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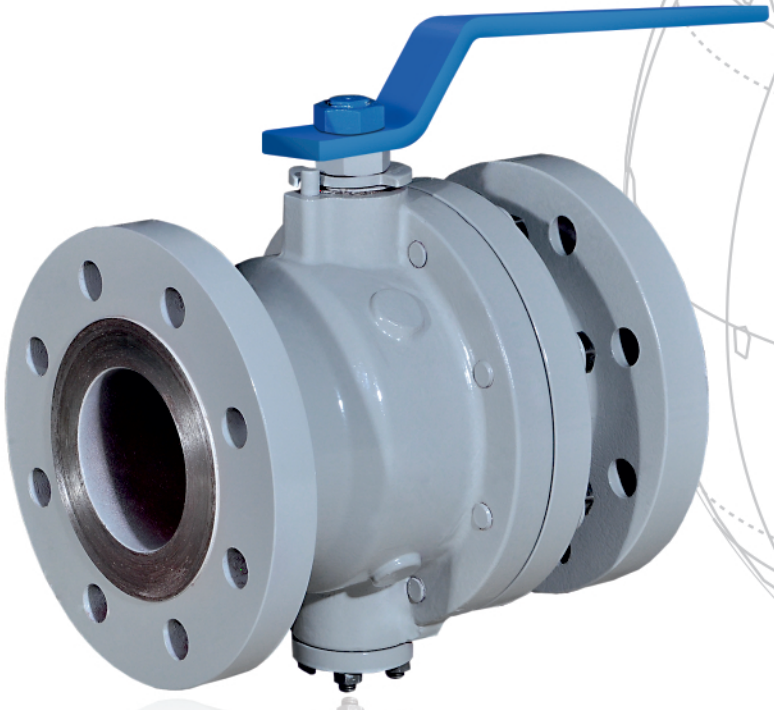
Believes in
SUCCESS



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Trunnion Mounted Ball Valve

Specifications & Standards

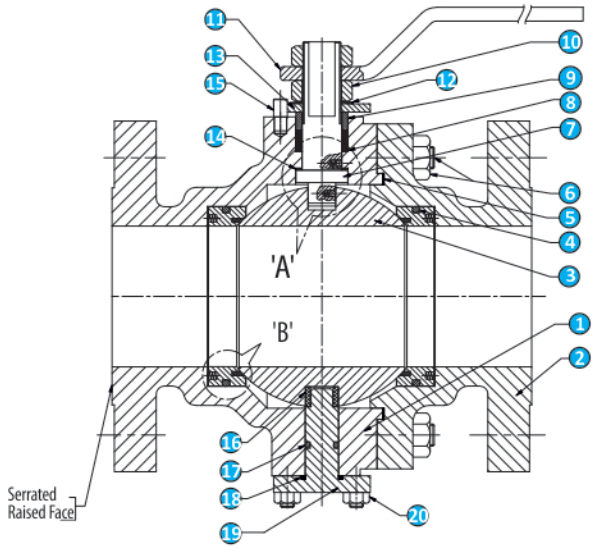
Design & Manufacture	: BS 5351 / API 6D / ANSI B16:34
Body & Trim	: Nace MR 01-75
Casting Inspection	: MSS SP-53, 55, 59, 94
Testing	: BS 6755 Part-I / API 598
Fire Safe	: API 607, API 6FA / BS 6755 Part II
Valve Bore	: API 6D
Flange Dimensions	: ANSI B16.5 / B16.47 / MSS SP-44
Drain / Vent / Bypass	: MSS SP-45 / API 6D
SW END	: ANSI B16.11
BW END	: ANSI B16.25 / B31.8
Thread END	: ANSI B 1.20.1 / ANSI B 2.1
Face to Face	: ANSI B16.10 / API-6D

Design Features

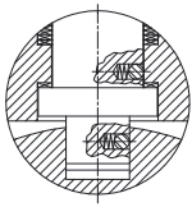
- » Anti-Static Device & Blowout Proof
- » Double Block & Bleed
- » Double Body Sealing
- » Multiple Stem Sealing
- » Sealant System & Lubricant
- » Fire Safe Design
- » Corrosion Protection & Painting

API 6 D: Inspection & Testing

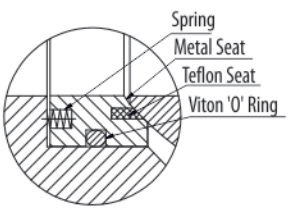
Class	Minimum Test Pressure in PSIg		
	Body	Seat	
	Hydrostatic	Hydrostatic	Air
300	1110	815	90



