

CRANE[®]

**Brands you
trust**



CRANE SUPPLY – Carbon Steel and Stainless Steel Ball Valves

2022

CRANE[®]

CRANE SUPPLY

www.cranesupply.com

Key Features and Index

CRANE Supply Ball Valves Key Features:

- ❶ Flexible body style choices of Stainless Steel and Carbon Steel
- ❷ 100% Factory Testing for Quality Assurance



Figure Number Index

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Stainless Steel:

1 pc:

CSC-9501.....	3
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2 pc:

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3 pc:

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Carbon Steel:

1 pc:

CSC-9601-2	11
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2 pc:

CSC-9602-2	13
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Overview

APPLICATIONS

CRANE ball valves have gained wide acceptance in industrial segments for their accurate machining and strict testing procedures ensuring that quality is built into every valve. CRANE® ball valves are specified for service in chemical plants, petroleum refineries, pulp and paper mills, and industrial construction projects.

BODY

CRANE offers one, two, and three-piece body style designs. Two-piece valves offer a larger port opening, equivalent to other competitive options.

CRANE Offers:

1-piece reduced bore ball valves	Threaded to 2"
2-piece full bore ball valves	Threaded to 3"
3-piece full/standard bore ball valves	Threaded/Socketed to 4"

STEM

Stems are inserted from within the body to provide a pressure - safe design (blowout proof).

All CRANE ball valves are furnished with stem seals of PTFE/RPTFE to assure a long lasting, positive seal.

Most valves have gland nuts which may be adjusted for stem seal tightness.

SEAT

Tight shutoff is achieved with use of PTFE/RPTFE.

HANDLE

Handles on the valves are stainless steel, covered with a protective plastic sleeve. Handles are firmly attached to the stem with jam nuts.

TESTING

Each valve is individually air-tested to ensure the double-block qualities of the seals and to test the integrity of the pressure - containing parts.

WEIGHTS AND DIMENSIONS

Published weights and dimensions are for estimating purposes only and are subject to change without notice. It is our intent to maintain basic dimensional requirements of acceptable standards.

MATERIALS

The standard materials for ball valves are stainless steel and carbon steel. All materials for ball valves conform to the specifications set by the American Society for Testing and Materials. Changes in materials may be made without notice.

Figure Number System

Size	Body Style	No. of pieces	*End	Option
1/4" - 4"	95 = Stainless Steel body and trim (SS) 96 = Carbon Steel body and Stainless Steel trim (CS)	01 = 1 pc 02 = 2 pc 03 = 3 pc*	T = NPT Thread W = Socket Weld	H = Hexagon type body and trim 2 = Working Pressure 2000 WOG**

CSC2FB150 is a special full bore flanged ball valve and does not follow this system.

Use this figure number system when ordering ball valves to indicate specific features desired. **Not all combinations are available.**

** Varies by valve size – See figure sheet

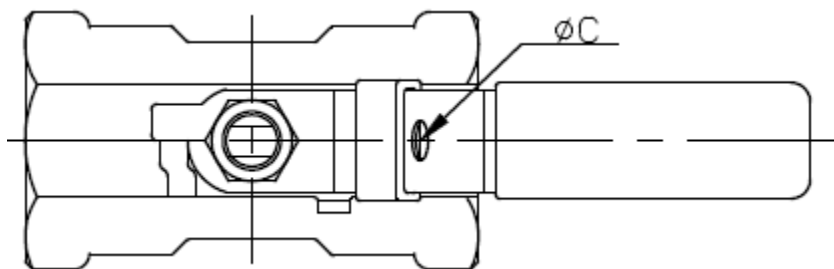
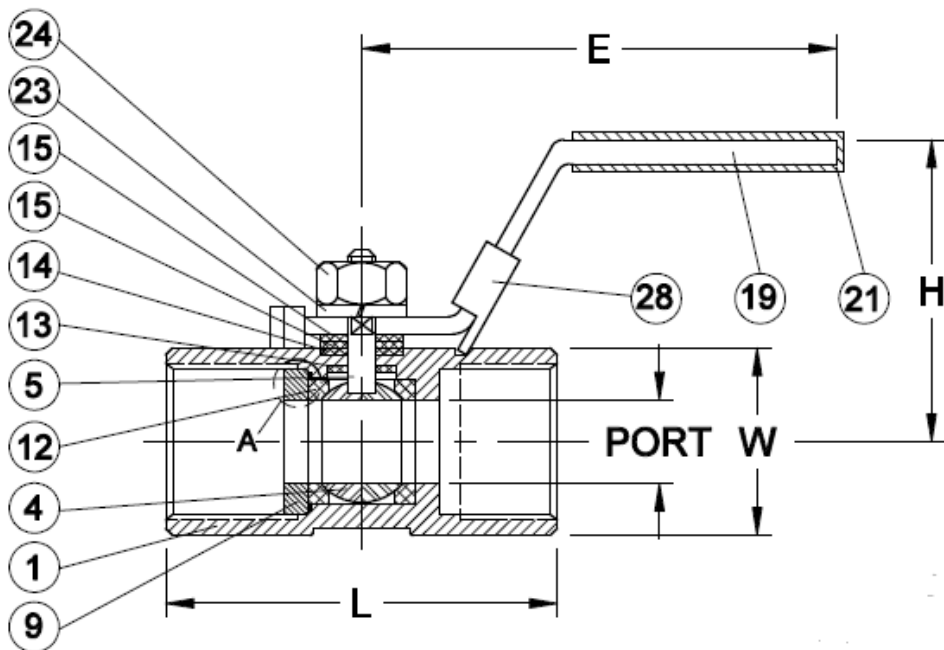
QUALITY MANAGEMENT

CRANE is committed to a philosophy of total quality management. It begins with design in compliance with pertinent MSS and ASME Standards. Continuous improvement is applied in a methodical process to improve materials and services to meet or exceed customer needs.

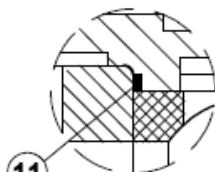
SS • 1 PC • 1000 WOG • Reduced Bore

CSC-9501

Meet industry standards as per ASME B16.34



1/4"~1"
A-VIEW



1-1/4"~2"
A-VIEW

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	ASTM A351 Gr.CF8M
4	BALL	1/4"-1/2" SS 316
		3/4"-2" CF8M
5	STEM	SS 316
9	INSERT	1/4"-1/2" SS 316
		3/4"-2" CF8M
11	BODY SEAL	PTFE
12	SEAT	PTFE
13	THRUST WASHER	PTFE
14	STEM PACKING	PTFE
15	GLAND	SS 304
19	HANDLE	SS 304
21	HANDLE COVER	PLASTIC
23	HANDLE WASHER	SS 304
24	HANDLE NUT	SS 304
28	LOCKING DEVICE	SS 304

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

SIZE	PORT	L	E	H	W	C
1/4"	5	39	69	35	17	6
3/8"	7.2	44	79	36.5	21	6
1/2"	9.2	56.5	109	40	25	8
3/4"	12.5	59	109	44.3	32	8
1"	15	71	111.7	47.5	38	8
1-1/4"	20	78	111.7	53	48	8
1-1/2"	25	83	157	62	53	8
2"	35	100	155.5	68.5	64	8

Ball: AISI 316 solid ball

Stem: Blow-out proof

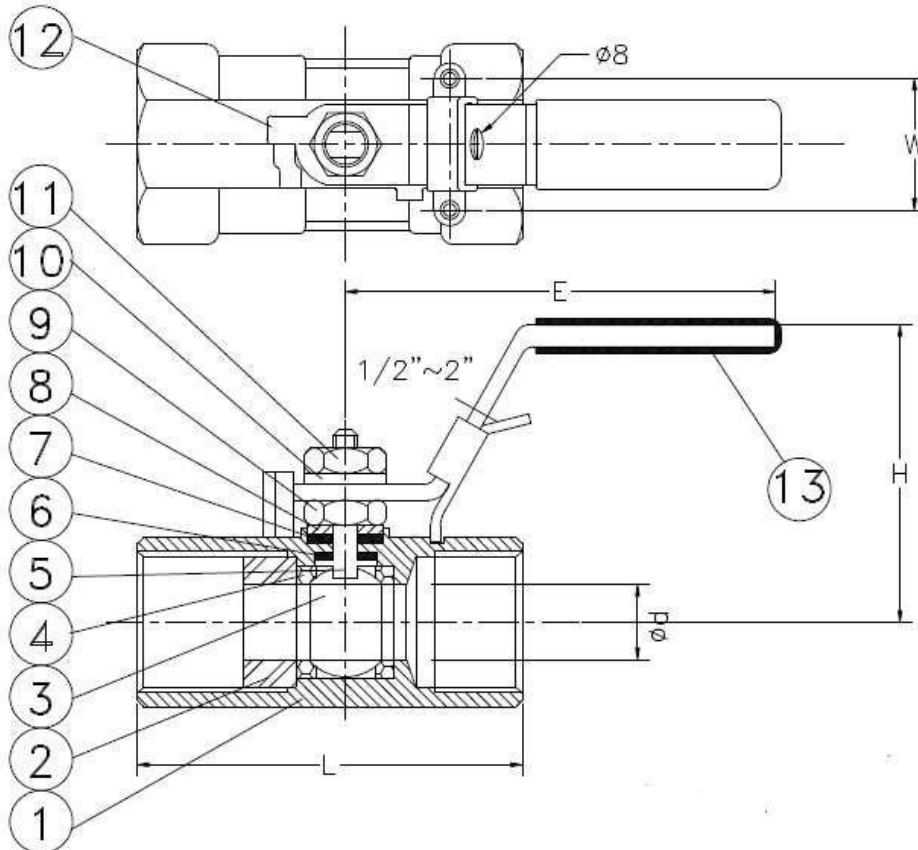
Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9501" in black

SS • 1 PC • 2000 WOG • Reduced Bore

CSC-9501-2

Meet industry standards as per ASME B16.34



Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	INSERT	SUS 316
3	BALL	SUS 316
4	SEAT	PTFE 15% gf
5	STEM	SUS 316
6	THRUST WASHER	PTFE
7	STEM SEAL	PTFE
8	GLAND WASHER	SUS 304
9	NUT STOPPER	SUS 304
10	SPRING WASHER (1/2"-2")	SUS 304
11	NUT	SUS 304
12	HANDLE	SUS 304
13	HANDLE SLEEVE	VINYL GRIP
14	PIN	SUS 304

