Engineers Combine

QUALITY WITH PERFORMANCE

www.valveindia.com

Your Source For Valves, Actuators & Mechanical Packing

Engineers Combine

I-18, Shayona Industrial Estate, Near Memco Char Rasta,
Naroda Road, Ahmedabad-380025. Telefax : +91 79 22203333.
Mob : +91 98240 68774 / 93270 10950
Email : sales@valveindia.com • mukesh@valveindia.com
Website : www.valveindia.com

Chemiteck Engineering Enterprises,
RTB-151, Shipra Royal Tower Market,
Indirapuram, Ghaziabad, UP - 201014.
Email: sales@chemiteck.in
9560391635 / 9289381979.

Engineers Combine | Who we are?

Engineers Combine is a leading manufacturers of Industrial Valves, Automation, Strainers & Filters used in Oil, Gas, Petrochemicals, Pharmaceuticals and other process industries. We are manufacturing Gate, Globe, Check, Ball Valves as per international codes like API 6D, API 600, BS 5351/ISO 17292, BS 1873, BS 1868 etc. Flange tables can be of ASME/DIN/JIS standards. We are using investment casting (lost wax process) and sand castings sourced from reputed foundries with having all the facilities like NDT Testing facilities, Spectro etc.

We can provide all critical metallurgies like Duplex Stainless Steel, WCB, CF8, CF8M, CF3, CF3M and any other metal. We are catering to various reputed consultants/actual users like Mazda Limited, Rallis India, Lupin Limited, Cipla Limited, Concond Biotech, Sabarmati Gas, NIKO Resources, IOCL, BPCL, HPCL, Atul Limited, Century Pulp and Papers, BFCL Terminal, Bharat Foods Limited. All the air dryer/duplex filter manufacturers in India are buying our 3 way/4 way ball valve for diversion of fluid/media.

Our moto is to satisfy our customers with timely delivery and required chemistry of the metal and good manufacturing practices.

OUR MAIN PRODUCTS

- **Ball Valves-fire Safe Type Tested Under DNV**
- **3 Way Ball Valves, 4Way Ball Valves Actuated / ROV's**
- **Gate Valve / Globe Valve / Swing Check Valve**
- **Dual Plate Non Slam Check Valve (Wafer/Lug/Flanged)**
- **Strainer and Filters**

QUALITY CONTROL & INSPECTION

Strict quality control is maintained at every stage of manufacturing. All castings and forgings are of radiographic quality and chemical composition, physical properties and heat treatment standard laid down by the American Society of Testing Materials (ASTM). Radiographic inspection is carried out as per the ASME B 16.34. The system of stage wise inspection of various components for dimensions and other properties are followed strictly & records maintained. Achievements in a short span we have developed very good relation with various Indian/ International companies. We have exported at very short deliveries valves/strainer to various companies in Middle east. We are prompt in deliveries and competitive prices for the quality products for your process plants needs.

TRIM MATERIAL

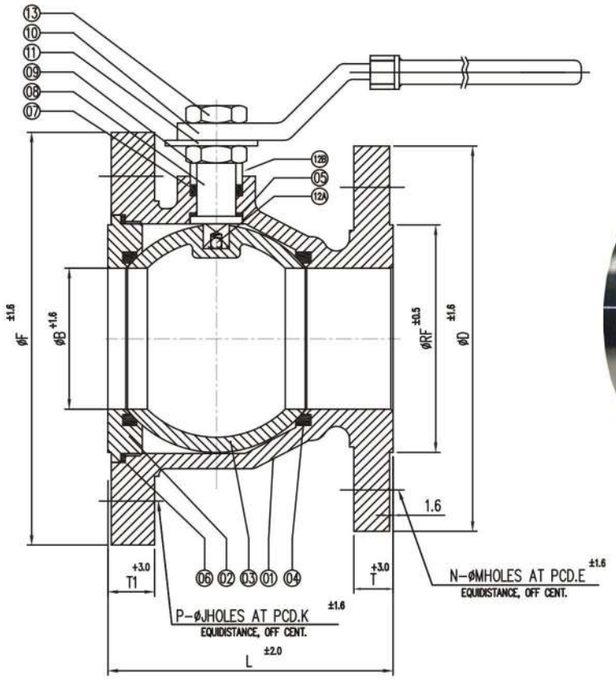
API TRIM NO.	DISC/WEDGE SURFACE	SEATRING SURFACE	STEM/HINGE PIN/ BACKSEAT	SERVICE
TRIM 1	13% Cr.	13% Cr.	13% Cr. (SS 410)	General corrosive and Non-corrosive service between -100°C & 400°C.
TRIM 2	18% Cr. - 8% Ni	18% Cr. - 8% Ni	18% Cr. - 8% Ni (SS 304)	For moderate pressure in non - corrosive or corosive service between -265°C and 320°C.
TRIM 5	Hardfaced (ST- 6)	Hardfaced (ST- 6)	13% Cr. (SS 410)	For High Pressure in Slightly erosive and corrosive service between - 265°C and 650°C
TRIM 8	13% Cr.	Hardfaced (ST- 6)	13% Cr. (SS 410)	As per Trim no. 5 but for moderate Pressure
TRIM 9	Ni Cu Alloy (Monel)	Ni Cu Alloy (Monel)	Ni Cu Alloy (Monel)	Very corrosive fluids. Erosive - corrosive service between -240°C & 480°C
TRIM10	18Cr. - 8 Ni - Mo	18Cr. - 8 Ni - Mo	18Cr.-8 Ni-Mo (SS 316)	As per Trim no. 2
TRIM 11	Ni-Cu Alloy (Monel)& Hardfaced	Ni-Cu Alloy (Monel) & Hardfaced	Ni-Cu Alloy (Monel)	As per Trim No.2
TRIM12	18Cr. - 8 Ni - Mo	18Cr.-8 Ni-Mo (ST-6,Co,Cr)	18Cr.-8 Ni-Mo (SS 316)	As per Trim No. 10 but for medium pressure
TRIM 13	Alloy 20 (CN7M)	Alloy 20 (CN7M)	19Cr. - 29 Ni (Alloy-20)	As per Trim No. 10 but for medium pressure
TRIM 14	Alloy 20	Alloy 20 and Hard faced	19 Cr.- 29 Ni(Alloy-20)	For high pressure in Slightly erosive & corrosive service between -265°C
TRIM 15	Hardfaced	Hardfaced (ST- 6)	18 Cr. - 8 Ni (SS 304)	As per Trim No.2 but more erosive service and high pressure
TRIM 16	Hardfaced	Hardfaced (ST- 6)	18 Cr.-8 Ni-Mo (SS 316)	As per Trim No. 10 but more erosive service & high pressure
TRIM 17	Hardfaced	Hardfaced (ST- 6)	18 Cr.-10Ni-Cb (SS - 347)	As per Trim No. 13 but more corrosive service & High pressure, combines good corrosion resistance with high temperature resistance up to 800°C.
TRIM 18	Hardfaced	Hardfaced (ST- 6)	19 Cr.- 29 Ni (Alloy - 20)	As per Trim 13 but more corrosive service & higher pressure, water gas or low pressure steam to 230°C.

