



Smart Solutions. Powerful Products.

PRODUCTS & SERVICES

Gate • Globe • Check • Ball

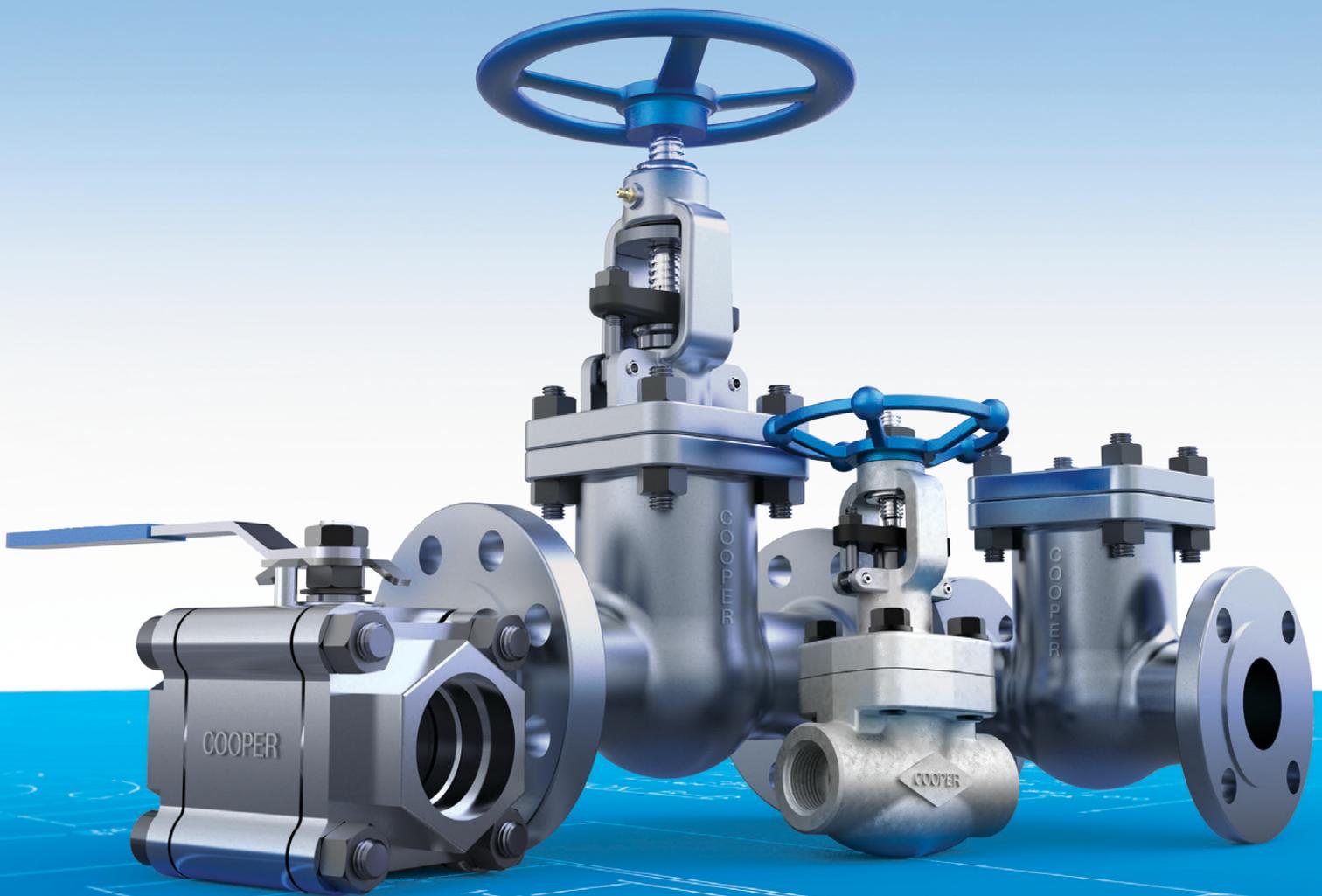


Table of Contents

COOPER® Valves Company Information



Our History

COOPER® Valves was founded in 1930 and in 1934 COOPER's foundry developed the first successful technique to pour 304 stainless steel. Since then COOPER has become a well-respected and approved valve manufacturer that specializes in exotic alloy valves, serving the downstream and mid-stream chemical, petrochemical, oil and gas, water, power, mining and refining industries for over 90 years. COOPER's success is derived from its dedication to building dependable valves through advanced engineering, experienced personnel, controlled manufacturing processes, and a wide level of end-user's approvals.

Our Mission Statement

To manufacture and deliver to our customers the finest valves in the world.

Our motto is "Quality without Compromise". We strive to make every valve we produce "bullet proof" because we know that our quality directly impacts our end users, our community, and our environment. An American classic, Cooper's vision is to grow and maintain our market position as the leading manufacturer and supplier of high alloy and nickel valves in a global market..

We believe through hard work, intelligent decision making and effective management we can deliver the highest quality, shortest delivery products to our client base at a fair price. We believe that our employees and their dedication to preserving and protecting our core values will be our basis for success. We are all like-minded people with shared beliefs in striving to always do the best.

Our Valves



Gate Valves

- > API 600, 602, 603 and ASME B16.34
- > Tested to API 598
- > For shut off and isolation applications



Globe Valves

- > API 602, BS 1873 and ASME B16.34
- > Tested to API 598
- > For isolation and throttling applications



Check Valves

- > API 594, 602, and ASME B16.34
- > Tested to API 598
- > Available in swing and lift type



Ball Valves

- > API 608 and ASME B16.34
- > Tested to API 598
- > Firesafe to API 607



Cryogenic Valves

- > API 600, 602, 603, API 608 and ASME B16.34
- > Tested to API 598
- > Tested to MSS or BS

Under Development

- > API 6D Trunnion Mounted Ball Valves
- > Lined and Sleeved Plug Valves

Cryogenic Globe Valve



Cryogenic Gate Valve



Cryogenic 3-Piece Ball Valve



Cryogenic 2-Piece Ball Valve



About Our COOPER® Products

Valve Type	Shape Process	Size	Pressure Class	End Connections
Gate	Cast	0.50"- 36.0"	150#- 1500#	RFF, RTJ, BW, SE, SW, TSW
	Forged	0.25"- 3.00"		
Globe	Cast	0.50"- 12.0"	150#- 1500#	RFF, RTJ, BW, SE, SW, TSW
	Forged	0.50"- 3.00"		
Check	Cast	0.50"- 24.0"	150#- 1500#	RFF, RTJ, BW, SE, SW, TSW
	Forged	0.50"- 3.00"		
Soft Seated Ball 2-Piece	Cast	0.50"- 12.0"	150#- 600#	RFF, RTJ, BW
Soft Seated Ball 3-Piece	Cast	0.25"- 3.00"	1500 PSI/WOG	SE, SW, TSW, BW, TE1

Typical Applications

The attention to detail we put into our products ensures a higher standard of dependability. This dependability allows COOPER® Valves to be installed in a wide range of challenging applications.

- > High Temperature (+1100°F)
- > Cryogenic Service (-320°F)
- > Corrosive/Erosive
- > Toxic/Lethal
- > Abrasive/Slurry
- > Special/Severe
- > (Autoclave Process-Gold/Nickel Mining)

COOPER® Features

- > Largest Offering of Nickel Alloy Materials
- > Wide Range Of Severe Service Applications
- > Material Test Reports
- > Traceability / Serial Numbers
- > API-591 Tested
- > API-598 Tested
- > Major End-User Approvals
- > Extensive Engineering Capabilities
- > Excellent Customer Service
- > Extended Warranty Program
- > Quick Deliveries & Stock
- > Recognized Highest Industry Quality
- > Extensive NDE Availability
- > International Organization for Standardization (ISO 9001)

Our Services



Manual Operations

- › Worm Gears, Spur Gears, Bevel Gears, and Reach Rods
- › Table Stands, Extension Systems, and Brackets
- › Shop Installation Services

Valve Automation

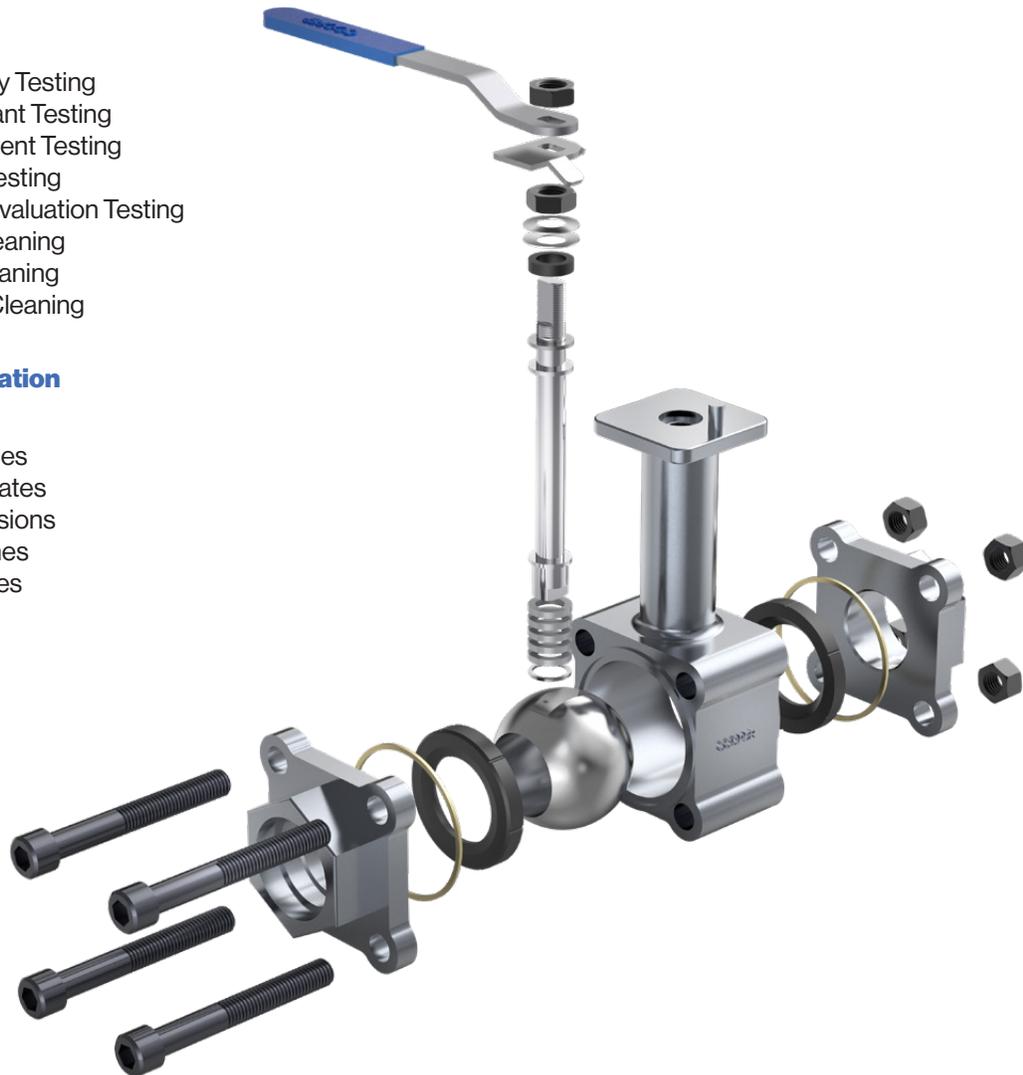
- › Electric, Hydraulic, and Pneumatic Automation
- › Multi-turn, Quarter-turn, and Linear
- › New Applications

Testing

- › Radiography Testing
- › Dye Penetrant Testing
- › Ferrite Content Testing
- › Hardness Testing
- › Corrosion Evaluation Testing
- › Chlorine Cleaning
- › Oxygen Cleaning
- › Phosgene Cleaning

Valve Modification

- › By Passes
- › Bore Changes
- › Mounting Plates
- › Stem Extensions
- › Limit Switches
- › Trim Changes
- › and More!



Why Consider COOPER® Valves?



Why COOPER?

- › Highest Quality Products Available
- › Short Lead Times
- › Friendly and Educated Staff
- › An American Classic
- › Fast and Reliable Service

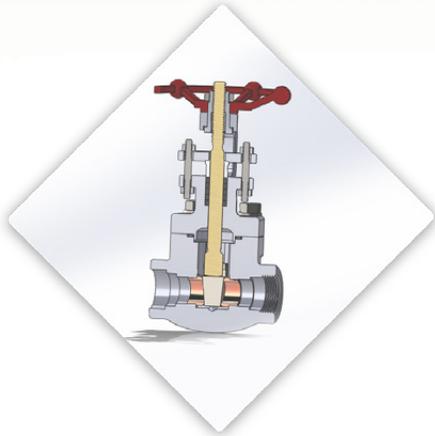
Industries COOPER® Valves Serves:

- › Chemical/Petrochemical
- › Refining
- › Mining
- › Slurry/Autoclave
- › Power

Available Inventory for Quick Delivery

COOPER® Valves maintains an inventory that is ever changing based upon market conditions. If you have any quick delivery or inventory needs please contact the factory at **+1 (832) 409-6050** or **sales@coopervalves.com**

COOPER® Valves Engineering



Exceeding Customer Requirements

Meeting these needs requires full commitment on COOPER Valves to provide the highest quality in-house engineering services and product development. COOPER Valves engineering has over thirty years of engineering experience in design, development and most importantly customer support in the valve industry. COOPER Valve engineering uses the latest equipment, software and materials to meet the defined product requirements.

3D CAD Modeling

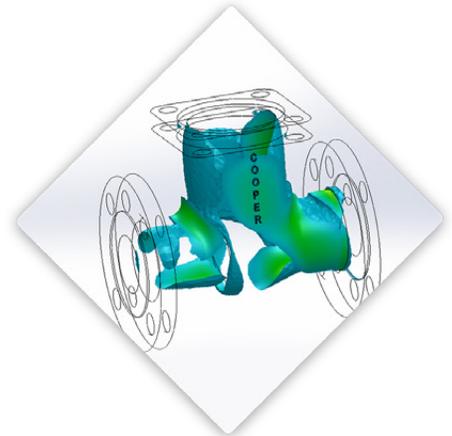
3D CAD allows COOPER Valve engineering to fully design all new product development and product improvements in a three dimensional computer environment. This allows engineering to develop different design paths and select the optimum design quicker, easier and more cost effective.

Finite Element Analysis

Original design of valves and other flow control equipment required hand calculations to solve material stress, strain, and deformation to determine if the design will satisfy all requirements. The use of FEA will calculate these values quickly, efficiently and more accurately. This allows engineering to analyze various ideas, designs and iterations quicker to determine the best design. This allows development of better, stronger, lighter and cost effective designs.

Computational Fluid Dynamics

CFD is used to analyze both fluid moving through the valve at any given time and temperature variations during operation. Once the environmental and operational conditions are known, the information can be inputted into the program to recreate the flow during operation. CFD will analyze the flow to provide critical information on the performance and operation. CFD can provide information on flow rates, velocity, mass flow, cavitation, turbulence, efficiency and much more. This information provides critical insights to develop the finest valves possible.



