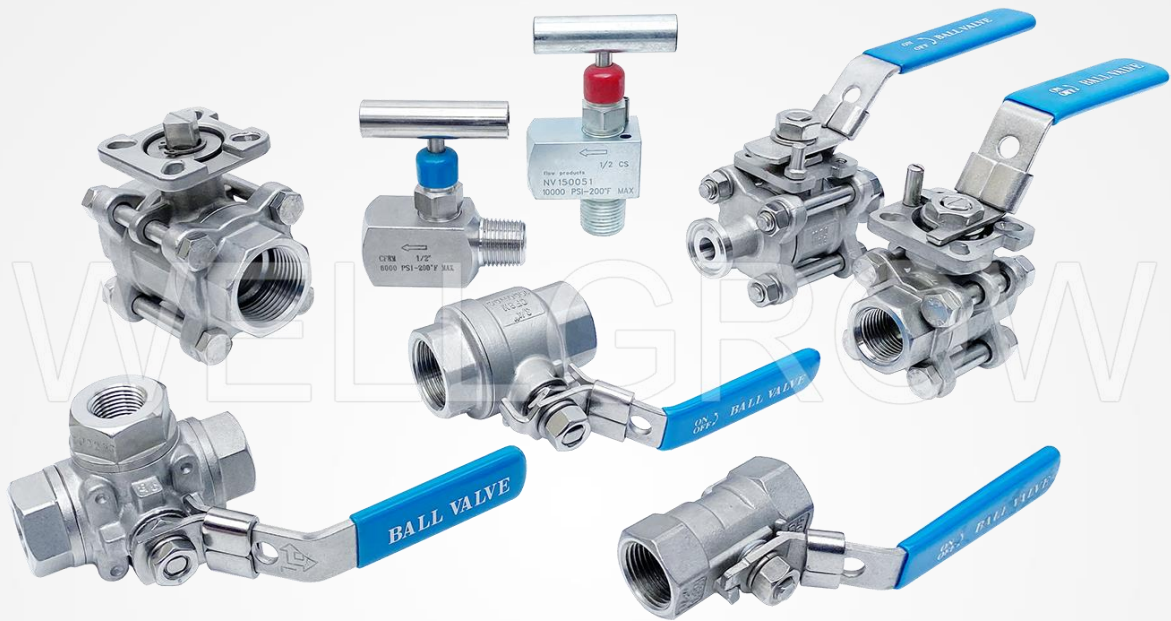


# VALVES

WELLGROW INDUSTRIES CORP.



- ▲ 1 Piece Ball Valves
- ▲ 2 Piece Ball Valves
- ▲ 3 Piece Ball Valves
- ▲ 3 Way Ball Valves
- ▲ Flanged Ball Valves
- ▲ Check Valves
- ▲ Globe Valves
- ▲ Gate Valves
- ▲ Knife Gate Valves
- ▲ Needle Valves
- ▲ Butterfly Valves
- ▲ Diverter Valves
- ▲ Strainers
- ▲ Sight Glasses

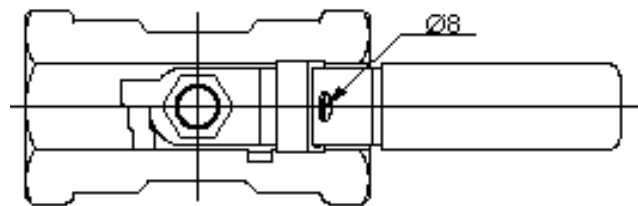
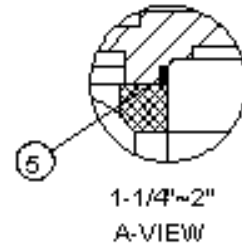
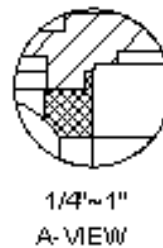
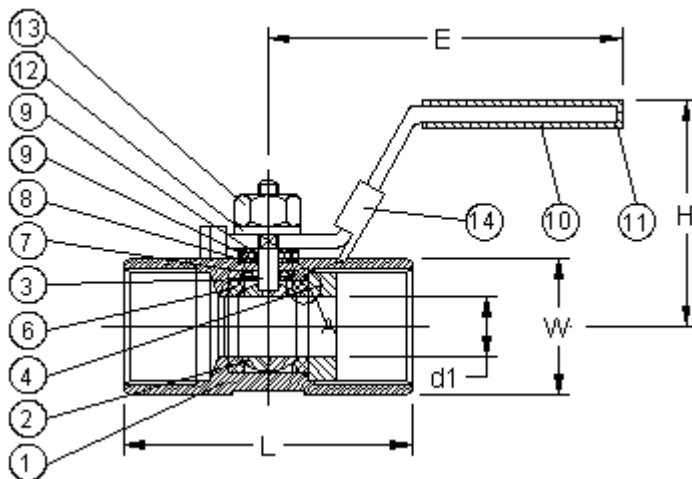
**VBR1 1 Piece Ball Valve 1000WOG, Reduced Port**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

**Options**

1. Carbon/ Stainless steel body construction.
2. Oval/ Butterfly handle available.
3. Locking device is available if requested.



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	INSERT	SS316
5	BODY SEAL	PTFE
6	SEAT	PTFE
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	HANDLE WASHER	SS304
13	HANDLE NUT	SS304
14	LOCKING DEVICE	SS304 (OPTION)

**Dimension**

SIZE	d1	L	E	H	W
1/4"	5.0	39.0	69.0	35.0	17.0
3/8"	7.2	44.0	79.0	36.0	21.0
1/2"	9.2	56.5	109.0	40.0	25.0
3/4"	12.5	59.0	109.0	42.0	32.0
1"	15.0	71.0	111.7	47.0	38.0
1-1/4"	20.0	78.0	111.7	53.0	48.0
1-1/2"	25.0	83.0	157.0	62.0	53.0
2"	32.0	100.0	155.5	67.0	64.0

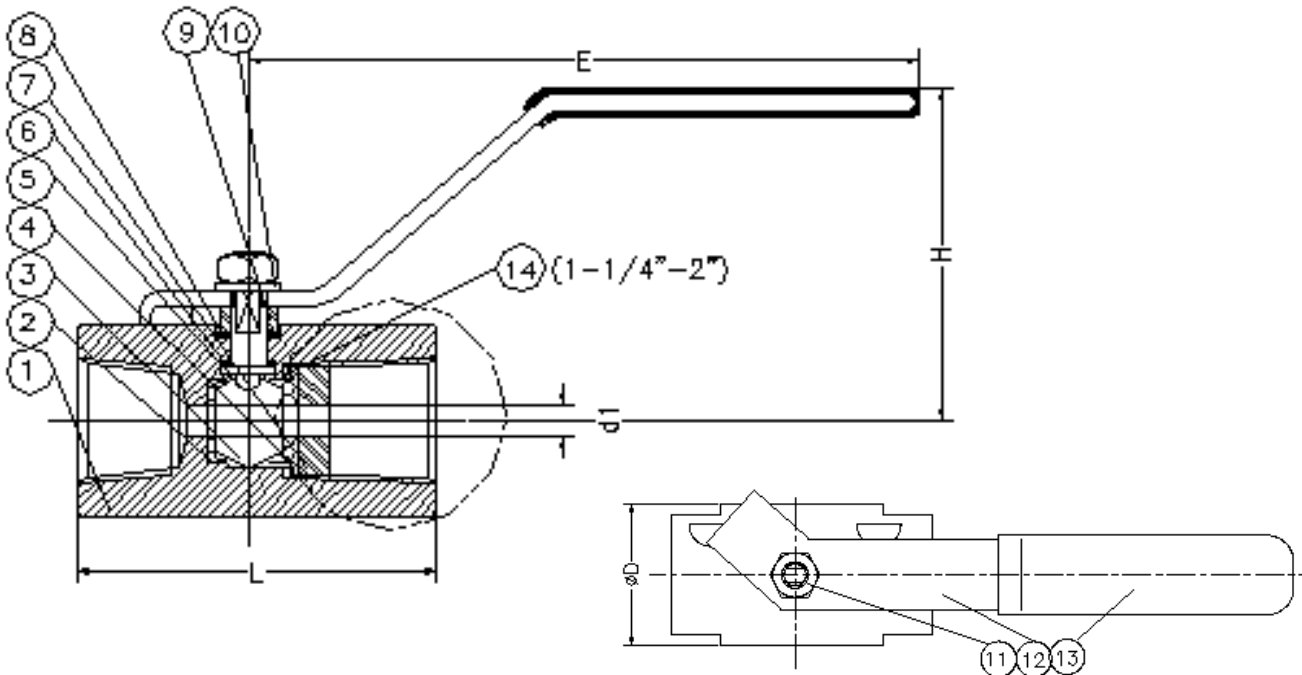
**VBA1 1 Piece Ball Valve Bar Stock (Round Bar) 1000WOG, Reduced Port**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

**Options**

1. Carbon/ Stainless steel body construction
2. Oval/ Butterfly handle is available if requested



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	SEAT	PTFE
3	BALL	SS316
4	SEAT 2	PTFE
5	STEM	SS316
6	THRUST WASHER	PTFE
7	INSERT	SS316
8	STEM SEAL	PTFE
9	WASHER	SS304
10	CONICAL SPRING WASHER	SS304
11	NUT	SS304
12	LEVER HANDLE	SS304
13	HANDLE COVER	PLASTIC
14	SEAT	PTFE

**Dimension**

SIZE	ØD	d1	E	L	H
1/4"	22	9.5	110	50.5	55
3/8"	28	9.5	110	60	55
1/2"	32	9.2	110	60	55
3/4"	38	12.5	120	67	58
1"	45	17	146	76	67
1-1/4"	55	21	146	90	72
1-1/2"	65	25	150	98	80
2"	75	32	150	112	85

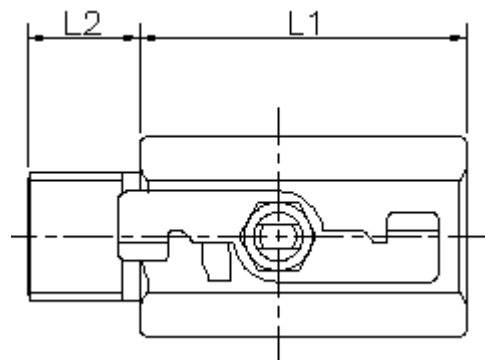
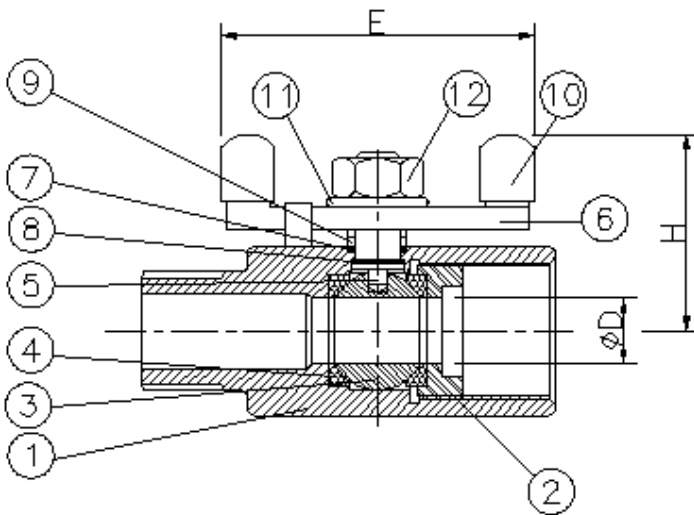
## VBB1 1 Piece Ball Valve 1000WOG, Reduced Port, Butterfly Handle, Male x Female

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

### Options

1. Carbon/ Stainless steel body construction
2. Oval/ Butterfly handle is available if requested



### Dimension

SIZE	ØD±0.5	L1±1.0	L2±1.0	H±3.0	E±3.0	WT/KG
1/4"	5	34	12	24	48.5	0.07
3/8"	7	35.5	15	28	51.5	0.12
1/2"	9.2	42	18.5	30	55.5	0.20
3/4"	12.7	43	18.5	34	55.5	0.29

### Material List

NO	PART NAME	MATERIAL
1	BODY	SS316
2	SEAT RETAINER	SS316
3	BALL	SS316
4	SEAT	PTFE (RTFE)
5	STEM	SS316
6	HANDLE	SS304
7	STEM PACKING	PTFE
8	THRUST WASHER	PTFE
9	GLAND RING	SS304
10	PLASTIC COVER	PLASTIC
11	SPRING WASHER	SS304
12	NUT	SS304

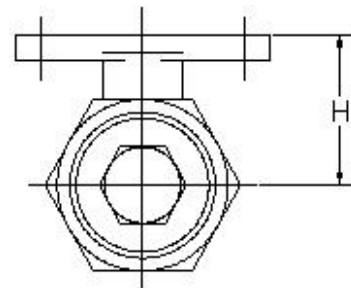
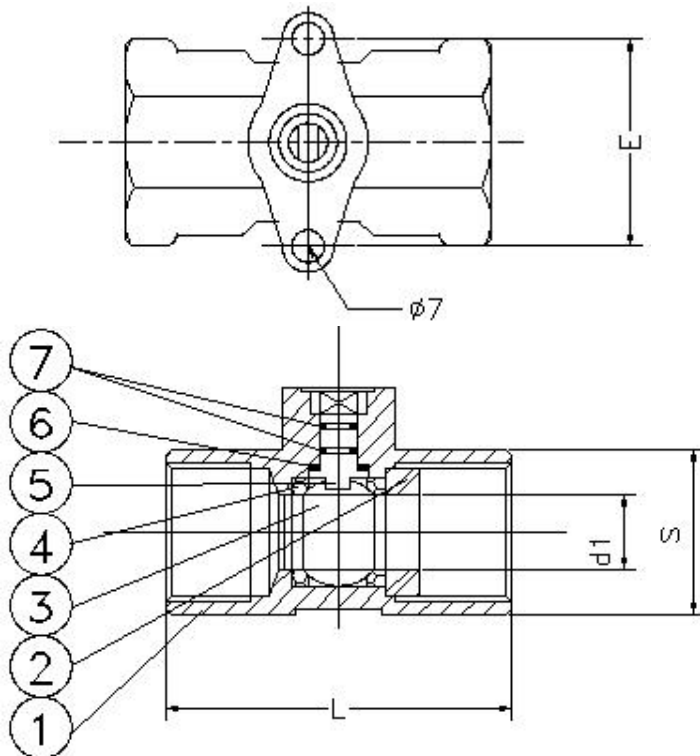
**VBR1D 1 Piece Ball Valve 800WOG, Reduced Port, Direct Mount**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 800WOG

**Options**

1. Carbon/ Stainless steel body construction
2. Oval/ Butterfly handle is available if requested



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	CAP	SS316
3	BALL	SS316
4	SEAT	PTFE
5	THRUST WASHER	PTFE
6	STEM	SS316
7	O RING	VITON

**Dimension**

SIZE	d1	L	H	E	S
1/4"	5.0	39	26	38.5	17
3/8"	7.2	44	27	38.5	19
1/2"	9.2	56.5	26.5	38.5	25
3/4"	12.5	59	28.5	38.5	32
1"	15	71	32.5	38.5	38
1-1/4"	20	78	36	38.5	49
1-1/2"	25	83	41.5	38.5	53
2"	32	100	47	38.5	64

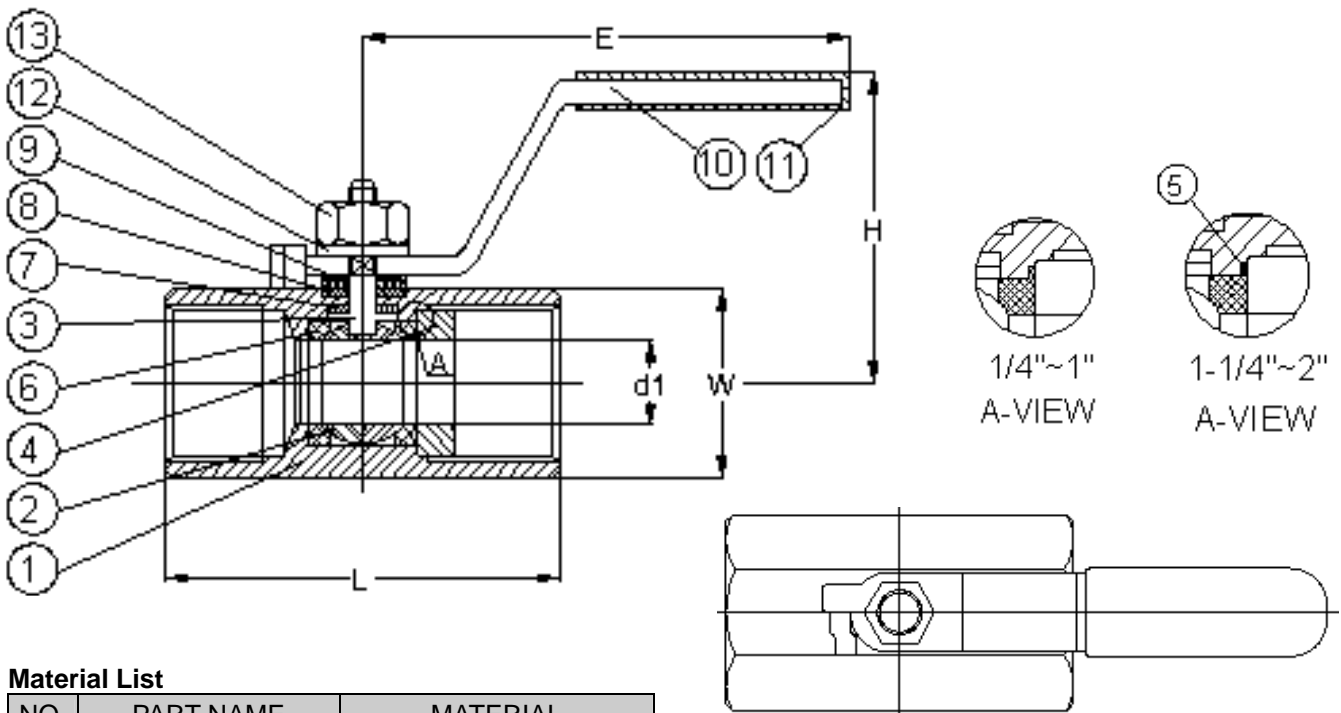
**VBM1 1 Piece Ball Valve Hex Bar 1000WOG, Reduced Port**

**Features**

- 1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
- 2. Investment casting
- 3. Blow-out proof stem
- 4. Pressure: 1000WOG

**Options**

- 1. Carbon/ Stainless steel body construction
- 2. Oval/ Butterfly handle is available if requested



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	ASTM A351 GR.CF8M
2	BALL	SS316/CF8M
3	STEM	SS316
4	INSERT	ASTM A351 GR.CF8M
5	BODY SEAL	PTFE
6	SEAT	PTFE
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND WASHER	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	SPRING WASHER	SS304
13	HANDLE NUT	SS304

**Dimension**

SIZE	d1	L	E	H	W
1/4"	5	39.0	70.0	30.5	17.0
3/8"	7.2	44.0	81.5	31.0	21.0
1/2"	9.2	56.5	97.0	47.0	25.0
3/4"	12.5	59.0	97.0	51.0	32.0
1"	15.0	71.0	101.0	52.0	38.0
1-1/4"	20.0	78.0	101.0	57.0	48.0
1-1/2"	25.0	83.0	146.0	66.5	53.0
2"	32.0	98.0	146.0	71.5	64.0

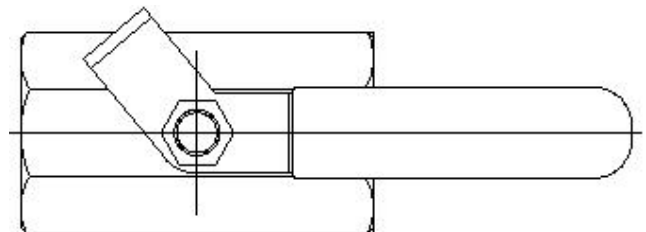
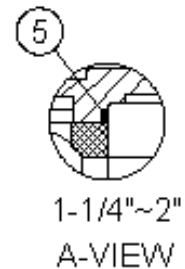
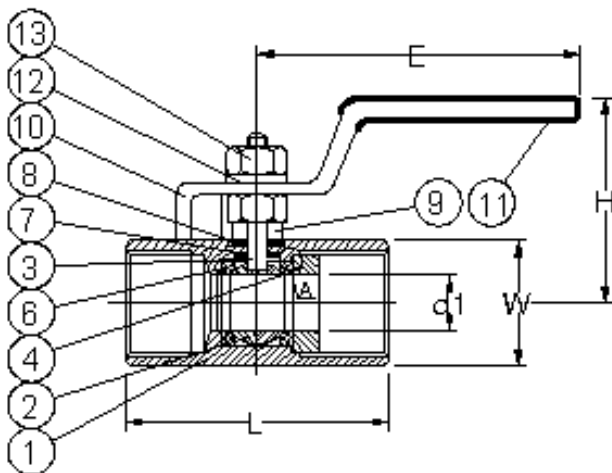
## VBV1 1 Piece Ball Valve 1500WOG/ 2000WOG, Reduced Port

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/4"~1" :2000WOG  
1-1/4"~2" :1500WOG

### Options

1. Carbon/ Stainless steel body construction
2. Oval/ Butterfly handle is available if requested



### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316/CF8M
3	STEM	SS316
4	INSERT	SS316
5	BODY SEAL	PTFE
6	SEAT	PTFE + 15%G.F.
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND BUSHING	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	SPRING WASHER	SS304
13	HANDLE NUT	SS304

### Dimension

SIZE	d1	L	E	H	W
1/4"	5.0	41.3	61.0	29.5	21.0
3/8"	7.2	46.0	79.0	34.5	23.0
1/2"	9.2	57.2	108.0	56.0	29.0
3/4"	12.5	65.1	110.0	65.0	35.0
1"	15.0	76.2	122.0	68.0	41.0
1-1/4"	20.0	92.1	145.0	79.5	55.0
1-1/2"	24.5	98.4	148.0	84.0	57.0
2"	32.0	114.3	148.0	92.5	73.5

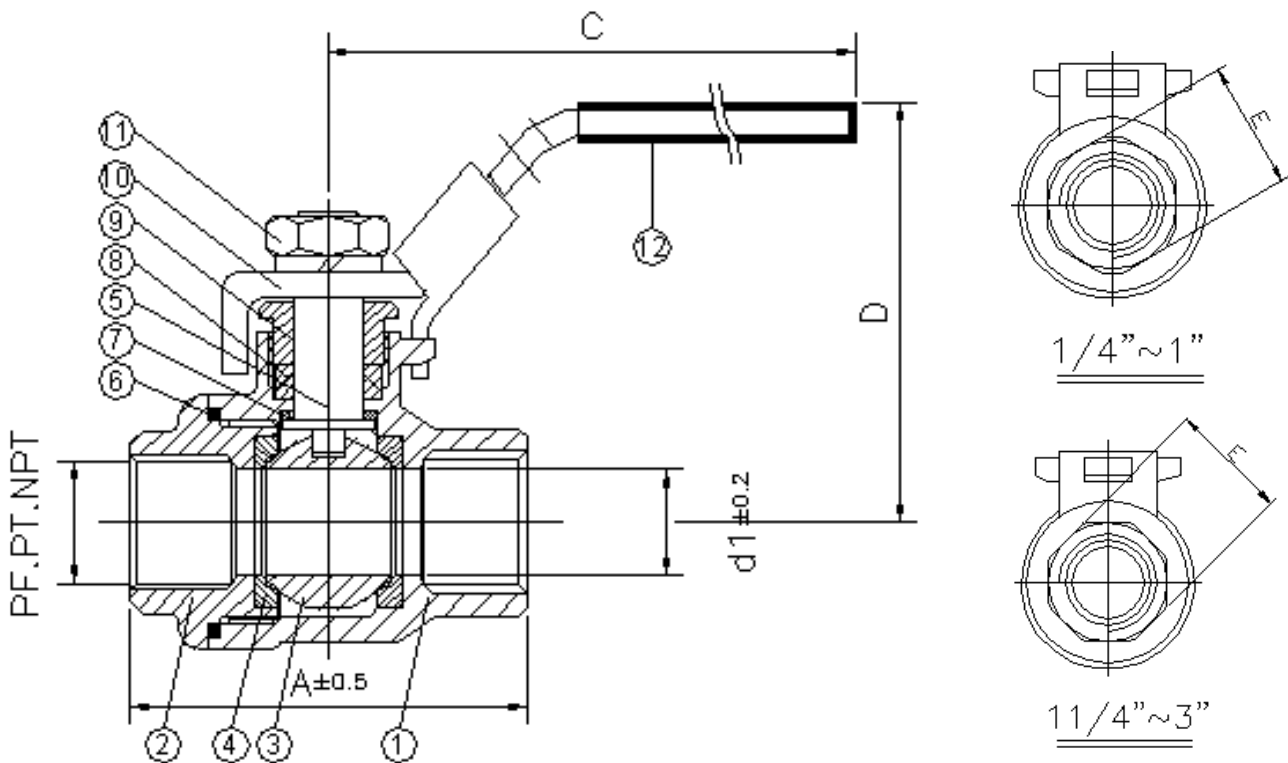
**VBM2C 2 Piece Ball Valve 1000WOG, Full Port**

**Features**

- 1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
- 2. Investment casting
- 3. Blow-out proof stem
- 4. Pressure: 1000WOG

**Options**

- 1. Carbon/ Stainless steel body construction
- 2. Locking device is available if requested



**Material List**

NO.	PART NAME	MATERIAL	
1	BODY	CF8M	CF3M
2	CAP	CF8M	CF3M
3	BALL	CF8M	CF3M
4	BALL SEAT	PTFE	PTFE
5	STEM	SS316	SS316L
6	GASKET	PTFE	PTFE
7	THRUST WASHER	PTFE	PTFE
8	STEM PACKING	PTFE	PTFE
9	GLAND	SS304	SS304
10	HANDLE	SS304	SS304
11	HANDLE NUT	SS304	SS304
12	HANDLE COVER	PLASTIC	PLASTIC

**Dimension**

SIZE	A	d1	C	D	E
1/4"	46.6	11.5	75	50	21.5
3/8"	46.6	12.5	75	50	21.5
1/2"	56.3	15.0	85	56.5	24
3/4"	61.5	20.0	85	60.5	31.5
1"	75.5	24	110	68.8	40
1-1/4"	85.8	31	110	75	49
1-1/2"	94.8	37	140	83.5	55
2"	114.2	50	140	95	67
2-1/2"	139.8	62	185	127.3	84
3"	156.4	75	200	136.1	98



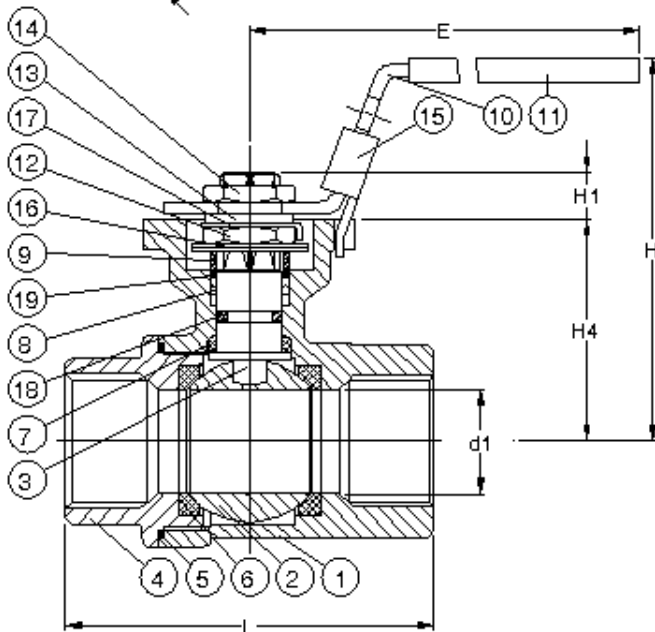
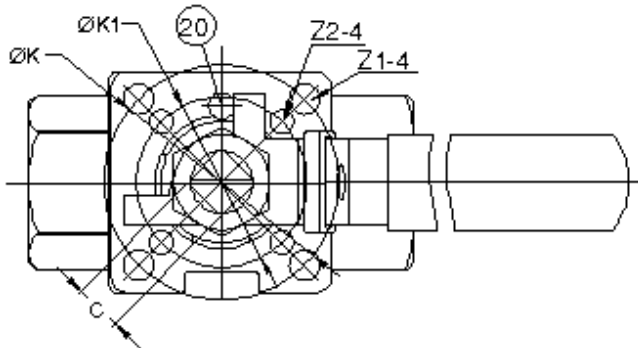
**VBM2D 2 Piece Ball Valve 1000WOG, Full Port, ISO 5211 Direct Mount**

**Features:**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

**Note:**

1. Our quote is without handle.
2. Handle and locking device are available if requested.



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	BODY SEAL	PTFE.
6	SEAT	PTFE.
7	THRUST WASHER	PTFE.
8	STEM PACKING	PTFE.
9	GLAND BUSH	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	STEM NUT	SS304
13	HANDLE WASHER	SS304
14	HANDLE NUT	SS304
15	LOCKING DEVICE	SS304
16	BELLEVILLE WASHER	SS304-CSP
17	TAB WASHER	SS304
18	STEM O-RING	VITON
19	PACKING FOLLOWER	PTFE.+25%GF
20	STOP PIN	SS304

**Dimension**

SIZE	d1	L	E	H	H1	H4	C	ØK	ØK1	Z1-4	Z2-4	
DN8	1/4"	11.5	65.3	112.0	72.9	8.5	37.0	9.0	50.0	36.0	7.0	6.0
DN10	3/8"	12.5	65.3	112.0	72.9	8.5	37.0	9.0	50.0	36.0	7.0	6.0
DN15	1/2"	15.0	65.3	112.0	72.9	8.5	37.0	9.0	50.0	36.0	7.0	6.0
DN20	3/4"	20.0	77.3	112.0	81.8	8.5	45.0	9.0	50.0	36.0	7.0	6.0
DN25	1"	25.0	88.7	136.0	90.5	11.4	53.5	9.0	50.0	36.0	7.0	6.0
DN32	1-1/4"	32.0	102.4	185.0	98.0	11.4	59.0	9.0	50.0	36.0	7.0	6.0
DN40	1-1/2"	38.0	109.0	197.9	114.7	14.0	74.8	14.0	70.0	50.0	9.0	7.0
DN50	2"	50.0	125.3	197.9	124.0	13.7	83.5	14.0	70.0	50.0	9.0	7.0

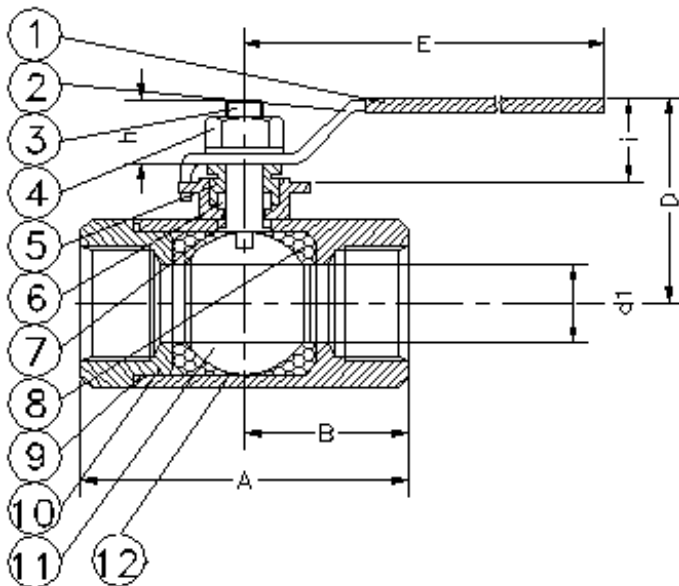
## VBR2 2 Piece Ball Valve 1500/2000WOG, STD Port

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/4"~1" : 2000WOG  
1-1/4"~2" : 1500WOG

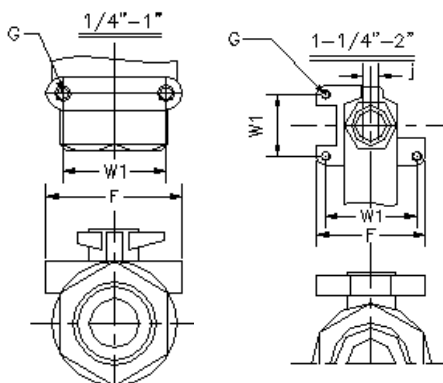
### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



### Material List

NO.	PART NAME	MATERIAL	
		STAINLESS STEEL	CARBON STEEL
1	HANDLE COVER	PLASTIC	PLASTIC
2	HANDLE	SS304	SS304
3	STEM	SS316	SS316
4	HANDLE NUT	SS304	SS304
5	GLAND	SS304	SS304
6	PACKING	PTFE	PTFE
7	THRUST WASHER	PTFE	PTFE
8	SEAT	PTFE+15%G/F	PTFE+15%G/F
9	GASKET	PTFE	PTFE
10	CAP	SS316	WCB
11	BALL	SS316	SS316
12	BODY	SS316	WCB



### Dimension

SIZE	A	B	d1	D	E	F	G	W1	h	i	j
1/4"	52.6	25.5	11.5	54.5	97	39	W3/16-24	28.2	11	30	5.2
3/8"	56.5	25.5	12.5	54.5	97	39	W3/16-24	28.2	11	30	5.2
1/2"	59.2	28.5	12.7	54.5	97	39	W3/16-24	28.2	11	30	5.2
3/4"	78.9	38.1	17.5	64.1	119	46	W3/16-24	34.7	12	32.9	6.2
1"	84.9	40.8	22.3	67.1	119	46	W3/16-24	34.7	12	33.1	6.2
1-1/4"	102.6	51.3	25.4	84.5	144	50	W1/4-20	35.6	20	40.8	9.3
1-1/2"	110.6	54.7	31.8	84.6	144	50	W1/4-20	35.6	20	41	9.3
2"	136.1	67.2	38.1	105	180	50	W1/4-20	35.6	20	51.8	9.3

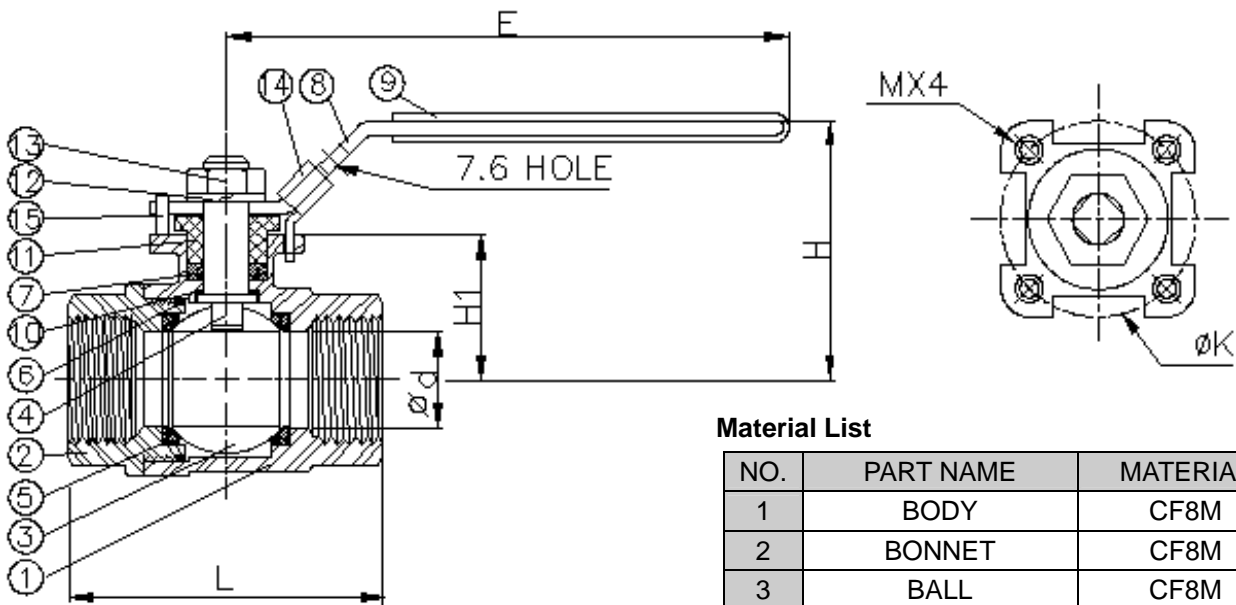
**VBM2H 2 Piece Ball Valve 3000WOG, Full Port**

**Features**

- 1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
- 2. Investment casting
- 3. Blow-out proof stem
- 4. Pressure: 3000WOG