SPECIFICATIONS & PROPERTIES OF MATERIAL

Specification ASTM	COMPOSITION									MECHANICAL CHARACTERISTICS				
	C (Max)	Mn (Max)	P (Max)	S (Max)	Si (Max)	Cr (Max)	Mo (Max)	Ni (Max)	OTHERS	UTS (Min)	Y S (Min) Mpa	Elong % (Min)	R A % (Min)	Hardness
A 216 WCB	0.30	1.0	0.04	0.045	0.60	0.50	0.20	0.50	Cu<0.3	485-655	250	22	35	-
A 216 WCC	0.25	1.20	0.04	0.045	0.60	0.50	0.20	0.50	Cu<0.3	485-655	275	22	35	-
A 351 CF 8	0.08	1.50	0.04	0.04	2.00	18.00-21.00	0.50	8.00-11.00	-	485	205	35	-	-
A 351 CF 8C	0.08	1.50	0.04	0.04	2.00	18.00-21.00	0.50	9.00-12.00	Cb + Min 0.8X	485	205	30	-	-
A 351 CF 8M	0.08	1.50	0.04	0.04	1.50	18.00-21.00	2.00-3.00	9.00-12.00	C max1.00	485	205	30	-	-
A 351 CF 3	0.03	1.50	0.04	0.04	2.00	17.00-21.00	0.50	8.00-12.00	-	485	205	35	-	-
A 351 C3M	0.03	1.50	0.04	0.04	1.50	17.00-21.00	2.00-3.00	9.00-13.00	-	485	205	30	-	-
A 351 CN 7M	0.07	1.50	0.04	0.04	1.50	19.00-22.00	2.00-3.00	27.5-30.5	Cu 3.00-4.00	425	170	35	-	-
A 352 LCB	0.30	1.0	0.04	0.045	0.60	0.50	0.20	0.50	Cu<0.3	450-620	240	24	35	-
A 352 LCC	0.25	1.20	0.04	0.045	0.60	0.50	0.20	0.50	-	485-655	275	22	35	-
A 217 WC 6	0.05-0.20	0.50-0.80	0.04	0.045	0.60	1.00-1.50	0.045-0.65	0.50	Cu<0.5	485-655	275	20	35	-
A 217 WC 9	0.05-0.18	0.40-0.70	0.04	0.045	0.60	2.00-2.75	0.90-1.20	0.50	Cu<0.5	485-655	275	20	35	-
A 217 C 5	0.20	0.40-0.70	0.04	0.045	0.75	4.00-6.50	0.45-0.65	0.50	Cu<0.5	620-795	415	18	35	-
A 217 C 12	0.20	0.35-0.65	0.04	0.045	1.00	8.00-10.00	0.90-1.20	0.50	Cu<0.5	620-795	415	18	35	-
A 217 CA 15	0.15	1.00	0.04	0.04	1.50	11.50-14.00	0.50	1.00	-	620-795	450	18	30	-
A 105	0.35	0.60-1.05	0.035	0.04	0.10-0.35	0.30	0.12	0.40	Cu<0.4	485	250	22	30	max 187 HB
A 182 F 5	0.15	0.30-0.60	0.03	0.03	0.50	4.00-6.00	0.44-0.65	0.50	-	485	275	20	35	143-217 BHN
A 182 F6 A	0.15	1.00	0.04	0.03	1.00	11.50-13.50	-	0.50	-	585	380	18	35	167-229 BHN
A 182 F11	0.10-0.20	0.30-0.80	0.04	0.04	0.50-1.00	1.00-1.50	0.44-0.65	-	-	485	275	20	30	143-207 BHN
A 182 F 12	0.10-0.20	0.30-0.80	0.04	0.04	0.10-0.60	0.80-1.25	0.44-0.65	-	-	485	275	20	30	143-207 BHN
A 182 F 22	0.05-0.15	0.30-0.60	0.04	0.04	0.50	2.00-2.50	0.87-1.13	-	-	515	310	20	30	156-207 BHN
A 182 F 304	0.08	2.00	0.045	0.03	1.00	18.00-20.00	-	8.00-11.00	N<0.1	515	205	30	50	-
A 182 F 316	0.08	2.00	0.045	0.03	1.00	16.00-18.00	2.00-3.00	10.00-14.00	N<0.1	515	205	30	50	-
A 350 LF 2	0.35	0.60-1.35	0.035	0.040	0.15-0.30	0.30	0.12	0.40	Cu<0.4	485-655	250	22	30	-
A 276 TP 410	0.15	1.00	0.04	0.03	1.00	11.50-13.50	-	-	-	480	275	20	45	-
A 276 TP 304	0.08	2.00	0.045	0.030	1.00	18.00-20.00	-	8.00-10.50	N<0.1	515	205	30	40	-
A 276 TP 316	0.08	2.00	0.045	0.03	1.00	16.00-18.00	2.00-3.00	10.00-14.00	N<0.1	515	205	30	40	-
A 276 TP 304 L	0.03	2.00	0.045	0.030	1.00	18.00-20.00	-	8.00-12.00	N<0.1	485	170	40	50	-
A 276 TP 316 L	0.03	2.00	0.045	0.03	1.00	16.00-18.00	2.00-3.00	10.00-14.00	N<0.1	485	170	40	50	-
B 164 - MOENL	0.30	2.00	-	0.24	0.50	-	-	63.00	Cu 28-34 Al max 3.00	550	275	30	-	-
STELLITE - 6	0.90-1.40	1.00	0.04	0.04	1.50	27.00-31.00	1.50	3.00	W3.5-5.5 Fe 3.00 Bal.Co	895	-	1	-	344 BHN min
439 D2C	2.90	1.80-2.40	0.08	-	1.00-3.00	0.50	-	21.00-24.00	-	400	193	20	-	121-171 BHN
AL - BRONZE - B 148 Gr. 955	-	3.50	-	-	-	-	-	3.00-5.50	Cu min 78.00 Fe 3.00-5.00 Al 10.00-11.50	620	275	6	-	190BHN
A 193 GR. B7	0.37-0.49	0.65-1.10	0.035	0.04	0.15-0.35	0.75-1.20	0.15-0.25	-	-	860	725	16	50	35 HRC max
A 193 GR. B7M	0.37-0.49	0.65-1.10	0.035	0.04	0.15-0.35	0.75-1.20	0.15-0.25	-	-	690	552	18	50	99 HRB max
A 193 GR. B16	0.36-0.47	0.45-0.70	0.035	0.04	0.15-0.35	0.80-1.15	0.50-0.65	-	VA0.25-0.35 Al 0.015	860	725	18	50	35 HRC max
A 193 GR. B8	0.08	2.00	0.045	0.03	1.00	18.00-20.00	-	8.00-11.00	-	517	207	30	50	96 HRB max
A 193 GR. B8M	0.08	2.00	0.045	0.030	1.00	16.00-18.00	2.00-3.00	10.00-14.00	-	517	207	30	50	96 HRB max
A 320 GR. L7	0.38-0.48	0.75-1.00	0.035	0.04	0.15-0.35	0.80-1.10	0.15-0.25	-	-	860	725	16	50	-
A 194 GR. 2H	Min.0.40	1.00	0.040	0.05	0.40	-	-	-	-	-	-	-	-	24-38 HRC
A 194 GR. 2HM	Min. 0.40	1.00	0.040	0.05	0.40	-	-	-	-	-	-	-	-	22 HRC max
A 194 GR. 8	0.08	2.00	0.045	0.03	1.00	18.00-20.00	-	8.00-11.00	-	-	-	-	-	126 - 300BHN
A 194 GR. 8M	0.08	2.00	0.045	0.03	1.00	16.00-18.00	2.00-3.00	10.00-14.00	-	-	-	-	-	126-300 BHN
A 194 GR.7	0.37-0.49	0.65-1.1	0.040	0.04	0.15-0.35	0.75-1.20	0.15-0.25	-	-	-	-	-	-	24-38 HRC
A 194 GR. 4	0.40-0.50	0.70-0.90	0.035	0.04	0.15-0.35	-	0.20-0.30	-	-	-	-	-	-	24-38 HRC

FLUSH BOTTOM VALVE

Engineers Combine



STANDARDS	
Design Std.	BS 5351
Face to Face	As per Mfg. Std.
End Connection	As per B 16.5 Flanged End
Testing Standard	BS 6755 Part : 11 / API 598

MATERIAL OF CONSTRUCTION		
P. NO.	PART'S NAME	MATERIAL
1	Body	As Cast
2	End Piece	As Cast
3	Ball	As Cast
4	Seat Ring	PTFE
5	Stem Ring	PTFE
6	Body Gasket	PTFE
7	Gland Packing	PTFE
8	Stem	SS304 / SS316
9	Gland Nut	SS304 / SS316
10	Handle	S.S. / C.S.
11	Lock Plate	As Per Drawing
12 A	Antistatic Spring (Ball)	S.S.
12 B	Antistatic Spring (Body)	S.S.
13	Handle Nut	S.S.

