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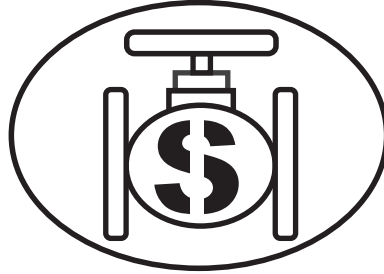


# SAKTHI INDUSTRIES

MANUFACTURERS OF EXCEL BRAND IBR & NON IBR VALVES



- BELLOW SEALED VALVES • GLOBE VALVES • GATE VALVES • BALL VALVES • NON RETURN VALVES • BUTTERFLY VALVES
- FORGED VALVES • DISC CHECK VALVES • Y TYPE STRAINERS • BALL TYPE FLUSH BOTTOM VALVES • AUTOMATION VALVES



**SAKTHI INDUSTRIES**  
Manufacturer of IBR & NON IBR VALVES



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# Introduction

**Excel** understands the critical nature of valve in industry We take at most care in design, manufacturing and testing to ensure that the valve perform best in its class.

**Impeccable Standards** : The manufacturing facility is located at Ambattur, Chennai, India. Sakthi Industries manufacturing facilities confirms to quality standards prescribed by the ISO 9001:2008 series. The valves comply with stringent international standards such as API, ANSI, ASME, BSI, etc. hence they continue to meet and often surpass the quality standards required . Sakthi Industries Engineers continuously evaluate existing products through advanced analyses and engineering to ensure that the valve match customer's requirements as well as industry standards.

We practice lean manufacturing to ensure our products are value for money by reducing the cost of ownership. We are geared up to meet the delivery challenges with our supplier partnership program and exclusive vendors.

**Discerning Eye** : The product quality of castings and forgings is assured through close control on foundries & forging shops by way of periodic inspection by our quality control team. Similarly all other suppliers are monitored through continuous verification of materials and part, which are tested at laboratories.

**Comprehensive Range** : The company's leading products include, Bellow Seal, Gate Valve, Globe Valves, Ball Valves, Check Valves, High Pressure & High Temperature Valves, Automated Valves with Actuators & Electric actuators, etc.

This catalogue provides basic dimensions and specifications for ordering various Excel Valves. The illustrations are of a particular size for each product line and do not necessarily represent all sizes in detail. The designs and materials may vary according to 'Excel Valves' policy of continuous improvement.

## **Production Process & Quality Control :**

- Quality production is assured by numerous control systems during all stages of production
- Visual & Dimension check
- On line production checks
- Check in of material
- Mechanical & laboratory test
- Issuance of Quality Certificate
- Montage supervision and hydraulic pneumatic test of valves

## **Application System :**

- Steam
- Hot Water
- Chemical
- Bulk Drugs
- Sea Water
- Thermic Fluid
- Pharmaceutical
- Petroleum
- Air & Gas
- OEM & Process

# Index

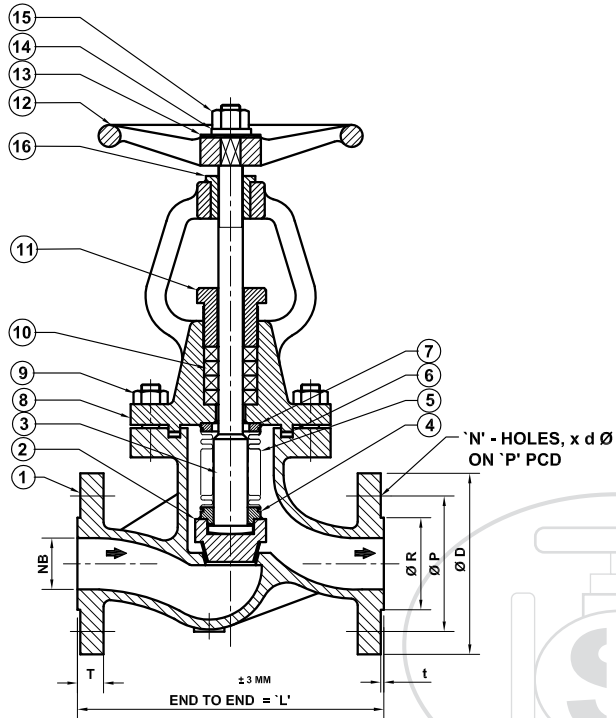
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### Standards

Valve Design	: BS 1873
Face to Face	: ANSI B 16.10
End Connections	: ANSI B 16.5
Pressure / Temperature Ratings	: ANSI B 16.34
Testing Standard	: API 598



## Bellow Seal Globe / Gate Valves - IBR / N IBR # 150 / 300



### Application

- Thermic Fluid
- Steam
- Fatty Acid
- Chlorine

### NOTE :-

- A) Valve Design To Bs:1873
- B) Valve Testing To Bs:5146 / Api 598
- C) Flanged Ends As Per Ansi B-16.5 (# 150/300)
- D) Valve End To End As Per Ansi B-16.10 (300#)
- E) Tongue & Groove Body ,bonnet Bolted Joint
- F) Bellow Imported From Germany

No.	PART	MATERIAL
16	YOKE NUT	S.G IRON / C.S
15	HAND WHEEL NUT	CARBON STEEL
14	WASHER	CARBON STEEL
13	LABLE	AISI 304
12	HAND WHEEL	M.I.
11	GLAND NUT	AISI 410
10	STUFFING BOX PACKINGS	GRAFOIL
09	FASTNERS (H.T STUDS & NUTS)	ASTM A 193 GR. B7 / A 194 GR. 2H
08	BONNET	ASTM A 216 GR.WCB
07	TOP BELLOW COLLAR	AISI 316
06	GASKET	SPIRAL WOUND (SS-304 + GRAFOIL)
05	BELLOW (MIN 2 PLY)	AISI 316 TI ('HYDRA' GERMANY)
04	BOTTOM BELLOW COLLAR	AISI 316
03	STEM	AISI 410
02	PLUG	AISI 410 (H.F. STELLITED)
01	BODY (WITH H.F. SEAT)	ASTM A 216 GR.WCB + H.F. STELLITED

Note : Standard material specifications can be changed according to service condition



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## Comparison Between Types of Valves

	<b>BELLOW SEALED VALVES</b>	<b>PISTON VALVES</b>	<b>CONVENTIONAL VALVES</b>
Primary Stem Seal	Metallic Bellow	Piston ring	Gland Packing
Secondary Stem Seal	Gland Packing	None	None
Stem Leakage	Not Possible. Metallic Bellows are designed to last several thousand cycles	Occurs as soon as the ring (which are made of gasket material) wear out	Very Common due to friction between stem and the gland, Leakage occurs within a few cycles no matter which make valve or what quality of gland packing.
Packing Replacement	Not Applicable.	Rings need to be changed frequently	Packing needs to be replaced very often
Replacement Cost	Not Applicable.	Very high	High
Media Loss	Zero Loss as the isolation is by Metallic bellows, Leakage (even in ppm) is not possible.	Large in case of leaks	Through gland leakages. Normally large amount when leakage remains unattended
Equipment Downtime	Nil	Very high for replacing Rings	Very high for replacing gland packing
Maintenance Cost	Nil	High as rings need to be changed at least once in six months.	Very High. Gland packing need to be replaced / repacked often. This cost along with equipment down time, man hours spent etc. is very high
Valve life	High (in years)	Low	Very Low in months. Due to leakage through gland, certain parts erode, making the valve irreparable after some months. Valves needs to be replaced
Safety	Can be used safely for almost any media	Can be used for limited media	High unsafe when the media is hazardous/poisonous
Cost	Comparatively Higher initially but lowest Total Cost of Ownership over the years of use.	High compared to the benefits viz a viz problems	Initially low but very high Total Cost of Ownership if cost of packing, down time, man-hours spent, number of valves replaced etc. is taken into account.

