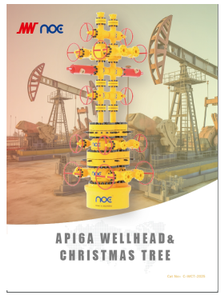
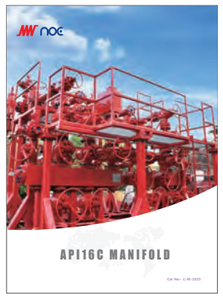
NEWAY OIL EQUIPMENT

Product Summary

Subsea Products



WELLHEAD & CHRISTMAS TREE



MANIFOLD

FRACTURING PRODUCTS

ACTUATOR

To be a Global Leading Manufacturer of Flow Equipment
Complete Solutions for Smart High Pressure Flow Equipment

Neway Oil Equipment (Suzhou) Co., Ltd
Address: No.999 Xiangjiang Road,
Suzhou New District, P.R.China
Tel: 0512-6708-1952
Email: noe@neway.com.cn
Website: www.newayoilequipment.com
Post: 215129

WEBSITE WECHAT

NEWAY OIL EQUIPMENT

API6A VALVES

Cat No: C-V-2025

How to Order

Figure Number Example:

GEN	2-1/16"	5M	FLG	DD-NL	PU	PSL2	PR1
①	②	③	④	⑤	⑥	⑦	⑧

Following descriptions provide a basic guideline in valve specification:

① Valve type

Valve type	Symbol	Valve type	Symbol
Expanding Gate Valve	GEN	Multiple Orifice Choke	CM
Expanding Gate Valve(high temperature)	GEH	Trunnion Mounted Ball Valve	BS
Slab Gate Valve	GBC	Trunnion Mounted Ball Valve	BT
Slab Gate Valve(lip seal)	GBS	Metallic Sealing Ball Valve	BTM
Ball Screw Gate Valve	GBSR	Regular Check Valve	LC
Frac Service Gate Valve	GBW	Regular Check Valve	SC
Plug & Cage Control Choke	CAP	Full-opening Check Valve	SF
External Sleeve Control Choke	CAE	Mud Valve	GA
Adjustable Needle Choke	CAN	Mud Valve	GA75
Positive Choke	CP	Globe Valve	GL

② Size

in	1-13/16	2-1/16	2-9/16	3-1/16	3-1/8	4-1/16	5-1/8	6-3/8	6-5/8	7-1/16	9
mm	46	52	65	78	79	103	130	162	168	178	228

③ Working Pressure

Symbol	2M	3M	5M	10M	15M	20M
MPa	13.8	20.7	34.5	69.0	103.5	138.0
Psi	2,000	3,000	5,000	10,000	15,000	20,000

④ End Connection

Symbol	FLG	LP	NU	EU	H	W
End	Flange End	Pipeline Thread	Tubing Thread	EU Thread	Hub Connection	Weld Connection

⑤ Material Selection

Please find the detailed sheet on the next page.

⑥ Temperature Rating

Symbol	Range(°F)		Range(℃)	
K	-75	180	-60	82
L	-50	180	-46	82
N	-50	140	-46	60
P	-20	180	-29	82
S	0	140	-18	60
T	0	180	-18	82
U	0	250	-18	121
V	35	250	2	121
X	0	350	0	180
Y	0	650	0	345

⑦ Product Specification Level

Symbol	PSL1	PSL2	PSL3	PSL3G	PSL4
Testing Type	Hydrostatic Test	Hydrostatic Test	Hydrostatic Test	Hydrostatic & Gas Test	Hydrostatic & Gas Test
Traceability	No	No	Yes	Yes	Yes

⑧ Product Performance Requirement

Symbol	PR1	PR2

Material Selection

⑤ Material Selection

Parts	Material Type	Surface Treatment	Size							
			DD-NL	EE-0.5	EE-1.5	EE-NL	FF-0.5	FF-1.5	FF-NL	HH-NL
Body	ZG30CrMo	-	■	■	■	■				
	AISI 4130	-	■	■	■	■				
	ASTM A217-CA15	-					■	■	■	
	AISI 410	-					■	■	■	
	AISI 4130	CLAD								■
Bonnet	AISI 4130	-	■	■	■	■				
	AISI 410	-					■	■	■	
	AISI 4130	CLAD								■
Stem	AISI 4130	QPQ	■							
	17-4PH	QPQ		■			■			
	AISI 410	QPQ			■			■		
	INCONEL 718	-				■			■	■
Gate	AISI 4130	QPQ	■							
	AISI 4130	TC	■							
	AISI 410	QPQ		■	■	■	■	■	■	
	AISI 410	TC		■	■	■	■	■	■	
	AISI 410	STL		■	■	■	■	■	■	
	17-4PH	QPQ		■	■	■	■	■	■	
	INCONEL 718	-								■
Seat	AISI 4130	QPQ	■							
	AISI 4130	TC	■							
	AISI 410	QPQ		■	■	■	■	■	■	
	AISI 410	TC		■	■	■	■	■	■	
	AISI 410	STL		■	■	■	■	■	■	
	17-4PH	QPQ		■	■	■	■	■	■	
	INCONEL 725/718	-								■
Bonnet Ring	Carbon Steel	ZINC	■							
	SS316	-		■	■	■	■	■	■	
	INCONEL 625	-								■

Notes:

Symbol	Meaning
CLAD	Surface Cladding
QPQ	Nitriding
TCC	Tungsten Carbide
STL	Stellite Overlay

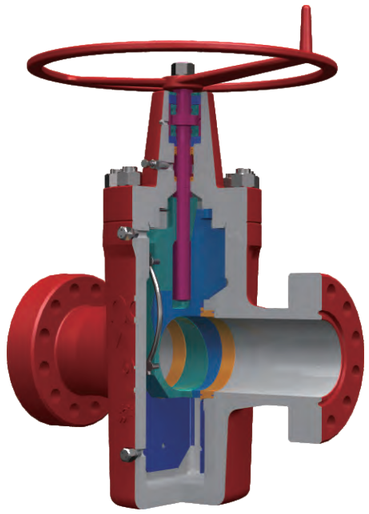
Product Range

Valve Type		Working Pressure	Size									
			1-13/16''	2-1/16''	2-9/16''	3-1/8''	3-1/16''	4-1/16''	5-1/8''	7-1/16''	9''	11''
Gate Valve	GEN	2,000		■	■	■		■		■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
	GEH	2,000		■				■				
		3,000		■		■		■				
		5,000		■	■			■				
	GBC	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■	■	
		10,000	■	■	■		■	■	■			
		15,000	■	■	■		■	■	■			
		20,000	■	■	■		■					
	GBS	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■	■	
		10,000	■	■	■		■	■	■	■	■	
		15,000	■	■	■		■	■	■	■		
		20,000	■	■	■		■			■		
	GBSR	5,000									■	
		10,000						■	■	■	■	
		15,000						■	■	■		
		20,000					■	■				
	GBW	3,000					■	■	■	■		
		5,000					■	■	■	■		
		10,000	■	■	■		■	■	■			
		15,000	■	■	■		■	■				
		20,000	■	■	■		■					
	GBFL	10,000							■	■		
		20,000						■	■	■		
	GA	2,000			■	■	■		■	■		
		3,000			■	■	■		■	■		
		5,000			■	■	■		■	■		
		7,500			■	■		■	■	■		
		10,000					■	■	■			
	AH	3,000	■	■	■		■	■	■	■	■	
		5,000	■	■	■		■	■	■	■	■	
		10,000	■	■	■		■	■	■	■	■	
		15,000	■	■	■		■	■	■	■		
		20,000	■	■	■		■					
	AC	3,000						■	■			
		5,000					■	■	■			
		10,000					■	■	■			
		15,000					■					
	DH	3,000	■	■	■		■	■	■	■	■	
		5,000	■	■	■		■	■	■	■	■	
		10,000	■	■	■		■	■	■	■	■	
		15,000	■	■	■		■	■	■	■		
		20,000	■	■	■		■					
	AP	3,000	■	■	■		■	■	■	■		
		5,000	■	■	■		■	■	■	■		
		10,000	■	■	■		■	■	■	■		
		15,000	■	■	■		■	■	■			
		20,000	■	■	■		■					
	AD	3,000	■	■	■		■	■	■	■		
		5,000	■	■	■		■	■	■	■		
		10,000	■	■	■		■	■	■	■		
		15,000	■	■	■		■	■	■			

