

Sliding Gate Valve 8021

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

Pneumatic sliding gate valve optionally with integrated positioner for regulating or shutting off liquid and gaseous media for industrial applications

- Space saving wafer type construction
- Lowest possible weight
- Quiet operation
- Fast response time
- Greatly reduced energy consumption rates due to short strokes and low actuating forces on the throttle element
- High Cv-values
- Meets the requirements of TA-Luft 2021



Technical Information

Design	wafer-type design -for flanges acc. DIN EN 1092-1 Form B or ASME B16.5 RF - with threaded connection (only PN40 in stainless steel; 1/2" - 2")	
Nominal Sizes	1/2" - 10"	
Nominal pressure acc. EN 1333	PN 40 (fits also to PN 10-PN 25) PN 100 (fits also to PN 63) PN 16 and PN 25	1/2" - 6" 1/2" - 3" 8" - 10"
Nominal pressure acc. ASME B16.5	ANSI 150 ANSI 300 ANSI 600	1/2" - 10" 1/2" - 6" 1/2" - 3"
Nominal pressure acc. JIS for flanges with raised face	10K 20K	1/2" - 2" 1/2" - 1 1/2"
Fluid Temperature	Versions from -76°F up to +662°F	
Ambient temperature	Positioner type 8049: +14°F up to +167°F Positioner type 8047: +5°F up to +140°F Other positioner versions: -40°F up to +212°F	
Rangeability / Characteristic:	Positioner type 8047: Positioner type 8049:	30 : 1 40 : 1 linear / 80 : 1 equal percentage versions up to 200:1
Specific leakage rate shaft and body sealing	ISO FE-BH-CC3-SSA0-t(-40°C/+350°C)-PN40-ISO 15848-1	
Marking ATEX non electric	II 2G Ex h IIC T6...T1 X Gb II 2D Ex h IIIC 85°C...530°C X Db	
Applications acc. DGRL 2014/68/EU	stainless steel or carbon steel body body made of Alloy C-276 body made of stainless steel with threaded ends	up to category II up to category I up to category I

Fluid temperature

Rating	PN16 - PN40	PN 100	ANSI 150	ANSI 300	ANSI 600
Body material cpl. stainless steel					
Tmin [°F]	-76	-76	-20	-20	-20
Tmax [°F]	662	662	662	662	662
Body material carbon steel with stainless steel body cover					
Tmin [°F]	-76	14	-4	-4	-4
Tmax [°F]	662	662	662	662	662
Body material cpl. Alloy C-276					
Tmin [°F]	-76	-76	-20	-20	-20
Tmax [°F]	662	662	662	662	662

Materials Special versions

Version in stainless steel	
Valve body	Stainless steel , 1.4408
Bodycover	Stainless steel, 1.4404 resp. 316L
Valve stem	Stainless steel, 1.4571
Coupling ring	Stainless steel, 1.4581
Tube for packing	Stainless steel 1.4408
Packing	PTFE filled with carbon (Spring 1.4310)
Body seal	Graphite with stainless steel inlay

Version in C-steel	
Valve body	C-steel, 1.0619
Bodycover	Stainless steel, 1.4404 resp. 316L
Valve stem	Stainless steel, 1.4571
Coupling ring	Stainless steel, 1.4581
Tube for packing	Stainless steel, 1.4408
Packing	PTFE filled with carbon (spring 1.4310)
Body seal	Graphite with stainless steel inlay

Version in Alloy C-276	
Valve body	Alloy C-276, 2.4819
Bodycover	Alloy C-276, 2.4819
Valve stem	Alloy C-276, 2.4819
Coupling ring	Alloy C-276, 2.4819
Tube for packing	Alloy C-276, 2.4819
Packing	PTFE filled with carbon (spring Alloy C4, 2.4610)
Body seal	Pure graphite

For all versions	
Diaphragm casing	aluminium, KTL-coated or stainless steel
Actuator springs	stainless steel 1.4310

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	-	-	-	0.41	-	-	-	-
1 1/4"	(mod.) linear	19	12	-	-	-	-	-	-	-	-	-	-	-
	eq. perc.	9.3	5.45	-	-	-	-	-	-	-	-	-	-	-
1 1/2"	(mod.) lin.	30	19	13	8.1	-	-	-	-	-	-	-	-	-
	eq. perc.	13	9.9	-	3.2	-	-	-	-	-	-	-	-	-
2"	(mod.) linear	52	32	23	14	12	-	-	-	-	-	-	-	-
	eq. perc.	22	14	-	-	-	3.5	-	-	-	-	-	-	-
2 1/2"	(mod.) linear	60	41	-	17	-	-	-	-	-	-	-	-	-
	eq. perc.	35	22	-	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.	329	-	-	-	-	-	-	-	-	-	-	-	-
10"	(mod.) linear	1056	667	-	-	-	-	-	-	-	-	-	-	-
	eq.perc.	505	-	-	-	-	-	-	-	-	-	-	-	-

Definition of the Cv-Value:

The Cv-value corresponds to the volume flow of water (US gallons/min), passing the valve if a pressure difference of 1 psi is applied. Cv = 1 US gallon of flow per 1 psi of pressure drop.