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

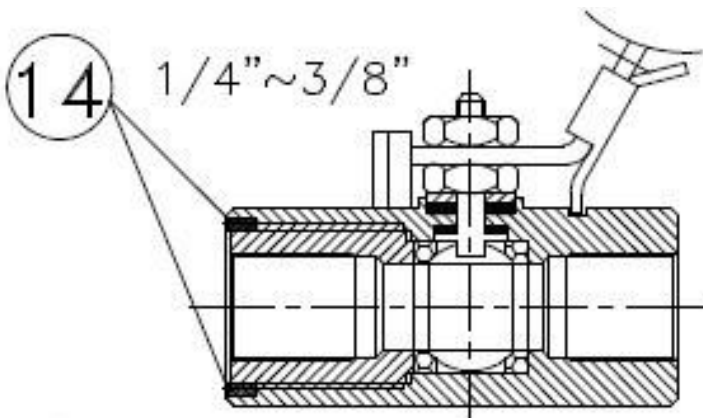
SIZE	d	L	H	E	W
1/2"	9.2	66	57.5	98.5	28.2
3/4"	12.5	70	61.4	98.5	28.2
1"	15	80	64.3	104.7	35.6
1-1/4"	20	95	68.8	104.7	35.6
1-1/2"	25	101	73.8	156.1	35.6
2"	32	114	79.8	156.1	35.6

Ball: AISI 316 solid ball

Stem: Blow-out proof

Lever: Locking handle

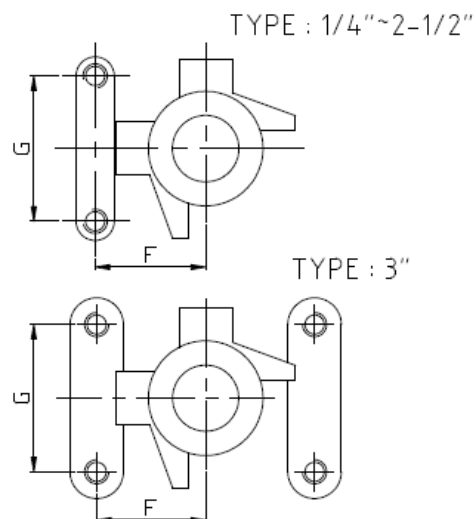
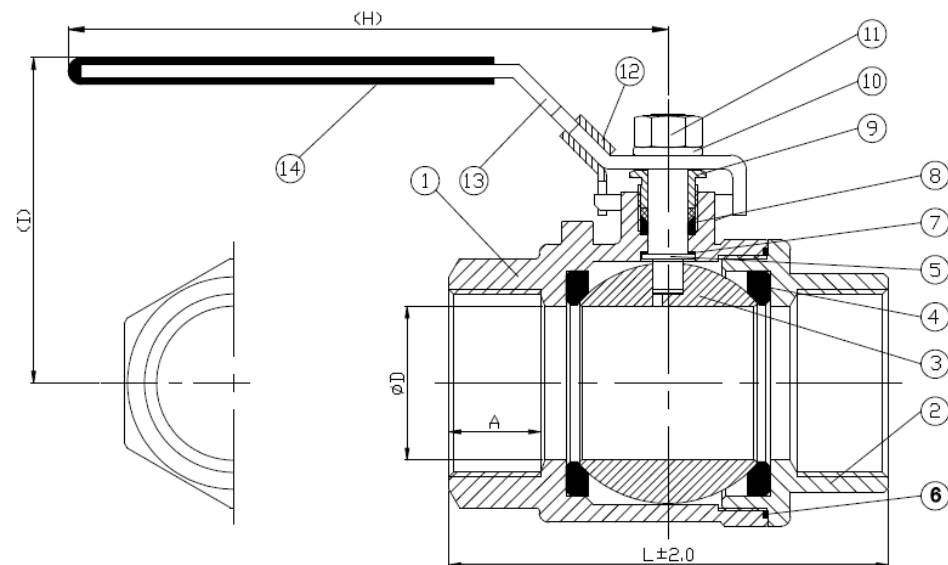
Sleeve: Orange sleeve with "CSC-9501-2" in black



SS • 2 PC • 2000 WOG* • Full Bore

CSC-9502-2

Meet industry standards as per ASME B16.34



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

SIZE	D	L	C	H	F	G	A	WT KG
1/4"	11.5	50	55	105	12.7	28.5	12.5	0.3
3/8"	12.5	60	55	105	12.7	28.5	14	0.31
1/2"	15	75	57	105	12.7	28.5	17.8	0.4
3/4"	20	80	68	123	22.1	35	19.1	0.6
1"	25	90	73	155	22.1	35	22.6	0.94
1-1/4"	32	110	85	155	23.6	38	24.9	1.42
1-1/2"	38	120	97	191	23.6	38	24.9	2.24
2"	49	140	104	191	28.9	38	29.2	3.29
2-1/2"	65	185	145	255	35	55	33.7	7.29
3"	80	205	156	255	37.5	72	36.8	11.24

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	BALL (Relief Hole)	CF8M
4	SEAT	PTFE 15% gf
5	STEM	AISI 316
6	BODY SEAL	PTFE
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND NUTS	A2=A194-8
10	SPRING WASHER	AISI 304
11	HANDLE NUTS	A2=A194-8
12	LOCKING DEVICE	AISI 304
13	HANDLE	AISI 304
14	HANDLE SLEEVE	PVC

Ball: AISI 316 solid ball

Stem: Blow-out proof

Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9502-2" in black

*Working pressure:

- 1/4"~1-1/2": 2000 WOG
- 2": 1500 WOG
- 3": 1000 WOG

Feature: Actuator pad drilled & tapped, anti-static device

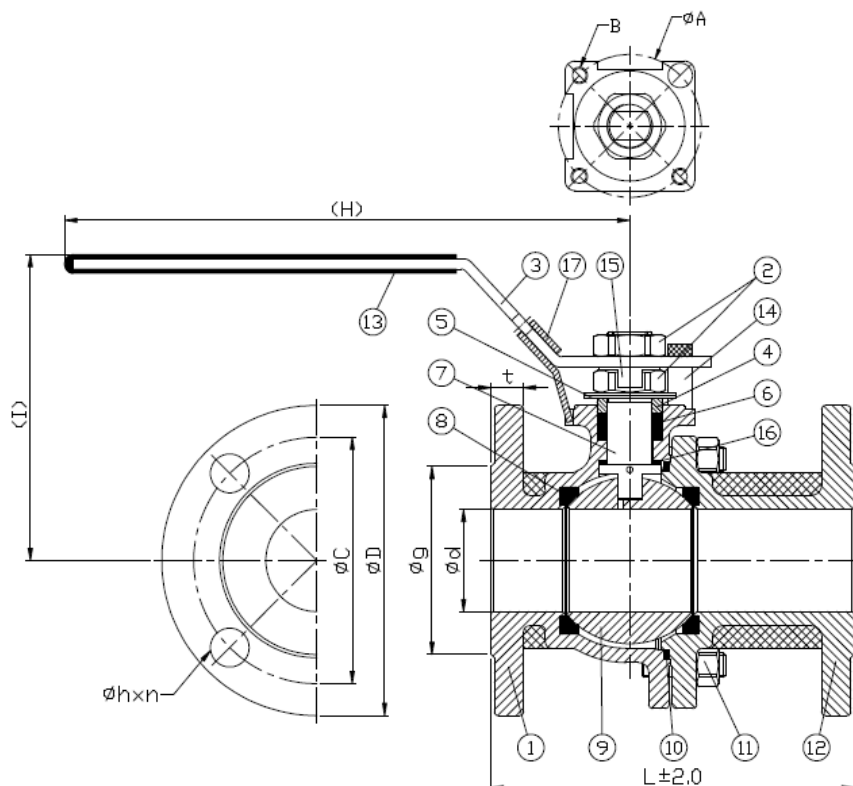
SS • 2 PC • ANSI-150 • Full Pore • Flanged • Fire Safe

CSC2FB-150

Meet industry standards as per ASME B16.34, API-607 Firesafe Approved

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	STEM NUTS	A2=A194-8
3	HANDLE	AISI 304
4	GLAND RING	AISI 304
5	BELLEVILLE DISC	AISI 301
6	STEM PACKING	GRAPHITE
7	STEM (Anti-Static)	AISI 316
8	SEAT	PTFE
9	BALL (Relief Hole)	CF8M
10	BODY SEAL	GRAPHITE/SS316 GASKET GRAPHITE
11	HEX CAP SCREWS	A2=A193-B8
11.1	STUD	A2=A193-B8
11.2	NUTS	A2=A194-8
12	CAP	CF8M
13	HANDLE SLEEVE	PVC
14	STOP PIN	AISI 304
15	NUT STOPPER	AISI 304
16	THRUST WASHER	TFM4215
17	LOCKING DEVICE	AISI 304



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

SIZE		ISO-5211			d	D	C	g	t	h	n	H	I	L	WT
INCH	MM		A	B											KG
1/2"	15	F04	42	M5	15	89	60.3	34.9	11.1	15.9	4	165	86	108	1.67
3/4"	20	F04	42	M5	20	98	69.8	42.9	11.1	15.9	4	165	92	117	2.22
1"	25	F05	50	M6	25	108	79.4	50.8	11.1	15.9	4	176	106	127	3.13
1-1/4"	32	F05	50	M6	32	117	88.9	63.5	12.7	15.9	4	215	114	140	4.47
1-1/2"	40	F05	50	M6	38	127	98.4	73	14.3	15.9	4	215	116	165	5.45
2"	50	F07	70	M8	50	152	120.7	92.1	15.9	19	4	278	148	178	10.1
2-1/2"	65	F07	70	M8	65	178	139.7	104.8	17.5	19	4	278	160	190	13.81
3"	80	F10	102	M10	80	190	152.4	127	19	19	4	375	185	203	20.33
4"	100	F10	102	M10	100	229	190.5	157.2	23.8	19	8	375	200	229	30.22

Ball: AISI 316 solid ball

Stem: Blow-out proof anti-static stem

Lever: Locking handle

Sleeve: Orange sleeve with
"CSC2FB-150" in black

Feature: ISO-5211 top flange drilled & tapped

Stuffing Box:

- Graphite stem packing
- Thrust washer

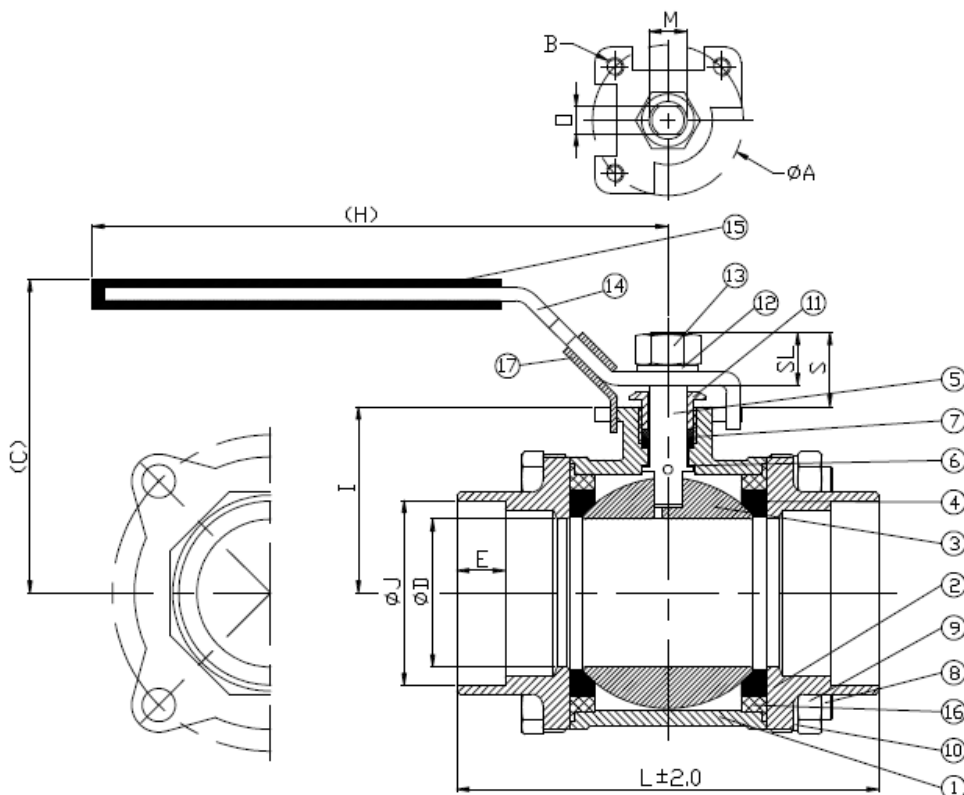
SS • 3 PC • 1000 WOG • Full Bore • NPT Thread