Testing

However, all the technical resources can only provide an excellent representation of the valve during operations. Once the design and manufacturing processes are complete, COOPER Valves are tested using some of the latest equipment. If you want to know more about our testing capabilities, contact us today!

New Product Development

COOPER Valves is committed to not only providing the finest quality valves but the continues product improvement and new product development to meet new challenges. COOPER Valves have several product improvements and new product development projects:

API 6D Certified Valve – Trunnion Mounted Ball Valves
Cryogenic Valves – Low Temperature Operation

COOPER ALLOY™ - Materials List

COOPER ALLOY™ valves are available in a wide range of materials. The Cooper Sales Team can solve your most challenging and critical process applications. For pricing and ordering our valve products, please contact the Cooper Sales Team by phone at **1-832-407-1214** or by email at sales@coopervalves.com.

Common Name	Castings		Forging		Bar	
	ASTM	UNS	ASTM	UNS	ASTM	UNS
Carbon Steel	A216 WCB	J03002	A105	K03504	A105	K03504
Carbon Steel	A216 WCC	J02503	---	---	---	---
Low Temp Carbon Steel	A352 LCB	J03003	---	---	---	---
Low Temp Carbon Steel	A352 LCC	J2505	A350 LF2	K03011	A350 LF2	K03011
1-1/4 Chrome	A217 WC6	J12072	A182 F11	K11572	A182 F11	K11572
2-1/4 Chrome	A217 WC9	J21890	A182 F22	K21590	A182 F22	K21590
5 Chrome	A217 C5	J42045	A182 F5	K41545	A182 F5	K41545
9 Chrome	A217 C12	J82090	A182 F9	K90941	A182 F9	K90941
C12A	A217 C12A	J84090	A182 F91	K90901	A182 F91	K90901
304	A351 CF8	J92600	A182 F304	S30400	A276 304	S30400
304H	A351 CF10	J92590	A182 F304H	S30409	A479 304H	S30409
304L	A351 CF3	J92700	A182 F304L	S30403	A276 304L	S30403
316	A351 CF8M	J92900	A182 F316	S31600	A276 316	S31600
316H	A351 CF10M	J92901	A182 F316H	S31609	A479 316H	S31609
316L	A351 CF3M	J92800	A182 F316L	S31603	A276 316L	S31603
317	A351 CG8M	J93000	A182 F317	S31700	A276 317	S31700
317L	A351 CG3M	J92999	A182 F317L	S31703	A276 317L	S31703
321	---	---	A182 F321	S32100	A276 321	S32100
321H	---	---	A182 321H	S32109	A276 321H	S32109
347	A351 CF8C	J92710	A182 F347	S34700	A276 347	S34700
347H	---	---	A182 F347H	S34709	A276 347H	S34709
410	A217 CA15	J91150	A182 F6A	S41000	A276 410	S41000
Avesta 254-SMO	A351 CK3MCUN	J93254	A182 F44	S31254	A276 S31254	S31254
AL6XN	A351 CN3MN	J94651	A182 F62	N08367	B462 N08367	N08367
Alloy 20	A351 / 744 CN7M	N08007	A182 F20/B462	N08020	B473 N08020	N08020
Alloy 20 (Modified)	A990 CN3MCu	J80020	---	---	---	---
Duplex 2205 - Gr. 4A	A995 Gr. 4A CD3MN	J92205	A182 F51	S31803	A276 S32205	S32205
Super Duplex 2507 - Gr. 5A	A995 Gr. 5A CE3MN	J93404	A182 F53	S32750	A479 S32750	S32750
Super Duplex Zeron 100 - Gr. 6A	A995 Gr. 6A CD3MWCuN	J93380	A182 F55	S32760	A479 S32760	S32760
Super Duplex Ferralium 255 - Gr. 1B	A995 Gr. 1B CD4MCuN	J93372	A182 F61	S32550	A479 S32550	S32550
Hastelloy B	A494 N12MV	N30012	---	---	B335 N10001	N10001
Hastelloy B2	A494 N7M	N30007	B564 N10665	N10665	B335 N10665	N10665
Hastelloy C (Modified)	A494 CW6M	N30107	---	---	---	---
Hastelloy C22	A494 CX2MW	N26022	B564 N06022	N06022	B574 N06022	N06022
Hastelloy C276	A494 CW12MW	N30002	B564 N10276	N10276	B574 N10276	N10276
Hastelloy C4	A494 CW2M	N26455	---	---	B574 N06455	N06455
Inconel 600	A494 CY40	N06040	B564 N06600	N06600	B166 N06600	N06600
Inconel 625	A494 CW6MC	N26625	B564 N06625	N06625	B446 N06625	N06625
Incoloy 800	A351 CT15C	N08151	B564 N08800	N08800	B408 N08800	N08800
Inconel 825	A494 CU5MCuC	N08826	B564 N08825	N08825	B425 N08825	N08825
Monel (Weldable)	A494 M30C	N24130	---	---	---	---
Monel 400	A494 M35-1	N24135	B564 N04400	N04400	B164 N04400	N04400
Monel K500	---	---	---	---	B865 N05500	N05500
Nickel 200	A494 CZ100	N02100	B564 N02200	N02200	B160 N02200	N02200
Titanium Gr. 2	B367 Gr. C-2	R50400	B381 Gr. F-2	R50400	B348 Gr. 2	R50400
Titanium Gr. 3	B367 Gr. C-3	R50550	B381 Gr. F-3	R50550	B348 Gr. 3	R50550
Titanium Gr. 5	B367 Gr. C-5	R50550	B381 Gr. F-5	R50550	B348 Gr. 5	R50550
Titanium Gr. 7	B367 Gr. C-7	R52400	B381 Gr. F-7	R52400	B348 Gr. 7	R52400
Titanium Gr. 12	B367 Gr. C-12	R53400	B381 Gr. F12	R53400	B348 Gr.12	R53400
Zirconium	B752 Gr. 702C	R60702	B493 Gr. 702	R60702	B550 Gr. 702	R60702

GATE VALVES

COOPER®
Valves

COOPER® Gate Valves are multi-turn valves typically used as a stop valve or isolation valve in either fully open or fully closed positions. Our gate valve design utilizes an Outside Screw and Yoke (OS&Y) which is advantageous in that the threads are outside the fluid resulting in minimized thread damage.

STANDARDS FOR END CONNECTS

Screwed End | Socket Weld | Thread by Socket Weld

Valve Design: API 602 & B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding & Threaded: ASME B16.11

Tested in Accordance with: API 598

STANDARDS FOR END CONNECTS

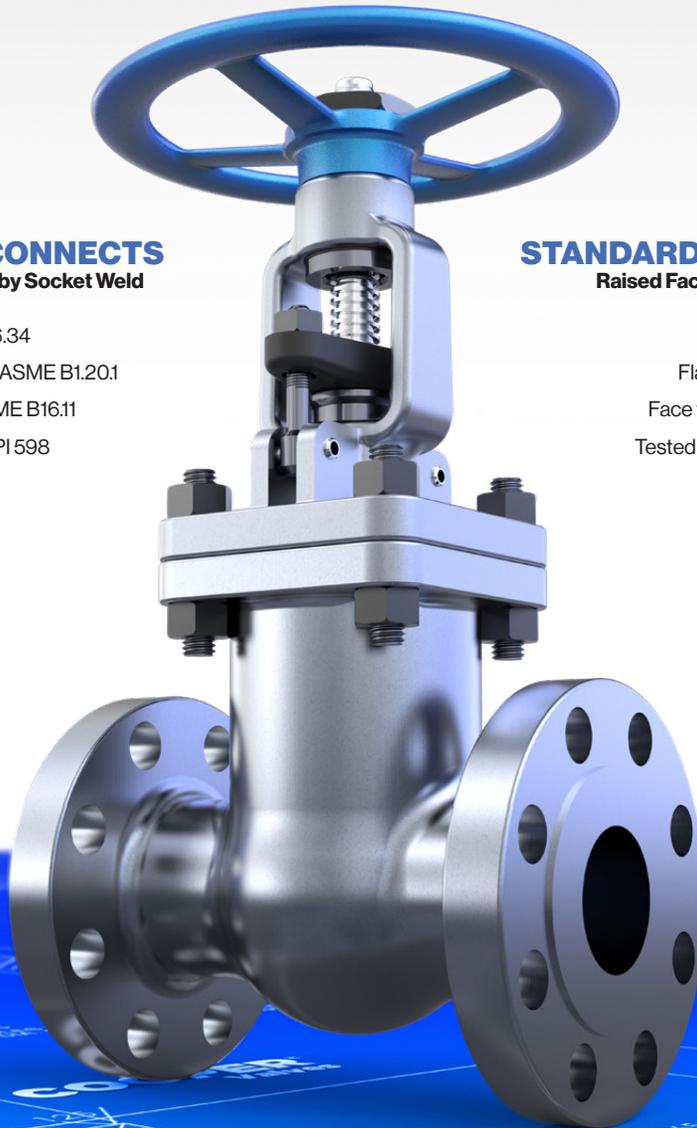
Raised Face | Ring Type Joint | Butt Weld

Valve Design: B16.34

Flange Dimensions: B16.5

Face to Face Dimensions: B16.10

Tested in Accordance with: API 598



EXPANDED VIEW

1. **Body:** Cooper nickel alloy bodies with integral seats provide optimum strength and corrosion resistance.

2. **Bonnet Bolting:** The bonnet bolts and nuts secure the bonnet to the body.

3. **Bonnet Gasket:** The bonnet gasket creates a leak-proof seal between the bonnet and body.

4. **Bonnet & Yoke:** The Cooper bonnet and yoke assemblies are built to the same standards as the bodies. Larger size gate valves utilize a multi-piece bonnet design. Bonnet has integral back seat.

5. **Gland Bolt and Nut:** The gland bolts and nuts allow easy adjustment for packing compression.

6. **Grease Fitting:** The grease fitting allows easy stem lubrication.

7. **Stem Nut:** The stem nut provides a precision guide for proper stem alignment.

8. **Handwheel Nut:** The handwheel nut secures the handwheel to the bonnet assembly.

9. **Handwheel:** The handwheel cycles the valve.

10. **Key:** The key helps prevent the hand wheel from slipping.

11. **Stem:** The stem is precision machined and inserts into the horizontal channel in the disc.

12. **Gland Bolt Pin:** This pin secures the gland bolts to the yoke and bonnet.

13. **Gland Flange:** The gland flange applies pressure to the gland for accurate packing adjustments.

14. **Gland:** The gland (same as body material) compresses the packing to create a stem seal above the back seat, between the bonnet and stem.

15. **Packing:** The packing creates a seal above the back seat, between the bonnet and stem.

16. **Wedge:** Cooper's wedge is machined to the tightest tolerances to ensure trouble free shutoff and cycling.

17. **Integral Back Seat: (not shown)** The integral back seat, when engaged with the stem head, provides a stable shutoff to the stuffing box which isolates the packing from flow exposure.



Cast Full Port Gate Valves

CLASS 150 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
½	4.25	0.5	8.75	4	9	15	108	15	222	102	4
¾	4.62	0.75	8.75	4	10	20	117	20	222	102	5
1	5.00	1	9.63	4	18	25	127	25	246	102	8
1½	6.50	1.5	13.06	8	22	40	165	40	332	204	10
2	7.00	2	14.69	8	30	50	178	50	373	204	13
3	8.00	3	16.38	8	57	80	203	80	416	204	26
4	9.00	4	20.75	10	84	100	229	100	527	254	38
6	10.50	6	27.44	12	170	150	267	150	697	305	77
8	11.50	8	39.38	16	289	200	292	200	1000	406	131
10	13.00	10	46.94	22	435	250	330	250	1192	559	198
12	14.00	12	56.81	22	640	300	356	300	1443	559	291
14	15.00	14	65.63	22	925	350	381	350	1667	559	420
16	16.00	16	73.44	26	1300	400	406	400	1865	660	591
18	17.00	18	82.69	28	1478	450	432	450	2100	711	672
20	18.00	20	90.75	28	1786	500	457	500	2305	711	812
24	20.00	24	100.31	28	2602	600	508	600	2548	711	1183
30	24.00	30	126.3	39.4	4488.5	762	610	762	3400	1000	2189
36	28.00	36	140	39.4	6849.9	914	711	914	3700	1000	3113.6

CLASS 300 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
½	5.50	0.5	8.75	4	13	15	140	15	222	102	6
¾	6.00	0.75	8.75	4	16	20	152	20	222	102	7
1	6.50	1	9.63	4	24	25	165	25	245	102	11
1½	7.50	1.5	13.06	8	39	40	190	40	332	203	18
2	8.50	2	14.69	8	53	50	216	50	373	203	24
3	11.12	3	22.94	10	100	80	282	80	583	254	45
4	12.00	4	26.44	12	171	100	305	100	672	305	78
6	15.88	6	34.56	16	305	150	403	150	878	406	139
8	16.50	8	46.06	22	540	200	419	200	1170	559	245
10	18.00	10	55.56	22	823	250	457	250	1411	559	374
12	19.75	12	65	22	1250	300	502	300	1651	559	568
14	30.00	14	62.5	22	1650	350	762	350	1588	560	750
16	33.00	16	68.7	29.5	2096.6	400	838	400	1744	750	953
18	36.00	18	76	29.5	2579.3	450	914	450	1930	750	1170
20	39.00	20	83.9	29.5	3300	500	991	500	2130	750	1500
24	45.00	24	99.8	39.4	4998.4	600	1143	600	2520	1000	2272
30	55.00	30	148.5	39.4	5119	762	1397	762	3772	1000	2322
36	68.00	36	159	39.4	8318.2	914	1727	914	3989	1000	3781

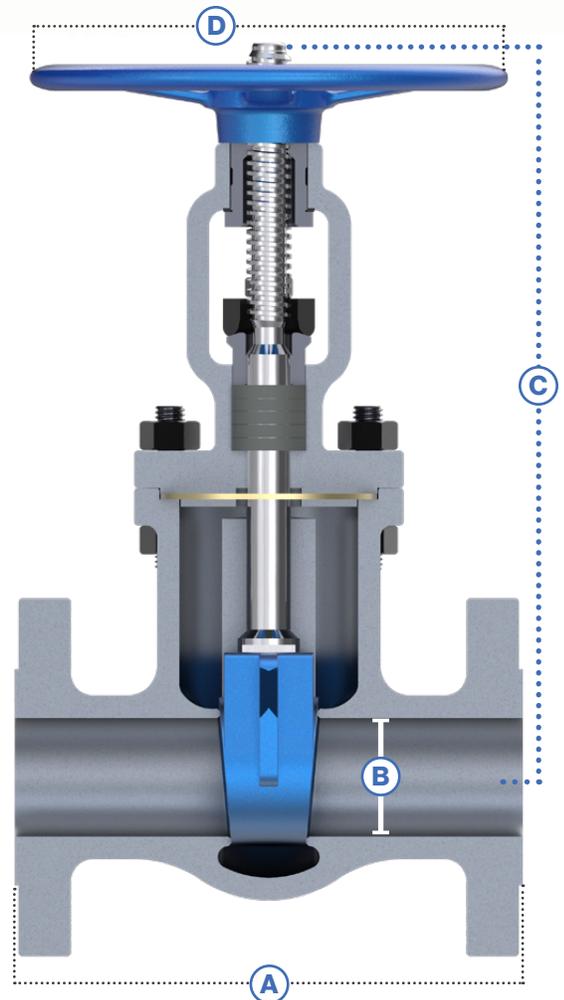
CLASS 600 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
½	6.50	0.5	8.75	4	13	15	165	15	222	102	6
¾	7.50	0.75	8.75	4	16	20	190	20	222	102	7
1	8.50	1	9.63	4	24	25	216	25	245	102	11
1½	9.50	1.5	13.06	8	39	40	241	40	332	203	18
2	11.50	2	14.69	8	53	50	292	50	373	203	24
3	14.00	3	22.94	10	100	80	356	80	583	254	45
4	17.00	4	26.44	12	171	100	432	100	672	305	78
6	22.00	6	34.56	16	305	150	559	150	878	406	139
8	26.00	8	46.06	22	540	200	660	200	1170	559	245
10	31.00	10	55.56	22	823	250	787	250	1411	559	374