Valve Type		Working Pressure	Size									
			1-13/16''	2-1/16''	2-9/16''	3-1/8''	3-1/16''	4-1/16''	5-1/8''	7-1/16''	9''	11''
Choke Valve	CAP	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
		10,000		■	■		■	■	■			
		15,000		■	■		■	■				
		20,000										
	CAE	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
		10,000		■	■		■	■	■	■		
		15,000		■	■		■	■	■			
		20,000		■	■		■					
	CAN	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
		10,000		■	■		■	■	■			
		15,000		■	■							
	CP	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
		10,000		■	■		■	■	■			
		15,000		■	■							
	CM	2,000		■	■	■		■	■	■		
		3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
		10,000		■	■		■	■	■			
		15,000		■	■		■	■				
		20,000										
Ball Valve	BS	3,000		■		■		■		■	■	
		5,000		■		■		■		■	■	
	BT	2,000		■		■		■		■		
		3,000		■		■		■		■		
		5,000		■		■		■		■		
	BTM	5,000				■						
		10,000	■	■			■					
	BEM	10,000	■	■								
Check Valve	LC	2,000		■	■	■		■		■	■	■
		3,000		■	■	■		■		■	■	■
		5,000		■	■	■		■		■	■	■
		10,000	■	■	■		■	■	■	■	■	
		15,000	■	■	■		■	■				
		20,000	■	■	■		■					
	SC	3,000		■	■	■		■		■	■	■
		5,000		■	■	■		■		■	■	■
		10,000		■	■	■		■		■	■	■
	SF	10,000		■		■		■				
Globe Valve	GL	3,000		■	■	■		■	■	■		
		5,000		■	■	■		■	■	■		
Plug Valve	PL	15,000	■					■				

Description

The GE Gate Valve, with expanding split gate design, non-rising stem and all kinds of sealing provide safe, dependable service in applications of 2000 to 5000 psi WP. It is available in sizes from 2-1/16” through 4-1/16” with threaded and 2-1/16 " through 7-1/16" with flanged ends. It is available in trims for all types of oilfield service.

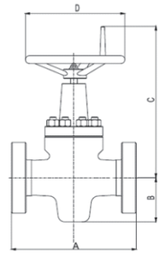


Features

- It is available in two sealing types, double sealing and metal to metal sealing.
- Expanding gate design creates a positive mechanical seal across seat, with or without line pressure;
- The valve has a preferred direction of installation (marked with an arrow on the valve body) .
- Gate skirts reduce loss of body lubricants.
- Upper/lower thrust bearings are isolated from well fluid, minimizing torque.
- Stem packing can be re-energized with the valve under pressure.
- Non-rising stem permits valve installation in closer quarters.

Approved Certification

PR2	Product Test, Issued by LR
CE/PED	For API 6A Product, Issued by DNV



Dimensions for flanged end GE

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

2,000 psi Working Pressure

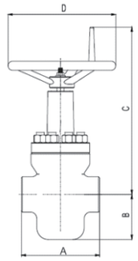
Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16”	2.06	52.4	11.62	295	4.92	125	18.50	470	11.02	280	99	45
2-9/16”	2.56	65.1	13.12	333	5.91	150	19.29	490	12.99	330	143	85
3-1/8”	3.13	79.4	14.12	359	7.28	185	21.65	550	12.99	330	220	100
4-1/16”	4.06	103.2	17.12	435	8.86	225	25.00	635	15.75	400	353	205
7-1/16”	7.06	179.4	26.12	664	14.17	360	32.48	825	25.59	650	1146	520

3,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16”	2.06	52.4	14.62	371	5.31	135	18.31	465	12.99	330	165	75
2-9/16”	2.56	65.1	16.62	422	5.91	150	19.49	495	15.75	400	220	100
3-1/8”	3.13	79.4	17.12	435	7.28	185	21.85	555	15.75	400	276	125
4-1/16”	4.06	103.2	20.12	511	8.86	225	25.59	650	18.90	480	573	260
7-1/16”	7.06	179.4	28.12	714	14.17	360	32.48	825	29.92	760	1235	560

5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16”	2.06	52.4	14.62	371	5.31	135	18.50	470	12.99	330	154	70
2-9/16”	2.56	65.1	16.62	422	5.91	150	19.49	495	15.75	400	220	100
3-1/8”	3.13	79.4	18.62	473	7.28	185	21.85	555	15.75	400	320	145
4-1/16”	4.06	103.2	21.62	549	9.06	230	25.39	645	18.90	480	573	260
7-1/16”	7.06	179.4	32	813	13.98	335	32.68	830	29.92	760	1433	650



Dimensions for threaded end GE

A: Thread face to face
B: Bore centerline to bottom of valve
C: Bore centerline to handwheel top
D: Handwheel diameter

2,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	9.65	245	4.92	125	18.50	470	11.02	280	99	45
2-9/16"	2.56	65.1	10.24	260	5.91	150	19.29	490	12.99	330	132	60
3-1/8"	3.13	79.4	11.42	290	7.28	185	21.65	550	12.99	330	198	85
4-1/16"	4.06	103.2	12.99	330	8.86	225	25.00	635	12.99	330	276	150

3,000 psi Working Pressure

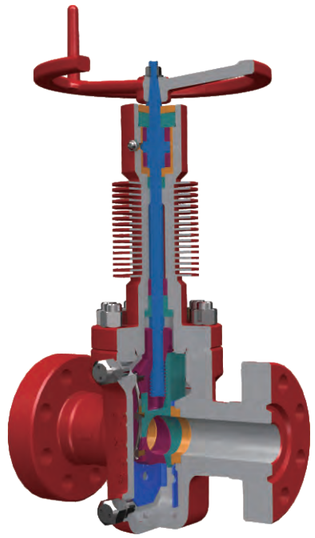
Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	8.86	225	4.92	125	18.70	475	12.99	330	110	50
2-9/16"	2.56	65.1	10.24	260	5.91	150	19.49	495	15.75	400	143	65
3-1/8"	3.13	79.4	11.42	290	7.28	185	21.85	555	15.75	400	198	90
4-1/16"	4.06	103.2	12.99	330	9.06	230	26.38	670	20	508	276	190

5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	8.86	225	4.92	125	18.70	475	12.99	330	110	50
2-9/16"	2.56	65.1	10.24	260	5.91	150	19.49	495	15.75	400	143	65
3-1/8"	3.13	79.4	11.42	290	7.28	185	21.85	555	15.75	400	198	90
4-1/16"	4.06	103.2	12.99	330	9.06	230	25.39	645	18.90	480	419	190

Description

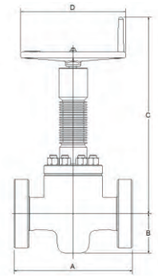
The GE Gate Valve, with expanding split gate design, non-rising stem and all kinds of sealing provide safe, dependable service in applications of 2000 to 5000 psi WP. It is available in sizes from 2-1/16" through 4-1/16" with threaded and 2-1/16 " through 7-1/16" with flanged ends. The valve is suitable for thermal recovery wellhead.



Features

- Seat is welded to the valve body which decrease the sealing face.
- Metal to metal sealing between seat & gate to ensure the sealing performance of Y level temperature.
- Gate: parallel expanding ,with spring which can appropriately increase the pressure between the seat at any time to ensure the sealing .
- Disc and seat sealing surface through nitriding, spray welding and HVOF to improve the quality, ensure the sealing and prolong the service life.
- Stem with double packing design, improved the seal performance of the valve stem.
- The bonnet is equipped with cooling structure, which can effectively inhibit heat conduction upwards and protect the seals.
- Bearing space sleeve is equipped with grease fitting which can prolong the service life of bearing and lower operating torque.
- Valve is equipped with heavy-duty thrust bearing, reduce the operating torque.