DIMENSIONS FOR FLUSH BOTTOM BALL VALVE

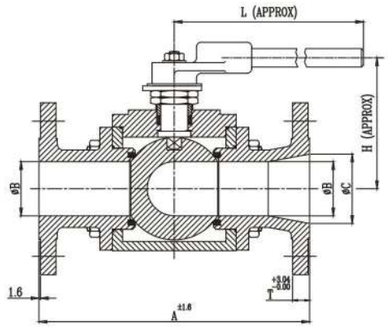
CLASS	150#										
SIZE	L	ØB	ØRF	ØD	ØF	T	T1	E-PCD	N x ØM	K-PCD	P x ØJ
50mm x 40mm	104	38	73	127	152	14.22	15.75	98.55	4 x 16	120.5	4 x 19
65mm x 50mm	127	50	92.1	152	178	15.75	17.5	120.7	4 x 19	139.7	4 x 19
80mm x 50mm	112	50	92.1	152	191	15.75	19.05	120.7	4 x 19	152.4	4 x 19
80mm x 65mm	131.5	65	105	178	191	17.5	19.05	139.7	4 x 19	152.4	4 x 19
100mm x 80mm	170	76	127	191	230	19.05	23.8	152.4	4 x 19	190.5	8 x 19

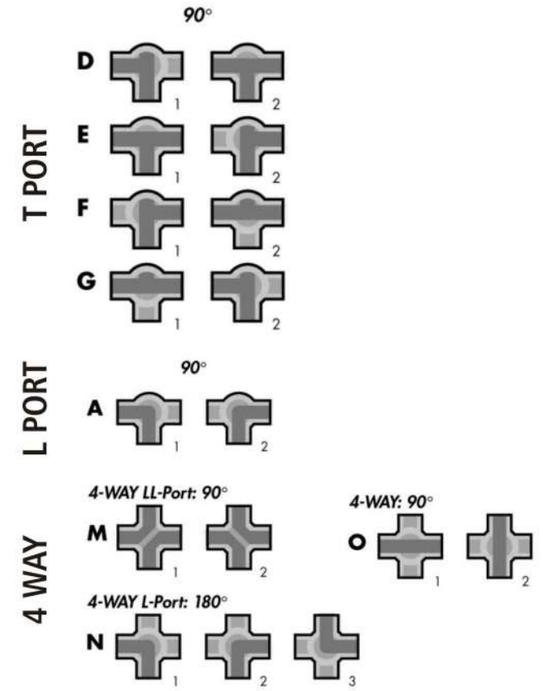
Note : All dimensions are in MM

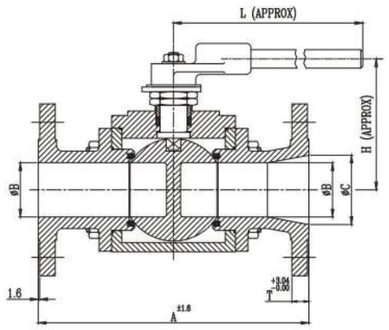
MULTI PORT VALVE

Engineers Combine

3 WAY/4 WAY BALL VALVE







DIMENSIONS FOR 3 WAY BALL VALVE

Size	Rating	A	ØB	ØC	ØD	ØE	T	PCD	Holes	H	L
15mm	150#	139	12.5	15	89	34.9	11.5	60.5	4-Ø16	60	150
	300#	152	12.5	15	95	34.9	14.3	67.0	4-Ø16	60	150
20mm	150#	152	15	19	99	42.9	11.5	70	4-Ø16	60	150
	300#	163	15	19	118	42.9	15.9	82.5	4-Ø19	60	150
25mm	150#	165	19	32	108	50.8	11.5	79.5	4-Ø16	65	175
	300#	291	19	32	124	50.8	11.5	89.0	4-Ø19	70	175
40mm	150#	215	32	38	127	73.0	14.3	98.5	4-Ø16	75	200
	300#	220	32	38	156	73.0	20.6	114.5	4-Ø22	80	225
50mm	150#	235	38	50	152	92.1	15.9	120.7	4-Ø16	80	225
	300#	262	38	50	165	92.1	22	127	8-Ø19	90	250
65mm	150#	280	50	65	178	104.8	17.5	140	4-Ø19	90	250
	300#	318	50	65	191	104.8	25.5	149	8-Ø22	100	275
80mm	150#	318	65	76	191	127.0	19.5	152.5	4-Ø19	105	275
	300#	365	65	76	210	127.0	28.6	168.5	8-Ø22	115	300
100mm	150#	365	76	102	229	157.2	23.8	190.5	8-Ø19	115	300
	300#	425	76	102	254	157.2	31.7	200	8-Ø22	125	350
150mm	150#	432	102	152	279	185.7	25.4	241	8-Ø22	125	350
	300#	432	102	152	318	185.7	36.5	270	12-Ø22	150	400

Note : All dimensions are in MM

DIMENSIONS FOR 4 WAY BALL VALVE

Size	Rating	A	ØB	ØC	ØD	ØE	T	PCD	Holes	H	L
25mm	150#	165	19	32	108	50.8	11.5	79.5	4-Ø16	95	250
	300#	190	19	32	124	50.8	11.5	89.0	4-Ø19	95	250
40mm	150#	216	32	38	127	73.0	14.3	98.5	4-Ø16	105	280
	300#	235	32	38	156	73.0	20.6	114.5	4-Ø22	105	280
50mm	150#	279	38	50	152	92.1	15.9	120.7	4-Ø16	135	350
	300#	279	38	50	165	92.1	22	127	8-Ø19	140	350
65mm	150#	306	50	65	178	104.8	17.5	140	4-Ø19	155	400
	300#	381	50	65	191	104.8	25.5	149	8-Ø22	160	400
80mm	150#	356	65	76	191	127.0	19.5	152.5	4-Ø19	160	450
	300#	450	65	76	210	127.0	28.6	168.5	8-Ø22	170	450
100mm	150#	435	76	102	229	157.2	23.8	190.5	8-Ø19	180	475
	300#	560	76	102	254	157.2	31.7	200	8-Ø22	215	500
150mm	150#	525	102	152	279	185.7	25.4	241	8-Ø22	235	500
	300#	-	-	-	-	-	-	-	-	-	-

FORGED VALVES : GATE/GLOBE/LIFT CHECK

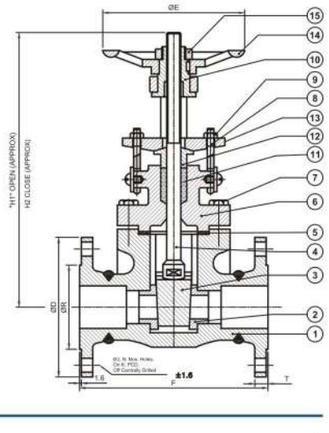
STANDARDS	
Design Std.	ASME B16.34 / API 602
End Connection	Flange Ends - ASME B 16.5 Socket Weld Ends - ASME B 16.11 Screwed Ends - ASME B 1.20.1
Testing Std.	API 598 / BS EN 12266-Part-I

DESIGN FEATURES

Material : A105 / F11 / F22 / F304 / F316 / F51 / LF2
Pressure Rating : 800# / 1500# / 2500#
Size Range : ½" to 2"
Trims Material : Available on requirement
(Full port / Reduce Port / Integral Flange / Welded Flange)

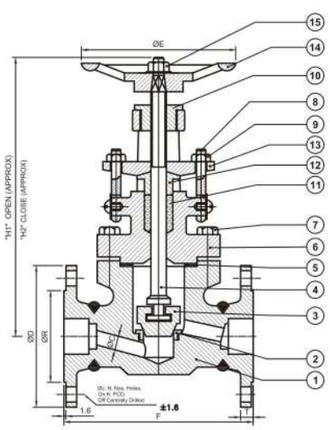
FORGED GATE VALVE

	MATERIAL OF CONSTRUCTION			
P. NO.	Part Name	Forged CS	Forged SS 304	Forged SS 316
1	Body	ASTM A 105	A182 F304	A182 F316
2	Seat Ring	11-13% Cr. SS	SS 304	SS 316
3	Wedge	11-13% Cr. SS	SS 304	SS 316
4	Stem	A 182 F6	A182 F304	A182 F316
5	Gasket	SS 304/316 Spiral Wound		
6	Bonnet	ASTM A 105	A182 F304	A182 F 316
7	Bonnet Bolt	A 193 Gr. B7	SS 304	SS 316
8	Gland Bolt	A 193 Gr. B7	SS 304	SS 316
9	Glant Nut	A 194-2H	SS 304	SS 316
10	Stem Nut	NI. Resist	NI. Resist	NI. Resist
11	Packing	To Suit Service		
12	Gland Follower	AISI 410	AISI 304	AISI 316
13	Gland Flange	A 105	SS 304	SS 316
14	Hand Wheel		MCI	
15	Hand Wheel Nut		MS	



