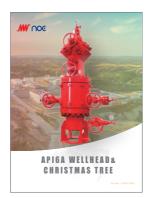


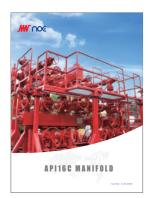
**Product Summary** 



Subsea Products



WLLHEAD & CHRISTMAS TREE



MANIFOLD



FRACTURING PRODUCTS



ACTUATOR



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



# APIGA VALVES

### Figure Number Example:



### Following descriptions provide a basic guideline in valve specification:

	Valve type			Symbol			Valve	type		Sym	bol	
Ex	xpanding Gate	Valve		GEN			Multiple Or	ifice Chol	ке	С	M	
Expanding	Gate Valve(hig	jh temperature)		GEH		Tru	Trunnion Mounted Ball Valve			BS		
	Slab Gate Val	lve		GBC		Trunnion Mounted Ball Valve			/alve	BT		
Sla	ib Gate Valve(li	ip seal)		GBS		Metallic Sealing Ball Valve			alve	BTM		
	all Screw Gate			GBSR		Regular Check Valve			е	L	_	
	ac Service Gate			GBW			Regular Cl			S		
	Plug & Cage Control Choke External Sleeve Control Choke			CAP		F	ull-opening		alve	S		
				CAE			Mud \			G		
Adjı	Adjustable Needle Choke			CAN			Mud			GA		
	Positive Choke			CP			Globe	vaive		G	L	
2) <b>Sizo</b>												
2 Size	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	
		2-1/16 52	2-9/16 65	3-1/16 78	3-1/8 79	4-1/16 103	5-1/8 130	6-3/8 162	6-5/8 168	7-1/16 178	9 228	
in mm	1-13/16	52				,				,	-	
in mm	1-13/16 46 king Press	52			79	,				178	-	
in mm 3) <b>Work</b>	1-13/16 46 <b>king Press</b>	52 ure		78	79	103	130		168	178	228	
in mm 3 <b>Work</b> Sym	1-13/16 46 king Press	52 ure 2M		78 3M	79 5 34	103 M	130 10M		168 15M	178	228 20M	
in mm 3 Work Sym MP	1-13/16 46 king Press	52 ure 2M 13.8 2,000		78 3M 20.7	79 5 34	103 M	130 10M 69.0		168 15M 103.5	178	228 20M 38.0	
in mm 3 Work Sym MP Ps	1-13/16 46 king Press bol Pa si	52 ure 2M 13.8 2,000		78 3M 20.7	79 5 3 <sup>4</sup> 5,0	103 M	130 10M 69.0		168 15M 103.5	178	228 20M 38.0	

# 5 Material Selection

Please find the detailed sheet on the next page.

6 Temperatur	e Rating			
Symbol	Rang	ge(°F)	Range	e(°C)
K	-75	180	-60	82
L	-50	180	-46	82
N	-50	140	-46	60
Р	-20	180	-29	82
S	0	140	-18	60
Т	0	180	-18	82
U	0	250	-18	121
V	35	250	2	121
X	0	350	0	180
Υ	0	650	0	345

7 Product Speci	ification Level				
Symbol	PSL1	PSL2	PSL3	PSL3G	PSL4
Testing Type	Hydrostatic Test	Hydrostatic Test	Hydrostatic Test	Hydrostatic & Gas Test	Hydrostatic & Gas Tes
Traceability	No	No	Yes	Yes	Yes
8 Product Perfo	rmance Requireme	nt			
Symbol		PR1		PR2	

⑤ Material S	election									
						Size				
Parts	Material Type	Surface Treatment	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 17-4PH AISI 410 INCONEL 718	QPQ QPQ QPQ -								
Gate	AISI 4130 AISI 4130 AISI 410 AISI 410 AISI 410 17-4PH INCONEL 718	QPQ TC QPQ TC STL QPQ								
Seat	AISI 4130 AISI 4130 AISI 410 AISI 410 AISI 410 17-4PH INCONEL 725/718	QPQ TC QPQ TC STL QPQ								
Bonnet Ring	Carbon Steel SS316 INCONEL 625	ZINC - -								

### Notes:

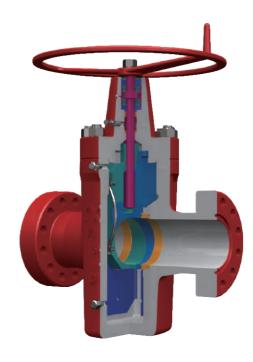
Meaning
Surface Cladding
Nitriding
Tungsten Carbide
Stellite Overlay

		Γ					Si	ze				
Valv	е Туре	Working Pressure	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"
	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										
Gate Valve	GBW	3,000 5,000 10,000 15,000 20,000										
Ve	GBFL	10,000 20,000										
	GA	2,000 3,000 5,000 7,500 10,000										
	АН	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										
	АР	3,000 5,000 10,000 15,000 20,000										
	AD	3,000 5,000 10,000 15,000										

							Siz	е				
Valve	Туре	Working Pressure	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"
	CAP	2,000 3,000 5,000 10,000 15,000 20,000										
C	CAE	2,000 3,000 5,000 10,000 15,000 20,000										
Choke Valve	CAN	2,000 3,000 5,000 10,000 15,000										
	СР	2,000 3,000 5,000 10,000 15,000										
	СМ	2,000 3,000 5,000 10,000 15,000 20,000										
<b></b>	BS	3,000 5,000										
Ball Valve	ВТ	2,000 3,000 5,000										
	втм	5,000 10,000										
	BEM	10,000										
Check Valve	LC	2,000 3,000 5,000 10,000 15,000 20,000										
'alve	sc	3,000 5,000 10,000										
	SF	10,000										
Globe Valve	GL	3,000 5,000										
Plug Valve	PL	15,000										

4 5

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.



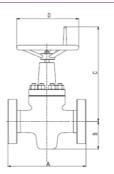
### **Features**

- 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

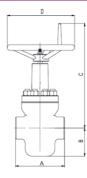
# 2,000 psi Working Pressure

Size	Во	ore	A	Ą	В		С			)	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	Вс	ore	A	A	E	3	C	;		)	We	ight
	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

Size	Во	ore	A	١	В		С		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	Во	ore	A	A	В		Ç		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

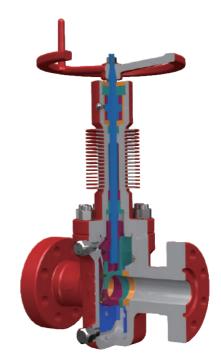
Size	Вс	ore	P	4	В		С		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	8.86	225	4.92	125	18.70	475	12.99	330	110	50
2-9/16"	2.56	65.1	10.24	260	5.91	150	19.49	495	15.75	400	143	65
3-1/8"	3.13	79.4	11.42	290	7.28	185	21.85	555	15.75	400	198	90
4-1/16"	4.06	103.2	12.99	330	9.06	230	26.38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

# 5,000 psi Working Pressure

Size	Во	ore	P	4	E	3	(		[	)	We	ight
	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

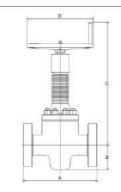
### Description

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.