CLASS 900 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
1	10.00	1	14	8	55	25	254	25	356	203	25
1½	12.00	1.5	15.56	9	70	40	305	40	395	229	32
2	14.50	2	17.44	10	125	50	368	50	443	254	57
3	15.00	3	28.25	14	202	80	381	80	716	356	92
4	18.00	4	32.5	17	380	100	457	100	826	432	173
6	24.00	6	39.9	20	807	150	610	150	991	508	367
8	29.00	8	51.9	36	1465	200	737	200	1318	914	666

Flange Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

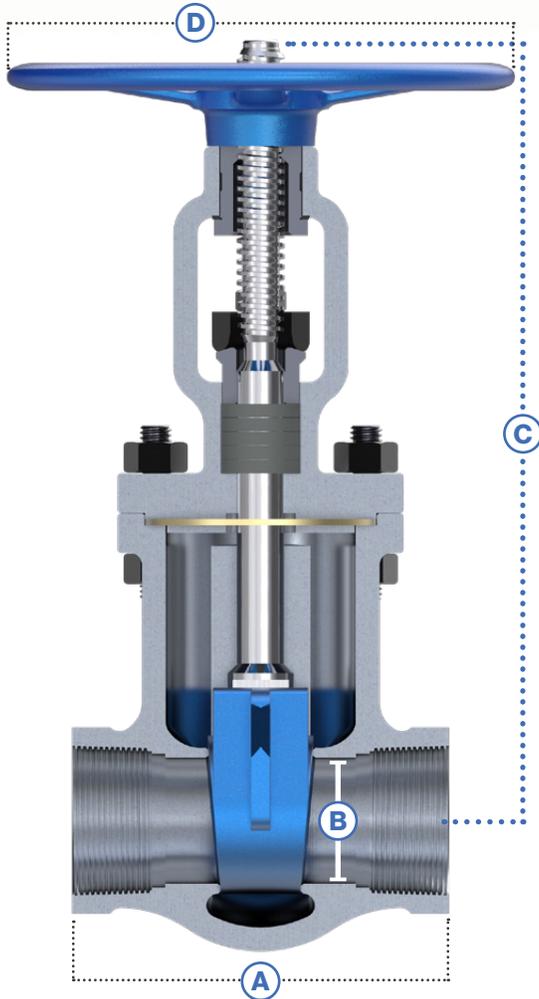
Sizes

1/2" thru 36"

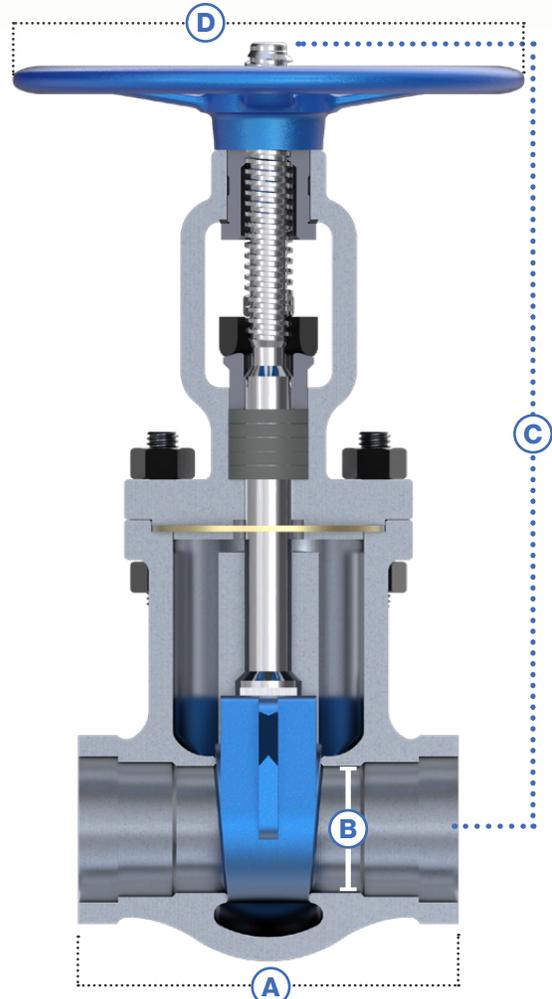
Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld
- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

Threaded Gate Valve



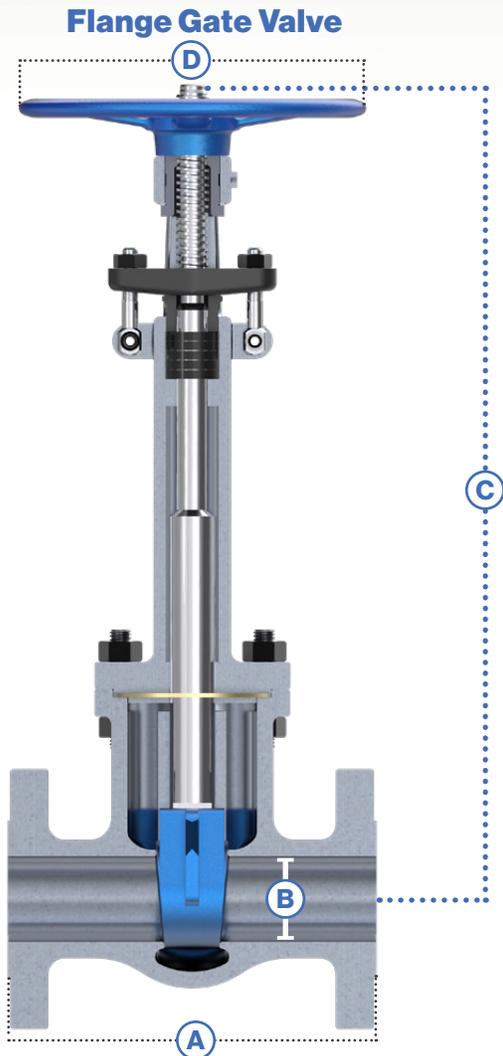
Socket Weld Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

CLASS 1500 - RF					
IMPERIAL					
SIZE (in.)	A	B	C	D	WT (lb)
1	10.00	1	14	8	55
1½	12.00	1.5	15.56	9	70
2	14.50	2	17.44	10	125
3	18.50	3	28.25	14	202
METRIC					
SIZE (mm.)	A	B	C	D	WT (kg)
25	254	25	356	203	25
40	305	40	395	229	32
50	368	50	443	254	57
80	470	80	716	356	92

Cryogenic Cast Full Port Gate Valves



Valve imagery is for representation purposes only.
Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
Dimensions are subject to change without notice.

Sizes

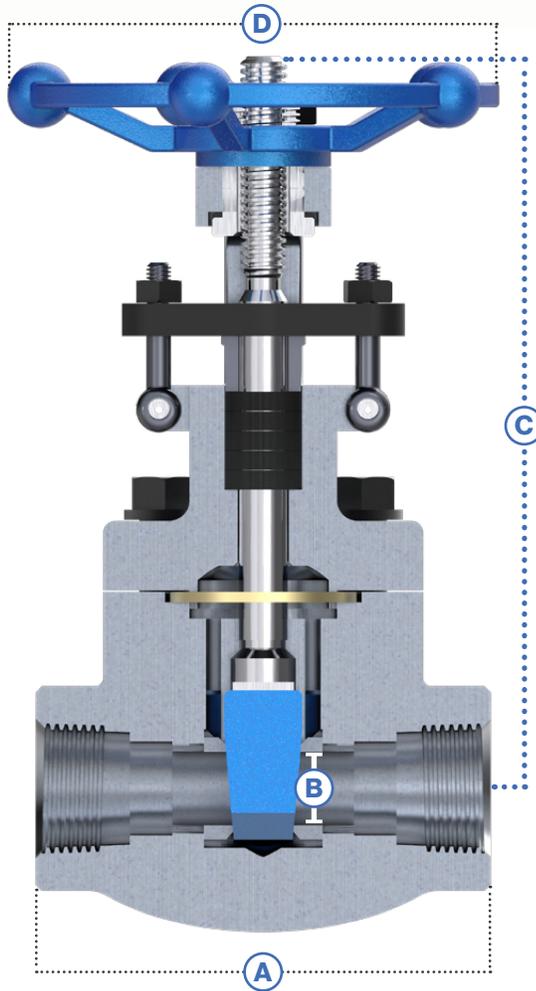
1/2" thru 36"

Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld

Forged Regular Port Gate Valves

Threaded Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Sizes

1/2" thru 36"

Connections

- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

CLASS 800									
IMPERIAL						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (lb)	B	C	d1 (NPT)	S
1/4*	5.43	2.99	3.35	0.25	3.3	0.56	0.38	-	-
3/8*	5.43	2.99	3.35	0.38	3.3	0.69	0.38	-	-
1/2	5.43	2.99	3.35	0.38	3.3	0.86	0.39	1/2	0.54
3/4	5.79	3.62	3.82	0.5	4.6	1.07	0.5	3/4	0.54
1	6.85	4.09	3.82	0.71	6.2	1.33	0.5	1	0.69
1 1/2	8.54	4.53	5.39	1.13	10.6	1.68	0.5	1 1/4	0.71
2	8.54	4.53	5.39	1.13	10.6	1.92	0.5	1 1/2	0.72
3	10.28	5.75	6.18	1.46	18.0	2.41	0.62	2	0.76

METRIC									
IMPERIAL						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (kg)	B	C	d1 (NPT)	S
6*	138	76	85	6	1.5	14	10	-	-
10*	138	76	85	10	1.5	18	10	-	-
15	138	76	85	10	1.5	22	10	1/2	13.7
20	147	92	97	13	2.1	27	13	3/4	13.7
25	174	104	97	18	2.8	34	13	1	17.52
30	217	115	137	29	4.8	43	13	1 1/4	18
40	217	115	137	29	4.8	49	13	1 1/2	18.3
50	261	146	157	37	8.2	61	16	2	19.3

CLASS 1500									
IMPERIAL						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (lb)	B	C	d1 (NPT)	S
1/2	5.79	3.62	3.82	0.38	4.6	0.86	0.38	1/2	0.54
3/4	6.14	4.09	3.82	0.5	6.4	1.07	0.5	3/4	0.54
1	8.15	4.53	5.39	0.71	11.0	1.33	0.5	1	0.69
1 1/4	9.69	5.75	6.18	1.13	18.0	1.68	0.5	1 1/4	0.71
1 1/2	9.69	5.75	6.18	1.13	18.0	1.92	0.5	1 1/2	0.72
2	11.93	8.27	6.18	1.48	26.2	2.41	0.62	2	0.76

METRIC									
IMPERIAL						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (kg)	B	C	d1 (NPT)	S
15	147	92	97	10	2.1	22	10	1/2	13.7
20	156	104	97	13	2.9	27	13	3/4	13.7
25	207	115	137	18	5	34	13	1	17.52
30	246	146	157	29	8.2	43	13	3/4	18
40	246	146	157	29	8.2	49	13	1	18.3
50	303	210	157	38	11.9	61	16	1 1/4	19.3

GLOBE VALVES

COOPER[®]
Valves

COOPER[®] Cast Globe Valves are typically used for unidirectional isolation and when a pressure drop is required or preferred. Our globe valve design utilizes an Outside Screw and Yoke (OS&Y) which is advantageous in that the threads are outside the fluid resulting in minimized thread damage.

STANDARDS FOR END CONNECTS

Screwed End | Socket Weld | Thread by Socket Weld

Valve Design: API 602 & B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding & Threaded: ASME B16.11

Tested in Accordance with: API 598

STANDARDS FOR END CONNECTS

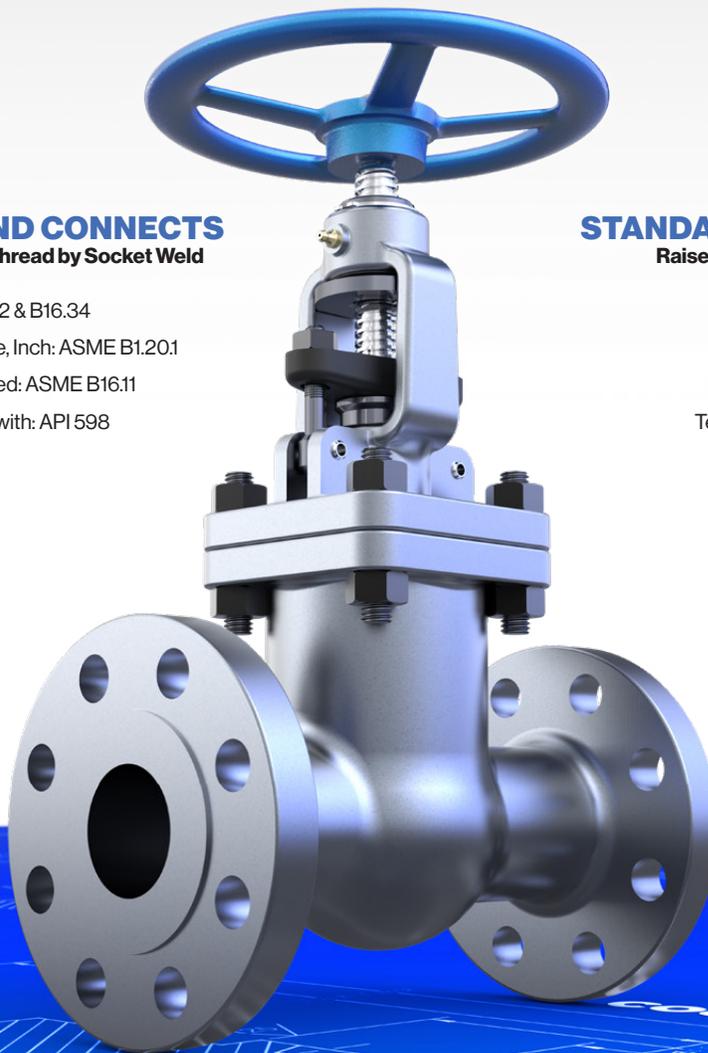
Raised Face | Ring Type Joint | Butt Weld

Valve Design: B16.34

Flange Dimensions: B16.5

Face to Face Dimensions: B16.10

Tested in Accordance with: API 598



EXPANDED VIEW

1. **Body:** Cooper nickel alloy bodies with integral seats provide optimum strength and corrosion resistance.