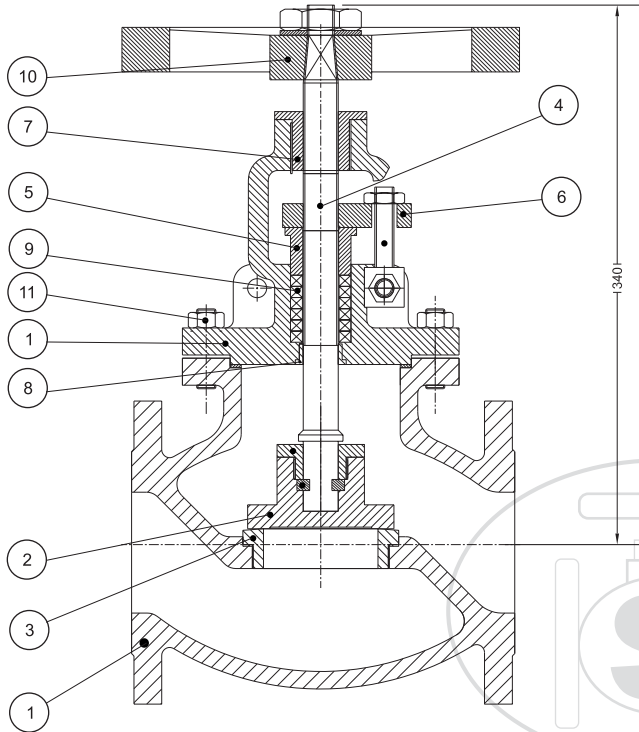


### Standards

Valve Design	: BS 1873
Face to Face	: ANSI B 16.10
End Connections	: ANSI B 16.5
Pressure / Temperature Ratings	: ANSI B 16.34
Testing Standard	: API 598



## Globe Valve Class 150/300 with IBR



Sr.	Parts Name	Material Specifications
1	Body & Bonnet	ASTM A 216 GR WCB/A 352 LCB/A 217 WC6/ A351 CF8/ A351 CF8M/A 351 CF3/A351 CF3M
2	Disc	AISI – 410/304/316
3	Seat	AISI – 410/304/316
4	Spindle	AISI – 410/304/316
5	Gland bush	AISI – 410,304,316
6	Gland flange	ASTM A 216 GR WCB
7	Spindle Bush	Alloy Iron / Ni resits
8	Gasket	CAF - Spiral wound SS With graphite filler
9	Gland packing	Graphite Ring
10	Hand wheel	C.I. / M.I.
11	Stud, nut & washer	ASTM-A-193 Gr.B, ASTM-A-194 Gr.2H

### Class 150 Flange

SIZE	INCH	Ø1/2'	Ø3/4'	Ø1'	Ø1.5'	Ø2'	Ø2.5'	Ø3'	Ø4'	Ø5'	Ø6'	Ø8'	Ø10'	Ø12'
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300
<b>F</b>		89	98.5	127	165	203	216	243	292	330	406	495	622	698
<b>H open</b>		160	195	230	259	285	357	394	435	472	532	623	845	736
<b>D</b>		100	100	150	176	176	252	252	300	300	352	400	500	560

### Class 300 Flange

SIZE	INCH	Ø1/2'	Ø3/4'	Ø1'	Ø1.5'	Ø2'	Ø2.5'	Ø3'	Ø4'	Ø5'	Ø6'	Ø8'	Ø10'	Ø12'
	MM	15	20	25	40	50	65	80	100	125	150	200	250	300
<b>F</b>		153	178	203	229	267	292	318	356	400	444	559	622	711
<b>H open</b>		160	195	240	300	317	335	380	423	510	548	663	733	888
<b>D</b>		100	100	160	160	200	200	250	250	300	350	400	450	500

Note : Standard material specifications can be changed according to service condition



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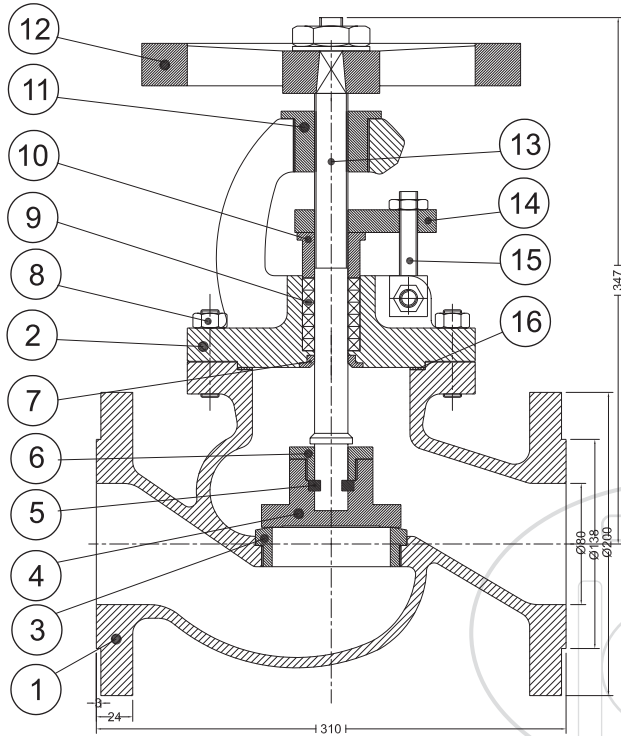


### Standards

Valve Design	: BS 1873
Face to Face	: ANSI B 16.10
End Connections	: ANSI B 16.5
Pressure / Temperature Ratings	: ANSI B 16.34
Testing Standard	: BS 5146



## Globe Valve DIN ND40



Sr.	Parts Name	Material Specifications
1	Body	Cast Carbon Steel to ASTM A216 Gr. WCB
2	Bonnet	
3	Seat	13% Chrome Steel
4	Disc	Hardened
5	Split Collar	AISI 410
6	Disc Retainer	
7	Back Seat Bush	
8	Fastners	High Tensile
9	Gland Packing	Graphite Ring
10	Gland	AISI 410
11	Spindle Bush	
12	Hand Wheel	Malleable Iron/Cast Iron
13	Spindle	AISI 410
14	Gland Plate	Carbon Steel
15	Gland Stud	Mild Steel
16	Gasket	Compressed Asbestos / Spiral Wound

SIZE	INCH	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
	$\phi$ NB	12.5	19	25	38	51	64	76	102	127	152	203	254	304.8
	L	130	150	160	200	230	290	310	350	400	480	600	730	850
	H	205	215	230	260	282	340	342	395	450	500	600	823	914
	$\phi$ HW	125	125	125	150	175	200	250	300	350	350	400	457	635

Hydro Test Pressure Kg/Sq. Cm	
Body	Seat/Back Seat
60	40

Temp C	Working Pressure Kg/Sq. Cm.
200	40
300	32
400	25
450	16

Note : Standard material specifications can be changed according to service condition



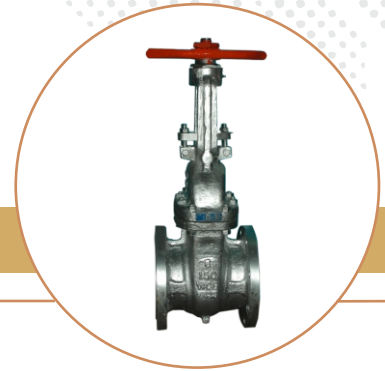
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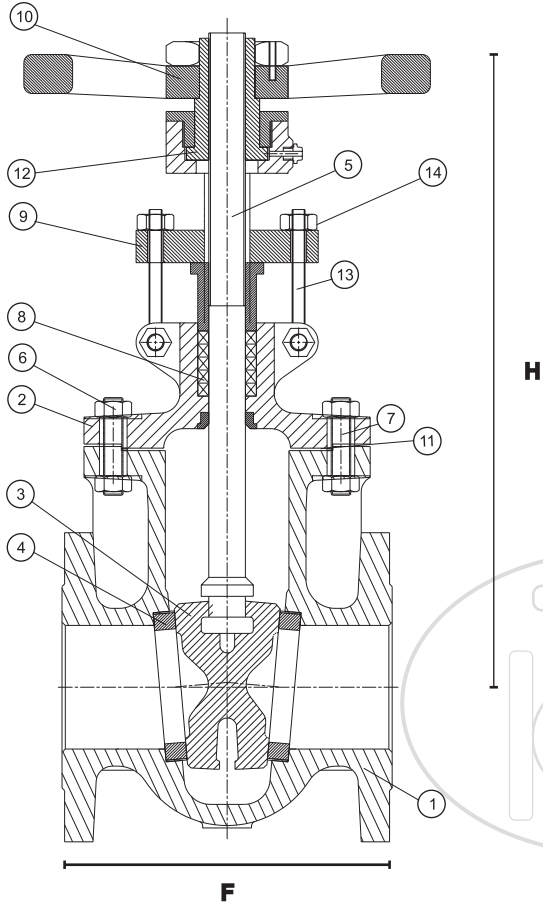


### Standards

Valve Design	: API 600. / BS 1414
Face to Face	: ASME/ ANSI B 16.10
End Connections	: ASME/ ANSI B 16.5
Pressure / Temperature Ratings	: ASME/ANSI B 16.34
Testing Standard	: API 598