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	Вс	ore	A	A	E	3	(		[	)	We	ight
	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

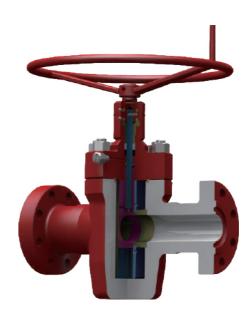
Size	Во	ore	A	Ą	E	3	(		[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.62	371	4.92	125	24.80	630	12.99	330	165	75
3-1/8"	3.13	79.4	17.12	435	7.68	195	25.79	655	15.75	400	276	125
4-1/16"	4.06	103.2	20.12	511	9.45	240	44.09	1120	18.90	400	573	260

# 5,000 psi Working Pressure

Size	Во	ore	A	A	E	3	(			)	We	ight
	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

### 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".



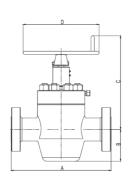
### **Features**

- 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	Вс	ore	P	4	E	3	(		[	)	We	ight
	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	Во	ore	P	4	Е	3	(			)	We	ight
	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	Вс	ore	A	4	E	3	(		1	D	We	ight
	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	Во	ore	A	<b>\</b>	Е	3	(			)	We	ight
	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	Во	ore	P	4	Е	3			С	)	We	ight
	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

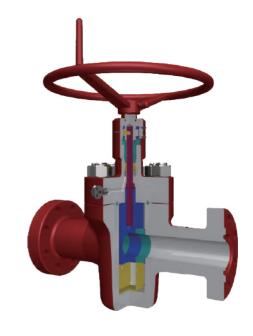
Size	Во	ore	A	Ą	E	3	(		[	)	We	ight
	in	mm	in	mm	in	mm	in mm		in	mm	lb	kg
1-13/16"	1.66	42.1	21	533	5.82	148	21.58	548	18.50	470	474	215

12

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 7-1/16".

### **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. Nonelectrometric 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.

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

Dimensions for threaded end GBC

D.Halluwileel dialilete

# 2,000 psi Working Pressure

Size	Во	ore	A	Ą	E	3	(			)	We	ight
	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	Во	ore	A	Ą	E	3	(		[	)	We	ight
	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

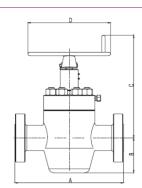
Size	Вс	re	A	4	E	3	C			)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	9.61	244	5.39	137	21.46	545	14.02	356	132	60
2-9/16"	2.56	65.1	16.61	422	6.00	153	22.38	569	14.00	356	220	100
3-1/8"	3.13	79.4	18.62	473	7.56	192	22.64	575	17.00	432	322	146
4-1/16"	4.06	103.2	21.61	549	9.65	245	25.12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

### **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

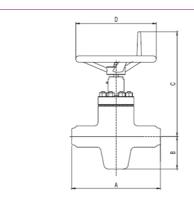
Size	Во	ore	A	A	Е	3	(		[	)	We	eight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.62	371	5.28	134	21.61	549	14.02	356	165	75
2-9/16"	2.56	65.1	16.62	422	6.34	161	22.36	568	14.00	356	209	95
3-1/8"	3.13	79.4	18.62	473	7.48	190	22.52	572	17.01	432	320	145
4-1/16"	4.06	103.2	21.62	549	9.65	245	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	Во	ore	1	4	E	3	(		I	)	We	ight
	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	Во	ore	P	4	Е	3	(			)	We	ight
	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	Во	re	P	4	E	3	(			)	We	ight
	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

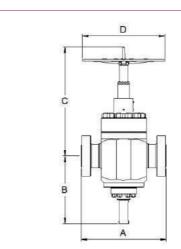
Size	Во	ore	A	Ą	E	3	(	0		)	We	eight
	in	mm	in	mm	in	mm	in mm		in	mm	lb	kg
5-1/8"	5.13	130.2	28.62	727	11.02	280	20.47	520	23.62	600	734	333

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	Во	ore	A	A	E	3	(		[	)	We	ight
	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

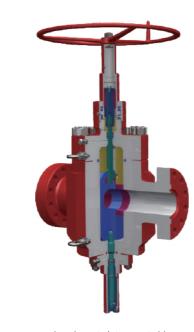
Size	Во	ore	1	A	Е	3	C		[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.2	29	737	25.24	641	43.31	1100	23.62	600	1687	765
5-1/8"	5.13	130.2	35	889	27.99	711	45.08	1145	36	914	2601	1180
6-3/8"	6.38	162.0	41	1041	34.09	866	61.57	1640	40	1016	6779	3075
7-1/16"	7.06	179.4	41	1041	36.73	933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

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.

**GBSR** 

### **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.

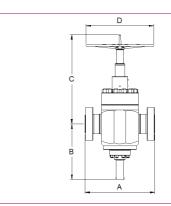


- Pressure-energized metal-to-metal bonnet seal.
- The GBS-R Gate Valve has grease fittings located on the downstream side of the upper stem and lower stem back seat shoulders for lubricating stem and the valve cavity.
- Bi-directional design provides flow direction versatility and increased service 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	Во	ore	A	4	Е	3	(	;	[	)	We	ight
	in	mm	in	mm	in	mm	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	Во	ore	A	4	E	3	(			)	We	ight
	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

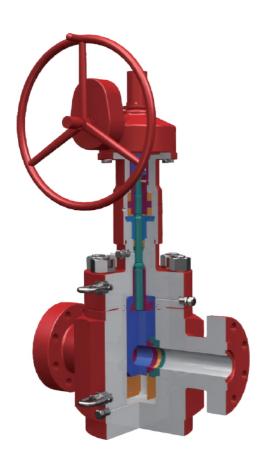
### 15,000 psi Working Pressure

Size	Во	re	A	A .	E	3	(			)	We	ight
	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	В	ore	A	A	Е	3	(		[	)	We	eight
	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

20



- 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				Size			
Pressure	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	*	*	*	*			



- 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



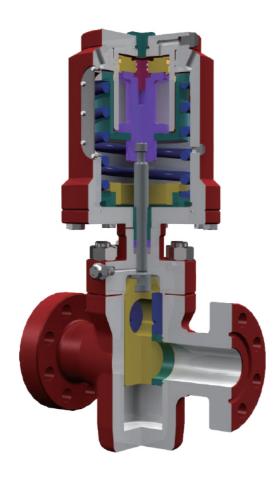
Working	Size							
Pressure	1-13/16"	2-1/16"	2-9/16"	3-1/16"	4-1/16''	5-1/8''	7-1/16''	9"
3000 psi	*	*	*	*	*	*	*	*
5000 psi	*	*	*	*	*	*	*	*
10000 psi	*	*	*	*	*	*	*	*
15000 psi	*	*	*	*	*	*	*	
20000 psi	*	*	*	*				

