



METFLOW ENGINEERS
THE COMPLETE SOLUTION

India's Leading
Industrial Valves
Solution Provider

High quality and reliable valves, guaranteed



BALL VALVES

BOLTED SIDE PIECE CAST CARBON , STAINLESS OR ALLOY STEEL
 SIZE:- 2" -12", ASME CLASS:- 150# - 600#

DESIGN FEATURES

- ⦿ 2 & 3-Piece, Side Entry / Split Body, Fire Safe, Anti-static & Blow-out Proof Stem, Floating & Trunnion type Ball design.
- ⦿ Ball:- Full bore or reduced bore.
- ⦿ End Connection:- A choice of Flat flanged, RF flanged, RTJ & Butt Welding end fas per piping flexibility.
- ⦿ Operation:- Lever upto 6" Size & Gear for above size.
- ⦿ Packing:- Std packing multiple V-teflon packing. combined with live loading, maintains packing



STANDARD MATERIALS

PART	MATERIAL		
	WCB	CF8	CF8M
Body & Side Piece	WCB	CF8	CF8M
Ball	WCB + ENP / CF8/CF8M	CF8/CF8M	CF8M
Stem	SS 410 / 17-4 PH / SS 304 / SS 316	SS 304	SS 316
Seat Seal	PTFE / CFT / GFT / VITON		
Gasket	PTFE / CFT / GFT / VITON / SPIRAL WOUND		
Packing Flanged	PTFE / CFT / GFT / VITON / SPIRAL WOUND		
Trunnion MOC	AISI 410 / SS 304 / SS 316	SS 304 / SS 316	SS 316
Body/Side Piece Nut	GR. 2H	GR. 8	GR. 8M
Body/Side Piece Stud	GR. B7	GR. B8	B8M
Lever	SS		
Name Plate	STAINLESS STEEL / ALLUMINIUM		

DESIGN SPECIFICATIONS

ITEM	APPLICABLE STD
Design Standard	API 6D / BS 5351
Fire Safe Standard	API 607 / API 6FA
Pressure-Temperature Rating	ASME B16.34
Face-to-Face Dimensions	ASME B16.10
Testing Standard	API 598 / BS 6755
Flange Design	ASME B16.5
Butt Welding Design	ASME B16.25
Materials	ASTM

BALL VALVE DIMENSIONS

SIZE	ASME CLASS 150						
	DN	F to F	Flange Dia	RFD	THK	PCD	Hole Dia
15	108	90	35	9.6	60.30	15.9	4
20	117	100	43	11.2	69.9	15.9	4
25	127	110	51	12.7	79.4	15.9	4
32	140	115	64	14.3	88.9	15.9	4
40	165	125	73	15.9	98.4	15.9	4
50	178	150	92	17.5	120.7	19.05	4
65	190	180	105	20.7	139.7	19.05	4
80	203	190	127	22.3	152.4	19.05	4
100	229	230	157	22.3	190.5	19.05	8
150	267	280	216	23.9	241.3	22.22	8
200	292	345	270	27.0	298.5	22.22	8
250	330	405	324	28.6	362.0	25.4	12
300	356	485	381	30.2	431.8	25.4	12

SIZE	ASME CLASS 300							ASME CLASS 600						
	DN	F to F	Flange Dia	RFD	THK	PCD	Hole Dia	No.of Hole	F to F	Flange Dia	RFD	THK	PCD	Hole Dia
15	140	95	35	12.7	66.7	15.9	4	165	95	35	14.3	66.7	15.9	4
20	152	115	43	14.3	82.6	19.05	4	190	115	43	15.9	82.6	19.05	4
25	165	125	51	15.9	88.9	19.05	4	216	125	51	17.5	88.9	19.05	4
32	178	135	64	17.5	98.4	19.05	4	229	135	64	20.7	98.4	19.05	4
40	190	155	73	19.1	114.3	22.22	4	241	155	73	22.3	114.3	22.22	4
50	216	165	92	20.7	127.0	19.05	8	292	165	92	25.4	127.0	19.05	8
65	241	190	105	23.9	149.2	22.22	8	330	190	105	28.6	149.2	22.22	8
80	282	210	127	27	168.3	22.22	8	356	210	127	31.8	168.3	22.22	8
100	305	255	157	30.2	200	22.22	8	432	275	157	38.1	215.9	25.4	8
150	403	320	216	35.0	269.9	22.22	12	559	355	216	47.7	292.1	28.57	12
200	502	380	270	39.7	330.2	25.4	12	660	420	270	55.6	349.2	31.75	12
250	568	445	324	46.1	387.4	28.57	12	787	510	324	63.5	431.8	34.92	16
300	648	520	381	49.3	450.8	31.75	12	838	560	381	66.7	489.0	34.92	20

GATE VALVES

BOLTED BONNET CAST CARBON , STAINLESS OR ALLOY STEEL
 SIZE:- 2" -24", ASME CLASS:- 150# - 600#

DESIGN FEATURES

- Trims:- 13% Cr stem-wedge in CA 15 or 13 Cr faced, and CoCr alloy faced seat API trip 8 suitable for applications up to 850 F (454 C).
- Flexible wedge with centre stem-wedge contact in solid CA15 (13Cr) or hand faced with 13 Cr, SS 316 Monel or CoCr alloy. Wedge is ground and lapped to a mirror finish and tightly guided to prevent dragging and seat damage.
- Non-rotating stem with precision acme threads and burnished finish. Double acme for faster operation
- Body and bonnet joint accurately machined. Spiral wound with different grade of material.
- Body and bonnet casting are precision machined. One-piece bonnet up to NPS 12 (DN 300) for better alignment and fewer parts.
- Flanges : Finish 125-250 AARH for all valves.
 ASME Classes 150-300: 2mm raised face
 ASME Classes 600-up: 7mm raised face
- RTJ available on client requirement
- Rotating stem nut is austenitic ductile iron Gr.D-2C renewable inline.



