Motor Valve 8036

GS 3 series DN 15 up to DN 200

SCHUBERT & SALZER CONTROL SYSTEMS

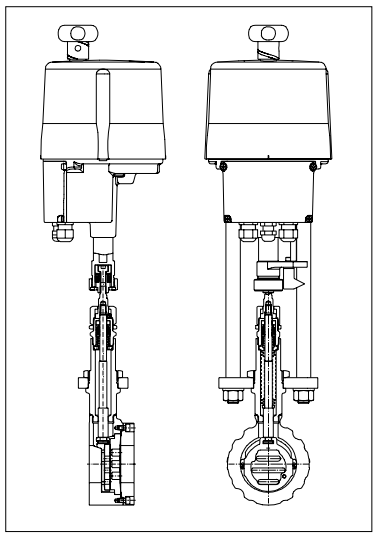
Motor valve for control and switching of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Space saving wafer type construction
- Lowest possible weight (especially in larger sizes)
- Low operation noise level (quiet operation)
- Control of high differential pressures with small actuators
- Fast response time

Technical Information Valve

Design	flangeless design further versions see data sheet 8036-GS1	
Nominal size	DN 15 up to DN 200	
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
Nominal pressure acc. ANSI	ANSI 150	DN 15 - DN 200
	ANSI 300	DN 15 - DN 150
	ANSI 600	DN 15 - DN 80
Media temperature	body 1.0570: -10°C up to +300°C body 1.4571: -60°C up to +350°C	
Rangeability	30 : 1	
Leakage (% of Kvs)	disc pair carbon-stainless steel < 0,0001	disc pair STN 2 < 0,001

K_{vs}-values see data sheet 8001.



Materials

Body	stainless steel 1.4571 /1.4581	C-Stahl 1.0570 /1.0619
Head section	stainless steel 1.4571 /1.4581	
Packing	PTFE (carbon filled), spring 1.4310	
Actuating stem	stainless steel, roller burnished	
Bellow	stainless steel 1.4571	
Fixed disc	stainless steel 1.4571, plated	STN2-disc
Sliding disc	standard: special carbon material	STN2-disc
Coupling ring for disc	stainless steel 1.4581	

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Motor Valve 8036-GS3

Actuator with Electronic Positioner

Technical Information

Driving force	2,3 kN
Type of duty (according IEC-34)	S2 30min S4 - 1200 c/h 50% ED
Power connections	24 V DC 24 V AC 110/120 V AC 230 V AC
Ambient temperature	-20°C up to +60°C
Mounting position	choice horizontal or vertical actuator only
Protection class (DIN 60529)	IP 65
max. Power consumption	30 Watt
Set point range	adjustable 0 - 20 mA, 0 - 10 V
Feed back	adjustable 0 - 20 mA, 0 - 10 V
Self Monitoring	torque, set point, temperature
Diagnostic function	storage of motor and total service life, number of motor starts, etc.
Valve adaptation	automatic stroke adjustment to suit valve limits

Stroking Time (sec.)

DN	Stroking speed for the complete stroke		
	0,45 mm/s (50%)	0,67 mm/s (75%)	0,9 mm/s (100%)
15 - 40	13,9	9,3	6,9
50 - 80	18,4	12,3	9,2
100 - 200	19,5	13,1	9,7

= Standard

Options

2 additional stroke limit switches	free adjustable volt free contacts (open/close)
Heater	anti condensation heater
Process controller	PI - process controller integrated in the actuator
Fair Safe Protection	via battery pack open or closed
Local control	mounted on the actuator
Communication software	by use of data care to configure actuator

Admissible Differential Pressures
(For temperatures of up to 120°C)

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

DN	max. differential pressure (bar)			
	carbon - stainless steel coated control	carbon - stainless steel coated on - off	STN2 control	STN2 on - off
15	100	100	100	100
20	100	100	100	100
25	100	100	88	100
32	100	100	65	100
40	97	100	45	72
50	63	100	27	53
65	53	80	22	44
80	34	48	13	26
100	21	33	8	16
125	14	23	5,5	11
150	11	16	4	8
200	6,5	12		