### **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	API 6A 1-13/16" thru 9"				
		Nor	Nace / No	n Sour Serv	/ice	
	А	А	ВВ		CC	
Material Class	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)					



- 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

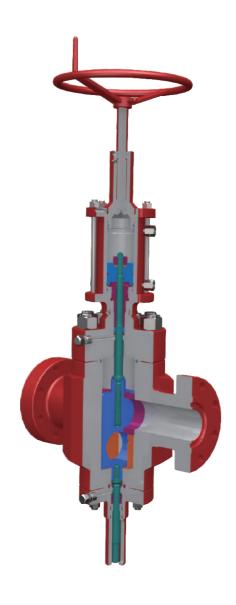
### Scope

Working		Size	
Pressure	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 th	nru 15,000#	‡ PSI			
Valve Normal Sizes	API 6A 1-	13/16" thru	u 5-1/8"				
		Nor	Nace / No	n Sour Serv	/ice		
	А	А	BB		CC		
Valve Material Class	Sour Service Nace MR0175 Trim						
valve material class	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)						

DH



### **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

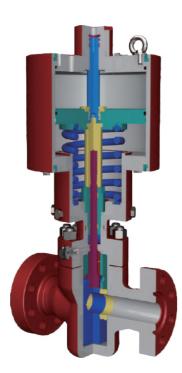
Working	Size							
Pressure	1-13/16"	2-1/16"	2-9/16''	3-1/16"	4-1/16''	5-1/8''	7-1/16''	9"
3000 psi	*	*	*	*	*	*	*	*
5000 psi	*	*	*	*	*	*	*	*
10000 psi	*	*	*	*	*	*	*	*
15000 psi	*	*	*	*	*	*	*	
20000 psi	*	*	*	*				

### **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-	API 6A 1-13/16" thru 9"				
		Non N	Nace / Non	Sour Servic	e Trim	
	А	A	BB		СС	
Material Class	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)					



- 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

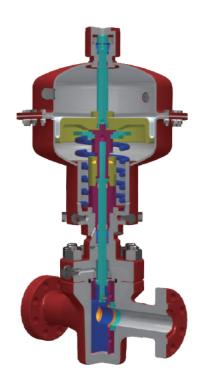
Working	Size						
Pressure	1-13/16"	2-1/16''	2-9/16"	3-1/16"	4-1/16"	5-1/8''	7-1/16"
3000 psi	*	*	*	*	*	*	*
5000 psi	*	*	*	*	*	*	*
10000 psi	*	*	*	*	*	*	*
15000 psi	*	*	*	*	*	*	
20000 psi	*	*	*	*			

### **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 th	nru 20,000#	‡ PSI			
Sizes	API 6A 1-	13/16" thru	ı 7-1/16"				
		Non N	lace / Non	Sour Servic	e Trim		
	А	A	В	В	С	С	
Material Class		Sour	Service Na	ce MR017	'5 Trim		
	DD-0.5	DD-1.5	DD-NL	EE-0.5	EE-1.5	EE-NL	
	FF-0.5	FF-0.5 FF-1.5 FF-NL HH-0.5 HH-1.5					
Product Specification Level	PSL 1, 2,	3, 3G, 4					
Temperature Rating	-50°F to	250°F (-46	°C to +12	1°C)			



- 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				Size			
Pressure	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

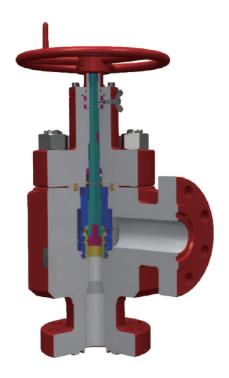
Pressure Ratings	API 6A 2	,000# PSI t	hru 20,000	# PSI					
Sizes	API 6A 1	-13/16" thr	u 7-1/16"						
		Non	Nace / Nor	Sour Serv	ice Trim				
	А	А	В	В	С	С			
Material Class		Sour Service Nace MR0175 Trim							
	DD-0.5	DD-1.5	DD-NL	EE-0.5	EE-1.5	EE-NL			
	FF-0.5	FF-0.5 FF-1.5 FF-NL HH-0.5 HH-1.5							
Product Specification Level	PSL 1, 2,	3, 3G, 4							
Temperature Rating	-50°F to	250°F (-46	°C to +12	1°C)					

32

## Description

The Plug and Cage Choke has a plug that throttles the flow on the inside diameter of the ported cage. This choke is used for high capacity/medium pressure drop applications. Because of its high capacity, the Plug and Cage Choke is useful for flow optimization near the end of well life.

Neway choke products include plug and cage choke, external sleeve choke, adjustable needle choke, positive choke and multiple orifice choke.



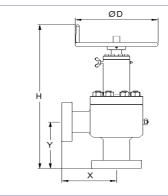
### Features

- Tungsten carbide flow plug assembly in conjunction with cage sleeve provides optimum wear resistance in erosive conditions.
- Metal-to-metal bonnet closure seal.
- Fully guided plug minimizes side loading and vibration.
- Self-flushing, pressure-balanced ports minimize stem loads and actuator requirements. Heavy duty thrust bearings also reduce operating torque.
- Outer flow cage provides protection from impact damage.
- Stem lock maintains set position.
- Indicator calibrated in 1/64" or multiples of 1/64" increments to show effective orifice diameter.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



### Dimensions for CAP

- D:Handwheel diameter
- X:Bore centerline to inlet flange face Y:Bore centerline to outlet flange face
- H:Overall size

### 3,000 psi Working Pressure

Size	Вс	re	[	)	>	<	١	<b>′</b>	H	1	Wei	ght
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/8"	3.13	79.4	15.75	400	10.39	264	11.22	285	34.84	885	386	175

# 5,000 psi Working Pressure

Size	Вс	re	[	D		X		1	H	Н	Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	15.75	400	8.74	222	10.87	276	27.95	710	309	140
2-9/16"	2.56	65.1	15.75	400	10.51	267	12.52	318	30.71	780	342	155
3-1/8"	3.13	79.4	15.75	400	10.39	264	11.61	295	35.43	900	392	178
4-1/16"	4.06	103.2	15.75	400	11.89	302	15.98	406	39.37	1000	476	216
5-1/8"	5.13	130.2	24.02	610	14.25	362	19.37	492	40.16	1020	849	385

# 10,000 psi Working Pressure

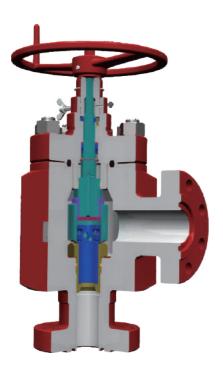
Size	Вс	re	[	D		<	Υ		н		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	15.75	400	8.74	222	10.87	276	27.95	710	320	145
2-9/16"	2.56	65.1	15.75	400	10.51	267	12.52	318	30.71	780	364	165
4-1/16"	4.06	103.2	15.75	400	10.00	254	11.54	293	33.98	863	560	254

Size	Во	re	D		>	Κ	)	1	H	4	Wei	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	15.75	400	8.74	222	10.87	276	27.95	710	331	150
3-1/16"	3.06	77.8	15.75	400	11.46	291	12.52	318	34.84	885	763	346

# Description

The External Sleeve Control Choke has a sleeve that throttles the flow on the outside diameter of the ported cage. This choke is used for low capacity/high pressure drop applications. The external sleeve is specifically designed for severely erosive conditions where the combination of high pressure drops and high sand concentrations can reduce the life of a choke.

