

GWC Italia

Proven technology
for individual valve solutions
worldwide



**FORGED STEEL VALVES
GATE, GLOBE & CHECK**

FSV-1005

GWC[®]



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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 but not limited to:

- 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.



**Proven technology
for individual valve solutions
worldwide**

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

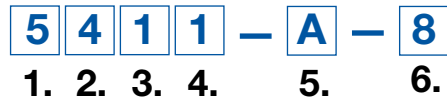
ASME-B1.20.1	Pipe Threads, General Purpose (inch)
ASME-B16.11	Forged Fittings, Socket-Welding and Threaded
ASME-B16.10	Face to Face and End to End Dimensions of Valves
ASME-B16.5	Pipe Flanges and Flanged Fittings NPS 1/2 ~ NPS 24
ASME-B16.47	Large Diameter Steel Flanges NPS 26 ~ NPS 60
ASME-B16.25	Buttwelding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

ORDERING GUIDE

Example: 2" Figure #5411-A-8



2" CLASS 800 GATE VALVE, FNPT, A105 BODY, A276 420 DISC, A276 410 SEATS
W/STELLITE OVERLAY, A276 410 STEM

1. MODEL

- | | |
|--|---|
| 5 - API 602 GATE VALVE | 9 - API 602/ASME B16.34 SWING CHECK VALVE |
| 7 - API 602/ASME B16.34 GLOBE VALVE | 10 - API 602/ASME B16.34 BALL CHECK VALVE |
| 8 - API 602/ASME B16.34 PISTON CHECK VALVE | |

2. RATING

- | | |
|---------------|----------------|
| 1 - CLASS 150 | 5 - CLASS 1500 |
| 2 - CLASS 300 | 6 - CLASS 2500 |
| 3 - CLASS 600 | 9 - CLASS 900 |
| 4 - CLASS 800 | |

3. END CONNECTION

- | | |
|---------------------------|-----------------|
| 0 - RF FLANGED | 7 - BUTTWELD |
| 1 - SCREWED | 9 - RTJ FLANGED |
| 2 - SOCKET WELD | X - OTHER |
| 3 - SCREWED x SOCKET WELD | |

4. BASIC CONSTRUCTION

- | | |
|----------------------------------|---|
| 1 - BOLTED BONNET - REDUCED PORT | 4 - WELDED BONNET - FULL PORT |
| 2 - WELDED BONNET - REDUCED PORT | 5 - PRESSURE SEAL BONNET - REDUCED PORT |
| 3 - BOLTED BONNET - FULL PORT | |

5. MATERIAL (BODY & BONNET/CAP)

- | | | |
|-----------|--------------|-----------|
| A - A105N | M - F304 | S - F51 |
| D - LF2 | N - F316 | T - F53 |
| I - F11 | O - F304L | U - F55 |
| J - F22 | P - F316L | X - OTHER |
| K - F5 | Q - F347 | |
| L - F9 | R - ALLOY 20 | |

6. MATERIAL (TRIM)

- | | | |
|--------------------------|----------------------------|---------------------------|
| 1 - 13CR | 12 - 316SS 1/2 STELLITE | 17H - 347SS 1/2 STELLITE |
| 8 - 13CR 1/2 STELLITE | 16 - 316SS FULL STELLITE | 17S - 347SS FULL STELLITE |
| 5 - 13CR FULL STELLITE | 9 - MONEL | 21 - F51 |
| 2 - 304SS | 11 - MONEL 1/2 STELLITE | 22 - F53 |
| 2S - 304SS 1/2 STELLITE | 13 - ALLOY 20 | 23 - F55 |
| 15 - 304SS FULL STELLITE | 14 - ALLOY 20 1/2 STELLITE | O - OTHER |
| 10 - 316SS | 17 - 347SS | |

7. SPECIAL REQUIREMENT

- | | |
|---------------------------------|----------------------|
| N - NACE MR-01-75 | EB - EXTENDED BONNET |
| S - SUPPLY COMPLETE INFORMATION | Y - "Y" PATTERN |

FORGED STEEL GATE VALVES

STANDARD PARTS & MATERIALS

NO.	PART NAME	CARBON STEEL		ALLOY STEEL				STAINLESS STEEL
		TYPE A105N	TYPE LF2	TYPE F5	TYPE F9	TYPE F11	TYPE 22	TYPE F316
1	BODY	A105	A350 LF2	A182 F5	A182 F9	A182 F11	A182 F22	A182 F316
2	SEAT	A276 410 HF	A276 410 HF	A276 410 HF	A276 410 HF	A246 410 HF	A276 410 HF	A276 316 HF
3	WEDGE	A276 420	A276 420	A276 420	A276 420	A276 420	A276 420	A276 316
4	STEM	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 316
5	GASKET	SPIRAL WOUND 304+GRAPHITE						316 + GRAPHITE
6	BONNET	A105	A350 LF2	A182 F5	A182 F9	A182 F11	A182 F22	A182 F316
7	BOLT	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8M
8	PIN	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316
9	GLAND	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 316
10	GLAND EYEBOLT	A193 B8	A320 L7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8M
11	GLAND FLANGE	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A182 F316
12	HEX NUT	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8	A194 8M
13	STEM NUT	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410
14	LOCKING NUT	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020
15	NAME PLATE	AL	AL	AL	AL	AL	AL	AL
16	HANDWHEEL	A197	A197	A197	A197	A197	A197	A197
17	LUBRICATING GASKET	A240 410	A240 410	A240 410	A240 410	A240 410	A240 410	A240 410
18	PACKING	Braided Graphite / Graphoil / Braided Graphite						
19	*STOP NUT	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020
23	*SEAL GASKET	A276 420	A276 420	A276 304	A276 304	A276 304	A276 304	A276 316
24	*P.S. RING	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316
25	*P.S. SEAT	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 316
26	*NUT PAD	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410
27	*PACKING NUT	Cast steel	Cast steel	Cast steel	Cast steel	Cast steel	Cast steel	A276 316
37	**SCREWED STUD	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8M
38	**NUT	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8	A194 8M
39	**METAL RING	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316

* Pressure seal bonnet only ** Ring join bonnet gasket only

MODEL 5411 / 5421 / 5413 / 5423

Forged steel gate valve, Outside screw and yoke, Bolted bonnet, Rising stem, non-rising handwheel, Solid wedge, Threaded or Socket weld ends, Full or Reduced bore, Designed to API-602.

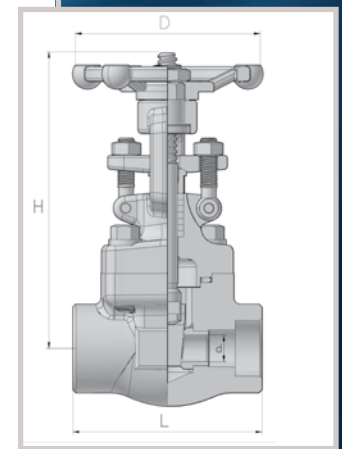
DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800

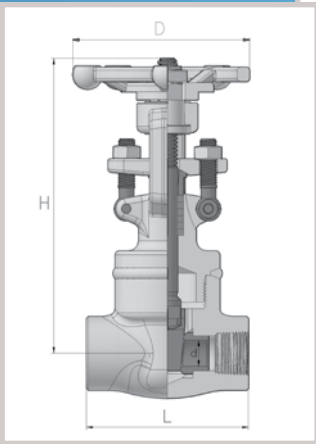
CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Face to Face (L)		3.11	3.11	3.62	4.37	4.72	4.72	5.51	7.01	7.09
Handwheel Diameter (D)		3.94	3.94	3.94	4.92	6.3	6.3	7.09	7.87	8.66
Height (H)		6.34	6.34	6.42	7.72	8.78	9.88	11.42	13.11	14.57
Port Dimension (d)		0.31	0.41	0.53	0.71	0.94	1.14	1.44	1.91	2.01
Weight (lbs.)		5.06	5.06	5.28	9.33	12.54	15.51	23.98	36.96	52.8



MODEL 5412 / 5422 / 5414 / 5424



Forged steel gate valve, Outside screw and yoke, Welded bonnet, Rising stem, non-rising handwheel, Solid wedge, Threaded or Socket weld ends, Full or Reduced bore, Designed to API-602.

