



Ball Valve Series

GUARDIAN WORLDWIDE, LLC.

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Intelligent Manufacturing
Developing in Vietnam to Benefit the World



COMPANY PROFILE

Intelligent Manufacturing Developing in Vietnam to Benefit the World



To align with evolving trends in global supply chains, we made the strategic decision to establish Guardianmade (Vietnam) Co., Ltd. in 2019. Following a challenging three-year period marked by the global impact of Covid-19, we successfully concluded the construction and equipment installation phase by the close of 2022.

Encompassing an expansive area of 30,000 square meters, Guardianmade is a dynamic facility engaged in comprehensive activities such as designing, casting, machining, assembling, testing, marketing, and servicing.

The launch of Guardianmade signifies a pivotal milestone in Grande-Tek's global strategic expansion. This development enhances our capacity to deliver professional and expedited services to our esteemed global clientele.

Our commitment extends beyond establishment, as we strive for continuous

Our unwavering commitment is directed towards a perpetual refinement of our cutting-edge engineering and manufacturing capabilities. This dedication is aimed at enhancing the overall quality of both our products and customer service. Through a continuous process of improvement, we strive to set new benchmarks, ensuring that our offerings consistently meet and exceed the highest standards in the industry.

COMPANY CULTURE

MISSION

Create a safer and greener flow world, support all employees and their families to bloom a happy life.

VISION

We strive to stand side by side with the world's top fluid control companies and become a century enterprise.

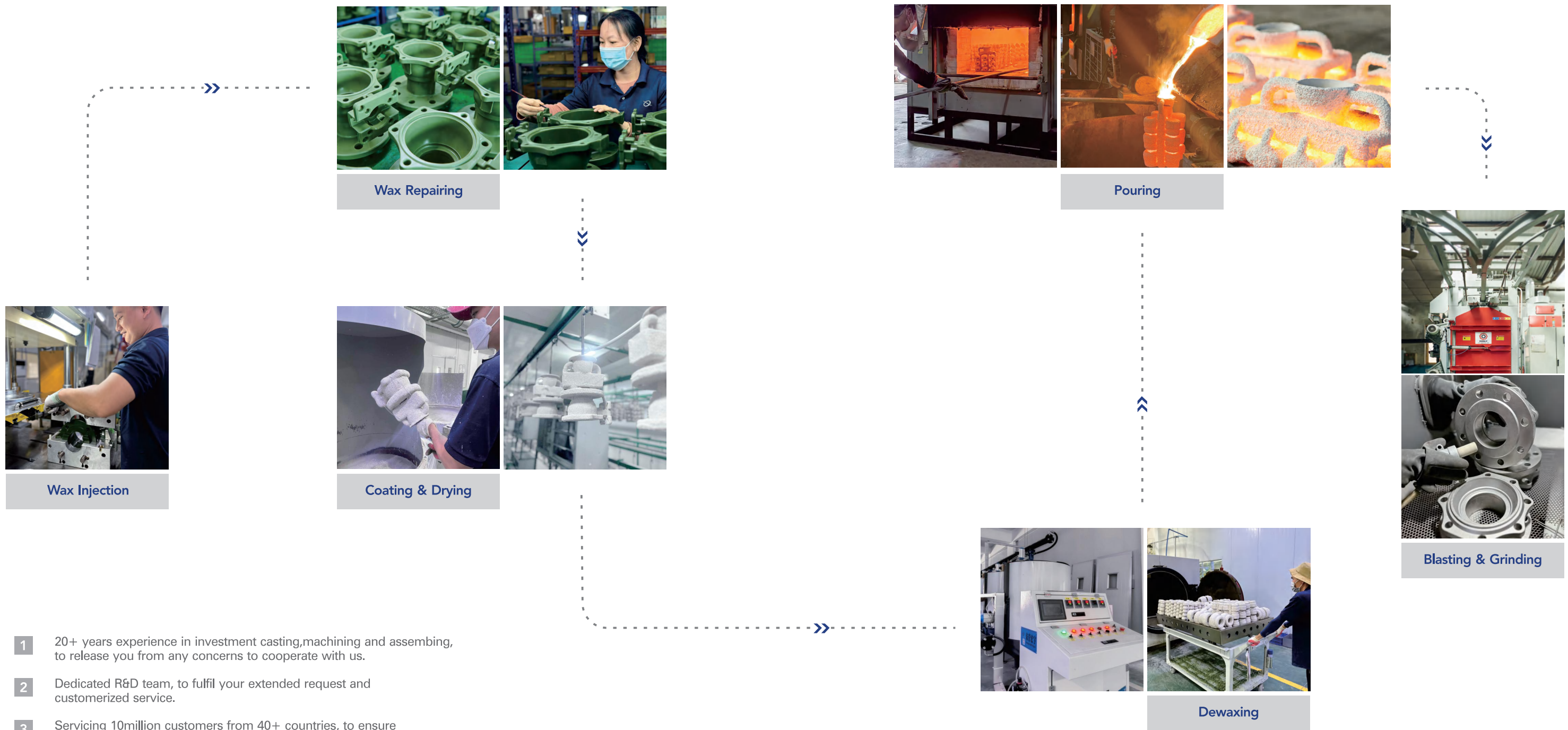
VALUES

Diligent & Innovative
Trustworthy & Humble
Benevolent & Righteous

BELIEF

Brighten the future, benefit the world.

GENERAL PROCESS



- 1 20+ years experience in investment casting,machining and assembling, to release you from any concerns to cooperate with us.
- 2 Dedicated R&D team, to fulfil your extended request and customerized service.
- 3 Servicing 10million customers from 40+ countries, to ensure you that we have the capacity to serve you well.
- 4 Professional team members from China, Vietnam and US, 12 sales net works throughout the world, to provide 24 hours seamless service for you.
- 5 Consistency of goods to keep the stable quality and maintain your reputation.

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Ball Valve Series

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1PC Threaded Ball Valve

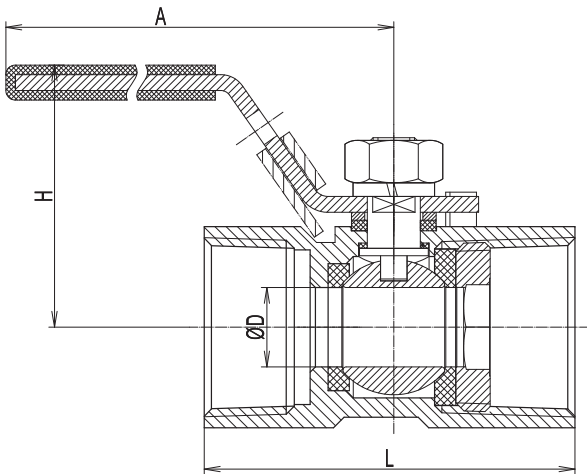


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	1000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1,JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Reduced bore
Blow-out proof stem
Lockable handle or butterfly handle (option)



DIMENSIONS

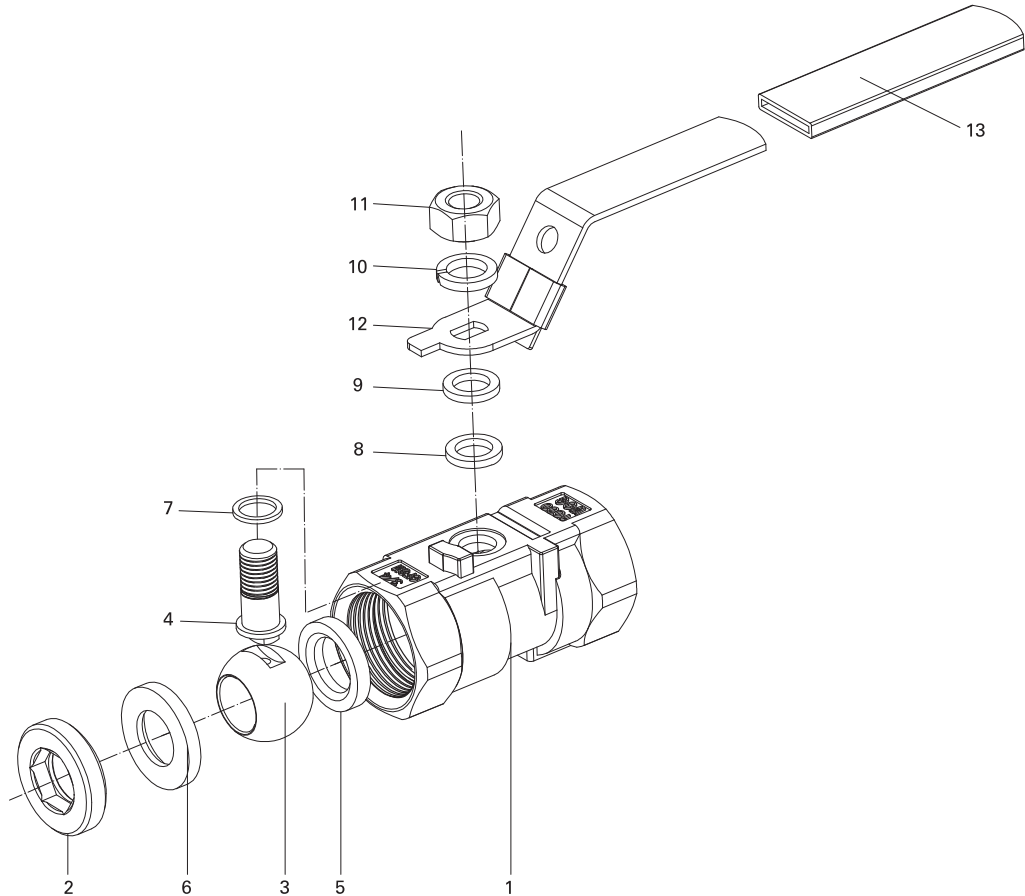
Unit: inch

Size	D	L	H	A
1/4"	0.20	1.54	1.22	2.56
3/8"	0.28	1.73	1.34	3.46
1/2"	0.36	2.22	1.57	4.33
3/4"	0.49	2.32	1.69	4.33
1"	0.59	2.80	1.95	4.33
1-1/4"	0.79	3.07	2.13	4.33
1-1/2"	0.98	3.27	2.46	6.10
2"	1.26	3.90	2.60	6.10
2-1/2"	1.50	5.00	3.35	7.44
3"	1.97	6.02	3.54	7.44

1PC Threaded Ball Valve



PART DRAWING



No.	Item	Material		
1	Body	A351-CF8M	A216-WCB	A351-CF8
2	Cap	A351-CF8M	A216-WCB	A351-CF8
3	Ball	A182-F316	A182-F316	A182-F304
4	Stem	A276-316	A276-316	A276-304
5	Seat B	RTFE	RTFE	RTFE
6	Seat A	RTFE	RTFE	RTFE
7	Gasket	PTFE	PTFE	PTFE
8	Stem packing	PTFE	PTFE	PTFE
9	Steel washer	A240-304	A240-304	A240-304
10	Spring washer	A276-304	A276-304	A276-304
11	Nut	A2-70	A2-70	A2-70
12	Handle	A240-304	A240-304	A240-304
13	Handle cover	PVC	PVC	PVC

1PC Barstock Ball Valve-Reduce Port

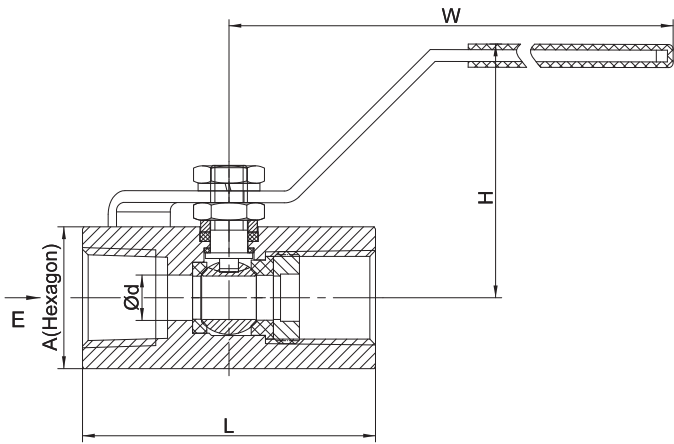


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Socket weld	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

- Reduced bore
- Blow-out proof stem
- Handle / Lockable handle



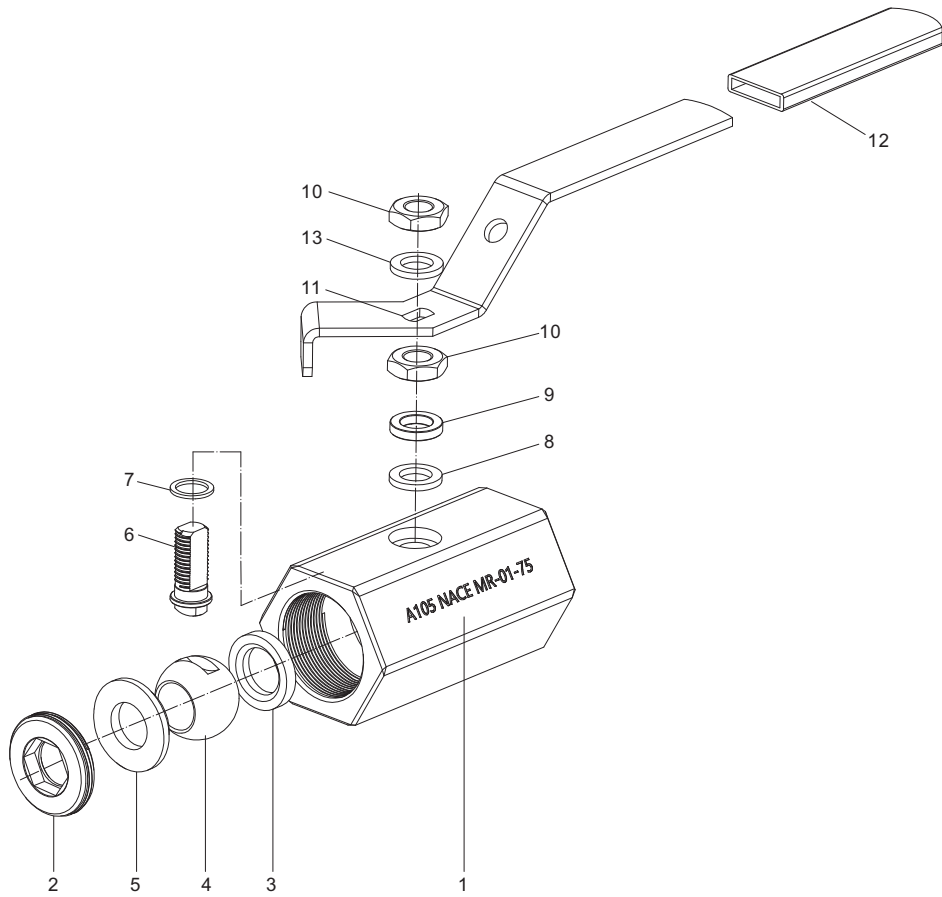
DIMENSIONS

Unit: inch

Size	d	L	H	W	A
1/4"	0.20	1.69	1.50	2.87	0.83
3/8"	0.28	1.77	1.97	2.87	0.98
1/2"	0.37	2.44	2.44	4.53	1.18
3/4"	0.5	2.76	1.38	4.53	1.42
1"	0.59	3.37	2.28	5.08	1.81
1-1/4"	0.79	3.70	2.52	5.08	2.09
1-1/2"	0.98	3.98	2.83	5.91	2.36
2"	1.26	4.49	3.15	5.91	2.95

1PC Barstock Ball Valve-Reduce Port

PART DRAWING



No.	Item	Material
1	Body	ASTM A105
2	Insert	ASTM A216 WCB
3	Insert seat	RTFE
4	Ball	ASTM A182 F316
5	Seat	RTFE
6	Stem	ASTM A276 F316
7	Thrust washer	PTFE
8	Packing	PTFE
9	Spring washer	ASTM A240 304
10	Nut	A2-70
11	Handle	ASTM A240 304
12	Handle cover	PVC
13	Lock washer	ASTM A240 304(1/4" No Lock Washer)

1PC Fire-Safe Threaded Ball Valve
-Reduced Port

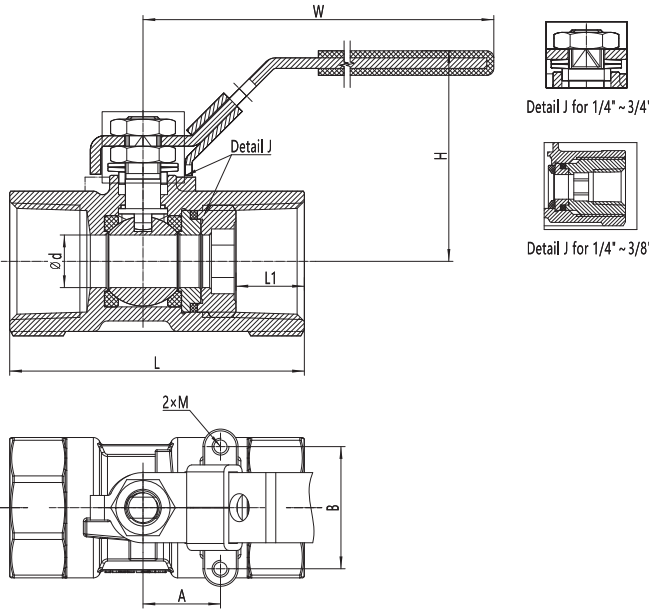


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Socket weld	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Reduced bore
Blow-out proof stem
Fire-proof