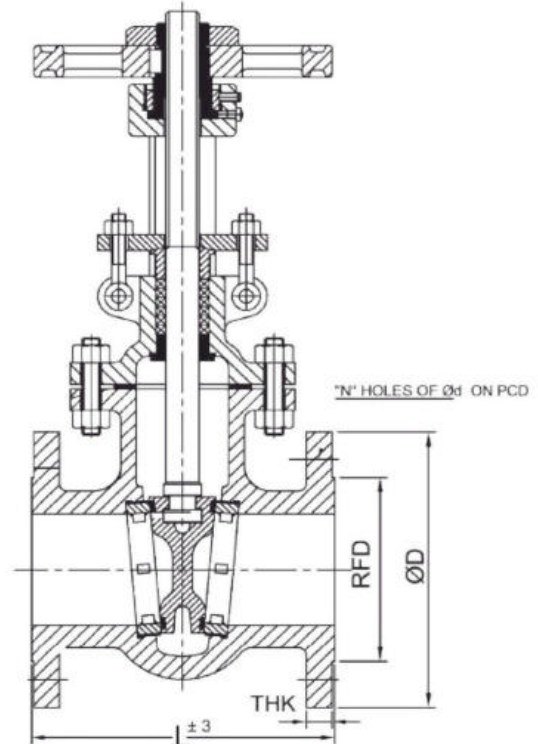
STANDARD MATERIALS



PARTS	MATERIALS		
Body	WCB	CF8	CF8M
Bonnet	WCB	CF8	CF8M
Stem	SS 410	SS 304	SS 316
Wedge	CA15 or 13Cr faced	CF8	CF8M
Seat	13% Cr. Or Steel	CoCr Alloy Faced	CoCr Alloy Faced
Packing Flanged	Carbon Steel	Stainless steel	Stainless Steel
Gland Bushing	Carbon Steel	Stainless steel	Stainless Steel
Packing ring	Graphite		
Gland Stud	Gr. B7	Gr. B8	B8M
Gland Nut	Gr. 2H	Gr.8	Gr.8M
Body/Bonnet Nut	Gr.2H	Gr.8	Gr.8M
Body/Bonnet Stud	Gr.B7	Gr.B8	B8M
Back Seat	SS 410	SS 304	SS 316
Gasket	Class 150 : Corrugated Steel / Graphite Class 300 - 1500 : Spiral Wound Stainless Steel/ Graphite		
Key	Carbon Steel		
Yoke Bushing	Carbon Steel	Stainless steel	Stainless Steel
Handwheel Nut	Malleable Iron Or Steel		
Handwheel	Malleable Iron Or Ductile Iron		
Name Plate	Stainless Steel		
Stem Nut	A 439 Austenitic Ductile Iron Gr. D-2c		

DESIGN SPECIFICATIONS

ITEM	APPLICABLE STD.
Wall thickness and general design = NPS 24	API 600, ISO 10434
Wall thickness and general design > NPS 24	ASME B16.34
Pressure-temperature rating	ASME B16.34
Face-to-face dimensions for butt weld and flanged valves	ASME B16.10
Testing Standard	API 598
Flange design	ASME B16.5
Butt welding design	ASME B16.25
Materials	ASTM



GATE VALVE DIMENSIONS

DIMENSIONAL DETAILS AS PER ANSI 150 # CLASS													
SIZE	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
F TO F	178	191	203	229	267	292	330	356	381	406	432	457	508
OD	150	180	190	230	280	345	405	485	535	595	635	700	815
THK	17.5	20.7	22.3	22.3	25.4	28.6	30.2	31.8	33.4	35	38.1	41.3	46.1
RFD	92	105	127	157	216	270	324	381	413	470	533	584	692
PCD	121	139.7	152	191	241	299	362	432	476	540	578	635	749
ød	19.1	19.05	19.1	19.1	22.2	22.2	25.4	25.4	28.6	28.6	31.8	31.8	34.9
NOH	4	4	4	8	8	8	12	12	12	16	16	20	20
DIMENSIONAL DETAILS AS PER ANSI 300 # CLASS													
SIZE	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
F TO F	216	241	282	305	403	419	457	501	762	838	914	990	1143
OD	165	190	210	255	320	380	445	520	585	650	710	775	915
THK	20.7	23.9	27	30.2	35	39.7	46.1	49.3	52.4	55.6	58.8	62	68.3
RFD	92	105	127	157	216	270	324	381	413	470	533	584	692
PCD	127	149.2	168	200	270	330	387	451	514	572	629	686	813
ød	19.1	22.22	22.2	22.2	22.2	25.4	28.6	31.8	31.8	34.9	34.9	34.9	41.3
NOH	8	8	8	8	12	12	16	16	20	20	24	24	24

GLOBE VALVES

BOLTED BONNET CAST CARBON , STAINLESS OR ALLOY STEEL
 SIZE:- 2" -24", ASME CLASS:- 150# - 600#

DESIGN FEATURES

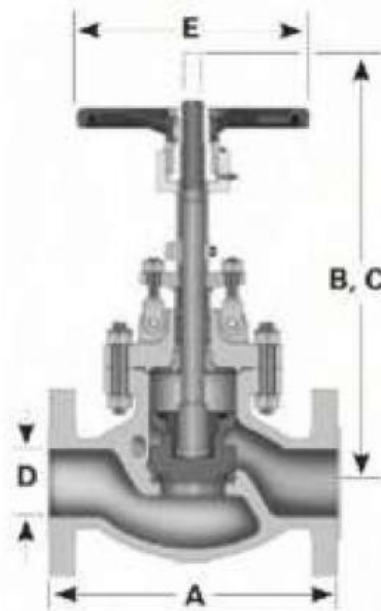
- ⦿ Trims:- 13% Cr Stem, 13 Cr faced Plug and CoCr alloy faced Seat API Trip 8 Suitable for Applications up to 850° F (454° C).
- ⦿ Body and Bonnet casting are precision Machined. one-piece bonnet for better alignment and fewer parts.
- ⦿ Tapered Disc accurately mates the hard-faced surface of the disc with the surface of the seat, Hard-faced with 13% Cr., CoCr alloy, SS 316 or Monel, Ground and lapped with seat.
- ⦿ Flanges : Finish 125-250 AARH for all Valves.
 ASME Classes 150-300 : 2 mm raised face
 ASME Classes 600-up : 7 mm Raised faced
- ⦿ Non-Rotating stem with precision acme Threads and Burnished finish. Double Acme For Faster Operation
- ⦿ RTJ available on client requirement
- ⦿ Body and Bonnet Joint accurately Machined. Spiral Wound with Different Grade of Material.
- ⦿ Rotating stem nut is austenitic Ductile iron Gr.D-2C renewable in line.



