANSI and DIN in psi			
	ANSI150	ANSI 300	PN16	PN40
P max. carbon steel	284	741	232	580
P max. stainless steel	276	719		

with integrated positioner

## 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"	275,0	265,0	235,0	215,0	200,0	175,0	150,0	120,0	275,0	265,0	235,0	215,0	200,0	175,0	150,0	120,0
6"	230,0	230,0	230,0	215,0	200,0	175,0	150,0	120,0	235,0	235,0	235,0	215,0	200,0	170,0	140,0	120,0
8"	230,0	230,0	230,0	215,0	200,0	175,0	150,0	120,0	-	-	-	-	-	-	-	-
10"	150,0	150,0	150,0	145,0	135,0	120,0	105,0	100,0	-	-	-	-	-	-	-	-

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"	720,0	695,0	610,0	560,0	520,0	485,0	460,0	440,0	720,0	695,0	610,0	560,0	520,0	485,0	460,0	440,0
3"	695,0	695,0	610,0	560,0	520,0	485,0	460,0	440,0	530,0	530,0	530,0	505,0	480,0	390,0	320,0	275,0
4"	480,0	480,0	480,0	480,0	480,0	480,0	460,0	440,0	480,0	480,0	480,0	460,0	435,0	355,0	290,0	250,0
5"	335,0	335,0	335,0	335,0	335,0	335,0	335,0	335,0	320,0	320,0	320,0	305,0	290,0	235,0	190,0	165,0
6"	230,0	230,0	230,0	230,0	230,0	230,0	230,0	230,0	230,0	230,0	230,0	225,0	210,0	170,0	140,0	120,0

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		-	-	-	-	-	-
10" (only PN16)	145	130	130	115	100	85		-	-	-	-	-	-

Limitation for SFC-sliding discs: 570°F

with integrated positioner

## 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

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	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 235 psi)	230	230	220	190	175	155	-	-	-	-	-	-
10" (only 235 psi)	145	130	130	115	100	87	-	-	-	-	-	-

Limitation for SFC-sliding discs: 570°F

### ANSI150

DN	Paarung: Carbonwerkstoff/SFC - Edelstahl beschichtet								Paarung: STN 2							
	max. zulässige Drücke in bar für GS3-Ventile aus C-Stahl								max. zulässige Drücke in bar für GS3-Ventile aus C-Stahl							
	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	-	-	-	-	-	-	-	-
250	10,5	10,5	10,5	9,9	9,4	8,4	7,4	6,0	-	-	-	-	-	-	-	-

Begrenzung für SFC-Dichtscheiben: 300°C

### ANSI300

DN	Paarung: Carbonwerkstoff/SFC - Edelstahl beschichtet								Paarung: STN 2							
	max. zulässige Drücke in bar für GS3-Ventile aus C-Stahl								max. zulässige Drücke in bar für GS3-Ventile aus C-Stahl							
	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