Slide pairing overview								
Moving plate	Carbon	Carbon	Carbon	Carbon	SFC	STN2	STN3	Hard metal
Fixed plate	STN2	STN1	Brass	Alloy	STN2	STN2	STN3	Hard metal
Nominal Sizes	1/2" - 10"	1/2" - 6"	1/2" - 4"	1/2", 1", 1 1/2", 2", 3"	1/2" - 10"	1/2" - 10"	1/2", 1", 2"	1/2", 3/4", 1 1/2", 2"
Operating temperature	-328°F up to +842°F (max. 572°F with oxidising gases)	-76°F up to +572°F	-76°F up to +446°F	-328°F up to +842°F (max. 572°F with oxidising gases)	-76°F up to +572°F	-328°F up to +986°F	-328°F up to +986°F	-328°F up to +986°F
Leakage rate*	1E-6 from the Kvs value	1E-6 from the Kvs value	1E-6 from the Kvs value	1E-6 from the Kvs value	5E-6 from the Kvs value	1E-5 from the Kvs value	1E-5 from the Kvs value	1E-5 from the Kvs value
Leakage IEC 60534-4	IV-S1	IV-S1	IV-S1	IV-S1	IV-S1	IV	IV	IV
Leakage EN 12266-1	E	E	E	E	F	F	F	F
Limitation		Δ P max. 232 psi for liquids, max. 363 psi for gases	Δ P max. 145 psi for liquids, max. 580 psi for gases		Δ P max. 363 psi			
Typical applications	Gases, liquids at low differential pressures without cavitation; no pressure surges	Pure gases and liquids, no cavitation; no pressure surges	Oxygen, Pure gases and liquids, no cavitation; no pressure surges	Aggressive acids and alkalis, seawater, no cavitation; no pressure surges	Vapour, pure liquids	Gases, vapour and liquids also with cavitation	Liquids at high differential pressures	Liquids at very high differential pressures

* For DN15 with reduction less than 25 %, different leakage rates possible

Limitations

Additionally to the limitations of the pressure rating valves made of Alloy C-276 as well as valves with threaded connections are limited to applications of the category I of the PED 2014/68/EU.

		maximum admissible operating pressure in bar for application of category I of the pressure equipment directive 2014/68/EU				
		1/2"	1"	1 1/2"	2"	3"
Fluid group 1	gaseous	X	X	362	290	181
	liquid	X	X	725	580	362
Fluid group 2	gaseous	X	X	X	X	X
	liquid	X	X	X	X	X

X = no limitation

*3" is not available with threaded connections.

Sliding Gate Valve 8021-GS3

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



Admissible differential pressures

For temperatures up to 248°C for PN pressure ratings up to 100.40°F for ANSI pressure ratings, for high temperatures the application limits must be taken into account.

Movable sealing disc made of carbon or SFC

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi									
	20 in ²					40 in ²				
Size	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2" **	1479	44	1479	52	1479	33	1479	39	1479	52
3/4"	1479	44	1479	52	1479	33	1479	39	1479	52
1" **	1276 (1479)*	44	1276 (1479)*	52	1276 (1479)*	33	1276 (1479)*	39	1276 (1479)*	52
1 1/4"	1276	45	1479	55	1276	33	1479	44	1479	52
1 1/2" **	972	49	1204	59	1276 (1479)*	38	1276 (1479)*	44	1276 (1479)*	57
2" **	638	59	783	71	1088	45	1320	54	1479	70
2 1/2"	537	61	653	73	914	45	1102	55	1160	70
3" **	334	62	421	77	580	48	696	57	696	71
4"	218	65	268	80	363	49	450	59	479	75
5"	145	67	181	81	254	51	305	61	334	77
6"	110	67	136	81	189	51	225	61	232	77
8"	64	68	78	83	109	52	132	62	174	83
10"	39	68	48	83	67	52	81	62	109	83
Spring quantity	6 springs		8 springs		6 springs		8 springs		12 springs	
Spring Configuration	Code „-“		Code 4		Code „-“		Code 4		Code 6	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

** Nominal size available in Alloy C-276 version

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi											
	80 in ²						120 in ²					
Size	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2" **	1479	33	1479	39	1479	48	-	-	-	-	-	-
3/4"	1479	33	1479	39	1479	48	-	-	-	-	-	-
1" **	1276 (1479)*	33	1276 (1479)*	39	1276 (1479)*	48	-	-	-	-	-	-
1 1/4"	1479	33	1479	39	1479	49	-	-	-	-	-	-
1 1/2" **	1276 (1479)*	35	1276 (1479)*	41	1276 (1479)*	51	-	-	-	-	-	-
2" **	1479	42	1479	49	1479	59	-	-	-	-	-	-
2 1/2"	1160	42	1160	49	1160	59	-	-	-	-	-	-
3" **	696	44	696	49	696	61	-	-	-	-	-	-
4"	479	45	479	52	479	62	290	19	479	42	479	49
5"	334	45	334	54	334	64	196	19	334	42	334	49
6"	232	45	232	52	232	64	145	20	232	42	232	49
8"	218	51	232	59	232	71	86	20	232	46	232	54
10"	138	52	152	61	152	73	52	20	174	49	174	57
Spring quantity	12 springs		16 springs		22 springs		12 springs		18 springs		24 springs	
Spring Configuration	Code „-“		Code 8		Code B		Code L		Code „-“		Code P	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