Expanding Gate Valve GEH



Dimensions for flanged end GEH

A: Flange face to face
B: Bore centerline to bottom of valve
C: Bore centerline to handwheel top
D: Handwheel diameter

2,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	11.62	295	4.92	125	24.80	630	11.02	280	99	45
4-1/16"	4.06	103.2	17.12	435	9.06	230	44.09	1120	15.75	400	276	150

3,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.62	371	4.92	125	24.80	630	12.99	330	165	75
3-1/8"	3.13	79.4	17.12	435	7.68	195	25.79	655	15.75	400	276	125
4-1/16"	4.06	103.2	20.12	511	9.45	240	44.09	1120	18.90	400	573	260

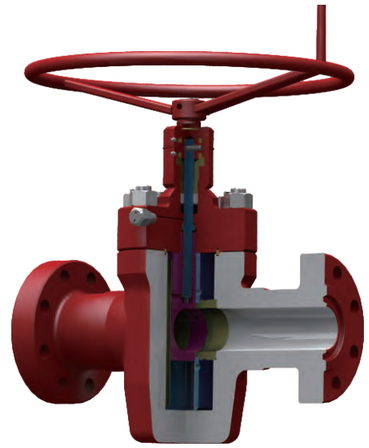
5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.62	371	4.92	125	24.8	630	12.99	330	154	70

GBC Slab Gate Valve

Description

The GBC Gate Valve is a field-proven valve that provides reliability and interchangeability. The valve is available in a wide variety of trim configurations to suit all service conditions. Valves are also available prepared for an actuator of the customer's choice or equipped with a Neway Pneumatic Diaphragm, Pneumatic Piston or Hydraulic Actuator. It is available in pressure ratings from 2000 to 20,000 psi and bore sizes of 1-13/16" to 7-1/16".

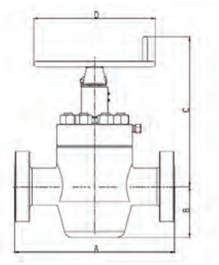


Features

- GBC slab gate valves are full bore, through conduit design, non-rising stem, symmetrical, bi-directional design without a preferred direction of operation.
- Bearing cap grease fitting allows positive bearing lubrication.
- Stem can be back seated to allow stem seal replacement with the valve under pressure(For safety purposes, it's suggested to replace packing after releasing pressure).
- Grease injection fitting is located on the bonnets, for lubricating stem, and gate. It can also be used to test the back seat integrity.
- Positive metal-to-metal sealing (gate-to-seat and seat-to-body).
- Special modified ACME threads at the gate-to-stem connection provide sufficient freedom of movement to creating effect a positive downstream seal.
- Handwheel can be easily removed/reassembled by means of a screw and nut.

Approved Certification

PR2	Product Test, Issued by DNV & LR
CE/PED	For API 6A Product, Issued by DNV
API607/6FA	Fire Safe Test, Issued by LR



Dimensions for flanged end GBC

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

2,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16”	2.06	52.4	11.62	295	5.00	127	18.90	480	14.02	356	112	51
2-9/16”	2.56	65.1	13.12	333	6.34	161	22.36	568	14.00	356	208	95
3-1/8”	3.13	79.4	14.12	359	7.48	190	22.83	580	17.01	432	320	145
4-1/16”	4.06	103.2	17.12	435	8.98	228	22.64	575	15.16	385	397	180

3,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16”	2.06	52.4	14.62	371	5.28	134	20.67	525	14.00	356	165	75
2-9/16”	2.56	65.1	16.62	422	6.34	161	22.36	568	14.00	356	208	95
3-1/8”	3.13	79.4	17.12	435	7.01	178	22.74	578	17.00	432	262	119
4-1/16”	4.06	103.2	20.12	511	9.37	238	25.12	638	18.50	470	496	225
5-1/8”	5.13	130.2	24.12	613	11.38	289	26.38	670	24.02	610	926	420
7-1/16”	7.13	181.0	28.12	714	14.63	372	34.25	870	24.02	610	1620	735

5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16”	2.06	52.4	14.62	371	5.32	135	21.65	550	14.00	356	165	75
2-9/16”	2.56	65.1	16.62	422	6.00	153	22.44	570	14.00	356	231	105
3-1/8”	3.13	79.4	18.62	473	7.56	192	22.64	575	17.00	432	320	145
4-1/16”	4.06	103.2	21.62	549	9.65	245	25.20	640	18.50	470	529	240
5-1/8”	5.13	130.2	28.62	727	11.22	285	28.15	715	24.00	610	959	435
7-1/16”	7.13	181.0	32	813	14.63	372	34.25	870	24.02	610	1984	900
9”	9.00	228.6	41	1041	18.50	470	45.28	1150	-	Gear Box	3748	1700

10,000 psi Working Pressure

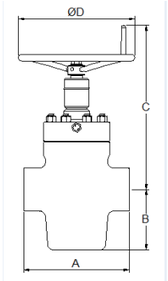
Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16“	1.81	46.1	18.25	464	5.15	131	21.74	552	14.00	356	187	85
2-1/16”	2.06	52.4	20.50	521	5.75	146	21.54	547	18.50	470	265	120
2-9/16”	2.56	65.1	22.25	565	6.69	170	22.36	568	18.50	470	309	140
3-1/16”	3.06	77.8	24.38	619	8.19	208	23.23	590	24.02	610	452	205
4-1/16”	4.06	103.2	26.38	670	9.84	250	26.26	667	24.00	610	805	365
5-1/8”	5.13	130.2	29.00	737	13.11	333	28.94	735	24.02	610	1312	595

15,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16”	1.81	46.1	18	457	5.63	143	21.65	547	18.50	470	309	140
2-1/16”	2.06	52.4	19	483	6.69	170	21.54	547	18.50	470	298	135
2-9/16”	2.56	65.1	21	533	6.69	170	24.61	625	18.50	470	529	240
3-1/16”	3.06	77.8	23.56	598	9.49	241	27.76	705	24.00	610	827	375
4-1/16”	4.06	103.2	29	737	10.28	261	29.53	750	24.00	610	1091	495

20,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16”	1.66	42.1	21	533	5.82	148	21.58	548	18.50	470	474	215



Dimensions for threaded end GBC

A:Thread face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

2,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	8.98	228	5.00	127	18.90	480	14.02	356	99	45
2-9/16"	2.56	65.1	12.20	310	6.34	161	22.36	568	14.00	356	208	95
3-1/8"	3.13	79.4	13.39	340	7.48	190	22.52	570	17.01	432	276	125
4-1/16"	4.06	103.2	15.43	392	8.98	228	22.52	572	18.50	470	331	150

3,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	9.61	244	5.39	137	21.57	548	14.00	356	115	52
2-9/16"	2.56	65.1	12.20	310	6.34	161	22.36	568	14.00	356	208	95
3-1/8"	3.13	79.4	13.39	340	7.56	192	22.74	578	17.00	432	262	119
4-1/16"	4.06	103.2	15.43	392	9.37	238	25.12	638	18.50	470	496	225

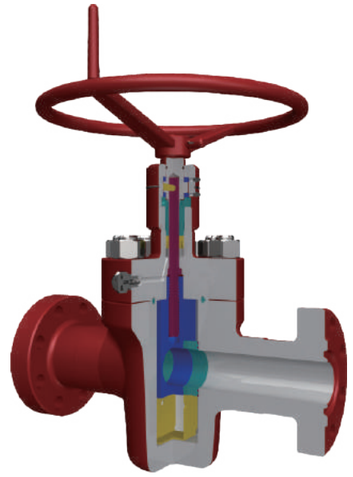
5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	9.61	244	5.39	137	21.46	545	14.02	356	132	60
2-9/16"	2.56	65.1	16.61	422	6.00	153	22.38	569	14.00	356	220	100
3-1/8"	3.13	79.4	18.62	473	7.56	192	22.64	575	17.00	432	322	146
4-1/16"	4.06	103.2	21.61	549	9.65	245	25.12	638	18.46	469	525	238

Description

The GBS Gate Valve is manufactured in accordance with API 6A and NACE MR 0175 and widely recognized as a high quality valve for all types of applications. The GBS is a full-bore, through-conduit valve available in standard double flange, threaded-end and special block body configurations. It is available in pressure ratings from 2000 to 20,000 psi and bore sizes of 1-13/16" to 11".