2. **Bonnet Bolting:** The bonnet bolts and nuts secure the bonnet to the body.

3. **Bonnet Gasket:** The bonnet gasket creates a leak-proof seal between the bonnet and body.

4. **Bonnet & Yoke:** The Cooper bonnet and yoke assemblies are built to the same standards as the bodies. Larger size gate valves utilize a multi-piece bonnet design. Bonnet has integral back seat.

5. **Gland Bolt Pin:** This pin secures the gland bolts to the yoke and bonnet.

6. **Gland Bolt and Nut:** The gland bolts and nuts allow easy adjustment for packing compression.

7. **Grease Fitting:** The grease fitting allows easy stem lubrication.

8. **Stem Nut:** The stem nut provides a precision guide for proper stem alignment.

9. **Handwheel Nut:** The handwheel nut secures the handwheel to the bonnet assembly.

10. **Handwheel:** The handwheel cycles the valve.

11. **Key:** The key helps prevent the hand wheel from slipping.

12. **Snap Ring:** The snap ring helps to prevent loosening and distributes pressure evenly.

13. **Stem:** The stem is precision machined and inserts into the horizontal channel in the disc.

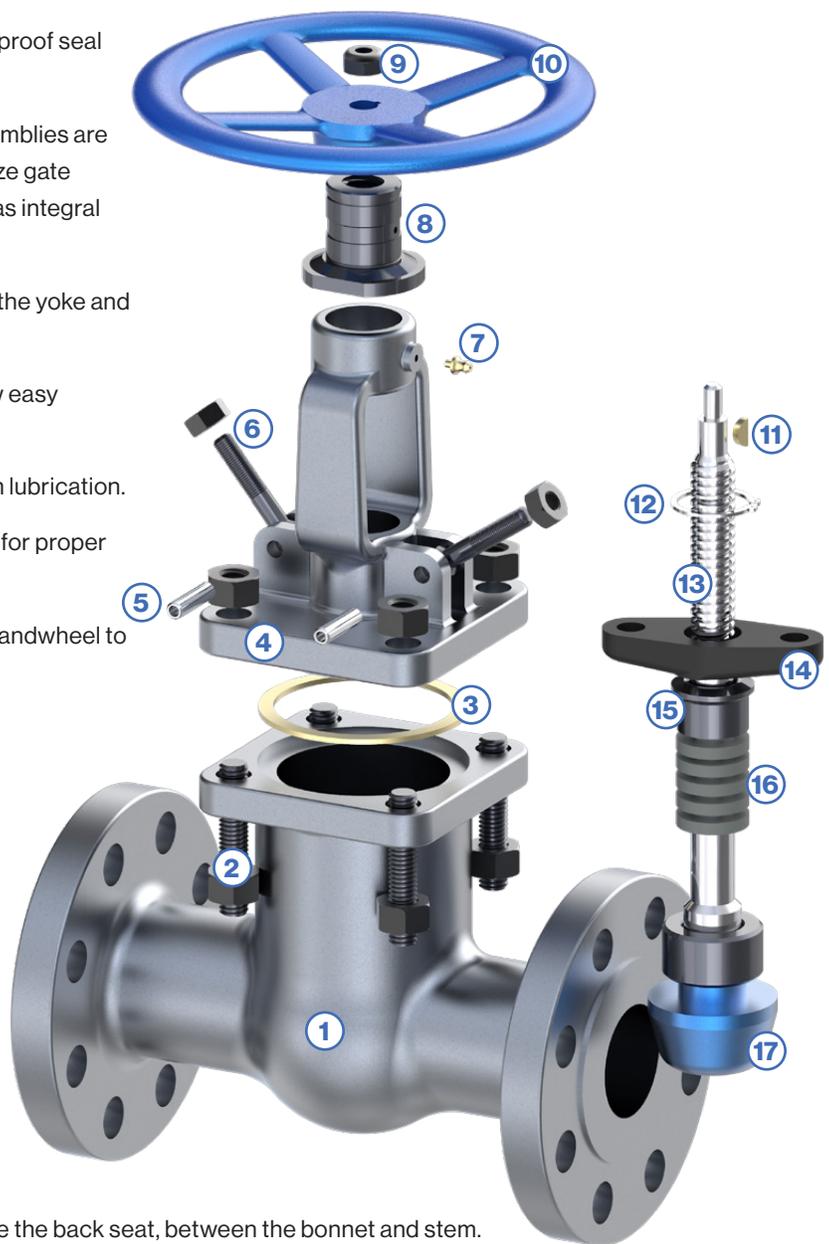
14. **Gland Flange:** The gland flange applies pressure to the gland for accurate packing adjustments.

15. **Gland:** The gland (same as body material) compresses the packing to create a stem seal above the back seat, between the bonnet and stem.

16. **Packing:** The packing creates a seal above the back seat, between the bonnet and stem.

17. **Wedge:** Cooper's wedge is machined to the tightest tolerances to ensure trouble free shutoff and cycling.

18. **Integral Back Seat: (not shown)** The integral back seat, when engaged with the stem head, provides a stable shutoff to the stuffing box which isolates the packing from flow exposure.



Cast Full Port Globe Valves

CLASS 150 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
½	4.25	0.5	8.38	4	6	15	108	15	213	102	3
¾	4.62	0.75	8.38	4	7	20	117	20	213	102	3
1	5.00	1	9.31	4	8	25	127	25	236	102	4
1½	6.50	1.5	13.25	8	15	40	165	40	337	203	7
2	8.00	2	14.38	8	23	50	203	50	365	203	10
3	9.50	3	14.5	12	56	80	241	80	368	304	25
4	11.50	4	15.88	12	74	100	292	100	403	305	34
6	16.00	6	20.63	16	145	150	406	150	524	406	66
8	19.50	8	24.5	16	246	200	495	200	622	406	112
10	24.50	10	25.6	17.7	574.2	250	622	250	650	450	261
12	27.50	12	29	29.5	1100	300	698	300	736	750	499

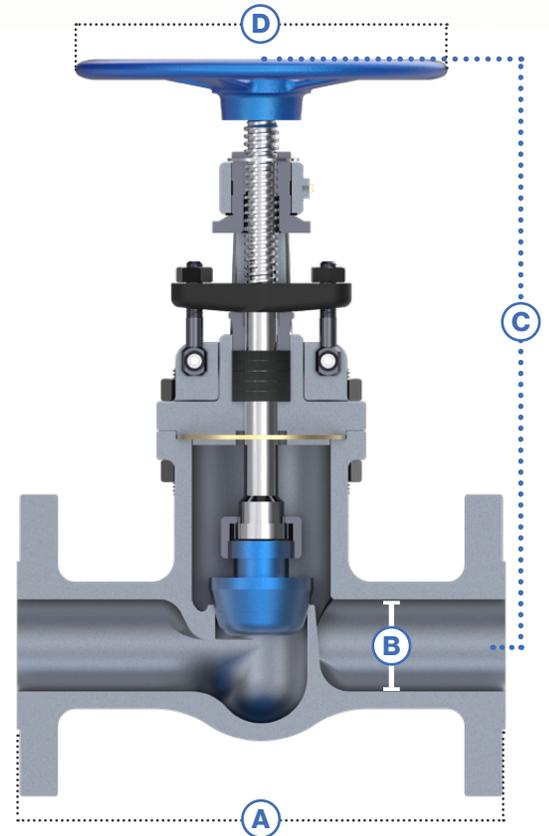
CLASS 300 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
½	6.00	0.5	8.38	4	13	15	152	15	213	102	6
¾	7.00	0.75	8.38	4	17	20	178	20	213	102	8
1	8.00	1	9.31	4	25	25	203	25	236	102	11
1½	9.00	1.5	13.25	8	36	40	229	40	337	203	16
2	10.50	2	14.19	8	54	50	267	50	360	203	25
3	12.50	3	19.5	12	92	80	318	80	495	305	42
4	14.00	4	22.19	12	147	100	356	100	564	305	67
6	17.50	6	26.69	16	280	150	444	150	678	406	127
8	22.00	8	40	22	566	200	559	200	1016	559	257
10	24.50	10	31.5	17.7	827.2	250	622	250	800	450	376

CLASS 600 - RF

IMPERIAL						METRIC					
SIZE (in.)	A	B	C	D	WT (lb)	SIZE (mm.)	A	B	C	D	WT (kg)
½	6.50	0.5	8.38	4	5	15	165	15	213	102	2
¾	7.50	0.75	8.38	4	5	20	190	20	213	102	2
1	8.50	1	9.31	4	7	25	216	25	236	102	3
1½	9.50	1.5	16.44	8	29	40	241	40	418	203	13
2	11.50	2	18.38	10	39	50	292	50	467	254	18

Flange Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Missing Class 900 - RF

Missing Class 1500 - RF

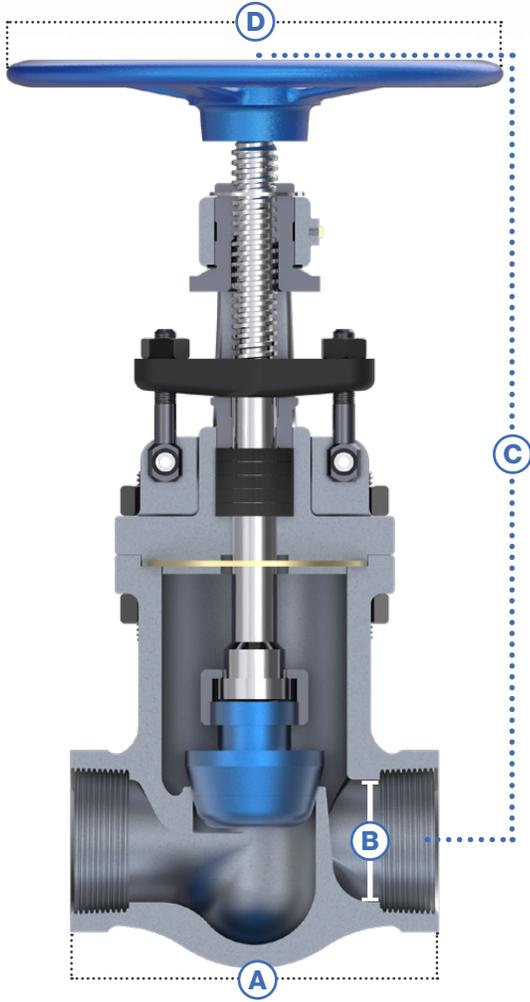
Sizes

1/2" thru 36"

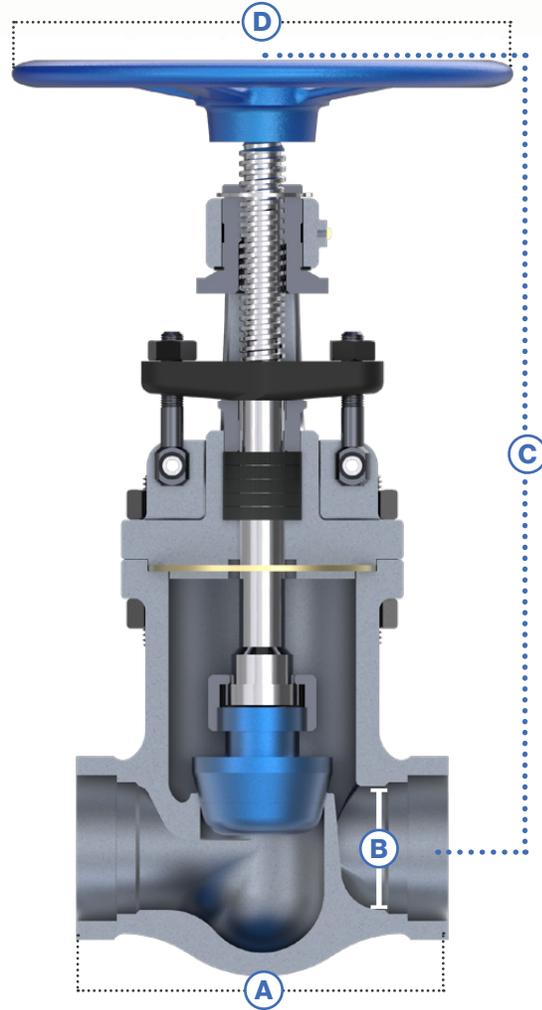
Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld
- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

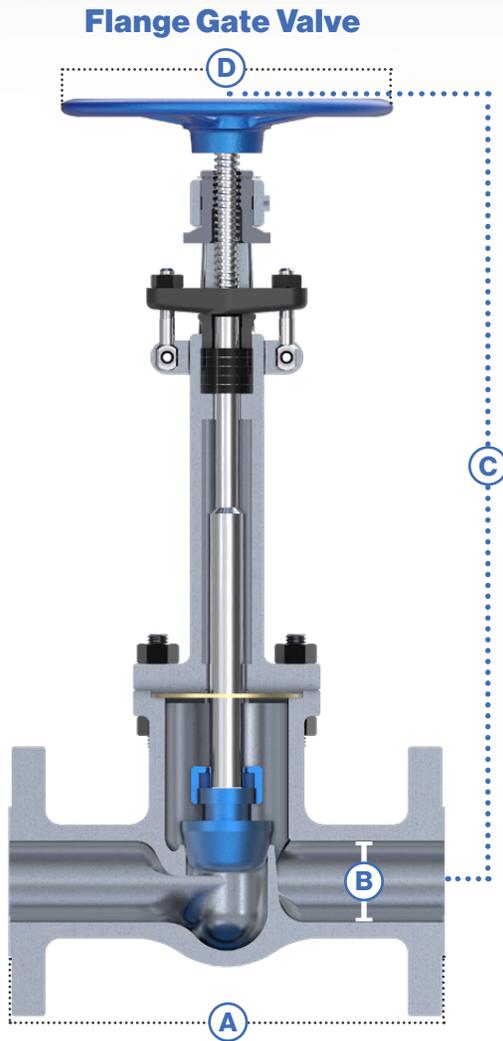
Threaded Gate Valve



Socket Weld Gate Valve



Cryogenic Cast Full Port Globe Valves



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

"E" dimension shown to the left is standard minimum length.
 It goes from the center line of bore to top of stuffing box.
 Longer "E" dimension is optional, contact COOPER® Valves.

Sizes

1/2" thru 36"

Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld

EXTENDED BONNET DIMENSIONS

IMPERIAL				IMPERIAL			
SIZE (in.)	Class 150	Class 300	Class 600	SIZE (mm.)	Class 150	Class 300	Class 600
1/2	13.5	13.5	13.5	15	343	343	343
3/4	13.5	13.5	13.5	20	343	343	343
1	15.25	15.25	15.25	25	387	387	387
1 1/2	18	18	18	40	457	457	457
2	18.5	18.5	18.5	50	470	470	470
3	18.5	21.88	ON	80	470	556	ON
4	20.38	24	REQUEST	100	518	610	REQUEST
6	24	30.31	ON	150	610	770	ON
8	30.31	34.31	REQUEST	200	770	871	REQUEST

Options

- > Renewable plug with Teflon insert good to -325°F.
- > Renewable plug with KEL-F insert good to -325°F.
- > Pressure relief vent hole.

Cooper Cryogenic Globe Valves are available in ASME pressure classes 150, 300 and 600 with OS&Y extended bolted bonnet and metal plug or renewable disc.