CSC-9503-T

Meet industry standards as per ASME B16.34

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	BALL (Relief Hole)	CF8M
4	SEAT	PTFE 15% gf
5	STEM (Anti-static)	AISI 316
6	THRUST WASHER	PTFE
7	STEM PACKING	PTFE
8	BOLT	A2=A193-B8
9	NUTS	A2=A194-8
10	SPRING WASHER	AISI 304
11	GLAND NUTS	A2=A194-8
12	SPRING WASHER	AISI 304
13	HANDLE NUTS	A2=A194-8
14	HANDLE	AISI 304
15	HANDLE SLEEVE	PVC
16	BODY SEAL	PTFE
17	LOCKING DEVICE	AISI 304



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Ball: AISI 316 solid ball

Stem: Blow-out proof

Lever: Locking handle

Sleeve: Orange sleeve with
"CSC-9503-T" in black

Feature:

- ISO-5211 top flange drilled & tapped
- Anti-static device

SIZE	ISO-5211			C	D	G	H	L	I	S	SL	M	O	WT KG
		A	B											
1/4"	F04	42	M5	55	10.6	11.5	108	50	28	14	10	8	5	0.41
3/8"	F04	42	M5	55	12.7	15	108	60	28	14	10	8	5	0.43
1/2"	F04	42	M5	64	15	22	121	75	30	16.8	11	9.5	6.5	0.65
3/4"	F04	42	M5	70	20	21.5	121	80	34.8	17.7	11	9.5	6.5	0.77
1"	F04	42	M5	75	25	22.6	155	90	37.6	23.7	16	11	8	1.11
1-1/4"	F04	42	M5	83	32	28.5	155	110	43.3	24.6	16	11	8	1.76
1-1/2"	F05	50	M6	98	38	28.5	192	120	53.4	25.4	17.5	12.5	9	2.45
2"	F05	50	M6	105	49	32	192	140	61.7	24.7	17.5	12.5	9	3.64
2-1/2"	F07	70	M8	148	65	38	257	185	79.7	44.7	29.5	19	12	8.1
3"	F07	70	M8	155	80	40	257	205	87	43.2	29.5	19	12	10.85

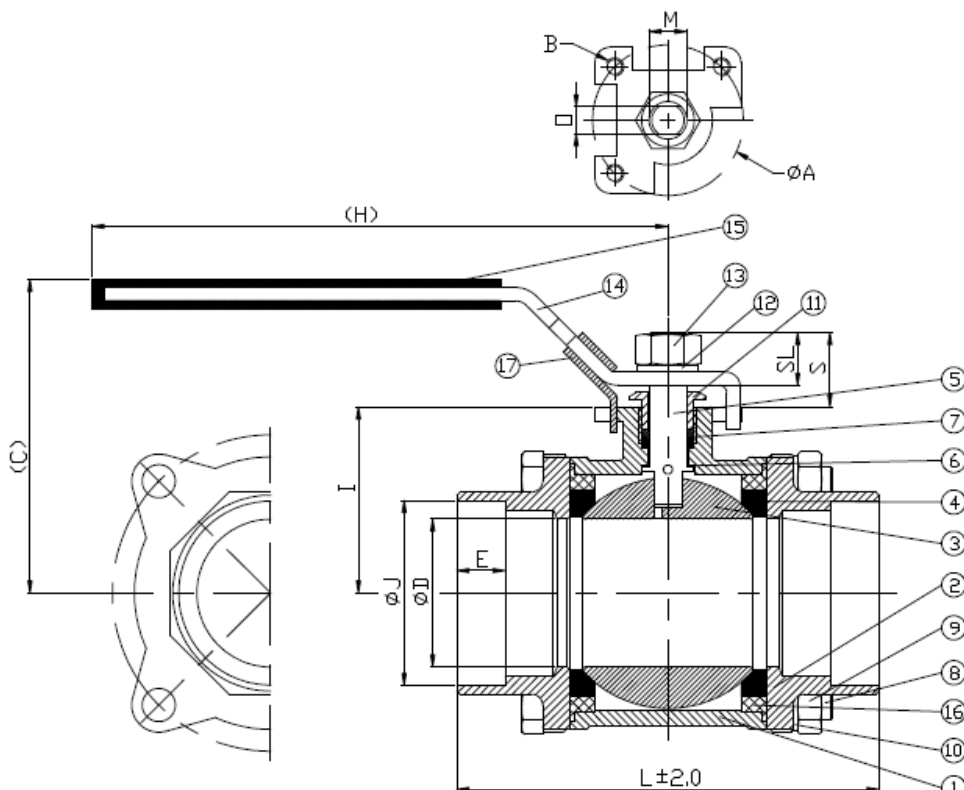
SS • 3 PC • 1000 WOG • Full Bore • Socket Weld

CSC-9503-W

Meet industry standards as per ASME B16.34

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	BALL (Relief Hole)	CF8M
4	SEAT	PTFE 15% gf
5	STEM (Anti-static)	AISI 316
6	THRUST WASHER	PTFE
7	STEM PACKING	PTFE
8	BOLT	A2=A193-B8
9	NUTS	A2=A194-8
10	SPRING WASHER	AISI 304
11	GLAND NUTS	A2=A194-8
12	SPRING WASHER	AISI 304
13	HANDLE NUTS	A2=A194-8
14	HANDLE	AISI 304
15	HANDLE SLEEVE	PVC
16	BODY SEAL	PTFE
17	LOCKING DEVICE	AISI 304



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Ball: AISI 316 solid ball
 Stem: Blow-out proof
 Lever: Locking handle
 Sleeve: Orange sleeve with
 "CSC-9503-W" in black

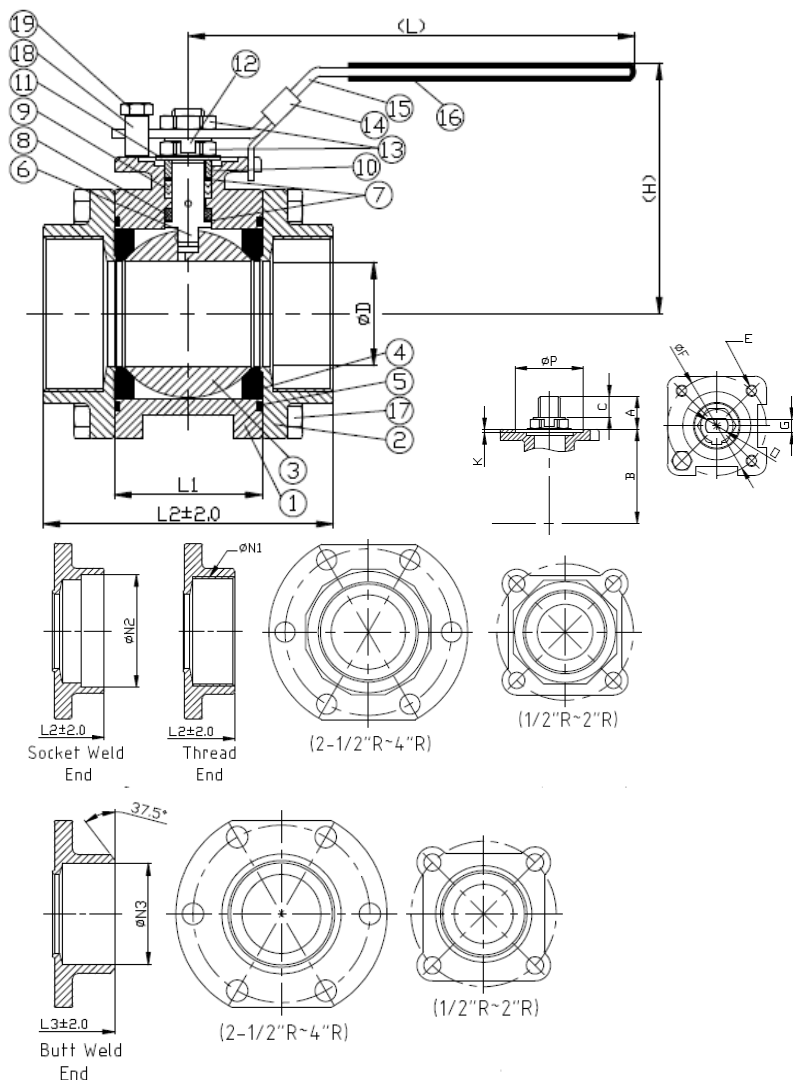
Feature:
 - ISO-5211 top flange
 - Anti-static device

SIZE	ISO-5211			C	D	E	H	L	I	J	S	SL	M	O	WT KG
	F04	A	B												
1/4"	F04	42	M5	55	10.6	10	108	50	28	14.4	14	10	8	5	0.41
3/8"	F04	42	M5	55	12.7	10	108	60	28	17.8	14	10	8	5	0.42
1/2"	F04	42	M5	64	15	10	121	75	30	22	16.8	11	9.5	6.5	0.64
3/4"	F04	42	M5	70	20	13	121	80	34.8	27.3	17.7	11	9.5	6.5	0.75
1"	F04	42	M5	75	25	13	155	90	37.6	34.1	23.7	16	11	8	1.11
1-1/4"	F04	42	M5	83	32	13	155	110	43.3	42.8	24.6	16	11	8	1.75
1-1/2"	F05	50	M6	98	38	13	192	120	53.4	48.9	25.4	17.5	12.5	9	2.43
2"	F05	50	M6	105	49	16	192	140	61.7	61.4	24.7	17.5	12.5	9	3.55
2-1/2"	F07	70	M8	148	65	16	257	185	79.7	77.1	44.7	29.5	19	12	8.8
3"	F07	70	M8	155	80	16	257	205	87	90	43.2	29.5	19	12	11.04

