



HAITIMA CORPORATION

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INDUSTRIAL VALVES

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HAITIMA CORPORATION

LIMITED WARRANTY

HAITIMA's warrants its products to be free from defects in material and workmanship for a period of eighteen (18) months from the date of shipment or twelve (12) months from the date of installation whichever comes first. This warranty is limited to the repair or replacement of the defective item providing that it was handled, installed, used and maintained in accordance with the manufacturer's recommendations and applicable standard industry practices. Haitima will not be liable for any additional direct or indirect costs beyond the repair or replacement of the defective item.

This warranty is in lieu of any other warranty expressed or implied.

President :

Shen Ming-Show

HAITIMA CORPORATION

Haitima Ball Valve Manufacturer was founded in 1984 with capital twenty-five million U.S. Dollars. Through the years, "Perfection" has been the only goal we pursue. In order to satisfy customers, with continuous efforts, we are working towards perfection through a Quality Assurance System, which has given us the ISO 9001, PED 2014/68/EU Module H certificate, UKCA certificate, DNV, ABS, Lloyd's, BV MARINE Certificate, AD-2000, 3A, WRAS, ATEX, TA-Luft, ISO 15848, API 624, API 641, API 607 Fire-Safe Approval, CRN Registered, REACH, RoHS. With persistence and effort, we have become one of the leading enterprises of valves and fittings in Taiwan and China.

We offer a wide ranges of valves, including ball valves, gate valves, globe valves, check valves, blind valves, butterfly valves, safety valves, strainer, needle valves, sight glass, s/s ball and rotary screwed end valves, furthermore, such as butt weld, flanged end, clean and trunnion valves, professional manufacturer ball valves, gate valves, globe valves, check valves, actuators and accessory, screwed fittings and pipe.

If you are interested in our valve products, Contact us now and we will be glad to meet your request and offer the best quality and price.



CERTIFICATE

QUALITY MANAGEMENT

ISO 9001

PED(CE) CERTIFICATE

PESR(UKCA) CERTIFICATE

AD-2000

DNV CERTIFICATE (TYPE APPROVAL)

BV MARINE CERTIFICATE

ABS CERTIFICATE

LLOYD'S CERTIFICATE

CERTIFICATE

PRODUCT DESIGN

3A APPROVED

CSA/CGA CERTIFICATE

CRN REGISTERED

API 607 FIRE SAFE APPROVED

ATEX II2GD CERTIFICATE

TA-Luft CERTIFICATE

ISO 15848 CERTIFICATE

API 624 CERTIFICATE

API 641 CERTIFICATE

VOC TEST CERTIFICATE

SIL CERTIFICATE

REACH & RoHS CERTIFICATE

EN10204 3.1 MATERIAL CERTIFICATE

WRAS CERTIFICATE

CERTIFICATE

API 607 Fire Safe Approved Ball Valves

2006WB

2007W21

2007W36

2007W60

2013KM

2013KMD

2019D

2020D

2020N

2021D

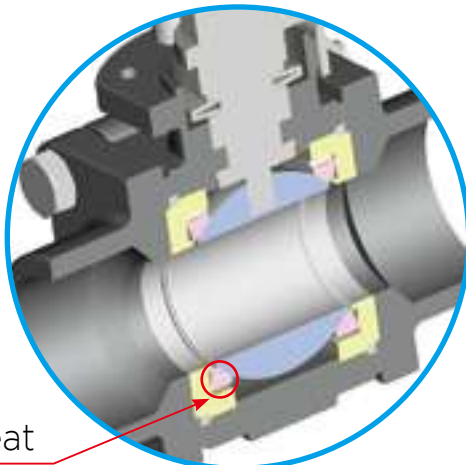
2052AD

2063F-MS



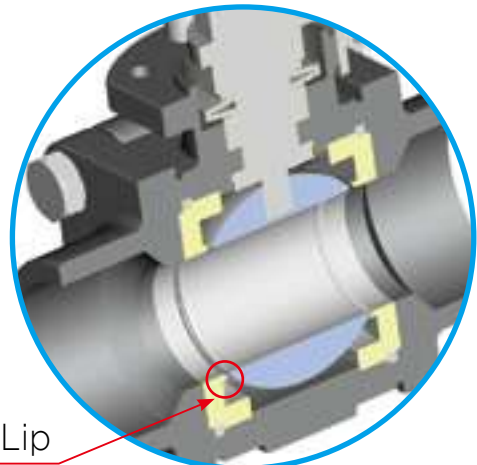
Fire Safe Design

Before the Fire



Ball Seat

After the Fire



Fire Safe Lip

Secondary metal to metal seal acts as backup if primary seal is destroyed by fire.

CERTIFICATE

TA-Luft Fugitive Emission Approved Ball Valves

2006	2011N
2006S	2012N
2006SW	2013N
2006W	2011NM
2019S	2012NM
2020S	2013NM



ISO 15848 Fugitive Emission Approved Ball Valves

2006SD	2011ND	2013KMD	2052AD
2009D	2012ND	2012LD	2006-G
2011D	2013ND	2019SD	2057ND
2012D	2011KMD	2019D	
2013D	2012KMD	2020D	

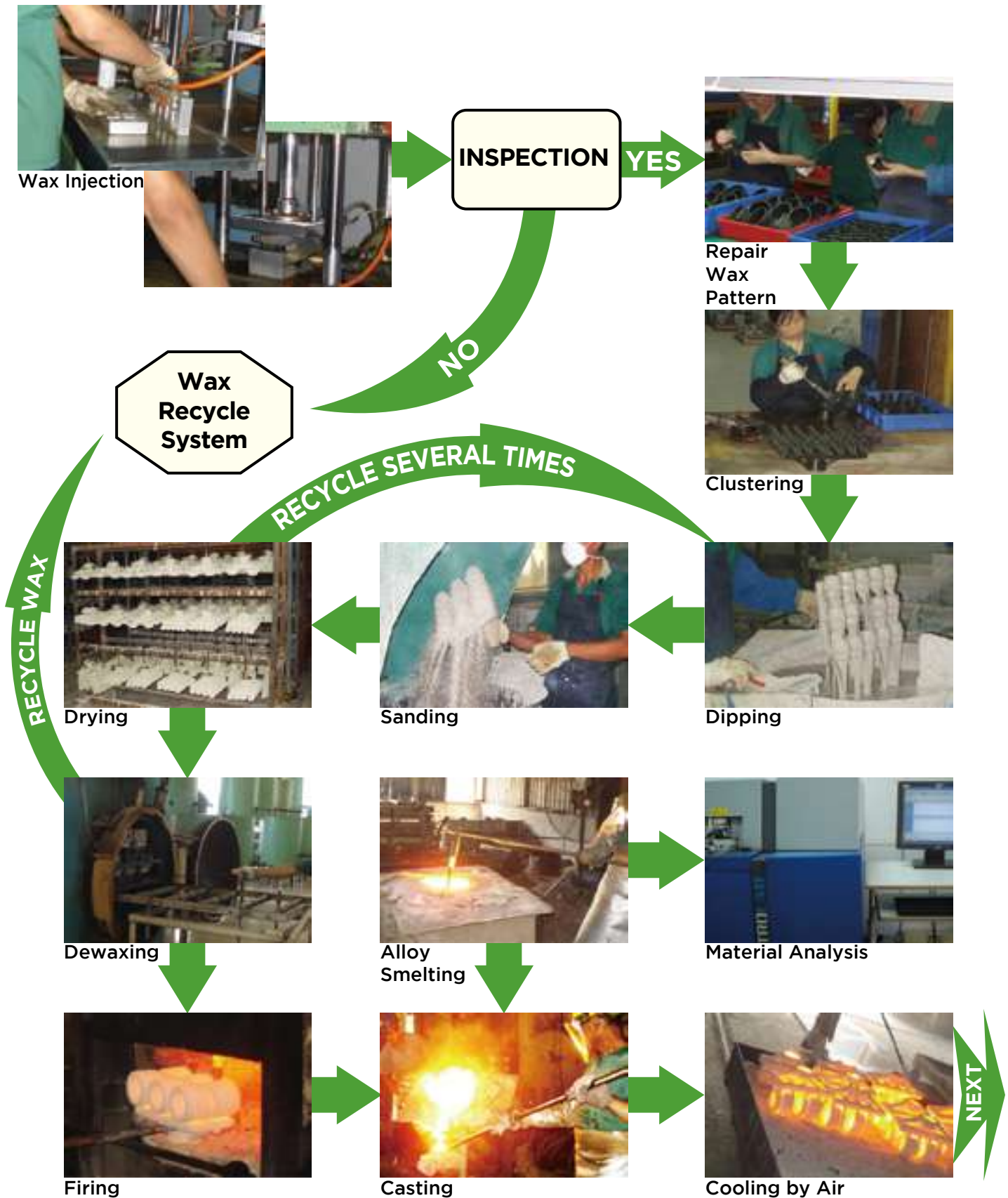
Comparison table of the current standards

	ISO 15848-1	TA-Luft VDI 2440
Test fluid	He or CH ₄	He
Leakage method	global measure	global measure
Class	A: $10^{-6} \cdot \text{mg} \cdot \text{s}^{-1} \cdot \text{m}^{-1}$ B: $10^{-4} \cdot \text{mg} \cdot \text{s}^{-1} \cdot \text{m}^{-1}$ C: $10^{-2} \cdot \text{mg} \cdot \text{s}^{-1} \cdot \text{m}^{-1}$	$10^{-4} \cdot \text{mbar} \cdot \text{l} \cdot \text{s}^{-1} \cdot \text{m}^{-1}$ ($1.76 \cdot 10^{-5} \cdot \text{mg} \cdot \text{s}^{-1} \cdot \text{m}^{-1}$)
Valve type stroke	100% for on-off $\pm 10\%$ for control	not specified
Number of cycles	20k, 60k, 100k	not specified

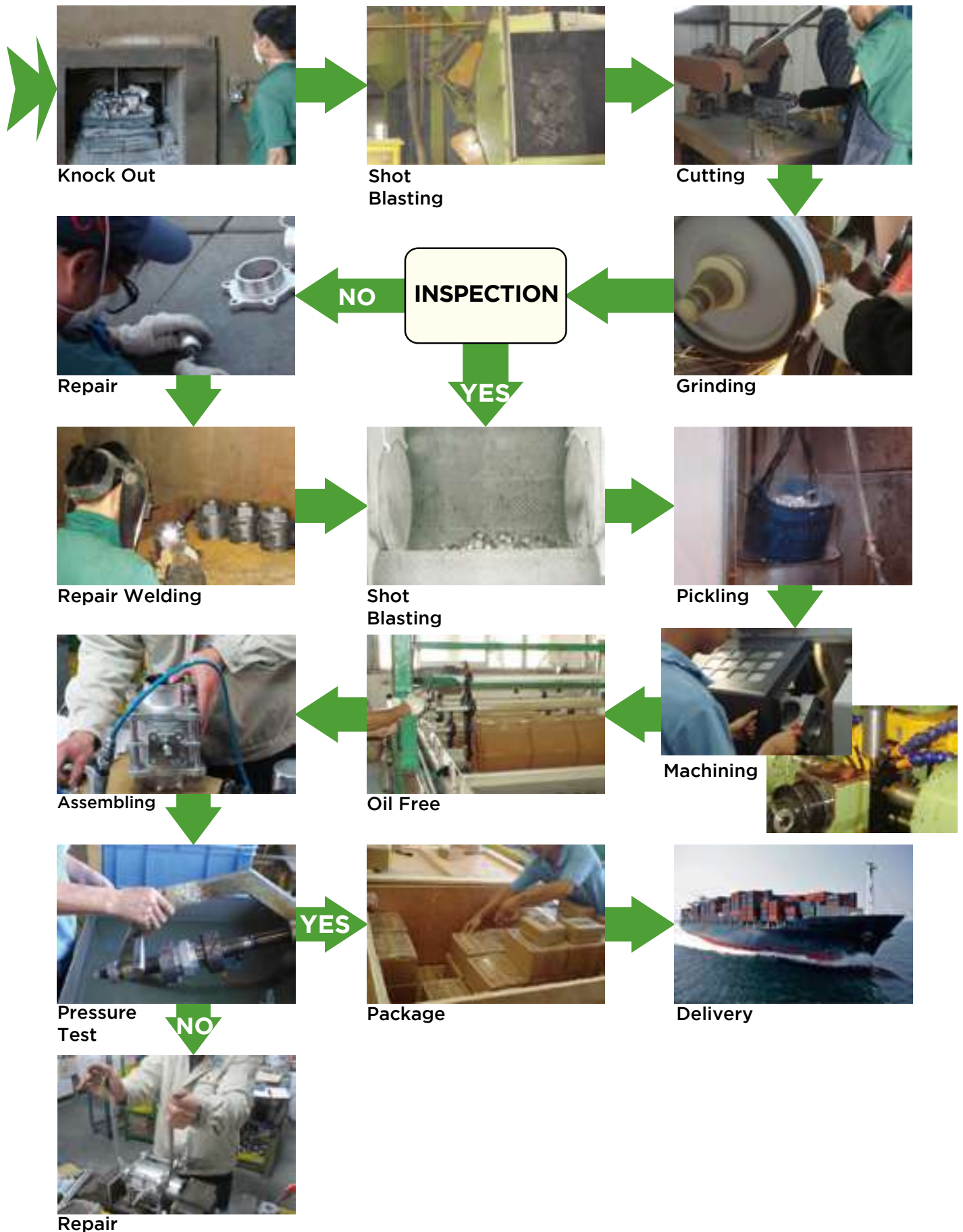
API 624 Fugitive Emission Approved Gate Valve 2054

API 641 Fugitive Emission Approved Ball Valve 2020D

Valves Product Flow Diagram.



Valves Product Flow Diagram.



VALVE ACCESSORIES

STEM EXTENSION

A valve stem extension extends the length of a valve stem for bringing the operating device close to the surface, eliminating the need for heavy, long Valve struggling to find the operating device.

Especially if you have a deep burying.

FEATURES

- Rugged and stable
- Investment casting
- Stainless steel fabrication
- Good airtightness
- Mount upon ISO-5211 direct mounting pad F04~F12
- Could be fitted with locking device and actuator

TYPE A



FEATURES

- Less cost
- Bar stock
- Stainless steel fabrication
- Easy to fitted with any valves
- Optional extension stem state length
- Require no maintenance

TYPE B



CERTIFICATE

V-PORT BALL

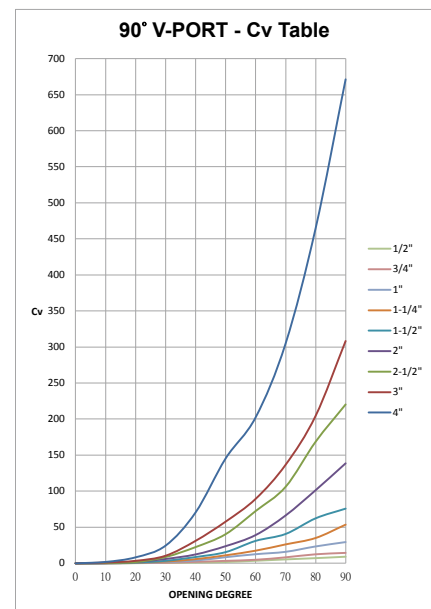
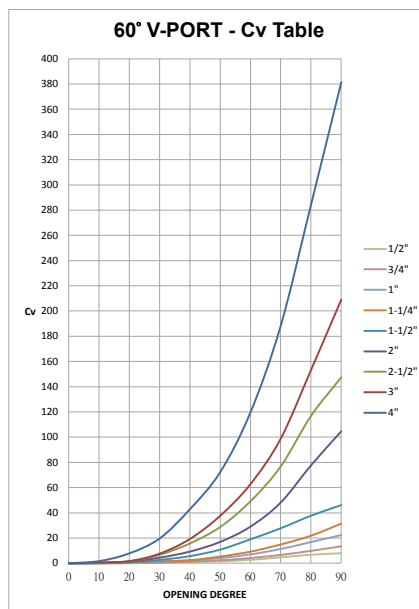
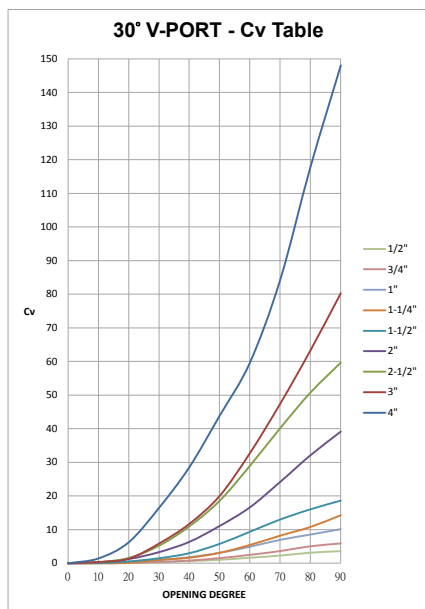
HAITIMA V-Port Ball are ideal for achieving more precise control than traditional round ported ball valves with the simplicity and sealing features. The standard "V" notch options are 30°, 60° & 90°.

The 30° option allows for 30° V-Port finer tapered control throughout the valve rotation and the 60° & 90° offers a larger Cv in addition to controlled flow.



SIZE	BALL ANGLE	OPENING DEGREE									
		0	10	20	30	40	50	60	70	80	90
1/2"	30°	0.0	0.0	0.0	0.3	0.6	1.0	1.6	2.2	3.1	3.6
	60°	0.0	0.0	0.1	0.4	0.8	1.6	2.7	4.7	6.7	7.9
	90°	0.0	0.0	0.2	0.6	1.0	1.8	3.5	5.4	7.1	9.1
3/4"	30°	0.0	0.0	0.1	0.4	0.8	1.5	2.5	3.6	5.0	5.8
	60°	0.0	0.0	0.2	0.5	1.3	2.4	4.2	6.7	9.9	13.6
	90°	0.0	0.0	0.4	0.7	2.0	3.3	4.8	8.1	12.3	14.2
1"	30°	0.0	0.0	0.3	0.9	1.8	3.1	4.9	6.9	8.5	10.1
	60°	0.0	0.0	0.4	0.9	2.1	4.1	7.0	11.3	16.8	22.3
	90°	0.0	0.0	0.4	1.8	3.8	8.4	12.5	15.7	23.1	29.1
1-1/4"	30°	0.0	0.0	0.1	1.0	1.6	3.1	5.4	8.2	10.8	14.3
	60°	0.0	0.0	0.6	1.6	2.4	5.3	9.2	14.9	21.9	31.5
	90°	0.0	0.0	0.8	2.4	5.7	11.1	17.5	26.2	35.1	53.7
1-1/2"	30°	0.0	0.0	0.5	1.4	2.9	5.7	9.3	13.0	16.0	18.6
	60°	0.0	0.0	0.8	2.6	5.6	10.8	19.0	27.8	37.8	46.2
	90°	0.0	0.1	0.9	3.4	8.7	15.4	30.9	40.5	62.1	75.5
2"	30°	0.0	0.3	1.3	3.3	6.4	11.1	16.6	24.2	32.1	39.1
	60°	0.0	0.3	1.4	4.5	9.3	17.0	29.1	48.2	77.7	104.7
	90°	0.0	0.3	2.0	6.1	12.3	23.7	39.1	66.2	101.2	138.4
2-1/2"	30°	0.0	0.3	1.6	5.2	11.0	18.6	29.0	40.2	50.8	59.7
	60°	0.0	0.3	1.6	6.7	15.8	28.8	49.2	76.8	116.9	147.5
	90°	0.0	0.4	1.7	8.8	22.6	40.4	72.5	106.1	168.6	220.3
3"	30°	0.0	0.4	1.4	5.9	11.7	20.0	32.7	47.4	63.3	80.3
	60°	0.0	0.7	1.7	7.7	19.3	37.7	62.8	98.9	153.3	209.1
	90°	0.0	1.1	3.5	10.6	31.2	57.8	89.4	136.7	204.5	308.3
4"	30°	0.0	1.4	6.2	16.4	28.5	43.8	59.6	84.3	117.9	148.1
	60°	0.0	1.7	7.9	19.7	42.9	72.3	119.7	188.4	284.3	381.4
	90°	0.0	2.0	8.3	24.6	70.7	145.5	202.4	305.0	464.7	671.5

unit:USgal/min



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1-PC. SCREWED END BALL VALVE

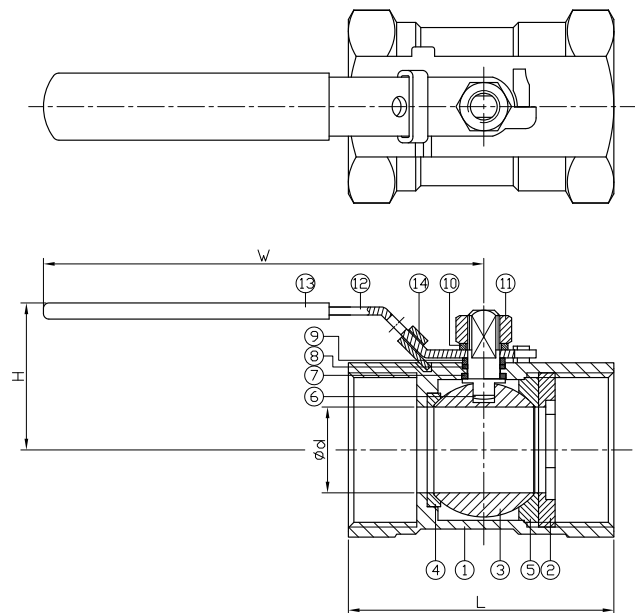
2017K

FEATURES

- Reduced port, 1/4"~3" (DN8~DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF8
2	RETAINER	1.4408	1.4308
3	BALL	ASTM A351-CF8M	ASTM A351-CF8
4	SEAT A	PTFE / RTFE	
5	SEAT B		
6	STEM	316	304
7	THRUST WASHER	PTFE	
8	PACKING		
9	GLAND RING	304	
10	SPRING WASHER		
11	STEM NUT	STAINLESS STEEL	
12	HANDLE		
13	HANDLE SLEEVE	PVC	
14	LOCK DEVICE	304	



DN	d	L	H	W
8	5	39	28.5	65
10	7	44	31	88
15	9.2	56.5	38	110
20	12.5	59	40	110
25	15	71	47	110
32	20	78	52	110
40	25	83	58.5	155
50	32	99	64.5	155
65	38	126	90	172
80	50	150	100	172

unit:mm

NPS	d	L	H	W
1/4"	0.2	1.54	1.12	2.56
3/8"	0.28	1.73	1.22	3.46
1/2"	0.36	2.22	1.5	4.33
3/4"	0.49	2.32	1.57	4.33
1"	0.59	2.8	1.85	4.33
1-1/4"	0.79	3.07	2.05	4.33
1-1/2"	0.98	3.27	2.3	6.1
2"	1.26	3.9	2.54	6.1
2-1/2"	1.5	4.96	3.54	6.77
3"	1.97	5.91	3.94	6.77

unit:in



1-PC. SCREWED END BALL VALVE

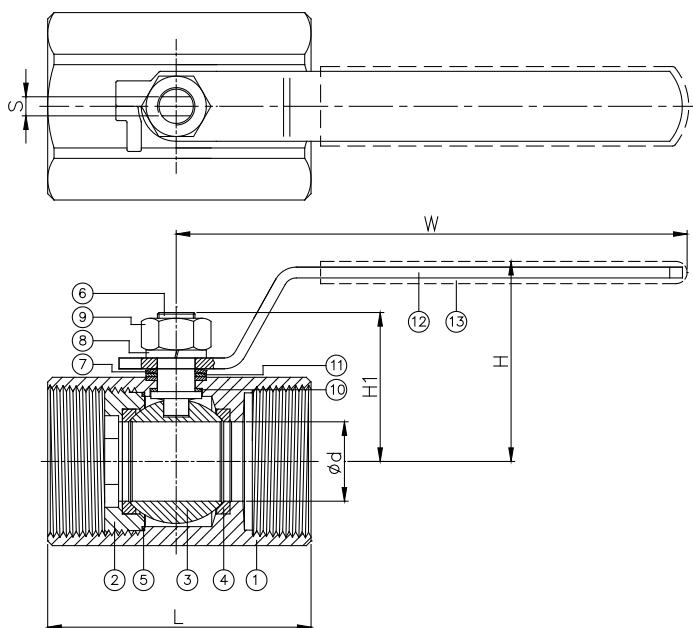
2017

FEATURES

- Reduced port, 1/4"~2" (DN8~DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Polished body (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	RETAINER			
3	BALL	ASTM A351-CF8M		
4	BALL SEAT	PTFE / RTFE		
5	BODY SEAL	PTFE		
6	STEM	ASTM A276-316		
7	FLAT WASHER	AISI 304		
8	SPRING WASHER			
9	STEM NUT			
10	THRUST WASHER	PTFE		
11	PACKING			
12	HANDLE	STAINLESS STEEL		
13	HANDLE SLEEVE	PVC		



DN	d	L	H	H1	W	S
8	5	39	35.5	17	62.7	3
10	7	44	37.1	21.4	72.9	4
15	9	56.5	42.4	26.1	88.2	5
20	12.5	59	45.9	28.8	88.2	5
25	15	71	48.5	36.5	106	6
32	20	78	54	40.5	106	6
40	25	83	65.5	46.5	153	8
50	32	100	71.5	51	153	8

unit:mm

NPS	d	L	H	H1	W	S
1/4"	0.2	1.54	1.4	0.67	2.47	0.12
3/8"	0.28	1.73	1.46	0.84	2.87	0.16
1/2"	0.35	2.22	1.67	1.03	3.47	0.2
3/4"	0.49	2.32	1.81	1.13	3.47	0.2
1"	0.59	2.8	1.91	1.44	4.17	0.24
1-1/4"	0.79	3.07	2.13	1.59	4.17	0.24
1-1/2"	0.98	3.27	2.58	1.83	6.02	0.31
2"	1.26	3.94	2.81	2.01	6.02	0.31

unit:in



1-PC. SCREWED END BALL VALVE

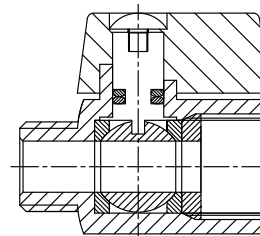
2017S

FEATURES

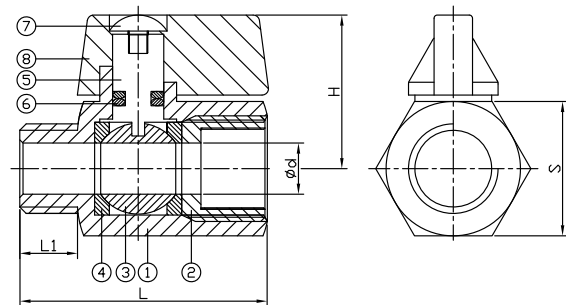
- Reduced port, 1/8"-3/4"(DN6~DN20)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Connection type : Female X Male
Female X Female
Male X Male
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF8
2	END CAP	SUS 316	SUS 304
3	BALL		
4	BALL SEAT	RTFE	
5	STEM	SUS 316	
6	O-RING	VITON	
7	SEMICIRCLE HEAD SCREW	SUS 304	
8	HANDLE	ZINC ALLOY	



3/8"-3/4"



1/8"-1/4"

DN		d	L	L1	H	S
MALE THREAD	FEMALE THREAD					
6	6	5	39	9	25	21
8	8	7	39	9	25	21
10	10	7	39	9	25	21
6	8	5	39	9	25	21
8	10	7	39	9	25	21
15	15	9	50	13	28	26
20	20	12.5	57	15	30	32

unit:mm

NPS		d	L	L1	H	S
MALE THREAD	FEMALE THREAD					
1/8"	1/8"	0.2	1.54	0.35	0.98	0.83
1/4"	1/4"	0.28	1.54	0.35	0.98	0.83
3/8"	3/8"	0.28	1.54	0.35	0.98	0.83
1/8"	1/4"	0.2	1.54	0.35	0.98	0.83
1/4"	3/8"	0.28	1.54	0.35	0.98	0.83
1/2"	1/2"	0.35	1.97	0.51	1.1	1.02
3/4"	3/4"	0.49	2.24	0.59	1.18	1.26

unit:in

1-PC. SCREWED END BALL VALVE

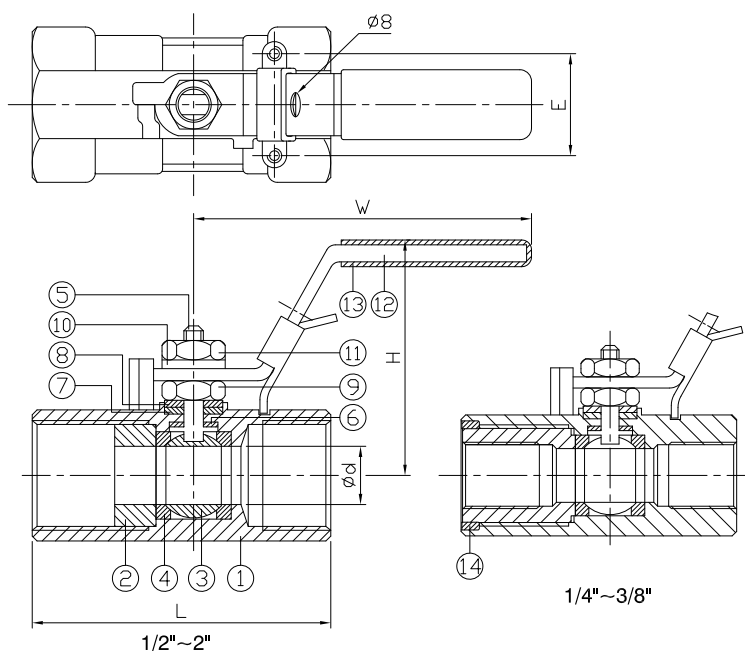
2017BM

FEATURES

- Reduced port, 1/4"~2" (DN8~DN50)
- W.P. : 2000 WOG (PN150)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Tapped & drilled mounting pad (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M ASTM A216-WCB
2	RETAINER	SUS 316
3	BALL	
4	SEAT	RTFE
5	STEM	SUS 316
6	THRUST WASHER	PTFE
7	PACKING	
8	GLAND WASHER	SUS 304
9	NUT	
10	SPRING WASHER	
11	NUT	
12	HANDLE	VINYL GRIP
13	HANDLE SLEEVE	
14	PIN	SUS 304



DN	d	L	H	W	E
8	9.2	58.5	47.4	102	28.5
10	9.2	58.5	47.4	102	28.5
15	9.2	66	57.5	98.5	28.2
20	12.5	70	61.4	98.5	28.2
25	15	80	64.3	104.7	35.6
32	20	95	68.8	104.7	35.6
40	25	101	73.8	156.1	35.6
50	32	114	79.8	156.1	35.6

unit:mm

NPS	d	L	H	W	E
1/4"	0.36	2.3	1.87	4.02	1.12
3/8"	0.36	2.3	1.87	4.02	1.12
1/2"	0.36	2.6	2.26	3.88	1.11
3/4"	0.49	2.76	2.42	3.88	1.11
1"	0.59	3.15	2.53	4.12	1.4
1-1/4"	0.79	3.74	2.71	4.12	1.4
1-1/2"	0.98	3.98	2.91	6.15	1.4
2"	1.26	4.49	3.14	6.15	1.4

unit:in

1-PC. SCREWED END BALL VALVE

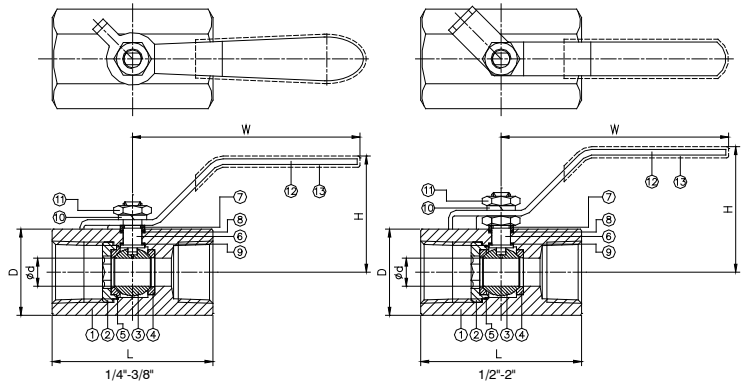
2017C

FEATURES

- Reduced port, 1/4"~2" (DN8~DN50)
- W.P. : 2000 WOG (PN150)
- W.T. : -20°C~200°C (-4°F~392°F)
- **Forged body**
- Blow-out proof stem
- Anti-static device (option)
- NACE MR0175
- ASME B16.34 Wall thickness
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A105
2	RETAINER	
3	BALL	ASTM A351-CF8
4	SEAT	RTFE / CTFE
5	BODY SEAL	
6	STEM	AISI 304
7	GLAND RING	
8	PACKING	RTFE / CTFE
9	THRUST WASHER	
10	SPRING WASHER	AISI 304
11	NUT	
12	HANDLE	STAINLESS STEEL
13	HANDLE SLEEVE	PVC



DN	d	D	L	H	W
8	5	21	43.2	27.5	60
10	7	25	47.2	25.5	79
15	9	30	62.5	51.9	118
20	12.5	36	69.9	59.8	118
25	15	46	85.9	67	120
32	20	55	93.7	75.5	146
40	25	61	101.6	78.5	146
50	32	75	114.3	81.5	152

unit:mm

NPS	d	D	L	H	W
1/4"	0.2	0.83	1.7	1.08	2.36
3/8"	0.28	0.98	1.86	1	3.11
1/2"	0.35	1.18	2.46	2.04	4.65
3/4"	0.49	1.42	2.75	2.35	4.65
1"	0.59	1.81	3.38	2.64	4.72
1-1/4"	0.79	2.17	3.69	2.97	5.75
1-1/2"	0.98	2.4	4	3.09	5.75
2"	1.26	2.95	4.5	3.21	5.98

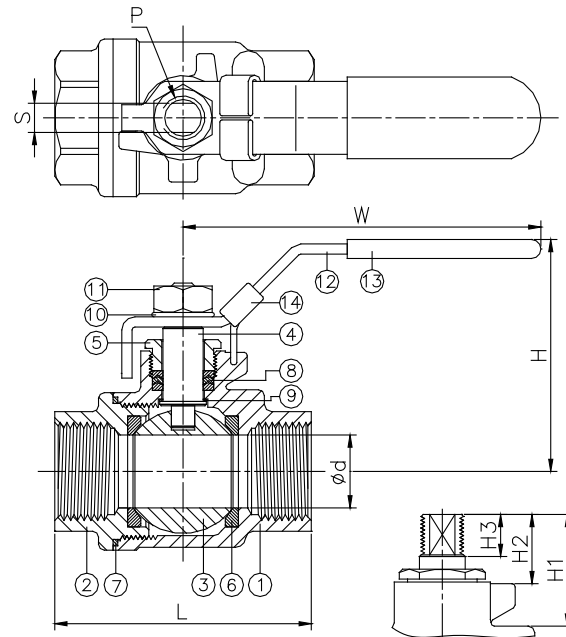
unit:in

2-PC. SCREWED END BALL VALVE

2006

FEATURES

- Full port
- W.P. : 1/4"~1" - 2000 WOG(PN150)
1-1/4"~2" - 1500 WOG(PN100)
2-1/2"~4" - 1000 WOG(PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Tapped & drilled mounting pad (option)
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3 - 2006M3 (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	SEAT	PTFE / RTFE / TFM 1600	
7	SEAL	PTFE / TFM 1600	
8	PACKING	PTFE / RTFE / TFM 1600	
9	THRUST WASHER	PTFE	
10	SPRING WASHER	AISI 304	
11	NUT		
12	HANDLE	STAINLESS STEEL	
13	HANDLE SLEEVE	PVC	
14	LOCKING DEVICE	STAINLESS STEEL	

DN	d	L	H	H1	H2	H3	W	S	P
8	11.6	60.5	54.1	25	17.1	11	103	5	5/16"W
10	13	60.5	54.1	25	17.1	11	103	5	5/16"W
15	15	64	56.7	26	17.7	11	103	5	5/16"W
20	20	77	63.7	31.7	22.7	13.5	126	6.5	3/8"W
25	25	90	76.7	37.3	26.1	15.7	164	8	7/16"W
32	32	100	82.7	37.7	24.9	15.7	164	8	7/16"W
40	38	118	95.5	42.1	27.2	17	190	9	1/2"W
50	50	138	105.3	43.3	28.3	17	190	9	1/2"W
65	65	166.5	142	59.3	42.7	27.5	247	12	3/4"W
80	80	193	153	59	40.5	27.5	247	12	3/4"W
100	100	260	182.3	79.5	54.7	39.8	320	16	1"W

unit:mm

NPS	d	L	H	H1	H2	H3	W	S	P
1/4"	0.46	2.38	2.13	0.98	0.67	0.43	4.06	0.2	5/16"W
3/8"	0.51	2.38	2.13	0.98	0.67	0.43	4.06	0.2	5/16"W
1/2"	0.59	2.52	2.23	1.02	0.7	0.43	4.06	0.2	5/16"W
3/4"	0.79	3.03	2.51	1.25	0.89	0.53	4.96	0.26	3/8"W
1"	0.98	3.54	3.02	1.47	1.03	0.62	6.46	0.31	7/16"W
1-1/4"	1.26	3.94	3.26	1.48	0.98	0.62	6.46	0.31	7/16"W
1-1/2"	1.5	4.65	3.76	1.66	1.07	0.67	7.48	0.35	1/2"W
2"	1.97	5.43	4.15	1.7	1.11	0.67	7.48	0.35	1/2"W
2-1/2"	2.56	6.56	5.59	2.33	1.68	1.08	9.72	0.47	3/4"W
3"	3.15	7.6	6.02	2.32	1.59	1.08	9.72	0.47	3/4"W
4"	3.94	10.24	7.18	3.13	2.15	1.57	12.6	0.63	1"W

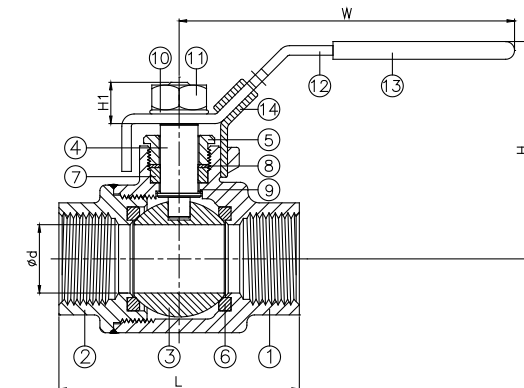
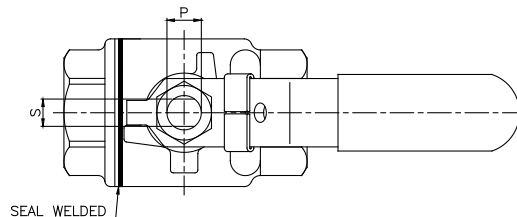
unit:in

2-PC. SCREWED END BALL VALVE

2006WB

FEATURES

- Full port
- W.P. : 1/4"~1" - 2000 WOG(PN150)
1-1/4"~2" - 1500 WOG(PN100)
2-1/2"~4" - 1000 WOG(PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Tapped & drilled mounting pad
- API 607 Fire safe approved
- ASME B16.34 Wall thickness
- API 608 Design
- NACE MR0175
- Seal welded ends
- TA-Luft approved (option)
- Economic pattern - 2006W
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	BALL SEAT	PTFE / RTFE	
7	PACKING A	GRAPHITE	
8	PACKING B	CTFE	
9	THRUST WASHER		
10	SPRING WASHER	AISI 304	
11	NUT		
12	HANDLE	STAINLESS STEEL	
13	HANDLE SLEEVE	PVC	
14	LOCK DEVICE	STAINLESS STEEL	

DN	d	L	H	H1	W	S	P
8	11.6	60.5	56.7	11	101	5	5/16"-18UNC
10	12.8	60.5	56.7	11	101	5	5/16"-18UNC
15	15	62.5	56.8	11	101	5	5/16"-18UNC
20	20.2	77	64.3	13.5	124	6.5	3/8"-16UNC
25	25.6	90	78.5	15.7	162	8	7/16"-14UNC
32	32	100	84.5	15.7	162	8	7/16"-14UNC
40	38	118	98.6	17	183	9	1/2"-12UNC
50	50.8	138	106.7	17	183	9	1/2"-12UNC
65	65.5	167	139.8	27.5	245	12	3/4"-10UNC
80	80	193	152.9	27.5	245	12	3/4"-10UNC
100	100	258	182.3	39.8	316	16	1"-8UNC

unit:mm

NPS	d	L	H	H1	W	S	P
1/4"	0.46	2.38	2.23	0.43	3.98	0.2	5/16"-18UNC
3/8"	0.5	2.38	2.23	0.43	3.98	0.2	5/16"-18UNC
1/2"	0.59	2.46	2.24	0.43	3.98	0.2	5/16"-18UNC
3/4"	0.8	3.03	2.53	0.53	4.88	0.26	3/8"-16UNC
1"	1.01	3.54	3.09	0.62	6.38	0.31	7/16"-14UNC
1-1/4"	1.26	3.94	3.33	0.62	6.38	0.31	7/16"-14UNC
1-1/2"	1.5	4.65	3.88	0.67	7.2	0.35	1/2"-12UNC
2"	2	5.43	4.2	0.67	7.2	0.35	1/2"-12UNC
2-1/2"	2.58	6.57	5.5	1.08	9.65	0.47	3/4"-10UNC
3"	3.15	7.6	6.02	1.08	9.65	0.47	3/4"-10UNC
4"	3.94	10.16	7.18	1.57	12.44	0.63	1"-8UNC

unit:in



2-PC. SCREWED END BALL VALVE

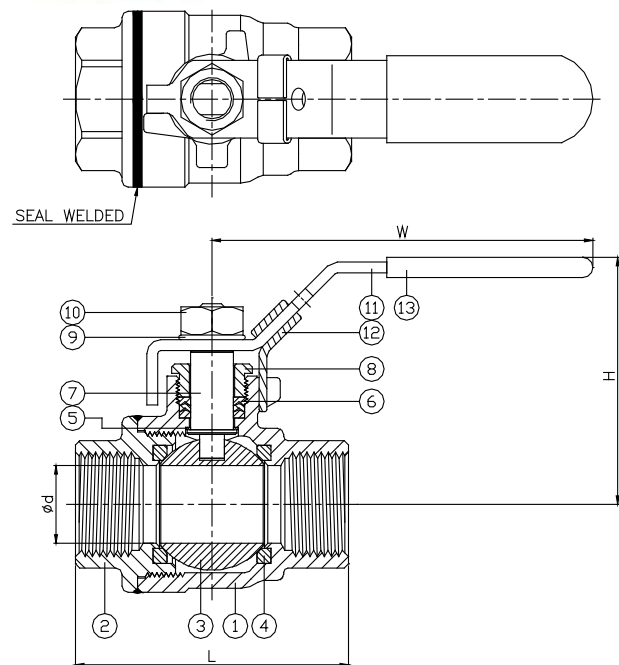
2006W-A

FEATURES

- Full port
- W.P. : 1/4"~2" -2000 WOG (PN150)
2-1/2"~3" -1500 WOG (PN100)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Seal welded ends
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	CAP			
3	BALL	ASTM A351-CF8M		
4	SEAT	RTFE		
5	THRUST WASHER	PTFE		
6	PACKING			
7	STEM	ASTM A276-316		
8	GLAND	AISI 304		
9	SPRING WASHER			
10	NUT			
11	HANDLE	STAINLESS STEEL		
12	LOCKING DEVICE			
13	HANDLE SLEEVE	PVC		



DN	d	L	H	W
8	11.6	51	54.6	101
10	12.5	51	54.6	101
15	15	60	56.5	101
20	20	70	64.3	124
25	25	83	76.7	162
32	32	97	82	162
40	38	110	96.1	183
50	50	134	104.2	183
65	65	167	142.6	245
80	76	192	152.6	245

unit:mm

NPS	d	L	H	W
1/4"	0.46	2.01	2.15	3.98
3/8"	0.49	2.01	2.15	3.98
1/2"	0.59	2.36	2.22	3.98
3/4"	0.79	2.76	2.53	4.88
1"	0.98	3.27	3.02	6.38
1-1/4"	1.26	3.82	3.23	6.38
1-1/2"	1.5	4.33	3.78	7.2
2"	1.97	5.28	4.1	7.2
2-1/2"	2.56	6.57	5.61	9.65
3"	2.99	7.56	6.01	9.65

unit:in

2-PC. SCREWED END BALL VALVE

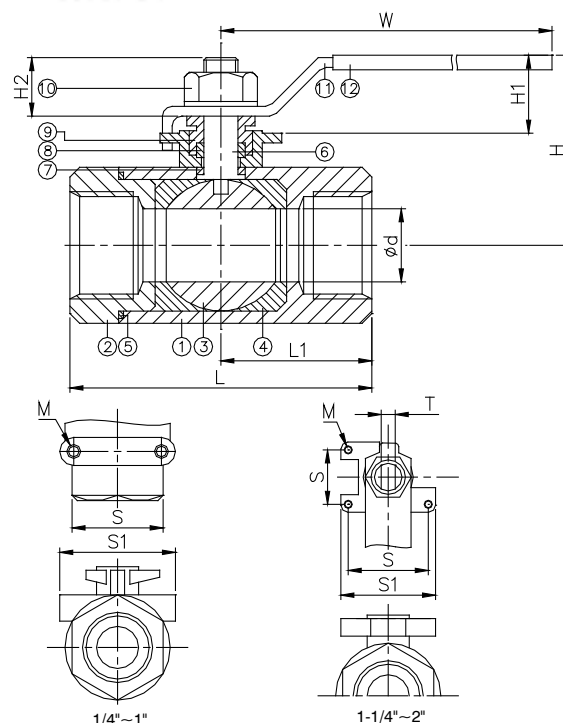
2007A

FEATURES

- Standard port
- W.P. : 1/4"~1" - 2000 WOG (PN150)
1-1/4"~2" - 1500 WOG (PN100)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Tapped & drilled mounting pad (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	SEAT	RTFE	
5	GASKET	PTFE	
6	STEM	316	
7	THRUST WASHER	PTFE	
8	PACKING		
9	GLAND	304	
10	HANDLE NUT		
11	HANDLE	PLASTIC	
12	HANDLE SLEEVE		
13	WASHER	304	



DN	d	L	L1	H	H1	H2	W	S	S1	T	M
8	12.7	56.5	25.5	51	35	10	98.7	28.2	39	5.45	W3/16-24
10	12.7	56.5	25.5	51	35	10	98.7	28.2	39	5.45	W3/16-24
15	12.7	59.2	28.5	51	35	10	98.7	28.2	39	5.45	W3/16-24
20	17.5	78.9	38.1	62	42	13	119.5	34.7	46	6.2	W3/16-24
25	22.3	84.9	40.8	67	42	13	119.5	34.7	46	6.2	W3/16-24
32	25.4	102.6	51.3	84	40	20.5	142	35.6	50	9.4	W1/4-20
40	32	110.6	54.7	89	42	20.5	142	35.6	50	9.4	W1/4-20
50	38.1	136.1	67.2	94	40	20.5	180	35.6	50	9.4	W1/4-20

unit:mm

NPS	d	L	L1	W	H	H1	H2	S	S1	T	M
1/4"	0.5	2.22	1	2.01	1.38	0.39	3.89	1.11	1.54	0.21	W3/16-24
3/8"	0.5	2.22	1	2.01	1.38	0.39	3.89	1.11	1.54	0.21	W3/16-24
1/2"	0.5	2.33	1.12	2.01	1.38	0.39	3.89	1.11	1.54	0.21	W3/16-24
3/4"	0.69	3.11	1.5	2.44	1.65	0.51	4.7	1.37	1.81	0.24	W3/16-24
1"	0.88	3.34	1.61	2.64	1.65	0.51	4.7	1.37	1.81	0.24	W3/16-24
1-1/4"	1	4.04	2.02	3.31	1.57	0.81	5.59	1.4	1.97	0.37	W1/4-20
1-1/2"	1.26	4.35	2.15	3.5	1.65	0.81	5.59	1.4	1.97	0.37	W1/4-20
2"	1.5	5.36	2.65	3.7	1.57	0.81	7.09	1.4	1.97	0.37	W1/4-20

unit:in

2-PC. SCREWED END BALL VALVE

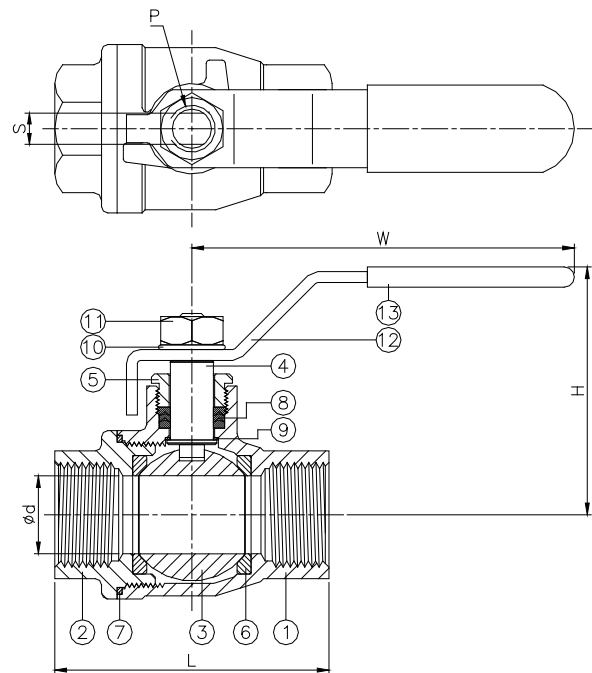
2009

FEATURES

- Full port, 1/4"~3" (DN8-DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	BALL SEAT	PTFE / RTFE	
7	BODY SEAL	PTFE	
8	PACKING		
9	THRUST WASHER		
10	SPRING WASHER	AISI 304	
11	NUT		
12	HANDLE	STAINLESS STEEL	
13	HANDLE SLEEVE	PVC	



DN	d	L	H	W	S	P
8	12	51.5	49	102	5	5/16"W
10	13	51.5	49	102	5	5/16"W
15	15	60.5	49	102	5	5/16"W
20	20	70.5	62.5	120	6	3/8"W
25	25	83.5	75	158	8	7/16"W
32	32	97	81.5	158	8	7/16"W
40	38	107	99	188	9	1/2"W
50	50	135	108	188	9	1/2"W
65	65	159.5	136.5	245	12	3/4"W
80	80	185.5	145.5	245	12	3/4"W

unit:mm

NPS	d	L	H	W	S	P
1/4"	0.47	2.03	1.93	4.02	0.2	5/16"W
3/8"	0.51	2.03	1.93	4.02	0.2	5/16"W
1/2"	0.59	2.38	1.93	4.02	0.2	5/16"W
3/4"	0.79	2.78	2.46	4.72	0.24	3/8"W
1"	0.98	3.29	2.95	6.22	0.31	7/16"W
1-1/4"	1.26	3.82	3.21	6.22	0.31	7/16"W
1-1/2"	1.5	4.21	3.9	7.4	0.35	1/2"W
2"	1.97	5.31	4.25	7.4	0.35	1/2"W
2-1/2"	2.56	6.28	5.37	9.65	0.47	3/4"W
3"	3.15	7.3	5.73	9.65	0.47	3/4"W

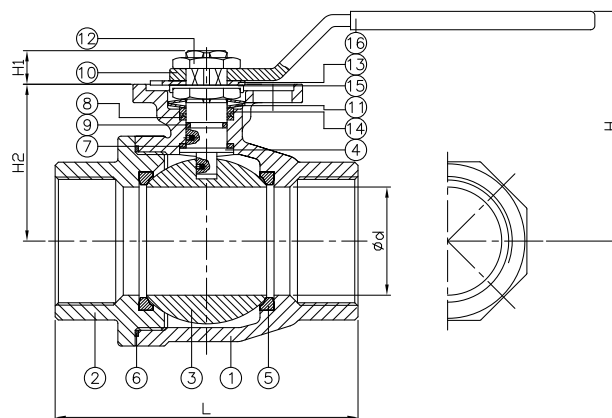
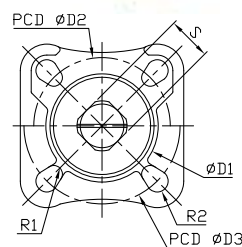
unit:in

2-PC. SCREWED END BALL VALVE

2009D

FEATURES

- Full port, 1/4"~2" (DN8-DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	RTFE / PTFE / TFM 1600	
6	GASKET	PTFE	
7	THRUST WASHER		
8	PACKING		
9	O-RING	VITON	
10	HANDLE	STAINLESS STEEL	
11	DISC SPRING	SS 301	
12	STEM NUT	AISI 304	
13	LOCK DEVICE		
14	GLAND RING		
15	LOCK WASHER	PVC	
16	HANDLE SLEEVE		

DN	d	L	H	H1	H2	S	D1	D2	D3	R1	R2	ISO 5211
8	8	75	64	8	39	9	31	36	42	2.75	2.75	F03/F04
10	10	75	64	8	39	9	31	36	42	2.75	2.75	F03/F04
15	15	75	64	8	39	9	31	36	42	2.75	2.75	F03/F04
20	20	80	70	8	44	9	31	36	42	2.75	2.75	F03/F04
25	25	90.5	74	9	47.5	11	35.5	42	50	2.75	3.5	F04/F05
32	32	110	80	12	53	11	35.5	42	50	2.75	3.5	F04/F05
40	38	120	98	13	64.5	14	56	50	70	3.5	4.5	F05/F07
50	50	140	107	13.5	73	14	56	50	70	3.5	4.5	F05/F07

unit:mm

NPS	d	L	H	H1	H2	S	D1	D2	D3	R1	R2	ISO 5211
1/4"	0.31	2.95	2.52	0.31	1.54	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.39	2.95	2.52	0.31	1.54	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	2.95	2.52	0.31	1.54	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	3.15	2.76	0.31	1.73	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	3.56	2.91	0.35	1.87	0.43	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	4.33	3.15	0.47	2.09	0.43	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	4.72	3.86	0.51	2.54	0.55	2.2	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	5.51	4.21	0.53	2.87	0.55	2.2	1.97	2.76	0.14	0.18	F05/F07

unit:in



2-PC. SCREWED END BALL VALVE

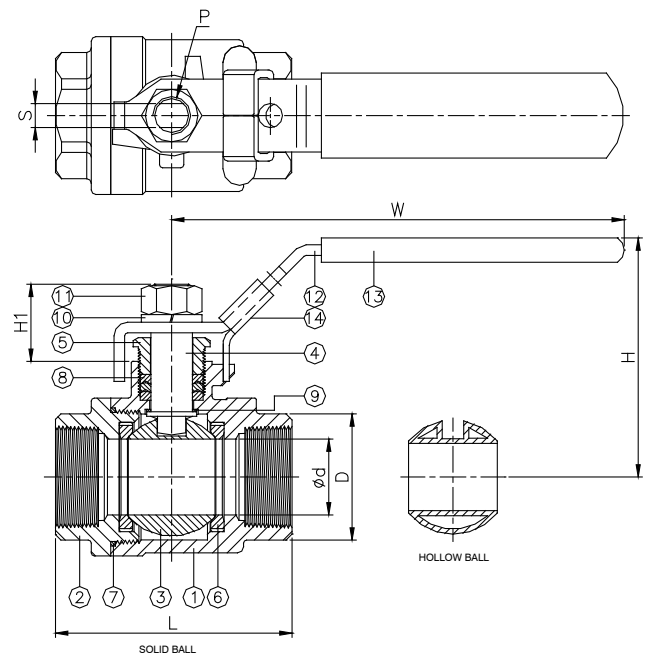
2006S

FEATURES

- Full port, 1/4"~3" (DN8-DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- Tapped & drilled mounting pad (option)
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2006SM3 (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A216-WCB 1.0619
2	CAP		
3	SOLID BALL	ASTM A351-CF8M	
	HOLLOW BALL	ASTM A240-316	
4	STEM	ASTM A276-316	
5	GLAND	AISI 304	
6	SEAT	PTFE / RTFE	
7	SEAL	PTFE	
8	PACKING		
9	THRUST WASHER		
10	SPRING WASHER	AISI 304	
11	NUT		
12	HANDLE	STAINLESS STEEL	
13	HANDLE SLEEVE	PVC	
14	LOCK DEVICE	STAINLESS STEEL	