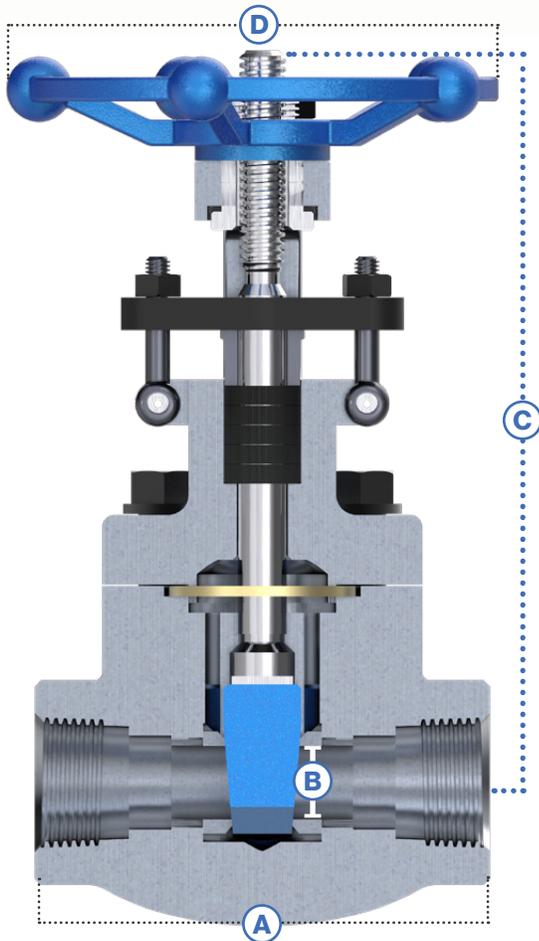
Class 150: Flanged or buttweld 1/2 thru 8".*
 Threaded, socketweld, NPS 1/2 thru 2".

Class 300: Flanged or buttweld 1/2 thru 8".*
 Threaded, socketweld, NPS 1/2 thru 2".

Class 600: Flanged or buttweld 1/2 thru 8".*
 Threaded, socketweld, NPS 1/2 thru 2".

Forged Regular Port Globe Valves

Threaded Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Sizes

1/2" thru 36"

Connections

- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

CLASS 800									
IMPERIAL						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (lb)	B	C	d1 (NPT)	S
1/2	5.67	2.99	3.35	0.37	3.3	0.86	0.38	1/2	0.54
3/4	6.06	3.62	3.82	0.5	4.8	1.07	0.5	3/4	0.54
1	6.97	4.09	3.82	0.69	6.2	1.33	0.5	1	0.69
1 1/4	8.86	5.51	5.39	1.16	12.3	1.68	0.5	1 1/4	0.71
1 1/2	8.86	5.51	5.39	1.16	12.3	1.92	0.5	1 1/2	0.72
2	10	5.75	6.18	1.38	18.7	2.41	0.62	2	0.76

CLASS 1500									
IMPERIAL						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (lb)	B	C	d1 (NPT)	S
1/2	5.67	2.99	3.35	0.37	5.1	0.86	0.38	1/2	0.54
3/4	6.06	3.62	3.82	0.5	7	1.07	0.5	3/4	0.54
1	6.97	4.09	3.82	0.69	13.4	1.33	0.5	1	0.69
1 1/4	8.86	5.51	5.39	1.16	23.1	1.68	0.5	1 1/4	0.71
1 1/2	8.86	5.51	5.39	1.16	23.1	1.92	0.5	1 1/2	0.72
2	10	5.75	6.18	1.38	28.6	2.41	0.62	2	0.76

CLASS 1500									
METRIC						END CONNECTION			
SIZE (in.)	H	L	W	P	WT (kg)	B	C	d1 (NPT)	S
15	144	76	85	9.4	1.5	22	10	1/2	13.7
20	153.9	92	97	12.7	2.1	27	13	3/4	13.7
25	177	104	97	17.5	2.8	34	13	1	17.52
30	225	140	137	29.5	5.6	43	13	1 1/4	18
40	225	140	137	29.5	5.6	49	13	1 1/2	18.3
50	254	146	157	35.1	8.5	61	16	2	19.3

CHECK VALVES

COOPER[®]
Valves

COOPER[®] Check Valves have a simple yet reliable design that allows them to perform with low pressure drop and excellent seat tightness. We manufacture both swing check and lift check designs. Our lift check valves are generally used in applications where faster closing speeds are required to prevent surges.

STANDARDS FOR END CONNECTS

Screwed End | Socket Weld | Thread by Socket Weld

Valve Design: API 602 & B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding & Threaded: ASME B16.11

Tested in Accordance with: API 598

STANDARDS FOR END CONNECTS

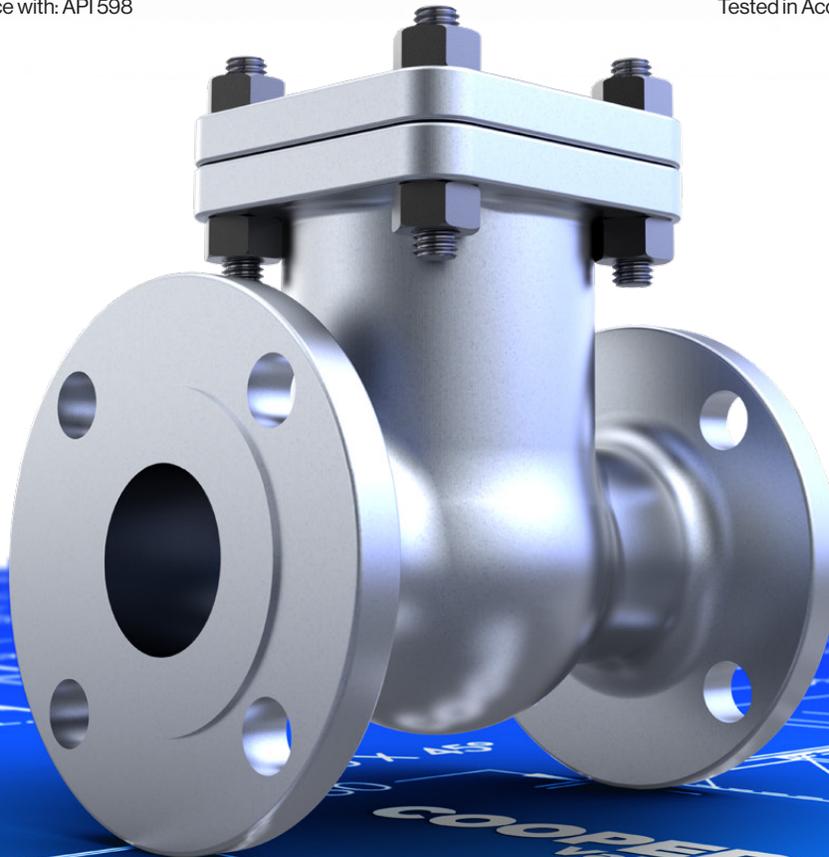
Raised Face | Ring Type Joint | Butt Weld

Valve Design: B16.34

Flange Dimensions: B16.5

Face to Face Dimensions: B16.10

Tested in Accordance with: API 598



EXPANDED VIEW

- 1. Body:** The Cooper nickel alloy bodies with integral seat provide optimum strength and corrosion resistance.
- 2. Bonnet Bolting:** The bonnet bolts and nuts secure the bonnet to the body.
- 3. Cover Gasket:** The cover gasket creates a leakproof seal between the cover and the body.
- 4. Disc:** The disc allows unidirectional flow and restricts back flow with trouble-free shutoff.
- 5. Swing Arm(s):** The swing arm(s) allow the disc to open and close.
- 6. Hinge Pin:** The hinge pin provides a stable mechanism for the swing arm(s) to function.
- 7. Cover:** The cover seals the valve and allows access to the internal components.
- 8. Wedge Spring:** NEED A DESCRIPTION FOR THIS ONE.
- 9. Wedge:** Cooper's wedge is machined to the tightest tolerances to ensure trouble free shutoff and cycling.
- 10. Integral Back Seat (not shown):** Cooper's integral seat ensures a stable shutoff, the integral seat is precision machined for optimal seating.



Cast Full Port Swing Checks

CLASS 150 - RF

IMPERIAL					METRIC				
SIZE (in.)	A	B	C	WT (lb)	SIZE (mm.)	A	B	C	WT (kg)
½	4.25	0.5	3.19	9	15	108	15	81	3
¾	4.63	0.75	3.19	7	20	118	20	81	3
1	5	1	3.69	8	25	127	25	94	4
1½	6.5	1.5	4.81	15	40	165	40	122	7
2	8	2	5.75	23	50	203	50	146	10
3	9.5	3	5	56	80	241	80	127	25
4	11.5	4	7.44	74	100	292	100	189	34
6	14	6	9.31	145	150	356	150	236	66
8	19.5	8	10.25	246	200	495	200	260	112
10	24.5	10	11.63	420	250	622	250	295	191
12	27.5	12	14.13	635	300	699	300	359	289

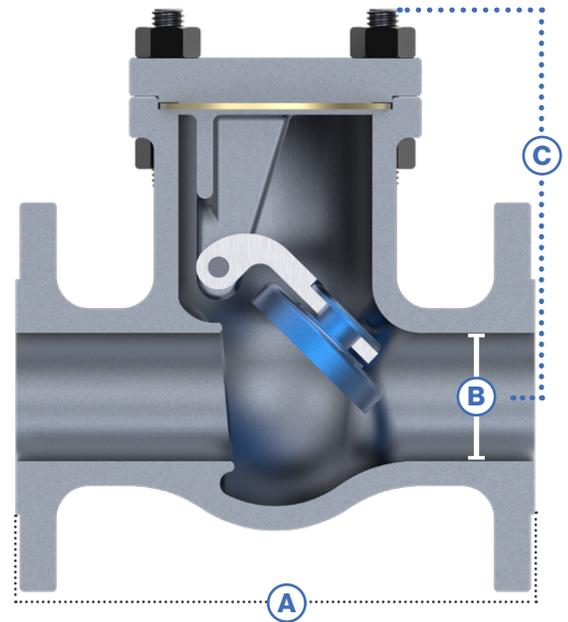
CLASS 300 - RF

IMPERIAL					METRIC				
SIZE (in.)	A	B	C	WT (lb)	SIZE (mm.)	A	B	C	WT (kg)
½	6	0.50	3.19	16	15	152	15	81	7
¾	7	0.75	3.19	18	20	178	20	81	8
1	8.5	1.00	3.69	21	25	216	25	94	10
1½	9.5	1.5	4.81	30	40	241	40	122	14
2	10.50	2.00	5.75	60	50	268	50	146	27
3	12.50	3.00	6.25	115	80	318	80	159	52
4	14.00	4.00	7.63	185	100	356	100	194	84
6	17.50	6.00	11.13	230	150	445	150	283	105
8	21.00	8.00	10.75	620	200	422	200	273	282
10	24.5	10	14.38	800	250	511	250	365	364

CLASS 600 - RF

IMPERIAL					METRIC				
SIZE (in.)	A	B	C	WT (lb)	SIZE (mm.)	A	B	C	WT (kg)
½	6.50	0.50	3.19	16	15	165	15	81	7
¾	7.50	0.75	3.19	19	20	191	20	81	9
1	8.50	1.00	3.69	21	25	216	25	94	10
1½	9.50	1.50	6.63	50	40	241	40	168	23
2	11.5	2.00	7.00	70	50	292	50	178	32
3	14.00	3.00	8.75	135	80	356	80	222	61
4	17.00	4.00	10.25	255	100	432	100	260	116
6	22.00	6.00	12.63	530	150	559	150	321	241

Flange Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Sizes

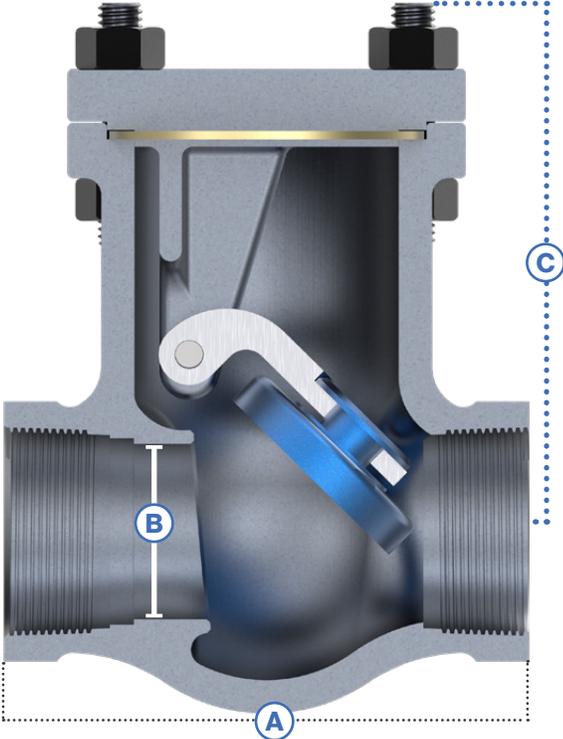
1/2" thru 36"

Connections

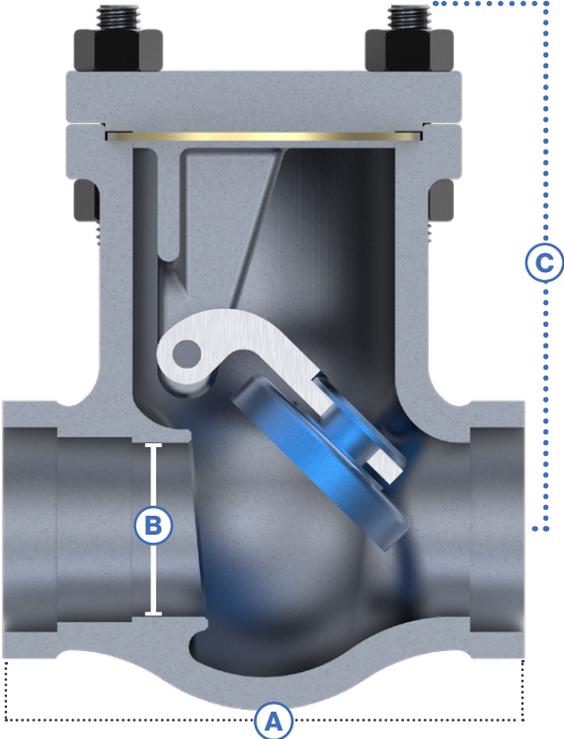
- > Raised Face
- > Ring Type Joint
- > Butt Weld
- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

Cast Full Port Threaded Swing Checks

Threaded Gate Valve



Threaded Gate Valve



Valve imagery is for representation purposes only.
Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
Dimensions are subject to change without notice.