DIMENSIONS

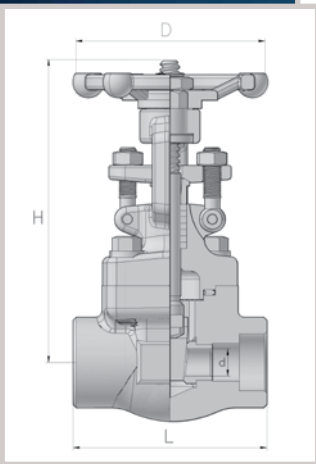
Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800

CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Face to Face (L)	3.11	3.11	3.62	4.37	4.72	4.72	5.51	7.01	7.09	
Handwheel Diameter (D)	3.94	3.94	3.94	4.92	6.3	6.3	7.09	7.87	8.66	
Height (H)	6.34	6.34	6.42	7.72	8.78	9.88	11.42	13.11	14.57	
Port Dimension (d)	0.31	0.41	0.53	0.71	0.94	1.14	1.44	1.91	2.01	
Weight (lbs.)	5.06	5.06	5.28	9.33	12.54	15.51	23.98	36.96	52.8	

MODEL 5511 / 5521 / 5513/ 5523



Forged steel gate valve, Outside screw and yoke, Bolted bonnet, Rising stem, non-rising handwheel, Solid wedge, Threaded or Socket weld ends, Full or Reduced bore, Designed to API-602.

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

CLASS 1500

DIMENSIONS IN INCHES

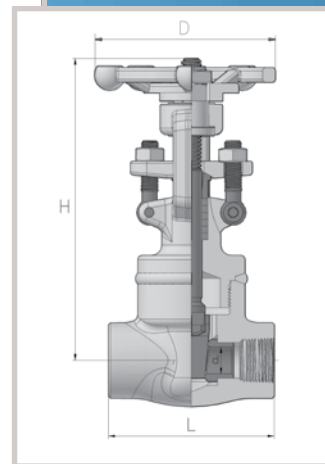
Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	3.62	4.37	4.37	4.72	4.72	5.51	7.01	7.09	
Handwheel Diameter (D)	3.94	4.92	4.92	6.3	6.3	7.09	7.87	8.66	
Height (H)	7.52	7.52	7.56	8.62	9.57	11.65	12.44	14.57	
Port Dimension (d)	0.31	0.41	0.53	0.71	0.94	1.14	1.44	1.77	
Weight (lbs.)	5.28	9.68	9.68	13.2	15.84	25.08	35.2	50.6	

MODEL 5512 / 5522 / 5514/ 5524

Forged steel gate valve, Outside screw and yoke, Welded bonnet, Rising stem, non-rising handwheel, Solid wedge, Threaded or Socket weld ends, Full or Reduced bore, Designed to API-602

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500



CLASS 1500

DIMENSIONS IN INCHES

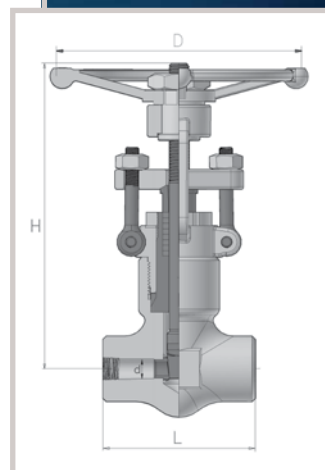
Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	3.62	4.37	4.37	4.72	4.72	5.51	7.01	7.09	
Handwheel Diameter (D)	3.94	4.92	4.92	6.3	6.3	7.09	7.87	8.66	
Height (H)	7.52	7.52	7.56	8.62	9.57	11.65	12.44	14.57	
Port Dimension (d)	0.31	0.41	0.53	0.71	0.94	1.14	1.44	1.77	
Weight (lbs.)	5.28	9.68	9.68	13.2	15.84	25.08	35.2	50.6	

MODEL 5625

Forged steel gate valve, Outside screw and yoke, Pressure seal bonnet, Rising stem, non-rising handwheel, Solid wedge, Threaded or Socket weld ends, Reduced Bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 2500

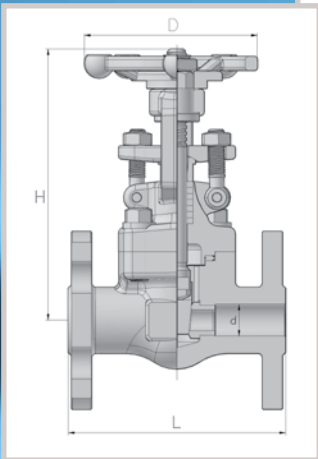


CLASS 2500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	7.32	7.32	7.32	7.32	9.13	9.13	10.98	
Handwheel Diameter (D)	7.87	7.87	7.87	7.87	11.02	11.02	11.81	
Height (H)	12.8	12.8	12.8	12.87	18.39	18.43	21.26	
Port Dimension (d)	0.55	0.55	0.55	0.75	0.98	1.18	1.44	
Weight (lbs.)	27.06	27.06	25.52	23.76	57.2	62.48	132	

MODEL 5101 / 5201 / 5301 / 5901 / 5501



Forged steel gate valve, Outside screw and yoke, Bolted bonnet, Rising stem, non-rising handwheel, Solid wedge, Integral flanged raised face, Reduced bore, Designed to API-602.

DIMENSIONS

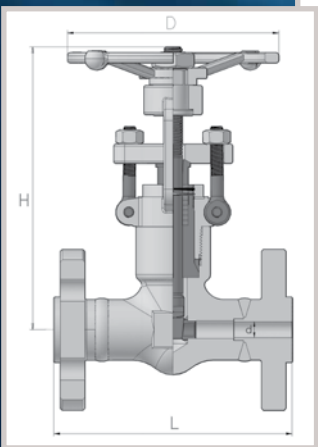
Face to Face	ASME B16.10
End Flange	ASME B16.5
Rating	ASME Class 150, 300, 600, 900, 1500

CLASS 150 / 300 / 600 / 900 / 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) CL 150		4.25	4.61	5	5.51	6.5	7.01
Face to Face (L) CL 300		5.51	5.98	6.5	7.01	7.48	8.5
Face to Face (L) CL 600		6.5	7.48	8.5	9.02	9.49	11.5
Face to Face (L) CL 900/1500 RF		8.5	9.02	10	10.98	12.01	14.49
Face to Face (L) CL 900/1500 RTJ		8.5	9.02	10	10.98	12.01	14.61
Handwheel Diameter (D) CL 150		6.93	7.24	8.54	8.9	9.84	11.42
Handwheel Diameter (D) CL300 / 600		6.34	6.42	7.72	8.9	9.84	11.42
Handwheel Diameter (D) CL 900/1500		4.92	4.92	6.3	7.09	7.87	8.66
Height (H) CL 150/300/600		3.94	3.94	4.92	6.3	6.3	7.09
Height (H) CL 900/1500		7.52	7.56	8.62	10.12	11.65	12.44
Port Diameter (d) CL 150/300/600		0.39	0.53	0.71	0.94	1.14	1.44
Port Diameter (d) CL 900/1500		0.53	0.71	0.94	1.14	1.44	1.77
Weight (lbs.) CL150		7.48	8.76	13.46	15.84	22.88	34.1
Weight (lbs.) CL300		8.29	10.76	15.91	21.12	27.81	39.6
Weight (lbs.) CL600		9.24	12.76	19.36	26.62	34.32	42.9
Weight (lbs.) CL 900/1500		15.84	25.3	34.32	35.64	49.72	62.04

MODEL 5605



Forged steel gate valve, Outside screw and yoke, Pressure seal bonnet, Rising stem, non-rising handwheel, Solid wedge, Flanged raised face, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	ASME B16.10
End Flange	ASME B16.5
Rating	ASME Class 2500