SS • 3 PC • 2000 WOG* • Standard Bore • NPT Thread

CSC-9503-2-T

Meet industry standards as per ASME B16.34



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	BALL (Relief Hole)	CF8M
4	SEAT	RPTFE
5	BODY SEAL	PTFE
6	STEM (Anti-Static)	AISI 316
7	LOWER THRUST WASHER	50%S.S+50%PTFE
8	UPPER THRUST WASHER	TFM 1600
9	STEM PACKING	PTFE
10	GLAND RING	AISI 304
11	BELLEVILLE DISC	AISI 301
12	NUT STOPPER	AISI 304
13	STEM NUTS	A2=A194-8
14	LOCKING DEVICE	AISI 304
15	HANDLE	AISI 304
16	HANDLE SLEEVE	PVC
17	HEX CAP SCREWS	A2=A193-B8
18	STOP PIN	AISI 304
19	HEX CAP SCREWS	A2=A193-B8

Ball: AISI 316 solid ball

Stem: Blow out proof

Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9503-2-T" in black

*Working pressure:

- 1/2"~1": 2000 WOG

- 1-1/4"~2": 1500 WOG

Feature:

- ISO-5211 top flange drilled & tapped

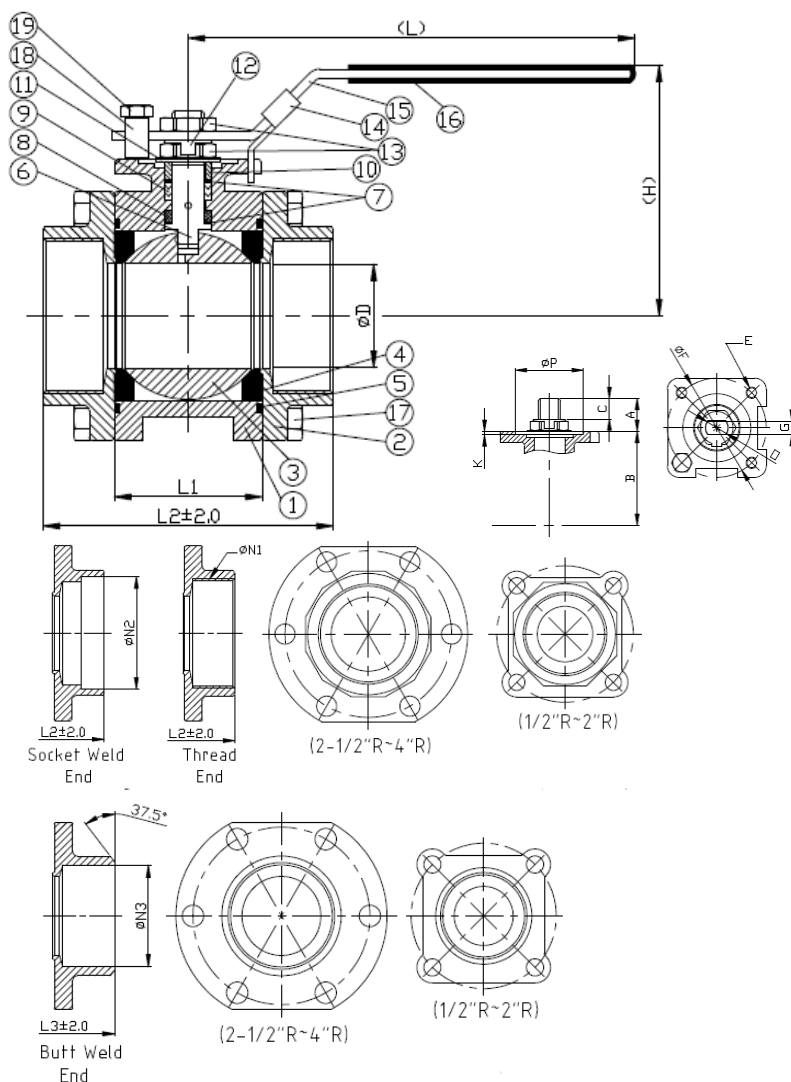
- Anti-static device

SIZE	ØD	L	L1	L2	L3	H	F	E	G	ØP	A	B	C	K	O	ØN1	ØN2	ØN3	KG WT		
																			Thread	BW	SW
1/2"	11.5	118	21.2	60	70	59	F03	M5	5.5	26	9.6	27.5	7.1	2.5	3/8"-24UNF	ISO-228 PT NPT	22	16.1	0.63	0.63	0.63
3/4"	15	135	25.2	75	75	74	F04	M5	6.3	30.1	14.8	38.2	8.4	1.9	3/8"-24UNF		27.3	21.4	0.86	0.83	0.86
1"	20	135	32.3	80	90	81	F04	M5	6.3	30.1	19.8	41.9	10.7	2	3/8"-24UNF		34.1	27.2	1.33	1.34	1.33
1-1/4"	25.4	167	42.3	90	100	92	F05	M6	8	35.1	20.2	51.5	11.8	2.5	7/16"-20UNF		42.8	35.1	1.96	2	1.96
1-1/2"	32	167	49.3	110	110	96	F05	M6	8	35.1	20	55.1	11.6	2.5	7/16"-20UNF		48.9	40.5	2.83	2.78	2.84
2"	38	218	57.2	120	125	112	F07	M8	9.5	48.1	24.1	66.3	14.6	2.5	5/8"-18UNF		61.4	52.7	4.2	4.1	4.11
2-1/2"	50.8	218	71.4	140	150	121	F07	M8	9.5	48.1	23.3	75.7	14.5	2.5	5/8"-18UNF		77.1	65.6	7.66	7.71	7.76
3"	65	376	89	185	190	165	F10	M10	17	68.1	42.7	89.1	25.1	3	7/8"-14UNF		90	78.5	13.83	13.15	13.96

SS • 3 PC • 2000 WOG* • Standard Bore • Socket Weld

CSC-9503-2-W

Meet industry standards as per ASME B16.34



Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	BALL (Relief Hole)	CF8M
4	SEAT	RPTFE
5	BODY SEAL	PTFE
6	STEM (Anti-Static)	AISI 316
7	LOWER THRUST WASHER	50%S.S+50%PTFE
8	UPPER THRUST WASHER	TFM 1600
9	STEM PACKING	PTFE
10	GLAND RING	AISI 304
11	BELLEVILLE DISC	AISI 301
12	NUT STOPPER	AISI 304
13	STEM NUTS	A2=A194-8
14	LOCKING DEVICE	AISI 304
15	HANDLE	AISI 304
16	HANDLE SLEEVE	PVC
17	HEX CAP SCREWS	A2=A193-B8
18	STOP PIN	AISI 304
19	HEX CAP SCREWS	A2=A193-B8

Ball: AISI 316 solid ball

Stem: Blow out proof

Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9503-2-W" in black

*Working pressure:

- 1/2"~1": 2000 WOG
- 1-1/4"~2": 1500 WOG

Feature:

- ISO-5211 top flange drilled & tapped
- Anti-static device

Dimensions and Weights

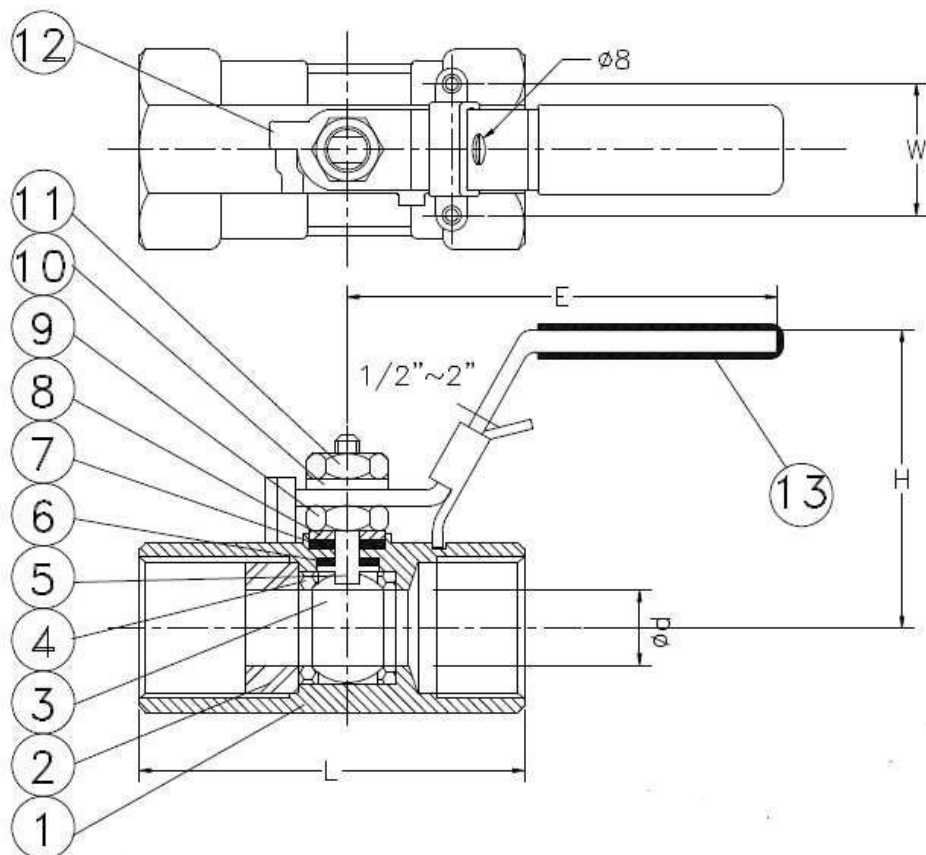
Inches (millimeters) - Pounds (kilograms)

SIZE	ØD	L	L1	L2	L3	H	F	E	G	ØP	A	B	C	K	O	ØN1	ØN2	ØN3	KG WT		
																			Thread	BW	SW
1/2"	11.5	118	21.2	60	70	59	F03	M5	5.5	26	9.6	27.5	7.1	2.5	3/8"-24UNF	ISO-228 PT NPT	22	16.1	0.63	0.63	0.63
3/4"	15	135	25.2	75	75	74	F04	M5	6.3	30.1	14.8	38.2	8.4	1.9	3/8"-24UNF		27.3	21.4	0.86	0.83	0.86
1"	20	135	32.3	80	90	81	F04	M5	6.3	30.1	19.8	41.9	10.7	2	3/8"-24UNF		34.1	27.2	1.33	1.34	1.33
1-1/4"	25.4	167	42.3	90	100	92	F05	M6	8	35.1	20.2	51.5	11.8	2.5	7/16"-20UNF		42.8	35.1	1.96	2	1.96
1-1/2"	32	167	49.3	110	110	96	F05	M6	8	35.1	20	55.1	11.6	2.5	7/16"-20UNF		48.9	40.5	2.83	2.78	2.84
2"	38	218	57.2	120	125	112	F07	M8	9.5	48.1	24.1	66.3	14.6	2.5	5/8"-18UNF		61.4	52.7	4.2	4.1	4.11
2-1/2"	50.8	218	71.4	140	150	121	F07	M8	9.5	48.1	23.3	75.7	14.5	2.5	5/8"-18UNF		77.1	65.6	7.66	7.71	7.76
3"	65	376	89	185	190	165	F10	M10	17	68.1	42.7	89.1	25.1	3	7/8"-14UNF		90	78.5	13.83	13.15	13.96