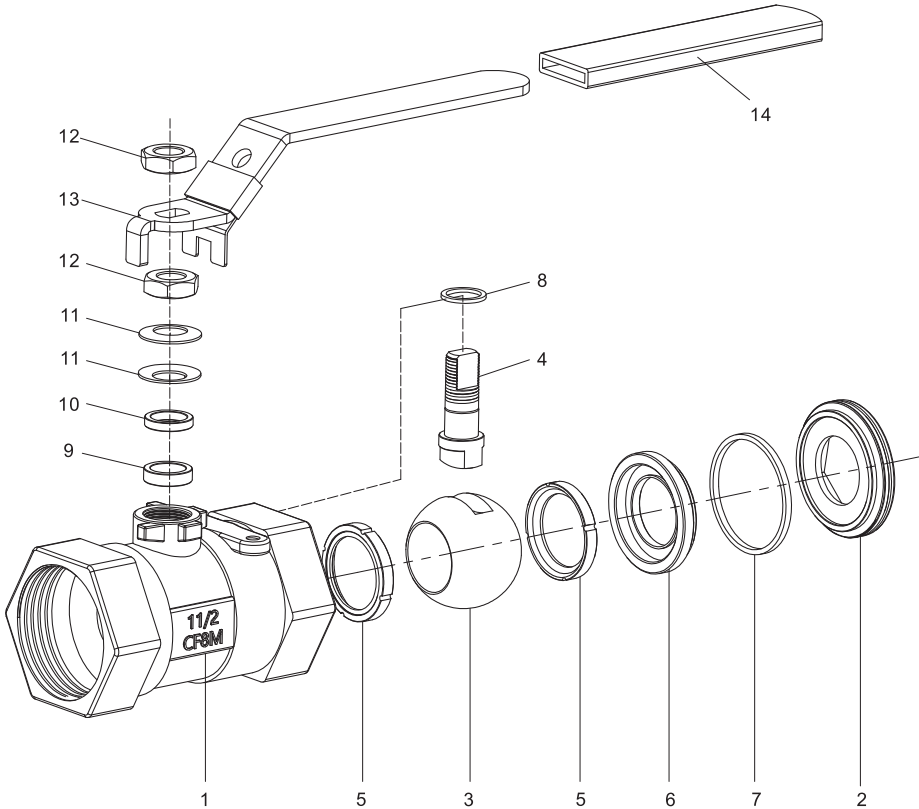
DIMENSIONS

Unit: inch

Size	d	L	L1	H	W	A	B	M
1/4"-3/8"	0.36	2.36	-	1.81	4.33	0.50	1.12	10-24UNC
1/2"	0.36	2.64	0.74	1.81	4.33	0.50	1.12	10-24UNC
3/4"	0.49	2.80	0.65	1.97	4.33	0.87	1.37	10-24UNC
1"	0.59	3.31	0.77	2.36	5.51	0.87	1.37	10-24UNC
1-1/4"	0.79	3.70	0.89	2.56	5.51	0.87	1.37	10-24UNC
1-1/2"	0.98	3.94	0.93	2.83	6.30	0.93	1.50	1/4"-20UNC
2"	1.26	4.65	0.98	3.07	6.30	0.93	1.50	1/4"-20UNC

1PC Fire-Safe Threaded Ball Valve
-Reduced Port

PART DRAWING



No.	Item	Material	
1	Body	A351-CF8M	A351-WCB
2	Insert	A351-CF8M	A216-WCB
3	Ball	A182-F316	A182-F316
4	Stem	A276-316	A276-316
5	Seat	RTFE	RTFE
6	Inner seat ring	A276-316	A276-316
7	Gasket	Graphite	Graphite
8	Thrust washer	PTFE	PTFE
9	Stem packing	Graphite	Graphite
10	Gland bushing	A182-F304	A182-F304
11	Disc spring	SS301	SS301
12	Hex thin nut	A2-70	A2-70
13	Handle	304	304
14	Handle cover	PVC	PVC

1PC Ball Valve-MxF Thread

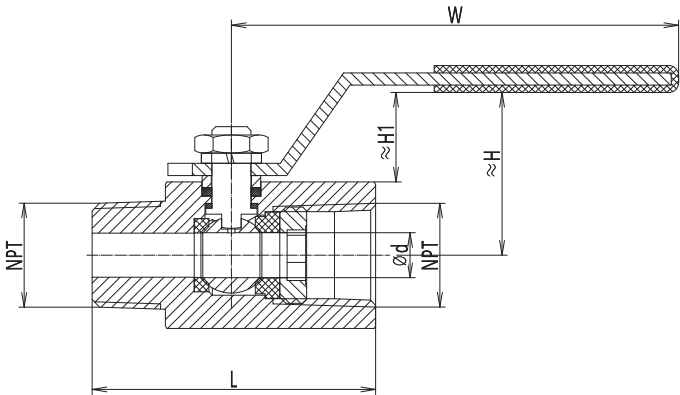


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Socket weld	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Reduced bore
Blow-out proof stem
Male & Female thread



DIMENSIONS

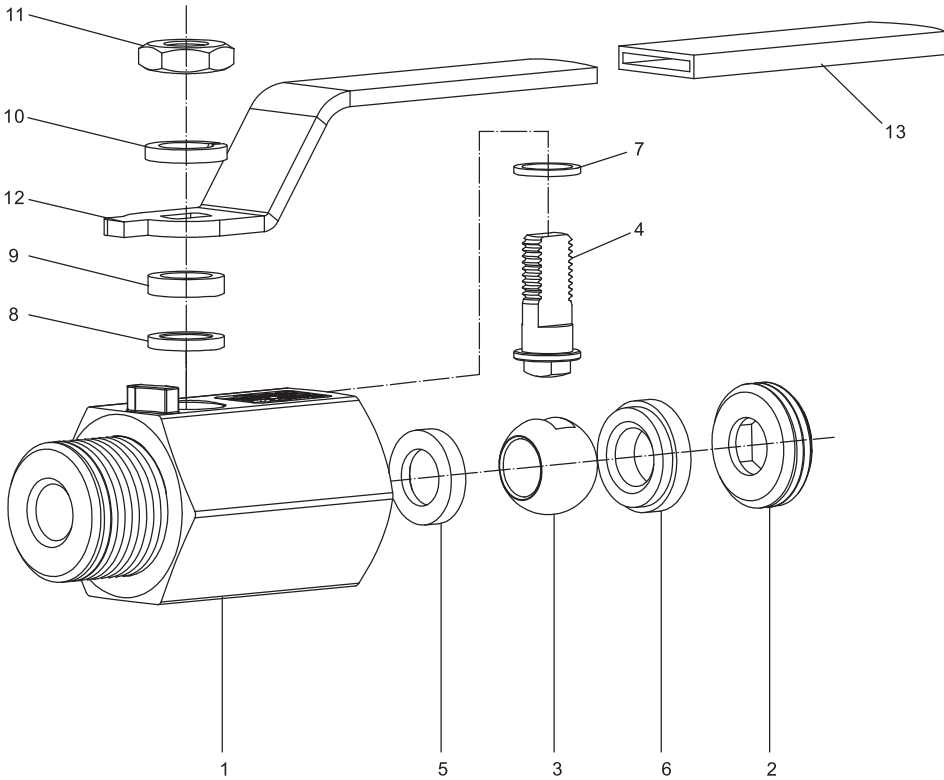
Unit: inch

Size	d	L	H	H1	W	T
1/4"	0.20	1.77	1.06	0.59	2.56	0.79
3/8"	0.28	1.97	1.18	0.71	2.56	0.98
1/2"	0.36	2.28	1.38	0.59	3.54	1.18

1PC Ball Valve-MxF Thread



PART DRAWING



No.	Item	Material
1	Body	A351-CF8M
2	End cap	A351-CF8M
3	Ball	A182-F316
4	Stem	A276-316
5	Seat A	RTFE
6	Seat B	RTFE
7	Thrust gasket	PTFE
8	Packing	PTFE
9	Bushing	304
10	Spring washer	304
11	Nut	304
12	Handle	304
13	Handle cover	PVC

2PC Thread Ball Valve 1000PSI
-Full Port

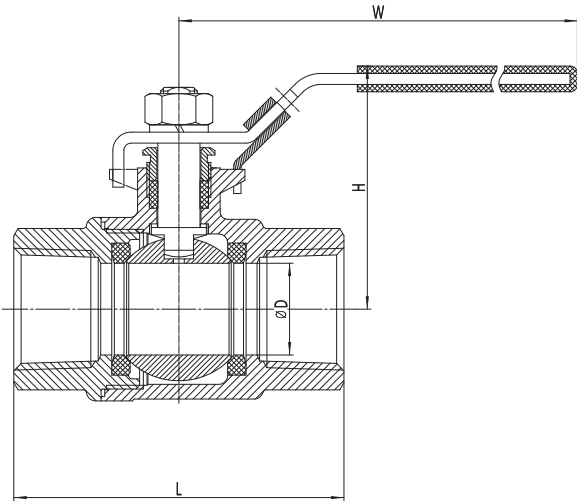


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	1000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem



DIMENSIONS

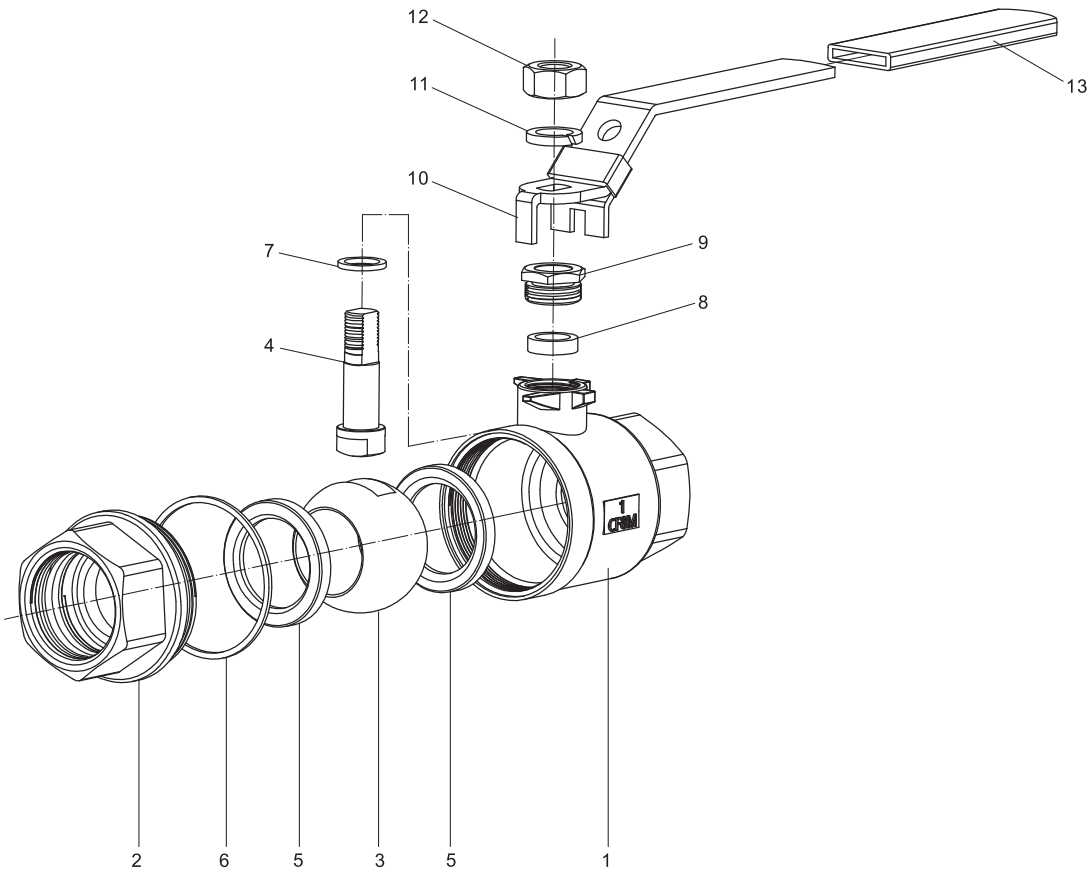
Unit: inch

Size	D	L	H	W
1/4"	0.43	2.13	1.89	3.94
3/8"	0.50	2.17	1.89	3.94
1/2"	0.59	2.24	1.97	4.33
3/4"	0.79	2.68	2.09	4.92
1"	0.98	3.15	2.68	5.71
1-1/4"	1.26	3.58	2.91	6.30
1-1/2"	1.50	4.06	3.39	7.09
2"	1.93	4.93	3.70	7.09
2-1/2"	2.56	6.18	4.72	9.06
3"	2.99	7.03	5.12	9.06

2PC Thread Ball Valve 1000PSI
-Full Port



PART DRAWING



No.	Item	Material
1	Body	A351-CF8M
2	Cap	A351-CF8M
3	Ball	A182-F316
4	Stem	A276-316
5	Seat	RTEF
6	Cap.gasket	PTFE
7	Gasket	PTFE
8	Stem packing	PTFE
9	Packing gland	304
10	Handle	304
11	Spring washer	304
12	Nut	304
13	Handle cover	PVC

2PC Thread Ball Valve 2000PSI
-Full Port

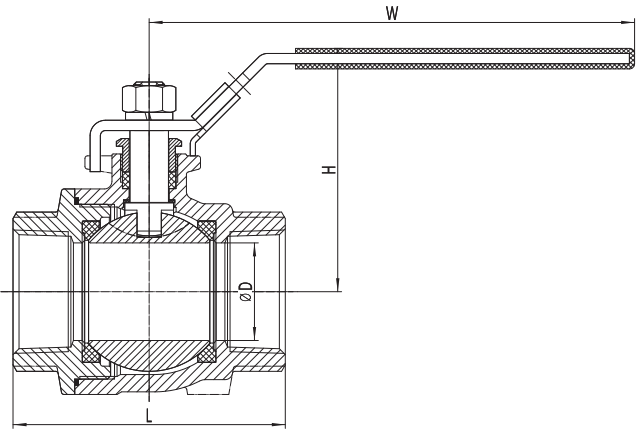


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem



DIMENSIONS

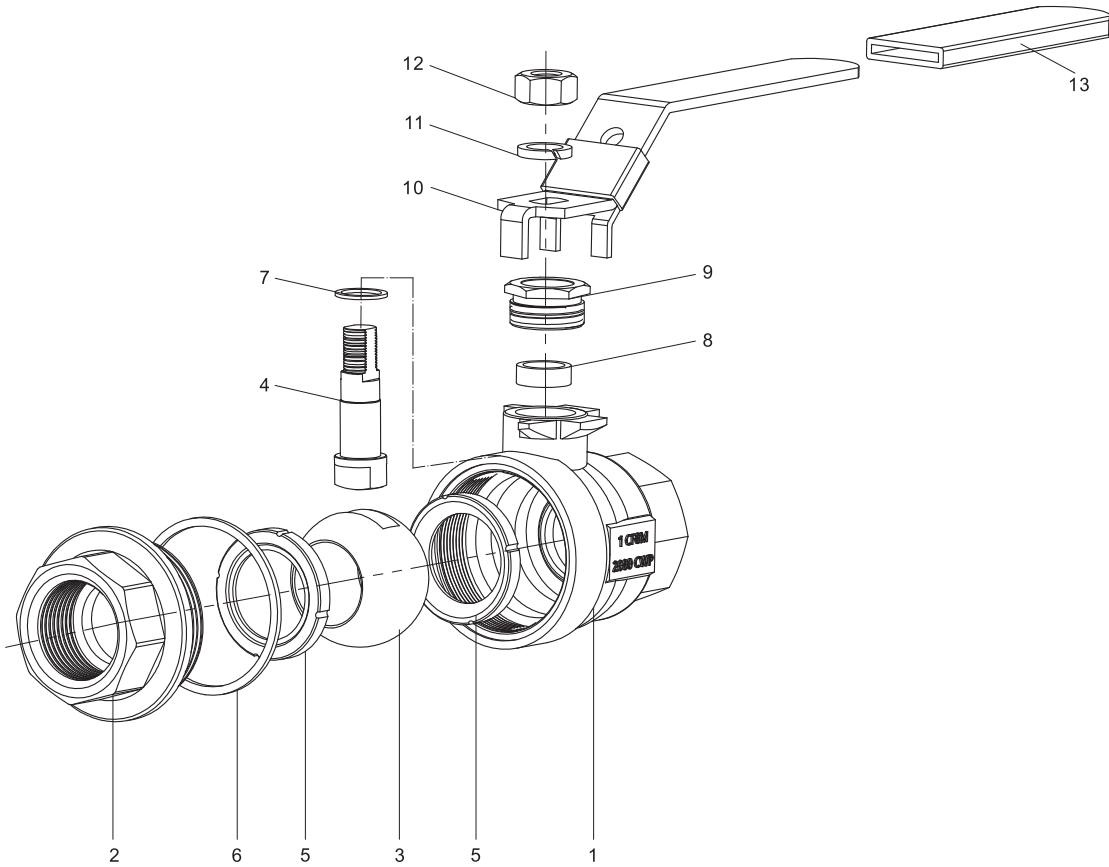
Unit: inch

Size	D	L	H	W
1/4"	0.43	1.89	2.01	4.09
3/8"	0.49	2.20	2.01	4.09
1/2"	0.59	2.68	2.09	4.96
3/4"	0.79	3.07	2.56	4.96
1"	0.98	3.35	3.03	5.67
1-1/4"	1.26	3.94	3.21	5.67
1-1/2"	1.50	4.17	3.72	7.44
2"	1.97	5.12	4.02	7.44