DN	d	D	L	H	H1	W	S	P
8	11.6	19	50.8	58.5	18.5	99.5	5	3/8"-24UNF
10	12.5	22.5	50.8	58.5	18.5	99.5	5	3/8"-24UNF
15	15	26	58	60.5	18.8	99.5	5	3/8"-24UNF
20	20	32	65.6	63	23.4	123	6.5	7/16"-20UNF
25	25	38	78.7	79.5	26.15	149	8	7/16"-20UNF
32	32	48	90	86	23.6	149	8	7/16"-20UNF
40	38	54.8	105	101.7	28.2	190	10	1/2"-20UNF
50	50	67	124	109.3	28.2	190	10	1/2"-20UNF
65	63	85	146	140	39.4	247	12	3/4"-10UNC
80	76	100	163.2	148.5	39.4	247	12	3/4"-10UNC

unit:mm

NPS	d	D	L	H	H1	W	S	P
1/4"	0.46	0.75	2	2.3	0.73	3.92	0.2	3/8"-24UNF
3/8"	0.49	0.89	2	2.3	0.73	3.92	0.2	3/8"-24UNF
1/2"	0.59	1.02	2.28	2.38	0.74	3.92	0.2	3/8"-24UNF
3/4"	0.79	1.26	2.58	2.48	0.92	4.84	0.26	7/16"-20UNF
1"	0.98	1.5	3.1	3.13	1.03	5.87	0.31	7/16"-20UNF
1-1/4"	1.26	1.89	3.54	3.39	0.93	5.87	0.31	7/16"-20UNF
1-1/2"	1.5	2.16	4.13	4	1.11	7.48	0.39	1/2"-20UNF
2"	1.97	2.64	4.88	4.3	1.11	7.48	0.39	1/2"-20UNF
2-1/2"	2.48	3.35	5.75	5.51	1.55	9.72	0.47	3/4"-10UNC
3"	2.99	3.94	6.43	5.85	1.55	9.72	0.47	3/4"-10UNC

unit:in

2-PC. SCREWED END BALL VALVE

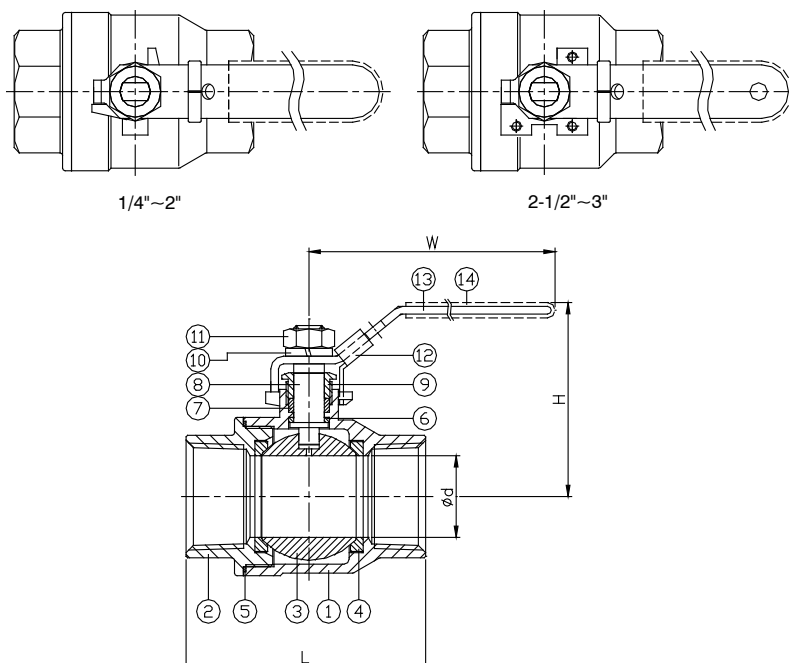
2006S-A

FEATURES

- Full port, 1/4"~3" (DN8-DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP	
3	BALL	SS 316
4	SEAT	RTFE
5	SEAL	PTFE
6	THRUST WASHER	
7	PACKING	SS 316
8	STEM	
9	GLAND	AISI 304
10	SPRING WASHER	
11	STEM NUT	
12	HANDLE	
13	LOCKING DEVICE	PVC
14	HANDLE SLEEVE	



DN	d	L	H	W
8	11.6	50.8	58.5	99.5
10	12.5	50.8	58.5	99.5
15	15	60	60.5	99.5
20	20	70	63	123
25	25	82.5	79.5	149
32	32	96.5	86	149
40	38	110	101.7	190
50	50	134	109.3	190
65	65	167	142	247
80	76	192	150	247

unit:mm

NPS	d	L	H	W
1/4"	0.46	2	2.3	3.92
3/8"	0.49	2	2.3	3.92
1/2"	0.59	2.36	2.38	3.92
3/4"	0.79	2.76	2.48	4.84
1"	0.98	3.25	3.13	5.87
1-1/4"	1.26	3.8	3.39	5.87
1-1/2"	1.5	4.33	4	7.48
2"	1.97	5.28	4.3	7.48
2-1/2"	2.56	6.57	5.59	9.72
3"	2.99	7.56	5.91	9.72

unit:in

2-PC. SCREWED END BALL VALVE

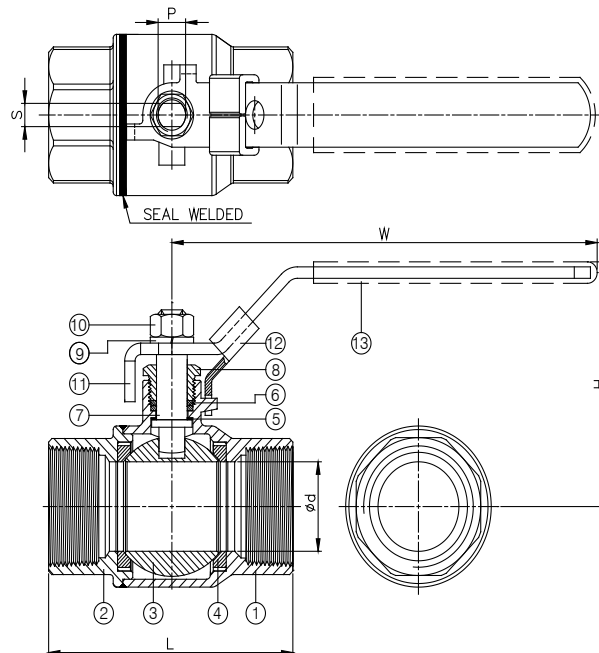
2006SW

FEATURES

- Full port, 1/4"-3" (DN8-DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- Seal welded ends
- TA-Luft approved (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP	
3	BALL	ASTM A351-CF8M
4	BALL SEAT	PTFE / RTFE
5	THRUST WASHER	PTFE
6	PACKING	
7	STEM	ASTM A276-316
8	GLAND RING	AISI 304
9	SPRING WASHER	
10	STEM NUT	
11	HANDLE	STAINLESS STEEL
12	LOCK DEVICE	
13	HANDLE SLEEVE	PVC



DN	d	L	H	W	S	P
8	11.5	50	48	102	5	5/16"-18UNC
10	12.5	50	48	102	5	5/16"-18UNC
15	15	58	51	102	5	5/16"-18UNC
20	20	66	57	129	6.5	3/8"-16UNC
25	25	75.5	63	129	6.5	3/8"-16UNC
32	32	88.5	74	153	8	7/16"-14UNC
40	38	98.5	81	153	8	7/16"-14UNC
50	50	120	94	190	9	1/2"-12UNC
65	63	146.5	130	247	12	3/4"-10UNC
80	76	165	137	247	12	3/4"-10UNC

unit:mm

NPS	d	L	H	W	S	P
1/4"	0.45	1.97	1.89	4.02	0.2	5/16"-18UNC
3/8"	0.49	1.97	1.89	4.02	0.2	5/16"-18UNC
1/2"	0.59	2.28	2.01	4.02	0.2	5/16"-18UNC
3/4"	0.79	2.6	2.24	5.08	0.26	3/8"-16UNC
1"	0.98	2.97	2.48	5.08	0.26	3/8"-16UNC
1-1/4"	1.26	3.48	2.91	6.02	0.31	7/16"-14UNC
1-1/2"	1.5	3.88	3.19	6.02	0.31	7/16"-14UNC
2"	1.97	4.72	3.7	7.48	0.35	1/2"-12UNC
2-1/2"	2.48	5.77	5.12	9.72	0.47	3/4"-10UNC
3"	2.99	6.5	5.39	9.72	0.47	3/4"-10UNC

unit:in

2-PC. SCREWED END BALL VALVE

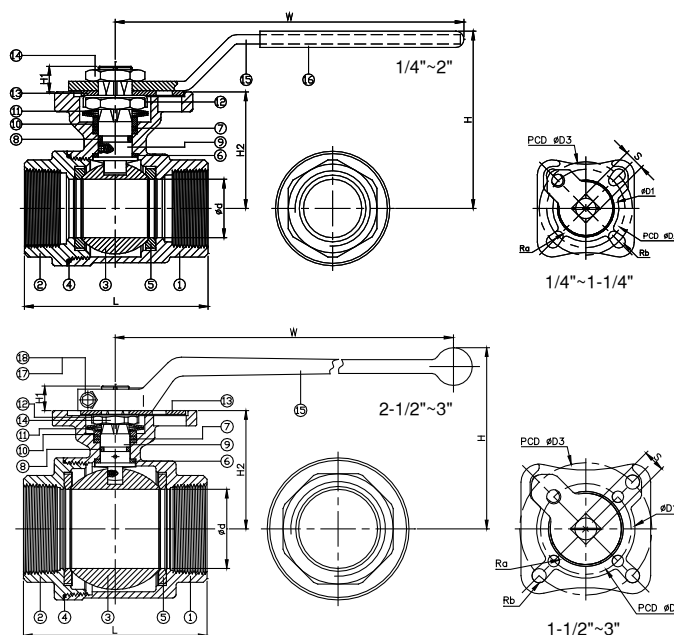
2006SD

FEATURES

- Full port, 1/4"~3" (DN8~DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	BODY SEAL	PTFE	
5	BALL SEAT	PTFE / RTFE / TFM 1600	
6	THRUST WASHER	PTFE	
7	PACKING		
8	O-RING	VITON	
9	STEM	ASTM A276-316	
10	GLAND RING	AISI 304	
11	BELLEVEILLE WASHER	AISI 301	
12	LOCK WASHER	AISI 304	
13	STOPPER		
14	STEM NUT		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	BOLT	AISI 304	
18	NUT		



DN	d	L	H	H1	H2	W	S	D1	D2	D3	Ra	Rb	ISO 5211
8	11.6	58	62	8	36.4	113.5	9	31	36	42	2.75	2.75	F03/F04
10	12.7	58	62	8	36.4	113.5	9	31	36	42	2.75	2.75	F03/F04
15	15	58	62	8	36.4	113.5	9	31	36	42	2.75	2.75	F03/F04
20	20	65.6	65	8	39.2	113.5	9	31	36	42	2.75	2.75	F03/F04
25	25	78.7	76	11.8	48.7	140	11	35.5	42	50	2.75	3.5	F04/F05
32	32	90	81.5	11.5	54.2	140	11	35.5	42	50	2.75	3.5	F04/F05
40	38	105	103	11.3	65.7	172	14	56	50	70	3.5	4.5	F05/F07
50	50	124	111.5	10.4	75.5	172	14	56	50	70	3.5	4.5	F05/F07
65	63	146.2	141	17	91.5	325	17	76	70	102	4.5	5.5	F07/F10
80	76	163.7	150	16.5	100.75	325	17	76	70	102	4.5	5.5	F07/F10

unit:mm

NPS	d	L	H	H1	H2	W	S	D1	D2	D3	Ra	Rb	ISO 5211
1/4"	0.46	2.28	2.44	0.31	1.43	4.47	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.5	2.28	2.44	0.31	1.43	4.47	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	2.28	2.44	0.31	1.43	4.47	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	2.58	2.56	0.31	1.54	4.47	0.35	1.22	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	3.1	2.99	0.46	1.92	5.51	0.43	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	3.54	3.21	0.45	2.13	5.51	0.43	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	4.13	4.06	0.44	2.59	6.77	0.55	2.2	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	4.88	4.39	0.41	2.97	6.77	0.55	2.2	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.48	5.76	5.55	0.67	3.6	12.8	0.67	2.99	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	6.44	5.91	0.65	3.97	12.8	0.67	2.99	2.76	4.02	0.18	0.22	F07/F10

unit:in



3-PC. SOCKET WELD END BALL VALVE

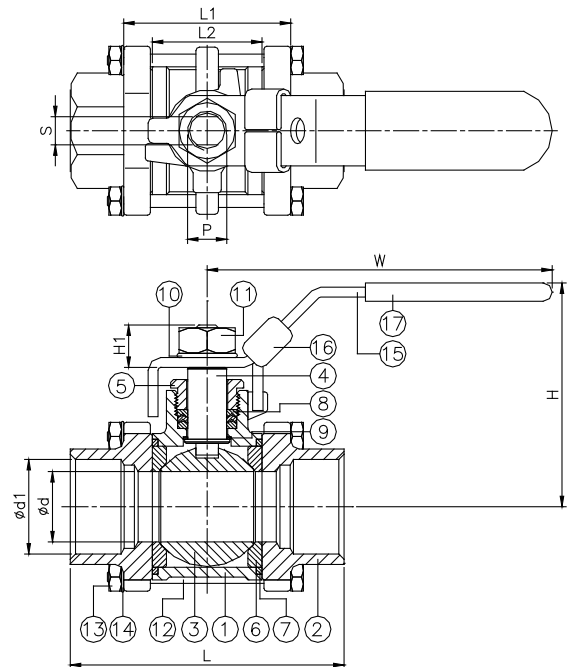
2011

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A351-CF8	ASTM A216-WCB
2	CAP	1.4408	1.4308	1.0619
3	BALL	ASTM A351-CF8M		
4	STEM	ASTM A276-316		
5	GLAND NUT	AISI 304		
6	SEAT	PTFE / RTFE / CTFE		
7	SEAL	PTFE		
8	PACKING			
9	THRUST WASHER			
10	SPRING WASHER	AISI 304		
11	STEM NUT			
12	BOLT			
13	BOLT NUT			
14	SPRING WASHER	STAINLESS STEEL		
15	HANDLE			
16	LATCH LOCK	PVC		
17	HANDLE SLEEVE			



DN	d	d1	L	L1	L2	H	H1	W	S	P
8	11.6	14	64.5	35.5	21.5	56	9.5	102	5	5/16"UNC
10	12.7	18	64.5	35.5	21.5	56	9.5	102	5	5/16"UNC
15	15	22	66	38	24	57	10.5	102	5	5/16"UNC
20	20	27.6	83.5	43	28	66	13.5	120.5	6.5	3/8"UNC
25	25	34.5	95	54	35	76	15.5	158.5	8	7/16"UNC
32	32	43	111.2	65	45	81	15.5	158.5	8	7/16"UNC
40	38	49.2	130	75	55	98	17.5	188	9	1/2"UNC
50	50	61.5	151	88	66	106	17.5	188	9	1/2"UNC
65	65	74	183	114	86	138	33	245	12	3/4"UNC
80	80	90	210.4	132	100	154	33	290	12	3/4"UNC
100	100	115	234	158	125	178	42	320	16	1"UNC

unit:mm

NPS	d	d1	L	L1	L2	H	H1	W	S	P
1/4"	0.46	0.55	2.54	1.4	0.85	2.2	0.37	4.02	0.2	5/16"UNC
3/8"	0.5	0.71	2.54	1.4	0.85	2.2	0.37	4.02	0.2	5/16"UNC
1/2"	0.59	0.87	2.6	1.5	0.94	2.24	0.41	4.02	0.2	5/16"UNC
3/4"	0.79	1.09	3.29	1.69	1.1	2.6	0.53	4.74	0.26	3/8"UNC
1"	0.98	1.36	3.74	2.13	1.38	2.99	0.61	6.24	0.31	7/16"UNC
1-1/4"	1.26	1.69	4.38	2.56	1.77	3.19	0.61	6.24	0.31	7/16"UNC
1-1/2"	1.5	1.94	5.12	2.95	2.17	3.86	0.69	7.4	0.35	1/2"UNC
2"	1.97	2.42	5.94	3.46	2.6	4.17	0.69	7.4	0.35	1/2"UNC
2-1/2"	2.56	2.91	7.2	4.49	3.39	5.43	1.3	9.65	0.47	3/4"UNC
3"	3.15	3.54	8.28	5.2	3.94	6.06	1.3	11.42	0.47	3/4"UNC
4"	3.94	4.53	9.21	6.22	4.92	7.01	1.65	12.6	0.63	1"UNC

unit:in



3-PC. BUTT WELD END BALL VALVE

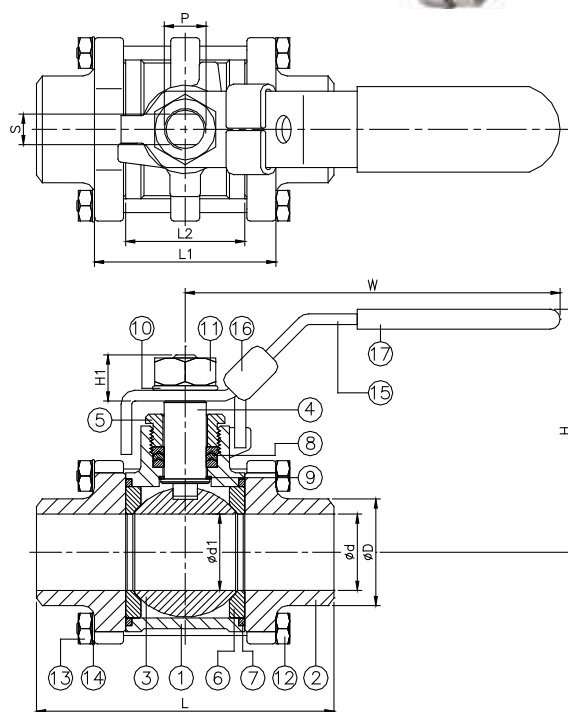
2012

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A351-CF8	ASTM A216-WCB
2	CAP	1.4408	1.4308	1.0619
3	BALL	ASTM A351-CF8M		
4	STEM	ASTM A276-316		
5	GLAND NUT	AISI 304		
6	SEAT	PTFE / RTFE / CTFE		
7	SEAL	PTFE		
8	PACKING			
9	THRUST WASHER			
10	SPRING WASHER	AISI 304		
11	STEM NUT			
12	BOLT			
13	BOLT NUT			
14	SPRING WASHER	STAINLESS STEEL		
15	HANDLE			
16	LATCH LOCK	PVC		
17	HANDLE SLEEVE			



DN	d	d1	D	L	L1	L2	H	H1	W	S	P
8	8	12.7	13.5	64.5	35.5	21.5	56	9.5	102	5	5/16"UNC
10	12.7	12.7	17.5	64.5	35.5	21.5	56	9.5	102	5	5/16"UNC
15	15	15	22	66	38	24	57	10.5	102	5	5/16"UNC
20	20	20	27	82	43	28	66	13.5	120.5	6.5	3/8"UNC
25	25	25	34	95	54	35	76	15.5	158.5	8	7/16"UNC
32	32	32	42.5	111.2	65	45	81	15.5	158.5	8	7/16"UNC
40	38	38	48.5	130.6	75	55	98	17.5	188	9	1/2"UNC
50	50	50	61	151	88	66	106	17.5	188	9	1/2"UNC
65	65	65	77	185	114	86	138	33	245	12	3/4"UNC
80	80	80	90	212	132	100	154	33	290	12	3/4"UNC
100	100	100	115	235	158	125	178	42	320	16	1"UNC

unit:mm

NPS	d	d1	D	L	L1	L2	H	H1	W	S	P
1/4"	0.31	0.5	0.53	2.54	1.4	0.85	2.2	0.37	4.02	0.2	5/16"UNC
3/8"	0.5	0.5	0.69	2.54	1.4	0.85	2.2	0.37	4.02	0.2	5/16"UNC
1/2"	0.59	0.59	0.87	2.6	1.5	0.94	2.24	0.41	4.02	0.2	5/16"UNC
3/4"	0.79	0.79	1.06	3.23	1.69	1.1	2.6	0.53	4.74	0.26	3/8"UNC
1"	0.98	0.98	1.34	3.74	2.13	1.38	2.99	0.61	6.24	0.31	7/16"UNC
1-1/4"	1.26	1.26	1.67	4.38	2.56	1.77	3.19	0.61	6.24	0.31	7/16"UNC
1-1/2"	1.5	1.5	1.91	5.14	2.95	2.17	3.86	0.69	7.4	0.35	1/2"UNC
2"	1.97	1.97	2.4	5.94	3.46	2.6	4.17	0.69	7.4	0.35	1/2"UNC
2-1/2"	2.56	2.56	3.03	7.28	4.49	3.39	5.43	1.3	9.65	0.47	3/4"UNC
3"	3.15	3.15	3.54	8.35	5.2	3.94	6.06	1.3	11.42	0.47	3/4"UNC
4"	3.94	3.94	4.53	9.25	6.22	4.92	7.01	1.65	12.6	0.63	1"UNC

unit:in

3-PC. SCREWED END BALL VALVE

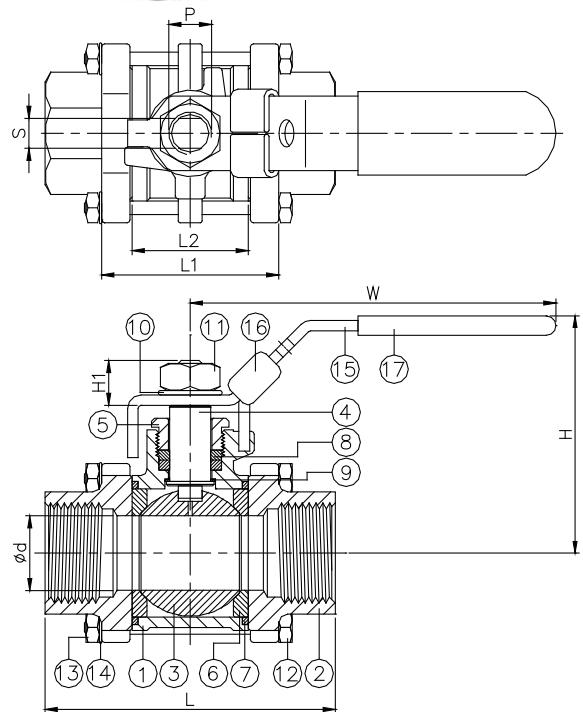
2013

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A351-CF8	ASTM A216-WCB
2	CAP	1.4408	1.4308	1.0619
3	BALL	ASTM A351-CF8M		
4	STEM	ASTM A276-316		
5	GLAND NUT	AISI 304		
6	SEAT	PTFE / RTFE / CTFE		
7	SEAL	PTFE		
8	PACKING			
9	THRUST WASHER			
10	SPRING WASHER	AISI 304		
11	STEM NUT			
12	BOLT			
13	BOLT NUT			
14	SPRING WASHER	STAINLESS STEEL		
15	HANDLE			
16	LATCH LOCK	PVC		
17	HANDLE SLEEVE			



DN	d	L	L1	L2	H	H1	W	S	P
8	11.6	64.5	35.5	21.5	56	9.5	102	5	5/16"UNC
10	12.7	64.5	35.5	21.5	56	9.5	102	5	5/16"UNC
15	15	66	38	24	57	10.5	102	5	5/16"UNC
20	20	83.4	43	28	66	13.5	120.5	6.5	3/8"UNC
25	25	95	54	35	76	15.5	158.5	8	7/16"UNC
32	32	111.2	65	45	81	15.5	158.5	8	7/16"UNC
40	38	130	75	55	98	17.5	188	9	1/2"UNC
50	50	151	88	66	106	17.5	188	9	1/2"UNC
65	65	184	114	86	138	33	245	12	3/4"UNC
80	80	209	132	100	154	33	290	12	3/4"UNC
100	100	234.4	158	125	178	42	320	16	1"UNC

unit:mm

NPS	d	L	L1	L2	H	H1	W	S	P
1/4"	0.46	2.54	1.4	0.85	2.2	0.37	4.02	0.2	5/16"UNC
3/8"	0.5	2.54	1.4	0.85	2.2	0.37	4.02	0.2	5/16"UNC
1/2"	0.59	2.6	1.5	0.94	2.24	0.41	4.02	0.2	5/16"UNC
3/4"	0.79	3.28	1.69	1.1	2.6	0.53	4.74	0.26	3/8"UNC
1"	0.98	3.74	2.13	1.38	2.99	0.61	6.24	0.31	7/16"UNC
1-1/4"	1.26	4.38	2.56	1.77	3.19	0.61	6.24	0.31	7/16"UNC
1-1/2"	1.5	5.12	2.95	2.17	3.86	0.69	7.4	0.35	1/2"UNC
2"	1.97	5.94	3.46	2.6	4.17	0.69	7.4	0.35	1/2"UNC
2-1/2"	2.56	7.24	4.49	3.39	5.43	1.3	9.65	0.47	3/4"UNC
3"	3.15	8.23	5.2	3.94	6.06	1.3	11.42	0.47	3/4"UNC
4"	3.94	9.23	6.22	4.92	7.01	1.65	12.6	0.63	1"UNC

unit:in



3-PC. SOCKET WELD END BALL VALVE

2011M

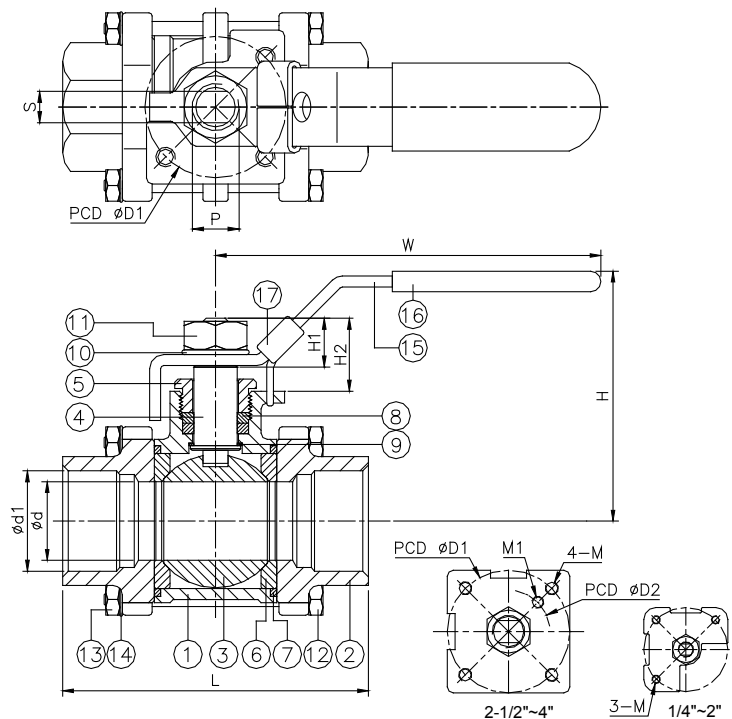
FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- ISO 5211 direct Mounting pad
- 2411D (option)

- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	SEAT	PTFE / RTFE	
7	SEAL	PTFE	
8	PACKING		
9	THRUST WASHER		
10	SPRING WASHER		
11	STEM NUT	AISI 304	
12	BOLT		
13	NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	LOCKING DEVICE	STAINLESS STEEL	



DN	d	d1	L	H	H1	H2	W	S	D1	D2	P	M	M1	ISO 5211
8	11.6	14	64.5	56	11	15	119	5	36	-	5/16"UNC	M5	-	F03
10	12.7	18	64.5	56	11	15	119	5	36	-	5/16"UNC	M5	-	F03
15	15	22	66	57	11	15	119	5	36	-	5/16"UNC	M5	-	F03
20	20	27.6	83.4	63	14	19.5	135.5	6.5	36	-	3/8"UNC	M5	-	F03
25	25	34.5	95	81	15.5	23.5	158.5	8	42	-	7/16"UNC	M5	-	F04
32	32	43	111.2	87	15.5	20	158.5	8	50	-	7/16"UNC	M5	-	F05
40	38	49.2	130	96	18	26	188	9	50	-	1/2"UNC	M6	-	F05
50	50	61.5	151	109	18	26	198	9	70	-	1/2"UNC	M8	-	F07
65	65	74	184	133	31	40	280	12	102	68.5	3/4"UNC	M12	M10	F10
80	80	90	209	149	31	38	320	12	102	68	3/4"UNC	M12	M10	F10
100	100	115	234.4	171	40	53	312	16	102	69	1"UNC	M12	M10	F10

NPS	d	d1	L	H	H1	H2	W	S	D1	D2	P	M	M1	ISO 5211
1/4"	0.46	0.55	2.54	2.2	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
3/8"	0.5	0.71	2.54	2.2	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
1/2"	0.59	0.87	2.6	2.24	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
3/4"	0.79	1.09	3.28	2.48	0.55	0.77	5.33	0.26	1.42	-	3/8"UNC	M5	-	F03
1"	0.98	1.36	3.74	3.19	0.61	0.93	6.24	0.31	1.65	-	7/16"UNC	M5	-	F04
1-1/4"	1.26	1.69	4.38	3.43	0.61	0.79	6.24	0.31	1.97	-	7/16"UNC	M5	-	F05
1-1/2"	1.5	1.94	5.12	3.78	0.71	1.02	7.4	0.35	1.97	-	1/2"UNC	M6	-	F05
2"	1.97	2.42	5.94	4.29	0.71	1.02	7.8	0.35	2.76	-	1/2"UNC	M8	-	F07
2-1/2"	2.56	2.91	7.24	5.24	1.22	1.57	11.02	0.47	4.02	2.7	3/4"UNC	M12	M10	F10
3"	3.15	3.54	8.23	5.87	1.22	1.5	12.6	0.47	4.02	2.68	3/4"UNC	M12	M10	F10
4"	3.94	4.53	9.23	6.73	1.57	2.09	12.28	0.63	4.02	2.72	1"UNC	M12	M10	F10

unit:mm



3-PC. BUTT WELD END BALL VALVE

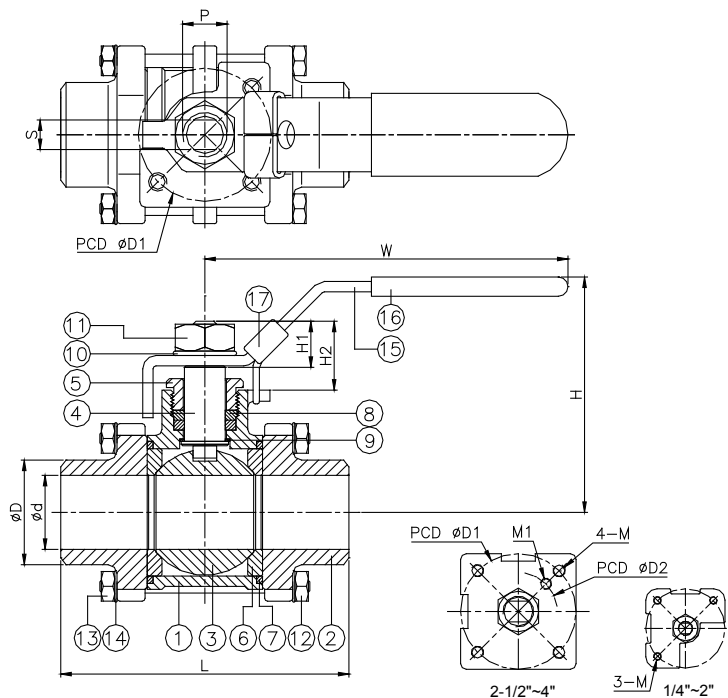
2012M

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- ISO 5211 direct Mounting pad
- 2412D (option)
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	SEAT	PTFE / RTFE	
7	SEAL	PTFE	
8	PACKING		
9	THRUST WASHER		
10	SPRING WASHER		
11	STEM NUT	AISI 304	
12	BOLT		
13	BOLT NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	LOCKING DEVICE	STAINLESS STEEL	



DN	d	D	L	H	H1	H2	W	S	D1	D2	P	M	M1	ISO 5211
8	8	13.5	64.5	56	11	15	119	5	36	-	5/16"UNC	M5	-	F03
10	12.7	17.5	64.5	56	11	15	119	5	36	-	5/16"UNC	M5	-	F03
15	15	22	66	57	11	15	119	5	36	-	5/16"UNC	M5	-	F03
20	20	27	82	63	14	19.5	135.5	6.5	36	-	3/8"UNC	M5	-	F03
25	25	34	95	81	15.5	23.5	158.5	8	42	-	7/16"UNC	M5	-	F04
32	32	42.5	111.2	87	15.5	20	158.5	8	50	-	7/16"UNC	M5	-	F05
40	38	48.5	130.6	96	18	26	188	9	50	-	1/2"UNC	M6	-	F05
50	50	61	151	109	18	26	198	9	70	-	1/2"UNC	M8	-	F07
65	65	77	185	133	31	40	280	12	102	68.5	3/4"UNC	M12	M10	F10
80	80	90	212	149	31	38	320	12	102	68	3/4"UNC	M12	M10	F10
100	100	115	235	171	40	53	312	16	102	69	1"UNC	M12	M10	F10

NPS	d	D	L	H	H1	H2	W	S	D1	D2	P	M	M1	ISO 5211
1/4"	0.31	0.53	2.54	2.2	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
3/8"	0.5	0.69	2.54	2.2	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
1/2"	0.59	0.87	2.6	2.24	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
3/4"	0.79	1.06	3.23	2.48	0.55	0.77	5.33	0.26	1.42	-	3/8"UNC	M5	-	F03
1"	0.98	1.34	3.74	3.19	0.61	0.93	6.24	0.31	1.65	-	7/16"UNC	M5	-	F04
1-1/4"	1.26	1.67	4.38	3.43	0.61	0.79	6.24	0.31	1.97	-	7/16"UNC	M5	-	F05
1-1/2"	1.5	1.91	5.14	3.78	0.71	1.02	7.4	0.35	1.97	-	1/2"UNC	M6	-	F05
2"	1.97	2.4	5.94	4.29	0.71	1.02	7.8	0.35	2.76	-	1/2"UNC	M8	-	F07
2-1/2"	2.56	3.03	7.28	5.24	1.22	1.57	11.02	0.47	4.02	2.7	3/4"UNC	M12	M10	F10
3"	3.15	3.54	8.35	5.87	1.22	1.5	12.6	0.47	4.02	2.68	3/4"UNC	M12	M10	F10
4"	3.94	4.53	9.25	6.73	1.57	2.09	12.28	0.63	4.02	2.72	1"UNC	M12	M10	F10

unit:mm



3-PC. SCREWED END BALL VALVE

2013M

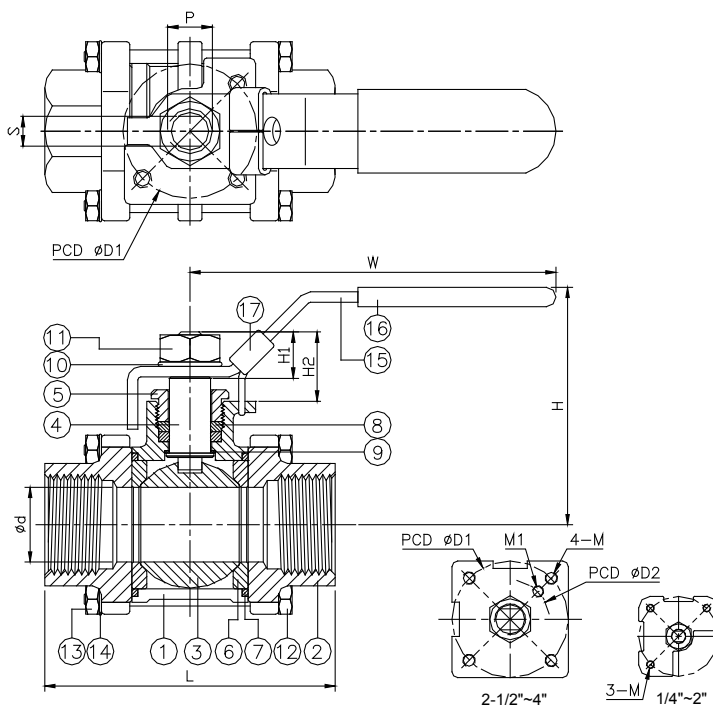
FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- ISO 5211 direct Mounting pad
- 2413D (option)

- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	SEAT	PTFE / RTFE	
7	SEAL	PTFE	
8	PACKING		
9	THRUST WASHER		
10	SPRING WASHER		
11	STEM NUT	AISI 304	
12	BOLT		
13	NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	LOCKING DEVICE	STAINLESS STEEL	



DN	d	L	H	H1	H2	W	S	D1	D2	P	M	M1	ISO 5211
8	11.6	64.5	56	11	15	119	5	36	-	5/16"UNC	M5	-	F03
10	12.7	64.5	56	11	15	119	5	36	-	5/16"UNC	M5	-	F03
15	15	66	57	11	15	119	5	36	-	5/16"UNC	M5	-	F03
20	20	83.4	63	14	19.5	135.5	6.5	36	-	3/8"UNC	M5	-	F03
25	25	95	81	15.5	23.5	158.5	8	42	-	7/16"UNC	M5	-	F04
32	32	111.2	87	15.5	20	158.5	8	50	-	7/16"UNC	M5	-	F05
40	38	130	96	18	26	188	9	50	-	1/2"UNC	M6	-	F05
50	50	151	109	18	26	198	9	70	-	1/2"UNC	M8	-	F07
65	65	184	133	31	40	280	12	102	68.5	3/4"UNC	M12	M10	F10
80	80	209	149	31	38	320	12	102	68	3/4"UNC	M12	M10	F10
100	100	234.4	171	40	53	312	16	102	69	1"UNC	M12	M10	F10

unit:mm

NPS	d	L	H	H1	H2	W	S	D1	D2	P	M	M1	ISO 5211
1/4"	0.46	2.54	2.2	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
3/8"	0.5	2.54	2.2	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
1/2"	0.59	2.6	2.24	0.43	0.59	4.69	0.2	1.42	-	5/16"UNC	M5	-	F03
3/4"	0.79	3.28	2.48	0.55	0.77	5.33	0.26	1.42	-	3/8"UNC	M5	-	F03
1"	0.98	3.74	3.19	0.61	0.93	6.24	0.31	1.65	-	7/16"UNC	M5	-	F04
1-1/4"	1.26	4.38	3.43	0.61	0.79	6.24	0.31	1.97	-	7/16"UNC	M5	-	F05
1-1/2"	1.5	5.12	3.78	0.71	1.02	7.4	0.35	1.97	-	1/2"UNC	M6	-	F05
2"	1.97	5.94	4.29	0.71	1.02	7.8	0.35	2.76	-	1/2"UNC	M8	-	F07
2-1/2"	2.56	7.24	5.24	1.22	1.57	11.02	0.47	4.02	2.7	3/4"UNC	M12	M10	F10
3"	3.15	8.23	5.87	1.22	1.5	12.6	0.47	4.02	2.68	3/4"UNC	M12	M10	F10
4"	3.94	9.23	6.73	1.57	2.09	12.28	0.63	4.02	2.72	1"UNC	M12	M10	F10

unit:in



3-PC. SOCKET WELD END BALL VALVE

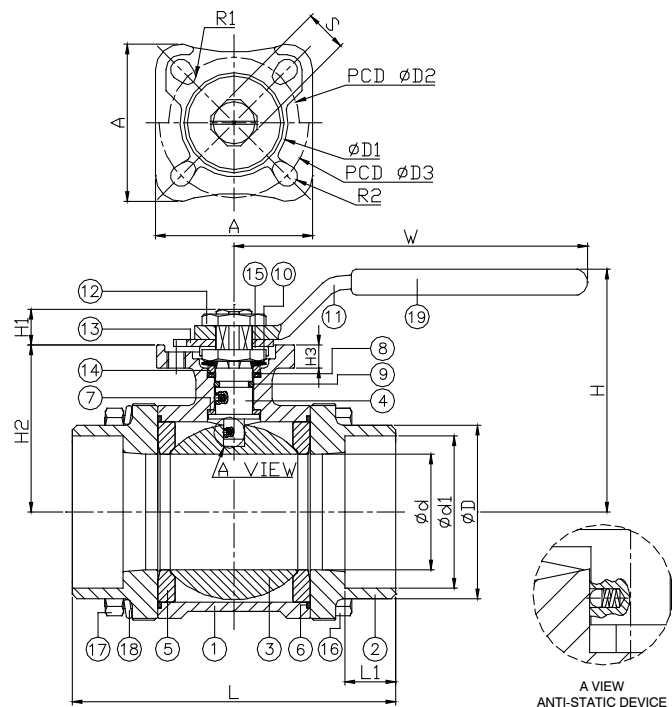
2011D

FEATURES

- Full port, 1/4"-2" (DN8-DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- Length conform to DIN 3202/4-M3
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	PTFE / RTFE	
6	GASKET	PTFE	
7	THRUST WASHER		
8	PACKING		
9	O-RING	VITON	
10	DISC SPRING	AISI 301	
11	HANDLE	STAINLESS STEEL	
12	STEM NUT	AISI 304	
13	STOPPER		
14	GLAND RING		
15	LOCK DEVICE		
16	BOLT		
17	NUT	PVC	
18	SPRING WASHER		
19	HANDLE SLEEVE		



DN	d	d1	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
8	8	14.4	22	55	11	63	8	40.3	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
10	10	17.9	22	60	11	63	8	40.3	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
15	15	22	29	75	10	63	8	40.3	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
20	20	27.5	35	80	13	69	9	45	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
25	25	34.2	42	90	13	76	10	47.5	7.5	148	11	50	35.5	42	50	2.75	3.5	F04/F05
32	32	43	52	110	13	84	11	55.5	7.5	148	11	50	35.5	42	50	2.75	3.5	F04/F05
40	38	49	62	120	13	99	12	65.3	9	178	14	70	56	50	70	3.5	4.5	F05/F07
50	50	61	75	140	16	108	12	73	9	178	14	70	56	50	70	3.5	4.5	F05/F07

unit:mm

NPS	d	d1	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
1/4"	0.31	0.57	0.87	2.17	0.43	2.48	0.31	1.59	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.39	0.7	0.87	2.36	0.43	2.48	0.31	1.59	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	0.87	1.14	2.95	0.39	2.48	0.31	1.59	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	1.08	1.38	3.15	0.51	2.72	0.35	1.77	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	1.35	1.65	3.54	0.51	2.99	0.39	1.87	0.3	5.83	0.43	1.97	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	1.69	2.05	4.33	0.51	3.31	0.43	2.19	0.3	5.83	0.43	1.97	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	1.93	2.44	4.72	0.51	3.9	0.47	2.57	0.35	7.01	0.55	2.76	2.2	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	2.4	2.95	5.51	0.63	4.25	0.47	2.87	0.35	7.01	0.55	2.76	2.2	1.97	2.76	0.14	0.18	F05/F07

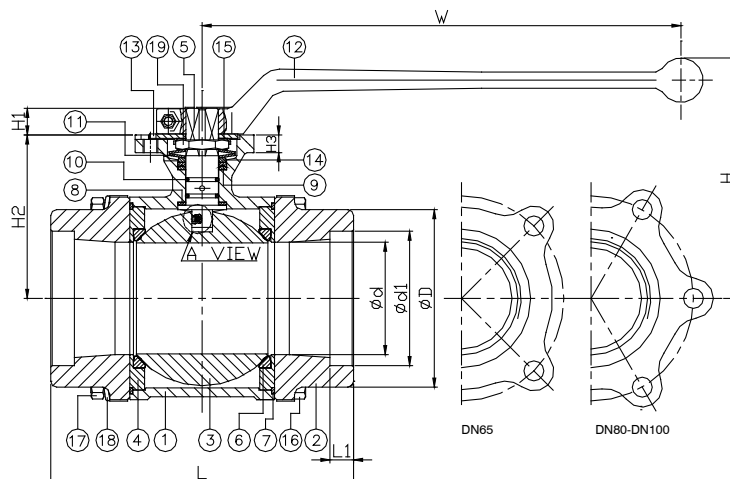
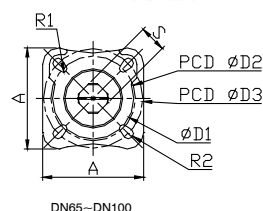
unit:in

3-PC. SOCKET WELD END BALL VALVE

2011D

FEATURES

- Full port, 2-1/2"~4" (DN65~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- Length conform to DIN 3202/4-M3
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	RETAINER		
5	STEM	ASTM A276-316	
6	SEAT	PTFE / RTFE	
7	GASKET		
8	THRUST WASHER	PTFE	
9	PACKING		
10	O-RING	VITON	
11	DISC SPRING	AISI 301	
12	HANDLE		
13	STOPPER		
14	GLAND RING		
15	LOCK DEVICE		
16	BOLT		
17	NUT		
18	SPRING WASHER		
19	STEM NUT		

DN	d	d1	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
65	65	74	92	185	16	158	17	105	10	325	17	100	70	70	102	4.5	5.5	F07/F10
80	76	90	104	205	16	165	17	111.5	10	325	17	100	70	70	102	4.5	5.5	F07/F10
100	100	115.5	140	240	20	189	22	136	12	325	22	125	100	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	d1	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
2-1/2"	2.56	2.91	3.62	7.28	0.63	6.22	0.67	4.13	0.39	12.8	0.67	3.94	2.76	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	3.54	4.09	8.07	0.63	6.5	0.67	4.39	0.39	12.8	0.67	3.94	2.76	2.76	4.02	0.18	0.22	F07/F10
4"	3.94	4.55	5.51	9.45	0.79	7.44	0.87	5.35	0.47	12.8	0.87	4.92	3.94	4.02	4.92	0.22	0.26	F10/F12

unit:in

3-PC. BUTT WELD END BALL VALVE

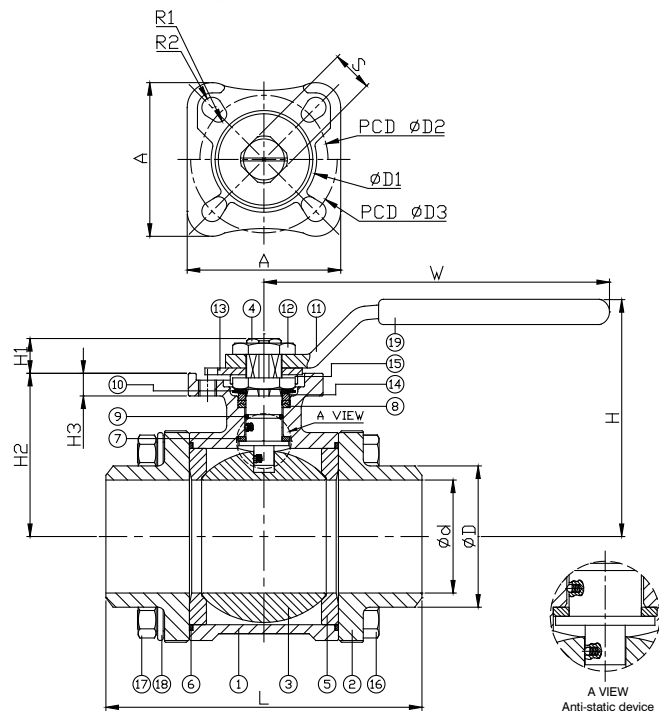
2012D

FEATURES

- Full port, 1/4"-2" (DN8-DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1
- Length conform to DIN 3202/2-S5



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	PTFE / RTFE	
6	GASKET	PTFE	
7	THRUST WASHER		
8	PACKING		
9	O-RING	VITON	
10	DISC SPRING	SS 301	
11	HANDLE	STAINLESS SREEL	
12	STEM NUT	AISI 304	
13	STOPPER		
14	GLAND NUT		
15	LOCK DEVICE		
16	BOLT		
17	NUT	PVC	
18	SPRING WASHER		
19	HANDLE SLEEVE		



DN	d	D	L	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
8	8	14	65	63	8	40.3	6	120	9	42	31	36	42	2.75	2.75	F03/F04
10	10	18	65	63	8	40.3	6	120	9	42	31	36	42	2.75	2.75	F03/F04
15	15	22	65	63	8	40.3	6	120	9	42	31	36	42	2.75	2.75	F03/F04
20	20	28	75	69	9	45	6	120	9	42	31	36	42	2.75	2.75	F03/F04
25	25	34	85	76	10	47.5	7.5	148	11	50	35.5	42	50	2.75	3.5	F04/F05
32	32	43	100	84	11	55.5	7.5	148	11	50	35.5	42	50	2.75	3.5	F04/F05
40	38	49	140	99	14	65.3	8.5	178	14	70	56	50	70	3.5	4.5	F05/F07
50	50	61	150	108	14	73	8.5	178	14	70	56	50	70	3.5	4.5	F05/F07

unit:mm

NPS	d	D	L	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
1/4"	0.31	0.55	2.6	2.48	0.31	1.59	0.24	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.39	0.71	2.6	2.48	0.31	1.59	0.24	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	0.87	2.6	2.48	0.31	1.59	0.24	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	1.1	2.95	2.72	0.35	1.77	0.24	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	1.34	3.35	2.99	0.39	1.87	0.3	5.83	0.43	1.97	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	1.69	3.94	3.31	0.43	2.19	0.3	5.83	0.43	1.97	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	1.93	5.51	3.9	0.55	2.57	0.33	7.01	0.55	2.76	2.2	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	2.4	5.91	4.25	0.55	2.87	0.33	7.01	0.55	2.76	2.2	1.97	2.76	0.14	0.18	F05/F07

unit:in

3-PC. BUTT WELD END BALL VALVE

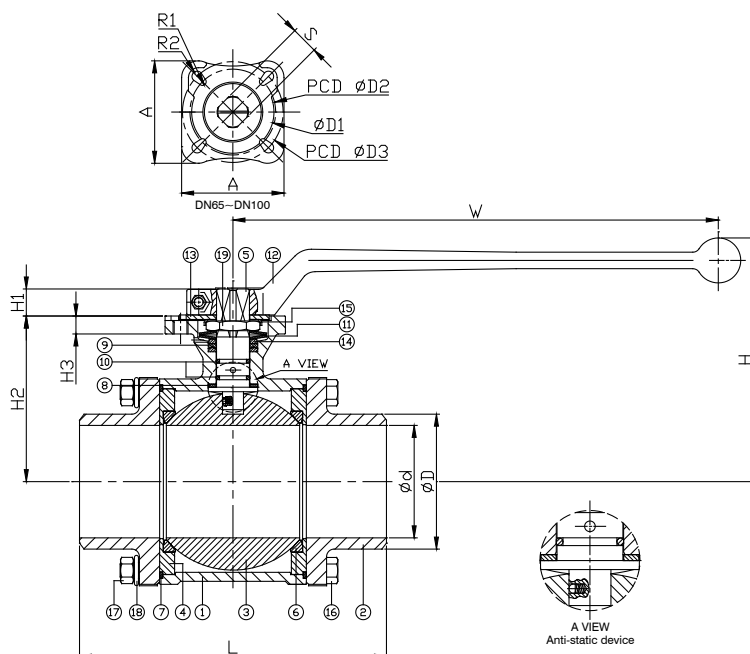
2012D

FEATURES

- Full port, 2-1/2"~4" (DN65~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1
- Length conform to DIN 3202/2-S5



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	RETAINER		
5	STEM	ASTM A276-316	
6	SEAT	PTFE / RTFE	
7	GASKET	PTFE	
8	THRUST WASHER		
9	PACKING		
10	O-RING	VITON	
11	DISC SPRING	SS 301	
12	HANDLE	AISI 304	
13	STOPPER		
14	GLAND RING		
15	LOCK DEVICE		
16	BOLT		
17	NUT		
18	SPRING WASHER		
19	STEM NUT		



DN	d	D	L	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
65	65	74	170	158	17	105	10	325	17	100	70	70	102	4.5	5.5	F07/F10
80	76	90	180	165	17	111.5	10	325	17	100	70	70	102	4.5	5.5	F07/F10
100	100	115	190	189	22	136	12	325	22	125	100	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	D	L	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
2-1/2"	2.56	2.91	6.69	6.22	0.67	4.13	0.39	12.8	0.67	3.94	2.76	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	3.54	7.09	6.5	0.67	4.39	0.39	12.8	0.67	3.94	2.76	2.76	4.02	0.18	0.22	F07/F10
4"	3.94	4.53	7.44	7.44	0.87	5.35	0.47	12.8	0.87	4.92	3.94	4.02	4.92	0.22	0.26	F10/F12

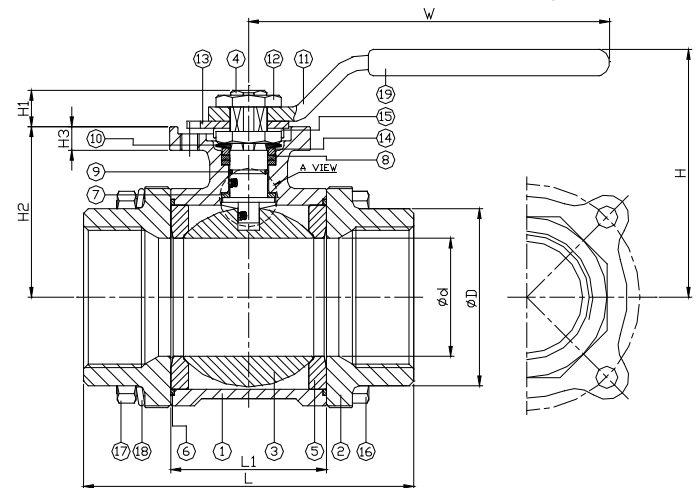
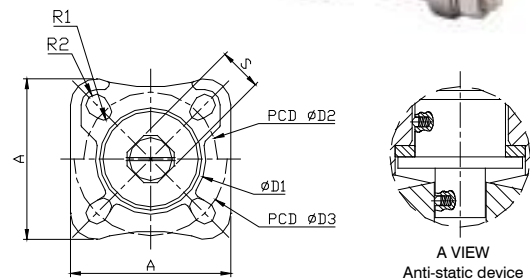
unit:in

3-PC. SCREWED END BALL VALVE

2013D

FEATURES

- Full port, 1/4"-2" (DN8-DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- Length conform to DIN 3202/4-M3
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	PTFE / RTFE	
6	GASKET	PTFE	
7	THRUST WASHER		
8	PACKING		
9	O-RING	VITON	
10	DISC SPRING	SS 301	
11	HANDLE	STAINLESS STEEL	
12	STEM NUT	AISI 304	
13	STOPPER		
14	GLAND RING		
15	LOCK DEVICE		
16	BOLT		
17	NUT		
18	SPRING WASHER		
19	HANDLE SLEEVE	PVC	

DN	d	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
8	8	21	55	23	63	8	40.3	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
10	10	21	60	23	63	8	40.3	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
15	15	28	75	23	63	8	40.3	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
20	20	35	80	28	69	9	45	6.5	120	9	42	31	36	42	2.75	2.75	F03/F04
25	25	42	90	35	76	10	47.5	7.5	148	11	50	35.5	42	50	2.75	3.5	F04/F05
32	32	52	110	44.8	84	11	55.5	7.5	148	11	50	35.5	42	50	2.75	3.5	F04/F05
40	38	59	120	54.5	99	12	65.3	9	178	14	70	56	50	70	3.5	4.5	F05/F07
50	50	72	140	66	108	12	73	9	178	14	70	56	50	70	3.5	4.5	F05/F07

unit:mm

NPS	d	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
1/4"	0.31	0.83	2.17	0.91	2.48	0.31	1.59	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.39	0.83	2.36	0.91	2.48	0.31	1.59	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	1.1	2.95	0.91	2.48	0.31	1.59	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	1.38	3.15	1.1	2.72	0.35	1.77	0.26	4.72	0.35	1.65	1.22	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	1.65	3.54	1.38	2.99	0.39	1.87	0.3	5.83	0.43	1.97	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	2.05	4.33	1.76	3.31	0.43	2.19	0.3	5.83	0.43	1.97	1.4	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	2.32	4.72	2.15	3.9	0.47	2.57	0.35	7.01	0.55	2.76	2.2	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	2.83	5.51	2.6	4.25	0.47	2.87	0.35	7.01	0.55	2.76	2.2	1.97	2.76	0.14	0.18	F05/F07

unit:in

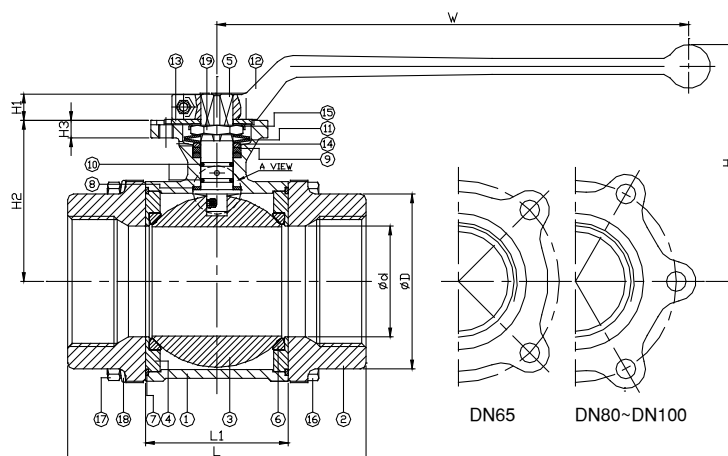
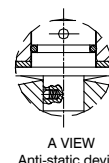
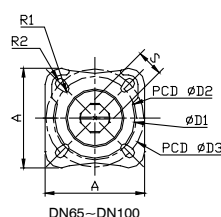