**Options**

- 1. Locking device is available if requested



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	BONNET	CF8M
3	BALL	CF8M
4	STEM	SS316
5	BALL SEATS	TFM1600
6	END SEAL	PTFE
7	STEM PACKINGS	PTFE
8	HANDLE	STAINLESS STEEL
9	HANDLE SLEEVE	VINYL GRIP
10	THRUST WASHER	PTFE
11	GLAND	SS304
12	WASHER	SS304
13	HANDLE NUT	SS304
14	LOCKING PLATE	STAINLESS STEEL
15	STOP PIN	SS304

**Dimension**

SIZE	Ød	E	M	ØK	H1	H	L
1/4"	12.5	120	M5	36	24	50	60
3/8"	12.5	120	M5	36	24	50	60
1/2"	15	120	M5	36	29	55	75
3/4"	20	145	M5	42	32.5	65	80
1"	25.4	145	M5	42	38	72	90
1-1/4"	32	178	M6	50	50	85	110
1-1/2"	38.1	178	M6	50	54	90	120
2"	50	178	M6	50	63	98	140

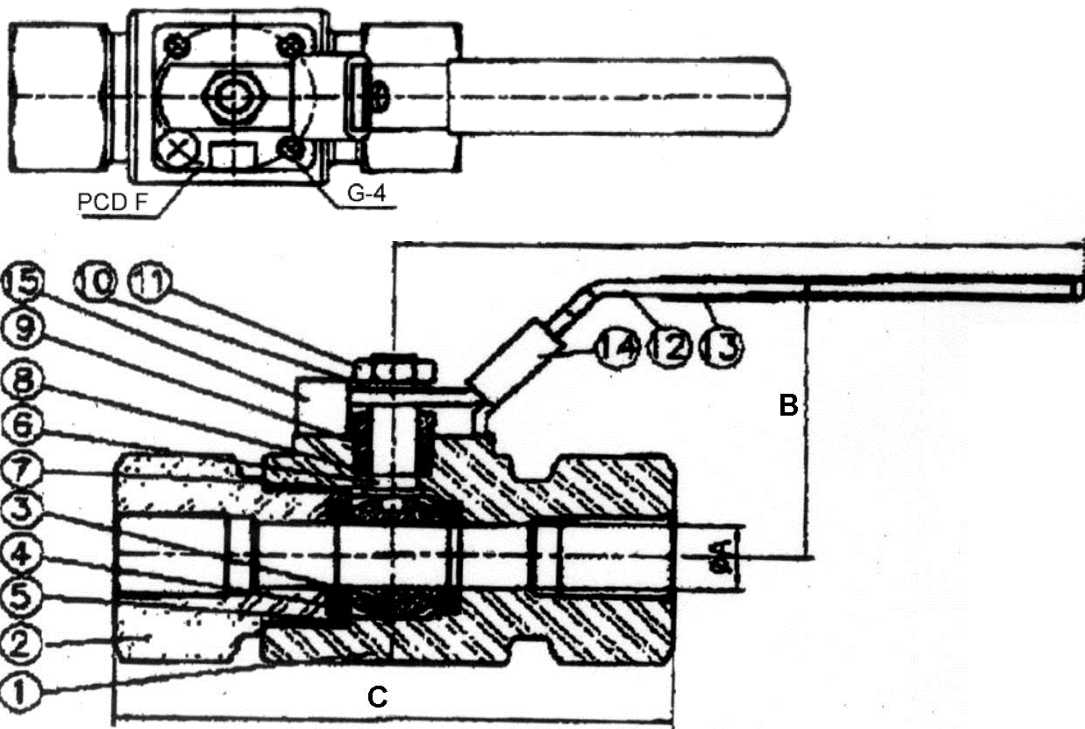
**VB260 2 Piece Ball Valve 6000WOG, Full Port**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 6000WOG
5. Adjustable stem packing

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	A351 CF8M/A216 WCB
2	END CAP	A351 CF8M/A216 WCB
3	BALL	A351 CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	STEM	SUS316
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND NUT	SUS304
10	HANDLE WASHER	SUS304
11	HANDLE NUT	SUS304
12	HANDLE	SUS304
13	HANDLE COVER	PVC
14	LOCKING PLATE	SUS304
15	STOP PIN	SUS304

**Dimension**

Size	A	B	C	D	F	G
1/4"	6.4	56	76.3	129	36	M5X0.8P
3/8"	9.6	56	76.3	129	36	M5X0.8P
1/2"	12.7	56	101.4	129	36	M5X0.8P
3/4"	20	68	108.2	150	42	M5X0.8P
1"	25.4	88	114.4	205	42	M5X0.8P
1-1/2"	38.1	113	133.3	260	50	M6X1.0P
2"	50	113	168.7	260	50	M6X1.0P

**VBM3 3 Piece Ball Valve 1000WOG, Full Port**

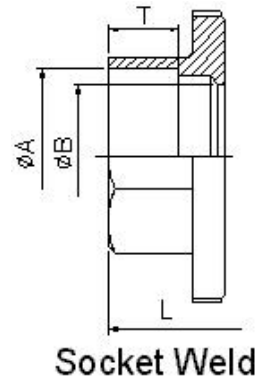
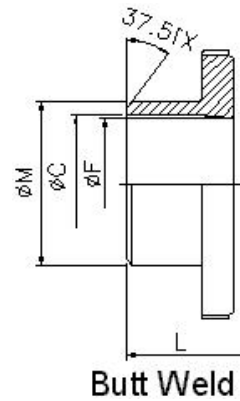
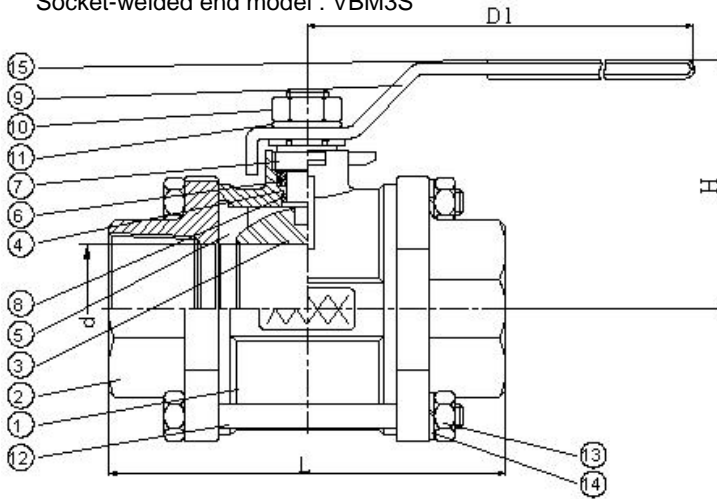


**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT  
Butt Weld: ASME B16.25  
Socket Weld: ASME B16.11
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/4"~2" : 1000WOG  
2-1/2"~4" : 800WOG

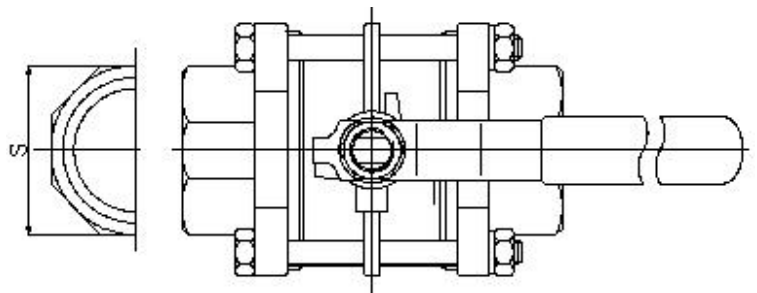
**Options**

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested
3. Butt-welded end model : VBM3B  
Socket-welded end model : VBM3S



**Material List**

NO.	PART NAME	MATERIAL	
		STAINLESS STEEL	CARBON STEEL
1	BODY	ASTM A351 GR.CF8M	ASTM A216 WCB
2	CAP	ASTM A351 GR.CF8M	ASTM A216 WCB
3	BALL	ASTM A351 GR.CF8M	ASTM A351 GR.CF8M
4	STEM	ASTM A276 Gr.316	ASTM A276 Gr.316
5	BALL SEATS	PTFE	PTFE
6	STEM PACKING	PTFE	PTFE
7	GLAND	SS304	SS304
8	THRUST WASHER	PTFE	PTFE
9	HANDLE	SS304	SS304
10	HANDLE NUT	SS304	SS304
11	HANDLE WASHER	SS304	SS304
12	BOLTS	SS304	SS304
13	BOLTS BUTS	SS304	SS304
14	BOLTS WASHER	SS304	SS304
15	HANDLE SLEEVE	VINYL GRIP	VINYL GRIP



**Dimension**

SIZE	d	L	H	D1	S	A	B	T	C	F	M
1/4"	11.5	54.0	49.0	97.4	23.0	14.2	11.5	10	11	11	13.7
3/8"	12.5	54.0	49.0	97.4	23.0	17.5	12.5	10	12.5	12.5	17.1
1/2"	15.0	63.5	58	122.9	28.0	21.8	15	10	15.8	15	21.3
3/4"	20.0	72.5	61.0	122.9	34.0	27.4	20	13	20.9	20	26.7
1"	25.0	81.0	68	144.9	41.0	34.1	25	13	26.6	25	33.4
1-1/4"	32.0	94.5	73.5	144.9	50.0	42.7	32	13	35.1	32	42.2
1-1/2"	38.0	108	84.5	188.9	57.0	49	38.1	13	40.9	38.1	48.3
2"	50.0	121.5	93.2	188.9	69.0	61	50	16	52.5	50	60.3
2-1/2"	65.0	157.5	131.8	255.3	88.0	77	65	16	65	62.7	73
3"	80.0	190	140	260.8	102	90.2	80	16	77.9	77.9	88.9
4"	100	225	173.6	322.2	126	115.3	100	22	102.3	100	114.3

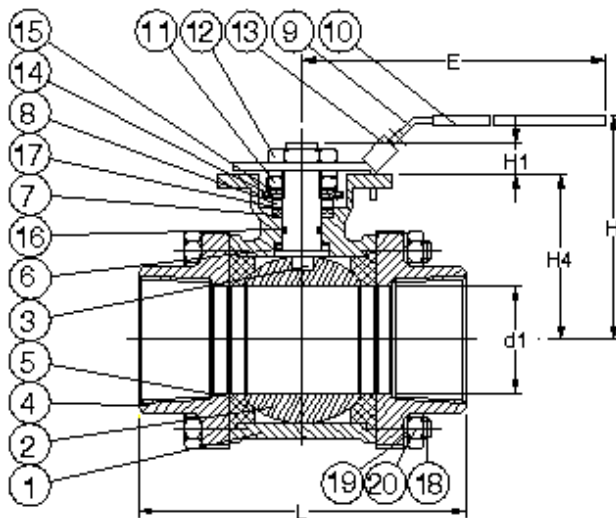
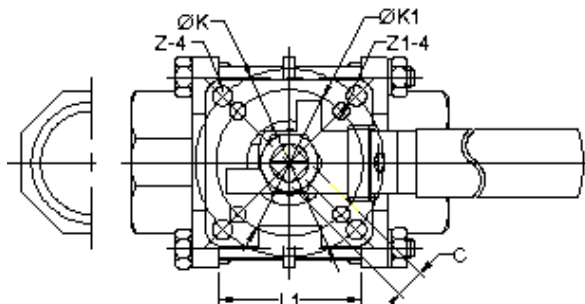
## VBM3D 3 Piece Ball Valve 1000WOG, Full Port, ISO5211 Direct Mount

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/4"~2" : 1000WOG  
2-1/2"~4" : 800WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested
3. Butt-weld end model : VBM3DB



### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	SEAT	RTFE
6	THRUST WASHER	RTFE
7	STEM PACKING	RTFE
8	GLAND BUSH	SS304
9	HANDLE	SS304
10	HANDLE COVER	PLASTIC
11	STEM NUT	SS304
12	HANDLE NUT	SS304
13	LOCKING PAD	SS304
14	BEVELILLE WASHER	SS304-CSP
15	TAB WASHER	SS304
16	O-RING	VITON
17	PACKING FOLLOWER	PTFE + 25% G.F.
18	BODY BOLT	SS304
19	BOLT WASHER	SS304
20	BOLT NUT	SS304

### Dimension

SIZE	d1	L	E	H	H1	H4	C	ØK	ØK1	Z-4	Z1-4	L1
1/4"	11.5	63.5	112.0	73.0	8.5	37	9.0	50.0	36.0	7.0	6.0	22.5
3/8"	12.5	63.5	112.0	73.0	8.5	37	9.0	50.0	36.0	7.0	6.0	22.5
1/2"	15.0	63.5	112.0	73.0	8.5	37	9.0	50.0	36.0	7.0	6.0	22.5
3/4"	20.0	72.5	112.0	80.8	8.5	45.0	9.0	50.0	36.0	7.0	6.0	27.5
1"	25.0	81.0	136.0	90.5	11.4	53.5	9.0	50.0	36.0	7.0	6.0	34.0
1-1/4"	32.0	94.5	185.0	98.7	11.4	59.0	9.0	50.0	36.0	7.0	6.0	42.5
1-1/2"	38.0	108.0	197.9	115.3	14.0	74.8	14.0	70.0	50.0	9.0	7.0	52.0
2"	50.0	121.5	197.9	124.0	13.7	83.5	14.0	70.0	50.0	9.0	7.0	63.5
2-1/2"	65.0	157.5	267.0	155.0	18.0	108.8	17.0	102.0	70.0	11.0	9.0	85.5
3"	80.0	190.0	267.0	208.5	18.0	118.3	17.0	102.0	70.0	11.0	9.0	102.0
4"	100.0	225.0	325.0	216.7	18.0	153.8	17.0	102.0	70.0	11.0	9.0	128.5

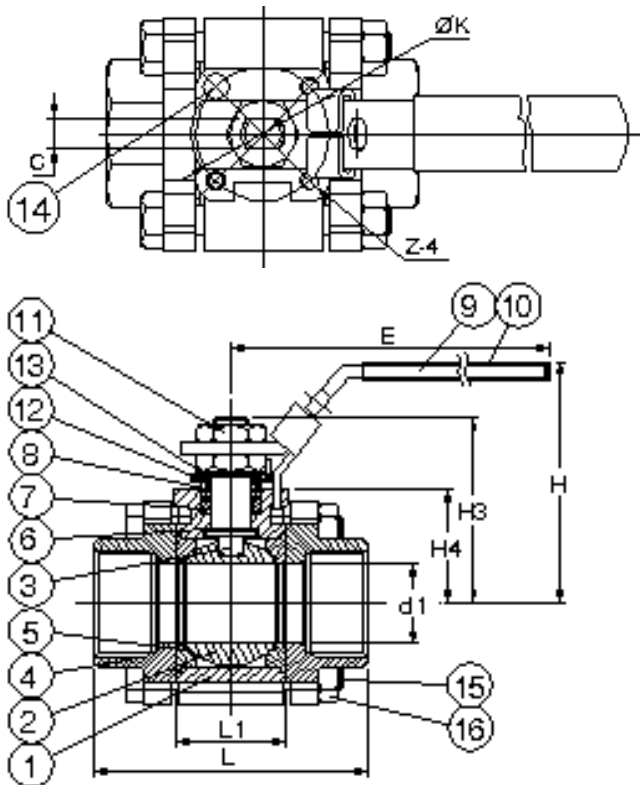
## VBM3E 3 Piece Ball Valve 1500/2000WOG, STD Port, ISO5211 Direct Mount

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/2"~1-1/4" :2000WOG  
1-1/2"~2-1/2" :1500WOG  
3"~4" :1000WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	SEAT	PTFE
6	THRUST WASHER	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	HANDLE	SS304
10	HANDLE COVER	PLASTIC
11	HANDLE NUT	SS304
12	BELLEVILLE WASHER	SS301
13	TAB WASHER	SS304
14	STOP PIN	SS304
15	BODY BOLT	SS304
16	BOLT NUT	SS304

### Dimension

SIZE	d1	L	E	H	H3	H4	C	ØK	Z-4	L1
1/2"	12.5	57.5	102.0	64.0	46.9	31.6	5.0	36.0	M5xP0.8	22.5
3/4"	15.0	69.4	102.0	64.0	46.9	31.6	5.0	36.0	M5xP0.8	22.5
1"	20.0	77.5	102.0	67.0	50.2	33.8	5.0	36.0	M5xP0.8	27.5
1-1/4"	25.0	86.0	145.0	76.0	56.0	35.5	8.0	42.0	M5xP0.8	34.0
1-1/2"	32.0	99.5	145.0	80.0	61.3	40.3	8.0	42.0	M5xP0.8	42.5
2"	38.0	112.6	162.0	92.0	75.0	46.5	10.0	50.0	M6xP1.0	52.0
2-1/2"	50.0	128.6	162.0	101.0	83.0	55.5	10.0	50.0	M6xP1.0	63.5

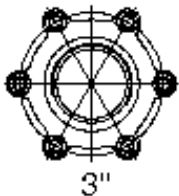
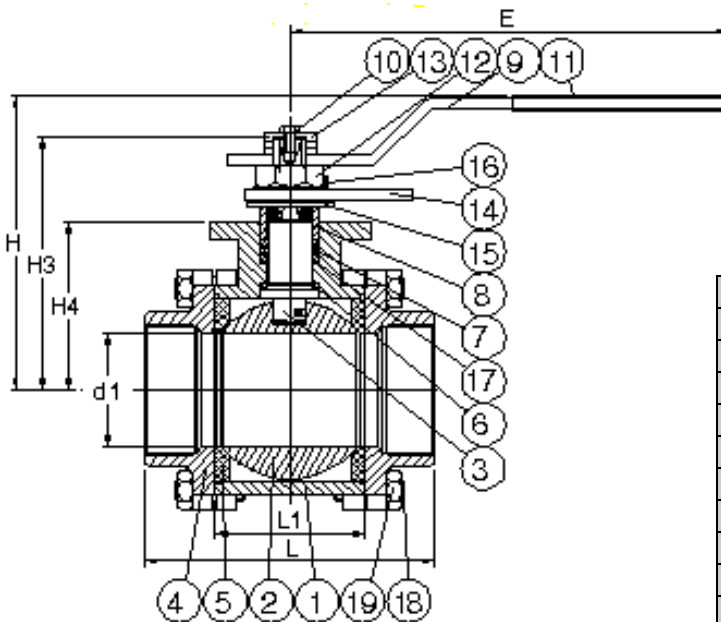
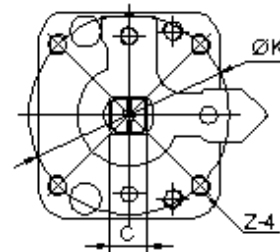
## VBM3E 3PC Ball Valve 1500/2000WOG, STD Port, ISO5211 Direct Mount

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/2"~1-1/4" :2000WOG  
1-1/2"~2-1/2" :1500WOG  
3"~4" :1000WOG

### Options

3. Carbon/ Stainless steel body construction
4. Locking device is available if requested



### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	SEAT	PTFE
6	THRUST WASHER	PTFE
7	STEM PACKING	NRG
8	GLAND BUSH	SS304
9	HANDLE	SS304
10	STE SCREW	SS304
11	HANDLE COVER	PLASTIC
12	STEM NUT	SS301
13	HANDLE WASHER	SS304
14	STOP PLATE	SS304
15	BELLEVILLE WASHER	SS304-CSP
16	TAB WASHER	SS304
17	PACKING FOLLOWER	SS304
18	BODY BOLT	SS304
19	BOLT NUT	SS304

### Dimension

SIZE	d1	L	E	H	H3	H4	C	ØK	Z-4	L1
3"	65.0	180.0	265.0	168.0	144.0	96.0	18.9	102.0	M10Xp1.5	102.0
4"	80.0	206.0	265.0	176.6	152.6	104.5	18.9	102.0	M10xP1.5	128.5



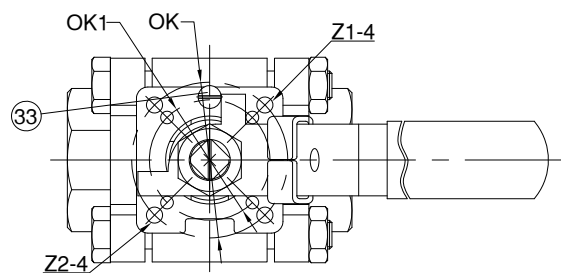
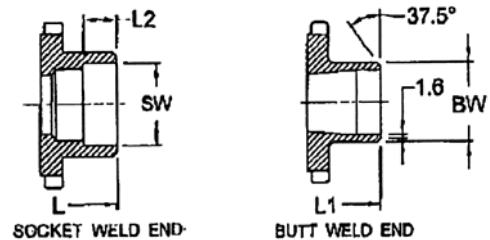
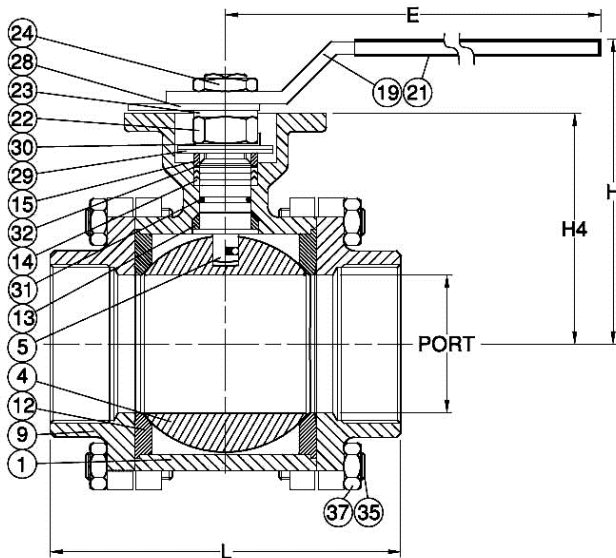
## VBM3F 3 Piece Ball Valve 1500/2000WOG, Full Port, ISO5211 Direct Mount

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1/4"~1" :2000WOG  
1-1/4"~2" :1500WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested
3. Socket-welded end model: VBM35FS
4. Butt Weld end model: VBM35FB



### Material List

NO.	PART NAME	MATERIAL
1	BODY	ASTM A351 GR. CF8M
4	BALL	ASTM A351 GR. CF8M
5	STEM	SS316
9	END CAP	ASTM A351 GR. CF8M
11	BODY SEAL	PTFE
12	SEAT	RTFE
13	THRUST WASHER	RTFE
14	STEM PACKING	RTFE
15	GLAND BUSH	SS304
19	HANDLE	SS304
21	HANDLE COVER	PLASTIC
22	STEM NUT	SS304
23	HANDLE WASHER	SS304
24	HANDLE NUT	SS304
29	BELLEVILLE WASHER	SUS301
30	TAB WASHER	SS304
31	STEM O-RING	VITON
32	PACKING FOLLOWER	PTFE+25%GF
33	STOP PIN	SS304
35	BODY BLOT	SS304
37	BOLT NUT	SS304

### Dimension

SIZE	PORT	L	L1	L2	E	H	H1	H4	C	ØK	ØK1	Z1-4	Z2-4	SW	BW
1/4"	11.5	56.1	62.5	10	112.0	77.9	8.0	42.0	9	50	36	7	6	14.2	13.7
3/8"	12.5	56.1	62.5	10	112.0	77.9	8.0	42.0	9	50	36	7	6	17.5	17.1
1/2"	15.0	67.9	66.1	10	112.0	77.9	8.0	42.0	9	50	36	7	6	21.8	21.3
3/4"	20.0	76.1	77.1	13	112.0	81.8	8.5	45.0	9	50	36	7	6	27.4	26.7
1"	25.0	84.6	83.6	13	136.0	90.5	9.5	53.5	9	50	36	7	6	34.1	33.4
1-1/4"	32.0	98.1	96.1	13	185.0	98.0	9.5	59.0	9	50	36	7	6	42.7	42.2
1-1/2"	38.0	111.2	107.2	13	197.9	114.7	14.0	74.8	14	70	50	9	7	49.0	48.3
2"	50.0	126.7	118.5	16	197.9	124.0	13.7	83.5	14	70	50	9	7	61.0	60.3

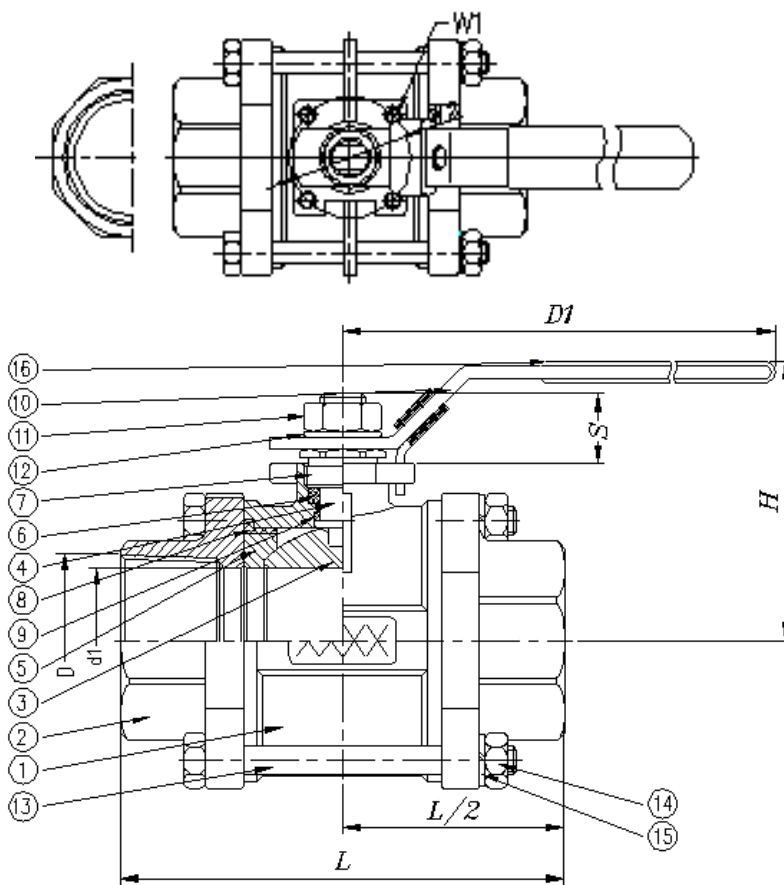
**VBM3M 3 Piece Ball Valve 1000WOG, Full Port, With Mounting Pad**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested
3. Butt-welded: VBM3MB  
Socket-welded: VBM3MS



**Material List**

NO.	PART NAME	MATERIAL
		STAINLESS STEEL/ CARBON STEEL
1	BODY	SS316/ ASTM A216 WCB
2	CAP	SS316/ ASTM A216 WCB
3	BALL	SS316/ ASTM A351 GR. CF8
4	STEM	SS316/ ASTM A276 GR. 304
5	BALL SEATS	PTFE
6	STEM PACKING	PTFE
7	GLAND	SS304
8	END SEATS	PTFE
9	THRUST WASHER	PTFE
10	HANDLE	SS304
11	HANDLE NUT	SS304
12	HANDLE WASHER	SS304
13	BOLTS	SS304
14	BOLTS NUTS	SS304
15	BOLTS WASHERS	SS304
16	HANDLE COVER	PLASTIC

**Dimension**

SIZE	d1	L	H	D1	S	W1	W2	D
1/4"	11.0	*56.6	54	102	13	M5*0.8	36	1/4" DIN 2999
3/8"	12.5	*56.6	54	102	13	M5*0.8	36	3/8" DIN 2999
1/2"	15.0	*65.7	55	102	13	M5*0.8	36	1/2" DIN 2999
3/4"	20.0	76.2	62	126	17	M5*0.8	36	3/4" DIN 2999
1"	25.4	86.2	66	126	19	M5*0.8	36	1" DIN 2999
1-1/4"	32.0	102.8	90	154	27	M6*1.0	50	1-1/4" DIN 2999
1-1/2"	40.0	119.4	93	154	26	M6*1.0	50	1-1/2" DIN 2999
2"	50.8	131.4	102	188	24	M6*1.0	50	2" DIN 2999
2-1/2"	65.0	164.0	121	265	39	M8*1.25	70	2-1/2" DIN 2999
3"	80.0	182.7	134	265	37	M10*1.5	102	3" DIN 2999
4"	100.0	*236.2	175	272	50	M10*1.5	102	4" DIN 2999

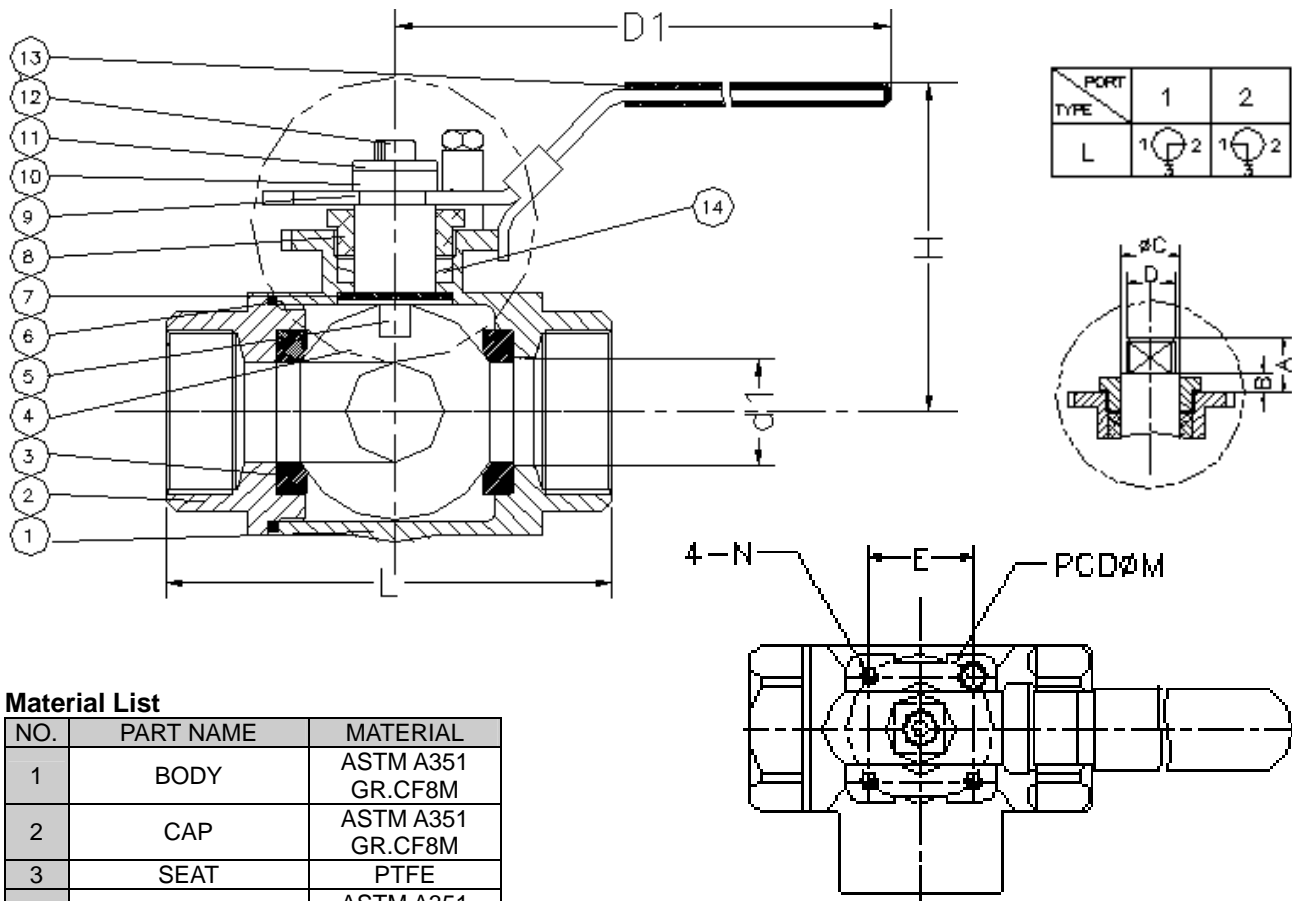
## 3W1L 3-Way Ball Valve 1000WOG, STD Port, L-Port, Mounting Pad

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



### Material List

NO.	PART NAME	MATERIAL
1	BODY	ASTM A351 GR.CF8M
2	CAP	ASTM A351 GR.CF8M
3	SEAT	PTFE
4	BALL	ASTM A351 GR.CF8M
5	STEM	SS316
6	END SEALS	PTFE
7	THRUST WASHER	PTFE
8	GLAND	SS304
9	HANDLE	SS304
10	HANDLE WASHER	SS304
11	WASHER	SS304
12	HANDLE NUT	SS304
13	HANDLE COVER	PLASTIC
14	STEM PACKINGS	PTFE

### Dimension

SIZE	d1	L	H	D1	A	B	C	D	E	F	M	N
1/4"	11.0	57.2	62.7	133	11	6	12	9	25	29	36	M5*0.8
3/8"	11.0	57.2	62.7	133	11	6	12	9	25	29	36	M5*0.8
1/2"	12.5	66	64.7	133	11	6	12	9	25	33.5	36	M5*0.8
3/4"	16.0	77	67.7	133	11	6	12	9	25	38.7	36	M5*0.8
1"	20.0	88	71.2	133	11	6	12	9	29	46	42	M5*0.8
1-1/4"	25.4	103	88.7	178.5	23.5	8	15	11	35.5	51.7	50	M6*1.0
1-1/2"	31.8	111	93.7	178.5	23.5	8	15	11	35.5	61	50	M6*1.0
2"	38.1	136	98.2	178.5	23.5	8	15	11	35.5	71.4	50	M6*1.0

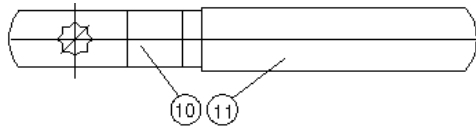
## 3W2L/ 3W2T 3-Way Ball Valve 1000WOG, Full Port, Direct Mount, L-Port/ T-Port

### Features

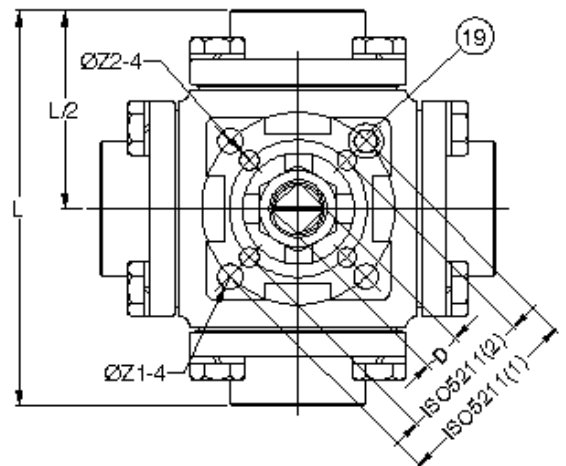
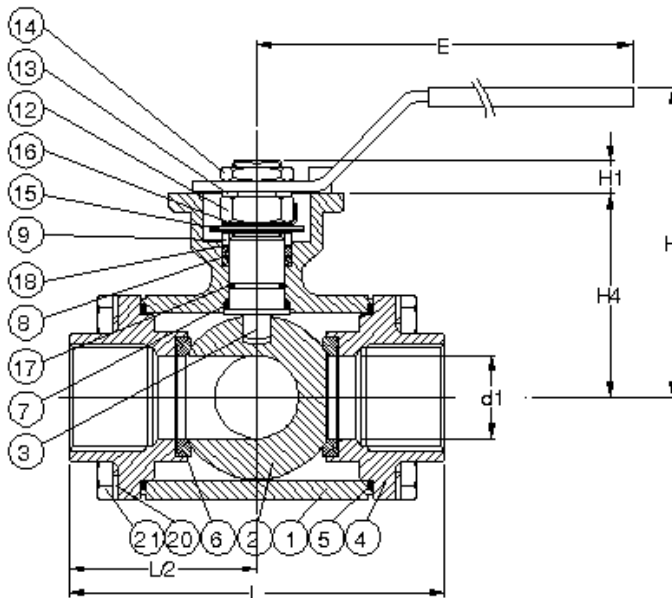
1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



PORT \ TURN	0°	90°	180°	270°
	L			
T				



### Dimension

SIZE	d1	L	E	H1	H	H4	C	Z1	Z2	F	ISO 5211	
1/2"	16.0	96.0	186.5	9.0	89.0	47.8	9.0	6.0		48.0	42	F04
3/4"	20.0	107.0	218.0	11.0	98.0	58.2	9.0	7.0		53.5	50	F05
1"	25.0	126.0	218.0	11.5	102.0	64.0	9.0	7.0		63.0	50	F05
1-1/4"	32.0	133.0	235.0	15.2	118.5	79.0	14.0	9.0	7.0	66.5	50	F07
1-1/2"	38.0	151.0	235.0	14.3	127.0	88.5	14.0	9.0	7.0	75.5	50	F07
2"	50.0	166.0	252.0	17.8	139.0	105.8	17.0	11.0	9.0	83.0	70	F10
2-1/2"	65.0	175.0	252.0	17.5	165.7	117.3	17.0	11.0	9.0	87.5	70	F10
3"	80.0	207.2	252.0	17.5	170.0	128.0	17.0	11.0	9.0	103.6	70	F10

### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	BODY SEAL	PTFE.
6	SEAT	PTFE.
7	THRUST WASHER	PTFE.
8	STEM PACKING	PTFE.
9	GLAND	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	STEM NUT	SS304
13	HANDLE WASHER	SS304
14	HANDLE NUT	SS304
15	BELLEVEILLE WASHER	SS410
16	STOP WASHER	SS304
17	O-RING	VITON
18	PACKING FOLLOWER	PTFE + 25%G/F
19	STOP PIN	SS304
20	BOLT	SS304
21	BOLT WASHER	SS304

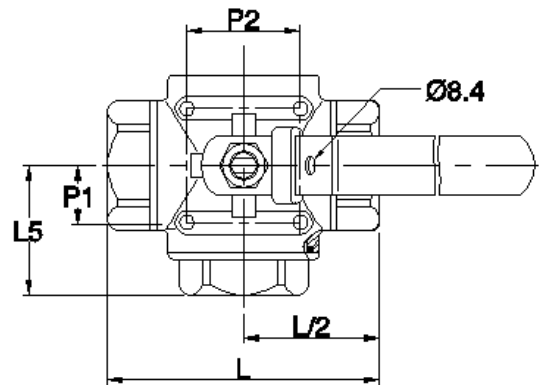
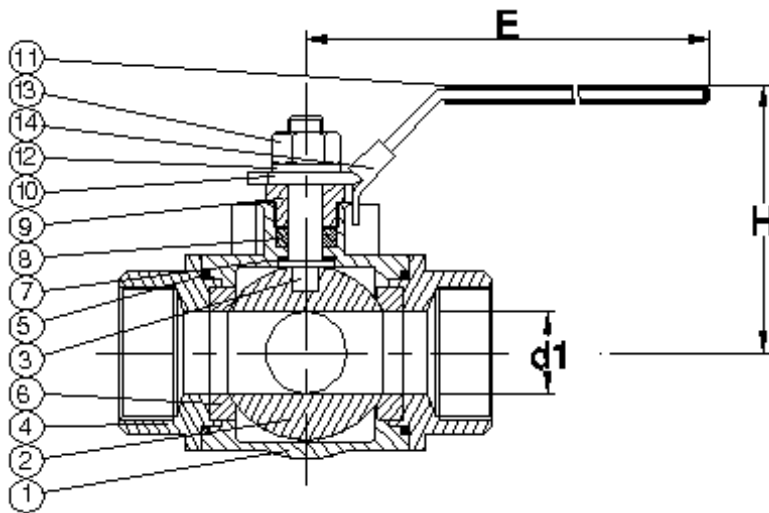
## 3W3L/ 3W3T 3-Way Ball Valve 1000WOG, STD Port, L-Port/ T-Port

### Features

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



PORT \ TURN	TURN			
	0°	90°	180°	270°
T				
L				

### Dimension

SIZE		d1	L	L5	E	H	M	P1	P2
DN8	1/4"	11.0	69.4	35.0	106.0	61.0	10-24 UNC	13.0	28.5
DN10	3/8"	11.0	69.4	35.0	106.0	61.0	10-24 UNC	13.0	28.5
DN15	1/2"	12.7	76.0	37.5	138.0	65.5	10-24 UNC	13.0	28.5
DN20	3/4"	16.0	86.6	45.0	138.0	71.0	10-24 UNC	21.0	34.6
DN25	1"	20.0	102.0	51.0	157.0	76.0	10-24 UNC	21.0	34.6
DN32	1-1/4"	25.0	118.0	58.0	157.0	81.5	10-24 UNC	24.0	38.0
DN40	1-1/2"	32.0	126.0	63.0	220.0	102.0	1/4"-20 UNC	24.0	38.0
DN50	2"	38.1	149.0	77.0	220.0	112.2	1/4"-20 UNC	24.0	38.0

### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	BODY SEAL	PTFE.
6	SEAT	PTFE.
7	THRUST WASHER	PTFE.
8	STEM PACKING	PTFE.
9	GLAND NUT	SS304
10	HANDLE	SS304
11	HANDLE COVER	PALSTIC
12	HANDLE WASHER	SS304
13	HANDLE NUT	SS304
14	LOCKING PAD	SS304

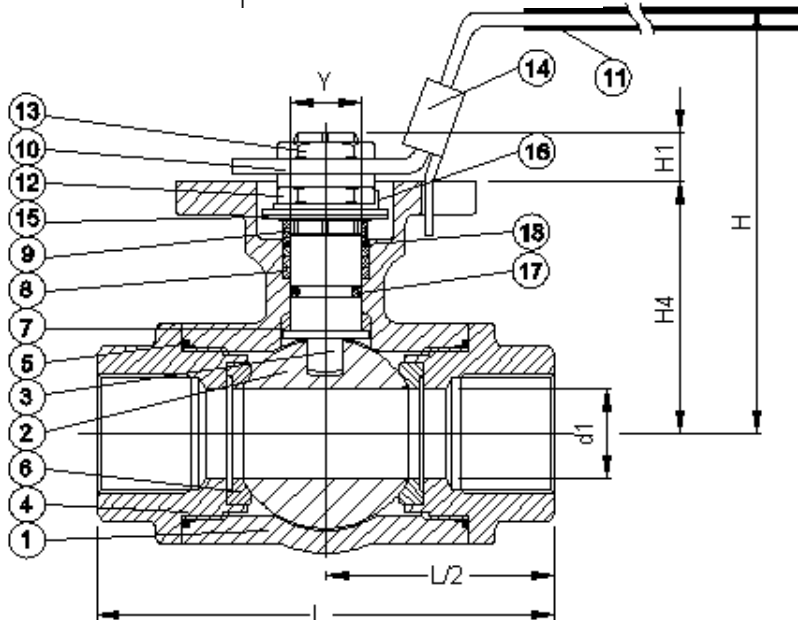
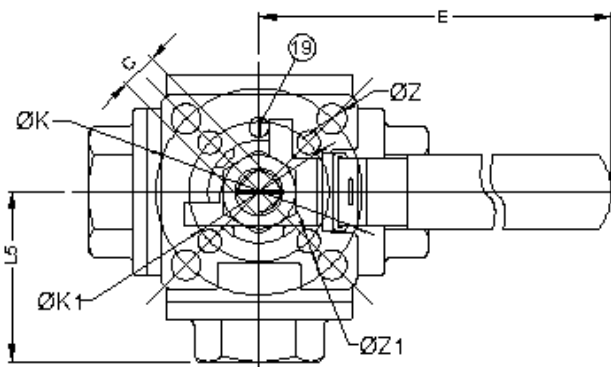
**3W3DL/ 3W3DT 3-Way Ball Valve 1000WOG, STD Port, Direct Mount, L-Port/ T-Port**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



TURN PORT	0°	90°	180°	270°
L				
T				

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	CAP	SS316
5	BODY SEAL	RTFE.
6	SEAT	RTFE.
7	THRUST WASHER	RTFE.
8	STEM PACKING	RTFE.
9	GLAND BUSH	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	STEM NUT	SS304
13	HANDLE NUT	SS304
14	LOCKING PAD	SS304
15	BELLEVEILLE WASHER	SS304-CSP
16	STOP WASHER	SS304
17	O-RING	VITON
18	PACKING FOLLOWER	PTFE. + 25%G/F
19	STOP PIN	SS304

**Dimension**

SIZE	d1	L	L5	E	H	H1	H4	C	Y	ØK	ØK1	Z	Z1
DN8	1/4"	11.0	75.7	37.3	112.0	77.5	9.0	38.2	9.0	12.0	42.0	6.0	
DN10	3/8"	11.0	75.7	37.3	112.0	77.5	9.0	38.2	9.0	12.0	42.0	6.0	
DN15	1/2"	12.7	75.7	37.3	112.0	77.5	9.0	38.2	9.0	12.0	42.0	6.0	
DN20	3/4"	16.0	86.6	44.7	112.0	82.0	9.0	45.2	9.0	12.0	42.0	6.0	
DN25	1"	20.0	102.4	51.4	136.5	93.7	11.0	56.5	11.0	15.8	50.0	7.1	
DN32	1-1/4"	25.0	118.2	57.7	188.0	101.1	11.0	61.9	11.0	15.8	50.0	7.1	
DN40	1-1/2"	32.0	125.8	62.7	197.5	120.3	14.3	78.3	14.0	20.8	70.0	9.2	7.1
DN50	2"	38.1	149.0	74.6	197.5	129.9	14.0	87.4	14.0	20.8	70.0	9.2	7.1

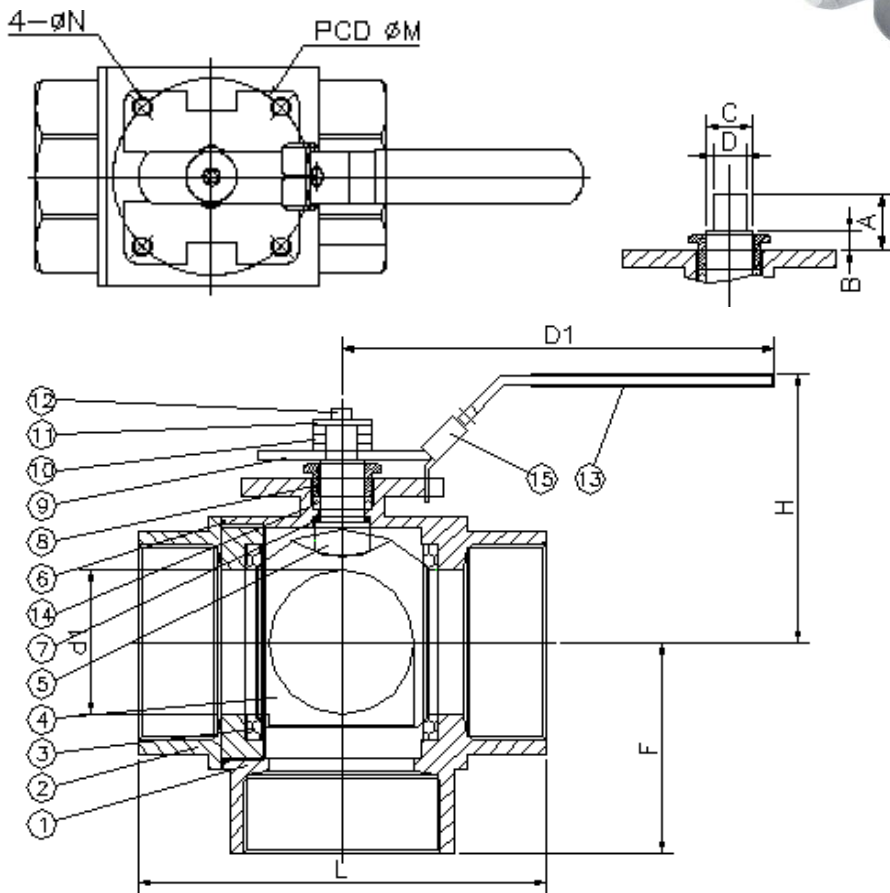
**3W3EL/ 3W3ET 3-Way Ball Valve 1000WOG, STD Port, Mounting Pad, L-Port/ T-Port**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



PORT TYPE \	1	2	3	4
L3	1 ⊖ 2	1 ⊖ 2	1 ⊖ 2	1 ⊖ 2
L2	1 ⊖ 2	1 ⊖ 2	1 ⊖ 2	1 ⊖ 2

PORT TYPE \	1	2	3	4
T3	1 ⊖ 2	1 ⊖ 2		
T4	1 ⊖ 2	1 ⊖ 2	1 ⊖ 2	1 ⊖ 2



**Material List**

NO	PART NAME	MATERIAL
1	BODY	SS316
2	CAP	SS316
3	SEAT	PTFE
4	BALL	SS316
5	STEM	SS316
6	END SEALS	PTFE
7	THRUST WASHER	PTFE
8	GLAND	SS304
9	HANDLE	SS304
10	HANDLE WASHER	SS304
11	WASHER	SS304
12	HANDLE NUT	SS304
13	HANDLE COVER	PLASTIC
14	STEM PACKINGS	PTFE
15	LOCKING PLATE	SS304

**Dimension**

SIZE	d1	A	B	C	D	D1	H	F	L	M	N
1/4"	11.0	10.9	5.9	12.0	9.0	133.4	62.7	29.0	57.2	36	M5*0.8
3/8"	11.0	10.9	5.9	12.0	9.0	133.4	62.7	29.0	57.2	36	M5*0.8
1/2"	12.5	10.9	5.9	12.0	9.0	133.4	64.7	34.5	66.0	36	M5*0.8
3/4"	16.0	11.4	6.4	12.0	9.0	133.4	78.7	39.7	85.8	36	M5*0.8
1"	20.0	11.4	6.4	12.0	9.0	133.4	71.2	46.0	88.5	42	M5*0.8
1-1/4"	25.4	23.7	8.2	15.0	11.0	178.5	90.2	51.7	103.4	50	M6*1.0
1-1/2"	31.8	23.7	8.2	15.0	11.0	178.5	93.7	61.0	111.1	50	M6*1.0
2"	38.1	23.7	8.2	15.0	11.0	178.5	98.2	71.4	136.4	50	M6*1.0
3"	65.0	23.5	8.0	20.0	14.0	265.0	138.0	94.7	182	70.0	M8*1.25

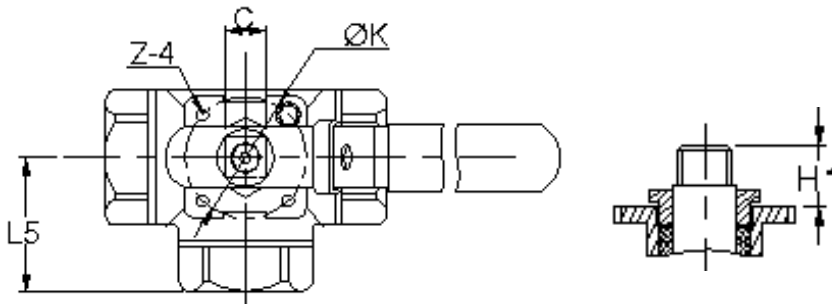
## 3W3ML/ 3W3MT 3-Way Ball Valve 1000WOG, STD Port, Mounting Pad, L-Port/ T-Port

### Features

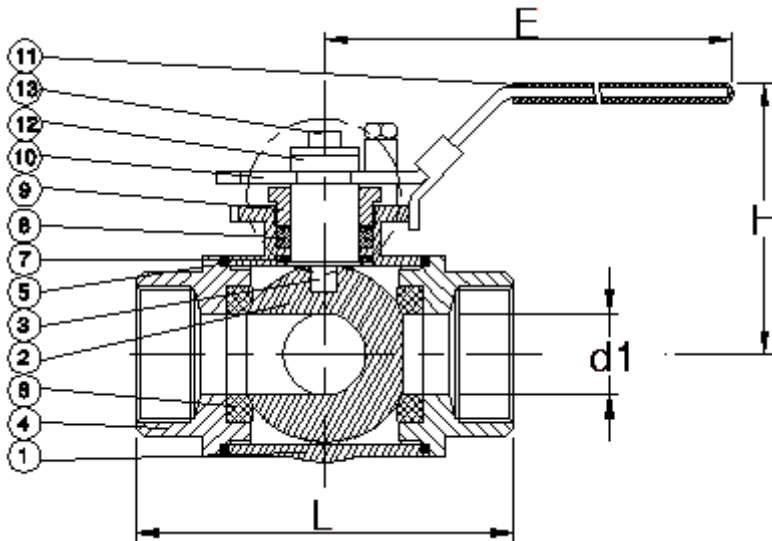
1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Blow-out proof stem
4. Pressure: 1000WOG

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



PORT \ TURN	0°	90°	180°	270°
	T			
L				



### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	BODY SEAL	PTFE
6	SEAT	PTFE
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND NUT	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	HANDLE WASHER	SS304
13	HANDLE NUT	SS304

### Dimension

SIZE		d1	L	L5	E	H	H1	C	ØK	Z-4
DN8	1/4"	11.0	69.4	34.6	133.4	60.7	10.7	9.0	42.0	M5*P0.8
DN10	3/8"	11.0	69.4	34.6	133.4	60.7	10.7	9.0	42.0	M5*P0.8
DN15	1/2"	12.5	75.7	37.3	133.4	64.1	10.7	9.0	42.0	M5*P0.8
DN20	3/4"	16.0	86.6	44.7	178.5	82.4	13.9	11.0	50.0	M6*P1.0
DN25	1"	20.0	102.4	51.4	178.5	86.1	20.0	11.0	50.0	M6*P1.0
DN32	1-1/4"	25.0	118.2	57.7	209.9	91.4	23.8	11.0	50.0	M6*P1.0
DN40	1-1/2"	32.0	125.8	62.7	208.0	102.7	25.8	11.0	70.0	M8*P1.25
DN50	2"	38.0	149.0	74.6	229.9	110.7	25.3	14.0	70.0	M8*P1.25
DN65	2-1/2"	50.0	160.0	80.0	229.9	115.8	24.5	14.0	70.0	M8*P1.25
DN80	3"	65.0	185.0	92.5	265.0	132.0	25.5	17.0	102.0	M10*P1.5



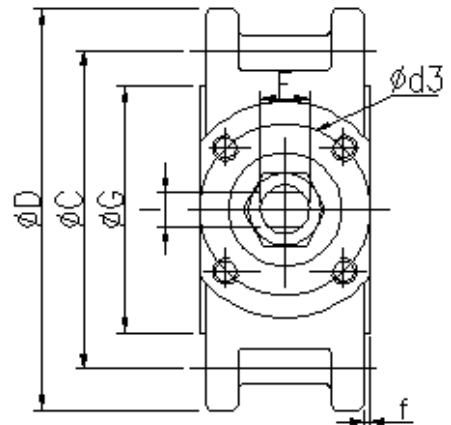
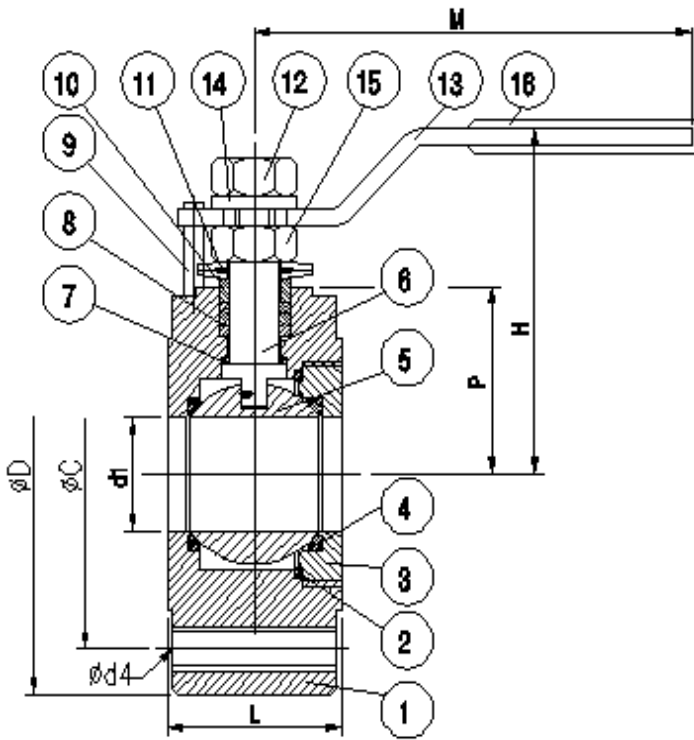
**W1F-1 Wafer Type Ball Valve Flanged 150#, Full Port**

**Features**

1. Face to face: ANSI B16.10
2. End flange: ANSI B16.5
3. Test: API 598
4. Design: ANSI 16.34
5. Investment casting
6. Adjustable Stem Packing, Blow-out Proof Stem
7. Pressure: 150 LBS

**Options**

1. Pneumatic/ Electric Actuator



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8M, CF8 (1.4408)
2	GASKET	PTFE
3	RING NUT	CF8M, CF8 (1.4408)
4	SEAT	PTFE
5	BALL	SS316, 304 (1.4408)
6	STEM	SS316
7	STEM SEAL	PTFE
8	STEM PACKING	PTFE
9	STOP	SS304
10	RING	SS304
11	BEVEL WASHER	SS301
12	NUT	SS304
13	HANDLE	SS304
14	SPRING WASHER	SS304
15	NUT	SS304
16	PLASTIC COVER	PLASTIC

**Dimension**

SIZE		ISO-5211	ØC	ØD	Ød3	Ød4	d1	F	I	ØG	H	L	L1	M	P	f
DN15	1/2"	F03	60.5	88.9	36	1/2"	16	9.6	6.35	35.1	70	35	31	116	32	1.6
DN20	3/4"	F03	69.9	98.6	36	1/2"	20	9.6	6.35	42.9	74	38	34	116	38	1.6
DN25	1"	F03	79.2	108.0	36	1/2"	25	9.6	6.35	50.8	75	44	38	165	42	1.6

**W1F-1 Wafer Type Ball Valve Flanged 150#, Full Port**

**Features**

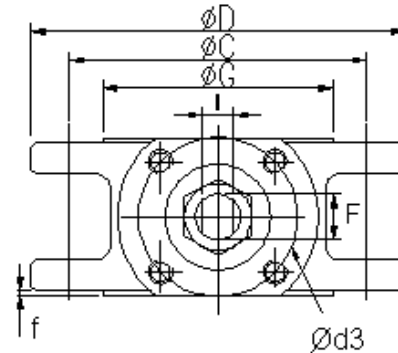
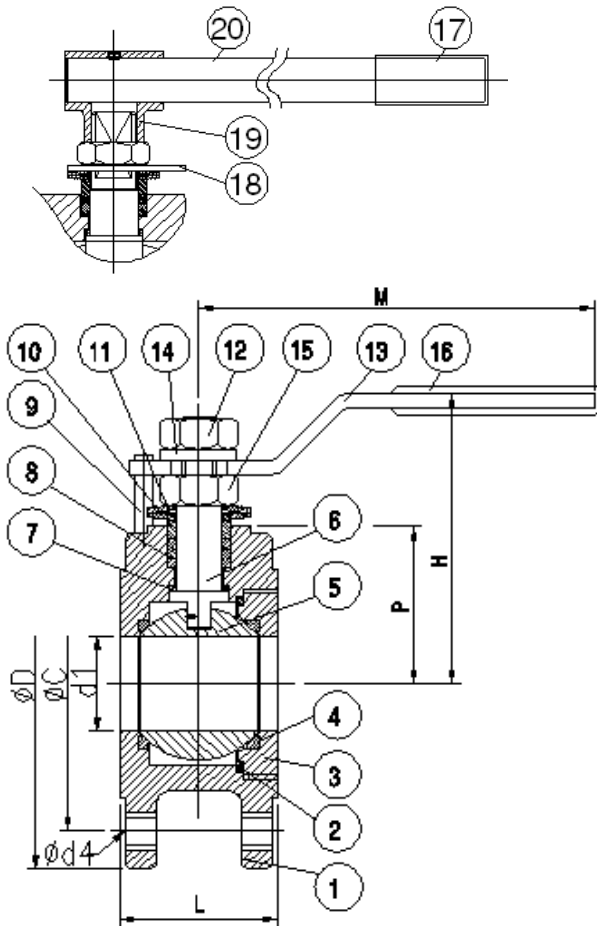
1. Face to face: ANSI B16.10
2. End flange: ANSI B16.5
3. Test: API 598
4. Design: ANSI 16.34
5. Investment casting
6. Adjustable Stem Packing, Blow-out Proof Stem
7. Pressure: 150 LBS

**Options**

1. Pneumatic/ Electric Actuator



DN125~DN150:



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8M, CF8 (1.4408)
2	GASKET	PTFE
3	RING NUT	CF8M, CF8 (1.4408)
4	SEAT	PTFE
5	BALL	SS316, 304 (1.4408)
6	STEM	SS316
7	STEM SEAL	PTFE
8	STEM PACKING	PTFE
9	STOP	SS304
10	RING	SS304
11	BEVEL WASHER	SS301
12	NUT	SS304
13	HANDLE	SS304
14	SPRING WASHER	SS304
15	NUT	SS304
16	HANDLE COVER	PLASTIC
17	HANDLE COVER	PLASTIC
18	STOP BOLT	SS304
19	HANDLE ADAPTER	CF8
20	HANDLE	STEEL

**DIMENSION**

SIZE	ISO-5211	ØC	ØD	Ød2	Ød3	Ød4	d1	F	ØG	H	I	L	L1	M	P	f	
1-1/4"	DN32	F04	88.9	117.3	32	42	M16	32	16	63.5	85	8.5	54	48	165	50	1.6
1-1/2"	DN40	F05	98.6	127.0	35	50	M16	38	16	73.2	89	8.5	62	54	193	54	1.6
2"	DN50	F05	120.7	152.4	35	50	M16	50	16	91.9	98	8.5	80	72	193	62	1.6
2-1/2"	DN65	F07	139.7	177.8	53	70	M16	64	20	104.6	129	12	101	93	235	82	1.6
3"	DN80	F07	152.4	190.5	53	70	M16	76	20	127.0	138	12	118	110	235	91	1.6
4"	DN100	F10	190.5	228.6	55	102	M16	96	24	157.2	164	16	150	144	329	107	1.6
6"	DN150	F12	241.3	279.4	60	125	M20	135	27	215.9	198	17	182	177	460	130	1.6

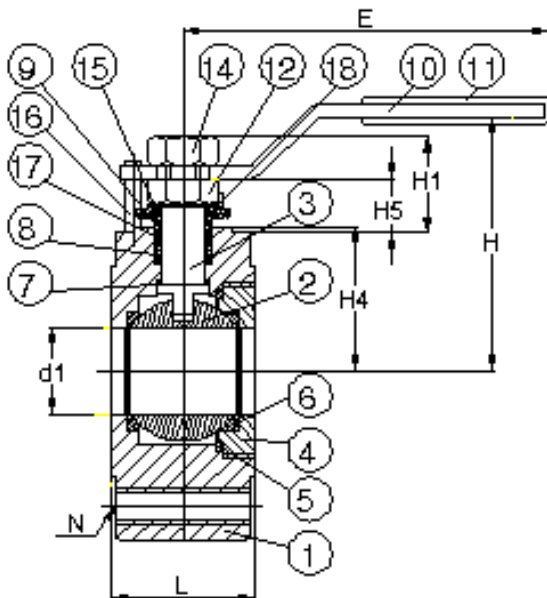
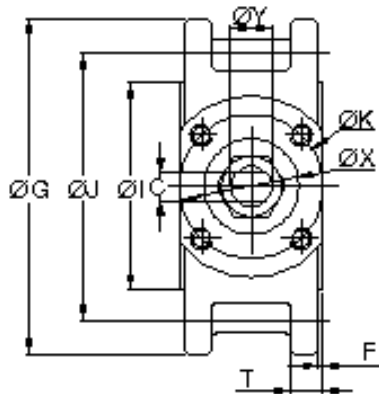
**W1F-16 Wafer Type Ball Valve Flanged PN16, Full Port**

**Features**

1. Face to face: DIN 3202 F4/F5
2. End flange: PN 16 DIN 2633
3. Design: ANSI 16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: PN16

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device available



**Material List**

NO.	PART NAME	MATERIAL	
1	BODY	SS316	WCB
2	BALL	SS316	SS304
3	STEM	SS316	SS304
4	INSERT CAP	SS316	WCB
5	BODY SEAL	PTFE	
6	SEAT	PTFE	
7	THRUST WASHER	PTFE	
8	STEM PACKING	PTFE	
9	GLAND	SS304	
10	HANDLE	SS304	
11	HANDLE COVER	PLASTIC	
12	STEM NUT	SS304	
14	HANDLE NUT	SS304	
15	BELLEVILLE WASHER	SS301	
16	STOP PIN	SS304	
17	PACKING FOLLOWER	PTFE.+25%G.F.	
18	TAB WASHER	SS304	

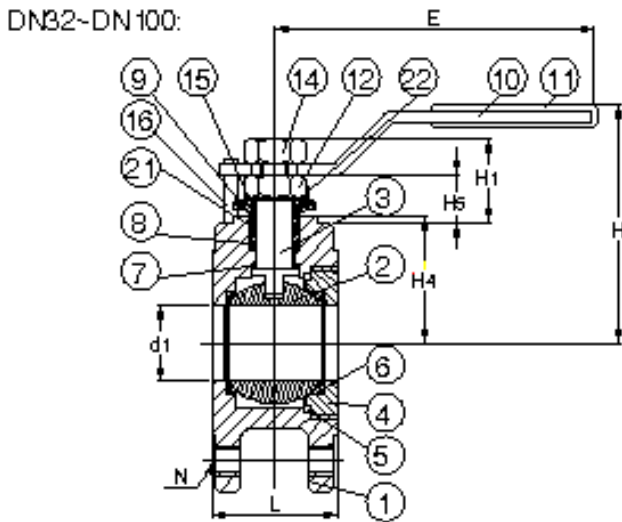
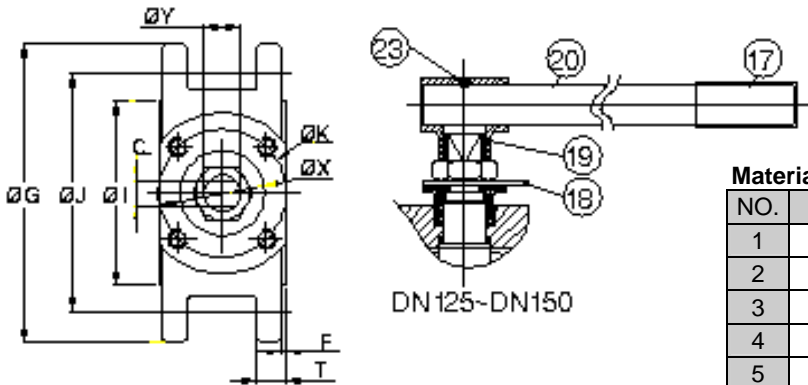
**Dimension**

SIZE	d1	L	E	H	H1	H4	H5	C	ØX	ØY	ØG	ØJ	ØI	T	F	ØK	N
DN15 1/2"	15	35	116	70	21.0	32	11.6	6.35	25	9.6	95	65	45	7.0	2	36	M12
DN20 3/4"	20	40	116	74	18.0	38	9.6	6.35	25	9.6	105	75	58	7.0	2	36	M12
DN25 1"	25	44	165	75	18.3	42	9.6	6.35	25	9.6	115	85	65	7.5	2	36	M12

**W1F-16 Wafer Type Ball Valve Flanged PN16, Full Port**

**Features**

1. Flange ends conform to DIN 2545 PN16
2. Investment casting
3. Adjustable Stem Packing, Blow-out Proof Stem
4. Pressure: PN16



**Material List**

NO.	PART NAME	MATERIAL	
1	BODY	SS316	WCB
2	BALL	SS316	SS304
3	STEM	SS316	SS304
4	INSERT CAP	SS316	WCB
5	BODY SEAT	PTFE	
6	SEAT	PTFE	
7	THRUST WASHER	PTFE	
8	STEM PACKING	PTFE	
9	GLAND	SS304	
10	HANDLE	SS304	
11	HANDLE COVER	PLASTIC	
12	STEM NUT	SS304	
14	HANDLE NUT	SS304	
15	BELLEVILLE WASHER	SS301	
16	STOP PIN	SS304	
17	HANDLE COVER	PLASTIC	
18	STOP BOLT	SS304	
19	HANDLE ADAPTER	SS304	
20	HANDLE	STEEL	
21	PACKING FOLLOWER	PTFE.+25%G.F.	
22	TAB WASHER	SS304	
23	SET BOLT	SS304	

**Dimension**

SIZE	d1	L	E	H	H1	H4	H5	C	ØX	ØY	ØG	ØJ	ØI	T	F	ØK	N
DN32 1-1/4"	32	54	165	87	26.5	50	15.6	8.0	32	11.2	140	100	78	17.0	2	42	M16
DN40 1-1/2"	38	62	193	90	26.0	54	15.6	8.0	35	11.2	150	110	88	19.0	2	50	M16
DN50 2"	50	80	193	99	25.0	62	14.6	8.0	35	11.2	165	125	102	19.5	2	50	M16
DN65 2-1/2"	64	101	235	141	31.0	82	17.8	9.5	53	16.0	185	145	122	17.0	2	70	M16
DN80 3"	76	118	235	150	31.5	91	18.8	9.5	53	16.0	200	160	138	20.0	3	70	M16
DN100 4"	96	150	266	172	51.0	107	28.0	17.0	55	28.0	220	180	158	21.0	3	102	M16
DN125 5"	118	179	400	205	50.0	117	31.0	17.0	55	28.0	250	210	188	22.0	3	102	M16
DN150 6"	135	202	600	220	50.0	130	31.0	17.0	60	28.0	285	240	212	22.0	3	125	M20

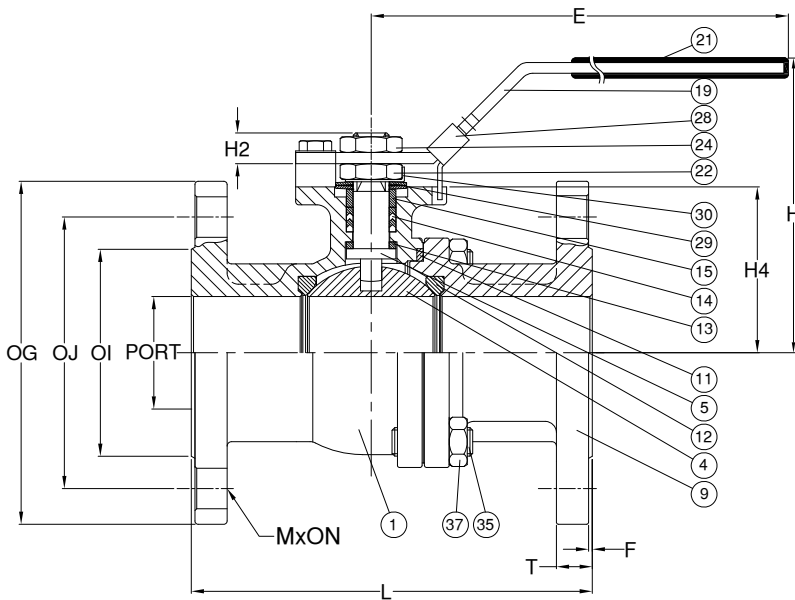
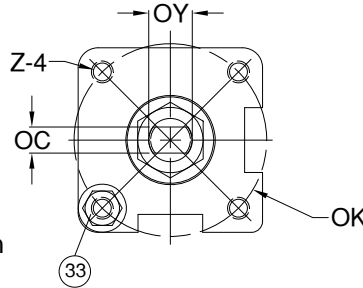
## VBF2-1 2 Piece Ball Valve Flanged 150#, Full Port

### Features

1. Face to face: ANSI B16.10
2. End Flange: ANSI B16.5
3. Design: ANSI B16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: 150#

### Options

1. Carbon/ Stainless steel body construction
2. Locking device available if requested



### Materials List

NO.	PART NAME	MATERIAL	
1	BODY	ASTM A351 Cr.CF8M	ASTM A216 Gr.WCB
4	BALL	ASTM A351 Cr.CF8M	ASTM A351 Cr.CF8
5	STEM	SS316	SS304
9	END CAP	ASTM A351 Cr.CF8M	ASTM A216 Gr.WCB
11	BODY SEAL	PTFE.	
12	SEAT	RTFE.	
13	THRUST WASHER	PTFE.	
14	STEM PACKING	PTFE.	
15	GLAND BUSH	SS304	
19	HANDLE	SS304	
21	HANDLE COVER	PLASTIC	
22	STEM NUT	SS304	
24	HANDLE NUT	SS304	
28	LOCKING PAD	SS304	
29	BELLEVILLE WASHER	SS301	
30	TAB WASHER	SS304	
33	STOP PIN	SS304	
35	BODY BOLT	ASTM A193 Gr.B8	ASTM A193 Gr.B7
37	BOLT NUT	ASTM A193 Gr.8	ASTM A193 Gr.2HM

### Dimensions

Size		PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z
1/2"	DN15	15.0	108.0	132.0	80.0	8.5	38.5	6.4	9.6	89.0	60.5	35.0	11.2	1.6	4	16.0	42.0	M5*0.8P
3/4"	DN20	20.0	117.0	132.0	84.5	8.5	42.5	6.4	9.6	98.6	70.0	43.0	12.7	1.6	4	16.0	42.0	M5*0.8P
1"	DN25	25.0	127.0	166.0	102.0	12.0	52.0	8.0	11.2	108.0	79.2	51.0	14.3	1.6	4	16.0	50.0	M6*1.0P
1-1/4"	DN32	32.0	140.0	166.0	105.0	12.0	56.0	8.0	11.2	117.5	88.9	63.5	15.9	1.6	4	16.0	50.0	M6*1.0P
1-1/2"	DN40	38.0	165.0	198.0	125.0	12.0	65.3	9.5	16.0	127.0	98.6	73.2	17.5	1.6	4	16.0	70.0	M8*1.25P
2"	DN50	50.0	178.0	198.0	132.0	12.0	73.8	9.5	16.0	152.5	120.7	92.0	19.1	1.6	4	19.0	70.0	M8*1.25P