Neway choke products include plug and cage choke, external sleeve choke, adjustable needle choke, positive choke and multiple orifice choke.



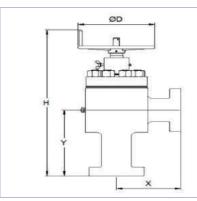
### **Features**

- Tungsten carbide lined stem and seat provide optimum wear resistance in erosive conditions.
- Metal-to-metal bonnet closure seal.
- Reverse angle trim reduces annular flow-by extending the life of the trim.
- Self-flushing, pressure-balanced ports minimize stem loads and actuator requirements. Heavy duty thrust bearings also reduce operating torque.
- Outer Flow Sleeve provides protection from impact damage.
- Stem lock maintains set position.
- Indicator calibrated in 1/64" or multiples of 1/64" increments to show effective orifice diameter.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



### Dimensions for CAE

- D:Handwheel diameter
- X:Bore centerline to inlet flange face
- Y:Bore centerline to outlet flange face
- H:Overall size

### 10,000 psi Working Pressure

S	Size	Во	re		)	>	<	١	<b>′</b>	H	1	Wei	ght
		in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-	-1/16''	2.06	52.4	15.75	400	11.81	300	12.13	308	33.86	860	304	138

# 15,000 psi Working Pressure

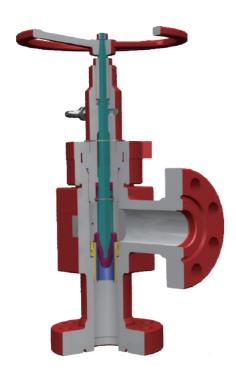
Size	В	ore	[	)	D X		Y		Н		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/16"	3.06	77.8	15.75	400	13.46	342	17.76	451	39.25	997	1019	462

Size	Во	re		)		<b>X</b>	`	Y	H	4	Wei	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/16"	3.06	77.8	15.75	400	14.96	380	15.51	394	38.43	976	970	440

## Description

The adjustable needle choke has a standard body with an adjustable bonnet assembly and seat installed. This assembly features a tungsten carbide-tipped needle, tungsten carbide-lined seat, and an indicator calibrated in 1/64" or multiple of 1/64" to show effective orifice diameter. A needle lock device retains needle position.

Neway choke products include plug and cage choke, external sleeve choke, adjustable needle choke, positive choke and multiple orifice choke.



### Features

- Bleed valve allows the operator to safety vent the body cavity pressure prior to removal of the bonnet assembly.
- Body pressure is automatically vented when the operator unscrews the bonnet nut one turn.
- ACME threads can be cleaned and inspected easily on both the bonnet assembly and body.
- CAN type choke prevents bonnet seal extrusion by means of body-to-bonnet contact behind the O-ring seal.
- The bean/seat has been recessed in the body below the inlet flow path for longer life.

### **Approved Certification**

PR2 Product Test, Issued by DNV

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

# W X

### Dimensions for CAN

D:Handwheel diameter

X:Bore centerline to inlet flange face

Y:Bore centerline to outlet flange face

H:Overall size

### 3,000 psi Working Pressure

Size	Во	re		)	>	(	`	Y	H	1	Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	12.99	330	8.74	222	10.87	276	24.88	632	172	78
2-9/16	2.56	65.1	12.99	330	10.5	267	12.5	317.5	27.83	707	220.5	100
3-1/8"	3.13	79.4	12.99	330	10.39	264	11.61	295	27.56	700	249	113
4-1/16"	4.06	103.2	15.75	400	11.89	302	15.98	406	33.98	863	401	182
7-1/16"	7.13	181.0	7.09	180	14.25	362	19.37	492	38.27	972	791	359

# 5,000 psi Working Pressure

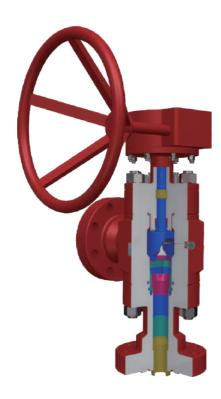
Size	Во	re		)	>	(	)	1	H	1	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	12.99	330	8.74	222	10.87	276	25.43	646	187	85
2-9/16"	2.56	65.1	12.99	330	10.51	267	12.01	305	28.74	730	220	100
3-1/8"	3.13	79.4	15.75	400	10.39	264	11.61	295	31.65	804	287	130
4-1/16''	4.06	103.2	15.75	400	11.89	302	15.98	406	34.72	882	452	205
5-1/8"	5.13	130.2	18.90	480	14.25	362	19.37	492	38.27	972	833	378
7-1/16''	7.06	179.4	18.90	480	14.25	362	19.37	492	38.27	972	833	378

Size	Во	re		)	>	(	,	Y	H	1	Wei	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	12.99	330	7.68	195	8.74	222	23.62	600	163	74
2-9/16"	2.56	65.1	15.75	400	10.51	267	12.52	318	25.59	650	243	110
3-1/16"	3.06	77.8	8.66	220	10.39	264	11.61	295	28.46	723	370	168
4-1/16"	4.06	103.2	19.69	500	11.89	302	15.98	406	29.53	750	430	195

# Description

The Multiple Orifice Chokes utilize a set of adjacent discs, each containing a pair of circular opening orifices. The two discs are diamond lapped on the mating surfaces to tolerances near two ligh bands of flatness. This allows for extremely precise shutoff and flow regulation.

Neway choke products include plug and cage choke, external sleeve choke, adjustable needle choke, positive choke and multiple orifice choke.



