

GWC Italia

Proven technology
for individual valve solutions
worldwide



API 6A GATE VALVES

The logo for GWC Italia, consisting of the letters 'GWC' in a bold, blue, sans-serif font. A registered trademark symbol (®) is located at the top right of the 'C'. The logo is set against a white background.

WGV-1002

GWC Italia

Worldwide Network

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GWC Italia SpA with its Headquarters in Milan, Italy designs, manufacturers and markets valves with one of the most extensive lines you will find in the Industry today. GWC Italia SpA which is founded by an Italian Group & USA Entrepreneurial Management team, has become the Parent Company of the long standing GWC Worldwide Companies. This Italian & USA team has a history of building and managing successful valve manufacturing companies over the past 40 years. The valves manufactured in Italy will be complementary to the existing GWC line consisting of diversified flow control packages in a variety of alloys, trims, configurations, sizes and pressure classes, from general to severe applications. GWC Valves are used in major applications for Upstream, Downstream & Transportation Segments of the Oil & Gas Industry, E&P, Petrochemical, Chemical, Mining/Minerals, Power, Marine and Industrial markets.

GWC Italia SpA extensive line of valve and flow control products include:

- Trunnion Mounted Ball Valves (soft & metal seated)
 - Split Body
 - Top Entry
 - Welded Body
 - Subsea
 - Cryogenic & High Temperature
 - Two Balls One Body DBBV
- Pipeline Gate and Check Valves
- Floating Ball Valves
- Gate, Globe and Check Valves including Cast & Forged
- Butterfly Valves including Triple Offset, High Performance and Resilient Seated
- Dual Plate Check Valves
- Needle and Gauge Valves
- Wellhead Gate Valves

GWC Italia Spa products are designed, engineered and manufactured to exceed its customer's stringent process requirements including API 6D, API 6A, API 6DSS, API 600, API 602, API 608, ISO 9001, PED, ATEX, SIL 3 and TA – Luft.



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CERTIFICATIONS & STANDARDS

American Standards

American Petroleum Institute

API-6D	Specification for Pipeline Valves
API-6D SS	Specification for Subsea Pipeline Valves
API-6A	Specification for Wellhead and Christmas Tree Equipment
API-6FA	Specification for Fire Test for Valves
API-594	Check Valves: Wafer, Wafer-Lug, and Double Flanged Type
API-598	Valve Inspection and Testing
API-600	Bolted Bonnet Steel Gate Valves for Petroleum and Natural Gas Industries
API-602	Compact Steel Gate Valves- Flanged, Threaded, Welding and Extended-Body Ends
API-607	Fire Test for Soft-Seated Quarter-Turn Valves
API-608	Metal Ball Valves - Flanged, Threaded, and Welding End
API-609	Butterfly Valves: Double Flanged, Lug and Wafer-Type
API-Q1	Specification for Quality Programs for the Petroleum, Petrochemical & Natural Gas

American Society of Mechanical Engineers

ASME-B1.20.1	Pipe Threads, General Purpose (inch)
ASME-B16.11	Forged Fittings, Socket-Welding and Threaded
ASME-B16.10	Face to Face and End to End Dimensions of Valves
ASME-B16.5	Pipe Flanges and Flanged Fittings NPS 1/2 ~ NPS 24
ASME-B16.47	Large Diameter Steel Flanges NPS 26 ~ NPS 60
ASME-B16.25	Buttwelding Ends
ASME-B16.34	Valves - Flanged, Threaded and Welding End

International Standards

ISO 9001:2008	Quality Management Systems
ISO 14001	Environmental Management
OHSAS 18001:2007	Occupational Health and Safety Management System
ISO/TS 29001	Petroleum, Petrochemical and Natural Gas Industries - Sector Specific Quality Management Systems
CE/PED	Pressure Equipment Directive
CU-TR	Technical Reglament Conformity Certificate TRCU
CRN	Canadian Registration Number
Z245.15.96	Pipeline Steel Valves
ATEX	European for explosive atmosphere
SIL3	Measurement of performance required for safety instrument function

VALVE TRIM CHART

Non-NACE Trims				NACE Trims						
API Material Class	AA	BB	CC	DD-NL	EE-0.5	EE-1.5	EE-NL	FF-0.5	FF-1.5	FF-NL
Service	GENERAL	GENERAL	GENERAL	SOUR	SOUR	SOUR	SOUR	SOUR	SOUR	SOUR
Trim	STANDARD	SS TRIM	FULL SS	STANDARD	SS TRIM	SS TRIM	SS TRIM	FULL SS	FULL SS	FULL SS
Corrosive	NO	SLIGHTLY	MODERATE	NO	MODERATE	MODERATE	MODERATE	HIGHLY	HIGHLY	HIGHLY
Available API Temperature	L TO Y	L to Y	P to Y	L to Y	L to Y	L to Y	L to Y	P to Y	P to Y	P to Y
Body	ASTM A 487 CL 4 60K ALLOY	ASTM A 487 CL 4 60K ALLOY	ASTM A 217 or A 487 CA-15 60K SS	ASTM A 487 CL 4 60K ALLOY	ASTM A 487 CL 4 60K ALLOY	ASTM A 487 CL 4 60K ALLOY	ASTM A 487 CL 4 60K ALLOY	ASTM A 217 or A487 CA-15 60K SS	ASTM A217 or A487 CA-15 60K SS	ASTM A 217 or A487 CA-15 60K SS
Bonnet	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 410 60K SS	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 4130 60K ALLOY	AISI 410 60K SS	AISI 410 60K SS	AISI 410 60K SS
Gate	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
Seats	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
Stem	AISI 4130 75K NITRIDED	ASTM A 564 GR 630 (17-4) 105K NITRIDED	ASTM A 564 GR 630 (17-4) 105K NITRIDED	AISI 4130 75K NITRIDED	ASTM A 564 GR 630 (17-4) 105K NITRIDED	CRA (2) PER NACE	CRA (2) PER NACE	ASTM A 564 GR 630 (17-4) 105K NITRIDED	CRA (2) PER NACE	CRA (2) PER NACE
Bonnet Seal Ring	AISI 1018/1020	AISI 316 SS	AISI 316 SS	AISI 1018/1020	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS
Studs	ASTM A193 GR B7 OR ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7	ASTM A193 GR B7 or ASTM A320 GR L7
Nuts	ASTM A194 GR 2H	ASTM A194 GR 2H	ASTM A194 GR 2H	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM	ASTM A194 GR 2HM
Packing	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)	25% GLASS FILLED PTFE (3)