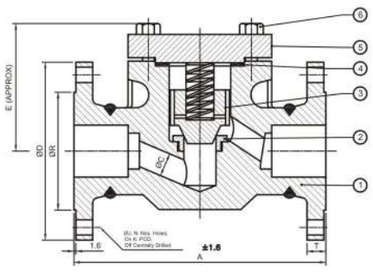
FORGED GLOBE VALVE

	MATERIAL OF CONSTRUCTION			
P. NO.	Part Name	Forged CS	Forged SS 304	Forged SS 316
1	Body	ASTM A 105	A182 F304	A182 F316
2	Seat	11-13% Cr. SS	Integral	Integral
3	Plug/Disc	A 182 F6	SS 304	SS 316
4	Stem	A 182 F6	A182 F304	A182 F316
5	Gasket	SS 304/316 Spiral Wound		
6	Bonnet	ASTM A 105	A182 F304	A182 F 316
7	Bonnet Bolt	A 193 Gr. B7	SS 304	SS 316
8	Gland Bolt	A 193 Gr. B7	SS 304	SS 316
9	Glant Nut	A 194-2H	SS 304	SS 316
10	Yoke Bush	NI. Resist	NI. Resist	NI. Resist
11	Gland Packing	To Suit Service		
12	Gland Follower	AISI 410	SS 304	SS 316
13	Gland Flange	A 105	SS 304	SS 316
14	Hand Wheel	MCI	MCI	MCI
15	Hand Wheel Nut	A 194 2H	SS 304	SS 316



FORGED LIFT CHECK VALVE

	MATERIAL OF CONSTRUCTION			
P. NO.	Part Name	Forged CS	Forged SS 304	Forged SS 316
1	Body	A 105	A182 F304	A182 F316
2	Seat	11-13% Cr. SS	Integral	Integral
3	Plug	A 182 F6	SS 304	SS 316
4	Gasket	SS Spiral Wound		
5	Cover	A 105	A182 F304	A182 F316
6	Cover Bolt	A 193 Gr. B7	SS 304	SS 316



Engineers Combine

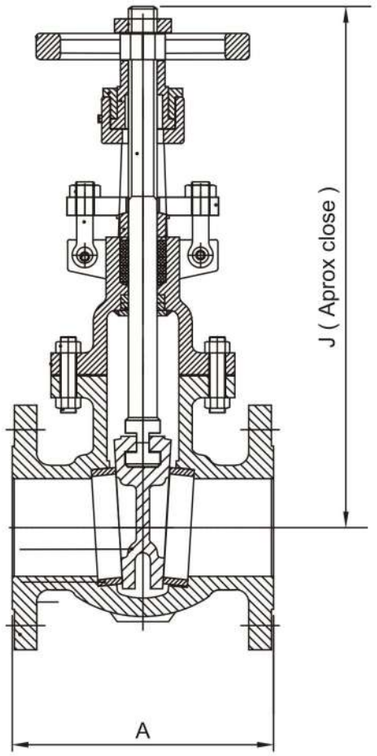
DIMENSIONS FOR FORGED GATE VALVE							
Parameters	Class	½"	¾"	1"	1 ¼"	1 ½"	2"
Face to Face (L)	800#	87	92	106	127	127	135
	1500#	92	106	127	135	135	-
	2500#	106	127	135	-	-	-
Port Dia. (ØP)	800#	9	12	17.5	22.5	29.5	35
	1500#	9	12	17.5	22.5	29.5	-
	2500#	9	12	17.5	-	-	-
Height (H) (Approx.)	800#	151	157	186	237	237	278
	1500#	157	186	237	278	278	-
	2500#	186	237	278	-	-	-
Weight (Kg) (Approx.)	800#	1.4	1.6	2.8	5.7	5.8	10.5
	1500#	1.8	3	6.3	6.5	11.5	-
	2500#	3.3	6.8	12.6	-	-	-

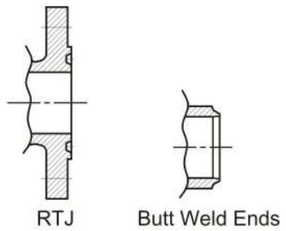
DIMENSIONS FOR FORGED GLOBE VALVE							
Parameters	Class	½"	¾"	1"	1 ¼"	1 ½"	2"
Face to Face (L)	800#	87	92	106	127	127	135
	1500#	92	106	127	135	135	-
	2500#	106	127	135	-	-	-
Port Dia. (ØP)	800#	9.5	12.7	17.5	23.8	28.6	29.5
	1500#	8	9	14	20	25	-
	2500#	7	12.5	15.5	-	-	-
Height (H) (Approx.)	800#	170	175	190	250	250	285
	1500#	175	190	250	250	255	-
	2500#	190	250	255	-	-	-
Weight (Kg) (Approx.)	800#	2	3	4	8	8	11
	1500#	3	4	8	8	11	-
	2500#	4.5	7.7	9	-	-	-

DIMENSIONS FOR FORGED LIFT CHECK VALVE							
Parameters	Class	½"	¾"	1"	1 ¼"	1 ½"	2"
Face to Face (L)	800#	87	92	106	127	127	135
	1500#	92	105	125	130	135	-
	2500#	105	125	130	-	-	-
Port Dia. (ØP)	800#	9.5	12.7	17.5	23.8	28.6	29.5
	1500#	8	9	14	20	25	-
	2500#	7	12.5	15.5	-	-	-
Height (H) (Approx.)	800#	55	65	70	105	105	115
	1500#	65	70	105	115	115	-
	2500#	70	90	110	-	-	-
Weight (Kg) (Approx.)	800#	2	3	4	6	6	8
	1500#	4	4	7	10	10	-
	2500#	4.5	5.3	9.7	-	-	-

Note : Weights and dimensions are for reference only.

GATE VALVE

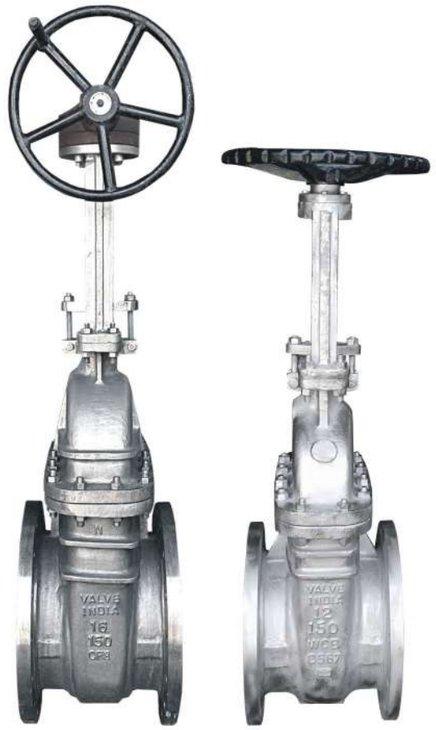




STANDARDS	
Design & Mfg. Std.	API 600 / BS 1414
Face to Face	ASME B16.10
End Connection	Flange Ends - ASME B 16.5
	Butt Weld Ends - ASME B 16.25
Inspection & Testing Standard	API 598 / BS EN 12266-Part-I

MATERIAL OF CONSTRUCTION				
PART NAME	**CARBON STEEL**		**ALLOY STEEL**	**STAINLESS STEEL**
Body	A 216 WCB / WCC	A 352 LCB /LCC	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Bonnet	A 216 WCB / WCC	A 352 LCB /LCC	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Seat Ring	A 216 WCB / WCC+13% Cr.	A 351 C F8	A 217 WC6/WC9/C5/C12 /A 217 CA 15	A 351 CF8/CF8M/CF3/CF3M/CF8C
Wedge	A 216 WCB+13% Cr. Facing	A 351 C F8	A 217 WC6/WC9/C5/C12+13% Cr.	A 351 CF8/CF8M/CF3/CF3M/CF8C
Stem	A 276 TP 410	A 276 TP 304	A 276 TP 410	A 276 TP 304/316/304L/316L/321
Gland Flange	A 105 / CS/A216 WCB	A 105 / CS	A 105/CS	A1053/CS3/A351 CF8/CF8M/CF3
Back Seat	A 276 TP 410	A 276 TP 304	A 276 TP 410	A351 CF8/CF8M/CF3/CF3M/CF8C
Gland	A 276 TP 410	A 276 TP 304	A 276 TP 410	A276 TP 304 / 316 / 304L /316 L /321
Joint Sutd	A 193 B7	A 320 L7	A 193 B16	A 193 B7 / B8
Joint Stud Nuts	A 194 2H	A 194 7	A194 7	A 194 2H /8
Gland Stud	A 193 B7	A 320 L7	A 193 B16	A 193 B7 / B8
Gland Stud nuts	A 194 2H	A 194 7	A194 7	A 194 2H /8
Gasket	Spiral Wounded SS 316 /316L / 304L / 304 / 321 with Grafoil filler			
Stem Packing	Braided Graphite and Die Formed Graphite ring			
Yoke Sleeve	A439 Gr.D2			
Hand wheel	Below 2"= Malleable Iorn & Above 2" Ductlie Iron			

Engineers Combine



DESIGN FEATURES

Material :
WCB / WC6 / LCB / CF8 / CF8M / CF3 / CF3M etc.