No.	Name	Material
1	Body	ASTMA 216 GR. WCB / LCB / ASTM A 105
2	Side PC.	ASTMA 216 GR. WCB / LCB / ASTM A 105
3	Ball	ASTM A351 Gr. CF8 / CF8M / 216 GR WCB
4	Seat Ring + P.T.F.E. Ring	ASTM A 276 T 304 / 316 / ASTM A105
5	Packing Ring	GRAFOIL / CFT / GFT / PTFE / NYLON
6	Body Stud/Nut	ASTM A193 Gr. B7/ASTM A194 Gr. 2H
7	Stem	ASTM A 276 T 304 / 316 / 410
8	Gland Packing	GRAFOIL / CFT / GFT / PTFE / NYLON
9	Gland Bush	ASTM A 276 T 304 / 316 / 410
10	Gland Nut	CARBON STEEL
11	Lever	CARBON STEEL
12	Spring Washer	SPRING STEEL
13	Stopper Plate	CARBON STEEL
14	Stem Seal	GRAFOIL / CFT / GFT / PTFE / NYLON
15	Stop Pin	ASTM A 276 T 304 / 316 / 410
16	Trunnion Bush	P.T.F.E. / NYLON / DELRIN
17	Trunnion 'O' Ring	VITON / NBR / PTFE
18	Trunnion Packing	GRAFOIL / CFT / GFT / PTFE / NYLON
19	Trunnion	ASTM A351 Gr. CF8 / CF8M / 216 GR WCB
20	Trunnion Stud/Nut	ASTM A193 Gr. B7/ASTM A194 Gr. 2H



Antistatic Device (Detail "A")



Fire Safe (Detail "B")

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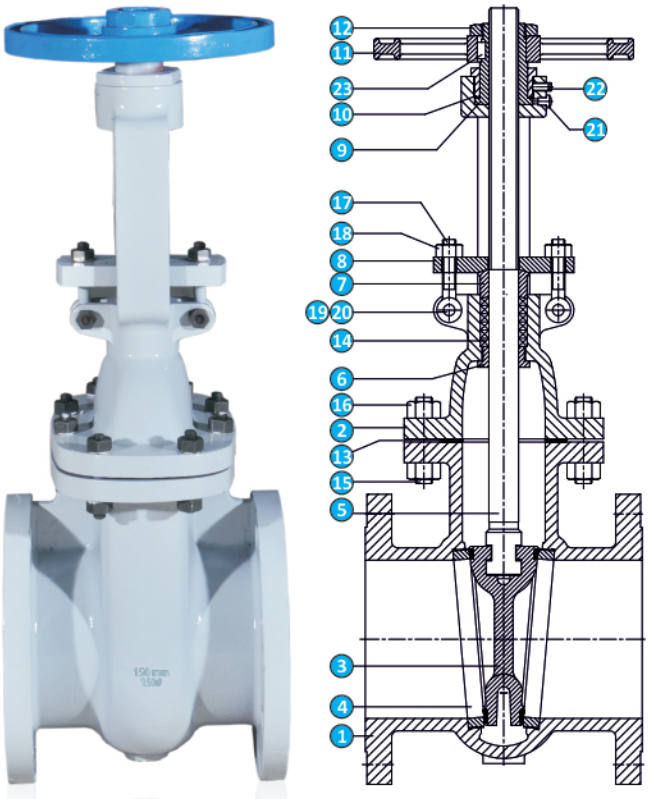
Bolted Bonnet Steel Gate Valve



API 600: Inspection & Testing

Valves	Minimum Test Pressure in PSIg	
	Shell Test	Back Seat / Seat Test
150# (PN-20)	430	315
300#(PN-50)	1110	815
400#(PN-64)	1485	1090
600#(PN-100)	2220	1630
900#(PN-150)	3330	2445
1500#(PN-250)	5560	4080
2500#(PN-420)	9350	6790

The minimum test duration as follows:		
Valve Size	Shell Test	Back Seat / Seat Test
DN15 TO DN 50	15 Seconds	15 Seconds
DN150 TO DN 250	60 Seconds	60 Seconds
DN300 TO DN 450	120 Seconds	120 Seconds
DN500 &LARGER	300 Seconds	300 Seconds

Maximum allowable gas leakage rate		
Valve size range DN	mm3 / s	Bubbles / s
DN < 50	0	0
65 < DN 150	25	0.4
200 < DN < 300	42	0.7
350 < DN	58	0.9

No.	Name	Material
1	Body	ASTMA 216 GR. WCB / LCB / ASTM A 105
2	Bonnet	ASTMA 216 GR. WCB / LCB / ASTM A 105
3	Wedge	ASTM A 276 T 304 / 316 / 410
4	Seatring	CS + 13% Cr. Facing
5	Stem	ASTM A 276 T 304 / 316 / 410
6	Backseat Bush	ASTM A 276 T 304 / 316 / 410
7	Gland Bush	ASTM A 276 T 304 / 316 / 410
8	Gland Flange	Carbon Steel
9	Yoke Sleeve	ASTM A 439 Gr. D2 / ASTM A 276 T 304 / 316 / 410
10	Yoke Nut	Carbon Steel
11	Handwheel	WCB / SG Iron
12	Hand Wheel Nut	Carbon Steel
13	Gasket	Spiral Wound SS 304+CAF / GRAFOIL
14	Gland Packing	GRAFOIL / CFT / GFT / PTFE / NYLON
15	Stud	ASTM A 194 Gr. B7
16	Nut	ASTM A 194 Gr. 2H
17	Eye Bolt	Carbon Steel
18	Eye Bolt NU	Carbon Steel
19	Cross Bolt	Carbon Steel
20	Cross Bolt NU	Carbon Steel
21	Grease Nipple	Carbon Steel
22	Grub Screw	Carbon Steel
23	Key	Carbon Steel