- Nitriding is standard on all gates and seats. Tungsten Carbide, HF6 or other hardfacing techniques are also available upon request.
- Corrosion resistant alloy per NACE MR0175/ISO 15156.
- High temperature (API Temp Ratings X,Y) valves use graphite packing. Other special packing is available upon request.
- Teflon inserts on seat faces are standard in TVC valves. Metal-to-metal seats are available upon request.
- Charpy impact test results are provided as required by API 6A according to the temperature rating and material class.
- Materials for sour service trims conform to latest edition of NACE MR0175. Explanation for suffixes used for sour trims: 0.5 = 0.5 psi maximum partial pressure of hydrogen sulfide 1.5 = 1.5 psi maximum partial pressure of hydrogen sulfide NL = No limit to hydrogen sulfide exposure.
- GWC reserves the right to use material class ZZ when customers request materials of construction that do not comply with current NACE MR0175/ISO standards.

Temperature Classification	Operating Range (°F)	
	Minimum	Maximum
K	-75°F (-60°C)	to 180°F (+82°C)
L	-50°F (-46°C)	to 180°F (+82°C)
N	-50°F (-46°C)	to 140°F (+60°C)
P	-20°F (-29°C)	to 180°F (+82°C)
R	Room Temperature	
S	0°F (-18°C)	to 140°F (+60°C)
T	0°F (-18°C)	to 180°F (+82°C)
U	0°F (-18°C)	to 250°F (+121°C)
V	35°F (+2°C)	to 250°F (+121°C)
X	0°F (-18°C)	to 350°F (+177°C)
Y	0°F (-18°C)	to 650°F (+343°C)

API MATERIAL REQUIREMENTS

MATERIAL CLASS		MINIMUM MATERIAL REQUIREMENTS	
		BODY, BONNET, END AND OUTLET CONNECTIONS	PRESSURE-CONTROLLING PARTS, STEMS AND MANDREL HANGERS
AA	General Service	Carbon or Low-Alloy Steel	Carbon or Low-Alloy Steel
BB	General Service	Carbon or Low-Alloy Steel	Stainless Steel
CC	General Service	Stainless Steel	Stainless Steel
DD	General Service ^a	Carbon or Low-Alloy Steel ^b	Carbon or Low-Alloy Steel ^b
EE	General Service ^a	Carbon or Low-Alloy Steel ^b	Stainless Steel ^b
FF	General Service ^a	Stainless Steel ^b	Stainless Steel ^b
HH	General Service ^a	CRAs ^{bcd}	CRAs ^{bcd}

a As defined by ISO 15156 (all parts) (NACE MR0175: see Clause 2).

b In accordance with ISO 15156 (all parts) (NACE MR0175: see Clause 2).

c CRA required on retained fluid-wetted surfaces only: CRA cladding of low-alloy or stainless steel is permitted [see 6.5.1.2.2 a].

d CRA as defined in Clause 3: ISO 15156 (all parts) (NACE MR0175: see Clause 2) definition of CRA does not apply.

API 6A PRODUCT SPECIFICATION LEVELS

	PSL-1	PSL-2	PSL-3	PSL-4
Operation	One tensile test is required to qualify heat lot	Slightly stringent requirements than PSL-1	Same as PSL-2	Same as PSL-2
Tensile Testing	Required on selected wetted parts only for temperatures K and L	Required on all wetted parts for temperatures K, L and P. Stringent retest criteria PSL-1	Required for all temperatures. Otherwise, same as PSL-2	Same as PSL-3, but stringent acceptance criteria
Impact Testing (Charpy)	One hardness punch each on bonnet and stem sampling permitted	Same as PSL-1, but each part must be tested	Same as PSL-2, but additional punch on bonnet face	Same as PSL-3
Hardness Testing	No requirement	Mag particle on all surfaces. Can use wet or dry mag method	Same as PSL-2 but all surfaces must be tested. Must use wet mag method	Same as PSL-3
Service NDE	No requirement	No requirement	100% Volumetric testing by radiography or ultrasonic testing required, all wetted parts	Same as PSL-3, but stricter acceptance criteria
Volumetric NDE Serialization	No requirement	No requirement	Each wetted part must carry a unique serialization number	Same as PSL-3
Traceability	No requirement	Traceability to job lot required	Part must be traceable to specific heat and heat treat lot	Same as PSL-3
Chemical Analysis	No requirement	Verification of material chemistry required	Same as PSL-2, but stricter acceptance criteria	Same as PSL-3
Functional / Hydrotesting	Basic Function / Hydrotests required	Same as PSL-1	Same as PSL-1, but extended hold periods on hydrotest	Same as PSL-3 with addition of gas testing, no leakage acceptable
Documentation Supply Requirements	No requirement	No requirement	Cert of compliance for assembly, assembly trace records, pressure test records with strip charts.	Same as PSL-3 with addition of 1. NDE, hardness matl and heat treat records for bonnets & stems. 2. Cert of compliance for seals 3. Gas test records for assy.