Pressure Rating :
150# / 300# / 600#

Operation :
Hand Wheel / Gear / Actuated (Pneumatic/Electric)

Trims Material :
Available on requirement like
Trim = 1, 2, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Tolerance :
Face to face :
± 2.0mm for NPS ≤ 10"& ± 3.0mm for NPS > 10"

FACE TO FACE DIMENSIONS FOR GATE VALVES

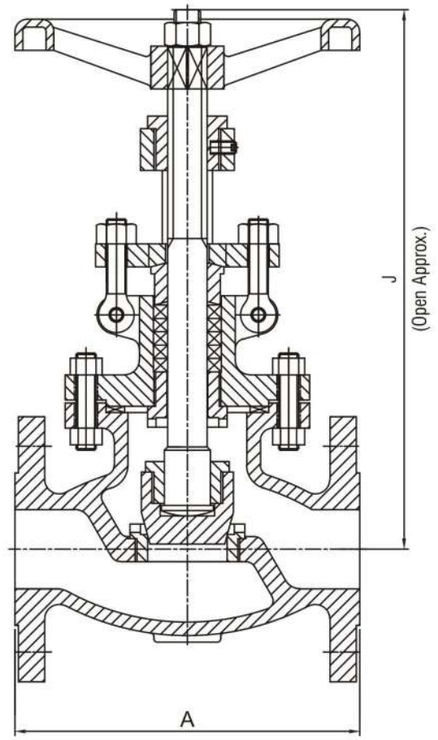
CLASS 150							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
1/2"	15	108	108	108	172	5	4
3/4"	20	117	117	117	187	5.8	5
1"	25	127	140	127	258	7.9	7
1.1/2"	40	165	178	165	278	12.8	10.5
2"	50	178	191	216	375	22	19
2.1/2"	65	190	203	241	393	31	24
3"	80	203	216	282	473	35	27
4"	100	229	242	305	570	55	44
5"	125	254	267	381	664	82	70
6"	150	267	280	403	765	97	92
8"	200	292	305	419	995	149	130
10"	250	330	343	457	1178	255	229
12"	300	356	369	502	1375	360	345
14"	350	381	394	572	1525	520	490
16"	400	406	419	610	1735	630	600
18"	450	432	445	660	1906	803	775
20"	500	457	470	711	2095	1040	1000
22"	550	482.6	495.6	762	2340	1080	1050
24"	600	508	521	813	2525	1310	1170

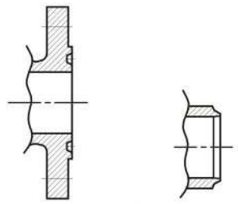
CLASS 300							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
1/2"	15	140	151	140	172	6.5	6
3/4"	20	152	165	152	187	7.5	7
1"	25	165	178	165	258	11.5	10
1.1/2"	40	190	203	190	278	18	17
2"	50	216	232	216	375	28	20.5
2.1/2"	65	241	257	241	393	52	41
3"	80	282	298	282	473	57	44
4"	100	305	321	305	570	86	63
5"	125	381	397	381	664	127	101
6"	150	403	419	403	765	170	139
8"	200	419	435	419	995	402	375
10"	250	457	473	457	1178	528	470
12"	300	502	518	502	1375	670	570
14"	350	762	778	762	1525	827	710
16"	400	838	854	838	1735	1200	1160
18"	450	914	930	914	1906	1410	1240
20"	500	991	1010	991	2095	1900	1650
24"	550	1143	1165	1143	2340	2678	2500

CLASS 600							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
1/2"	15	165	163	165	172	9.5	8.5
3/4"	20	190	190	190	186	10.5	9
1"	25	216	216	216	262	16.5	15
11/2"	40	241	241	241	283	21	19
2"	50	292	295	292	428	40	35
21/2"	65	330	333	330	492	63	58
3"	80	356	359	356	534	83	77
4"	100	432	435	432	680	145	135
5"	125	508	511	508	805	220	200
6"	150	559	562	559	918	305	280
8"	200	660	663	660	1122	510	475
10"	250	787	790	787	1252	805	760

Note : Weights and dimensions are for reference only.

GLOBE VALVE





STANDARDS	
Design & Mfg. Std.	BS 1873 / ASME B 16.34
Face to Face	ASME B16.10
End Connection	Flange Ends - ASME B 16.5
	Butt Weld Ends - ASME B 16.25
Inspection & Testing Standard	API 598 / BS EN 12266-Part-I

MATERIAL OF CONSTRUCTION				
PART NAME	**CARBON STEEL**		**ALLOY STEEL**	**STAINLESS STEEL**
Body	A 216 WCB / WCC	A 352 LCB /LCC	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Bonnet	A 216 WCB / WCC	A 352 LCB /LCC	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Seat Ring	A 216 WCB / WCC+13% Cr.	A 351 C F8	A 217 WC6/WC9/C5/C12 /A 217 CA 15	A 351 CF8/CF8M/CF3/CF3M/CF8C
Wedge	A 216 WCB+13% Cr. Facing	A 351 C F8	A 217 WC6/WC9/C5/C12+13% Cr.	A 351 CF8/CF8M/CF3/CF3M/CF8C
Stem	A 276 TP 410	A 276 TP 304	A 276 TP 410	A 276 TP 304/316/304L/316L/321
Gland Flange	A 105 / CS/A216 WCB	A 105 / CS	A 105/CS	A1053/CS3/A351 CF8/CF8M/CF3
Back Seat	A 276 TP 410	A 276 TP 304	A 276 TP 410	A351 CF8/CF8M/CF3/CF3M/CF8C
Gland	A 276 TP 410	A 276 TP 304	A 276 TP 410	A276 TP 304 / 316 / 304L /316 L /321
Joint Sutd	A 193 B7	A 320 L7	A 193 B16	A 193 B7 / B8
Joint Stud Nuts	A 194 2H	A 194 7	A194 7	A 194 2H /8
Gland Stud	A 193 B7	A 320 L7	A 193 B16	A 193 B7 / B8
Gland Stud nuts	A 194 2H	A 194 7	A194 7	A 194 2H /8
Gasket	Spiral Wounded SS 316 /316L / 304L / 304 / 321 with Grafoil filler			
Stem Packing	Braided Graphite and Die Formed Graphite ring			
Yoke Sleeve	A439 Gr.D2			
Hand wheel	Below 2"= Malleable Iorn & Above 2" Ductlie Iron			

Engineers Combine

DESIGN FEATURES

Material :
WCB / WC6 / LCB / CF8 / CF8M / CF3 / CF3M etc.

Pressure Rating :
150# / 300# / 600#

Operation :
Hand Wheel / Gear / Actuated (Pneumatic/Electric)

Trims Material :
Available on requirement like
Trim = 1, 2, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Tolerance :
Face to face :
± 2.0mm for NPS ≤ 10"& ± 3.0mm for NPS > 10"

FACE TO FACE DIMENSIONS FOR GLOBE VALVES

CLASS 150							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
½"	15	108	-	108	184	4	-
3/4"	20	117	-	117	185	5	-
1"	25	127	140	127	236	7	-
1.1/2"	40	165	178	165	282	18	-
2"	50	203	216	203	338	22	-
2.1/2"	65	216	229	216	373	29	19
3"	80	241	254	241	396	38	28
4"	100	292	305	292	476	60	49
5"	125	356	369	356	497	80	70
6"	150	406	419	406	524	110	89
8"	200	495	508	495	588	163	140
10"	250	622	635	622	738	255	220
12"	300	698	711	698	862	400	365
14"	350	787	80	787	950	555	495
16"	400	914	927	914	994	725	657
18"	450	978	991	978	1105	989	866
20"	500	978	991	978	1255	1335	1210
24"	600	1295	1308	1295	1405	1625	1500

CLASS 300							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
½"	15	152	163	152	184	8	-
3/4"	20	178	191	178	186	9	-
1"	25	203	216	203	237	15	-
1.1/2"	40	229	242	229	282	20	17
2"	50	267	283	267	354	26	22
2.1/2"	65	292	3089	292	389	39	30
3"	80	318	334	318	421	52	36
4"	100	356	372	356	495	79	55
5"	125	400	416	400	530	105	92
6"	150	444	460	444	675	165	140
8"	200	559	575	559	912	280	235
10"	250	622	638	622	949	380	320

CLASS 600							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
½"	15	165	163	165	184	11	-
3/4"	20	190	190	190	190	13	-
1"	25	216	216	216	236	18	-
1.1/2"	40	241	241	241	285	25	-
2"	50	292	295	292	397	39	27
2.1/2"	65	330	333	330	445	53	43
3"	80	356	359	356	495	79	62
4"	100	432	435	432	600	122	90
5"	125	508	511	508	680	195	165
6"	150	559	562	559	790	287	225
8"	200	660	663	660	1015	547	447

Note : Weights and dimensions are for reference only.