Materials for Parts

Part	Material
Body and Bonnet	ASME B16.34, Group 1 and Group 2
Gate	Steel, corrosion resistance to body material
Yoke, Separate	Carbon Steel or same material as the bonnet
Bolting: Bonnet-to-Body	Bolt ASTM A193-B7 & nuts ASTM A194-2H.
Bolting: Gland and Yoke	ANSI ASTM A307 Grade B
Seat Ring	Weld Face, corrosion resistance to body material
Gland Flange	Steel
Gland	Material with melting point above 955° C
Packing	Temperature range from – 29° C to 538° C
Stem Nut	Austenitic ductile iron or copper alloy above 955° C
Hand Wheel	Malleable iron, carbon steel or ductile iron
Hand Wheel Nut	Steel, Malleable, ductile or Non-Ferrous Copper Alloy
Pipe Plugs	Steel, Cast iron plug shall not be used
Bypass piping and valves	Steel
Pin, Double Disk Stem to Gate	Austenitic Stainless Steel
Identification Plate	Austenitic Stainless Steel or Nickel Alloy
Lantern Ring	Corrosion resistance equal to that of body material
Bonnet Gasket	Corrosion resistance equal to that of body material

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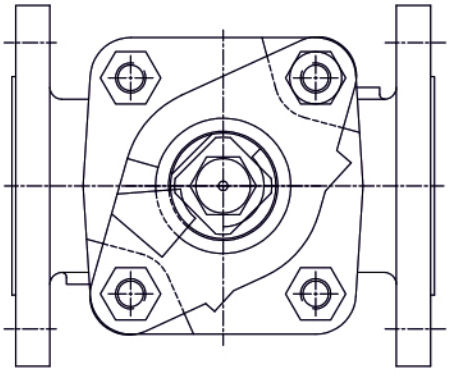
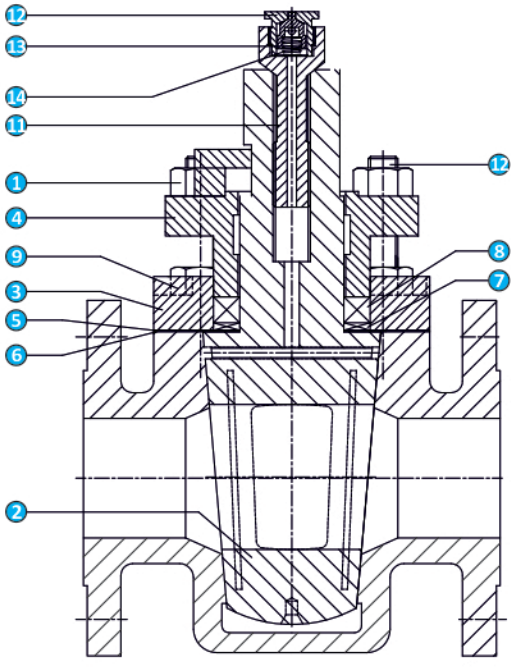
Tapper Plug Valve





API 6 D: Inspection & Testing

Valves	Minimum Test Pressure in PSIg	
	Shell Test	Back Seat / Seat Test
150# (PN-20)	430	315
300#(PN-50)	1110	815
400#(PN-64)	1485	1090
600#(PN-100)	2220	1630
900#(PN-150)	3330	2445
1500#(PN-250)	5560	4080
2500#(PN-420)	9350	6790

The minimum test duration as follows:		
Valve Size	Shell Test	Back Seat / Seat Test
DN 15 TO DN 100	2 Minutes	2 Minutes
DN 150 TO DN 250	5 Minutes	5 Minutes
DN 300 TO DN 450	15 Minutes	5 Minutes
DN 500 & Larger	30 Minutes	5 Minutes

No.	Name	Material
1	Body	ASTMA 216 GR. WCB / LCB
2	Plug	ASTMA 216 GR. WCB / LCB
3	Cover	ASTMA 216 GR. WCB / LCB
4	Gland	ASTMA 216 GR. WCB / LCB
5	Shim	S.S. 304 / 316
6	Shim Gasket	S.S. 304 + Graphite
7	Gland Packing Lower	Graphite / PTFE
8	Gland Packing Upper	Graphite / PTFE
9	Body Bolt & Nut	ASTM A 193 Gr.B7/2H
10	Gland Stud & Nut	ASTM A 193 Gr.B7/2H
11	Lubricating Screw	Carbon Steel
12	Check Valve Body	ASTM A 276 T304 / 316
13	Check Valve Plug	ASTM A 276 T304 / 316
14	Spring	S.S. 304