ORDERING GUIDE

Example: 2-1/16”, Expanding Gate Valve, 5000 PSIG, Flanged RTJ, Performance Requirement PR1 with Product Specifications Level PSL1, Material Class DD, Temperature Rating “L”

E 500 9 – R1 – L1 – DD L
1. 2. 3. 4. 5. 6. 7.

1. MODEL

E EXPANDING GATE S SLAB GATE SB SLAB GATE WITH BALL SCREW

2. RATING

300 3000 PSIG 500 5000 PSIG 1000 10000 PSIG 1500 15000 PSIG

3. END CONNECTION

9 RTJ FLANGE 3 EXTERNAL UPSET TUBING THREAD
 1 LINE PIPE NPT 4 CLAMP HUB END
 2 NON UPSET TUBING THREAD

4. PERFORMANCE REQUIREMENT

R1 PR1 R2 PR2

5. PRODUCT SPECIFICATION LEVEL

L1 PSL1 L2 PSL2 L3 PSL3 L3G PSL3G L4 PSL4

6. MATERIAL CLASS

Material Class	Body	Bonnet	Stem	Gate	Seat
AA	4130 FORGED ASTM A487-CL 4 60K CAST	AISI 4130 60K ALLOY	AISI 4130 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 4130 75K NITRIDED
BB	4130 FORGED ASTM A487-CL 4 60K CAST	AISI 4130 60K ALLOY	ASTM A564 GR 630 (17-4) 105K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
CC	410 FORGED ASTM A487 CA-15 60K SS CAST	AISI 410 60K SS	ASTM A564 GR 630 (17-4) 105K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 4130 75K NITRIDE
DD-NL	4130 FORGED ASTM A487-CL 4 60K CAST	AISI 4130 60K SS	AISI 4130 75K NITRIDED	AISI 4130 75K NITRIDED	AISI 4130 75K NITRIDED
EE-0.5	4130 FORGED ASTM A487-CL 4 60K CAST	AISI 4130 60K ALLOY	ASTM A564 GR 630 (17-4) 105K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
EE-NL	4130 FORGED ASTM A487-CL 4 60K CAST	AISI 4130 60K ALLOY	CAR (1) PER NACE	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
FF-0.5	410 FORGED ASTM A487 CA-15 60K SS CAST	AISI 410 60K SS	ASTM A564 GR 630 (17-4) 105K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED
FF-NL	410 FORGED ASTM A487 CA-15 60K SS CAST	AISI 410 60K SS	CAR (1) PER NACE	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED

7. TEMPERATURE RATING

Temperature Classification	Operating Range (°F)		Operating Range (°C)	
K	-75	180	-60	82
L	-50	180	-46	82
P	-20	180	-29	82
R	ROOM TEMPERATURE			
S	0	150	-18	66
T	0	180	-18	82
U	0	250	-18	121
V	35	250	2	121

MODEL E EXPANDING GATE VALVES

GWC Model E cast-body expanding gate valves are designed for oil and natural gas wellhead or other critical service applications with operating pressures from 2,000 to 5,000 psi. All GWC model expanding gate valves are API 6A Latest Edition monogrammed equipment and are available in bore sizes ranging from 2-1/16" through 7-1/16".

Operating Temperatures

GWC Model E Gate Valves are available with API 6A Temperature ratings of L (-50 F) through Y (650 F). Valves for API Temperature ratings of X and Y are pressure de-rated as required per Annex G of API 6A Latest Edition.

Expanding Gate

The expanding gate is field-replaceable and provides a tight mechanical seat that does not rely on line pressure. This ensures seal integrity at both high and low pressures.

Seat Designs

The standard gate to seat and seat to body sealing interface is a slip-fit design, assisted by inserts in the face and rear of each seat. Metal-to-metal gate to seat and pressed-fit seat to body sealing is used for high-temp valves and is otherwise available upon request.

Packing Design

Chevron style stem packing is replaceable and can be re-energized by injection between the packing stacks. This ensures efficient sealing for the life of the valve. Graphite packing is used for high-temperature application.

Body Lubricant

All Model E Valves are shipped with body filler grease appropriate for the material class and temperature rating of the valve to ensure smooth operation of the valve under pressure and to prevent corrosion during storage prior to deployment.