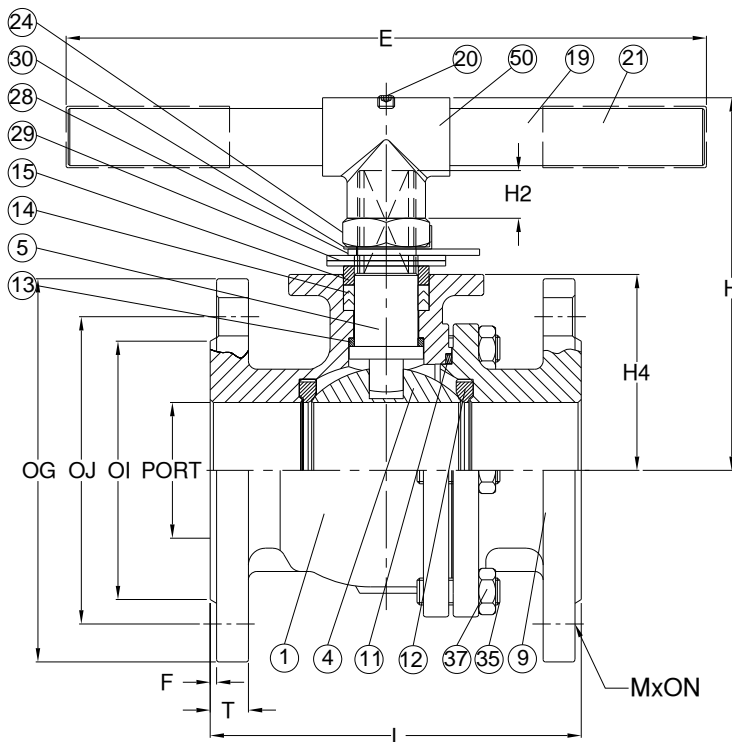
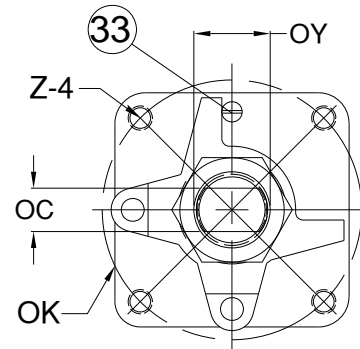
## VBF2-1 2 Piece Ball Valve Flanged 150#, Full Port

### Features

1. Face to face: ANSI B16.10
2. End Flange: ANSI B16.5
3. Design: ANSI B16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: 150#

### Options

1. Carbon/ Stainless steel body construction
2. Locking device available if requested



### Materials List

NO.	PART NAME	MATERIAL	
1	BODY	ASTM A351 Cr.CF8M	ASTM A216 Gr.WCB
4	BALL	ASTM A351 Cr.CF8M	ASTM A351 Cr.CF8
5	STEM	SS316	SS304
9	END CAP	ASTM A351 Cr.CF8M	ASTM A216 Gr.WCB
11	BODY SEAL	PTFE.	
12	SEAT	RTFE.	
13	THRUST WASHER	PTFE.	
14	STEM PACKING	PTFE.	
15	GLAND BUSH	SS304	
19	HANDLE	LRON	
20	SET BOLT	SS304	
21	HANDLE COVER	PLASTIC	
24	HANDLE NUT	SS304	
28	STOP PLATE	SS304	
29	BELLEVILLE WASHER	SS301	
30	TAB WASHER	SS304	
33	STOP PIN	SS304	
35	BODY BOLT	ASTM A193 Gr.B8	ASTM A193 Gr.B7
37	BOLT NUT	ASTM A193 Gr.8	ASTM A193 Gr.2HM
50	HANDLE ADAPTER	ASTM A351 Gr. CF8	

### Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
2-1/2"	DN65	64.0	190.0	300.0	178.0	23.0	92.5	17.0	28.0	177.8	139.7	104.7	23.3	1.6	4	19.0	102.0	M10*1.5P
3"	DN80	76.0	203.0	300.0	188.0	23.0	101.7	17.0	28.0	190.5	152.4	127.0	23.9	1.6	8	19.0	102.0	M10*1.5P
4"	DN100	100.0	229.0	450.0	202.0	23.0	119.0	17.0	28.0	228.6	191.0	157.2	23.9	1.6	8	19.0	102.0	M10*1.5P

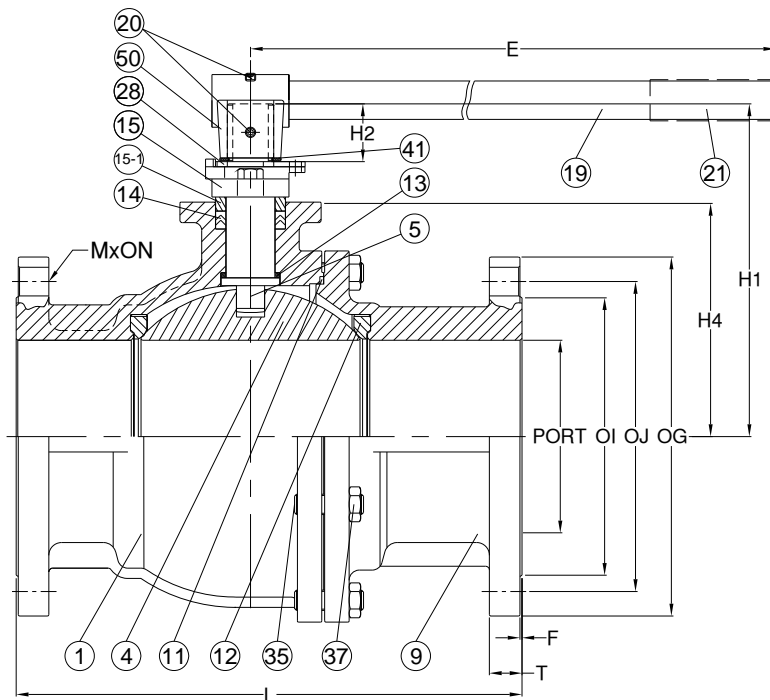
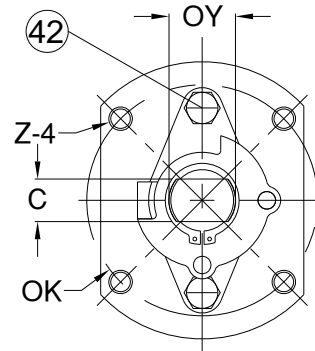
## VBF2-1 2 Piece Ball Valve Flanged 150#

### Features

1. Face to face: ANSI B16.10
2. End Flange: ANSI B16.5
3. Design: ANSI B16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: 150#

### Options

1. Carbon/ Stainless steel body construction
2. Locking device available if requested



### Materials List

NO.	PART NAME	MATERIAL	
1	BODY	ASTM A351 Cr.CF8M	ASTM A216 Gr.WCB
4	BALL	ASTM A351 Cr.CF8M	ASTM A351 Cr.CF8
5	STEM	SS316	SS304
9	END CAP	ASTM A351 Cr.CF8M	ASTM A216 Gr.WCB
11	BODY SEAL	PTFE.	
12	SEAT	PTFE	
13	THRUST WASHER	PTFE.	
14	STEM PACKING	PTFE.	
15	GLAND	ASTM A351 Gr.CF8	ASTM A216 Gr.WCB
15-1	GLAND BUSH	SS304	
19	HANDLE	LRON	
20	SET BOLT	SS304	
21	HANDLE COVER	PLASTIC	
28	STOP PLATE	SS304	
35	BODY BOLT	ASTM A193 Gr.B8	ASTM A193 Gr.B7
37	BOLT NUT	ASTM A193 Gr.8	ASTM A193 Gr.2HM
41	SNAP RING	SS304	
42	GLAND BOLT	SS304	
50	HANDLE ADAPTER	ASTM A351 Gr.CF8	

### Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
5"	DN125	125.0	356.0	600.0	233.0	45.0	163.0	23.0	36.0	254.0	216.0	186.0	24.0	1.6	8	Ø22.3	125	M12*1.75P
6"	DN150	150.0	394.0	800.0	259.0	45.0	182.5	23.0	36.0	279.4	241.3	216.0	25.4	1.6	8	Ø22.3	125	M12*1.75P
8"	DN200	200.0	457.0	800.0	285.0	45.0	211.5	23.0	36.0	342.9	295.0	270.0	27.0	2.0	8	Ø22.3	125	M12*1.75P

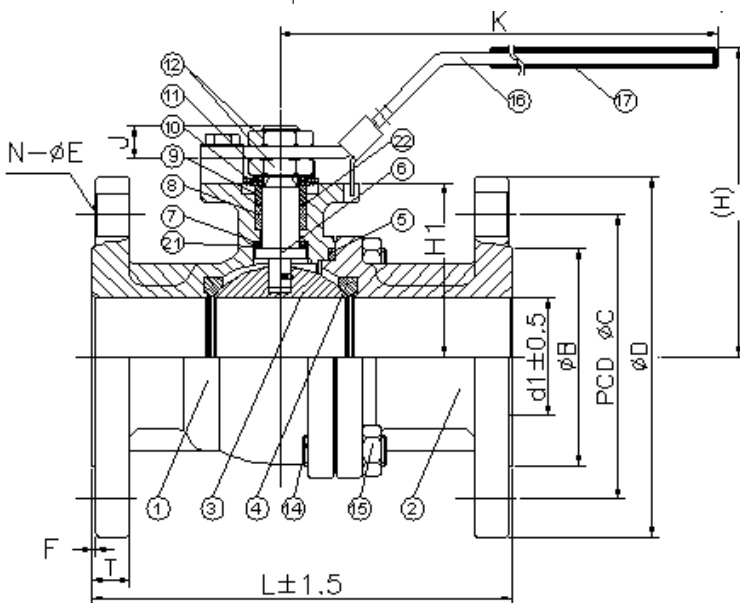
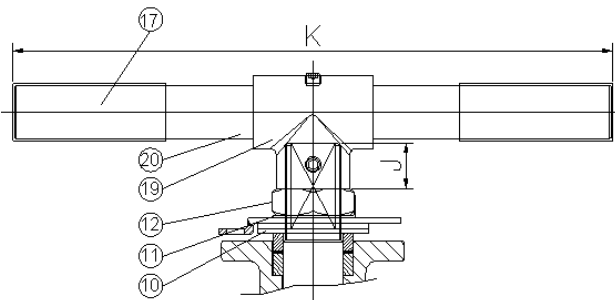
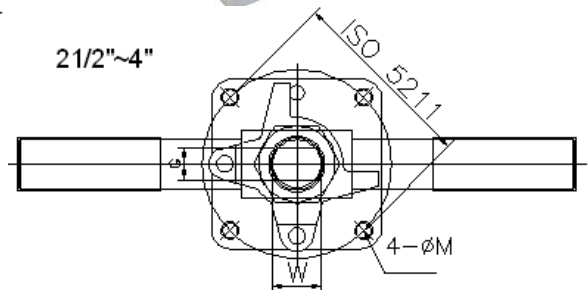
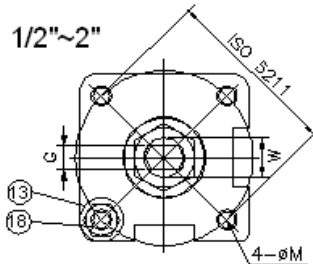
**VBF2-3 2 Piece Ball Valve Flanged 300#, Full Port, Direct Mounting**

**Features**

1. Face to face: ANSI B16.10
2. End Flange: ANSI B16.5
3. Design: ANSI B16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: 300#

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device available



**Material List**

NO.	PART NAME	MATERIAL	
1	BODY	SS316	WCB
2	END CAP	SS316	WCB
3	BALL	SS316	SS304
4	BALL SEAT	PTFE	
5	BODY GASKET	GRAPHITE	
6	STEM	SS316	SS304
7	STEM SEAL-RING	GRAPHITE	
8	V-RING STEM PACKING	GRAPHITE	
9	SLEEVE	SS304	
10	BELLEVILLE WASHER	SS304	
11	STOP	SS304	
12	STEM NUT	SS304	
13	STOP PIN	SS304	
14	BOLTS	ASTM A193 GR.B8	ASTM A193 GR.B7
15	BOLTS NUTS	ASTM A193 GR. 8	ASTM A194 GR. 2HM
16	HANDLE	SS304	
17	HANDLE COVER	PLASTIC	
18	STOP BOLT	SS304	
19	HANDLE ADAPTER	CF8	
20	HANDLE	STEEL	
21	STEM SEAL-RING	RTFE	
22	V-RING STEM PACKING	RTFE	

**Dimension**

Size	d1	B	C	D	T	F	N	E	H	H1	J	K	L	ISO 5211	M	G	W		
1/2"	15	35	66.5	95.3	14.3	1.6	4	16	80	38.5	8.5	162	140	F04	42	M5*0.8P	10-24UNC	6.35	12
3/4"	20	43	82.6	117.4	15.9	1.6	4	19.1	84.5	42.5	8.5	162	152	F04	42	M5*0.8P	10-24UNC	6.35	12
1"	25	51	88.9	124.0	17.5	1.6	4	19.1	102	52	12	196	165	F05	50	M6*1.0P	1/4-20UNC	8.0	14
1-1/4"	32	63.5	98.6	133.4	19.1	1.6	4	19.1	102	56	12	196	178	F05	50	M6*1.0P	1/4-20UNC	8.0	14
1-1/2"	38	73.2	114.3	155.5	20.7	1.6	4	22.3	125	65.3	12	226	190	F07	70	M8*1.25P	5/16-18UNC	9.5	16
2"	50	92.0	127.0	165.1	22.3	1.6	8	19.1	132	73.8	12	226	216	F07	70	M8*1.25P	5/16-18UNC	9.5	18
2-1/2"	64	104.7	149.4	190.5	25.4	1.6	8	22.3	176.8	92.5	12	300	241	F10	102	M10*1.5P	3/8-16UNC	17	28
3"	76	127.0	168.1	209.6	28.6	1.6	8	22.3	185.5	101.7	23	300	283	F10	102	M10*1.5P	3/8-16UNC	17	28
4"	100	157.2	200.2	254.0	31.8	1.6	8	22.3	200.0	119.0	23	450	305	F10	102	M10*1.5P	3/8-16UNC	17	28



## VBF2-3 2 Piece Ball Valve Flanged 300#, Full Port, Direct Mounting

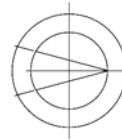
### Features

1. Face to face: ANSI B16.10
2. End Flange: ANSI B16.5
3. Design: ANSI B16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: 300#
7. Test: API-598

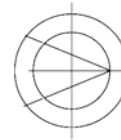
### Options

1. Carbon/ Stainless steel body construction
2. Locking device available

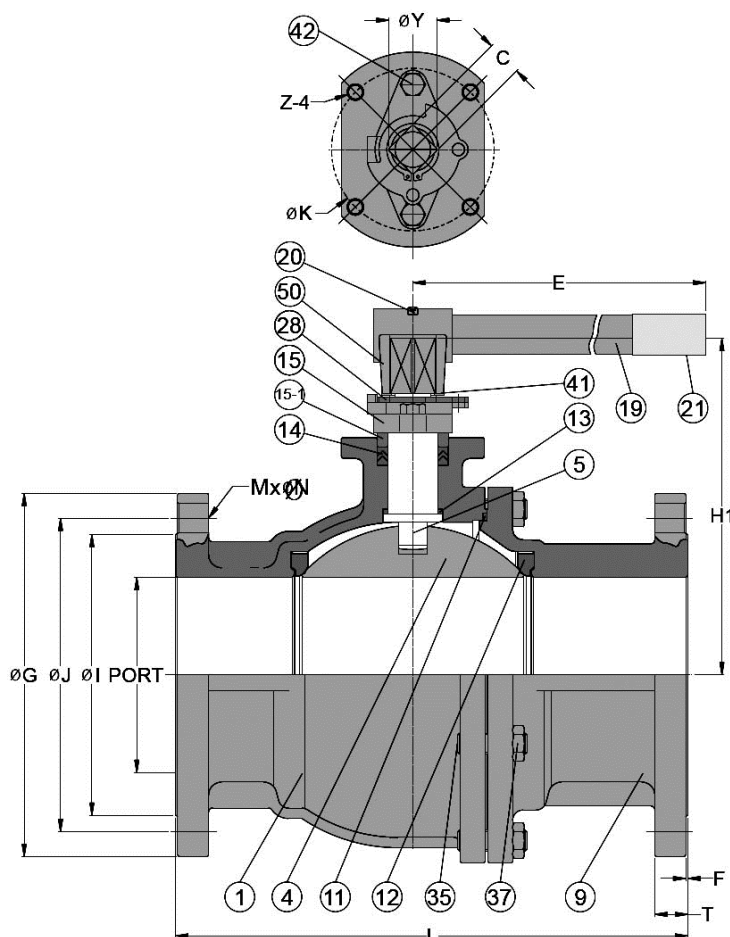
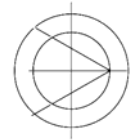
30° V-Ball



45° V-Ball



60° V-Ball



### Material List

NO.	PART NAME	MATERIAL		QTY
1	BODY	CF8M	WCB	1
4	BALL	CF8M	WCB	1
5	STEM	SS316	SS304	1
9	END CAP	CF8M	WCB	1
11	BODY SEAL	PTFE		1
12	SEAT	PTFE		2
13	THRUST WASHER	PTFE		1
14	STEM PACKING	PTFE		1 SET
15	GLAND	CF8	WCB	1
15-1	GLAND BUSH	SS304		1
19	HANDLE	LRON		1
20	SET BOLT	SS304		2
21	HANDLE COVER	PLASTIC		1
28	STOP PLATE	SS304		1
35	BODY BOLT	A193 GR. B8	A193 GR. B7	8
37	BOLT NUT	A194 GR. 8	A193 GR. 2HM	8
41	SNAP RING	SS304		1
42	GLAND BOLT	SS304		2
50	HANDLE ADAPTER	A351 GR. CF8		1

### Material List

Size	PORT	L	E	H1	H2	H4	C	Ø Y	Ø G	Ø J	Ø I	T	F	M	Ø N	Ø K	Z
5"	125	381	600	233	45	163.0	23	36	279.4	235.0	186	35.0	1.6	8	22.3	125	M12*1.75P
6"	150	403	800	259	45	182.5	23	36	317.5	269.8	216	36.6	1.6	12	22.3	125	M12*1.75P

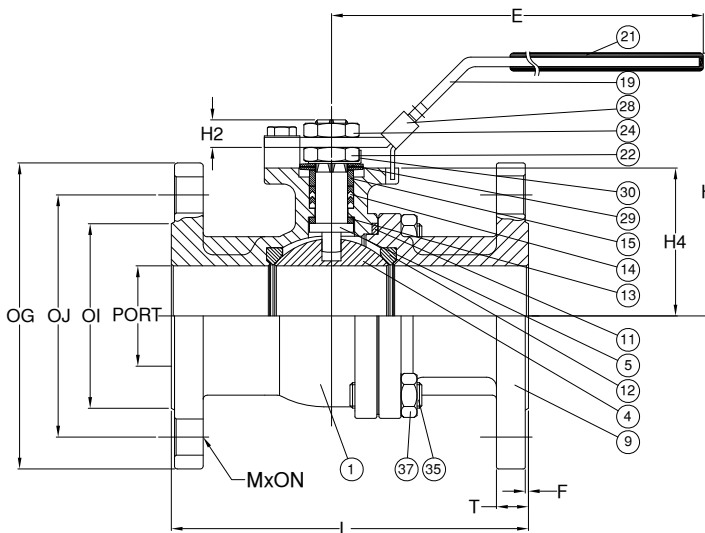
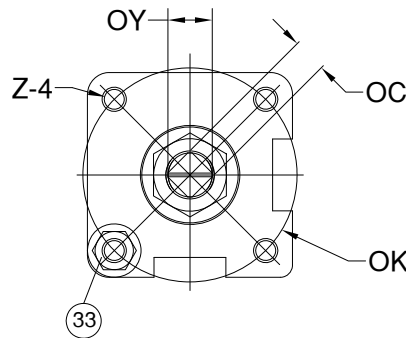
## VBF2-16/VBF2-40 2 Piece Ball Valve Flanged PN16/PN40, Full Port

### Features

- 1.Face to face: DIN 3202 F4/F5
- 2.End Flange: DIN2633
- 3.Design: ANSI B16.34
- 4.Investment casting
- 5.Blow-out proof stem
- 6.Pressure: PN16/PN40

### Options

- 1.Carbon/ Stainless steel body construction
- 2.Locking device available if requested



### Materials List

NO.	PART NAME	MATERIAL	
1	BODY	1.4408/ EN1503-1	1.0619/ EN1503-1
4	BALL	SS316	SS304
5	STEM	SS316	SS304
9	END CAP	1.4408/ EN1503-1	1.0619/ EN1503-1
11	BODY SEAL	PTFE.	
12	SEAT	RTFE.	
13	THRUST WASHER	PTFE.	
14	STEM PACKING	PTFE.	
15	GLAND BUSH	SS304	
19	HANDLE	SS304	
21	HANDLE COVER	PLASTIC	
22	STEM NUT	SS304	
24	HANDLE NUT	SS304	
28	LOCKING PAD	SS304	
29	BELLEVILLE WASHER	SS301	
30	TAB WASHER	SS304	
33	STOP PIN	SS304	
35	BODY BOLT	ASTM A193 Gr.B8	ASTM A193 Gr.B7
37	BOLT NUT	ASTM A193 Gr.8	ASTM A193 Gr.2HM

### PN16/PN40 Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
DN15	1/2"	15.0	115.0	132.0	80.0	8.5	38.5	9.0	11.2	95.0	65.0	45.0	16.0	2.0	4	14.0	42.0	M5*0.8P
DN20	3/4"	20.0	120.0	132.0	84.5	8.5	42.5	9.0	11.2	105.0	75.0	58.0	18.0	2.0	4	14.0	42.0	M5*0.8P
DN25	1"	25.0	125.0	166.0	102.0	12.0	52.0	11.0	14.3	115.0	85.0	68.0	18.0	2.0	4	14.0	50.0	M6*1.0P
DN32	1-1/4"	32.0	130.0	166.0	105.0	12.0	56.0	11.0	14.3	140.0	100.0	78.0	18.0	2.0	4	18.0	50.0	M6*1.0P
DN40	1-1/2"	38.0	140.0	198.0	125.0	12.0	65.3	14.0	18.0	150.0	110.0	88.0	18.0	2.0	4	18.0	70.0	M8*1.25P
DN50	2"	50.0	150.0	198.0	132.0	12.0	73.8	14.0	18.0	165.0	125.0	102.0	20.0	2.0	4	18.0	70.0	M8*1.25P

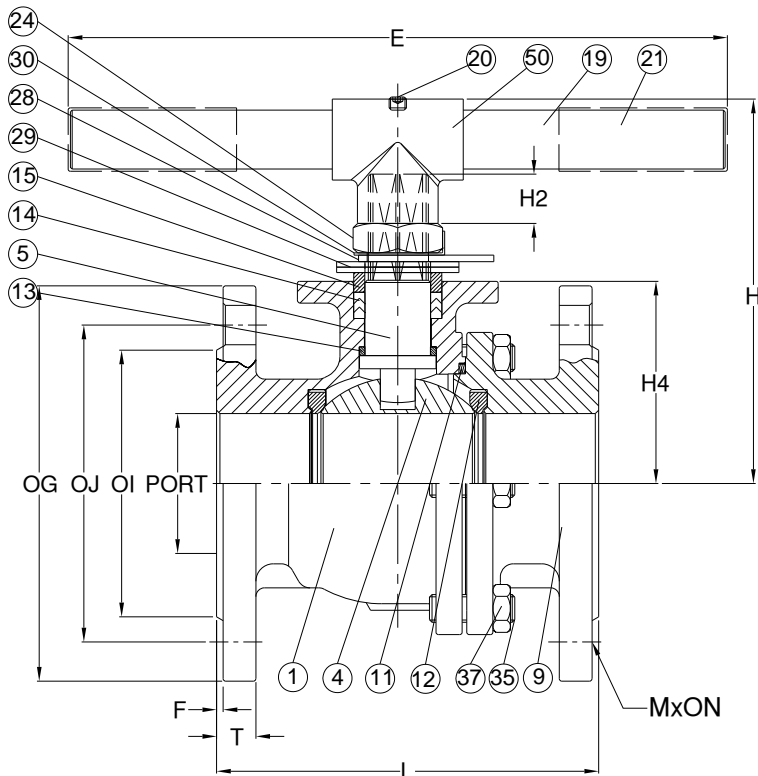
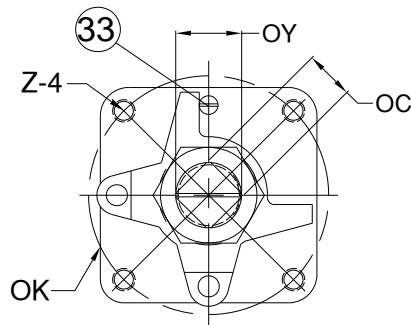
## VBF2-16/VBF2-40 2 Piece Ball Valve Flanged PN16/PN40, Full Port

### Features

- 1.Face to face: DIN 3202 F4/F5
- 2.End Flange: DIN2633
- 3.Design: ANSI B16.34
- 4.Investment casting
- 5.Blow-out proof stem
- 6.Pressure: PN16/PN40

### Options

- 1.Carbon/ Stainless steel body construction
- 2.Locking device available if requested



### Materials List

NO.	PART NAME	MATERIAL	
1	BODY	1.4408/ EN1503-1	1.0619/ EN1503-1
4	BALL	SS316	SS304
5	STEM	SS316	SS304
9	END CAP	1.4408/ EN1503-1	1.0619/ EN1503-1
11	BODY SEAL	PTFE.	
12	SEAT	PTFE.	
13	THRUST WASHER	PTFE.	
14	STEM PACKING	PTFE.	
15	GLAND BUSH	SS304	
19	HANDLE	LRON	
20	SET BOLT	SS304	
21	HANDLE COVER	PLASTIC	
24	HANDLE NUT	SS304	
28	STOP PLATE	SS304	
29	BELLEVILLE WASHER	SS301	
30	TAB WASHER	SS304	
33	STOP PIN	SS304	
35	BODY BOLT	ASTM A193 Gr.B8	ASTM A193 Gr.B7
37	BOLT NUT	ASTM A193 Gr.8	ASTM A193 Gr.2HM
50	HANDLE ADAPTER	ASTM A351 Gr. CF8	

### PN16 Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
DN65	2-1/2"	64.0	170.0	300.0	178.0	23.0	95.5	17.0	22.3	185.0	145.0	122.0	18.0	2.0	4	18.0	102.0	M10*1.5P
DN80	3"	76.0	180.0	300.0	188.0	23.0	101.7	17.0	22.3	200.0	160.0	138.0	20.0	2.0	8	18.0	102.0	M10*1.5P
DN100	4"	100.0	190.0	450.0	202.0	23.0	119.0	17.0	22.3	220.0	180.0	158.0	20.0	2.0	8	18.0	102.0	M10*1.5P

### PN40 Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
DN65	2-1/2"	64.0	170.0	300.0	178.0	23.0	95.5	17.0	22.3	185.0	145.0	122.0	18.0	2.0	8	18.0	102.0	M10*1.5P
DN80	3"	76.0	180.0	300.0	188.0	23.0	101.7	17.0	22.3	200.0	160.0	138.0	20.0	2.0	8	18.0	102.0	M10*1.5P
DN100	4"	100.0	190.0	450.0	202.0	23.0	119.0	17.0	22.3	235.0	190.0	158.0	24.0	2.0	8	18.0	102.0	M10*1.5P

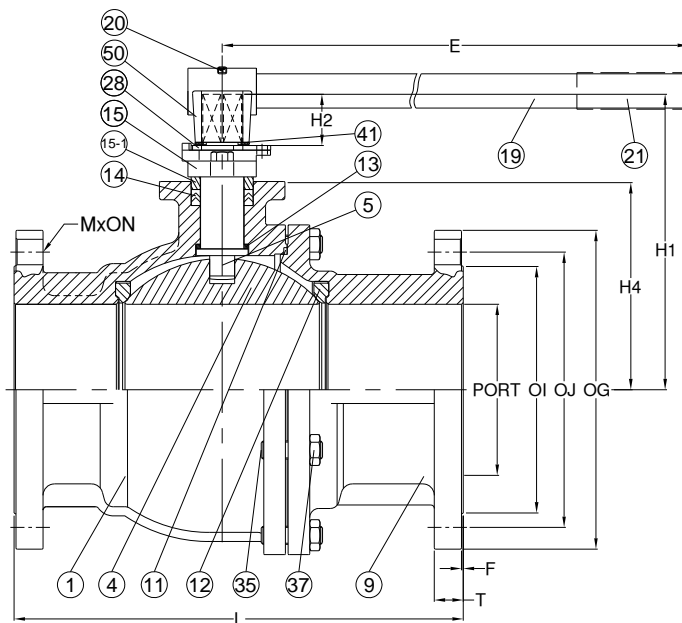
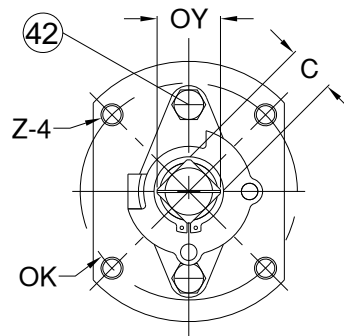
## VBF2-16/VBF2-40 2 Piece Ball Valve Flanged PN16/PN40, Full Port

### Features

- 1.Face to face: DIN 3202 F4/F5
- 2.End Flange: DIN2633
- 3.Design: ANSI B16.34
- 4.Investment casting
- 5.Blow-out proof stem
- 6.Pressure: PN16/PN40

### Options

- 1.Carbon/ Stainless steel body construction
- 2.Locking device available if requested



### Materials List

NO.	PART NAME	MATERIAL	
1	BODY	1.4408/ EN1503-1	1.0619/ EN1503-1
4	BALL	SS316	SS304
5	STEM	SS316	SS304
9	END CAP	1.4408/ EN1503-1	1.0619/ EN1503-1
11	BODY SEAL	PTFE.	
12	SEAT	PTFE.+15%G.F.	
13	THRUST WASHER	PTFE.	
14	STEM PACKING	PTFE.	
15	GLAND	SS304	1.0619/ EN1503-1
15-1	GLAND BUSH	SS304	
19	HANDLE	LRON	
20	SET BOLT	SS304	
21	HANDLE COVER	PLASTIC	
28	STOP PLATE	SS304	
35	BODY BOLT	ASTM A193 Gr.B8	ASTM A193 Gr.B7
37	BOLT NUT	ASTM A193 Gr.8	ASTM A193 Gr.2HM
41	SNAP RING	SS304	
42	GLAND BOLT	SS304	
50	HANDLE ADAPTER	SS304	

### PN16 Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
DN125	5"	125.0	325.0	600.0	233.0	45.0	163.0	27.0	36.0	250.0	210.0	188.0	22.0	2.0	8	Ø18.0	125	M12*1.75P
DN150	6"	150.0	350.0	800.0	259.0	45.0	182.5	27.0	36.0	285.0	240.0	212.0	22.0	20.	8	Ø22.0	125	M12*1.75P

### PN40 Dimensions

Size	PORT	L	E	H	H2	H4	C	ØY	ØG	ØJ	ØI	T	F	M	ØN	ØK	Z	
DN125	5"	125.0	325.0	600.0	233.0	45.0	163.0	27.0	36.0	270.0	220.0	188.0	26.0	2.0	8	Ø26.0	125	DN65
DN150	6"	150.0	350.0	800.0	259.0	45.0	182.5	27.0	36.0	300.0	250.0	218.0	28.0	20.	8	Ø26.0	125	DN80

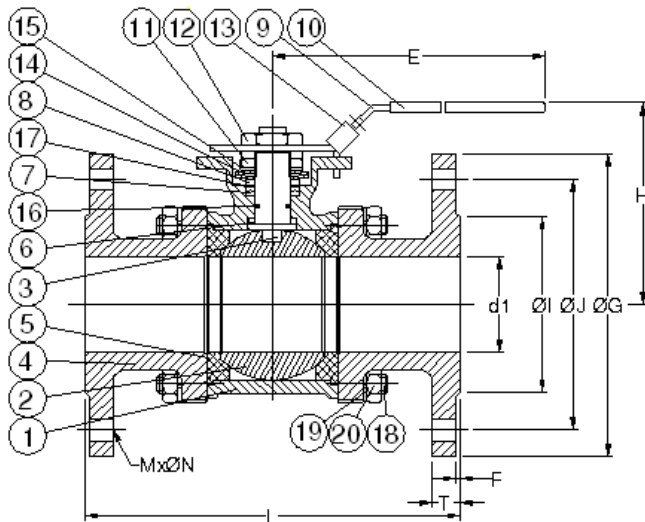
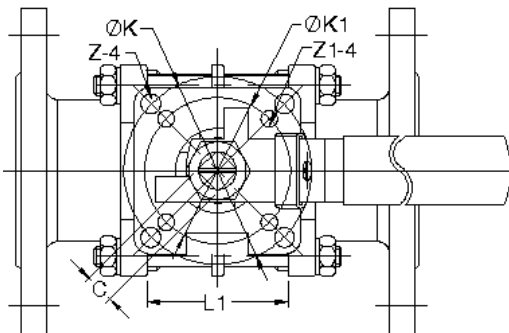
**VBF3E-PN16 3PC Ball Valve Flanged PN16, Full Port, Direct Mounting**

**Features**

1. Face to face: DIN 3202 F4/F5
2. End flange: PN 16 DIN 2633
3. Design: ANSI 16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: PN16

**Options**

1. Carbon/ Stainless steel body construction
2. Locking device available if requested



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	1.4408/EN1503-1
2	BALL	CF8M/EN1503-2
3	STEM	SS316
4	END CAP	1.4408/EN1503-1
5	SEAT	RTFE
6	THRUST WASHER	RTFE
7	STEM PACKING	RTFE
8	GLAND BUSH	SS304
9	HANDLE	SS304
10	HANDLE COVER	PLASTIC
11	STEM NUT	SS304
12	HANDLE NUT	SS304
13	LOCKING PAD	SS304
14	BELLEVILLE WASHER	SS304-CSP
15	TAB WASHER	SS304
16	O-RING	VITON
17	PACKING FOLLOWER	PTFE+25%GF
18	BODY BOLT	SS304
19	BOLT WASHER	SS304
20	BOLT NUT	SS304

**Dimension**

SIZE	d1	L	E	H	C	ØG	ØJ	ØI	T	F	MxØN	ØK	ØK1	Z-4	Z1-4	L1	
DN15	1/2"	15.0	130.0	112.0	74.0	9.0	95.0	65.0	45.0	16.0	2.0	4xØ14	50.0	36.0	7.0	6.0	22.5
DN20	3/4"	20.0	150.0	112.0	81.0	9.0	105.0	75.0	58.0	18.0	2.0	4xØ14	50.0	36.0	7.0	6.0	27.5
DN25	1"	25.0	160.0	136.0	90.5	9.0	115.0	85.0	68.0	18.0	2.0	4xØ14	50.0	36.0	7.0	6.0	34.0
DN32	1-1/4"	32.0	180.0	185.0	98.7	9.0	140.0	100.0	78.0	18.0	2.0	4xØ18	50.0	36.0	7.0	6.0	42.5
DN40	1-1/2"	38.0	200.0	198.0	115.3	14.0	150.0	110.0	88.0	18.0	3.0	4xØ18	70.0	50.0	9.0	7.0	52.0
DN50	2"	50.0	230.0	198.0	124.0	14.0	165.0	125.0	102.0	20.0	3.0	4xØ18	70.0	50.0	9.0	7.0	63.5
DN65	2-1/2"	65.0	290.0	267.0	155.0	17.0	185.0	145.0	122.0	18.0	3.0	4xØ18	102.0	70.0	11.0	9.0	85.5
DN80	3"	80.0	310.0	267.0	208.5	17.0	200.0	160.0	138.0	20.0	3.0	8xØ18	102.0	70.0	11.0	9.0	102.0
DN100	4"	100.0	350.0	322.0	216.7	17.0	220.0	180.0	158.0	20.0	3.0	8xØ18	102.0	70.0	11.0	9.0	128.5

