

# High Pressure Sliding Gate Valve 8021

## GS 4 series - DN 25 up to DN 250

**Sliding gate valve optionally with integrated positioner for the control of neutral and aggressive fluids for industrial high pressure applications**

- Space saving screwed wafer type construction
- Compact version, low weight
- Quiet operation
- High dynamic because of small stroke
- Control of high differential pressures with small actuators
- Low energy consumption
- High Kvs-values
- Long lifetime also with cavitation operation



### Technical Information

Design	screwed wafer-type design for flanges acc. DIN EN 1092-1 Form B further versions see data sheet 8021-GS1 and -GS3	
Nominal Sizes*	DN 25 - 250	
Nominal pressure acc. DIN 2401*	PN160	DN 25 - DN 80
	PN 100 PN 40	DN 100 - DN 150 DN 200 - DN 250
Nominal pressure ANSI*	ANSI 900	DN 25 - DN 80 (1" - 3")
	ANSI 600	DN 100 - DN 150 (4" - 6")
	ANSI 300	DN 200 - DN 250 (8" - 10")
Mounting position	Any mounting position for installation in horizontal pipes Not in rising pipes	
Fluid Temperature	-60°C up to +350°C **	
Ambient temperature***	digital positioner -10°C up to +75°C analog positioner -15°C up to +60°C	
digital positioner	40 : 1 linear / 80:1 equalpercentage	
Leakage	Disc pair STN 2	
% from Kvs	< 0,002	
IEC 60534-4	IV	
EN 12266-1	F	
Spezific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1	

\* other pressure ratings on demand

\*\* higher temperatures on demand

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

Kvs- and Cv-values see data sheet 8001.

### Materials

Valve body	stainless steel 1.4571
Head section	stainless steel 1.4571
Diaphragm casing	aluminium, KTL-coated
Actuator springs	stainless steel 1.4310
Packing	carbon-filled PTFE (spring 1.4310)
Valve stem	stainless steel 1.4122 or 1.4571, roller burnished
Fixed disc	STN2-disc
Sliding disc	STN2-disc

\*further materials such as hastelloy, duplex-steel, monell, titan, inconell, incoloy, 1.4539 etc. on request

### Positioner

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

# High Pressure Sliding Gate Valve 8021-GS4



## Differential pressures

### Admissible differential pressures

For temperatures of up to 120°C (PN) / 38°C (ANSI)

**For temperatures of 120°C for PN-ratings and 38°C for ANSI-ratings and above: obey application limits!**

Actuator size	750 cm <sup>2</sup>			1000 cm <sup>2</sup>			1500 cm <sup>2</sup>		
	1,4	3,6	4,3	3,8	4,9	5,5	3,4	4	4,3
Supply pressure (bar)									
DN	max. admissible pressure in bar			max. admissible pressure in bar			max. admissible pressure in bar		
25	55	160	160	160	160	160	160	160	160
50	21	85	102	115	159	160	160	160	160
80	11,5	45	54	61	84	93	87	102	112
100	7,3	28	34	39	53	59	55	65	71
150	3,6	14	17	19	26	29	27	32	35
200	2,1	8,2	9,9	11	15,5	17	16	18,5	20
250	1,3	5,1	6,1	6,9	9,6	10,5	9,9	11,5	12,5
Spring configuration	Code L	Code „-“	Code P	Code L	Code „-“	Code P	Code L	Code „-“	Code P

Standard

# High Pressure Sliding Gate Valve 8021-GS4



## Differential pressures

### Application limitations for GS4 valves in stainless steel

These pressure must not be exceeded for GS-valves from the GS4-series made of stainless steel, even though the actuator power might allow it. Applications for dangerous gases acc. pressure equipment directive 2014/68/EU category III (DN > 100; PS x DN > 3500) only after consultation.

#### PN160

DN	Sliding unit: SFC - stainless steel, coated max. admissible pressures for GS4-valves						Sliding unit: STN2 max. admissible pressures for GS4-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
25	160	147	127	115	104	-	160	147	127	115	104	98
50	160	147	127	115	104	-	160	147	127	115	104	98
80	160	147	127	115	104	-	160	147	127	115	104	98

#### PN100

DN	Sliding unit: SFC - stainless steel, coated max. admissible pressures for GS4-valves						Sliding unit: STN 2 max. admissible pressures for GS4-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
100	100	92	79	72	65	-	100	92	79	72	65	61
150	100	92	79	72	65	-	66	65	65	56	48	41

#### PN40

DN	Sliding unit: SFC - stainless steel, coated max. admissible pressures for GS4-valves						Sliding unit: STN 2 max. admissible pressures for GS4-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
DN200	40	36	31	28	26	-	38	36	31	28	26	24
DN250	40	36	31	28	26	-	23	23	23	19	17	14

#### ANSI 900 (ASME B16.34 - 316L)\*

DN	Sliding unit: SFC - stainless steel, coated max. admissible pressures for GS4-valves						Sliding unit: STN 2 max. admissible pressures for GS4-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
25	132,7	122,9	114,9	108,1	102,4	-	132,7	122,9	114,9	108,1	102,4	97,8
50	132,7	122,9	114,9	108,1	102,4	-	132,7	122,9	114,9	108,1	102,4	97,8
80	132,7	122,9	114,9	108,1	102,4	-	132,7	122,9	114,9	108,1	102,4	97,8

\*: ASME B16.34 rating depends on the valve body material. Other materials and ratings on demand.