Grease Fittings

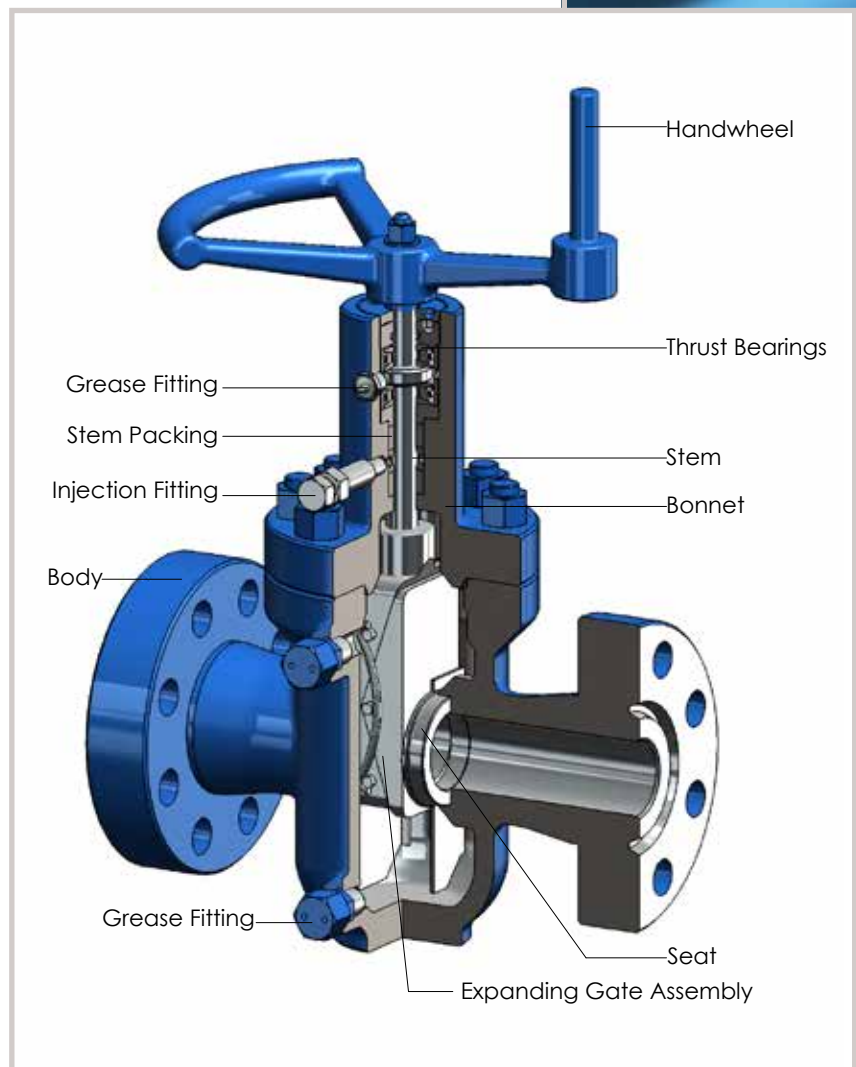
The valve body may be lubricated through the grease fittings provided in the valve body. All fittings meet the requirements of NACE MR0175.

Exposed Bolting

All exposed bolting meets the requirements of NACE MRO175.

Full Through Conduit Bore

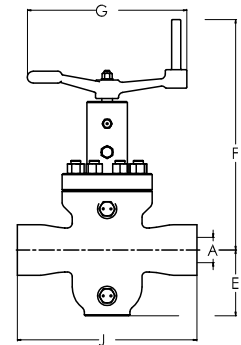
The full through conduit bore provides for smooth flow with minimal turbulence. It also provides an unobstructed passage for well intervention tools.



2,000 - 5,000 PSI Expanding Gate Valves

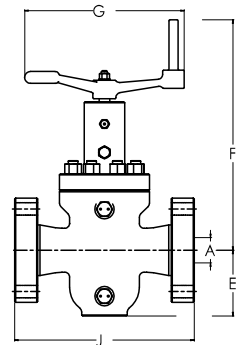
Threaded Valves

MODEL E DIMENSIONAL DETAILS														
Size	Working (PSI)	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
2 1/16	2000	2.06	52	4.81	122	19.25	488	11.00	279	9.62	244	90	40	13
	3000-5000	2.06	52	5.06	128	19.43	493	13.00	330	9.62	244	125	56	
2 9/16	2000	2.56	65	5.62	142	20.18	512	13.00	330	10.25	260	125	56	15-1/2
	3000-5000	2.56	65	5.93	150	20.43	519	16.00	406	10.25	260	160	72	
3 1/8	2000	3.12	79	6.93	176	22.50	571	13.00	330	11.37	288	190	86	20
	3000-5000	3.12	79	7.31	185	22.75	577	16.00	406	11.37	288	230	104	
4 1/16	2000	4.06	103	8.62	219	25.93	658	16.00	330	13.00	330	320	145	24-1/2
	3000-5000	4.06	103	9.06	230	26.37	669	20.00	508	13.00	330	420	190	



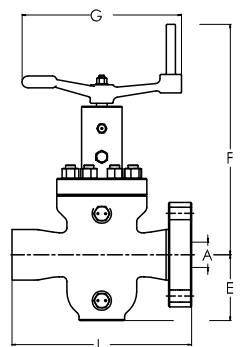
Flanged End Valves

MODEL E DIMENSIONAL DETAILS														
Size	Working (PSI)	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs	
2 1/16	2000	2.06	52	4.81	122	19.25	488	11.00	279	11.62	295	120	54	13
	3000-5000	2.06	52	5.06	128	19.43	493	13.00	330	14.62	371	180	56	
2 9/16	2000	2.56	65	5.62	142	20.18	512	13.00	330	13.12	333	180	81	15-1/2
	3000-5000	2.56	65	5.93	150	20.43	519	16.00	406	16.62	422	220	99	
3 1/8	2000	3.12	79	6.93	176	22.50	571	13.00	330	14.12	358	220	99	20
	3000	3.12	79	7.31	185	22.75	577	16.00	406	17.12	434	300	136	
	5000	3.12	79	7.31	185	22.75	577	16.00	406	18.62	437	340	154	
4 1/16	2000	4.06	103	8.62	219	25.93	658	16.00	406	17.12	358	360	163	24-1/2
	3000	4.06	103	9.06	230	26.37	669	20.00	508	20.12	511	520	235	
	5000	4.06	103	9.06	230	26.37	669	20.00	508	21.62	549	560	254	
5 1/8	2000	5.12	79	11.62	295	32.50	825	21.00	533	22.12	561	800	362	31
	3000	5.12	79	11.62	295	32.50	825	23.50	596	24.12	612	900	408	
	5000	5.12	79	11.62	295	32.50	825	23.50	596	28.62	727	980	444	
7 1/16	2000	7.06	103	13.87	352	33.10	840	13.00	330	20.00	666	1021	463	42
	3000	7.06	103	13.87	352	34.10	866	16.00	406	24.00	714	1118	507	
	5000	7.06	103	13.87	352	34.10	866	20.00	508	30.00	812	1398	634	