DUAL PLATE CHECK VALVE

INTRODUCTION

Engineers Combine is promoted by a professional having more than two decades of experience in the process Equipment and Process valves, having dealt with various consultants of reputed and associated with various industries in the country and abroad. Our valves are being manufactured as per national / international Standards to meet the requirements of Oil & Gas, pharmaceuticals, petrochemicals, sea water and process industries.

FLANGED

LUG TYPE

WAFER TYPE

STANDARDS	
Design Std.	API 6D / API 594
Testing Standard	API 6D / API 598
Flange End Standard	ASME B16.5 FOR NPS 2-24 (DN 50-600), ASME B 16.47 Series A for NPS 26 (DN-650) and larger, ASME B16.47 Series B available upon request
Face to Face Standard	API 6D / ASME B16.10
Material	ASTM Standards

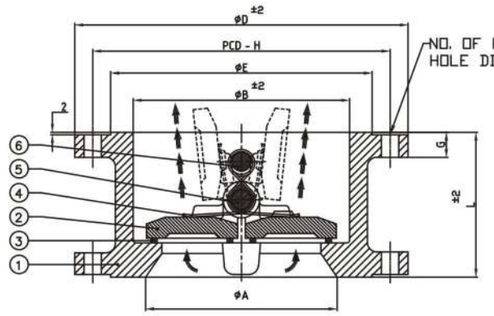
The table show below provides details of the materials as per the specific condition of the service.

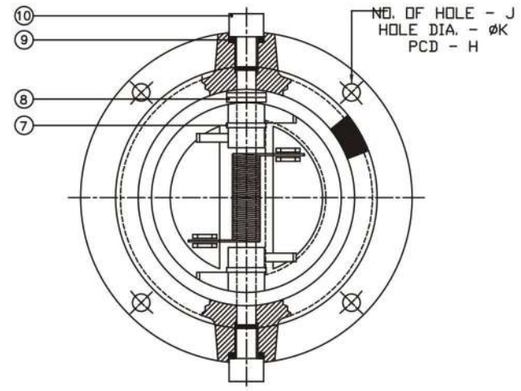
- Carbon steel for general purpose.
- Stainless steel for corrosive.
- Alloy steel for low temp. / high temp. service.
- Alloy 20, Hastelloy, Monel for highly corrosive or abrasive application.

MATERIAL OF CONSTRUCTION				
P. NO.	**PART'S NAME**	**Cast Steel**	**SS 304**	**SS 316**
1	Body	ASTM A216 Gr. WCB	ASTM A351 Gr. CF8	ASTM A351 Gr. CF8M
2	Closure Plate	CA-15 / CF8 / CF8M	CF8	CF8M
3	Seat	13%CR / SS304 / SS316 / EPDM / Nitrile	SS304 / EPDM / Nitrile	SS316 / EPDM / Nitrile
4	Spring	AISI 304 / AISI 316 / Inconel	AISI 304 / AISI 316 / Inconel	AISI 304 / AISI 316 / Inconel
5	Hinge Pin	AISI 410 / AISI 304 / AISI 316	AISI 304	AISI 316
6	Stop Pin	AISI 410 / AISI 304 / AISI 316	AISI 304	AISI 316
7	Plate Lug Bearing	AISI 410 / AISI 304 / AISI 316	AISI 304	AISI 316
8	Body Lug Bearing	AISI 410 / AISI 304 / AISI 316	AISI 304	AISI 316
9	Seals	PTFE	PTFE	PTFE
10	Plugs	Carbon Steel / 304 / 316	304	316

Note : Weights and dimensions are for reference only.

Dual Plate Check Valve : Flanged End





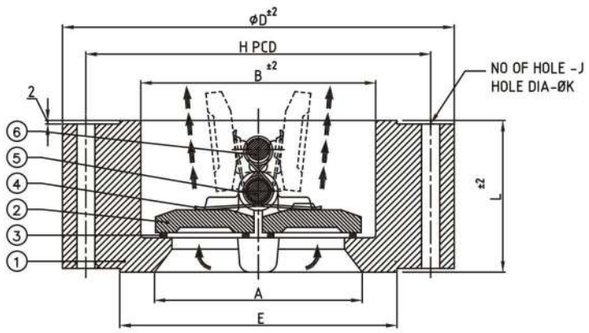
STANDARDS	
Design Std.	API 6D / API 594
Wall Thickness	API 594, 150#
Face to Face	API 6D/ASME B16.10, 150#
End Connection	Flanged as per ASME B16.5, 150#
Testing	APi 6D / API 598

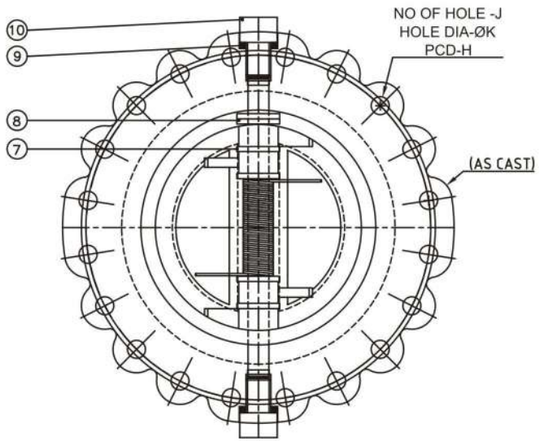
Note : Weights and dimensions are for reference only.

DIMENSIONS FOR DUAL PLATE CHECK VALVE FLANGED END												
Size (mm)	**Rating**	**L**	**ØA**	**ØB**	**ØD**	**ØE**	**G**	**J**	**KØ**	**H**	**Tag No.**	**Qty.**
50	150#	60	51	65	150	92	16.3	04	19	120.7	-	-
	300#	60	51	65	165	92	22.7	08	19	127	-	-
65	150#	67	65	76	180	105	17.9	04	19	139.7	-	-
	300#	67	65	76	190	105	25.9	08	22.2	149.2	-	-
80	150#	73	80	92	190	127	19.5	04	19	152.4	-	-
	300#	73	80	92	210	127	29.0	08	22.2	168.3	-	-
100	150#	73	100	113	230	157	24.3	08	19	190.5	-	-
	300#	73	100	113	255	157	32.2	08	22.2	200.0	-	-
150	150#	98.5	152	163	280	216	25.9	08	22	241.3	-	-
	300#	98.5	152	163	320	216	37	12	22.2	269.9	-	-
200	150#	127	203	204	345	270	29	08	22	295.5	-	-
	300#	127	203	204	380	270	41.7	12	25.4	330.2	-	-
250	150#	146	254	262	405	324	30.6	12	25.4	362	-	-
	300#	146	254	262	445	324	48.1	16	28.57	387.4	-	-
300	150#	181	305	315	485	381	32.2	12	25.4	431.8	-	-
	300#	181	305	315	520	381	51.3	16	31.75	450.8	-	-
350	150#	184	350	363	535	412.8	35.4	12	28	476.3	-	-
	300#	222	350	363	585	412.8	54.4	20	31.75	514.4	-	-
400	150#	191	400	407	595	469.9	37	16	28	539.8	-	-
	300#	232	400	407	650	469.9	57.6	20	34.92	571.5	-	-
450	150#	203	450	465	635	533.4	40.1	16	32	577.9	-	-
	300#	264	450	465	710	533.4	60.8	24	34.92	628.5	-	-
500	150#	219	500	510	700	584.2	43.3	20	32	635	-	-
	300#	292	500	510	775	584.2	64.0	24	34.92	685.8	-	-
600	150#	222	600	610	815	692.2	48.1	20	34	749.3	-	-
	300#	318	600	610	915	692.2	70.3	24	41.27	812.8	-	-

DUAL PLATE CHECK VALVE

Dual Plate Check Valve : Lug Type





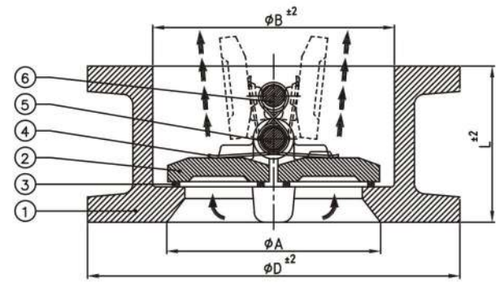
STANDARDS	
Design Std.	API 6D/API 594
Wall Thickness	API 594, 300#
Face to Face	API 594 / API 6D / ASME B16.10, 300#
End Connection	Lug to suit ASME B16.5, 300#
Testing	API 6D / API 598

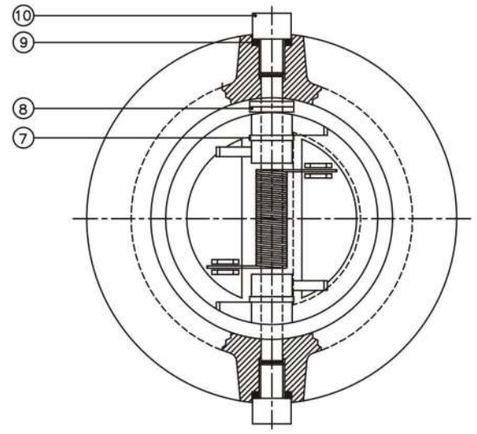
Note : Weights and dimensions are for reference only.