#### ANSI 600 (ASME B16.34 - 316L)\*

DN	Sliding unit: SFC - stainless steel, coated max. admissible pressures for GS4-valves						Sliding unit: STN 2 max. admissible pressures for GS4-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
100	62,8	58,3	54,9	52,1	51	41	62,8	58,3	54,9	52,1	51	49,5
150	62,8	58,3	54,9	52,1	51	41	62,8	36,0	31,0	28,0	26,0	24,0

\*: ASME B16.34 rating depends on the valve body material. Other materials and ratings on demand.

#### ANSI 300 (ASME B16.34 - 316L)\*

DN	Sliding unit: SFC - stainless steel, coated max. admissible pressures for GS4-valves						Sliding unit: STN 2 max. admissible pressures for GS4-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
DN200	31,4	29,2	27,5	26,1	25,5	-	31,4	29,2	27,5	26,1	25,5	24,0
DN250	31,4	29,2	27,5	26,1	25,5	-	23,0	23,0	23,0	19,0	17,0	14,0

\*: ASME B16.34 rating depends on the valve body material. Other materials and ratings on demand.

# High Pressure Sliding Gate Valve 8021-GS4



## Ordering Number System

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

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

Type      Size      Symbol: "V": Valve  
 "R": Repair kit (sealings)

1. Function	2. Body design	3. Body material	4. Safety function	5. Actuator
G sliding gate valve with pneumatic actuator (type 8021)	P GS4-flangeless design acc. DIN Q GS4-Flangeless design acc. ASME Z GS4-version	0 carbon steel 1.0619 1 stainless steel 1.4408 5 Alloy C-276; 2.4819	0 spring closes 1 spring opens	9 diaphragm actuator 750 cm <sup>2</sup> E diaphragm actuator 1000 cm <sup>2</sup> F diaphragm actuator 1500 cm <sup>2</sup>

6. Special version	7. Springs	8. Stem sealing	9. Moved disc	10. Fixed disc
M To state, if further sections are quoted A groove and groove acc. DIN EN1092-1 C groove and tongue acc. DIN EN1092-1 E 2x lowered face acc. DIN EN1092-1 H lowered and raised face acc. DIN EN1092-1	- Standard 4 8 springs 8 16 springs	- PTFE-packing, self adjusting (standard) 0 PTFE-and fluororubber-free 200°C 5 packing for higher chemical resistance	- Carbon material 9 STN2 S SFC	- stainless steel 1.4571 1 STN2 (only in combination with pos. „9“ STN2)

11. Kvs-Values	12. Flow characteristic	13. Accessories	14. Positioners	15. Signalling equipment
- 100% (Stand.) A red. auf 63 % 1 red. auf 40 % B red. auf 25 % 2 red. auf 16 % 6 red. auf 20 % 7 red. auf 12 % 8 red. auf 2 % 9 red. auf 0,4%	- linear 1 equal-%	Z To state if further sections are quoted	- without 1 p/p positioner Type 8047 3 i/p positioner Type 8047 8 i/p positioner with plug connec. M12x1 C dig. positioner, Type 8049, 4-wire R dig. positioner, Type 8049, 2-wire W dig. positioner, type 8049 ExPro, ATEX, IECEX K dig. positioner, type 8049 ExPro-FM N dig. positioner, type 8049 IO-Link version	- without 0 2 limit switches M12x1 DC