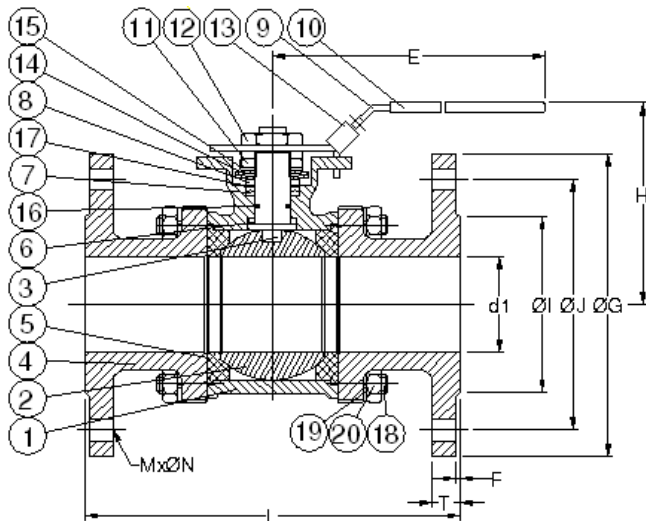
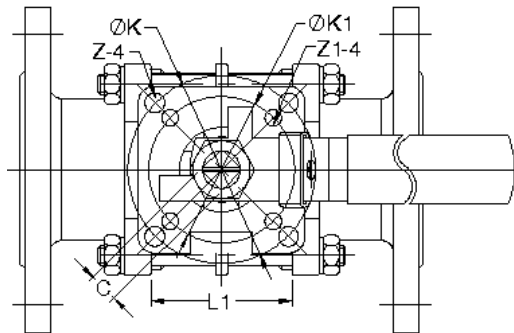
## VBF3E-PN40 3 Piece Ball Valve Flanged PN40, Full Port, Direct Mounting

### Features

1. Face to face: DIN 3202 F1
2. End flange: PN 40 DIN 2545
3. Design: ANSI 16.34
4. Investment casting
5. Blow-out proof stem
6. Pressure: PN40

### Options

1. Carbon/ Stainless steel body construction
2. Locking device available if requested



### Material List

NO.	PART NAME	MATERIAL
1	BODY	1.4408/EN1503-1
4	BALL	CF8M/EN1503-2
5	STEM	SS316
9	END CAP	1.4408/EN1503-1
12	SEAT	RTFE
13	THRUST WASHER	RTFE
14	STEM PACKING	RTFE
15	GLAND BUSH	SS304
19	HANDLE	SS304
21	HANDLE COVER	PLASTIC
22	STEM NUT	SS304
24	HANDLE NUT	SS304
28	LOCKING PAD	SS304
29	BELLEVILLE WASHER	SS304-CSP
30	TAB WASHER	SS304
31	O-RING	VITON
32	PACKING FOLLOWER	PTFE+25%GF
35	BODY BOLT	SS304
36	BOLT WASHER	SS304
37	BOLT NUT	SS304

### Dimension

SIZE	d1	L	E	H	C	ØG	ØJ	ØI	T	F	MxØN	ØK	ØK1	Z-4	Z1-4	L1	
DN15	1/2"	15.0	130.0	112.0	74.0	9.0	95.0	65.0	45.0	16.0	2.0	4xØ14	50.0	36.0	7.0	6.0	22.5
DN20	3/4"	20.0	150.0	112.0	81.0	9.0	105.0	75.0	58.0	18.0	2.0	4xØ14	50.0	36.0	7.0	6.0	27.5
DN25	1"	25.0	160.0	136.0	90.5	9.0	115.0	85.0	68.0	18.0	2.0	4xØ14	50.0	36.0	7.0	6.0	34.0
DN32	1-1/4"	32.0	180.0	185.0	98.7	9.0	140.0	100.0	78.0	18.0	2.0	4xØ18	50.0	36.0	7.0	6.0	42.5
DN40	1-1/2"	38.0	200.0	198.0	115.3	14.0	150.0	110.0	88.0	18.0	3.0	4xØ18	70.0	50.0	9.0	7.0	52.0
DN50	2"	50.0	230.0	198.0	124.0	14.0	165.0	125.0	102.0	20.0	3.0	4xØ18	70.0	50.0	9.0	7.0	63.5
DN65	2-1/2"	65.0	290.0	267.0	155.0	17.0	185.0	145.0	122.0	22.0	3.0	8xØ18	102.0	70.0	11.0	9.0	85.5
DN80	3"	80.0	310.0	267.0	208.5	17.0	200.0	160.0	138.0	24.0	3.0	8xØ18	102.0	70.0	11.0	9.0	102.0
DN100	4"	100.0	350.0	322.0	216.7	17.0	235.0	190.0	162.0	27.0	3.0	8xØ22	102.0	70.0	11.0	9.0	128.5

## 3W4FD 3-Way Ball Valve Flanged 150LBS, Full Port, Direct Mount, L/ T/ X Port

### Features

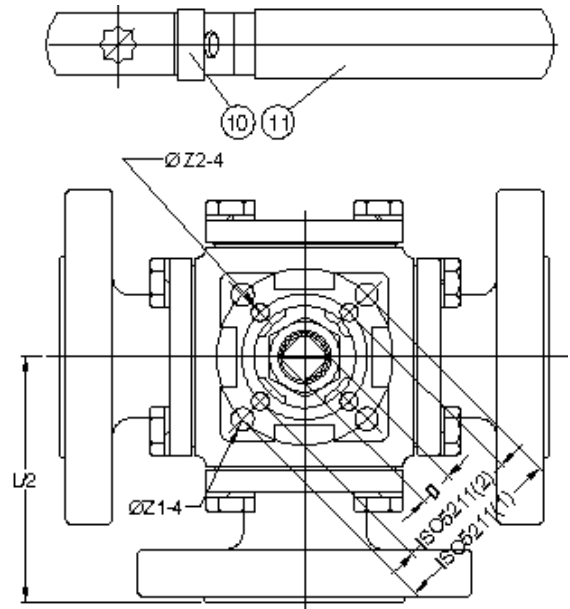
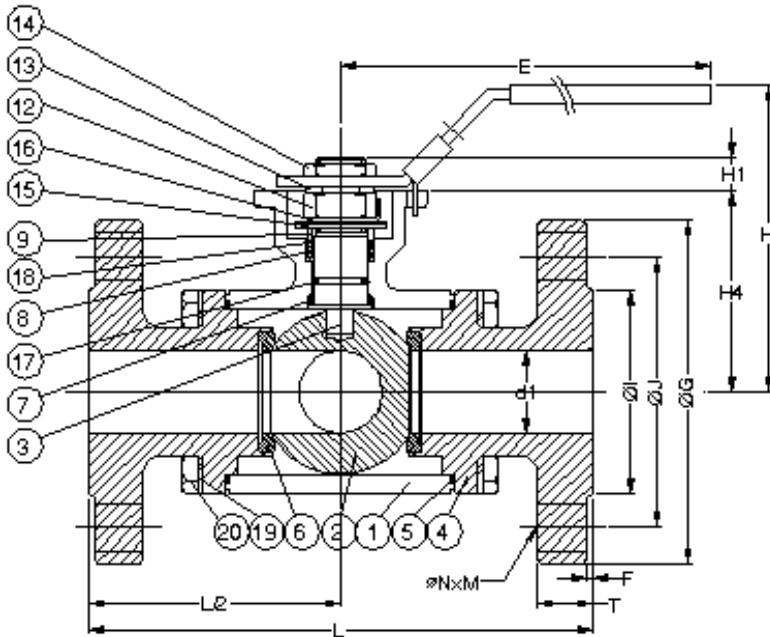
1. Flange ends conform to ANSI B16.5-1996
2. Investment casting
3. Blow-out proof stem
4. Pressure: 150LBS

### Options

1. Carbon/ Stainless steel body construction
2. Locking device is available if requested



TURN PORT	TURN			
	0°	90°	180°	270°
L				
T				



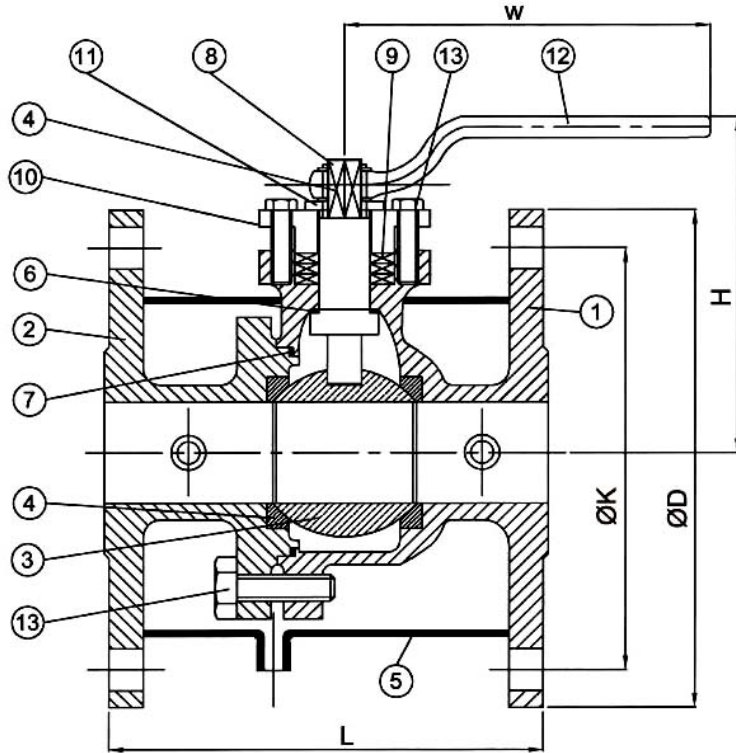
### Material List

NO.	PART NAME	MATERIAL
1	BODY	SS316
2	BALL	SS316
3	STEM	SS316
4	END CAP	SS316
5	BODY SEAL	PTFE
6	SEAT	PTFE
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND	SS304
10	HANDLE	SS304
11	HANDLE COVER	PLASTIC
12	STEM NUT	SS304
13	HANDLE WASHER	SS304
14	HANDLE NUT	SS304
15	BELLEVILLE WASHER	SS410
16	STOP WASHER	SS304
17	O-RING	VITON
18	PACKING FOLLOWER	PTFE + 25% GF
19	BOLT	SS304
20	BOLT WASHER	SS304

### Dimension

SIZE	d1	L	E	H1	H	H4	C	G	J	I	T	F	M	N	Z1	Z2	ISO 5211
1/2"	16	147.2	186.5	9	89	47.8	9	89	60.5	35	11.1	1.6	4	16	6		42 F04
3/4"	20	153.5	218	11	98	58.2	9	98.6	70	43	11.1	1.6	4	16	7		50 F05
1"	25	169	218	11.5	102	64	9	108	79.2	51	11.1	1.6	4	16	7		50 F05
1 1/4"	32	192.5	235	15.2	118.5	79	14	117.5	88.9	63.5	12.7	1.6	4	16	9	7	50 F05 F07
1 1/2"	38	214.6	235	14.3	127	88.5	14	127	98.6	73.2	14.3	1.6	4	16	9	7	50 F05 F07
2"	50	221	260	17.8	149	105.8	17	152.5	120.7	92	15.9	1.6	4	16	11	9	70 F07 F10

**VBFJ Two-way Ball Valve With Heating Jacket Flanged 10K/150LB**



**Test Pressure To API 598**

	ANSI 150LB
Shell test (water)	450 PSI / 32 kg/cm <sup>2</sup>
Seat test (water)	315 PSI / 22 kg/cm <sup>2</sup>
Seat test (air)	80 PSI / 6kg cm <sup>2</sup>

**ANSI 150LB Dimension**

SIZE	IN	1/2	3/4	1	1-1/2	2	2-1/2	3	4	6
	MM	15	20	25	40	50	65	80	100	150
H		130	135	140	155	180	185	185	235	290
L		110	120	130	165	180	190	200	235	286
ØD		127	127	152	178	190	229	254	279	343
ØK		98.6	98.6	120.7	139.7	154.2	190.5	216	241.3	298.4

**JIS 10K Dimension**

SIZE	IN	1/2	3/4	1	1-1/2	2	2-1/2	3	4	6
	MM	15	20	25	40	50	65	80	100	150
H		130	135	140	155	180	185	185	235	290
L		110	120	130	165	180	190	200	235	270
ØD		140	140	155	175	185	210	250	280	330
ØK		105	105	120	140	150	175	210	240	290

**Material List**

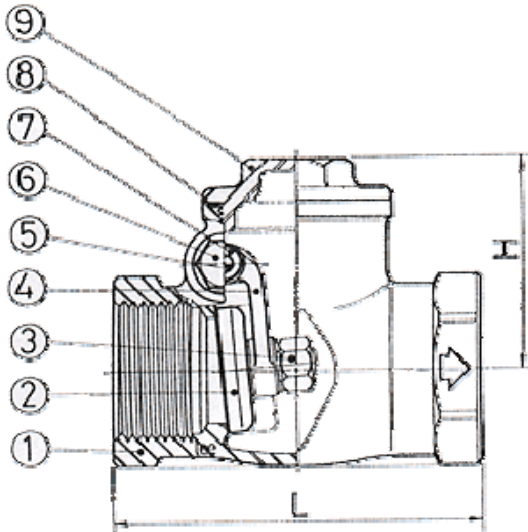
NO.	PART NAME	MATERIAL
1	BODY	A351-CF8/ A351-CF8M
2	BONNET	A351-CF8/ A351-CF8M
3	BALL	A351-CF8/ A351-CF8M
4	SEAT	PTFE+33%C
5	SHELL OF JACKET	A240-304/ A240-316
6	THRUST WASHER	PTFE+33%C
7	GASKET	PTFE+33%C
8	STEM	A276-304
9	PACKING	CRAPHITE
10	GLAND	A351-CF8
11	STOPPER	A267-304
12	HANDLE	FCD-45
13	BOLT	SUS304



**CK-6 Swing Check Valve 600WOG**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Swing type disc
4. Pressure: 600WOG



**Materials List**

NO.	PART	MATERIAL
1	BODY	304/316
2	DISC	304/316
3	DISC NUT	304
4	CONNECTING ROD	304/316
5	PIN	304/316
6	BOLT	304
7	BOLT WASHER	PTFE
8	GASKET	PTFE
9	CAP	304/316

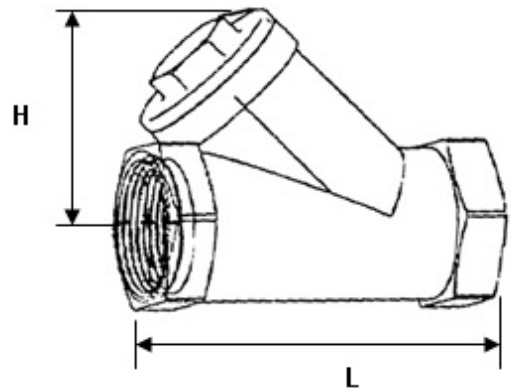
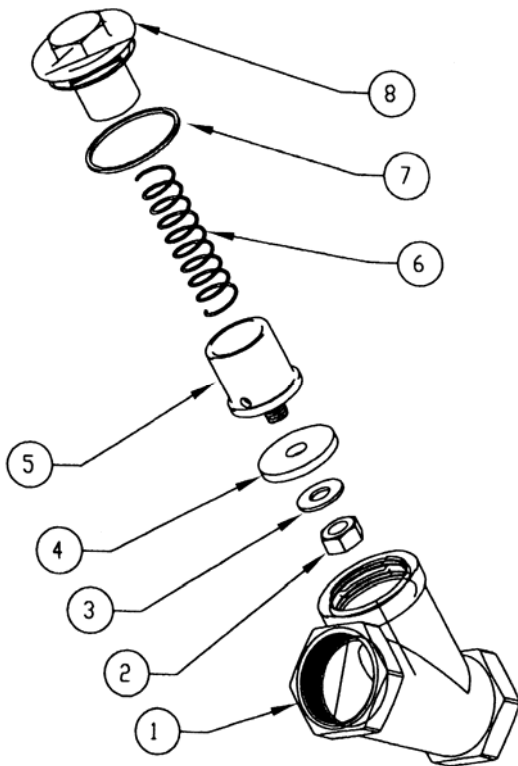
**Dimension**

SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
L	60.0	78.0	84.0	94.0	104.0	122.0	153.0	175.0
H	41.5	46.0	49.0	53.5	58.5	67.0	105.0	125.0

**YC-8 Y-Spring Check Valve 800WOG**

**Features**

- 1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
- 2. Investment casting
- 3. Pressure: 800WOG



**Material List**

NO.	Part	Material
1	Body	SS316
2	Nut	SS304
3	Disc Washer	SS316
4	Disc	PTFE/Viton
5	Disc Bonnet	SS316
6	Spring	JIS G4801 Gr. Sup 3
7	Gasket	PTFE
8	Cap	SS316

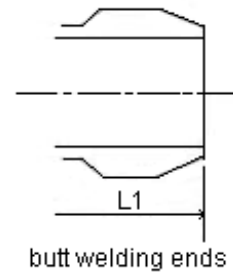
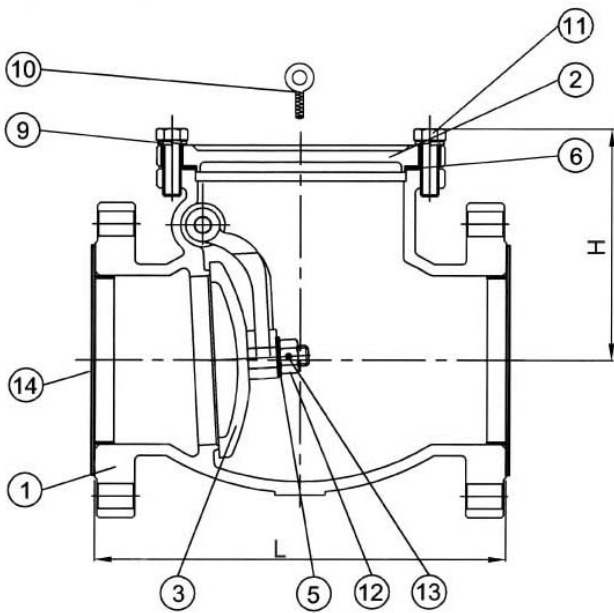
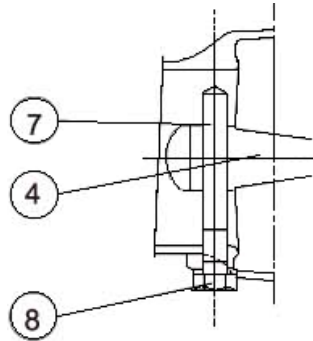
**Dimension**

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
L	57.0	57.0	61.0	70.0	86.0	100.0	111.0	138.0	170.0	195.0
H	32.0	32.0	37.0	41.0	47.0	54.0	62.0	76.0	110.0	130.0
D	10.0	10.0	15.0	20.0	25.0	32.0	38.0	51.0	65.0	80.0

**CKF-1 Cast Stainless & Steel Check Valve Flanged 10K/150LB**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210
- Bolted cover
- Swing type
- For horizontal lines
- Renewable seat ring
- Flanged ends
- Butt welding ends



**Material List**

NO.	PART NAME	MATERIAL			
		304SS	316SS	316L	CS
1	BODY	CF8	CF8M	CF3M	WCB
2	COVER	CF8	CF8M	CF3M	WCB
3	DISC	CF8	CF8M	CF3M	WCB
4	SWING ARM	CF8	CF8M	CF3M	WCB
5	WASHER	A276-304/316/316L			
6	GASKET	V#1500/GRAPHITE/PTFE			
7	HINGE PIN	A276-304/316/316L			
8	PLUG	A276-304/316/316L			
9	SPRING WASHER	A276-304			
10	EYE BOLT	A36+ZN			
11	COVER BOLT	A193-B8			
12	NUT	A194-8/A194-8M			
13	PIN	A276-304/316/316L			
14	COVER	PE			

**Test Pressure To API 598**

	ANSI 150LB	JIS 10K
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )	15 kg/cm <sup>2</sup>
Seat Test (Air)	80PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

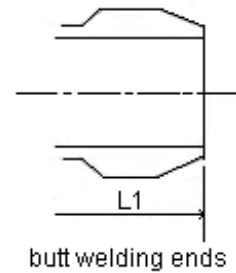
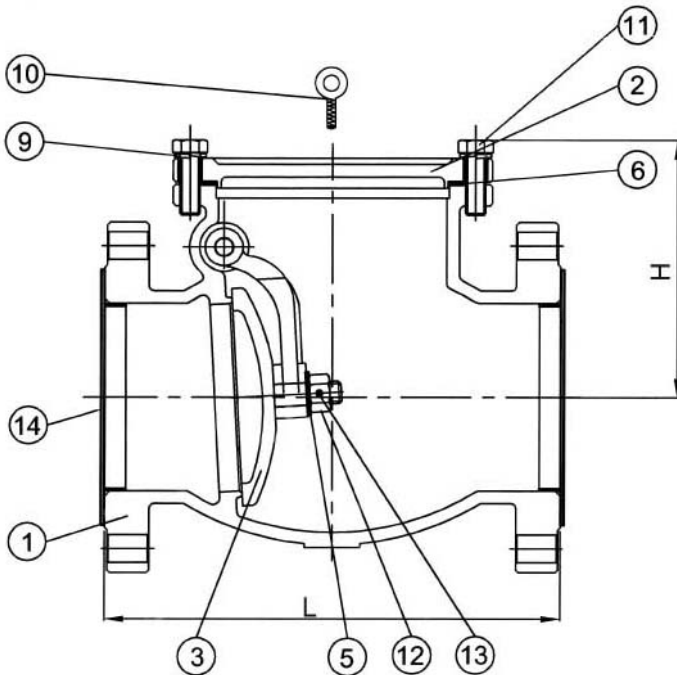
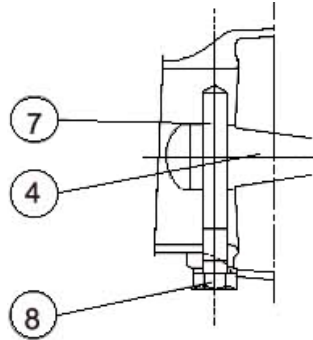
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L		108	117	127	165	203	216	241	292	330	356	495	622	699	787	864	978	978	1295
H		57	58	68	80	102	120	125	168	178	200	235	350	380	430	450	650	650	900

**CKF-3 Cast Stainless Steel Check Valve Flanged 20K/ 300LB**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210
- Bolted cover
- Swing type
- For horizontal lines
- Renewable seat ring
- Flanged ends
- Buttwelding ends



**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	CF8	CF8M	CF3M
2	COVER	CF8	CF8M	CF3M
3	DISC	CF8	CF8M	CF3M
4	SWING ARM	CF8	CF8M	CF3M
5	WASHER	A276-304/316/316L		
6	GASKET	V#1500/GRAPHITE/PTFE		
7	HINGE PIN	A276-304/316/316L		
8	PLUG	A276-304/316/316L		
9	SPRING WASHER	A276-304		
10	EYE BOLT	A36+ZN		
11	COVER BOLT	A193-B8		
12	NUT	A194-8/A194-8M		
13	PIN	A276-304/316/316L		
14	COVER	PE		

**Test Pressure To API 598**

	ANSI 300LB	JIS 20K
Shell Test (Water)	1125 PSI (77 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
Seat Test (Water)	814 PSI (56 kg/cm <sup>2</sup> )	30 kg/cm <sup>2</sup>
Seat Test (Air)	80PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

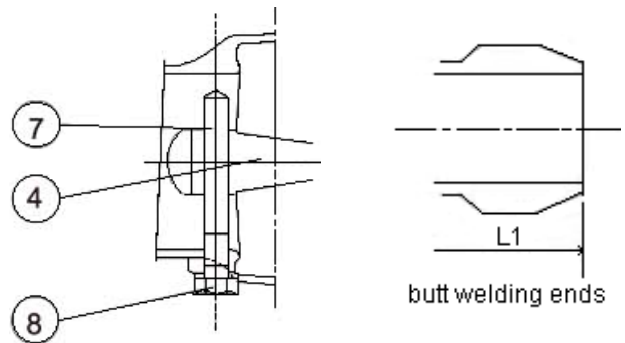
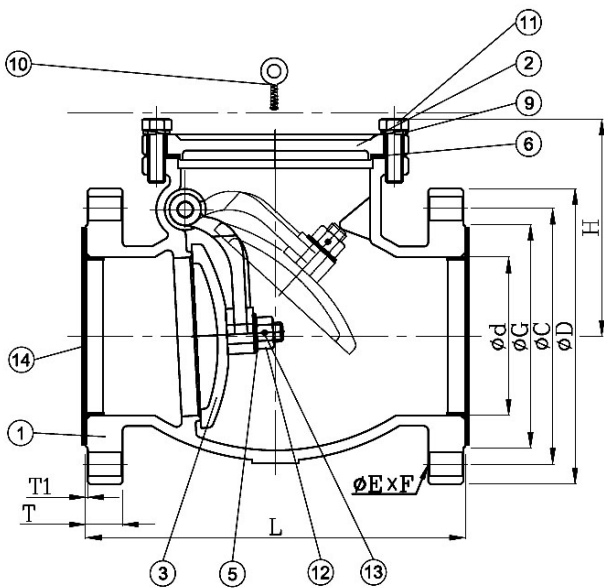
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300
L		152	178	216	241	267	292	318	356	400	444	533	622	711
H		80	90	100	116	129	143	164	177	271	231	291	319	360

**CKF-16 Cast Stainless Steel Check Valve Flanged PN16**

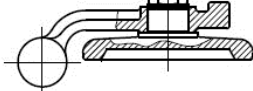
**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face DIN 3202-1977
- End Flanges DIN 2543-1977
- Bolted cover
- Swing type
- For horizontal lines
- Flanged ends
- Butt welding ends



Disc type: DN15-DN80

DN100-DN300



**Test Pressure To API 598**

	PN16
Shell Test (Water)	340 PSI (24kg/cm <sup>2</sup> )
Seat Test (Water)	250 PSI (18 kg/cm <sup>2</sup> )
Seat Test (Air)	80 PSI (6 kg/cm <sup>2</sup> )

**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	1.4308	1.4408	1.4409
2	COVER	1.4308	1.4408	1.4409
3	DISC	1.4308	1.4408	1.4409
4	SWING ARM	1.4308	1.4408	1.4409
5	WASHER	SUS304	SUS316	SUS316L
6	GASKET	GRAPHITE/PTFE		
7	HINGE PIN	SUS304	SUS316	SUS316L
8	PLUG	SUS304	SUS316	SUS316L
9	SPRING WASHER	SUS304		
10	EYE BOLT	SUS304		
11	COVER BOLT	A193-B8		
12	NUT	A194-8		
13	PIN	SUS304	SUS316	SUS316L
14	COVER	PE		

**Dimension**

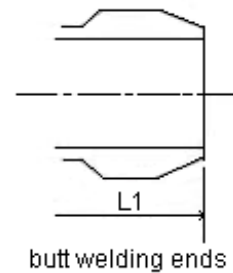
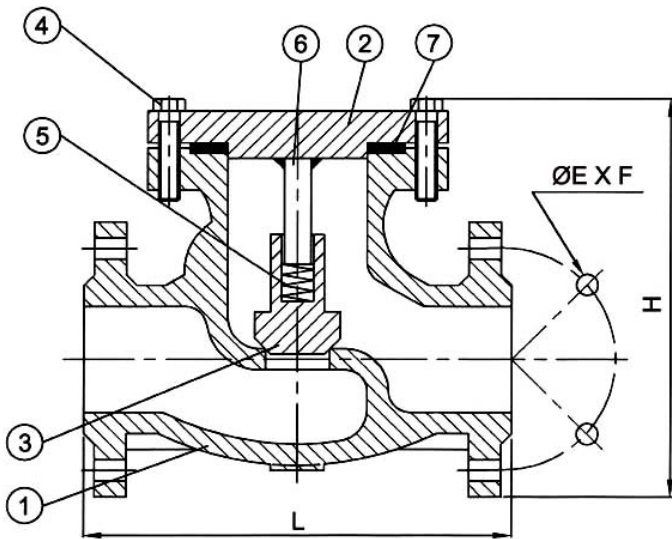
in millimeter ( mm)

DN	NPS	Ø d	L	H	Ø D	Ø C	Ø G	T	T1	Ø E	F
15	1/2"	15	130	57	95	65	45	14	2	14	4
20	3/4"	20	150	58	105	75	58	16	2	14	4
25	1"	25	160	68	115	85	68	16	2	14	4
32	1-1/4"	32	180	75	140	100	78	16	2	18	4
40	1-1/2"	40	200	80	150	110	88	16	3	18	4
50	2"	50	230	102	165	125	102	20	3	18	4
65	2-1/2"	65	290	120	185	145	122	18	3	18	8
80	3"	80	310	125	200	160	138	20	3	18	8
100	4"	100	350	168	220	180	158	20	3	18	8
125	5"	125	400	178	250	210	188	22	3	18	8
150	6"	150	480	200	285	240	212	22	3	23	8
200	8"	200	600	235	340	295	268	24	3	23	12
250	10"	250	622	350	405	355	320	26	3	27	12
300	12"	300	699	380	460	410	378	28	4	27	12

**CKL Lift Type Check Valve Flanged 10K/ 150LB**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210
- Bolted cover
- Swing type
- For horizontal lines
- Renewable seat ring
- Flanged ends
- Buttwelding ends



**Test Pressure To API 598**

	ANSI 150LB	JIS 10K
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )	15 kg/cm <sup>2</sup>
Seat Test (Air)	80PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

**Material List**

NO.	PART NAME	MATERIAL			
		WCB	304SS	316SS	316L
1	BODY	WCB	CF8	CF8M	CF3M
2	COVER	WCB	CF8	CF8M	CF3M
3	DISC	SUS304	CF8	CF8M	CF8M
4	BOLT	A193-B8			
5	SPRING	SUS304/SUS316			
6	STEM	A276-304/316/316L			
7	GASKET	V#1500/GRAPHITE/PTFE			

**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400
L		108	117	127	165	203	216	241	292	356	406	495	622	699	787	864
H		114	119	129	158	186	209	215	274	297	324	421	543	617	661	708

**WC-1 Wafer Type Check Valve**

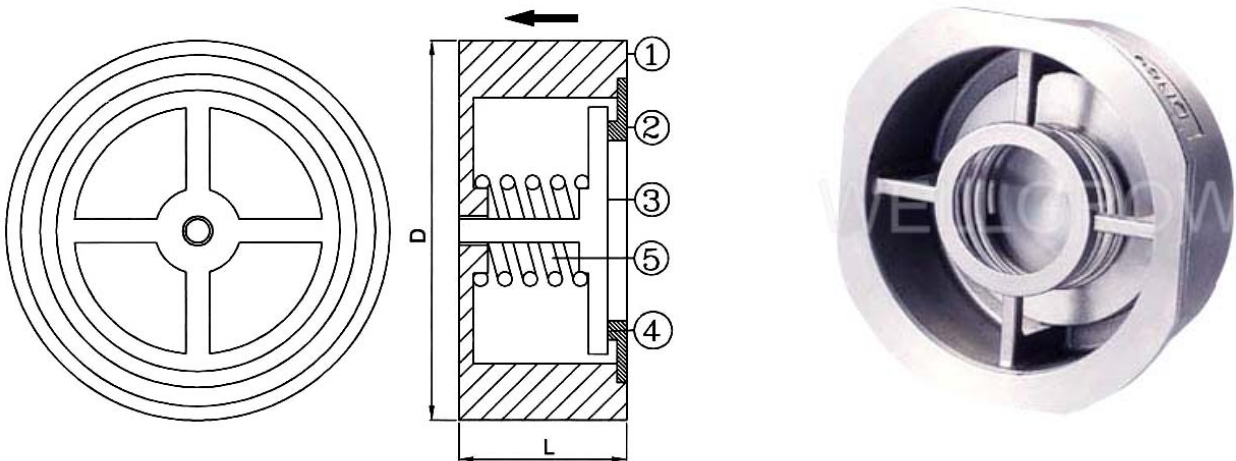
**Feature**

End Connection Rating:

JIS 10K, AISI 150#, DIN PN16 PN40

Working Pressure:

10kg/cm<sup>2</sup> , 16kg/cm<sup>2</sup>



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8, CF8M, CF3M
2	COVER	CF8, CF8M, CF3M
3	DISC	CF8, CF8M, CF3M
4	SEAT	CF8, CF8M, CF3M
5	SPRING	SUS316

**Dimension**

MARK	SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	L		15	19	22	28	33	40	46	50	60	90	106	140	150	160	160	191	203	219
D	10K	55	60	70	80	85	104	124	134	159	190	220	270	332	370	415	482	538	594	697
	150LB	47	57	66	76	85	104	124	134	174	190	220	270	332	409	450	512	548	605	697
	PN16	53	63	73	84	94	109	129	144	164	190	220	270	330	386	446	496	557	619	-
	PN40	53	63	73	84	94	109	129	144	170	196	226	293	355	420	477	547	-	-	-

**WC-2 Dual Plate Wafer Type Check Valve**

**Feature**

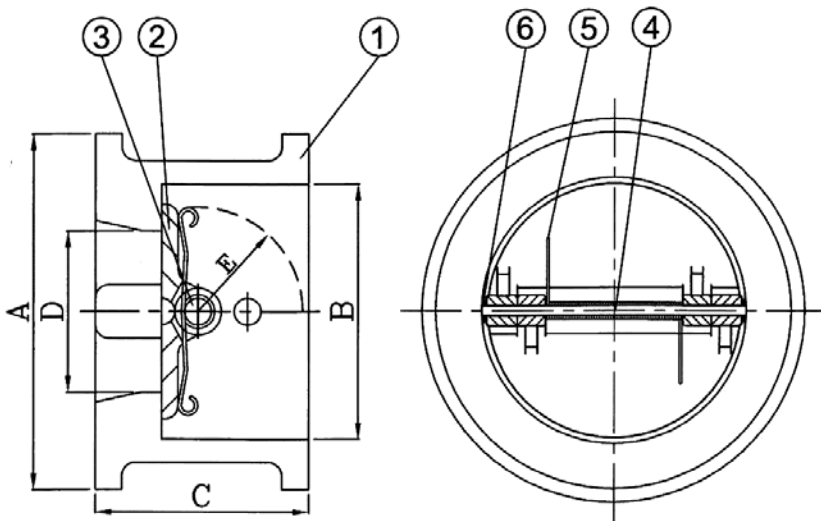
End Connection Rating:

JIS 10K, AISI 150#, DIN PN16

Working Pressure:

10kg/cm<sup>2</sup> , 16kg/cm<sup>2</sup>

Face to Face Dimension: API 594



**Material List**

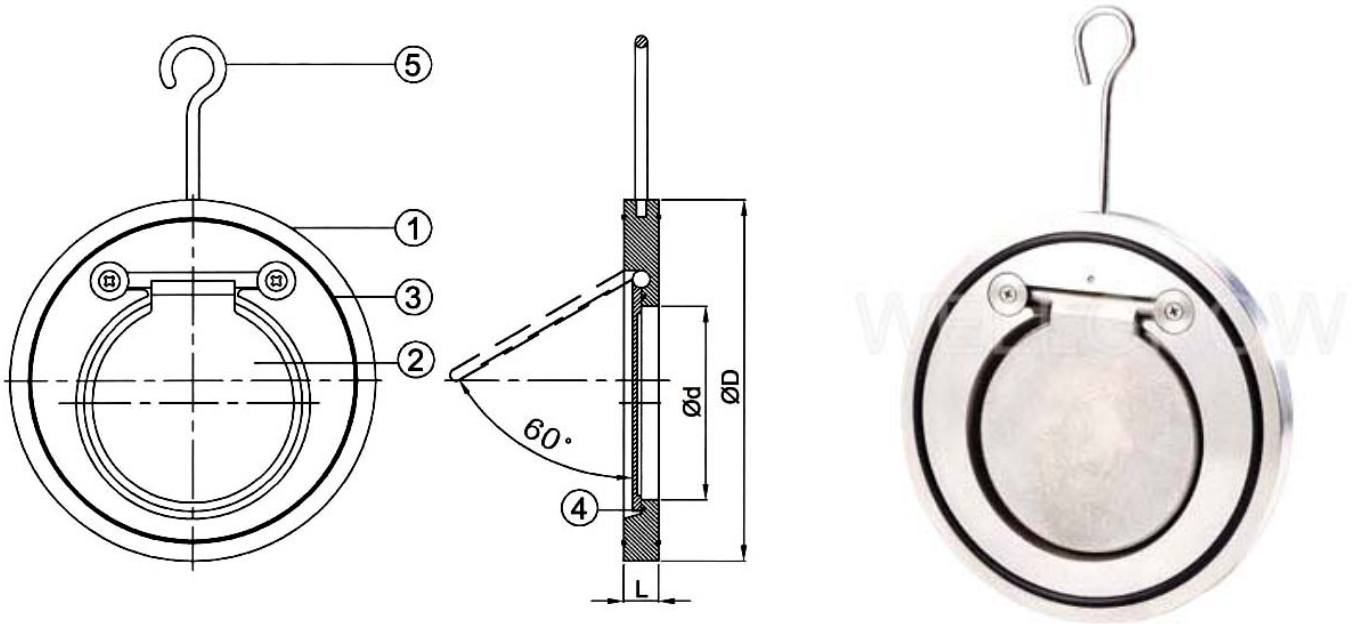
NO.	PART NAME	MATERIAL			
		WCB	CF8	CF8M	CF3M
1	BODY	WCB	CF8	CF8M	CF3M
2	PLATE	CF8	CF8	CF8M	CF3M
3	HINGE PIN	SUS304	SUS304	SUS316	SUS316L
4	SEAT	METAL, EPDM, VITON			
5	SPRING	SUS304, SUS316, INCONEL			
6	WASHER	SUS304		SUS316	