STANDARD MATERIALS

PART	MATERIAL		
Body	WCB	CF8	CF8M
Bonnet	WCB	CF8	CF8M
Stem	SS 410	SS 304	SS316
Plug	CA15 OR 13CR Faced	CF8	CF8M
Seat	13% CR. OR STL.	CoCr Alloy Faced	CoCr Alloy Faced
Packing Flanged	Carbon Steel	Stainless Steel	Stainless Steel
Gland Bushing	Carbon Steel	Stainless Steel	Stainless Steel
Packing Ring	Graphite		
Gland Stud	GR. B7	GR. B8	B8M
Gland Nut	GR. 2H	GR. 8	GR. 8M
Body/Bonnet Nut	GR. 2H	GR. 8	GR. 8M
Body/Bonnet Stud	GR. B7	GR. B8	B8M
Back Seat	SS 410	SS 304	SS 316
	Class 150 : Corrugated Steel/Graphite		
Gasket	Class 300-1500 : Spiral Wound Stainless Steel/Graphite		
Hinge Pin	AISI 410	SS 304	SS 316
Yoke Bushing	Carbon Steel	Stainless Steel	Stainless Steel
Stem Nut	A 439 Austenitic Ductile Iron Gr.D-2c		
Handwheel Nut	Malleable Iron Or Steel		
Handwheel	Malleable Iron Or Ductile Iron		

DESIGN SPECIFICATIONS ITEM	APPLICABLE STD.
Wall thickness and general design \leq NPS 24	API 600, BS 1873
Wall thickness and general design $>$ NPS 24	ASME B16.34
Pressure-temperature rating	ASME B16.34
Face-to-face dimensions for butt weld and flanged valves	ASME B16.10
Testing Standard	API 598
Flange design	ASME B16.5
Butt welding design	ASME B16.25
Materials	ASTM



BW = Butt Weld
 FL = Flanged
 B = Centre-to-top, Open
 C = Dismantling height

GLOBE VALVE DIMENSIONS						DIMENSIONAL DETAILS AS PER ANSI 150 # CLASS							
SIZE	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
F TO F	203	216	241	292	406	495	622	699	787	914	978	978	1295
OD	150	180	190	230	280	345	405	485	535	595	635	700	815
THK	17.5	20.7	22.3	22.3	25.4	28.6	30.2	31.8	33.4	35	38.1	41.3	46.1
RFD	92	105	127	157	216	270	324	381	413	470	533	584	692
PCD	120.7	139.7	152.4	190.5	241.3	298.5	362	431.8	476.3	539.8	577.9	635	749.3
ϕ d	19.05	19.05	19.05	19.05	22.23	22.23	25.4	25.4	28.58	28.58	31.75	31.75	34.93
NOH	4	4	4	8	8	8	12	12	12	16	16	20	20
DIMENSIONAL DETAILS AS PER ANSI 300 # CLASS													
SIZE	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
F TO F	266.7	292.1	317.5	355.6	444.5	558.8	622.3	711.2	-	-	-	-	-
OD	165	190	210	255	320	380	445	520	585	650	710	775	915
THK	20.7	23.9	27	30.2	35	39.7	46.1	49.3	52.4	55.6	58.8	62	68.3
RFD	92	105	127	157	216	270	324	381	413	470	533	584	692
PCD	127	149.2	168.3	200	269.9	330.2	387.4	450.8	514.4	571.5	628.6	685.8	812.8
ϕ d	19.05	22.22	22.22	22.22	22.22	25.4	28.57	31.75	31.75	34.93	34.93	34.93	41.28

SWING CHECK VALVES (NON-RETURN VALVES)

BOLTED BONNET CAST CARBON , STAINLESS OR ALLOY STEEL
SIZE:- 2" -24", ASME CLASS:- 150# - 600#

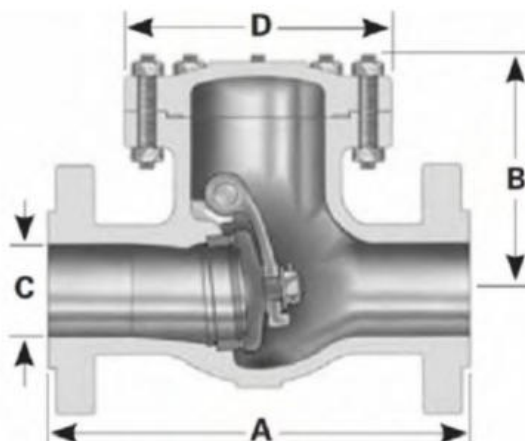
DESIGN FEATURES

- ⦿ Trims:- 13% Cr Hinge Pine, 13 Cr faced Disc and CoCr alloy faced Seat API Trip 8 Suitable for Applications up to 850° F (454° C).
- ⦿ Body and Cover casting are precision Machined.
- ⦿ Disc Assembly:- Non-rotating disc is fastened securely to disc hanger with a lock nut and cotter pin. Disc hanger is supported on a sturdy disc carrier hinge pin of excellent bearing qualities. All parts accessible from the top for easy servicing.
- ⦿ Flanges : Finish 125-250 AARH for all Valves.
ASME Classes 150-300 : 2 mm raised face
ASME Classes 600-up : 7 mm Raised faced
- ⦿ Disc:- One-piece Construction to withstand the severe shock of check valve service. Hard-faced with 13% Cr., CoCr alloy, SS 316 or Monel, Ground and lapped with seat.
- ⦿ RTJ available on client requirement
- ⦿ Body and Bonnet Joint accurately Machined. Spiral Wound with Different Grade of Material.



PART	MATERIAL		
Body	WCB	CF8	CF8M
Cover	WCB	CF8	CF8M
Hinge Pin	SS 410	SS 304	SS316
Disc	CA15 OR 13CR Faced WCB	CF8	CF8M
Seat	13% CR. OR STL. Faced	CoCr Alloy Faced CF8	CoCr Alloy Faced CF8M
Gasket	Class 150 : Corrugated Steel/Graphite Class 300-1500 : Spiral Wound Stainless Steel/Graphite		
Body/Cover Nut	GR. 2H	GR. 8	GR. 8M
Body/Cover Stud	GR. B7	GR. B8	B8M
Name Plate	Stainless Steel		

DESIGN SPECIFICATIONS ITEM	APPLICABLE STD.
Wall thickness and general design \leq NPS 24	API 600, BS 1868
Wall thickness and general design $>$ NPS 24	ASME B16.34
Pressure-temperature rating	ASME B16.34
Face-to-face dimensions for butt weld and flanged valves	ASME B16.10
Testing Standard	API 598
Flange design	ASME B16.5
Butt welding design	ASME B16.25
Materials	ASTM



BW = Butt Weld
 FL = Flanged
 B = Centre-to-top, Open

DIMENSIONAL DETAILS AS PER ANSI 150 # CLASS

SIZE	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
F TO F	203	216	241	292	356	495	622	699	787	914	978	978	1295
OD	150	180	190	230	280	345	405	485	535	595	635	700	815
THK	17.5	20.7	22.3	22.3	25.4	28.6	30.2	31.8	33.4	35	38.1	41.3	46.1
RFD	92	105	127	157	216	270	324	381	413	470	533	584	692
PCD	120.7	139.7	152.4	190.5	241.3	298.5	362	431.8	476.3	539.8	577.9	635	749.3
ød	19.05	19.05	19.05	19.05	22.23	22.23	25.4	25.4	28.58	28.58	31.75	31.75	34.93
NOH	4	4	4	8	8	8	12	12	12	16	16	20	20