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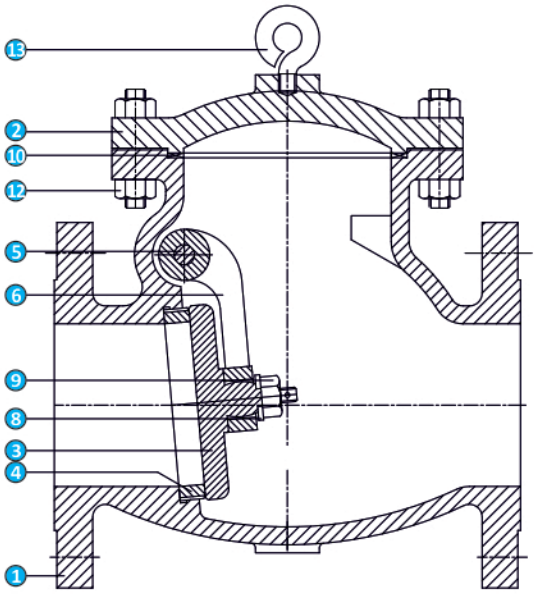
Swing Check Valve



Specifications & Standards

Design & Manufacture : BS1868 / API6D/ANSI B16:34
Body & Trim : Nace MR01-75
Casting Inspection : MSS SP-53, 55, 59, 94
Testing : BS 6755 Part-I / API 598
Flange Dimensions : ANSI B16.5 / B16.47 / MSS SP-44
Face to Face : ANSI B16.10 / API-6D

Nominal Pressure, Class ratings & nominal size range

Rating		Nominal Size Range	
PN	Class	mm	Inch
10	150	50 to 600	2 to 24
16	150	50 to 600	2 to 24
25	300	25 to 600	1 to 24
40	300	25 to 600	1 to 24
64	600	25 to 600	1 to 24
100	600	25 to 600	1 to 24
160	900	25 to 300	1 to 12
250	1500	25 to 300	1 to 12
320	2500	25 to 250	1 to 10
400	2500	25 to 200	1 to 8

No.	Name	Material
1	Body	ASTMA 216 GR. WCB / LCB / ASTM A 105
2	Cover	ASTMA 216 GR. WCB / LCB / ASTM A 105
3	Disc	ASTM A 276 T 304 / 316 / 410
4	Seatring	ASTM A 276 T 30< / ASTM A105
5	Hinge Pin	ASTM A 276 T 304 / 316 / 410
6	Hinge	ASTM A 216 Gr. WCB
7	Plug	ASTM A 276 T 410 / Carbon Steel
8	Disc Washer	ASTM A 276 T 410 / Carbon Steel
9	Disc Nut	ASTM A 276 T 410 / ASTM A 194 Gr. 2H
10	Gasket	Spiral Wound SS 304+CAF / Grafoil
11	Stud	ASTM A 193 Gr. B7
12	Nut	ASTM A 194 Gr. 2H
13	Eye Bolt	Carbon Steel

API 6 D: Inspection & Testing

Class	Minimum Test Pressure in PSIg		
	Body	Seat	
	Hydrostatic	Hydrostatic	Air
150	430	315	90

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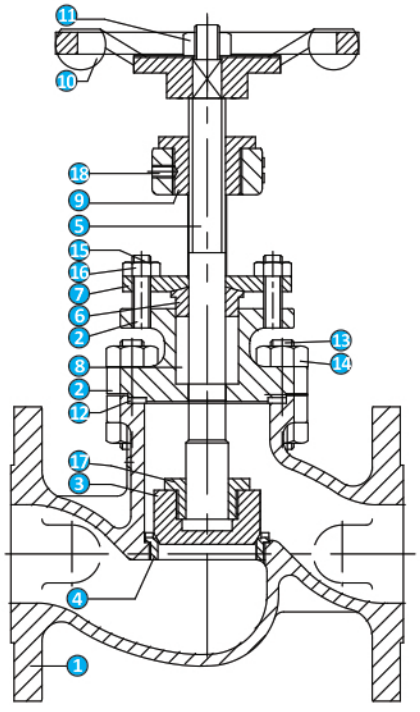
Globe Valve

Specifications & Standards

Valve Design : BS 1873 . ANSI B 16.34
Pressure Testing : BS 6755 Part I
Pressure Temp. Rating : ANSI B 16.34
Face to Face : ANSI B 16.10 / DIN STD.
Flange Drilling : ANSI B 16.5 / BS 10 Table / IN / IS Std.
Butt Weld En : ANSI B 16.25
Socket Weld End : ANSI B 16.11
Screwed End : ANSI B 1.20.1 / ANSI B 2.1 (BSP/NPT)