3-PC. SCREWED END BALL VALVE

2013D

FEATURES

- Full port, 2-1/2"~4" (DN65~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 Direct mounting pad
- Length conform to DIN 3202/4-M3
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	RETAINER		
5	STEM	ASTM A276-316	
6	SEAT	PTFE / RTFE	
7	GASKET		
8	THRUST WASHER	PTFE	
9	PACKING		
10	O-RING	VITON	
11	DISC SPRING	SS 301	
12	HANDLE		
13	STOPPER		
14	GLAND RING		
15	LOCK DEVICE		
16	BOLT	AISI 304	
17	NUT		
18	SPRING WASHER		
19	STEM NUT		

DN	d	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
65	65	92	185	88	158	17	105	10	325	17	100	70	70	102	4.5	5.5	F07/F10
80	76	104	205	98	165	17	111.5	10	325	17	100	70	70	102	4.5	5.5	F07/F10
100	100	140	240	120	189	22	136	12	325	22	125	100	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	D	L	L1	H	H1	H2	H3	W	S	A	D1	D2	D3	R1	R2	ISO 5211
2-1/2"	2.56	3.62	7.28	3.46	6.22	0.67	4.13	0.39	12.8	0.67	3.94	2.76	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	4.09	8.07	3.86	6.5	0.67	4.39	0.39	12.8	0.67	3.94	2.76	2.76	4.02	0.18	0.22	F07/F10
4"	3.94	5.51	9.45	4.72	7.44	0.87	5.35	0.47	12.8	0.87	4.92	3.94	4.02	4.92	0.22	0.26	F10/F12

unit:in

3-PC. EXTEND BUTT WELD END BALL VALVE

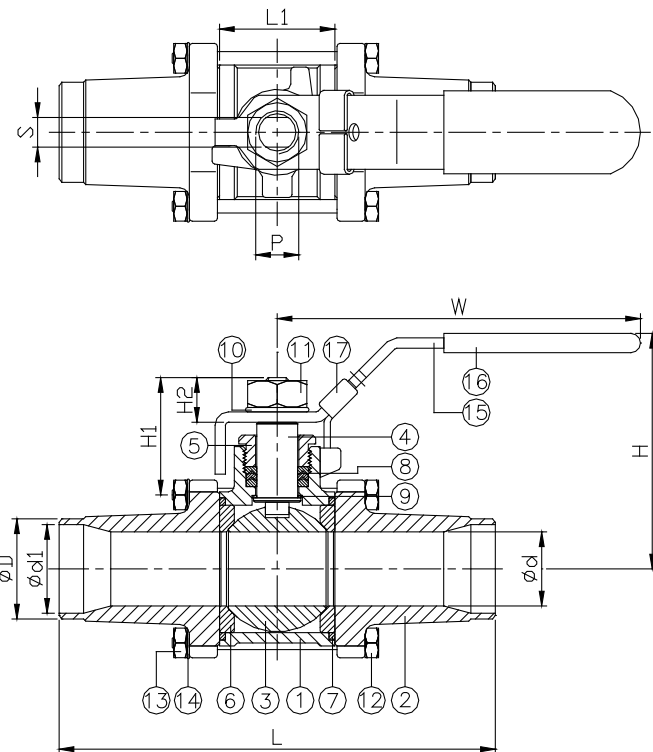
2012L

FEATURES

- Full port, 3/8"~4" (DN10~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad - 2012LM (option)
- ISO 5211 Direct mounting pad - 2412LD (option)

- Butt weld ends conform to ASME B16.25 & DIN 3239 part1

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP	
3	BALL	ASTM A351-CF8M
4	STEM	ASTM A276-316
5	GLAND NUT	AISI 304
6	SEAT	RTFE
7	SEAL	PTFE
8	PACKING	
9	THRUST WASHER	
10	SPRING WASHER	AISI 304
11	STEM NUT	
12	BOLT	
13	BOLT NUT	
14	SPRING WASHER	STAINLESS STEEL
15	HANDLE	
16	HANDLE SLEEVE	PVC
17	LOCK DEVICE	STAINLESS STEEL



DN	d	d1	D	L	L1	H	H1	H2	W	S	P
10	12.7	14	17.2	225	21.5	54	29.7	10.5	102	5	5/16"UNC
15	15	17.3	21.3	225	24	57	30.1	10.5	102	5	5/16"UNC
20	20	22.5	26.5	225	28	66	36.5	13.5	120.5	6.5	3/8"UNC
25	25	28.3	33.5	245	35	76	40.6	15.5	158.5	8	7/16"UNC
32	32	37.2	42.4	255	45	81	41.8	15.5	158.5	8	7/16"UNC
40	38	43.1	48.3	260	55	98	48.5	17.5	188	9	1/2"UNC
50	50	53.3	60.3	275	66	106	49.4	17.5	188	9	1/2"UNC
65	65	69	76	334	86	138	72.1	33	245	12	3/4"UNC
80	76	82	90	354	100	154	65.6	33	245	12	3/4"UNC
100	100	106	115	365	125	178	78.2	39	320	16	1"UNC

unit:mm

NPS	d	d1	D	L	L1	H	H1	H2	W	S	P
3/8"	0.5	0.55	0.68	8.86	0.85	2.13	1.17	0.41	4.02	0.2	5/16"UNC
1/2"	0.59	0.68	0.84	8.86	0.94	2.24	1.19	0.41	4.02	0.2	5/16"UNC
3/4"	0.79	0.89	1.04	8.86	1.1	2.6	1.44	0.53	4.74	0.26	3/8"UNC
1"	0.98	1.11	1.32	9.65	1.38	2.99	1.6	0.61	6.24	0.31	7/16"UNC
1-1/4"	1.26	1.46	1.67	10.04	1.77	3.19	1.65	0.61	6.24	0.31	7/16"UNC
1-1/2"	1.5	1.7	1.9	10.24	2.17	3.86	1.91	0.69	7.4	0.35	1/2"UNC
2"	1.97	2.1	2.37	10.83	2.6	4.17	1.94	0.69	7.4	0.35	1/2"UNC
2-1/2"	2.56	2.72	2.99	13.15	3.39	5.43	2.84	1.3	9.65	0.47	3/4"UNC
3"	2.99	3.23	3.54	13.94	3.94	6.06	2.58	1.3	9.65	0.47	3/4"UNC
4"	3.94	4.17	4.53	14.37	4.92	7.01	3.08	1.54	12.6	0.63	1"UNC

unit:in





TESTED AND CERTIFIED FIRE SAFE TO API 607 API 608 DESIGN

Size range :

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

End Connection :

2011KM - Socket Weld End
2012KM - Butt Weld End
2013KM - Screwed End

Valve Materials :

316 Stainless Steel
Carbon Steel

Ball & Stem Material :

316 Stainless Steel

Service Applications :

Hydraulic Chemical
Steam Oil / Gas
Oxygen Food Processing
Vacuum Dry / Liquid Chlorine
Thermal Fluids

Seat Materials :

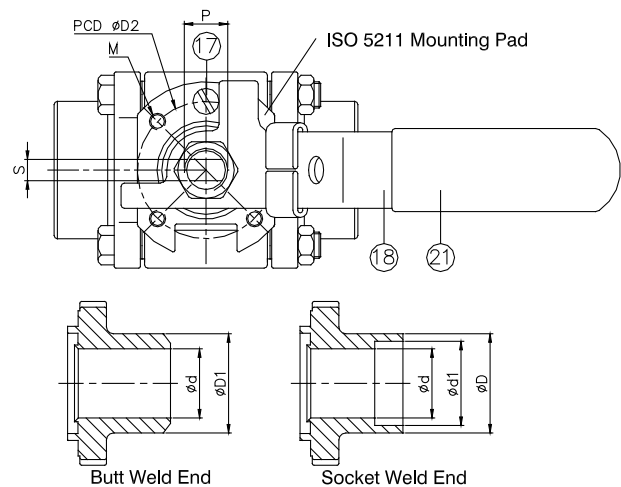
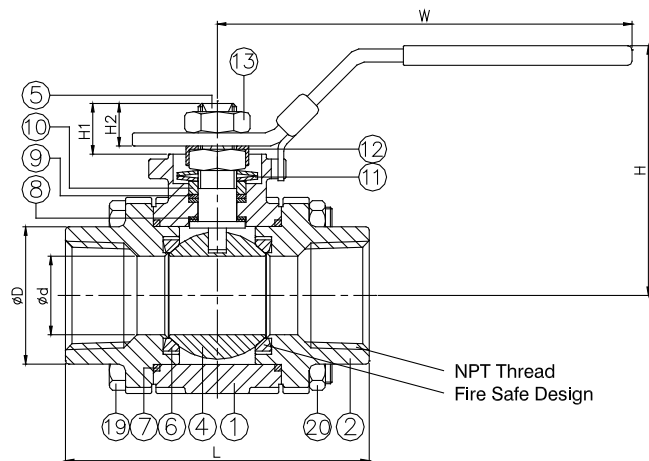
Teflon (PTFE)
Reinforced Teflon (RTFE)
TFE+25% Carbon
DELIN
PEEK
TFM1600

NACE MR0175

- Spring return handle (option)

3-PC. SCREWED END BALL VALVE

2013KM

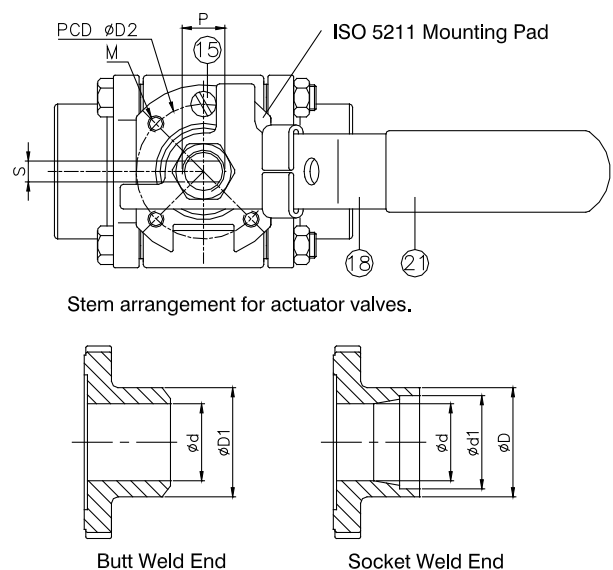
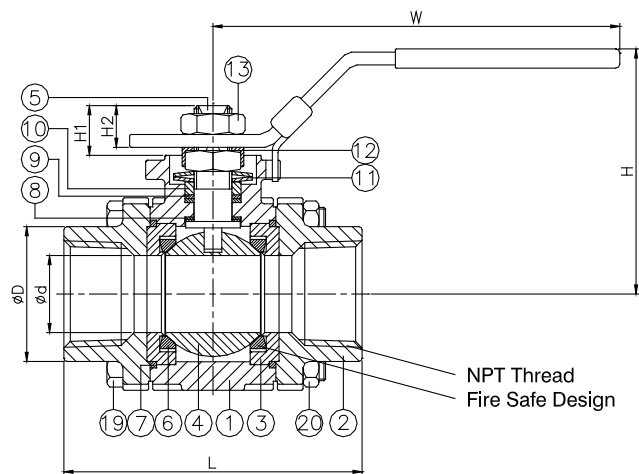


DN	d	d1	D	D1	L	H	H1	H2	W	S	D2	M	P	ISO 5211
8	8	14	25	13.5	65.7	57	12.1	9.8	113.5	5.7	36	M5x0.8	3/8"-24UNF	F03
10	10	18	25	17.5	65.7	57	12.1	9.8	113.5	5.7	36	M5x0.8	3/8"-24UNF	F03
15	15	22	30.3	23.3	74.8	57	12.1	9.8	113.5	5.7	36	M5x0.8	3/8"-24UNF	F03
20	20	27.5	36	28.7	80.2	59.7	14.5	10.6	113.5	5.7	36	M5x0.8	3/8"-24UNF	F03

unit:mm

NPS	d	d1	D	D1	L	H	H1	H2	W	S	D2	M	P	ISO 5211
1/4"	0.31	0.55	0.98	0.53	2.59	2.24	0.48	0.39	4.47	0.22	1.42	M5x0.8	3/8"-24UNF	F03
3/8"	0.39	0.71	0.98	0.69	2.59	2.24	0.48	0.39	4.47	0.22	1.42	M5x0.8	3/8"-24UNF	F03
1/2"	0.59	0.87	1.19	0.92	2.94	2.24	0.48	0.39	4.47	0.22	1.42	M5x0.8	3/8"-24UNF	F03
3/4"	0.79	1.08	1.42	1.13	3.16	2.35	0.57	0.42	4.47	0.22	1.42	M5x0.8	3/8"-24UNF	F03

unit:in



Stem arrangement for actuator valves.

Butt Weld End Socket Weld End

DN	d	d1	D	D1	L	H	H1	H2	W	S	D2	M	P	ISO 5211
25	24	26.6	44.8	34.8	93	81.5	15.5	14	146	7.5	42	M5x0.8	7/16"-24UNF	F04
32	30	35	54	42.6	110.6	85.9	15.5	15	146	7.5	42	M5x0.8	7/16"-20UNF	F04
40	38	41	62	50	120	96.7	27.3	18.7	180	8.6	50	M6x1.0	9/16"-18UNF	F05
50	50	52.5	76	63.7	140	104.9	28.1	19	180	8.6	50	M6x1.0	9/16"-18UNF	F05

unit:mm

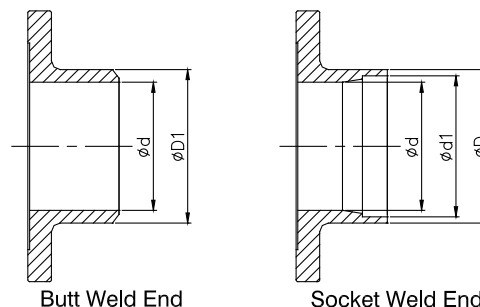
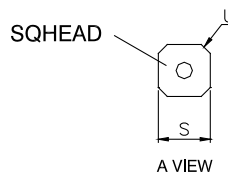
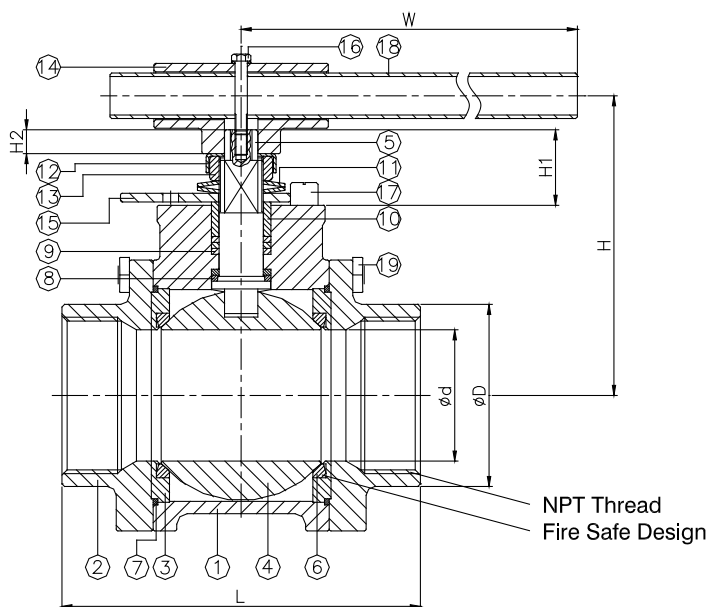
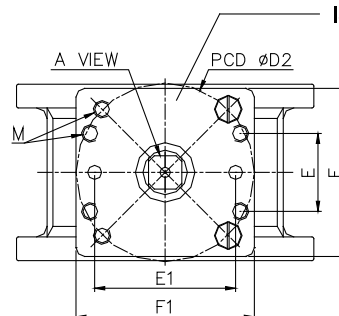
NPS	d	d1	D	D1	L	H	H1	H2	W	S	D2	M	P	ISO 5211
1"	0.94	1.05	1.76	1.37	3.66	3.21	0.61	0.55	5.75	0.3	1.65	M5x0.8	7/16"-24UNF	F04
1-1/4"	1.18	1.38	2.13	1.68	4.35	3.38	0.61	0.59	5.75	0.3	1.65	M5x0.8	7/16"-20UNF	F04
1-1/2"	1.5	1.61	2.44	1.97	4.72	3.81	1.07	0.74	7.09	0.34	1.97	M6x1.0	9/16"-18UNF	F05
2"	1.97	2.07	2.99	2.51	5.51	4.13	1.11	0.75	7.09	0.34	1.97	M6x1.0	9/16"-18UNF	F05

unit:in

3-PC. SCREWED END BALL VALVE

2013KM

ISO 5211 Mounting Pad



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	ASTM A352-LCC
2	CAP			
3	RETAINER	ASTM A351-CF8M		
4	BALL			
5	STEM	ASTM A276-316		
6	SEAT	PTFE / RTFE / CTFE / TFM 1600		
7	GASKET	GRAPHITE		
8	THRUST WASHER	CTFE		
9	PACKING	GRAPHITE		
10	GLAND RING	AISI 304		
11	DISC SPRING	AISI 301		
12	LOCK PAD	ASTM A167-304		
13	STEM NUT	AISI 304		
14	WRENCH BLOCK			
15	STOPPER			
16	HEX HEAD BOLT			
17	STOP PIN			
18	HANDLE	STAINLESS STEEL		
19	BOLT	ASTM A193-B8M		
20	NUT	ASTM A194-8M		
21	HANDLE SLEEVE	PVC		

DN	d	d1	D	D1	L	H	H1	H2	H3	W	S	D2	E	E1	F	F1	M	U	ISO 5211
65	64	74	92	74	184.6	133.9	42.5	15	82.5	222.5	14	70	32	64	70	85	M8x1.25	M20x2.5	F07
80	75	90	104	90	204	172.1	46.4	17.5	108.6	344	19	102	44.5	80.6	96	102	M10x1.5	1"-14UNF	F10
100	96	115.5	136	118	240	185.5	47	17.5	121.6	344	19	102	44.5	80.6	96	102	M10x1.5	1"-14UNF	F10

unit:mm

NPS	d	d1	D	D1	L	H	H1	H2	H3	W	S	D2	E	E1	F	F1	M	U	ISO 5211
2-1/2"	2.52	2.91	3.62	2.91	7.27	5.27	1.67	0.59	3.25	8.76	0.55	2.76	1.26	2.52	2.76	3.35	M8x1.25	M20x2.5	F07
3"	2.95	3.54	4.09	3.54	8.03	6.78	1.83	0.69	4.28	13.54	0.75	4.02	1.75	3.17	3.78	4.02	M10x1.5	1"-14UNF	F10
4"	3.78	4.55	5.35	4.65	9.45	7.3	1.85	0.69	4.79	13.54	0.75	4.02	1.75	3.17	3.78	4.02	M10x1.5	1"-14UNF	F10

unit:in



TESTED AND CERTIFIED FIRE SAFE TO API 607 API 608 DESIGN

Size range :

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

End Connection :

2011KMD - Socket Weld End
2012KMD - Butt Weld End
2013KMD - Screwed End

Valve Materials :

316 Stainless Steel
Carbon Steel

Ball & Stem Material :

316 Stainless Steel

Service Applications :

Hydraulic Chemical
Steam Oil / Gas
Oxygen Food Processing
Vacuum Dry / Liquid Chlorine
Thermal Fluids

Seat Materials :

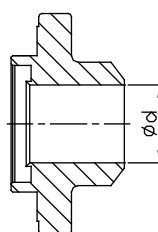
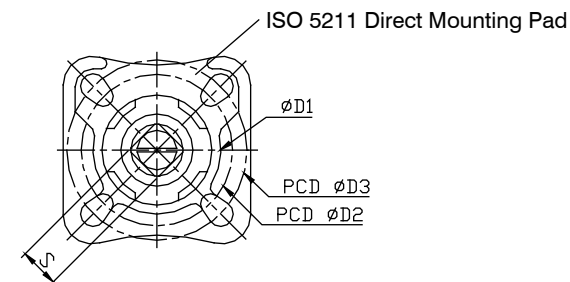
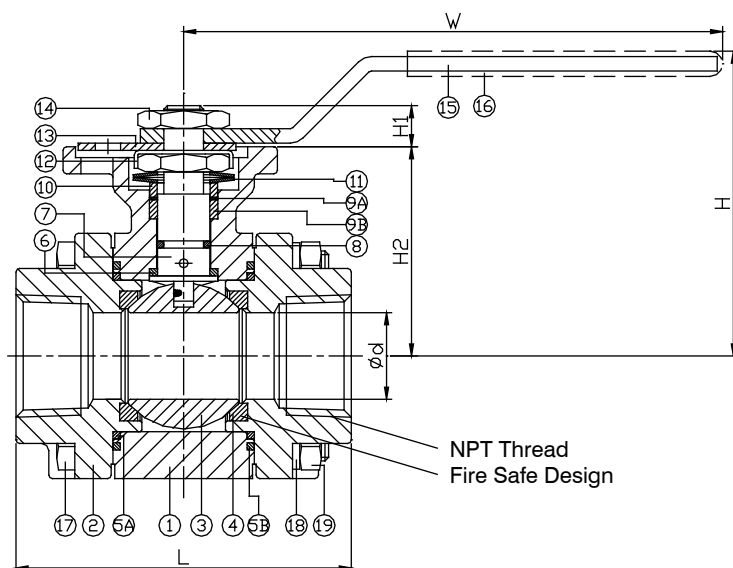
Teflon (PTFE)
Reinforced Teflon (RTFE)
TFE+25% Carbon
DELIN
PEEK
TFM1600

NACE MR0175

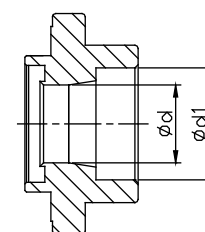
- ISO 5211 Direct mounting pad
- ISO 15848 fugitive emission approved (option)
- Spring return handle (option)

3-PC. SCREWED END BALL VALVE

2013KMD



Butt Weld End



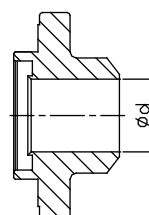
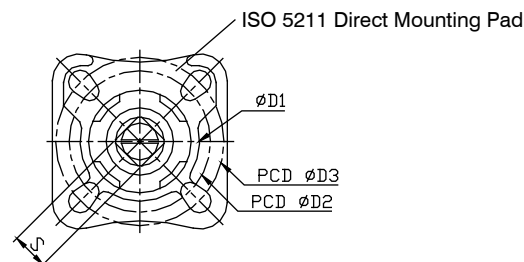
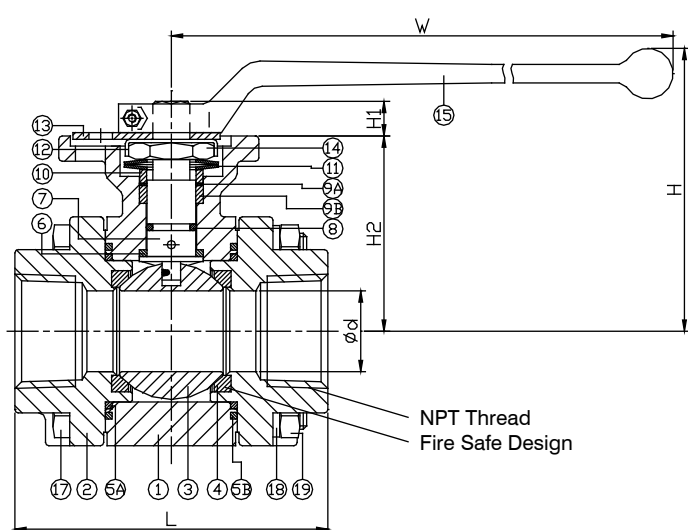
Socket Weld End

DN	d	d1	L	H	H1	H2	W	S	D1	D2	D3	ISO 5211
15	15	22	75	64	8.5	43	114.5	9	31	36	42	F03/F04
20	20	27.5	80	67	9	46	114.5	9	31	36	42	F03/F04
25	24	34.5	93	80.9	11	58	140	11	35.5	42	50	F04/F05

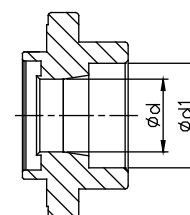
unit:mm

NPS	d	d1	L	H	H1	H2	W	S	D1	D2	D3	ISO 5211
1/2"	0.59	0.87	2.95	2.52	0.33	1.69	4.51	0.35	1.22	1.42	1.65	F03/F04
3/4"	0.79	1.08	3.15	2.64	0.35	1.81	4.51	0.35	1.22	1.42	1.65	F03/F04
1"	0.94	1.36	3.66	3.19	0.43	2.28	5.51	0.43	1.4	1.65	1.97	F04/F05

unit:in



Butt Weld End



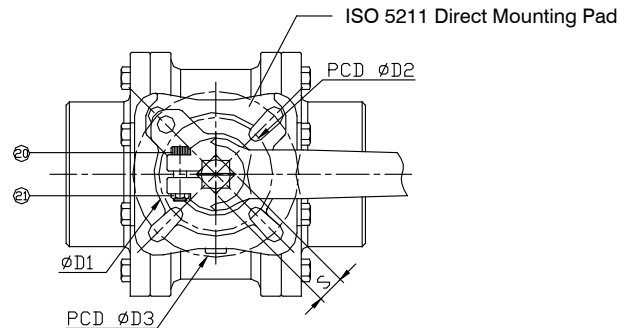
Socket Weld End

DN	d	d1	L	H	H1	H2	W	S	D1	D2	D3	ISO 5211
32	30	43	110	98.5	11	62.8	197.5	11	35.5	42	50	F04/F05
40	38	49	120	119	14	74.5	247.5	14	56	50	70	F05/F07
50	50	61.2	140	119	14	82	247.5	14	56	50	70	F05/F07

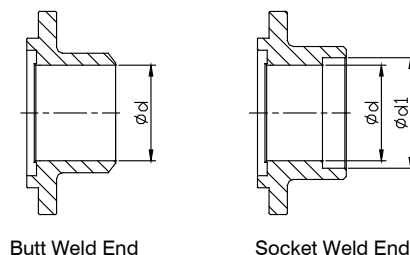
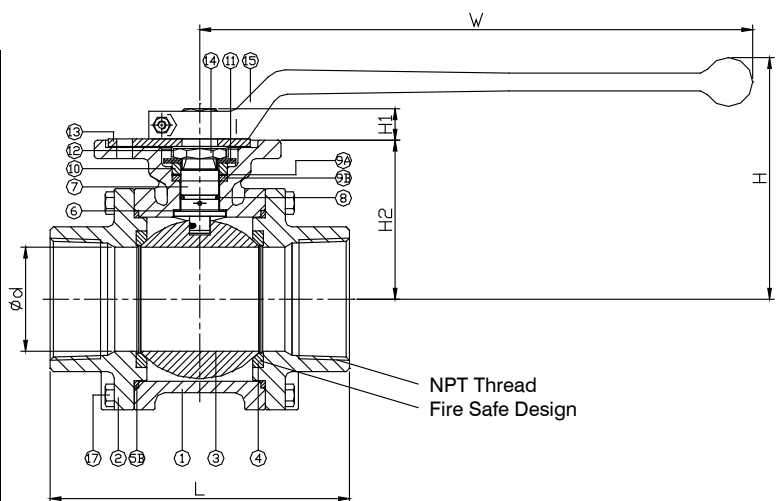
unit:mm

NPS	d	d1	L	H	H1	H2	W	S	D1	D2	D3	ISO 5211
1-1/4"	1.18	1.69	4.33	3.88	0.43	2.47	7.78	0.43	1.4	1.65	1.97	F04/F05
1-1/2"	1.5	1.93	4.72	4.69	0.55	2.93	9.74	0.55	2.2	1.97	2.76	F05/F07
2"	1.97	2.41	5.51	4.69	0.55	3.23	9.74	0.55	2.2	1.97	2.76	F05/F07

unit:in



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / CTFE / TFM1600	
5A	SEAL A	CTFE	
5B	SEAL B	GRAPHITE	
6	THRUST WASHER	CTFE	
7	STEM	ASTM A276-316	
8	O-RING	VITON	
9A	PACKING A	CTFE	
9B	PACKING B	GRAPHITE	
10	GLAND RING	AISI 304	
11	BELLEVILLE WASHER	AISI 301	
12	LOCK WASHER	AISI 304	
13	STOPPER		
14	NUT		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	BOLT	AISI 304	
18	SPRING WASHER		
19	NUT		
20	BOLT		
21	NUT		



DN	d	d1	L	H	H1	H2	W	S	D1	D2	D3	ISO 5211
65	64	74	184.2	146.8	17	96.5	340	17	76	70	102	F07/F10
80	75	90	204	158.9	17	108.6	340	17	76	70	102	F07/F10
100	96	115.5	240	184	22	131	340	22	100	102	125	F10/F12

unit:mm

NPS	d	d1	L	H	H1	H2	W	S	D1	D2	D3	ISO 5211
2-1/2"	2.56	2.91	7.25	5.78	0.67	3.8	13.39	0.67	2.99	2.76	4.02	F07/F10
3"	2.95	3.54	8.03	6.26	0.67	4.28	13.39	0.67	2.99	2.76	4.02	F07/F10
4"	3.78	4.55	9.45	7.24	0.87	5.16	13.39	0.87	3.94	4.02	4.92	F10/F12

unit:in

3-PC. SOCKET WELD END BALL VALVE

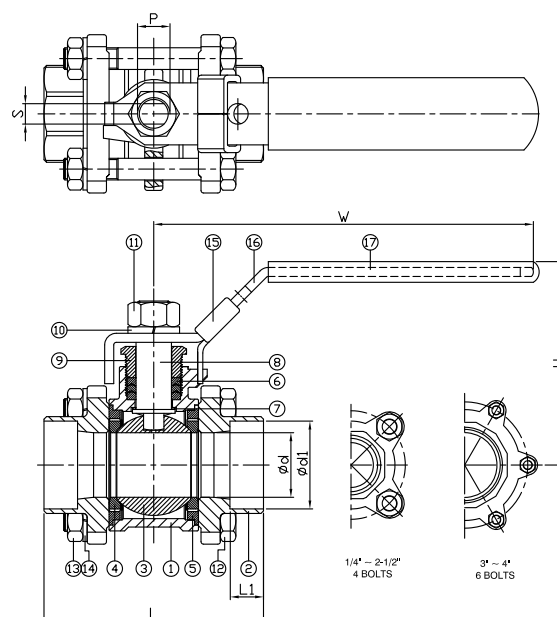
2011N

FEATURES

- Full port, 1/4"-4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2011N-M3 (option)
- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / TFM 1600	
5	SEAL	PTFE	
6	PACKING		
7	THRUST WASHER		
8	STEM	ASTM A276-316	
9	GLAND	AISI 304	
10	SPRING WASHER		
11	STEM NUT		
12	BOLT		
13	NUT		
14	SPRING WASHER	STAINLESS STEEL	
15	LOCKING DEVICE		
16	HANDLE	PVC	
17	HANDLE SLEEVE		



DN	d	d1	L	L1	H	W	S	P
8	11.6	14.5	65	10	55.15	100.5	5	3/8"-24UNF
10	12.5	18	65	10	55.15	100.5	5	3/8"-24UNF
15	15	22	65	10	57.05	100.5	5	3/8"-24UNF
20	20	27.5	75	13	64.6	121	6.5	7/16"-20UNF
25	25	34	85	13	80.1	146.5	8	7/16"-20UNF
32	32	43	101	13	85.1	146.5	8	7/16"-20UNF
40	38	49	112	13	103.3	187.3	10	1/2"-20UNF
50	50	61.5	130	16	110.8	187.3	10	1/2"-20UNF
65	63	74	162	16	141.7	245	12	3/4"-10UNC
80	76	90	188	16	150.4	245	12	3/4"-10UNC
100	96	115.5	224	20	181.7	316	16	1"-8UNC

NPS	d	d1	L	L1	H	W	S	P
1/4"	0.46	0.57	2.56	0.39	2.17	3.96	0.2	3/8"-24UNF
3/8"	0.49	0.71	2.56	0.39	2.17	3.96	0.2	3/8"-24UNF
1/2"	0.59	0.87	2.56	0.39	2.25	3.96	0.2	3/8"-24UNF
3/4"	0.79	1.08	2.95	0.51	2.54	4.76	0.26	7/16"-20UNF
1"	0.98	1.34	3.35	0.51	3.15	5.77	0.31	7/16"-20UNF
1-1/4"	1.26	1.69	3.98	0.51	3.35	5.77	0.31	7/16"-20UNF
1-1/2"	1.5	1.93	4.41	0.51	4.07	7.37	0.39	1/2"-20UNF
2"	1.97	2.42	5.12	0.63	4.36	7.37	0.39	1/2"-20UNF
2-1/2"	2.48	2.91	6.38	0.63	5.58	9.65	0.47	3/4"-10UNC
3"	2.99	3.54	7.4	0.63	5.92	9.65	0.47	3/4"-10UNC
4"	3.78	4.55	8.82	0.79	7.15	12.44	0.63	1"-8UNC

unit:mm



3-PC. BUTT WELD END BALL VALVE

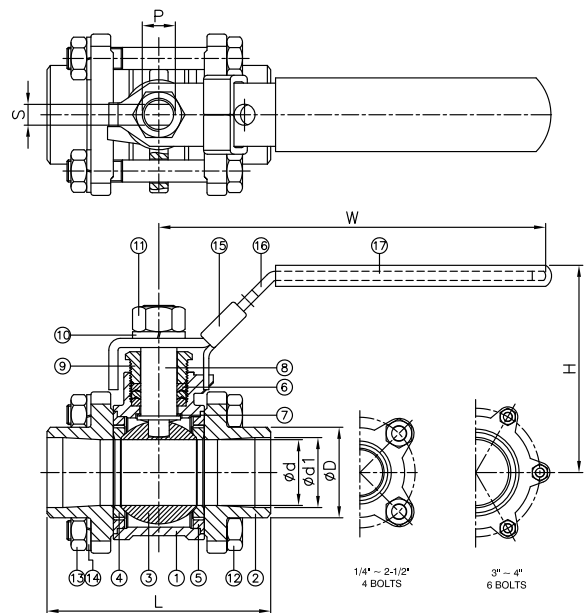
2012N

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2012N-M3 (option)
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / TFM 1600	
5	SEAL	PTFE	
6	PACKING		
7	THRUST WASHER		
8	STEM	ASTM A276-316	
9	GLAND	AISI 304	
10	SPRING WASHER		
11	STEM NUT		
12	BOLT		
13	NUT		
14	SPRING WASHER	STAINLESS STEEL	
15	LOCKING DEVICE		
16	HANDLE	PVC	
17	HANDLE SLEEVE		



DN	d	d1	D	L	H	W	S	P
8	9.3	-	14.7	65	55.15	100.5	5	3/8"-24UNF
10	12.5	-	18.1	65	55.15	100.5	5	3/8"-24UNF
15	15	15.8	22.3	65	57.05	100.5	5	3/8"-24UNF
20	20	20.9	27.7	75	64.6	121	6.5	7/16"-20UNF
25	25	26.6	34.4	85	80.1	146.5	8	7/16"-20UNF
32	32	35.1	43.2	101	85.1	146.5	8	7/16"-20UNF
40	38	40.9	49.3	112	103.3	187.3	10	1/2"-20UNF
50	50	52.5	61.5	130	110.8	187.3	10	1/2"-20UNF
65	63	62.7	74.5	162	141.7	245	12	3/4"-10UNC
80	76	77.9	91	188	150.4	245	12	3/4"-10UNC
100	96	102	115.5	224	181.7	316	16	1"-8UNC

NPS	d	d1	D	L	H	W	S	P
1/4"	0.37	-	0.58	2.56	2.17	3.96	0.2	3/8"-24UNF
3/8"	0.49	-	0.71	2.56	2.17	3.96	0.2	3/8"-24UNF
1/2"	0.59	0.62	0.88	2.56	2.25	3.96	0.2	3/8"-24UNF
3/4"	0.79	0.82	1.09	2.95	2.54	4.76	0.26	7/16"-20UNF
1"	0.98	1.05	1.35	3.35	3.15	5.77	0.31	7/16"-20UNF
1-1/4"	1.26	1.38	1.7	3.98	3.35	5.77	0.31	7/16"-20UNF
1-1/2"	1.5	1.61	1.94	4.41	4.07	7.37	0.39	1/2"-20UNF
2"	1.97	2.07	2.42	5.12	4.36	7.37	0.39	1/2"-20UNF
2-1/2"	2.48	2.47	2.93	6.38	5.58	9.65	0.47	3/4"-10UNC
3"	2.99	3.07	3.58	7.4	5.92	9.65	0.47	3/4"-10UNC
4"	3.78	4.02	4.55	8.82	7.15	12.44	0.63	1"-8UNC

unit:mm

unit:in

3-PC. SCREWED END BALL VALVE

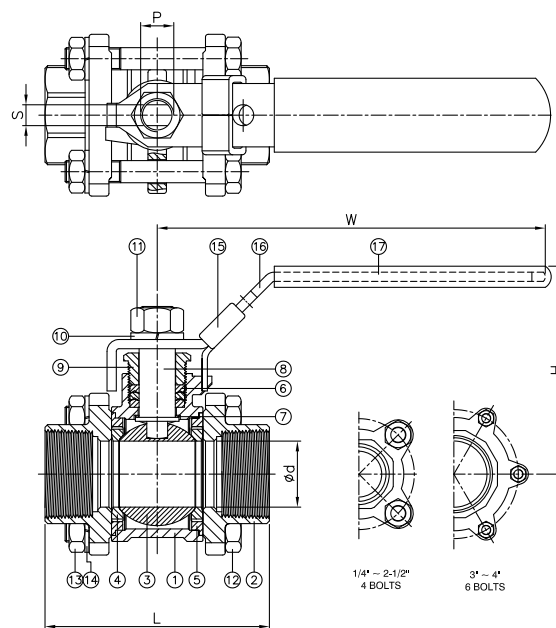
2013N

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2013N-M3 (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / TFM 1600	
5	SEAL	PTFE	
6	PACKING		
7	THRUST WASHER		
8	STEM	ASTM A276-316	
9	GLAND	AISI 304	
10	SPRING WASHER		
11	STEM NUT		
12	BOLT		
13	NUT		
14	SPRING WASHER	STAINLESS STEEL	
15	LOCKING DEVICE		
16	HANDLE	PVC	
17	HANDLE SLEEVE		



DN	d	L	H	W	S	P
8	11.6	65	55.15	100.5	5	3/8"-24UNF
10	12.5	65	55.15	100.5	5	3/8"-24UNF
15	15	65	57.05	100.5	5	3/8"-24UNF
20	20	75	64.6	121	6.5	7/16"-20UNF
25	25	85	80.1	146.5	8	7/16"-20UNF
32	32	101	85.1	146.5	8	7/16"-20UNF
40	38	112	103.3	187.3	10	1/2"-20UNF
50	50	130	110.8	187.3	10	1/2"-20UNF
65	63	162	141.7	245	12	3/4"-10UNC
80	76	188	150.4	245	12	3/4"-10UNC
100	96	224	181.7	316	16	1"-8UNC

unit:mm

NPS	d	L	H	W	S	P
1/4"	0.46	2.56	2.17	3.96	0.2	3/8"-24UNF
3/8"	0.49	2.56	2.17	3.96	0.2	3/8"-24UNF
1/2"	0.59	2.56	2.25	3.96	0.2	3/8"-24UNF
3/4"	0.79	2.95	2.54	4.76	0.26	7/16"-20UNF
1"	0.98	3.35	3.15	5.77	0.31	7/16"-20UNF
1-1/4"	1.26	3.98	3.35	5.77	0.31	7/16"-20UNF
1-1/2"	1.5	4.41	4.07	7.37	0.39	1/2"-20UNF
2"	1.97	5.12	4.36	7.37	0.39	1/2"-20UNF
2-1/2"	2.48	6.38	5.58	9.65	0.47	3/4"-10UNC
3"	2.99	7.4	5.92	9.65	0.47	3/4"-10UNC
4"	3.78	8.82	7.15	12.44	0.63	1"-8UNC

unit:in



3-PC. SOCKET WELD END BALL VALVE

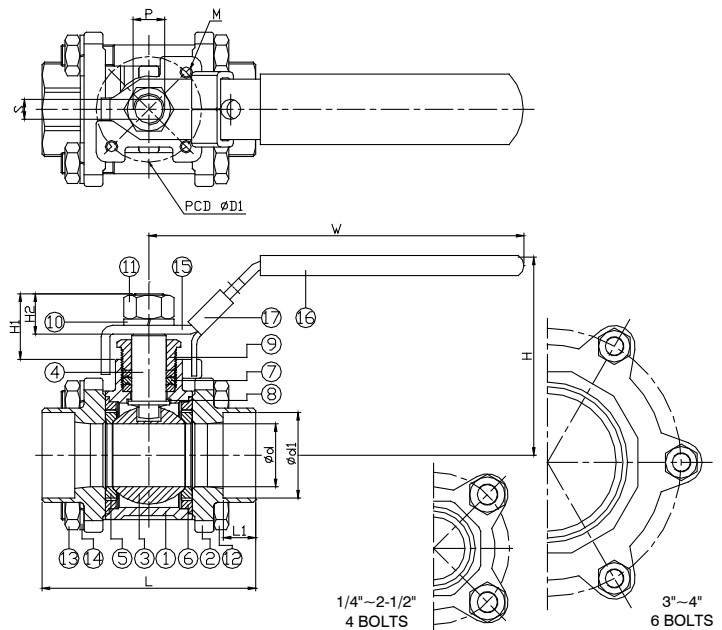
2011NM

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- ISO 5211 Mounting pad
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2011NM-M3 (option)
- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A216-WCB 1.0619
2	CAP		
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	PTFE / RTFE / TFM 1600	
6	GASKET	PTFE	
7	PACKING		
8	THRUST WASHER		
9	GLAND NUT	AISI 304	
10	SPRING WASHER		
11	STEM NUT		
12	BOLT		
13	NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	LATCH LOCK	STAINLESS STEEL	



DN	d	d1	L	L1	H	H1	H2	W	S	D1	M	P	ISO 5211
8	11.6	14.5	65	10	57.3	19.3	13.5	103.5	5	36	M5	3/8"-24UNF	F03
10	12.5	18	65	10	57.3	19.3	13.5	103.5	5	36	M5	3/8"-24UNF	F03
15	15	22	65	10	61.4	19.4	13.5	103.5	5	36	M5	3/8"-24UNF	F03
20	20	27.5	75	13	64.6	23.4	16	121	6.5	36	M5	7/16"-20UNF	F03
25	25	34	85	13	80.1	25.6	16.2	147	8	42	M5	7/16"-20UNF	F04
32	32	43	101	13	85.1	25.6	16.2	147	8	42	M5	7/16"-20UNF	F04
40	38	49	112	13	103.6	29.7	20	188	10	50	M6	1/2"-20UNF	F05
50	50	61.5	130	16	110.8	29.7	20	188	10	50	M6	1/2"-20UNF	F05
65	63	74	162	16	137.2	39.4	27.5	250	12	70	M8	3/4"-10UNC	F07
80	76	90	188	16	145.9	39.4	27.5	250	12	70	M8	3/4"-10UNC	F07
100	96	115.5	224	20	181.7	53.7	39.8	318	16	102	M10	1"-8UNC	F10

unit:mm

NPS	d	d1	L	L1	H	H1	H2	W	S	D1	M	P	ISO 5211
1/4"	0.46	0.57	2.56	0.39	2.26	0.76	0.53	4.07	0.2	1.42	M5	3/8"-24UNF	F03
3/8"	0.49	0.71	2.56	0.39	2.26	0.76	0.53	4.07	0.2	1.42	M5	3/8"-24UNF	F03
1/2"	0.59	0.87	2.56	0.39	2.42	0.76	0.53	4.07	0.2	1.42	M5	3/8"-24UNF	F03
3/4"	0.79	1.08	2.95	0.51	2.54	0.92	0.63	4.76	0.26	1.42	M5	7/16"-20UNF	F03
1"	0.98	1.34	3.35	0.51	3.15	1.01	0.64	5.79	0.31	1.65	M5	7/16"-20UNF	F04
1-1/4"	1.26	1.69	3.98	0.51	3.35	1.01	0.64	5.79	0.31	1.65	M5	7/16"-20UNF	F04
1-1/2"	1.5	1.93	4.41	0.51	4.08	1.17	0.79	7.4	0.39	1.97	M6	1/2"-20UNF	F05
2"	1.97	2.42	5.12	0.63	4.36	1.17	0.79	7.4	0.39	1.97	M6	1/2"-20UNF	F05
2-1/2"	2.48	2.91	6.38	0.63	5.4	1.55	1.08	9.84	0.47	2.76	M8	3/4"-10UNC	F07
3"	2.99	3.54	7.4	0.63	5.74	1.55	1.08	9.84	0.47	2.76	M8	3/4"-10UNC	F07
4"	3.78	4.55	8.82	0.79	7.15	2.11	1.57	12.52	0.63	4.02	M10	1"-8UNC	F10

unit:in

3-PC. BUTT WELD END BALL VALVE

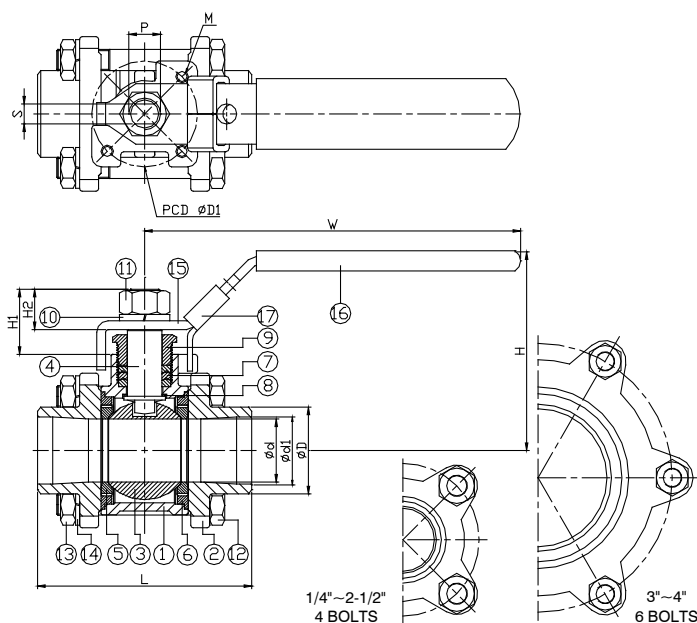
2012NM

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- ISO 5211 Mounting pad
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2012NM-M3 (option)
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A216-WCB 1.0619
2	CAP		
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	PTFE / RTFE / TFM 1600	
6	GASKET	PTFE	
7	PACKING		
8	THRUST WASHER		
9	GLAND NUT	AISI 304	
10	SPRING WASHER		
11	STEM NUT		
12	BOLT		
13	NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	LATCH LOCK	STAINLESS STEEL	



DN	d	d1	D	L	H	H1	H2	W	S	D1	M	P	ISO 5211
8	9.3	-	14.7	65	57.3	19.3	13.5	103.5	5	36	M5	3/8"-24UNF	F03
10	12.5	-	18.1	65	57.3	19.3	13.5	103.5	5	36	M5	3/8"-24UNF	F03
15	15	15.8	22.3	65	61.4	19.4	13.5	103.5	5	36	M5	3/8"-24UNF	F03
20	20	20.9	27.7	75	64.6	23.4	16	121	6.5	36	M5	7/16"-20UNF	F03
25	25	26.6	34.4	85	80.1	25.6	16.2	147	8	42	M5	7/16"-20UNF	F04
32	32	35.1	43.2	101	85.1	25.6	16.2	147	8	42	M5	7/16"-20UNF	F04
40	38	40.9	49.3	112	103.6	29.7	20	188	10	50	M6	1/2"-20UNF	F05
50	50	52.5	61.5	130	110.8	29.7	20	188	10	50	M6	1/2"-20UNF	F05
65	63	62.7	74.5	162	137.2	39.4	27.5	250	12	70	M8	3/4"-10UNC	F07
80	76	77.9	91	188	145.9	39.4	27.5	250	12	70	M8	3/4"-10UNC	F07
100	96	102	115.5	224	181.7	53.7	39.8	318	16	102	M10	1"-8UNC	F10

unit:mm

NPS	d	d1	D	L	H	H1	H2	W	S	D1	M	P	ISO 5211
1/4"	0.37	-	0.58	2.56	2.26	0.76	0.53	4.07	0.2	1.42	M5	3/8"-24UNF	F03
3/8"	0.49	-	0.71	2.56	2.26	0.76	0.53	4.07	0.2	1.42	M5	3/8"-24UNF	F03
1/2"	0.59	0.62	0.88	2.56	2.42	0.76	0.53	4.07	0.2	1.42	M5	3/8"-24UNF	F03
3/4"	0.79	0.82	1.09	2.95	2.54	0.92	0.63	4.76	0.26	1.42	M5	7/16"-20UNF	F03
1"	0.98	1.05	1.35	3.35	3.15	1.01	0.64	5.79	0.31	1.65	M5	7/16"-20UNF	F04
1-1/4"	1.26	1.38	1.7	3.98	3.35	1.01	0.64	5.79	0.31	1.65	M5	7/16"-20UNF	F04
1-1/2"	1.5	1.61	1.94	4.41	4.08	1.17	0.79	7.4	0.39	1.97	M6	1/2"-20UNF	F05
2"	1.97	2.07	2.42	5.12	4.36	1.17	0.79	7.4	0.39	1.97	M6	1/2"-20UNF	F05
2-1/2"	2.48	2.47	2.93	6.38	5.4	1.55	1.08	9.84	0.47	2.76	M8	3/4"-10UNC	F07
3"	2.99	3.07	3.58	7.4	5.74	1.55	1.08	9.84	0.47	2.76	M8	3/4"-10UNC	F07
4"	3.78	4.02	4.55	8.82	7.15	2.11	1.57	12.52	0.63	4.02	M10	1"-8UNC	F10

unit:in



3-PC. SCREWED END BALL VALVE

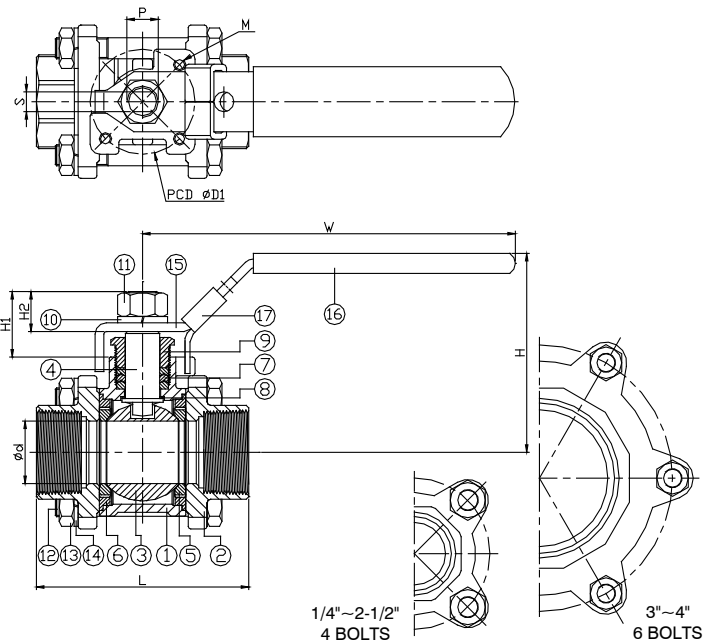
2013NM

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- ISO 5211 Mounting pad
- TA-Luft approved (option)
- Length conform to DIN 3202/4-M3-2013NM-M3 (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A216-WCB 1.0619
2	CAP		
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	SEAT	PTFE / RTFE / TFM 1600	
6	GASKET	PTFE	
7	PACKING		
8	THRUST WASHER		
9	GLAND NUT	AISI 304	
10	SPRING WASHER		
11	STEM NUT		
12	BOLT		
13	NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	LATCH LOCK	STAINLESS STEEL	



DN	d	L	H	H1	H2	W	S	D1	P	M	ISO 5211
8	11.6	65	57.3	19.3	13.5	103.5	5	36	3/8"-24UNF	M5	F03
10	12.5	65	57.3	19.3	13.5	103.5	5	36	3/8"-24UNF	M5	F03
15	15	65	61.4	19.4	13.5	103.5	5	36	3/8"-24UNF	M5	F03
20	20	75	64.6	23.4	16	121	6.5	36	7/16"-20UNF	M5	F03
25	25	85	80.1	25.6	16.2	147	8	42	7/16"-20UNF	M5	F04
32	32	101	85.1	25.6	16.2	147	8	42	7/16"-20UNF	M5	F04
40	38	112	103.6	29.7	20	188	10	50	1/2"-20UNF	M6	F05
50	50	130	110.8	29.7	20	188	10	50	1/2"-20UNF	M6	F05
65	63	162	137.2	39.4	27.5	250	12	70	3/4"-10UNC	M8	F07
80	76	188	145.9	39.4	27.5	250	12	70	3/4"-10UNC	M8	F07
100	96	224	181.7	53.7	39.8	318	16	102	1"-8UNC	M10	F10

NPS	d	L	H	H1	H2	W	S	D1	P	M	ISO 5211
1/4"	0.46	2.56	2.26	0.76	0.53	4.07	0.2	1.42	3/8"-24UNF	M5	F03
3/8"	0.49	2.56	2.26	0.76	0.53	4.07	0.2	1.42	3/8"-24UNF	M5	F03
1/2"	0.59	2.56	2.42	0.76	0.53	4.07	0.2	1.42	3/8"-24UNF	M5	F03
3/4"	0.79	2.95	2.54	0.92	0.63	4.76	0.26	1.42	7/16"-20UNF	M5	F03
1"	0.98	3.35	3.15	1.01	0.64	5.79	0.31	1.65	7/16"-20UNF	M5	F04
1-1/4"	1.26	3.98	3.35	1.01	0.64	5.79	0.31	1.65	7/16"-20UNF	M5	F04
1-1/2"	1.5	4.41	4.08	1.17	0.79	7.4	0.39	1.97	1/2"-20UNF	M6	F05
2"	1.97	5.12	4.36	1.17	0.79	7.4	0.39	1.97	1/2"-20UNF	M6	F05
2-1/2"	2.48	6.38	5.4	1.55	1.08	9.84	0.47	2.76	3/4"-10UNC	M8	F07
3"	2.99	7.4	5.74	1.55	1.08	9.84	0.47	2.76	3/4"-10UNC	M8	F07
4"	3.78	8.82	7.15	2.11	1.57	12.52	0.63	4.02	1"-8UNC	M10	F10

unit:mm

unit:in



3-PC. SOCKET WELD END BALL VALVE

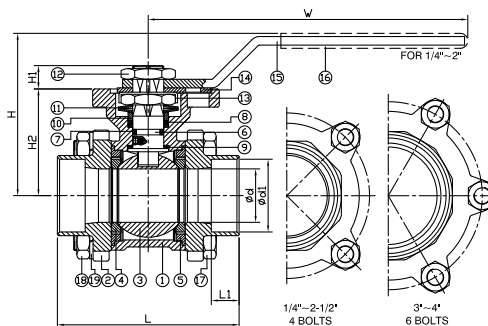
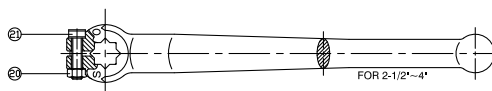
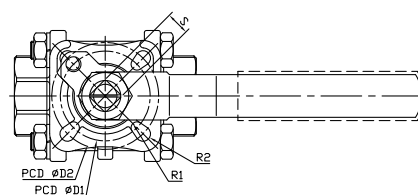
2011ND

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 direct mounting pad
- Length conform to DIN 3202/4-M3-2011ND-M3 (option)
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / CTFE / TFM1600	
5	SEAL	PTFE	
6	STEM	ASTM A276-316	
7	O-RING	VITON	
8	PACKING	PTFE	
9	THRUST WASHER		
10	GLAND RING	AISI 304	
11	BELLEVILLE WASHER	AISI 301	
12	STEM NUT		
13	LOCK WASHER	AISI 304	
14	LOCKING DEVICE		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	BOLT		
18	NUT		
19	SPRING WASHER	AISI 304	
20	NUT		
21	BOLT		