## Gate Valve 150/300



Sr.	Parts Name	Material Specifications
1	Body	Cast Carbon Steel to ASTM A 216 Gr WCB
2	Bonnet	
3	Wedge	ASTM A 217 Gr. CA 15 ORI ASTM A 216 Gr WCB With suitable seating surface
4	Seat	13% CR S/Steel
5	Spindle	AISI 410/304/316/304L/316L
6	Nut	ASTM A 194 Gr. 2H/High tensile
7	Stud	ASTM A 194 Gr. B7/High tensile
8	Gland packing	Graphite Ring
9	Gland flange	AISI 410/304/316/304L/316L
10	Hand Wheel	IS 210 1978/CI/MI
11	Body gasket	Spiral wound S S 304 with CAP as per requirement
12	Yoke sleeve	Ni resits/Alloy Iron
13	Eye bolt	Carbon steel
14	Eye bolt nuts	Carbon steel

### Class 150 Flange

SIZE	INCH	1/2'	3/4'	1'	1.5'	2'	2.5'	3'	4'	5'	6'	8'	10'	12'
	MM	12.5	20	25	40	50	65	80	100	125	150	200	250	300
<b>F</b>		108	117.5	127	165	178	190	203	229	254	267	292	330	356
<b>H open</b>		200	220	273	342	386	435	507	590	650	762	965	1175	1365

### Class 300 Flange

SIZE	INCH	1/2'	3/4'	1'	1.5'	2'	2.5'	3'	4'	5'	6'	8'	10'	12'
	MM	12.5	20	25	40	50	65	80	100	125	150	200	250	300
<b>L</b>		140	152	165	191	216	242	283	305	381	403	419	457	502
<b>H open</b>		220	245	275	335	365	415	500	575	680	785	1000	1210	1400

Note : Standard material specifications can be changed according to service condition

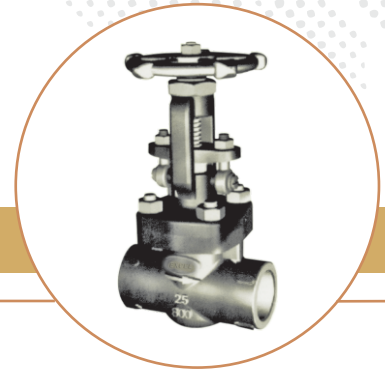


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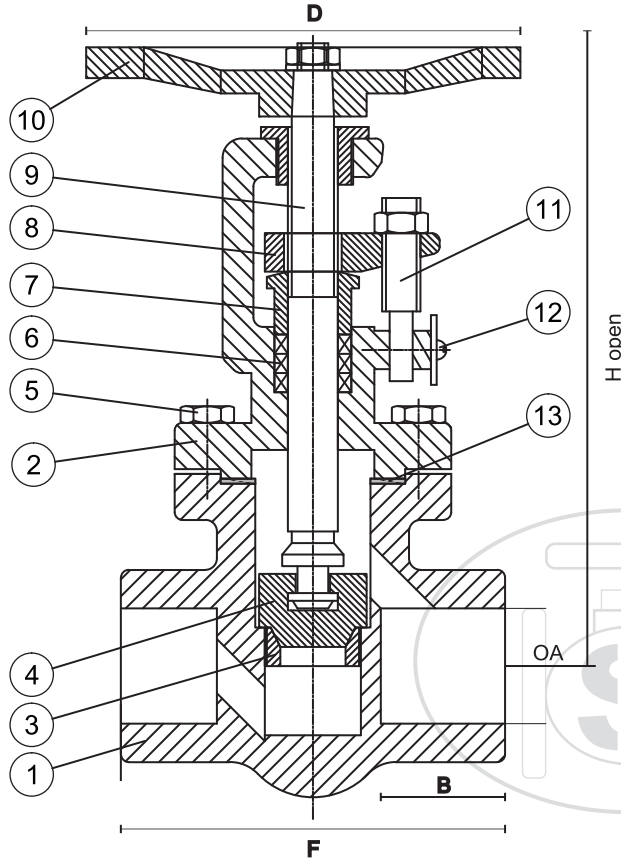


**Standards**

- Valve Design : API 602
- Face to Face : ANSI B 16.10
- End Connections : ASME B 16.11 / ANSI B 2.1
- Testing Standard : API 598 / BS 5146



**Forged Steel Globe Valve # 800**



Sr.	Parts Name	Material Specifications
1	Body	Forged Steel to ASTM A 105
2	Bonnet	
3	Seat	ANSI 410
4	Disc	
5	Fastners	High Tensile
6	Gland Packing	Graphite Ring
7	Gland	AISI 410
8	Gland Plate	Carbon Steel
9	Spindle	AISI 410
10	Hand Wheel	Malleable Iron
11	Eye Bolt & Nut	Mild Steel
12	Screw	Steel
13	Gasket	SS 304 Sprial Wound with Graphite

SIZE	INCH	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	15	20	25	32	40	50
	<b>F</b>	87	90	105	128	128	142
	<b>H open</b>	169	174	194	262	267	277
	$\phi$ <b>A</b>	21.7	27.1	33.78	41.57	48.64	61.11
	<b>B</b>	9.5	12.7	12.7	12.7	12.7	16

Note : Stellite is done on seat ring & wedge if required



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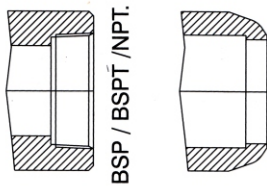
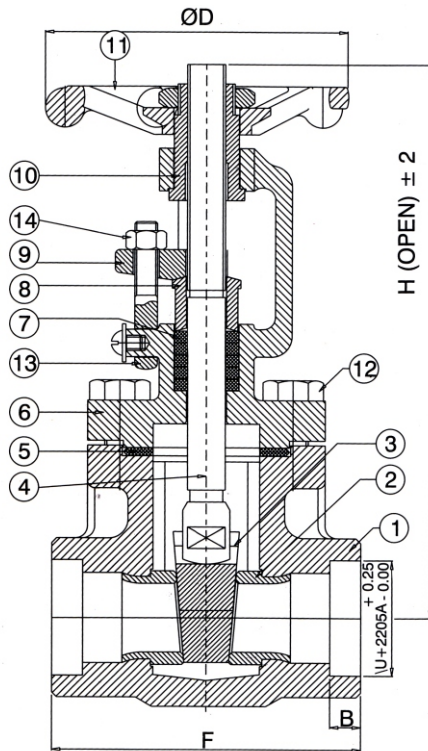


### Standards

Valve Design	: API 602
Face to Face	: ANSI B 16.10
Socket Weld & Threaded to	: ANSI B 16.11 / ANSI B 2.1
Testing Standard	: API 598 / BS 5146



## Forged Steel Gate Valve # 800



Sr.	Parts Name	Material Specifications
1	Body	ASTM - A 105/A 182F / 304-316
2	Seat Ring	AISI - 410/304/316
3	Wedge	AISI - 410/304/316
4	Spindle	AISI - 410/304/316
5	Gasket	Spiral wound SS 304 Filled Asbestos/graphite filler
6	Bonnet	ASTM - A 105/A 182F / 304-316
7	Gland Packing	Graphite Ring
8	Gland bush	AISI - 410/304/316
9	Gland flower	ASTM - A 105/304
10	Yoke sleeve	NI - resist
11	Hand wheel	C.I / M.I
12	Bonnet nut	A 193 Gr. B7
13	Eye bolt	Carbon steel or AISI 410/304
14	Nut	Carbon steel or AISI 410/304

SIZE	INCH	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	15	20	25	32	40	50
<b>F</b>		87	90	105	128	128	142
<b>H open</b>		169	174	194	262	267	277
<b>D</b>		85	85	90	145	145	145
<b>φA</b>		21.7	27.1	33.78	41.57	48.64	61.11
<b>B</b>		9.5	12.7	12.7	12.7	12.7	16