Nominal Pressure, Class ratings & nominal size range

Rating		Nominal Size Range	
PN	Class	mm	Inch
10	150	50 to 400	2 to 16
16	150	50 to 400	2 to 16
25	300	15 to 300	½ to 12
40	300	15 to 300	½ to 12
64	600	15 to 300	½ to 12
100	600	80 to 350	½ to 12
160	900	15 to 300	3 to 14
250	1500	15 to 300	½ to 12
320	2500	15 to 300	½ to 12
400	2500	15 to 300	½ to 12



No.	Name	Material
1	Grub Screw	Carbon Steel
2	Disc Nut	AISI 304/316 / 410
3	Eye Bolt Nut	Carbon Steel
4	Eyebolt	Carbon Steel
5	Nut	ASTM A 194 Gr. 2H
6	Stud	ASTM A 194 Gr. B7
7	Gasket	S.S. 304 + Graphite
8	Handwheel Nut	Carbon Steel
9	Handwheel	M.I./CS
10	Yoke Sleeve	AISI 4140 / Carbon Steel
11	Gland Packing	GRAFOIL / CFT / GFT / PTFE / NYLON
12	Gland Flange	Carbon Steel
13	Gland Bush	AISI 304/316 / 410
14	Stem	ASTM A 276 T 304 / 316 / 410
15	Seatring	ASTM A 276 T 304 / 316 / ASTM A105
16	Plug	ASTM A 351 Gr. CF8/CF8M/216 Gr. WCB / LCB
17	Bonnet	ASTM A 351 Gr. CF8/CF8M/216 Gr. WCB / LCB
18	Body	ASTM A 351 Gr. CF8/CF8M/216 Gr. WCB / LCB

Test Duration

Nominal Valve Size DN	Minimum Test Duration (seconds)		
	Shell Test	Back Seat Test	Seat Test
Upto DN 50	15	15	15
DN 65 to DN 150	60	15	60
DN 200 to DN 300	120	15	120
DN 350 & larger	300	15	120

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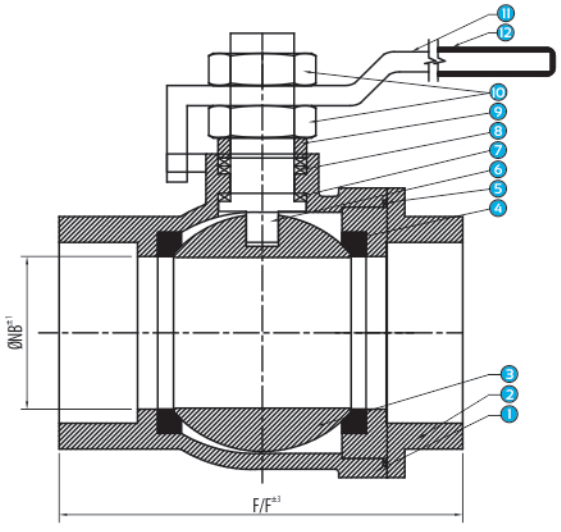
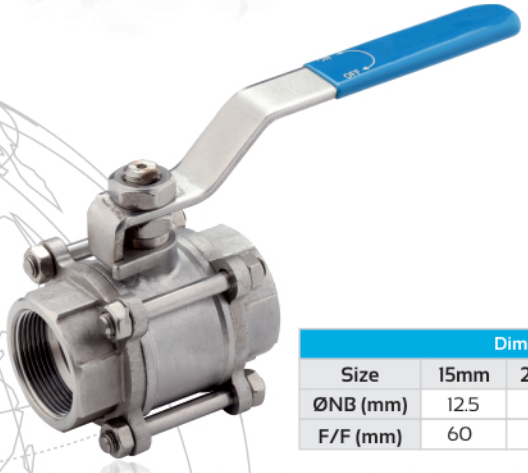
Single Piece Threaded Ball Valve

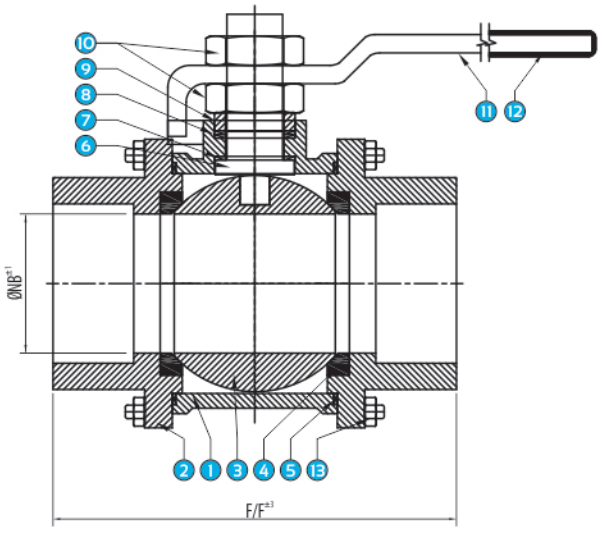
Dimensions (150#)					
Size	15mm	20mm	25mm	40mm	50mm
ØNB (mm)	12.5	19	25	38	50
F/F (mm)	60	70	85	100	105