CS • 1 PC • 2000 WOG • Reduced Bore

CSC-9601-2

Meet industry standards as per ASME B16.34



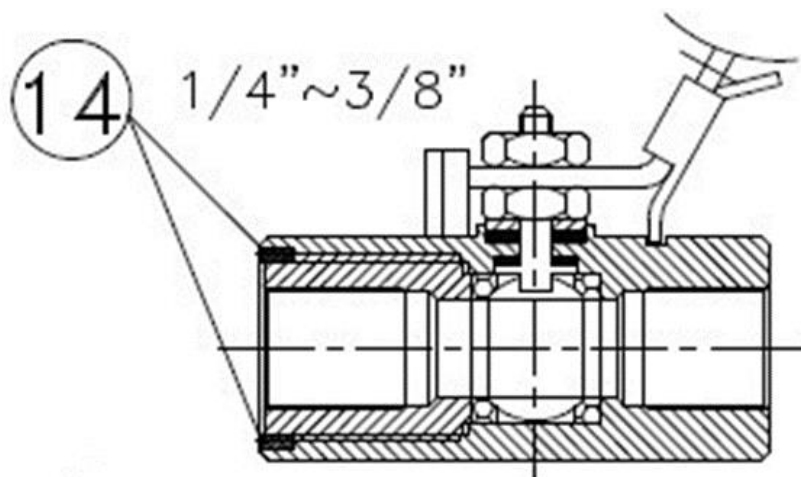
Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
2	INSERT	SUS 316
3	BALL	SUS 316
4	SEAT	PTFE 15% gf
5	STEM	SUS 316
6	THRUST WASHER	PTFE
7	STEM SEAL	PTFE
8	GLAND WASHER	SUS 304
9	NUT STOPPER	SUS 304
10	SPRING WASHER (1/2"-2")	SUS 304
11	NUT	SUS 304
12	HANDLE	SUS 304
13	HANDLE SLEEVE	VINYL GRIP
14	PIN	SUS 304

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

SIZE	d	L	H	E	W
1/2"	9.2	66	57.5	98.5	28.2
3/4"	12.5	70	61.4	98.5	28.2
1"	15	80	64.3	104.7	35.6
1-1/4"	20	95	68.8	104.7	35.6
1-1/2"	25	101	73.8	156.1	35.6
2"	32	114	79.8	156.1	35.6



Ball: AISI 316 solid ball

Stem: Blow-out proof

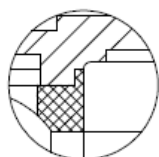
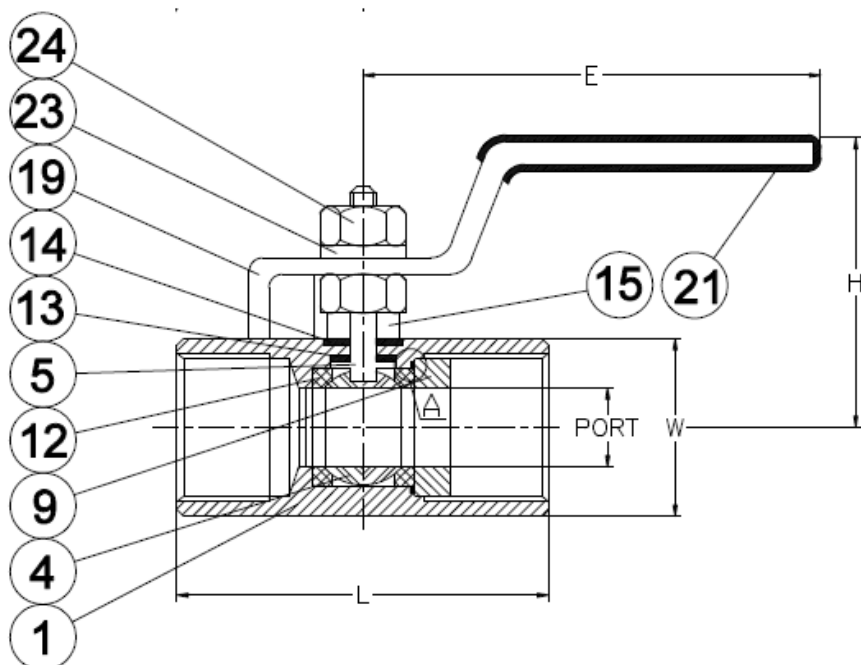
Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9601-2" in black

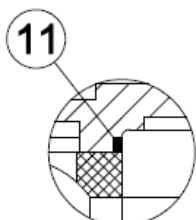
CS • 1 PC • 2000 WOG • Reduced Bore • Hexagonal

CSC-9601-2-H

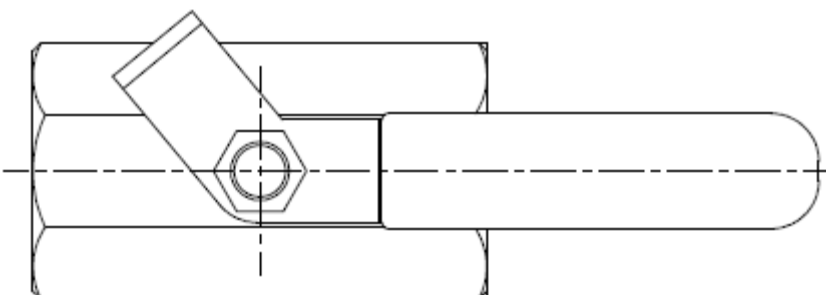
Meet industry standards as per ASME B16.34



1/4"~1"
A-VIEW



1-1/4"~2"
A-VIEW



Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
4	BALL	1/4"-1/2" SS 316
		3/4"-2" CF8M
5	STEM	SS316
9	INSERT	WCB
11	BODY SEAL	PTFE
12	SEAT	PTFE 15% gf
13	THRUST WASHER	PTFE
14	STEM PACKING	PTFE
15	GLAND BUSHING	SS304
19	HANDLE	SS304
21	HANDLE COVER	PLASTIC
23	SPRING WASHER	SS304
24	HANDLE NUT	SS304

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

SIZE	PORT	L	E	H	W
1/4"	5	41.3	61	29.5	21
3/8"	7.2	46	79	34.5	23
1/2"	9.2	57.2	108	56	29
3/4"	12.5	65.1	110	65	35
1"	15	76.2	122	68	41
1-1/4"	20	92.1	145	79.5	55
1-1/2"	24.5	98.4	148	84	57
2"	32	114.3	148	92.5	73.5

Ball: AISI 316 solid ball

Stem: Blow-out proof stem

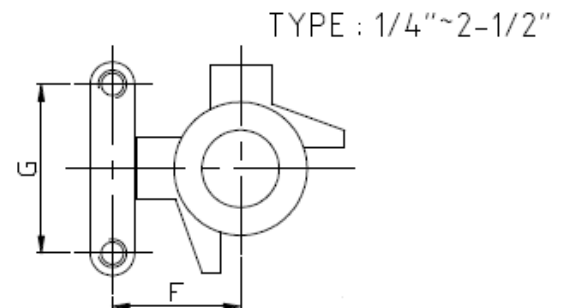
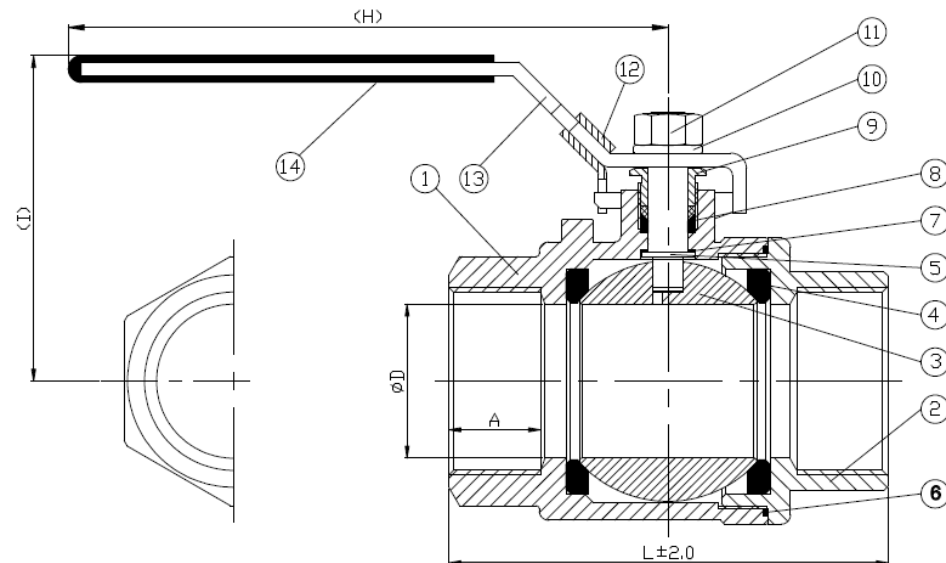
Lever: SS304 handle

Sleeve: Orange sleeve with "CSC-9601-2-H" in black

CS • 2 PC • 2000 WOG* • Full Bore

CSC-9602-2

Meet industry standards as per ASME B16.34



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

SIZE	D	L	C	H	F	G	A	WT KG
1/4"	11.5	50	55	105	12.7	28.5	12.5	0.3
3/8"	12.5	60	55	105	12.7	28.5	14	0.31
1/2"	15	75	57	105	12.7	28.5	17.8	0.4
3/4"	20	80	68	123	22.1	35	19.1	0.6
1"	25	90	73	155	22.1	35	22.6	0.94
1-1/4"	32	110	85	155	23.6	38	24.9	1.42
1-1/2"	38	120	97	191	23.6	38	24.9	2.24
2"	49	140	104	191	28.9	38	29.2	3.29

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
2	CAP	WCB
3	BALL (Relief Hole)	CF8M
4	SEAT	PTFE 15% gf
5	STEM	AISI 316
6	BODY SEAL	PTFE
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND NUTS	A2=A194-8
10	SPRING WASHER	AISI 304
11	HANDLE NUTS	A2=A194-8
12	LOCKING DEVICE	AISI 304
13	HANDLE	AISI 304
14	HANDLE SLEEVE	PVC

Ball: AISI 316 solid ball

Stem: Blow-out proof

Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9602-2" in black

*Working pressure:

- 1/4"~1-1/2": 2000 WOG

- 2": 1500 WOG

Feature: Actuator pad drilled & tapped, anti-static device

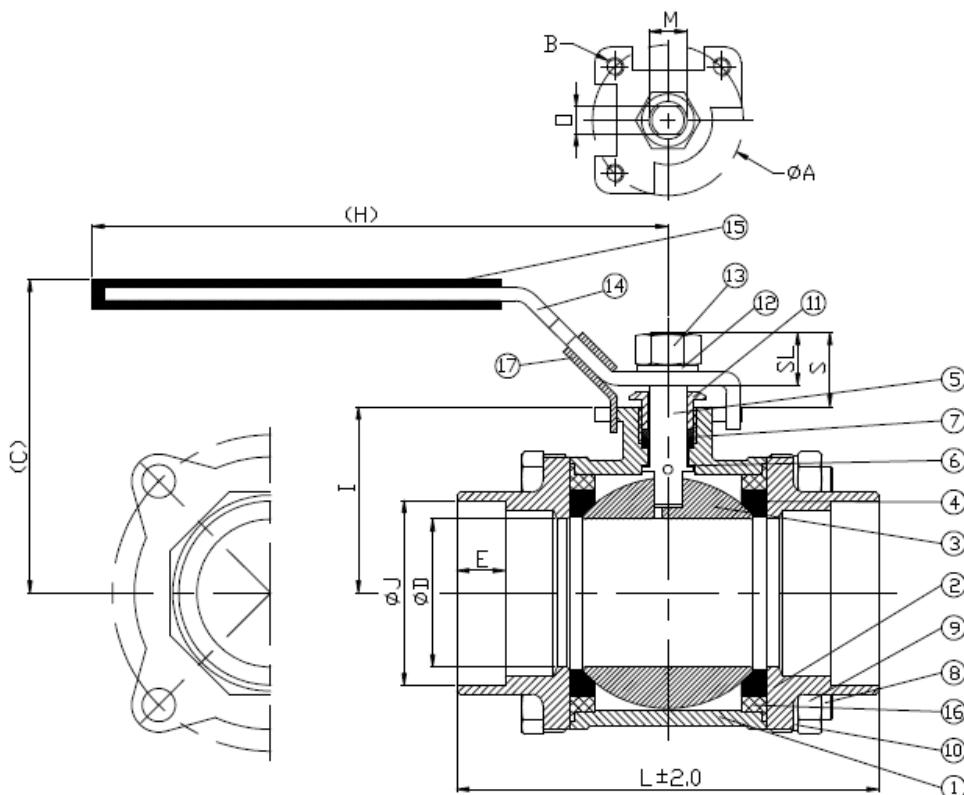
CS • 3 PC • 1000 WOG • Full Bore • NPT Thread

CSC-9603-T

Meet industry standards as per ASME B16.34

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
2	CAP	WCB
3	BALL (Relief Hole)	CF8M
4	SEAT	PTFE 15% gf
5	STEM (Anti-static)	AISI 316
6	THRUST WASHER	PTFE
7	STEM PACKING	PTFE
8	BOLT	A2=A193-B8
9	NUTS	A2=A194-8
10	SPRING WASHER	AISI 304
11	GLAND NUTS	A2=A194-8
12	SPRING WASHER	AISI 304
13	HANDLE NUTS	A2=A194-8
14	HANDLE	AISI 304
15	HANDLE SLEEVE	PVC
16	BODY SEAL	PTFE
17	LOCKING DEVICE	AISI 304



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Ball: AISI 316 solid ball
 Stem: Blow-out proof
 Lever: Locking handle
 Sleeve: Orange sleeve with
 "CSC-9603-T" in black
 Feature:
 - ISO-5211 top flange
 - Anti-static device

SIZE	ISO-5211			C	D	G	H	L	I	S	SL	M	O	WT KG
		A	B											
1/4"	F04	42	M5	55	10.6	11.5	108	50	28	14	10	8	5	0.41
3/8"	F04	42	M5	55	12.7	15	108	60	28	14	10	8	5	0.43
1/2"	F04	42	M5	64	15	22	121	75	30	16.8	11	9.5	6.5	0.65
3/4"	F04	42	M5	70	20	215	121	80	34.8	17.7	11	9.5	6.5	0.77
1"	F04	42	M5	75	25	22.6	155	90	37.6	23.7	16	11	8	1.11
1-1/4"	F04	42	M5	83	32	28.5	155	110	43.3	24.6	16	11	8	1.76
1-1/2"	F05	50	M6	98	38	28.5	192	120	53.4	25.4	17.5	12.5	9	2.45
2"	F05	50	M6	105	49	32	192	140	61.7	24.7	17.5	12.5	9	3.64
2-1/2"	F07	70	M8	148	65	38	257	185	79.7	44.7	29.5	19	12	8.1
3"	F07	70	M8	155	80	40	257	205	87	43.2	29.5	19	12	10.85

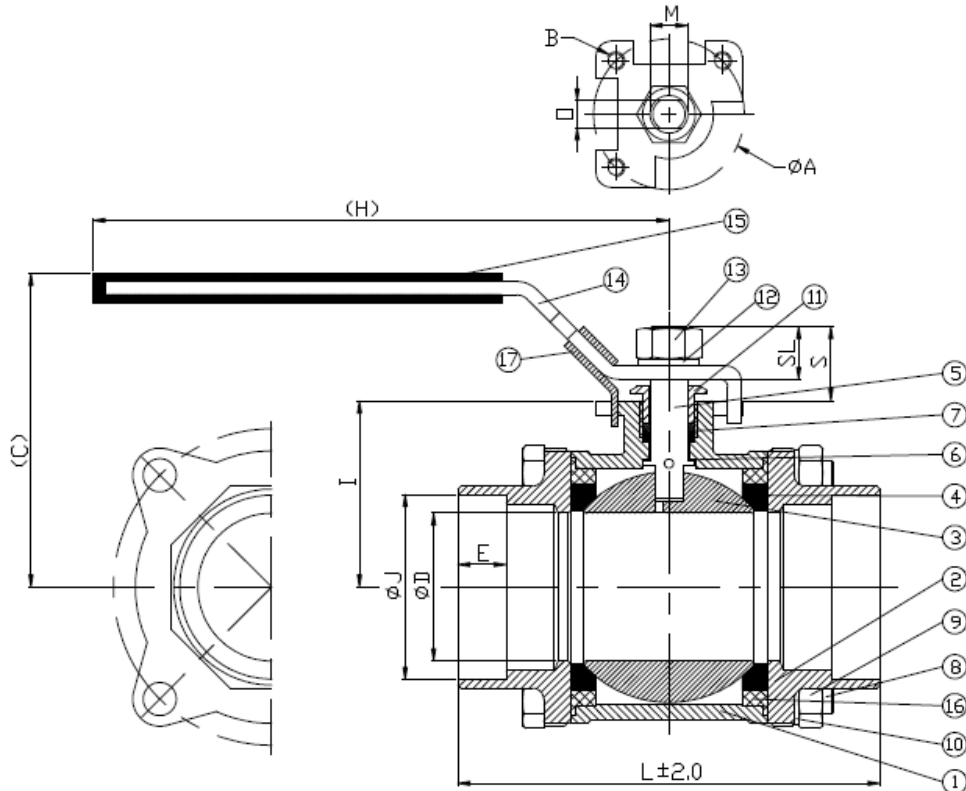
CS • 3 PC • 1000 WOG • Full Bore • Socket Weld

CSC-9603-W

Meet industry standards as per ASME B16.34

Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
2	CAP	WCB
3	BALL (Relief Hole)	CF8M
4	SEAT	PTFE 15% gf
5	STEM (Anti-static)	AISI 316
6	THRUST WASHER	PTFE
7	STEM PACKING	PTFE
8	BOLT	A2=A193-B8
9	NUTS	A2=A194-8
10	SPRING WASHER	AISI 304
11	GLAND NUTS	A2=A194-8
12	SPRING WASHER	AISI 304
13	HANDLE NUTS	A2=A194-8
14	HANDLE	AISI 304
15	HANDLE SLEEVE	PVC
16	BODY SEAL	PTFE
17	LOCKING DEVICE	AISI 304



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

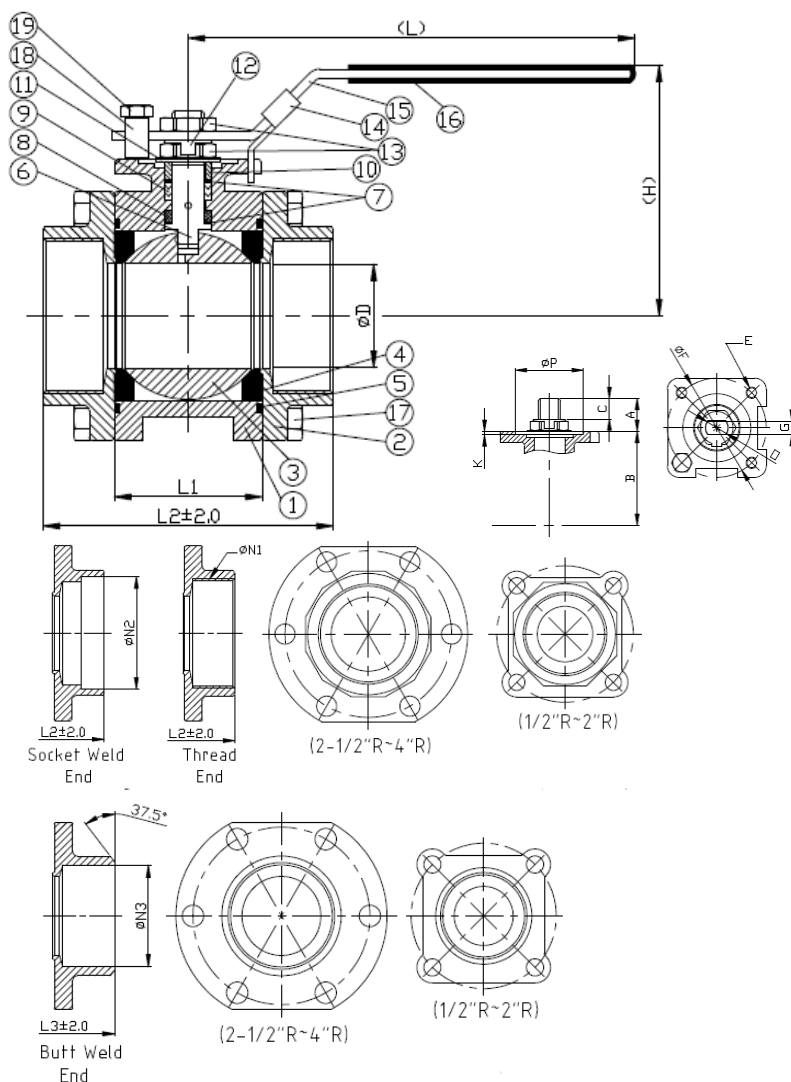
Ball: AISI 316 solid ball
 Stem: Blow-out proof
 Lever: Locking handle
 Sleeve: Orange sleeve with
 "CSC-9603-W" in black
 Feature:
 - ISO-5211 top flange
 - Anti-static device