DIMENSIONAL DETAILS AS PER ANSI 300 # CLASS

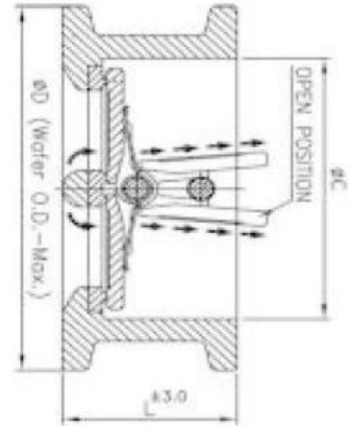
SIZE	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
F TO F	266.7	292.1	317.5	355.6	444.5	533.4	622.3	711.2	838.2	863.6	977.9	1016	1346.2
OD	165	190	210	255	320	380	445	520	585	650	710	775	915
THK	20.7	23.9	27	30.2	35	39.7	46.1	49.3	52.4	55.6	58.8	62	68.3
RFD	92	105	127	157	216	270	324	381	413	470	533	584	692
PCD	127	149.2	168.3	200	269.9	330.2	387.4	450.8	514.4	571.5	628.6	685.8	812.8
ød	19.05	22.22	22.22	22.22	22.22	25.4	28.57	31.75	31.75	34.93	34.93	34.93	41.28
NOH	8	8	8	8	12	12	16	16	20	20	24	24	24

DUAL PLATE CHECK VALVES (NON-RETURN VALVES)

CAST CARBON , STAINLESS OR ALLOY STEEL
SIZE:- 2" -24", ASME CLASS:- 150# - 600#

DESIGN SPECIFICATIONS

ITEM	APPLICABLE STD.
Design standard	API 594
Wall thickness and general design	ASME B16.34
Pressure-temperature rating	ASME B16.34
Testing Standard	API 598
Fire Safe Design	API 609
Flange design	ASME B16.5
Materials	ASTM



DESIGN FEATURES

- Retainer less design is supplied as standard
- API 594 Face-to-face dimension
- To suit ANSI B16.5 flanges, NPS 2-24 (DN 50-60)

PART	STANDARD MATERIAL		
	WCB	CF8	CF8M
Body	WCB	CF8	CF8M
Closure Plate	WCB / SS 304 / SS 316	CF8	CF8M
Seat Ring	PTFE / Metal To Metal		
Spring	SS 202 / SS 304 / SS 316	SS 304 / SS 316	SS 316
Hinge Pin	AISI 410 / SS 304 / SS 316	SS 304 / SS 316	SS 316

DCV DIMENSIONS

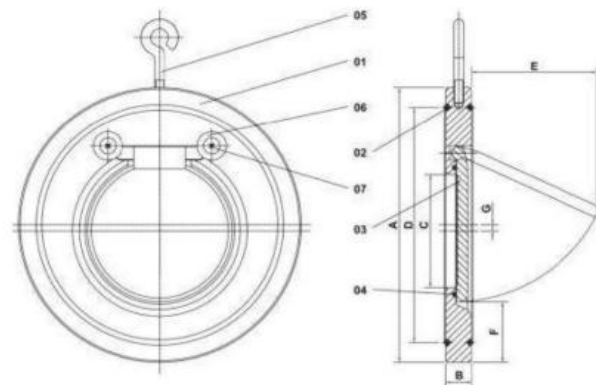
SIZE	ASME CLASS 150			ASME CLASS 300			ASME CLASS 600		
	L	ϕC	ϕD	L	ϕC	ϕD	L	ϕC	ϕD
50	60	60	101	60	60	107	60	60	107
65	67	73	120	67	73	127	67	73	127
80	73	89	133	73	89	145	73	89	145
100	73	114	171	73	114	177	79	114	190
125	86	141	193	86	141	212	105	141	238
150	98	168	218	98	168	247	137	168	263
200	127	219	276	127	219	304	165	219	317
250	146	273	336	146	273	358	213	273	396
300	181	324	406	181	324	419	229	324	453
350	184	356	447	222	356	482	273	356	488
400	191	406	511	232	406	536	305	406	562
450	203	457	546	264	457	593	362	457	609
500	219	508	603	292	508	650	368	508	679
600	222	610	714	318	610	771	-	-	-

SINGLE PLATE CHECK VALVES (NON-RETURN VALVES)



MATERIAL DESCRIPTION

ITEM	DESCRIPTION	MATERIAL	STANDARD
1	Body	SS304	ASTM A276
2	O Ring	EPDM	EN681
3	Disc	SS316	ASTM A276
4	O Ring	EPDM	EN681
5	Eye Bolt	SS304	ASTM A276
6	Gasket	SS304	ASTM A276
7	Screw	SS304	ASTM A276



PRODUCT SPECIFICATIONS

- Single plate check valve DN32-600
- Working pressure PN10/16
- Maximum temperature -10° C to +80°C
- Suitable for water, Sewage and Natural liquid

STANDARDS

- Design: - EN1074-3
- Flange: - EN1092-1
- Face to face: - EN558-1
- Test: - EN12266-1

FEATURES

- With or w/o spring design
- Large angle of opening
- Easy maintenance and long life

CHECK VALVE DIMENSIONS

DN	A	B	C	D	E	F	G
32	85	15	18	57	20.5	26	2
40	95	16	22	69.4	26	28.5	1.5
50	109	14	32	82.8	38	28.8	3.2
65	129	14	40	106	46	31	3.5
80	144	14	54	116	56	32.5	3.5
100	164	18	70	143	75	31	6
125	195	18	92	170	96	35.3	7.5
150	220	20	112	194	113	35.5	8
200	275	22	154	252	151	38.5	11
250	330	26	192	308	195	41	13
300	380	32	227	359	229	41	20
350	440	38	266	411	254	55	16
400	491	44	310	462	291	55.5	19
450	541	52	350	515	325	61	19
500	596	58	400	545	545	58	545
600	698	62	486	655	446	60	28

BUTTERFLY VALVES

HIGH PERFORMANCE CAST CARBON , STAINLESS OR ALLOY STEEL
 SIZE:- 1 1/2" -28" , ASME CLASS:- PN10 - PN25

DESIGN FEATURES

- ⦿ Slim Seal, Wafer Type, Double Flanged Type Double Eccentric, Triple Eccentric
- ⦿ 100% tight shut off in both flow directions.
- ⦿ REPLACEABLE/ Molded rubber seat in various material.
- ⦿ A fully universal body design ensures suitable for mounting between all popular standards (VIZ: - ANSI, BS, DIN, IS, JIS, etc.)
- ⦿ The notch disc & band lever ensures locking of the valves in 8 intermediate positions in addition to close and open position.
- ⦿ Face to face water short dimensions conform to BS 5155 / API 609 / IS 13095 / AWWA C 504.
- ⦿ Lever Operated, Gear Operated, Pneumatic and Electrical Actuator operated.