2PC Thread Ball Valve 2000PSI
-Full Port



PART DRAWING



No.	Item	Material	
1	Body	A351-CF8	A351-CF8M
2	Cap	A351-CF8	A351-CF8M
3	Ball	A182-F304	A182-F316
4	Stem	A276-304	A276-316
5	Seat	RTEF	RTEF
6	Cap gasket	PTFE	PTFE
7	Gasket	PTFE	PTFE
8	Stem packing	PTFE	PTFE
9	Packing gland	A182-304	A182-304
10	Handle	A240-304	A240-304
11	Spring washer	304	304
12	Nut	A2-70	A2-70
13	Handle cover	PVC	PVC

2PC Long Pattern Threaded
Ball Valve



STANDARD SPECIFICATION

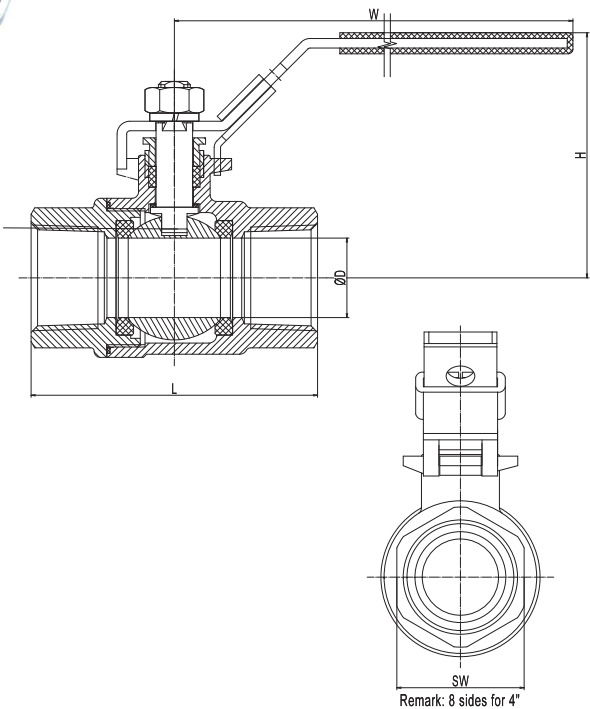
Design	ASME B16.34
Rating	1000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem

DIMENSIONS

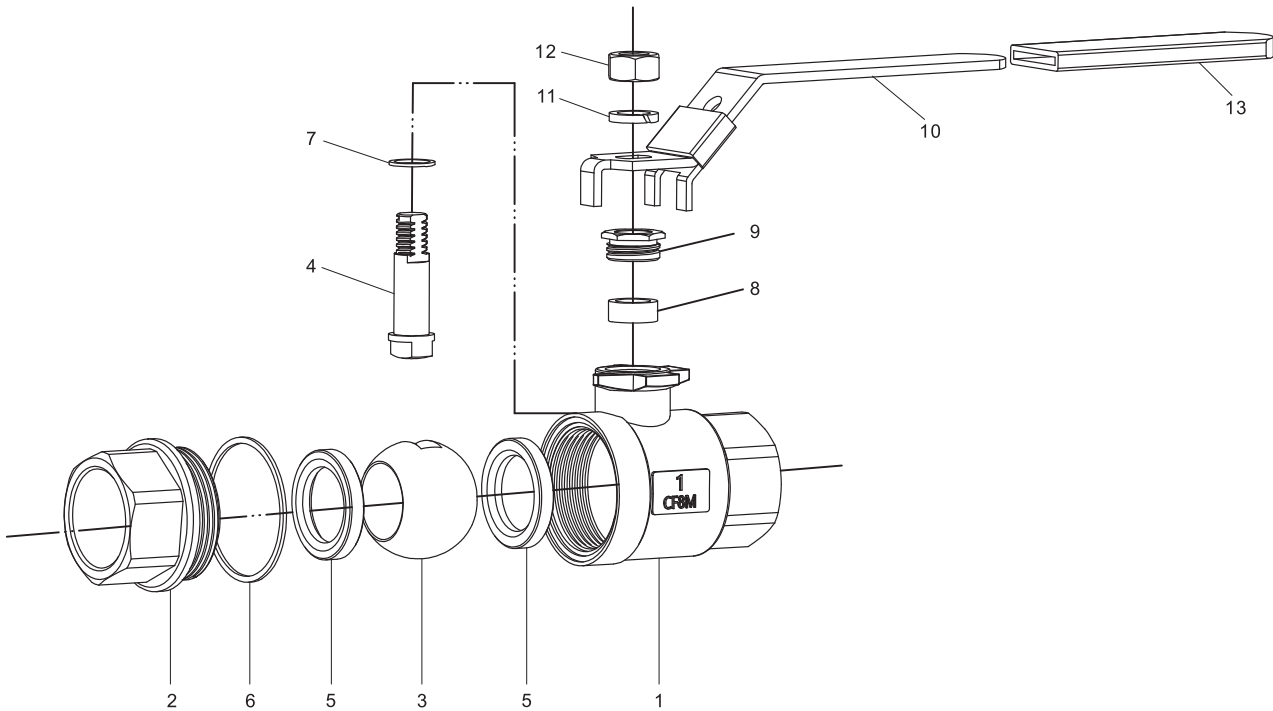
Size	D	L	H	W	SW
1/4"	0.43	2.36	2.01	4.06	0.87
3/8"	0.49	2.36	2.01	4.06	0.87
1/2"	0.59	2.95	2.09	4.06	1.02
3/4"	0.79	3.15	2.56	4.96	1.26
1"	0.98	3.54	3.03	5.67	1.57
1-1/4"	1.26	4.33	3.21	5.67	1.89
1-1/2"	1.50	4.72	3.72	7.44	2.20
2"	1.97	5.51	4.02	7.44	2.76
2-1/2"	2.56	7.28	4.69	8.78	3.29
3"	3.00	8.07	5.08	8.78	4.02
4"	3.70	9.45	6.65	11.69	5.12



Unit: inch

2PC Long Pattern Threaded
Ball Valve

PART DRAWING



No.	Item	Material		
1	Body	A351-CF8M	A216-WCB	A351-CF8
2	Cap	A351-CF8M	A216-WCB	A351-CF8
3	Ball	A182-F316	A182-F316	A182-F304
4	Stem	A276-316	A276-316	A276-304
5	Seat	TFM1600/RTFE	TFM1600/RTFE	TFM1600/RTFE
6	Cap gasket	PTFE	PTFE	PTFE
7	Thrust washer	PTFE	PTFE	PTFE
8	Stem packing	PTFE	PTFE	PTFE
9	Packing gland	A182-304	A182-304	A182-304
10	Spring washer	A276-304	A276-304	A276-304
11	Nut	A2-70	A2-70	A2-70
12	Handle	A240-304	A240-304	A240-304
13	Handle cover	PVC	PVC	PVC

2PC Threaded Ball Valve
-Reduced Port

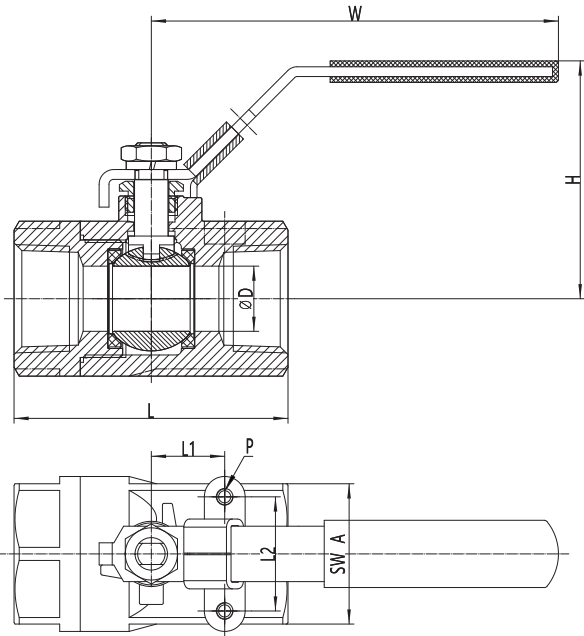


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Reduced bore
Blow-out proof stem



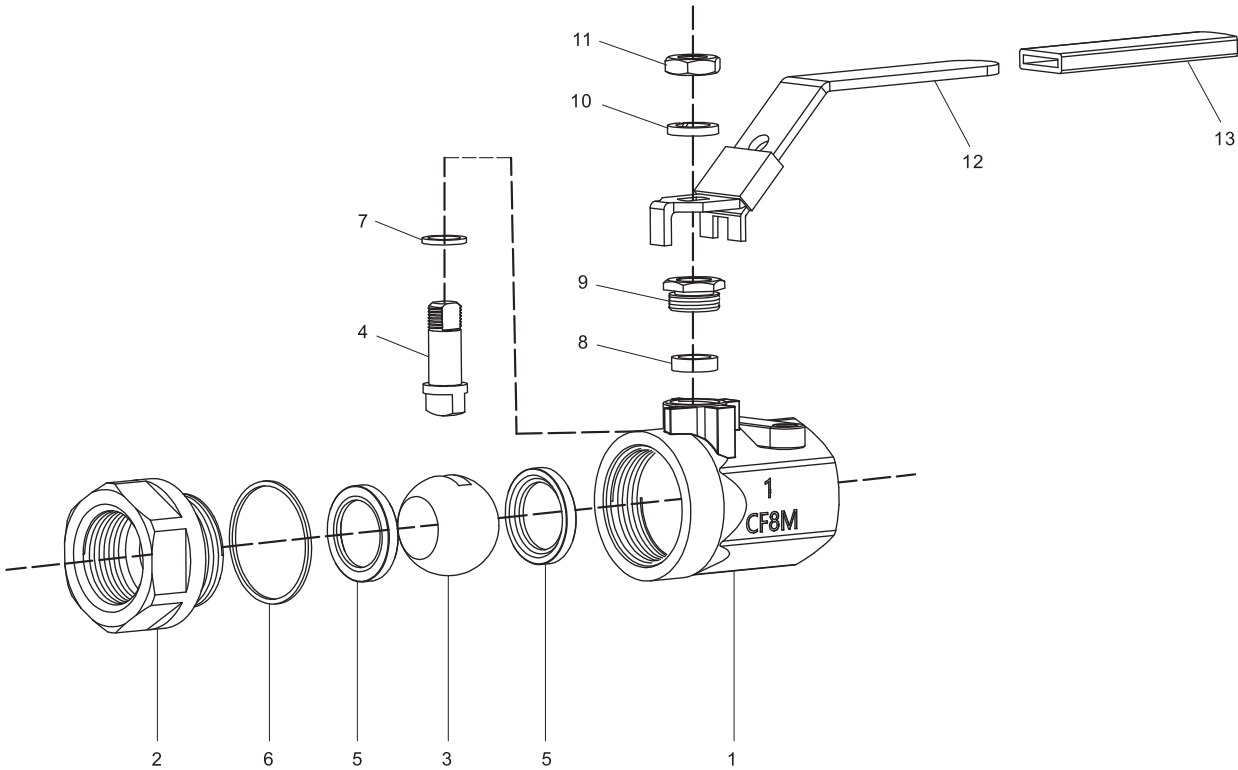
DIMENSIONS

Size	D	L	L1	L2	H	W	SW(A)	P
1/4"	0.41	2.03	0.49	1.12	2.01	3.74	0.98	10-24UNC
3/8"	0.41	2.24	0.49	1.12	2.01	3.74	0.98	10-24UNC
1/2"	0.49	2.46	0.49	1.12	2.05	3.74	1.10	10-24UNC
3/4"	0.59	2.91	0.81	1.38	2.36	4.13	1.42	10-24UNC
1"	0.79	3.31	0.89	1.38	2.87	4.92	1.69	10-24UNC
1-1/4"	0.98	3.60	0.85	1.50	3.03	4.92	2.05	10-24UNC
1-1/2"	1.26	3.90	0.94	1.50	3.46	7.09	2.36	1/4-20UNC
2"	1.50	4.31	0.94	1.50	3.66	7.09	2.83	1/4-20UNC

2PC Threaded Ball Valve
-Reduced Port



PART DRAWING



No.	Item	Material	
1	Body	A351-CF8	A351-CF8M
2	Bonnet	A351-CF8	A351-CF8M
3	Ball	A182-F304	A182-F316
4	Stem	A276-304	A276-316
5	Seat	RTEF	RTEF
6	Bnnet gasket	PTFE	PTFE
7	Thrust washer	PTFE	PTFE
8	Packing	PTFE	PTFE
9	Gland bushing	A182-304	A182-304
10	Retaining ring	304	304
11	Thin hexagonal nut	A2-70	A2-70
12	Handle	A240-304	A240-304
13	Handle cover	PVC	PVC

2PC Welded Threaded Ball Valve
3600PSI

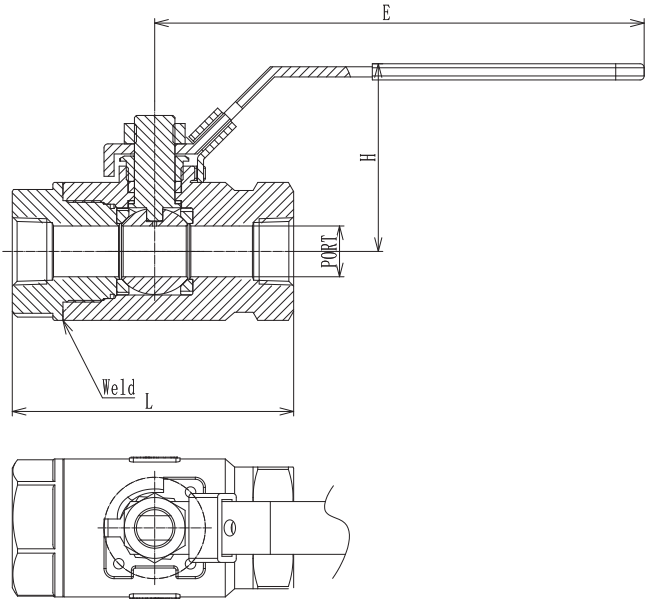


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	3600PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266