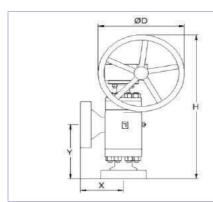
### Features

- Pressure holds discs together, avoid vibration, noise or fatigue failures.
- The circular shape of disc offers a smaller wearing surface, less wear on the throttling and greatly extended service life.
- Very little downtime for maintenance.
- Tungsten carbide discs are offered for extreme erosive conditions and very high pressure drops.
- The outlet end of a Multiple Orifice Choke has a replaceable adapter flange, the customer can changes it in accordance with different pressure ratings and sizes.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



### Dimensions for CM

- D:Handwheel diameter
- X:Bore centerline to inlet flange face
- Y:Bore centerline to outlet flange face
- H:Overall size

### 5,000 psi Working Pressure

Size	Bor	е	[	)		<b>X</b>	`	Y	H	ŀ	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.2	23.62	600	11.93	303	16.89	429	44.49	1130	794	360

Size	Bore	)	[	)	>	Κ	`	Y	H	ł	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/16"	3.06	77.8	12.80	325	12.80	325	37.20	945	37.20	945	1080	490
4-1/16"	4.06	103.2	23.62	600	13.50	343	19.69	500	48.43	1230	794	360

# Description

Positive Choke provides a fixed flow condition with a large selection of available bean sizes and types. All standard positive chokes under 15000psi wp are furnished with a blanking plug that has a 1/2" NPT port for attaching a needle valve and/or pressure gauge. Positive chokes 15000psi wp and over are supplied with a 9/16" autoclave port.

Neway choke products include plug and cage choke, external sleeve choke, adjustable needle choke, positive choke and multiple orifice choke.



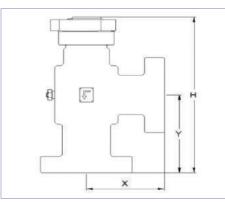
### **Features**

- Positive choke bodies are interchangeable with adjustable needle choke.
- Bleed valve allows the operator to safely vent the body cavity pressure prior to removal of the bonnet assembly.
- Body pressure is automatically vented when the operator unscrews the bonnet nut one turn.
- · ACME threads can be cleaned and inspected easily on both the bonnet assembly and body.
- CAN type choke prevents bonnet seal extrusion by means of body-to-bonnet contact behind the O-ring seal.
- The bean/seat has been recessed in the body below the inlet flow path for longer life.

### **Approved Certification**

PR2 Product Test, Issued by DNV

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



### Dimensions for CP

X:Bore centerline to inlet flange face Y:Bore centerline to outlet flange face H:Overall size

### 3,000 psi Working Pressure

Size	Во	re		K	١	1	H	4	We	ight
	in mm		in	mm	in	mm	in	mm	lb	kg
7-1/16''	7.06	179.4	14.25	362	19.37	492	29.17	741	505	229

### 5,000 psi Working Pressure

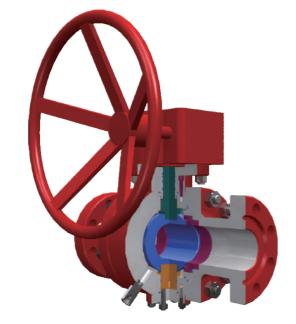
Size	Во	re	>	<	١	(	H	4	We	ight
	in	mm	in	mm	in	mm	in	mm	Ib	kg
2-9/16"	2.56	65.1	10.55	268	12.52	318	20.87	530	198	90
3-1/8"	3.13	79.4	10.39	264	11.61	295	20.16	512	254	115
7-1/16''	7.06	179.4	14.25	362	19.37	492	29.17	741	604	274

Size	Вс	re		Κ	`	Y	H	4	We	ight
	in	mm	in	mm	in	mm	in	mm	lb	kg
2-9/16"	2.56	65.1	10.51	267	12.52	318	20.87	530	220	100
3-1/16"	3.13	77.8	9.06	230	11.02	280	22.05	560	282	128
4-1/16''	4.06	103.2	10.00	254	11.50	292	21.18	538	381	173

NOE Trunnion Mounted soft sealing Ball Valve is supplied for two-piece or three-piece split body, all design is based on standard API 6A&ISO 10423. Flow shut off can be achieved by rotating the ball 90 degrees.







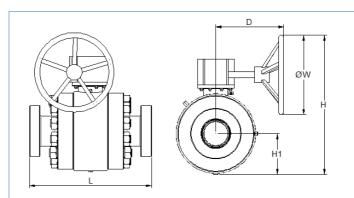
### **Features**

- Two O-ring seals prevents leakage from stem area.
- Emergency Sealant Injection Fitting: Allow external interventions to prevent stem leakage.
- Blow-out Proof Stem(internally inserted): Safety feature that functions to assure stem sealing at all pressures.
- Emergency Sealant Injection Fitting: Allows for external intervention to prevent seat leakage.
- Back-up Metal to Metal Sealing: When primary soft-seat material is deteriorated by fire, the metal-to-metal provides shutoff.
- O-ring & Gasket Combination: Prevents leakage from body joint area.
- Floating Spring-loaded Seats: Ensure sealing even at low pressures.
- Anti-Static Device: Anti-static device ensures electric continuity preventing damage from static build-up.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



Dimensions for BS ball valve

L:Flange face to face D:Bore centerline to handwheel H:Valve overall size H1:Bore centerline to bottom

### 3,000 psi Working Pressure

Size	Во	re	I	L		)	Н	1	ŀ	4	V	V	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	17.72	450	6.30	160	4.65	118	15.75	400	7.99	203	198	90
3-1/8"	3.13	79.4	18.70	475	10.63	270	5.71	145	22.83	580	15.75	400	364	165
4-1/16"	4.06	103.2	22.76	578	16.54	420	6.97	177	27.95	710	19.69	500	584	265
7-1/16''	7.06	179.4	32.68	830	22.05	560	16.97	431	45.87	1165	23.62	600	2205	1000

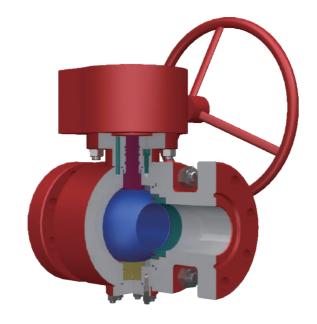
# 5,000 psi Working Pressure

Size	Во	re	I	L		)	Н	1	H	1	V	V	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	17.64	448	9.06	230	5.71	145	20.67	525	15.75	400	220	100
3-1/8"	3.13	79.4	23.86	606	16.54	420	7.28	185	28.35	720	19.69	500	628	285
4-1/16"	4.06	103.2	26.38	670	18.11	460	7.87	200	34.06	865	23.62	600	838	380
7-1/16"	7.06	179.4	37.40	950	22.05	560	16.97	431	49.80	1265	27.56	700	2756	1250
9"	9.00	228.6	47.64	1210	25.59	650	20.12	511	57.68	1465	29.92	760	5203	2360

44

NOE Trunnion Mounted soft sealing Ball Valve is supplied for two-piece or three-piece split body, all design is based on standard API 6A&ISO 10423. Flow shut off can be achieved by rotating the ball 90 degrees.