CLASS 2500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/2"	2"
Face to Face (L) RF		10.39	10.75	12.13	15.12	17.76
Face to Face (L) RTJ		10.39	10.75	12.13	15.24	17.87
Handwheel Diameter (D)		7.87	7.87	7.87	11.02	11.81
Height (H)		12.8	12.8	12.87	18.82	21.26
Port Dimension (d)		0.53	0.53	0.75	1.18	1.44
Weight (lbs.)		10.12	14.96	16.72	33	48.18

FORGED STEEL GLOBE VALVES

STANDARD PARTS & MATERIALS

NO.	PART NAME	CARBON STEEL		ALLOY STEEL				STAINLESS STEEL
		TYPE A105N	TYPE LF2	TYPE F5	TYPE F9	TYPE F11	TYPE 22	TYPE F316
1	BODY	A105 HF	A320 LF2 HF	A182 F5 HF	A182 F9 HF	A182 F11 HF	A182 F22 HF	A182 F316 HF
3	DISC	A276 420	A276 420	A276 420	A276 420	A276 420	A276 420	A276 316
4	STEM	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 316
5	GASKET	SPIRAL WOUND 304+GRAPHITE						316+GRAPHITE
6	BONNET	A105	A320 LF2	A182 F5	A182 F9	A182 F11	A182 F22	A182 F316
7	BOLT	193 B7	A193 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8M
8	PIN	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316
9	GLAND	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 316
10	GLAND EYEBOLT	A193 B8	A350 L7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8M
11	GLAND FLANGE	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 F316
12	HEX NUT	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8	A194 8M
13	STEM NUT	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410
14	LOCKING NUT	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
15	NAME PLATE	AL	AL	AL	AL	AL	AL	AL
16	HANDWHEEL	A197	A197	A197	A197	A197	A197	A197
17	LUBRICATING GASKET	A240 410	A240 410	A240 410	A240 410	A240 410	A240 410	A240 410
18	PACKING	Braided Graphite / Graphoil / Braided Graphite						
19	*STOP NUT	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
23	*SEAL GASKET	A276 420	A276 420	A276 304	A276 304	A276 304	A276 304	A276 316
24	*P.S. RING	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316
25	*P.S. SEAT	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 316
26	*NUT PAD	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410
27	*PACKING NUT	Cast steel	Cast steel	Cast steel	Cast steel	Cast steel	Cast steel	A276 316
37	**SCREWED STUD	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8M
38	**NUT	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8	A194 8M
39	**METAL RING	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316

* Pressure seal bonnet only
 ** Ring join bonnet gasket only

MODEL 7411 / 7421 / 7413 / 7423

Forged steel globe valve, Outside screw and yoke, Bolted bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

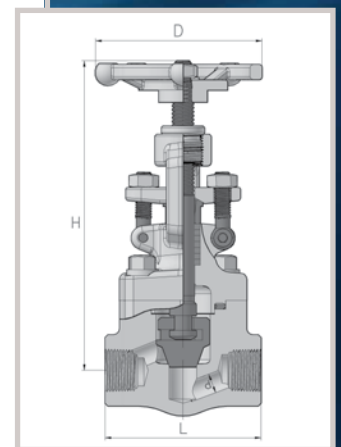
DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800

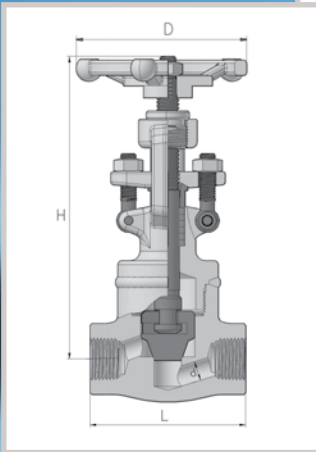
CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	3.11	3.11	3.62	4.37	4.72	5.98	6.77	7.87	
Handwheel Diameter (D)	3.94	3.94	3.94	4.92	6.3	6.3	7.09	7.87	
Height (H)	6.46	6.46	6.46	7.99	8.82	10.24	11.81	13.98	
Port Dimension (d)	0.28	0.35	0.51	0.69	0.91	1.18	1.38	1.81	
Weight (lbs.)	4.18	5.02	5.21	9.46	12.65	17.16	27.5	38.5	



MODEL 7412 / 7422 / 7414 / 7424



Forged steel globe valve, Outside screw and yoke, Welded bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

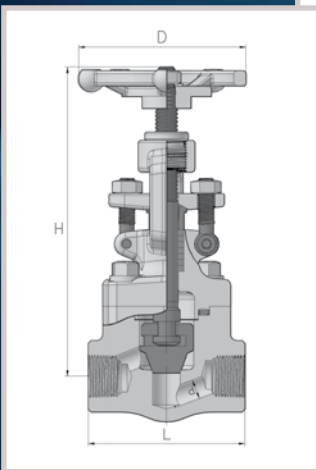
Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800

CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		3.11	3.11	3.62	4.37	4.72	5.98	6.77	7.87
Handwheel Diameter (D)		3.94	3.94	3.94	4.92	6.3	6.3	7.09	7.87
Height (H)		6.46	6.46	6.46	7.99	8.82	10.24	11.81	13.98
Port Dimension (d)		0.28	0.35	0.51	0.69	0.91	1.18	1.38	1.81
Weight (lbs.)		3.74	3.74	4.18	7.26	11.44	14.96	23.32	30.36

MODEL 7511 / 7521



Forged steel globe valve, Outside screw and yoke, Bolted bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

CLASS 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		3.62	4.37	4.37	4.72	5.98	6.77	7.87	7.87
Handwheel Diameter (D)		3.94	4.92	4.92	6.3	6.3	7.09	7.87	9.45
Height (H)		6.73	8.15	8.15	9.45	10.16	12.99	13.98	14.57
Port Dimension (d)		0.28	0.47	0.59	0.79	1.1	1.26	1.57	1.77
Weight (lbs.)		5.06	8.14	8.58	14.96	16.72	25.52	33	48.18

MODEL 7512 / 7522

Forged steel globe valve, Outside screw and yoke, Welded bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

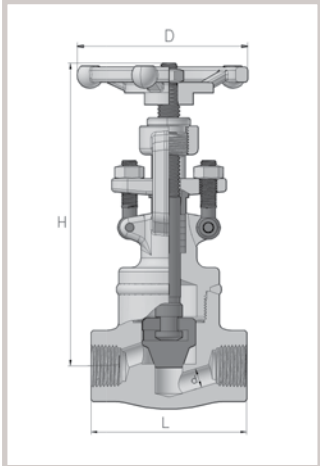
DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

CLASS 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	3.62	4.37	4.37	4.72	5.98	6.77	7.87	7.87	7.87
Handwheel Diameter (D)	3.94	4.92	4.92	6.3	6.3	7.09	7.87	7.87	9.45
Height (H)	6.73	8.15	8.15	9.45	10.16	12.99	13.98	13.98	14.57
Port Dimension (d)	0.28	0.47	0.59	0.79	1.1	1.26	1.57	1.57	1.77
Weight (lbs.)	4.4	7.48	7.7	13.2	14.52	22.66	31.24	31.24	39.6



MODEL 7625

Forged steel globe valve, Outside screw and yoke, Pressure seal bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Designed to ASME B16.34

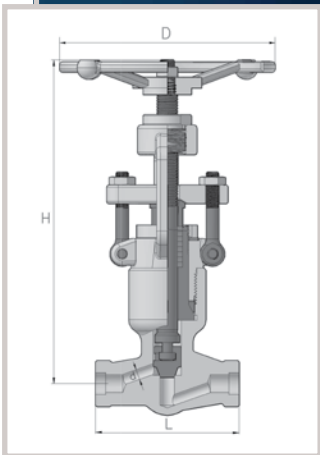
DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 2500