DESIGN FEATURES

Blow-out proof stem
Socket weld connection
High pressure



DIMENSIONS

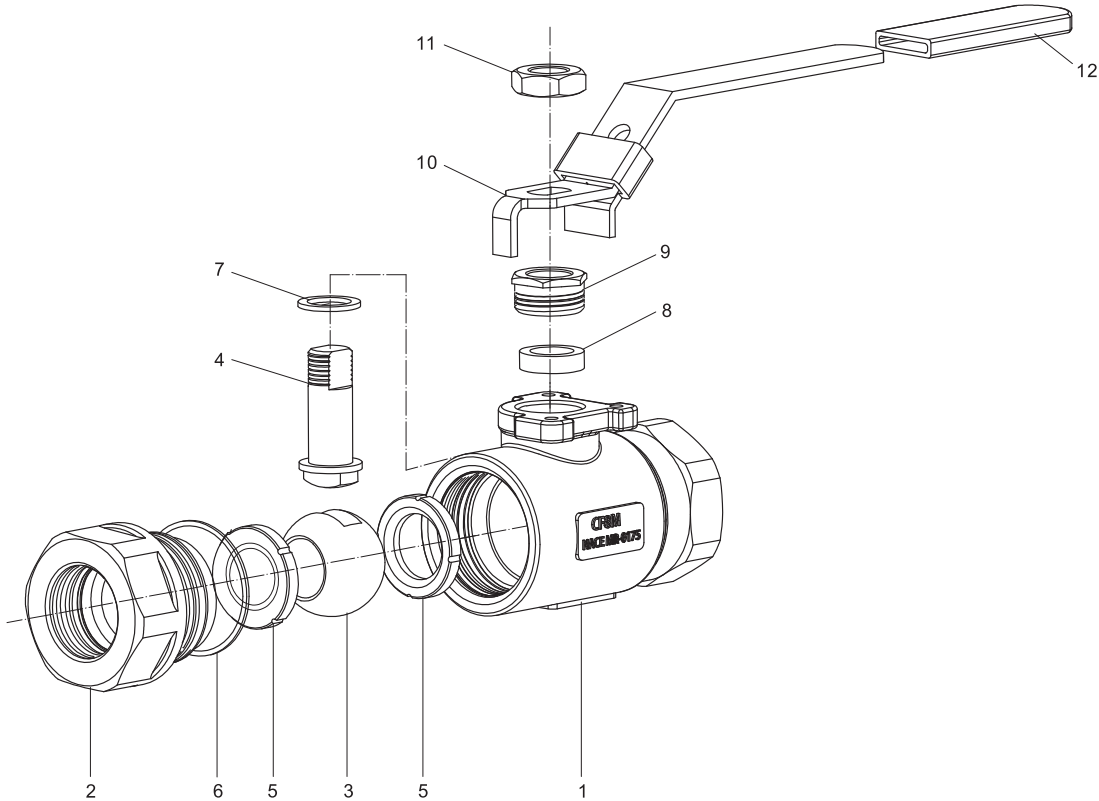
Unit: inch

Size	H	E	L	PORT	ISO5211
1/4"	2.44	5.12	2.99	0.252	F03
3/8"(R)	2.44	5.12	2.99	0.252	F03
1/2"	2.44	5.12	4	0.5	F03
3/4"	2.99	5.71	4.25	0.75	F04
1"(R)	2.99	5.71	4.25	0.75	F04
1"	3.78	10	4.5	1	F05
1-1/2"	4.67	13.78	5.29	1.51	F07
2"(R)	4.67	13.78	6.25	1.51	F07

2PC Welded Threaded Ball Valve
3600PSI



PART DRAWING



No.	Item	Material	
1	Body	WCB	CF8M
2	Cap	WCB	CF8M
3	Ball	F316	F316
4	Stem	316	316
5	Seat	PEEK	PEEK
6	Sealing gasket	Graphite	Graphite
7	Gasket	PEEK	PEEK
8	Packing	Graphite	Graphite
9	Gland	316	316
10	Handle	A240-304	A240-304
11	Nut	A2-70	A2-70
12	Handle sleeve	PVC	PVC

2PC Welded Threaded Ball Valve
6000PSI

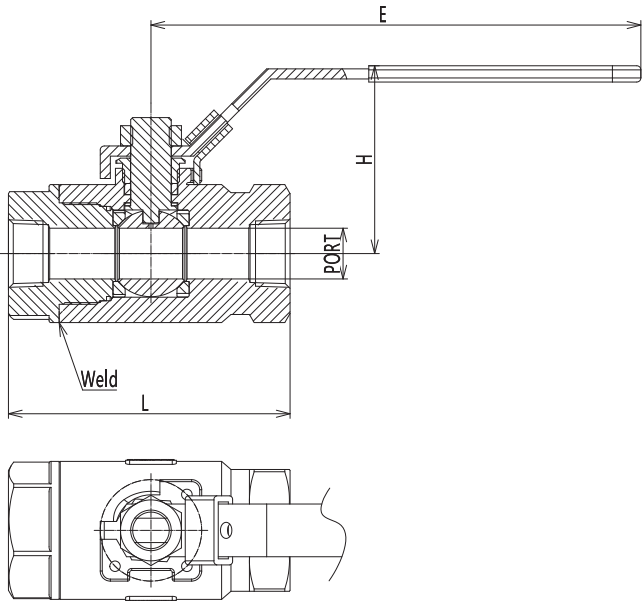


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	6000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266

DESIGN FEATURES

Blow-out proof stem
Socket weld connection
High pressure



DIMENSIONS

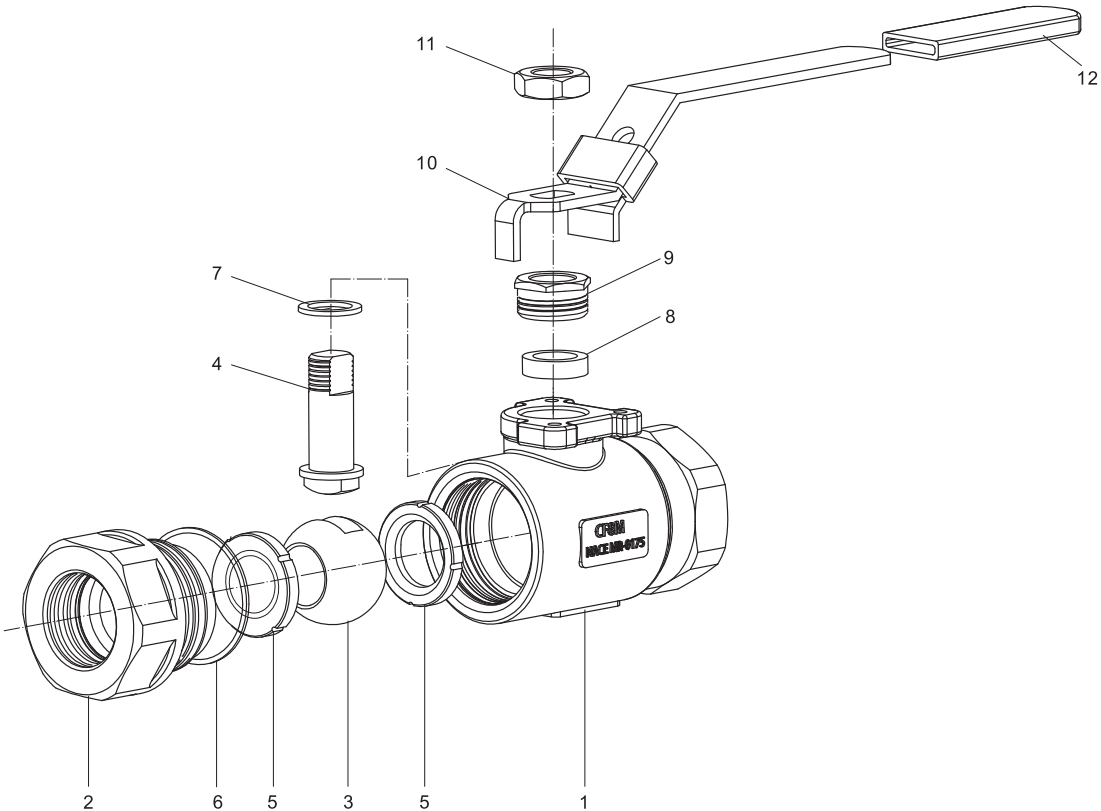
Unit: inch

Size	H	E	L	PORT	ISO5211
1/4"	2.44	5.12	2.99	0.252	F03
3/8"(R)	2.44	5.12	2.99	0.252	F03
1/2"	2.44	5.12	4	0.5	F03
3/4"	2.99	5.71	4.25	0.75	F04
1"(R)	2.99	5.71	4.25	0.75	F04
1"	3.78	10	4.75	1	F05
1-1/2"	4.67	13.78	5.29	1.51	F07
2"(R)	4.67	13.78	6.25	1.51	F07

2PC Welded Threaded Ball Valve
6000PSI



PART DRAWING



No.	Item	Material	
1	Body	WCB	CF8M
2	Cap	WCB	CF8M
3	Ball	F316	F316
4	Stem	316	316
5	Seat	PEEK	PEEK
6	Sealing gasket	Graphite	Graphite
7	Gasket	PEEK	PEEK
8	Packing	Graphite	Graphite
9	Gland	316	316
10	Handle	A240-304	A240-304
11	Nut	A2-70	A2-70
12	Handle sleeve	PVC	PVC

2PC Thread Bracket-Mounted
Welded Ball Valve 2000PSI

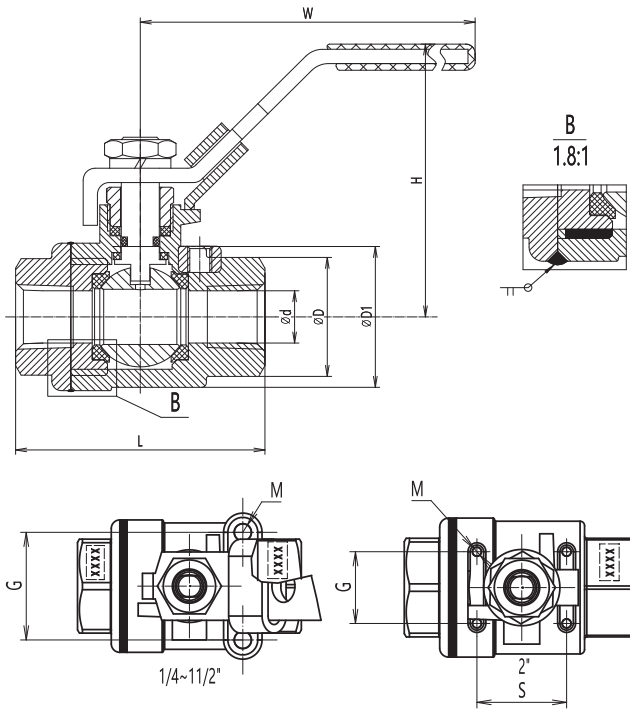


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem

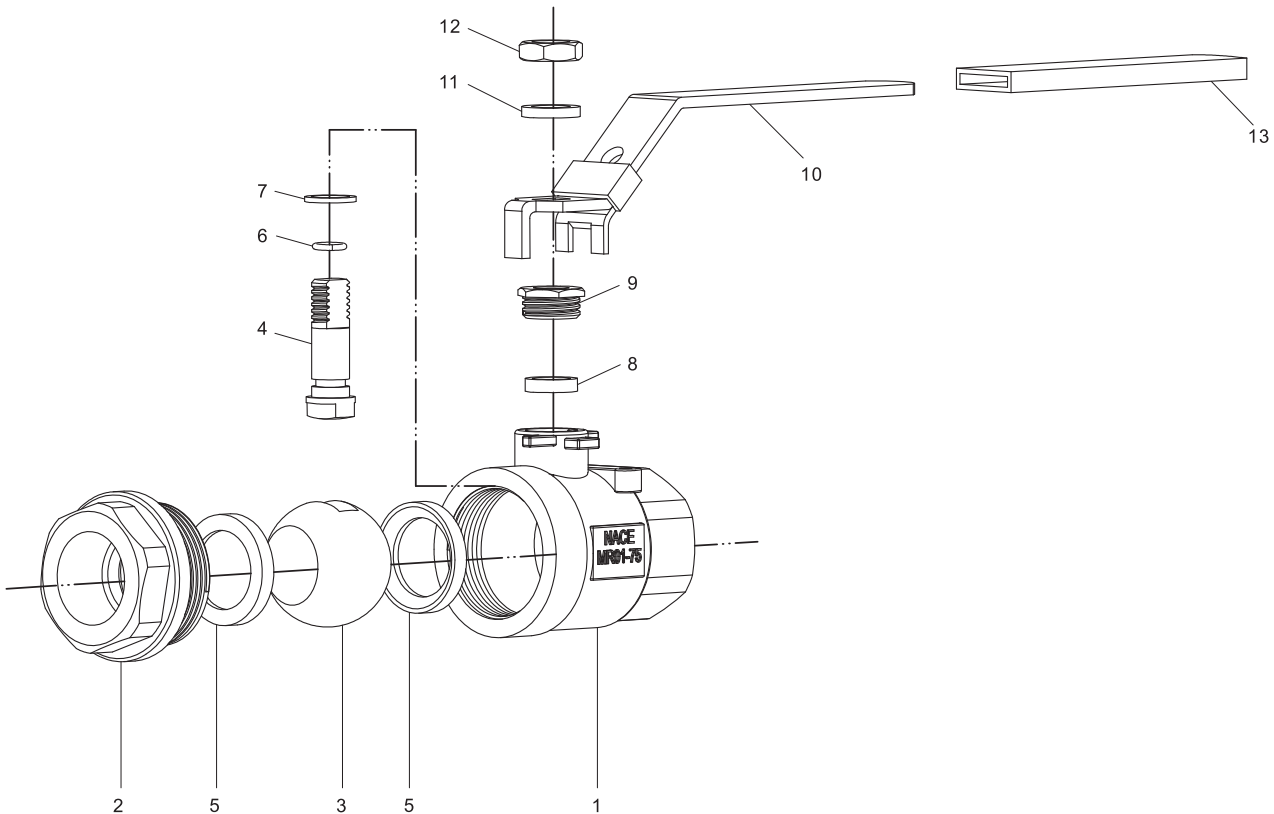


DIMENSIONS

Size	d	L	H	W	D	D1	M	G	S
1/4"	0.43	2.08	2.28	4.13	0.97	1.16	10-24UNC	0.99	/
3/8"	0.5	2.08	2.28	4.13	1.1	1.18	10-24UNC	1.01	/
1/2"	0.59	2.48	2.63	4.92	1.1	1.34	10-24UNC	0.98	/
3/4"	0.79	2.83	2.75	5.71	1.46	1.68	10-24UNC	1.38	/
1"	0.98	3.38	3.15	6.10	1.87	2	10-24UNC	1.38	/
1-1/4"	1.25	3.93	3.30	6.10	2.05	2.51	1/4-20UNC	1.5	/
1-1/2"	1.5	4.24	4.09	7.49	2.36	2.99	1/4-20UNC	1.5	/
2"	1.97	4.85	4.44	7.49	3.22	3.72	1/4-20UNC	1.52	1.97

2PC Thread Bracket-Mounted
Welded Ball Valve 2000PSI

PART DRAWING



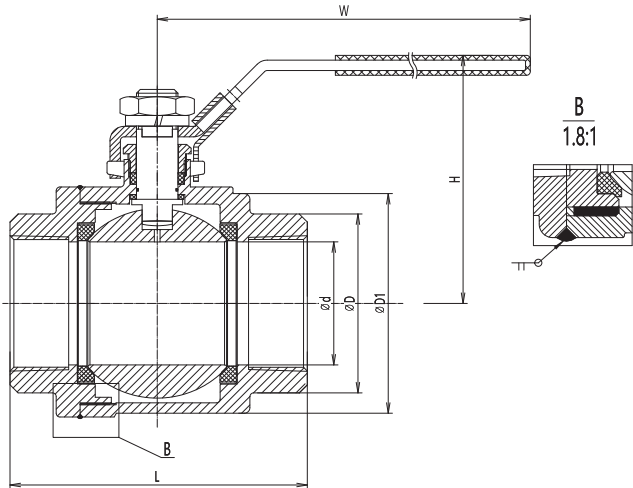
No.	Item	Material	
1	Body	A351-CF8	A351-CF8M
2	Cap	A351-CF8	A351-CF8M
3	Ball	A182-F304	A182-F316
4	Stem	A276-304	A276-316
5	Seat	RTFE	RTFE
6	O-ring	VITON GLTE	VITON GLTE
7	Gasket	RTFE	RTFE
8	Stem packing	RTFE	RTFE
9	Packing gland	A182-304	A182-304
10	Handle	A240-304	A240-304
11	Spring washer	304	304
12	Nut	A2-70	A2-70
13	Handle cover	PVC	PVC

2PC Thread Bracket-Mounted
Welded Ball Valve 1000PSI



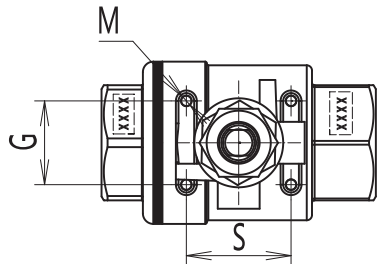
STANDARD SPECIFICATION

Design	ASME B16.34
Rating	1000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110