DN	d	d1	L	L1	H	H1	H2	W	S	D1	D2	R1	R2	ISO 5211
8	11.6	14.5	65	10	61	7.5	35.3	114.5	9	36	42	2.75	2.75	F03/F04
10	12.5	18	65	10	61	7.5	35.3	114.5	9	36	42	2.75	2.75	F03/F04
15	15	22	65	10	62.7	7.1	36.4	114.5	9	36	42	2.75	2.75	F03/F04
20	20	27.5	75	13	65.1	7.3	39.5	114.5	9	36	42	2.75	2.75	F03/F04
25	25	34	85	13	76.5	11	49	140	11	42	50	2.75	3.5	F04/F05
32	32	43	101	13	82	9.5	54.2	140	11	42	50	2.75	3.5	F04/F05
40	38	49	112	13	102	12.4	64.6	172	14	50	70	3.5	4.5	F05/F07
50	50	61.5	130	16	110.1	13.6	72.5	172	14	50	70	3.5	4.5	F05/F07
65	63	74	162	16	127.3	16.3	92	325	17	70	102	4.5	5.5	F07/F10
80	76	90	188	16	136.3	16.3	100	325	17	70	102	4.5	5.5	F07/F10
100	96	115.5	224	20	168	20.5	130	325	22	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	d1	L	L1	H	H1	H2	W	S	D1	D2	R1	R2	ISO 5211
1/4"	0.46	0.57	2.56	0.39	2.4	0.3	1.39	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.49	0.71	2.56	0.39	2.4	0.3	1.39	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	0.87	2.56	0.39	2.47	0.28	1.43	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	1.08	2.95	0.51	2.56	0.29	1.56	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	1.34	3.35	0.51	3.01	0.43	1.93	5.51	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	1.69	3.98	0.51	3.23	0.37	2.13	5.51	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	1.93	4.41	0.51	4.02	0.49	2.54	6.77	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	2.42	5.12	0.63	4.33	0.54	2.85	6.77	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.48	2.91	6.38	0.63	5.01	0.64	3.62	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	3.54	7.4	0.63	5.37	0.64	3.94	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
4"	3.78	4.55	8.82	0.79	6.61	0.81	5.12	12.8	0.87	4.02	4.92	0.22	0.26	F10/F12

unit:in



3-PC. BUTT WELD END BALL VALVE

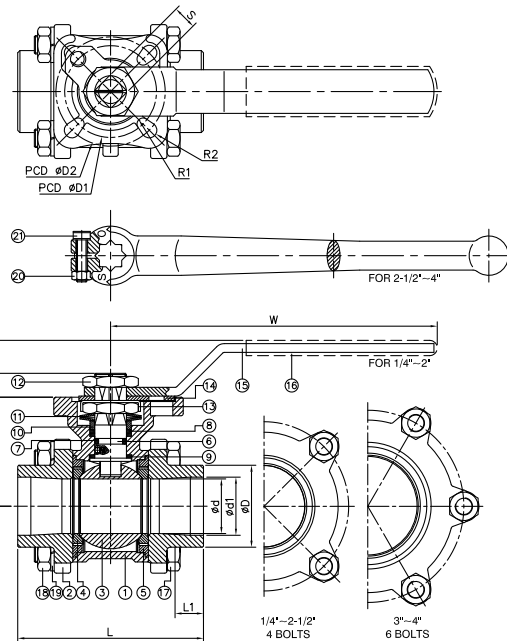
2012ND

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 direct mounting pad
- Length conform to DIN 3202/4-M3-2012ND-M3 (option)
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Butt weld ends conform to ASME B16.25 & DIN 3239 part1



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A216-WCB 1.0619
2	CAP		
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / CTFE / TFM1600	
5	SEAL	PTFE	
6	STEM	ASTM A276-316	
7	O-RING	VITON	
8	PACKING	PTFE	
9	THRUST WASHER		
10	GLAND RING	AISI 304	
11	BELLEVILLE WASHER	AISI 301	
12	STEM NUT	AISI 304	
13	LOCK WASHER		
14	LOCKING DEVICE		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	BOLT	AISI 304	
18	NUT		
19	SPRING WASHER		
20	NUT		
21	BOLT		



DN	d	d1	D	L	H	H1	H2	W	S	D1	D2	R1	R2	ISO 5211
8	9.3	-	14.7	65	61	7.5	35.3	114.5	9	36	42	2.75	2.75	F03/F04
10	12.5	-	18.1	65	61	7.5	35.3	114.5	9	36	42	2.75	2.75	F03/F04
15	15	15.8	22.3	65	62.7	7.1	36.4	114.5	9	36	42	2.75	2.75	F03/F04
20	20	20.9	27.7	75	65.1	7.3	39.5	114.5	9	36	42	2.75	2.75	F03/F04
25	25	26.6	34.4	85	76.5	11	49	140	11	42	50	2.75	3.5	F04/F05
32	32	35.1	43.2	101	82	9.5	54.2	140	11	42	50	2.75	3.5	F04/F05
40	38	40.9	49.3	112	102	12.4	64.6	172	14	50	70	3.5	4.5	F05/F07
50	50	52.5	61.5	130	110.1	13.6	72.5	172	14	50	70	3.5	4.5	F05/F07
65	63	62.7	74.5	162	127.3	16.3	92	325	17	70	102	4.5	5.5	F07/F10
80	76	77.9	91	188	136.3	16.3	100	325	17	70	102	4.5	5.5	F07/F10
100	96	102	115.5	224	168	20.5	130	325	22	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	d1	D	L	H	H1	H2	W	S	D1	D2	R1	R2	ISO 5211
1/4"	0.37	-	0.58	2.56	2.4	0.3	1.39	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.49	-	0.71	2.56	2.4	0.3	1.39	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	0.62	0.88	2.56	2.47	0.28	1.43	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	0.82	1.09	2.95	2.56	0.29	1.56	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	1.05	1.35	3.35	3.01	0.43	1.93	5.51	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	1.38	1.7	3.98	3.23	0.37	2.13	5.51	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	1.61	1.94	4.41	4.02	0.49	2.54	6.77	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	2.07	2.42	5.12	4.33	0.54	2.85	6.77	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.48	2.47	2.93	6.38	5.01	0.64	3.62	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	3.07	3.58	7.4	5.37	0.64	3.94	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
4"	3.78	4.02	4.55	8.82	6.61	0.81	5.12	12.8	0.87	4.02	4.92	0.22	0.26	F10/F12

unit:in

3-PC. SCREWED END BALL VALVE

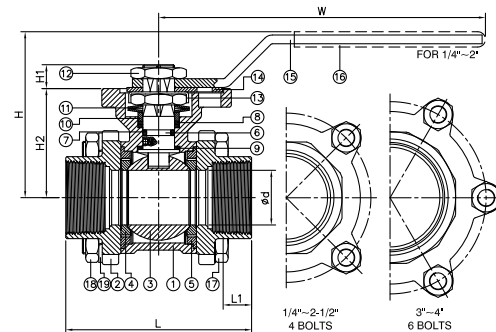
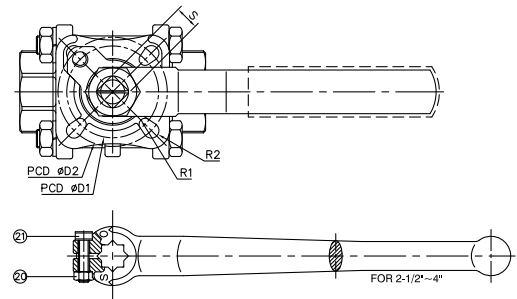
2013ND

FEATURES

- Full port, 1/4"~4" (DN8~DN100)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Locking device
- Anti-static device
- ISO 5211 Direct mounting pad
- Length conform to DIN 3202/4-M3-2013ND-M3 (option)
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	SEAT	PTFE / RTFE / CTFE / TFM1600	
5	SEAL	PTFE	
6	STEM	ASTM A276-316	
7	O-RING	VITON	
8	PACKING	PTFE	
9	THRUST WASHER		
10	GLAND RING	AISI 304	
11	BELLEVILLE WASHER	AISI 301	
12	STEM NUT		
13	LOCK WASHER	AISI 304	
14	LOCKING DEVICE		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	BOLT		
18	NUT		
19	SPRING WASHER	AISI 304	
20	NUT		
21	BOLT		



DN	d	L	H	H1	H2	W	S	D1	D2	R1	R2	ISO 5211
8	11.6	65	61	7.5	35.3	114.5	9	36	42	2.75	2.75	F03/F04
10	12.5	65	61	7.5	35.3	114.5	9	36	42	2.75	2.75	F03/F04
15	15	65	62.7	7.1	36.4	114.5	9	36	42	2.75	2.75	F03/F04
20	20	75	65.1	7.3	39.5	114.5	9	36	42	2.75	2.75	F03/F04
25	25	85	76.5	11	49	140	11	42	50	2.75	3.5	F04/F05
32	32	101	82	11.5	54.2	140	11	42	50	2.75	3.5	F04/F05
40	38	112	102	12.4	64.6	172	14	50	70	3.5	4.5	F05/F07
50	50	130	110.1	13.6	72.5	172	14	50	70	3.5	4.5	F05/F07
65	63	162	127.3	16.3	92	325	17	70	102	4.5	5.5	F07/F10
80	76	188	136.3	16.3	100	325	17	70	102	4.5	5.5	F07/F10
100	96	224	168	20.5	130	325	22	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	L	H	H1	H2	W	S	D1	D2	R1	R2	ISO 5211
1/4"	0.46	2.56	2.4	0.3	1.39	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
3/8"	0.49	2.56	2.4	0.3	1.39	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
1/2"	0.59	2.56	2.47	0.28	1.43	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	2.95	2.56	0.29	1.56	4.51	0.35	1.42	1.65	0.11	0.11	F03/F04
1"	0.98	3.35	3.01	0.43	1.93	5.51	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.26	3.98	3.23	0.45	2.13	5.51	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	4.41	4.02	0.49	2.54	6.77	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	5.12	4.33	0.54	2.85	6.77	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.48	6.38	5.01	0.64	3.62	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	7.4	5.37	0.64	3.94	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
4"	3.78	8.82	6.61	0.81	5.12	12.8	0.87	4.02	4.92	0.22	0.26	F10/F12

unit:in

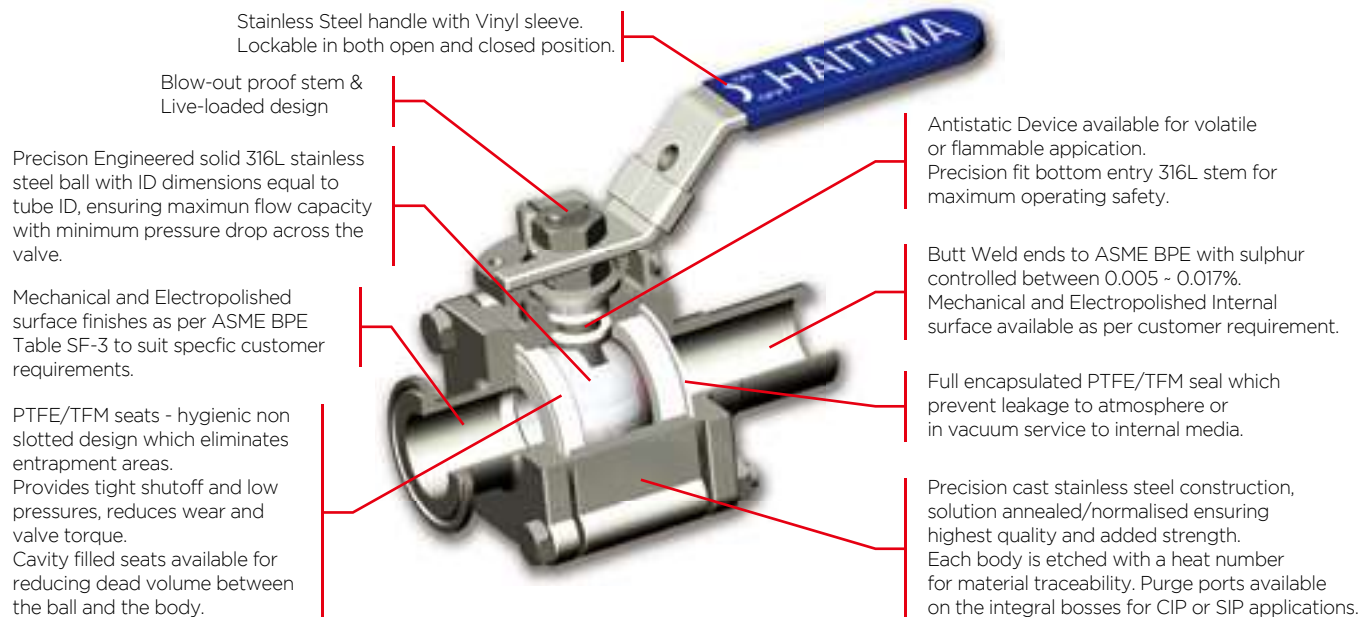


HIGH PURITY BALL VALVE



APPLICATIONS:

Pharmaceutical, Bio-Tech, Semiconductor, Vacuum, Drinking Water.



Body and Trim Materials

The valve body and ends are castings made from Stainless Steel conforming to ASTM A351 CF3M which improves the resistance to intergranular corrosion caused by welding. Welded end castings have low sulphur content of 0.005-0.017% and ferrite < 3%. The ball and stem are from Stainless Steel conforming to AISI 316L. These materials are offered for Biochemical, pharmaceutical, chemical and food machine equipment.

Stem & Ball

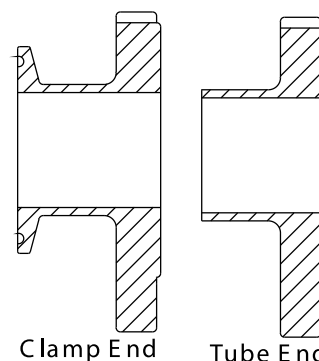
All valves have blowout proof stems. And a highly polished solid ball ensures tight shutoff and long service life. The ball orifice matches the tube internal diameter to reduce product deposits being trapped in the line and minimize pressure drop. Its post leading edges are rounded to eliminate excessive wear of the seats.

Seats

A flexible seat design provides tight shutoff at high and low pressures, reduces wear and valve torque. The seats are designed for low torque giving bubble tight shutoff and have no equalizing pressure slots or chamfers on the perimeter. Other seat designs available are Cavity Filler seats for reducing dead volume in the valve cavity.

End Connections

All ends are one-piece castings and are machined on all wetted parts to high grade finish. The standard ends are tube end, hygienic clamp or extended tube end.



HIGH PURITY BALL VALVE



Surface Finish

Table SF-1 Acceptance Criteria for Stainless Steel and Higher Alloy Mechanically Polished Product Contact Surface Finishes

Anomaly or Indication	Acceptance Criteria
Pits	If diameter <0.020 in. and bottom is shiny. Pits <0.003 in. diameter are irrelevant and acceptable.
Cluster of pits	No more than 4 pits per each 1/2 in. x 1/2 in. inspection window. The cumulative total of all relevant pits shall not exceed 0.040 in.
Dents	None accepted.
Finishing marks	If Ra max. is met.
Welds	As welded shall meet requirements of MJ-6. If welds are finished, then shall be smooth and blended.
Nicks	None accepted.
Scratches	For tubing, if cumulative length is <12.0 in. per 20 ft tube length or prorated and if depth is <0.003 in. For fittings, valves, and other process components, if length is <0.25 in. cumulatively, depth <0.003 in. and Ramax. is met. For vessels, if length < 0.50 in. at 0.003 depth and if <3 per inspection window.
Surface cracks	None accepted.
Surface inclusions	If Ra max. is met.
Surface residuals	None accepted, visual inspection.
Surface roughness (Ra)	See Table SF-3.
Weld slag	For tubing, up to 3 per 20 ft length or prorated, if <75% of the width of the weld bead. For fittings, valves, vessels, and other process components, none accepted (as welded shall meet the requirements of MJ-6 and Table MJ-3).
Porosity	None open to the surface.

Table SF-3 Ra Readings For Product Contact Surfaces

Surface Designation	Mechanically Polished [Note (1)]	
	Ra Max.	
	Q-in.	Qm
SF1	20	0.51
SF2	25	0.64
SF3	30	0.76

Surface Designation	Mechanically Polished [Note (1)] and Electropolished	
	Ra Max.	
	Q-in.	Qm
SF4	15	0.38
SF5	20	0.51
SF6	25	0.64

GENERAL NOTES:

- (a) All Ra readings are taken across the lay, wherever possible.
- (b) No single Ra reading shall exceed the Ra max. value in this table.
- (c) Other Ra readings are available if agreed upon between owner/user and manufacturer, not to exceed values in this table.

NOTE:

- (1) Or any other finishing method that meets the Ra max.

Conversion Chart				
Standard Grit	Ra		RMS	
	Q-in.	Qm	Q-in.	Qm
150g	27-32	.68-.80	30-35	.76-.89
180g	18-23	.46-.58	20-25	.51-.64
240g	14-18	.34-.46	15-20	.38-.51
320g	8-10	.21-.25	9-11	.23-.28

Grit : Measures the number of scratches per linear inch of abrasive pad. Higher numbers indicate a smoother finish.

RMS : Defined as Root Mean Square roughness, this method measures a sample for peaks and valleys. Lower numbers indicate a smoother finish.

Ra : Known as the Arithmetic Mean, this measurement represents the average value of all peaks and valleys. Lower numbers indicate a smooth finish.



HIGH PURITY BALL VALVE

2013KB

FEATURES

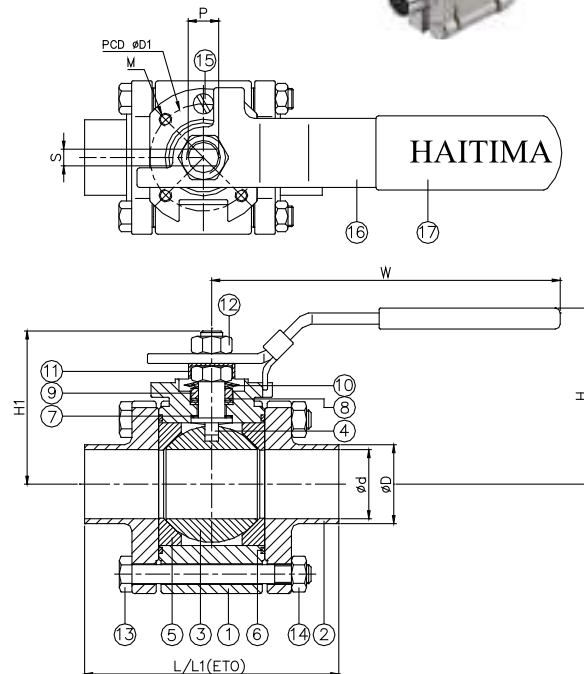
- Tube end, 1/2"-2" (DN15~DN50)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Mounting pad



2013KB-BPE

- Tube end castings have low sulphur content of 0.005-0.017%
- Extended tube end (ETO)

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF3M
2	CAP	
3	BALL	
4	STEM	ASTM A276-316L
5	SEAT	PTFE / TFM 1600
6	GASKET	PTFE
7	THRUST WASHER	
8	PACKING	AISI 304
9	GLAND RING	
10	DISC SPRING	AISI 301
11	LOCK PAD	ASTM A167-304
12	STEM NUT	ASTM A194-8
13	BOLT	ASTM A193-B8
14	NUT	ASTM A194-8
15	STOP PIN	AISI 304
16	HANDLE	STAINLESS STEEL
17	HANDLE SLEEVE	PVC



DN	d	D	L	L1	H	H1	W	S	D1	M	P	ISO 5211
15	9.4	12.7	66.2	118	53.5	39.5	114.3	5.7	36	M5	3/8"-24UNF	F03
20	15.75	19.05	76.9	124	55	41	114.3	5.7	36	M5	3/8"-24UNF	F03
25	22.1	25.4	103	141	65.8	58.7	146	7.5	42	M5	7/16"-20UNF	F04
32	28.45	31.75	110	-	71	62.85	146	7.5	42	M5	7/16"-20UNF	F04
40	34.8	38.1	139.5	157	80.8	77.8	177.8	8.89	50	M6	9/16"-18UNF	F05
50	47.5	50.8	158.7	172	89.3	86.3	177.8	8.89	50	M6	9/16"-18UNF	F05

unit:mm

NPS	d	D	L	L1	H	H1	W	S	D1	M	P	ISO 5211
1/2"	0.37	0.5	2.61	4.65	2.11	1.56	4.5	0.22	1.42	M5	3/8"-24UNF	F03
3/4"	0.62	0.75	3.03	4.88	2.17	1.61	4.5	0.22	1.42	M5	3/8"-24UNF	F03
1"	0.87	1	4.06	5.55	2.59	2.31	5.75	0.3	1.65	M5	7/16"-20UNF	F04
1-1/4"	1.12	1.25	4.33	-	2.8	2.47	5.75	0.3	1.65	M5	7/16"-20UNF	F04
1-1/2"	1.37	1.5	5.49	6.18	3.18	3.06	7	0.35	1.97	M6	9/16"-18UNF	F05
2"	1.87	2	6.25	6.77	3.52	3.4	7	0.35	1.97	M6	9/16"-18UNF	F05

unit:in



HIGH PURITY BALL VALVE

FEATURES

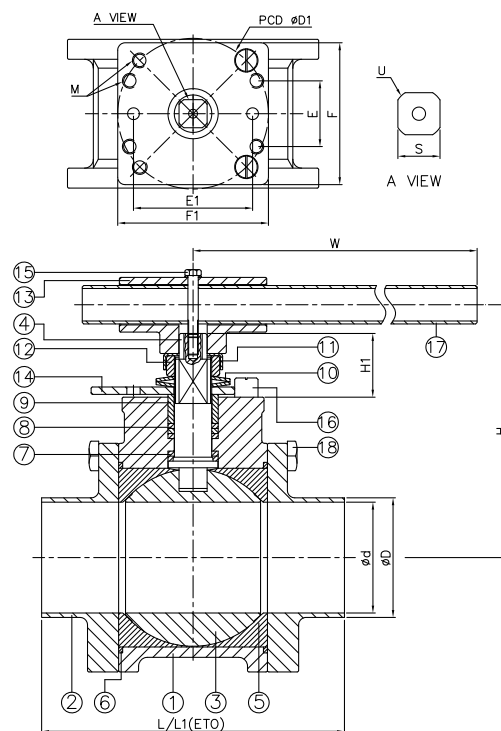
- Tube end, 2-1/2"~4" (DN65~DN100)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Mounting pad



2013KB-BPE

- Tube end castings have low sulphur content of 0.005-0.017%
- Extended tube end (ETO)

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF3M
2	CAP	
3	BALL	
4	STEM	ASTM A276-316L
5	SEAT	PTFE / TFM1600
6	GASKET	PTFE
7	THRUST WASHER	
8	PACKING	
9	GLAND RING	AISI 304
10	DISC SPRING	AISI 301
11	LOCK PAD	AISI 304
12	STEM NUT	ASTM A194-8
13	WRENCH BLOCK	AISI 304
14	STOPPER	
15	HEX HEAD BOLT	ASTM A193-B8
16	STOP PIN	AISI 304
17	HANDLE	ASTM A167-304
18	BOLT	ASTM A193-B8



DN	d	D	L	L1	H	H1	W	S	D1	E	E1	F	F1	M	U	ISO 5211
65	60.2	63.5	159	185	132.08	40.64	222	13.97	102.11	32	64.01	70.1	85.09	M10	M20x2.5	F10
80	72.9	76.2	177.8	220	165.61	42.67	349	19.05	102.11	44.45	80.52	96.01	102.11	M10	1"-14UNEF	F10
100	97.28	101.6	215.9	250	179.07	42.93	349	19.05	102.11	44.45	80.52	96.01	102.11	M10	1"-14UNEF	F10

unit:mm

NPS	d	D	L	L1	H	H1	W	S	D1	E	E1	F	F1	M	U	ISO 5211
2-1/2"	2.37	2.5	6.26	7.28	5.2	1.6	8.74	0.55	4.02	1.26	2.52	2.76	3.35	M10	M20x2.5	F10
3"	2.87	3	7	8.66	6.52	1.68	13.74	0.75	4.02	1.75	3.17	3.78	4.02	M10	1"-14UNEF	F10
4"	3.83	4	8.5	9.84	7.05	1.69	13.74	0.75	4.02	1.75	3.17	3.78	4.02	M10	1"-14UNEF	F10

unit:in



HIGH PURITY BALL VALVE

FEATURES

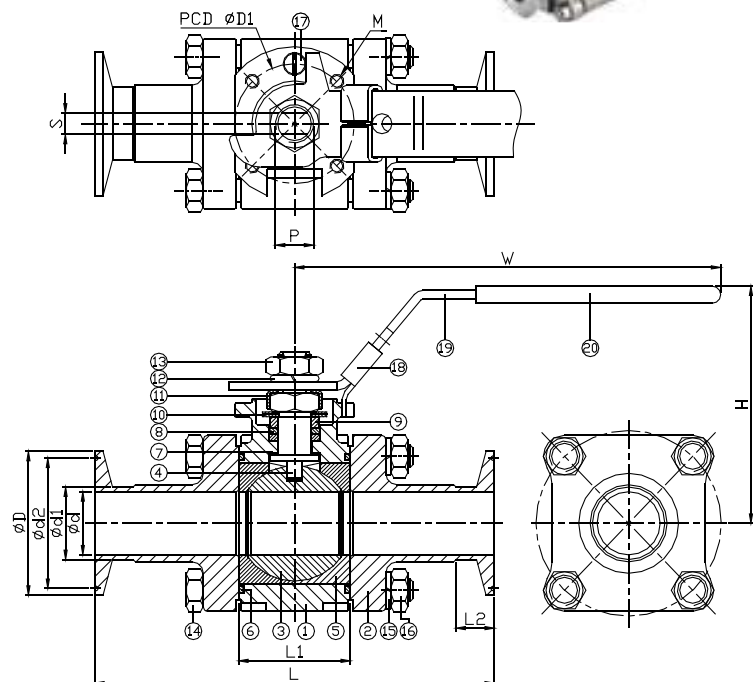
- Clamp end, 1/2"~2" (DN15~DN50)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Mounting pad



2013KC-BPE

- Clamp end castings have low sulphur content of 0.005-0.017%

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF3M
2	CAP	
3	BALL	
4	STEM	ASTM A276-316L
5	SEAT	PTFE / TFM1600
6	GASKET	PTFE
7	THRUST WASHER	
8	PACKING	
9	GLAND RING	AISI 304
10	BELLEVILLE WASHER	AISI 301
11	LOCK WASHER	AISI 304
12	STEM WASHER	
13	STEM NUT	
14	BOLT	
15	BOLT WASHER	
16	NUT	
17	STOP PIN	STAINLESS STEEL
18	LOCK DEVICE	
19	HANDLE	
20	HANDLE SLEEVE	PVC



DN	d	d1	d2	D	L	L1	L2	H	W	S	D1	M	P	ISO 5211
15	9.4	12.7	20.2	25.4	88.9	24.6	17	57.9	114	5.7	36	M5	3/8"-24UNF	F03
20	15.75	19.05	20.2	25.4	101.6	26.7	18	59.4	114	5.7	36	M5	3/8"-24UNF	F03
25	22.1	25.4	43.6	50.4	122.2	39.2	15	81.3	149	7.5	42	M5	7/16"-20UNF	F04
32	28.45	33.5	43.6	50.4	130	48	20	85.3	149	7.5	42	M5	7/16"-20UNF	F04
40	34.8	38.1	43.6	50.4	139.7	54	18	96.6	175	8.6	50	M6	9/16"-18UNF	F05
50	47.5	50.8	56.34	63.9	158.76	67.5	20.15	106.4	175	8.6	50	M6	9/16"-18UNF	F05

unit:mm

NPS	d2	d1	d3	D	L	L1	L2	H	W	S	D1	M	P	ISO 5211
1/2"	0.37	0.5	0.8	1	3.5	0.97	0.67	2.28	4.49	0.22	1.42	M5	3/8"-24UNF	F03
3/4"	0.62	0.75	0.8	1	4	1.05	0.71	2.34	4.49	0.22	1.42	M5	3/8"-24UNF	F03
1"	0.87	1	1.72	1.98	4.81	1.54	0.59	3.2	5.87	0.3	1.65	M5	7/16"-20UNF	F04
1-1/4"	1.12	1.32	1.72	1.98	5.12	1.89	0.79	3.36	5.87	0.3	1.65	M5	7/16"-20UNF	F04
1-1/2"	1.37	1.5	1.72	1.98	5.5	2.13	0.71	3.8	6.89	0.34	1.97	M6	9/16"-18UNF	F05
2"	1.87	2	2.22	2.52	6.25	2.66	0.79	4.19	6.89	0.34	1.97	M6	9/16"-18UNF	F05

unit:in



HIGH PURITY BALL VALVE

2013KC

FEATURES

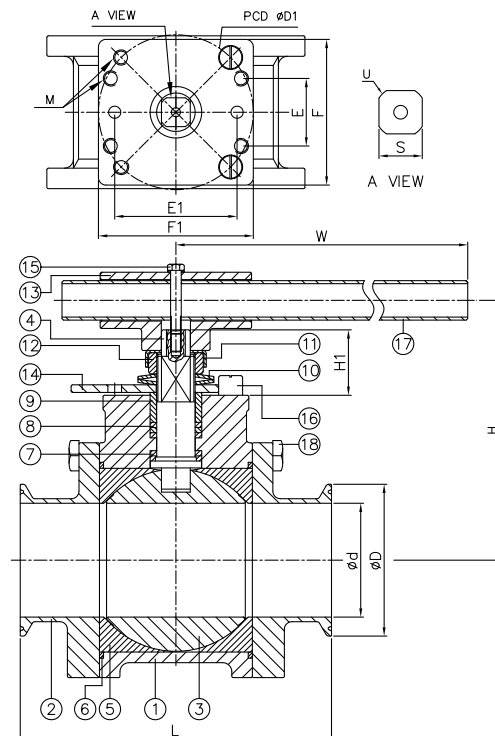
- Clamp end, 2-1/2"~4" (DN65~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Mounting pad



2013KC-BPE

- Clamp end castings have low sulphur content of 0.005-0.017%

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF3M
2	CAP	
3	BALL	
4	STEM	ASTM A276-316L
5	BALL SEAT	PTFE / TFM1600
6	GASKET	PTFE
7	THRUST WASHER	
8	PACKING	
9	GLAND RING	AISI 304
10	DISC SPRING	AISI 301
11	LOCK PAD	AISI 304
12	STEM NUT	ASTM A194-8
13	WRENCH BLOCK	AISI 304
14	STOPPER	
15	HEX HEAD BOLT	ASTM A193-B8
16	STOP PIN	AISI 304
17	HANDLE	ASTM A167-304
18	BOLT	ASTM A193-B8



DN	d	D	L	H	H1	W	E	E1	F	F1	S	D1	M	U	ISO 5211
65	60.2	77.5	159	132.1	40.6	222	32	64	70.1	85.1	14	102	M10	M20x2.5	F10
80	72.9	91	177.8	165.6	42.7	349	44.5	80.5	96	102.1	19.1	102	M10	1"-14UNEF	F10
100	97.3	119	215.9	179.1	42.9	349	44.5	80.5	96	102.1	19.1	102	M10	1"-14UNEF	F10

unit:mm

NPS	d	D	L	H	H1	W	E	E1	F	F1	S	D1	M	U	ISO 5211
2-1/2"	2.37	3.05	6.26	5.2	1.6	8.74	1.26	2.52	2.76	3.35	0.55	4.02	M10	M20x2.5	F10
3"	2.87	3.58	7	6.52	1.68	13.74	1.75	3.17	3.78	4.02	0.75	4.02	M10	1"-14UNEF	F10
4"	3.83	4.69	8.5	7.05	1.69	13.74	1.75	3.17	3.78	4.02	0.75	4.02	M10	1"-14UNEF	F10

unit:in



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CLEAN BALL VALVE

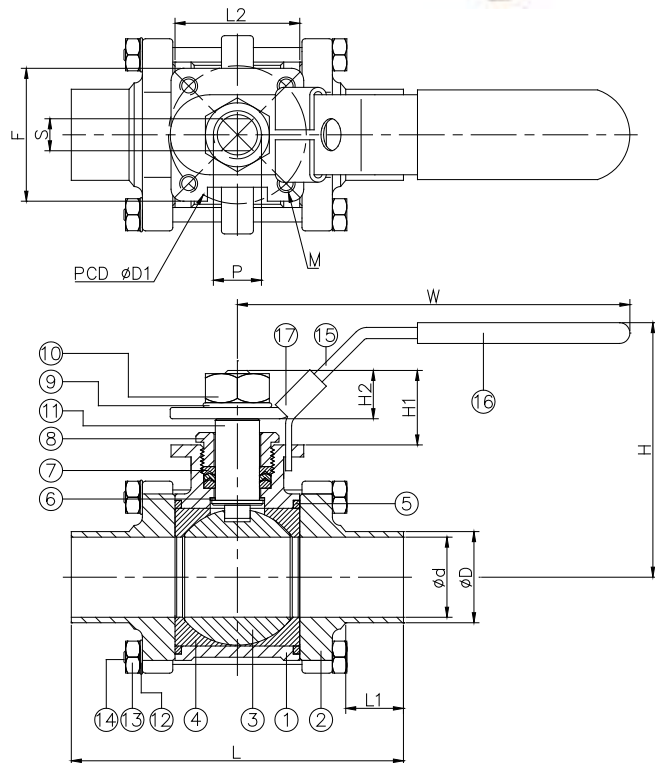
FEATURES

2012CM

- Tube end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Cavity filled seats
- Locking device
- ISO 5211 Mounting pad



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	CAP	
3	BALL	
4	SEAT	PTFE
5	SEAL	
6	THRUST WASHER	
7	PACKING	AISI 304
8	GLAND NUT	
9	STEM WASHER	
10	STEM NUT	AISI 316
11	STEM	
12	WASHER	AISI 304
13	NUT	
14	BOLT	
15	HANDLE	STAINLESS STEEL
16	HANDLE SLEEVE	PLASTIC
17	LOCKING DEVICE	STAINLESS STEEL



DN	d	D	L	L1	L2	H	H1	H2	W	F	D1	S	P	M	ISO 5211
15	9.6	12.7	90.7	20	26.7	63.5	18	13	141.2	37	36	6.5	M10	M5	FO3
20	15.8	19.1	103	22.5	33	66.6	18.7	13	141.2	37	36	6.5	M10	M5	FO3
25	22.1	25.4	115	25	38	69.4	18	13	141.2	42	42	6.5	M10	M5	FO4
40	34.8	38.2	140	25	54	100.6	30	19.5	188.3	50	50	8.5	M12	M6	FO5
50	47.7	50.8	158	25	69	110.6	29	19.5	188.3	50	50	8.5	M12	M6	FO5
65	60.3	63.5	197	25	85	139.2	37.7	26	260	72	70	12	3/4"W	M8	FO7
80	72.9	76.4	228	25	101.6	148.2	38.2	26	260	72	70	12	3/4"W	M8	FO7
100	97.5	101.7	241.8	25	121.8	175	52	35	295	94	102	16	1"W	M10	F10

unit:mm

NPS	d	D	L	L1	L2	H	H1	H2	W	F	D1	S	P	M	ISO 5211
1/2"	0.38	0.5	3.57	0.79	1.05	2.5	0.71	0.51	5.56	1.46	1.42	0.26	M10	M5	FO3
3/4"	0.62	0.75	4.06	0.89	1.3	2.62	0.74	0.51	5.56	1.46	1.42	0.26	M10	M5	FO3
1"	0.87	1	4.53	0.98	1.5	2.73	0.71	0.51	5.56	1.65	1.65	0.26	M10	M5	FO4
1-1/2"	1.37	1.5	5.51	0.98	2.13	3.96	1.18	0.77	7.41	1.97	1.97	0.33	M12	M6	FO5
2"	1.88	2	6.22	0.98	2.72	4.35	1.14	0.77	7.41	1.97	1.97	0.33	M12	M6	FO5
2-1/2"	2.37	2.5	7.76	0.98	3.35	5.48	1.48	1.02	10.24	2.83	2.76	0.47	3/4"W	M8	FO7
3"	2.87	3.01	8.98	0.98	4	5.83	1.5	1.02	10.24	2.83	2.76	0.47	3/4"W	M8	FO7
4"	3.84	4	9.52	0.98	4.8	6.89	2.05	1.38	11.61	3.7	4.02	0.63	1"W	M10	F10

unit:in

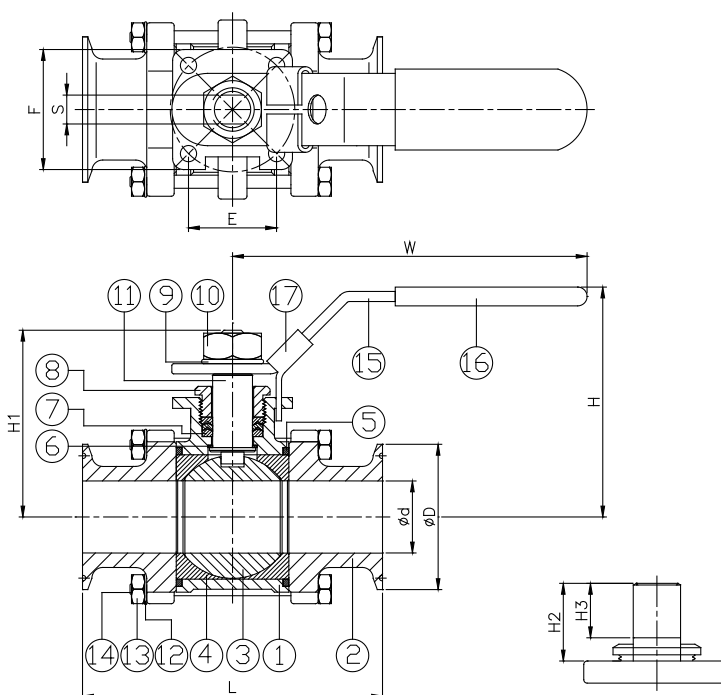
CLEAN BALL VALVE

FEATURES

- Clamp end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Cavity filled seats
- Locking device
- ISO 5211 Mounting pad



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	CAP	
3	BALL	
4	SEAT	PTFE
5	SEAL	
6	THRUST WASHER	
7	PACKING	AISI 304
8	GLAND NUT	
9	STEM WASHER	
10	STEM NUT	AISI 316
11	STEM	
12	BOLT WASHER	AISI 304
13	NUT	
14	BOLT	
15	HANDLE	STAINLESS STEEL
16	HANDLE SLEEVE	PLASTIC
17	LOCKING DEVICE	STAINLESS STEEL



DN	d	D	L	H	H1	H2	H3	W	S	E	F	ISO 5211
15	9.6	25.4	90.7	63.5	48.5	18	13	141.2	6.5	25.5	37	F03
20	15.8	25.4	103	66.6	51.8	18.7	13	141.2	6.5	25.5	37	F03
25	22.1	50.5	115	69.4	54.5	18	13	141.2	6.5	29.7	42	F04
40	34.8	50.5	140	100.6	82.5	30	19.5	188.3	8.5	35.4	50	F05
50	47.7	64	158	110.6	91.5	29	19.5	188.3	8.5	35.4	50	F05
65	60.3	77.5	197	139.2	117.2	37.7	26	260	12	49.5	72	F07
80	72.9	91	228	148.2	126.7	38.2	26	260	12	49.5	72	F07
100	97.5	119	241.8	175	162	52	35	295	16	72.1	94	F10

unit:mm

NPS	d	D	L	H	H1	H2	H3	W	S	E	F	ISO 5211
1/2"	0.38	1	3.57	2.5	1.91	0.71	0.51	5.56	0.26	1	1.46	F03
3/4"	0.62	1	4.06	2.62	2.04	0.74	0.51	5.56	0.26	1	1.46	F03
1"	0.87	1.99	4.53	2.73	2.15	0.71	0.51	5.56	0.26	1.17	1.65	F04
1-1/2"	1.37	1.99	5.51	3.96	3.25	1.18	0.77	7.41	0.33	1.39	1.97	F05
2"	1.88	2.52	6.22	4.35	3.6	1.14	0.77	7.41	0.33	1.39	1.97	F05
2-1/2"	2.37	3.05	7.76	5.48	4.61	1.48	1.02	10.24	0.47	1.95	2.83	F07
3"	2.87	3.58	8.98	5.83	4.99	1.5	1.02	10.24	0.47	1.95	2.83	F07
4"	3.84	4.69	9.52	6.89	6.38	2.05	1.38	11.61	0.63	2.84	3.7	F10

unit:in

CLEAN BALL VALVE

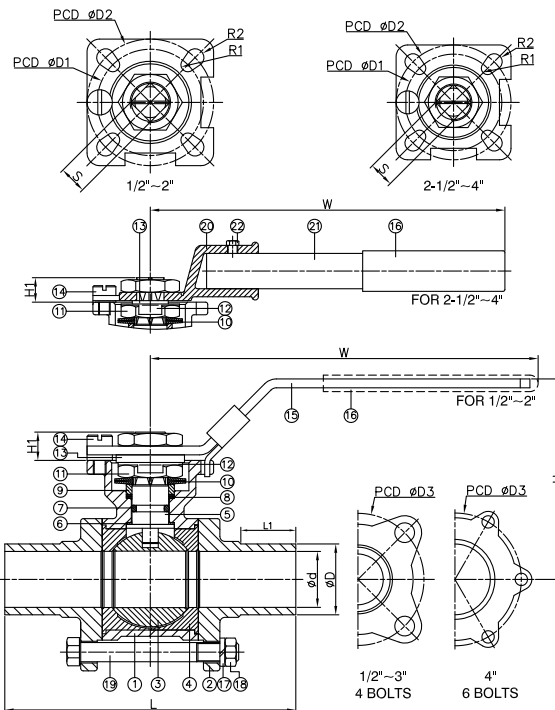
FEATURES

2012CD

- Tube end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Cavity filled seats
- Locking device
- ISO 5211 Direct mounting pad
- ISO 1127 tube end - 2012CDA (option)
- Automation accessories (option)
- Spring return handle (option)



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF3M
2	CAP		
3	BALL	ASTM A351-CF8M / ASTM A351-CF3M	
4	SEAT	PTFE / TFM1600	
5	STEM	ASTM A276-316	
6	THRUST WASHER	PTFE	
7	O-RING	VITON	
8	PACKING	PTFE	
9	GLAND RING	AISI 304	
10	BELLEVILLE WASHER	AISI 301	
11	NUT	AISI 304	
12	LOCKING WASHER		
13	FLAT WASHER		
14	STOP PIN		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	SPRING WASHER	AISI 304	
18	NUT		
19	BOLT		
20	WRENCH BLOCK		
21	STEEL TUBE		
22	BOLT		



DN	d	D	L	L1	H	H1	W	S	D1	D2	D3	R1	R2	ISO 5211
15	9.6	12.7	90.7	20	66.2	9	123	9	36	42	45.5	2.75	2.75	F03/F04
20	15.8	19.1	103	22.5	67.5	11	123	9	36	42	47	2.75	2.75	F03/F04
25	22.1	25.4	115	25	80.2	11	151.5	11	42	50	57.5	2.75	3.5	F04/F05
40	34.8	38.1	139	25	98.5	14	182	14	50	70	83	3.5	4.5	F05/F07
50	47.7	50.8	158	25	107	14	182	14	50	70	100	3.5	4.5	F05/F07
65	60.3	63.5	197	25	130.3	17	344	17	70	102	126	4.5	5.5	F07/F10
80	72.9	76.2	228	25	139.3	17	344	17	70	102	148	4.5	5.5	F07/F10
100	97.5	101.6	241.8	25	169	22	389	22	102	125	183	5.5	6.5	F10/F12

unit:mm

NPS	d	D	L	L1	H	H1	W	S	D1	D2	D3	R1	R2	ISO 5211
1/2"	0.38	0.5	3.57	0.79	2.61	0.35	4.84	0.35	1.42	1.65	1.79	0.11	0.11	F03/F04
3/4"	0.62	0.75	4.06	0.89	2.66	0.43	4.84	0.35	1.42	1.65	1.85	0.11	0.11	F03/F04
1"	0.87	1	4.53	0.98	3.16	0.43	5.96	0.43	1.65	1.97	2.26	0.11	0.14	F04/F05
1-1/2"	1.37	1.5	5.47	0.98	3.88	0.55	7.17	0.55	1.97	2.76	3.27	0.14	0.18	F05/F07
2"	1.88	2	6.22	0.98	4.21	0.55	7.17	0.55	1.97	2.76	3.94	0.14	0.18	F05/F07
2-1/2"	2.37	2.5	7.76	0.98	5.13	0.67	13.54	0.67	2.76	4.02	4.96	0.18	0.22	F07/F10
3"	2.87	3	8.98	0.98	5.48	0.67	13.54	0.67	2.76	4.02	5.83	0.18	0.22	F07/F10
4"	3.84	4	9.52	0.98	6.65	0.87	15.31	0.87	4.02	4.92	7.2	0.22	0.26	F10/F12

unit:in

CLEAN BALL VALVE

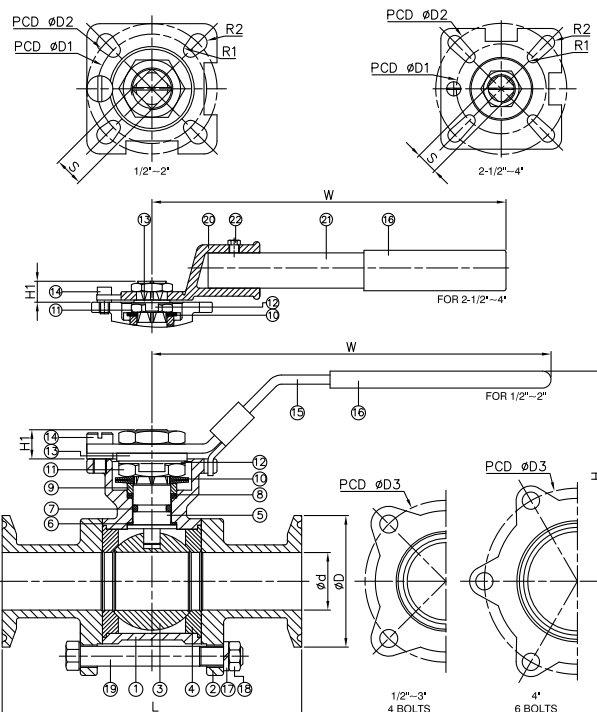
FEATURES

2013CD

- Clamp end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Cavity filled seats
- Locking device
- ISO 5211 Direct mounting pad
- DIN 32676-B clamp end - 2013CDA (option)
- Automation accessories (option)
- Spring return handle (option)



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF3M
2	CAP		
3	BALL	ASTM A351-CF8M / ASTM A351-CF3M	
4	SEAT	PTFE / TFM1600	
5	STEM	ASTM A276-316	
6	THRUST WASHER	PTFE	
7	O-RING	VITON	
8	PACKING	PTFE	
9	GLAND RING	AISI 304	
10	BELLEVILLE WASHER	AISI 301	
11	NUT	AISI 304	
12	LOCKING WASHER		
13	FLAT WASHER		
14	STOP PIN		
15	HANDLE	STAINLESS STEEL	
16	HANDLE SLEEVE	PVC	
17	SPRING WASHER	AISI 304	
18	NUT		
19	BOLT		
20	WRENCH BLOCK		
21	STEEL TUBE		
22	BOLT		



DN	d	D	L	H	H1	W	S	D1	D2	D3	R1	R2	ISO 5211
15	9.6	25.4	90.7	66.2	9	123	9	36	42	45.5	2.75	2.75	F03/F04
20	15.8	25.4	103	67.5	9	123	9	36	42	47	2.75	2.75	F03/F04
25	22.1	50.5	115	80.2	11	151.5	11	42	50	57.5	2.75	3.5	F04/F05
40	34.8	50.5	139	98.5	14	182	14	50	70	83	3.5	4.5	F05/F07
50	47.7	64	158	107	14	182	14	50	70	100	3.5	4.5	F05/F07
65	60.3	77.5	197	130.3	17	344	17	70	102	126	4.5	5.5	F07/F10
80	72.9	91	228	139.3	17	344	17	70	102	148	4.5	5.5	F07/F10
100	97.5	119	241.8	169	22	389	22	102	125	183	5.5	6.5	F10/F12

unit:mm

NPS	d	D	L	H	H1	W	S	D1	D2	D3	R1	R2	ISO 5211
1/2"	0.38	1	3.57	2.61	0.35	4.84	0.35	1.42	1.65	1.79	0.11	0.11	F03/F04
3/4"	0.62	1	4.06	2.66	0.35	4.84	0.35	1.42	1.65	1.85	0.11	0.11	F03/F04
1"	0.87	1.99	4.53	3.16	0.43	5.96	0.43	1.65	1.97	2.26	0.11	0.14	F04/F05
1-1/2"	1.37	1.99	5.47	3.88	0.55	7.17	0.55	1.97	2.76	3.27	0.14	0.18	F05/F07
2"	1.88	2.52	6.22	4.21	0.55	7.17	0.55	1.97	2.76	3.94	0.14	0.18	F05/F07
2-1/2"	2.37	3.05	7.76	5.13	0.67	13.54	0.67	2.76	4.02	4.96	0.18	0.22	F07/F10
3"	2.87	3.58	8.98	5.48	0.67	13.54	0.67	2.76	4.02	5.83	0.18	0.22	F07/F10
4"	3.84	4.69	9.52	6.65	0.87	15.31	0.87	4.02	4.92	7.2	0.22	0.26	F10/F12

unit:in



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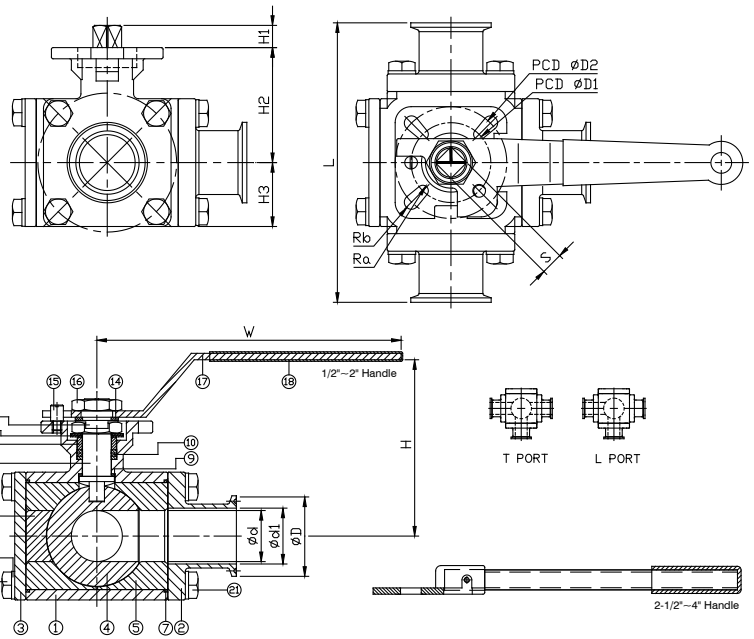
CLEAN BALL VALVE

FEATURES

- Clamp end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-Static Device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Direct mounting pad
- **Automation accessories (option)**



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF3M
2	CAP		
3	FLAT CAP		
4	BALL	ASTM A351-CF8M	
5	SEAT A	PTFE / TFM1600	
6	SEAT B		
7	SEAL	PTFE	
8	STEM	ASTM A276-316	
9	THRUST WASHER	PTFE	
10	PACKING		
11	GLAND RING	AISI 304	
12	BELLEVILLE WASHER		
13	LOCK WASHER		
14	FLAT WASHER		
15	STOP PIN		
16	STEM NUT	STAINLESS STEEL	
17	HANDLE		
18	HANDLE SLEEVE	PVC	
19	SPRING WASHER	AISI 304	
20	BOLT A		
21	BOLT B		



DN	d	d1	D	L	H	H1	H2	H3	W	S	D1	D2	Ra	Rb	ISO 5211
15	9.4	9.4	25.4	118	84	9	44.5	23.5	122	9	36	42	2.75	2.75	F03/F04
20	15.8	15.8	25.4	127	87.5	9	48	26	122	9	36	42	3	3	F03/F04
25	22.1	22.1	50.4	152.4	95.5	11	59	30.5	137	11	42	50	3.5	3.5	F04/F05
40	35	35	50.4	175	113.5	14	72	40	183	14	50	70	3.5	4.5	F05/F07
50	47.6	47.6	63.9	190	123.5	14	82	50	183	14	50	70	3.5	4.5	F05/F07
65	60	60	77.5	228	132.8	17	100	61	370	17	70	102	4.5	6.5	F07/F10
80	73	73	90.9	260	161.5	23	125.5	74	400	22	102	125	5.5	6.5	F10/F12
100	80	97.4	118.9	289	171.5	23	135.5	84	400	22	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	d1	D	L	H	H1	H2	H3	W	S	D1	D2	Ra	Rb	ISO 5211
1/2"	0.37	0.37	1	4.65	3.31	0.35	1.75	0.93	4.8	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.62	0.62	1	5	3.44	0.35	1.89	1.02	4.8	0.35	1.42	1.65	0.12	0.12	F03/F04
1"	0.87	0.87	1.98	6	3.76	0.43	2.32	1.2	5.39	0.43	1.65	1.97	0.14	0.14	F04/F05
1-1/2"	1.38	1.38	1.98	6.89	4.47	0.55	2.83	1.57	7.2	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.87	1.87	2.52	7.48	4.86	0.55	3.23	1.97	7.2	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.36	2.36	3.05	8.98	5.23	0.67	3.94	2.4	14.57	0.67	2.76	4.02	0.18	0.26	F07/F10
3"	2.87	2.87	3.58	10.24	6.36	0.91	4.94	2.91	15.75	0.87	4.02	4.92	0.22	0.26	F10/F12
4"	3.15	3.83	4.68	11.38	6.75	0.91	5.33	3.31	15.75	0.87	4.02	4.92	0.22	0.26	F10/F12

unit:in

CLEAN BALL VALVE

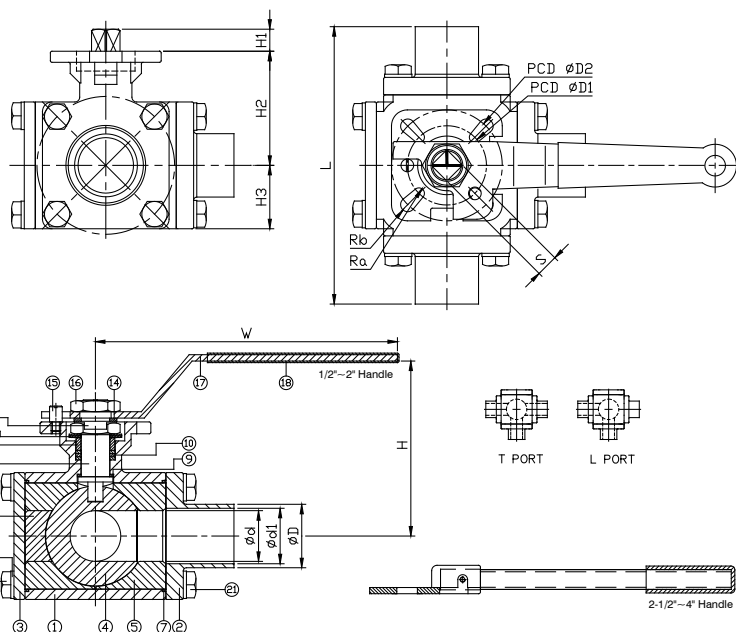
FEATURES

2057C-B

- Tube end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-Static Device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Direct mounting pad
- **Automation accessories (option)**



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF3M
2	CAP		
3	FLAT CAP		
4	BALL	ASTM A351-CF8M	
5	SEAT A	PTFE / TFM1600	
6	SEAT B		
7	SEAL	PTFE	
8	STEM	ASTM A276-316	
9	THRUST WASHER	PTFE	
10	PACKING		
11	GLAND RING		
12	BELLEVILLE WASHER	AISI 304	
13	LOCK WASHER		
14	FLAT WASHER		
15	STOP PIN		
16	STEM NUT		
17	HANDLE	STAINLESS STEEL	
18	HANDLE SLEEVE	PVC	
19	SPRING WASHER	AISI 304	
20	BOLT A		
21	BOLT B		