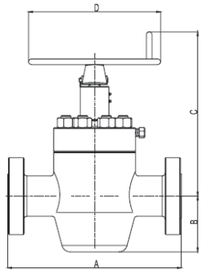
Features



- Grease injection fitting is located on the bonnet, for lubricating stem, stem nut and gate.
- In addition to the metal-to-metal seal between the seats and gate, GBS gate valves incorporate two spring-loaded, pressure-energized structures.
- The structure can sense the spring supply load to seal when there is low pressures and lip seal to seal when there is high pressure. Non-electrometric lip-seal between each seat and the body. This kind of structure protects the metal seal surface of the seat and gate from damage and improves valve performance at very low pressures.
- This double-seal design provides maximum protection against intrusion of particles into the valve cavity, prevents sand particles from affecting the metal-to-metal seal between the body and seats and gate and also prevents body erosion in drilling mud applications.
- Positive metal-to-metal sealing (gate-to-seat and seat-to-body).
- Simple, reliable gate and seat design promotes ease of field service.
- Bi-directional design provides flow direction versatility and increased service life.
- Bearing cap grease fitting allows positive bearing lubrication.
- Stem can be back seated to allow stem seal replacement with the valve under pressure(For safety purposes, it's suggested to replace packing after releasing pressure).
- Metal-to-metal bonnet seal, (pressure energized at 10,000 psi WP and above).
- The stem packing is a pressure energized seal and can withstand severe temperatures and fluids. It is constructed of a non-elastomeric material that offers a low coefficient of friction.
- Compatible with a wide range of actuators.

Approved Certification

PR2	Product Test, Issued by DNV
CE/PED	For API 6A Product, Issued by DNV
ABS	For API 6A Product, Issued by ABS



Dimensions for flanged end GBS

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

5,000 psi Working Pressure

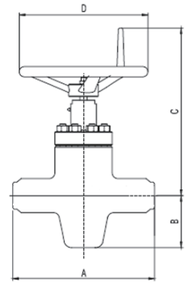
Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.62	371	5.28	134	21.61	549	14.02	356	165	75
2-9/16"	2.56	65.1	16.62	422	6.34	161	22.36	568	14.00	356	209	95
3-1/8"	3.13	79.4	18.62	473	7.48	190	22.52	572	17.01	432	320	145
4-1/16"	4.06	103.2	21.62	549	9.65	245	24.99	635	17.72	450	507	230
5-1/8"	5.13	130.2	28.62	727	11.38	289	27.36	695	24.00	610	1102	500
7-1/16"	7.06	179.4	32	813	14.63	372	51.97	1320	42.91	1090	1984	900

10,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16"	1.81	46.0	18.25	464	5.12	130	21.85	555	14.02	356	194	88
2-1/16"	2.06	52.4	20.50	521	5.71	145	21.65	550	18.50	470	243	110
2-9/16"	2.56	65.1	22.25	565	6.69	170	22.44	570	18.50	470	298	135
3-1/16"	3.06	77.8	24.38	619	8.19	208	24.41	620	24.02	610	474	215
4-1/16"	4.06	103.2	26.38	670	9.84	250	26.38	670	24.00	610	805	365
5-1/8"	5.13	130.2	29.00	737	13.19	335	29.13	740	24.02	610	1323	600
6-3/8"	6.37	161.9	35.00	889	14.76	375	45.87	1165	35.00	889	2502	1135

15,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16"	1.81	46.1	18	457	5.63	143	27.20	547	18.50	470	298	135
2-1/16"	2.06	52.4	19	483	6.69	170	21.54	547	18.50	470	287	130
2-9/16"	2.56	65.1	21	533	7.68	195	23.48	597	18.50	470	529	240
3-1/16"	3.06	77.8	23.56	598	9.45	240	24.61	625	23.03	585	871	395
4-1/16"	4.06	103.2	29	737	11.69	297	35.79	909	24.02	610	1554	705



Dimensions for welded end GBS

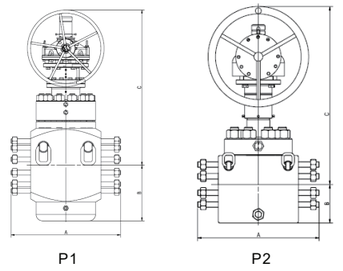
A:Weld face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

3,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	10.63	270	5.28	134	21.61	549	14.02	356	132	60
2-9/16"	2.56	65.1	12.36	314	6.34	161	22.36	568	14.02	356	172	78
3-1/8"	3.13	79.4	13.62	346	7.48	190	22.52	572	17.01	432	320	145

5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
5-1/8"	5.13	130.2	28.62	727	11.02	280	20.47	520	23.62	600	734	333



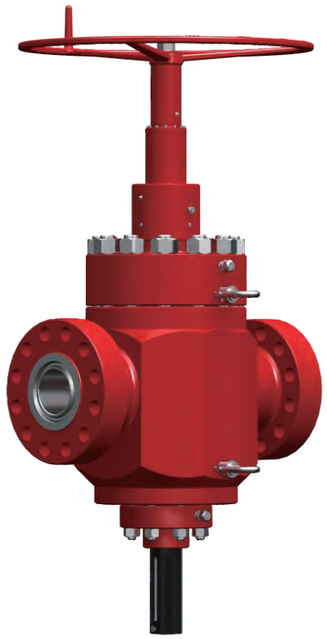
Dimension for studed end GBS Gear Box Operation

A:Stud face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
10000psi Working Pressure

	Size	Bore		A		B		C		Weight		Gear ratio	Full open/close Turn Count
		in	mm	in	mm	in	mm	in	mm	lb	kg		
P1	1-13/16"	1.81	46.1	16.14	410	5.12	130	20.87	530	367.40	167	2.35	28
	2-1/16"	2.06	52.4	16.93	430	6.36	161.5	21.18	538	638.00	290	2.35	31
	4-1/16"	4.06	103.2	23.86	606	9.84	250	27.17	690	1188.00	540	8.4	200
P2	6-5/8"	6.52	161.9	33.70	856	16.69	424	45.51	1156	3612.40	1642	6.0	188
	7-1/16"	7.06	179.4	33.70	856	16.93	430	46.06	1170	3656.40	1662	6.0	200
	9"	9	228.6	46.30	1176	23.23	590	57.72	1466	12078.00	5490	25.1	383
	11"	11	279.4	53.31	1354	27.56	700	64.96	1650	16541.80	7519	25.1	610

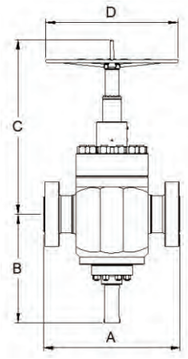
Description

The GBFL Gate Valve was designed for use as a manual valve in high pressure,large bore applications. This valve incorporates a lower balancing stem and unique ball screw mechanism for ease of operation in the field. It is value-engineered for reliability, low torque,ease of operation and servic and has many of the same features as the GBS gate valve,including the gate and seat design.



Features

- Bi-directional and through conduit design provides low flow residence and increased service life.
- A ball screw mechanism and balance stem are incorporated into the GBFL gate valve to minimize the actuating torque.
- Sealing at the gate-to-seat and the seat-to-body is metal-to-metal.
- One-piece seats and a slab gate ensure dependable sealing and simplify field service. The gate and seat assembly seals in both directions, and the gate and seats can be reversed for increased life.
- In addition to the metal-to-metal seal between the seat and valve body, non-elastomeric seal rings provide protection against intrusion of particle contaminates into the valve cavity, improve gate and seat service life, prevent damage to the body-to-seat seal face, and improve valve performance at very low pressure.
- The stem packing can withstand severe temperatures and fluids of fracturing conditions. It's economical and convenient to maintain.
- The balance stem may be used to indicate the gate position.
- The seal between the valve body and bonnet is a pressure-energized, BX-style metal bonnet gasket.