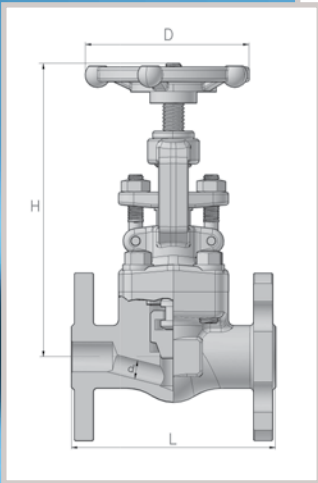
CLASS 2500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	7.32	7.32	7.32	9.13	9.13	10.98	10.98
Handwheel Diameter (D)	7.87	7.87	7.87	11.02	11.02	11.81	11.81
Height (H)	14.76	14.88	14.96	19.29	19.29	21.26	21.26
Port Dimension (d)	0.43	0.55	0.75	0.98	1.1	1.38	1.38
Weight (lbs.)	27.06	27.5	28.6	57.2	62.48	132	132



MODEL 7101 / 7201 / 7301 / 7901 / 7501



Forged steel globe valve, Outside screw and yoke, Bolted bonnet, Rising stem, Rising handwheel, Solid disc, Integral flanged raised face, Reduced bore, Designed to ASME B16.34

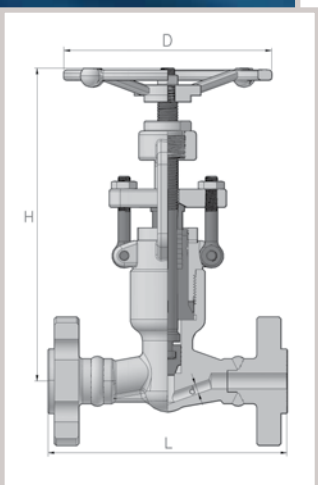
DIMENSIONS

Face to Face	ASME B16.10
End Flange	ASME B16.5
Rating	ASME Class 150, 300, 600, 900, 1500

CLASS 150 / 300 / 600 / 900 / 1500

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) CL 150		4.25	4.61	5	5.51	6.5	7.99
Face to Face (L) CL 300		5.98	7.01	7.99	8.5	9.02	10.51
Face to Face (L) CL 600		6.5	7.48	8.5	9.02	9.49	11.5
Face to Face (L) RF CL 900 / 1500		8.5	9.02	10	10.98	12.01	14.49
Face to Face (L) RTJ CL 900 / 1500		8.5	9.02	10	10.98	12.01	14.61
Handwheel Diameter (D) CL 150		3.94	3.94	4.92	6.3	6.3	7.09
Handwheel Diameter (D) CL300 / 600		7.09	7.24	8.54	8.82	10.24	11.81
Handwheel Diameter (D) CL 900 / 1500		4.92	4.92	6.3	6.3	7.09	7.87
Height (H) CL 150 / 300 / 600		6.46	6.46	7.99	8.82	10.24	11.81
Height (H) CL 900 / 1500		8.15	8.15	9.06	10.24	11.81	13.19
Port Diameter (d) CL 150 / 300 / 600		0.35	0.51	0.69	0.91	1.18	1.38
Port Diameter (d) CL 900 / 1500		0.47	0.59	0.79	1.1	1.26	1.57
Weight (lbs.) CL150		7.59	8.8	13.62	21.12	23.1	37.4
Weight (lbs.) CL300		8.36	11.22	15.84	26.4	29.7	43.34
Weight (lbs.) CL600		12.32	17.16	27.5	37.4	51.7	63.36
Weight (lbs.) CL 900 / 1500		24.2	29.04	38.28	41.8	53.9	68.2

MODEL 7605



Forged steel globe valve, Outside screw and yoke, Pressure seal bonnet, Rising stem, Rising handwheel, Solid disc, Flanged raised face, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 2500

CLASS 2500

DIMENSIONS IN INCHES

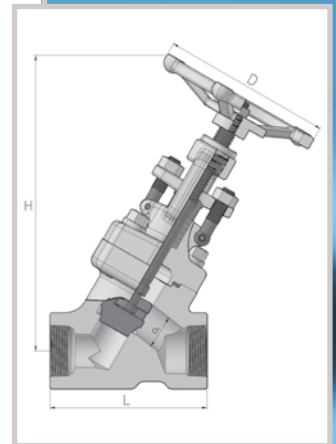
Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) RF		10.39	10.75	12.13	13.74	15.12	17.76
Face to Face (L) RTJ		10.39	10.75	12.13	13.74	15.24	17.87
Handwheel Diameter (D)		7.87	7.87	11.02	11.02	11.02	11.81
Height (H)		12.6	12.6	12.6	17.32	17.32	19.29
Port Dimension (d)		0.43	0.55	0.75	0.98	1.1	1.38
Weight (lbs.)		47.3	54.34	66.88	105.82	127.82	286

MODEL 7411 / 7421 / 7413 / 7423 “Y”

Forged steel globe valve, Outside screw and yoke, “Y” pattern, Bolted bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800



CLASS 800

DIMENSIONS IN INCHES

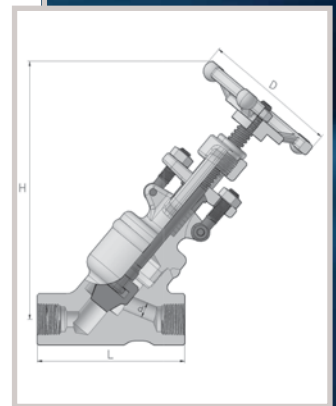
Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	3.86	3.86	3.86	4.37	5.51	5.51	6.1	6.69	
Handwheel Diameter (D)	3.94	3.94	3.94	4.92	6.3	6.3	7.09	7.87	
Height (H)	7.09	7.09	7.09	7.4	11.02	11.02	11.61	13.78	
Port Dimension (d)	0.28	0.35	0.51	0.69	0.91	1.18	1.38	1.81	
Weight (lbs.)	5.72	5.72	8.36	10.12	20.46	20.68	30.8	43.12	

MODEL 7412 / 7422 / 7414 / 7424 “Y”

Forged steel globe valve, Outside screw and yoke, “Y” pattern, Welded bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 601 Class 800

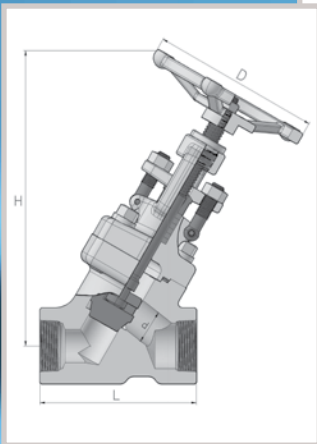


CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)	3.86	3.86	3.86	4.37	5.51	5.51	6.1	6.69	
Handwheel Diameter (D)	3.94	3.94	3.94	4.92	6.3	6.3	7.09	7.87	
Height (H)	7.09	7.09	7.09	7.4	11.02	11.02	11.61	13.78	
Port Dimension (d)	0.28	0.35	0.51	0.69	0.91	1.18	1.38	1.81	
Weight (lbs.)	3.96	3.96	4.4	7.7	17.6	19.8	26.4	35.2	

MODEL 7511 / 7521 “Y”



Forged steel globe valve, Outside screw and yoke, “Y” pattern, Bolted bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

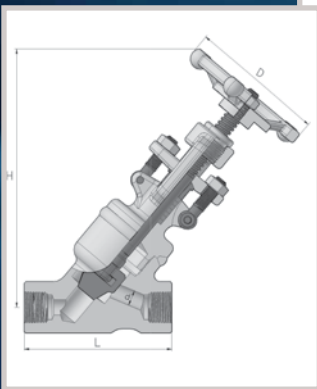
Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

CLASS 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		4.37	4.37	5.51	5.51	6.1	6.69
Handwheel Diameter (D)		4.92	4.92	6.3	6.3	7.09	7.87
Height (H)		6.89	8.46	8.46	10	12.01	12.01
Port Dimension (d)		0.47	0.59	0.79	1.1	1.26	1.57
Weight (lbs.)		10.12	10.34	20.46	20.68	30.8	43.12