DESIGN FEATURES

Full bore
Blow-out proof stem



DIMENSIONS

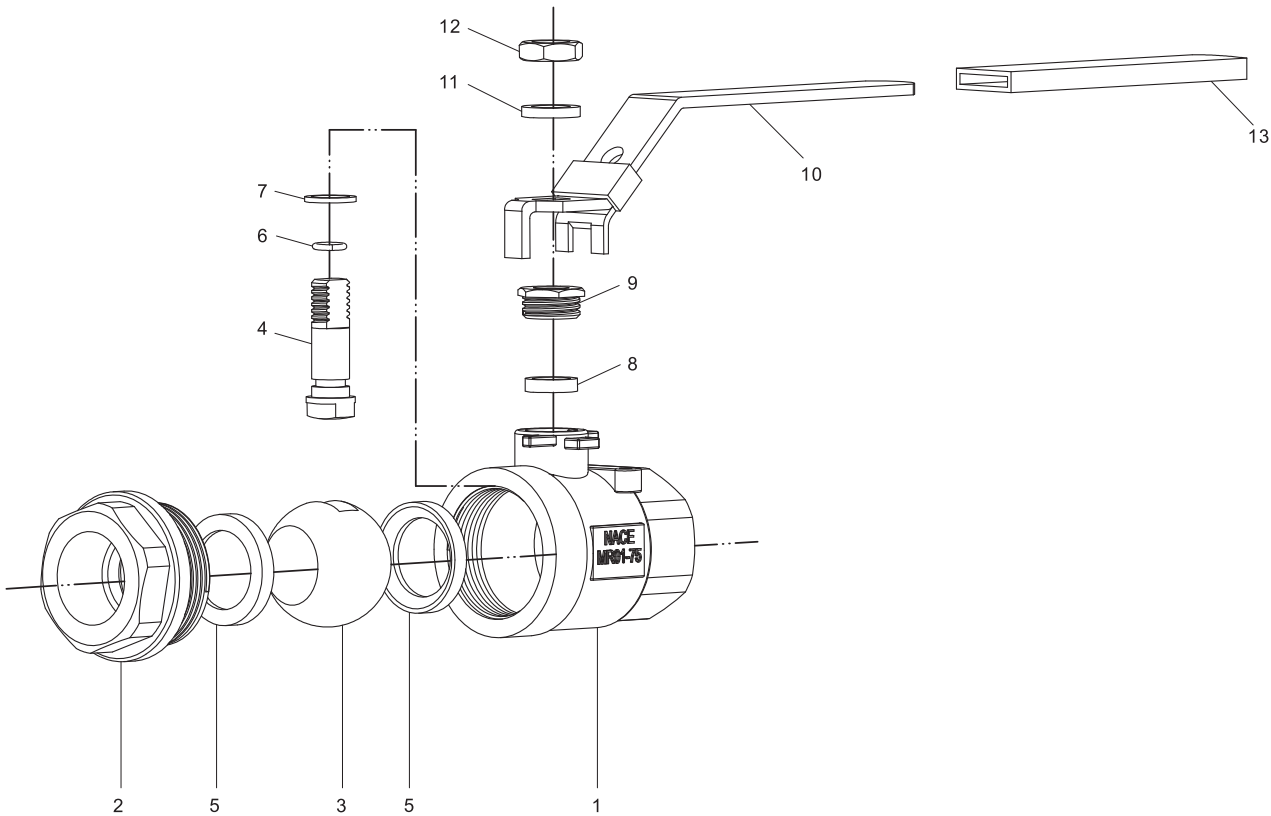
Unit: inch

Size	d	L	H	W	D	D1	M	G	S
2-1/2"	2.56	6.18	4.72	10.24	3.72	4.57	5/16-18UNC	2.58	2.56
3"	3.15	7.28	5.35	12.2	4.37	5.31	5/16-18UNC	2.58	2.77
4"	3.9	9.02	6.14	14.57	5.81	6.71	5/16-18UNC	2.76	2.76

2PC Thread Bracket-Mounted
Welded Ball Valve 1000PSI

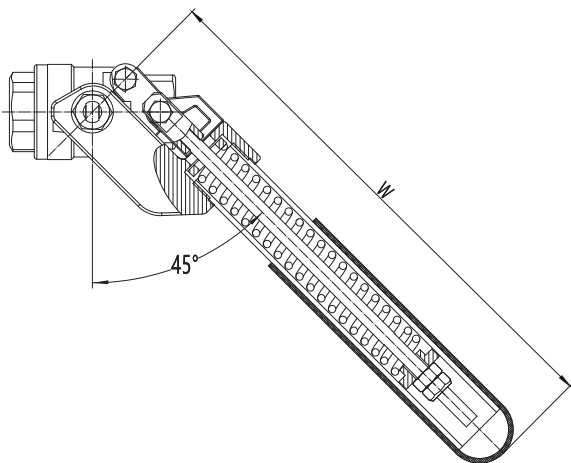
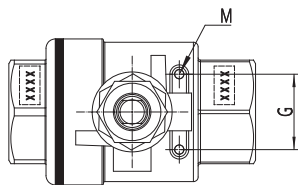
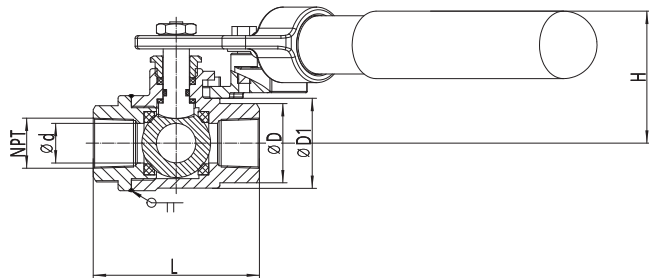


PART DRAWING



No.	Item	Material	
1	Body	A351-CF8	A351-CF8M
2	Cap	A351-CF8	A351-CF8M
3	Ball	A182-F304	A182-F316
4	Stem	A276-304	A276-316
5	Seat	RTFE	RTFE
6	O-ring	VITON GLTE	VITON GLTE
7	Gasket	RTFE	RTFE
8	Stem packing	RTFE	RTFE
9	Packing gland	A182-304	A182-304
10	Handle	A240-304	A240-304
11	Spring washer	304	304
12	Nut	A2-70	A2-70
13	Handle cover	PVC	PVC

2PC Loating Spring Return
Ball Valve 2000PSI



STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem
Self-reset

DIMENSIONS

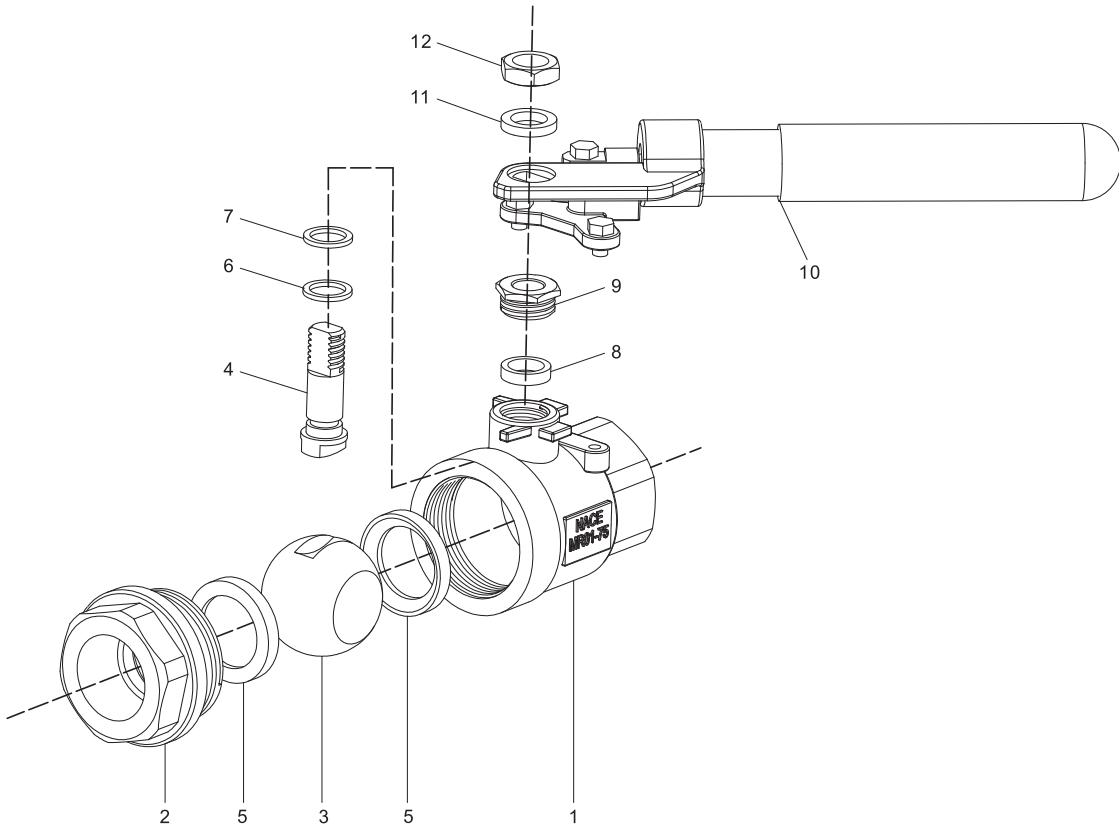
Unit: inch

Size	d	L	H	W	G	D	D1	M
1/2"	0.59	2.48	1.97	7.91	0.99	1.1	1.34	10-24UNC
3/4"	0.79	2.83	2.07	7.91	1.38	1.46	1.68	10-24UNC
1"	0.98	3.38	2.36	7.91	1.38	1.87	2	10-24UNC

2PC Loating Spring Return
Ball Valve 2000PSI



PART DRAWING



No.	Item	Material
1	Body	A351-CF8M
2	Cap	A351-CF8M
3	Ball	A182-F316
4	Stem	A276-316
5	Seat	RTFE
6	O-ring	VITON GLTE
7	Gasket	RTFE
8	Stem packing	RTFE
9	Packing gland	A182-304
10	Reset handle	A240-304
11	Spring washer	304
12	Nut	A2-70

3PC Threaded (Butt & Socket)
Ball Valve

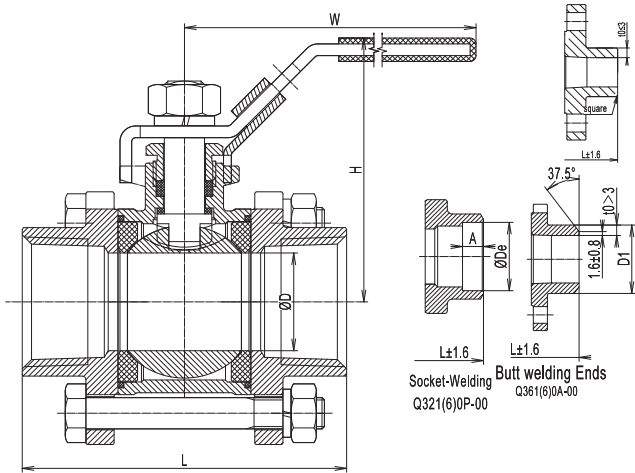


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	1000PSI (1/4"~2") 800PSI (2-1/2"~4")
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem



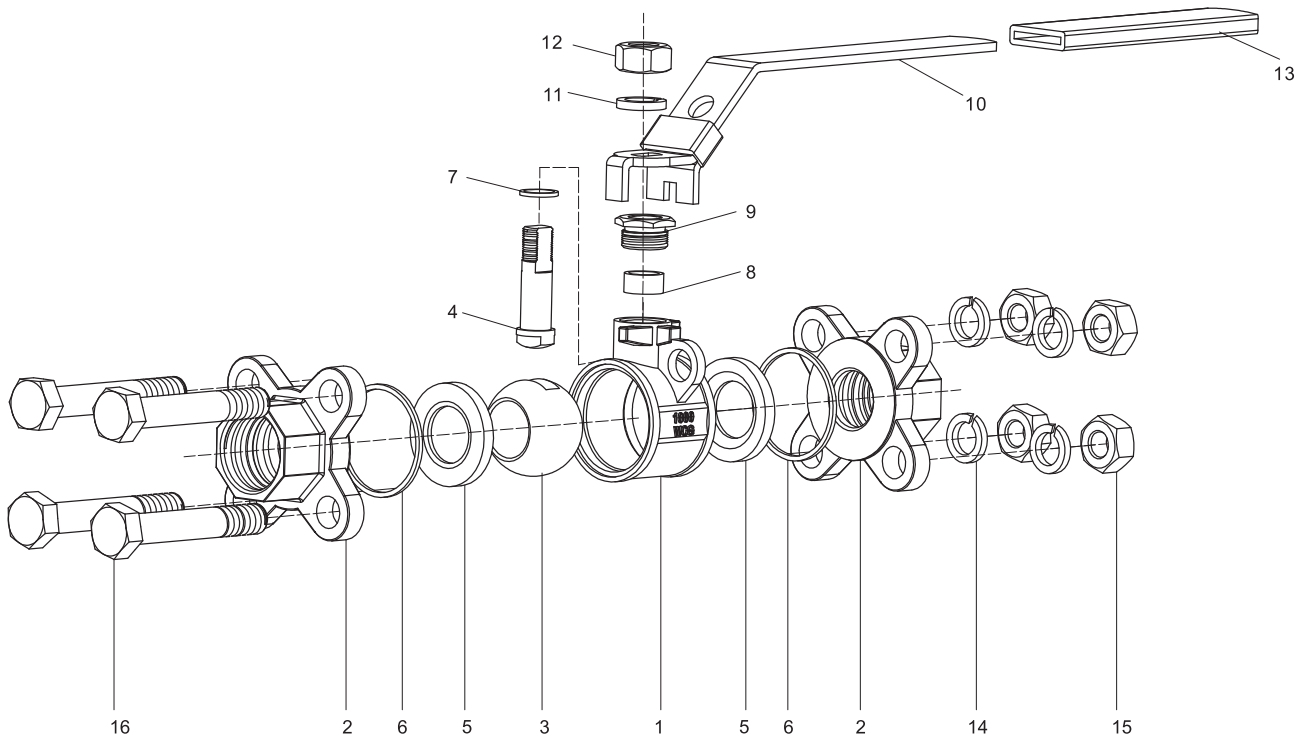
DIMENSIONS

Unit: inch

Size	D	L	H	W	SW			BW		
					De	A	D1	t0-10	t0-40	t0-80
1/4"	0.43	2.40	1.89	4.09	0.57	0.43	0.54	0.07	0.09	0.275
3/8"	0.49	2.32	1.89	4.09	0.71	0.43	0.67	0.07	0.09	0.255
1/2"	0.59	2.52	2.24	4.92	0.87	0.43	0.84	0.08	0.11	0.44
3/4"	0.79	2.80	2.44	4.92	1.09	0.55	1.05	0.08	0.11	0.55
1"	0.98	3.27	2.83	6.10	1.35	0.71	1.31	0.11	0.13	0.82
1-1/4"	1.26	3.86	3.07	6.30	1.70	0.71	1.66	0.11	0.14	1.30
1-1/2"	1.50	4.25	3.58	7.48	1.94	0.75	1.90	0.11	0.14	2.015
2"	1.97	4.96	4.02	7.48	2.43	0.83	2.37	0.11	0.14	3.15
2-1/2"	2.56	6.38	4.80	9.06	2.93	0.83	2.87	0.12	0.20	7.21
3"	2.99	6.89	5.20	9.06	3.55	0.83	3.50	0.12	0.22	10.3
4"	3.94	8.50	6.97	13.19	4.56	0.83	4.50	0.12	0.24	21.35