Dimensions for flanged end GBFL

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

10,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
5-1/8"	5.13	130.2	29	737	26.97	685	42.72	1085	23.62	864	2006	910
6-3/8"	6.38	162	35	889	30	762	58.07	1305	34	864	2502	1135
7-1/16"	7.06	179.4	41	889	27.95	710	65.16	1655	34	864	3748	1700

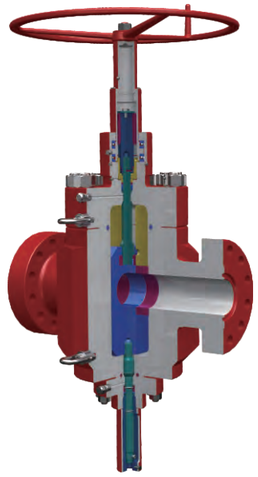
15,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.2	29	737	25.24	641	43.31	1100	23.62	600	1687	765
5-1/8"	5.13	130.2	35	889	27.99	711	45.08	1145	36	914	2601	1180
6-3/8"	6.38	162.0	41	1041	34.09	866	61.57	1640	40	1016	6779	3075
7-1/16"	7.06	179.4	41	1041	36.73	933	58.07	1475	34	864	5787	2625

Description

The GBS-R Gate Valve was designed as a manual valve for use in high pressure, large bore applications. This valve incorporates a lower balancing stem and unique ball screw mechanism for ease of operation in the field. It is value-engineered for reliability, low torque, ease of operation and service with many of the same features as the GBS Gate Valve, including the gate and seat design.

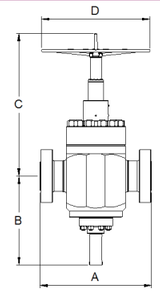
Features



- Bearing cap grease fitting allows positive bearing lubrication.
- Positive metal-to-metal sealing (gate-to-seat and seat-to-body).
- The lower stem balances the pressure thrust on the upper stem to reduce operating torque, prevents body cavity pressure build-up during operation and provides position indication.
- The upper stem and lower stem can be back seated to allow either stem packing to be replaced, under pressure if necessary. (For safety purposes, it's suggested to replace packing after releasing pressure).
- In addition to the metal-to-metal seal between the seats and valve body, two spring loaded, non-elastomeric lip-seals provide maximum protection against intrusion of particle contaminates into the valve cavity, improve gate and seat service life, prevent damage to the body-to-seat seal face, and improve valve performance at very low pressure.
- Pressure-energized metal-to-metal bonnet seal.
- The GBS-R Gate Valve has grease fittings located on the downstream side of the upper stem and lower stem back seat shoulders for lubricating stem and the valve cavity.
- Bi-directional design provides flow direction versatility and increased service life.
- The stem packing is a pressure energized seal and can withstand severe temperatures and fluids. It is constructed of a non-elastomeric material that offers a low coefficient of friction.

Approved Certification

CE/PED For API 6A Product, Issued by DNV



Dimensions for flanged end GBSR

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Handwheel diameter

5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
9"	9.00	228.6	41.00	1041	33.70	856	59.06	1500	24.02	610	4552	2065

10,000 psi Working Pressure

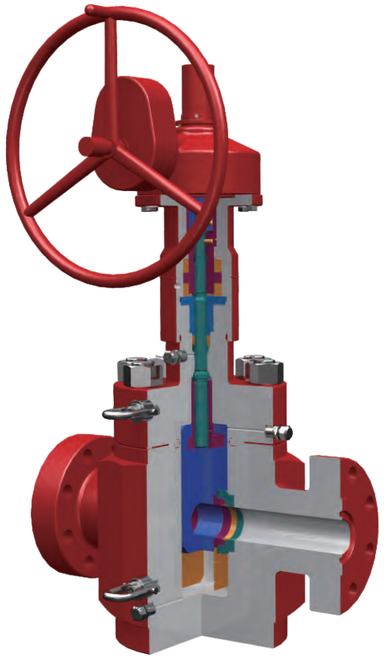
Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.2	26.38	670	24.09	612	40.75	1035	23.62	600	1235	560
5-1/8"	5.13	130.2	29.00	737	26.97	685	42.72	1085	23.62	600	2006	910
6-3/8"	6.38	162.0	35.00	889	30.00	762	51.38	1305	34.00	864	2502	1135
7-1/16"	7.06	179.4	35.00	889	27.95	710	65.16	1655	34.00	864	3748	1700

15,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.2	29	737	25.24	641	43.31	1100	23.62	600	1687	765
5-1/8"	5.13	130.2	35.00	889	27.99	711	45.08	1145	36.00	914	2601	1180
6-3/8"	6.38	162.0	41.00	1041	34.09	866	61.57	1640	40.00	1016	6779	3075
7-1/16"	7.06	179.4	41	1041	36.73	933	58.07	1475	34.00	864	5787	2625

20,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/16"	3.06	77.8	30.5	775	19.49	495	35.24	895	23.62	600	1885	855



Features

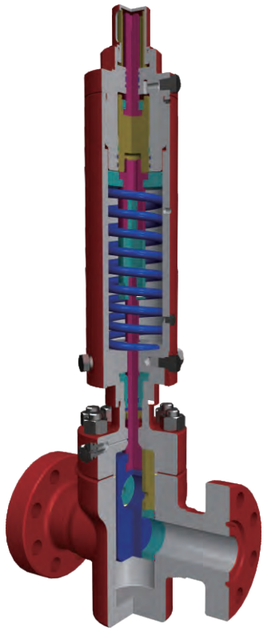
- The outer seats and inner seats are both embedded into the body. Under the pressure, the inner seats and outer seats move freely, creating an effective upstream sealing.
- The inner seats have a sand control plate design on the bottom, and the set of shielded ring between outer seats and inner seats prevents the sand getting into the body cavity effectively.
- The surface of the sand control board and the inner seat sealing surface are aligned. When the gate move downward, the gate is always contact with the inner seat and sand control plate in order to prevent sand getting into body

Approved Certification

CE/PED	For API 6A Product, Issued by DNV

Scope

Working Pressure	Size						
	1-13/16''	2-1/16''	2-9/16''	3-1/16''	4-1/16''	5-1/8''	7-1/16''
3000 psi				★	★	★	★
5000 psi				★	★	★	★
10000 psi	★	★	★	★	★	★	
15000 psi	★	★	★	★	★		
20000 psi	★	★	★	★			



Features

- Valve body pressure assist in closing valve.
- Back seat port for testing of metal to metal seating.
- Quick disconnect.
- Vent weep port above bonnet packing to detect stem packing integrity.
- Top shaft seals easily repaired in-line by removing upper piston assembly.
- Manufactured to Nace MR-0175 for effective operation under harsh environments.
- Non traveling seal design increases piston seals longevity.
- Piston cylinder and piston are electrolysis nickel plated for corrosion resistance.
- Hydraulic control port can be rotated 360 degrees for easy alignment.
- Metal-to-metal seal between bonnet and stem is designed to be secondary seal should high temperatures melt or distort bonnet stem packing.
- No small ports to plug up or freeze.
- Spring assist in closing with no valve body pressure.
- Actuator top shaft serves as a visual for position of gate.
- Can be installed as secondary master valve, wing valve, headers, gathering lines, pipelines or ESD valve.
- External Pressure Relief Device (PSE) to protect from over-pressure.

Approved Certification

PR2	Product Test , Issued by DNV
CE/PED	For API 6A Product, Issued by DNV

Scope

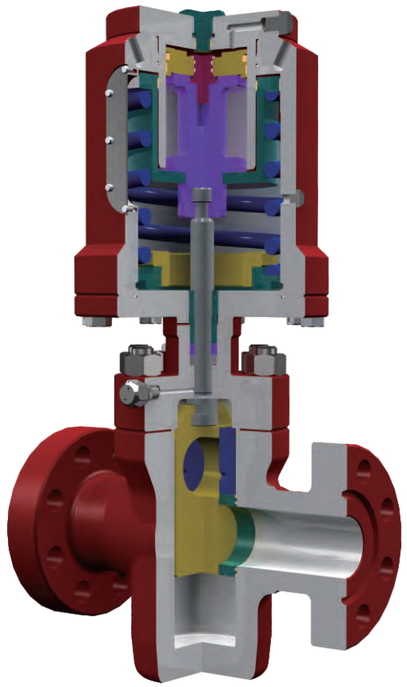
Working Pressure	Size							
	1-13/16''	2-1/16''	2-9/16''	3-1/16''	4-1/16''	5-1/8''	7-1/16''	9''
3000 psi	★	★	★	★	★	★	★	★
5000 psi	★	★	★	★	★	★	★	★
10000 psi	★	★	★	★	★	★	★	★
15000 psi	★	★	★	★	★	★	★	
20000 psi	★	★	★	★				