STANDARD MATERIALS

PART	MATERIAL			
	CI	WCB	CF8	CF8M
Body	CI	WCB	CF8	CF8M
Disc	CI / WCB / CF8 / CF8M	WCB / CF8 / CF8M	CF8 / CF8M	CF8M
Stem	SS 410 / 17-4 PH / SS 304 / SS 316	SS 410 / 17-4 PH / SS 304 / SS 316	SS 304	SS316
Lining	EPDM / NITRILE / VITON / PTFE / PFA			
Stem Packing	NBR / VITON / PTFE			
Lever	IC CASTED, IN ALL MOC			
Stud - Nut	GR. B7 / 2H	GR. B7 / 2H	GR. 8	GR. 8M
Name Plate	Stainless Steel / Alluminium			

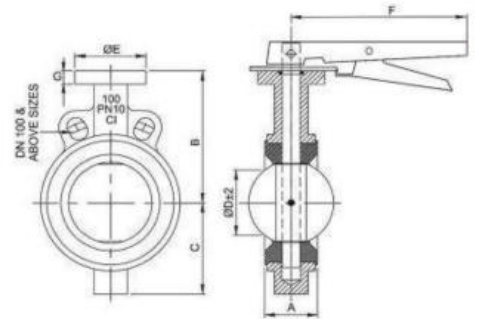
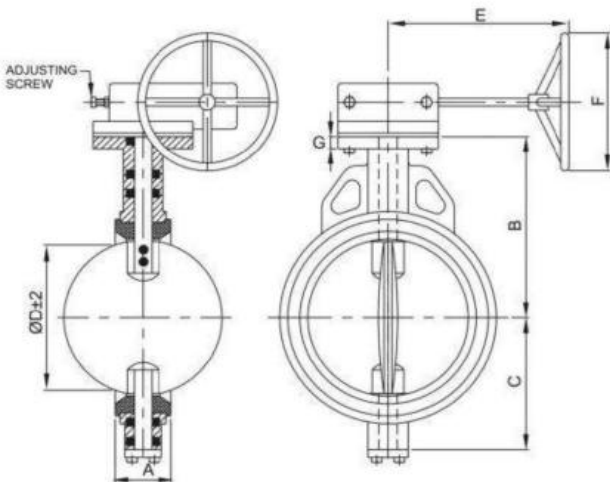
BUTTERFLY VALVES

HIGH PERFORMANCE CAST CARBON , STAINLESS OR ALLOY STEEL
 SIZE:- 1 1/2" -28", ASME CLASS:- PN10 - PN25

GEAR OPERATED BUTTERFLY VALVE : PN 10 / PN 16

SIZE DN	A	B	C	D	E	F	G
50	43	104	61	28	65	185	15
65	46	111	68	48	65	185	15
80	46	124	75	67	65	230	15
100	52	140	89	88	65	230	15
125	56	158	105	114	65	230	15
150	56	180	120	142	65	265	15
200	60	230	156	194	75	325	15
250	68	566	196	243	75	385	18
300	78	300	230	292	75	385	18

ITEM	APPLICABLE STD.
Design Standard	API 6D / BS 5351
Fire Safe Standard	API 607 / API 6FA
Pressure-temperature	ASME B16.34
Face-to-face dimensions	ASME B16.10
Testing Standard	API 598 / BS 6755
Flange design	ASME B16.5
Materials	ASTM



SIZE DN	A	B	C	D	E	F	G	FLANGE STD. ISO 5211
100	52	157	100	88	180	200	15	F07
125	56	164	115	114	180	200	15	F07
150	56	181	133	142	240	250	15	F07
200	60	230	165	194	285	350	15	F10
250	68	266	196	243	285	350	18	F10
300	78	300	230	292	285	350	18	F10
350	92	320	272	330	300	350	22	F12
400	102	385	302	375	305	350	22	F14
450	114	405	325	425	305	450	24	F14
500	127	465	405	470	350	500	26	F16
600	154	540	460	570	370	600	26	F16

KNIFE EDGE GATE VALVES



DESIGN FEATURES

"Metflow Engineers" Knife Edge Gate Valve design ensures minimum contact between the parts of the valve, Reduces the Wear & Tear. Valve design is Non Sliding Motion, Avoid Sliding Contact between Body & Gate allow flushing of media from the valve interior. A wide variety of hardened trim options are available on Gate, Seat and Wear Ring. Batten edge of the Gate (Knife-Edge) allows the tight shut off even when solid particles settles at the bottom of the Body.

"Metflow Engineers" Knife Gate Valve are Unidirectional Valves, Excellent Hopper Isolation Valves with their ability to cut through flowing media and closed by dislodging any material in the seating area.

Knife-Edge Gate Valves are widely use in Mining, Power, Steel, Chemical, Paper and withstand high Temperature & Abrasive Slurries in Industries Ideal for high-density Slurry Lines.

Edge Gate Valves.		Uni-directional / Bi-directional Knife Edge Gate Valve
Body/Gate/Seat		Cast Steel / Cast Iron / S.G.Iron/SS 304 / 316 / 316L.
M.O.C.	Body:	Cast Corrosion resistant steel or cast iron to provide receptivity against corrosion for all wetted parts
	Stem:	Stainless steel or as desire, having double start thread rising / non-rising spindle, For fast closing and opening.
	Gate:	The Stainless steel knife gate plate is precision-buffed on both sides, to enhance Packing life and ensure positive shut off even heavy or high-viscous fluid.
	Seat:	Renewable Metal-to-Metal, replaceable type, soft seat and other Suitable to application.
Port Type :		Round Port, Lugged Type.
Valve End Connection :		Flanged End / Uni Lugged, Wafer , Two Lug, Wafer Flangeless.
Sizes :		50mm TO 600mm
Rating :		Pressure Rating Up to PN 10 Class
Drilling :		Option Include ANSI, DIN, BS, JIS and AS standard; others on request
Operation Available :		Manual, Cylinder Operated, Electrical Actuator, Pneumatic Actuator with Manual Override.

No.	Body Parts Name	M.O.C. of Parts
1	Body	WCB/CF8/CF8M
2	Yoke	WCB/CF8/CF8M
3	Yoke Bush / Sleeve	C.S.
4	Disc	S.S. 304 / 316
5	Gland	WCB/CF8/CF8M
6	Gland Stud & Nut	ASTM A193 B7 / A194 2H
7	Gland Packing	Graphite / PTFE
8	Seat	Soft / Metal
9	Seat Ring	CF8 / CF8M
10	Seam / Spindle	S.S. 304 / 316
11	Spindle Pind / Stud & Nut	S.S. 304 / 316
12	Wheel / Nut	C.S.
13	Wheel / Nut	C.I.