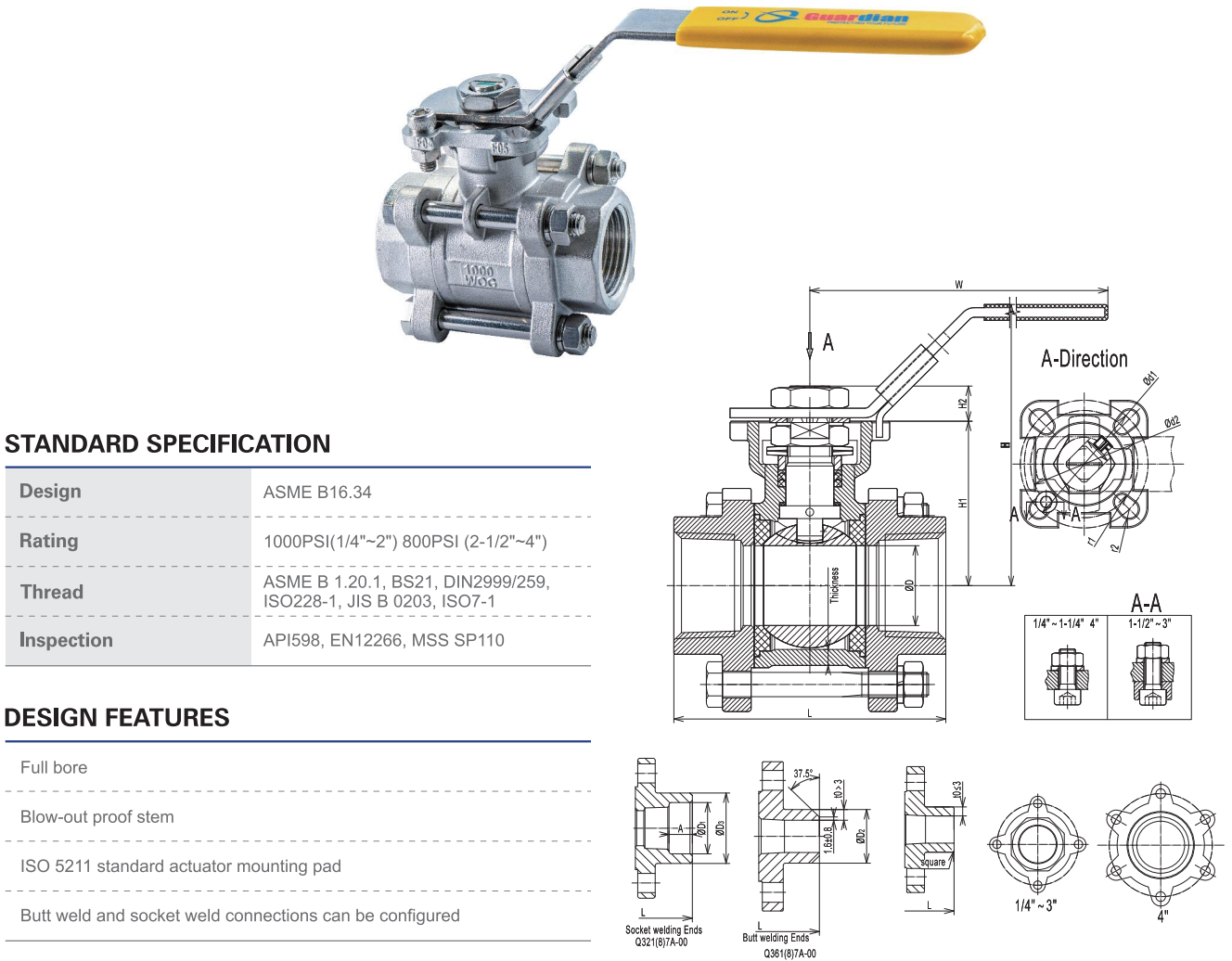
3PC Threaded (Butt & Socket)
Ball Valve

PART DRAWING



No.	Item	Material		
1	Body	A351-CF8M	A216-WCB	A351-CF8
2	Cap	A351-CF8M	A216-WCB	A351-CF8
3	Ball	A182-F316	A182-F316	A182-F304
4	Stem	A276-316	A276-316	A276-304
5	Seat	TFM1600/RTFE	TFM1600/RTFE	TFM1600/RTFE
6	Packing gasket	PTFE	PTFE	PTFE
7	Gasket	PTFE	PTFE	PTFE
8	Stem packing	PTFE	PTFE	PTFE
9	Packing gland	A182 F304	A182 F304	A182 F304
10	Handle	A240 304	A240 304	A240 304
11	Spring washer	A276-304	A276-304	A276-304
12	Nut	304	304	304
13	Handle cover	PVC	PVC	PVC
14	Spring washer	A276-304	A276-304	4"used 6
15	Nut	A2-70	A2-70	4"used 6
16	Bolt	A2-70	A2-70	4"used 6

3PC Threaded Ball Valve
(Butt & Socket)



STANDARD SPECIFICATION

Design	ASME B16.34
Rating	1000PSI(1/4"~2") 800PSI (2-1/2"~4")
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

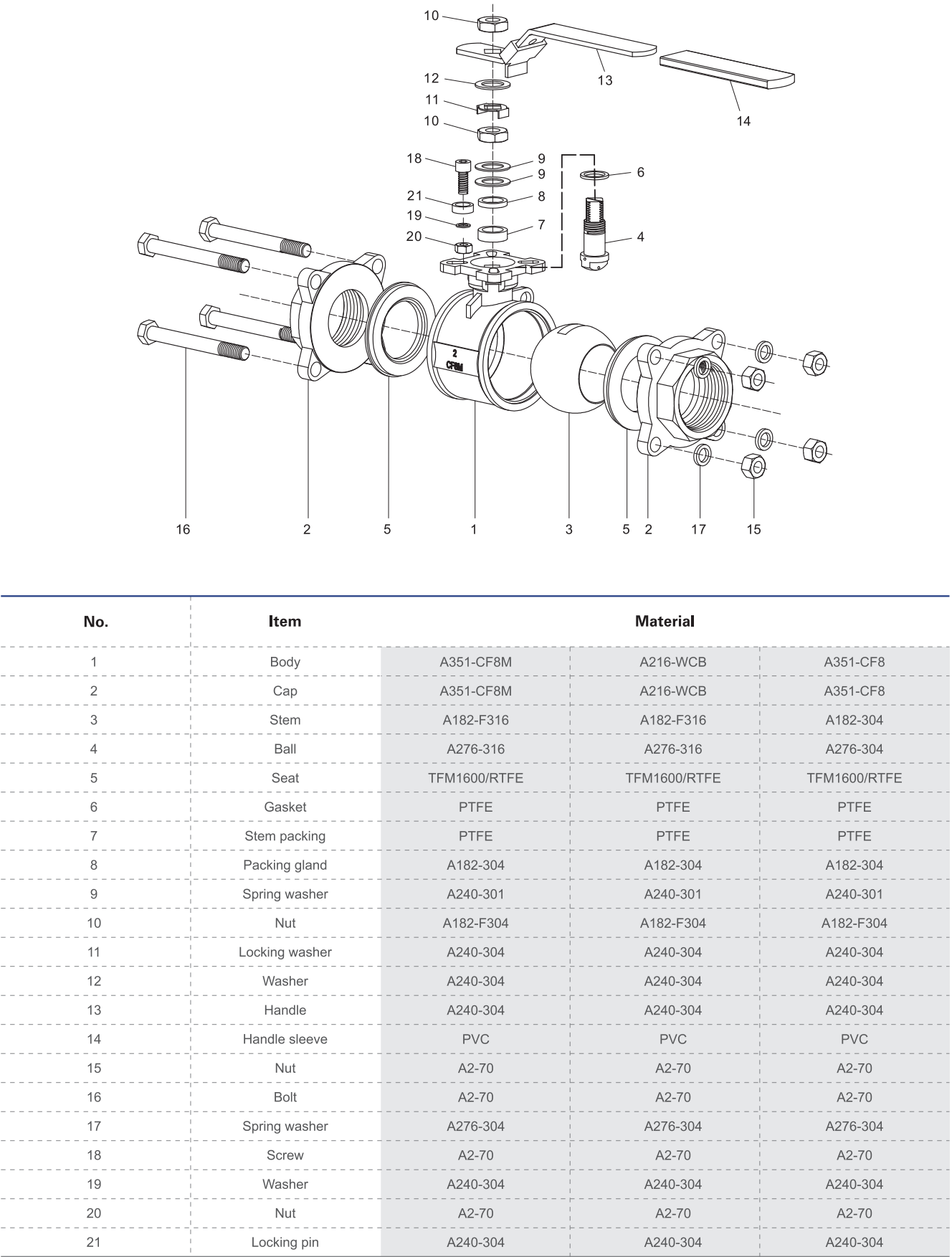
Full bore
Blow-out proof stem
ISO 5211 standard actuator mounting pad
Butt weld and socket weld connections can be configured

DIMENSIONS

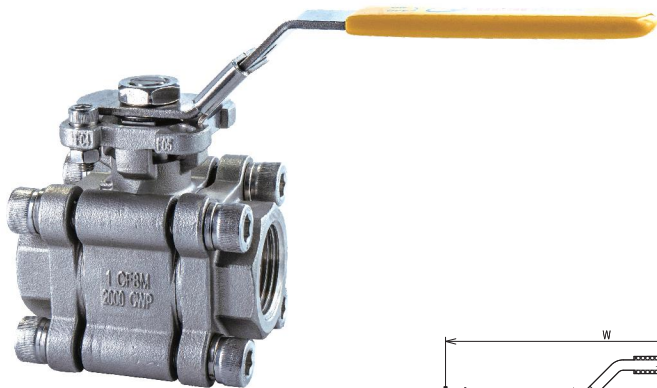
Size	D	L	H	H1	H2	W	F	A	D1	D2	D3	t0-10	t0-40	t0-80	t	d1	d2	r1	r2	ISO5211
1/4"	0.43	2.52	2.52	1.63	0.34	4.41	0.35	0.39	0.58	0.54	0.80	0.07	0.09	0.12	0.16	1.42	1.65	0.12	0.12	F03/F04
3/8"	0.49	2.52	2.52	1.63	0.34	4.41	0.35	0.39	0.71	0.68	0.94	0.07	0.09	0.13	0.16	1.42	1.65	0.12	0.12	F03/F04
1/2"	0.59	2.84	2.95	1.59	0.35	5.55	0.35	0.39	0.87	0.84	1.19	0.08	0.11	0.15	0.16	1.42	1.65	0.12	0.12	F03/F04
3/4"	0.79	3.15	3.03	1.69	0.35	5.55	0.35	0.51	1.09	1.05	1.47	0.08	0.11	0.15	0.17	1.42	1.65	0.12	0.12	F03/F04
1"	0.98	3.35	3.54	2.03	0.43	6.38	0.43	0.51	1.35	1.32	1.76	0.11	0.13	0.18	0.20	1.65	1.97	0.12	0.14	F04/F05
1-1/4"	1.26	4.13	3.70	2.21	0.43	6.38	0.43	0.51	1.70	1.66	2.18	0.11	0.14	0.19	0.21	1.65	1.97	0.12	0.14	F04/F05
1-1/2"	1.50	4.45	4.25	2.72	0.55	7.40	0.55	0.51	1.94	1.90	2.46	0.11	0.15	0.20	0.23	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	5.20	4.61	3.05	0.55	7.40	0.55	0.63	2.43	2.38	3.01	0.11	0.15	0.22	0.27	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.56	6.69	5.79	3.94	0.75	8.86	0.67	0.63	2.93	2.88	3.54	0.12	0.20	0.28	0.28	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	7.34	6.18	4.33	0.75	8.86	0.67	0.63	3.55	3.50	4.21	0.12	0.22	0.30	0.29	2.76	4.02	0.18	0.22	F07/F10
4"	3.70	8.92	7.40	5.39	0.87	12.60	0.87	0.75	4.56	4.50	5.28	0.12	0.24	0.34	0.32	2.76	4.02	0.18	0.22	F07/F10

3PC Threaded Ball Valve
(Butt & Socket)

PART DRAWING



3PC Threaded (Butt & Socket)
Ball Valve Anti-static 2000PSI

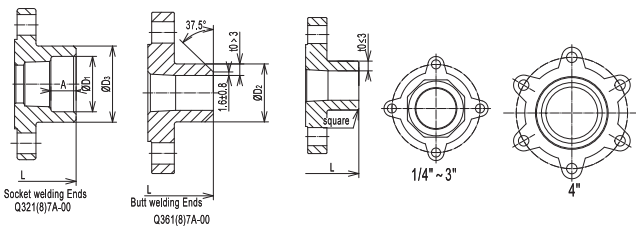
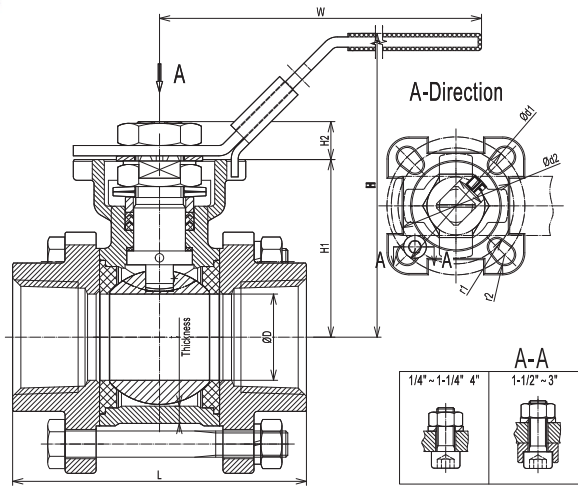


STANDARD SPECIFICATION

Design	ASME B16.34
Rating	2000PSI(1/4"~1") 1500PSI (1-1/4"~2")
Thread	ASME B 1.20.1, BS21, DIN2999/259, ISO228-1, JIS B 0203, ISO7-1
Inspection	API598, EN12266, MSS SP110

DESIGN FEATURES

Full bore
Blow-out proof stem
ISO 5211 standard actuator mounting pad
Butt weld and socket weld connections can be configured



DIMENSIONS

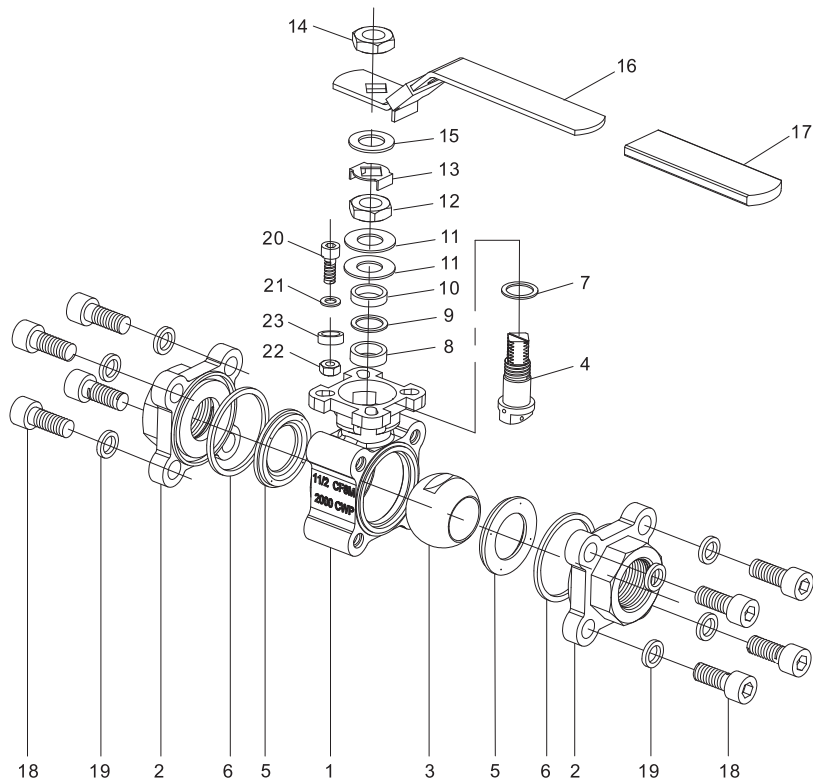
Unit: inch

Size	P.R.	D	L	H	H1	H2	W	Df	A	t	D1	De	BW				d1	d2	r1	r2	ISO5211
													ΦD2	t0-10	t0-40	t0-80					
1/4"	CL800	9.4	2.36	2.84	1.54	0.35	5.55	0.35	0.39	0.18	0.95	0.58	0.54	0.07	0.09	0.12	1.42	1.65	0.12	0.12	F03/F04
3/8"	CL800	9.4	2.36	2.84	1.54	0.35	5.55	0.35	0.39	0.18	1.02	0.71	0.68	0.07	0.09	0.13	1.42	1.65	0.12	0.12	F03/F04
1/2"	CL800	15	2.95	2.95	1.63	0.35	5.55	0.35	0.39	0.19	1.21	0.87	0.84	0.08	0.11	0.15	1.42	1.65	0.12	0.12	F03/F04
3/4"	CL800	20	3.15	3.15	1.85	0.35	5.55	0.35	0.51	0.20	1.44	1.09	1.05	0.08	0.11	0.15	1.42	1.65	0.12	0.12	F03/F04
1"	CL800	25	3.39	3.54	2.11	0.43	6.38	0.43	0.51	0.23	1.77	1.35	1.32	0.11	0.13	0.18	1.65	1.97	0.12	0.12	F04/F05
1-1/4"	CL1600	32	4.33	3.86	2.38	0.43	6.38	0.43	0.51	0.25	2.13	1.70	1.66	0.11	0.14	0.19	1.65	1.97	0.12	0.12	F04/F05
1-1/2"	CL1600	38	4.72	4.45	2.91	0.55	7.40	0.55	0.51	0.27	2.39	1.94	1.90	0.11	0.15	0.20	1.97	2.76	0.14	0.18	F05/F07
2"	CL1600	50	5.51	4.80	3.25	0.55	7.40	0.55	0.63	0.30	2.98	2.43	2.38	0.11	0.15	0.21	1.97	2.76	0.14	0.18	F05/F07