Actuator Accessories

- Mechanical Hold Open Device Assembly (Non Fusible)
- Mechanical Hold Open Device Assembly (Fusible)
- Fusible Lock Out Cap
- Limit Switch & Position Indicator
- Transparent Stem Protector
- Hydraulic Override

Standard Hydraulic AH Actuator	
Model	AH
Piston Size	AH 3.5 / AH 4.5 / AH 6.5 / AH 9.5
API Material Class	AA
Maximum Operating Pressure	3,000# PSI (207 Bars)
Relief Device Setting	3,000# PSI (207 Bars) @ +72°F (+ 22°C)
Housing Test Pressure	4,500# PSI (310 Bars)
API 6A Monogramable	API 6A / ISO 10423
Operating Temperature	- 20°F to +250°F (-28°C to +121°C)
Product Specification Level	PSL 1, 2, 3, 3G, 4
Performance Requirements	PR - 1 & PR-2

Pressure Ratings	API 6A 2,000# PSI thru 20,000# PSI					
Sizes	API 6A 1-13/16" thru 9"					
Material Class	Non Nace / Non Sour Service					
	AA		BB		CC	
	Sour Service Nace MR0175 Trim					
	DD-0.5	DD-1.5	DD-NL	EE-0.5	EE-1.5	EE-NL
	FF-0.5	FF-1.5	FF-NL	HH-0.5	HH-1.5	HH-NL
Product Specification Level	PSL 1, 2, 3, 3G, 4					
Temperature Rating	-50°F to 250°F (-46°C to +121°C)					



Features

- Liberal use of wear rings in actuator assuring long life.
- Actuator has single forged top cap and cylinder for simple in-line maintenance.
- Quick disconnect mechanism allows for fast removal without disturbing the body / bonnet connection and provides immediate access to stem packing.
- Provides immediate access to stem packing.
- Anti-explosive decompression seals and energized non-elastomeric lip seals are available.
- Adjustable internal down-stop for gate alignment.
- A metal to metal seal between the bonnet and stem acts as a secondary seal if the stem packing is damaged.

Approved Certification

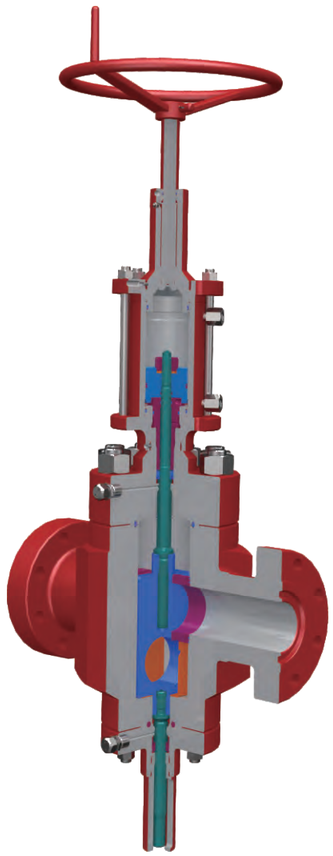
PR2	Product Test , Issued by DNV
CE/PED	For API 6A Product, Issued by DNV

Scope

Working Pressure	Size		
	3-1/16''	4-1/16''	5-1/8''
3000 psi		★	★
5000 psi	★	★	★
10000 psi	★	★	★
15000 psi	★		

Standard Hydraulic AC Actuator(IPS)	
Actuator Model	AC
Piston Size	4.5" x 78 / 5.875" x 90 / 5.875" x 118 / 6.5" x 118 / 6.5" x 142
Actuator Material Class	AA
Maximum Operating Pressure	3,000# PSI (207 Bars)
Relief Device Setting	3,000# PSI (207 Bars)
Housing Test Pressure	4,500# PSI (310 Bars)
API 6A Monogramable	API 6A / ISO 10423
Operating Temperature	- 20°F to +250°F (-29°C to +121°C)
Product Specification Level	PSL 1, 2
Performance Requirements	PR-1 & PR-2

Valve Model	GBS/GBC/GBW					
Valve Pressure Ratings	API 6A 2,000# PSI thru 15,000# PSI					
Valve Normal Sizes	API 6A 1-13/16" thru 5-1/8"					
Valve Material Class	Non Nace / Non Sour Service					
	AA		BB		CC	
	Sour Service Nace MR0175 Trim					
	DD-0.5	DD-1.5	DD360	DD-NL	EE-0.5	EE-1.5
	EE360	EE-NL	FF-0.5	FF-1.5	FF360	FF-NL
	HH-NL					
Product Specification Level	PSL 1, 2, 3, 3G, 4					
Temperature Rating	-50°F to 250°F (-46°C to +121°C)					



Features

- Back seat test port and packing detection port.
- Rising stem provides indication of gate valve position.
- Cylinder and piston are electrolysis nickel plated for corrosion resistance.
- External Pressure Relief Device (PSE) to protect from over-pressure.

Approved Certification

CE/PED	For API 6A Product, Issued by DNV

Scope

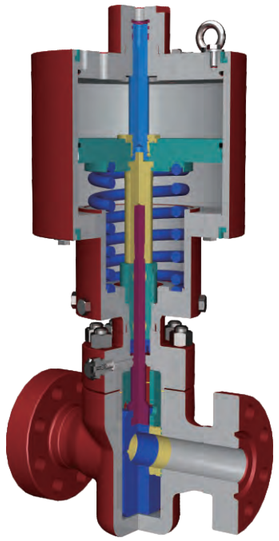
Working Pressure	Size							
	1-13/16''	2-1/16''	2-9/16''	3-1/16''	4-1/16''	5-1/8''	7-1/16''	9''
3000 psi	★	★	★	★	★	★	★	★
5000 psi	★	★	★	★	★	★	★	★
10000 psi	★	★	★	★	★	★	★	★
15000 psi	★	★	★	★	★	★	★	
20000 psi	★	★	★	★				

Actuator Accessories

- Mechanical Hand Open Device Assembly (Non Fusible)
- Fusible Lock Out Cap

Standard DH Actuator Specification	
Model	DH
Piston Size	DH 4.5 / DH 6.5 / DH 9.5
API Material Class	AA
Maximum Operating Pressure	3,000# PSI (207 Bars)
Relief Device Setting	3,000# PSI (207 Bars) @ +72°F (+ 22°C)
Housing Test Pressure	6,000# PSI (414 Bars)
API 6A Monogramable	API 6A / ISO 10423
Operating Temperature	- 20°F to +250°F (-29°C to +121°C)
Product Specification Level	PSL 1, 2, 3, 3G, 4
Performance Requirements	PR - 1 & PR-2

Pressure Ratings	API 6A 2,000# PSI thru 20,000# PSI					
Sizes	API 6A 1-13/16" thru 9"					
Material Class	Non Nace / Non Sour Service Trim					
	AA		BB		CC	
	Sour Service Nace MR0175 Trim					
	DD-0.5	DD-1.5	DD-NL	EE-0.5	EE-1.5	EE-NL
	FF-0.5	FF-1.5	FF-NL	HH-0.5	HH-1.5	HH-NL
Product Specification Level	PSL 1, 2, 3, 3G, 4					
Temperature Rating	-50°F to 250°F (-46°C to +121°C)					



Features

- Valve is designed to close upon loss of control pressure.
- A metal to metal seal between the bonnet and stem acts as a secondary seal if the stem packing is damaged.
- Back seat port for gas testing of metal to metal seating.
- Vent weep port above the bonnet packing to detect stem packing integrity.
- An internal Pressure Relief Valve (PSE) helps provide tamper proof protection against overpressure. The internal PSE is set to relieve at a higher setting than the external PSE.
- Actuator top shaft serves as a visual for position of gate.
- Piston Housing is coated internally and externally with low friction coating, high corrosion resistance to oxidation and high temperatures. All other internal components are either stainless steel or coated to prevent corrosion from contamination.
- The AP Safety Valve is designed to be repaired and maintained in the field. Internal parts can be removed and changed without removing the valve assembly from the line.
- Top shaft seals easily repaired in line without removing piston housing.
- Spring assist in closing with no valve body pressure.
- Internal adjustable down stop.
- Quick disconnect.
- Manufactured to Nace MR-0175 for effective operation under harsh environments.