** Nominal size available in Alloy C-276 version

Upper limits of the pressure rating

	Upper limits for permissible pressures in bar according to nominal pressure levels					
	PN16	PN40	PN100	ANSI150	ANSI300	ANSI600
P max. carbon steel / Alloy C-276	232	580	1450	19,6	51,1	102,1
P max. stainless steel				19	49,6	99,3

Sliding Gate Valve 8021-GS3

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



Admissible differential pressures

For temperatures up to 248°C for PN pressure ratings up to 100.40°F for ANSI pressure ratings, for high temperatures the application limits must be taken into account.

Movable sealing disc made of STN 2, STN 3 or hard metal

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi									
	20 in ²					40 in ²				
DN	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2"	1479	44	1479	52	1479	33	1479	39	1479	52
3/4"	1175	46	1450	57	1479	35	1479	41	1479	54
1"	870	51	1088	61	1175 (1479)*	39	1175 (1479)*	45	1175 (1479)*	58
1 1/4"	653	54	812	64	1117	41	1349	49	1479	62
1 1/2"	450	57	551	68	769	44	928	52	1044	67
2"	268	64	318	77	450	45	551	58	740	78
2 1/2"	218	64	268	78	377	49	450	59	609	78
3"	133	65	160	80	225	49	276	59	363	80
4"	83	67	102	81	141	51	167	62	225	83
5"	55	68	68	83	94	52	113	62	152	83
6"	41	68	49	83	70	52	84	62	113	83
8"	23	68	28	83	39,0	52	48	62	64	84
10"	13	68	17	83	23	52	29	62	39,0	84
Spring quantity	6 springs		8 springs		6 springs		8 springs		12 springs	
Spring Configuration	Code „-“		Code 4		Code „-“		Code 4		Code 6	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi											
	80 in ²						120 in ²					
DN	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2"	1479	33	1479	39	1479	48	-	-	-	-	-	-
3/4"	1479	33	1479	41	1479	49	-	-	-	-	-	-
1"	1175 (1479)*	36	1175 (1479)*	42	1175 (1479)*	51	-	-	-	-	-	-
1 1/4"	1479	38	1479	45	1479	54	-	-	-	-	-	-
1 1/2"	1059	39	1059	46	1059	55	-	-	-	-	-	-
2"	928	48	1117	58	1131	70	-	-	-	-	-	-
2 1/2"	769	49	914	58	914	70	-	-	-	-	-	-
3"	465	49	537	59	537	70	-	-	-	-	-	-
4"	283	51	334	61	435	77	112	20	435	51	479	59
5"	189	52	232	62	290	78	74	20	290	52	334	61
6"	142	52	167	62	210	78	55	20	210	52	232	61
8"	81	52	97	62	122	78	30	20	123	52	145	62
10"	122	52	59	62	74	78	19	20	75	52	90	62
Spring quantity	12 springs		16 springs		22 springs		12 springs		18 springs		24 springs	
Spring Configuration	Code „-“		Code 8		Code B		Code L		Code „-“		Code P	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

Upper limits of the pressure rating

	Upper limits for permissible pressures in bar according to nominal pressure levels					
	PN16	PN40	PN100	ANSI150	ANSI300	ANSI600
P max. carbon steel / Alloy C-276	232	580	1450	19,6	51,1	102,1
P max. stainless steel				19	49,6	99,3

Sliding Gate Valve 8021-GS3



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

Admissible differential pressures

For temperatures up to 248°C for PN pressure ratings up to 100.40°F for ANSI pressure ratings, for high temperatures the application limits must be taken into account.

Movable sealing disc made of carbon or SFC

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi									
	20 in ²					40 in ²				
DN	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2" **	1475	43	1475	52	1475	33	1475	39	1475	52
3/4"	1115	47	1390	56	1475	34	1475	42	1475	53
1" **	825	50	1025	62	1276 (1421)*	39	1276 (1479)*	44	1276 (1479)*	58
1 1/4"	605	53	750	65	1055	42	1275	49	1475	63
1 1/2" **	420	56	520	68	710	43	870	52	1160	69
2" **	245	63	300	76	420	49	505	58	695	78
2 1/2"	200	63	250	78	345	49	420	59	565	78
3" **	120	65	150	79	210	50	250	59	330	79
4"	75	66	94	82	130	50	150	62	210	82
5"	50	68	62	82	87	52	105	62	140	82
6"	37	68	46	82	63	52	76	62	100	82
8"	20	68	26	82	36	52	43	62	59	84
10"	13	68	15	82	21	52	26	62	36	84
Spring quantity	6 springs		8 springs		6 springs		8 springs		12 springs	
Spring Configuration	Code „-“		Code 4		Code „-“		Code 4		Code 6	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