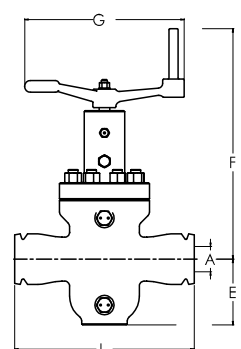
Threaded by Flanged Valves

MODEL E DIMENSIONAL DETAILS														
Size	Working (PSI)	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs	
2 1/16	2000	2.06	52	4.81	122	19.25	488	11.00	279	11.62	269	105	47	13
	3000-5000	2.06	52	5.06	128	19.43	493	13.00	330	12.12	307	140	63	
2 9/16	2000	2.56	65	5.62	142	20.18	512	13.00	330	11.67	296	155	70	15-1/2
	3000-5000	2.56	65	5.93	150	20.43	519	16.00	406	13.43	341	190	86	
3 1/8	2000	3.12	79	6.93	176	22.50	571	13.00	330	12.75	323	205	92	20
	3000	3.12	79	7.31	185	22.75	577	16.00	406	14.25	14	265	120	
	5000	3.12	79	7.31	185	22.75	577	16.00	406	15.00	15	285	129	
4 1/16	2000	4.06	103	8.62	219	25.93	658	16.00	406	15.06	382	340	154	24-1/2
	3000	4.06	103	9.06	230	26.37	669	20.00	508	16.56	420	470	213	
	5000	4.06	103	9.06	230	26.37	669	20.00	508	17.31	420	490	222	



Clamp Hub End Valves

MODEL E DIMENSIONAL DETAILS														
Size	Working (PSI)	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs	
2 1/16	2000	2.06	52	4.81	122	19.25	488	11.00	279	11.20	279	84	38	13
	3000-5000	2.06	52	5.06	128	19.43	493	13.00	330	11.25	287	105	47	
2 9/16	2000	2.56	65	5.62	142	20.18	512	13.00	330	12.00	304	109	49	15-1/2
	3000-5000	2.56	65	5.93	150	20.43	519	16.00	406	15.00	381	159	72	
3 1/8	2000	3.12	79	6.93	176	22.50	571	13.00	330	14.00	355	168	76	20
	3000	3.12	79	7.31	185	22.75	577	16.00	406	17.00	431	215	97	
	5000	3.12	79	7.31	185	22.75	577	16.00	406	17.00	431	222	100	
4 1/16	2000	4.06	103	8.62	219	25.93	658	16.00	406	16.00	406	310	140	24-1/2
	3000	4.06	103	9.06	230	26.37	669	20.00	508	18.00	457	396	179	
	5000	4.06	103	9.06	230	26.37	669	20.00	508	19.00	482	408	185	



MODEL S SLAB GATE VALVES

GWC Model S forged-body slab gate valves are designed for oil and natural gas wellhead, manifold or other critical service applications with operating pressures from 3,000 to 15,000 psi. All model S slab gate valves are API 6A latest edition monogrammed equipment and are available in bore sizes ranging from 1-13/16" through 4-1/16".

Operating Temperatures

GWC Model S valves are available with API 6A Temperature ratings of L (-50 F) through Y (650 F). Valves for API Temperature ratings of X and Y are pressure de-rated as required per Annex G of API 6A Latest Edition.

Slab Gate

The single piece slab gate is field-replaceable and provides the valve with full bidirectional sealing capability at both high and low pressures.

Seat Design

The standard gate to seat and seat to body sealing interface is a two-piece design consisting of a seat ring and a body bushing, assisted by inserts in the rear of each piece. Metal-to-metal gate to seat interface is standard. Metal inserts are used for high-temperature applications.

Packing Design

Stem packing is replaceable and assisted by an anti-extrusion ring. This ensures efficient sealing for the life of the valve. Graphite packing is used for high-temperature applications.

Integrates Backseat

All Model S valves have an integrated metal-to-metal stem to bonnet

backseat. When valve is in backseat position pressure is contained within the valve cavity and cannot ingress into bonnet or stem packing area.