PULP VALVES

DESIGN FEATURES

"Metflow Engineers" offers pulp valve (plate valve) which are carefully design to offer unrestricted smooth flow of viscous fluids, recesses free straight passage orifice offers minimum body contact of line fluid, avoids accumulation of viscous fluid in the orifice ensures unaltered velocity.

Our pulp valve are widely used in sugar industries for handling molasses, isolation of pulp & and fibrous material in paper industries. Our pulp valve are ideally suitable for hopper isolation in the cement industries. For corrosive slurries in the chemical industries, powder application minerals & metal industries, coal ash with abrasive particle in the coal & mining industries.

Size: DN 50 to DN 400

Standard Flange Connection:-

Table "E", "D" Pulp Valves For Slurry Lines, Sludge And Viscous Media Handling, Pulp And Paper Stock Lines, Dry Solid, Powder Handling And Many More.

Valve Operation:

Hand Wheel Operation, pneumatic Operation, Hydraulic Operation ,chain Wheel Operation Electric Motor Operation , Bevel Gear Operation , lever Operation

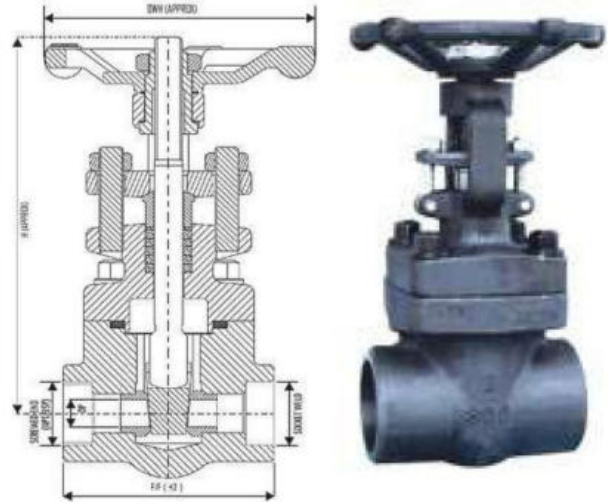


MATERIAL DESCRIPTION

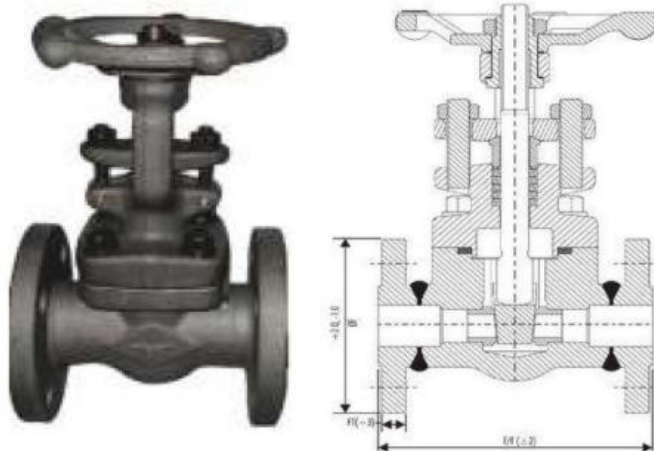
No	Body Parts Name	M.O.C. of Parts
1	Body	C.I, WCB, CF8, CF8M
2	Gate	AISI 304 AISI 316
3	Seat	Metal To Metal
4	Packing	PTFE Impreg. Synth. Fibre
5	Gland Follower	Ductile Iron
6	Stem	AISI 304
7	Stem Nut	Gun Metal
8	Yoke	Carbon Steel
9	Seat Ring	AISI 304 AISI 316
10	Handwheel	310 : Ductile Iron / > 410: Gjl 250 (Gg25)
11	Fasteners	Zinc Plated Carbon Steel

FORGED GATE VALVES

CLASS 800 #						
SIZE	F/F	oP	H(O)	H(C)	ØWH	WT (Kg)
15 mm	87	9.5	152	130	86	1.6
20 mm	92	13	158	133	86	1.9
25 mm	106	18	189	155	116	3.1
32 mm	127	24	239	200	150	6.3
40 mm	127	29	239	200	150	6.4
50 mm	142	37	288	235	150	9.8
CLASS 1500 #						
SIZE	F/F	oP	H(O)	H(C)	ØWH	WT (Kg)
15 mm	92	13	158	133	86	2.2
20 mm	106	18	189	155	116	3.6
25 mm	127	24	239	200	150	7.3
32 mm	127	29	239	200	150	7
40 mm	142	37	288	235	150	11.3
CLASS 2500 #						
SIZE	F/F	oP	H(O)	H(C)	ØWH	WT (Kg)
15 mm	106	18	189	155	116	4.1
20 mm	127	24	239	200	150	8.4
25 mm	142	37	288	235	150	13



FLANGED END GATE VALVES



CLASS 150 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	108	90	9.6	2.6
20 mm	117	100	11	3.5
25 mm	127	110	13	5.1
32 mm	140	115	14	8.7
40 mm	165	125	16	9.3
50 mm	178	150	18	15
CLASS 300 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	140	95	13	3.2
20 mm	152	115	14	4.7
25 mm	165	125	16	6.5
32 mm	178	135	18	10.5
40 mm	190	155	19	12.1
50 mm	216	165	21	17.2
CLASS 600 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	165	95	14	3.6
20 mm	190	115	16	5.1
25 mm	216	125	18	7.3
32 mm	229	135	21	11.5
40 mm	241	155	22	13.7
50 mm	292	165	25	20

APPLICATION STANDARDS

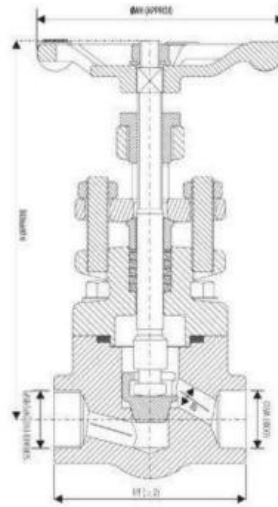
- ⊙ Design & Manufacture confirm to API 602
- ⊙ End Connection Confirm to
 - Socket weld Standard:- ASME B16.11
 - Screwed end standard:- ASME B1.20.1
 - Butt-weld standard:- ASME B16.25
 - Flange End Standard:- ASME B16.5
 - Face to Face standard:- ASME B16.10 / mfg.
- ⊙ Testing Standard: API 598
- ⊙ Pressure & Temp. Rating Standard:- ASME B16.34
- ⊙ Structure Features
 - Bolted Bonnet / Welded Bonnet
- ⊙ Material Confirms to ANSI / ASTM
 - Carbon Steel:- A105, LF2
 - Alloy Steel:- F5, F9, F11, F22, F91
 - Stainless Steel:- F304L, F316L
 - Duplex Steel:- F51, F53, F55
 - Special Grades:- INCONEL 625, MONEL K400,