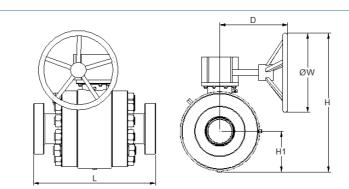
### **Features**

- Two O-ring seals prevents leakage from stem area.
- Emergency Sealant Injection Fitting: Allow external interventions to prevent stem leakage.
- Blow-out Proof Stem(internally inserted): Safety feature that functions to assure stem sealing at all pressures.
- Emergency Sealant Injection Fitting: Allows for external intervention to prevent seat leakage.
- Back-up Metal to Metal Sealing: When primary soft-seat material is deteriorated by fire, the metal-to-metal provides shutoff.
- O-ring & Gasket Combination: Prevents leakage from body joint area.
- Floating Spring-loaded Seats: Ensure sealing even at low pressures.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



Dimensions for BT ball valve

L:Flange face to face D:Bore centerline to handwheel H:Valve overall size H1:Bore centerline to bottom

# 2,000 psi Working Pressure

Size	Вс	re	L	-		)	Н	1	H	4	V	<b>/</b>	Wei	ght
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	11.61	295	6.30	160	4.72	120	15.75	400	7.99	203	132	60
3-1/8"	3.13	79.4	14.13	359	10.63	270	5.71	145	22.64	575	15.75	400	254	115
4-1/16''	4.06	103.2	17.13	435	16.54	420	6.97	177	27.95	710	19.69	500	507	230
7-1/16"	7.06	179.4	27.95	710	22.05	560	13.19	335	42.13	1070	23.62	600	2006	910

# 3,000 psi Working Pressure

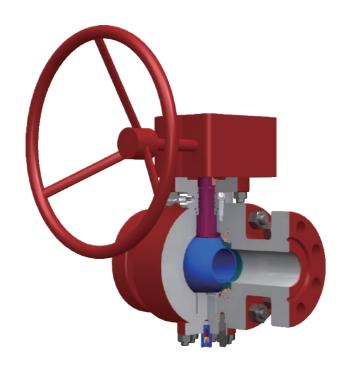
Size	Вс	re	L	-		)	Н	1	H	4	V	V	Wei	ght
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.61	371	6.30	160	4.72	120	15.75	400	7.99	203	176	80
3-1/8"	3.13	79.4	15.12	384	10.63	270	5.71	145	22.64	575	15.75	400	287	130
4-1/16"	4.06	103.2	18.11	460	16.54	420	6.97	177	27.95	710	19.69	500	551	250
7-1/16"	7.06	179.4	30.39	772	22.05	560	13.19	335	42.13	1070	23.62	600	2116	960

### 5,000 psi Working Pressure

Size	Во	re	L		Г	)	Н	1	F	1	V	V	Wei	ght
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.61	371	9.06	230	5.31	135	18.90	480	11.81	300	209	95
3-1/8"	3.13	79.4	18.62	473	16.54	420	7.28	185	28.35	720	19.69	500	595	270
4-1/16''	4.06	103.2	21.61	549	18.11	460	7.87	200	34.06	865	23.62	600	661	300
7-1/16''	7.06	179.4	34.25	870	22.05	560	14.17	360	47.24	1200	27.56	700	2557	1160

46

Metallic sealing ball valve is designed to suit severe conditions, such as high temperature, high pressure, strong corrosive fluid and the medium with solid phase particles. It is value-engineered for reliability, low pressure loss, ease of operation and has long service time.



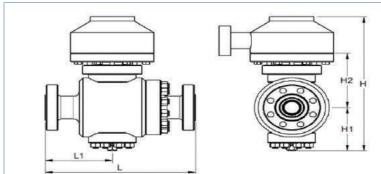
### **Features**

- Low leakage graphite packing.
- Surface harding treatment between ball and seat, it meets the requirement of high temperature abrasive wear and high impact resistance.
- Floating Spring-loaded Seats: Ensure sealing even at low pressures.
- Blow-out Proof Stem(internally inserted): Safety feature that functions to ensure stem sealing at all pressures.
- The top flange is designed according to ISO 5211, it is available for installation with either gear box or power drive mechanism.

# **Approved Certification**

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

API 607/6FA Fire Safe Test, Issued by LR



Dimensions for BM ball valve

L1:Bore centerline to bonnet

L:Face to face H1:Bore centerline to bottom

H2:Bore centerline to body top

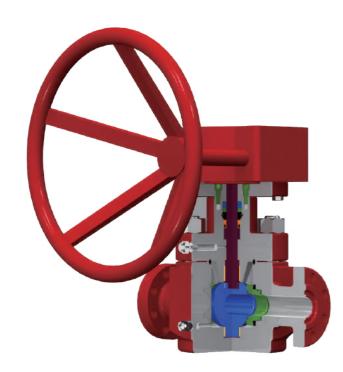
H:Valve overall size

# 5,000 psi Working Pressure

Size	Во	re	I	-	L	1	H	ł	H	11	Н	2	Wei	ght
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/8"	3.13	79.4	18.62	473	8.03	204	29.02	737	7.99	203	8.35	212	613	278

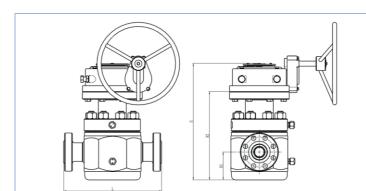
Size	Во	re	L	-	L	.1	H	1	Н	11	Н	2	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16"	1.81	46.0	18.25	464	8.39	213	37.40	950	8.46	215	10.16	258	661	300
2-1/16"	2.06	52.4	20.50	521	9.17	233	26.69	678	7.48	190	9.37	238	529	240
3-1/16"	3.13	79.4	24.38	619	8.03	204	29.02	737	7.99	203	8.35	212	613	278

The BEM ball valve can be removed easily and quickly on the pipe line. There is no need to remove the valve from the line when the valve has a failure on the line, and only remove the flange bolts and nuts, remove the bonnet and stem assembly from the valve body and then remove the ball and seat assembly, you can repair the valve on the line. So that we can saves time and reduces losses.



### **Features**

- The ball valve consists of body, ball, seat, stem, bonnet, gearbox and so on.
- Adopt up install structure, more less leakage, little pipeline stress, easy to manufacture, it can achieve online maintenance.
- This valve body is forging, which is convenient to process support in the body bottom, simple structure, small processing difficulty, accurate positioning, no leakage point, and cost saving.
- Use o-rings or fire prevention sealing materials between seat and body, that can ensure the sealing effect.
- Seat and ball low pressure seal adopt two opposite disc springs, that can reduce processing cost and difficulty, easy to install.
- Between the valve body and the bonnet, BX ring was used, that can ensure the seal performance. Two seals are designed for stem packing: Lipseal and Graphite packing.
- Add a relief valve to the valve body. When replacing the stem packing, the pressure of the middle cavity is all released to ensure the safety of the operator.
- Simple installation and disassembly tools can be used for online maintenance.