Three Piece Threaded Ball Valve



Dimensions (150#)					
Size	15mm	20mm	25mm	40mm	50mm
ØNB (mm)	12.5	19	25	38	50
F/F (mm)	60	70	85	100	115



Technical Specification (Material Data Sheet)				
No.	Description	WCB	CF8	CF8M
1	Body	ASTM A 216 Gr. WCB	ASTM A 351 Gr. CF8	ASTM A 351 Gr. CF8M
2	Nut	ASTM A 216 Gr. WCB	ASTM A 351 Gr. CF8	ASTM A 351 Gr. CF8M
3	Ball	SS 202 / SS 304	SS 304	SS 316
4	Seatring	PTFE	PTFE	PTFE
5	Body Seal	PTFE	PTFE	PTFE
6	Stem	SS 202 / SS 304	SS 304	SS 316
7	Stem Seal	PTFE	PTFE	PTFE
8	Gland Packing	PTFE	PTFE	PTFE
9	Gland	SS 202 / SS 304	SS 304	SS 316
10	Gland Nut & Lock Nut	MS + Zinc Plated	MS + Zinc Plated / SS	MS + Zinc Plated / SS
11	Lever	MS + Zinc Plated	MS + Zinc Plated / SS	MS + Zinc Plated / SS
12	Sleeve	Rubber	Rubber	Rubber
13	Stud Nut	MS	SS	SS

Technical Data	
Design & Manufacturing Std	: BS 5351/API 6D/ASME B16.34
Testing & Inspection	: API 598/BS 6755
Face To Face	: Manufacturing Standard
End Connection	: Screwed End

Test Type	Class 150		Class 300	
	Kg / Cm²	PSIG	Kg / Cm²	PSIG
Hydro Body	32	430	78	1110
Hydro Seat	22	315	56	815
Air / Pneumatic	7	80	7	80

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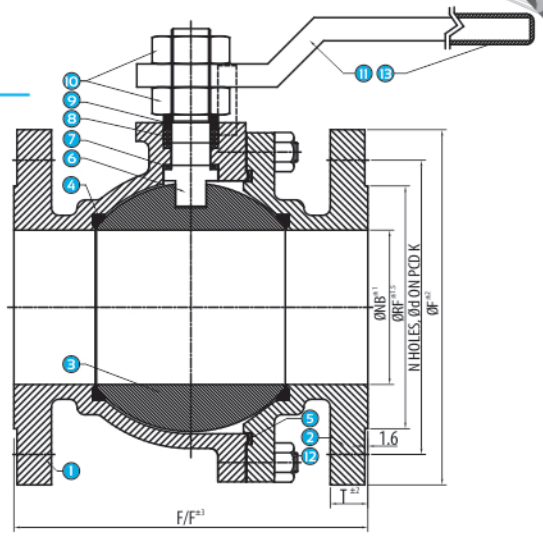
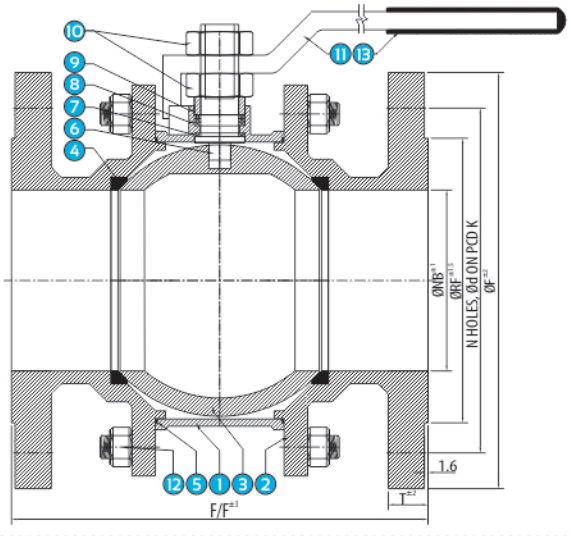
Two Piece Flange End Ball Valve



Three Piece Flange End Ball Valve



Technical Specification (Material Detail)				
No.	Description	WCB	CF8	CF8M
1	Body	ASTM A 216 Gr. WCB	ASTM A 351 Gr. CF8	ASTM A 351 Gr. CF8M
2	Side Piece	ASTM A 216 Gr. WCB	ASTM A 351 Gr. CF8	ASTM A 351 Gr. CF8M
3	Ball	SS 304	SS 304	SS 316
4	Seatring	PTFE	PTFE	PTFE
5	Body Seal	PTFE	PTFE	PTFE
6	Stem	SS 410	SS 304	SS 316
7	Stem Seal	PTFE	PTFE	PTFE
8	Gland Packing	PTFE	PTFE	PTFE
9	Gland	SS 410	SS 304	SS 316
10	Gland Nut & Lock Nut	MS + Zinc Plated	MS + Zinc Plated / SS	MS + Zinc Plated / SS
11	Lever	MS + Zinc Plated	MS + Zinc Plated / SS	MS + Zinc Plated / SS
12	Stud Nut	MS	SS	SS
13	Sleeve	Rubber	Rubber	Rubber