**Dimension**

MARK	SIZE	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	36"	
		A	10K	104	124	134	159	190	220	270	332	378	423	483	538	593	697				
	150 LB	B16.47B B16.47A	104	124	134	174	190	220	270	340	409	450	513	538	593	697	720 760	770 820	815 870	870 930	980 1040
	PN16	109	129	144	164	194	220	275	330	386	446	498	558	620							
	300LB	111	129	148	180	215	250	308	361	421	485	540	595	654	775						
	B	72	80	90	115	140	170	225	280	323	358	435	485	530	630	630	730	780	830	900	
	C	60	67	73	73	83	98	127	146	181	184	191	203	219	222	222	280	305	356	368	
	D	45	52	68	90	110	135	186	240	275	295	360	400	450	550	550	650	700	750	850	
	E	32	37	42	55	64	82	105	134	155	176	203	226	249	301	301	350	375	410	450	



**WC-3 Single Door Wafer Type Check Valve**



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	WCB/ SUS304/ SUS316
2	CLAPPER	WCB/ SUS304/ SUS316
3	BODY SEAT	NBR/ VITON/ PTFE/ METAL
4	CLAPPER SEAT	NBR/ VITON/ PTFE/ METAL
5	O-BOLT	SS304

Body	SUS304/ SUS316	SUS304/ SUS316	SUS304/ SUS316
Seat	NBR	VITON	PTFE
Fluid	Air, Oil, Water & others	Air, Oil, Hot water & others	Air, Oil, Steam & others
Working Pressure (Max) (kgf/cm <sup>2</sup> )	14	12	12
Fluid Temperature (Max) (°C)	80	250	200

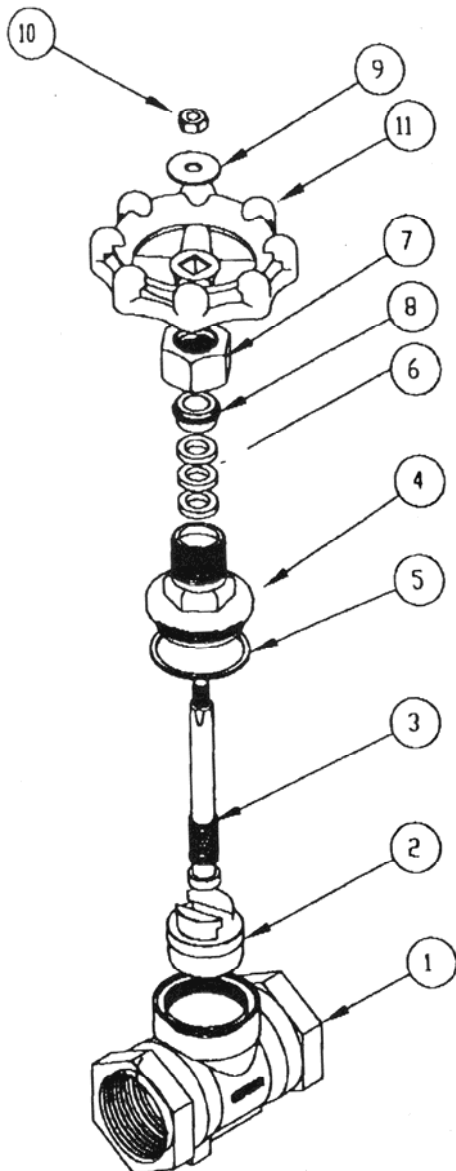
**Dimension**

MARK	SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"
d		8	9	9	12	15	30	42	50	72	93	113	142	190	211	260	306	340	408	450	485	520
D	JIS10K	55	60	70	80	85	104	124	134	159	190	220	270	332	370	415	475	530	580	640	690	745
	150LB	47	56	66	76	85	104	124	134	174	190	220	270	332	409	448	510	548	605	657	715	770
	300LB	53	63	72	84	94	111	129	148	179	214	250	307	360	423							
	PN16	53	63	72	84	94	109	129	144	164	194	220	275	330	386	446	498	558	620			
L		14	14	14	14	14	14	14	14	18	18	20	27	29	35	38	45	55	65	70	70	70

**GB-6 Globe Valve Class 600**

**Features**

- 1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
- 2. Investment casting



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	304, 316, CF8M
2	DISC	304, 316, CF8M
3	STEM	304, 316
4	CAP	304, 316, CF8M
5	GASKET	TEFLON
6	PACKING	TEFLON
7	CAP NUT	304, 316, CF8M
8	GLAND WASHER	304
9	SPIN WASHER	304
10	NUT	304
11	HANDLE	DUCT IRON

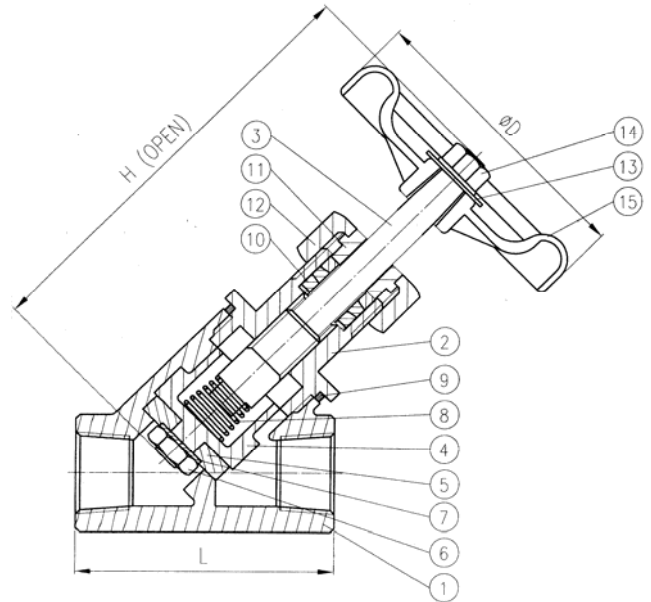
**Dimension**

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
L (mm)	63	63	63	70	77	87	100	110
H (mm)	105	105	106	106	116	122	144	145
D (mm)	62	62	62	62	75	75	95	95

**YG-6 Y Type Globe Valve 600WOG**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting
3. Pressure: 600WOG



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	304; 316
2	CAP	304; 316
3	STEM	304; 316
4	DISC BONNET	304; 316
5	DISC	TEFLON; VITON
6	NUT	304
7	DISC WASHER	304; 316
8	SPRING	304
9	GASKET	TEFLON; NBR
10	STEM PACKING	TEFLON
11	GLAND	304; 316
12	CAP NUT	304; 316
13	WASHER	304; 316
14	HANDLE NUT	304
15	HANDLE	Ductile Iron

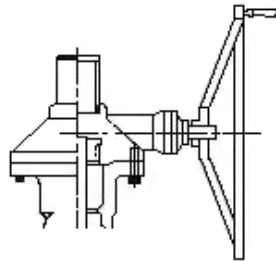
**Dimension**

SIZE	L	H	D
1/4	57	90	62
3/8	57	90	62
1/2	61	100	62
3/4	70	125	62
1	86	130	75
1-1/4	100	165	75
1-1/2	111	195	95
2	138	210	95

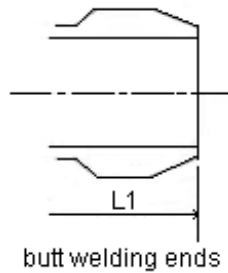
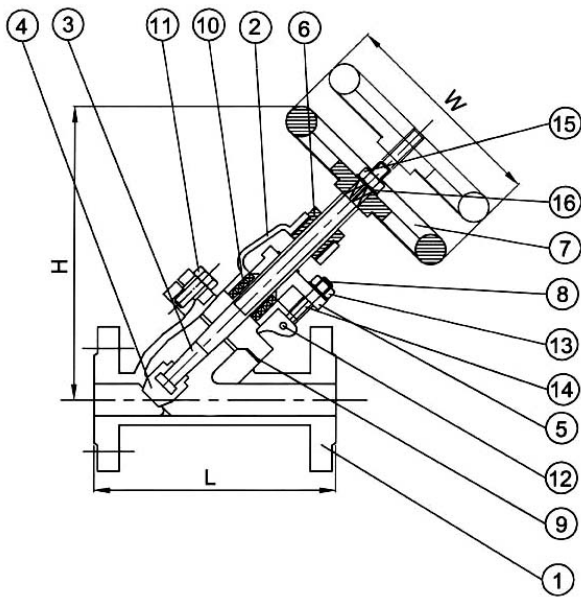
**YGF Y type Globe Valve Flanged 10K/ 150LB/ PN16**  
**Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



available with gear operator



butt welding ends

**Material List**

NO.	PART NAME	MATERIAL			
		WCB	304SS	316SS	316L
1	BODY	WCB	CF8	CF8M	CF3M
2	BONNET	WCB	CF8	CF8M	CF3M
3	STEM	SUS304	CF8	CF8M	CF8M
4	DISC	SUS304	CF8	CF8M	CF3M
5	GRAND	WCB	CF8	CF8M	CF3M
6	BUSH	DUCTILE IRON			
7	HAND WHEEL	CAST IRON			
8	BOLT	A193-B8			
9	GASKET	V#1500/ GRAPHITE/ PTFE			
10	PACKING	PTFE/GRAPHITE			
11	BOLT	A193-B8			
12	PIN	A276-304			
13	NUT	A194-8			
14	WASH	A276-304			
15	NUT	A194-8			
16	WASH	A276-304			

**Test Pressure To API 598**

	ANSI 150LB	JIS 10K
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )	15 kg/cm <sup>2</sup>
Seat Test (Air)	80PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

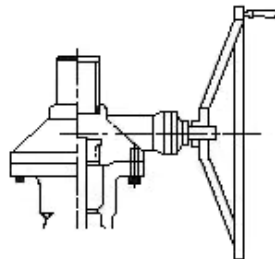
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300
L		139.7	152.4	165.1	203.2	228.6	279.4	317.5	368.3	400	469.9	596.9	673.1	774.7
H		145	150	160	245	270	300	356	407	487	610	685	785	950
W		100	100	125	140	160	180	200	225	250	300	350	400	500

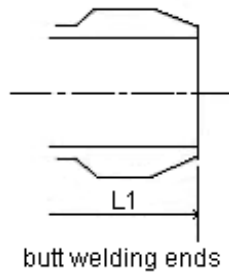
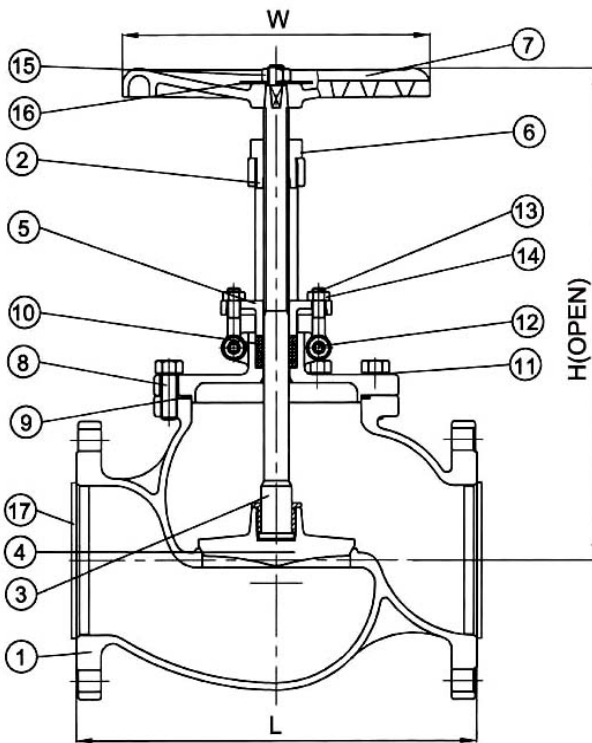
**GBF-1 Cast Stainless Steel Globe Valve Flanged 10K /150LB  
Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



available with gear operator



butt welding ends

**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	CF8	CF8M	CF3M
2	BONNET	CF8	CF8M	CF3M
3	STEM	SUS304	SUS316	SUS316L
4	DISC SEAT	SUS304	SUS316	SUS316L
5	GRAND	CF8	CF8M	CF3M
6	BUSH	BRONZE		
7	HAND WHEEL	DUCTILE IRON		
8	BONNET BOLT	A193-B8		
9	GASKET	SPIRAL WOUND/ GRAPHITE/PTFE		
10	PACKING	PTFE/GRAPHITE		
11	WASHER	A267-304		
12	EYE BOLT PIN	A276-304		
13	EYE BOLT	A194-B8		
14	EYE BOLT NUT	A194-8		
15	WHEEL NUT	A194-8		
16	WASHER	SUS304		
17	COVER	PE		

**Test Pressure To API 598**

	ANSI 150LB	JIS 10K
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )	15 kg/cm <sup>2</sup>
Seat Test (Air)	80 PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

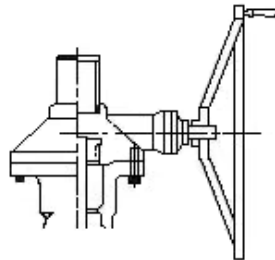
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400
L/L1		108	117	127	165	203	216	241	292	356	406	495	622	698	787	864
H		190	195	208	265	275	320	360	415	510	535	600	718	760	1050	1200
W		100	100	125	140	170	180	190	220	290	350	400	500	500	500	600

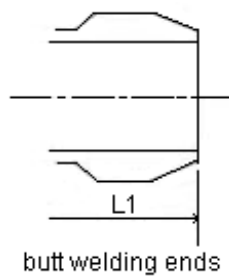
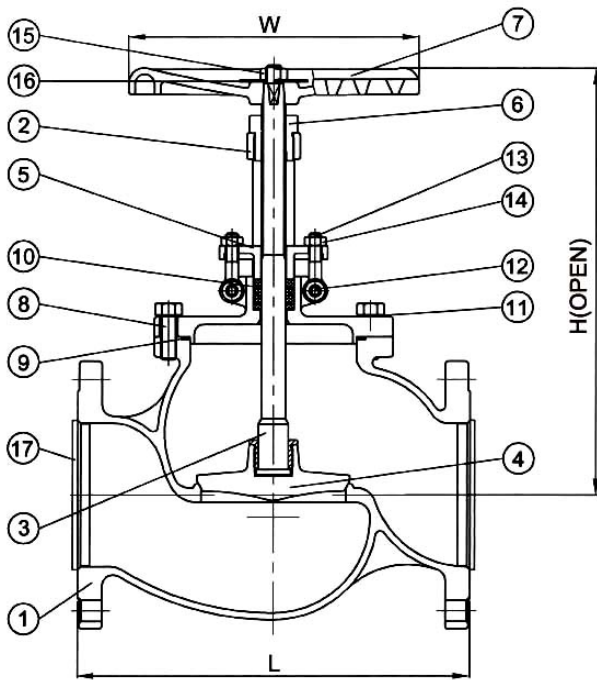
**GBF-3 Cast Stainless Steel Globe Valve Flanged 20K/ 300LB  
Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



available with gear operator



**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	CF8	CF8M	CF3M
2	BONNET	CF8	CF8M	CF3M
3	STEM	SUS304	SUS316	SUS316L
4	DISC SEAT	SUS304	SUS316	SUS316L
5	GRAND	CF8	CF8M	CF3M
6	BUSH	BRONZE		
7	HAND WHEEL	DUCTILE IRON		
8	BONNET BOLT	A193-B8		
9	GASKET	SPIRAL WOUND/ GRAPHITE/PTFE		
10	PACKING	PTFE/GRAPHITE		
11	SPRING WASHER	A267-304		
12	EYE BOLT PIN	A276-304		
13	EYE BOLT	A193-B8		
14	EYE BOLT NUT	A194-8		
15	WHEEL NUT	A194-8		
16	WASHER	SUS304		
17	COVER	PE		

**Test Pressure To API 598**

	ANSI 300LB	JIS 20K
Shell Test (Water)	1125 PSI (77 kg/cm <sup>2</sup> )	40 kg/cm <sup>2</sup>
Seat Test (Water)	814 PSI (56 kg/cm <sup>2</sup> )	30 kg/cm <sup>2</sup>
Seat Test (Air)	80 PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

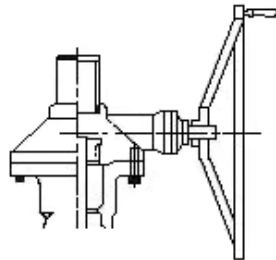
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
	MM	15	20	25	40	50	65	80	100	125	150	200	250
L/L1		152	178	203	229	267	292	318	356	400	444	559	622
H		195	200	215	275	285	335	380	435	540	560	630	750
W		125	125	125	160	190	190	220	250	350	350	400	500

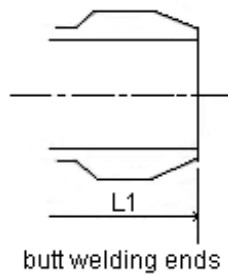
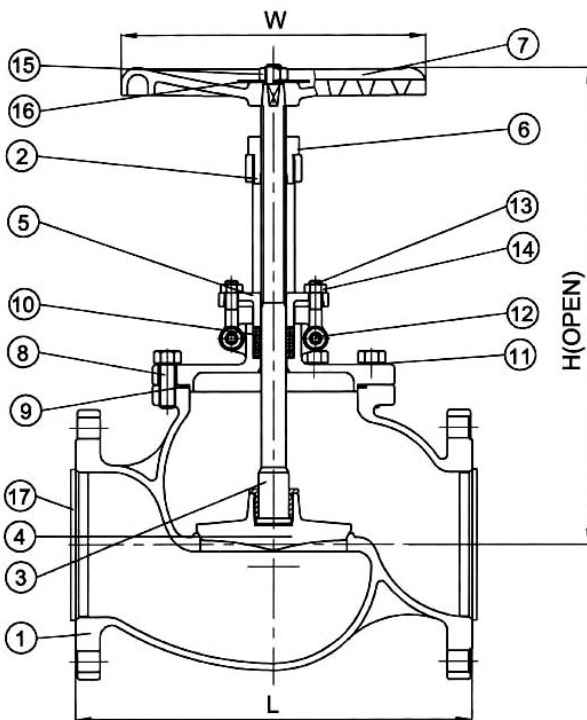
**GBF-16 Cast Stainless Steel Globe Valve Flanged PN16  
Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face DIN 3202
- End Flanges DIN 2501



available with gear operator



butt welding ends

**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	1.4308	1.4408	1.4409
2	BONNET	1.4308	1.4408	1.4409
3	STEM	SUS304	SUS316	SUS316L
4	DISC SEAT	SUS304	SUS316	SUS316L
5	GRAND	1.4308	1.4408	1.4409
6	BUSH	BRONZE		
7	HAND WHEEL	DUCTILE IRON		
8	BONNET BOLT	A193-B8		
9	GASKET	SPIRAL WOUND/ GRAPHITE/PTFE		
10	PACKING	PTFE/GRAPHITE		
11	SPRING WASHER	A276-304		
12	EYE BOLT PIN	A276-304		
13	EYE BOLT	A194-B8		
14	EYE BOLT NUT	A194-8		
15	WHEEL NUT	A194-8		
16	WASHER	A276-304		
17	COVER	PE		

**Test Pressure To API 598**

	PN16
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )
Seat Test (Air)	80PSI (6 kg/cm <sup>2</sup> )

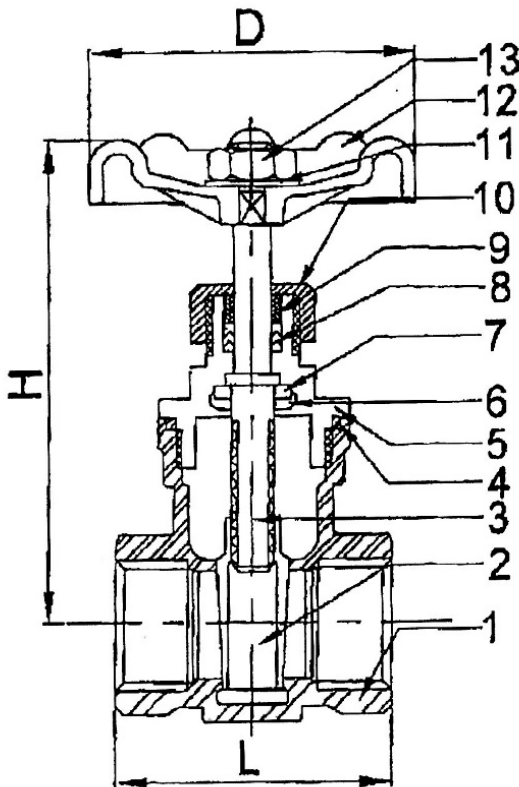
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
	MM	15	20	25	32	40	50	65	80	100	125	150	200	250	300
L		130	150	160	180	200	230	290	310	350	400	480	500	600	700
H		190	200	230	270	280	320	390	415	510	600	710	900	1117	1324
W		90	90	100	140	140	160	180	200	225	250	290	330	350	400

**GT-6 Gate Valve 600 PSI Threaded End**

**Feature**

- Thread ends: NPT, BSPP, BSPF, BSPT, PT
- Pressure Rating: 600PSI
- Working Temperature: < 160°C
- Investment casting body
- Inside screwed and screwed bonnet wedge disc
- Integral seat
- Non rising stem and hand wheel
- Material: SS316/ASTM A351 Gr.CF8M  
DIN 1.4408



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	DISC	CF8M
3	STEM	CF8M
4	CAP	CF8M
5	GASKET	TEFLON
6	SNAP PING	316
7	STEM PACKING	316
8	PACKING	TEFLON
9	GLAND WASHER	304/316
10	CAP NUT	304/316
11	SPIN WASHER	ALUMINUM
12	HANDLE	ALUMINUM
13	NUT	304

**Dimension (mm):**

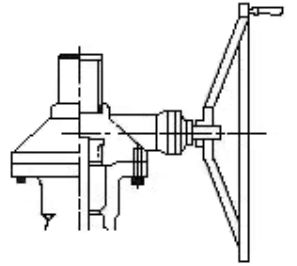
SIZE	NPS	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
	DN	10	15	20	25	32	40	50	65	80
L		55.5	58.0	62.5	70.5	78.5	83.0	95.5	114.5	131.0
H		95.5	99.0	109.0	114.0	135.5	152.0	170.5	215.0	243.0
W		61.0	61.0	61.0	77.0	83.0	83.0	95.0	112.0	112.0



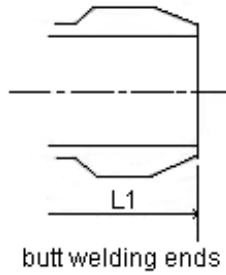
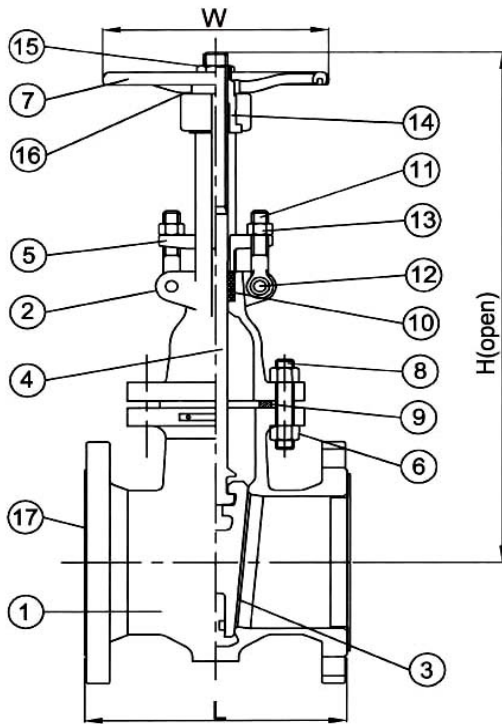
**GTF-1 Cast Stainless & Steel Gate Valve Flanged 10K/ 150LB  
Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Gate valves API 603
- Shell wall thickness ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



available with gear operator



butt welding ends

**Material List**

NO.	PART NAME	MATERIAL			
		304SS	316SS	316L	CARBON STEEL
1	BODY	CF8	CF8M	CF3M	WCB
2	BONNET	CF8	CF8M	CF3M	WCB
3	DISC	CF8	CF8M	CF3M	WCB
4	STEM	SUS304	SUS316	SUS316L	SUS304
5	GLAND	CF8	CF8M	CF3M	WCB
6	BONNET NUT	A194-8			
7	HAND WHEEL	DUCTILE IRON			
8	BONNET BOLT	A193-B8			
9	GASKET	V#1500/GRAPHITE/PTFE			
10	PACKING	PTFE/GRAPHITE			
11	EYE BOLT	A193-B8			
12	BOLT PIN	A276-304			
13	EYE BOLT NUT	A194-8			
14	YOKE SLEEVE	BRONZE			
15	WHEEL NUT	STEEL			
16	WASH	SUS304			
17	COVER	PE			

**Test Pressure To API 598**

	ANSI 150LB	JIS 10k
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )	20kg/cm <sup>2</sup>
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )	15kg/cm <sup>2</sup>
Seat Test (Air)	80 PSI (6 kg/cm <sup>2</sup> )	6kg/cm <sup>2</sup>

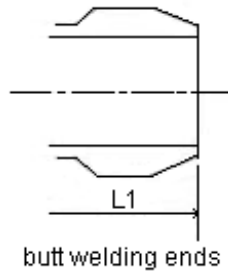
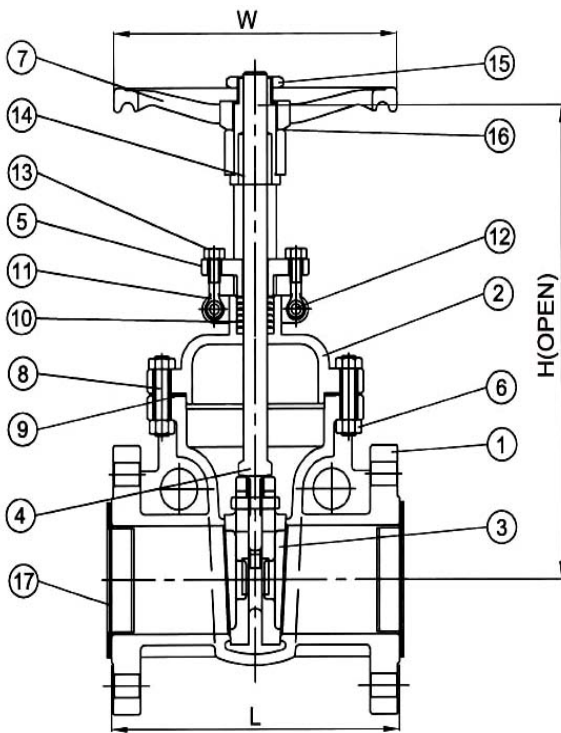
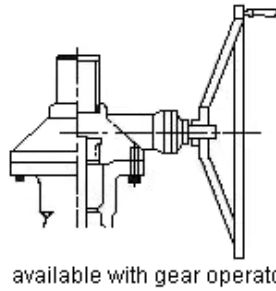
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L/L1		108	117	127	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H		205	209	225	288	340	398	490	577	695	770	990	1115	1385	1600	1700	1800	1900	2100
W		100	100	120	170	170	170	189	222	290	290	350	400	400	500	500	500	600	600

**GTF-3 Cast Stainless Steel Gate Valve Flanged 20K/ 300LB  
Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Gate valves API 603
- Shell wall thickness ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



**Material List**

NO.	PART NAME	MATERIAL			
		304SS	316SS	316L	CARBON STEEL
1	BODY	CF8	CF8M	CF3M	WCB
2	BONNET	CF8	CF8M	CF3M	WCB
3	DISC	SUS304	SUS316	SUS316L	CF8
4	STEM	SUS304	SUS316	SUS316L	SUS304
5	GLAND	CF8	CF8M	CF3M	CF8
6	BONNET NUT	A194-8			
7	HAND WHEEL	DUCTILE IRON			
8	BONNET BOLT	A193-B8			
9	GASKET	SPIRALWOUND/ GRAPHITE/PTFE			
10	PACKING	PTFE/GRAPHITE			
11	EYE BOLT	A193-B8			
12	EYE BOLT PIN	A276-304			
13	EYE BOLT NUT	A194-8			
14	YOKE SLEEVE	BRONZE			
15	WHEEL NUT	STEEL			
16	WASH	SUS304			
17	COVER	PE			

**Test Pressure To API 598**

	ANSI 300LB	JIS 20k
Shell Test (Water)	1125 PSI (77 kg/cm <sup>2</sup> )	40 kg/cm <sup>2</sup>
Seat Test (Water)	814 PSI (56 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
Seat Test (Air)	80 PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

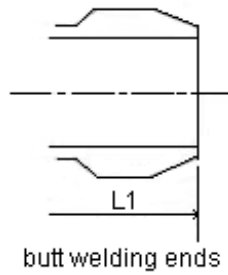
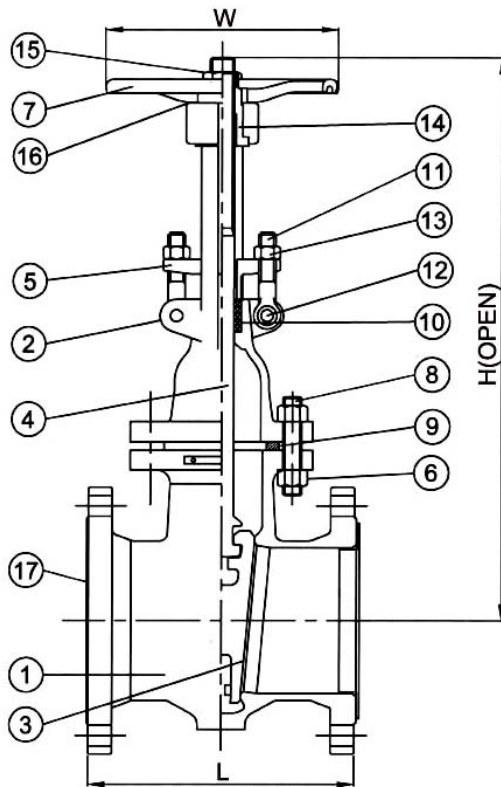
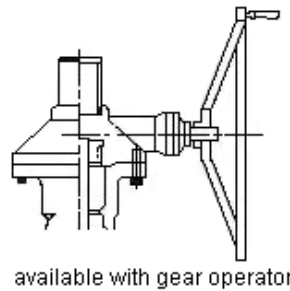
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400
L/L1		140	152	165	190	216	241	283	305	381	403	419	459	502	762	838
H		210	215	230	295	345	405	500	585	705	780	1000	1130	1410	1650	1750
W		125	125	125	170	190	200	220	250	350	350	400	400	500	600	600

**GTF-16 Cast Stainless Steel Gate Valve Flanged PN16  
Outside Screw & Yoke Bolted Bonnet**

**Feature**

- Gate valves API 603
- Shell Wall Thickness: ANSI B16.34
- Face to Face DIN 3202
- End Flanges DIN 2501



**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	1.4308	1.4408	1.4409
2	BONNET	1.4308	1.4408	1.4409
3	DISC	SUS304	SUS316	SUS316L
4	STEM	SUS304	SUS316	SUS316L
5	GLAND	1.4308	1.4408	1.4409
6	BONNET NUT	A194-8		
7	HAND WHEEL	DUCTILE IRON		
8	BONNET BOLT	A193-B8		
9	GASKET	V#1500/GRAPHITE/PTFE		
10	PACKING	PTFE/GRAPHITE		
11	EYE BOLT	A193-B8		
12	BOLT PIN	A276-304		
13	EYE BOLT NUT	A194-8		
14	YOKE SLEEVE	BRONZE		
15	WHEEL NUT	STEEL		
16	WASH	SUS304		
17	COVER	PE		

**Test Pressure To API 598**

	PN16
Shell Test (Water)	450 PSI (32 kg/cm <sup>2</sup> )
Seat Test (Water)	314 PSI (22 kg/cm <sup>2</sup> )
Seat Test (Air)	80 PSI (6 kg/cm <sup>2</sup> )

**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
	MM	15	20	25	32	40	50	65	80	100	125	150	200	250	300
L		115	120	125	130	140	150	170	180	190	200	210	230	250	270
H		190	200	230	270	280	320	390	415	510	600	710	900	1117	1324
W		90	90	100	140	140	160	180	200	225	250	290	330	350	400

## VKGF01 Manual Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

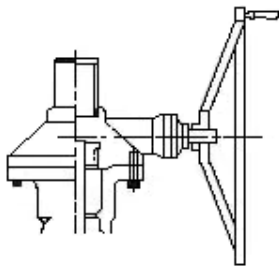
DIN PN10 PN16

MSS-SP81 Test Standard:

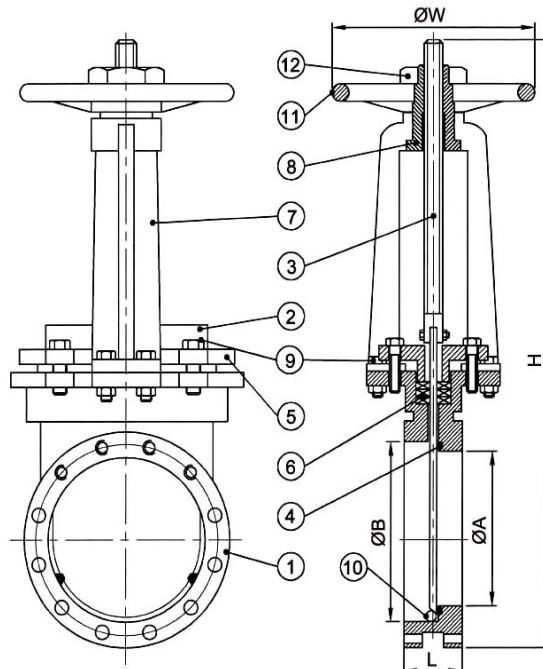
Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



available with gear operator



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC FCD WCB	SUS304 SUS316 SUS304L SUS316L	TEFLON METAL VITON EPDM	NON-ASB+PTFE ASB ASB+PTFE TEFLON NON ASBESTOS

### Dimension

SIZE	L	ØA	ØB	W	H
2"	55	42	64	190	405
2-1/2"	55	57	80	190	420
3"	55	72	95	190	460
4"	55	92	114	220	520
5"	60	116	141	290	615
6"	60	138	161	290	685
8"	70	192	213	350	850
10"	75	232	261	350	1000
12"	80	280	315	400	1110
14"	80	345	376	400	1200
16"	90	395	425	500	1410
18"	95	445	480	500	1570
20"	120	490	520	500	1700
24"	120	590	630	500	1970
30"	120	660	720	500	3050

### Material List

NO.	PART NAME	MATERIAL
1	BODY	FC FCD
2	PLATE	SUS304 '316
3	STEM	SUS410 '304 '316
4	SEAT	TEFLON. METAL
5	GLAND	CAST IRON
6	GLAND PACKING	ASB NON-ASB
7	YOKE	FC-FCD
8	YOKE SLEEVE	CAST BRONZE. FCD
9	BOLT NUT	MILD STEEL
10	PAWLS	CAST IRON
11	HAND WHEEL	CAST IRON
12	NUT	CAST IRON

## VKGF02 Manual Stainless Steel Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

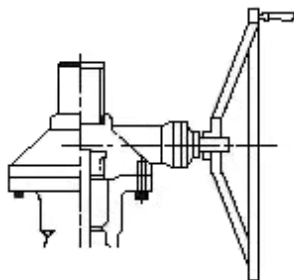
DIN PN10 PN16

MSS-SP81 Test Standard:

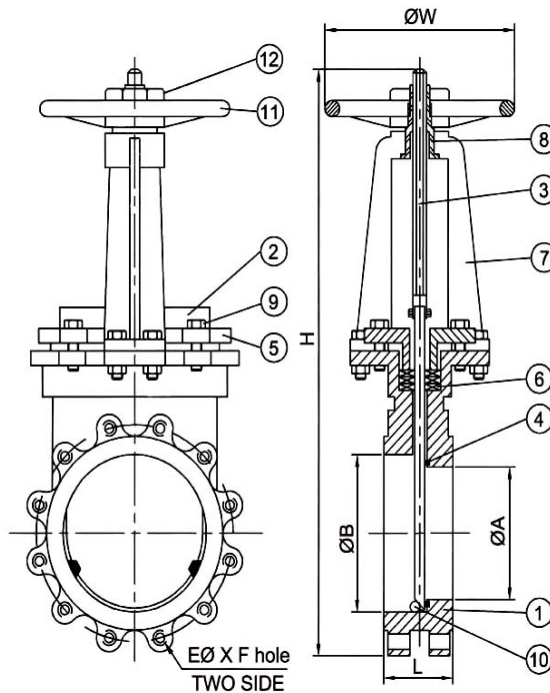
Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



available with gear operator



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	CF8 CF8M CF3M	SUS304 SUS316 SUS304L SUS316L	TEFLON METAL VITON EPDM	NON-ASB+PTFE ASB ASB+PTFE TEFLON NON ASBESTOS