Upper limits for admissible pressures in bar

bar	P max.
PN 16	16
PN 40	40
PN 100	100
ANSI 150	16
ANSI 300	40
ANSI 600	80

Motor Valve 8036-GS3

SCHUBERT & SALZER CONTROL SYSTEMS

Actuator without Electronic Positioner
(function: open/close or 3-step-drive)

Technical Information

Driving force	1 kN, 2 kN, 4,5 kN
Type of duty (according VDE 0530)	S2 30min S4 - 1200 c/h 50%ED
Power connections	24 V AC 110/120V AC 230 V AC
Ambient temperature	-20°C bis +80°C (S2) / -20°C bis +60°C (S4)
Mounting position	choice horizontal or vertical actuator only
Protection class (EN 60529)	IP 65
max. Power consumption	1 kN: 26W, 2 kN: 30W , 4,5kN: 47 W
Actuator protection	torque switch

Options

2 additional stroke limit switches	free adjustable volt free contacts (open/close)
Heater	anti condensation heater
Feed back 4-20 mA	in 2-wire or 3-wire design
Local control	mounted key pad on actuator

Stroking Time (sec.)

DN	Stroking times for the complete stroke		
	1 kN	2 kN	4,5 kN
DN 15 - 40	25	25	12,5
DN 50 - 80	33	33	16,5
DN 100 - 200	35	35	17,5

(other regualting speeds on request)

Admissible Differential Pressures
(For temperatures of up to 120°C)

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

DN	max. differential pressure (bar)					
	disc - pair carbon stainless steel coated			disc - pair STN2		
	1 kN	2 kN	4,5 kN	1 kN	2 kN	4,5 kN
15	88	100	100	62	100	100
20	76	100	100	48	100	100
25	64	100	100	36	76	100
32	52	100	100	26	56	100
40	39	84	100	18	38	72
50	26	55	100	11	23	53
65	22	46	80	9	19	44
80	14	29	48	5	11	26
100	8,5	18	33	3	7	16
125	6	12	23	2	4,5	11
150	4,5	9,5	16	1,5	3,5	8
200	2,5	5,5	12,5			

Upper limits for admissible pressures in bar

bar	P max.
PN 16	16
PN 40	40
PN 100	100
ANSI 150	16
ANSI 300	40
ANSI 600	80

Motor Valve 8036-GS3

SCHUBERT & SALZER CONTROL SYSTEMS

Ordering Number System

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
8	0	3	6	/				V	T					M								Z			S

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

Type

Size

Symbol: "V": Valve

"R": Repair kit (sealings)

1. Function		2. Body design		3. Body material		4. Security position		5. Actuator		6. Special versions		7. Motor voltages		8. Stem sealing	
T	GS-motor valve (type 8036)	E	GS3 - flangeless design acc. ANSI 150	0	carbon-steel 1.0570 / 1.0619	-	without	R	2,3 kN, position-electronic, IP65	M	to state, if some sections 7-16 are quoted	-	230V 50/60 Hz (Standard)	-	PTFE-V-shaped seal, self-adjusting (Standard)
		F	GS3 - flangeless design acc. ANSI 300			0	motor closed (storage battery)	1	2 kN, IP65 (On - Off)	A	groove and groove acc. DIN2512	1	24V 50/60 Hz	1	additional stain-steel bellow 1.4571 (max. 33 bar pressure)
		K	GS3 - flangeless design acc. ANSI 600	1	stainless steel 1.4571 / 1.4581			2	4,5 kN, IP65 (On - Off)	C	groove and tongue acc. DIN 2512	3	24V DC (only with 2,3 kN)		
		G	GS3 - flangeless design acc. DIN, PN10-PN40					4	1 kN, IP65 (On - Off)	E	2x lowered face acc. DIN 2513	4	115V 50/60 Hz		
		H	GS3 - flangeless design acc. DIN, PN100							H	lowered and raised face acc. DIN 2513				

9. Sliding disc		10. Fixed disc		11. Kvs-values		12. Seat characteristics		13. Accessories		14. Input signal		15. Limit switches		16. Special versions	
-	Carbon material	-	stainless steel 1.4581, hard-chrome plated	-	100 % (Stand.)	-	linear	Z	to state, if in sections 14 and 15 accessories are qouted	-	Standard with electronic positioner 4-20 mA	-	without	S	Other special versions have to be quoted in letters
B	Carbon material fibre reinforced	1	STN2 (only in combination with the position "9" STN2-disc)	A	red. to 63 %	1	equal percentage			3	0-10 V	2	2 limit switches		
9	STN2			1	red. to 40 %					4	2-10 V				
				2	red. to 16 %										
				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 %										