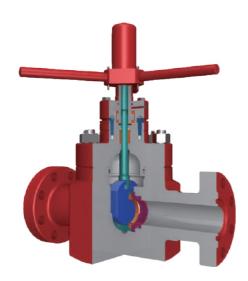


Dimensions for BEM ball valve

L:Face to face size
H1:Bore centerline to bottom size
H2:Body top to bottom size
H: Gear Box top to bottom size

Size	Во	re	l	-	Н	11	Н	12	H	4	Wei	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
1-13/16"	1.81	46	18.25	464	22.20	564	4.72	120	16.34	415	572	260
2-1/16"	2.06	52.4	20.50	521	23.43	595	4.72	120	17.13	435	605	275

The GA75 Series Mud Valve is designed to meet the 7,500 psi working pressure demands of deep well drilling. It is chosen for the following drilling applications: standpipe manifolds, pump manifolds, pump manifold block valves, high pressure drilling system block valves and high pressure frac service. This Valve is available in sizes 2-1/16" to 5-1/8" with butt weld end or flanged end connections.



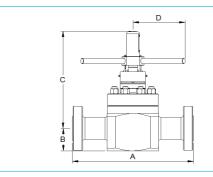
### Features

- Unique abrasion-resistant one piece seat and metal wear rings ensure positive seal performance for extended service.
- Replaceable one piece seat and metal wear rings eliminate costly valve removal.
- In Line Field Repairability, bonnet is easily removed for internal parts inspection and/or replacement without removing the valve from the line.
- Include a sight lens to view the stem for determining gate position.
- Locking seat design ensures alignment and minimum resistance to flow.
- Flow-cleansed body cavity eliminates sanding problems.
- Floating slab gate design.

### **Approved Certification**

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

ABS For API 6A Product, Issued by ABS



Dimensions for flanged end GA75

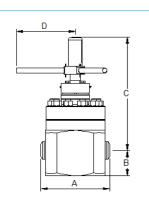
A:Flange face to face

B:Bore centerline to bottom of valve

C:Bore centerline to handwheel top

D:Bore centerline to handwheel

Size	Во	ore	F	A	E	3	(		[	)	We	eight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	20.51	521	4.02	102	17.36	441	9.96	253	265	120
2-9/16"	2.56	65.1	22.24	565	4.72	120	20.08	510	11.02	280	417	189
3-1/16"	3.06	77.8	24.38	619	5.39	137	22.36	568	11.02	280	562	255
4-1/16"	4.06	103.2	26.38	670	6.22	158	24.80	630	9.53	242	739	335
5-1/8"	5.13	130.2	29.00	737	7.17	182	33.94	862	10.00	254	1404	637



Dimensions for welded end GA75

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

# 7,500 psi Working Pressure

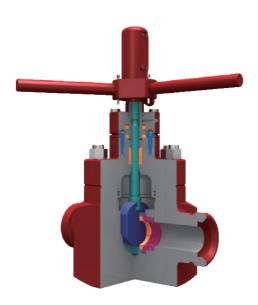
Size	Вс	ore	A	A .	E	3	C			)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.00	50.8	9.00	229	4.02	102	13.03	331	9.96	253	260	118
3-1/16"	3.00	76.2	13.00	330	5.39	137	22.36	568	11.02	280	430	195
4-1/16"	4.00	101.6	16.00	406	6.22	158	24.80	630	9.53	242	529	240
5-1/8"	5.00	127.0	17.88	454	7.17	182	33.94	862	10.00	254	1102	500

# 10,000 psi Working Pressure

Size	Вс	ore	A	A	E	3	(			)	We	ight
		mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/16"	3.06	77.8	13.00	330	4.29	109	23.07	586	11.02	280	419	190
4-1/16"	4.06	103.2	16.00	406	4.88	124	26.22	666	10.00	254	529	240
5-1/8"	5.13	130.2	18.66	474	6.69	170	34.65	880	13.39	340	1146	520

### Description

The GA series mud valve specifically engineered for the rigorous requirements of oilfield applications. It is designed for dependable, heavy duty performance in abrasive service conditions. It is available in pressure ratings from 2000 to 5000psi and bore sizes from 2-1/16" to 4-1/16".



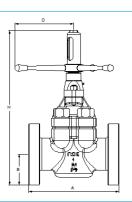
### **Features**

- The valve should be either fully open or fully closed while in service. Flow through a partially open valve may erode the gate and seat.
- In Line Field Repairability, the bonnet is easily removed for internal parts inspection and/or replacement without removing the valve from the line.
- Flexible trim offerings: Optional materials for stems, gates, seat inserts and seat elastomers make it easier to trim valves for a wide range of service conditions.
- The rising stem design protects the stem threads from lading.
- Include a sight lens to view the stem for determining gate position.
- The seat uses a unique design to ensures a tight seat seal against the body and around each valve port and has proven to be effective even if the gate and seat ring become scored or abraded during service.

### **Approved Certification**

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

ABS For API 6A Product, Issued by ABS



Dimensions for flanged end GA

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

# 2,000 psi Working Pressure

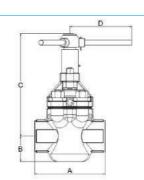
Size	Во	ore	1	Ą	E	3	(	C	[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
7-1/16"	7.06	179.4	26.12	664	7.28	185	41.34	1050	12.80	325	1213	550

# 3,000 psi Working Pressure

Size	Во	ore	A	A .	E	3	C			)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
3-1/8"	3.13	79.4	17.12	435	4.92	125	17.72	450	19.02	483	179	135
4-1/16"	4.06	103.2	20.12	511	4.72	120	16.93	430	19.02	483	298	81

# 5,000 psi Working Pressure

Size	Вс	ore	A	A	E	3	(		[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.2	21.62	549	6.10	155	24.65	626	22.99	584	374	170
7-1/16"	7.06	179.4	32	813	8.07	2.05	41.34	1050	15.75	400	1367	620



Dimensions for threaded end GA

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

D:Bore centerline to handwheel

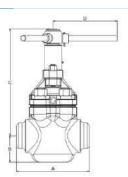
# 2,000 psi Working Pressure

Size	Вс	ore	A	A	E	3	(		[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
5-1/8"	5.13	130.2	16.00	406	5.55	141	31.61	803	24.02	610	402	183

# 3,000 psi Working Pressure

Size	Во	ore		A	E	3	C		[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.06	103.1	13.03	331	4.69	119	19.02	483	22.91	582	207	94
5-1/8"	5.13	130.2	15.98	406	5.55	141	31.61	803	24.02	610	403	183