Note : Stellite is done on seat ring & wedge if required

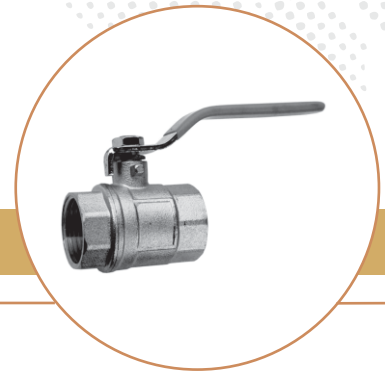


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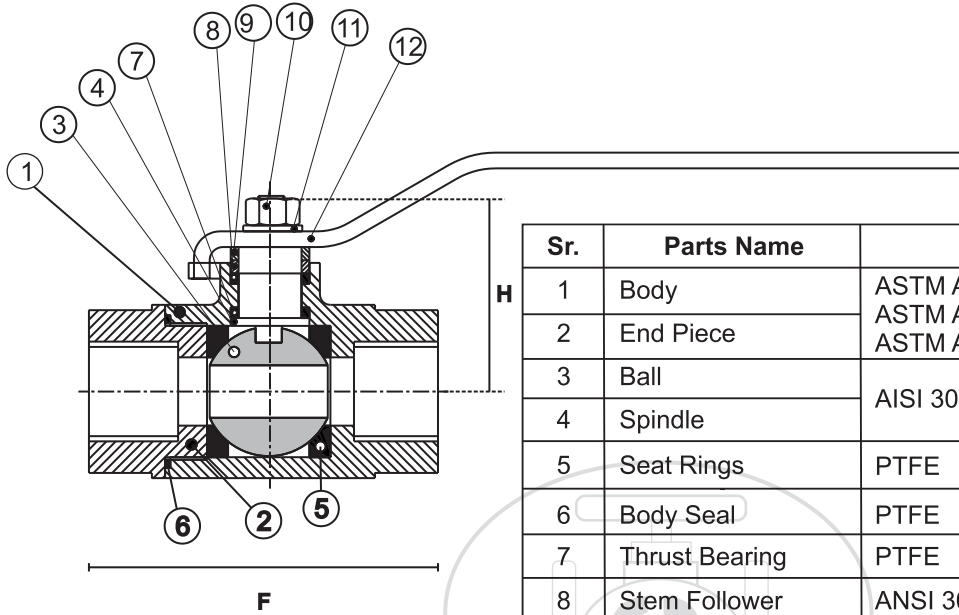


**Standards**

- Valve Design : BS 5351 (SINGLE PIECE)
- Face to Face : Given below in table
- End Connections : ASME B 16.11 / BSP / NPT
- Testing Standard : BS 5146 / API 598



**Ball Valve Single Piece**



Sr.	Parts Name	Material Specifications
1	Body	ASTM A351 Gr Cf8
2	End Piece	ASTM A351 Gr CF8M ASTM A216 Gr WCB
3	Ball	AISI 304/316
4	Spindle	
5	Seat Rings	PTFE
6	Body Seal	PTFE
7	Thrust Bearing	PTFE
8	Stem Follower	ANSI 304/316
9	Spring Washer	Spring Steel/Hardend
10	Fasteners	Mild Steel/Stainless Steel
11	Plate Washer	Cadmium Coated Plate
12	Hand Lever	Powder Coated Lever

SIZE	INCH	1/2	3/4	1	1 1/2	2	3
	MM	15	20	25	40	50	80
F		65	76	85	114	125	181
H		59	70	80	91	107	143

Note : Standard material specifications can be changed according to service condition



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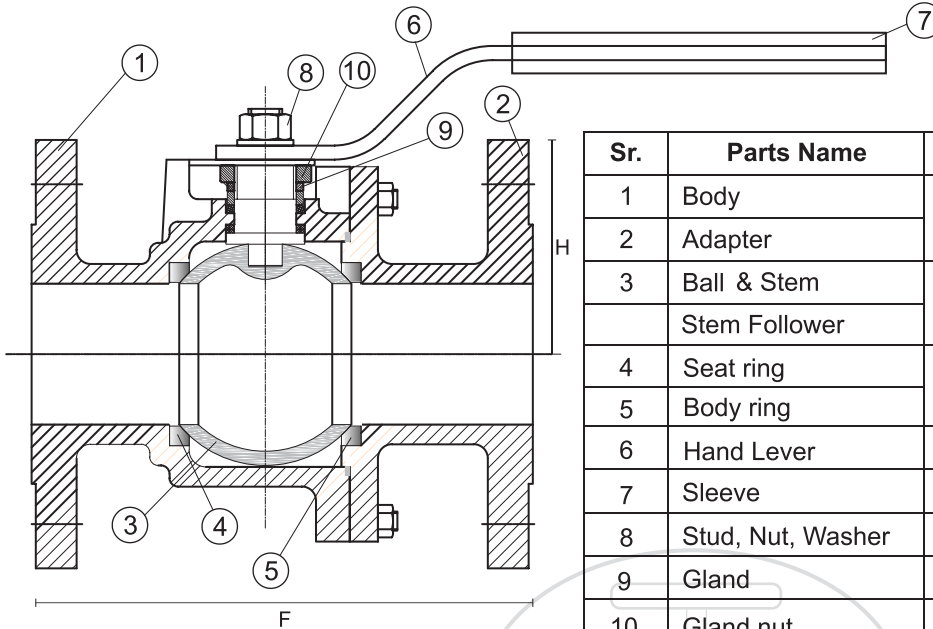


### Standards

Valve Design	: BS 5351 (TWO PIECE)
Face to Face	: ASME B 16.10
End Connections	: ASME B 16.5
Testing Standard	: BS 5146 / API 598



## Ball Valve 2 Piece



Sr.	Parts Name	Material Specifications
1	Body	ASTM A 216 Gr WCB/ASTM A 351 Cf8/Cf8M
2	Adapter	
3	Ball & Stem	AISI - 304/316
	Stem Follower	
4	Seat ring	PTFE/ Glass filled PTFE/ Carbon filled PTFE
5	Body ring	
6	Hand Lever	MS/ASTM A 351 Ca15/ Cf8/ CF8M
7	Sleeve	Plastic
8	Stud, Nut, Washer	ASTM-A-193 Gr.B7, ASTM-A-194Gr.2H
9	Gland	PTFE
10	Gland nut	AISI 304/316

### Features :

- Rotary actuator can be mounted.
- Electro plating for ss ball valves.
- Three way "L" port and "T" port.
- Special seating arrangement.
- Fire safe design.
- Easy maintenance.

### CLASS 150 FLANGE

SIZE	INCH	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
	MM	15	20	25	40	50	65	80	100	150	200
<b>F</b>		108	117	127	165.1	177.8	190.5	203.2	228.6	266.7	292.1
<b>H (apprx)</b>		63	69	86	102	116	134	137	167	250	312
<b>L(apprx)</b>		137	137	162	205	205	300	300	350	800	875

### CLASS 300 FLANGE

SIZE	INCH	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
	MM	15	20	25	40	50	65	80	100	150	200
<b>F</b>		140	155	165	190	215	241	285	305	405	419
<b>H (apprx)</b>		63	69	86	102	116	134	137	167	250	312
<b>L(apprx)</b>		137	137	162	205	205	300	300	350	800	875

Note : Standard material specifications can be changed according to service condition

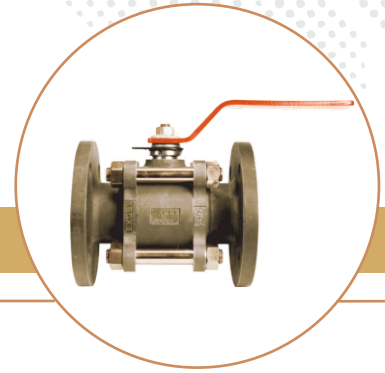


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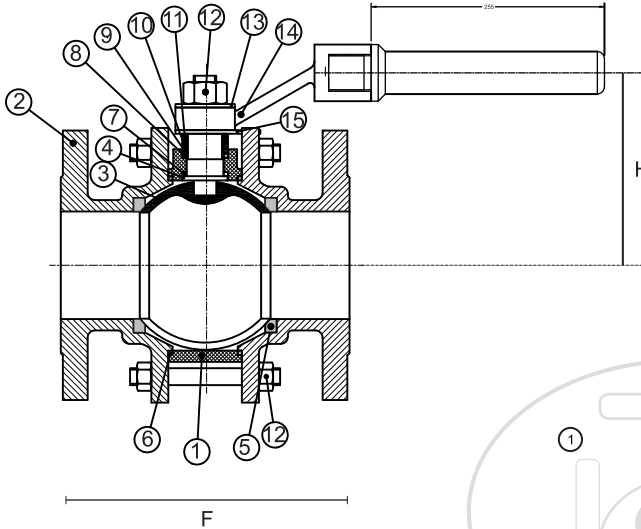


### Standards

Valve Design	: BS 5351 (THREE PIECE)
Face to Face	: ASME B 16.10
End Connections	: ASME B 16.5
Testing Standard	: BS 5146 / API 598



## Ball Valve 3 Piece



### Features :

- Rotary actuator can be mounted.
- Electro plating for ss ball valves.
- Three way "L" port and "T" port.
- Special seating arrangement.
- Fire safe design.
- Easy maintainance.
- Solid ball with micro finish.