MODEL 7512 / 7522 “Y”



Forged steel globe valve, Outside screw and yoke, “Y” pattern, Welded bonnet, Rising stem, Rising handwheel, Solid disc, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standards
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

CLASS 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		4.37	4.37	5.51	5.51	6.1	6.69
Handwheel Diameter (D)		4.92	4.92	6.3	6.3	7.09	7.87
Height (H)		6.89	8.46	8.46	10	12.01	12.01
Port Dimension (d)		0.47	0.59	0.79	1.1	1.26	1.57
Weight (lbs.)		10.12	10.34	20.46	20.68	30.8	43.12

FORGED STEEL CHECK VALVES

STANDARD PARTS & MATERIALS

NO.	PART NAME	CARBON STEEL		ALLOY STEEL				STAINLESS STEEL
		TYPE A105N	TYPE LF2	TYPE F5	TYPE F9	TYPE F11	TYPE 22	TYPE F316
1	BODY	A105 HF	A350 LF2 HF	A182 F5 HF	A182 F9 HF	A182 F11 HF	A182 F22 HF	A182 F316 HF
3	DISC/PISTON	A276 420	A276 420	A276 420	A276 420	A276 420	A276 420	A276 316
5	GASKET	SPIRAL WOUND 304+GRAPHITE						316+GRAPHITE
6	BONNET	A105	A350 LF2	A182 F5	A182 F9	A182 F11	A182 F22	A182 F316
7	BOLT	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8M
15	NAME PLATE	AL	AL	AL	AL	AL	AL	AL
19	*STOP NUT	Cast steel	Cast steel	Cast steel	Cast steel	Cast steel	Cast steel	316 SS
23	*SEAL GASKET	A276 420	A276 420	A276 304	A276 304	A276 304	A276 304	A276 316
24	*P.S. RING	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316
25	*P.S. SEAT	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 316
26	*NUT PAD	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410	A276 410
27	*PACKING NUT	CAST STEEL						316 SS
32	RIVIT	AL	AL	AL	AL	AL	AL	AL
34	DISC NUT	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8	A194 8M
35	HINGE	A351 304	A351 304	A351 304	A351 304	A351 304	A351 304	A351 316
36	PIN	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316
37	**SCREWED STUD	A194 B7	A320 L7	A194 B8	A194 B8	A194 B8	A194 B8	A194 B8M
38	**NUT	A193 2H	A193 8	A193 8	A193 8	A193 8	A193 8	A193 8M
39	**METAL RING	A276 304	A276 304	A276 304	A276 304	A276 304	A276 304	A276 316

* Pressure seal bonnet only

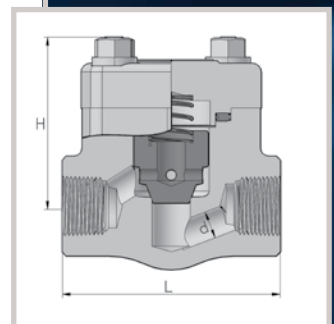
** Ring join bonnet gasket only

MODEL 8411 / 8421/ 8413 / 8423
MODEL 9411 / 9421/ 9413 / 9423

Forged steel check valve, Piston or Swing check, Bolted cover, Horizontal or Vertical lines, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

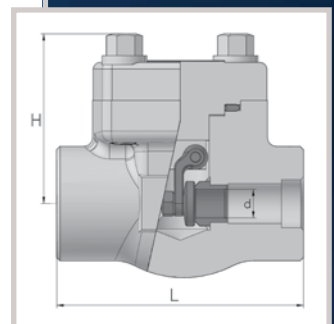
Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800



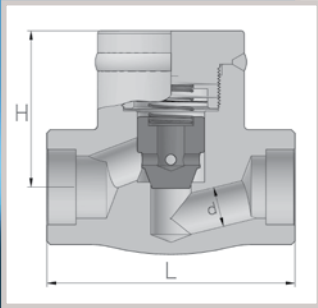
CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) (Piston)	3.11	3.11	3.62	4.37	4.72	5.98	6.77	7.87	
Face to Face (L) (Swing)	3.11	3.11	3.62	4.37	4.72	4.72	5.51	7.01	
Height (H) (Piston)	2.4	2.4	2.4	3.07	3.31	3.31	4.65	5.2	
Height (H) (Swing)	2.4	2.4	2.4	3.07	3.31	3.31	4.72	5.24	
Port Diameter (d) (Piston)	0.28	0.35	0.51	0.69	0.91	1.18	1.38	1.81	
Port Diameter (d) (Swing)	0.28	0.35	0.51	0.69	0.91	1.14	1.44	1.77	
Weight (lbs.) (Piston)	2.64	3.3	3.74	7.26	9.24	9.24	23.1	27.5	
Weight (lbs.) (Swing)	3.08	3.3	3.74	7.26	9.24	9.24	18.7	23.98	



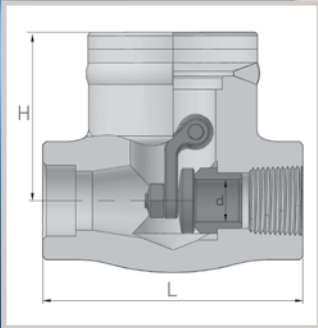
MODEL 8412 / 8422/ 8414/ 8424
MODEL 9412 / 9422/ 9414 / 9424



Forged steel check valve, Piston or Swing check, Welded cover, Horizontal or Vertical lines, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800

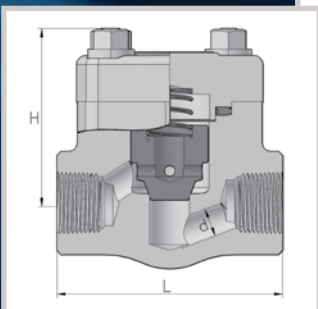


CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) (Piston)		3.11	3.11	3.62	4.37	4.72	5.98	6.77	7.87
Face to Face (L) (Swing)		3.11	3.11	3.62	4.37	4.72	4.72	5.51	7.01
Height (H) (Piston)		2.4	2.4	2.4	3.07	3.31	4.06	4.65	5.2
Height (H) (Swing)		2.4	2.4	2.4	3.07	3.31	3.31	4.72	5.24
Port Diameter (d) (Piston)		0.28	0.35	0.51	0.69	0.91	1.18	1.38	1.81
Port Diameter (d) (Swing)		0.28	0.35	0.51	0.69	0.91	1.14	1.44	1.77
Weight (lbs.) (Piston)		2.64	2.86	3.3	6.6	8.58	13.2	22	26.4
Weight (lbs.) (Swing)		3.08	3.3	3.74	7.26	9.24	9.24	18.7	23.98

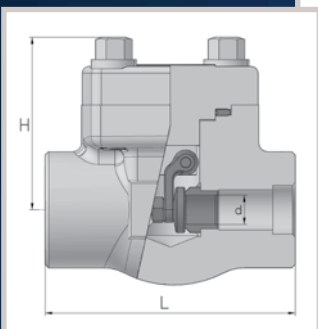
MODEL 8511 / 8521
MODEL 9511 / 9521



Forged steel check valve, Piston or Swing check, Bolted cover, Horizontal or Vertical lines, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500