Cast Full Port Lift Checks

CLASS 150 - RF

IMPERIAL					METRIC				
SIZE (in.)	A	B	C	WT (lb)	SIZE (mm.)	A	B	C	WT (kg)
½	3.44	0.50	3.19	5	15	87	15	81	2
¾	3.44	0.75	3.19	5	20	87	20	81	2
1	4.06	1.00	3.69	7	25	103	25	94	3
1½	5.44	1.50	4.19	12	40	138	40	106	5
2	5.94	2.00	5.75	17	50	151	50	146	8

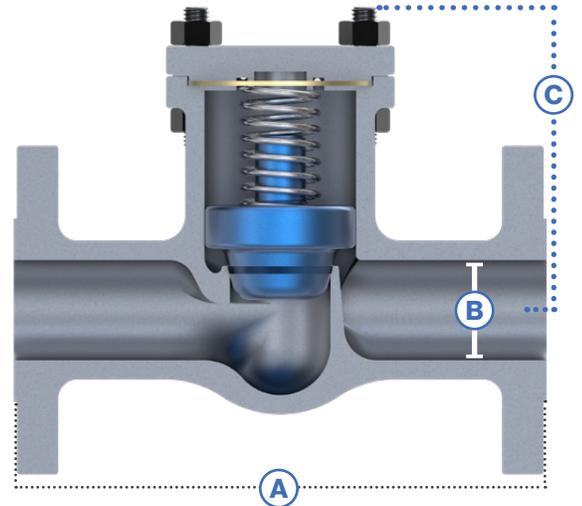
CLASS 300 - RF

IMPERIAL					METRIC				
SIZE (in.)	A	B	C	WT (lb)	SIZE (mm.)	A	B	C	WT (kg)
½	3.44	0.50	3.19	5	15	87	15	81	2
¾	3.44	0.75	3.19	5	20	87	20	81	2
1	4.06	1.00	3.69	7	25	103	25	94	3
1½	5.44	1.50	4.19	12	40	138	40	106	5
2	5.94	2.00	5.75	17	50	151	50 <td 146	8	

CLASS 600 - RF

IMPERIAL					METRIC				
SIZE (in.)	A	B	C	WT (lb)	SIZE (mm.)	A	B	C	WT (kg)
½	3.44	0.50	3.19	5	15	87	15	81	2
¾	3.44	0.75	3.19	5	20	87	20	81	2
1	4.06	1.00	3.69	7	25	103	25	94	3
1½	5.44	1.50	7.00	29	40	138	40	178	13
2	7.00	2.00	7.00	39	50	178	50	178	18

Flange Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Sizes

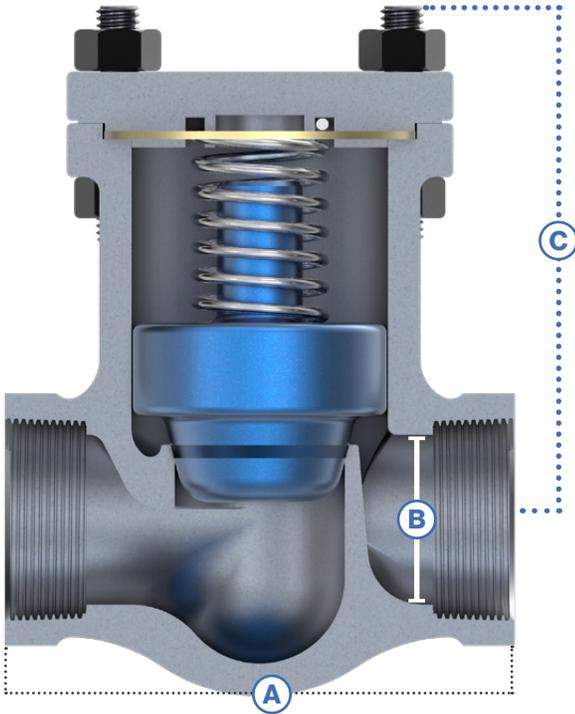
1/2" thru 36"

Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld

Cast Full Port Threaded Lift Checks

Threaded Gate Valve



Valve imagery is for representation purposes only.
Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
Dimensions are subject to change without notice.

Sizes

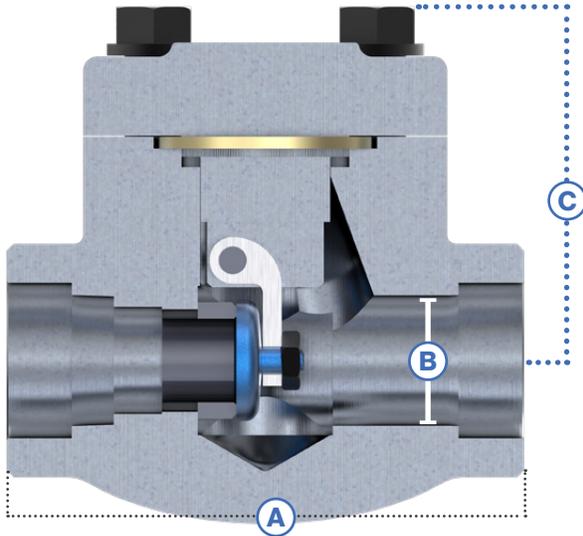
1/2" thru 36"

Connections

- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

Forged Regular Port Swing Check Valves

Flange Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Sizes

1/2" thru 36"

Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld

CLASS 800

IMPERIAL					END CONNECTION			
SIZE (in.)	H	L	P	WT (lb)	B	C	d1 (NPT)	S
1/2	1.81	2.99	.038	2.2	0.86	0.38	1/2	0.54
3/4	2.20	3.62	0.50	3.3	1.07	0.50	3/4	0.54
1	2.56	4.09	0.71	4.4	1.33	0.5	1	0.69
1 1/4	2.95	4.53	1.13	9.0	1.68	0.5	1 1/4	0.71
1 1/2	2.95	4.53	1.13	9.0	1.92	0.5	1 1/2	0.72
2	3.94	5.75	1.46	14.1	2.41	0.62	2	0.76

METRIC					END CONNECTION			
SIZE (in.)	H	L	P	WT (kg)	B	C	d1 (NPT)	S
15	46	76	10	1.0	22	10	1/2	13.7
20	56	92	13	1.5	27	13	3/4	13.7
25	65	104	18	2.0	34	13	1	17.52
30	75	115	29	4.1	43	13	1 1/4	18
40	75	115	29	4.1	49	13	1 1/2	18.3
50	100	146	37	6.4	61	16	2	19.3

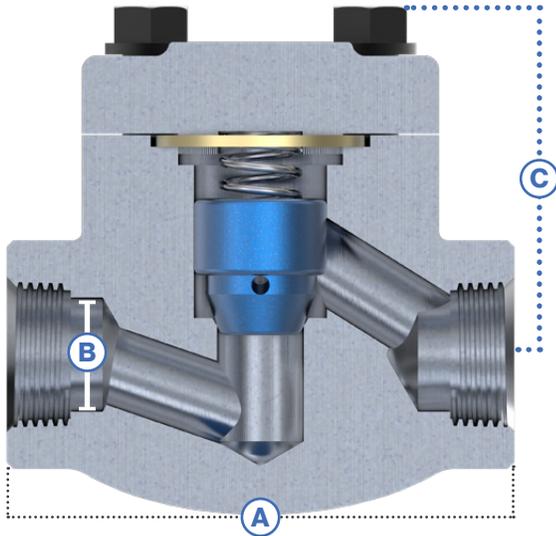
CLASS 1500

IMPERIAL					END CONNECTION			
SIZE (in.)	H	L	P	WT (lb)	B	C	d1 (NPT)	S
1/2	2.20	3.62	0.38	3.3	0.86	0.38	1/2	0.54
3/4	2.56	4.09	0.5	4.4	1.07	0.5	3/4	0.54
1	2.95	4.53	0.71	9.0	1.33	0.5	1	0.69
1 1/4	3.94	5.75	1.13	14.1	1.68	0.5	1 1/4	0.71
1 1/2	3.94	5.75	1.13	14.1	1.92	0.5	1 1/2	0.72
2	4.92	8.27	1.46	21.6	2.41	0.62	2	0.76

METRIC					END CONNECTION			
SIZE (in.)	H	L	P	WT (kg)	B	C	d1 (NPT)	S
15	56	92	10	1.5	22	10	1/2	13.7
20	65	104	13	2.0	27	13	3/4	13.7
25	75	115	18	4.1	34	13	1	17.52
30	100	146	29	6.4	43	13	1 1/4	18
40	100	146	29	6.4	49	13	1 1/2	18.3
50	125	210	37	9.8	61	16	2	19.3

Forged Regular Port Lift Check Valves

Threaded Gate Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

Sizes

1/2" thru 36"

Connections

- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

CLASS 800								
IMPERIAL					END CONNECTION			
SIZE (in.)	H	L	P	WT (lb)	B	C	d1 (NPT)	S
1/2	1.81	2.99	.038	2.2	0.86	0.38	1/2	0.54
3/4	2.20	3.62	0.50	3.3	1.07	0.50	3/4	0.54
1	2.56	4.09	0.69	4.4	1.33	0.5	1	0.69
1 1/4	2.95	4.51	1.16	9.0	1.68	0.5	1 1/4	0.71
1 1/2	2.95	4.51	1.16	9.0	1.92	0.5	1 1/2	0.72
2	3.94	5.75	1.38	14.1	2.41	0.62	2	0.76

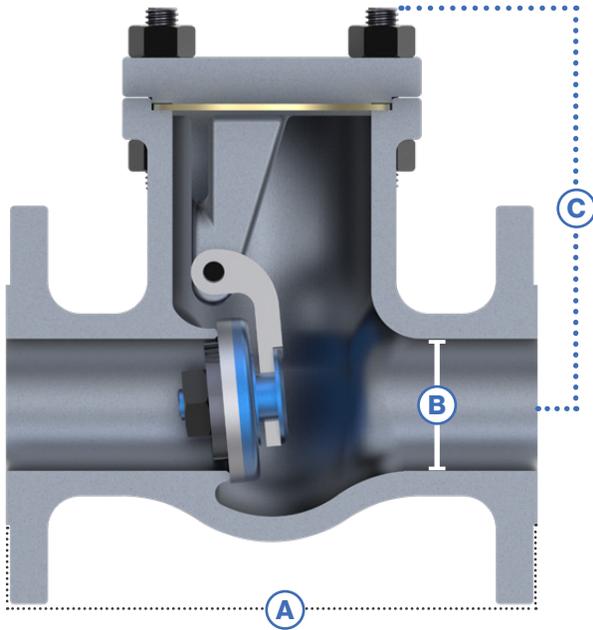
METRIC								
IMPERIAL					END CONNECTION			
SIZE (in.)	H	L	P	WT (kg)	B	C	d1 (NPT)	S
15	46	76	10	1.0	22	10	1/2	13.7
20	56	92	13	1.5	27	13	3/4	13.7
25	65	104	18	2.0	34	13	1	17.52
30	75	140	29	4.1	43	13	1 1/4	18
40	75	140	29	4.1	49	13	1 1/2	18.3
50	100	146	35	6.4	61	16	2	19.3

CLASS 1500								
IMPERIAL					END CONNECTION			
SIZE (in.)	H	L	P	WT (lb)	B	C	d1 (NPT)	S
1/2	2.20	3.62	0.37	3.3	0.86	0.38	1/2	0.54
3/4	2.56	4.09	0.5	4.4	1.07	0.5	3/4	0.54
1	2.95	5.51	0.63	9.0	1.33	0.5	1	0.69
1 1/4	3.94	5.75	1.06	14.1	1.68	0.5	1 1/4	0.71
1 1/2	3.94	5.75	1.06	14.1	1.92	0.5	1 1/2	0.72
2	4.92	8.27	1.38	21.6	2.41	0.62	2	0.76

METRIC								
IMPERIAL					END CONNECTION			
SIZE (in.)	H	L	P	WT (kg)	B	C	d1 (NPT)	S
15	56	92	9.4	1.5	22	10	1/2	13.7
20	65	104	12.7	2.0	27	13	3/4	13.7
25	75	140	16	4.1	34	13	1	17.52
30	100	146	26.9	6.4	43	13	1 1/4	18
40	100	146	26.9	6.4	49	13	1 1/2	18.3
50	125	210	35.1	9.8	61	16	2	19.3

Cryogenic Full Port Check Valves

Flange Gate Valve



Valve imagery is for representation purposes only.
Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
Dimensions are subject to change without notice.

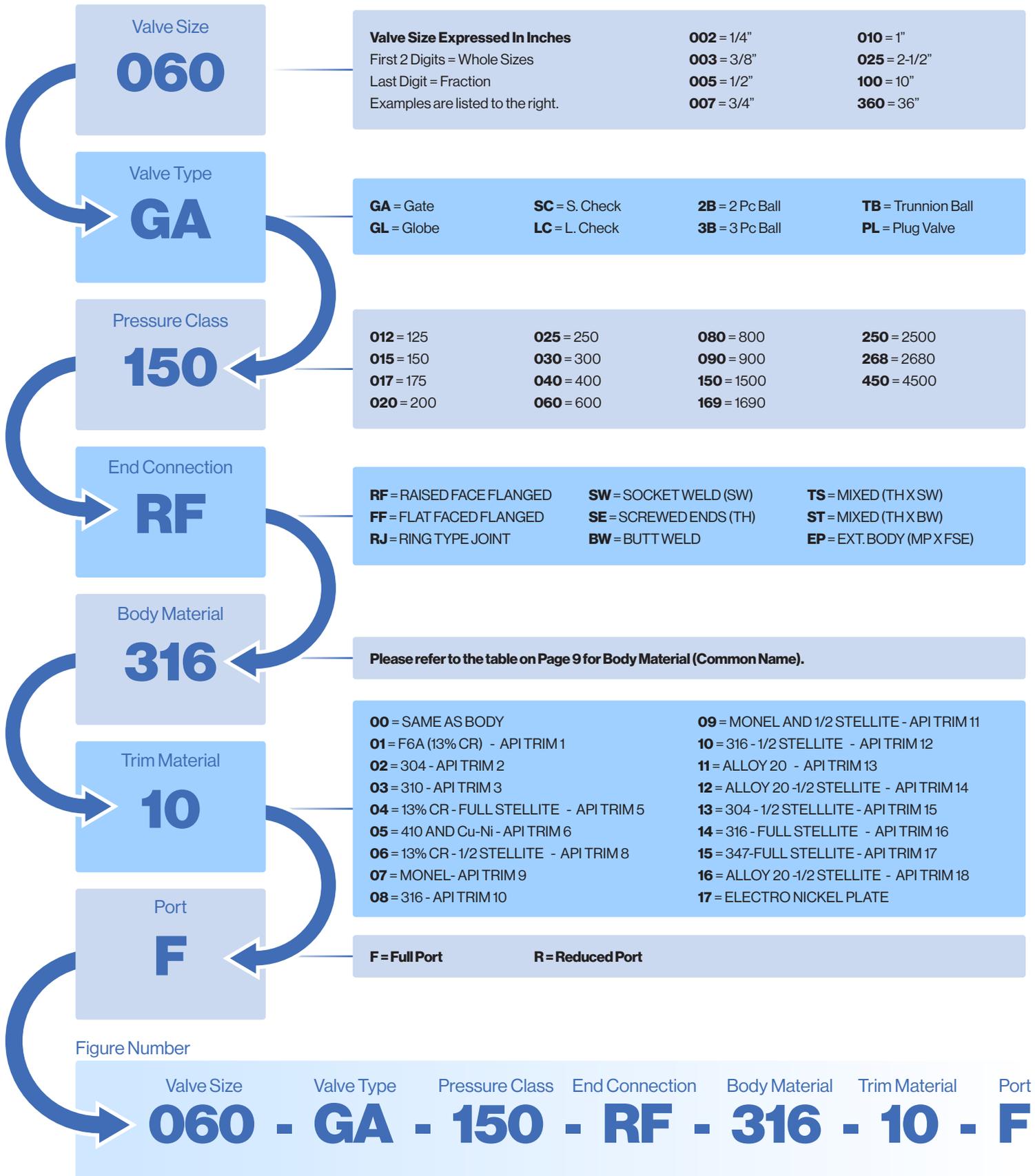
Sizes

1/2" thru 36"

Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld

FIGURE NUMBERS



BALL VALVES



COOPER® Ball Valves are a Floating Ball design for bubble tight operation in clean services and low temperature settings. They have blowout proof stems, are API 607 Firesafe, and have an ISO 5211 Mounting Pad. Additionally, with special configuration our Ball Valves are capable of cryogenic service.