** Nominal size available in Alloy C-276 version

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi											
	80 in ²						120 in ²					
DN	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2" **	1475	33	1475	39	1475	47	1475	14	1475	33	1475	39
3/4"	1475	33	1475	40	1475	49	1475	14	1475	33	1475	39
1" **	1276 (1479)*	36	1276 (1479)*	42	1276 (1479)*	52	1130	15	1276 (1479)*	34	1276 (1479)*	40
1 1/4"	1475	39	1475	44	1475	55	825	15	1475	36	1475	43
1 1/2" **	1276 (1479)*	43	1276 (1479)*	49	1276 (1479)*	59	565	17	1276 (1479)*	40	1276 (1479)*	46
2" **	870	49	1040	58	1315	72	330	18	1315	49	1475	58
2 1/2"	710	49	855	59	1070	73	275	18	1070	49	1160	56
3" **	420	49	505	59	650	75	165	18	650	49	695	58
4"	260	50	315	62	390	76	100	20	390	50	475	60
5"	170	52	210	62	265	78	68	20	265	52	315	62
6"	130	52	150	62	195	78	50	20	195	52	230	62
8"	75	52	89	62	110	78	29	20	110	52	135	62
10"	44	52	55	62	69	78	17	20	69	52	84	62
Spring quantity	12 springs		16 springs		22 springs		12 springs		18 springs		24 springs	
Spring Configuration	Code „-“		Code 8		Code B		Code L		Code „-“		Code P	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

** Nominal size available in Alloy C-276 version

Upper limits of the pressure rating

	Upper limits for permissible pressures in bar according to nominal pressure levels					
	PN16	PN40	PN100	ANSI150	ANSI300	ANSI600
P max. carbon steel / Alloy C-276	232	580	1450	19,6	51,1	102,1
P max. stainless steel				19	49,6	99,3

Sliding Gate Valve 8021-GS3



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

Admissible differential pressures

For temperatures up to 248°C for PN pressure ratings up to 100.40°F for ANSI pressure ratings, for high temperatures the application limits must be taken into account.

Movable sealing disc made of STN 2, STN 3 or hard metal

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi									
	20 in ²				40 in ²					
DN	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2"	795	51	985	63	1375	40	1475	47	1475	60
3/4"	535	56	665	67	925	43	1130	51	1475	67
1"	360	57	445	70	620	44	765	52	1025	70
1 1/4"	250	58	315	72	435	45	520	54	710	73
1 1/2"	165	60	200	73	280	47	330	56	460	74
2"	95	66	115	80	155	51	195	61	260	82
2 1/2"	76	67	95	80	130	51	155	61	210	82
3"	44	67	56	82	78	51	94	61	125	82
4"	27	69	34	83	47	53	58	61	76	83
5"	17	69	21	83	31	53	37	63	50	85
6"	13	69	15	83	23	53	27	63	37	85
8"	7	69	8	83	13	53	15	63	21	85
10"	4	69	5	83	7	53	8	63	13	85
Spring quantity	6 springs		8 springs		6 springs		8 springs		12 springs	
Spring Configuration	Code „-“		Code 4		Code „-“		Code 4		Code 6	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

Supply air	Max. allowed differential pressure P _{Diff} and min. supply air pressure P _{Supply air} in psi											
	80 in ²						120 in ²					
DN	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}	P _{Diff}	P _{Supply air}
1/2"	1475	37	1475	43	1475	53	1085	16	1475	35	1475	41
3/4"	1475	41	1475	47	1475	56	735	16	1475	38	1475	44
1"	1290	44	1275 (1475)	53	1275 (1475)	61	490	18	1275 (1475)	41	1275 (1475)	48
1 1/4"	895	45	1085	54	1360	67	345	18	1360	45	1475	53
1 1/2"	580	47	695	56	880	70	220	18	880	47	1055	56
2"	330	51	390	61	490	76	125	19	490	51	590	61
2 1/2"	265	51	315	61	405	76	100	19	405	51	475	61
3"	155	51	185	61	235	76	60	19	235	51	290	61
4"	97	53	115	63	145	79	37	21	145	53	170	63
5"	63	53	78	63	97	79	24	21	97	53	115	63
6"	47	53	56	63	71	79	17	21	71	53	87	63
8"	26	53	31	63	40	79	10	21	40	53	49	63
10"	15	53	18	63	24	79	5	21	24	53	29	63
Spring quantity	12 springs		16 springs		22 springs		12 springs		18 springs		24 springs	
Spring Configuration	Code „-“		Code 8		Code B		Code L		Code „-“		Code P	

Standard

* Values in brackets for valves made of carbon steel or alloy C-276

Upper limits of the pressure rating

	Upper limits for permissible pressures in bar according to nominal pressure levels					
	PN16	PN40	PN100	ANSI150	ANSI300	ANSI600
P max. carbon steel / Alloy C-276				19,6	51,1	102,1
P max. stainless steel	232	580	1450	19	49,6	99,3

Application limits for GS3 valves made out of stainless steel

The actual maximum permissible operating pressure of the valve results from the minimum value of the pressure tables, the limitation by the pressure rating, the category according to DGRL 2014/68/EU and the application limits listed here. These pressures must not be exceeded for GS valves of the GS3 series made of stainless steel, even if the tensile force of the actuator would allow this.