Grease Fittings

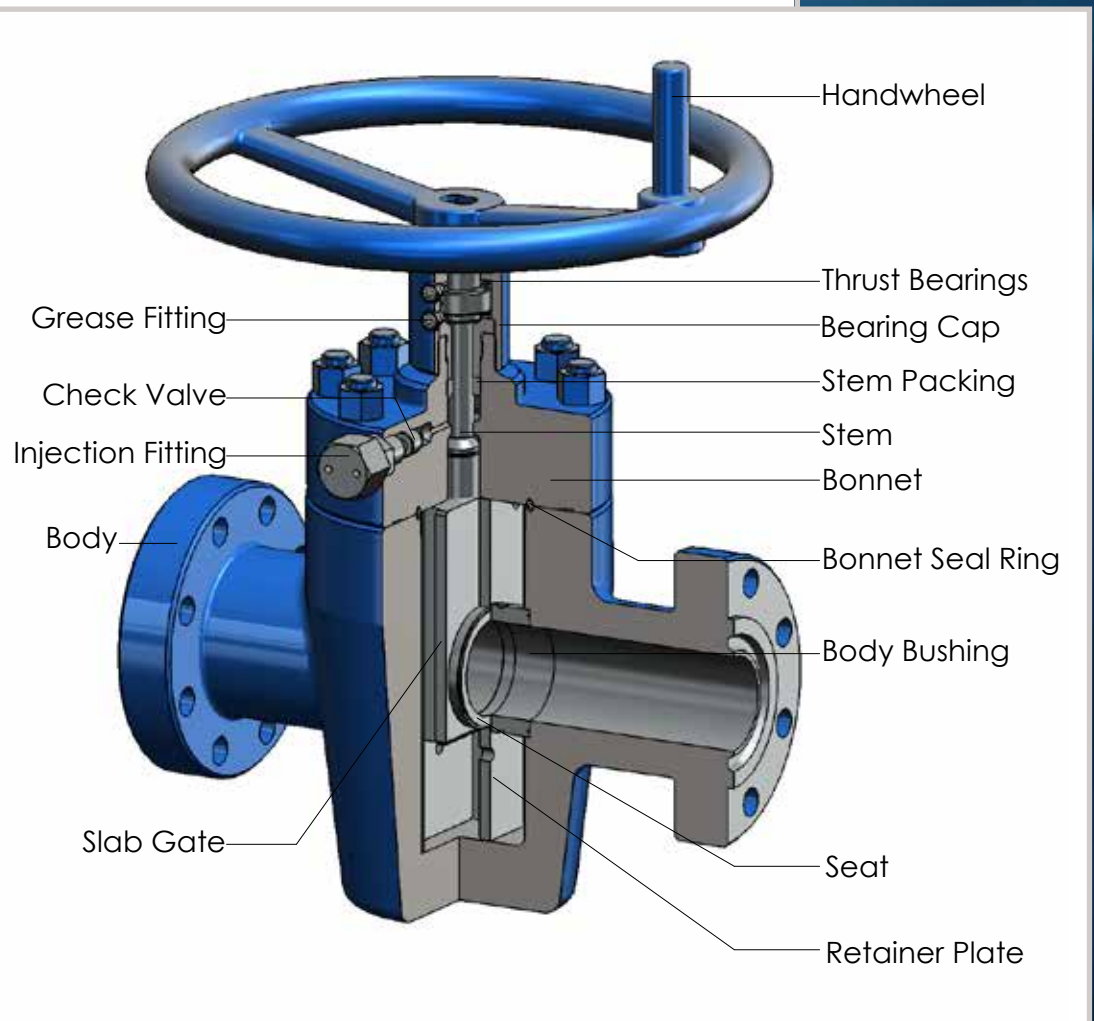
The valve body may be lubricated through the grease fitting provided in the valve bonnet. An in-line check valve is provided behind the grease fitting to ensure a unidirectional flow. All fittings meet the requirements of NACE MRO175.

Lubrication and Corrosion Protection

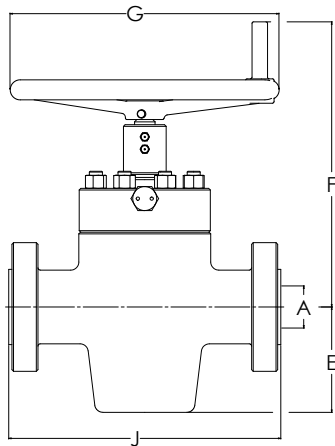
All model S valves have body cavity lubrication appropriate for the material class and temperature rating of the valve under pressure and prevents corrosion during storage.

Full Through Conduit Bore

The full through conduit bore provides for smooth flow with minimal turbulence. It also provides an unobstructed passage for well intervention tools.



3,000 - 15,000 PSI Slab Gate Valves



- A Valve Bore
- E Bore centerline to bottom of valve
- F Bore centerline to handwheel top
- G Handwheel diameter
- J Flange face to face
- N Number of turns to open valve
- WT Estimated weight