Sr.	Parts Name	Material Specifications
1	Body	ASTM A 351 Gr Cf8
2	End Piece	ASTM A 351 Gr CF8M
3	Ball	ASTM A 216 Gr WCB
4	Spindle	CI IS 210 Gr FG 200
5	Seat Rings	AISI 304/316
6	Body Seal	PTFE
7	Thrust Bearing	PTFE
8	Stem Seal	PTFE
9	Stem Follower	ANSI 304/316
10	Spring Washer	Spring Steel Coated
11	Lock Nut	ANSI 304
12	Fastener	Mild Steel/Stainless Steel
13	Plate Washer	Cadmium Coated Washer
14	Hand Lever	Powder Coated Leaver
15	Stopper Plate	Cadmium Coated Plate

### CLASS 150 FLANGE

SIZE	INCH	½"	¾"	1"	1 ½"	2"	2 ½"	3"	4"	6"	8"
	MM	15	20	25	40	50	65	80	100	150	200
<b>F</b>		108	117	127	165.1	177.8	190.5	203.2	228.6	266.7	292.1
<b>H (apprx)</b>		53	60	80	103	103	115	135	140	200	250
<b>L (apprx)</b>		137	137	162	203	225	255	297	297	800	875

### CLASS 300 FLANGE

SIZE	INCH	½"	¾"	1"	1 ½"	2"	2 ½"	3"	4"	6"	8"
	MM	15	20	25	40	50	65	80	100	150	200
<b>F</b>		140	155	165	190	215	241	285	305	405	419
<b>H (apprx)</b>		453	60	80	103	103	115	135	140	200	250
<b>L (apprx)</b>		137	137	162	203	225	255	297	297	800	875

Note : Standard material specifications can be changed according to service condition



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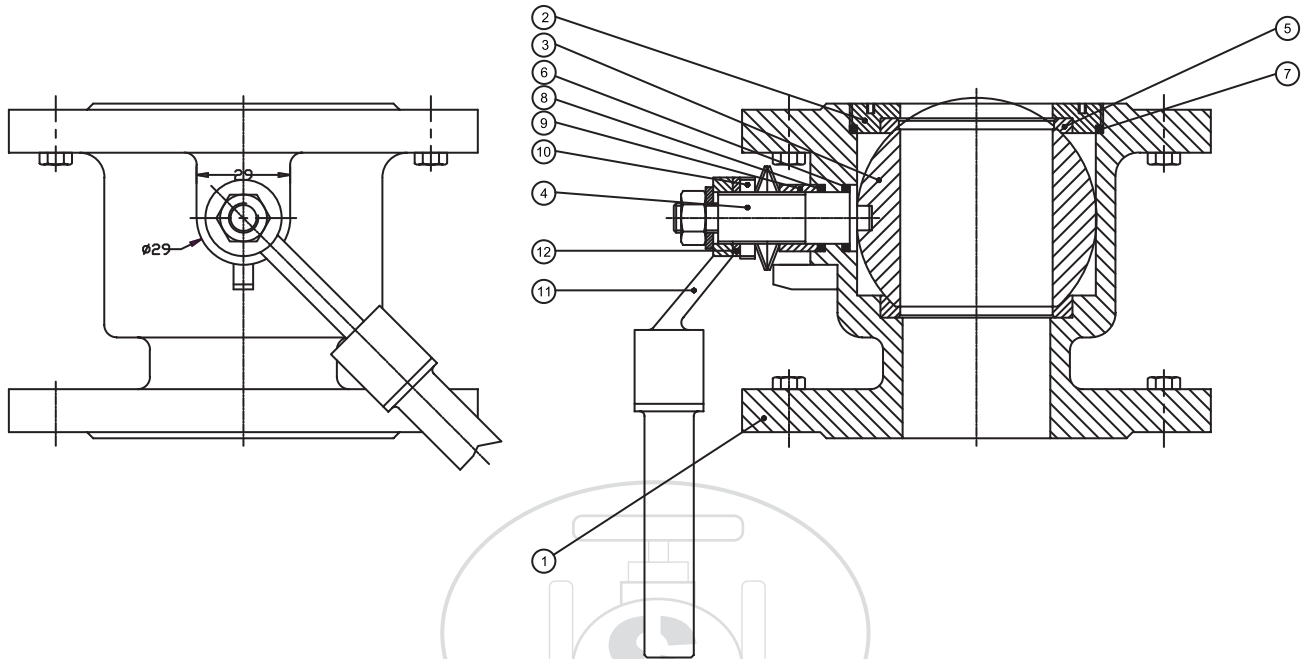


**Standards**

Valve Design : API 607/BS EN 17292  
 Face to Face : Manufacture Std  
 End Connections : ASME B 16.11  
 Testing Standard : BS EN 12266



**Ball Type Tank Bottom Valve**



Sr.	Parts Name	Material Specifications
1	Body	ASTM A351 GR CF8/CF8M
2	End Cover	
3	Ball	
4	Spindle	AISI 304/316
5	Seat	PTFE
6	Thrust Bearing	
7	Body Seal	
8	Stem Seal	AISI 304/316
9	Seal Follower	
10	Lock Hut	
11	Hand Lever	MS Cadmium Plated
12	Stopper Plate	

Note : Standard material specifications can be changed according to service condition



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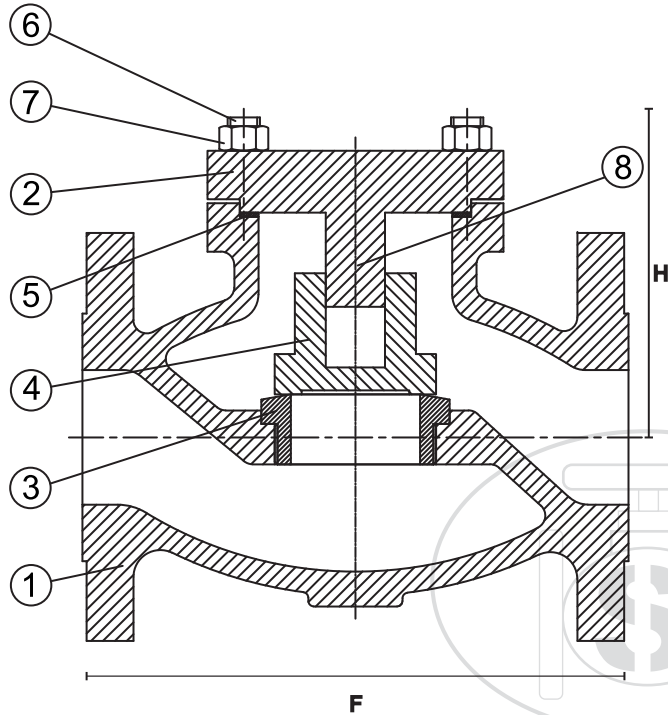


**Standards**

Valve Design	: BS 1868
Face to Face	: ANSI B 16.10
End Connections	: ANSI B 16.05
Pressure / Temperature Ratings	: ANSI B 16.34
Testing Standard	: API 598



**Lift Type Non Return Valve # 150/300**



Sr.	Parts Name	Material Specifications
1	Body	Cast Carbon steel to ASTM A216 Gr. WCB
2	Top Cover	Cast Steel
3	Seat	13% Chrome Steel hardend
4	Disc	13% Chrome Steel hardend
5	Gasket	Compressed Asbestos / Spiral wound
6	Stud	High Tensile
7	Nut	High Tensile
8	Shank	SS 304/316

**Class 150 Flange**

SIZE	INCH	1/2"	3/4"	1"	1.5"	2"	2.5"	3"	4"	5"	6"	8"
	MM	15	20	25	40	50	65	80	100	125	150	200
	F	108	117	127	165	203	216	241	292	365	406	495
	H	80	84	101.5	114.2	151.5	170	164	186	197	250	267

Note : Standard material specifications can be changed according to service condition



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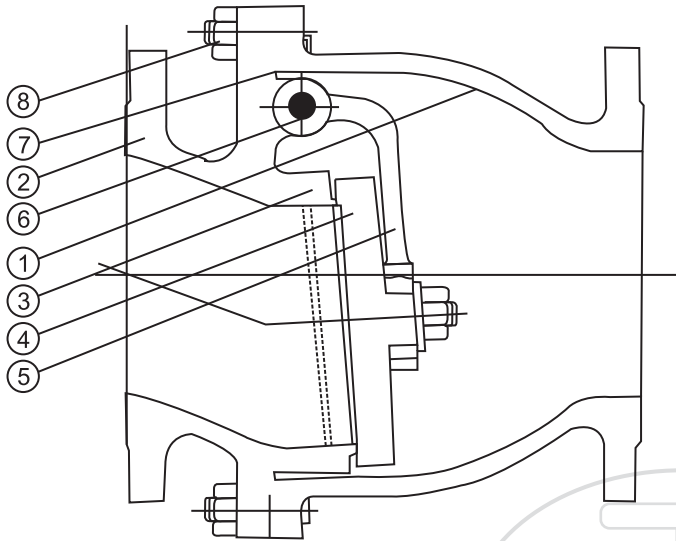


**Standards**

- Valve Design : BS 5352
- Face to Face : Given below in table
- End Connections : ASME B 16.11 / BSP / NPT
- Testing Standard : BS EN 12266