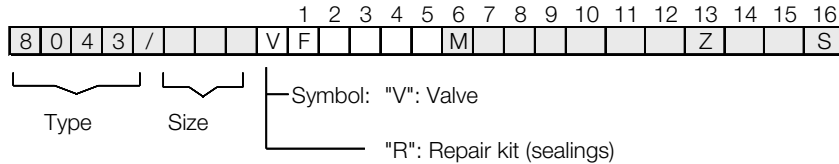
Begrenzung für SFC-Dichtscheiben: 300°C

# Control Valve 8043-GS3



with integrated positioner

## Ordering Number System



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

1. Function	2. Body design	3. Body material	4. Pilot function	5. Actuator	6. Special versions	7. Springs	8. Stem sealing
F GS-Control Valve with piston actu. long design (Type 8043)	E GS3 - flangeless design acc. ANSI 150 F GS3 - flangeless design acc. ANSI 300 G GS3 - flangeless design acc. DIN, 145 - 580 psi	0 C-steel ASTM A216 WCB 1 stainless steel CF8M	0 Spring to close 1 Spring to open - without	8 piston 3" (NPT) 9 piston 5" (NPT)	M to state if some sections 7-16 are quoted!	- standard double acting, without springs D	- PTFE-V-shaped sealing rings, self-adjusting 1 additional bellow 316 Ti
9. Sliding disc	10. Fixed disc	11.	12. Characteristic	13. Accessories	14. Positioner	15. Special versions	16. Special version
- carbon material 9 STN2/STN3 S SFC	- stainless steel/stellite 1 STN2-plate (only in combination with the positioner „9“) 3 STN3-plate (only in combination with the positioner „9“)	- 100 % (Stand.) A red. auf 63 % 1 red. auf 40 % B red. auf 25 % 2 red. auf 16 % C red. auf 10 % 3 red. auf 6,3 % 4 red. auf 2,5 % 5 red. auf 1 % 6 red. auf 20 % 7 red. auf 12 % 8 red. auf 2 % 9 red. auf 0,4 %	- linear 1 equal percentage	Z to state, if in sections 14 and 15 accessories are quoted	2 p/p-positioner Type 8047 +pos. indicator 3 i/p positioner Type 8047 +pos. indicator 5 i/p positioner Type 8047 +pos. indicator Eex ib II CT6, plug conn. M12x1 8 i/p positioner Type 8047 plug conn. M12x1, pos. indicator C dig. positioner, Type 8049, 4-wire R dig. positioner, Type 8049, 2-wire T dig. positioner, Type 8049, AS-i version W dig. positioner, Type 8049, 2-wire ex-version	1 air-tube-connection actuator-positioner in plastic (PA)	S please quote further special versions in clear text

Ordering example:

8043/050VFE101M-1--2-Z8

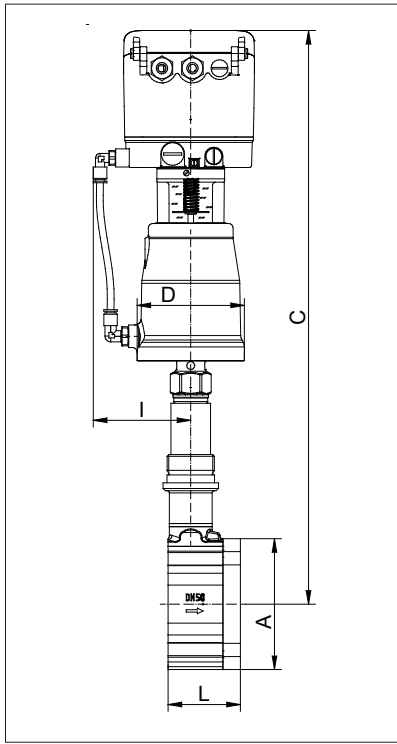
GS3-control valve with piston actuator, long design, 2", ANSI#150, body material stainless steel, NC, actuator Ø 3", bellow, disc pair: carbon material - stainless steel 316 Ti coated, fixed disc stainless steel 316 Ti coated, Cv-value 16 % (red.), linear characteristics, integrated i/p-positioner with position indicator