STANDARDS FOR END CONNECTS

Screwed End | Socket Weld | Thread by Socket Weld

Valve Design: API 602 & B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding & Threaded: ASME B16.11

Tested in Accordance with: API 598

STANDARDS FOR END CONNECTS

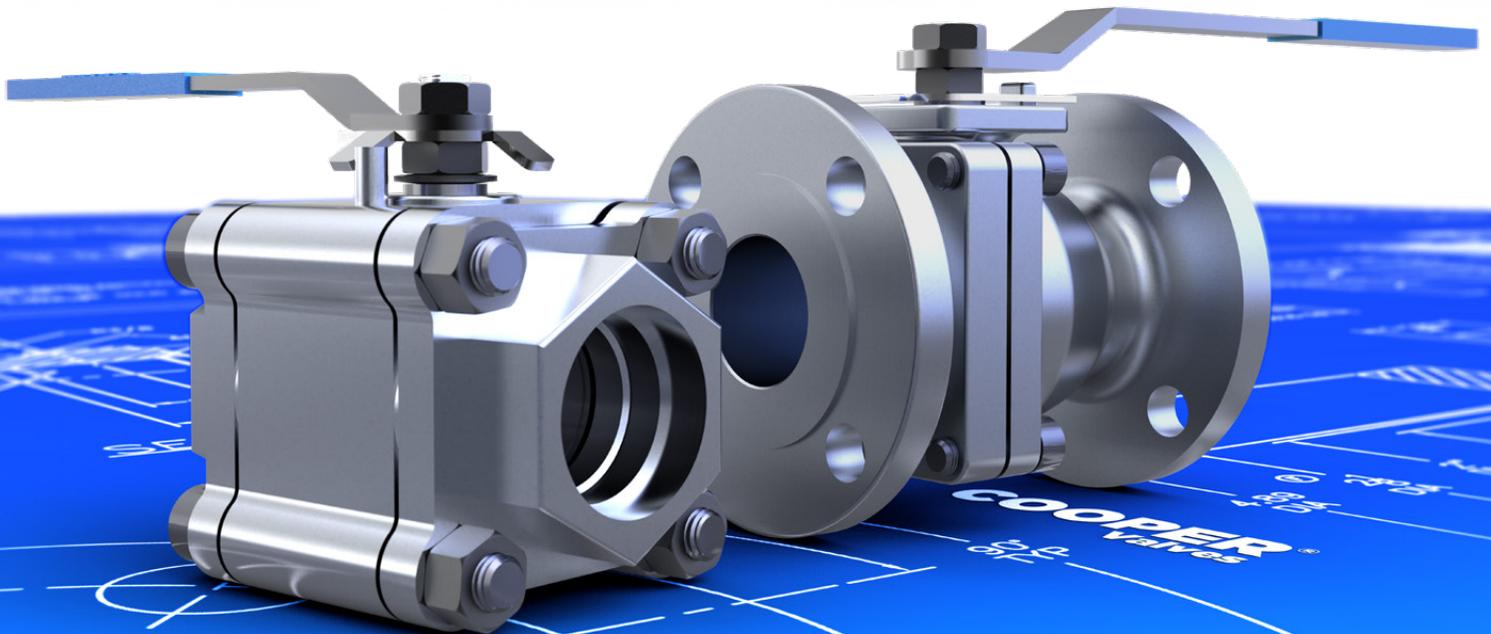
Raised Face | Ring Type Joint | Butt Weld

Valve Design: B16.34

Flange Dimensions: B16.5

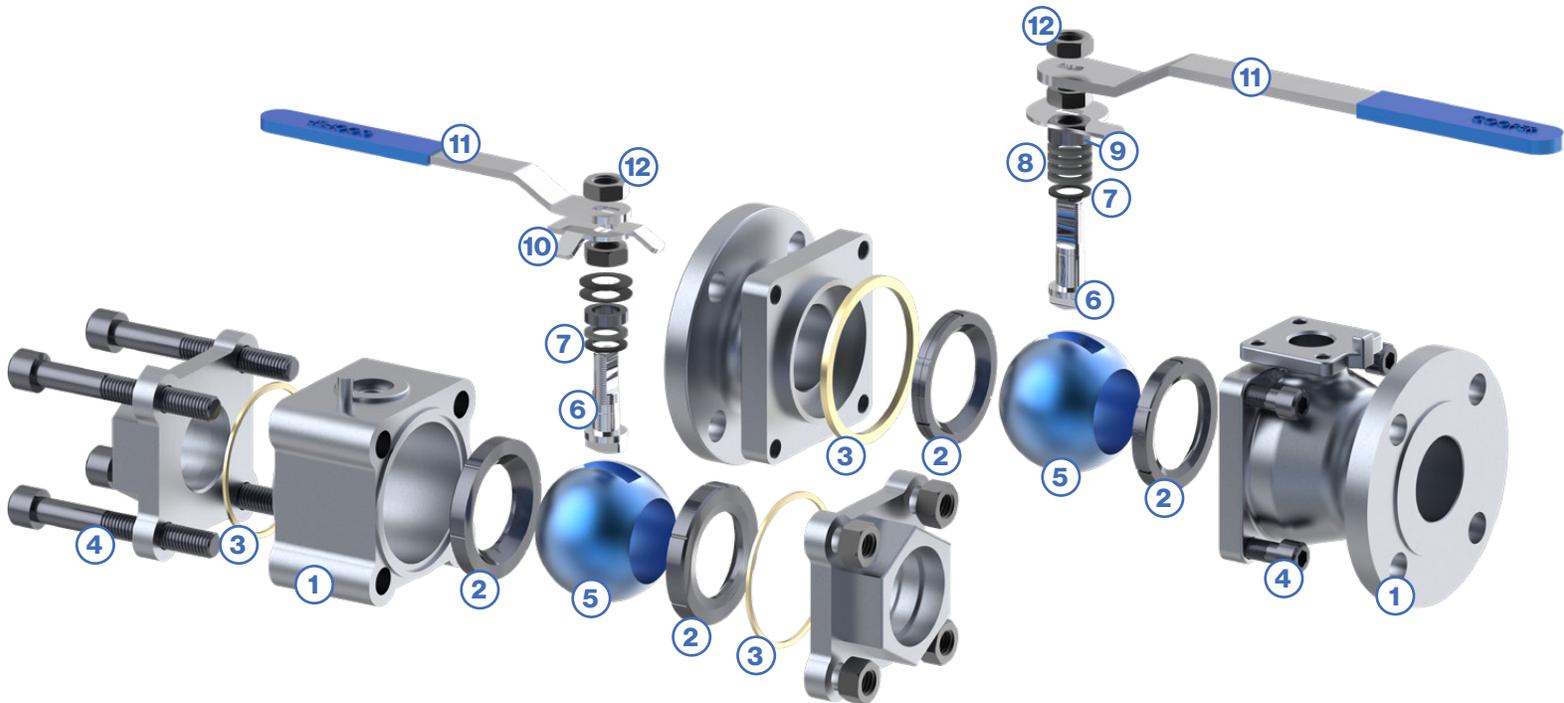
Face to Face Dimensions: B16.10

Tested in Accordance with: API 598, API 607 Rev 4*



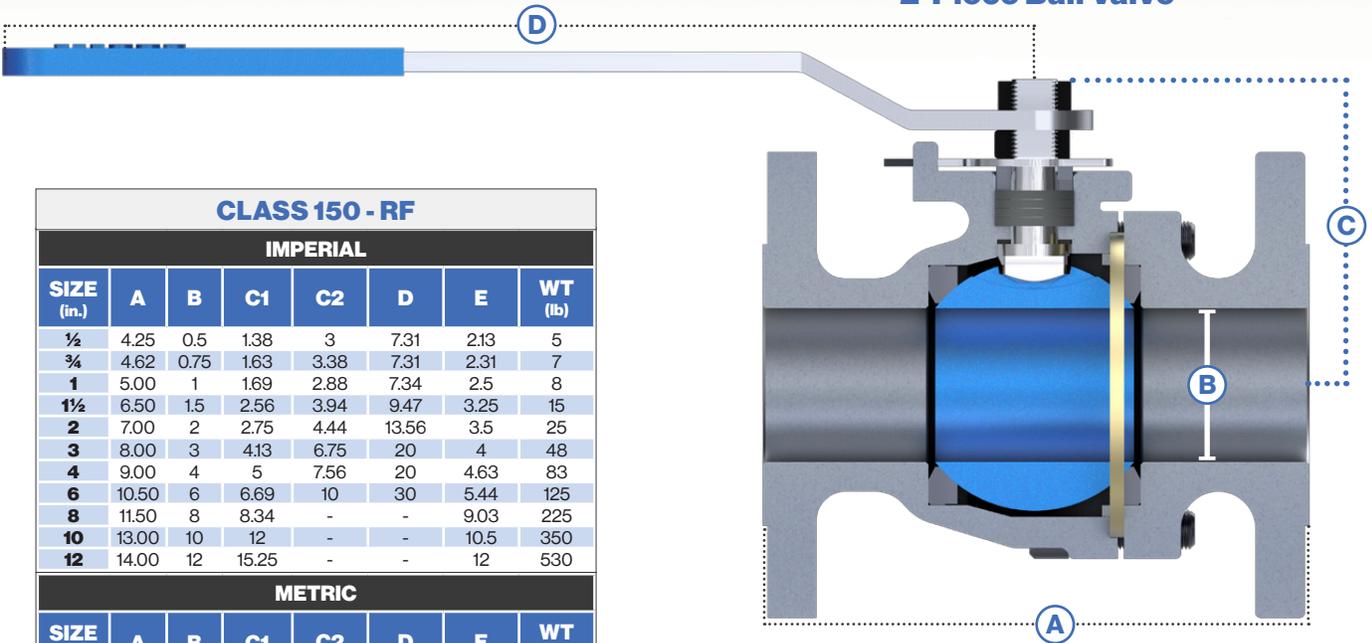
EXPANDED VIEW

- 1. Body and End Piece:** The end piece is built to the same standards as the bodies.
- 2. Seat:** The seat ensures positive shutoff for pressure or vacuum services.
- 3. Body Seal:** The body seal creates a leakproof seal between the body and end piece.
- 4. Body & End Piece Bolting:** The body and end piece bolting secures the body to the end piece.
- 5. Ball:** The seat ensures positive shutoff for pressure or vacuum services.
- 6. Stem:** Blow-out proof stem ensures the valve stem cannot be blown out of the body under pressure.
- 7. Thrust Bearing:** The thrust bearing provides back seating, protection, and reduces friction and loading.
- 8. Packing:** The packing creates a seal above the back seat, between the bonnet and the stem.
- 9. Stem Bushing:** Compresses the packing and thrust bearing to create a stem seal. Stem Bushing is same as body material.
- 10. Stop Plate:** The stop plate prevents the stem turning past 90°.
- 11. Lever:** Cycles the valve.
- 12. Handle Nuts:** These secure the lever to the stem.
- 13. Anti-Static Spring (not shown):** Insures electrical continuity between the body, ball, and stem.



Cast Full Port 2-Piece Ball Valves

2-Piece Ball Valve



Valve imagery is for representation purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

CLASS 150 - RF							
IMPERIAL							
SIZE (in.)	A	B	C1	C2	D	E	WT (lb)
1/2	4.25	0.5	1.38	3	7.31	2.13	5
3/4	4.62	0.75	1.63	3.38	7.31	2.31	7
1	5.00	1	1.69	2.88	7.34	2.5	8
1 1/2	6.50	1.5	2.56	3.94	9.47	3.25	15
2	7.00	2	2.75	4.44	13.56	3.5	25
3	8.00	3	4.13	6.75	20	4	48
4	9.00	4	5	7.56	20	4.63	83
6	10.50	6	6.69	10	30	5.44	125
8	11.50	8	8.34	-	-	9.03	225
10	13.00	10	12	-	-	10.5	350
12	14.00	12	15.25	-	-	12	530
METRIC							
SIZE (mm.)	A	B	C1	C2	D	E	WT (kg)
15	108	15	35	76	186	54	2
20	117	20	41	86	186	59	3
25	127	25	43	73	186	64	4
40	165	40	65	10	241	83	7
50	178	50	70	113	344	89	11
80	203	80	105	171	508	102	22
100	229	100	127	192	508	118	38
150	267	150	170	254	762	138	57
200	292	200	212	-	-	229	102
250	330	250	305	-	-	267	159
300	356	300	387	-	-	305	241

CLASS 300 - RF							
IMPERIAL							
SIZE (in.)	A	B	C1	C2	D	E	WT (lb)
1/2	5.50	0.5	1.38	3	7.31	2.75	6
3/4	6.00	0.75	1.63	3.38	7.31	3	9
1	6.50	1	2.25	3.41	7.34	3.25	10
1 1/2	7.50	1.5	2.56	3.94	9.47	3.75	22
2	8.50	2	2.75	4.48	13.56	4.25	28
3	11.12	3	4.13	6.88	20	6.69	60
4	12.00	4	5.34	8.03	20	6	110
6	15.88	6	7.56	12.5	30	7.91	195
8	16.50	8	9.44	-	-	9.19	325
10	18.00	10	13.63	-	-	11.63	470
12	19.75	12	-	-	-	13.5	765
METRIC							
SIZE (mm.)	A	B	C1	C2	D	E	WT (kg)
15	140	15	35	76	186	70	3
20	152	20	41	86	186	76	4
25	165	25	57	87	186	83	5
40	190	40	65	100	241	95	10
50	216	50	70	114	344	108	13
80	282	80	105	175	508	170	27
100	305	100	136	204	508	152	50
150	403	150	192	318	762	201	98
200	419	200	240	-	-	233	148
250	457	250	346	-	-	295	214
300	502	300	-	-	-	343	348

Sizes

1/2" thru 12"