Technical Data		Test Type	Class 150		Class 300	
			Kg / Cm²	PSIG	Kg / Cm²	PSIG
Design & Mfg. Std	: BS 5351/API 6D/ASME B16.34					
Testing & Inspection	: API 598/BS 6755	Hydro Body	32	430	78	1110
Face To Face	: ASME B16.10 / API 6D	Hydro Seat	22	315	56	815
End Connection	: ASME B16.5	Air / Pneumatic	7	80	7	80

Dimensions: Class - 150								
SIZE	ØNB (MIN)	F/F	ØF	ØRF	N	ØD	K	T
15	13	108	90	34.9	4	15.9	60.3	8
20	19	117	100	42.9	4	15.9	69.9	8
25	25	127	110	50.8	4	15.9	79.4	9.6
32	32	140	115	63.5	4	15.9	88.9	11.2
40	38	165	125	73	4	15.9	98.4	12.7
50	49	178	150	92.1	4	19.1	120.7	14.3
65	62	191	180	104.8	4	19.1	139.7	15.9
80	74	203	190	127	4	19.1	152.4	17.5
100	100	229	230	157.2	8	19.1	190.5	22.3
150	150	267	280	215.9	8	22.2	241.3	23.9
200	201	292	345	269.9	8	22.2	298.5	27
250	252	330	405	323.8	12	25.4	362	28.6

Dimensions: Class - 300								
SIZE	ØNB (MIN)	F/F	ØF	ØRF	N	ØD	K	T
15	13	140	95	34.9	4	15.9	66.7	12.7
20	19	152	115	42.9	4	19.1	82.6	14.3
25	25	165	125	50.8	4	19.1	88.9	15.9
32	32	178	135	63.5	4	19.1	98.4	17.5
40	38	190	155	73	4	22.2	114.3	19.1
50	49	216	165	92.1	8	19.1	127	20.7
65	62	241	190	104.8	8	22.2	149.2	23.9
80	74	282	210	127	8	22.2	168.3	27
100	100	305	255	157.2	8	22.2	200	30.2
150	150	403	320	215.9	12	22.2	269.9	35
200	201	419	380	269.9	12	25.4	330.2	39.7
250	252	457	445	323.8	16	28.6	387.4	46.1

All dimensions are in mm
Note: Due to constant up gradation, dimensions are subject to change by the manufacturer

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Deliuering Excellence

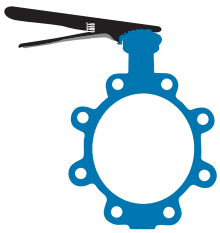
BUTTERFLY **VALVE**

CHECK **VALVE**

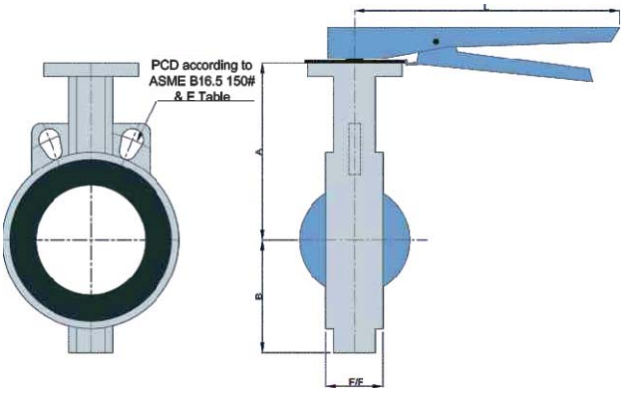
WAFER TYPE

BUTTERFLY VALVE

(Industrial Pattern)



MODEL - OVCWL



SIZE		F/F	A	B	L	M Mounting Flange PCD
MM	INCH					
40	1½	33	97	57	185	F05
50	2	43	105	65	220	F07
65	2½	46	111	72	220	F07
80	3	46	118	78	220	F07
100	4	52	140	96	220	F07
125	5	56	173	114.5	265	F07
150	6	56	185.5	127	265	F07
200	8	60	233	154	345	F07

Material :

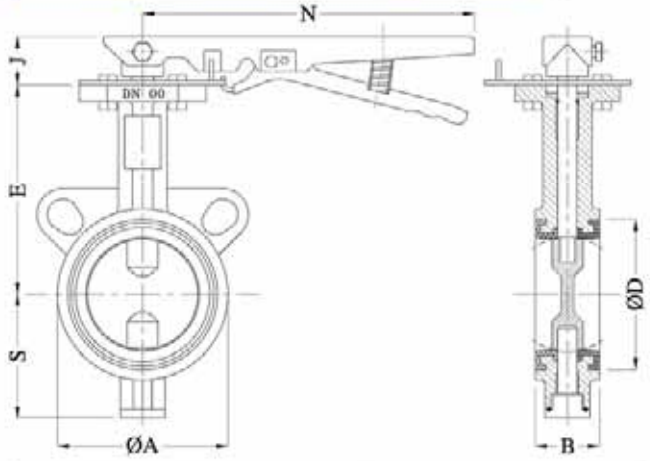
Body	CI, WCB, CF8, CF8M
Disc	CI, SG IRON, CF8, CF8M
Body Liner	Nitrile / EPDM / Vitone / Silicon / Hypalon
Handle	Sheet Metal