CLASS 1500

DIMENSIONS IN INCHES

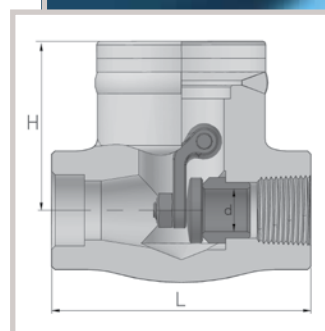
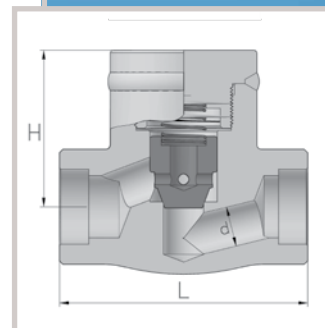
Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) (Piston)		4.37	4.37	4.72	5.98	6.77	7.87
Face to Face (L) (Swing)		4.37	4.37	4.72	4.72	5.51	7.01
Height (H) (Piston)		3.07	3.07	3.31	4.06	4.65	5.2
Height (H) (Swing)		3.07	3.07	3.31	3.98	4.72	5.24
Port Diameter (d) (Piston)		0.47	0.59	0.79	1.02	1.26	1.57
Port Diameter (d) (Swing)		0.47	0.59	0.79	0.94	1.14	1.77
Weight (lbs.) (Piston)		7.48	7.92	9.24	13.86	23.1	27.5
Weight (lbs.) (Swing)		7.48	7.92	9.24	11	18.7	23.98

MODEL 8512 / 8522
MODEL 9512 / 9522

Forged steel check valve, Piston or Swing check, Welded cover, Horizontal or Vertical lines, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500



CLASS 1500

DIMENSIONS IN INCHES

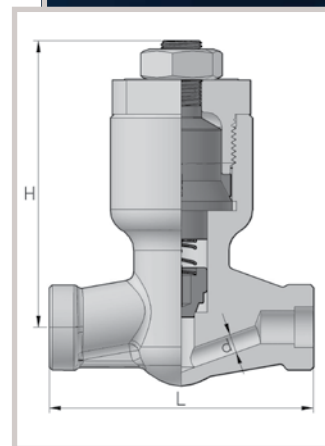
Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) (Piston)		4.37	4.37	4.72	5.98	6.77	7.87
Face to Face (L) (Swing)		4.37	4.37	4.72	4.72	5.51	7.01
Height (H) (Piston)		3.07	3.07	3.31	4.06	4.65	5.2
Height (H) (Swing)		3.07	3.07	3.31	3.98	4.72	5.24
Port Diameter (d) (Piston)		0.47	0.59	0.79	1.1	1.26	1.57
Port Diameter (d) (Swing)		0.47	0.59	0.79	0.94	1.14	1.77
Weight (lbs.) (Piston)		6.82	6.82	8.58	12.76	22	25.3
Weight (lbs.) (Swing)		6.82	6.82	8.58	11	18.7	23.98

MODEL 8625

Forged steel Piston check valve, Pressure seal cover, Horizontal or Vertical lines, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 2500

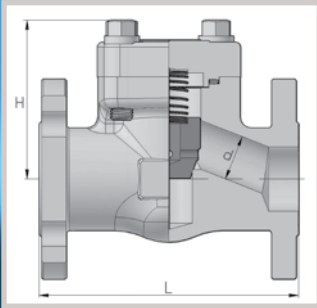


CLASS 2500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		5.91	5.91	5.91	5.91	8.27	9.25	9.25	9.25
Height (H)		6.54	6.54	6.73	8.15	9.45	10.16	12.99	13.98
Port Dimension (d)		0.3	0.41	0.43	0.55	0.75	0.98	1.1	1.38
Weight (lbs.)		4.18	5.06	37.4	1023	136.4	160.6	173.8	187

**MODEL 8101 / 8201 / 8301 / 8901 / 8501
MODEL 9101 / 9201 / 9301 / 9901 / 9501**



Forged steel check valve, Piston or Swing check, bolted cover, Horizontal or Vertical lines, Integral flanged raised face, Reduced bore, Designed to ASME B16.34

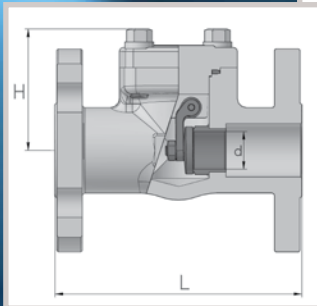
DIMENSIONS

Face to Face	ASME B16.10
End Flange	ASME B16.5
Rating	ASME Class 150, 300, 600, 900, 1500

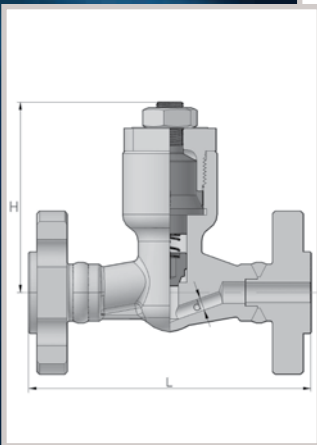
CLASS 150 / 300 / 600 / 900 / 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) CL 150		4.25	4.65	5	5.51	6.54	7.99
Face to Face (L) CL 300		6.02	7.01	7.99	8.5	9.02	10.51
Face to Face (L) CL 600		6.5	7.52	8.5	9.02	9.49	11.5
Face to Face (L) RF CL 900 / 1500		8.5	9.02	10	11.02	12.01	14.49
Face to Face (L) RTJ CL 900 / 1500		8.5	9.02	10	11.02	12.01	14.61
Height (H) CL 150 / 300 / 600		2.4	3.07	3.31	3.98	4.72	5.24
Height (H) CL 900 / 1500		3.19	3.66	3.74	3.98	4.65	5.12
Port Diameter (d) CL 150 / 300 / 900		0.39	0.51	0.69	0.91	1.18	1.38
Port Diameter (d) CL 900 / 1500		0.47	0.59	0.79	1.1	1.26	1.57
Weight (lbs.) CL150		7.9	10.1	18.7	20.2	27.5	32.6
Weight (lbs.) CL300		8.1	10.6	19.4	21.1	30.1	39.2
Weight (lbs.) CL600		8.8	12.8	20.9	22.9	34.3	53.9
Weight (lbs.) CL 900 / 1500		11.4	15	23.1	61.6	39.6	59.4



MODEL 8605



Forged steel Piston check valve, pressure seal cover, Horizontal or Vertical lines, Flanged raised face, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	ASME B16.10
End Flange	ASME B16.5
Rating	ASME Class 2500

CLASS 2500

DIMENSIONS IN INCHES

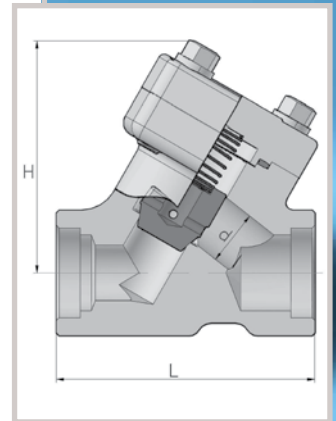
Valve Size	RED. BORE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L) RF		10.39	10.75	12.13	13.74	15.12	17.72
Face to Face (L) RTJ		10.39	10.75	12.13	13.86	15.24	17.87
Height (H)		3.19	3.27	3.74	3.98	4.65	5.12
Port Diameter (d)		0.47	0.59	0.79	1.1	1.26	1.57
Weight (lbs.)		37.4	46.2	61.6	75.9	127.6	187

MODEL 8411 / 8421/ 8413/ 8423 “Y”

Forged steel Piston check valve, Bolted cover, “Y” pattern, Horizontal or Vertical lines, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800



CLASS 800

DIMENSIONS IN INCHES

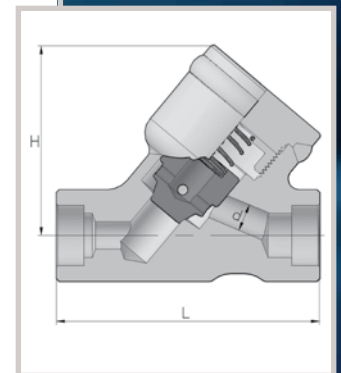
Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		3.86	3.86	3.86	4.37	5.51	5.51	6.1	6.69
Height (H)		2.76	2.76	2.76	3.94	3.94	4.72	4.72	5.91
Port Dimension (d)		0.28	0.39	0.51	0.69	0.91	1.18	1.38	1.81
Weight (lbs.)		4.84	4.84	5.06	9.24	19.8	20.46	22	40.92