**SWING CHECK VALVES # 150/300**



Part No	Description	Material
1	Body	Cast Carbon Steel to ASTM A216 Gr. WCB
2	Cover	
3	Seat	AISI 410/13% Cr. Hard Faced
4	Disc	AISI 410/13% Cr. Hard Faced
5	Swing Arm	Carbon Steel
6	Hinge Pin	AISI 410
7	Body cover Gasket	Compressed Asbestos fibre/spiral wound(optional)
8	Fasteners	ASTM A 193 Gr. B7 & A 194 Gr. 2H

**Class 150**

Valve Size	Face to Face Dim L	Flange Dia D	Flange Thick T	Height of Valve H
50	203	178	19	170
80	241	190.5	23.8	185
100	292	229	23.8	200
150	356	279.4	25.4	250

Note : Standard material specifications can be changed according to service condition



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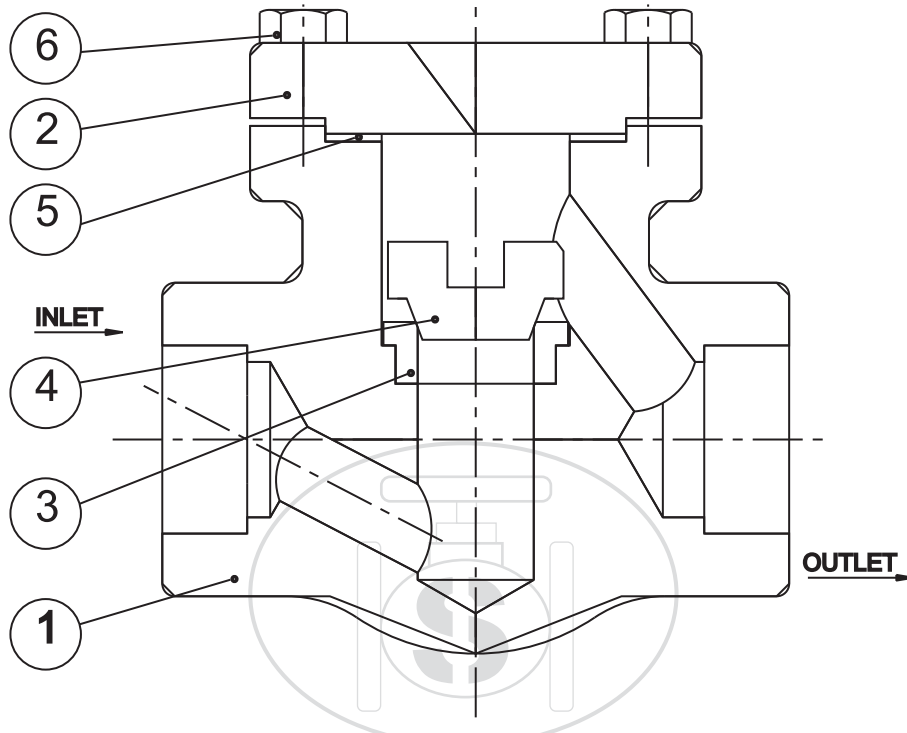


**Standards**

- Valve Design : BS 5352
- Face to Face : Given below in table
- End Connections : ASME B 16.11 / BSP / NPT
- Testing Standard : BS EN 12266



**FORGED NON RETURN VALVE - LIFT TYPE**



PART NO	DESCRIPTION	MATERIAL
1	BODY	FORGED STEEL TO
2	COVER	ASTM A105
3	SEAT	ANSI 410 / Stellite
4	DISC	
5	GASKET	SS 304 SPRIAL WOUND WITH GRAPHITE
6	FASTNERS	HIGH TENSILE

Note : Standard material specifications can be changed according to service condition

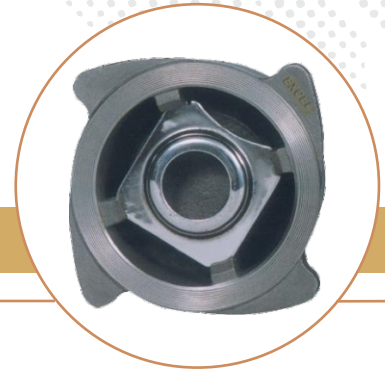


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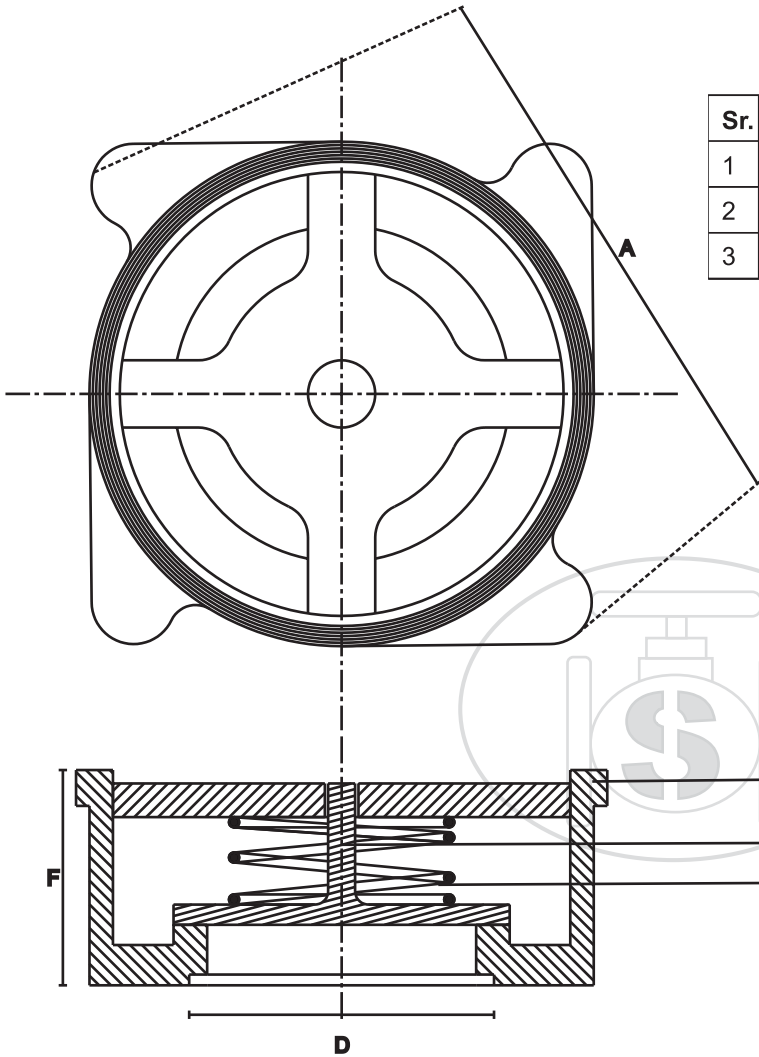


**Standards**

- Valve Design : 7438
- End Connections : To suit flange dimensions as per ASA 150, H table, PN 16, Max Operating 16 BARg
- Pressure & temp ratings for soft seats : Max. operating temp 260°C  
Hydraulic test pressure 24 BAR



**Disc Check Valves**



Sr.	Parts Name	Material Specifications
1	Body	ASTM A 351 CF8/ CF8M
2	Plug	AISI 304/316
3	Spring	Stainless steel

SIZE	INCH	Ø1/2	Ø3/4	Ø1	Ø1.5	Ø2	Ø3	Ø4
	MM	15	20	25	40	50	80	100
<b>F</b>		25	30	35	40	45	58	65
<b>D</b>		15	20	25	38	50	75	100
<b>A</b>		62	72	85	103	127	157	157

Note : Standard material specifications can be changed according to service condition