PN16 + PN25

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal					
	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
8" (max. PN25)	232	232	218	189	174	160	116	102	87	73	58	44
10" (max. PN25)	149	131	131	116	102	87	83,0	78,0	74,0	59,0	49,0	42,0

Limitation for SFC-sliding discs: 570°F

PN40

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal					
	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	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

Limitation for SFC-sliding discs: 570°F

PN100

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal					
	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"	1450	1450	1450	1350	1220	1145	1450	1450	1450	1350	1220	1145
3/4"	1450	1450	1290	1175	1060	985	1450	1450	1290	1175	1060	985
1"	1275	1175	1015	915	825	785	1275	1175	1015	915	825	785
1 1/4"	1450	1350	1160	1060	945	900	1450	1350	1160	1060	945	870
1 1/2"	1275	1175	1015	915	825	785	1045	1000	945	770	625	535
2"	1450	1450	1450	1450	1450	1365	1115	1060	1015	810	665	580
2 1/2"	1160	1160	1160	1145	1030	970	900	855	810	655	535	465
3"	695	695	695	695	695	640	520	495	480	375	320	275

Limitation for SFC-sliding discs: 570°F

ANSI150

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal									
	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	265	235	215	200	175	150	120	275	265	235	215	200	175	150	120
6"	230	230	230	215	200	175	150	120	235	235	235	215	200	170	140	120
8"	230	230	230	215	200	175	150	120	150	145	120	110	100	80	65	55
10"	150	150	150	145	135	120	105	100	85	85	85	80	75	60	50	40

Limitation for SFC-sliding discs: 570°F

ANSI300

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal									
	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	695	610	560	520	485	460	440	720	695	610	560	520	485	460	440
3"	695	695	610	560	520	485	460	440	530	530	530	505	480	390	320	275
4"	480	480	480	480	480	480	460	440	480	480	480	460	435	355	290	250
5"	335	335	335	335	335	335	335	335	320	320	320	305	290	235	190	165
6"	230	230	230	230	230	230	230	230	230	230	230	225	210	170	140	120
8"	230	230	230	145	135	120	105	100	230	230	220	200	180	155	140	130

Limitation for SFC-sliding discs: 570°F

ANSI600

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal									
	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" - 3/4"	1440	1395	1225	1115	1035	970	915	880	1440	1395	1225	1115	1035	970	915	880
1"	1275	1275	1225	1115	1015	925	830	785	1275	1275	1225	1115	1015	925	830	785
1 1/4"	1440	1395	1225	1115	1035	970	915	880	1440	1395	1225	1115	1035	970	915	875
1 1/2"	1275	1275	1225	1115	1015	925	830	785	1050	1050	1050	1000	950	770	630	545
2"	1440	1395	1225	1115	1035	970	915	880	1125	1125	1125	1070	1020	825	675	585
2 1/2"	1160	1160	1160	1115	1035	970	915	880	905	905	905	865	820	665	545	470
3"	695	695	695	695	695	695	695	645	530	530	530	505	480	390	320	275

Limitation for SFC-sliding discs: 570°F

Application limits for GS3 valves made out of carbon steel

The actual maximum permissible operating pressure of the valve results from the minimum value of the pressure tables, the limitation by the pressure rating, the category according to DGRL 2014/68/EU and the application limits listed here. These pressures must not be exceeded for GS valves of the GS3 series made of carbon steel, even if the tensile force of the actuator would allow this.

PN16 + PN25

DN	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal					
	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
8" (max. PN25)	232	232	218	189	174	160	116	102	87	73	58	44
10" (max. PN25)	149	131	131	116	102	87	83,0	78,0	74,0	59,0	49,0	42,0

Limitation for SFC-sliding discs: 570°F

PN40

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal					
	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	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

Limitation for SFC-sliding discs: 570°F

PN100

Size	Movable sealing disc carbon or SFC						Movable sealing disc STN2, STN3 or hard metal					
	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" - 3/4"	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
1"	1450	1450	1450	1450	1365	1260	1450	1450	1450	1450	1365	1260
1 1/4"	1450	1450	1450	1450	1450	1435	1450	1450	1450	1220	1000	870
1 1/2"	1450	1450	1450	1450	1365	1260	1045	1000	945	770	625	535
2"	1450	1450	1450	1450	1450	1360	1115	1060	1015	810	665	580
2 1/2"	1160	1160	1160	1160	1160	1100	900	855	810	655	535	460
3"	695	695	695	695	695	635	520	495	480	375	320	275

Limitation for SFC-sliding discs: 570°F

ANSI150

Size	Movable sealing disc carbon or SFC								Movable sealing disc STN2, STN3 or hard metal							
	max. admissible pressures for GS3-valves in carbon steel								max. admissible pressures for GS3-valves in carbon 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"	285	280	255	230	200	175	150	120	285	280	255	230	200	175	150	120
6"	230	230	230	230	200	175	150	120	235	235	235	225	200	170	140	115
8"	230	230	230	230	200	175	150	120	150	145	120	110	100	80	65	55
10"	150	150	150	145	135	120	105	87	85	85	85	80	75	60	50	40