17. Stroking time		18.		19. Positioner	
-	Standard	-		-	Standard (for controlling as input signal)
1	0,9 mm/sec (2,3 kN)			2	feed back 4-20 mA, 2 wire for open/close
2	0,45 mm/sec (2,3 kN)				

Ordering example: 8036/100VTG10RM- - - - - - Z-2
GS3-control valve with motor actuator, DN 100, PN 10/40, stainless steel, safety position, actuator 2,3kN, 230 V 50/60 Hz, PTFE-packing, discs: carbon - stainless steel 1.4571 coated, seat characteristics linear, 2 limit switches

Motor Valve 8036-GS3

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

	Sliding unit: carbon - stainless steel, coated						Sliding unit: carbon - STN2					
	max. admissible diff. pressures for GS3-valves						max. admissible diff. pressures for GS3-valves					
DN	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	34	32	31	29	40	38	34	32	31	29
80	40	38	34	32	31	29	36	34	33	26	22	19
100	33	31	29	27	25	24	33	31	26	24	20	17
125	23	21	20	19	18	17	22	21	17	16	13	11
150	16	15	14	13	12	12	16	15	13	11	9	8
200 (PN16 only)	16	15	14	13	12	11,0	-	-	-	-	-	-

PN 100

	Sliding unit: carbon - stainless steel, coated						Sliding unit: STN2					
	max. admissible diff. pressures for GS3-valves						max. admissible diff. pressures for GS3-valves					
DN	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	95	87	82	77	72	100	95	87	82	77	72
20	100	95	87	82	77	72	100	95	87	82	77	72
25	100	95	87	82	77	72	100	95	87	82	77	72
32	100	95	87	82	77	72	100	95	87	82	69	60
40	100	95	87	82	77	72	72	69	65	53	43	37
50	100	95	87	82	77	72	77	73	70	56	46	40
65	80	76	72	67	62	60	62	59	56	45	37	32
80	48	45	43	40	37	36	36	34	33	26	22	19

ANSI #150

	Sliding unit: carbon - stainless steel, coated						Sliding unit: carbon - STN2					
	max. admissible diff. pressures for GS3-valves						max. admissible diff. pressures for GS3-valves					
DN	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 - 125	16	15	13	12	10	8	16	15	13	12	10	8
150	16	15	13	12	10	8	16	15	13	11	9,5	8
200	16	15	13	12	10	8	-	-	-	-	-	-