FORGED GLOBE VALVES

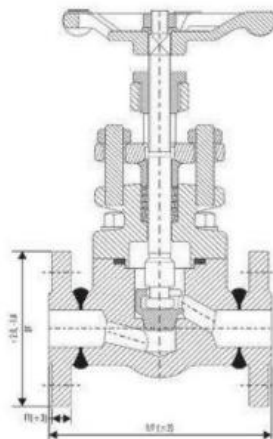
CLASS 800 #						
SIZE	F/F	oP	H(O)	H(C)	ØWH	WT (Kg)
15 mm	87	9.0	153	147	86	1.6
20 mm	92	12	158	149	86	1.9
25 mm	106	17	194	182	116	3.0
32 mm	127	23	222	208	150	6.5
40 mm	127	25	222	208	150	6.3
50 mm	142	29	263	245	150	10.1

CLASS 1500 #						
SIZE	F/F	oP	H(O)	H(C)	ØWH	WT (Kg)
15 mm	92	8	158	149	86	2.2
20 mm	106	9	194	182	116	3.5
25 mm	127	14	222	208	150	7.5
32 mm	127	20	222	208	150	7.3
40 mm	142	25	263	245	150	11.6

CLASS 2500 #						
SIZE	F/F	oP	H(O)	H(C)	ØWH	WT (Kg)
15 mm	106	7	194	182	116	4.0
20 mm	127	8	222	208	150	8.6
25 mm	142	12	263	245	150	13.3



FLANGED END GLOBE VALVES



APPLICATION STANDARDS

- Design & Manufacture confirm to API 602 / ISO 15761
- End Connection Confirm to
 - Socket weld Standard:- ASME B16.11
 - Screwed end standard:- ASME B1.20.1
 - Butt-weld standard:- ASME B16.25
 - Flange End Standard:- ASME B16.5
 - Face to Face standard:- ASME B16.10 / mfg.
- Testing Standard: API 598
- Pressure & Temp. Rating Standard:- ASME B16.34
- Structure Features
 - Bolted Bonnet / Welded Bonnet
- Material Confirms to ANSI / ASTM
 - Carbon Steel:- A105, LF2
 - Alloy Steel:- F5, F9, F11, F22, F91
 - Stainless Steel:- F304L, F316L
 - Duplex Steel:- F51, F53, F55

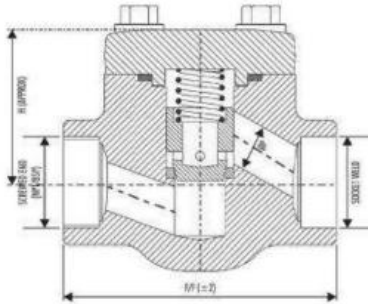
CLASS 150 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	108	90	9.6	2.6
20 mm	117	100	11.2	3.5
25 mm	127	110	12.7	5
32 mm	140	115	14.3	8.9
40 mm	165	125	15.9	9.5
50 mm	178	150	17.5	15.3

CLASS 300 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	140	95	12.7	3.4
20 mm	152	115	14.3	4.7
25 mm	165	125	15.9	6.8
32 mm	178	135	17.5	10.9
40 mm	190	155	19.1	12.5
50 mm	216	165	20.7	17.9

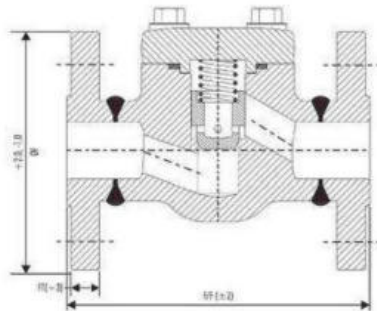
CLASS 600 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	165	95	14.3	3.6
20 mm	190	115	15.9	5.1
25 mm	216	125	17.5	7.2
32 mm	229	135	20.7	11.5
40 mm	241	155	22.3	13.5
50 mm	292	165	25.4	19.9

FORGED CHECK VALVES

CLASS 800 #				
SIZE	F/F	oP	H	WT (Kg)
15 mm	87	9.5	53	1
20 mm	92	12.7	56	1.3
25 mm	106	17.5	66	2.2
32 mm	127	23.8	86	4.9
40 mm	127	28.6	86	4.7
50 mm	142	36.5	104	8.2
CLASS 1500 #				
SIZE	F/F	oP	H(O)	WT (Kg)
15 mm	92	8	56	1.5
20 mm	106	9	66	2.5
25 mm	127	14	86	5.6
32 mm	127	20	401	5.4
40 mm	142	25	104	9.4
CLASS 2500 #				
SIZE	F/F	oP	H(O)	WT (Kg)
15 mm	106	7	66	2.9
20 mm	127	12.5	86	6.4
25 mm	142	15.5	104	10.8



FLANGED END CHECK VALVES



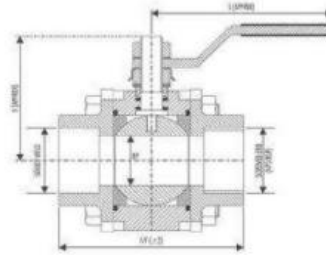
CLASS 150 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	108	90	9.6	2
20 mm	117	100	11.2	2.9
25 mm	127	110	12.7	4.2
32 mm	140	115	14.3	7.3
40 mm	165	125	15.9	7.9
50 mm	178	150	17.5	13.4
CLASS 300 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	140	95	12.7	2.8
20 mm	152	115	14.3	4.1
25 mm	165	125	15.9	6
32 mm	178	135	17.5	9.3
40 mm	190	155	19.1	10.9
50 mm	216	165	20.7	16
CLASS 600 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	165	95	14.3	3
20 mm	190	115	15.9	4.2
25 mm	216	125	17.5	6.4
32 mm	229	135	20.7	10.1
40 mm	241	155	22.3	11.9
50 mm	292	165	25.4	18

APPLICATION STANDARDS

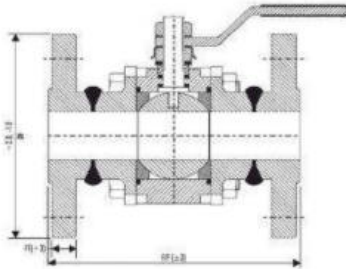
- ⦿ Design & Manufacture confirm to API 602/ ISO 15761
- ⦿ End Connection Confirm to
 - Socket weld Standard:- ASME B16.11
 - Screwed end standard:- ASME B1.20.1
 - Butt-weld standard:- ASME B16.25
 - Flange End Standard:- ASME B16.5
 - Face to Face standard:- ASME B16.10 / mfg.
- ⦿ Testing Standard: API 598
- ⦿ Pressure & Temp. Rating Standard:- ASME B16.34
- ⦿ Structure Features
 - Bolted Cover / Welded Cover
- ⦿ Material Confirms to ANSI / ASTM
 - Carbon Steel:- A105, LF2
 - Alloy Steel:- F5, F9, F11, F22, F91
 - Stainless Steel:- F304L, F316L
 - Duplex Steel:- F51, F53, F55
 - Special Grades:- INCONEL 625, MONEL K400,