# Control Valve 8043-GS3

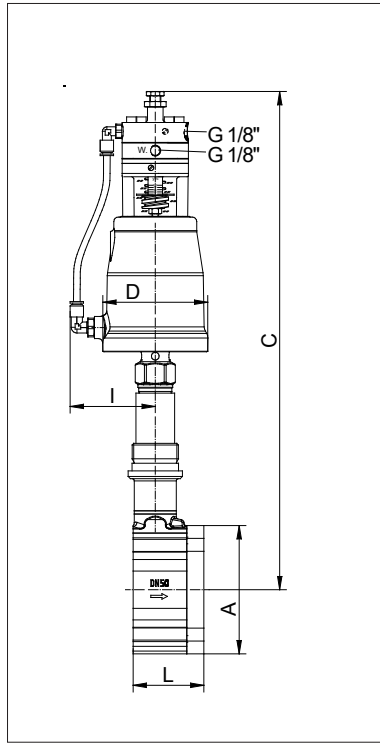


with integrated p/p and i/p - positioner, Type 8047

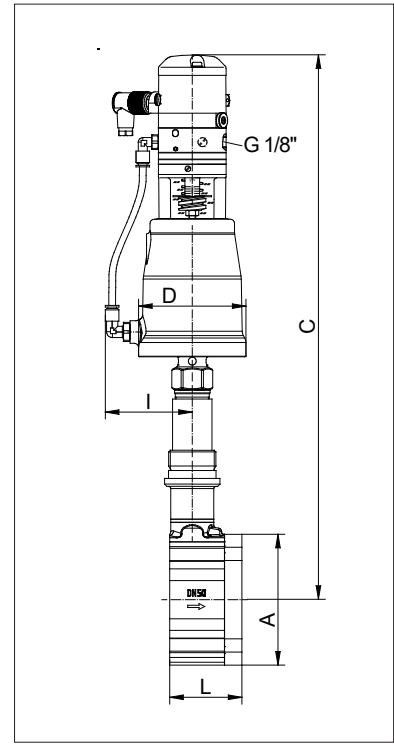
## Dimensions and Weights



Type 8043 with digital positioner  
Type 8049  
with position indicator



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



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

Size	Actuator Ø	A	L	D	I	p/p positioner	C i/p positioner	digital positioner	Stroke H	Weight (lbs)
1/2"	3"	2.52	2.2	3.78	3.15	16.77	18.03	19.06	0.24	13.5
1/2"	5"	2.52	2.2	5.75	4.13	17.56	18.82	19.84	0.24	17.5
3/4"	3"	2.83	2.2	3.78	3.15	16.93	18.19	19.21	0.24	14.5
3/4"	5"	2.83	2.2	5.75	4.13	17.72	18.98	20	0.24	18.5
1"	3"	3.23	2.2	3.78	3.15	17.13	18.39	19.41	0.24	14.5
1"	5"	3.23	2.2	5.75	4.13	17.91	19.17	20.2	0.24	18.5
1 1/4"	3"	3.5	2.2	3.78	3.15	17.2	18.46	19.49	0.24	15
1 1/4"	5"	3.5	2.2	5.75	4.13	17.99	19.25	20.28	0.24	19
1 1/2"	3"	3.9	2.2	3.78	3.15	17.44	18.7	19.72	0.24	16
1 1/2"	5"	3.9	2.2	5.75	4.13	18.23	19.49	20.51	0.24	20
2"	3"	4.57	2.52	3.78	3.15	17.76	19.02	20.04	0.31	19
2"	5"	4.57	2.52	5.75	4.13	18.54	19.8	20.83	0.31	23
2 1/2"	3"	5.43	2.68	3.78	3.15	18.11	19.37	20.39	0.31	22.5
2 1/2"	5"	5.43	2.68	5.75	4.13	18.9	16.22	21.18	0.31	26.5
3"	3"	6.02	2.76	3.78	3.15	18.46	19.72	20.75	0.31	25
3"	5"	6.02	2.76	5.75	4.13	19.25	20.51	21.54	0.31	29
4"	3"	7.24	2.95	3.78	3.15	18.98	20.24	21.26	0.33	32.5
4"	5"	7.24	2.95	5.75	4.13	19.76	21.02	22.05	0.33	36
5"	3"	8.35	3.15	3.78	3.15	19.57	20.83	21.85	0.33	41.5
5"	5"	8.35	3.15	5.75	4.13	20.35	21.61	22.64	0.33	45.5
6"	3"	9.53	3.15	3.78	3.15	20.16	21.42	22.44	0.33	49.5
6"	5"	9.53	3.15	5.75	4.13	20.94	22.2	23.23	0.33	53.5
8"	3"	11.89	3.66	3.78	3.15	-	-	23.62	0.33	87
8"	5"	11.89	3.66	5.75	4.13	-	-	24.41	0.33	90.5
10"	3"	14.17	3.78	3.78	3.15	-	-	24.61	0.33	98.5
10"	5"	14.17	3.78	5.75	4.13	-	-	25.39	0.33	102

Dimension C „reduced design“ shortened by 1"

Dimensions in inch



# Control Valve 8043-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	-	-	-	-	-	-	-	-
1 1/4"	(mod.) linear	19	12	-	-	-	-	-	-	-	-	-	-	-
	eq. perc.	9.3	-	-	-	-	-	-	-	-	-	-	-	-
1"	(mod.) lin.	30	19	13	8.1	-	-	-	-	-	-	-	-	-
	eq. perc.	13	9.9	-	3.2	-	-	-	-	-	-	-	-	-
1/2"	(mod.) linear	52	32	23	14	12	-	-	-	-	-	-	-	-
	eq. perc.	22	14	-	-	-	-	-	-	-	-	-	-	-
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.	296	-	-	-	-	-	-	-	-	-	-	-	-
10"	(mod.) linear	1056	667	-	-	-	-	-	-	-	-	-	-	-
	eq.perc.	-	-	-	-	-	-	-	-	-	-	-	-	-