### Dimension

SIZE	L	ØA	ØB	W	H
2"	48	42	64	190	420
2-1/2"	51	57	80	190	430
3"	51	72	95	190	430
4"	51	95	120	220	520
5"	57	125	148	290	600
6"	57	150	175	290	660
8"	70	195	222	350	810
10"	70	250	275	350	990
12"	76	300	325	400	1150
14"	76	350	375	400	1230
16"	89	400	430	500	1420
18"	89	435	475	500	1600
20"	114	480	515	500	1700
24"	114	580	620	500	1970
28"	120	670	730	500	2300

### Material List

NO.	PART NAME	MATERIAL
1	BODY	CF8.CF8M.CF3M
2	PLATE	SUS304. 316. 316L
3	STEM	SUS410. 304. 316. 316L
4	SEAT	TEFLON
5	GLAND	SUS304
6	GLAND PACKING	ASB NON-ASB
7	YOKE	DUCTILE IRON
8	YOKE SLEEVE	CAST BRONZE. FCD
9	BOLT NUT	SUS304
10	PAWLS	SUS304
11	HAND WHEEL	CAST IRON
12	NUT	CAST IRON

**VKGF03 Pneumatic Cast Iron Knife Gate Valve**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

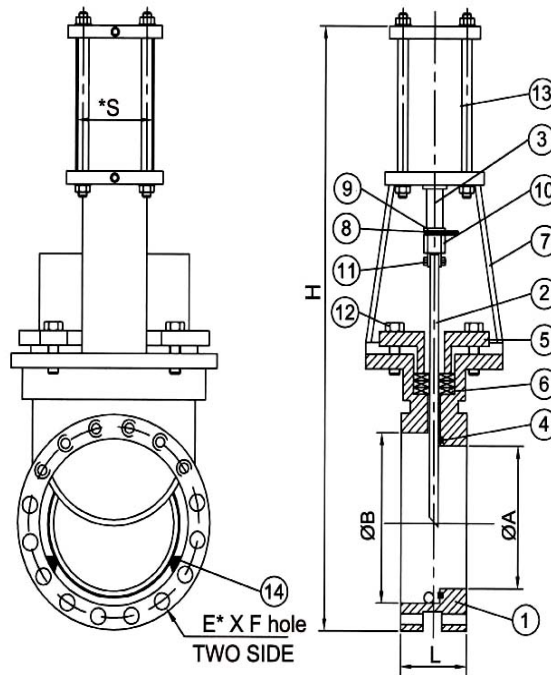
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC	SUS304	TEFLON	NON-ASB+PTFE
	FCD	SUS316	METAL	ASB
		SUS304L	VITON	ASB+PTFE
		SUS316L	EPDM	TEFLON NON ASBESTOS

**Dimension**

SIZE	L	ØA	ØB	ØS	H
2"	55	42	64	63	590
2-1/2"	55	57	80	63	600
3"	55	72	95	80	650
4"	55	92	114	80	720
5"	60	116	141	125	870
6"	60	138	161	125	940
8"	70	192	213	150	1190
10"	75	232	261	180	1440
12"	80	280	315	200	1560
14"	80	345	376	250	1840
16"	90	395	425	250	2060
18"	95	445	480	250	2200
20"	120	490	520	300	2460
24"	120	590	630	300	2750

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	FC.FCD
2	SHUT PLATE	SUS304
3	STEM	SS41+HCr
4	SEAT	TEFLON
5	GLAND	CAST IRON
6	GLAND PACKING	ASB NON-ASB
7	YOKE	DUCTILE IRON
8	POINTER	SUS304
9	NUT	SUS304
10	NUT	SUS304
11	CONNECTOR	SUS304
12	BOLT AND NUT	MILD STEEL
13	ACTUATOR	AL ALLOY. FC
14	GUIDE	CAST IRON

## VKGF04 Pneumatic Stainless Steel Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

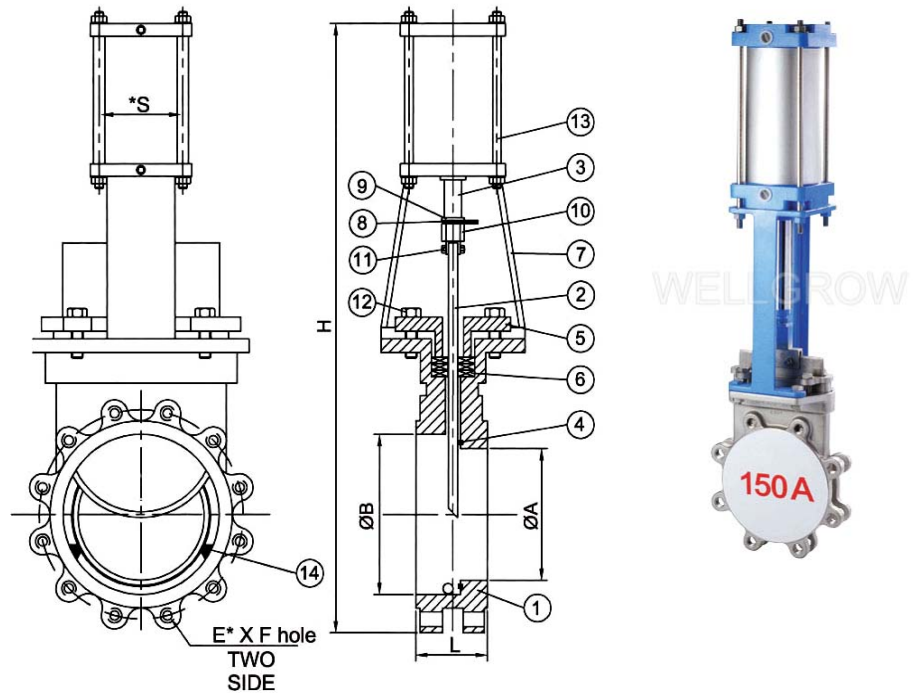
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	CF8	SUS304	TEFLON	NON-ASB+PTFE
	CF8M	SUS316	METAL	ASB
	CF3M	SUS304L	VITON	ASB+PTFE
		SUS316L	EPDM	TEFLON
				NON ASBESTOS

### Dimension

SIZE	L	ØA	ØB	ØS	H
2"	48	42	64	63	520
2-1/2"	51	57	80	63	570
3"	51	72	95	80	680
4"	51	95	120	80	755
5"	57	125	148	125	900
6"	57	150	175	125	960
8"	70	195	222	150	1160
10"	70	250	275	180	1440
12"	76	300	325	200	1605
14"	76	350	375	250	1860
16"	89	400	430	250	2070
18"	89	435	475	250	2200
20"	114	480	515	300	2400
24"	114	580	620	300	2750

### Material List

NO.	PART NAME	MATERIAL
1	BODY	CF8.CF8M.CF3M
2	PLATE	SUS304.316.316L
3	STEM	SS41+HCr
4	SEAT	TEFLON
5	GLAND	SUS304
6	GLAND PACKING	ASB NON-ASB
7	YOKE	DUCTILE IRON
8	POINTER	SUS304
9	NUT	SUS304
10	NUT	SUS304
11	CONNECTOR	SUS304
12	BOLT AND NUT	SUS304
13	ACTUATOR	AL ALLOY. FC
14	GUIDE	SUS304

**VKGF05 Electric Operated Knife Gate Valve**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150LB

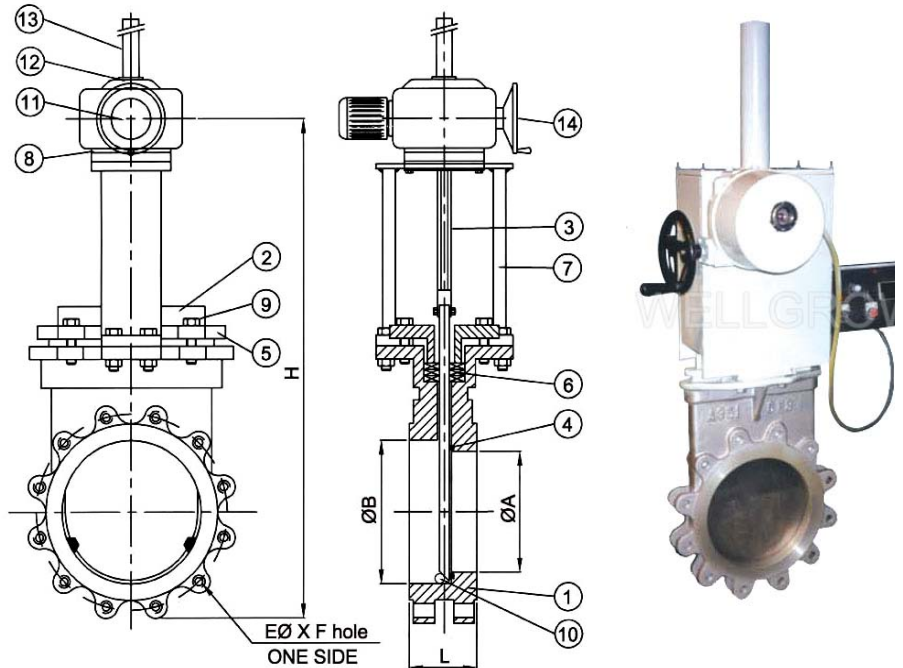
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	CF8	SUS304	TEFLON	NON-ASB+PTFE
	CF8M	SUS316	METAL	ASB
	CF3M	SUS304L	VITON	ASB+PTFE
	FC	SUS316L	EPDM	TEFLON NON ASBESTOS

**Dimension**

SIZE	L	ØA	ØB	H
2"	48	42	64	420
2-1/2"	51	57	80	430
3"	51	72	95	430
4"	51	95	120	520
5"	57	125	148	640
6"	57	150	175	680
8"	70	195	222	780
10"	70	250	275	950
12"	76	300	325	1150
14"	76	350	375	1230
16"	89	400	430	1420
18"	89	435	475	1600
20"	114	480	515	1700
24"	114	580	620	1970

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8.CF8M.CF3M.FC
2	PLATE	SUS304.316.316L
3	STEM	SUS410.304.316.316L
4	SEAT	TEFLON.EPDM
5	GLAND	SUS304
6	GLAND PACKING	ASB ; TEFLON
7	YOKE	SS400
8	YOKE SLEEVE	DUCTILE IRON
9	BOLT NUT	SUS304
10	PAWLS	SUS304.316.317
11	GEAR	SS41
12	MOTOR	AL ALLOY
13	TUBE	CARBON STEEL
14	HAND WHEEL	CAST IRON



## VKGF06 Pneumatic Two Stage Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

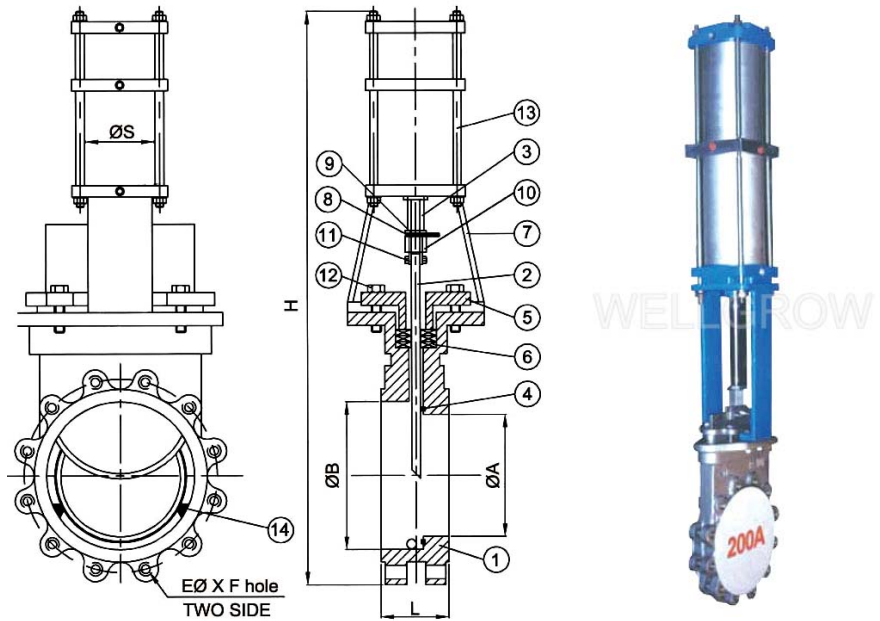
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	CF8	SUS304	TEFLON	NON-ASB+PTFE
	CF8M	SUS316	METAL	ASB
	CF3M	SUS304L	VITON	ASB+PTFE
		SUS316L	EPDM	TEFLON NON ASBESTOS

### Dimension

SIZE	L	ØA	ØB	ØS	H
2"	48	42	64	63	560
2-1/2"	51	57	80	63	610
3"	51	72	95	80	750
4"	51	95	120	80	810
5"	57	125	148	125	980
6"	57	150	175	125	1060
8"	70	195	222	150	1280
10"	70	250	275	180	1600
12"	76	300	325	200	1800
14"	76	350	375	250	2050
16"	89	400	430	250	2300
18"	89	435	475	250	2600
20"	114	480	515	300	2850
24"	114	580	620	300	3250

### Material List

NO.	PART NAME	MATERIAL
1	BODY	CF8.CF8M.CF3M
2	PLATE	SUS304.316.316L
3	STEM	SS41+HCr
4	SEAT	TEFLON
5	GLAND	SUS304
6	GLAND PACKING	ASB NON-ASB
7	YOKE	DUCTILE IRON
8	POINTER	SUS304
9	NUT	SUS304
10	NUT	SUS304
11	CONNECTOR	SUS304
12	BOLT AND NUT	SUS304
13	ACTUATOR	AL ALLOY. FC
14	GUIDE	SUS304

**VKGF07 Pneumatic Knife Gate Valve With Handwheel**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

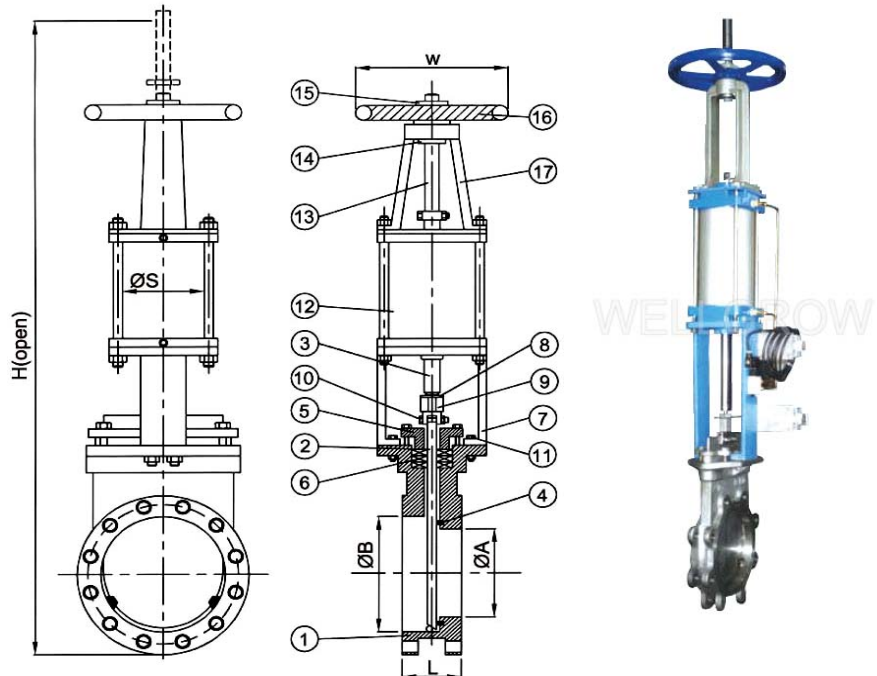
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC	SUS304	TEFLON	NON-ASB+PTFE
	WCB	SUS316	METAL	ASB
	SCS13	SUS304L	VITON	ASB+PTFE
	SCS14	SUS316L	EPDM	TEFLON
	SCS16			NON ASBESTOS

**Dimension**

SIZE	L	ØA	ØB	W	H	ØS
2"	48	42	64	190	755	63
2-1/2"	51	57	80	190	855	63
3"	51	72	95	190	975	80
4"	51	95	120	220	1085	80
5"	57	125	148	290	1310	125
6"	57	150	175	290	1445	125
8"	70	195	222	350	1755	150
10"	70	250	275	350	2095	180
12"	76	300	325	400	2365	200
14"	76	350	375	400	2710	250
16"	89	400	430	400	2950	250
18"	89	435	475	500	3375	250
20"	114	480	515	500	3685	300
24"	114	580	620	500	4235	300

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8.CF8M
2	SHUT PLATE	SUS304
3	STEM	SS41+HCr
4	SEAT	TEFLON
5	GLAND	CF8
6	GLAND PACKING	ASB NON-ASB
7	YOKE	DUCTILE IRON
8	POINTER	SUS304
9	NUT	SUS304
10	CONNECTOR	SUS304
11	BOLT AND NUT	SUS304
12	ACTUATOR	AL ALLOY. FC
13	STEM	S.S.410
14	YOKE SLEEVE	CAST BRONZE. FCD
15	NUT	CAST IRON
16	HAND WHEEL	CAST IRON
17	YOKE	CAST IRON

## VKGF08 Pneumatic Sealed Slide Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

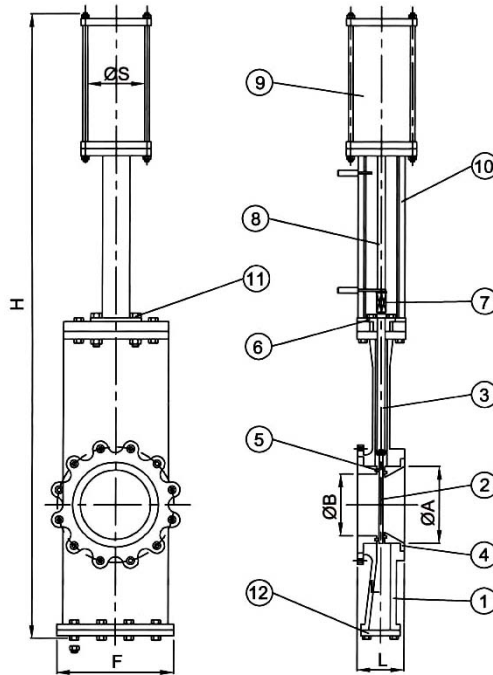
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	SCS13	SUS304	TEFLON	ASBESTOS+PTFE
	SCS14	SUS316	METAL	TEFLON
	AL	SUS304L SUS316L	VITON NBR	NON ASBESTOS

### Dimension

SIZE	L	ØA	ØB	F	L	ØS
2"	940	50	50	152	120	63
2-1/2"	990	65	65	180	120	63
3"	1050	90	90	190	120	80
4"	1200	116	116	230	120	80
5"	1350	145	145	255	120	125
6"	1500	170	170	280	120	125
8"	1700	221	221	345	150	150
10"	1900	276	276	400	150	180
12"	2200	325	325	480	150	200

### Material List

NO.	PART NAME	MATERIAL
1	BODY	CF8
2	PLATE	SUS304
3	STEM	SUS304
4	GUIDE PLATE	CF8
5	SEAT	PTFE
6	GLAND	CF8
7	CONNECTORVER	SUS304
8	STEM	SS41 + HCr
9	ACTUATOR	ALUMINUM ALLOYS FC
10	YOKE	FCD / WCB
11	NUT	SUS304
12	COVER	CF8

## VKGF09 Manual Square Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

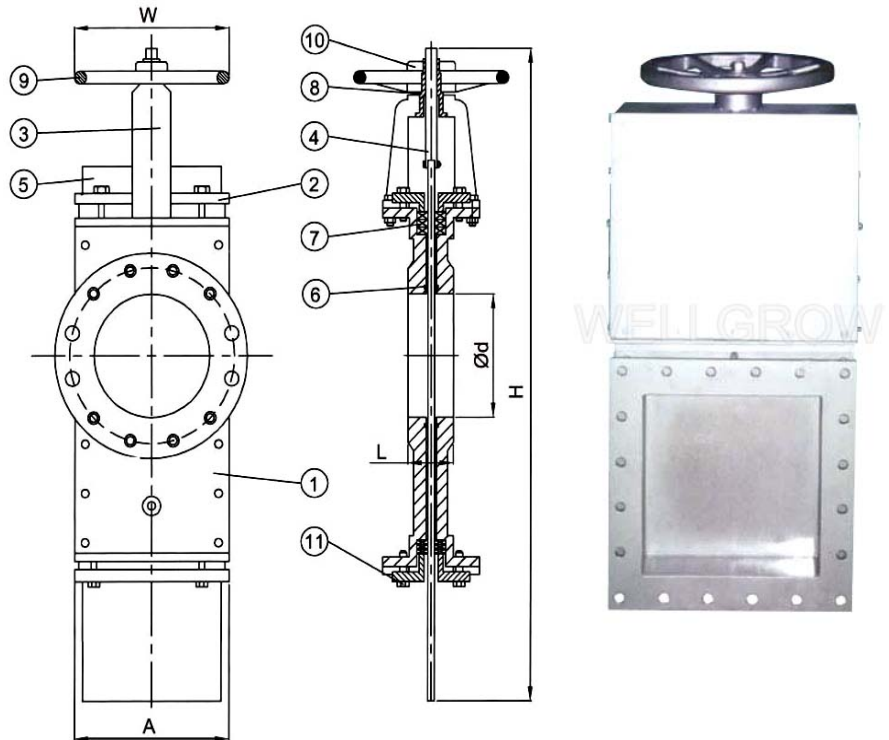
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	CF8 CF8M CF3M FC FCD	SUS304 SUS316 SUS304L SUS316L	TEFLON METAL VITON EPDM	NON-ASB+PTFE ASB ASB+PTFE TEFLON NON ASBESTOS

### Dimension

SIZE	L	A	Ød	W	H
4"	50	170	95	220	760
5"	50	200	122	290	870
6"	60	225	140	290	980
8"	60	275	188	385	1220
10"	70	330	240	385	1410
12"	70	390	293	400	1635
14"	70	430	320	400	1930
16"	90	495	360	500	2200
18"	90	600	430	500	2450
20"	110	620	490	500	2575
24"	110	650	545	500	2750

### Material List

NO.	PART NAME	MATERIAL
1	BODY	FC/SUS304
2	GRAND	FC/SUS304
3	YOKE	FC/FCD
4	STEM	SUS410/304
5	PLATE	SUS304/316
6	SEAT	PTFE
7	PACKING	ASB NON-ASB
8	YOKE SLEEVE	BRONZE
9	HAND WHEEL	FC
10	NUT	FC
11	BOLT	MILD STEEL

**VKGF10 Pneumatic Slide Knife Gate Valve**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

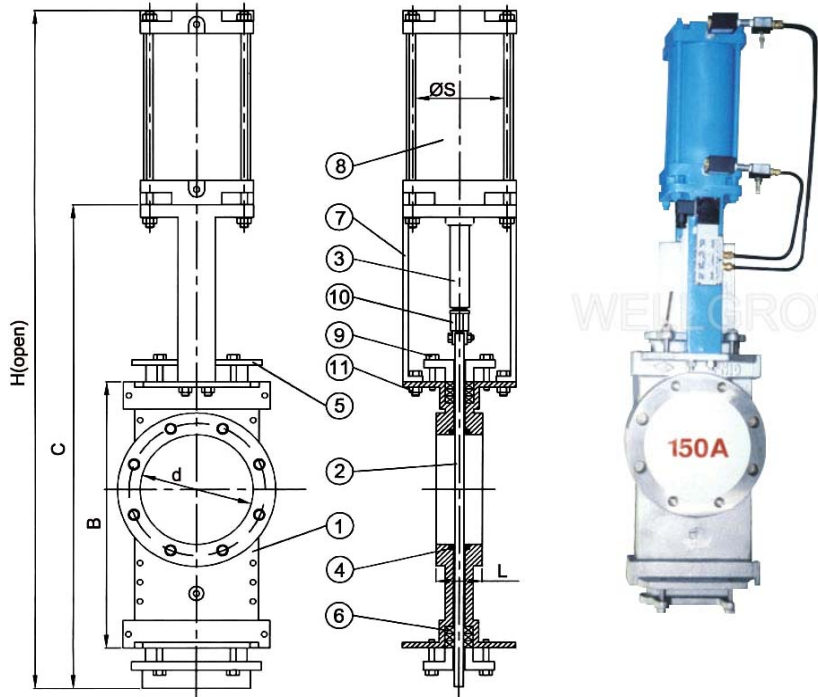
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 40 cc/per in. min.



**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC WCB SCS13 SCS14 SCS16	SUS304 SUS316 SUS304L SUS316L	MAT'L	NON-ASB+PTFE ASB ASB+PTFE NON ASBESTOS

**Dimension**

SIZE	d	L	B	C	H	ØS
4"	95	50	360	590	980	80
5"	122	50	426	640	1170	125
6"	140	60	458	720	1300	125
8"	188	60	450	870	1630	150
10"	240	70	668	1020	1920	180
12"	293	70	800	1120	2160	200
14"	320	70	930	1290	2500	250
16"	360	90	990	1580	2710	250
18"	430	90	1180	1730	3320	250
20"	490	110	1340	2000	3560	300
24"	545	110	1560	2350	3755	300

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	FC/FCD
2	PLATE	SUS304/316
3	STEM	SS41+HCr
4	SEAT	TEFLON. METAL
5	GLAND	CAST IRON
6	GLAND PACKING	ASB NON-ASB
7	YOKE	FC FCD
8	ACTUATOR	AL ALLOYS FC
9	BOLT NUT	MILD STEEL
10	CONNECTORVER	SUS304
11	NUT	MILD STEEL

**VKGF11 Manual Sealed Knife Gate Valve**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

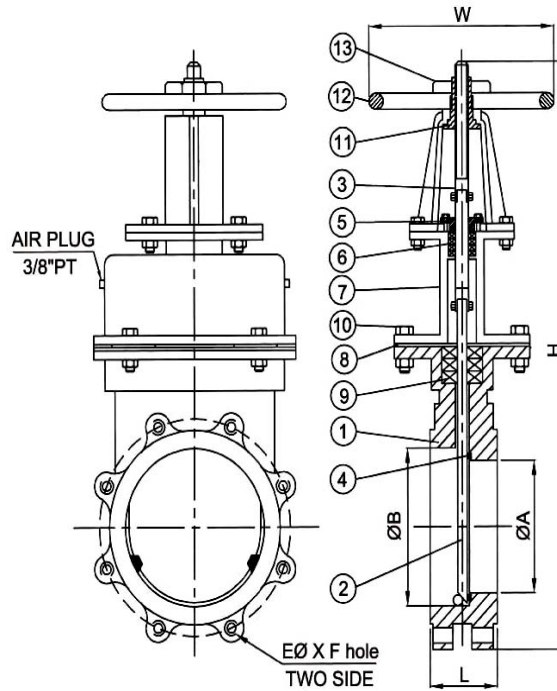
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC	SUS304	TEFLON	NON-ASB+PTFE
	WCB	SUS316	METAL	ASB
	SCS13	SUS304L	VITON	ASB+PTFE
	SCS14	SUS316L	EPDM	TEFLON
	SCS16			NON ASBESTOS

**Dimension**

SIZE	L	ØA	ØB	W	H
2"	48	42	64	190	570
2-1/2"	51	57	80	190	585
3"	51	72	95	190	650
4"	51	98	122	220	720
5"	57	123	146	290	870
6"	57	150	175	290	950
8"	70	195	225	350	1200
10"	70	250	275	350	1370
12"	76	300	325	406	1560
14"	76	350	375	406	1700
16"	89	400	430	500	2000
18"	89	435	475	500	2200
20"	114	480	515	500	2700

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8/CF8M
2	SHUT PLATE	CF8/CF8M
3	STEM	SUS304/410
4	SEAT	PTFE/METAL
5	GLAND	CF8
6	GLAND PACKING	PTFE
7	BONNET	CF8
8	PLATE	BC6, AL ALLOY
9	PACKING	ASB+PTFE
10	BOLT	SUS304
11	SLEEVE	FCD
12	HAND WHEEL	CAST IRON
13	NUT	CAST IRON

**VKGF12 Pneumatic Sealed Knife Gate Valve**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

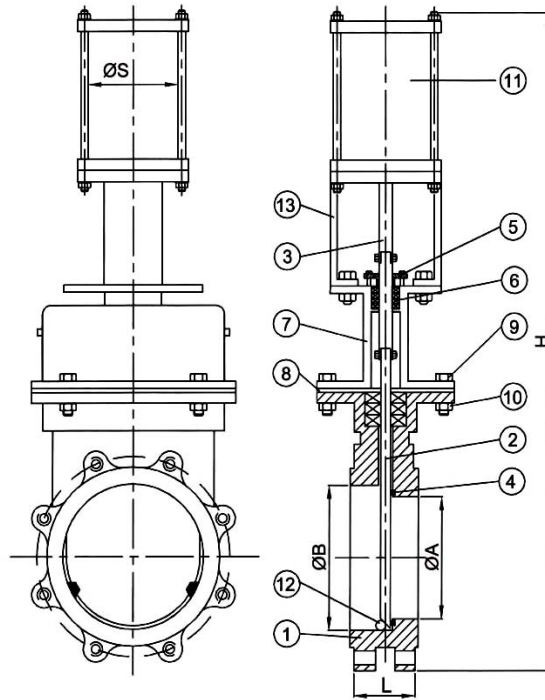
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/per in. min.



WELGROW

**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC	SUS304	TEFLON	NON-ASB+PTFE
	WCB	SUS316	METAL	ASB
	SCS13	SUS304L	VITON	ASB+PTFE
	SCS14	SUS316L	EPDM	TEFLON
	SCS16			NON ASBESTOS

**Dimension**

SIZE	L	ØA	ØB	ØS	H
4"	51	98	122	80	950
5"	57	123	146	125	1150
6"	57	150	175	125	1330
8"	70	195	225	150	1550
10"	70	250	275	180	1700
12"	76	300	325	200	1900
14"	76	350	375	250	2200
16"	89	400	430	250	2500
18"	89	435	475	250	2700
20"	114	480	515	300	2900

**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8
2	PLATE	SUS304
3	STEM	SS41+HCr
4	SEAT	PTFE
5	GLAND	SUS304
6	GLAND PACKING	PTFE
7	COVER	CF8
8	PLATE	BC-6, AL ALLOY
9	BOLT	SUS304
10	NUT	SUS304
11	ACTUATOR	AL ALLOYS.FC
12	GUIDE	SUS304
13	YOKE	FCD

## VKGF13 Pneumatic Sealed Knife Gate Valve

### Feature

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

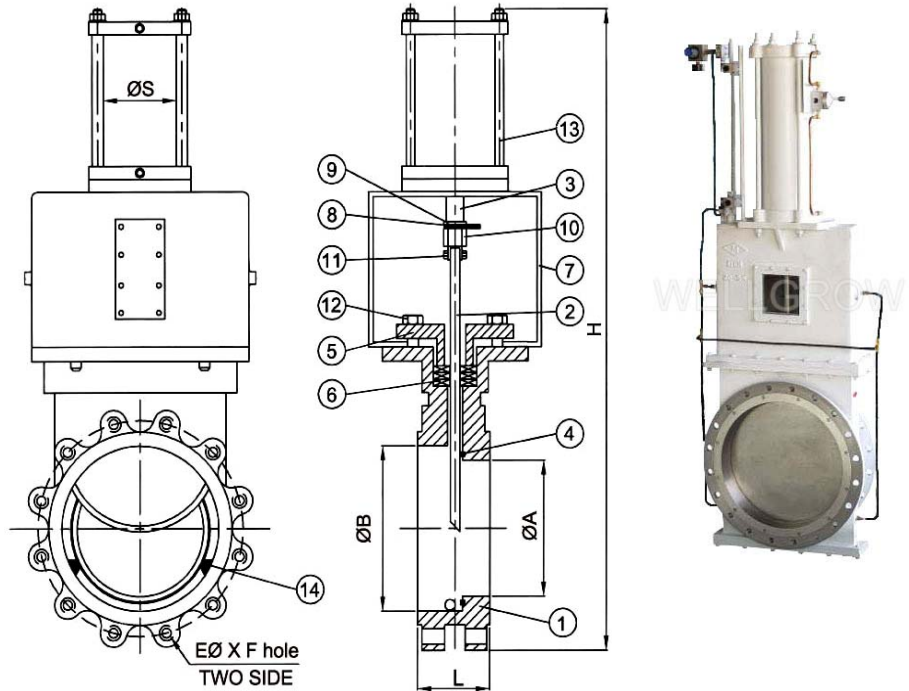
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 4 cc/ per in. min.



### Temperature

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

### Material Option

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	CF8 CF8M CF3M	SUS304 SUS316 SUS304L SUS316L	TEFLON METAL VITON EPDM	NON-ASB+PTFE ASB ASB+PTFE TEFLON NON ASBESTOS

### Dimension

SIZE	L	ØA	ØB	ØS	H
2"	48	42	64	63	520
2-1/2"	51	57	80	63	570
3"	51	72	95	80	650
4"	51	98	122	80	720
5"	57	123	146	125	870
6"	57	150	175	125	940
8"	70	195	225	150	1150
10"	70	250	275	180	1380
12"	76	300	325	200	1560
14"	76	350	375	250	1720
16"	89	400	430	250	1900
18"	89	435	475	250	2200
20"	114	480	515	300	2400
24"	114	580	620	300	2750

### Material List

NO.	PART NAME	MATERIAL
1	BODY	CF8.CF8M.CF3M
2	PLATE	SUS304.316.316L
3	STEM	SS41+HCr
4	SEAT	TEFLON
5	GLAND	SUS304
6	GLAND PACKING	ASB NON-ASB
7	CASE	SS400
8	POINTER	SUS304
9	NUT	SUS304
10	NUT	SUS304
11	CONNECTOR	SUS304
12	BOLT AND NUT	SUS304
13	ACTUATOR	AL ALLOY.FC
14	GUIDE	SUS304



**VKGF14 Purged Knife Gate Valve With Double Cylinders**

**Feature**

Connection Rating:

JIS 5K JIS 10K JIS 7.5K

ANSI 150#

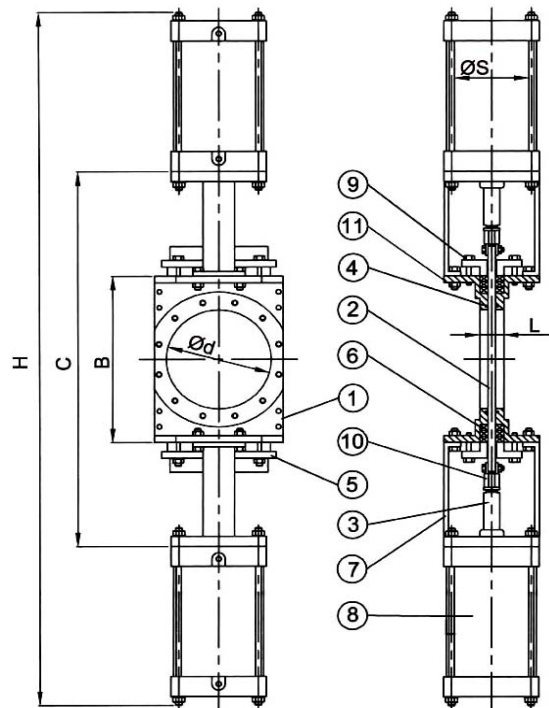
DIN PN10 PN16

MSS-SP81 Test Standard:

Body Test: 11kg/cm<sup>2</sup> (Water)

Seat Test: 2.8kg/cm<sup>2</sup> (Water)

Leakage: 400 cc/per in. min.