Approved Certification

CE/PED For API 6A Product, Issued by DNV

Scope

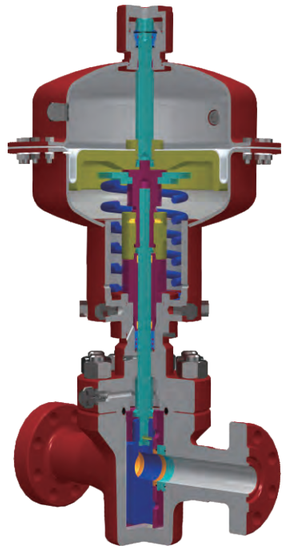
Working Pressure	Size						
	1-13/16''	2-1/16''	2-9/16''	3-1/16''	4-1/16''	5-1/8''	7-1/16''
3000 psi	★	★	★	★	★	★	★
5000 psi	★	★	★	★	★	★	★
10000 psi	★	★	★	★	★	★	★
15000 psi	★	★	★	★	★	★	
20000 psi	★	★	★	★			

Actuator Accessories

- Mechanical Hold Open Device Assembly (Non Fusible)
- Mechanical Hold Open Device Assembly (Fusible)
- Fusible Lock Out Cap
- Limit Switch & Position Indicator
- Transparent Stem Protector
- Hydraulic Override

Standard Piston Pneumatic AP Actuator	
Model	AP
Piston Size	AP -13", AP - 15", AP - 18" ,AP - 20"
API Material Class	AA
Maximum Operating Pressure	170# PSI (12 Bars)
Relief Device Setting	170# PSI (12 Bars) @ +72°F (+22°C)
Housing Test Pressure	225# PSI (18 Bars)
API 6A Monogramable	API 6A / ISO 10423
Operating Temperature	- 20°F to +250°F (-29°C to +121°C)
Product Specification Level	PSL 1, 2, 3, 3G, 4
Performance Requirements	PR - 1 & PR-2

Pressure Ratings	API 6A 2,000# PSI thru 20,000# PSI					
Sizes	API 6A 1-13/16" thru 7-1/16"					
Material Class	Non Nace / Non Sour Service Trim					
	AA		BB		CC	
	Sour Service Nace MR0175 Trim					
	DD-0.5	DD-1.5	DD-NL	EE-0.5	EE-1.5	EE-NL
	FF-0.5	FF-1.5	FF-NL	HH-0.5	HH-1.5	HH-NL
Product Specification Level	PSL 1, 2, 3, 3G, 4					
Temperature Rating	-50°F to 250°F (-46°C to +121°C)					



Features

- Rolling diaphragm design leads to longer seal life and reduces problems associated with moving O-Ring seals.
- Non stainless steel components are Xylan coated for longer wear life and maximum corrosion resistance.
- Manufactured to Nace MR-0175 for effective operation under harsh environments.
- Internal adjustable down stop.
- Spring assist in closing with no valve body pressure.
- Top shaft seals easily repaired in line without removing upper diaphragm case.
- External Pressure Relief Valve (PSE) for over pressure protection.
- Actuator top shaft serves as a visual for position of gate.
- Vent weep port above the bonnet packing to detect stem packing integrity.
- The AD Safety Valve are designed to be repaired and maintained in the field.
- Back seat port for testing of metal to metal seating.
- Valve is designed to close upon loss of control pressure.
- Operates with low pressure air, gas, and nitrogen.
- Quick disconnect.
- A metal to metal seal between the bonnet and stem acts as a secondary seal if the stem packing is damaged.

Approved Certification

CE/PED	For API 6A Product, Issued by DNV

Scope

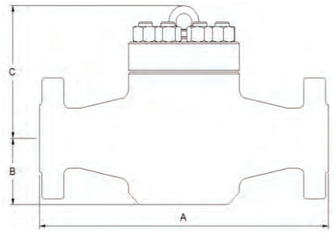
Working Pressure	Size						
	1-13/16''	2-1/16''	2-9/16''	3-1/16''	4-1/16''	5-1/8''	7-1/16''
3000 psi	★	★	★	★	★	★	★
5000 psi	★	★	★	★	★	★	★
10000 psi	★	★	★	★	★	★	★
15000 psi	★	★	★	★	★	★	

Actuator Accessories

- Mechanical Hold Open Device Assembly (Non Fusible)
- Mechanical Hold Open Device Assembly (Fusible)
- Fusible Lock Out Cap
- Limit Switch & Position Indicator
- Transparent Stem Protector
- Hydraulic Override

Standard Diaphragm Pneumatic AD Actuator	
Model	AD
Piston Size	AD - 10", AD - 12", AD - 15", AD - 18", AD - 20"
API Material Class	AA
Maximum Operating Pressure	170# PSI (12 Bars)
Relief Device Setting	170# PSI (12 Bars) @ +72°F (+22°C)
Housing Test Pressure	225# PSI (18 Bars)
API 6A Monogramable	API 6A / ISO 10423
Operating Temperature	- 20°F to +250°F (-29°C to +121°C)
Product Specification Level	PSL 1, 2, 3, 3G, 4
Performance Requirements	PR - 1 & PR-2

Pressure Ratings	API 6A 2,000# PSI thru 20,000# PSI						
Sizes	API 6A 1-13/16" thru 7-1/16"						
Material Class	Non Nace / Non Sour Service Trim						
	AA		BB		CC		
	Sour Service Nace MR0175 Trim						
	DD-0.5	DD-1.5	DD-NL	EE-0.5	EE-1.5	EE-NL	
	FF-0.5	FF-1.5	FF-NL	HH-0.5	HH-1.5	HH-NL	
Product Specification Level	PSL 1, 2, 3, 3G, 4						
Temperature Rating	-50°F to 250°F (-46°C to +121°C)						



Dimensions for LC

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top

3,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16''	2.06	52.4	14.62	371	4.61	117	8.58	218	179	81
3-1/8''	3.13	79.4	15.12	384	4.72	120	9.76	248	216	98
4-1/16''	4.06	103.2	18.12	460	5.91	150	8.27	210	298	135
7-1/16''	7.05	179.0	24.12	613	9.06	230	14.69	373	992	450

5,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16''	2.06	52.4	14.62	371	4.61	117	7.28	185	183	83
2-9/16''	2.56	65.1	16.62	422	6.00	153	8.27	210	220	100
3-1/8''	3.13	79.4	18.62	473	5.51	140	8.66	220	265	120
4-1/16''	4.06	103.2	21.62	549	7.09	180	9.96	253	547	248
7-1/16''	7.05	179.0	28	711	9.06	230	16.77	426	1190	540

10,000 psi Working Pressure

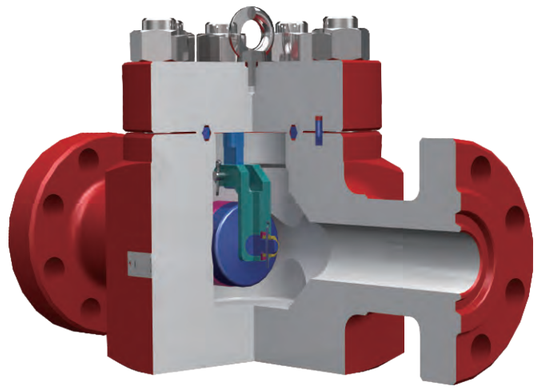
Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16''	1.81	46.1	18.25	464	4.33	110	7.60	193	225	102
2-1/16''	2.06	52.4	20.50	521	4.33	110	7.60	193	313	142
2-9/16''	2.56	65.1	22.25	565	4.96	126	8.78	223	295	134
3-1/16''	3.06	77.8	24.38	619	5.71	145	8.98	228	353	160

15,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/16''	3.06	77.8	23.56	598	6.69	170	12.05	306	705	320
4-1/16''	4.06	103.2	29	737	10.28	261	13.90	353	1091	495

Descrption

The regular check valve is a unidirectional valve and always installed in the horizontal orientation. The valve opened or closed by virtue of flow force and chosen for clean liquid. It is available in pressure ratings from 2000-5000psi and bore sizes of 2-1/16" to 7-1/16".



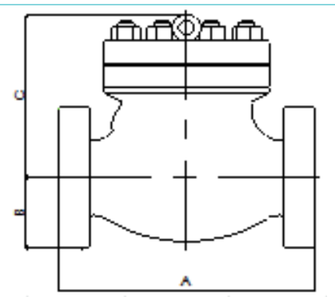
Features

- A hinge and hinge pin provided and mounted so as to permit full movement of the disc.
- Standard renewable seal welded seat with stellite 6.
- Standard swing disc type used in horizontal position for liquid service applications.
- There is a reserved standard boss at the bottom of body center line.