3PC Threaded (Butt & Socket)
Ball Valve Anti-static 2000PSI



PART DRAWING



No.	Item	Material		
1	Body	A351-CF8M	A216-WCB	A351-CF8
2	Cap	A351-CF8M	A216-WCB	A351-CF8
3	Ball	A182-F316	A182-F316	A182-304
4	Stem	316/F51	316/F51	316/F51
5	Seat	TFM1600&RPTFE&PEEK	TFM1600&RPTFE&PEEK	TFM1600&RPTFE&PEEK
6	Sealing gasket	Graphite	Graphite	Graphite
7	Gasket	PTFE	PTFE	PTFE
8	Packing	Graphite	Graphite	Graphite
9	Anti-wear washer	PTFE+15%Carbon Fiber	PTFE+15%Carbon Fiber	PTFE+15%Carbon Fiber
10	Packing gland	A182-304	A182-304	A182-304
11	Spring washer	A240-304	A240-304	A240-304
12	Nut	A182-F304	A182-F304	A182-F304
13	Locking washer	A240-304	A240-304	A240-304
14	Nut	A2-70	A2-70	A2-70
15	Steel washer	A240-304	A240-304	A240-304
16	Handle	A240-304	A240-304	A240-304
17	Handle cover	PVC	PVC	PVC
18	Screws	A2-70	A2-70	A2-70
19	Spring washer	A276-304	A276-304	A276-304
20	Screws	A2-70	A2-70	A2-70
21	Steel washer	A240-304	A240-304	A240-304
22	Nut	A2-70	A2-70	A2-70
23	Locking pin	A240-304	A240-304	A240-304

2PC Flanged Floating Ball Valve
CL150

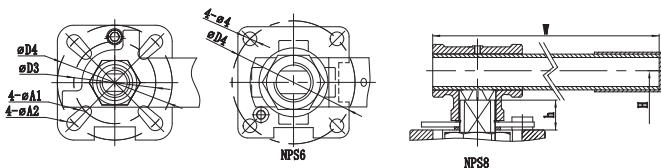
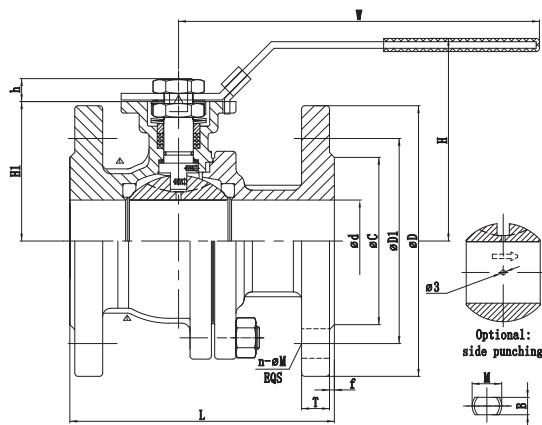


STANDARD SPECIFICATION

Design	ASME B16. 34
Rating	CL. 150
Face to Face	ASME B16. 10
Flange	ASME B16. 5-2020
Firesafe	API 607-8th

DESIGN FEATURES

Full bore
Blow-out proof stem



DIMENSIONS

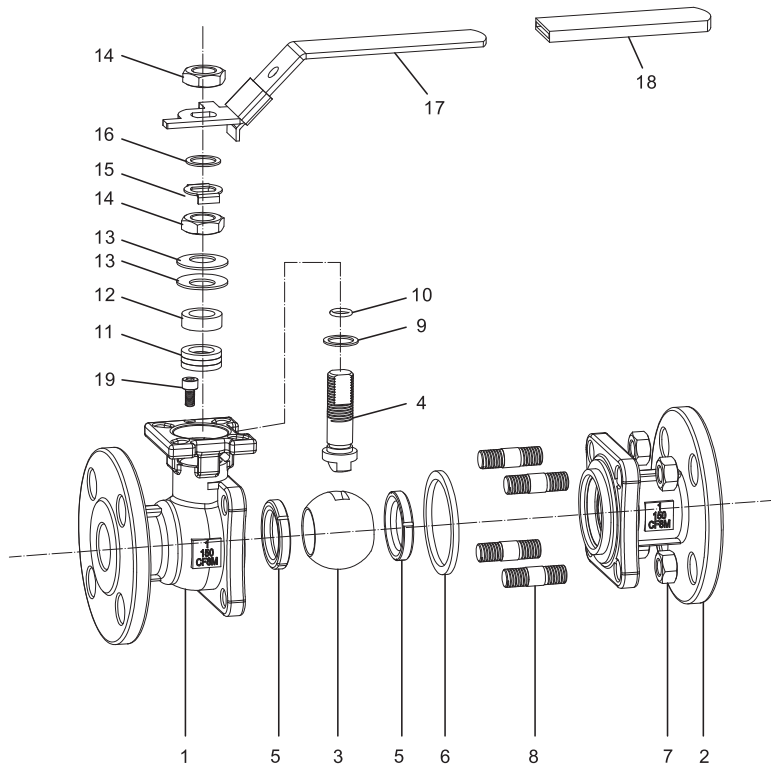
Unit: inch

Size	d	D	D1	C	T	f	n-ΦM	L	h	H1	H	W	M	B	D3	D4	A1	A2
1/2"	0.59	3.50	2.38	1.38	0.33	0.06	4-0.63	4.25	0.35	1.89	3.15	5.55	0.47	0.31	1.42	1.97	0.24	0.28
3/4"	0.79	3.90	2.75	1.69	0.37	0.06	4-0.63	4.61	0.35	2.13	3.39	5.55	0.47	0.31	1.42	1.97	0.24	0.28
1"	0.98	4.25	3.12	2.00	0.39	0.06	4-0.63	5.00	0.43	2.40	3.86	6.38	0.55	0.39	1.65	1.97	0.24	0.28
1-1/2"	1.50	5	3.88	2.87	0.50	0.06	4-0.63	6.50	0.55	2.99	4.49	8.66	0.71	0.47	1.97	2.76	0.27	0.35
2"	1.97	5.98	4.75	3.62	0.56	0.06	4-0.75	7.01	0.55	3.35	4.84	8.66	0.71	0.47	1.97	2.76	0.27	0.35
2-1/2"	2.52	7.01	5.50	4.12	0.62	0.06	4-0.75	7.48	0.67	4.25	6.06	11.22	0.87	0.55	2.76	4.02	0.35	0.43
3"	2.99	7.48	6.00	5.00	0.69	0.06	4-0.75	7.99	0.87	5.12	6.89	14.96	1.10	0.79	-	4.02	-	0.43
4"	3.94	9.02	7.50	6.19	0.89	0.06	8-0.75	9.02	0.87	5.83	7.72	14.96	1.10	0.79	-	4.02	-	0.43
6"	5.90	10.98	9.50	8.50	0.94	0.06	8-0.87	15.51	1.26	7.95	10.31	25.83	1.42	0.94	-	4.92	-	0.55
8"	7.95	13.50	11.75	10.62	1.06	0.06	8-0.87	17.99	1.34	10.24	12.44	1200	1.54	1.06	5.51	6.50	0.71	0.87

2PC Flanged Floating Ball Valve
CL150



PART DRAWING



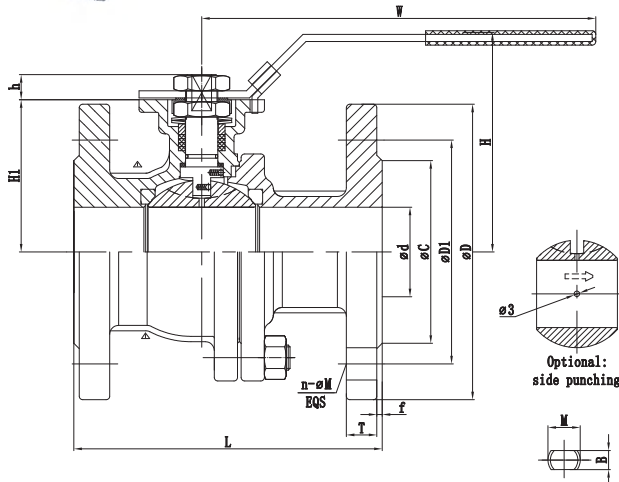
No.	Item	Material				
1	Body	A216-WCB	A351-CF8M	A351-CF8	A351-CF3M	A351-CF3
2	Cap	A216-WCB	A351-CF8M	A351-CF8	A351-CF3M	A351-CF3
3	Ball	A182-F316		A182-F304	A182-F316L	A182-304L
4	Stem	316/F51				
5	Seat	TFM1600/RTFE				
6	Sealing gasket	PTFE/316L+Graphite				
7	Nut	A194-2H	A194-8			
8	Stud	A193-B7	A193-B8			
9	Thrust gasket	RPTFE				
10	O-ring	VITON				
11	Packing	PTFE/Graphite				
12	Gland	SS304			SS316L	
13	Disc spring	SS301				
14	Thin nut	SS304				
15	Loose proof gasket	SS304				
16	Gasket	SS304				
17	Handle	SS304				
18	Handle sleeve	PVC(Soft)				

2PC Flanged Floating Ball Valve
CL300



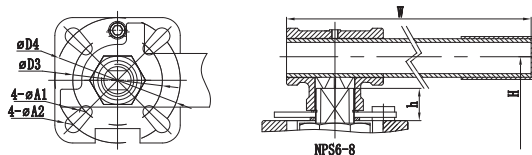
STANDARD SPECIFICATION

Design	ASME B16. 34
Rating	CL. 300
Face to Face	ASME B16. 10
Flange	ASME B16. 5-2020
Firesafe	API 607-8th



DESIGN FEATURES

Full bore
Blow-out proof stem



DIMENSIONS

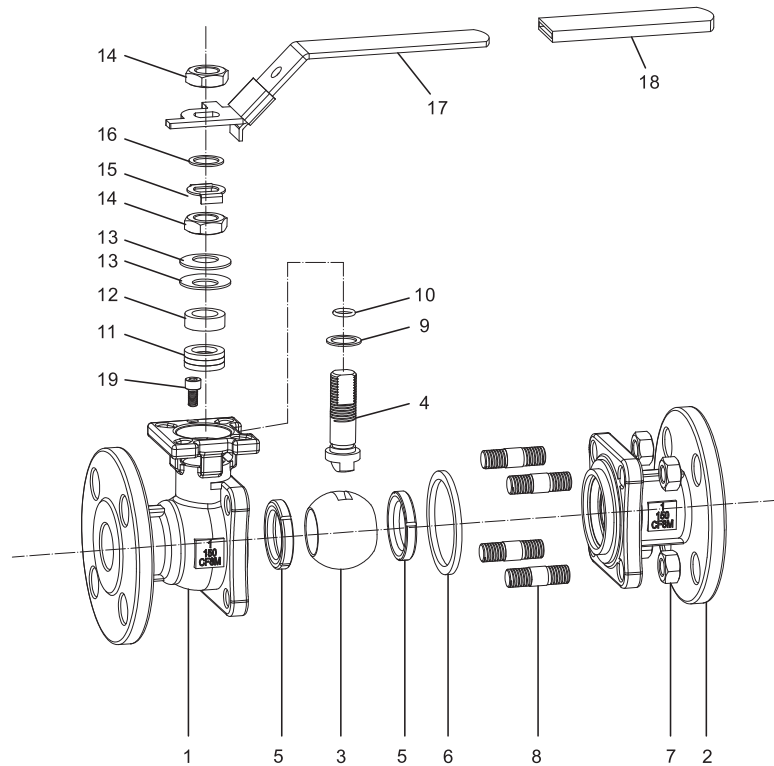
Unit: inch

Size	d	D	D1	C	T	f	n-ΦM	L	h	H1	H	W	M	B	D3	D4	A1	A2
1/2"	0.59	3.74	2.62	1.38	0.50	0.06	4-0.63	5.51	0.35	1.89	3.15	5.55	0.47	0.31	1.42	1.97	0.24	0.28
3/4"	0.79	4.61	3.25	1.69	0.56	0.06	4-0.75	5.98	0.35	2.32	3.58	5.55	0.47	0.31	1.42	1.97	0.24	0.28
1"	0.98	4.88	3.50	2.00	0.63	0.06	4-0.75	6.50	0.43	2.48	3.94	6.38	0.55	0.39	1.65	1.97	0.24	0.28
1-1/2"	1.50	6.10	4.50	2.87	0.75	0.06	4-0.87	7.48	0.55	3.07	4.57	8.66	0.71	0.47	1.97	2.76	0.27	0.35
2"	1.97	6.50	5.00	3.62	0.81	0.06	8-0.75	8.50	0.55	3.35	4.84	8.66	0.71	0.47	1.97	2.76	0.27	0.35
2-1/2"	2.52	7.48	5.88	4.12	0.94	0.06	8-0.87	9.49	0.67	4.25	6.06	11.22	0.87	0.55	2.76	4.02	0.35	0.43
3"	2.99	8.27	6.62	5.00	1.06	0.06	8-0.87	11.10	0.87	5.12	6.89	14.96	1.10	0.79	-	4.02	-	0.43
4"	3.94	10.00	7.88	6.19	1.19	0.06	8-0.87	12.01	0.87	5.83	7.72	14.96	1.10	0.79	-	4.02	-	0.43
6"	5.90	12.52	10.62	8.50	1.38	0.06	12-0.87	15.87	1.34	8.74	11.10	47.24	1.54	1.06	4.92	5.51	0.55	0.71
8"	7.95	15.00	13.00	10.62	1.56	0.06	12-0.98	19.76	1.57	10.91	13.62	47.24	1.89	1.26	5.51	6.50	0.71	0.87

2PC Flanged Floating Ball Valve
CL300

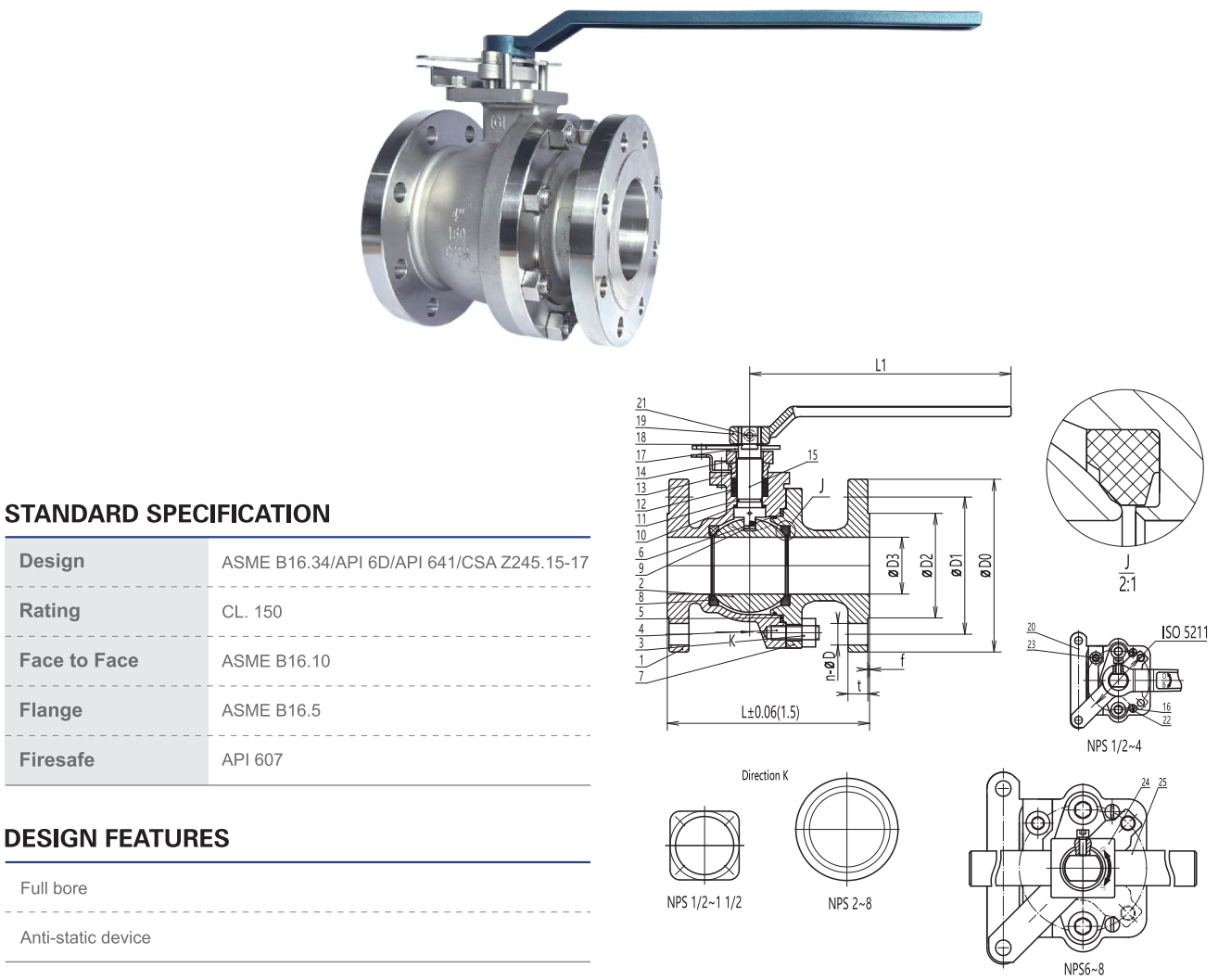


PART DRAWING



No.	Item	Material				
1	Body	A216-WCB	A351-CF8M	A351-CF8	A351-CF3M	A351-CF3
2	Cap	A216-WCB	A351-CF8M	A351-CF8	A351-CF3M	A351-CF3
3	Ball	A182-F316		A182-F304	A182-F316L	A182-304L
4	Stem	316/F51				
5	Seat	TFM1600/RTFE				
6	Sealing gasket	PTFE/316L+Graphite				
7	Nut	A194-2H	A194-8			
8	Stud	A193-B7	A193-B8			
9	Thrust gasket	RPTFE				
10	O-ring	VITON				
11	Packing	PTFE/Graphite				
12	Gland	SS304			SS316L	
13	Disc spring	SS301				
14	Thin nut	SS304				
15	Loose proof gasket	SS304				
16	Gasket	SS304				
17	Handle	SS304				
18	Handle sleeve	PVC(Soft)				