Limitation for SFC-sliding discs: 570°F

ANSI300

Size	Movable sealing disc carbon or SFC								Movable sealing disc STN2, STN3 or hard metal							
	max. admissible pressures for GS3-valves in carbon steel								max. admissible pressures for GS3-valves in carbon 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"	740	725	675	655	635	610	565	535	740	725	675	655	635	610	565	535
2 1/2"	740	725	675	655	635	610	565	535	605	605	605	575	545	485	550	470
3"	695	695	675	655	635	610	565	535	530	530	530	505	480	390	319	275
4"	480	480	480	480	480	480	475	475	480	480	480	460	435	355	290	245
5"	335	335	335	335	335	335	330	330	320	320	320	305	290	235	191	155
6"	230	230	230	230	230	230	230	230	230	230	230	225	210	170	141	115
8"	230	230	220	200	180	155	140	130	150	145	120	110	100	65	65	55

Limitation for SFC-sliding discs: 570°F

ANSI600

Size	Movable sealing disc carbon or SFC								Movable sealing disc STN2, STN3 or hard metal							
	max. admissible pressures for GS3-valves in carbon steel								max. admissible pressures for GS3-valves in carbon 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"-1"	1480	1455	1350	1310	1270	1215	1155	1085	1480	1455	1350	1310	1270	1215	1155	1085
1 1/4"	1480	1455	1350	1310	1270	1215	1155	1085	1480	1455	1350	1310	1270	1215	1010	870
1 1/2"	1450	1450	1350	1310	1270	1215	1155	1085	1050	1050	1050	1000	950	770	630	535
2"	1450	1450	1350	1310	1270	1215	1155	1085	1125	1125	1125	1070	1020	825	675	580
2 1/2"	1160	1160	1160	1160	1160	1160	1155	1085	905	905	905	865	820	665	545	460
3"	695	695	695	695	695	695	695	635	530	530	530	535	480	390	320	275