DIMENSIONS FOR DUAL PLATE CHECK VALVE - LUG TYPE

Size (mm)	Rating	L	ØA	ØB	ØD	ØE	J	KØ	H	Tag No.	Qty.
50	150#	60	51	65	150	92	04	19	120.7	-	-
	300#	60	51	65	165	92	08	19	127	-	-
65	150#	67	65	76	180	105	04	19	139.7	-	-
	300#	67	65	76	190	105	08	22.2	149.2	-	-
80	150#	73	80	92	190	127	04	19	152.4	-	-
	300#	73	80	92	210	127	08	22.2	168.3	-	-
100	150#	73	100	113	230	157	08	19	190.5	-	-
	300#	73	100	113	255	157	08	22.2	200.0	-	-
150	150#	98.5	152	163	280	216	08	22	241.3	-	-
	300#	98.5	152	163	320	216	12	22.2	269.9	-	-
200	150#	127	203	204	345	270	08	22	298.5	-	-
	300#	127	203	204	380	270	12	25.4	330.2	-	-
250	150#	146	254	262	405	324	12	25.4	362	-	-
	300#	146	254	262	445	324	16	28.57	387.4	-	-
300	150#	181	305	315	485	381	12	25.4	431.8	-	-
	300#	181	305	315	520	381	16	31.75	450.8	-	-
350	150#	184	350	363	535	412.8	12	28	476.3	-	-
	300#	222	350	363	585	412.8	20	31.75	514.4	-	-
400	150#	191	400	407	595	469.9	16	28	539.8	-	-
	300#	232	400	407	650	469.9	20	34.92	571.5	-	-
450	150#	203	450	465	635	533.4	16	32	577.9	-	-
	300#	264	450	465	710	533.4	24	34.92	628.5	-	-
500	150#	219	500	510	700	584.2	20	32	635	-	-
	300#	292	500	510	775	584.2	24	34.92	685.8	-	-
600	150#	222	600	610	815	692.2	20	34	749.3	-	-
	300#	318	600	610	915	692.2	24	41.27	812.8	-	-

Dual Plate Check Valve : Wafer Type





STANDARDS	
Design Std.	API 6D / API 594
Wall Thickness	API 594, 150#
Face to Face	API 6D / ASME B16.10, 150#
End Connection	Wafer to suit ASME B16.5, 150#
Testing	API 6D / API 598

DIMENSIONS FOR DUAL PLATE CHECK VALVE - WAFER TYPE

Size (mm)	Rating	L	ØA	ØB	ØD	Tag No.	Qty.
50	150#	60	51	65	101	-	-
	300#	60	51	65	108	-	-
65	150#	67	65	76	120	-	-
	300#	67	65	76	127	-	-
80	150#	73	80	92	132	-	-
	300#	73	80	92	147	-	-
100	150#	73	100	113	173	-	-
	300#	73	100	113	178	-	-
125	150#	86	127	135	193	-	-
	300#	86	127	135	213	-	-
150	150#	98.5	152	163	218	-	-
	300#	98.5	152	163	248	-	-
200	150#	127	203	204	275	-	-
	300#	127	203	204	305	-	-
250	150#	146	254	262	337	-	-
	300#	146	254	262	359	-	-
300	150#	181	305	315	407	-	-
	300#	181	305	315	419	-	-
350	150#	184	350	363	449	-	-
	300#	222	350	363	483	-	-
400	150#	191	400	407	512	-	-
	300#	232	400	407	537	-	-
450	150#	203	450	465	547	-	-
	300#	264	450	465	594	-	-
500	150#	219	500	510	604	-	-
	300#	292	500	510	651	-	-
600	150#	222	600	610	715	-	-
	300#	318	600	610	772	-	-

Note : Weights and dimensions are for reference only.

STRAINERS

Y TYPE STRAINER

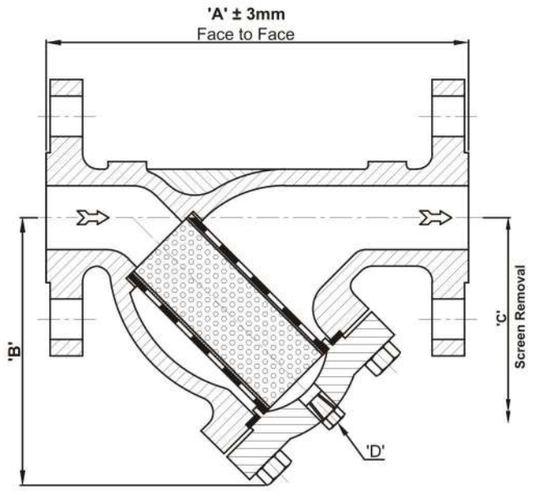
Sizes : 1/2" to 14" Nominal Bore

Pressure : ANSI Class 150 LB

Features :
- Integrally Cast Housing
- Bolted Cover C/W Drain Plug
- Red Oxide Finish (Carbon Steel)
- 40 Mesh Screen as Standard

Options :
- Special Gasket, Special Screen
- D.P. Tapings / Gauge
- Magnetic Screen Insert
- Flanged Drains / Drain Valves
- Special Finish / Linings

Standards :
- PED 97 / 23 EC.
- ANSI B16.5 Flange Dimensions
- EN 10204 / NACE Certification



MATERIAL OF CONSTRUCTION			
P. NO.	Item	Carbon Steel	Stainless Steel
1	Strainer Body (Cast)	ASTM A216 WCB	ASTM A351 CF8M
2	*Strainer Cover	ASTM A516 Gr. 60 / A216 WCB	ASTM A240 316 / A351 CF8M
3	Drain Plug (Forged)	ASTM A105N	ASTM A 182 F316
4	Cover Studbolts	ASTM A193 B7M - Zinc Plated	
5	Cover Full Nuts	ASTM A194 2HM - Zinc Plated	
6	Cover Gasket (Flat)	C.A.F. as standard / to customer specification	
7	Screen (perforated)	ST. ST. 316 (40 mesh as standard/to customer specification)	

*The strainer cover may be furnished from plate or casting depending upon size/availability.

DIMENSIONS Y TYPE STRAINERS						
Inch	MM	'A' Face to Face	'B' Base to Center Line	'C' Screen Removal	'D' Drain (NPT)	Screen Area (cm^2)
1/2"	15	140.0	90.0	150.0	1/2"	78.0
3/4"	20	152.0	100.0	165.0	1/2"	78.0
1"	25	165.0	125.0	215.0	1/2"	82.0
11/2"	40	203.0	160.0	285.0	1/2"	157.0
2"	50	229.0	200.0	315.0	1/2"	190.0
3"	80	318.0	270.0	490.0	1/2"	452.0
4"	100	368.0	320.0	500.0	1/2"	743.0
6"	150	470.0	460.0	730.0	1/2"	1456.0
8"	200	597.0	480.0	750.0	3/4"	2565.0
10"	250	673.0	550.0	895.0	3/4"	3923.0
12"	300	775.0	650.0	980.0	3/4"	6033.0
14"	350	850.0	685.0	1070.0	3/4"	7850.0

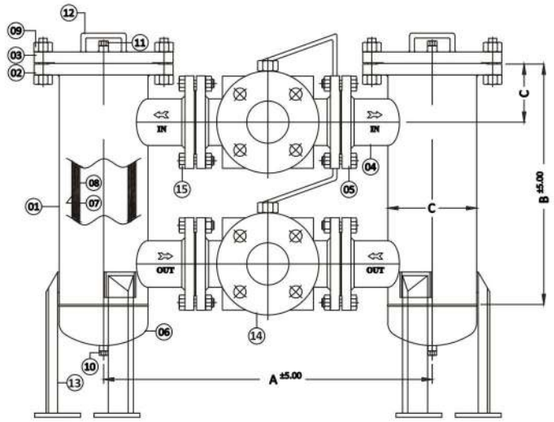
Note : Weights and dimensions are for reference only.