2PC Flanged Ball Valve CL150



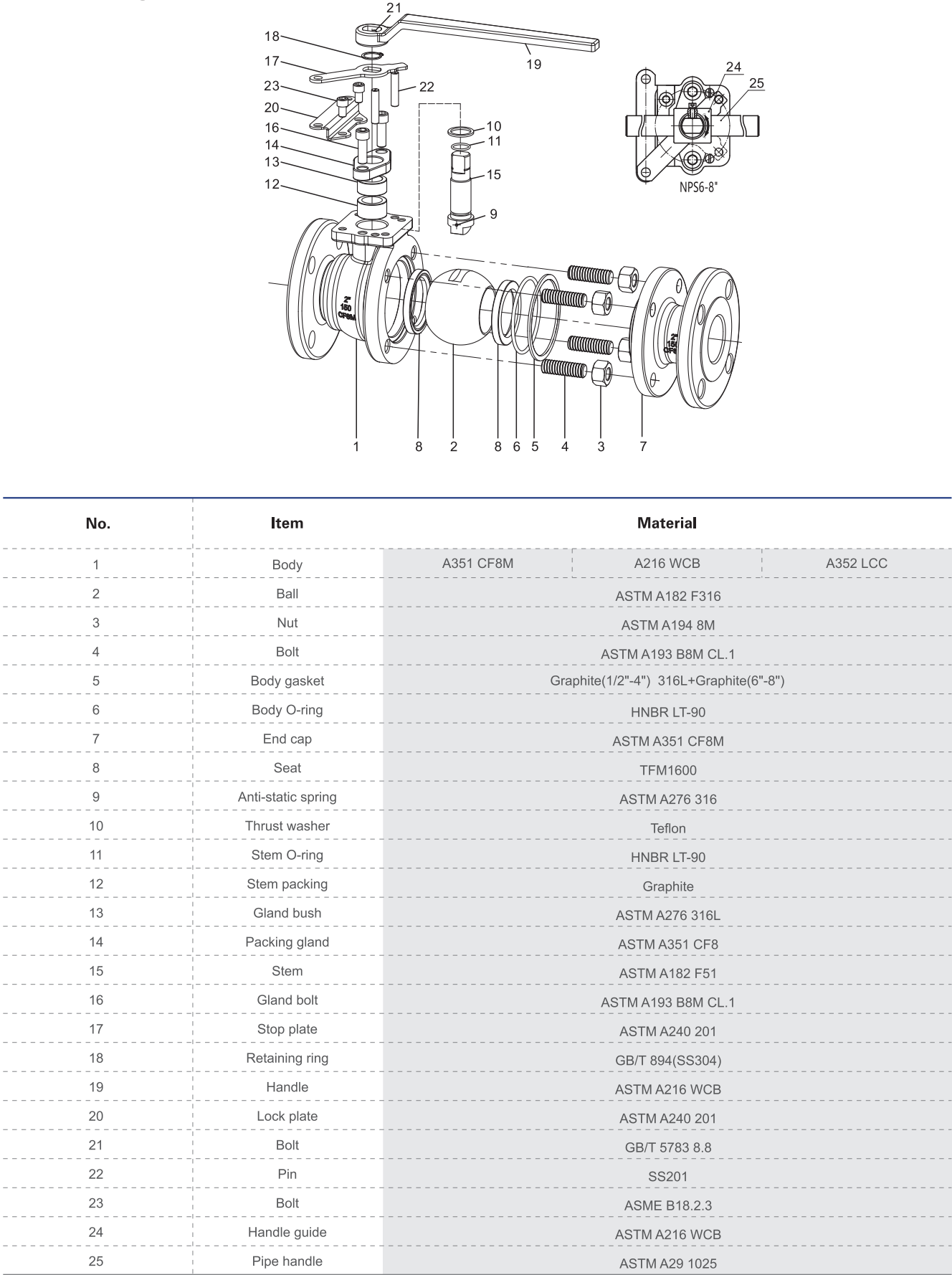
DIMENSIONS

Size	D3	D2	D1	D0	F	t	N-ØD	L	L1	ISO5211	CV
1/2"	0.60	1.38	2.38	3.50	0.06	0.39	4-5/8	4.25	5.55	F05	25
3/4"	0.79	1.69	2.75	3.88	0.06	0.45	4-5/8	4.62	5.55	F05	56
1"	0.98	2.00	3.12	4.25	0.06	0.51	4-5/8	5.00	6.38	F05	98
1-1/2"	1.50	2.88	3.88	5.00	0.06	0.63	4-5/8	6.50	10.24	F07	235
2"	1.97	3.62	4.75	6.00	0.06	0.69	4-3/4	7.00	10.24	F07	366
2-1/2"	2.56	4.12	5.50	7.00	0.06	0.81	4-3/4	7.50	12.99	F10	620
3"	2.99	5.00	6.00	7.50	0.06	0.89	4-3/4	8.00	14.96	F10	938
4"	3.94	6.19	7.50	9.00	0.06	0.91	8-3/4	9.00	15.74	F10	1466
6"	5.94	8.50	9.50	11.00	0.06	0.95	8-7/8	15.50	39.37	F12	3298
8"	7.95	10.62	11.75	13.50	0.06	1.08	8-7/8	18.00	47.27	F14	5863

2PC Flanged Ball Valve CL150



PART DRAWING



2PC Flanged Ball Valve CL300



STANDARD SPECIFICATION

Design	ASME B16.34/API 6D/API 641/CSA Z245.15-17
Rating	CL. 300
Face to Face	ASME B16.10
Flange	ASME B16.5
Firesafe	API 607

DESIGN FEATURES

- Full bore
- Anti-static device

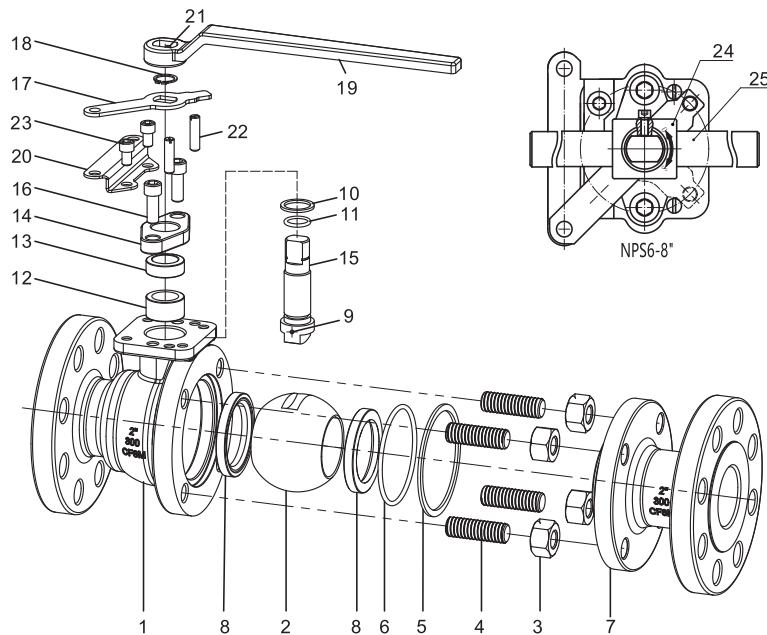
DIMENSIONS

Size	D3	D2	D1	D0	F	T	N-ΦD	L	L1	ISO5211	CV
1/2"	0.60	1.38	2.62	3.75	0.06	0.51	4-5/8	5.50	5.55	F05	25
3/4"	0.79	1.69	3.25	4.62	0.06	0.57	4-3/4	6.00	5.55	F05	56
1"	0.98	2.00	3.50	4.88	0.06	0.63	4-3/4	6.50	6.38	FO5	98
1-1/2"	1.50	2.88	4.50	6.12	0.06	0.77	4-7/8	7.50	10.24	FO7	235
2"	1.97	3.62	5.00	6.50	0.06	0.83	8-3/4	8.50	10.24	F07	366
2-1/2"	2.56	4.12	5.88	7.50	0.06	0.95	8-7/8	9.50	12.99	F10	620
3"	2.99	5.00	6.62	8.25	0.06	1.08	8-7/8	11.12	16.93	F10	938
4"	3.94	6.19	7.88	10.00	0.06	1.20	8-7/8	12.00	16.93	F10	1466
6"	5.94	8.50	10.62	12.50	0.06	1.42	12-7/8	15.88	47.24	F14	3298
8"	7.95	10.62	13.00	15.00	0.06	1.57	12-1	19.75	59.06	F14	5863

2PC Flanged Ball Valve CL300

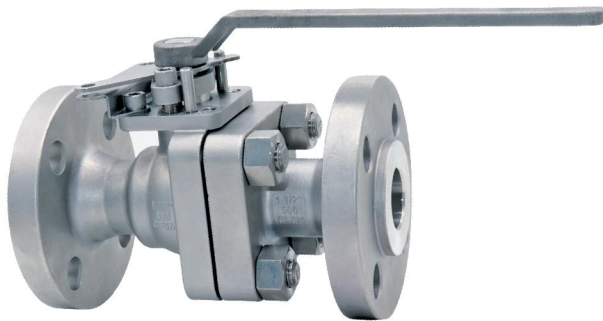


PART DRAWING



No.	Item	Material		
1	Body	A351 CF8M	A216 WCB	A352 LCC
2	Ball	ASTM A182 F316		
3	Nut	ASTM A194 8M		
4	Bolt	ASTM A193 B8M CL.1		
5	Body gasket	Graphite(1/2"-4") 316L+Graphite(6"-8")		
6	Body O-ring	NBRLT-90		
7	End cap	ASTM A351 CF8M		
8	Seat	TFM 1600		
9	Anti-static spring	ASTM A276 316		
10	Thrust washer	Ietion		
11	Stem O-ring	HNBR LT-90		
12	Stem packing	Graphite		
13	Gland bush	ASTM A276 316L		
14	Packing gland	ASTM A351 CF8		
15	Stem	ASTM A182 F51		
16	Gland bolt	ASTM A193 B8M CL.1		
17	Stop plate	ASTM A240 201		
18	Retaining ring	GB/T 894(SS304)		
19	Handle	ASTM A216 WCB		
20	Lock plate	ASTM A240 201		
21	Bolt	GB/T5783 8.8		
22	Pin	SS201		
23	Bolt	ASME B18.2.3		
24	Handle guide	ASTM A216 WCB		
25	Pipe handle	ASTM A29 1025		

2PC Flanged Ball Valve CL600



STANDARD SPECIFICATION

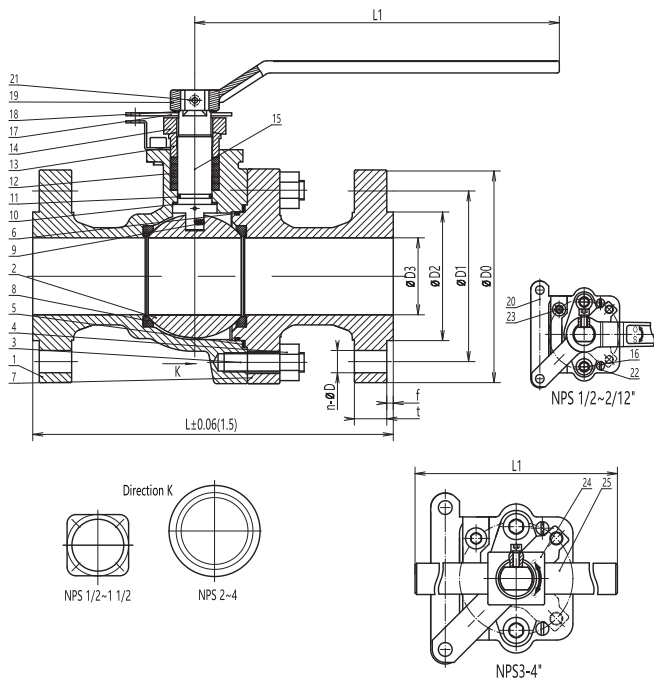
Design	ASME B16.34/API 6D/API 641/CSA Z245.15-17
Rating	CL. 600
Face to Face	ASME B16.10
Flange	ASME B16.5
Firesafe	API 607

DESIGN FEATURES

Full bore
Anti-static device

DIMENSIONS

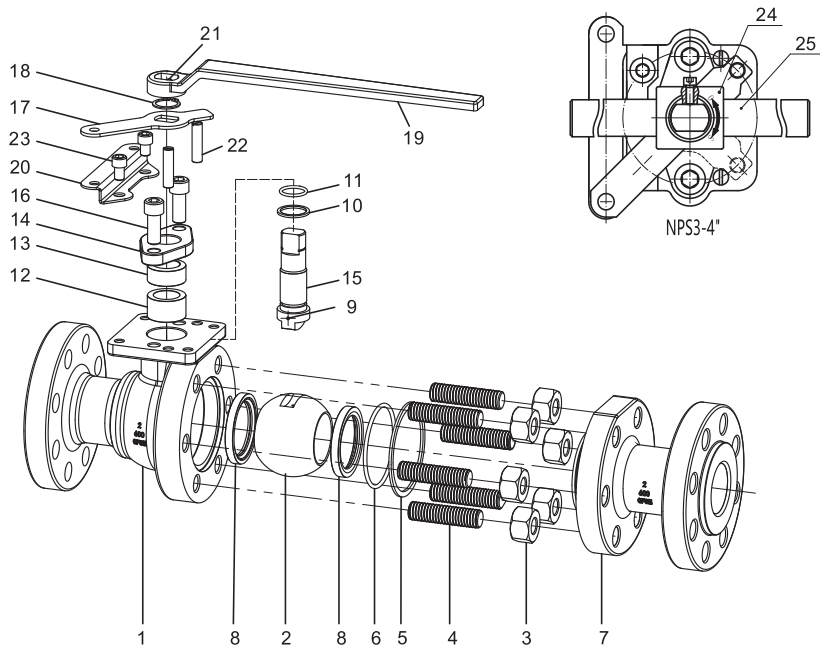
Size	D3	D2	D1	D0	F	T	N-ØD	L	L1	ISO5211	CV
1/2"	0.60	1.38	2.62	3.75	0.25	0.56	4-5/8(	6.50	5.55	F05	25
3/4"	0.79	1.69	3.25	4.62	0.25	0.62	4-3/4	7.50	6.38	F05	56
1"	0.98	2.00	3.50	4.88	0.25	0.69	4-3/4	8.50	7.09	F05	98
1-1/2"	1.50	2.88	4.50	6.12	0.25	0.88	4-7/8	9.50	10.24	F07	235
2"	1.97	3.62	5.00	6.50	0.25	1.00	8-3/4	11.50	12.99	F10	366
2-1/2"	2.56	4.12	5.88	7.50	0.25	1.14	8-7/8	13.00	12.99	F10	620
3"	2.99	5.00	6.62	8.25	0.25	1.26	8-7/8	14.00	19.69	F10	938
4"	3.94	6.19	8.50	10.75	0.25	1.50	8-1	17.00	25.6	F12	1466



2PC Flanged Ball Valve CL600



PART DRAWING



No.	Item	Material		
1	Body	A351 CF8M	A216 WCB	A352 LCC
2	Ball	ASTM A182 F316		
3	Nut	ASTM A194 8M		
4	Bolt	ASTM A193 8M CL.1		
5	Body gasket	Graphite		
6	Body O-ring	HNBR LT-90		
7	End cap	ASTM A351 CF8M		
8	Seat	DEVLON		
9	Anti-static spring	ASTM A276 316		
10	Thrust washer	Teflon		
11	Stem O-ring	HNBR LT-90		
12	Stem packing	Graphite		
13	Gland bush	ASTM A276 316L		
14	Packing gland	ASTM A351 CF8		
15	Stem	ASTM A182 F51		
16	Gland bolt	ASTM A193 B8M CL.1		
17	Stop plate	ASTM A240 201		
18	Retaining ring	GB/T 894(SS304)		
19	Handle	ASTM A216 WCB		
20	Lock plate	ASTM A240 201		
21	Bolt	GB/T5783 8.8		
22	Pin	SS201		
23	Bolt	ASME B18.2.3		
24	Handle guide	ASTM A216 WCB		
25	Pipe handle	ASTM A29 1025		