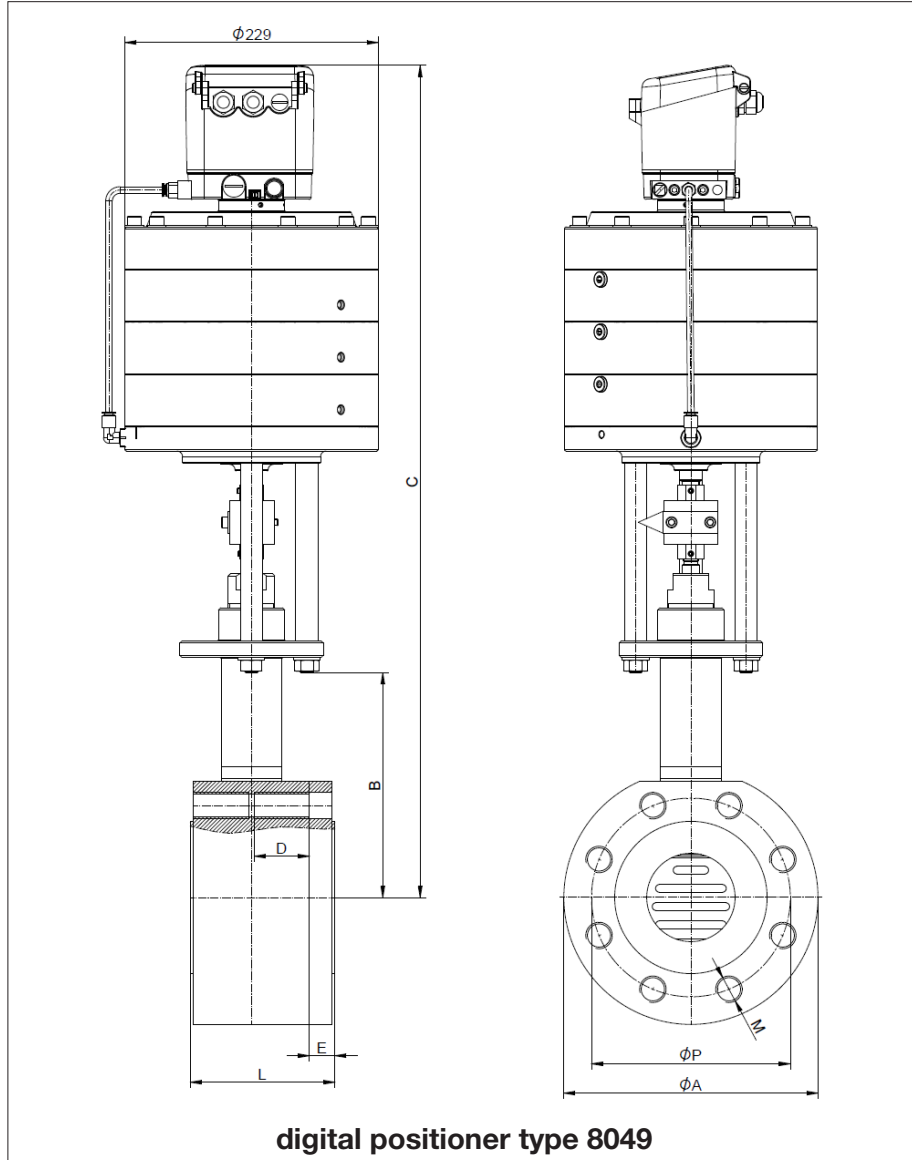
16. Further versions	
S	Other special versions have to be quoted in letters!

Ordering example: 8021/050VGP109M--91--ZC  
 sliding gate valve type 8021 with pneumatic actuator, DN 50, PN160, body material stainless steel, spring closes, actuator 750 cm<sup>2</sup>, PTFE-chevron rings, Disc pair: Moving disc STN2/STN3 and fixed disc STN2, characteristics linear, digital positioner type 8049, 4-wire

# High Pressure Sliding Gate Valve 8021-GS4

with integrated digital positioner, Type 8049

## Dimensions and Weights



DN	ØA	B	C for actuators			pressure rating	ØP	num- ber of screws	M	D	E	L	stro- ke	weight for actuators		
			D750	D1000	D1500									D750	D1000	D1500
25	135	162,6	668	715	-	PN160	100	4	M16	70	11	83	6	28 kg	33 kg	-
	150	162,6	668	715	-	ANSI900	101,6	4	7/8"-9 UNC	70	25	102 *		30 kg	35 kg	-
50	186	166	673	720	-	PN160	145	4	M24	68	22	92	8	35 kg	40 kg	-
	215	166	713	760	-	ANSI900	165,1	8	7/8"-9 UNC	78	39	124 *		38 kg	53 kg	-
80	230	203,5	708	755	-	PN160	180	8	M24	50	23	131	8	55 kg	60 kg	-
	240	203,5	708	755	-	ANSI900	190,5	8	7/8"-9 UNC	48	33	165 *		65 kg	70 kg	-
100	260	218,5	723	770	865	PN100	210	8	M27	55	24	152	8,5	70 kg	75 kg	82 kg
	275	218,5	723	770	865	ANSI600	215,9	8	7/8"-9 UNC	55	31	194 *		90 kg	95 kg	102 kg
150	375	323	828	875	970	PN100	290	12	M30	66	24	194	8,5	150 kg	155 kg	162 kg
	375	323	828	875	970	ANSI600	292,1	12	1"-8 UNC	70	37	229 *		173 kg	178 kg	185 kg
200	420	344	848	895	990	PN40	320	12	M27	55	24	146	8,5	140 kg	145 kg	152 kg
	420	344	848	895	990	ANSI300	330,2	12	7/8"-9 UNC	55	24	144,5		145 kg	150 kg	157 kg
250	450	361	868	915	1010	PN40	385	12	M30	60	24	156	8,5	155 kg	160 kg	167 kg
	450	361	868	915	1010	ANSI300	387,4	12	1"-8 UNC	60	24	156,5		158 kg	163 kg	170 kg

\* face to face dimension acc. ANSI ISA 75.08.09-2015

Dimensions in mm