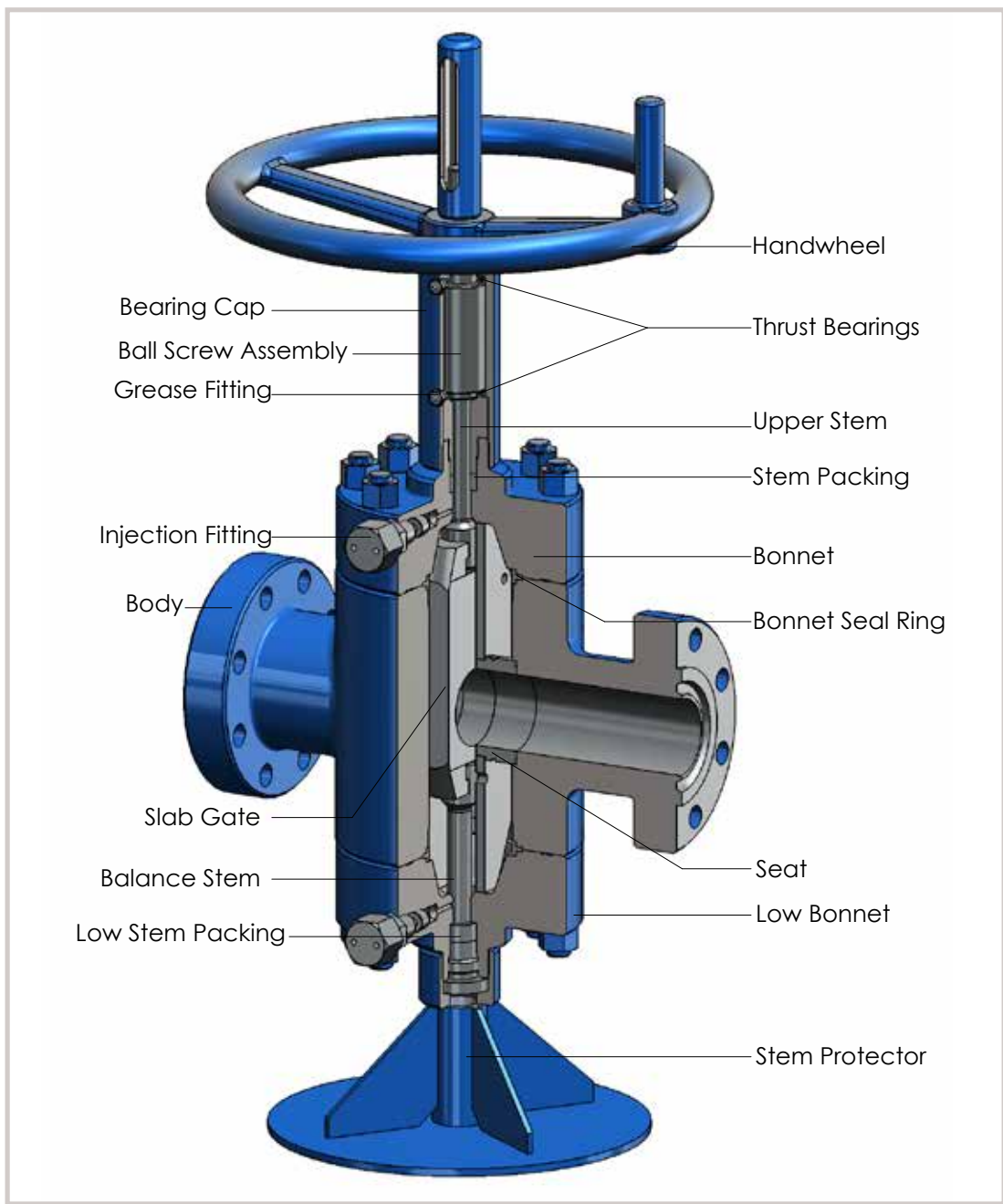
MODEL S DIMENSIONAL DETAILS														
Size	Press	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs	
1 13/16	10,000	1.81	46	5.69	144	16.47	418	14.00	355	18.25	463	240	108	12
	15,000	1.81	46	5.90	149	16.73	425	18.00	431	18.00	457	300	136	12
2 1/16	3,000-5,000	2.06	52	5.06	128	19.43	493	13.00	330	14.62	371	125	56	13
	10,000	2.06	52	5.69	144	16.45	417	14.00	355	20.50	520	265	120	12
2 9/16	15,000	2.06	52	5.90	149	16.73	425	18.00	431	19.00	482	330	149	12
	3,000-5,000	2.56	65	5.93	150	20.43	519	16.00	406	16.62	422	220	99	15 1/2
3 1/8	10,000	2.56	65	6.75	171	17.68	448	18.00	431	22.25	565	370	167	15
	15,000	2.56	65	7.74	196	18.95	481	18.00	431	21.00	533	450	204	15
3 1/8	3,000	3.12	79	7.31	185	22.75	577	16.00	406	17.12	434	300	136	20
	5,000	3.12	79	7.31	185	22.75	577	16.00	406	18.62	437	340	154	20
4 1/16	10,000	3.06	77	8.12	206	18.58	471	24.00	584	24.38	619	520	235	18
	15,000	3.06	77	9.65	245	22.79	578	24.00	584	23.56	598	880	399	19
4 1/16	3,000	4.06	103	9.06	230	26.37	669	20.00	508	20.12	511	520	235	24 1/2
	5,000	4.06	103	9.06	230	26.37	669	20.00	508	21.62	549	560	254	24 1/2
4 1/16	10,000	4.06	103	10.19	258	21.42	544	24.00	584	26.38	670	850	385	23
	15,000	4.06	103	11.71	297	24.05	636	24.00	584	29.00	736	1360	616	24

MODEL S DIMENSIONAL DETAILS				
		FULL STAINLESS	STANDARD WITH HARDFACING	FULL STAINLESS WITH HARDFACING
	API MATERIAL CLASS: EE-0,5	API MATERIAL CLASS: FF-0,5	API MATERIAL CLASS: EE-NL	API MATERIAL CLASS: FF-NL
COMPONENT	MATERIAL	MATERIAL	MATERIAL	MATERIAL
BODY	AISI 4130 75K	AISI 410 SS 75K	AISI 4130 75K	AISI 410 SS 75K
BONNET	AISI 4130 75K	AISI 410 SS 75K	AISI 4130 75K	AISI 410 SS 75K
GATE	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	AISI 4130 75K HARDFACED	AISI 410 SS 75K HARDFACED
SEAT RING	AISI 410 SS 75K NITRIDED	AISI 410 SS 75K NITRIDED	SOLID STELLITE #6 (1)	SOLID STELLITE #6 (1)
SEAT SEAL	GTFE	GTFE	GTFE	GTFE
BODY BUSHING	AISI 410 SS 75K	AISI 410 SS 75K	AISI 410 SS 75K	AISI 410 SS 75K
BODY BUSHING SEAL	GTFE	GTFE	GTFE	GTFE
STEM	17-4 PH HH1150	17-4 PH HH1150	INCONEL 718 (2)	INCONEL 718 (2)
BONNET SEAL RING	AISI 316 SS	AISI 316 SS	AISI 316 SS	AISI 316 SS
RETAINER PLATE	AISI 316 OR 304 SS	AISI 316 OR 304 SS	AISI 316 OR 304 SS	AISI 316 OR 304 SS
STUDS	B7M / L7M	B7M / L7M	B7M / L7M	B7M / L7M
NUTS	2HM	2HM	2HM	2HM