Size	Во	ore	F	Ą	E	3	(		[	)	We	ight
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.09	53.1	8.98	228	2.56	65	13.58	345	12.52	155	74	35
4-1/16"	4.06	104	13.00	330	4.59	116	24.61	625	11.50	292	254	115



Dimensions for welded end GA

A:Weld 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

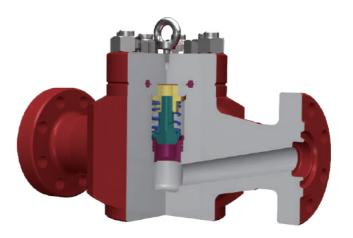
Size	Во	ore	А		В		С		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
4-1/16"	4.09	104	13.03	331	4.7	119	19.01	483	22.91	582	207	94

# 5,000 psi Working Pressure

Size	Вс	ore	А		В		С		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52	8.98	228	2.56	65	13.59	345	12.21	310	73	33
3-1/8"	3.11	79	10.98	279	3.94	100	17.72	450	9.45	240	132	60
4-1/16"	4.06	104	13.00	330	4.59	117	24.61	625	11.50	292	254	115

### Description

LC Series Check Valve is a unidirectional check valve which utilizes a spring loaded Poppet. The Poppet is guided for consistent, reliable operation and seating. This Valve is designed for installation and use in high-pressure Mud Choke Manifolds, and high pressure Christmas Tree Injection and Kill Lines. It is available in pressure ratings from 2000 to 20,000 psi and Bore sizes of 1-13/16" to 7-1/16".



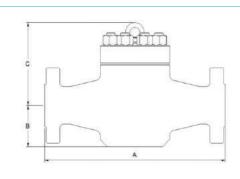
### Features

- Although the preferred orientation of installation is vertical, the check valve can operate equally well in the horizontal orientation with its spring loaded Poppet.
- The Check Valves are available with a variety of end connections. Flanged, Clamp Hub and Butt Weld connections or any combination of these are available.
- Metal sealing between disc and seat offers advantages over elastomeric seals in applications where chemical and well fluid attack and extreme temperatures are factors.
- Streamlined valve seat area results in less flow turbulence and improves body longevity.
- Low Maintenance Operation: The Check Valve is non-lubricated and requires no routine maintenance.

# **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



### 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	Во	re	А		Е	3		С	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	Вс	re	Α		В		(	С	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

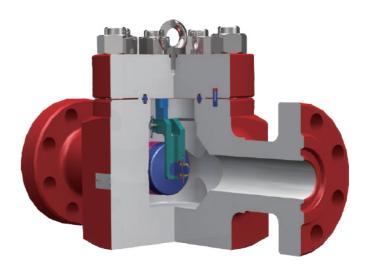
Size	Во	re	Α		E	3		С	Weight		
	in	mm	in	mm	in	mm	in	mm	lb	kg	
1-13/16"	1.81	46.1	18.25	464	4.33	110	7.60	193	225	102	
2-1/16"	2.06	52.4	20.50	521	4.33	110	7.60	193	313	142	
2-9/16''	2.56	65.1	22.25	565	4.96	126	8.78	223	295	134	
3-1/16"	3.06	77.8	24.38	619	5.71	145	8.98	228	353	160	

# 15,000 psi Working Pressure

Size	Во	re	Α		В		(	С	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".



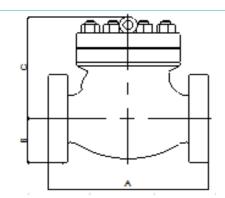
### Features

- 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

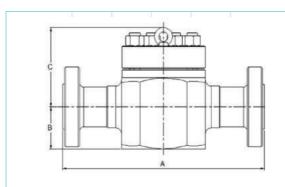
A:Flange face to face B:Bore centerline to bottom of valve C:Bore centerline to handwheel top

# 3,000 psi Working Pressure

Size	Во	re	А		E	3	(	С	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	Во	re	А		В		С		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



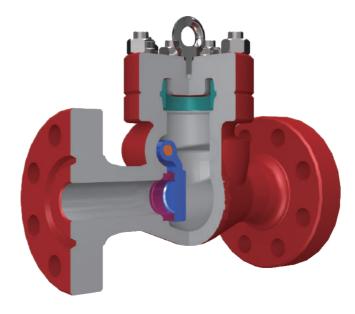
Dimensions for SC

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

Size	Во	re	А		В		(		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	

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".



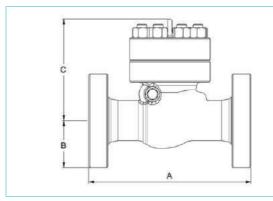
### Features

- 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.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV

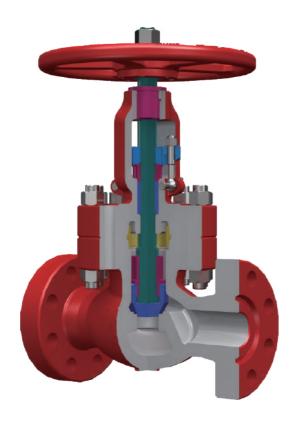


Dimensions for SF

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

Size	Во	re	А		В		(		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

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.



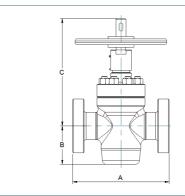
### Features

- 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
- Seat face with stellite 6 is standard design.

### **Approved Certification**

CE/PED

For API 6A Product, Issued by DNV



Dimensions for Globe valve

A:Flange face to face

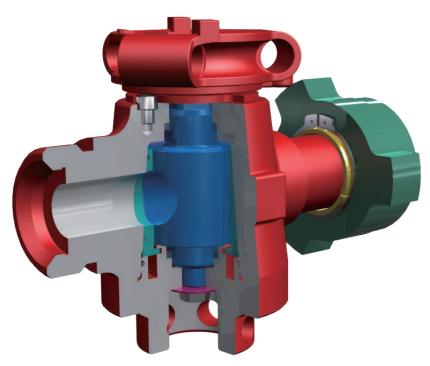
B:Bore centerline to bottom of valve C:Bore centerline to handwheel top D:Bore centerline to handwheel

# 3,000 psi Working Pressure

Size	Во	ore	Α		В		С		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

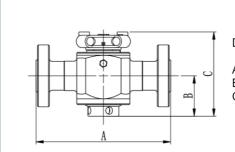
Size	Во	ore	А		В		С		D		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
2-1/16"	2.06	52.4	14.61	371	4.25	108	18.70	475	14.00	350	198	90
3-1/8"	3.13	79.4	18.62	473	7.44	189	16.93	430	18.00	450	386	175
7-1/16"	7.05	179	41.93	1065	7.87	200	57.28	1455	-	Gear Box	2646	1200

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

Size	Bore		А		В		С		Weight	
	in	mm	in	mm	in	mm	in	mm	Ib	kg
1-13/16"	1.81	46	17.99	457	5	127	11.3	287	154.3	70