SIZE	ISO-5211			C	D	E	H	L	I	J	S	SL	M	O	WT KG
		A	B												
1/4"	F04	42	M5	55	10.6	10	108	50	28	14.4	14	10	8	5	0.41
3/8"	F04	42	M5	55	12.7	10	108	60	28	17.8	14	10	8	5	0.42
1/2"	F04	42	M5	64	15	10	121	75	30	22	16.8	11	9.5	6.5	0.64
3/4"	F04	42	M5	70	20	13	121	80	34.8	27.3	17.7	11	9.5	6.5	0.75
1"	F04	42	M5	75	25	13	155	90	37.6	34.1	23.7	16	11	8	1.11
1-1/4"	F04	42	M5	83	32	13	155	110	43.3	42.8	24.6	16	11	8	1.75
1-1/2"	F05	50	M6	98	38	13	192	120	53.4	48.9	25.4	17.5	12.5	9	2.43
2"	F05	50	M6	105	49	16	192	140	61.7	61.4	24.7	17.5	12.5	9	3.55
2-1/2"	F07	70	M8	148	65	16	257	185	79.7	77.1	44.7	29.5	19	12	8.8
3"	F07	70	M8	155	80	16	257	205	87	90	43.2	29.5	19	12	11.04

CS • 3 PC • 2000 WOG* • Standard Bore • NPT Thread

CSC-9603-2-T

Meet industry standards as per ASME B16.34



Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
2	CAP	WCB
3	BALL (Relief Hole)	CF8M
4	SEAT	RPTFE
5	BODY SEAL	PTFE
6	STEM (Anti-Static)	AISI 316
7	LOWER THRUST WASHER	50%S.S+50%PTFE
8	UPPER THRUST WASHER	TFM 1600
9	STEM PACKING	PTFE
10	GLAND RING	AISI 304
11	BELLEVILLE DISC	AISI 301
12	NUT STOPPER	AISI 304
13	STEM NUTS	A2=A194-8
14	LOCKING DEVICE	AISI 304
15	HANDLE	AISI 304
16	HANDLE SLEEVE	PVC
17	HEX CAP SCREWS	A2=A193-B8
18	STOP PIN	AISI 304
19	HEX CAP SCREWS	A2=A193-B8

Ball: AISI 316 solid ball

Stem: Blow out proof

Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9603-2-T" in black

*Working pressure:

- 1/2"~1": 2000 WOG

- 1-1/4"~2": 1500 WOG

Feature:

- ISO-5211 top flange drilled & tapped

- Anti-static device

Dimensions and Weights

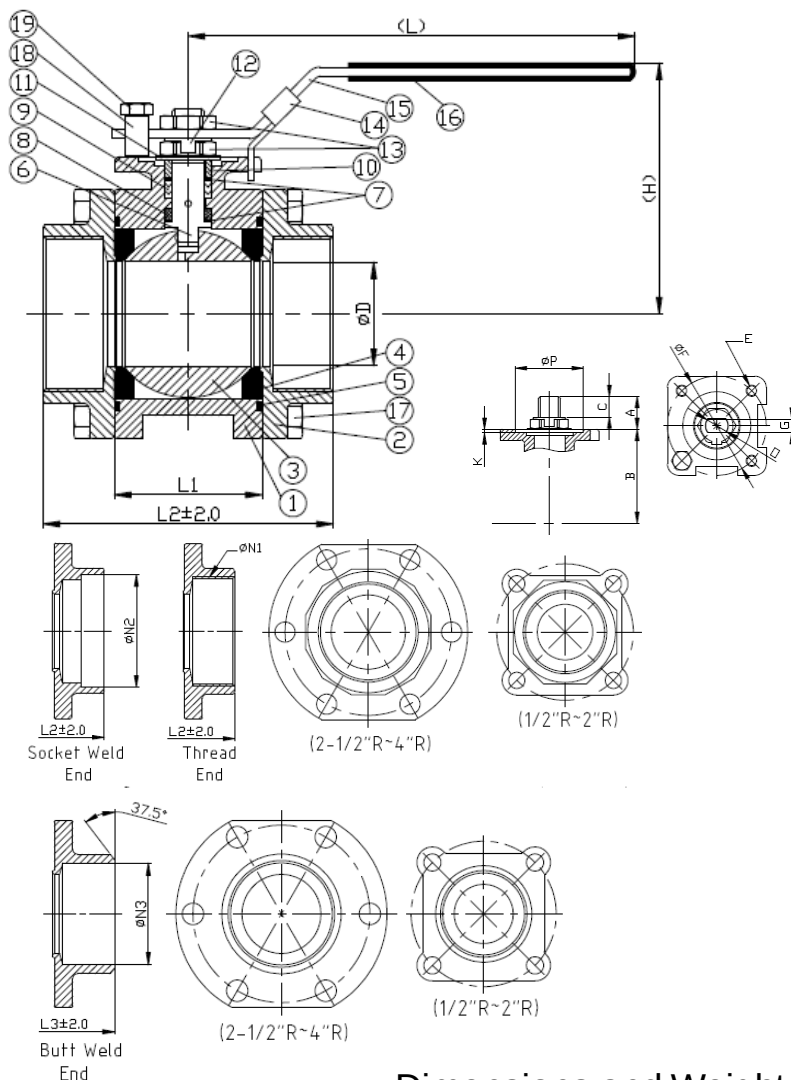
Inches (millimeters) - Pounds (kilograms)

SIZE	ØD	L	L1	L2	L3	H	F	E	G	ØP	A	B	C	K	O	ØN1	ØN2	ØN3	KG WT		
																			Thread	BW	SW
1/2"	11.5	118	21.2	60	70	59	F03	M5	5.5	26	9.6	27.5	7.1	2.5	3/8"-24UNF	ISO-228 PT NPT	22	16.1	0.63	0.63	0.63
3/4"	15	135	25.2	75	75	74	F04	M5	6.3	30.1	14.8	38.2	8.4	1.9	3/8"-24UNF		27.3	21.4	0.86	0.83	0.86
1"	20	135	32.3	80	90	81	F04	M5	6.3	30.1	19.8	41.9	10.7	2	3/8"-24UNF		34.1	27.2	1.33	1.34	1.33
1-1/4"	25.4	167	42.3	90	100	92	F05	M6	8	35.1	20.2	51.5	11.8	2.5	7/16"-20UNF		42.8	35.1	1.96	2	1.96
1-1/2"	32	167	49.3	110	110	96	F05	M6	8	35.1	20	55.1	11.6	2.5	7/16"-20UNF		48.9	40.5	2.83	2.78	2.84
2"	38	218	57.2	120	125	112	F07	M8	9.5	48.1	24.1	66.3	14.6	2.5	5/8"-18UNF		61.4	52.7	4.2	4.1	4.11
2-1/2"	50.8	218	71.4	140	150	121	F07	M8	9.5	48.1	23.3	75.7	14.5	2.5	5/8"-18UNF		77.1	65.6	7.66	7.71	7.76
3"	65	376	89	185	190	165	F10	M10	17	68.1	42.7	89.1	25.1	3	7/8"-14UNF		90	78.5	13.83	13.15	13.96

CS • 3 PC • 2000 WOG* • Standard Bore • Socket Weld

CSC-9503-2-W

Meet industry standards as per ASME B16.34



Materials of Construction

NO.	PART NAME	MATERIAL
1	BODY	WCB
2	CAP	WCB
3	BALL (Relief Hole)	CF8M
4	SEAT	RPTFE
5	BODY SEAL	PTFE
6	STEM (Anti-Static)	AISI 316
7	LOWER THRUST WASHER	50%S.S+50%PTFE
8	UPPER THRUST WASHER	TFM 1600
9	STEM PACKING	PTFE
10	GLAND RING	AISI 304
11	BELLEVILLE DISC	AISI 301
12	NUT STOPPER	AISI 304
13	STEM NUTS	A2=A194-8
14	LOCKING DEVICE	AISI 304
15	HANDLE	AISI 304
16	HANDLE SLEEVE	PVC
17	HEX CAP SCREWS	A2=A193-B8
18	STOP PIN	AISI 304
19	HEX CAP SCREWS	A2=A193-B8

Ball: AISI 316 solid ball

Stem: Blow out proof

Lever: Locking handle

Sleeve: Orange sleeve with "CSC-9603-2-W" in black

*Working pressure:

- 1/2"~1": 2000 WOG

- 1-1/4"~2": 1500 WOG

Feature:

- ISO-5211 top flange drilled & tapped

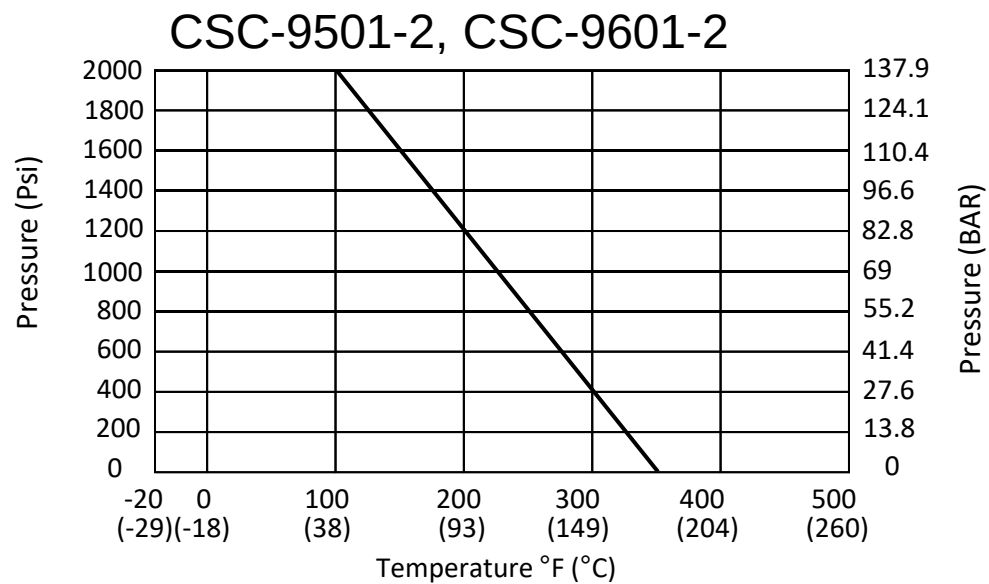
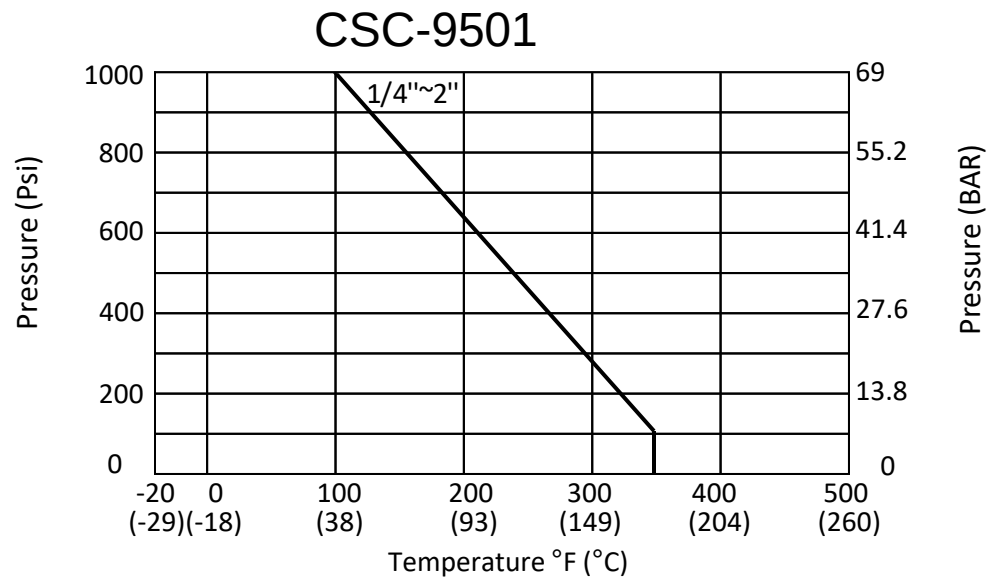
- Anti-static device