MODEL SB SLAB GATE VALVES WITH BALL SCREW

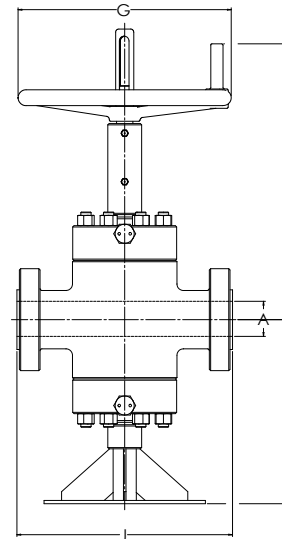
GWC Model SB (Ball-Screw Operated) forged body slab gate valves are designed for High-Pressure / Large Bore applications which are exposed to abrasive and high fluid volumes such as Fracing Operations or other critical service requirements with working pressures from 10,000psi thru 15,000psi. All Model SB slab gate valves are API 6A Latest Edition Licensed (6A-1074) and Monogrammed and are available in bore sizes from 4 1/16" thru 7 1/16" with features as follows:

- Frac Valve Service
- Bidirectional Flow and Seal Capabilities
- Metal to Metal Sealing
(Gate to Seat-Seat to Body- Backseat Fire Safe Seal)
- Non-rising Stem Design
- Forged Body and Bonnet
- Low Operating Torque
- No Special Tools Required for Repairs
- Full Bore Design
- Fewer Turns Manually for Open-Close Cycles
- Manual Ball Screw or Hydraulically Actuated



10,000 - 15,000 PSI Slab Gate Valves with Ball Screw

- A Valve Bore
- E Bore centerline to bottom of valve
- F Bore centerline to handwheel top
- G Handwheel diameter
- J Flange face to face
- N Number of turns to open valve
- WT Estimated weight



10,000 PSI Flanged End Studded Valves

MODEL SB DIMENSIONAL DETAILS														
Size	PRESS	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs	
5 1/8	10,000	5.12	130	25.70	653	44.90	1140	24.00	610	29.00	736	2304	860	23
7 1/16	10,000	7.06	179	30.28	769	55.88	1419	31.00	787	35.00	889	3804	1420	31
7 1/16	10,000	7.06	179	30.28	769	55.88	1419	31.00	787	24.00	610	3429	1280	31

15,000 PSI Flanged End Studded Valves

MODEL SB DIMENSIONAL DETAILS														
Size	PRESS	A		E		F		G		J		WT		N
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs	
3 1/16	15,000	3.06	78	22.68	576	31.47	799	22.00	559	23.56	598	1474	550	15.5
4 1/16	15,000	4.06	103	22.12	562	42.00	1067	24.00	610	29.00	737	2170	810	19.5
5 1/16	15,000	5.12	130	25.70	653	44.90	1140	24.00	610	29.00	737	3738	1395	24.5
7 1/16	15,000	7.06	179	31.50	800	58.00	1473	30.00	762	41.00	1041	8091	3020	33
7 1/16	15,000	7.06	179	31.50	800	55.00	1473	30.00	762	26.00	660	7502	2800	33

MODEL SB DIMENSIONAL DETAILS				
	STANDARD WITH HARDFACING	FULL STAINLESS WITH HARDFACING	STANDARD WITH INCONEL HARDFACING	FULL STAINLESS WITH INCONEL AND HARDFACING
	API MATERIAL CLASS: EE-0.5	API MATERIAL CLASS: FF-0.5	API MATERIAL CLASS: EE-NL	API MATERIAL CLASS: FF-NL
COMPONENT	MATERIAL	MATERIAL	MATERIAL	MATERIAL
BODY	AISI 4130 75K	AISI 4130 75K	AISI 4130 75K	AISI 4130 75K
BONNET	AISI 4130 75K	AISI 4130 75K	AISI 4130 75K	AISI 4130 75K
GATE	AISI 410 SS 75K HFTC	AISI 410 SS 75K HFTC	AISI 410 SS 75K Hardfacing	AISI 410 SS 75K HFTC
SEAT RING	Solid Stellite #6	Solid Stellite #6	Solid Stellite #6	Solid Stellite #6
SEAT SEAL	GTFE	GTFE	GTFE	GTFE
BODY BUSHING	AISI 4130 75K	AISI 4130 75K	AISI 410 75K	AISI 410 75K
BODY BUSHING SEAL	GTFE	GTFE	GTFE	GTFE
STEM – UPPER & LOWER	17-4 PH HH1150	17-4 PH HH1150	INCONEL 718	INCONEL 718
BONNET SEAL RING	AISI 410 75K	AISI 410 75K	AISI 410 75K	AISI 410 75K
RETAINER PLATE		AISI 410 75K	AISI 410 75K	AISI 410 75K
STUDS	B7M / L7M	B7M / L7M	B7M / L7M	B7M / L7M
NUTS	2HM	2HM	2HM	2HM

1. Stellite is a registered trademark of the Deloro Stellite Group
 2. Inconel is a registered trademark of Special Metals Corporation



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