DN	d	d1	D	L	H	H1	H2	H3	W	S	D1	D2	Ra	Rb	ISO 5211
15	9.4	9.4	12.7	118	84	9	44.5	23.5	122	9	36	42	2.75	2.75	F03/F04
20	15.8	15.8	19.1	127	87.5	9	48	26	122	9	36	42	3	3	F03/F04
25	22.1	22.1	25.4	152.4	95.5	11	59	30.5	137	11	42	50	3.5	3.5	F04/F05
40	35	35	38.1	175	113.5	14	72	40	183	14	50	70	3.5	4.5	F05/F07
50	47.6	47.6	50.8	190	123.5	14	82	50	183	14	50	70	3.5	4.5	F05/F07
65	60	60	63.5	228	133	17	100	61	370	17	70	102	4.5	6.5	F07/F10
80	73	73	76.2	260	162	23	125.5	74	400	22	102	125	5.5	6.5	F10/F12
100	80	97.4	102	289	171.5	23	135.5	84	400	22	102	125	5.5	6.5	F10/F12

unit:mm

NPS	d	d1	D	L	H	H1	H2	H3	W	S	D1	D2	Ra	Rb	ISO 5211
1/2"	0.37	0.37	0.5	4.65	3.31	0.35	1.75	0.93	4.8	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.62	0.62	0.75	5	3.44	0.35	1.89	1.02	4.8	0.35	1.42	1.65	0.12	0.12	F03/F04
1"	0.87	0.87	1	6	3.76	0.43	2.32	1.2	5.39	0.43	1.65	1.97	0.14	0.14	F04/F05
1-1/2"	1.38	1.38	1.5	6.89	4.47	0.55	2.83	1.57	7.2	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.87	1.87	2	7.48	4.86	0.55	3.23	1.97	7.2	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.36	2.36	2.5	8.98	5.24	0.67	3.94	2.4	14.57	0.67	2.76	4.02	0.18	0.26	F07/F10
3"	2.87	2.87	3	10.24	6.38	0.91	4.94	2.91	15.75	0.87	4.02	4.92	0.22	0.26	F10/F12
4"	3.15	3.83	4.02	11.38	6.75	0.91	5.33	3.31	15.75	0.87	4.02	4.92	0.22	0.26	F10/F12

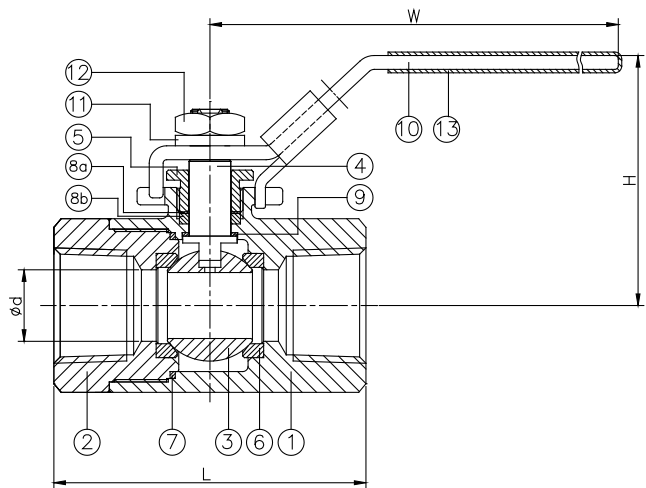
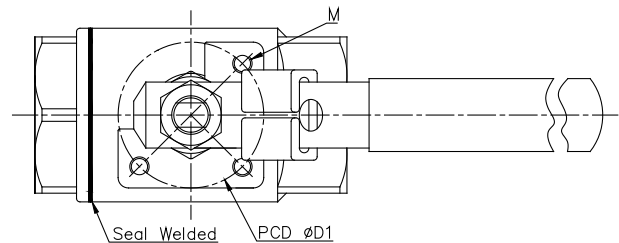
unit:in

HIGH PRESSURE BALL VALVE

2007W21

FEATURES

- Full port, 1/4"-3/8" (DN8-DN10)
- Standard port, 1/2"-2" (DN15-DN50)
- W.P. : 2160 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 mounting pad
- Seal welded ends
- ASME B16.34 Wall thickness
- NACE MR0175
- API 607 Fire safe approved
- API 608 Design
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	CAP			
3	BALL	ASTM A351-CF8M		
4	BALL SEAT	RTFE		
5	BODY SEAL	GRAPHITE		
6	THRUST WASHER	CTFE		
7a	PACKING A			
7b	PACKING B	GRAPHITE		
8	STEM	ASTM A276-316		
9	GLAND NUT	AISI 304		
10	SPRING WASHER			
11	NUT			
12	HANDLE	STAINLESS STEEL		
13	HANDLE SLEEVE	PVC		

DN	d	L	H	W	D1	M	ISO 5211
8	11	67	57.3	123	36	1/4"-20UNC	F03
10	11	67	57.3	123	36	1/4"-20UNC	F03
15	11	67	57.3	123	36	1/4"-20UNC	F03
20	15	78.3	68.3	144	42	1/4"-20UNC	F04
25	20	90	71.7	144	50	1/4"-20UNC	F05
40	31.8	108	91.5	250	50	1/4"-20UNC	F05
50	38	125.6	90	250	50	1/4"-20UNC	F05

unit:mm

NPS	d	L	H	W	D1	M	ISO 5211
1/4"	0.43	2.64	2.26	4.84	1.42	1/4"-20UNC	F03
3/8"	0.43	2.64	2.26	4.84	1.42	1/4"-20UNC	F03
1/2"	0.43	2.64	2.26	4.84	1.42	1/4"-20UNC	F03
3/4"	0.59	3.08	2.69	5.67	1.65	1/4"-20UNC	F04
1"	0.79	3.54	2.82	5.67	1.97	1/4"-20UNC	F05
1-1/2"	1.25	4.25	3.6	9.84	1.97	1/4"-20UNC	F05
2"	1.5	4.94	3.54	9.84	1.97	1/4"-20UNC	F05

unit:in

HIGH PRESSURE BALL VALVE

2007W36

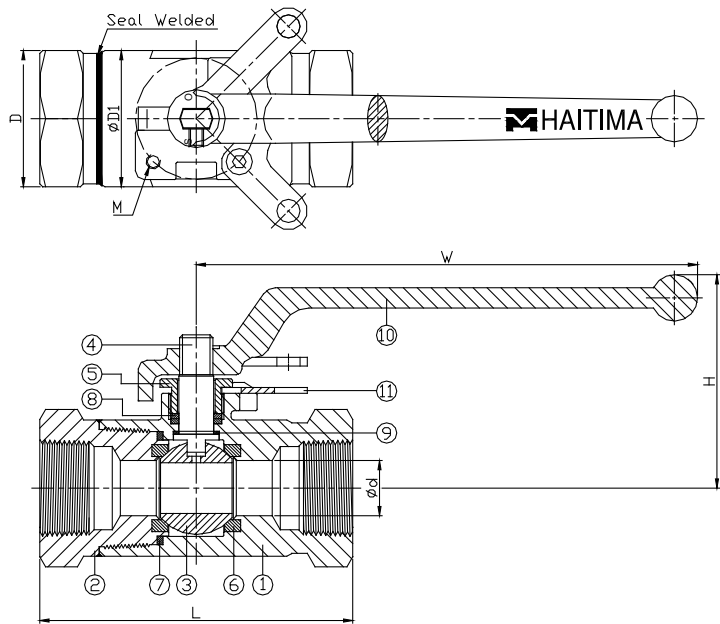
FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 3600 WOG (PN250)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- Seal welded ends
- ASME B16.34 Wall thickness
- NACE MR0175
- API 607 Fire safe approved
- API 608 Design
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	17-4PH	
4	STEM		
5	GLAND NUT	AISI 304	
6	SEAT	PEEK / DELRIN	
7	SEAL	GRAPHITE	
8	PACKING		
9	THRUST WASHER	CTFE	
10	HANDLE	AISI 304	
11	LOCK PAD		

- DELRIN SEAT MAX USING TEMPERATURE : 80°C



DN	d	D	D1	L	H	W	M	ISO 5211
8 F	6.35	32	39	76.2	56.6	142	M5xP0.8	F03
10 S	6.35	32	39	76.2	56.6	142	M5xP0.8	F03
15 F	12.7	32	39	101.6	56.6	142	M5xP0.8	F03
20 F	19	47	47	108	76.1	173	M5xP0.8	F04
25 S	19	47	47	108	76.1	173	M5xP0.8	F04
25 F	25.4	48	59.8	114	76.5	181	M6xP1	F05
40 F	38.1	77	86	134	117	247.5	M8xP1.25	F07
50 S	38.1	82	86	158.1	117	247.5	M8xP1.25	F07
50 F	50.8	82	106	158.1	124	247.5	M8xP1.25	F07

F: Full Port S: Standard Port

unit:mm

NPS	d	D	D1	L	H	W	M	ISO 5211
1/4" F	0.25	1.26	1.54	3	2.23	5.59	M5xP0.8	F03
3/8" S	0.25	1.26	1.54	3	2.23	5.59	M5xP0.8	F03
1/2" F	0.5	1.26	1.54	4	2.23	5.59	M5xP0.8	F03
3/4" F	0.75	1.85	1.85	4.25	3	6.81	M5xP0.8	F04
1" S	0.75	1.85	1.85	4.25	3	6.81	M5xP0.8	F04
1" F	1	1.89	2.35	4.49	3.01	7.13	M6xP1	F04
1-1/2" F	1.5	3.03	3.39	5.28	4.61	9.74	M8xP1.25	F07
2" S	1.5	3.23	3.39	6.22	4.61	9.74	M8xP1.25	F07
2" F	2	3.23	4.17	6.22	4.88	9.74	M8xP1.25	F07

F: Full Port S: Standard Port

unit:in



HIGH PRESSURE BALL VALVE

2007W60

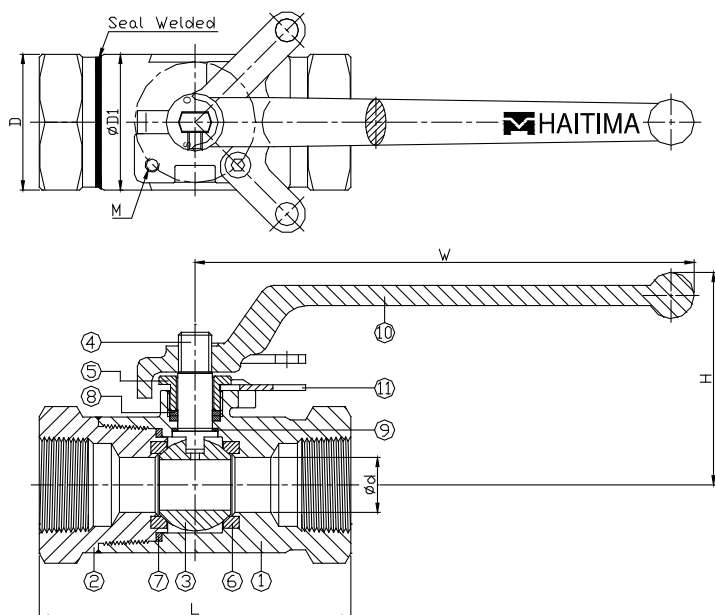
FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 6000 WOG (PN420)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- Seal welded ends
- ASME B16.34 Wall thickness
- NACE MR0175
- API 607 Fire safe approved
- API 608 Design
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	17-4PH	
4	STEM		
5	GLAND NUT	AISI 304	
6	SEAT	PEEK / DELRIN	
7	SEAL	GRAPHITE	
8	PACKING		
9	THRUST WASHER	CTFE	
10	HANDLE	AISI 304	
11	LOCK PAD		

- DELRIN SEAT MAX USING TEMPERATURE : 80°C



DN	d	D	D1	L	H	W	M	ISO 5211
8 F	6.35	32	39	76.2	56.6	142	M5xP0.8	F03
10 S	6.35	32	39	76.2	56.6	142	M5xP0.8	F03
15 F	12.7	38	39	101.6	56.6	142	M5xP0.8	F03
20 F	19	47	52	108	76.1	173	M5xP0.8	F04
25 S	19	55	55	108	76.1	173	M5xP0.8	F04
25 F	25.4	55	68	122	83.1	173	M6xP1	F05
40 F	38.1	77	97	134	117	247.5	M8xP1.25	F07
50 S	38.1	92	97	158.1	117	247.5	M8xP1.25	F07
50 F	50.8	92	122	158.1	124	247.5	M8xP1.25	F07

F: Full Port S: Standard Port

unit:mm

NPS	d	D	D1	L	H	W	M	ISO 5211
1/4" F	0.25	1.26	1.54	3	2.23	5.59	M5xP0.8	F03
3/8" S	0.25	1.26	1.54	3	2.23	5.59	M5xP0.8	F03
1/2" F	0.5	1.5	1.54	4	2.23	5.59	M5xP0.8	F03
3/4" F	0.75	1.85	2.05	4.25	3	6.81	M5xP0.8	F04
1" S	0.75	2.17	2.17	4.25	3	6.81	M5xP0.8	F04
1" F	1	2.17	2.68	4.8	3.27	6.81	M6xP1	F05
1-1/2" F	1.5	3.03	3.82	5.28	4.61	9.74	M8xP1.25	F07
2" S	1.5	3.62	3.82	6.22	4.61	9.74	M8xP1.25	F07
2" F	2	3.62	4.8	6.22	4.88	9.74	M8xP1.25	F07

F: Full Port S: Standard Port

unit:in



HIGH PRESSURE BALL VALVE

2007W36A

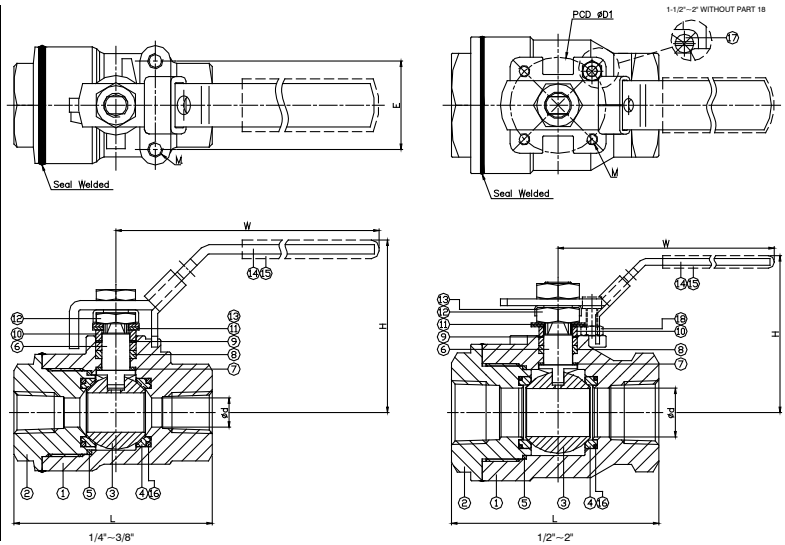
FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 3600 WOG (PN250)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad (1/2"~2")
- Seal welded ends
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	17-4PH	
4	SEAT	PEEK / DELRIN	
5	SEAL	GRAPHITE	
6	STEM	17-4PH	
7	THRUST WASHER	CTFE	
8	PACKING A	GRAPHITE	
9	PACKING B	CTFE	
10	GLAND	AISI 304	
11	BELLEVILLE WASHER	AISI 301	
12	STEM NUT	AISI 304	
13	LOCK WASHER		
14	HANDLE	STAINLESS STEEL	
15	HANDLE SLEEVE	PVC	
16	O-RING	VITON	
17	STOP PIN	AISI 304	
18	NUT		

- DELRIN SEAT MAX USING TEMPERATURE : 80°C



DN	d	L	H	W	E	D1	M	ISO 5211
8 F	9.4	64	55.6	113	28.5	-	M5	-
10 F	9.4	64	55.6	113	28.5	-	M5	-
15 F	12.7	72	62.7	136.5	-	36	M5	F03
20 F	20	89	68.6	166.5	-	42	M5	F04
25 F	25.4	102	79.7	176.5	-	50	M6	F05
32 F	32	116	85.7	176.5	-	50	M6	F05
40 F	38.1	124	110.5	244.5	-	70	M8	F07
50 S	38.1	140	110.5	244.5	-	70	M8	F07
50 F	50.8	82	106	158.1	124	247.5	M8xP1.25	F07

F: Full Port S: Standard Port

unit:mm

NPS	d	L	H	W	E	D1	M	ISO 5211
1/4" F	0.37	2.52	2.19	4.45	1.12	-	M5	-
3/8" F	0.37	2.52	2.19	4.45	1.12	-	M5	-
1/2" F	0.5	2.83	2.47	5.37	-	1.42	M5	F03
3/4" F	0.79	3.5	2.7	6.56	-	1.65	M5	F04
1" F	1	4.02	3.14	6.95	-	1.97	M6	F05
1-1/4" F	1.26	4.57	3.37	6.95	-	1.97	M6	F05
1-1/2" F	1.5	4.88	4.35	9.63	-	2.76	M8	F07
2" S	1.5	5.51	4.35	9.63	-	2.76	M8	F07
2" F	2	3.23	4.17	6.22	4.88	9.74	M8xP1.25	F07

F: Full Port S: Standard Port

unit:in



HIGH PRESSURE BALL VALVE

2007W60A

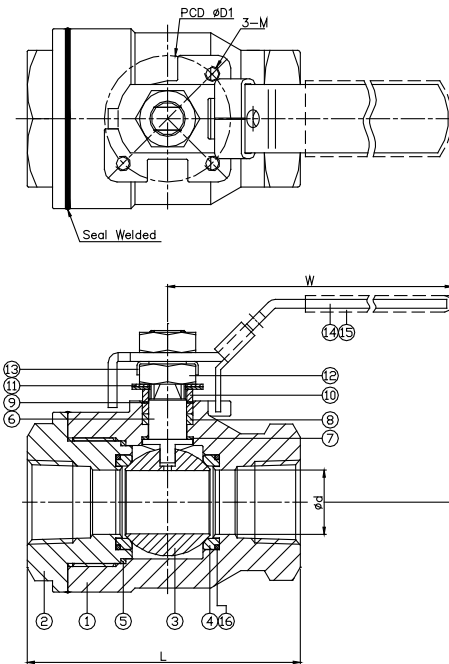
FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 6000 WOG (PN420)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- Seal welded ends
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	17-4PH	
4	SEAT	PEEK / DELRIN	
5	SEAL	GRAPHITE	
6	STEM	17-4PH	
7	THRUST WASHER	CTFE	
8	PACKING A	GRAPHITE	
9	PACKING B	CTFE	
10	GLAND	AISI 304	
11	BELLEVILLE WASHER	AISI 301	
12	STEM NUT	AISI 304	
13	LOCK WASHER		
14	HANDLE	STAINLESS STEEL	
15	HANDLE SLEEVE	PVC	
16	O-RING	VITON	

- DELRIN SEAT MAX USING TEMPERATURE : 80°C



DN	d	L	H	W	D1	M	ISO 5211
8 F	9.4	71.1	62.7	107.5	36	M5	F03
10 F	9.4	71.1	62.7	107.5	36	M5	F03
15 F	12.7	81	62.7	107.5	36	M5	F03
20 F	19	96	67.4	130	42	M5	F04
25 F	25.4	108	79.7	166.5	50	M6	F05
32 F	32	119.9	87.2	166.5	50	M6	F05
40 F	38.1	130	110.4	219.5	70	M8	F07
50 S	38.1	150.1	110.4	219.5	70	M8	F07

F: Full Port S: Standard Port

unit:mm

NPS	d	L	H	W	D1	M	ISO 5211
1/4" F	0.37	2.8	2.47	4.23	1.42	M5	F03
3/8" F	0.37	2.8	2.47	4.23	1.42	M5	F03
1/2" F	0.5	3.19	2.47	4.23	1.42	M5	F03
3/4" F	0.75	3.78	2.65	5.12	1.65	M5	F04
1" F	1	4.25	3.14	6.56	1.97	M6	F05
1-1/4" F	1.26	4.72	3.43	6.56	1.97	M6	F05
1-1/2" F	1.5	5.12	4.35	8.64	2.76	M8	F07
2" S	1.5	5.91	4.35	8.64	2.76	M8	F07

F: Full Port S: Standard Port

unit:in



HIGH PRESSURE BALL VALVE

2011KM3M

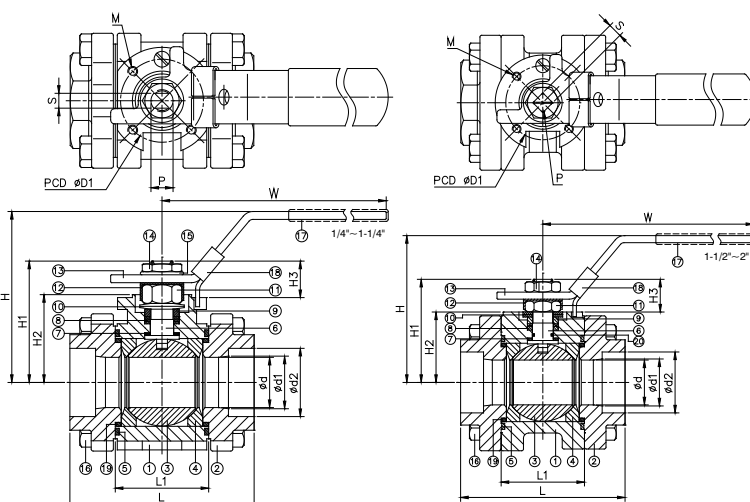
FEATURES

- Full port, 1/4"-2" (DN8-DN50)
- W.P. : 3000 WOG (PN200)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- ASME B16.34 Wall thickness
- NACE MR0175 (option)

- Socket weld ends conform to ASME B16.11 & DIN 3239 part2



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	CAP			
3	BALL	ASTM A351-CF8M		
4	SEAT	PEEK / DELRIN		
5	SEAL	RTFE		
6	STEM	ASTM A276-316		
7	THRUST WASHER	PTFE / CTFE		
8	PACKING			
9	GLAND RING	AISI 304		
10	BELLEVILLE WASHER	AISI 301		
11	STEM NUT	AISI 304		
12	LOCKING WASHER	STAINLESS STEEL		
13	HANDLE			
14	HANDLE NUT	AISI 304		
15	SPRING WASHER			
16	BOLT			
17	HANDLE SLEEVE	PVC		
18	LOCKING DEVICE	STAINLESS STEEL		
19	O-RING	VITON / PTFE ENCAPSULATED VITON		
20	O-RING	VITON		



*Temperature under 80°C will be used DELRIN.

DN	d	d1	d2	L	L1	H	H1	H2	H3	W	S	D1	P	M	ISO 5211
8	11.6	-	14	74.8	30.6	61.2	45.8	31.5	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
10	12.7	-	18	74.8	30.6	61.2	45.8	31.5	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
15	14.3	15.8	22	74.8	30.6	61.2	45.8	31.5	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
20	20.7	21	27.5	80	37.8	81.5	55.1	39.8	16.8	147	7.5	42	7/16"-20UNF	M5	FO4
25	25.4	26.6	34.5	93	47	86.2	60	44.4	17	147	7.5	42	7/16"-20UNF	M5	FO4
32	31.5	35	43	109.5	54.3	96.3	73.6	45.5	29.6	178	8.6	50	9/16"-18UNF	M6	FO5
40	38	41	49.5	120	62.3	102.4	79.3	57.5	21.8	228	14	50	M18x1.5	M6	FO5
50	50.8	52.5	61.5	140	78.8	112.9	89.8	68	21.8	228	14	50	M18x1.5	M6	FO5

unit:mm

NPS	d	d1	d2	L	L1	H	H1	H2	H3	W	S	D1	P	M	ISO 5211
1/4"	0.46	-	0.55	2.94	1.2	2.41	1.8	1.24	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
3/8"	0.5	-	0.71	2.94	1.2	2.41	1.8	1.24	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
1/2"	0.56	0.62	0.87	2.94	1.2	2.41	1.8	1.24	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
3/4"	0.81	0.83	1.08	3.15	1.49	3.21	2.17	1.57	0.66	5.79	0.3	1.65	7/16"-20UNF	M5	FO4
1"	1	1.05	1.36	3.67	1.85	3.39	2.36	1.75	0.67	5.79	0.3	1.65	7/16"-20UNF	M5	FO4
1-1/4"	1.24	1.38	1.69	4.31	2.14	3.79	2.9	1.79	1.17	7.01	0.34	1.97	9/16"-18UNF	M6	FO5
1-1/2"	1.5	1.61	1.95	4.72	2.45	4.03	3.12	2.26	0.86	8.98	0.55	1.97	M18x1.5	M6	FO5
2"	2	2.07	2.42	5.51	3.1	4.44	3.54	2.68	0.86	8.98	0.55	1.97	M18x1.5	M6	FO5

unit:in



HIGH PRESSURE BALL VALVE

2012KM3M

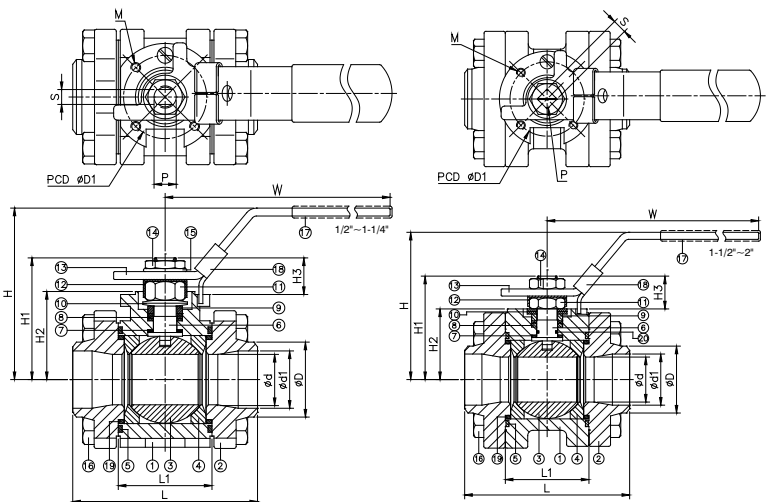
FEATURES

- Full port, 1/2"-2" (DN15~DN50)
- W.P. : 3000 WOG (PN200)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- ASME B16.34 Wall thickness
- NACE MR0175 (option)

- Butt weld ends conform to ASME B16.25 & DIN 3239 part1



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	CAP			
3	BALL	ASTM A351-CF8M		
4	SEAT	PEEK / DELRIN		
5	SEAL	RTFE		
6	STEM	ASTM A276-316		
7	THRUST WASHER	PTFE / CTFE		
8	PACKING			
9	GLAND RING	AISI 304		
10	BELLEVILLE WASHER	AISI 301		
11	STEM NUT	AISI 304		
12	LOCKING WASHER	STAINLESS STEEL		
13	HANDLE			
14	HANDLE NUT			
15	SPRING WASHER	AISI 304		
16	BOLT			
17	HANDLE SLEEVE	PVC		
18	LOCKING DEVICE	STAINLESS STEEL		
19	O-RING	VITON / PTFE ENCAPSULATED VITON		
20	O-RING	VITON		



*Temperature under 80°C will be used DELRIN.

DN	d	d1	D	L	L1	H	H1	H2	H3	W	S	D1	P	M	ISO 5211
15	14.3	15.8	21.35	74.8	30.6	61.2	31.5	45.8	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
20	20.7	20.9	26.65	80	37.8	81.5	39.8	55.1	16.8	147	7.5	42	7/16"-20UNF	M5	FO4
25	25.4	26.65	33.4	93	47	86.2	44.4	60	17	147	7.5	42	7/16"-20UNF	M5	FO4
32	31.5	35.05	42.15	109.5	54.3	96.3	45.5	73.6	29.6	178	8.6	50	9/16"-18UNF	M6	FO5
40	38	40.9	48.25	120	62.3	102.4	79.3	57.5	21.8	228	14	50	M18x1.5	M6	FO5
50	50.8	52.5	60.3	140	78.8	112.9	89.8	68	21.8	228	14	50	M18x1.5	M6	FO5

unit:mm

NPS	d	d1	D	L	L1	H	H1	H2	H3	W	S	D1	P	M	ISO 5211
1/2"	0.56	0.62	0.84	2.94	1.2	2.41	1.24	1.8	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
3/4"	0.81	0.82	1.05	3.15	1.49	3.21	1.57	2.17	0.66	5.79	0.3	1.65	7/16"-20UNF	M5	FO4
1"	1	1.05	1.31	3.66	1.85	3.39	1.75	2.36	0.67	5.79	0.3	1.65	7/16"-20UNF	M5	FO4
1-1/4"	1.24	1.38	1.66	4.31	2.14	3.79	1.79	2.9	1.17	7.01	0.34	1.97	9/16"-18UNF	M6	FO5
1-1/2"	1.5	1.61	1.9	4.72	2.45	4.03	3.12	2.26	0.86	8.98	0.55	1.97	M18x1.5	M6	FO5
2"	2	2.07	2.37	5.51	3.1	4.44	3.54	2.68	0.86	8.98	0.55	1.97	M18x1.5	M6	FO5

unit:in

HIGH PRESSURE BALL VALVE

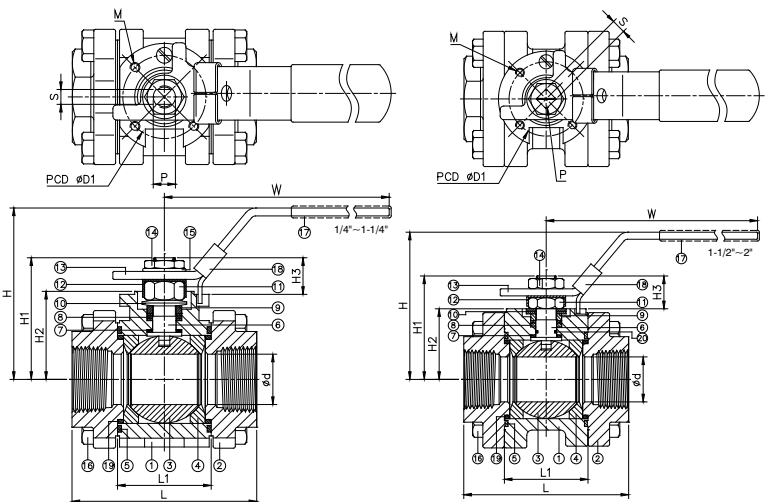
2013KM3M

FEATURES

- Full port, 1/4"-2" (DN8-DN50)
- W.P. : 3000 WOG (PN200)
- W.T. : -20°C~260°C (-4°F~500°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- ASME B16.34 Wall thickness
- NACE MR0175 (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	ASTM A351-CF8M	
4	SEAT	PEEK / DELRIN	
5	SEAL	RTFE	
6	STEM	ASTM A276-316	
7	THRUST WASHER	PTFE / CTFE	
8	PACKING		
9	GLAND RING	AISI 304	
10	BELLEVILLE WASHER	AISI 301	
11	STEM NUT	AISI 304	
12	LOCKING WASHER	AISI 304	
13	HANDLE	STAINLESS STEEL	
14	HANDLE NUT	AISI 304	
15	SPRING WASHER		
16	BOLT		
17	HANDLE SLEEVE	PVC	
18	LOCKING DEVICE	STAINLESS STEEL	
19	O-RING	VITON / PTFE ENCAPSULATED VITON	
20	O-RING	VITON	



*Temperature under 80°C will be used DELRIN.

DN	d	L	L1	H	H1	H2	H3	W	S	D1	P	M	ISO 5211
8	11.6	74.8	30.6	61.2	45.8	31.5	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
10	12.7	74.8	30.6	61.2	45.8	31.5	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
15	14.3	74.8	30.6	61.2	45.8	31.5	15.3	114.5	5.7	36	3/8"-24UNF	M5	FO3
20	20.7	80	37.8	81.5	55.1	39.8	16.8	147	7.5	42	7/16"-20UNF	M5	FO4
25	25.4	93	47	86.2	60	44.4	17	147	7.5	42	7/16"-20UNF	M5	FO4
32	31.5	109.5	54.3	96.3	73.6	45.5	29.6	178	8.6	50	9/16"-18UNF	M6	FO5
40	38	120	62.3	102.4	79.3	57.5	21.8	228	14	50	M18x1.5	M6	FO5
50	50.8	140	78.8	112.9	89.8	68	21.8	228	14	50	M18x1.5	M6	FO5

unit:mm

NPS	d	L	L1	H	H1	H2	H3	W	S	D1	P	M	ISO 5211
1/4"	0.46	2.94	1.2	2.41	1.8	1.24	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
3/8"	0.5	2.94	1.2	2.41	1.8	1.24	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
1/2"	0.56	2.94	1.2	2.41	1.8	1.24	0.6	4.51	0.22	1.42	3/8"-24UNF	M5	FO3
3/4"	0.81	3.15	1.49	3.21	2.17	1.57	0.66	5.79	0.3	1.65	7/16"-20UNF	M5	FO4
1"	1	3.66	1.85	3.39	2.36	1.75	0.67	5.79	0.3	1.65	7/16"-20UNF	M5	FO4
1-1/4"	1.24	4.31	2.14	3.79	2.9	1.79	1.17	7.01	0.34	1.97	9/16"-18UNF	M6	FO5
1-1/2"	1.5	4.72	2.45	4.03	3.12	2.26	0.86	8.98	0.55	1.97	M18x1.5	M6	FO5
2"	2	5.51	3.1	4.44	3.54	2.68	0.86	8.98	0.55	1.97	M18x1.5	M6	FO5

unit:in

HIGH PRESSURE BALL VALVE

2013F60

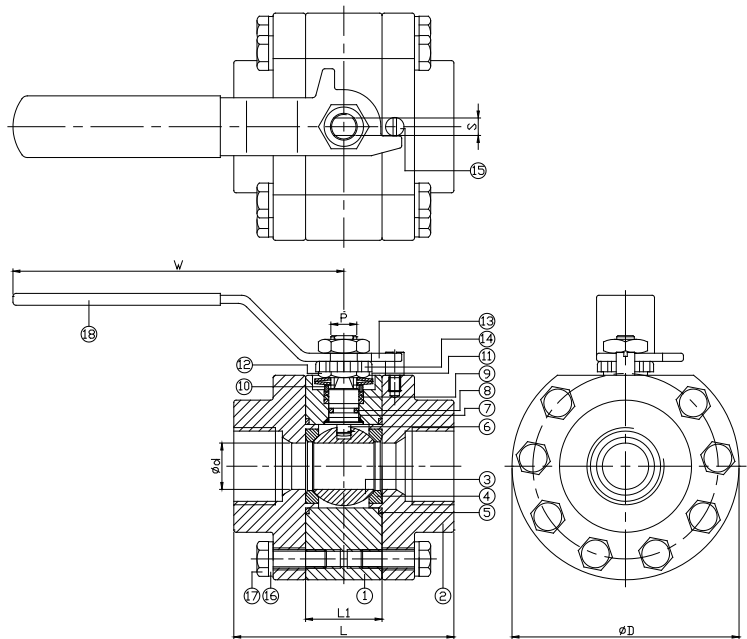
FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 6000 WOG (PN420)
- W.T. : -20°C~260°C (-4°F~500°F)
- **Forged body**
- Blow-out proof stem
- Live-loading design
- **NACE MR0175**
- **API 607 Fire safe design**
- End connection: Thread end
Socket weld
Butt weld



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A182 F316	ASTM A105
2	CAP		
3	BALL SEAL	DELRIN	
4	SEAT	DELRIN / PEEK	
5	BALL	SS 316	
6	STEM		
7	THRUST WASHER	DELRIN	
8	O-RING	VITON	
9	STEM PACKING	CTFE	
10	GLAND	SS 304	
11	BELLEVILLE WASHER		
12	STEM NUT		
13	HANDLE		
14	LOCK WASHER		
15	STOP PIN		
16	BOLT WASHER		
17	BOLT		
18	HANDLE COVER	PLASTIC	

- DELRIN SEAT MAX USING TEMPERATURE : 80°C



DN	d		D	L	L1	H	H1	W	S	P
	Reduced Bore	Full Bore								
8	9.7	11.6	76	75	25	29	42	142	5.54	3/8"UNF
10	11.6	12.5	76	75	25	29	42	142	5.54	3/8"UNF
15	12.5	15	76	75	25	29	42	142	5.54	3/8"UNF
20	15	20	84	85	33	35	48.3	142	5.54	3/8"UNF
25	20	25	98	95	33	39.2	54	162	7.54	7/16"UNF
32	25	32	107	108	41	42.8	57.6	162	7.54	7/16"UNF
40	32	38	130	128	50	51.5	73	200	8.68	9/16"UNF
50	38	50	146	156	56	57.5	79	200	8.68	9/16"UNF

unit:mm

NPS	d		D	L	L1	H	H1	W	S	P
	Reduced Bore	Full Bore								
1/4"	0.38	0.46	2.99	2.95	0.98	1.14	1.65	5.59	0.22	3/8"UNF
3/8"	0.46	0.49	2.99	2.95	0.98	1.14	1.65	5.59	0.22	3/8"UNF
1/2"	0.49	0.59	2.99	2.95	0.98	1.14	1.65	5.59	0.22	3/8"UNF
3/4"	0.59	0.79	3.31	3.35	1.3	1.38	1.9	5.59	0.22	3/8"UNF
1"	0.79	0.98	3.86	3.74	1.3	1.54	2.13	6.38	0.3	7/16"UNF
1-1/4"	0.98	1.26	4.21	4.25	1.61	1.69	2.27	6.38	0.3	7/16"UNF
1-1/2"	1.26	1.5	5.12	5.04	1.97	2.03	2.87	7.87	0.34	9/16"UNF
2"	1.5	1.97	5.75	6.14	2.2	2.26	3.11	7.87	0.34	9/16"UNF

unit:in



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1-PC. FLANGED END BALL VALVE

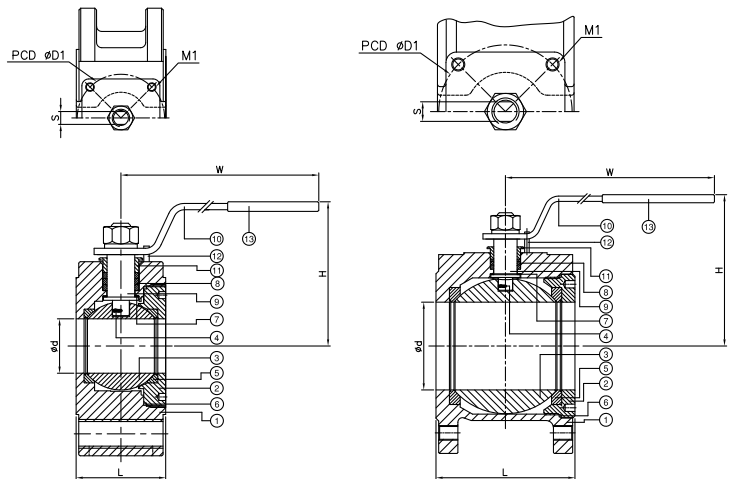
2052A

FEATURES

- Full port, 1/2"~5" (DN15~DN125)
- W.P. : 1/2"~2" - PN16-40
2-1/2"~4" - PN10-16
5" - PN16
- CLASS 150
- W.T. : -20°C~200°C (-4°F~392°F)
- Wafer type
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- ISO 5211 Mounting pad



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	RETAINER	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	ANTI-STATIC DEVICE	AISI 316	
5	SEAT	PTFE / RTFE	
6	SEAL	PTFE	
7	THRUST WASHER		
8	PACKING		
9	STEM	ASTM A276-316	
10	HANDLE	STAINLESS STEEL	
11	GLAND NUT	AISI 304	
12	STOP PIN		
13	HANDLE SLEEVE	PVC	



DN	d	L	H		W	S	D1	M1	ISO 5211
			CLASS 150	PN10/16/40					
15	15	36	68	70	150	7.8	36	M5	F03
20	20	38	72	70	150	7.8	36	M5	F03
25	25	43	75	80	150	8	36	M5	F03
32	32	51	88.5	87	156	8	36	M5	F03
40	38	63	110	102	180	10	50	M6	F05
50	50	70	118.5	108	180	10	50	M6	F05
65	65	107	140	143	282	12	70	M8	F07
80	76	120	152	152	290	12	70	M8	F07
100	96	152	168	168	325	15	102	M10	F10
125	118	180	-	183	325	15	102	M10	F10

unit:mm

NPS	d	L	H		W	S	D1	M1	ISO 5211
			CLASS 150	PN10/16/40					
1/2"	0.59	1.42	2.68	2.76	5.91	0.31	1.42	M5	F03
3/4"	0.79	1.5	2.83	2.76	5.91	0.31	1.42	M5	F03
1"	0.98	1.69	2.95	3.15	5.91	0.31	1.42	M5	F03
1-1/4"	1.26	2.01	3.48	3.43	6.14	0.31	1.42	M5	F03
1-1/2"	1.5	2.48	4.33	4.02	7.09	0.39	1.97	M6	F05
2"	1.97	2.76	4.67	4.25	7.09	0.39	1.97	M6	F05
2-1/2"	2.56	4.21	5.51	5.63	11.1	0.47	2.76	M8	F07
3"	2.99	4.72	5.98	5.98	11.42	0.47	2.76	M8	F07
4"	3.78	5.98	6.61	6.61	12.8	0.59	4.02	M10	F10
5"	4.65	7.09	-	7.2	12.8	0.59	4.02	M10	F10

unit:in



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1-PC. FLANGED END BALL VALVE

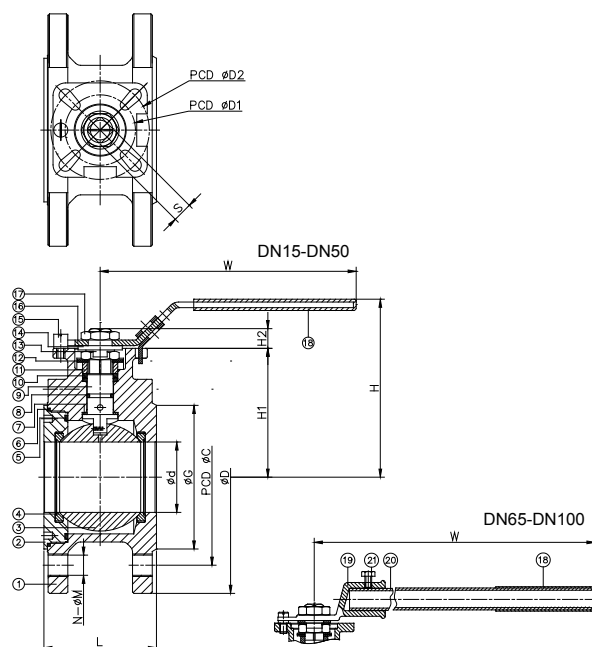
2052AD

FEATURES

- Full port, 1/2"~4" (DN15~DN100)
- W.P. : 1/2"~2" - PN16-40
2-1/2"~4" - PN10-16
- W.T. : -20°C~200°C (-4°F~392°F)
- Wafer type
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- ISO 5211 Direct mounting pad
- API 607 Fire safe approved (option)
- ISO 15848 fugitive emission approved (option)
- Spring return handle (option)



ITEM	PARTS	MATERIAL		
1	BODY	1.4408	1.0619	
2	CAP			
3	BALL	ASTM A351-CF8M		
4	SEAT	RTFE		
5	SEAL A	PTFE		
6	SEAL B			
7	THRUST WASHER			
8	O-RING	VITON		
9	STEM	1.4401		
10	PACKING	PTFE		
11	GLAND RING	1.4301		
12	BELLEVILLE WASHER	1.4310		
13	LOCK WASHER	1.4301		
14	FLAT WASHER			
15	STOPPER			
16	HANDLE	STAINLESS STEEL		
17	NUT	1.4301		
18	HANDLE SLEEVE	PVC		
19	HANDLE HEAD	1.4301		
20	STEEL TUBE			
21	BOLT			



DN	d	G	C	D	L	H	H1	H2	W	S	D1	D2	N	M	ISO 5211
15	15	45	65	95	42	86	54	9	123	9	36	42	4	M12	F03/F04
20	20	58	75	105	44	91	59	9	123	9	36	42	4	M12	F03/F04
25	25	68	85	115	50	99.5	66	11	151.5	11	42	50	4	M12	F04/F05
32	32	78	100	140	60	111	77.5	11	151.5	11	42	50	4	M16	F04/F05
40	38	88	110	150	65	119	84	14	182	14	50	70	4	M16	F05/F07
50	50	102	125	165	80	126.5	91.5	14	182	14	50	70	4	M16	F05/F07
65	65	122	145	185	110	147.5	105	17	344	17	70	102	4	M16	F07/F10
80	76	138	160	200	120	153.5	111	17	344	17	70	102	8	M16	F07/F10
100	96	158	180	220	150	174	131.5	22	390	22	102	125	8	M16	F10/F12

unit:mm

NPS	d	G	C	D	L	H	H1	H2	W	S	D1	D2	N	M	ISO 5211
1/2"	0.59	1.77	2.56	3.74	1.65	3.39	2.13	0.35	4.84	0.35	1.42	1.65	4	M12	F03/F04
3/4"	0.79	2.28	2.95	4.13	1.73	3.58	2.32	0.35	4.84	0.35	1.42	1.65	4	M12	F03/F04
1"	0.98	2.68	3.35	4.53	1.97	3.92	2.6	0.43	5.96	0.43	1.65	1.97	4	M12	F04/F05
1-1/4"	1.26	3.07	3.94	5.51	2.36	4.37	3.05	0.43	5.96	0.43	1.65	1.97	4	M16	F04/F05
1-1/2"	1.5	3.46	4.33	5.91	2.56	4.69	3.31	0.55	7.17	0.55	1.97	2.76	4	M16	F05/F07
2"	1.97	4.02	4.92	6.5	3.15	4.98	3.6	0.55	7.17	0.55	1.97	2.76	4	M16	F05/F07
2-1/2"	2.56	4.8	5.71	7.28	4.33	5.81	4.13	0.67	13.54	0.67	2.76	4.02	4	M16	F07/F10
3"	2.99	5.43	6.3	7.87	4.72	6.04	4.37	0.67	13.54	0.67	2.76	4.02	8	M16	F07/F10
4"	3.78	6.22	7.09	8.66	5.91	6.85	5.18	0.87	15.35	0.87	4.02	4.92	8	M16	F10/F12

unit:in

1-PC. FLANGED END BALL VALVE

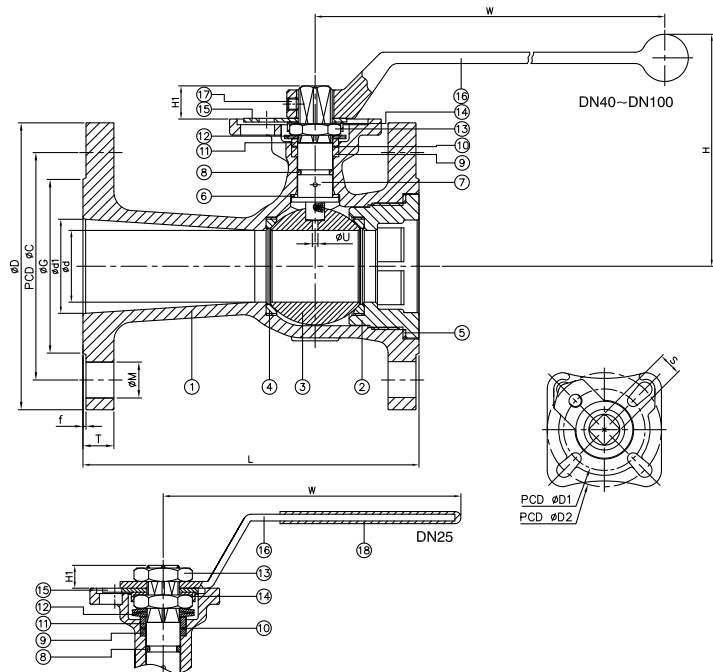
2021D

FEATURES

- Standard port, 1"~4" (DN25~DN100)
- W.P. : CLASS 150
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- ISO 5211 Direct mounting pad
- **API 607 Fire safe approved**
- **API 608 Design**
- **Automation accessories (option)**
- **Spring return handle (option)**
- Wall thickness: ASME B16.34
- Flange dimension: ASME B16.5
- Face to face: ASME B16.10



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	RETAINER			
3	BALL	ASTM A351-CF8M		
4	SEAT	RTFE / TFM1600		
5	SEAL	GRAPHITE		
6	THRUST WASHER	CTFE		
7	STEM	ASTM A276-316		
8	O-RING	VITON		
9	PACKING A	GRAPHITE		
10	PACKING B	CTFE		
11	GLAND RING	AISI 304		
12	BELLEVILLE WASHER	AISI 301		
13	STEM NUT	AISI 304		
14	LOCKING WASHER			
15	STOPPER			
16	HANDLE	STAINLESS STEEL		
17	SOCKET SET SCREWS	AISI 304		
18	HANDLE SLEEVE	PVC		



DN	d	d1	G	C	D	L	H	H1	W	T	f	S	U	D1	D2	M	ISO 5211
25	20	25	51	79.5	108	127	96.2	8	140	11.1	1.6	9	3	36	42	16	F03/F04
40	30	40	73	98.5	127	165	100.9	10.5	197.5	14.3	1.6	11	3	42	50	16	F04/F05
50	38	50	92	120.5	152	178	122.9	14	247.5	15.8	1.6	14	3	50	70	19	F05/F07
65	50	64	105	139.5	178	190.5	135.9	15.5	247.5	17.6	1.6	14	3	50	70	19	F05/F07
80	64	76	127	152.5	190.5	203	155.3	18.5	340	19.1	1.6	17	3	70	102	19	F07/F10
100	76	100	157	190.5	229	229	170.3	20	340	24	1.6	17	3	70	102	19	F07/F10

unit:mm

NPS	d	d1	G	C	D	L	H	H1	W	T	f	S	U	D1	D2	M	ISO 5211
1"	0.79	0.98	2.01	3.13	4.25	5	3.79	0.31	5.51	0.44	0.06	0.35	0.12	1.42	1.65	0.63	F03/F04
1-1/2"	1.18	1.57	2.87	3.88	5	6.5	3.97	0.41	7.78	0.56	0.06	0.43	0.12	1.65	1.97	0.63	F04/F05
2"	1.5	1.97	3.62	4.74	5.98	7.01	4.84	0.55	9.74	0.62	0.06	0.55	0.12	1.97	2.76	0.75	F05/F07
2-1/2"	1.97	2.52	4.13	5.49	7.01	7.5	5.35	0.61	9.74	0.69	0.06	0.55	0.12	1.97	2.76	0.75	F05/F07
3"	2.52	2.99	5	6	7.5	7.99	6.11	0.73	13.39	0.75	0.06	0.67	0.12	2.76	4.02	0.75	F07/F10
4"	2.99	3.94	6.18	7.5	9.02	9.02	6.7	0.79	13.39	0.94	0.06	0.67	0.12	2.76	4.02	0.75	F07/F10

unit:in



2-PC. FLANGED END BALL VALVE

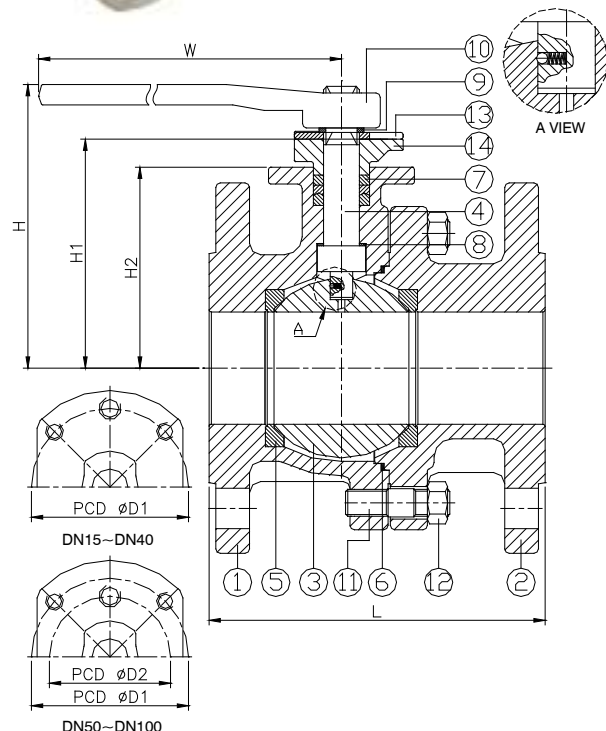
2019

FEATURES

- Full port, 1/2"~12" (DN15~DN300)
- W.P. : PN16/40
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- ISO 5211 Mounting pad
- Flange dimension: DIN 2501
- Face to face: DIN 3202 part1 - F4/F5



ITEM	PARTS	MATERIAL	
1	BODY	1.4408	1.0619
2	CAP		
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	BALL SEAT	PTFE / RTFE	
6	BODY SEAL	PTFE	
7	PACKING		
8	THRUST WASHER		
9	C SNAP RING	SUS 304 CSP	
10	HANDLE	CAST IRON	
11	STUD	AISI 304	
12	NUT		
13	LOCKING DEVICE		
14	GLAND	ASTM A351-CF8	



DN	L	H	H1	H2	W	D1	D2	ISO 5211
15	114.5	68	45	33.5	130	42	-	F04
20	121.4	70	48	36	130	42	-	F04
25	126.7	82	53	42	160	42	-	F04
32	131.2	87	59.5	48	160	42	-	F04
40	141.1	138	96	80.5	200	50	-	F05
50	150.7	147	104.5	89.5	200	70	50	F07
65	170.5	163	125.5	108	328	70	62	F07
80	181.5	173	135.5	117.5	328	102	62	F10
100	190.8	190	151	133.5	328	102	62	F10

unit:mm

NPS	L	H	H1	H2	W	D1	D2	ISO 5211
1/2"	4.51	2.68	1.77	1.32	5.12	1.65	-	F04
3/4"	4.78	2.76	1.89	1.42	5.12	1.65	-	F04
1"	4.99	3.23	2.09	1.65	6.3	1.65	-	F04
1-1/4"	5.17	3.43	2.34	1.89	6.3	1.65	-	F04
1-1/2"	5.56	5.43	3.78	3.17	7.87	1.97	-	F05
2"	5.93	5.79	4.11	3.52	7.87	2.76	1.97	F07
2-1/2"	6.71	6.42	4.94	4.25	12.91	2.76	2.44	F07
3"	7.15	6.81	5.33	4.63	12.91	4.02	2.44	F10
4"	7.51	7.48	5.94	5.26	12.91	4.02	2.44	F10

unit:in

2-PC. FLANGED END BALL VALVE

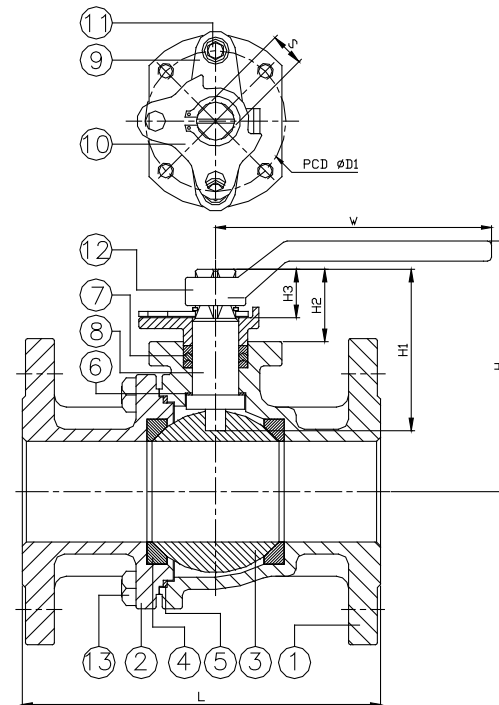
2020

FEATURES

- Full port, 1/2"~12" (DN15~DN300)
- W.P. : CLASS 150/300
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- ISO 5211 Mounting pad
- Flange dimension: ASME B16.5
- Face to face: ASME B16.10



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	ASTM A351-CF8M	
4	SEAT	RTFE	
5	GASKET	PTFE	
6	THRUST WASHER		
7	PACKING		
8	STEM	ASTM A276-316	
9	GLAND	ASTM A351-CF8	
10	STOPPER	ASTM A276-316	
11	GLAND BOLT	AISI 304	
12	HANDLE	ASTM A36(A536)	
13	BOLT	AISI 304	