ANSI #300

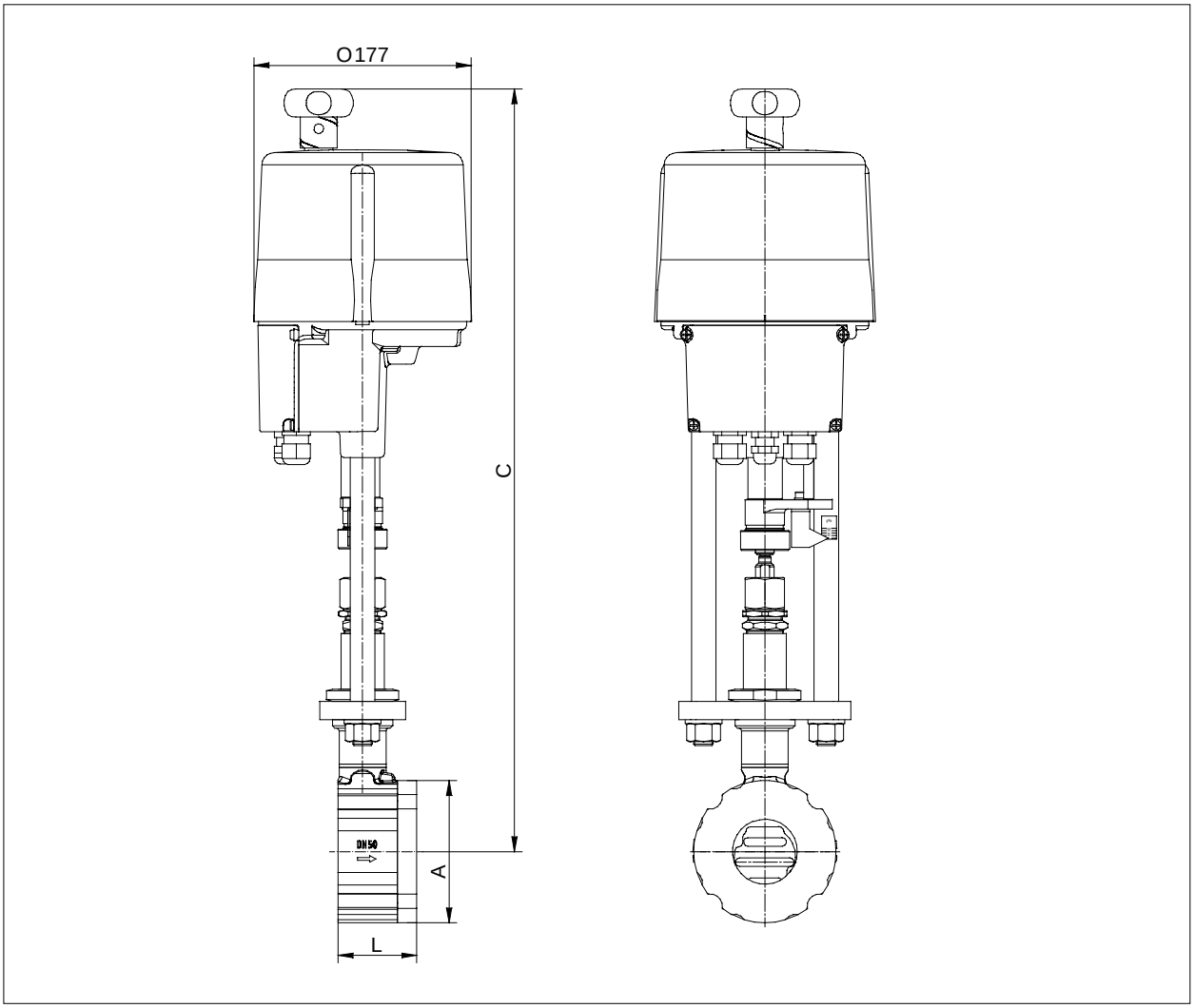
	Sliding unit: carbon - stainless steel, coated						Sliding unit: carbon - STN2					
	max. admissible diff. pressures for GS3-valves						max. admissible diff. pressures for GS3-valves					
DN	100°C	150°C	200°C	250°C	300°C	350°C	100°C	150°C	200°C	250°C	300°C	350°C
15 - 65	40	38	35	33	31	30	40	38	35	32	31	29
80	40	38	35	33	31	30	36	34	33	26	22	19
100	33	31	29	27	25	24	33	31	26	24	20	17
125	23	21	20	19	18	17	22	21	17	16	13	11
150	16	15	14	13	12	12	16	15	13	11	9	8

ANSI #600

	Sliding unit: carbon - stainless steel, coated						Sliding unit: STN2					
	max. admissible diff. pressures for GS3-valves						max. admissible diff. pressures for GS3-valves					
DN	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	80	77	71	66	63	60	80	77	71	66	63	60
40	80	77	71	66	63	60	72	69	65	53	43	37
50	80	77	71	66	63	60	77	73	70	56	46	40
65	80	76	71	66	62	60	62	59	56	45	37	32
80	48	45	43	40	37	36	36	34	33	26	22	19

Motor Valve 8036-GS3

Dimensions and Weights



DN	øA mm	C mm	L mm	Stroke mm	Weight kg
15	64	592	56	6	8,2
20	72	597	56	6	8,4
25	82	602	56	6	8,7
32	89	607	56	6	8,7
40	99	612	56	6	9,3
50	116	622	64	8	10,8
65	138	632	68	8	12,3
80	153	637	70	8	13,6
100	184	652	75	8,5	16,7
125	212	667	80	8,5	19,1
150	242	682	80	8,5	22,7
200	302	712	93	8,5	39,5

Dimensions in mm