MODEL 8412 / 8422/ 8414/ 8424 “Y”

Forged steel Piston check valve, Welded cover, “Y” pattern, Horizontal or Vertical lines, Threaded or Socket weld ends, Full or Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	API 602 Class 800

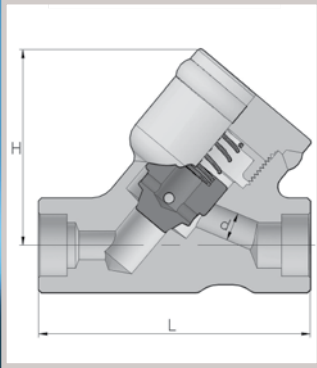


CLASS 800

DIMENSIONS IN INCHES

Valve Size	RED. BORE	-	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	-
	FULL BORE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		3.11	3.11	3.62	3.94	5.51	5.51	6.1	6.69
Height (H)		2.56	2.56	2.56	3.74	4.13	4.33	4.33	5.51
Port Dimension (d)		0.28	0.39	0.51	0.69	0.91	1.18	1.38	1.81
Weight (lbs.)		3.96	3.96	44	7.7	17.6	17.6	26.4	35.2

MODEL 8511 / 8521 “Y”



Forged steel Piston check valve, Bolted cover, “Y” pattern, Horizontal or Vertical lines, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

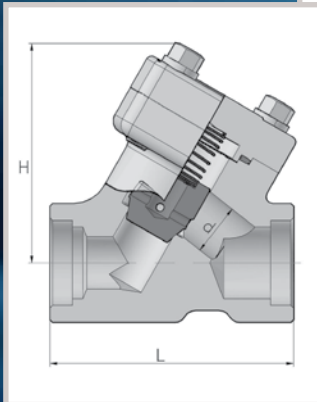
Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

CLASS 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		3.86	4.37	4.37	5.51	5.51	6.1	6.69
Height (H)		2.76	2.76	3.94	4.33	4.33	4.72	5.91
Port Dimension (d)		0.35	0.47	0.59	0.79	1.1	1.26	1.57
Weight (lbs.)		4.62	9.24	19.8	20.24	22	40.92	44

MODEL 8512 / 8522 “Y”



Forged steel Piston check valve, Welded cover, “Y” pattern, Horizontal or Vertical lines, Threaded or Socket weld ends, Reduced bore, Designed to ASME B16.34

DIMENSIONS

Face to Face	GWC Standard
Threaded	ASME B1.20.1
Socket Weld	ASME B16.1.1
Rating	ASME Class 1500

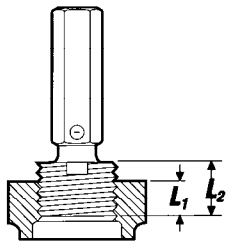
CLASS 1500

DIMENSIONS IN INCHES

Valve Size	RED. BORE	3/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Face to Face (L)		3.62	3.94	3.94	5.51	5.51	6.1	6.69
Height (H)		2.56	2.56	2.56	4.13	4.33	4.33	5.51
Port Dimension (d)		0.35	0.47	0.59	0.79	1.26	1.42	1.57
Weight (lbs.)		4.4	7.7	7.7	17.6	26.4	26.4	39.6

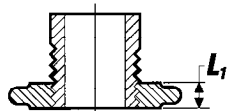
TECHNICAL DATA

PIPE THREADS - ASME B1.20.1



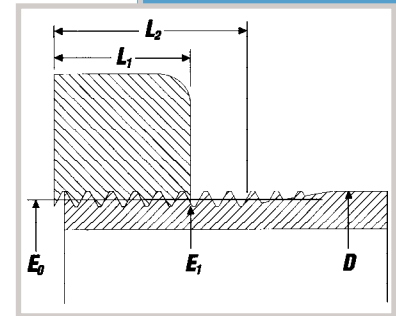
Gauging Internal Taper Threads
Tolerance on Product Notch flush with face of fitting (if chambered, notch flush with bottom of chamber). One turn large or small from notch.

$E_0 = D - (0.050D + 1.1)p$
 $L_2 = (0.80D + 6.8)p$
 Height of Thread (h) = 0.80p
 Taper of thread = 1 in 16 measured on diameter
 $E_1 = E_0 + 0.0625L_1$
 p = Pitch



Gauging External Taper Threads
Tolerance on Product One Turn Large or Small from notch on plug gauge of face of ring gauge.

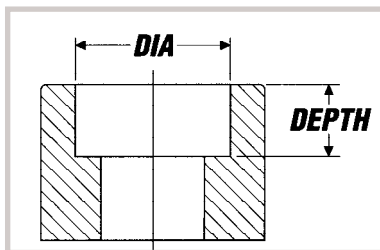
Flush by Hand



Nominal pipe size	D Outside diameter of pipe	n Number of threads per inch	p Pitch of thread	E ₀ Pitch diameter at beginning of external thread	E ₁ ⁿ Handtight engagement diameter	L ₁ [•] Handtight engagement Length	L ₂ ⁼ Length of effective external thread	h Height of thread
1/4	0.540	18	0.05556	0.47739	0.49163	0.2278	0.4018	0.04444
3/8	0.675	18	0.05556	0.61201	0.62701	0.240	0.4078	0.04444
1/2	0.840	14	0.07143	0.75843	0.77843	0.320	0.5337	0.05714
3/4	1.050	14	0.07143	0.96768	0.98887	0.339	0.5457	0.05714
1	1.315	11.5	0.08696	1.21363	1.23863	0.400	0.6828	0.06957
1-1/4	1.660	11.5	0.08696	1.55713	1.58338	0.420	0.7068	0.06957
1-1/2	1.900	11.5	0.08696	1.79609	1.82234	0.420	0.7235	0.06957
2	2.375	11.5	0.08696	2.26902	2.29627	0.436	0.7565	0.06957

- ⁿ Also pitch diameter at gauging notch.
- ⁼ Also length of plug gauge.
- [•] Also length of ring gauge, and length from gauging notch to small end of plug gauge.

SOCKET WELD - ASME B16.11



Nominal Pipe Size		Socket Bore Diameter				Socket Depth Min	
		Inches		Millimeters			
NPS	DN	Max.	Min.	Max.	Min.	Inch	mm
1/4	8	0.575	0.555	14.60	14.20	0.38	9.5
3/8	10	0.710	0.690	18.00	17.60	0.38	9.5
1/2	15	0.875	0.855	22.20	21.80	0.38	9.5
3/4	20	1.085	1.065	27.60	27.20	0.50	12.5
1	25	1.350	1.330	34.30	33.90	0.50	12.5
1 1/4	32	1.695	1.675	43.10	42.70	0.50	12.5
1 1/2	40	1.935	1.915	49.20	48.80	0.50	12.5
2	50	2.426	2.406	61.70	61.20	0.62	16.0