**Temperature**

MATERIAL	TEM. RANGE
ASBESTOS + PTFE	-50°C ~ 550°C
SILICON	-20°C ~ 150°C
VITON	-20°C ~ 250°C
TEFLON	-30°C ~ 150°C
NON ASBESTOS	-50°C ~ 550°C

**Material Option**

	BODY	PLATE	SEAT	GLAND PACKING
MATERIAL	FC WCB SCS13 SCS14 SCS16	SUS304 SUS316 SUS304L SUS316L	MET'L	NON-ASB+PTFE ASB ASB+PTFE NON ASBESTOS

**Dimension**

SIZE	Ød	L	B	C	H	ØS
4"	100	50	300	590	960	100
5"	120	50	325	640	1030	150
6"	150	60	370	720	1130	150
8"	200	60	450	870	1350	180
10"	250	70	550	1020	1560	200
12"	300	70	600	1120	1700	215
14"	350	70	700	1290	1990	250
16"	400	90	800	1580	2330	250
18"	450	110	900	1730	2530	300
20"	500	110	1000	2000	2890	300

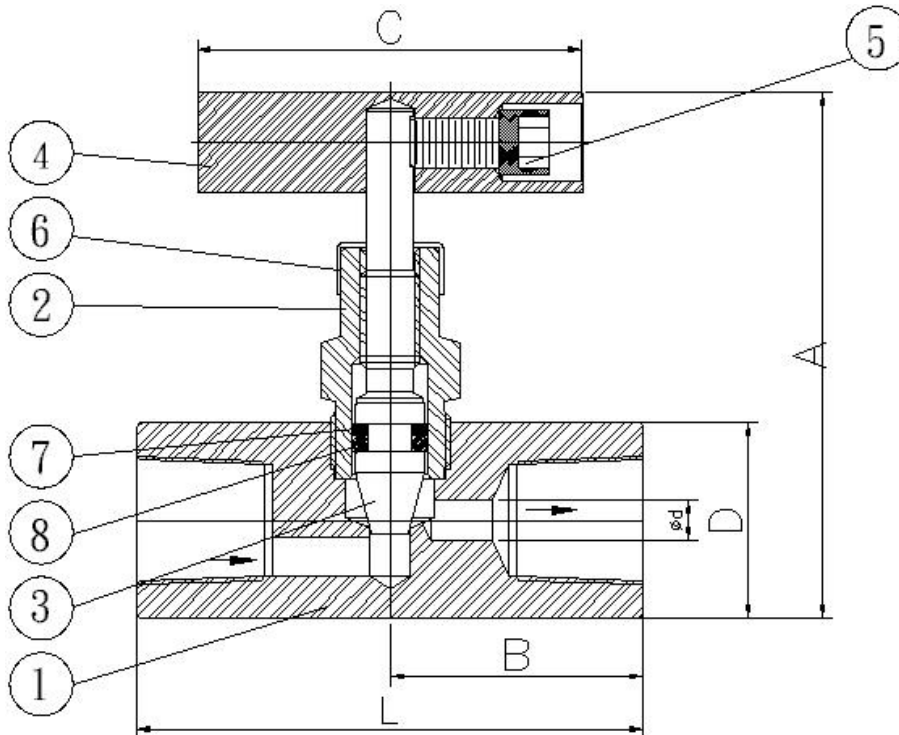
**Material List**

NO.	PART NAME	MATERIAL
1	BODY	FCD/CF8/CF8M
2	PLATE	SUS304 '316
3	STEM	SS41+HCr
4	SEAT	METAL
5	GLAND	FC. CF8
6	GLAND PACKING	ASB NON-ASB
7	YOKE	FC FCD
8	ACTUATOR	AL ALLOYS.FC
9	BOLT NUT	MILD STEEL
10	CONNECTOR	SUS304
11	NUT	MILD STEEL

**ND-6 Needle Valve 6000PSI, Threaded End**

**Features**

- Thread ends: NPT, BSPP, BSPF, BSPT, PT
- Feature: Screwed-In Bonnet  
T-hand wheel
- Working Pressure: 6,000PSI
- Temperature Range: Max. 120°C



**Material List**

NO.	PART NAME	MATERIAL	
1	BODY	SS316	A105
2	BONNET	SS316	A105
3	STEM	SS316	SS304
4	HANDLE	SS304	
5	HANDLE BOLT	SS304	
6	BONNET HOOD	POLYTHYLENE	
7	BACK-UP RING	VITON	
8	O-RING SEAL	VITON	

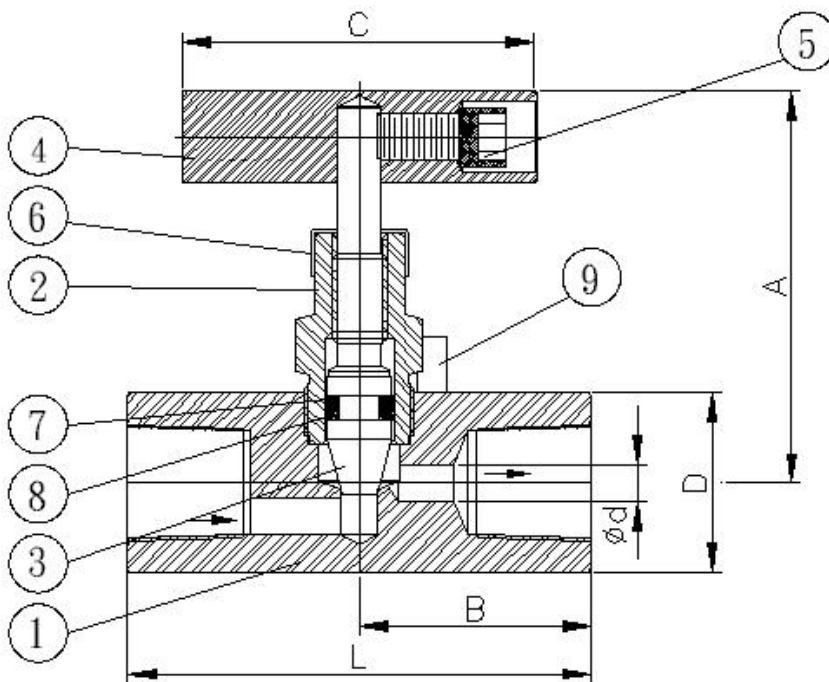
**Dimension**

SIZE	A	B	C	D	L	Ød
1/8"	75	29	60	24	58	4
1/4"	75	29	60	24	58	4
3/8"	75	29	60	26	58	4
1/2"	87	32.5	60	30	65	6
3/4"	90	35	60	36	70	6
1"	103	40	60	45	80	7

## ND-10 Needle Valve 10000PSI, Reduced Port, Threaded End

### Features

- Thread ends: NPT, BSPP, BSPF, BSPT, PT
- Material: Stainless steel 316 ASTM A351 and Carbon steel ASTM A105
- Feature: Screwed-In Bonnet  
T-hand wheel.
- Working pressure: 10,000PSI
- Temperature: Max. 120°C



### Dimension

SIZE	A	B	C	D	L	Ød
1/8"	75	29	60	28.5	58	4
1/4"	75	29	60	28.5	58	4
3/8"	75	29	60	28.5	58	4
1/2"	87	32.5	60	28.5	65	6
3/4"	90	35	60	35	70	6
1"	103	40	60	43	80	7

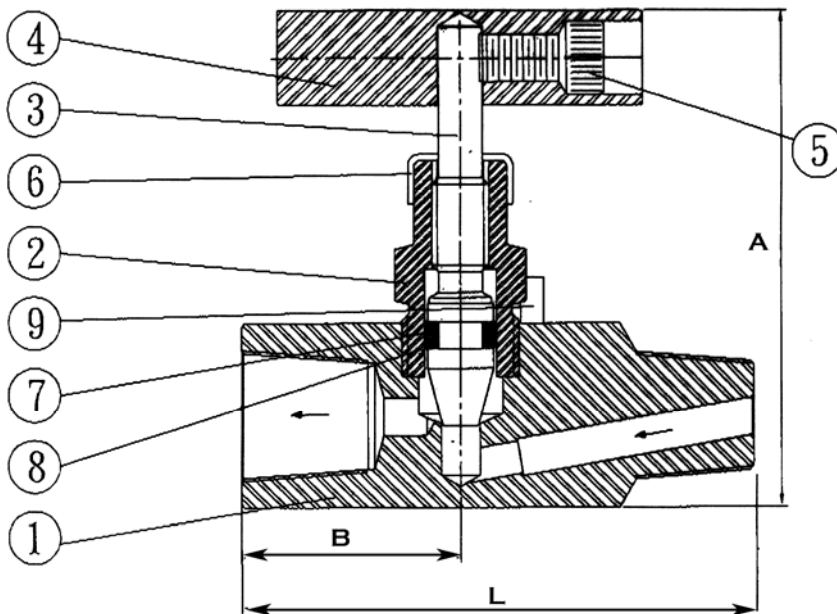
### Material List

NO.	PART NAME	MATERIAL	
1	BODY	SS316	A105
2	BONNET	SS316	A105
3	STEM	SS316	
4	HANDLE	SS304	A105
5	HANDLE BOLT	SS304	
6	BONNET HOOD	POLYTHYLENE	
7	BACK-UP RING	VITON/PTFE	
8	O-RING SEAL	VITON/PTFE	
9	BONNET LOCKING PIN	SS304	

**NDMF-6 Needle Valve 6000PSI, Male x Female Threaded End**

**Features**

- Thread ends: NPT, BSPP, BSPF, BSPT, PT
- Feature: Screwed-In Bonnet  
T-hand wheel
- Working Pressure: 6000 PSI
- Temperature Range: Max. 120°C



**Material List**

NO.	PART NAME	MATERIAL	
1	BODY	SS316	A105
2	BONNET	SS316	A105
3	STEM	SS316	
4	HANDLE	SS304	A105
5	HANDLE BOLT	SS304	
6	BONNET HOOD	POLYTHYLENE	
7	BACK-UP RING	VITON	
8	O-RING SEAL	VITON	
9	BONNET LOCKING PIN	SS304	

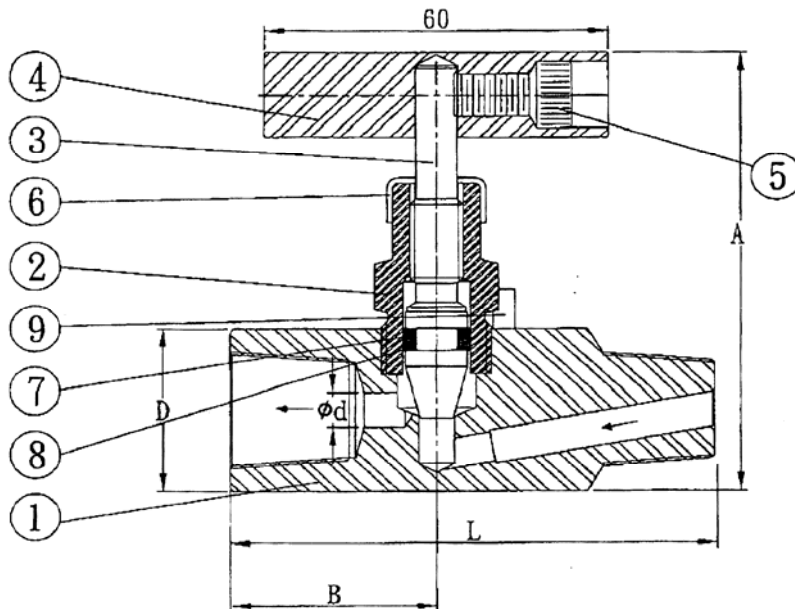
**Dimension**

SIZE	A	B	L
1/4"	75	30	70
3/8"	75	32	75
1/2"	87	36.5	86
3/4"	90	40	45
1"	103	45	100

**NDMF-10 Needle Valve 10000PSI, Male x Female Threaded End**

**Features**

- Thread ends: NPT, BSPP, BSPF, BSPT, PT
- Feature: Screwed-In Bonnet  
T-hand wheel
- Working Pressure: 10000 PSI
- Temperature Range: Max. 120°C



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SS316/SS316L/A105
2	BONNET	SS316/CARBON STEEL
3	STEM	SS316
4	HANDLE	SS304/CARBON STEEL
5	HANDLE BOLT	SS304/CARBON STEEL
6	BONNET HOOD	POLYTHYLENE
7	BACK-UP RING	VITON
8	O-RING SEAL	VITON
9	BONNET LOCKING PIN	SS304

**Dimension**

SIZE	Ød	A	B	D	L
1/8"	5	87	32.5	28.5	70.0
1/4"	5	87	32.5	28.5	70.0
3/8"	5	87	32.5	28.5	70.0
1/2"	5	87	32.5	28.5	70.0
3/4"	6	90	36.5	35.0	85.7
1"	7	103	45.0	43.0	100.0

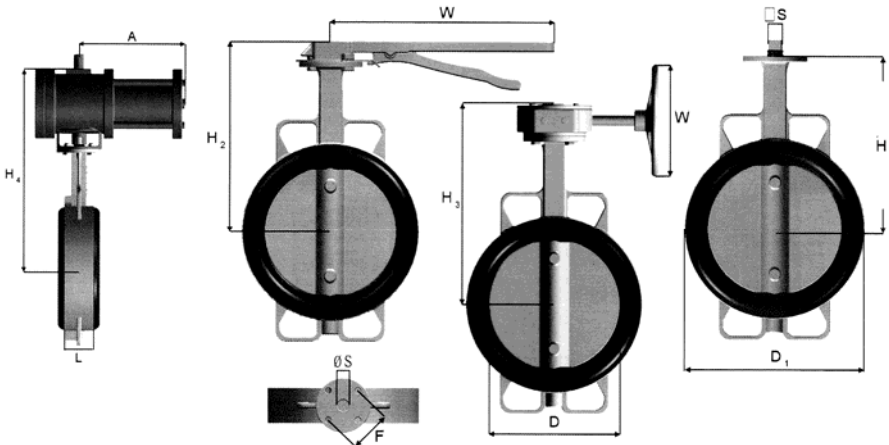
## BV1W Butterfly Valve Wafer Type

### Features

1. Face to face: ANSI B16.10
2. End Flange: ANSI B16.5, JIS 10K, PN10, PN16
3. Investment casting
4. Blow-out proof stem

### Options

1. Cast Iron/ Stainless steel body construction
2. Handle Operator, Gear Operator or Actuator available



### Material List

NO.	Parts name	Material
1	Gear Box	FC 200, CF8
2	O-Ring	NBR
3	Stem O-Ring	NBR
4	Body	FC 200, CF8, CF8M
5	Seat	NBR, EPDM, VITON
6	Taper Pin	CF8, CF8M
7	Disc	CF8, CF8M

### Dimension

MM	INCH	L	H1	H2	H3	H4	□ S	∅ S	D	D1	W	W1	E	F	A
DN50	2"	43	145	173	213	315	9.0	12.7	55	86	250	197	92	70	135
DN65	2-1/2"	46	156	184	224	328	9.0	12.7	68	102	250	197	92	70	158
DN80	3"	46	165	193	233	337	9.0	12.7	80	115	250	197	92	70	158
DN100	4"	53	185	213	253	405	12.5	16.0	100	145	250	197	92	70	180
DN125	5"	56	199	227	267	419	12.5	16.0	125	175	250	197	92	70	180
DN150	6"	56	213	243	281	456	15.0	19.0	150	207	345	197	92	70	193
DN200	8"	60	245	275	313	488	15.0	19.0	195	255	345	197	92	70	193
DN250	10"	68	272		358	572	16.0	22.0	242	310		297	120	102	206
DN300	12"	78	325		411	625	20.0	28.0	290	362		297	120	102	206
DN350	14"	78	365		451	743	23.0	28.0	332	400		297	180	140	270
DN400	16"	87	395		481	773		35.0	387			297	180	140	270
DN450	18"	106	435		525	843		35.0	436			297	180	140	325
DN500	20"	130	470		560			42.0	487			350	210	170	325
DN600	24"	150	560		650			50.0	580			350	210	170	

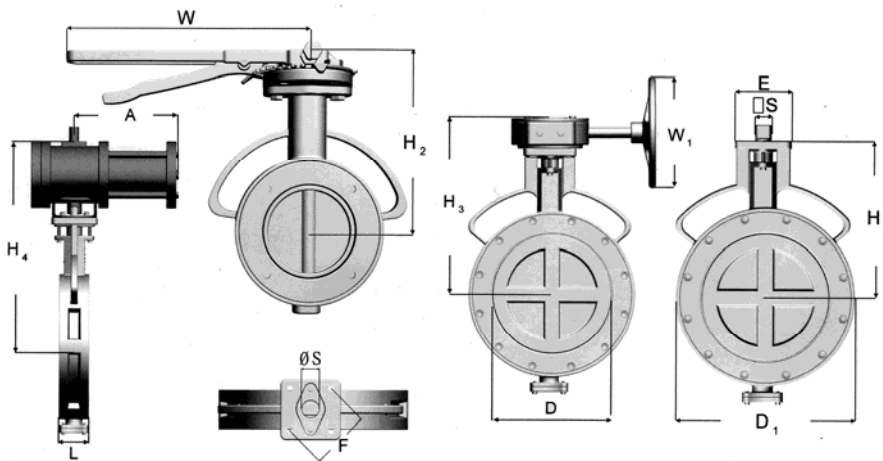
## BV1DE Double Eccentric Butterfly Valve

### Features

1. End Flange: ANSI B16.5 150#, JIS 10K, JIS16K, PN10, PN16
2. Investment casting
3. Blow-out proof stem

### Options

1. Carbon/ Stainless steel body construction
2. Handle Operator, Gear Operator or Actuator



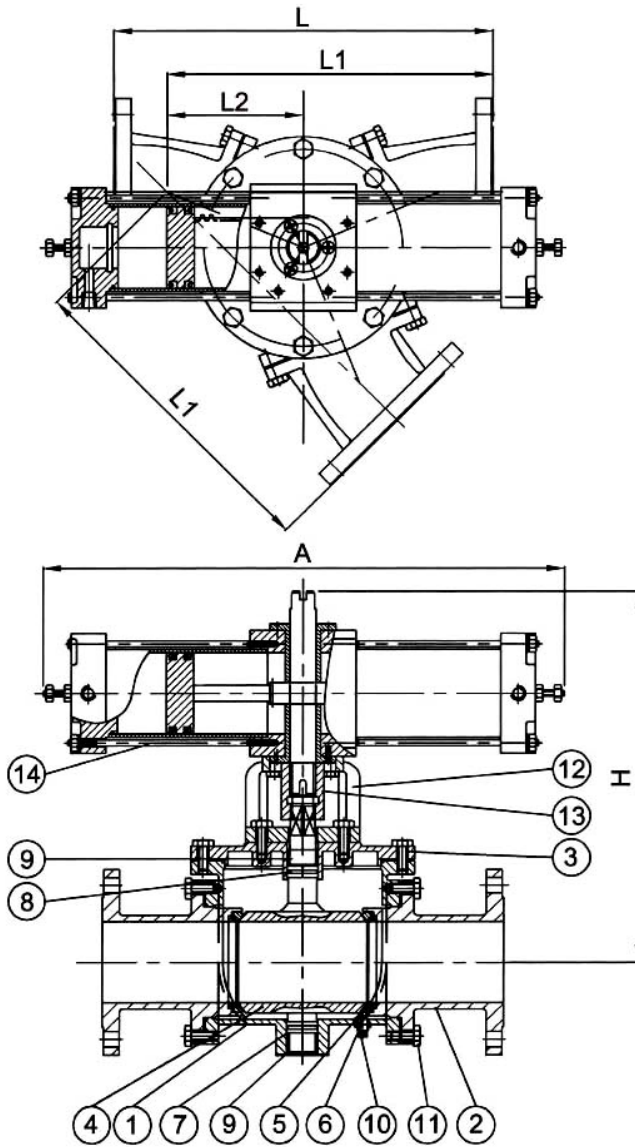
### Material List

NO.	Parts name	Material
1	Gland	316
2	Packing	PTFE
3	Packing	Graphite
4	Stem	304, 316
5	Body	304, 316, 316L, WCB
6	Taper Pin	304, 316
7	Disc	304, 316
8	Teflon Seat	RPTFE
9	Retainer	316
10	Packing	PTFE
11	Bottom Cover	304, 316

### Dimensions

MM	INCH	L	H1	H2	H3	H4	□ S	□ S	Ø S	D	D1	W	W1	E	F	A
DN50	2"	43	140	168	203	219	11	9.0	12.7	43	90	250	197	92	70	144.3
DN65	2-1/2"	43	145	173	208	224	11	9.0	12.7	59	118	250	197	92	70	144.3
DN80	3"	46	155	183	218	234	11	9.0	12.7	72	130	250	197	92	70	144.3
DN100	4"	53	178	206	241	276	14	12.5	16.0	92	154	250	197	92	70	150.0
DN125	5"	56	188	216	251	309	14	12.5	16.0	114	195	250	197	92	70	183.0
DN150	6"	56	210	240	273	331	14	12.5	19.0	147	215	345	197	92	70	183.0
DN200	8"	60	240	270	303	381	19	15.0	25.0	196	264	345	197	92	70	260.0
DN250	10"	68	291		370	467	22	15.0	30.0	246	330		297	120	102	304.0
DN300	12"	78	310		389	506	22	16.0	32.0	294	374		297	120	102	365.0
DN350	14"	78	323		402	519	27	20.0	32.0	320	415		297	180	125	365.0
DN400	16"	102	360		440	604	36	23.0	40.0	380	480		297	180	140	490.0
DN450	18"	114	417		498	661	36		45.0	430	534		297	180	140	490.0
DN500	20"	127	443		529		46		60.0	468	586		350	210	165	
DN600	24"	154	528		618		46		60.0	578	696		350	210	165	

**VDB3W Ball Type Three Way Diverter Valve Flanged 150LB**



**Material List**

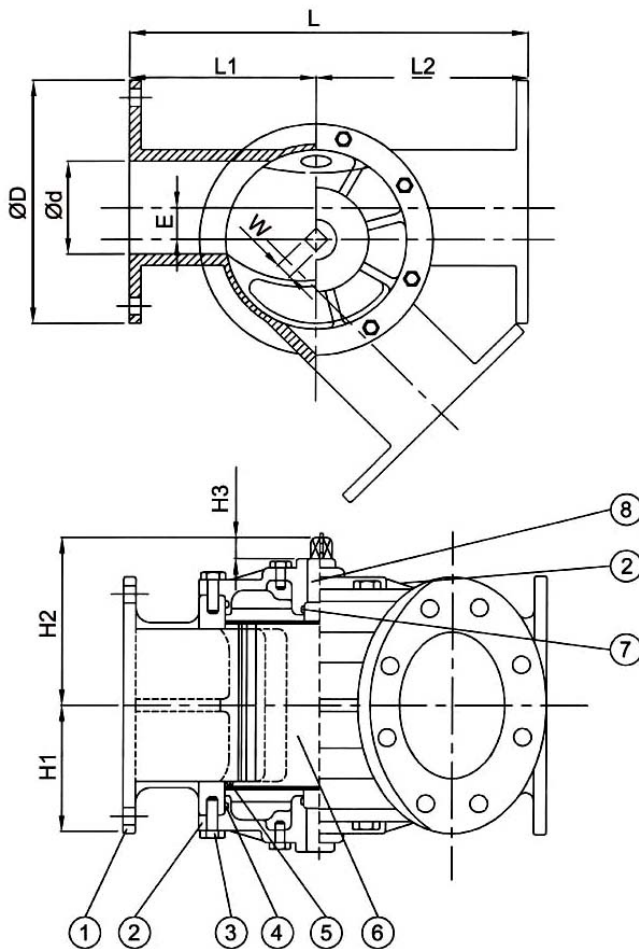
NO.	PART NAME	MATERIAL
1	BODY	SUS304 / SUS316
2	BODY CAP	SUS304 / SUS316
3	TOP FLANGE	SUS304 / SUS316
4	BALL	SUS304 / SUS316
5	BACK SEAT	TEFLON
6	BACK SEAT	SILINCON
7	O-RING	NBR OR VITON
8	O-RING	NBR OR VITON
9	BEARING	AL+PTFE
10	PLUG	SUS304
11	BOLT	SUS304
12	FRAME	WCB
13	JOINT	SS41
14	ACTUATOR	AL ALLOY

**Dimension**

SIZE	L	L1	L2	A	d	S	H	CYLINDER SIZE
2"	280	224	84	500	50	PT3/8	330	AC100
2-1/2"	320	264	104	500	65	PT3/8	365	AC100
3"	360	291	111	500	75	PT3/8	375	AC100
4"	460	384	154	600	100	PT3/8	435	AC125
5"	560	483	203	700	125	PT3/8	505	AC150
6"	660	547	227	700	150	PT3/8	510	AC180
8"	800	677	277	700	200	PT3/8	580	AC180
10"	960	810	330	1110	250	PT3/8	650	AC200



**VDC3W Cock Type Three Way Diverter Valve Flanged 150LB**



**Material List**

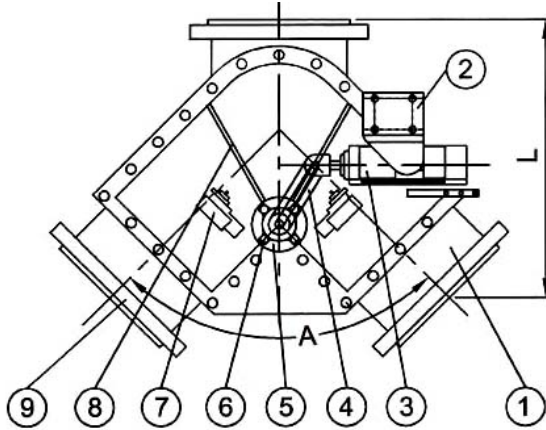
NO.	PART NAME	MATERIAL
1	BODY	SCS13
2	COVER	SCS13
3	BOLT	SUS304
4	O-RING	NBR OR VITON
5	SEAL RING	NBR OR VITON
6	PLUG	SCS13
7	O-RING	NBR OR VITON
8	BUSH	AL + PTFE

**Dimension**

SIZE	d	D	t	E	W	L	L1	L2	H1	H2	H3	CYLINDER SIZE
2"	50	155	15	18	20	280	120	160	80	105	25	AC-100
2-1/2"	65	175	15	19	20	320	140	180	90	118	25	AC-100
3"	75	185	18	19	20	320	140	180	90	118	25	AC-100
4"	100	210	18	27	24	380	180	200	110	140	30	AC-125
5"	125	250	20	35	24	425	200	225	125	155	30	AC-150
6"	150	280	22	39	30	480	230	250	160	195	35	AC-180
8"	200	330	22	55	37	570	270	420	180	220	40	AC-180
10"	250	400	24	68	37	700	330	470	220	270	50	AC-200
14"	350	533	24	90	37	900	410	490	270	350	70	AC-200

**DVD3W Damper Type Diverter Valve Flanged 150LB**

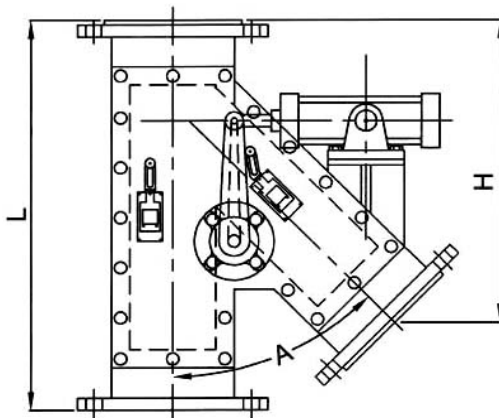
**Y TYPE**



**Dimension**

SIZE		2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
W		90	105	125	150	170	200	255	310	360
L	A	50°	350	360	370	410	435	470	540	610
		60°	270	275	290	310	330	350	395	445
		90°	220	240	260	275	300	320	375	420

**└ TYPE**



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	SUS304
2	YOKE	SUS304
3	CYLINDER	AL ALLOY
4	ARM	SUS304
5	BEARING	
6	BOLT	SUS304
7	LIMIT SWITCH	
8	PLATE	SUS304
9	FLANGE	SUS304

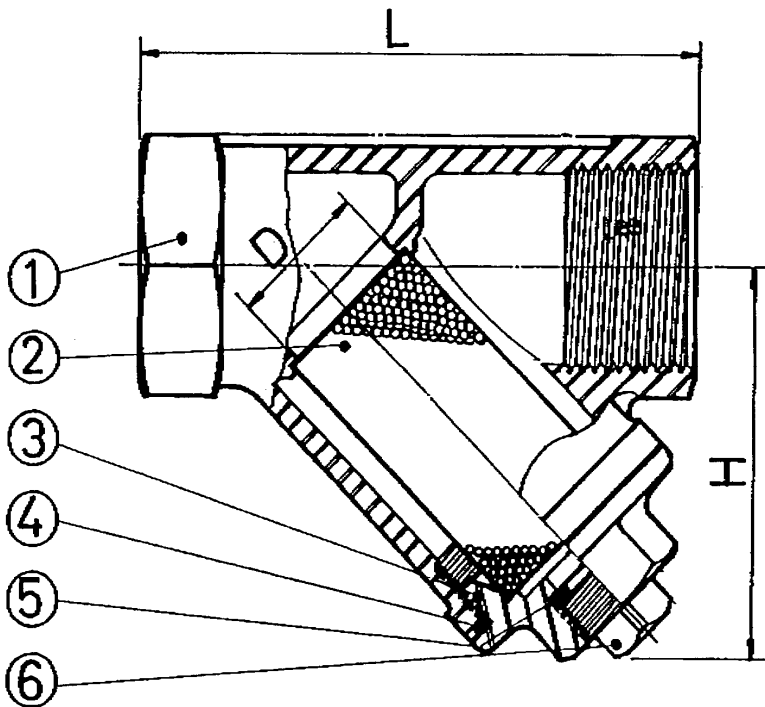
**Dimension**

SIZE		2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
W		90	105	125	150	170	200	255	310	360
L	A	30°	400	435	455	505	545	600	690	790
		45°	260	280	290	315	335	365	415	485
		60°	182	193	198	210	220	235	260	290
H	A	30°	448	485	515	570	615	675	780	900
		45°	325	350	370	405	435	470	540	635
		60°	260	280	295	320	340	370	415	475

**Y-8 Y-Strainer Threaded 800WOG**

**Features**

1. Thread ends: NPT, BSPP, BSPF, BSPT, PT
2. Investment casting



**Material List**

NO.	PART NAME	MATERIAL
1	BODY	CF8M (SS316)
2	SCREEN (FILTER)	SS316
3	CAP	SS316
4	GASKET	PTFE
5	PACKING	PTFE
6	PLUG	SS316

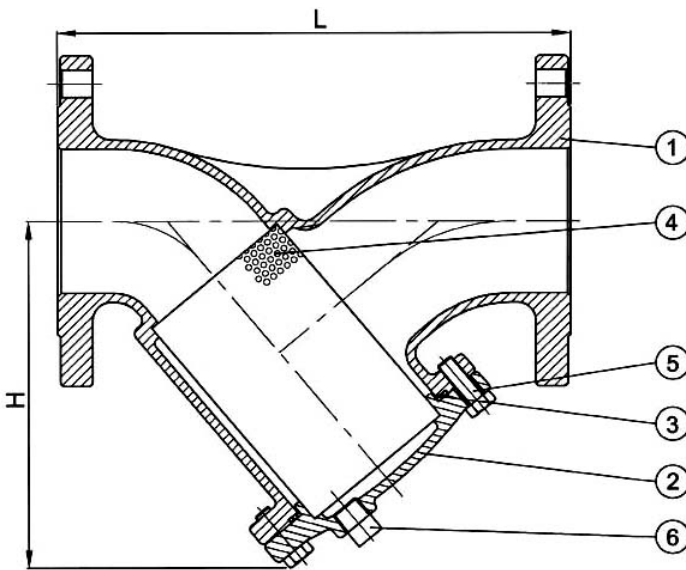
**Dimension**

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
L	57	57	61	70	86	100	111	138	170	195
H	32	32	37	41	47	54	62	76	110	130
D	10	10	15	20	25	32	38	51	65	80

**YF-1 Cast Stainless Steel Y-strainer Flanged 10K/ 150LB**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



**Screen Specification**

SIZE	PERFORATION
1/2" ~ 1 1/2"	1mm
2" ~ 12"	2mm
14" ~ 24"	4mm

**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	SCS13	SCS14	SCS16
		CF8	CF8M	CF3M
2	CAP	SCS13	SCS14	SCS16
		CF8	CF8M	CF3M
3	GASKET	PTFE		
4	SCREEN	SS304	316	SS316L
5	BOLT NUT	A193-B7	ASTMA 194-B8	
6	PLUG	SS304	SS316	SS316L

**Test Pressure To API 598**

		ANSI 150LB	JIS 10K
Shell	By water	450 PSI (32 kg/cm <sup>2</sup> )	20 kg/cm <sup>2</sup>
	By air	80PSI (6 kg/cm <sup>2</sup> )	6 kg/cm <sup>2</sup>

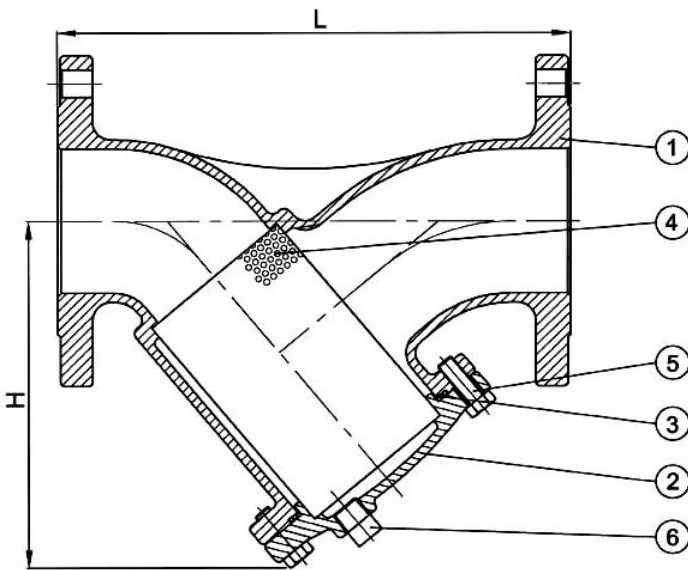
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L		120	140	150	190	210	250	280	340	380	420	500	730	810	960	1040	1120	1200	1400
H		75	75	100	120	140	175	196	244	277	320	390	430	580	630	720	880	980	1170

**YF-16 Cast Stainless Steel Y-strainer Flanged PN16**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face : DIN3202
- End Flanges: DIN2543



**Screen Specification**

SIZE	PERFORATION
1/2" ~ 1 1/2"	1mm
2" ~ 12"	2mm
14" ~ 24"	4mm

**Test Pressure To API 598**

	PN16
Shell TEST - WATER	340 PSI (24KG/CM2)

**Material List**

NO.	PART NAME	MATERIAL		
		304	316	316L
1	BODY	1.4308	1.4408	1.4409
2	CAP	1.4308	1.4408	1.4409
3	GASKET	PTFE		
4	SCREEN	SS304	316	SS316L
5	BOLT NUT	A193-B7	ASTMA 194-B8	
6	PLUG	SS304	SS316	SS316L

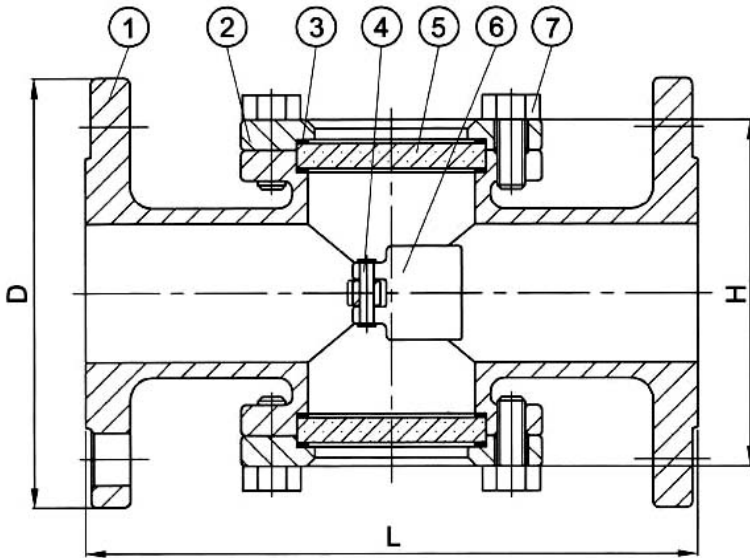
**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
	MM	15	20	25	40	50	65	80	100	125	150	200	250
L		130	150	160	200	230	290	310	350	400	480	600	680
H		75	75	100	120	140	175	196	244	277	320	390	430

**SGF-1 Sight Glass Flanged 10K/150LB**

**Feature**

- Shell Wall Thickness: ANSI B16.34
- Face to Face ANSI B16.10 / JISB2002
- End Flanges ANSI B16.5 / JISB2210



**Material List**

NO.	PART NAME	MATERIAL		
		304SS	316SS	316L
1	BODY	CF8	CF8M	CF3M
2	COVER	CF8	CF8M	CF3M
3	GASKET	PTFE		
4	SCREEN	SS304	SS316	SS316L
5	GLASS	REINFORCED GLASS		
6	FLAPPER	SS304	SS316	SS316L
7	BOLT	SUS304		

**Dimension**

SIZE	IN	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
	MM	15	20	25	40	40	50	65	80	100	125	150	200
L		130	130	170	200	200	220	270	270	320	380	420	580
H		100	100	100	125	125	125	167	180	210	270	280	345
D		89	98	108	117	127	152	178	190	229	254	279	343