DUPLEX BASKET STRAINER

Type : Duplex basket filter with 3-way ball valve

Technical Standard

1. In-Out Connection : Class 150 flanged ends RF as per ASME B16.5
2. Body : Fabricated Construction as per material
3. Operating temp. : 35°C
4. Operating Pressure : 5.0 kg/cm^2
5. Hydro. Test Pressure : 10.0 kg/cm^2



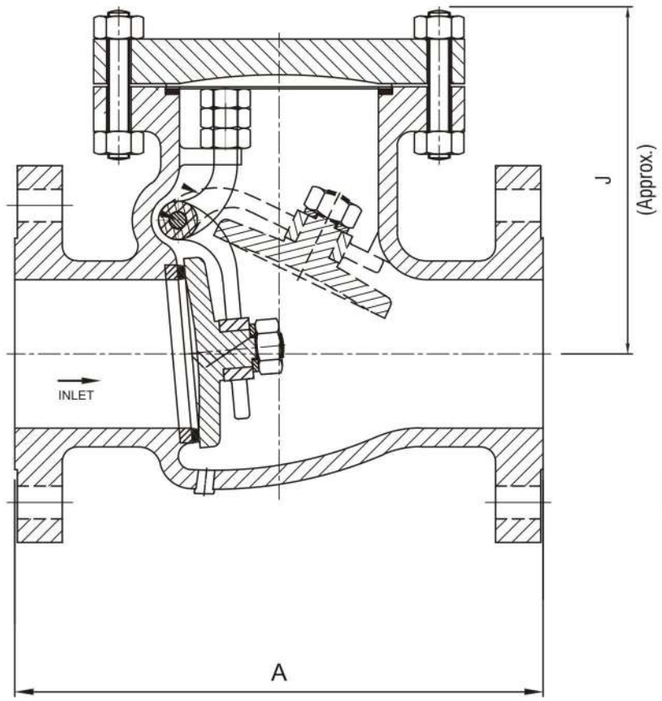
MATERIAL OF CONSTRUCTION			
SR. NO.	Item Description	Carbon Steel	Stainless Steel
1	Shell	IS 1239/IS 3589/SA 106	SS 304, SS 316
2	Shell Flange	IS 2062/SA 105	SS 304, SS 316
3	Cover Flange	IS 2062/SA 105	SS 304, SS 316
4	In-Out Nozzle	IS 1239/SA 106	SS 304, SS 316
5	Nozzle Flange	IS 2062/SA 105	SS 304, SS 316
6	Dishend	IS 2062/SA 234 Gr. WPB	SS 304, SS 316
7	P.Sheet	SS 304, SS 316 (Ø6mm Hole)	
8	Wire Mesh	SS 304, SS 316 (40 Mesh)	
9	Stud & Nut	IS 1367/ASTM A 193 Gr. B7/2H	SS 304/ASTM A 193 Gr. B7/2H
10	Drain Plug	M.S. / SA 105	SS 304, SS 316
11	Vent Plug	M.S. / SA 105	SS 304, SS 316
12	Handle	M.S.	SS 304
13	Leg Support	M.S.	SS 304
14	3-Way Ball Valve (L-port)	SA 216 Gr. WCB (SS 304 Ball)	SA 351 Gr. CF8/CF8M (SS 304, SS 316 Ball)
15	Stud & Nut	IS 1367/ASTM A 193 Gr. B7/2H	SS 304 / ASTM A 193 Gr. B7/2H

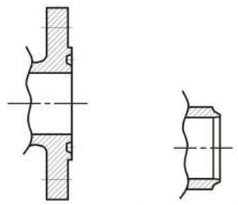
Note : • We are continuously improving our product. Also other material on request by client.
• We reserve the right to change detail without prior notice. • All dimensions are in mm. if not specified.

DIMENSIONS DUPLEX BASKET STRAINER							
Inch	MM	'A" Face to Face	'B" Top to Bottom Line	'C" Top to Nozzle Line	'ØD' Shell Dia.	'E' Screen Removal	Basket Area (CM^2)
1	25	490.0	360.0	120.0	4"	270.0	588.0
1½"	40	560.0	480.0	135.0	4"	320.0	915.0
2"	50	590.0	500.0	150.0	5"	320.0	950.0
3"	80	710.0	605.0	150.0	6"	460.0	1467.0

Note : Weights and dimensions are for reference only.

SWING CHECK VALVE





STANDARDS	
Design & Mfg. Std.	BS 1868 / ASME B16.34
Face to Face	ASME B16.10
End Connection	Flange Ends - ASME B 16.5
	Butt Weld Ends - ASME B 16.25
Inspection & Testing Standard	API 598 / BS EN 12266-Part-I

MATERIAL OF CONSTRUCTION

PART NAME	CARBON STEEL		ALLOY STEEL	STAINLESS STEEL
Body	A 216 WCB / WCC	A 352 LCB /LCC	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Cover	A 216 WCB / WCC	A 352 LCB /LCC	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Seat Ring	A 216 WCB/WCC+13% Cr./A 217 CA 15	A 351 CF 8	A 217 WC6/WC9/C5/C12+13% Cr. /A 217 CA 15	A 351 CF8/CF8M/CF3/CF3M/CF8C
Disc	A 216 WCB / WCC+13% Cr.	A 351 CF 8	A 217 WC6/WC9/C5/C12+13% Cr.	A 351 CF8/CF8M/CF3/CF3M/CF8C
Hinge	A 216 WCB / WCC	A 351 CF 8	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Hinge Bracket	A 216 WCB / WCC	A 351 CF 8	A 217 WC6/WC9/C5/C12	A 351 CF8/CF8M/CF3/CF3M/CF8C
Hinge Pin	A 276 TP 410	A 276 TP 304	A 276 TP 410	A 276 TP 304/316/304L/316L/321
Joint stud	A 193 B7	A 320 L7	A 193 B16	A193 B7/B8
Joint stud nuts	A 194 2H	A 194 7	A 194 7	A 194 2H/8
Bracket stud	A 193 B7	A 320 L7	A 193 B16	A193 B7/B8
Bracket stud nuts	A 194 2H	A 194 7	A 194 7	A 194 2H/8
Gasket	Spiral Wound SS316/316L/304L/321 with Grafoil filler			
Disc nut	Stainless Steel			

DESIGN FEATURES

Material :
WCB / WC6 / LCB / CF8 / CF8M / CF3 / CF3M etc.

Pressure Rating :
150# / 300# / 600#

Trims Material :
Available on requirement like
Trim = 1, 2, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Tolerance :
Face to face :
± 2.0mm for NPS ≤ 10"& ± 3.0mm for NPS > 10"

FACE TO FACE DIMENSIONS FOR SWING CHECK VALVES

CLASS 150							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
2"	50	203	216	203	144	19	13
2.1/2"	65	216	229	216	156	25	20
3"	80	241	254	241	166	30	22
4"	100	292	305	292	196	47	40
5"	125	330	343	330	220	82	70
6"	150	356	369	356	246	90	78
8"	200	495	508	495	295	135	115
10"	250	622	635	622	336	242	220
12"	300	698	711	698	395	298	270
14"	350	787	800	787	435	527	505
16"	400	864	877	864	498	611	591
18"	450	978	991	978	540	825	801
20"	500	978	991	978	625	935	904
24"	600	1295	1308	1295	715	1280	1258

CLASS 300							
Size		A(MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
2"	50	267	283	267	150	22	17
2.1/2"	65	292	308	292	165	37	32
3"	80	318	334	318	178	50	45
4"	100	356	372	356	200	68	62
5"	125	400	416	400	225	92	72
6"	150	444	460	444	252	130	110
8"	200	533	549	533	301	245	220
10"	250	622	638	622	356	340	310
12"	300	711	727	711	416	550	508

CLASS 600							
Size		A (MM)			J	Weight (kg)	
NPS	DN	RF	RTJ	BW	MM	FE	BW
2"	50	295	292	292	154	33	28
2.1/2"	65	333	330	330	172	49	38
3"	80	359	356	356	182	65	52
4"	100	435	432	432	214	112	96
5"	125	511	508	508	230	170	140
6"	150	562	559	559	269	220	180
8"	200	663	660	660	330	385	258
10"	250	790	787	787	380	465	407

Note : Weights and dimensions are for reference only.