DN	L		H	H1	H2	H3	W	S	D1	ISO 5211
	CLASS 150	CLASS 300								
15	108	140	73	50	24.3	17.3	130	11	42	F04
20	117	153	76	50	25.5	17.3	130	11	42	F04
25	127	165	86	63.5	30.8	23.1	160	14	50	F05
32	140	-	91	63.5	31	20.5	160	14	50	F05
40	165	190	119	81	41.5	28.4	205	17	70	F07
50	178	216	127	81	41	28.4	205	17	70	F07
65	190	241	136	88	42.5	28.4	325	17	70	F07
80	203	282	164	112	56	39.3	325	22	102	F10
100	229	305	178	112	56	38.1	325	22	102	F10

unit:mm

NPS	L		H	H1	H2	H3	W	S	D1	ISO 5211
	CLASS 150	CLASS 300								
1/2"	4.25	5.51	2.87	1.97	0.96	0.68	5.12	0.43	1.65	F04
3/4"	4.61	6.02	2.99	1.97	1	0.68	5.12	0.43	1.65	F04
1"	5	6.5	3.39	2.5	1.21	0.91	6.3	0.55	1.97	F05
1-1/4"	5.51	-	3.58	2.5	1.22	0.81	6.3	0.55	1.97	F05
1-1/2"	6.5	7.48	4.69	3.19	1.63	1.12	8.07	0.67	2.76	F07
2"	7.01	8.5	5	3.19	1.61	1.12	8.07	0.67	2.76	F07
2-1/2"	7.48	9.49	5.35	3.46	1.67	1.12	12.8	0.67	2.76	F07
3"	7.99	11.1	6.46	4.41	2.2	1.55	12.8	0.87	4.02	F10
4"	9.02	12.01	7.01	4.41	2.2	1.5	12.8	0.87	4.02	F10

unit:in

2-PC. FLANGED END BALL VALVE

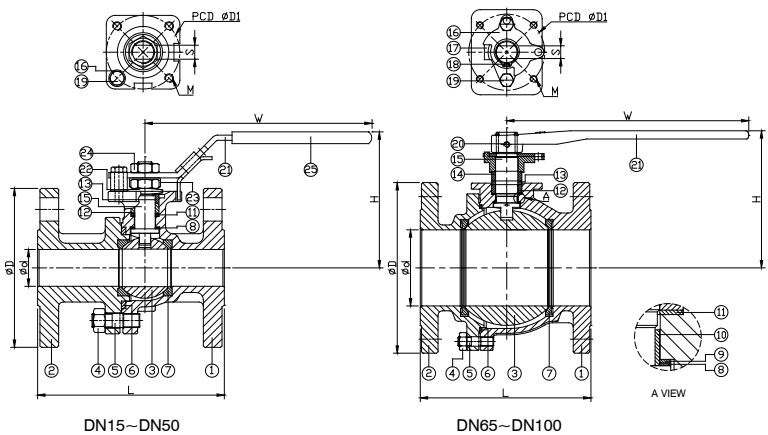
2020N

FEATURES

- Full port, 1/2"~12" (DN15~DN300)
- W.P. : CLASS 150/300
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- **API 607 Fire safe approved**
- Flange dimension: ASME B16.5
- Face to face: ASME B16.10



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M ASTM A216-WCB
2	CAP	
3	BALL	ASTM A351-CF8M
4	NUT	AISI 304
5	BOLT	
6	BODY SEAL	GRAPHITE
7	BALL SEAT	RTFE / TFM 1600
8	THRUST WASHER A	CTFE
9	THRUST WASHER B	
10	THRUST WASHER C	PTFE
11	PAKING A	GRAPHITE
12	PAKING B	
13	GLAND RING A	AISI 304
14	GLAND RING B	
15	STEM	ASTM A276-316
16	STOPPER	AISI 304
17	GLAND	ASTM A351-CF8
18	CIRCLIPS FOR SHAFTS	AISI 304
19	BOLT	
20	SOCKET SET SCREWS	ASTM A351-CF8
21	HANDLE	
22	BELLEVILLE WASHER	AISI 301
23	LOCK WASHER	AISI 304
24	STEM NUT	
25	HADELE SLEEVE	PVC



DN	d	D		L		H		W		S	D1	M	ISO 5211
		CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300				
15	15	88.9	95	108	140	74.5	74.5	165	165	6.3	42	M5x0.8	F04
20	20	98.5	117	117	152	77.5	77.5	165	165	6.3	42	M5x0.8	F04
25	25	107.9	124	127	165	90.6	90.6	199	199	8	50	M6x1	F05
32	32	115.5	133	140.2	178	93.5	93.5	199	199	8	50	M6x1	F05
40	38	127	156	165	190	108	108	248	248	9.5	70	M8x1.25	F07
50	50	152.4	165	178	216	124	124	262	262	9.5	70	M8x1.25	F07
65	65	177.8	190	190	241	155	168	328	400	17	102	M10x1.5	F10
80	76.5	190.5	210	203	282	160	173	328	400	17	102	M10x1.5	F10
100	102	228.6	254	229	305	181.6	195	328	400	17	102	M10x1.5	F10

unit:mm

NPS	d	D		L		H		W		S	D1	M	ISO 5211
		CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300				
1/2"	0.59	3.5	3.74	4.25	5.51	2.93	2.93	6.5	6.5	0.25	1.65	M5x0.8	F04
3/4"	0.79	3.88	4.61	4.61	5.98	3.05	3.05	6.5	6.5	0.25	1.65	M5x0.8	F04
1"	0.98	4.25	4.88	5	6.5	3.57	3.57	7.83	7.83	0.31	1.97	M6x1	F05
1-1/4"	1.26	4.55	5.24	5.52	7.01	3.68	3.68	7.83	7.83	0.31	1.97	M6x1	F05
1-1/2"	1.5	5	6.14	6.5	7.48	4.25	4.25	9.76	9.76	0.37	2.76	M8x1.25	F07
2"	1.97	6	6.5	7.01	8.5	4.88	4.88	10.31	10.31	0.37	2.76	M8x1.25	F07
2-1/2"	2.56	7	7.48	7.48	9.49	6.1	6.61	12.91	15.75	0.67	4.02	M10x1.5	F10
3"	3.01	7.5	8.27	7.99	11.1	6.3	6.81	12.91	15.75	0.67	4.02	M10x1.5	F10
4"	4.02	9	10	9.02	12.01	7.15	7.68	12.91	15.75	0.67	4.02	M10x1.5	F10

unit:in



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2-PC. FLANGED END BALL VALVE

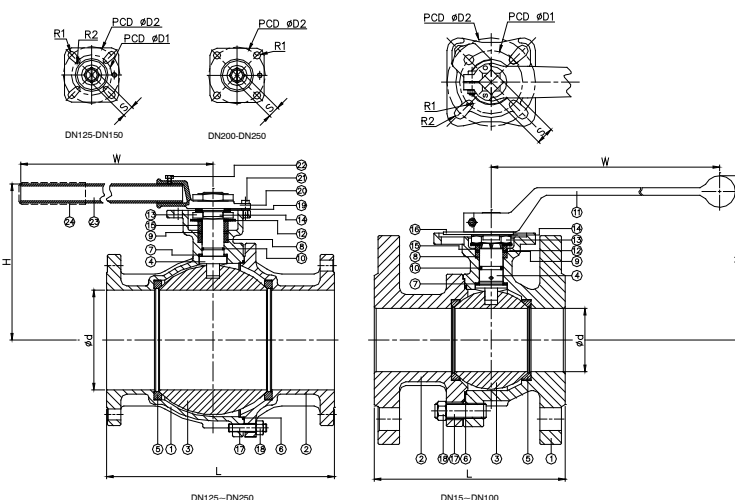
2019D

FEATURES

- Full port, 1/2"-10" (DN15~DN250)
- W.P. : PN16/40
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 direct mounting pad
- API 607 Fire safe approved
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)
- Face to face : DIN 3202-PART1-F4/F5
- DIN 3202-PART1-F1 (option)



ITEM	PARTS	MATERIAL	
1	BODY	1.4408	1.0619
2	CAP		
3	SOLID BALL	ASTM A351-CF8M	
	HOLLOW BALL	ASTM A240-316	
4	STEM	ASTM A276-316	
5	SEAT	RTFE / TFM1600	
6	SEAL	GRAPHITE / 316+GRAPHITE	
7	THRUST WASHER	CTFE	
8	PACKING A	GRAPHITE	
9	PACKING B	CTFE	
10	O-RING	VITON	
11	HANDLE	AISI 304	
12	BELLEVILLE WASHER	AISI 301	
13	STEM NUT	AISI 304	
14	LOCK DEVICE		
15	GLAND RING		
16	LOCK WASHER		
17	BOLT		
18	NUT		
19	FLAT WASHER		
20	HANDLE HEAD		
21	STOP PIN		
22	BOLT		
23	STEEL TUBE	PVC	
24	HANDLE SLEEVE		



DN	d	L	H	W	S	D1	D2	R1	R2	ISO 5211
15	15	115	87	190	9	36	42	2.75	2.75	F03/F04
20	20	120	90.5	190	9	36	42	2.75	2.75	F03/F04
25	24	125	92.4	190	11	42	50	2.75	3.5	F04/F05
32	30	130	106.9	190	11	42	50	2.75	3.5	F04/F05
40	38	140	121.9	235	14	50	70	3.5	4.5	F05/F07
50	50	150	129.9	235	14	50	70	3.5	4.5	F05/F07
65	64	170	155.8	325	17	70	102	4.5	5.5	F07/F10
80	75	180	162.3	325	17	70	102	4.5	5.5	F07/F10
100	98	190	190.9	325	22	102	125	5.5	6.5	F10/F12
125	125	325	232	756	27	102	125	6.5	5.5	F10/F12
150	150	350	253	756	27	102	125	6.5	5.5	F10/F12
200	200	400	320.5	840	36	-	140	8.5	-	F14
250	250	450	355	1040	36	-	140	8.5	-	F14

unit:mm

NPS	d	L	H	W	S	D1	D2	R1	R2	ISO 5211
1/2"	0.59	4.53	3.43	7.48	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	4.72	3.56	7.48	0.35	1.42	1.65	0.11	0.11	F03/F04
1"	0.94	4.92	3.64	7.48	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.18	5.12	4.21	7.48	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	5.51	4.8	9.25	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	5.91	5.11	9.25	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.52	6.69	6.13	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	7.09	6.39	12.8	0.67	2.76	4.02	0.18	0.22	F07/F10
4"	3.86	7.48	7.52	12.8	0.87	4.02	4.92	0.22	0.26	F10/F12
5"	4.92	12.8	9.13	29.76	1.06	4.02	4.92	0.26	0.22	F10/F12
6"	5.91	13.78	9.96	29.76	1.06	4.02	4.92	0.26	0.22	F10/F12
8"	7.87	15.75	12.62	33.07	1.42	-	5.51	0.33	-	F14
10"	9.84	17.72	13.98	40.94	1.42	-	5.51	0.33	-	F14

unit:in



2-PC. FLANGED END BALL VALVE

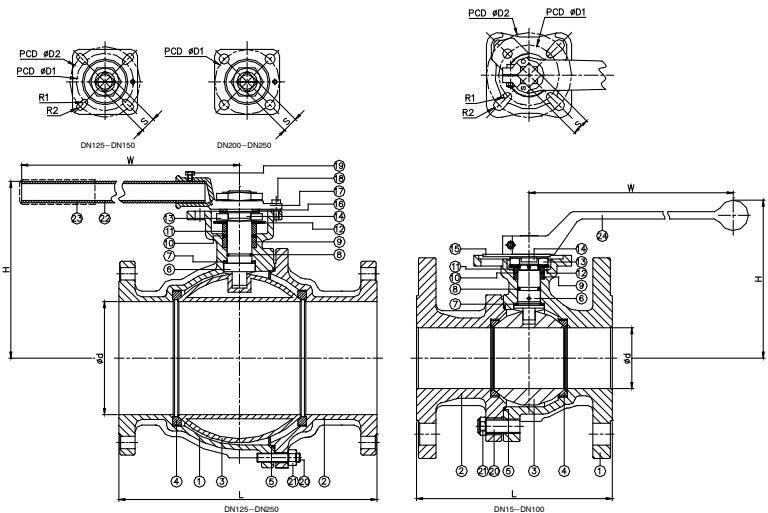
2020D

FEATURES

- Full port, 1/2"-10" (DN15~DN250)
- W.P. : CLASS 150/300
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device
- Locking device
- ISO 5211 direct mounting pad
- API 607 Fire safe approved
- API 608 Design
- ISO 15848 fugitive emission approved (option)
- Automation accessories (option)
- Spring return handle (option)



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A216-WCB	
2	CAP			
3	SOLID BALL	ASTM A351-CF8M		
	HOLLOW BALL	ASTM A240-316		
4	SEAT	RTFE / TFM1600		
5	SEAL	GRAPHITE / 316+GRAPHITE		
6	STEM	ASTM A276-316		
7	THRUST WASHER	CTFE		
8	O-RING	VITON		
9	PACKING A	GRAPHITE		
10	PACKING B	CTFE		
11	GLAND RING	AISI 304		
12	BELLEVILLE WASHER	AISI 301		
13	STEM NUT	AISI 304		
14	LOCK DEVICE			
15	LOCK WASHER			
16	FLAT WASHER			
17	HANDLE HEAD			
18	STOP PIN			
19	BOLT			
20	STUD			
21	NUT			
22	STEEL TUBE			
23	HANDLE SLEEVE	PVC		
24	HANDLE	AISI 304		



DN	d	L		H		W		S	D1	D2	R1	R2	ISO 5211
		CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300						
15	15	108	140	85	84.5	190	197.5	9	36	42	2.75	2.75	F03/F04
20	20	117	152	89.5	94.5	190	197.5	9	36	42	2.75	2.75	F03/F04
25	24	127.5	165	94.2	99.5	190	197.5	11	42	50	2.75	3.5	F04/F05
32	30	140.5	178	97.9	105	190	197.5	11	42	50	2.75	3.5	F04/F05
40	38	165	190	120.9	124.5	235	247.5	14	50	70	3.5	4.5	F05/F07
50	50	178	216	129.9	129	235	247.5	14	50	70	3.5	4.5	F05/F07
65	64	190.5	241	156.3	154.5	325	340	17	70	102	4.5	5.5	F07/F10
80	75	203	282	163.3	165.5	325	340	17	70	102	4.5	5.5	F07/F10
100	98	229	305	195.9	196	325	340	22	102	125	5.5	6.5	F10/F12
125	125	356	-	232	-	757.5	-	27	102	125	5.5	6.5	F10/F12
150	150	394	403	253	253	757.5	743	27	102	125	5.5	6.5	F10/F12
200	200	457	-	320.5	-	863	-	36	140	-	8.5	-	F14
250	250	533	-	355	-	1061	-	36	140	-	8.5	-	F14

unit:mm

NPS	d	L		H		W		S	D1	D2	R1	R2	ISO 5211
		CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300						
1/2"	0.59	4.25	5.51	3.35	3.33	7.48	7.78	0.35	1.42	1.65	0.11	0.11	F03/F04
3/4"	0.79	4.61	5.98	3.52	3.72	7.48	7.78	0.35	1.42	1.65	0.11	0.11	F03/F04
1"	0.94	5.02	6.5	3.71	3.92	7.48	7.78	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/4"	1.18	5.53	7.01	3.85	4.13	7.48	7.78	0.43	1.65	1.97	0.11	0.14	F04/F05
1-1/2"	1.5	6.5	7.48	4.76	4.9	9.25	9.74	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.97	7.01	8.5	5.11	5.08	9.25	9.74	0.55	1.97	2.76	0.14	0.18	F05/F07
2-1/2"	2.52	7.5	9.49	6.15	6.08	12.8	13.39	0.67	2.76	4.02	0.18	0.22	F07/F10
3"	2.99	7.99	11.1	6.43	6.52	12.8	13.39	0.67	2.76	4.02	0.18	0.22	F07/F10
4"	3.86	9.02	12.01	7.71	7.72	12.8	13.39	0.87	4.02	4.92	0.22	0.26	F10/F12
5"	4.92	14.02	-	9.13	-	29.82	-	1.06	4.02	4.92	0.22	0.26	F10/F12
6"	5.91	15.51	15.87	9.96	9.96	29.82	29.25	1.06	4.02	4.92	0.22	0.26	F10/F12
8"	7.87	17.99	-	12.62	-	33.98	-	1.42	5.51	-	0.33	-	F14
10"	9.84	20.98	-	13.98	-	41.77	-	1.42	5.51	-	0.33	-	F14

unit:in

2-PC. FLANGED END BALL VALVE

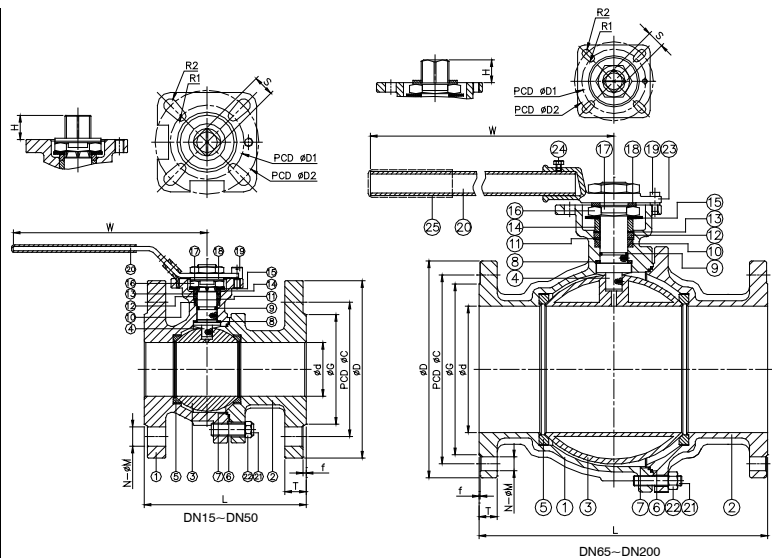
2019D-FCX

FEATURES

- Full port, 1/2"-8" (DN15~DN200)
- W.P. : 1/2"-2" - PN16-40
2-1/2"-4" - PN10-16
5"-8" - PN16
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loaded design
- Anti-static device
- Double sealed body & stem
- Locking device
- ISO 5211 direct mounting pad
- Cavity relief seat
- API 607 Fire safe approved
- ISO 15848 fugitive emission approved
- Automation accessories (option)
- Spring return handle (option)



ITEM	PARTS	MATERIAL	
1	BODY	1.4408	1.0619
2	CAP		
3	BALL	ASTM A351-CF8M	
4	STEM	1.4401	
5	SEAT	TFM 1600	
6	SEAL A	GRAPHITE	
7	SEAL B	PTFE	
8	THRUST WASHER	CTFE	
9	O-RING	VITON	
10	PACKING A	PTFE	
11	GLAND RING A	1.4301	
12	PACKING B	GRAPHITE	
13	PACKING C	PEEK	
14	GLAND RING B	1.4301	
15	BELLEVILLE WASHER	1.4310	
16	STEM NUT		
17	LOCKING WASHER	1.4301	
18	FLAT WASHER		
19	HANDLE HEAD		
20	HANDLE/STEEL TUBE	STAINLESS STEEL	
21	STUD		
22	NUT	1.4301	
23	HANDLE HEAD		
24	BOLT		
25	HANDLE SLEEVE	PVC	



DN	d	G	C	D	L	H	W	T	f	S	D1	D2	R1	R2	N	M	ISO 5211
15	15	45	65	95	115	9	121.3	16	2	9	36	42	2.75	2.75	4	14	F03/F04
20	20	58	75	105	120	9	121.3	18	2	9	36	42	2.75	2.75	4	14	F03/F04
25	24	68	85	115	125	11	150	18	2	11	42	50	2.75	3.5	4	14	F04/F05
32	30	78	100	140	130	11	150	18	2	11	42	50	2.75	3.5	4	18	F04/F05
40	38	88	110	150	140	15	180	18	3	14	50	70	3.5	4.5	4	18	F05/F07
50	50	102	125	165	150	15	180	20	3	14	50	70	3.5	4.5	4	18	F05/F07
65	64	122	145	185	170	18	344	18	3	17	70	102	4.5	5.5	4	18	F07/F10
80	75	138	160	200	180	18	344	20	3	17	70	102	4.5	5.5	8	18	F07/F10
100	100	158	180	220	190	22.5	390	20	3	22	102	125	5.5	6.5	8	18	F10/F12
125	125	188	210	250	325	27.5	743	22	3	27	102	125	5.5	6.5	8	18	F10/F12
150	150	212	240	285	350	27.5	743	22	3	27	102	125	5.5	6.5	8	22	F10/F12
200	200	268	295	340	400	36	860	24	3	36	140	-	8.5	-	12	22	F14

unit:mm

NPS	d	G	C	D	L	H	W	T	f	S	D1	D2	R1	R2	N	M	ISO 5211
1/2"	0.59	1.77	2.56	3.74	4.53	0.35	4.78	0.63	0.08	0.35	1.42	1.65	0.11	0.11	4	0.55	F03/F04
3/4"	0.79	2.28	2.95	4.13	4.72	0.35	4.78	0.71	0.08	0.35	1.42	1.65	0.11	0.11	4	0.55	F03/F04
1"	0.94	2.68	3.35	4.53	4.92	0.43	5.91	0.71	0.08	0.43	1.65	1.97	0.11	0.14	4	0.55	F04/F05
1-1/4"	1.18	3.07	3.94	5.51	5.12	0.43	5.91	0.71	0.08	0.43	1.65	1.97	0.11	0.14	4	0.71	F04/F05
1-1/2"	1.5	3.46	4.33	5.91	5.51	0.59	7.09	0.71	0.12	0.55	1.97	2.76	0.14	0.18	4	0.71	F05/F07
2"	1.97	4.02	4.92	6.5	5.91	0.59	7.09	0.79	0.12	0.55	1.97	2.76	0.14	0.18	4	0.71	F05/F07
2-1/2"	2.52	4.8	5.71	7.28	6.69	0.71	13.54	0.71	0.12	0.67	2.76	4.02	0.18	0.22	4	0.71	F07/F10
3"	2.99	5.43	6.3	7.87	7.09	0.71	13.54	0.79	0.12	0.67	2.76	4.02	0.18	0.22	8	0.71	F07/F10
4"	3.94	6.22	7.09	8.66	7.48	0.89	15.35	0.79	0.12	0.87	4.02	4.92	0.22	0.26	8	0.71	F10/F12
5"	4.92	7.4	8.27	9.84	12.8	1.08	29.25	0.87	0.12	1.06	4.02	4.92	0.22	0.26	8	0.71	F10/F12
6"	5.91	8.35	9.45	11.22	13.78	1.08	29.25	0.87	0.12	1.06	4.02	4.92	0.22	0.26	8	0.87	F10/F12
8"	7.87	10.55	11.61	13.39	15.75	1.42	33.86	0.94	0.12	1.42	5.51	-	0.33	-	12	0.87	F14

unit:in



2-PC. FLANGED END BALL VALVE

2019S

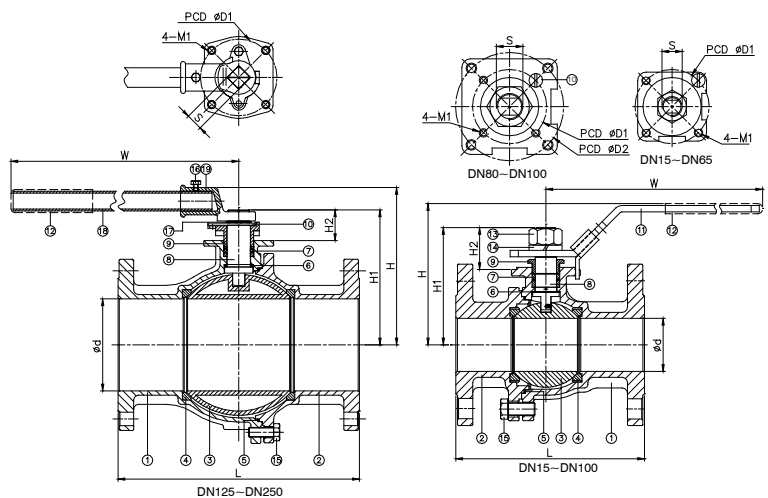
FEATURES

- Full port, 1/2"-10" (DN15~DN250)
- W.P. : PN16/40
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- TA-Luft approved (option)
- ISO 5211 Direct mounting pad - 2019SD (option)

- Flange dimension: DIN 2501
- Face to face: DIN 3202 part1 - F4/F5



ITEM	PARTS	MATERIAL	
1	BODY	1.4408	1.0619
2	CAP		
3	SOLID BALL	ASTM A351-CF8M	
	HOLLOW BALL	ASTM A240-316	
4	SEAT	PTFE / RTFE / TFM1600	
5	SEAL	PTFE	
6	THRUST WASHER		
7	PACKING		
8	STEM	ASTM A276-316	
9	GLAND	AISI 304	
10	STOP PIN		
11	HANDLE	STAINLESS STEEL	
12	HANDLE SLEEVE	PVC	
13	STEM NUT	AISI 304	
14	SPRING WASHER		
15	BOLT		
16	BOLT		
17	CIRCLIPS FOR SHAFT		
18	STEEL TUBE		
19	WRENCH BLOCK		



DN	d	L	H	H1	H2	W	S	D1	D2	M1	M2	ISO 5211
15	15	115	85.7	57.2	23.7	169	8	42	-	M5	-	F04
20	20	120	87.5	59	23.5	169	8	42	-	M5	-	F04
25	25	125	103	73.5	29.5	205.5	10	50	-	M6	-	F05
32	32	130	108	78	29.5	205.5	10	50	-	M6	-	F05
40	38	140	126	100.9	39.4	267	12	70	-	M8	-	F07
50	50	150	133	107.4	39.4	267	12	70	-	M8	-	F07
65	63	170	142	116.1	38.6	298	12	70	-	M8	-	F07
80	76	180	165	139	43	390	15	70	102	M8	M10	F07/F10
100	96	190	183	157	43	390	15	70	102	M8	M10	F07/F10
125	125	325	239.6	199	52	743	27	125	-	M12	-	F12
150	150	350	256.5	220	50	743	27	125	-	M12	-	F12
200	200	400	332.5	300.5	85.5	840	36	140	-	M16	-	F14
250	250	450	378	345.5	85.5	1050	36	140	-	M16	-	F14

unit:mm

NPS	d	L	H	H1	H2	W	S	D1	D2	M1	M2	ISO 5211
1/2"	0.59	4.53	3.37	2.25	0.93	6.65	0.31	1.65	-	M5	-	F04
3/4"	0.79	4.72	3.44	2.32	0.93	6.65	0.31	1.65	-	M5	-	F04
1"	0.98	4.92	4.06	2.89	1.16	8.09	0.39	1.97	-	M6	-	F05
1-1/4"	1.26	5.12	4.25	3.07	1.16	8.09	0.39	1.97	-	M6	-	F05
1-1/2"	1.5	5.51	4.96	3.97	1.55	10.51	0.47	2.76	-	M8	-	F07
2"	1.97	5.91	5.24	4.23	1.55	10.51	0.47	2.76	-	M8	-	F07
2-1/2"	2.48	6.69	5.59	4.57	1.52	11.73	0.47	2.76	-	M8	-	F07
3"	2.99	7.09	6.5	5.47	1.69	15.35	0.59	2.76	4.02	M8	M10	F07/F10
4"	3.78	7.48	7.2	6.18	1.69	15.35	0.59	2.76	4.02	M8	M10	F07/F10
5"	4.92	12.8	9.43	7.83	2.05	29.25	1.06	4.92	-	M12	-	F12
6"	5.91	13.78	10.1	8.66	1.97	29.25	1.06	4.92	-	M12	-	F12
8"	7.87	15.75	13.09	11.83	3.37	33.07	1.42	5.51	-	M16	-	F14
10"	9.84	17.72	14.88	13.6	3.37	41.34	1.42	5.51	-	M16	-	F14

unit:in

2-PC. FLANGED END BALL VALVE

2020S

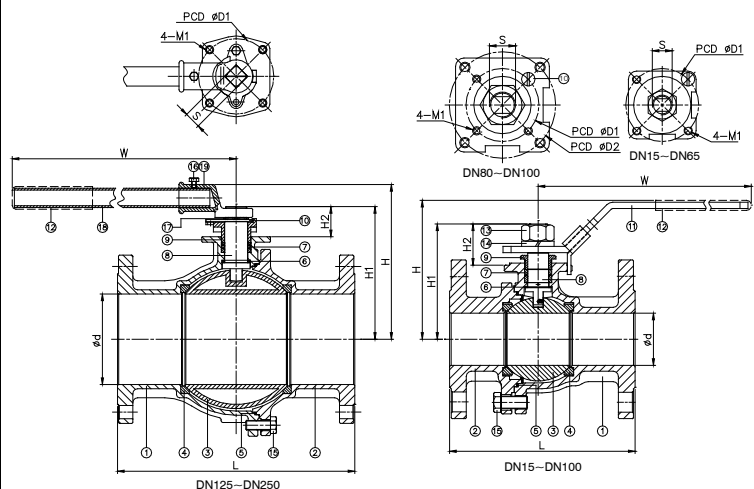
FEATURES

- Full port, 1/2"-10" (DN15~DN250)
- W.P. : CLASS 150/300
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad
- TA-Luft approved (option)

- Flange dimension: ASME B16.5
- Face to face: ASME B16.10



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	SOLID BALL	ASTM A351-CF8M	
	HOLLOW BALL	ASTM A240-316	
4	SEAT	PTFE / RTFE / TFM1600	
5	SEAL	PTFE	
6	THRUST WASHER		
7	PACKING		
8	STEM	ASTM A276-316	
9	GLAND	AISI 304	
10	STOP PIN		
11	HANDLE	STAINLESS STEEL	
12	HANDLE SLEEVE	PVC	
13	STEM NUT	AISI 304	
14	SPRING WASHER		
15	BOLT		
16	BOLT		
17	CIRCLIPS FOR SHAFT		
18	STEEL TUBE		
19	WRENCH BLOCK		



DN	d	L		H	H1	H2	W	S	D1	D2	M1	M2	ISO 5211
		CLASS 150	CLASS 300										
15	15	108	140	85.7	57.2	23.7	169	8	42	-	M5	-	F04
20	20	117	152	88.5	60	23.5	169	8	42	-	M5	-	F04
25	25	127	165	103.3	73.8	29	205.5	10	50	-	M6	-	F05
32	32	140	178	108	78.5	29	205.5	10	50	-	M6	-	F05
40	38	165	190	128.4	102.9	39.4	267	12	70	-	M8	-	F07
50	50	178	216	135.9	110.4	39.4	267	12	70	-	M8	-	F07
65	65	190	241	147.6	122.1	38.6	298	12	70	-	M8	-	F07
80	80	203	282	167.5	142	43	390	15	70	102	M8	M10	F07/F10
100	100	228.5	305	182.5	157	43	390	15	70	102	M8	M10	F07/F10
125	125	356	-	239.6	199	52	743	27	125	-	M12	-	F12
150	150	394	403	256.5	220	50	743	27	125	-	M12	-	F12
200	200	457	502	332.5	300.5	85.5	840	36	140	-	M16	-	F14
250	250	533	-	378	334.5	85.5	1050	36	140	-	M16	-	F14

unit:mm

NPS	d	L		H	H1	H2	W	S	D1	D2	M1	M2	ISO 5211
		CLASS 150	CLASS 300										
1/2"	0.59	4.25	5.51	3.37	2.25	0.93	6.65	0.31	1.65	-	M5	-	F04
3/4"	0.79	4.61	5.98	3.48	2.36	0.93	6.65	0.31	1.65	-	M5	-	F04
1"	0.98	5	6.5	4.07	2.91	1.14	8.09	0.39	1.97	-	M6	-	F05
1-1/4"	1.26	5.51	7.01	4.25	3.09	1.14	8.09	0.39	1.97	-	M6	-	F05
1-1/2"	1.5	6.5	7.48	5.06	4.05	1.55	10.51	0.47	2.76	-	M8	-	F07
2"	1.97	7.01	8.5	5.35	4.35	1.55	10.51	0.47	2.76	-	M8	-	F07
2-1/2"	2.56	7.48	9.49	5.81	4.81	1.52	11.73	0.47	2.76	-	M8	-	F07
3"	3.15	7.99	11.1	6.59	5.59	1.69	15.35	0.59	2.76	4.02	M8	M10	F07/F10
4"	3.94	9	12.01	7.19	6.18	1.69	15.35	0.59	2.76	4.02	M8	M10	F07/F10
5"	4.92	14.02	-	9.43	7.83	2.05	29.25	1.06	4.92	-	M12	-	F12
6"	5.91	15.51	15.87	10.1	8.66	1.97	29.25	1.06	4.92	-	M12	-	F12
8"	7.87	17.99	19.76	13.09	11.83	3.37	33.07	1.42	5.51	-	M16	-	F14
10"	9.84	20.98	-	14.88	13.17	3.37	41.34	1.42	5.51	-	M16	-	F14

unit:in

2-PC. FLANGED END BALL VALVE

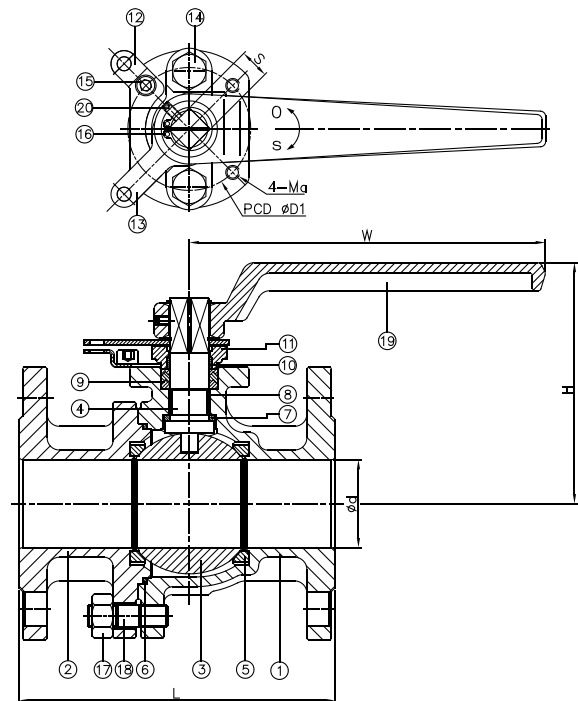
2020K

FEATURES

- Full port, 1/2"-8" (DN15~DN200)
- W.P. : JIS 10K/20K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device
- Locking device
- ISO 5211 Mounting pad
- Flange dimension: JIS B2220
- Face to face: JIS B2002



ITEM	PARTS	MATERIAL	
1	BODY	SCS14	SCS13
2	CAP		
3	BALL	SUS 316	
4	STEM		
5	BALL SEAT	RTFE	
6	BODY SEAL	PTFE	
7	THRUST WASHER A		
8	THRUST WASHER B		
9	PACKING A		
10	PACKING B		
11	GLAND		
12	BRACKET	SUS 304	
13	STOPPER		
14	BOLT		
15	BOLT		
16	CIRCLIPS FOR SHAFTS		
17	NUT		
18	STUD	SCW 410	
19	HANDLE		
20	SOCKET SET SCREWS	SUS 304	



DN	d	L		H	W	S	D1	Ma	ISO 5211
		JIS 10K	JIS 20K						
15	15	110	140	77	130	11	42	1/4"-20UNC	F04
20	20	120	152	80	130	11	42	1/4"-20UNC	F04
25	25	130	165	90	163	14	50	1/4"-20UNC	F05
32	32	140	178	98.5	163	14	50	1/4"-20UNC	F05
40	40	165	190	129	203	17	70	5/16"-18UNC	F07
50	50	180	216	136	203	17	70	5/16"-18UNC	F07
65	65	190	241	159	203	17	70	5/16"-18UNC	F07
80	80	200	283	173.5	327	22	102	3/8"-16UNC	F10
100	100	230	305	196	327	22	102	3/8"-16UNC	F10

unit:mm

NPS	d	L		H	W	S	D1	Ma	ISO 5211
		JIS 10K	JIS 20K						
1/2"	0.59	4.33	5.51	3.03	5.12	0.43	1.65	1/4"-20UNC	F04
3/4"	0.79	4.72	5.98	3.15	5.12	0.43	1.65	1/4"-20UNC	F04
1"	0.98	5.12	6.5	3.54	6.42	0.55	1.97	1/4"-20UNC	F05
1-1/4"	1.26	5.51	7.01	3.88	6.42	0.55	1.97	1/4"-20UNC	F05
1-1/2"	1.57	6.5	7.48	5.08	7.99	0.67	2.76	5/16"-18UNC	F07
2"	1.97	7.09	8.5	5.35	7.99	0.67	2.76	5/16"-18UNC	F07
2-1/2"	2.56	7.48	9.49	6.26	7.99	0.67	2.76	5/16"-18UNC	F07
3"	3.15	7.87	11.14	6.83	12.87	0.87	4.02	3/8"-16UNC	F10
4"	3.94	9.06	12.01	7.72	12.87	0.87	4.02	3/8"-16UNC	F10

unit:in

3-PC. FLANGED END BALL VALVE

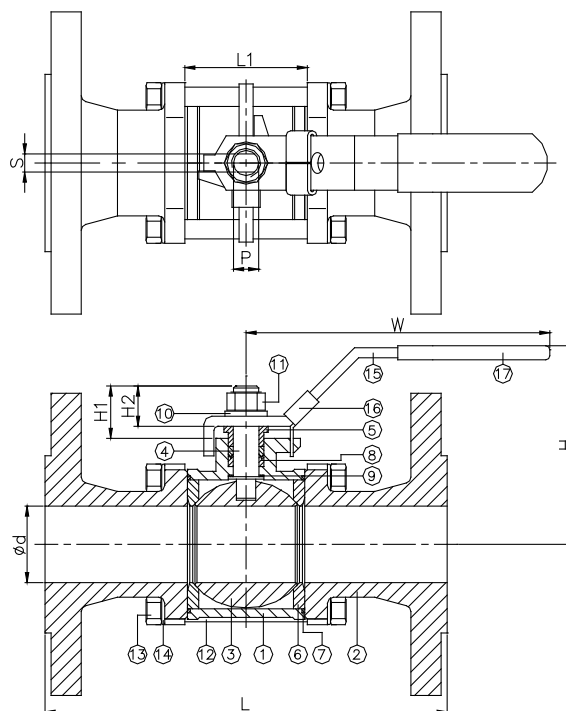
2010

FEATURES

- Full port, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Flange End W.P. : PN40
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Mounting pad - 2010M (option)
- ISO 5211 Direct mounting pad - 2010D (option)
- Flange dimension: DIN 2501 - PN40
- Face to face: DIN 3202 - F1



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP	1.4408	1.0619
3	BALL	ASTM A351-CF8M	
4	STEM	ASTM A276-316	
5	GLAND NUT	AISI 304	
6	SEAT	PTFE / RTFE	
7	SEAL	PTFE	
8	PACKING		
9	THRUST WASHER		
10	SPRING WASHER		
11	STEM NUT	AISI 304	
12	BOLT		
13	BOLT NUT		
14	SPRING WASHER		
15	HANDLE	STAINLESS STEEL	
16	LATCH LOCK		
17	HANDLE SLEEVE	PVC	



DN	d	L	L1	H	H1	H2	W	S	P
15	15	130	24	83	16.2	10.5	152	5	5/16"W
20	20	150	28	92	20.7	13.5	152	6.5	3/8"W
25	25	160	35	86	24.7	15.5	182	8	7/16"W
32	32	180	45	91	21.7	15.5	182	8	7/16"W
40	38	200	55	112	26.7	17.5	214	9	1/2"W
50	50	230	66	115	26.7	17.5	214	9	1/2"W
65	65	290	86	172	42.2	33	314	12	3/4"W
80	80	310	100	188	40.2	33	314	12	3/4"W
100	100	350	125	207	56	42	339	12	1"W

unit:mm

NPS	d	L	L1	H	H1	H2	W	S	P
1/2"	0.59	5.12	0.94	3.27	0.64	0.41	5.98	0.2	5/16"W
3/4"	0.79	5.91	1.1	3.62	0.81	0.53	5.98	0.26	3/8"W
1"	0.98	6.3	1.38	3.39	0.97	0.61	7.17	0.31	7/16"W
1-1/4"	1.26	7.09	1.77	3.58	0.85	0.61	7.17	0.31	7/16"W
1-1/2"	1.5	7.87	2.17	4.41	1.05	0.69	8.43	0.35	1/2"W
2"	1.97	9.06	2.6	4.53	1.05	0.69	8.43	0.35	1/2"W
2-1/2"	2.56	11.42	3.39	6.77	1.66	1.3	12.36	0.47	3/4"W
3"	3.15	12.2	3.94	7.4	1.58	1.3	12.36	0.47	3/4"W
4"	3.94	13.78	4.92	8.15	2.2	1.65	13.35	0.47	1"W

unit:in



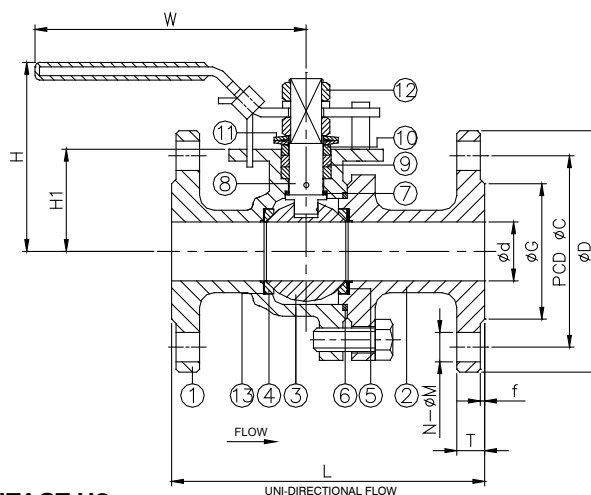
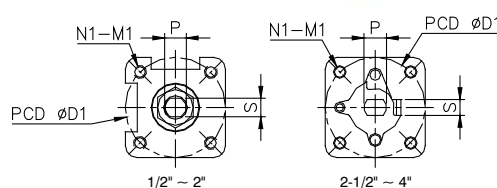
2-PC. FLANGED END BALL VALVE

2019N-MS
2020N-MS

FEATURES

- 1/2"~16" (DN15~DN400)
- W.P. : PN10/16/25/40
CLASS 150/300/600
JIS 10K/20K
- W.T. : -20°C~500°C (-4°F~1022°F)
- Investment casting
- Blow-out proof stem
- Anti-static device
- ISO 5211 mounting pad
- **Metal seat**
- Flange dimension:
ASME B16.5 CLASS 150/300/600 EN 1092-1
- Face to face:
ASME B16.10 CLASS 150/300/600 EN 558-1

★ METAL SEAT



CLASS 150 ONLY, OTHER PRESSURE RATING PLEASE CONTACT US.

DN	d	G	C	D	L	H	H1	W	T	f	S	P	D1	N	M	N1	M1	ISO 5211
15	15	44	60.3	90	108	66	14	165	16	1.6	6.35	9.3	42	4	16	4	#10-24UNC	F04
20	20	52	69.9	100	117	73.9	14	165	18	1.6	6.35	9.3	42	4	16	4	#10-24UNC	F04
25	25	57	79.4	110	127	87.1	19.1	200	18	1.6	8	10.9	50	4	16	4	1/4"-20UNC	F05
40	38.1	73	98.4	125	165	104.9	23.1	245	18	1.6	9.5	15.7	70	4	16	4	5/16"-18UNC	F07
50	50	92	120.7	150	178	115	23.1	265	20	1.6	9.5	15.7	70	4	19.1	4	5/16"-18UNC	F07
65	65	105	139.7	180	190	157.9	78	391	22.3	1.6	17	28	70	4	19.1	4	1/2"-13UNC	F07
80	75.9	127	152.4	190	203	166.1	78	391	22.3	1.6	17	28	102	4	19.1	4	1/2"-13UNC	F10
100	101.6	157	190.5	230	229	183.1	78	391	22.3	1.6	17	28	102	8	19.1	4	1/2"-13UNC	F10

unit:mm

NPS	d	G	C	D	L	H	H1	W	T	f	S	P	D1	N	M	N1	M1	ISO 5211
1/2"	0.59	1.73	2.37	3.54	4.25	2.6	0.55	6.5	0.63	0.06	0.25	0.37	1.65	4	0.63	4	#10-24UNC	F04
3/4"	0.79	2.05	2.75	3.94	4.61	2.91	0.55	6.5	0.71	0.06	0.25	0.37	1.65	4	0.63	4	#10-24UNC	F04
1"	0.98	2.24	3.13	4.33	5	3.43	0.75	7.87	0.71	0.06	0.31	0.43	1.97	4	0.63	4	1/4"-20UNC	F05
1-1/2"	1.5	2.87	3.87	4.92	6.5	4.13	0.91	9.65	0.71	0.06	0.37	0.62	2.76	4	0.63	4	5/16"-18UNC	F07
2"	1.97	3.62	4.75	5.91	7.01	4.53	0.91	10.43	0.79	0.06	0.37	0.62	2.76	4	0.75	4	5/16"-18UNC	F07
2-1/2"	2.56	4.13	5.5	7.09	7.48	6.22	3.07	15.39	0.88	0.06	0.67	1.1	2.76	4	0.75	4	1/2"-13UNC	F07
3"	2.99	5	6	7.48	7.99	6.54	3.07	15.39	0.88	0.06	0.67	1.1	4.02	4	0.75	4	1/2"-13UNC	F10
4"	4	6.18	7.5	9.06	9.02	7.21	3.07	15.39	0.88	0.06	0.67	1.1	4.02	8	0.75	4	1/2"-13UNC	F10

unit:in

FLANGED END TRUNNION BALL VALVE

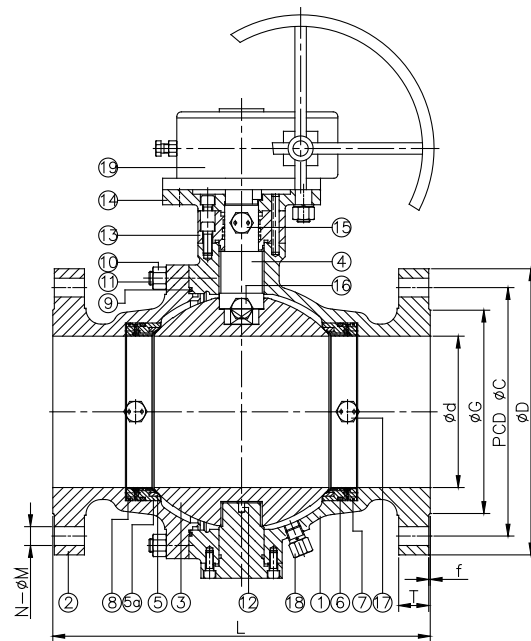
2063

FEATURES

- Full port, 2"-24" (DN50~DN600)
- W.P. : PN10/16/25/40
CLASS 150/300/600
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device
- ISO 5211 Direct mounting pad
- **Metal seat - 2063-MS (option)**
- Flange dimension:
ASME B16.5 CLASS 150/300/600 EN 1092-1
- Face to face:
ASME B16.10 CLASS 150/300/600 API 6D



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	CAP		
3	BALL	ASTM A182-F316	ASTM A105+ENP
4	STEM		ASTM A182-F6a
5	SEAT	RTFE	
5a	SEAT RETAINER	ASTM A182-F316	ASTM A105+ENP
6	O-RING	FPM	
7	FIRE SAFE RING	GRAPHITE	
8	SPRING	INCONEL X750	
9	GASKET	GRAPHITE	
10	NUT	ASTM A194-8M	ASTM A194-2H
11	STUD	ASTM A193-B8M	ASTM A193-B7
12	ANIT-STATIC SPRING	INCONEL X750	
13	GLAND	ASTM A182-F316	ASTM A105+ENP
14	TOP FLANGE		ASTM A182-F316
15	GREASE INJECTION	SS 316	AISI-1025+Zn
16	VENT VALVE		
17	GREASE INJECTION		
18	DRAIN VALVE		
19	GEAR BOX		



CLASS 150/300 ONLY, OTHER PRESSURE RATING PLEASE CONTACT US.

DN	d	G		C		D		L		T		f	N		M	
		CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300		CLASS 150	CLASS 300	CLASS 150	CLASS 300
100	100	157.2	157.2	190.5	200	230	255	229	305	22.3	30.2	2	8	8	19	22
150	150	215.9	215.9	241.3	269.9	280	320	394	403	23.9	35	2	8	12	22	22
200	201	269.9	269.9	298.5	330.2	345	380	457	502	27	39.7	2	8	12	22	25.5
250	252	323.8	323.8	362	387.4	405	445	533	568	28.6	46.1	2	12	16	25.5	29
300	303	381	381	431.8	450.8	485	520	610	648	30.2	49.3	2	12	16	25.5	32
350	334	412.8	412.8	476.3	514.4	535	585	686	762	33.4	52.4	2	12	20	29	32
400	385	469.9	469.9	539.8	571.5	595	650	762	838	35	55.6	2	16	20	29	35
450	436	533.4	533.4	577.9	628.6	635	710	864	914	38.1	58.8	2	16	24	32	35
500	487	584.2	584.2	635	685.8	700	775	914	991	41.3	62	2	20	24	32	35
600	589	692.2	692.2	749.3	812.8	815	915	1067	1143	46.1	68.3	2	20	24	35	41

unit:mm

NPS	d	G		C		D		L		T		f	N		M	
		CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300		CLASS 150	CLASS 300	CLASS 150	CLASS 300
4"	3.94	6.19	6.19	7.5	7.87	9.06	10.04	9.02	12.01	0.88	1.19	0.08	8	8	0.75	0.87
6"	5.91	8.5	8.5	9.5	10.63	11.02	12.6	15.51	15.87	0.94	1.38	0.08	8	12	0.87	0.87
8"	7.91	10.63	10.63	11.75	13	13.58	14.96	17.99	19.76	1.06	1.56	0.08	8	12	0.87	1
10"	9.92	12.75	12.75	14.25	15.25	15.94	17.52	20.98	22.36	1.13	1.81	0.08	12	16	1	1.14
12"	11.93	15	15	17	17.75	19.09	20.47	24.02	25.51	1.19	1.94	0.08	12	16	1	1.26
14"	13.15	16.25	16.25	18.75	20.25	21.06	23.03	27.01	30	1.31	2.06	0.08	12	20	1.14	1.26
16"	15.16	18.5	18.5	21.25	22.5	23.43	25.59	30	32.99	1.38	2.19	0.08	16	20	1.14	1.38
18"	17.17	21	21	22.75	24.75	25	27.95	34.02	35.98	1.5	2.31	0.08	16	24	1.26	1.38
20"	19.17	23	23	25	27	27.56	30.51	35.98	39.02	1.63	2.44	0.08	20	24	1.26	1.38
24"	23.19	27.25	27.25	29.5	32	32.09	36.02	42.01	45	1.81	2.69	0.08	20	24	1.38	1.61

unit:in



8F., No.201, Sec. 2, Tiding Blvd., Neihs District, Taipei City 114, Taiwan R.O.C.
TEL : +886-2-2658-5800 FAX : +886-2-2658-2266 / 2799-7766

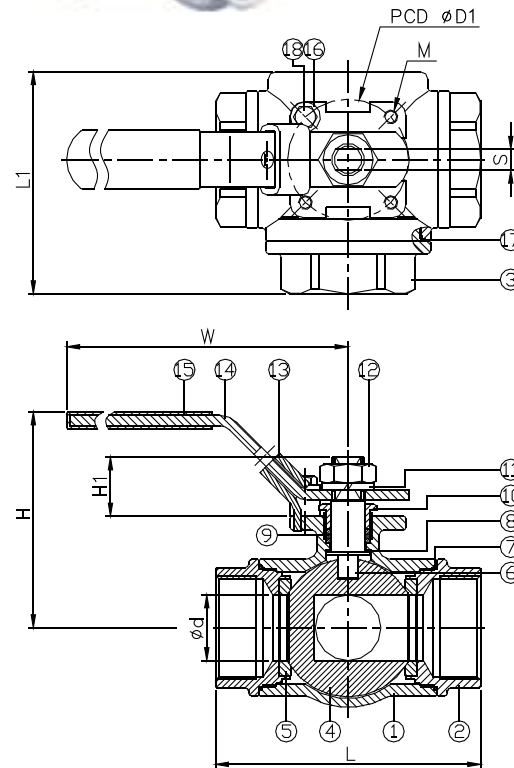
[Http://www.haitima.com.tw](http://www.haitima.com.tw)
E-mail : haitima@haitima.com.tw

3-WAY SCREWED END BALL VALVE

2057N

FEATURES

- L port / T port, 1/4"~2" (DN8~DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- Anti-static device (option)
- ISO 5211 Mounting pad
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP-A	
3	CAP-B	
4	BALL	ASTM A351-CF8M
5	SEAT	PTFE / RTFE
6	STEM	SUS 316
7	GASKET-A	PTFE / RTFE
8	THRUST WASHER	
9	PACKING	
10	GLAND	SUS 304
11	SPRING WASHER	
12	STEM NUT	
13	LOCKING DEVICE	
14	HANDLE	PLASTIC
15	PLASTIC COVER	
16	STOP PIN	SUS 304
17	GASKET-B	PTFE / RTFE
18	BOLT	SUS 304

DN	d	L	L1	H	H1	W	S	D1	M	ISO 5211
8	11.6	76	60	67	18	153	8	42	M5	F04
10	12.5	76	60	67	18	153	8	42	M5	F04
15	12.5	76	60	67	18	153	8	42	M5	F04
20	16	86	72	77	20	153	8	42	M5	F04
25	20	99	80.2	83	23	183	9.5	50	M6	F05
32	25	117	94.5	88	23	183	9.5	50	M6	F05
40	32	124	104	116	34	246	12	70	M8	F07
50	38	148	125	124	34	246	12	70	M8	F07

unit:mm

NPS	d	L	L1	H	H1	W	S	D1	M	ISO 5211
1/4"	0.46	2.99	2.36	2.64	0.71	6.02	0.31	1.65	M5	F04
3/8"	0.49	2.99	2.36	2.64	0.71	6.02	0.31	1.65	M5	F04
1/2"	0.49	2.99	2.36	2.64	0.71	6.02	0.31	1.65	M5	F04
3/4"	0.63	3.39	2.83	3.03	0.79	6.02	0.31	1.65	M5	F04
1"	0.79	3.9	3.16	3.27	0.91	7.2	0.37	1.97	M6	F05
1-1/4"	0.98	4.61	3.72	3.46	0.91	7.2	0.37	1.97	M6	F05
1-1/2"	1.26	4.88	4.09	4.57	1.34	9.69	0.47	2.76	M8	F07
2"	1.5	5.83	4.92	4.88	1.34	9.69	0.47	2.76	M8	F07

unit:in

3-WAY SCREWED END BALL VALVE

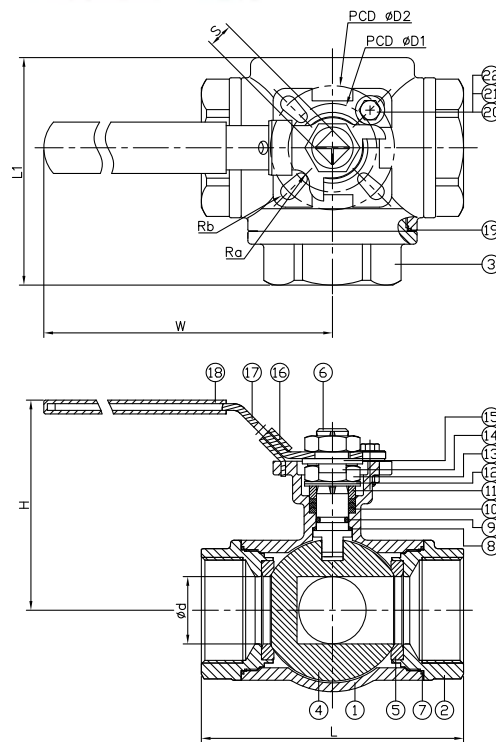
2057D

FEATURES

- L port / T port, 1/4"~2" (DN8~DN50)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- Anti-static device (option)
- ISO 5211 Direct mounting pad
- Automation accessories (option)
- ISO 15848 fugitive emission approved - 2057ND (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP-A	
3	CAP-B	
4	BALL	ASTM A351-CF8M
5	SEAT	PTFE / RTFE
6	STEM	SUS 316
7	GASKET	PTFE / RTFE
8	THRUST WASHER	TFM 4215
9	O-RING	VITON
10	PACKING	PTFE / RTFE
11	GLAND	SUS 304
12	SPRING WASHER	SUS 301
13	STEM NUT	SUS 304
14	STOP WASHER	
15	HANDLE WASHER	
16	LOCKING DEVICE	
17	HANDLE	
18	PLASTIC COVER	PLASTIC
19	GASKET	PTFE / RTFE
20	STOP PIN	SUS 304
21	BOLT	
22	NUT	