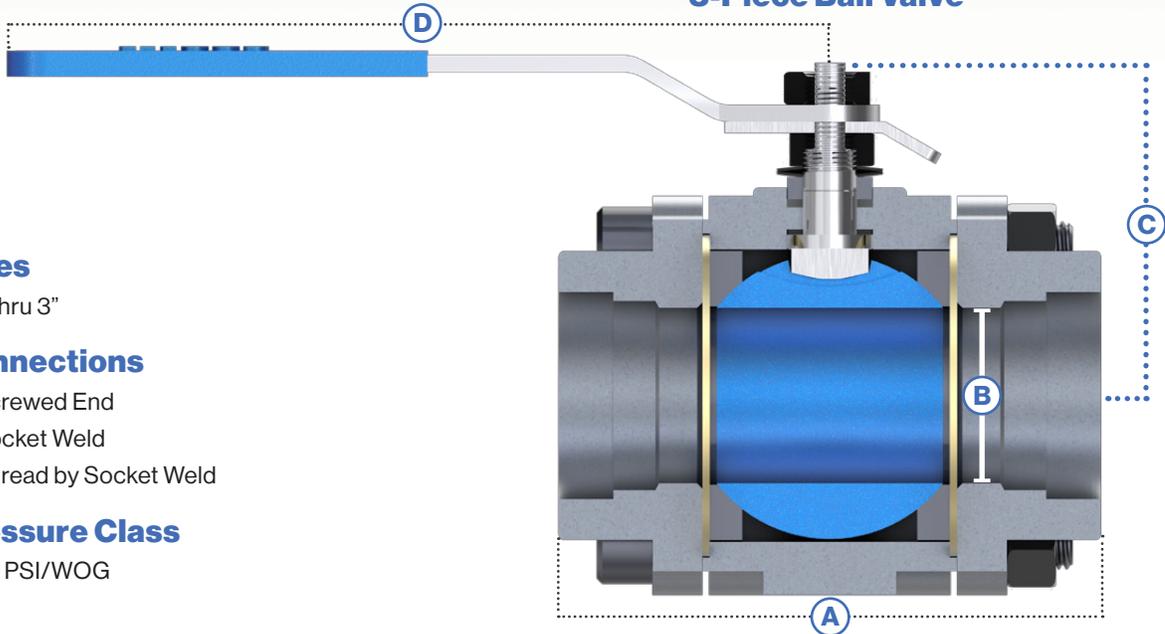
Connections

- > Raised Face
- > Ring Type Joint
- > Butt Weld (Available on request)

CLASS 600 - RF							
IMPERIAL							
SIZE (in.)	A	B	C1	C2	D	E	WT (lb)
1/2	6.50	0.5	1.38	3.13	7.31	3.5	7
3/4	7.50	0.75	1.63	3.5	7.31	4.25	10
1	8.50	1	2.25	3.41	7.34	5	12
1 1/2	9.50	1.5	2.81	4.19	9.47	5.38	25
2	11.50	2	3	4.94	13.06	6.88	33
3	14.00	3	4.13	6.88	20	9.19	80
4	17.00	4	5.34	8.88	30	10.53	135
6	22.00	6	7.56	12.5	30	13.34	235
10	26.00	10	12.31	-	-	18.6	1108
METRIC							
SIZE (mm.)	A	B	C1	C2	D	E	WT (kg)
15	165	15	35	80	186	89	3
20	190	20	41	89	186	108	5
25	216	25	57	87	186	127	5
40	241	40	71	106	241	137	11
50	292	50	76	125	332	175	15
80	356	80	105	175	508	233	36
100	432	100	136	226	762	267	61
150	559	150	192	318	762	339	107
250	660	250	313	-	-	472	504

Cast Full Port 3-Piece Ball Valves

3-Piece Ball Valve



Sizes

1/4" thru 3"

Connections

- > Screwed End
- > Socket Weld
- > Thread by Socket Weld

Pressure Class

1500 PSI/WOG

Valve imagery is for representational purposes only.
 Note: Dimensions are in Inches/Millimeters - Weight is in Pounds/Kilograms.
 Dimensions are subject to change without notice.

CLASS 1500 - STANDARD PORT/FULL PORT

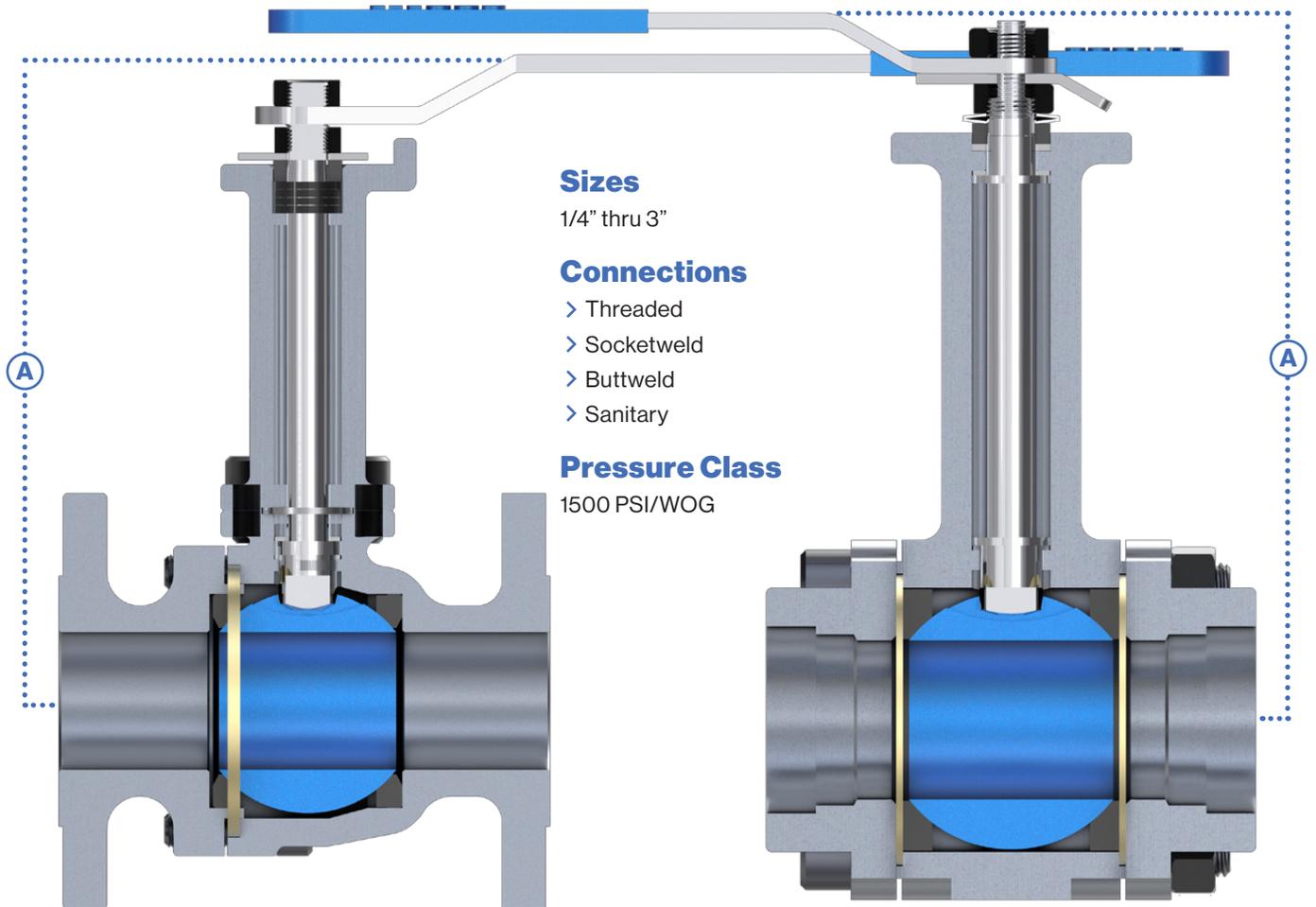
IMPERIAL

SIZE (in.)	A	B	C	D	E	F	G	H	I	J	K	WT (lb)
1/4	2.91	0.44/0.25	1.06	1.56	.370	1.19	1.25	0.25	.214	4.75	1.94	2
3/8	2.91	0.44/0.38	1.06	1.59	0.37	1.19	1.25	0.25	0.214	4.75	1.94	2
1/2	2.91/3.09	0.44/0.50	1.06/1.03	1.59/1.69	0.37	1.19/1.44	1.25/1.50	0.25	0.214	4.75	1.94/2.00	2
3/4	3.09/3.75	0.56/0.75	1.03/1.31	1.69/2.19	0.37	1.44/1.88	1.50/1.75	0.25/0.31	0.214	4.75/5.88	2.00/2.25	2.5/3
1	3.75/4.16	0.81/1.00	1.31/1.38	2.19/2.38	0.432	1.88/2.41	1.75/2.00	0.31	0.294	5.88	2.25/2.50	3.5/5
1 1/4	4.16/4.53	1.00/1.25	1.38/1.75	2.38/2.88	0.432	2.41/2.69	2.00/2.25	0.31/0.38	0.294	5.88/7.63	2.50/3.00	5/6.5
1 1/2	4.53/5.00	1.25/1.50	1.75/1.78	2.88/3.09	0.556	2.69/3.13	2.25/2.63	0.38	0.339	7.63	3.00/3.25	7/8
2	5.00/5.94	1.50/2.00	1.78/2.09	3.09/3.75	0.556	3.13/3.88	2.63/3.31	0.38/0.63	0.339	7.63/9.50	3.25/4.00	10/16.5
3	7.25	2.50/3.00	2.81/4.44	4.94/6.88	0.873	5.00/5.50	4.22/4.48	0.75/0.88	.499/.873	9.50/10.0	6.00/7.00	35/40

IMPERIAL

SIZE (in.)	A	B	C	D	E	F	G	H	I	J	K	WT (lb)
5	74	11/6	27	40	9	30	32	6	5	121	49	1
10	74	11/10	27	40	9	30	32	6	5	121	49	1
15	74/78	11/13	27/26	40/43	9	30/37	32/38	6	5	121	49/51	1
20	78/95	14/19	26/33	43/56	9	37/48	38/44	6/8	5	121/149	51/57	1
25	95/106	21/25	33/35	56/60	11	48/61	44/51	8	7	149	57/64	2
30	106/115	25/32	35/44	60/73	11	61/68	51/57	8/10	7	149/194	64/76	2/3
40	115/127	32/38	44/45	73/78	14	68/80	57/67	10	9	194	76/83	3/4
50	127/151	38/51	45/53	78/95	14	80/99	67/84	10/16	9	194/241	83/102	5/8
80	184	64/76	71/113	125/175	22	127/140	107/123	19/22	13/22	241/251	152/178	16/18

Cryogenic Ball Valves



Sizes

1/4" thru 3"

Connections

- > Threaded
- > Socketweld
- > Butt weld
- > Sanitary

Pressure Class

1500 PSI/WOG

Standard extended bonnet and stem "A" dimension available in 3", 4", 6" & 8" lengths. Other lengths available on request.

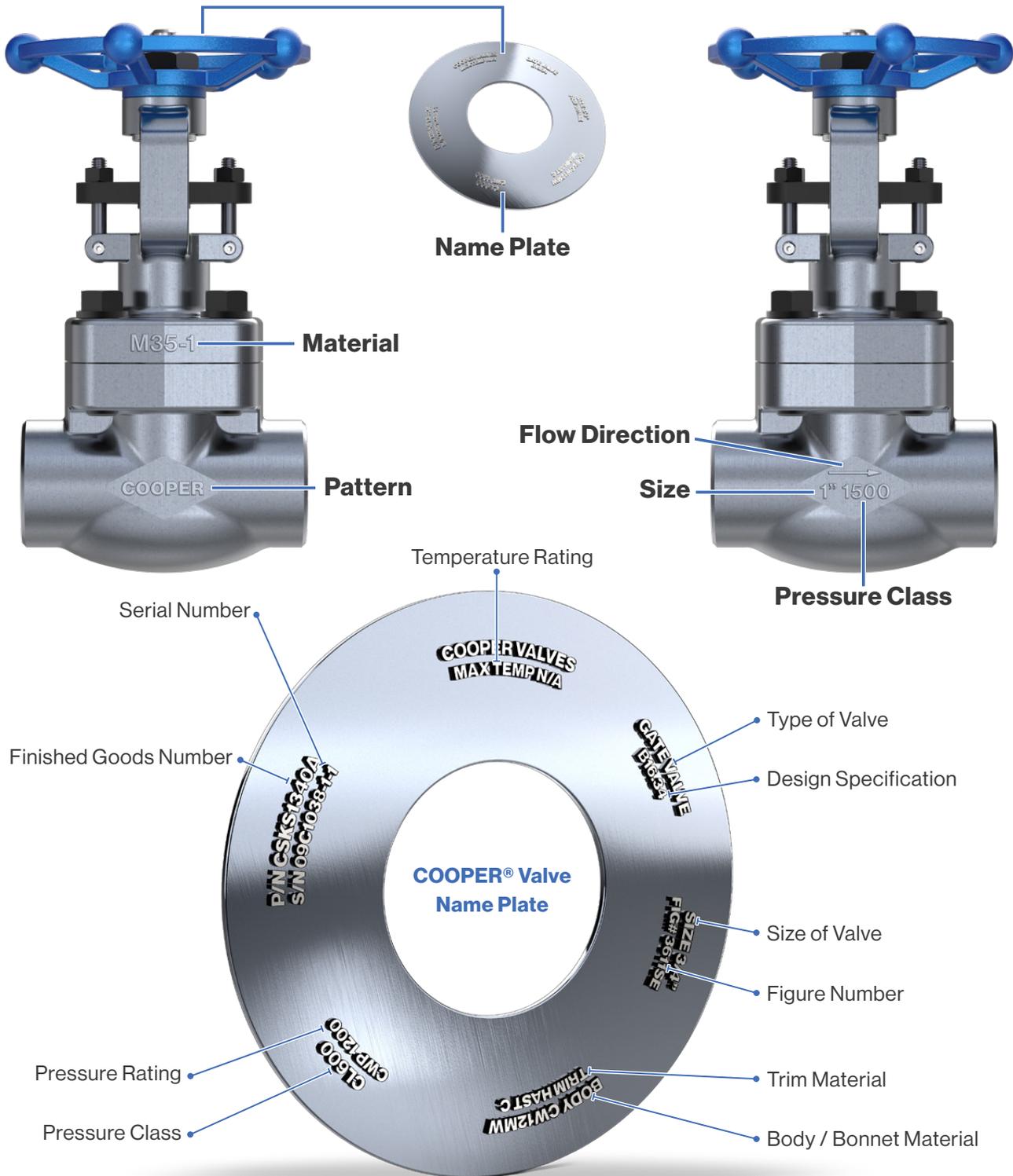
Special Advantages

- > Reinforced TFE seats and seals
- > Secondary metal-to-metal seat
- > Self-adjusting packing
- > Blowout-proof stem
- > 1/4" thru 3" standard and full port
- > 781 PEEK thrust bearing – exceptionally long life
- > Pressures: vacuum to 1500 PSI
- > Ends: threaded, socketweld, butt weld & sanitary
- > Materials: cast stainless steel & exotic alloy
- > All valves tested to ASME, MSS, or API specifications
- > All valves serialized – full traceability of materials
- > Flexible manufacturing facility – widest choice of special applications in the industry.

Valve and Name Plate Overview

Name Plate

The name plate displays all construction and tracking data regarding the respective valve on which it is attached. Below is a general overview of the identification tag components. Name Plates are securely fastened to the valve. Globe and Check Valves will have a flow direction arrow on body for proper installation.





Smart Solutions. Powerful Products.



818 East Sam Houston Pkwy S
Pasadena, TX 77503

sales@coopervalves.com