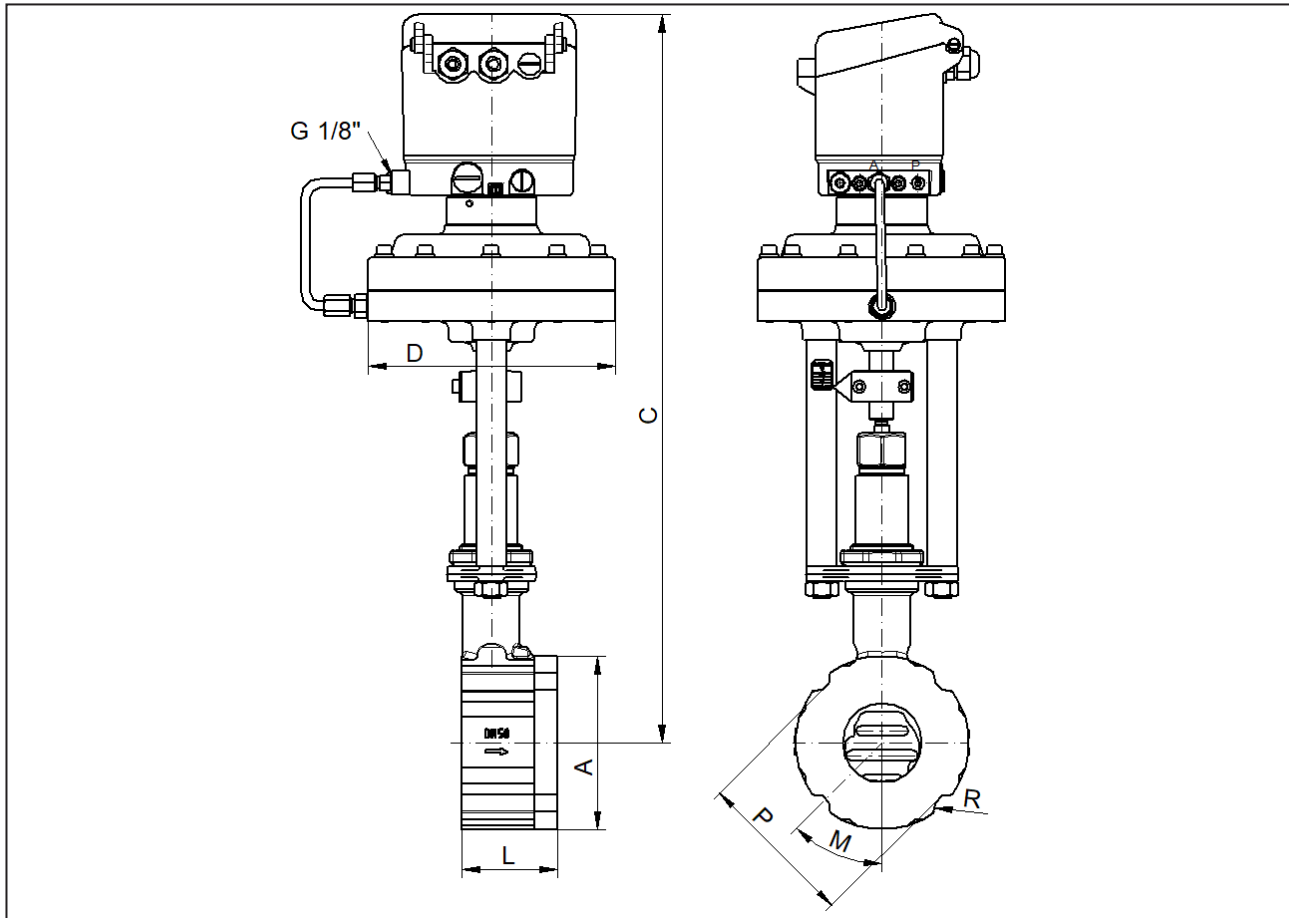
Limitation for SFC-sliding discs: 570°F

Sliding Gate Valve 8021



with integrated positioner Type 8049

Dimensions and Weights wafer-type construction



DN	ØA	C		ØD		PN 16			PN 40			PN 100		
		for actuator D125/ D250	D500	D 125	D250/ D500	P	M	Quantity of free savings	P	M	Quantity of free savings	P	M	Quantity of free savings
1/2"	2.52	18.11	20.08	6.5	8.74	---	---	---	2.09	1.77	0.16	2.48	1.77	0.16
3/4"	2.83	18.31	20.28	6.5	8.74	---	---	---	2.48	1.77	0.16	2.83	0	0
1"	3.23	18.5	20.47	6.5	8.74	---	---	---	2.87	1.77	0.16	3.23	0	0
1 1/4"	3.5	18.7	20.67	6.5	8.74	---	---	---	3.27	1.77	0.16	3.5	0	0
1 1/2"	3.9	18.9	20.87	6.5	8.74	---	---	---	3.7	1.77	0.16	3.9	0	0
2"	4.57	19.29	21.26	6.5	8.74	---	---	---	4.17	1.77	0.16	4.53	1.77	0.16
2 1/2"	5.43	19.69	21.65	6.5	8.74	---	---	---	5.08	0.89	0.31	5.43	0	0
3"	6.02	20.08	22.05	6.5	8.74	---	---	---	5.67	0.89	0.31	5.91	0.89	0.31
4"	7.24	20.47	22.44	6.5	8.74	---	---	---	6.46	0.89	0.31	---	---	---
5"	8.35	21.06	23.03	6.5	8.74	---	---	---	7.64	0.89	0.31	---	---	---
6"	9.53	21.65	23.62	6.5	8.74	---	---	---	8.66	0.89	0.31	---	---	---
8"	11.89	22.83	24.8	6.5	8.74	10.79	0.59	0.47	---	---	---	---	---	---
10"	14.17	23.82	25.79	6.5	8.74	12.95	0.59	0.47	---	---	---	---	---	---