PRESSURE/TEMPERATURE RATING ASME B16.34-2009 / API-602

COLD WORKING PRESSURE, psig

CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M	
150	-20 to 100	285	290	290	290	290	290	275	275	230	
	200	260	260	260	260	260	260	230	230	200	
	300	230	230	230	230	230	230	205	205	180	
	400	200	200	200	200	200	200	190	190	160	
	500	170	170	170	170	170	170	170	170	150	
	600	140	140	140	140	140	140	140	140	140	
	650	125	125	125	125	125	125	125	125		
	700	110	110	110	110	110	110	110	110		
	750	95	95	95	95	95	95	95	95		
	800	80	80	80	80	80	80	80	80		
	850	65	65	65	65	65	65	65	65		
	900	50	50	50	50	50	50	50	50		
	950	35	35	35	35	35	35	35	35		
	1000	20	20	20	20	20	20	20	20		
	1050				20 (a)	20 (a)	20 (a)	20 (a)	20(a)	20(a)	
	1100				20 (a)	20 (a)	20 (a)	20 (a)	20(a)	20(a)	
	1150				20 (a)	20 (a)	20 (a)	20 (a)	20(a)	20(a)	
	1200				15 (a)	15 (a)	15 (a)	20 (a)	20(a)	20(a)	
	1250								20(a)	20(a)	
	1300								20(a)	20(a)	
1350								20(a)	20(a)		
1400								20(a)	20(a)		
1450								20(a)	20(a)		
1500								15(a)	15(a)		
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M	
300	-20 to 100	740	750	750	750	750	750	720	720	600	
	200	680	750	750	750	750	750	600	620	520	
	300	655	730	720	730	730	730	540	560	465	
	400	635	705	695	705	705	705	495	515	420	
	500	605	665	665	665	665	665	465	480	390	
	600	570	605	605	605	605	605	440	450	360	
	650	550	590	590	590	590	590	430	440		
	700	530	555	570	570	570	570	420	435		
	750	505	505	530	530	530	530	415	425		
	800	410	410	510	510	510	510	405	420		
	850	320	320	485	485	485	485	395	420		
	900	230	225	450	450	375	450	390	415		
	950	135	135	320	385	275	375	380	385		
	1000	85	85	215	265	200	255	355	365		
	1050			145	175	145	170	325	360		
	1100			95	110	100	115	255	305		
	1150			65	70	60	75	205	235		
	1200			40	40	35	50	165	185		
	1250							135	145		
	1300							115	115		
1350							95	95			
1400							75	75			
1450							60	60			
1500							40	40			

(a) – Permissible, but not recommended for prolonged usage

PRESSURE/TEMPERATURE RATING ASME B16.34-2009 / API-602

COLD WORKING PRESSURE, psig

CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
600	-20 to 100	1480	1500	1500	1500	1500	1500	1440	1440	1200
	200	1360	1500	1500	1500	1500	1500	1200	1240	1035
	300	1310	1455	1445	1455	1455	1455	1075	1120	930
	400	1265	1405	1385	1410	1410	1410	995	1025	845
	500	1205	1330	1330	1330	1330	1330	930	955	780
	600	1135	1210	1210	1210	1210	1210	885	900	720
	650	1100	1175	1175	1175	1175	1175	865	885	
	700	1060	1110	1135	1135	1135	1135	845	870	
	750	1015	1015	1065	1065	1065	1065	825	855	
	800	825	825	1015	1015	1015	1015	810	845	
	850	640	640	975	975	975	975	790	835	
	900	460	445	900	900	745	900	780	830	
	950	275	275	640	755	550	755	765	775	
	1000	170	170	430	535	400	505	710	725	
	1050			290	350	290	345	650	720	
	1100			190	220	200	225	515	610	
	1150			130	135	125	150	410	475	
	1200			80	80	70	105	330	370	
	1250							265	295	
1300							225	235		
1350							185	190		
1400							150	150		
1450							115	115		
1500							85	85		

CLASS	TEMP °F	A216 WCB A105 & LF2	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316
800	-20 to 100	1975	2000	2000	2000	2000	1920	1920
	200	1810	2000	2000	2000	2000	1600	1655
	300	1745	1925	1925	1925	1940	1435	1495
	400	1690	1850	1850	1850	1880	1325	1370
	500	1610	1775	1775	1775	1775	1240	1275
	600	1515	1615	1615	1615	1615	1180	1205
	650	1465	1570	1570	1570	1570	1150	1180
	700	1415	1515	1515	1515	1515	1125	1160
	750	1350	1420	1420	1420	1420	1100	1140
	800	1100	1355	1355	1355	1355	1080	1125
	850	850	1300	1300	1300	1300	1055	1115
	900	615	1200	1200	1195	995	1035	1105
	950	365	850	1025	750	735	1020	1030
	1000	225	575	710	440	530	945	970
	1050		385	465	440	385	865	960
	1100		355	295	295	265	685	815
	1150		175	180	220	165	545	630
	1200		110	110	120	95	440	495
	1250						355	390
1300						300	310	
1350						250	255	
1400						200	200	
1450						150	155	
1500						110	110	

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CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
900	-20 to 100	2200	2250	2250	2250	2250	2250	2160	2160	1800
	200	2035	2250	2250	2250	2250	2250	1800	1860	1555
	300	1965	2185	2165	2185	2185	2185	1615	1680	1395
	400	1900	2110	2080	2115	2115	2115	1490	1540	1265
	500	1810	1995	1995	1995	1995	1995	1395	1435	1165
	600	1705	1815	1815	1815	1815	1815	1325	1355	1080
	650	1650	1765	1765	1765	1765	1765	1295	1325	
	700	1590	1665	1705	1705	1705	1705	1265	1305	
	750	1520	1520	1595	1595	1595	1595	1240	1280	
	800	1235	1235	1525	1525	1525	1525	1215	1265	
	850	955	955	1460	1460	1460	1460	1190	1255	
	900	690	670	1350	1350	1120	1350	1165	1245	
	950	410	410	955	1160	825	1130	1145	1160	
	1000	255	255	650	800	595	760	1065	1090	
	1050			430	525	430	515	975	1080	
	1100			290	330	300	340	770	915	
	1150			195	205	185	225	615	710	
	1200			125	125	105	155	495	555	
1250							400	440		
1300							340	350		
1350							280	290		
1400							225	225		
1450							175	175		
1500							125	125		
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
1500	-20 to 100	3705	3750	3750	3750	3750	3750	3600	3600	3000
	200	3395	3750	3750	3750	3750	3750	3000	3095	3590
	300	3270	3640	3610	3640	3640	3640	2690	2795	2330
	400	3170	3520	3465	3530	3530	3530	2485	2570	2110
	500	3015	3325	3325	3325	3325	3325	2330	2390	1945
	600	2840	3025	3025	3025	3025	3025	2210	2255	1800
	650	2745	2940	2940	2940	2940	2940	2160	2210	
	700	2665	2775	2840	2840	2840	2840	2110	2170	
	750	2535	2535	2660	2660	2660	2660	2065	2135	
	800	2055	2055	2540	2540	2540	2540	2030	2110	
	850	1595	1595	2435	2435	2435	2435	1980	2090	
	900	1150	1115	2245	2245	1870	2245	1945	2075	
	950	685	685	1595	1930	1370	1885	1910	1930	
	1000	430	430	1080	1335	995	1270	1770	1820	
	1050			720	875	720	855	1630	1800	
	1100			480	550	495	565	1285	1525	
	1150			325	345	310	375	1030	1185	
	1200			205	205	170	255	825	925	
1250							670	735		
1300							565	585		
1350							465	480		
1400							380	380		
1450							290	290		
1500							205	205		

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COLD WORKING PRESSURE, psig

CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
2500	-20 to 100	6170	6250	6250	6250	6250	6250	6000	6000	5000
	200	5655	6250	6250	6250	6250	6250	5000	5160	4320
	300	5450	6070	6015	6070	6070	6070	4480	4660	3880
	400	2280	5865	5775	5880	5880	5880	4140	4280	3520
	500	5025	5540	5540	5540	5540	5540	3880	3980	3240
	600	4730	5040	5040	5040	5040	5040	3680	3760	3000
	650	4575	4905	4905	4905	4905	4905	3600	3680	
	700	4425	4630	4730	4730	4730	4730	3520	3620	
	750	4230	4230	4430	4430	4430	4430	3440	3560	
	800	3430	3430	4230	4230	4230	4230	3380	3520	
	850	2655	2655	4060	4060	4060	4060	3300	3480	
	900	1915	1855	3745	3745	3115	3745	3240	3460	
	950	1145	1145	2655	3220	2285	3145	3180	3220	
	1000	715	715	1800	2230	1655	2115	2950	3030	
	1050			1200	1455	1200	1430	2715	3000	
	1100			800	915	830	945	2145	2545	
	1150			545	570	515	630	1715	1970	
	1200			345	345	285	430	1370	1545	
	1250							1115	1230	
	1300							945	970	
1350							770	800		
1400							630	630		
1450							485	485		
1500							345	345		



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