Salient Features :

- Design Standard : As per IS 13095, BS 5155, API 609
- Testing Standard : As per API 598, ISO 5208
- Available in Gear, Pneumatic & Electric Actuation
- Actuator Ready Series for on sight actuation
- Low Torque
- Aesthetic Looks

Butterfly Valve - Hand Lever Operator

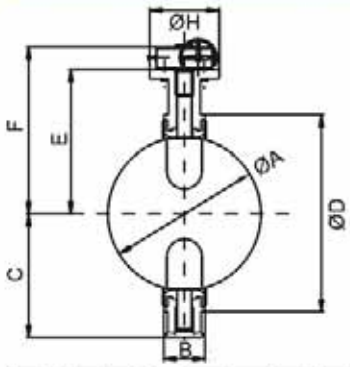
MODEL - OVCWR / OVCWB



DN200	PN10	262	60	230	38	375	242	159
DN150	PN10	210	56	195	36	262	193	138
DN125	PN10	180	56	182	36	262	164	125
DN100	PN10	154	52	167	36	262	137	108
DN80	PN10	122	46	151	36	262	107	88
DN65	PN10	106	46	137	21	167	92	79
DN50	PN10	94	43	127	21	167	81	76
DN40	PN10	81	33	94	21	167	67.5	63
VALVE SIZE NB	RTG. BAR	Aø ±2.0	B ±0.5	E	J	N	øD	S

Butterfly Valve - Hand Lever Operator

Butterfly Valve - Gear Operator



SIZE	ØA	B	C	ØD	E	F	ØH
DN 250	312	68	195	247	264	310	140
DN 300	372	78	222	297	298	360	140
DN 350	440	78	267	341	320	397	153
DN 400	491	104	291	389	344	429	155
DN 450	540	115	344	439	400	485	175
DN 500	595	126	368	489	430	520	175
DN 600	695	154	410	584.5	490	638	225
DN 700	824	167	471	688	566	714	305

Butterfly Valve - Gear Operator

Technical Advantages of Butterfly Valves

- Excellent control characteristics.
- Tight shut-off even after innumerable operations.
- 90° movement for full open/close position. Provision for intermediatory locking after every 10° for regulation/ controlling purpose.
- Installation cost considerably reduced because of very low weight and compact design.
- No routine maintenance required.
- Longer life and reliable service with minimum component wear.
- Renewable seats. No supplementary gasket required with the adjacent pipework.
- Body & Stem totally protected from service fluid.
- Centrally mounted disc, shafts and bearings, therefore these valves give higher CV values.

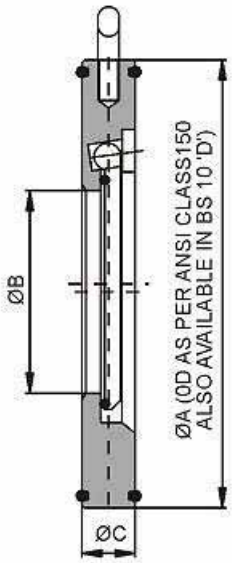
Wafer Type Check valves

MODEL - OVCV

Salient Features

- Design standard : API 6D & API 594.
- Simple but robust construction with reliability.
- Pressure rating- PN-10, PN-16.
- Range-DN-25 to DN- 700
- 100% tight shut-off.
- Short overall length-very short space received.
- Suitable for flange standards- BS,ANSI,IS,API etc.
- Material- M.S./ CS/ S.S. CF8 / CF-8 M.
- O rings- Nitrile / EPDM / Viton / Silicon / PTFE.

SIZE	ØA	ØB	C
DN 25	63	15	15
DN 32	72	18	15
DN 40	81	22	16
DN 50	97	28	18
DN 65	117	41	18
DN 80	128	52	18
DN 100	168	76	20
DN 125	190	100	20
DN 150	216	122	22
DN 200	272	158	26
DN 250	333	203	28
DN 300	403	248	32
DN 400	509	326	45
DN 450	543	374	45
DN 500	600	423	50
DN 600	711	518	64
DN 700	826	612	70



Wafer Type Check valves

Advantages

- Compact in design with high strength.
- Very light weight compared to conventional check valves.
- Zero maintenance for years.

Applications

- Sugar Industries
- Distilleries
- Powerplants
- Food Processing Industries
- Chemical & Pharmaceuticals
- Paper Industries
- Cement Factory
- Steel Industries
- Water Supply
- Fire Fighting Systems
- Petroleum Refineries
- Boiler Feed Water
- Cooling Water Systems and many more.