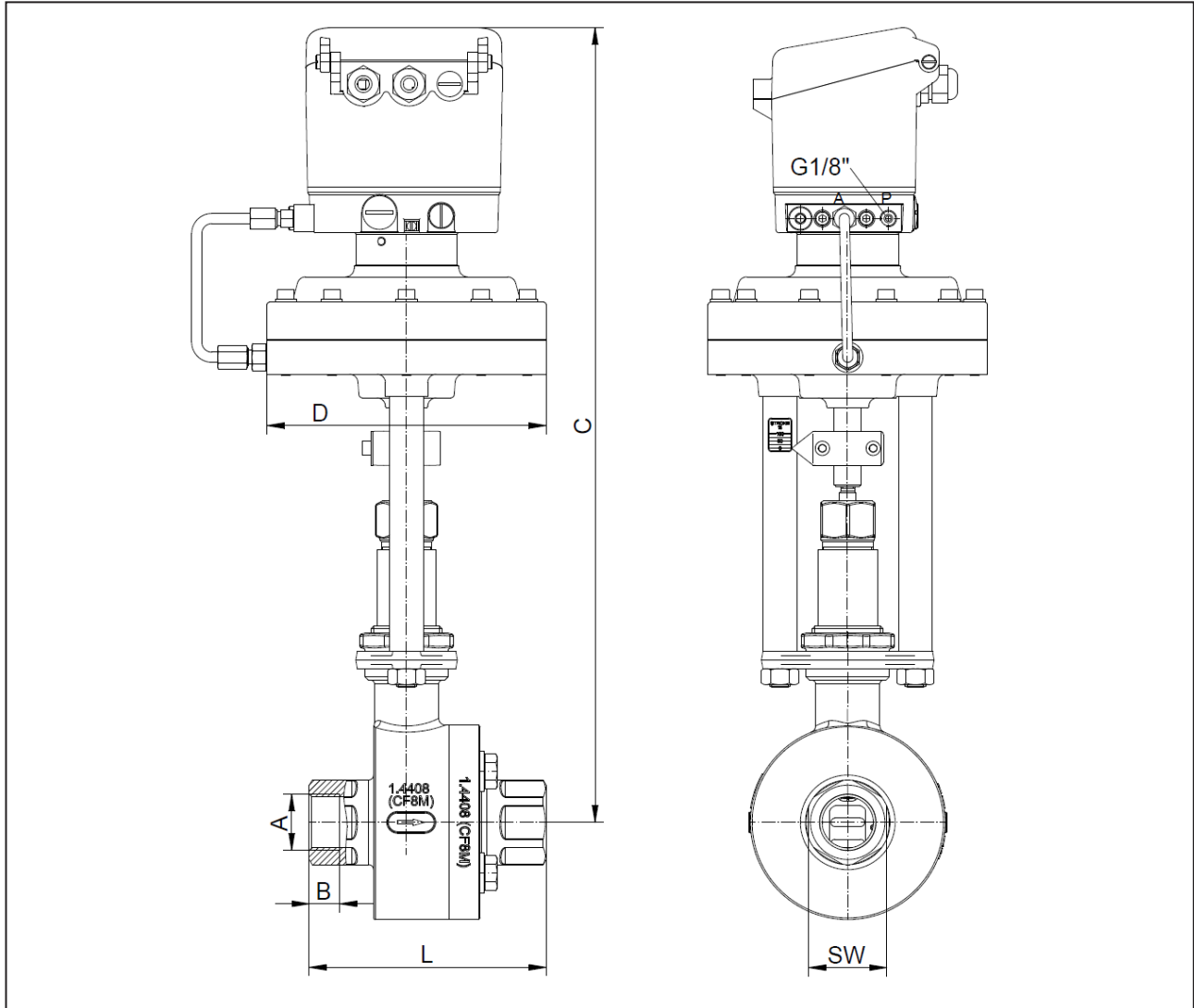
DN	ANSI 150			ANSI 300			ANSI 600			R	L	Stroke
	P	M	Quantity of free savings	P	M	Quantity of free savings	P	M	Quantity of free savings			
1/2"	1.92	1.77	0.16	2.09	1.77	0.16	2.09	1.77	0.16	0.31	2.2	0.24
3/4"	2.29	1.77	0.16	2.68	1.77	0.16	2.68	1.77	0.16	0.39	2.2	0.24
1"	2.66	1.77	0.16	2.87	1.77	0.16	2.87	1.77	0.16	0.39	2.2	0.24
1 1/4"	3.03	1.77	0.16	3.27	1.77	0.16	3.27	1.77	0.16	0.39	2.2	0.24
1 1/2"	3.43	1.77	0.16	3.7	1.77	0.16	3.7	1.77	0.16	0.39	2.2	0.24
2"	4.17	1.77	0.16	4.41	0.89	0.31	4.41	0.89	0.31	0.39	2.52	0.31
2 1/2"	4.92	1.77	0.16	5.08	0.89	0.31	5.08	0.89	0.31	0.39	2.68	0.31
3"	5.43	1.77	0.16	5.91	0.89	0.31	5.91	0.89	0.31	0.39	2.76	0.31
4"	6.93	0.89	0.31	7.17	0.89	0.31	---	---	---	0.39	2.95	0.33
5"	7.64	0.89	0.31	8.35	---	0	---	---	---	0.63	3.15	0.33
6"	8.66	0.89	0.31	9.53	---	0	---	---	---	0.63	3.15	0.33
8"	11.02	0.89	0.31	---	---	---	---	---	---	0.63	3.66	0.33
10"	13.31	0.59	0.47	---	---	---	---	---	---	0.63	3.78	0.33

Dimensions in inch

Sliding Gate Valve 8021

with integrated positioner Type 8049

Dimensions and Weights with threaded connection



Size	A (G / NPT)	B		C	øD for actuator		L	SW	Stroke	Weight (kg) for actuator	
		G	NPT		D125	D250				D125	D250
1/2"	1/2"	0.6	0.54	18.11	6.5	8.74	5	1.2	0.25	21.6	26.5
3/4"	3/4"	0.6	0.56	18.31	6.5	8.74	5	1.5	0.25	23.6	28.4
1"	1"	0.7	0.66	18.5	6.5	8.74	5.5	1.8	0.25	29.3	34.2
1 1/4"	1 1/4"	0.7	0.68	18.7	6.5	8.74	5.5	2.2	0.25	31.5	36.4
1 1/2"	1 1/2"	0.7	0.68	18.9	6.5	8.74	6	2.5	0.25	34.4	39.2
2"	2"	0.7	0.7	19.29	6.5	8.74	6	2.9	0.3	40.3	45.2

Dimensions in inch

Sliding Gate Valve 8021



Inquiry sheet for sliding gate valves

Valve dimensioning

In order to be able to dimension a valve for a quotation, at least the following data must be known:

1. Medium

(Designation, composition and aggregate state)

2. Operating data

		minimal	normal	maximum	units
Input pressure	P1				
Output pressure	P2				
Temperature	T1				
Flow rate	Q				

3. Valve function

Control valve Stop valve

4. Type of actuator

Hand operated Pneumatically operated Electrically operated

Control pressure psi Voltage psi

Spring opens (NO) Spring closes (NC)

5. Accessory

Limit switch Piece Pilot valve V

6. Other requests