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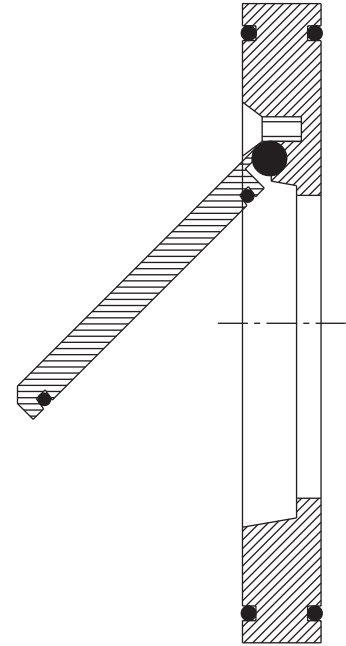
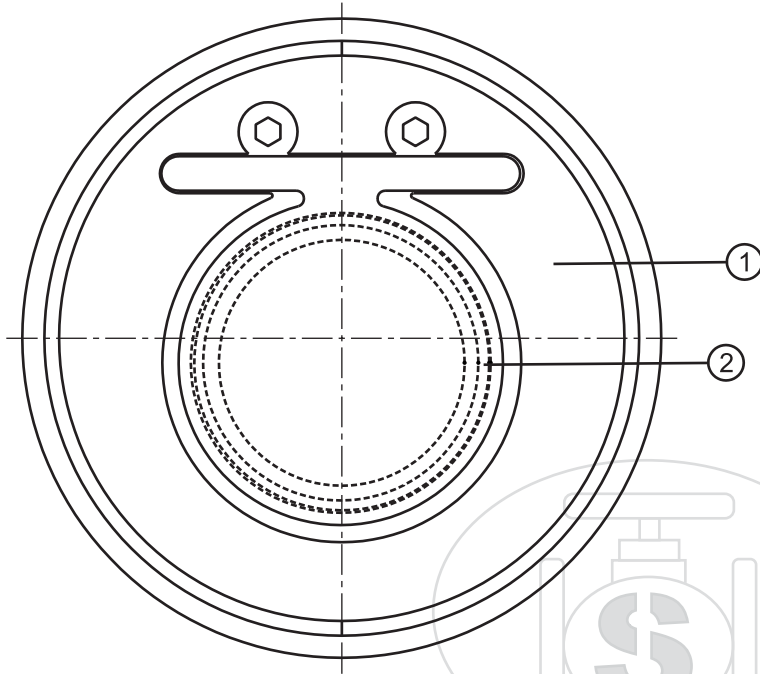


**Standards**

- Valve Design : AS PER API 6D, API 594
- Face to Face : AS PER API 6D, API 594
- End Connections : Wafer Type / Lug Type / Flange Type
- Testing Standard : API 598



## Wafer Check Valve



Sr.	Parts Name	Material Specifications
1	Body	CI / CS SS 304 / 316
2	Seat	Nitrile / Neo Prene / PTFE

Note : Standard material specifications can be changed according to service condition



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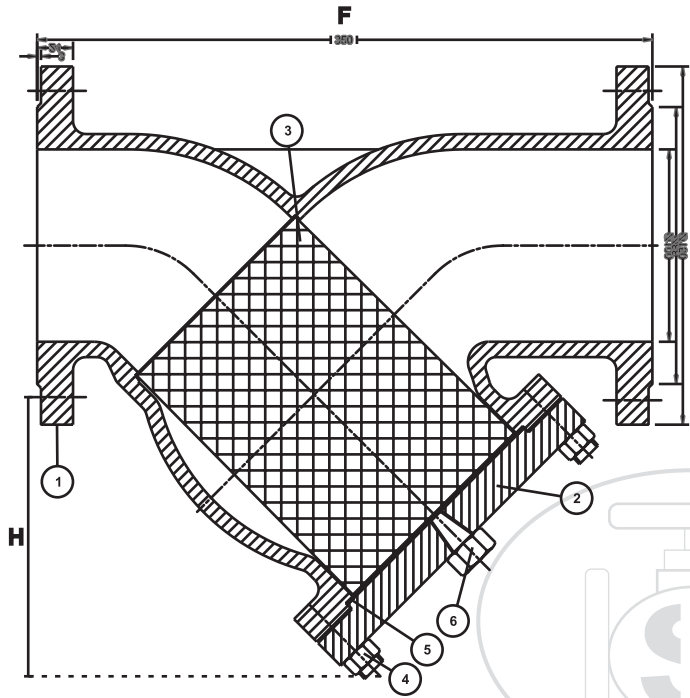


### Standards

Face to Face	: Given below in table
End Connections	: ANSI B 16.05/ DIN 2501/BS 10
Socket Weld Ends	: ANSI B 16.11
Testing Standard	: ANSI B 16.34
Pressure / Temperature Ratings	: 0 to 600 PSI g



## Strainer 'Y' Type



Sr.	Parts Name	Material Specifications
1	Body	ASTM A216 Gr. WCB / CF8 / CF8M
2	Cover Plate	ASTM A216 Gr. WCB / CF8 / CF8M
3	Element	ANSI 304/316
4	Fasteners	Hightensile
5	Gasket	Compressed Asbestos / Spiral wound
6	Plug	NPT Male

### Flanged End

SIZE	INCH	Ø1"	Ø1.5"	Ø2"	Ø2.5"	Ø3"	Ø4"	Ø6"	Ø8"
	MM	25	40	50	65	80	100	150	200
	F	160	200	230	290	310	350	480	600
	H	125	150	170	200	210	287	320	413

Note : Standard material specifications can be changed according to service condition Mesh size can be provided as per requirement



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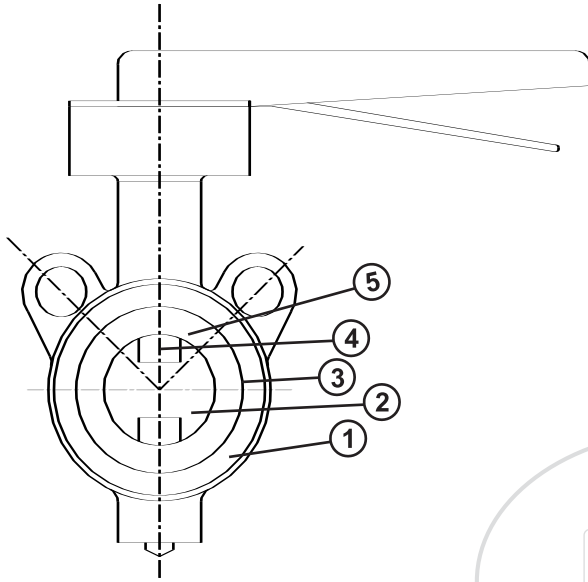


### Standards

Pressure	: PN6, PN 10, PN 16
Temperature	: -20°C to 180°C
Operating	: Bi-Directional
Painting	: Epoxy Coating



## Butterfly Valve



Sr.	Parts Name	Material Specifications
1	Body	CI-IS 210 Gr FG 220 CI ASTM A 216 Gr WCB/A 351 Gr CF8M
2	Disc	CI-IS 210 Gr FG 220 CI ASTM A 216 Gr WCB or A 105/ A 351 Gr CF8M or F16 CF8M
3	Seal Ring	Teflon, PTFE, Neoprene, EPDM Nitrile, Silicon
4	Shaft	ASTM A 182 F6A/A 479 TYPE XM19 (UNs S209 10)
5	Body Liner	Nitrile / EPDM / Viton / PTFE

### Key Features

- Full PN 10 pressure rating for the entire range of valve sizes from 50 NB to 400 NB.
- Bi-Directional valve with sealing capability to hold rated shut off pressure in either direction.
- Unique triple sealing system for shaft sealing, eliminates any fugitive emission or secondary leakage.
- Back up elastomer standardised in Viton to ensure excellent corrosion protection and maximum temperature resistance against media fumes and higher temperature.
- Disc springs and fasteners standardised on corrosion resistant stainless steel to ensure long service.
- Low operating torque enable selecting of smaller size actuator.

Note : Standard material specifications can be changed according to service condition



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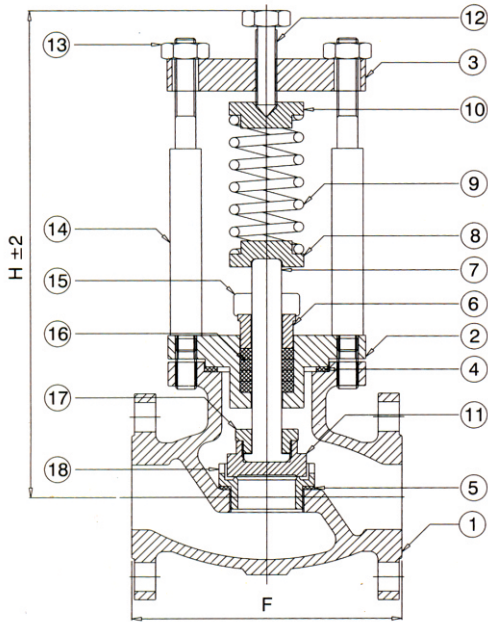


**Standards**

Face to Face : ANSI B 16.10  
 End Connections : ANSI B 16.5



**Safety Relief Valve**



Sr.	Parts Name	Material Specifications
01	Body	ASTM A 216 GR WCB/A 352 LCB /A 217 WC6/ A 351 CF8/ A351 CF8M/A 351 CF3/ A351 CF3M/IS 210 Gr. 220
02	Bonnet	
03	Top plate	
04	Gasket	CAF 20/59/ Spiral wound SS With Gr.filler
05	Seat Gasket	CAF 20/59, PTFE
06	Gland bush	AISI 410/304/316
07	Stem	AISI 410/304/316
08	Spring button bottom	AISI 410/304/316
09	Spring	Spring steel/ Mild steel
10	Spring button upper	AISI 410/304/316
11	Plug	AISI 410/304/316
12	Setting screw	AISI 410/304/316
13	Nut & washer	ASTM A 193 Gr.B7/ASTM A 194 Gr.2H
14	Stud	AISI 410/304/316
15	Gland flower	AISI 410/304/316
16	Gland	Grafoil/PTFE rope/Braided asbestos
17	Plug nut	AISI 410/304/316
18	Seat	AISI 410/304/316

SIZE	INCH	1"	1 ½"	2"	3"	4"
	MM	25	40	50	80	100
F		127	164	203	243	292
H		278.5	307	388	419	468

Note : soft seated safety relief valves are used for low temperatures and critical application standard material specifications can be changed according to service condition.