DN	d	L	L1	H	H1	W	S	D1	D2	Ra	Rb	ISO 5211
8	11.6	76	60	73	9	123	9	36	42	3	3	F03/F04
10	12.5	76	60	73	9	123	9	36	42	3	3	F03/F04
15	12.5	76	60	73	9	123	9	36	42	3	3	F03/F04
20	16	86	72	76	9	123	9	36	42	3	3	F03/F04
25	20	99	80.2	87	11	153	11	42	50	3	3.5	F04/F05
32	25	117	94.5	93	11	153	11	42	50	3	3.5	F04/F05
40	32	124	104	110	14	183	14	50	70	3.5	4.5	F05/F07
50	38	146	125	119	14	183	14	50	70	3.5	4.5	F05/F07

unit:mm

NPS	d	L	L1	H	H1	W	S	D1	D2	Ra	Rb	ISO 5211
1/4"	0.46	2.99	2.36	2.87	0.35	4.84	0.35	1.42	1.65	0.12	0.12	F03/F04
3/8"	0.49	2.99	2.36	2.87	0.35	4.84	0.35	1.42	1.65	0.12	0.12	F03/F04
1/2"	0.49	2.99	2.36	2.87	0.35	4.84	0.35	1.42	1.65	0.12	0.12	F03/F04
3/4"	0.63	3.39	2.83	2.99	0.35	4.84	0.35	1.42	1.65	0.12	0.12	F03/F04
1"	0.79	3.9	3.16	3.43	0.43	6.02	0.43	1.65	1.97	0.12	0.14	F04/F05
1-1/4"	0.98	4.61	3.72	3.66	0.43	6.02	0.43	1.65	1.97	0.12	0.14	F04/F05
1-1/2"	1.26	4.88	4.09	4.33	0.55	7.2	0.55	1.97	2.76	0.14	0.18	F05/F07
2"	1.5	5.83	4.92	4.69	0.55	7.2	0.55	1.97	2.76	0.14	0.18	F05/F07

unit:in

3-WAY SCREWED END SAMPLING VALVE

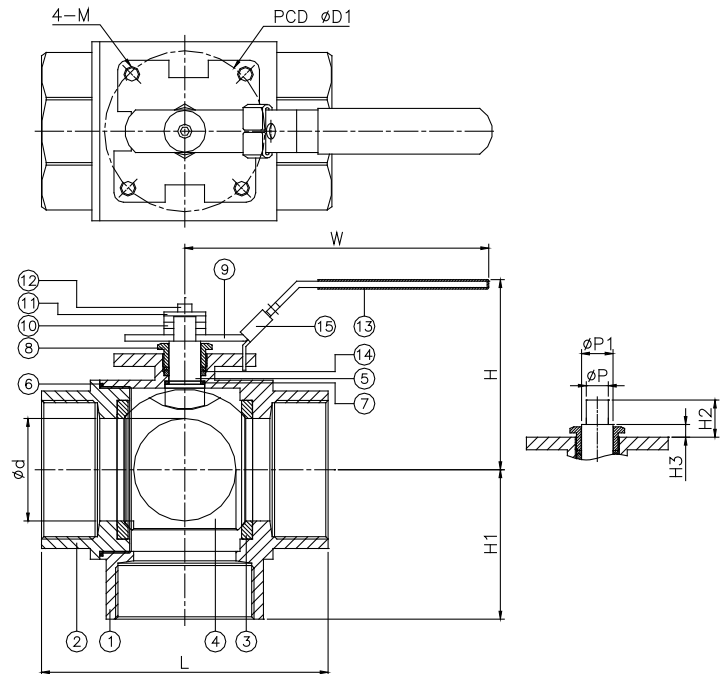
2058S

FEATURES

- Reduced port, 1/4"~3" (DN8~DN80)
- W.P. : 1000 WOG (PN63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Locking device
- Anti-static device (option)
- Tapped & drilled mounting pad (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	CAP	
3	SEAT	PTFE
4	BALL	ASTM A351-CF8M
5	STEM	SS 316
6	END SEAL	PTFE
7	THRUST WASHER	
8	GLAND	SS 304
9	HANDLE	
10	HANDLE WASHER	
11	WASHER	
12	HANDLE NUT	VINYL GRIP
13	HANDLE SLEEVE	
14	STEM PACKING	PTFE
15	LOCKING PLATE	SS 304
16	STOP PIN	



DN	d	L	H	H1	H2	H3	W	P	P1	D1	M	ISO 5211
8	11	57.2	60.75	29	10.9	5.9	133.4	9	12	36	M5x0.8	F03
10	11	57.2	60.75	29	10.9	5.9	133.4	9	12	36	M5x0.8	F03
15	12.5	66	60.75	34.5	10.9	5.9	133.4	9	12	36	M5x0.8	F03
20	16	77	69.65	39.7	11.4	6.4	133.4	9	12	36	M5x0.8	F03
25	20	88.5	73.15	46	11.4	6.4	133.4	9	12	42	M5x0.8	F04
32	25.4	103.4	88.2	51.7	23.7	8.2	178.5	11	15	50	M6x1.0	F05
40	31.8	111.1	93.2	61	23.7	8.2	178.5	11	15	50	M6x1.0	F05
50	38.1	136.4	97.7	71.4	23.7	8.2	178.5	11	15	50	M6x1.0	F05
80	65	182	121.3	94.75	25.3	9.8	229.9	14	20	70	M8x1.25	F07

unit:mm

NPS	d	L	H	H1	H2	H3	W	P	P1	D1	M	ISO 5211
1/4"	0.43	2.25	2.39	1.14	0.43	0.23	5.25	0.35	0.47	1.42	M5x0.8	F03
3/8"	0.43	2.25	2.39	1.14	0.43	0.23	5.25	0.35	0.47	1.42	M5x0.8	F03
1/2"	0.49	2.6	2.39	1.36	0.43	0.23	5.25	0.35	0.47	1.42	M5x0.8	F03
3/4"	0.63	3.03	2.74	1.56	0.45	0.25	5.25	0.35	0.47	1.42	M5x0.8	F03
1"	0.79	3.48	2.88	1.81	0.45	0.25	5.25	0.35	0.47	1.65	M5x0.8	F04
1-1/4"	1	4.07	3.47	2.04	0.93	0.32	7.03	0.43	0.59	1.97	M6x1.0	F05
1-1/2"	1.25	4.37	3.67	2.4	0.93	0.32	7.03	0.43	0.59	1.97	M6x1.0	F05
2"	1.5	5.37	3.85	2.81	0.93	0.32	7.03	0.43	0.59	1.97	M6x1.0	F05
3"	2.56	7.17	4.78	3.73	1	0.39	9.05	0.55	0.79	2.76	M8x1.25	F07

unit:in

3/4-WAY FLANGED END BALL VALVE

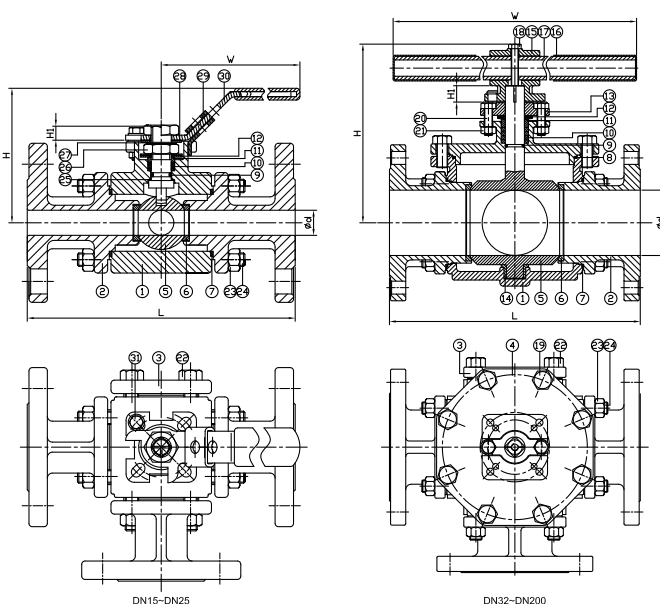
2059D

FEATURES

- L port / T port, 1/2"~8" (DN15~DN200)
- W.P. : PN16/40
CLASS 150/300
JIS 10K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- ISO 5211 direct mounting pad



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A216-WCB 1.0619
2	CAP			
3	CAP-A			
4	CAP-B			
5	BALL	ASTM A351-CF8M	ASTM A351-CF8	
6	SEAT	PTFE / RTFE / TFM 1600		
7	GASKET			
8	GASKET			
9	O-RING	VITON		
10	PACKING	PTFE / RTFE / TFM 1600		
11	GLAND RING	SUS 304		
12	SPRING WASHER	SUS 301		
13	GLAND FLANGE	ASTM A351-CF8 1.4308		
14	SLEEVE	PTFE / RTFE / TFM 1600		
15	HANDLE HEAD	ASTM A351-CF8 1.4308		
16	HANDLE SLEEVE	PLASTIC		
17	HANDLE POLE	GALVANIZED PIPE		
18	HANDLE BOLT	SUS 304		
19	CAP-A BOLT	SUS 304	CARBON STEEL	
20	STUD			
21	NUT			
22	CAP-B BOLT			
23	NUT			
24	STUD			
25	THRUST WASHER	TFM 4215		
26	STEM NUT	SUS 304		
27	STOP WASHER			
28	HANDLE WASHER			
29	LOCK DEVICE			
30	HANDLE			
31	STOP PIN			



DN	d	L				H	H1	W	ISO 5211
		CLASS 150	CLASS 300	PN16/40	JIS 10K				
15	15	148	160	160	160	80	9	123	F03/F04
20	20	153	165	165	165	84	9	123	F03/F04
25	25	168	180	180	180	96	11	153	F04/F05
32	32	221	221	234	221	197	19	403	F07/F10
40	40	221	234	234	221	197	19	403	F07/F10
50	50	254	254	273	254	204	19	403	F07/F10
65	65	300	300	300	300	241	24	504	F10
80	76	305	305	305	305	245	24	504	F10
100	96	369	369	369	369	272	24	654	F10
150	148	480	498	480	480	361	38	800	F14
200	200	630	-	630	630	387	40	1000	F14

unit:mm

NPS	d	L				H	H1	W	ISO 5211
		CLASS 150	CLASS 300	PN16/40	JIS 10K				
1/2"	0.59	5.83	6.3	6.3	6.3	3.15	0.35	4.84	F03/F04
3/4"	0.79	6.02	6.5	6.5	6.5	3.31	0.35	4.84	F03/F04
1"	0.98	6.61	7.09	7.09	7.09	3.78	0.43	6.02	F04/F05
1-1/4"	1.26	8.7	8.7	9.21	8.7	7.76	0.75	15.87	F07/F10
1-1/2"	1.57	8.7	9.21	9.21	8.7	7.76	0.75	15.87	F07/F10
2"	1.97	10	10	10.75	10	8.03	0.75	15.87	F07/F10
2-1/2"	2.56	11.81	11.81	11.81	11.81	9.49	0.94	19.84	F10
3"	2.99	12.01	12.01	12.01	12.01	9.65	0.94	19.84	F10
4"	3.78	14.53	14.53	14.53	14.53	10.71	0.94	25.75	F10
6"	5.83	18.9	19.61	18.9	18.9	14.21	1.5	31.5	F14
8"	7.87	24.8	-	24.8	24.8	15.24	1.57	39.37	F14

unit:in



SCREWED END GLOBE VALVE

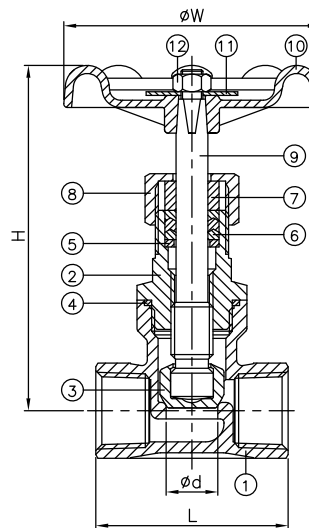
2028

FEATURES

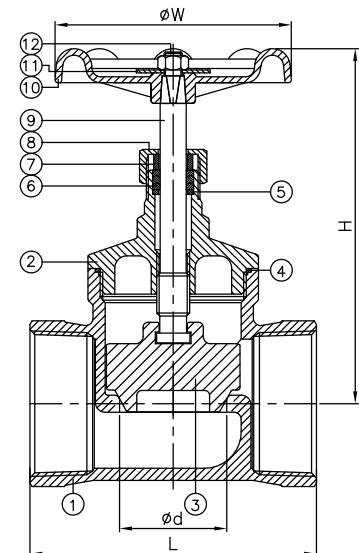
- 1/4"~2-1/2" (DN8~DN65)
- W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Rising stem
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF8
2	BONNET		
3	DISC		
4	GASKET	PTFE	
5	WASHER	SUS 304	
6	PACKING	PTFE	
7	GLAND	SUS 304	
8	CAP NUT	ASTM A351-CF8M	ASTM A351-CF8
9	STEM	SUS 316	SUS 304
10	HANDLE	ALUMINUM	
11	NAMEPLATE		
12	NUT	SUS 304	



1/4"~1-1/4"



1-1/2"~2-1/2"

DN	d	L	H		W
			Open	Close	
8	13.5	52	103	91	70
10	13.5	52	103	91	70
15	13.5	52	103	91	70
20	18	66	111	100	80
25	23	76	121	104	80
32	30	86	156	135	90
40	31	94	147	133	90
50	43	118	175	154	100
65	59	150	199	171	140

unit:mm

NPS	d	L	H		W
			Open	Close	
1/4"	0.53	2.05	4.06	3.58	2.76
3/8"	0.53	2.05	4.06	3.58	2.76
1/2"	0.53	2.05	4.06	3.58	2.76
3/4"	0.71	2.6	4.37	3.94	3.15
1"	0.91	2.99	4.76	4.09	3.15
1-1/4"	1.18	3.39	6.14	5.31	3.54
1-1/2"	1.22	3.7	5.79	5.24	3.54
2"	1.69	4.65	6.89	6.06	3.94
2-1/2"	2.32	5.91	7.83	6.73	5.51

unit:in

SCREWED END GATE VALVE

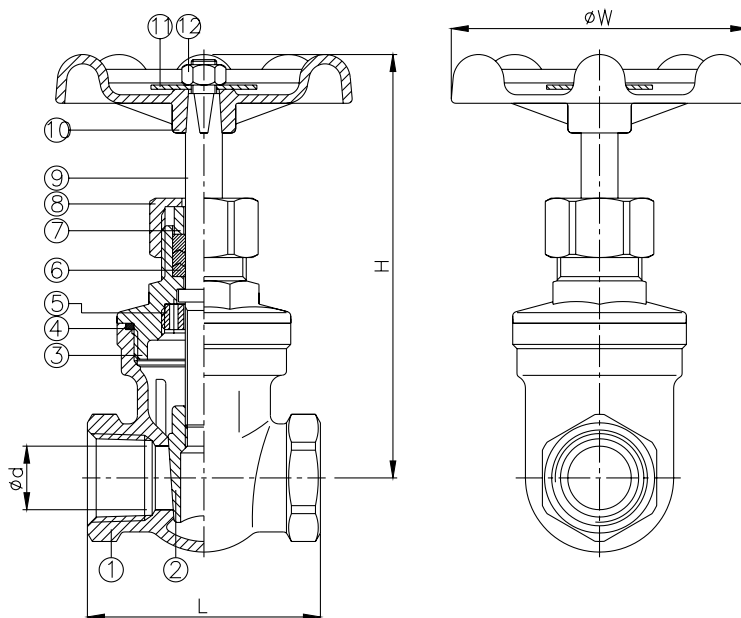
FEATURES

2029

- 1/2"~3" (DN15~DN80)
- W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Non-rising stem
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A351-CF8	
2	DISC			
3	BONNET			
4	GASKET	PTFE / RTFE		
5	WHORL GASKET	SUS 304		
6	PACKING	PTFE		
7	GLAND	SUS 304		
8	CAP NUT	ASTM A351-CF8M	ASTM A351-CF8	
9	STEM	SUS 316	SUS 304	
10	HANDLE	ALUMINUM		
11	NAMEPLATE			
12	NUT	SUS 304		



DN	d	L	H	W
15	15	55	101	70
20	20	60	108	70
25	25	65	115	80
32	32	75	132	80
40	38	85	149	90
50	50	95	175	100
65	65	116	213	140
80	80	130	241	140

unit:mm

NPS	d	L	H	W
1/2"	0.59	2.17	3.98	2.76
3/4"	0.79	2.36	4.25	2.76
1"	0.98	2.56	4.53	3.15
1-1/4"	1.26	2.95	5.2	3.15
1-1/2"	1.5	3.35	5.87	3.54
2"	1.97	3.74	6.89	3.94
2-1/2"	2.56	4.57	8.39	5.51
3"	3.15	5.12	9.49	5.51

unit:in

SCREWED END SWING CHECK VALVE

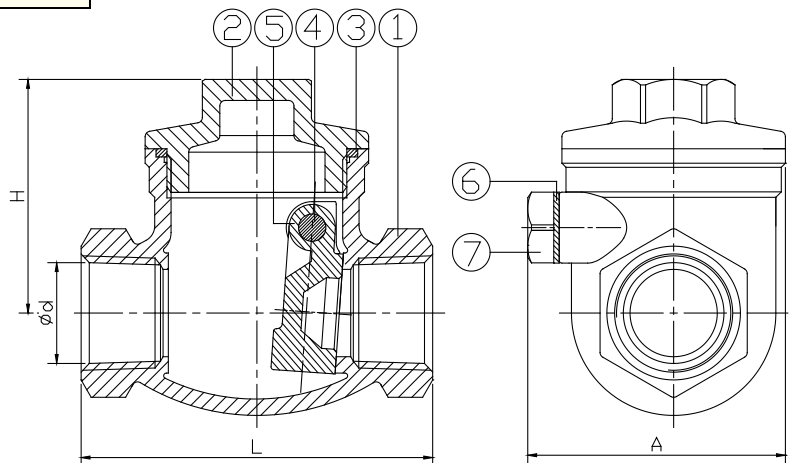
2030

FEATURES

- 1/2"~3" (DN15~DN80)
- W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Socket weld (option)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A351-CF8	ASTM A351-CF3M
2	CAP			
3	GASKET	PTFE		
4	PLUG	SUS 316	SUS 304	SUS 316L
5	DISC	ASTM A351-CF8M	ASTM A351-CF8	ASTM A351-CF3M
6	GASKET	PTFE		
7	STOPPER	SUS 304		



DN	d	L	H	A
15	16	65	43	46.5
20	20	80	51	51.5
25	25	89	60	56
32	32	105	66	64
40	40	120	75	74.5
50	50	139	80	84
65	65	181	99	105
80	80	200	104	140

unit:mm

NPS	d	L	H	A
1/2"	0.63	2.56	1.69	1.83
3/4"	0.79	3.15	2.01	2.03
1"	0.98	3.5	2.36	2.2
1-1/4"	1.26	4.13	2.6	2.52
1-1/2"	1.57	4.72	2.95	2.93
2"	1.97	5.47	3.15	3.31
2-1/2"	2.56	7.13	3.9	4.13
3"	3.15	7.87	4.09	5.51

unit:in

FLANGED END GLOBE VALVE

2053

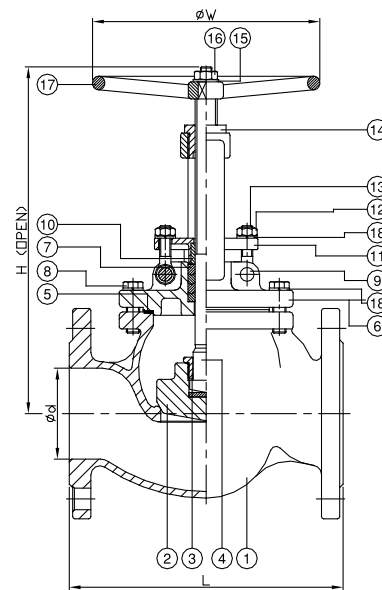
FEATURES

- 1/2"~12" (DN15~DN300)
- W.P. : PN16/40
CLASS 150/300/600
JIS 10K/20K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Rising stem
- API 6D / API 600 / API 602 (option)



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308
2	DISC		
3	DISC COVER		
4	STEM	SUS 316	SUS 304
5	GASKET	PTFE / 304+GRAPHITE	
6	BONNET	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308
7	PACKING	PTFE	
8	BOLT	SUS 304	
9	HINGE PIN		
10	SLEEVE	PTFE	
11	GLAND	ASTM A351-CF8 1.4308	
12	NUT	SUS 304	
13	EYE BOLT		
14	YOKE SLEEVE	BRONZE	
15	NAME PLATE	SUS 304	
16	NUT		
17	HANDWHEEL	FCD 400	
18	SPRING WASHER	SUS 304	

*8"UP GASKET: 304+GRAPHITE



DN	d	L			H			W		
		CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16
15	15	108	152	130	186	230	186	140	140	140
20	20	117	178	150	212	230	186	140	140	140
25	25	127	203	160	212	230	212	140	140	140
32	32	140	-	180	243	-	243	160	-	160
40	40	165	229	200	246	328	246	160	250	160
50	50	203	267	230	252	378	252	200	250	200
65	65	216	292	290	308	411	308	200	300	200
80	80	241	318	310	327	426	327	250	300	250
100	100	292	356	350	384	520	384	250	300	250
125	125	356	-	400	484	-	484	300	-	300
150	150	406	444	480	547	667	547	350	450	350
200	200	495	559	600	669	829	669	400	450	400
250	250	622	-	-	824	-	-	450	-	-

unit:mm

NPS	d	L			H			W		
		CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16
1/2"	0.59	4.25	5.98	5.12	7.32	9.06	7.32	5.51	5.51	5.51
3/4"	0.79	4.61	7.01	5.91	8.35	9.06	7.32	5.51	5.51	5.51
1"	0.98	5	7.99	6.3	8.35	9.06	8.35	5.51	5.51	5.51
1-1/4"	1.26	5.51	-	7.09	9.57	-	9.57	6.3	-	6.3
1-1/2"	1.57	6.5	9.02	7.87	9.69	12.91	9.69	6.3	9.84	6.3
2"	1.97	7.99	10.51	9.06	9.92	14.88	9.92	7.87	9.84	7.87
2-1/2"	2.56	8.5	11.5	11.42	12.13	16.18	12.13	7.87	11.81	7.87
3"	3.15	9.49	12.52	12.2	12.87	16.77	12.87	9.84	11.81	9.84
4"	3.94	11.5	14.02	13.78	15.12	20.47	15.12	9.84	11.81	9.84
5"	4.92	14.02	-	15.75	19.06	-	19.06	11.81	-	11.81
6"	5.91	15.98	17.48	18.9	21.54	26.26	21.54	13.78	17.72	13.78
8"	7.87	19.49	22.01	23.62	26.34	32.64	26.34	15.75	17.72	15.75
10"	9.84	24.49	-	-	32.44	-	-	17.72	-	-

unit:in



FLANGED END GLOBE VALVE

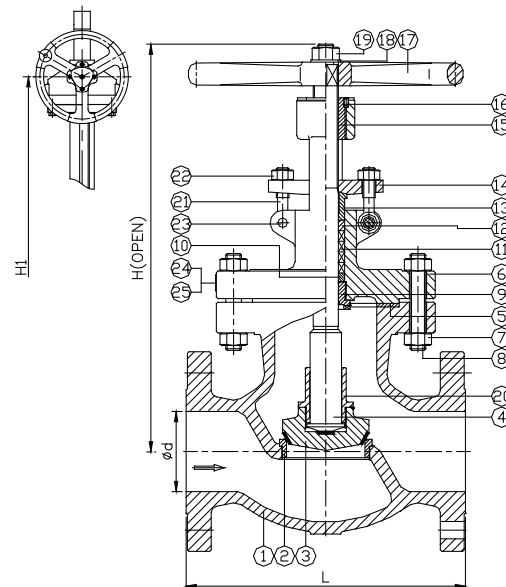
2053

FEATURES

- 1/2"~24" (DN15~DN600)
- Body W.P. : Class 150/300/600/900/1500/2500
- W.T. : -20°C~400°C (-4°F~752°F)
- Design: BS 1873
- Flange Dimension: ASME B16.5
- Face to Face: ASME B16.10



ITEM	PARTS	MATERIAL		
		Trim 1	Trim 5	Trim 8
1	BODY	ASTM A216-WCB		
2	SEAT	ASTM A105+13Cr	ASTM A105+STL#6	ASTM A105+STL#6
3	DISC			ASTM A105+13Cr
4	STEM			ASTM A182-F6a
5	GASKET	SPW SS304+GRAPHITE		
6	BONNET	ASTM A216-WCB		
7	NUT	ASTM A194-2H		
8	STUD	ASTM A193-B7		
9	BACK SEAT	ASTM A276-410		
10	PACKING A	GRAPHITE		
11	PACKING B			
12	PACKING C			
13	GLAND	ASTM A276-410		
14	GLAND FLANGE	ASTM A216-WCB		
15	STEM BUSHING	ASTM A439 D-2		
16	SCREW	ASTM A29-1035		
17	HANDWHEEL	DUCTILE IRON		
18	HANDWHEEL WASHER	ASTM A29-1025		
19	HANDWHEEL NUT	ASTM A29-1045		
20	DIDSC NUT	ASTM A276-410		
21	EYE BOLT	ASTM A193-B7		
22	NUT	ASTM A194-2H		
23	PIN	ASTM A29-1025		
24	NAMEPLATE	SS 304		
25	RIVET			



DN	d	CLASS 150				CLASS 300				CLASS 600				CLASS 900				CLASS 1500				CLASS 2500			
		L	H	H1		L	H	H1		L	H	H1		L	H	H1		L	H	H1		L	H	H1	
15	13	108	182	-		152	185	-		-	-	-		-	-	-		-	-	-		-	-	-	
20	19	117	193	-		178	195	-		-	-	-		-	-	-		-	-	-		-	-	-	
25	25	127	217	-		203	220	-		-	-	-		-	-	-		-	-	-		-	-	-	
32	32	140	235	-		216	240	-		-	-	-		-	-	-		-	-	-		-	-	-	
40	38	165	258	-		229	260	-		-	-	-		-	-	-		-	-	-		-	-	-	
50	51	203	330	-		267	385	-	292	360	-	368	480	-	368	529	614	451	620	698		-	-	-	
65	64	216	360	-		292	420	-	330	410	-	419	520	-	419	660	700	508	690	730		-	-	-	
80	76	241	390	-		318	440	-	356	465	-	381	564	630	470	692	729	578	750	805		-	-	-	
100	102	292	445	-		356	515	-	432	545	575	457	685	720	546	907	930	673	960	1020		-	-	-	
125	127	356	480	-		400	580	-	508	625	660	559	780	840	673	1120	1190	-	-	-		-	-	-	
150	152	406	520	556		444	660	690	559	785	820	610	950	1015	705	1015	1280	914	1080	1325		-	-	-	
200	203	495	600	658		559	900	950	660	930	960	737	932	-	832	1145	1400	-	-	-		-	-	-	
250	254	622	773	8005		622	950	990	787	1040	-	838	1040	-	-	-	-	-	-	-		-	-	-	
300	305	698	880	955		711	1030	1080	838	1280	-	-	-	-	-	-	-	-	-	-		-	-	-	
350	337	787	966	977		838	-	1385	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
400	387	914	1085	1100		864	-	1560	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
450	438	978	-	1166		978	-	1580	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
500	489	978	-	1217		1016	-	1609	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
600	591	1295	-	1295		1346	-	1803	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	

unit:mm

FLANGED END GATE VALVE

FEATURES

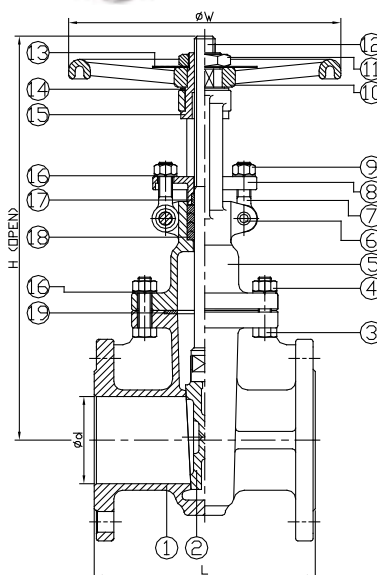
2054

- 1/2"~24" (DN15~DN600)
- W.P. : PN16
CLASS 150/300/600
JIS 10K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Rising stem
- API 6D / API 600 / API 603 (option)



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M	ASTM A351-CF8	ASTM A351-CF3M
2	DISC	1.4408	1.4308	1.4409
3	BONNET BOLT	SUS 304		
4	BONNET NUT			
5	BONNET	ASTM A351-CF8M	ASTM A351-CF8	ASTM A351-CF3M
		1.4408	1.4308	1.4409
6	HINGE PIN	SUS 304		
7	EYE BOLT			
8	GLAND	ASTM A351-CF8		
		1.4308		
9	EYE NUT	SUS 304		
10	HANDWHEEL	FCD		
11	NUT	BRONZE		
12	STEM	SUS 316	SUS 304	SUS 316L
13	NAME PLATE	SUS 304		
14	SPRING	BRONZE		
15	YOKE SLEEVE			
16	SPRING WASHER	SUS 304		
17	GLAND PACKING	PTFE		
18	PACKING			
19	GASKET	PTFE / 304+GRAPHITE		

* 5"UP GASKET: SS 304+GRAPHITE



DN	d	L			H			W		
		CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16
15	15	108	140	115	190	236	190	120	120	120
20	20	117	152	120	195	236	195	120	120	120
25	25	127	165	125	234	236	234	120	120	120
32	32	140	-	130	297	-	297	200	-	200
40	40	165	190	140	300	355	300	200	250	200
50	50	178	216	150	331	400	330	200	250	200
65	65	190	241	170	393	454	393	200	250	200
80	80	203	283	180	470	500	470	250	250	250
100	100	229	305	190	545	609	545	250	300	250
125	125	254	381	200	640	630	640	300	300	300
150	150	267	403	210	740	792	740	300	350	300
200	200	292	419	230	910	998	910	350	400	350
250	250	330	457	250	1097	1257	1097	400	500	400
300	300	356	502	270	1285	1507	1285	400	500	400

unit:mm

NPS	d	L			H			W		
		CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16
1/2"	0.59	4.25	5.51	4.53	7.48	9.29	7.48	4.72	4.72	4.72
3/4"	0.79	4.61	5.98	4.72	7.68	9.29	7.68	4.72	4.72	4.72
1"	0.98	5	6.5	4.92	9.21	9.29	9.21	4.72	4.72	4.72
1-1/4"	1.26	5.51	-	5.12	11.69	-	11.69	7.87	-	7.87
1-1/2"	1.57	6.5	7.48	5.51	11.81	13.98	11.81	7.87	9.84	7.87
2"	1.97	7.01	8.5	5.91	13.03	15.75	12.99	7.87	9.84	7.87
2-1/2"	2.56	7.48	9.49	6.69	15.47	17.87	15.47	7.87	9.84	7.87
3"	3.15	7.99	11.14	7.09	18.5	19.69	18.5	9.84	9.84	9.84
4"	3.94	9.02	12.01	7.48	21.46	23.98	21.46	9.84	11.81	9.84
5"	4.92	10	15	7.87	25.2	24.8	25.2	11.81	11.81	11.81
6"	5.91	10.51	15.87	8.27	29.13	31.18	29.13	11.81	13.78	11.81
8"	7.87	11.5	16.5	9.06	35.83	39.29	35.83	13.78	15.75	13.78
10"	9.84	12.99	17.99	9.84	43.19	49.49	43.19	15.75	19.69	15.75
12"	11.81	14.02	19.76	10.63	50.59	59.33	50.59	15.75	19.69	15.75

unit:in



FLANGED END GATE VALVE

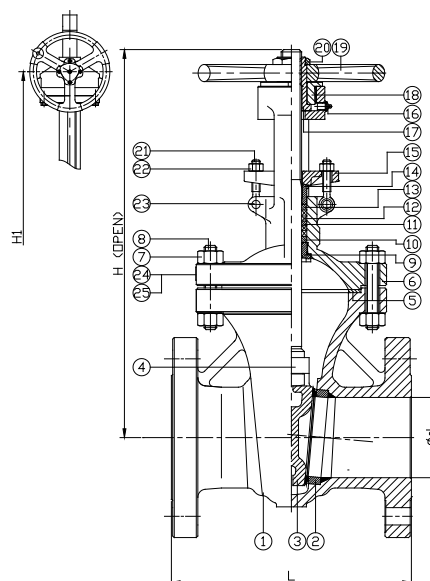
FEATURES

2054

- 2"~48" (DN50~DN1200)
- Body W.P. : Class 150/300/600/900/1500/2500
- W.T. : -20°C~400°C (-4°F~752°F)
- Design: API 600
- Flange Dimension: ASME B16.5
- Face to Face: ASME B16.10



ITEM	PARTS	MATERIAL		
		Trim 1	Trim 5	Trim 8
1	BODY	ASTM A105+13Cr	ASTM A216-WCB	ASTM A105+STL#6 ASTM A105+13Cr
2	SEAT		ASTM A105+STL#6	
3	WEDGE			
4	STEM	ASTM A182-F6a		
5	GASKET	SPW SS304+GRAPHITE		
6	BONNET	ASTM A216-WCB		
7	NUT	ASTM A194-2H		
8	STUD	ASTM A193-B7		
9	BACK SEAT	ASTM A276-410		
10	PACKING A	GRAPHITE		
11	SPACER RING	ASTM A276-410		
12	PACKING B	GRAPHITE		
13	PACKING C			
14	GLAND	ASTM A276-410		
15	GLAND FLANGE	ASTM A216-WCB		
16	GREASE FITTING	CARBON STEEL		
17	STEM BUSHING	ASTM A439 D-2		
18	RETAINING NUT	ASTM A29-1025		
19	HANDWHEEL	DUCTILE IRON		
20	HANDWHEEL NUT	ASTM A29-1025		
21	EYE BOLT	ASTM A193-B7		
22	NUT	ASTM A194-2H		
23	PIN	ASTM A29-1025		
24	NAMEPLATE	SS 304		
25	RIVET			



DN	d	CLASS 150			CLASS 300			CLASS 600			CLASS 900			CLASS 1500			CLASS 2500		
		L	H	H1	L	H	H1	L	H	H1	L	H	H1	L	H	H1	L	H	H1
50	51	178	400	-	216	420	-	292	444	-	368	500	-	368	510	-	451	530	580
65	64	190	435	-	241	446	-	330	500	-	419	550	-	419	560	-	508	580	630
80	76	203	515	-	282	537	-	356	558	585	381	610	660	470	620	670	578	650	700
100	102	229	595	-	305	619	650	432	665	695	457	702	750	546	728	770	673	750	800
125	127	254	725	-	381	722	750	508	760	790	559	850	900	673	870	920	794	900	960
150	152	267	780	820	403	806	835	559	868	900	610	980	1060	705	1000	1070	914	1040	1100
200	203	292	975	1020	419	1000	1030	660	1073	1110	737	1100	1140	832	1130	1180	1022	1150	1200
250	254	330	1150	1200	457	1240	1280	787	1263	1300	838	1320	1370	991	1360	1410	1270	1400	1460
300	305	356	1380	1430	502	1425	1460	838	1600	1650	965	1500	1560	1130	-	1620	1422	-	1660
350	337	381	1545	1580	762	1585	1620	889	1705	1750	1029	1900	1950	1257	-	2020	-	-	-
400	387	406	1733	1780	838	1790	1830	991	1835	1900	1130	2050	2100	1384	-	2180	-	-	-
450	438	432	1915	1990	914	1960	2000	1092	-	2020	-	-	-	-	-	-	-	-	-
500	489	457	2100	2220	991	2158	2220	1194	-	2172	-	-	-	-	-	-	-	-	-
600	591	508	2520	2600	1143	2576	2620	1397	-	2650	-	-	-	-	-	-	-	-	-
650	633	559	-	2800	1245	-	2850	-	-	-	-	-	-	-	-	-	-	-	-
700	684	610	-	3050	1346	-	3080	-	-	-	-	-	-	-	-	-	-	-	-
750	735	610	-	3130	1397	-	3180	-	-	-	-	-	-	-	-	-	-	-	-
800	779	711	-	3280	1524	-	3300	-	-	-	-	-	-	-	-	-	-	-	-
850	830	762	-	3500	1626	-	3550	-	-	-	-	-	-	-	-	-	-	-	-
900	874	813	-	3720	1727	-	3760	-	-	-	-	-	-	-	-	-	-	-	-

unit:mm

FLANGED END SWING CHECK VALVE

2024

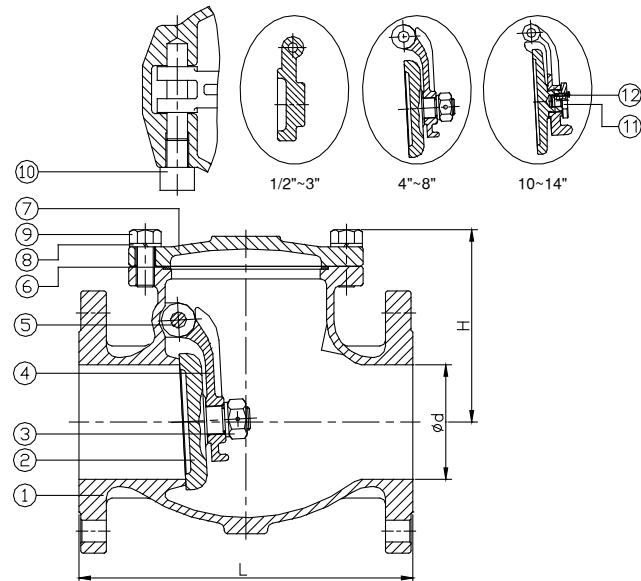
FEATURES

- 1/2"~14" (DN15~DN350)
- W.P. : PN16/40
CLASS 150/300/600
JIS 10K/20K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- API 6D / API 600 / API 602 (option)



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A351-CF3M 1.4409
2	DISC			
3	NUT	SUS 316	SUS 304	SUS 304
4	ARM HINGE	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A351-CF3M 1.4409
5	HINGE PIN	SUS 316	SUS 304	SUS 316L
6	GASKET	PTFE / 304+GRAPHITE		
7	BONNET	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A351-CF3M 1.4409
8	SPRING WASHER	SUS 304		
9	BONNET BOLT			
10	BOLT			

* 8"UP GASKET : 304+GRAPHITE



DN	d	L			H		
		CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16
15	15	108	152	130	51	61	51
20	20	117	178	150	54	61	54
25	25	127	203	160	64	79	64
32	32	140	-	180	68	-	68
40	40	165	241	200	75	93	75
50	50	203	267	230	98	127	97
65	65	216	292	290	112	144	111
80	80	241	318	310	124	154	120
100	100	292	356	350	161	196	162
125	125	330	400	400	180	217	179
150	150	356	444	480	205	230	203
200	200	495	533	600	236	265	236
250	250	622	-	-	302	-	-
300	300	698	-	-	340	-	-
350	337	787	-	-	385	-	-

unit:mm

NPS	d	L			H		
		CLASS 150	CLASS 300	PN16	CLASS 150	CLASS 300	PN16
1/2"	0.59	4.25	5.98	5.12	2.01	2.4	2.01
3/4"	0.79	4.61	7.01	5.91	2.13	2.4	2.13
1"	0.98	5	7.99	6.3	2.52	3.11	2.52
1-1/4"	1.26	5.51	-	7.09	2.68	-	2.68
1-1/2"	1.57	6.5	9.49	7.87	2.95	3.66	2.95
2"	1.97	7.99	10.51	9.06	3.86	5	3.82
2-1/2"	2.56	8.5	11.5	11.42	4.41	5.67	4.37
3"	3.15	9.49	12.52	12.2	4.88	6.06	4.72
4"	3.94	11.5	14.02	13.78	6.34	7.72	6.38
5"	4.92	12.99	15.75	15.75	7.09	8.54	7.05
6"	5.91	14.02	17.48	18.9	8.07	9.06	7.99
8"	7.87	19.49	20.98	23.62	9.29	10.43	9.29
10"	9.84	24.49	-	-	11.89	-	-
12"	11.81	27.48	-	-	13.39	-	-
14"	13.27	30.98	-	-	15.16	-	-

unit:in



FLANGED END SWING CHECK VALVE

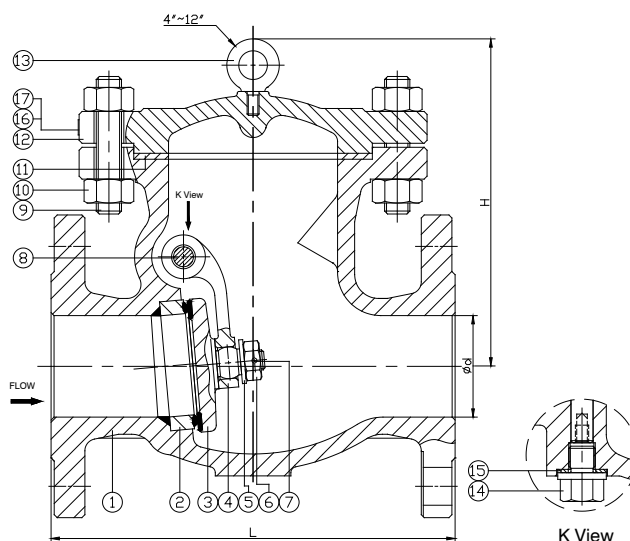
2024

FEATURES

- 2"~30" (DN50~DN750)
- Body W.P. : Class 150/300/600/
900/1500/2500
- W.T. : -20°C~400°C (-4°F~752°F)
- Design: BS 1868
- Flange Dimension: ASME B16.5
- Face to Face: ASME B16.10



ITEM	PARTS	MATERIAL		
		Trim 1	Trim 5	Trim 8
1	BODY	ASTM A216-WCB		
2	SEAT	ASTM A105+13Cr	ASTM A105+STL#6	ASTM A105+STL#6
3	DISC			ASTM A105+13Cr
4	HINGE	ASTM A216-WCB		
5	DISC WASHER	ASTM A276-410		
6	DISC NUT			
7	DISC NUT PIN			
8	HINGE PIN	ASTM A182-F6a		
9	STUD	ASTM A193-B7		
10	NUT	ASTM A194-2H		
11	GASKET	SPW SS 304+GRAPHITE		
12	BONNET	ASTM A216-WCB		
13	EYE BOLT	CARBON STEEL		
14	PLUG	ASTM A276-410		
15	WASHER	ASTM A276-304		
16	NAMEPLATE	SS 304		
17	RIVET			



DN	d	CLASS 150		CLASS 300		CLASS 600		CLASS 900		CLASS 1500		CLASS 2500	
		L	H	L	H	L	H	L	H	L	H	L	H
50	51	203	132	267	144	292	170	368	200	368	210	451	230
65	64	216	147	292	169	330	178	419	220	419	240	508	260
80	76	241	176	318	210	356	246	381	280	470	303	578	330
100	102	292	198	356	260	432	290	457	320	546	340	673	370
125	127	356	255	400	295	508	320	559	360	673	380	794	410
150	152	406	320	444	326	559	360	610	400	705	430	914	460
200	203	495	380	533	380	660	430	737	480	832	500	1022	530
250	254	622	440	622	440	787	502	838	560	991	590	1270	620
300	305	698	480	711	520	838	554	965	62	1130	660	1422	690
350	337	787	530	838	540	889	595	1029	680	1257	710	-	-
400	387	914	580	864	588	991	680	1130	780	1384	820	-	-
450	438	978	618	978	670	1092	778	1219	880	-	-	-	-
500	489	978	657	1016	720	1194	970	1321	1050	-	-	-	-
600	591	1295	760	1346	850	1397	1100	1549	1200	-	-	-	-
650	633	1295	840	1346	920	-	-	-	-	-	-	-	-
700	684	1448	920	1499	1150	-	-	-	-	-	-	-	-
750	735	1524	980	1594	1260	-	-	-	-	-	-	-	-

unit:mm



DUAL PLATE CHECK VALVE

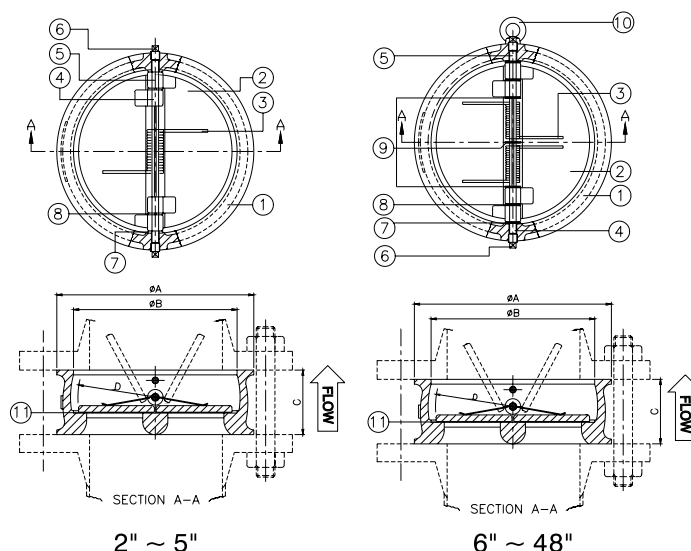
FEATURES

2025

- 2"~48" (DN50~DN1200)
- W.P. : PN10/16/40
CLASS 150/300/600
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Metal to metal (option)



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M / ASTM A216 WCB / DUCTILE IRON
2	PLATE	ASTM A351-CF8M / ASTM A351-CF8 / ASTM A351-CF3M / ASTM A216-WCB
3	SPRING	SUS 316 WPA
4	HINGE PIN	SUS 316 / SUS 304
5	STOP PIN	
6	PLUG	S25C
7	BODY BEARING	TEFLON
8	PLATE BEARING	
9	SPRING BEARING	
10	EYE BOLT	SS41
11	BODY SEAT	NBR / EPDM / VITON / SAME MATERIALS AS THE PLATE / 410SS OVERLAY / STELLITY #6 OVERLAY



PN16 ONLY, OTHER PRESSURE RATING PLEASE CONTACT US.

DN	A	B	C	D
50	109	60	54	32
65	129	73	54	37
80	144	89	57	45
100	164	114	64	53
125	194	141	70	67
150	220	168	76	79
200	275	219	95	105
250	331	273	108	123
300	386	324	143	155
350	446	356	184	170
400	498	406	191	195
450	558	457	203	219
500	620	508	213	244
600	737	610	222	292
700	807	711	321	337
800	914	813	356	397
900	1014	914	368	440
1000	1131	1016	419	495
1200	1345	1219	524	603

unit:mm

NPS	A	B	C	D
2"	4.29	2.36	2.13	1.26
2-1/2"	5.08	2.87	2.13	1.46
3"	5.67	3.5	2.24	1.77
4"	6.46	4.49	2.52	2.09
5"	7.64	5.55	2.76	2.64
6"	8.66	6.61	2.99	3.11
8"	10.83	8.62	3.74	4.13
10"	13.03	10.75	4.25	4.84
12"	15.2	12.76	5.63	6.1
14"	17.56	14.02	7.24	6.69
16"	19.61	15.98	7.52	7.68
18"	21.97	17.99	7.99	8.62
20"	24.41	20	8.39	9.61
24"	29.02	24.02	8.74	11.5
28"	31.77	27.99	12.64	13.27
32"	35.98	32.01	14.02	15.63
36"	39.92	35.98	14.49	17.32
40"	44.53	40	16.5	19.49
48"	52.95	47.99	20.63	23.74

unit:in

SINGLE DOOR CHECK VALVE

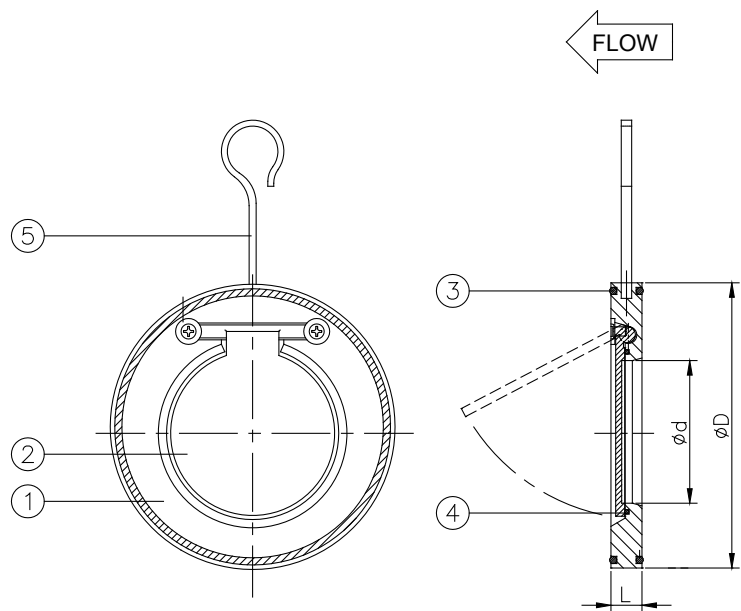
2025S

FEATURES

- 2"~12" (DN50~DN300)
- W.P. : PN10/16/40
CLASS 150/300/600
JIS 5K/10K/20K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Metal to metal (option)



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A240-316	ASTM A240-304
2	DISC	ASTM A351-CF8M	ASTM A351-CF8
3	BODY SEAL	NBR	
4	CLAPPER SEAL	NBR / VITON	
5	EYE BOLT	SUS 304	



PN16 ONLY, OTHER PRESSURE RATING PLEASE CONTACT US.

DN	d	D	L
50	30	104	19
65	42	124	19
80	50	134	19
100	72	159	19
125	93	191	21
150	112	220	21
200	142	271	27
250	190	330	29
300	211	386	32

unit:mm

NPS	d	D	L
2"	1.18	4.09	0.75
2-1/2"	1.65	4.88	0.75
3"	1.97	5.28	0.75
4"	2.83	6.26	0.75
5"	3.66	7.52	0.83
6"	4.41	8.66	0.83
8"	5.59	10.67	1.06
10"	7.48	12.99	1.14
12"	8.31	15.2	1.26

unit:in

DISC CHECK VALVE

FEATURES

2026
2026C

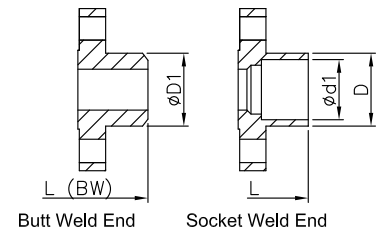
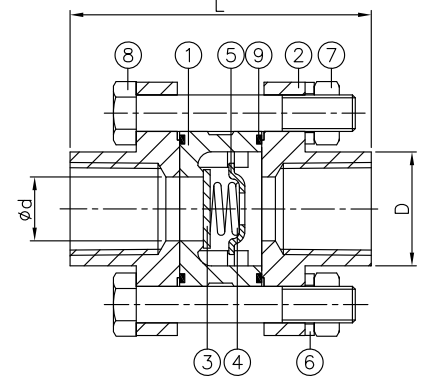
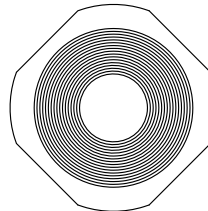
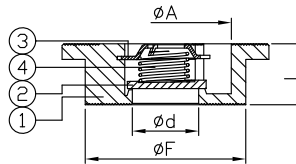
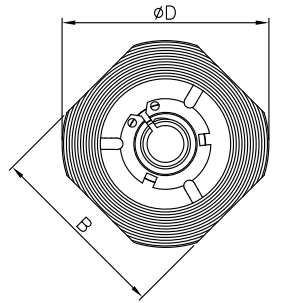
2026

- 1/2"~12" (DN15~DN300)
- W.P. : PN40
- W.T. : -20°C ~500°C (-4°F~932°F)
- Investment casting

2026C

- 1/4"~4" (DN8~DN100)
- W.P. : PN63
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- End connection - Socket Weld End
Butt Weld End
Screwed End

ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308
2	END CAP		
3	DISC	ASTM A240-316	ASTM A240-304
4	SPRING		
5	SPRING HOLDER	ASTM A240-316	
6	WASHER	SUS 304	
7	NUT		
8	BOLT		
9	SEAL	PTFE	



2026

2026C

#2026

DN	d	F	D	L	A	B
15	12.5	40.4	54	16	34	44.6
20	20	46.6	62	19	39	54
25	25	56	73	22	46	65
32	32	69.7	83	28	60	78
40	38	79.6	93	31.5	70	88
50	49	89.8	107	40	79	101.6
65	64	113.6	126.5	46	101	120.4
80	78	123.7	141.2	49	109	133
100	98	150	171.4	60	134	164
125	110	190	-	90	-	-
150	130	220	-	105	-	-
200	200	270	-	140	-	-
250	249	345	-	150	-	-
300	295	410	-	160	-	-

unit:mm

NPS	d	F	D	L	A	B
1/2"	0.49	1.59	2.13	0.63	1.34	1.76
3/4"	0.79	1.83	2.44	0.75	1.54	2.13
1"	0.98	2.2	2.87	0.87	1.81	2.56
1-1/4"	1.26	2.74	3.27	1.1	2.36	3.07
1-1/2"	1.5	3.13	3.66	1.24	2.76	3.46
2"	1.93	3.54	4.21	1.57	3.11	4
2-1/2"	2.52	4.47	4.98	1.81	3.98	4.74
3"	3.07	4.87	5.56	1.93	4.29	5.24
4"	3.86	5.91	6.75	2.36	5.28	6.46
5"	4.33	7.48	-	3.54	-	-
6"	5.12	8.66	-	4.13	-	-
8"	7.87	10.63	-	5.51	-	-
10"	9.8	13.58	-	5.91	-	-
12"	11.61	16.14	-	6.3	-	-

unit:in

#2026C

DN	d	d1	D	D1	L	L (BW)
8	10	14.2	22	18	60	66
10	10	17.5	22	20.5	60	66
15	15	21.8	26	22	63	67
20	20	27.4	32	28	71	81
25	25	34.1	39	31.5	81.5	89.5
32	32	42.7	49	40	91	92
40	38	49	56	46	97.5	103.5
50	50	61	69	60	117	117
65	65	77	83	78	131.5	131.5
80	80	90.2	100	91.5	143.5	143.5
100	100	115.3	122.5	116	174.5	174.5

unit:mm

NPS	d	d1	D	D1	L	L (BW)
1/4"	0.39	0.56	0.87	0.71	2.36	2.6
3/8"	0.39	0.69	0.87	0.81	2.36	2.6
1/2"	0.59	0.86	1.02	0.87	2.48	2.64
3/4"	0.79	1.08	1.26	1.1	2.8	3.19
1"	0.98	1.34	1.54	1.24	3.21	3.52
1-1/4"	1.26	1.68	1.93	1.57	3.58	3.62
1-1/2"	1.5	1.93	2.2	1.81	3.84	4.07
2"	1.97	2.4	2.72	2.36	4.61	4.61
2-1/2"	2.56	3.03	3.27	3.07	5.18	5.18
3"	3.15	3.55	3.94	3.6	5.65	5.65
4"	3.94	4.54	4.82	4.57	6.87	6.87

unit:in

FLANGED END CHECK VALVE

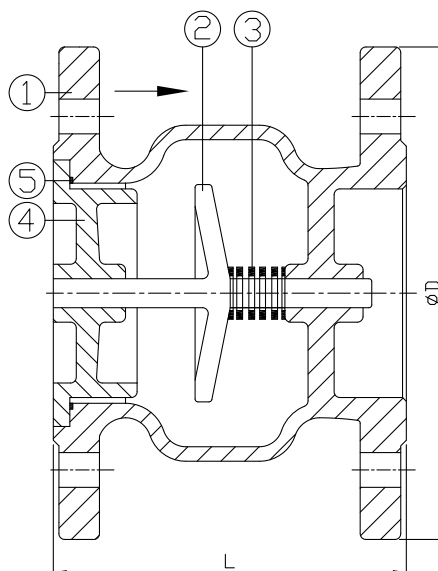
FEATURES

2027F

- 2"~24" (DN50~DN600)
- W.P. : PN16/40
CLASS 150/300
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A216-WCB
2	DISC	1.4408	1.0619
3	SPRING	304	
4	SEAT	ASTM A351-CF8M	ASTM A216-WCB
5	SEAL	BUNA-N	



CLASS 150 ONLY, OTHER PRESSURE RATING PLEASE CONTACT US.