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

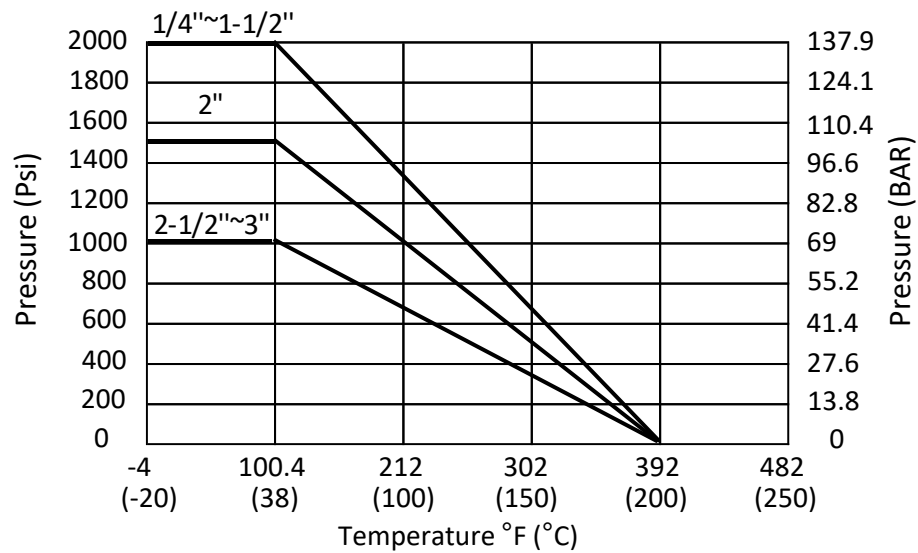
SIZE	ØD	L	L1	L2	L3	H	F	E	G	ØP	A	B	C	K	O	ØN1	ØN2	ØN3	KG WT		
																			Thread	BW	SW
1/2"	11.5	118	21.2	60	70	59	F03	M5	5.5	26	9.6	27.5	7.1	2.5	3/8"-24UNF	ISO-228 PT NPT	22	16.1	0.63	0.63	0.63
3/4"	15	135	25.2	75	75	74	F04	M5	6.3	30.1	14.8	38.2	8.4	1.9	3/8"-24UNF		27.3	21.4	0.86	0.83	0.86
1"	20	135	32.3	80	90	81	F04	M5	6.3	30.1	19.8	41.9	10.7	2	3/8"-24UNF		34.1	27.2	1.33	1.34	1.33
1-1/4"	25.4	167	42.3	90	100	92	F05	M6	8	35.1	20.2	51.5	11.8	2.5	7/16"-20UNF		42.8	35.1	1.96	2	1.96
1-1/2"	32	167	49.3	110	110	96	F05	M6	8	35.1	20	55.1	11.6	2.5	7/16"-20UNF		48.9	40.5	2.83	2.78	2.84
2"	38	218	57.2	120	125	112	F07	M8	9.5	48.1	24.1	66.3	14.6	2.5	5/8"-18UNF		61.4	52.7	4.2	4.1	4.11
2-1/2"	50.8	218	71.4	140	150	121	F07	M8	9.5	48.1	23.3	75.7	14.5	2.5	5/8"-18UNF		77.1	65.6	7.66	7.71	7.76
3"	65	376	89	185	190	165	F10	M10	17	68.1	42.7	89.1	25.1	3	7/8"-14UNF		90	78.5	13.83	13.15	13.96

Pressure / Temperature Rating – 1PC

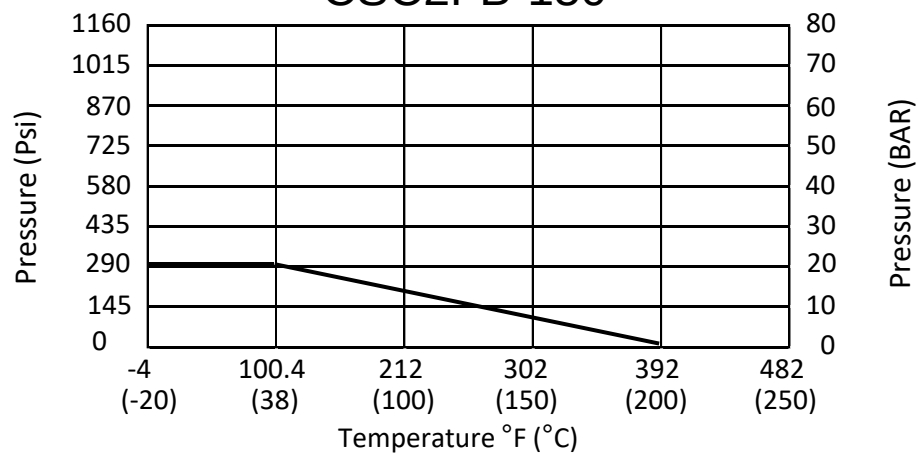


Pressure / Temperature Rating – 2PC

CSC-9502-2, CSC-9602-2

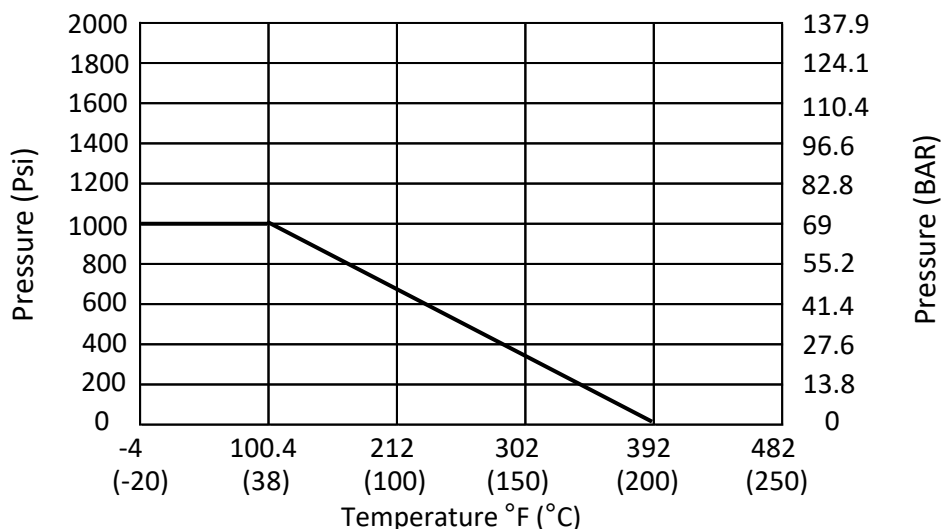


CSC2FB-150

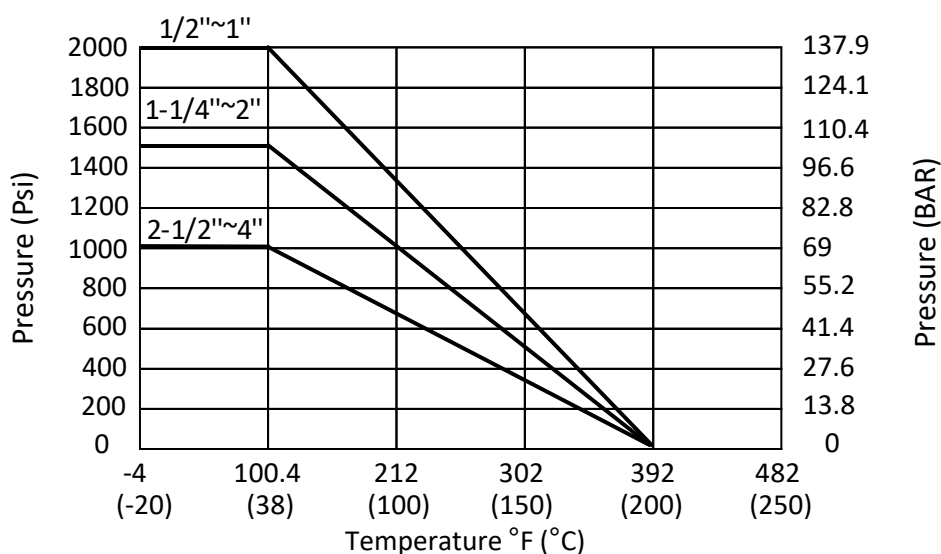


Pressure / Temperature Rating – 3PC

CSC-9503-T&W, CSC-9603-T&W



CSC-9503-2-T&W, CSC-9603-2-T&W



Installation, Operation and Maintenance Guide

Installation

1. The listed standard valves are bi-directional and can be installed for flow in either direction.
2. When installing threaded-end valves, be sure that the threads on the mating pipe are free from excessive grit, dirt or burrs.
3. Take care and assure that any pipe sealants used are not excessively applied to the pipe threads so that the valve seats, ball, and/or cavity become stained.

Operation

1. All valves feature $\frac{1}{4}$ turn operation, turning the valve handle 90 degrees clockwise will fully close the valve, while turning 90 degrees counterclockwise will fully open the valve.
2. If the handle is parallel to the flow direction, the valve is open. If the handle is in a right angle position with the flow direction, the valve is closed.
3. For best service life, a hand-operated ball valve should be operated in its fully open/closed positions. Excessive pressure drops could adversely affect service life.
4. Products are assembled using factory approved lubricant. Factory lubricant can be removed by disassembling the valve and solvent washing. Doing so may result in some seals requiring replacement and is not encouraged.
5. During operation, the pressure shall not exceed the allowable pressure given for the appropriate temperature. Short-term variations in temperature in the creep range are the user's responsibility.
6. If operating temperature is substantially higher or lower than room temperature (normal working temperature), an initial stem packing adjustment may be necessary depending on the valve condition.

Maintenance

1. During service life, the only maintenance should be periodic stem seal adjustments. If there is leakage at the stem, tighten the valve stem gland nut until leakage subsides.

CAUTION: Do not disassemble valve while under pressure nor with entrapped hazardous fluids therein.

NOTE: Always test valve and system before putting the system into service. (Crane Supply does not recommend disassembly of this valve to attempt internal repairs).

Following a policy of continuous improvement, Crane Supply reserves the right to alter any information and specifications in this brochure without prior notice.

CRANE

®

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