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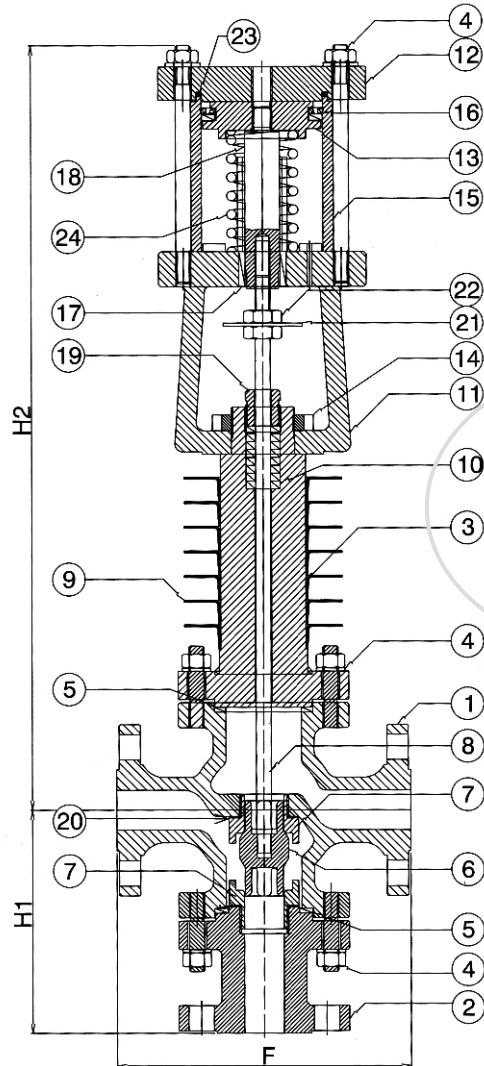


### Standards

- Face to Face : Given below in table  
 End Connections : ANSI B 16.5/ DIN 2501/ BS 10  
 Features : Cylinder actuated with extended finned Bonnet for high temp. service.



## Control Valve Cylinder 3 way Type



Sr.	Parts Name	Material Specifications
1	Body	ASTM A 216 GR WCB/A 352
2	Tail piece	LCB/A 217 WC6/ A 351 CF8/ A351 CF8M/A 351 CF3/ A351 CF3M/IS 210 Gr. 220
3	Bonnet	AISI 410/304/316
4	Stud, nut, washer	ASTM-A-193 Gr.B7, ASTM-A-194 Gr.2H
5	Gasket	CAF 59/ Spiral wound SS with Gr. fillef
6	Plug	AISI 410/304/316
7	Seat	AISI 410/304/316
8	Stem	AISI 410/304/316
9	Fins	Mild steel/AISI 410/304/316
10	Gland	Grafoil / PTFE rope/ Braided asbestos
11	Actuator stud	ASTM A 216 GR WCB/A 352
12	Top plate	LCB/A 217 WC6/ A 351 CF8/ A351 CF8M/A 351 CF3/ A351 CF3M/IS 210 Gr. 220
13	Piston	Aluminium
14	Check nut	Mild steel/ AISI 410/304/316
15	Cylinder	Aluminium
16	V Ring	Neoprene/ Nitrile/ Viton
17	Bush	Nylon
18	Lifting stem	Mild steel/ AISI 410/304/316
19	Gland nut	Mild steel/ AISI 410/304/316
20	Seat gasket	CAF 59/ Graphite ring
21	Indicator washer	Mild steel/ Spring steel
22	Setting nut	Mild steel/ AISI 410/304/316
23	O ring	Neoprene/ Nitrile/ Viton
24	Spring	Mild steel/ Spring steel

SIZE	INCH	1"	1 1/2"	2"	2 1/2"	3"	4"
	MM	25	40	50	65	80	100
F		186	223	254	279	300	365
H 1		141	177.5	187.5	218	220	296
H 2		539	732	727.5	749	749	906

Note : soft seated control valves are used for low temperatures and critical applications standard material specifications can be changed according to service condition.



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### Standards

Face to Face

End Connections

Features

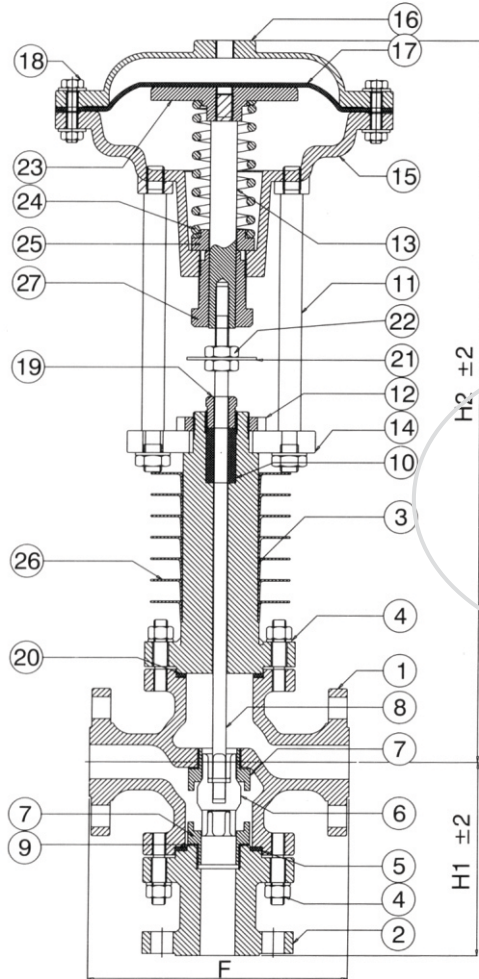
: ANSI B 16.5/ DIN 2501/ BS 10

: Diaphragm actuated with Extended finned Bonnet for high temp. service.

I to P controlling system can be provided for High accuracy.



## Control Valve Diaphragm 3 way Type



Sr.	Parts Name	Material Specifications
1	Body	ASTM A 216 GR WCB/A 352
2	Tail piece	LCB/A 217 WC6/ A 351 CF8/ A351 CF8M/A 351 CF3/ A351 CF3M/IS 210 Gr. 220
3	Bonnet	Mild steel/ AISI 410/304/316
4	Stud, nut, washer	ASTM-A-193 Gr.B7, ASTM-A-194 Gr.2H
5	Gasket	CAF 59/ Spiral wound SS with Fr. fillef
6	Plug	AISI 410/304/316
7	Seat	AISI 410/304/316
8	Stem	AISI 410/304/316
9	Seat Gasket	CAF 59/ Graphite ring
10	Gland	Grafoil / PTFE rope/ Braided asbestos
11	Actuator stud	Mild steel/ AISI 410/304/316
12	Check nut	Mild steel/ AISI 410/304/316
13	Lifting stem	Mild steel/ AISI 410/304/316
14	Triangular plate	Mild steel/ AISI 410/304/316
15	Actuator body	ASTM A 216 GR WCB/A 352
16	Actuator cover	LCB/A 217 WC6/ A 351 CF8/ A351 CF8M/A 351 CF3/ A351 CF3M/IS 210 Gr. 220
17	Diaphragm plate	
18	Finns	Mild steel/ AISI 410/304/316
19	Gland nut	Mild steel/ AISI 410/304/316
20	Tension nut	Mild steel/ AISI 410/304/316
21	Indicator washer	Mild steel/ AISI 410/304/316
22	Setting nut	Mild steel/ AISI 410/304/316
23	Diaphragm	Nitrile / Neoprene
24	Spring	Mild steel/ Spring steel
25	Spring washer	Mild steel/AISI 410/304/316

SIZE	INCH	1"	1 1/2"	2"	2 1/2"	3"	4"
	MM	25	40	50	65	80	100
F		186	223	254	279	300	365
H 1		141	177.5	187.5	218	220	296
H 2		539	732	727.5	749	749	906

Note : soft seated control valves are used for low temperatures and critical applications standard material specifications can be changed according to service condition.



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