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
D	152	178	191	229	254	279	343	406	483	535	595	635	700	813
L	133	140	154	187	216	248	321	399	362	400	448	500	523	600

unit:mm

NPS	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
D	5.98	7.01	7.52	9.02	10	10.98	13.5	15.98	19.02	21.06	23.43	25	27.56	32.01
L	5.24	5.51	6.06	7.36	8.5	9.76	12.64	15.71	14.25	15.75	17.64	19.69	20.59	23.62

unit:in

SCREWED END PISTON CHECK VALVE

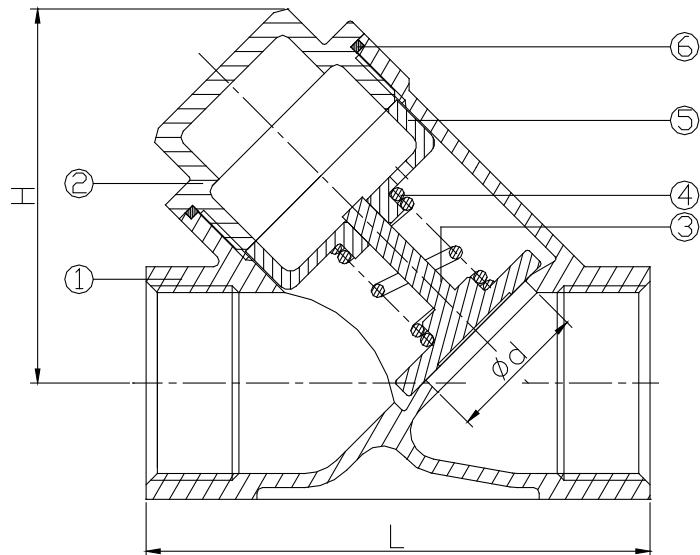
2050

FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 800 WOG (PN50)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	CAP	1.4408
3	DISC	ASTM A351-CF8M
4	SPRING	AISI 304
5	SPRING PLATE	ASTM A276-316
6	BODY SEAL	PTFE



DN	d	L	H
8	15	65	42
10	15	65	42
15	15	65	42
20	20	80	51
25	25	90	64.5
32	32	105	70
40	38	120	80
50	50	140	93.5

unit:mm

NPS	d	L	H
1/4"	0.59	2.56	1.65
3/8"	0.59	2.56	1.65
1/2"	0.59	2.56	1.65
3/4"	0.79	3.15	2.01
1"	0.98	3.54	2.54
1-1/4"	1.26	4.13	2.76
1-1/2"	1.5	4.72	3.15
2"	1.97	5.51	3.68

unit:mm

unit:in



VERTICAL IN-LINE SPRING CHECK VALVE

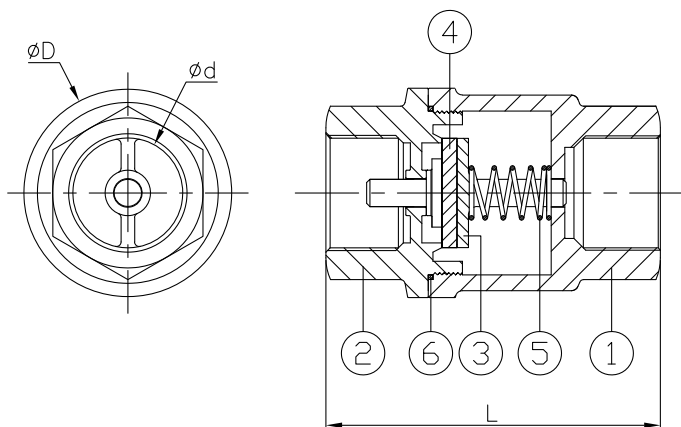
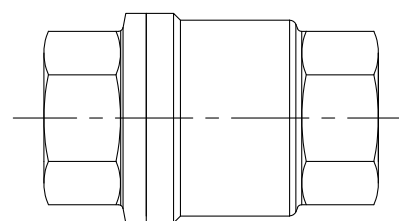
2023

FEATURES

- 1/4"~2" (DN8~DN50)
- W.P. : 1000 WOG (PN 63)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Thread Type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP	
3	DISC	
4	SEAT	PTFE / RTFE
5	SPRING	SS 316
6	GASKET	PTFE / RTFE



DN	d	D	L
8	10	34.3	58.7
10	10	34.3	58.7
15	15	34.3	58.7
20	20	46	72.9
25	25	54	88.9
32	32	62.5	106.2
40	40	73.5	126.5
50	50	90.5	127

unit:mm

NPS	d	D	L
1/4"	0.39	1.35	2.31
3/8"	0.39	1.35	2.31
1/2"	0.59	1.35	2.31
3/4"	0.79	1.81	2.87
1"	0.98	2.13	3.5
1-1/4"	1.26	2.46	4.18
1-1/2"	1.57	2.89	4.98
2"	1.97	3.56	5

unit:in



FORGED STEEL GATE / GLOBE / CHECK VALVE

GATE VALVE



GLOBE VALVE



CHECK VALVE



HAITIMA forged steel gate / globe / check valve is available in three kinds of bonnet design:

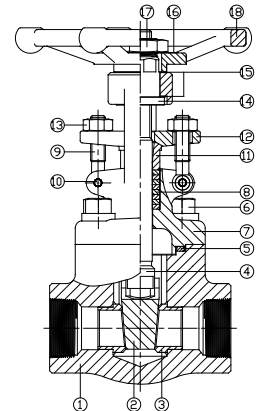
- (1) Bolted Bonnet: The body and bonnet is connected by bolts with spiral wound gasket (304+graphite) or metal rings sealed;
- (2) Welded Bonnet: The body and bonnet is screwed and sealed by welding;
- (3) Pressure Sealed Bonnet: The body and bonnet is screwed and sealed by inside pressure self-sealed ring.

FORGED STEEL GATE VALVE

2076

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB-2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Outside Screw & Yoke
- Bolt Bonnet / Welded Bonnet / Pressure-Seal Bonnet
- Rising Stem / Non-Rising Handwheel
- End Connection:
- Threaded: ASME B1.20.1
- Socket Welded: ASME B16.11
- Butt Welded: ASME B16.25
- Cryogenic Type: 2076C (option)
- Bellows Seal (option)



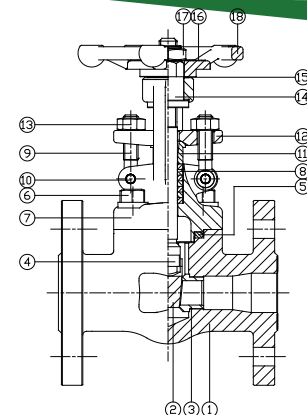
ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	WEDGE	ASTM A276-316		ASTM A276-304		ASTM A276-420	
3	SEAT RING	ASTM A276-316+STELLITE		ASTM A276-304+STELLITE		ASTM A276-410+STELLITE	
4	STEM	ASTM A276-316		ASTM A276-304		ASTM A276-410	
5	GASKET	316+GRAPHITE		304+GRAPHITE		ASTM A276-410	
6	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
7	BONNET	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
8	PACKING	GRAPHITE		GRAPHITE		ASTM A193-B7	
9	EYE BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
10	PIN	ASTM A276-316		ASTM A276-304		ASTM A276-420	
11	GLAND	ASTM A182-F316		ASTM A182-F304		ASTM A105N	
12	GLAND FLANGE	ASTM A194-8M		ASTM A194-8		ASTM A194-2H	
13	NUT	ASTM A194-8M		ASTM A194-8		ASTM A194-2H	
14	STEM NUT	ASTM A276-410		ASTM A276-410		ASTM A276-410	
15	WASHER	ASTM A276-410		ASTM A276-410		ASTM A276-410	
16	NAMEPLATE	ALUMINUM		ALUMINUM		ALUMINUM	
17	HANDWHEEL NUT	ASTM A108-1020		ASTM A108-1020		ASTM A108-1020	
18	HANDWHEEL	ASTM A197		ASTM A197		ASTM A197	

FLANGE END FORGED STEEL GATE VALVE

2073

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB-2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Outside Screw & Yoke, Bolt Bonnet
- Rising Stem / Non-Rising Handwheel
- End Connection:
- Flange: ASME B16.5
- Cryogenic Type: 2073C
- Bellows Seal (option)



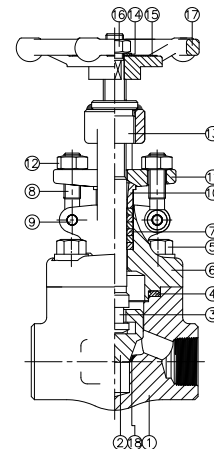
ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	WEDGE	ASTM A276-316		ASTM A276-304		ASTM A276-420	
3	SEAT RING	ASTM A276-316+STELLITE		ASTM A276-304+STELLITE		ASTM A276-410+STELLITE	
4	STEM	ASTM A276-316		ASTM A276-304		ASTM A276-410	
5	GASKET	316+GRAPHITE		304+GRAPHITE		ASTM A276-410	
6	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
7	BONNET	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
8	PACKING	GRAPHITE		GRAPHITE		ASTM A193-B7	
9	EYE BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
10	PIN	ASTM A276-316		ASTM A276-304		ASTM A276-420	
11	GLAND	ASTM A182-F316		ASTM A182-F304		ASTM A105N	
12	GLAND FLANGE	ASTM A194-8M		ASTM A194-8		ASTM A194-2H	
13	NUT	ASTM A194-8M		ASTM A194-8		ASTM A194-2H	
14	STEM NUT	ASTM A276-410		ASTM A276-410		ASTM A276-410	
15	WASHER	ASTM A276-410		ASTM A276-410		ASTM A276-410	
16	NAMEPLATE	ALUMINUM		ALUMINUM		ALUMINUM	
17	HANDWHEEL NUT	ASTM A108-1020		ASTM A108-1020		ASTM A108-1020	
18	HANDWHEEL	ASTM A197		ASTM A197		ASTM A197	

FORGED STEEL GLOBE VALVE

2078

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB-2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Outside Screw & Yoke
- Bolt Bonnet / Welded Bonnet / Pressure-Seal Bonnet
- Rising Stem & Handwheel
- End Connection:
- Threaded: ASME B1.20.1
- Socket Welded: ASME B16.11
- Butt Welded: ASME B16.25
- Cryogenic Type: 2078C (option)
- Bellows Seal (option)



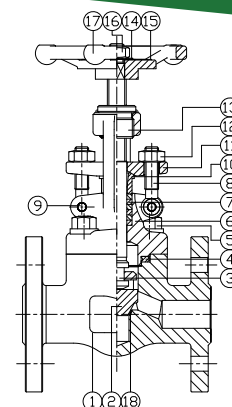
ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	DISC	ASTM A276-316		ASTM A276-304		ASTM A276-420	
3	STEM					ASTM A276-410	
4	GASKET	316+GRAPHITE		304+GRAPHITE			
5	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
6	BONNET	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
7	PACKING			GRAPHITE			
8	EYE BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
9	PIN			ASTM A276-304			
10	GLAND	ASTM A276-316				ASTM A276-420	
11	GLAND FLANGE	ASTM A182-F316		ASTM A182-F304		ASTM A105N	
12	NUT	ASTM A194-8M		ASTM A194-8		ASTM A194-2H	ASTM A194-4
13	STEM NUT						
14	WASHER			ASTM A276-410			
15	NAMEPLATE			ALUMINUM			
16	HANDWHEEL NUT			ASTM A193-B8		ASTM A194-2H	
17	HANDWHEEL			ASTM A197			
18	INTEGRAL SEAT	ASTM A182-F316+STELLITE	ASTM A182-F316L+STELLITE	ASTM A182-F304+STELLITE	ASTM A182-F304L+STELLITE	ASTM A105N+STELLITE	ASTM A350-LF2+STELLITE

FLANGE END FORGED STEEL GLOBE VALVE

2074

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB-2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Outside Screw & Yoke, Bolt Bonnet
- Rising Stem & Handwheel
- End Connection:
- Flange: ASME B16.5
- Cryogenic Type: 2074C (option)
- Bellows Seal (option)



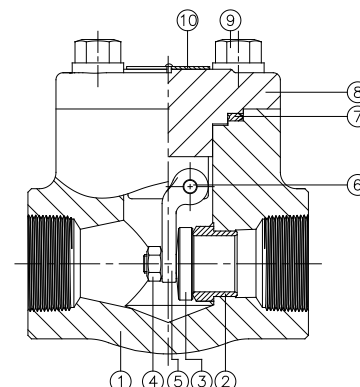
ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	DISC	ASTM A276-316		ASTM A276-304		ASTM A276-420	
3	STEM					ASTM A276-410	
4	GASKET	316+GRAPHITE		304+GRAPHITE			
5	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
6	BONNET	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
7	PACKING			GRAPHITE			
8	EYE BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
9	PIN			ASTM A276-304			
10	GLAND	ASTM A276-316				ASTM A276-420	
11	GLAND FLANGE	ASTM A182-F316		ASTM A182-F304		ASTM A105N	
12	NUT	ASTM A194-8M		ASTM A194-8		ASTM A194-2H	ASTM A194-4
13	STEM NUT			ASTM A276-410			
14	WASHER						
15	NAMEPLATE			ALUMINUM			
16	HANDWHEEL NUT			ASTM A193-B8		ASTM A194-2H	
17	HANDWHEEL			ASTM A197			
18	INTEGRAL SEAT	ASTM A182-F316+STELLITE	ASTM A182-F316L+STELLITE	ASTM A182-F304+STELLITE	ASTM A182-F304L+STELLITE	ASTM A105N+STELLITE	ASTM A350-LF2+STELLITE

FORGED STEEL SWING CHECK VALVE

2077

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB~2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Bolt Bonnet / Pressure-Seal Bonnet
- End Connection:
Threaded: ASME B1.20.1
Socket Welded: ASME B16.11
Butt Welded: ASME B16.25



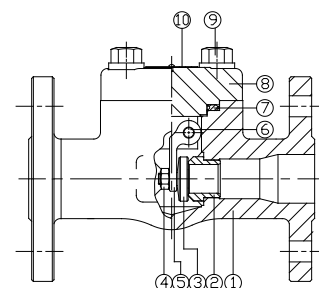
ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	SEAT RING	ASTM A276-316+STELLITE		ASTM A276-304+STELLITE		ASTM A276-410+STELLITE	
3	DISC	ASTM A276-316		ASTM A276-304		ASTM A276-420	
4	NUT	ASTM A194-8M					
5	HINGE	ASTM A351-CF8M					
6	PIN	ASTM A276-316					
7	GASKET	316+GRAPHITE			304+GRAPHITE		
8	BONNET	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
9	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
10	NAMEPLATE	ALUMINUM					

FLANGE END FORGED STEEL SWING CHECK VALVE

2075

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB~1500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Bolt Bonnet
- End Connection:
Flange: ASME B16.5



ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	SEAT RING	ASTM A276-316+STELLITE		ASTM A276-304+STELLITE		ASTM A276-410+STELLITE	
3	DISC	ASTM A276-316		ASTM A276-304		ASTM A276-420	
4	NUT	ASTM A194-8M					
5	HINGE	ASTM A351-CF8M					
6	PIN	ASTM A276-316					
7	GASKET	316+GRAPHITE			304+GRAPHITE		
8	BONNET	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
9	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
10	NAMEPLATE	ALUMINUM					

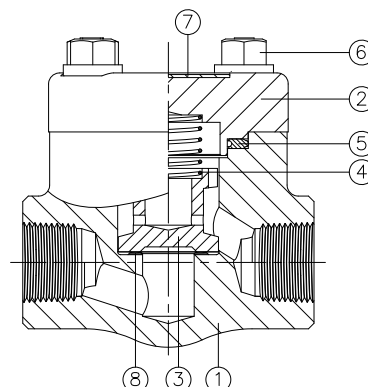


FORGED STEEL PISTON CHECK VALVE

2077P

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB~2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Bolt Bonnet / Welded Bonnet / Pressure-Seal Bonnet
- End Connection:
Threaded: ASME B1.20.1
Socket Welded: ASME B16.11
Butt Welded: ASME B16.25



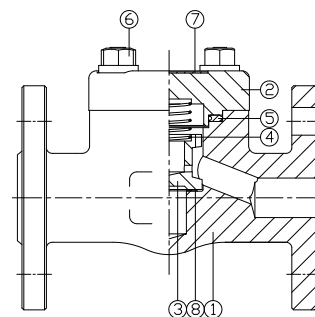
ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	BONNET						
3	DISC	ASTM A276-316		ASTM A276-304		ASTM A276-420	
4	SPRING	SS 316					
5	GASKET	316+GRAPHITE		304+GRAPHITE			
6	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
7	NAMEPLATE	ALUMINUM					
8	INTEGRAL SEAT	ASTM A182-F316+STELLITE	ASTM A182-F316L+STELLITE	ASTM A182-F304+STELLITE	ASTM A182-F304L+STELLITE	ASTM A105N+STELLITE	ASTM A350-LF2+STELLITE

FLANGE END FORGED STEEL PISTON CHECK VALVE

2075P

FEATURES

- Design: API 602, BS5352, ASME B16.34
- Valve Size: 1/2"~4"
- Applicable Rating: Class 150LB~2500LB
- Temperature Rating: Up to 500°C
- Structure Features:
- Bolt Bonnet
- End Connection:
Flange: ASME B16.5



ITEM	PARTS	MATERIAL					
1	BODY	ASTM A182-F316	ASTM A182-F316L	ASTM A182-F304	ASTM A182-F304L	ASTM A105N	ASTM A350-LF2
2	BONNET						
3	DISC	ASTM A276-316		ASTM A276-304		ASTM A276-420	
4	SPRING	SS 316					
5	GASKET	316+GRAPHITE		304+GRAPHITE			
6	BOLT	ASTM A193-B8M		ASTM A193-B8		ASTM A193-B7	ASTM A320-L7
7	NAMEPLATE	ALUMINUM					
8	INTEGRAL SEAT	ASTM A182-F316+STELLITE	ASTM A182-F316L+STELLITE	ASTM A182-F304+STELLITE	ASTM A182-F304L+STELLITE	ASTM A105N+STELLITE	ASTM A350-LF2+STELLITE



SCREWED END Y-STRAINER

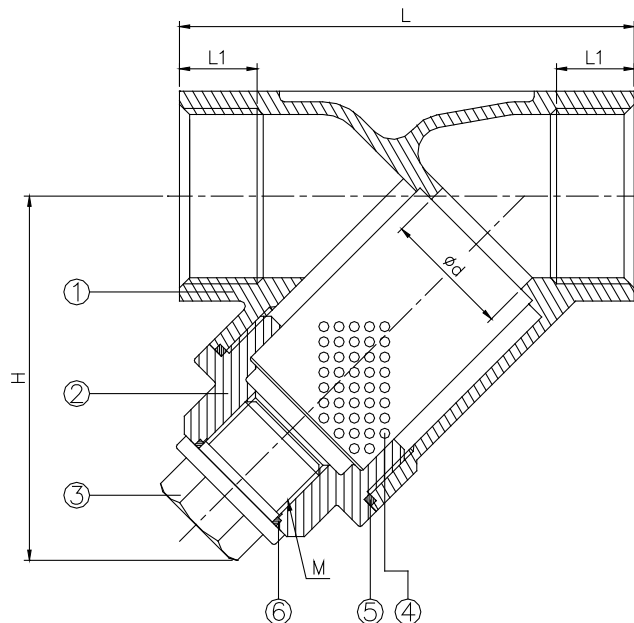
2049

FEATURES

- 1/4"~3" (DN8~DN80)
- W.P. : 800 WOG (PN50)
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP	
3	DRAIN PLUG	ASTM A351-CF8M
4	SCREEN	AISI 316
5	BODY SEAL	PTFE
6	GASKET	



DN	d	L	L1	H	M
8	15	65	13	46.5	1/4"-PF
10	15	65	13	46.5	1/4"-PF
15	15	65	13	46.5	1/4"-PF
20	20	80	15	54	1/4"-PF
25	25	90	18.5	67	1/2"-PF
32	32	105	18.5	74	1/2"-PF
40	40	120	22	81.5	1/2"-PF
50	50	140	22	95	1/2"-PF
65	65	180	26	121.3	1/2"-PF
80	80	200	29	138.3	1/2"-PF

unit:mm

NPS	d	L	L1	H	M
1/4"	0.59	2.56	0.51	1.83	1/4"-PF
3/8"	0.59	2.56	0.51	1.83	1/4"-PF
1/2"	0.59	2.56	0.51	1.83	1/4"-PF
3/4"	0.79	3.15	0.59	2.13	1/4"-PF
1"	0.98	3.54	0.73	2.64	1/2"-PF
1-1/4"	1.26	4.13	0.73	2.91	1/2"-PF
1-1/2"	1.57	4.72	0.87	3.21	1/2"-PF
2"	1.97	5.51	0.87	3.74	1/2"-PF
2-1/2"	2.56	7.09	1.02	4.78	1/2"-PF
3"	3.15	7.87	1.14	5.44	1/2"-PF

unit:in

FLANGED END Y-STRAINER

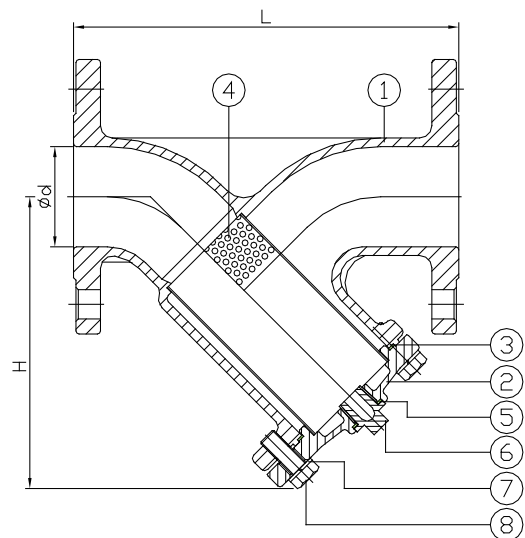
FEATURES

2049F

- 1/2"~12" (DN15~DN300)
- W.P. : PN10/16/25/40
CLASS 150/300
JIS 10K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting



ITEM	PARTS	MATERIAL			
1	BODY	ASTM A351-CF3M 1.4409	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A216-WCB 1.0619
2	BONNET				
3	GASKET	PTFE			
4	SCREEN	SUS 316L	SUS 316	SUS 304	
5	GASKET	PTFE			
6	PLUG	ASTM A351-CF3M 1.4409	ASTM A351-CF8 1.4308		
7	SPRING WASHER	SUS 304			
8	BONNET BOLT	SUS 304			CARBON STEEL



DN	d	L				H			
		CLASS 150	CLASS 300	PN16	PN40	CLASS 150	CLASS 300	PN16	PN40
15	15	120	130	130	130	85	85	85	85
20	20	140	140	150	150	87	87	87	87
25	25	150	150	160	160	114	114	114	114
32	32	180	-	180	180	114	-	114	114
40	40	190	190	200	200	135	135	135	135
50	50	210	210	230	230	155	155	155	155
65	65	250	270	290	290	189	189	189	189
80	80	280	290	310	310	200	200	200	200
100	100	340	386	350	350	232	232	232	232
125	125	380	400	400	400	274	274	274	274
150	150	420	480	480	480	326	326	326	326
200	200	500	600	600	600	397	397	397	397
250	250	730	730	730	730	512	512	512	512
300	300	850	850	850	850	562	562	562	562

unit:mm

NPS	d	L				H			
		CLASS 150	CLASS 300	PN16	PN40	CLASS 150	CLASS 300	PN16	PN40
1/2"	0.59	4.72	5.12	5.12	5.12	3.35	3.35	3.35	3.35
3/4"	0.79	5.51	5.51	5.91	5.91	3.43	3.43	3.43	3.43
1"	0.98	5.91	5.91	6.3	6.3	4.49	4.49	4.49	4.49
1-1/4"	1.26	7.09	-	7.09	7.09	4.49	-	4.49	4.49
1-1/2"	1.57	7.48	7.48	7.87	7.87	5.31	5.31	5.31	5.31
2"	1.97	8.27	8.27	9.06	9.06	6.1	6.1	6.1	6.1
2-1/2"	2.56	9.84	10.63	11.42	11.42	7.44	7.44	7.44	7.44
3"	3.15	11.02	11.42	12.2	12.2	7.87	7.87	7.87	7.87
4"	3.94	13.39	15.2	13.78	13.78	9.13	9.13	9.13	9.13
5"	4.92	14.96	15.75	15.75	15.75	10.79	10.79	10.79	10.79
6"	5.91	16.54	18.9	18.9	18.9	12.83	12.83	12.83	12.83
8"	7.87	19.69	23.62	23.62	23.62	15.63	15.63	15.63	15.63
10"	9.84	28.74	28.74	28.74	28.74	20.16	20.16	20.16	20.16
12"	11.81	33.46	33.46	33.46	33.46	22.13	22.13	22.13	22.13

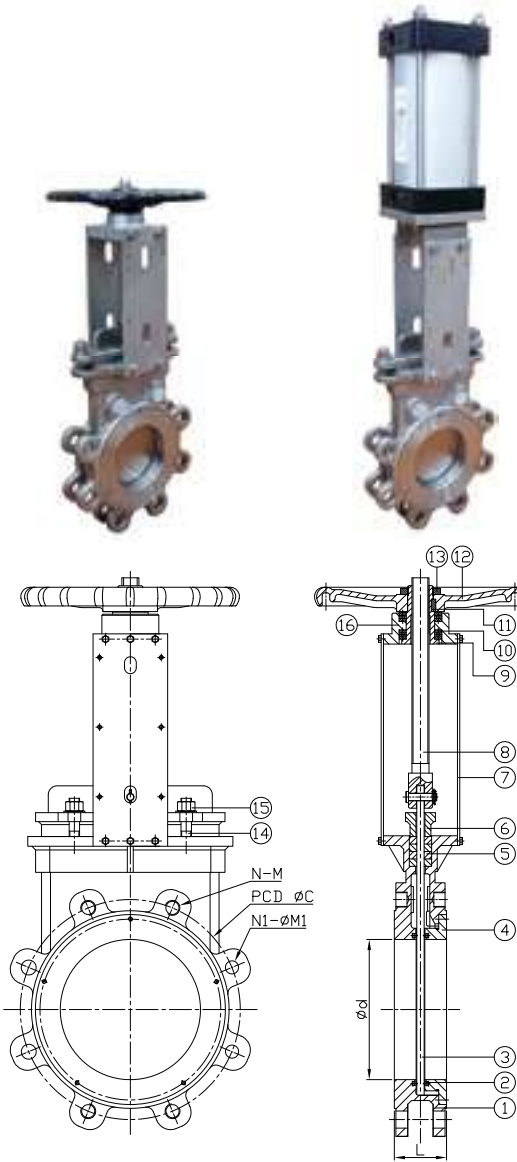
unit:in

KNIFE GATE VALVE

FEATURES

2092

- 2"~24" (DN50~DN600)
- W.P. : PN10/16
CLASS 150
JIS 10K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Automation accessories (option)



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	SEAT	EPDM
3	DISC	SS 316L
4	SEAT RETAINER	ASTM A351-CF8M
5	PACKING	PTFE
6	GLAND	ASTM A351-CF8M
7	YOKE	SS 316
8	STEM	
9	YOKE SLEEVE	COPPER ALLOY
10	BEARING	GCr15
11	KEY	1045
12	HANDWHEEL	KTH350-10
13	LOCK NUT	1045
14	STUD	ASTM A193-B8M
15	NUT	ASTM A194-8M
16	TOP SET	SS 316

PN10 ONLY, OTHER PRESSURE RATING PLEASE CONTACT US.

DN	d	C	L	N	M	N1	M1
50	50	125	48	2	M16	2	18
65	65	145	48	2	M16	2	18
80	80	160	51	2	M16	6	18
100	100	180	51	2	M16	6	18
125	125	210	57	2	M16	6	18
150	150	240	57	2	M20	6	22
200	200	295	70	2	M20	6	22
250	250	350	70	4	M20	8	22
300	300	400	76	4	M20	8	22
350	350	460	76	6	M20	10	22
400	400	515	89	6	M24	10	26
450	450	565	89	8	M24	12	26
500	500	620	114	8	M24	12	26
600	600	725	114	8	M27	12	30

unit:mm

NPS	d	C	L	N	M	N1	M1
2"	1.97	4.92	1.89	2	M16	2	0.71
2-1/2"	2.56	5.71	1.89	2	M16	2	0.71
3"	3.15	6.3	2.01	2	M16	6	0.71
4"	3.94	7.09	2.01	2	M16	6	0.71
5"	4.92	8.27	2.24	2	M16	6	0.71
6"	5.91	9.45	2.24	2	M20	6	0.87
8"	7.87	11.61	2.76	2	M20	6	0.87
10"	9.84	13.78	2.76	4	M20	8	0.87
12"	11.81	15.75	2.99	4	M20	8	0.87
14"	13.78	18.11	2.99	6	M20	10	0.87
16"	15.75	20.28	3.5	6	M24	10	1.02
18"	17.72	22.24	3.5	8	M24	12	1.02
20"	19.69	24.41	4.49	8	M24	12	1.02
24"	23.62	28.54	4.49	8	M27	12	1.18

unit:in

NEEDLE VALVE

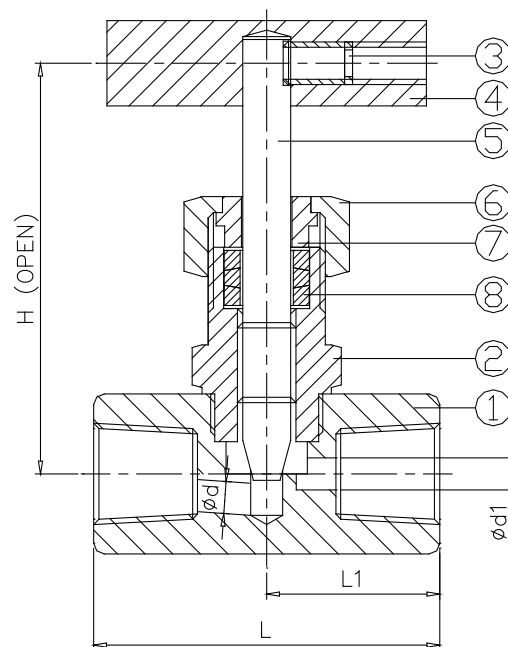
FEATURES

2032

- 1/8"~2" (DN6~DN50)
- W.P. : 6000 PSI
10000 PSI
- W.T. : -20°C~200°C (-4°F~392°F)
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A105
2	BONNET		
3	SET SCREW	SS 304	
4	HANDLE	SS 410	
5	STEM	SS 316	
6	GLAND NUT	SS 304	
7	GLAND		
8	PACKING	TEFLON	



DN	d	d1	L	L1	H
6	4	6	58	29	75
8	5	6	58	29	75
10	5	6	58	29	75
15	6	8	65	32.5	87
20	6	10	70	35	90
25	8	12	80	40	103
32	8	12	90	45	108
40	10	12	100	50	115
50	11	13.5	110	55	121

unit:mm

NPS	d	d1	L	L1	H
1/8"	0.16	0.24	2.28	1.14	2.95
1/4"	0.2	0.24	2.28	1.14	2.95
3/8"	0.2	0.24	2.28	1.14	2.95
1/2"	0.24	0.31	2.56	1.28	3.43
3/4"	0.24	0.39	2.76	1.38	3.54
1"	0.31	0.47	3.15	1.57	4.06
1-1/4"	0.31	0.47	3.54	1.77	4.25
1-1/2"	0.39	0.47	3.94	1.97	4.53
2"	0.43	0.53	4.33	2.17	4.76

unit:in

BUTTERFLY VALVE

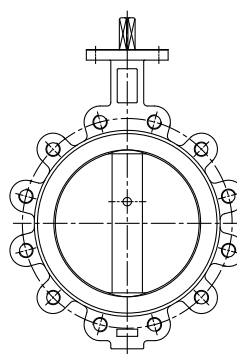
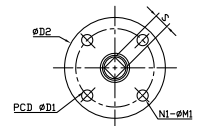
2014

FEATURES

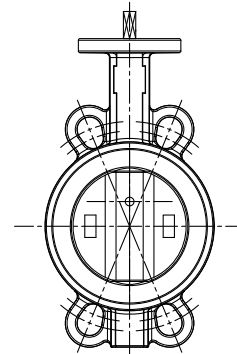
- 2"-24" (DN50~DN600)
- W.P. : PN10/16
CLASS 125/150
JIS 10K
- Wafer type (2014W) / Lug type (2014L)
- Lever operator / Gear operator (option)
- High performance butterfly valve - 2014H



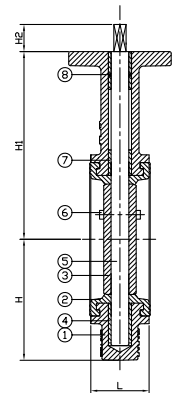
ITEM	PARTS	MATERIAL
1	BODY	CI / DI / SS 316 / SS 304 / WCB
2	SEAT	EPDM / VITON / NBR / PTFE
3	DISC	SS 316 / SS 304
4	BUSHING	PTFE
5	SHAFT	SS 316 / SS 304 / SS 410
6	PIN	SS 316 / SS 304
7	BUSHING	PTFE
8	O-RING	NBR



Lug type



Wafer type



DN	L	H	H1	H2	S	D1	D2	N1	M1	ISO 5211
50	43	72	132	10	9	50	65	4	8	F05
65	46	80	138	10	9	50	65	4	8	F05
80	46	95	153	10	9	50	65	4	8	F05
100	52	108	167	12	11	70	90	4	10	F07
125	56	125	183	16	14	70	90	4	10	F07
150	56	136	195	16	14	70	90	4	10	F07
200	60	170	236	25	17	102	125	4	12	F10
250	68	206	268	35	22	102	125	4	12	F10
300	78	236	306	35	22	102	125	4	12	F10
350	78	268	327	45	22	125	150	4	14	F12
400	102	304	400	55	27	140	175	4	18	F14
450	114	337	411	55	27	140	175	4	18	F14
500	127	368	460	55	27	140	175	4	18	F14
600	154	428	523	70	36	165	210	4	22	F16

unit:mm

NPS	L	H	H1	H2	S	D1	D2	N1	M1	ISO 5211
2"	1.69	2.83	5.2	0.39	0.35	1.97	2.56	0.16	0.31	F05
2-1/2"	1.81	3.15	5.43	0.39	0.35	1.97	2.56	0.16	0.31	F05
3"	1.81	3.74	6.02	0.39	0.35	1.97	2.56	0.16	0.31	F05
4"	2.05	4.25	6.57	0.47	0.43	2.76	3.54	0.16	0.39	F07
5"	2.2	4.92	7.2	0.63	0.55	2.76	3.54	0.16	0.39	F07
6"	2.2	5.35	7.68	0.63	0.55	2.76	3.54	0.16	0.39	F07
8"	2.36	6.69	9.29	0.98	0.67	4.02	4.92	0.16	0.47	F10
10"	2.68	8.11	10.55	1.38	0.87	4.02	4.92	0.16	0.47	F10
12"	3.07	9.29	12.05	1.38	0.87	4.02	4.92	0.16	0.47	F10
14"	3.07	10.55	12.87	1.77	0.87	4.92	5.91	0.16	0.55	F12
16"	4.02	11.97	15.75	2.17	1.06	5.51	6.89	0.16	0.71	F14
18"	4.49	13.27	16.18	2.17	1.06	5.51	6.89	0.16	0.71	F14
20"	5	14.49	18.11	2.17	1.06	5.51	6.89	0.16	0.71	F14
24"	6.06	16.85	20.59	2.76	1.42	6.5	8.27	0.16	0.87	F16

unit:in



FLANGED END SIGHT GLASS

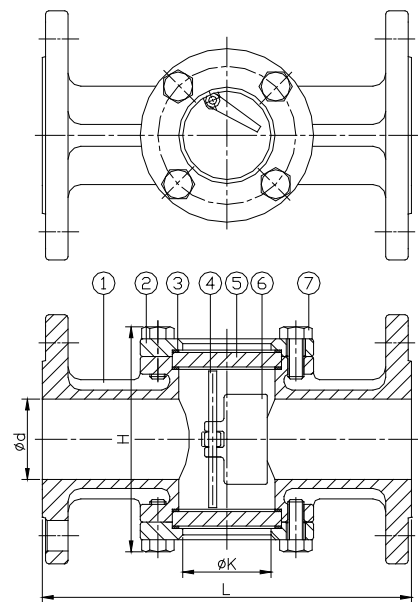
FEATURES

2055

- 1/2"~8" (DN15~DN200)
- W.P. : PN16
CLASS 150
JIS 10K
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Face to face : DIN 3202 Part1-F1



ITEM	PARTS	MATERIAL			
1	BODY	ASTM A351-CF3M 1.4409	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A216-WCB 1.0619
2	CAP				
3	GASKET	PTFE			
4	STEM	SUS 316L	SUS 316	SUS 304	
5	GLASS	GLASS			
6	INDICATOR	ASTM A351-CF3M	ASTM A351-CF8M	ASTM A351-CF8	
7	BOLT	SUS 304			CARBON STEEL



DN	d	L	H	K
15	15	130	115	35
20	20	150	115	35
25	25	160	115	35
32	32	180	143	55
40	40	200	143	55
50	50	230	143	55
65	65	290	185	85
80	80	310	196	85
100	100	350	228	110
125	125	400	268	135
150	150	480	310	160
200	200	600	400	200

unit:mm

NPS	d	L	H	K
1/2"	0.59	5.12	4.53	1.38
3/4"	0.79	5.91	4.53	1.38
1"	0.98	6.3	4.53	1.38
1-1/4"	1.26	7.09	5.63	2.17
1-1/2"	1.57	7.87	5.63	2.17
2"	1.97	9.06	5.63	2.17
2-1/2"	2.56	11.42	7.28	3.35
3"	3.15	12.2	7.72	3.35
4"	3.94	13.78	8.98	4.33
5"	4.92	15.75	10.55	5.31
6"	5.91	18.9	12.2	6.3
8"	7.87	23.62	15.75	7.87

unit:in

SCREWED END SIGHT GLASS

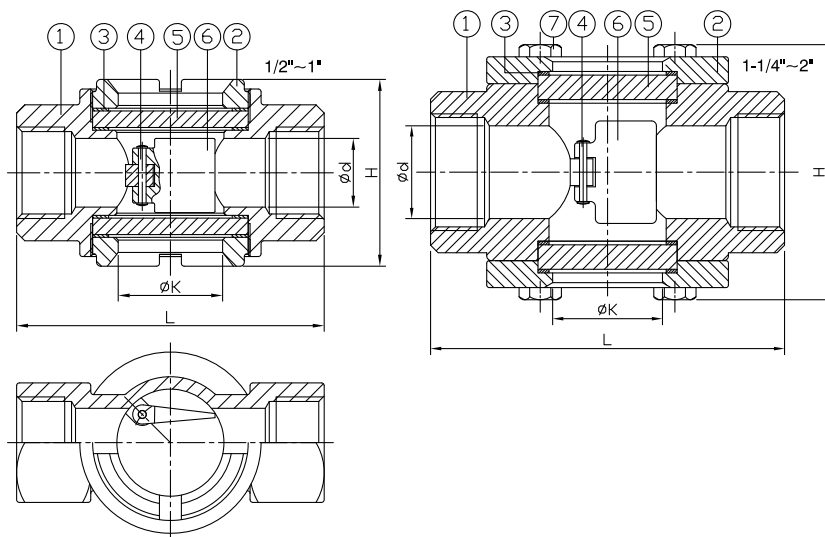
2056

FEATURES

- 1/2"~2" (DN15~DN50)
- W.P. : 200 WOG, PN16
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Thread type : ASME B1.20.1 (NPT)
DIN2999 & BS21
ISO7/1 & EN10226



ITEM	PARTS	MATERIAL		
1	BODY	ASTM A351-CF8M 1.4408	ASTM A351-CF8 1.4308	ASTM A216-WCB 1.0619
2	CAP			
3	GASKET	PTFE		
4	STEM	SUS 316	SUS 304	
5	GLASS	BOROSILICATE GLASS		
6	INDICATOR	ASTM A351-CF8M	ASTM A351-CF8	
7	BOLT	SUS 304		



DN	d	L	H	K
15	15	112	68	38
20	20	112	68	38
25	25	112	68	38
32	32	145	110	45
40	40	145	110	45
50	50	168	131	55

unit:mm

NPS	d	L	H	K
1/2"	0.59	4.41	2.68	1.5
3/4"	0.79	4.41	2.68	1.5
1"	0.98	4.41	2.68	1.5
1-1/4"	1.26	5.71	4.33	1.77
1-1/2"	1.57	5.71	4.33	1.77
2"	1.97	6.61	5.16	2.17

unit:in



BLIND FLANGE VALVE

FEATURES

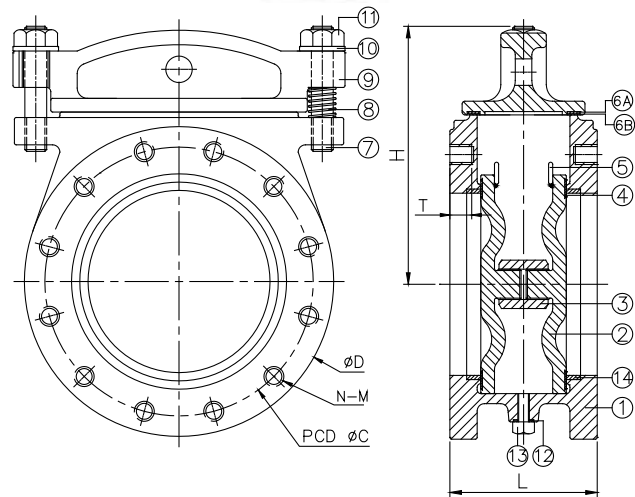
2080

- 2"-30" (DN50~DN750)
- W.P. : PN10/16/25/40
CLASS 150
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Maritime
- Petrochemical and refinery industries
- Terminals
- **DNV TYPE APPROVAL**



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M 1.4408	ASTM A216-WCB 1.0619
2	DISC	AISI 316	AISI 304
3	TIGHTENING NUT		
4	DISC SEAL	PTFE	
5	STOP PIN	AISI 316	AISI 304
6A	TOP COVER SEAL A	EPTFE	
6B	TOP COVER SEAL B	PTFE	
7	TOP COVER STUD	AISI 316	AISI 304
8	SPRING	STAINLESS STEEL	
9	TOP COVER	ASTM A351-CF8M	ASTM A216-WCB
10	WASHER	AISI 316	AISI 304
11	TOP COVER NUT		
12	DRAIN PLUG SEAL	PTFE	
13	DRAIN PLUG	AISI 316	AISI 304
14	METAL RING (2"-10")	-	

*ITEM 14 DESIGN IS ONLY FOR WCB



DN	C	D	L	H	T	N	M
50	PN10	125	165	154	173	18	M16
	PN16	125	165	154	173	18	M16
	PN25	125	165	154	173	18	M16
	PN40	125	165	154	173	18	M16
65	PN10	145	185	154	185	18	M16
	PN16	145	185	154	185	18	M16
	PN25	145	185	154	185	18	M16
	PN40	145	185	154	185	18	M16
80	PN10	160	200	154	194	18	M16
	PN16	160	200	154	194	18	M16
	PN25	190	200	154	194	18	M16
	PN40	190	200	154	194	18	M16
100	PN10	180	220	162	235	20	M16
	PN16	180	220	162	235	20	M16
	PN25	190	235	162	235	20	M20
	PN40	190	235	162	235	20	M20
125	PN10	210	250	162	245	22	M16
	PN16	210	250	162	245	22	M16
	PN25	220	270	162	245	22	M24
	PN40	220	270	162	245	22	M24
150	PN10	240	285	162	265	22	M20
	PN16	240	285	162	265	22	M20
	PN25	250	300	162	265	22	M24
	PN40	250	300	162	265	22	M24
200	PN10	295	340	162	300	24	M20
	PN16	295	340	162	300	24	M20
	PN25	310	360	162	300	24	M24
	PN40	320	375	162	300	24	M27
250	PN10	350	395	200	330	26	M20
	PN16	355	405	200	330	26	M24
	PN25	370	425	200	330	26	M27
	PN40	385	450	200	330	26	M30
300	PN10	400	445	200	360	28	M20
	PN16	410	460	200	360	28	M24
	PN25	430	485	200	360	28	M27
	PN40	450	515	200	360	28	M30

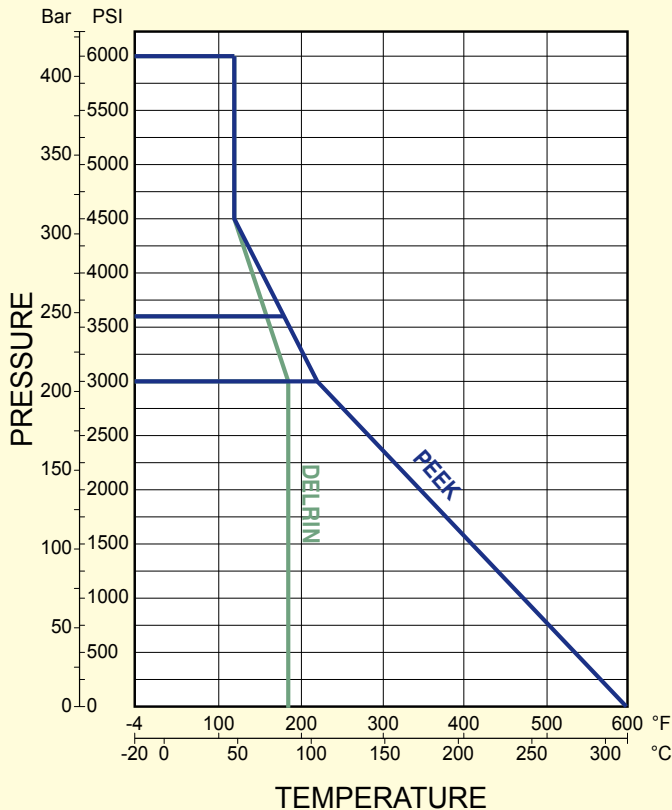
unit:mm

NPS	C	D	L	H	T	N	M
2"	PN10	4.92	6.5	6.06	6.81	0.71	M16
	PN16	4.92	6.5	6.06	6.81	0.71	M16
	PN25	4.92	6.5	6.06	6.81	0.71	M16
	PN40	4.92	6.5	6.06	6.81	0.71	M16
2-1/2"	PN10	5.71	7.28	6.06	7.28	0.71	M16
	PN16	5.71	7.28	6.06	7.28	0.71	M16
	PN25	5.71	7.28	6.06	7.28	0.71	M16
	PN40	5.71	7.28	6.06	7.28	0.71	M16
3"	PN10	6.3	7.87	6.06	7.64	0.71	M16
	PN16	6.3	7.87	6.06	7.64	0.71	M16
	PN25	7.48	7.87	6.06	7.64	0.71	M16
	PN40	7.48	7.87	6.06	7.64	0.71	M16
4"	PN10	7.09	8.66	6.38	9.25	0.79	M16
	PN16	7.09	8.66	6.38	9.25	0.79	M16
	PN25	7.48	9.25	6.38	9.25	0.79	M20
	PN40	7.48	9.25	6.38	9.25	0.79	M20
5"	PN10	8.27	9.84	6.38	9.65	0.87	M16
	PN16	8.27	9.84	6.38	9.65	0.87	M16
	PN25	8.66	10.63	6.38	9.65	0.87	M24
	PN40	8.66	10.63	6.38	9.65	0.87	M24
6"	PN10	9.45	11.22	6.38	10.43	0.87	M20
	PN16	9.45	11.22	6.38	10.43	0.87	M20
	PN25	9.84	11.81	6.38	10.43	0.87	M24
	PN40	9.84	11.81	6.38	10.43	0.87	M24
8"	PN10	11.61	13.39	6.38	11.81	0.94	M20
	PN16	11.61	13.39	6.38	11.81	0.94	M20
	PN25	12.2	14.17	6.38	11.81	0.94	M24
	PN40	12.6	14.76	6.38	11.81	0.94	M27
10"	PN10	13.78	15.55	7.87	12.99	1.02	M20
	PN16	13.98	15.94	7.87	12.99	1.02	M24
	PN25	14.57	16.73	7.87	12.99	1.02	M27
	PN40	15.16	17.72	7.87	12.99	1.02	M30
12"	PN10	15.75	17.52	7.87	14.17	1.1	M20
	PN16	16.14	18.11	7.87	14.17	1.1	M24
	PN25	16.93	19.09	7.87	14.17	1.1	M27
	PN40	17.72	20.28	7.87	14.17	1.1	M30

unit:in

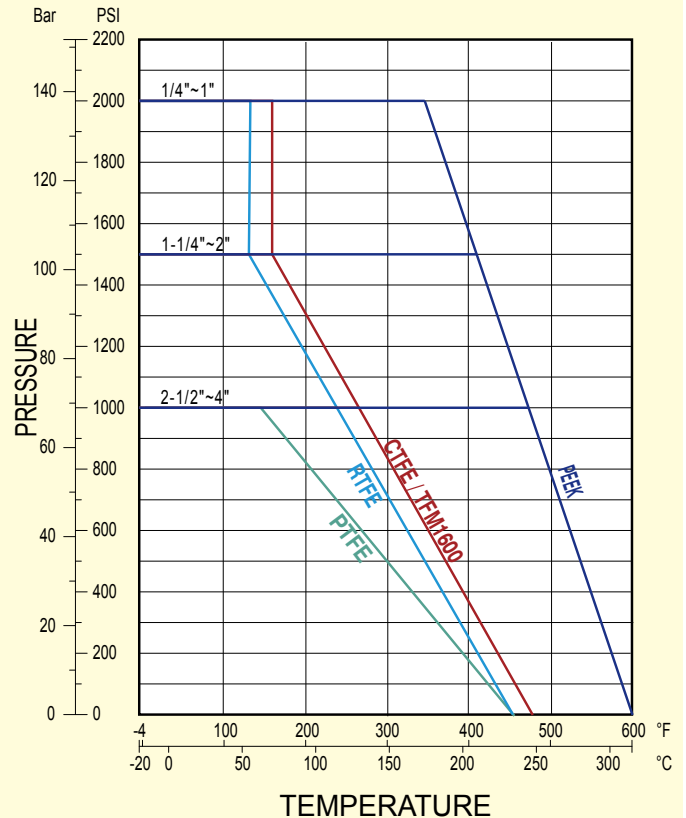
PRESSURE / TEMPERATURE RATING

PRESSURE-TEMPERATURE RATING



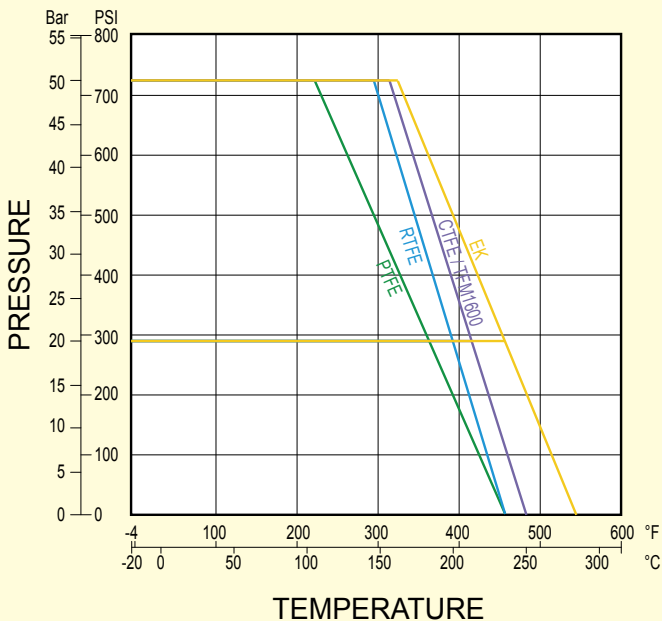
3000/3600/6000 WOG

PRESSURE-TEMPERATURE RATING



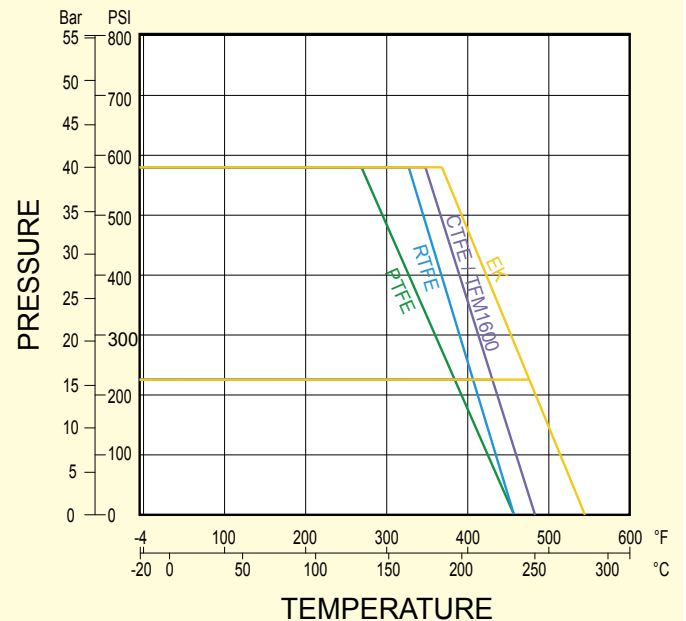
800/1000/1500/2000 WOG

PRESSURE-TEMPERATURE RATING



CLASS 150/300

PRESSURE-TEMPERATURE RATING



PN 16/40



VALVE SEAT MATERIAL SELECTION GUIDE

Material	Description	Color
PTFE	The material is the basic seat material used in most ball valves. Its chemical compatibility is excellent for almost all media service applications.	white
RTFE	15% Glass Reinforced TFE. This material is offered as the standard seal in most HAITIMA valves. Chemical resistance is compatible to virgin TFE with improved cycle life and greater pressure-temperature rating than PTFE.	Off white
CTFE	25% Carbon with 75% TFE. This material offers a wide temperature range with better cycle life than RTFE.	Black
TFM	TFM is chemically modified PTFE that fills the gap between conventional PTFE and melt-processable PFA. According to ASTM D 4894 and ISO Draft WDT 539-1.5, TFM is classified as a PTFE. Compared to conventional PTFE, TFM has lower permeability and much lower deformation under pressure (cold flow) at room and elevated temperature. Also they can be used at higher pressures.	White
PEEK	Polyether-ether-ketone-high temperature semirigid elastomer. Best suited for high pressure and temperature service. Also offers very good corrosion resistance.	Grey
DELRIN	Delrin is capable of handling extremely high pressure. Must not used for oxygen service.	Creamy white
Cavity Filler	Designed to reduce the possibility of contamination by entrapment of process fluids in the void normally found behind the ball and the valve body in conventionally designed ball valves. Ideal for application where cross contamination is a concern, such as paints and dyes.	white
EPDM	EPDM has good abrasion and tear resistance while offering excellent chemical resistance to a variety of acid and weak alkaline-based media. It also has exceptional weather aging and ozone resistance. EPDM is susceptible to attacks by oils and therefore is not recommended for applications involving petroleum oils, hydrocarbons, alcohols, strong acids or strong alkalines.	Black
BUNA-N	BUNA-N (NBR) is a general purpose polymer with good resistance to oil, water, solvents and hydraulic fluids. With good compression, tensile strength and abrasion-resistance, BUNA-N performs well with diverse media such as fatty acids, oils, alcohols, compressed air, Di-ester based fluids, inactive gasses or glycerine.	Black
Viton	Viton is DuPont's trademark name for Fluoroelastomer and is widely recognized for excellent heat resistance. With extensive chemical compatibility spanning a wide range of concentration and temperature ranges, fluorocarbon elastomers have gained acceptance in a variety of applications. Viton offers excellent resistance to aggressive fuels and chemicals as well as diverse media as mineral acids, salt solutions, chlorinated hydrocarbons, and petroleum oils.	Black or red
GRAPHITE	Graphite is chemically resistant to attack from nearly all organic and inorganic fluids with the exception of highly oxidizing chemicals and concentrated, highly oxidizing mineral acids. Because of its high temperature range, graphite is used with our fire safe valves.	Shiny black

VALVES DESIGN

DESIGE

ASME/ANSI B16.34
EN 12516
API 600
API 602
API 603
API 608
API 609

BUTT WELD ENDS

ASME/ANSI B16.25
DIN 3239 PART 1

SOCKET WELD ENDS

ASME/ANSI B16.11
DIN 3239 PART 2

THREADED ENDS

ASME/ANSI B1.20.1
ISO 7/1
DIN 2999
BS21
EN 10226

FLANGED ENDS

ASME/ANSI B16.5
ASME/ANSI B16.10
ASME/ANSI B16.34
EN 1092-1
EN 558
DIN 3202

MOUNTING PAD

ISO 5211

"SOUR GAS"

NACE MR0175

BIOPROCESSING EQUIPMENT

ASME BPE

FIRE SAFE TEST

API 607
ISO 10497

LOW FUGITIVE EMISSION

TA-Luft
ISO 15848-1
API 624
API 641

TEST AND INSPECTION

API 598
EN 12266

MARKING

ASME/ANSI B16.34
MSS SP 25
ISO 5209

SPECIAL MATERIALS INTRODUCTION

MATERIAL TYPE	MATERIAL CODE
Austenitic Stainless Steel	CN7M, CN3MN
Precipitation Hardening Stainless Steel	17-4PH, 15-5PH
Duplex Stainless Steel	CD4MCu, CD3MN, CE3MN, Alloy2205, Ferrallium255, SAF2507, ASTM A890
Monel	Monel400
Hastelloy	Hastelloy C276, Hastelloy B2, CW2M, CW12MW
Inconel	Inconel 600