Approved Certification

CE/PED

For API 6A Product, Issued by DNV



Dimensions for SC

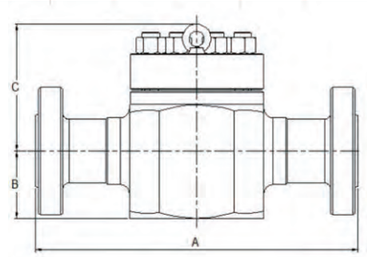
A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top

3,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16''	2.06	52.4	14.62	371	4.25	108	8.54	217	106	48
3-1/8''	2.90	79.4	15.12	384	4.72	120	13.19	335	265	120
4-1/16''	4.06	103.2	18.12	460	5.71	145	13.07	332	434	197
7-1/16''	7.05	179.0	24.12	613	7.48	190	15.75	400	681	309
9''	7.44	189.0	29.12	740	9.25	235	18.50	470	1272	577

5,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16''	2.06	52.4	14.62	371	4.23	108	9.17	233	121	55
3-1/8''	2.90	79.4	18.62	473	5.22	133	19.69	500	331	150



Dimensions for SC

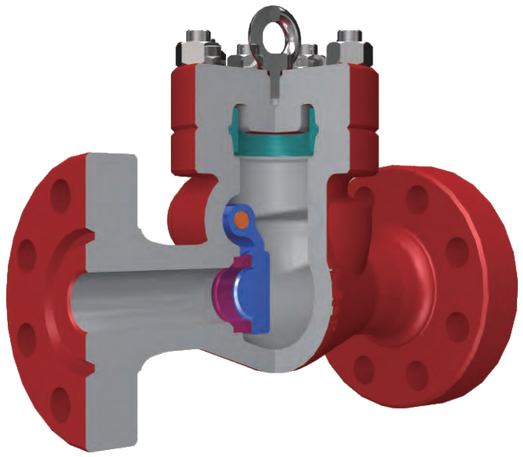
A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top

10,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16''	1.81	46	18.25	464	3.82	97	7.87	200	209	95
2-1/16''	2.06	52.4	20.50	521	4.13	105	7.87	200	225	150

Descrption

The full-opening check valve is a unidirectional valve and always installed in the horizontal orientation. The valve opened or closed by virtue of flow force and chosen for clean liquid. It is available in pressure ratings from 2000-5000psi and bore sizes of 2-1/16" to 7-1/16".



Features

- Full bore,strong flow capacity.
- Disc of convex design with better performance, and the arc design can reduce the pressure loss and turbulent medium.
- Optional soft seal and metal seal.

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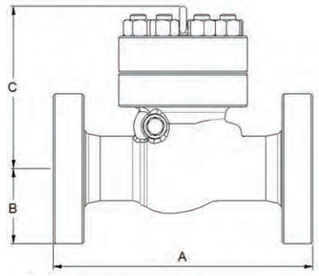


Dimensions for SF

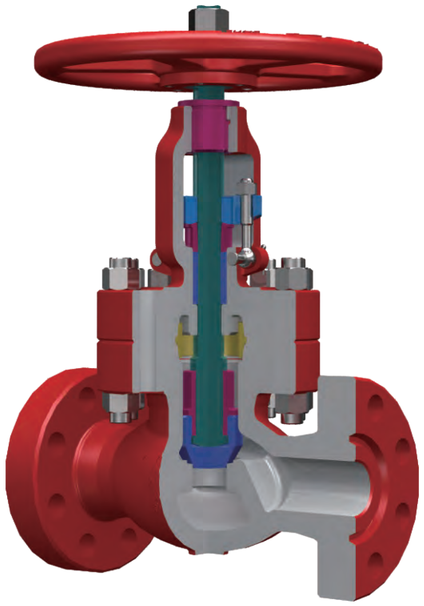
A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top

5,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	1.69	42.9	14.62	371	4.23	108	9.54	240	110	50
3-1/8"	2.90	66.6	18.62	473	5.22	133	11.22	285	243	110
4-1/16"	3.44	87.3	21.62	549	6.10	155	14.17	360	463	210

Description

The globe valve is a unidirectional valve, with simple structure and ease of maintenance. The valve has a very short stroke and reliable cutting function and it is also well controlled for flow regulation.



Features

- Impact handwheel supplied at manufacture's option or on customer request.
- Anti blow-out stem design with conical backseat surface to permit repacking of valve in the fully open position.
- Plug seat surface is standard disc design as well as spherical and flat seating surface is optional on customer request.
- Seat face with stellite 6 is standard design.

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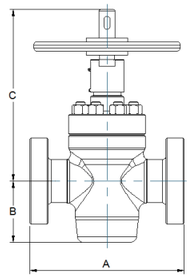


Dimensions for Globe valve

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bore centerline to handwheel top
D:Bore centerline to handwheel

3,000 psi Working Pressure

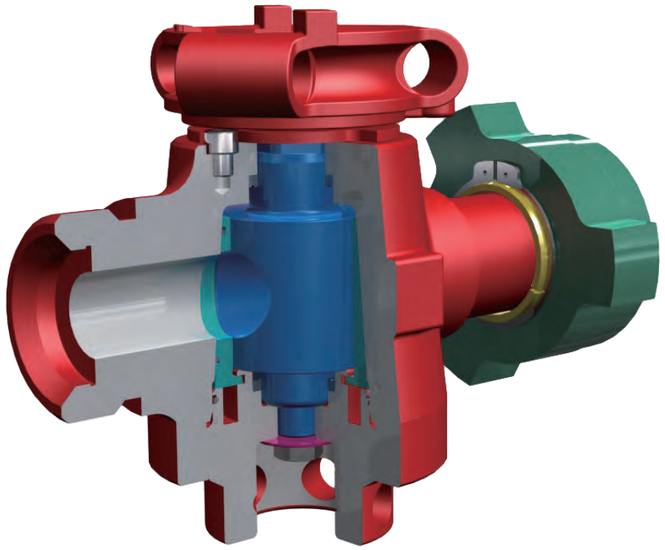
Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.61	371	5.28	134	18.70	475	14.00	350	198	90
4-1/16"	4.06	103.2	20.12	511	9.37	238	20.47	520	18.00	450	595	270
7-1/16"	7.05	179	28.11	714	7.87	200	32.09	815	-	Gear Box	1179	535

5,000 psi Working Pressure

Size	Bore		A		B		C		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.61	371	4.25	108	18.70	475	14.00	350	198	90
3-1/8"	3.13	79.4	18.62	473	7.44	189	16.93	430	18.00	450	386	175
7-1/16"	7.05	179	41.93	1065	7.87	200	57.28	1455	-	Gear Box	2646	1200

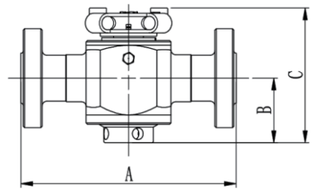
Description

The valves are intended for both onshore and offshore use. Onshore, the plug valves are used in connection with mobile pumping service units used to kill wells, cement wells, acidize and fracture wells. They are also used in hydraulic lines to control wellhead protector tools. Offshore, the valves are used in a number of applications. They are used in essentially permanent installations in pump rooms to isolate the discharges of the triplex pumps used in fracturing wells. They have also been used in choke and kill manifold systems.



Features

- Excellent sealing provided by precision ground metal-to-metal seal between Seats and plug.
- No need to remove valve from line for maintenance.
- No special tools needed for operation or maintenance.
- Plug bar cap has visible indication of open or closed position.
- Flanged body for easier maintenance.
- The stem packing can withstand severe temperatures and fluids of fracturing conditions. It's economical and convenient to maintain.
- The balance stem packings effectively reduce the operation torque.



Dimensions for flanged end PPV plug valve

A:Flange face to face
B:Bore centerline to bottom of valve
C:Bottom to handwheel top

3,000 psi Working Pressure

Size	Bore		A		B		C		Weight	
	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16"	1.81	46	17.99	457	5	127	11.3	287	154.3	70