3-PC BALL VALVE

CLASS 800 #					
SIZE	F/F	øP	H	L	WT (Kg)
15 mm	68	10	38	128	0.7
20 mm	73	14	40	128	1
25 mm	96	20	53	155	1.9
32 mm	103	25	56	165	2.5
40 mm	116	30.5	75	200	3.3
50 mm	128	37.3	80	200	4.7



FLANGED END BALL VALVES



APPLICATION STANDARDS

- ⊙ Design & Manufacture confirm to ISO 17292
- ⊙ End Connection Confirm to
 - Socket weld Standard:- ASME B16.11
 - Screwed end standard:- ASME B1.20.1
 - Butt-weld standard:- ASME B16.25
 - Flange End Standard:- ASME B16.5
 - Face to Face standard:- ASME B16.10 / mfg.
- ⊙ Testing Standard: API 598 / EN 12266-1
- ⊙ Pressure & Temp. Rating Standard:- ASME B16.34
- ⊙ Structure Features
 - Bolted Cover / Welded Cover
- ⊙ Material Confirms to ANSI / ASTM
 - Carbon Steel:- A105, LF2
 - Alloy Steel:- F5, F9, F11, F22, F91
 - Stainless Steel:- F304L, F316L
 - Duplex Steel:- F51, F53, F55
 - Special Grades:- INCONEL 625, MONEL K400, ALLOY 20

CLASS 150 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	108	90	9.6	1.7
20 mm	117	100	11.2	2.6
25 mm	127	110	12.7	3.9
32 mm	140	115	14.3	4.9
40 mm	165	125	15.9	6.5
50 mm	178	150	17.5	9.9
CLASS 300 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	140	95	12.7	2.5
20 mm	152	115	14.3	3.8
25 mm	165	125	15.9	5.7
32 mm	178	135	17.5	6.9
40 mm	190	155	19.1	9.5
50 mm	216	165	20.7	12.5
CLASS 600 #				
SIZE	F/F	ØF	FT	WT (Kg)
15 mm	165	95	14.3	2.7
20 mm	190	115	15.9	4.2
25 mm	216	125	17.5	6.1
32 mm	229	135	20.7	7.7
40 mm	241	155	22.3	10.5
50 mm	292	165	25.4	14.5

Y TYPE STRAINERS

FEATURES

- ⦿ Low pressure drop streamlined design
- ⦿ Large strainer screens
- ⦿ Compact end to end dimension

END CONNECTIONS

- ⦿ Flat Faced
- ⦿ Raised face
- ⦿ RTJ Flanged
- ⦿ Butt Weld ends
- ⦿ Threaded (NPT)
- ⦿ Socket weld Ends

MATERIALS

- ⦿ Cast Steel
- ⦿ Stainless Steel
- ⦿ Other Materials upon request

RATINGS

- ⦿ ASME Class 150
- ⦿ ASME Class 300
- ⦿ ASME Class 600
- ⦿ ASME Class 900
- ⦿ ASME Class 1500



SIMPLEX & DUPLEX TYPE STRAINERS

FEATURES

- ⦿ Offset strainer & Inline Strainer basket housing
- ⦿ Bolted or Welded construction
- ⦿ Available with mesh or wedge wire lined
- ⦿ Swing bolt closure allows for quick element change out.
- ⦿ Compact and economical units available
- ⦿ Davit used on larger vessels to facilitate basket change out .

MATERIALS

- ⦿ Cast Steel
- ⦿ Stainless Steel
- ⦿ Other Materials upon request

RATINGS

- ⦿ ASME Class 125
- ⦿ ASME Class 150
- ⦿ ASME Class 300
- ⦿ ASME Class 600
- ⦿ Higher class ratings upon request

END CONNECTIONS

- ⦿ Flat Faced Flanged
- ⦿ Raised faced Flanged
- ⦿ Ring Joint Flanged
- ⦿ Butt Weld ends



BAG FILTERS

FEATURES

- ⊙ Single & multi-purpose bag filter housings.
- ⊙ Accepts double or single length baskets.
- ⊙ Vessels available in carbon or stainless steel 304 or 316
- ⊙ Swing bolt closure allows for quick bag change out

RATINGS

- ⊙ ASME Class 125
- ⊙ ASME Class 150
- ⊙ Higher class ratings upon request

MATERIALS

- ⊙ Stainless steel
- ⊙ Other materials upon request

END CONNECTIONS

- ⊙ Flat faced flange
- ⊙ Raised faced flange



TEMPORARY STRAINERS

FEATURES

- ⊙ Cone, basket & plate strainers
- ⊙ 100% to 300% open area range as standard
- ⊙ Custom engineered designs available

SIZE:

- ⊙ 3/4" (20mm) up to 24" (600mm) as standard
- ⊙ Larger sizes available upon request

MATERIALS

- ⊙ Stainless steel
- ⊙ Carbon steel
- ⊙ Other materials upon request

END CONNECTIONS

- ⊙ Flat faced
- ⊙ Raised faced
- ⊙ RTJ flanged



T TYPE STRAINERS

FEATURES

- ⊙ Horizontal installations
- ⊙ Stainless steel perforated screens
- ⊙ Through bolt cover is standard

RATINGS:

- ⊙ ASME Class 150
- ⊙ ASME Class 300
- ⊙ ASME Class 600
- ⊙ ASME Class 900
- ⊙ ASME Class 1500
- ⊙ Higher class ratings upon request

MATERIALS

- ⊙ Stainless steel
- ⊙ Carbon steel
- ⊙ Other materials upon request

END CONNECTIONS

- ⊙ Flat faced flanged
- ⊙ Raised faced flanged
- ⊙ Ring Joint flanged
- ⊙ Butt welded flanged



OPTIONAL ACCESSORIES & SPARES

- ⊙ Differential pressure indicator/inlet and outlet pressure gauges to indicate clogged screen (time for cleaning)
- ⊙ Special cover arrangement to ease maintenance operation.
- ⊙ Spare screens, gaskets and fasteners to reduce process downtime.
- ⊙ Mesh size is based on customer's requirement.

TECHNICAL DATA :

CONSTRUCTION :

3 piece design, Single piece stem (Spindle) Reinforced Ball, Teflon seated, full bore.

DESIGN AND MANUFACTURING STD. :

As per Manufacturer's Standard

END CONNECTIONS :

Flanged as per ANSI B 16.5 (150 #) & as per BS 10 (Table D/E/F) & DIN STD.

AVAILABLE M.O.C. :

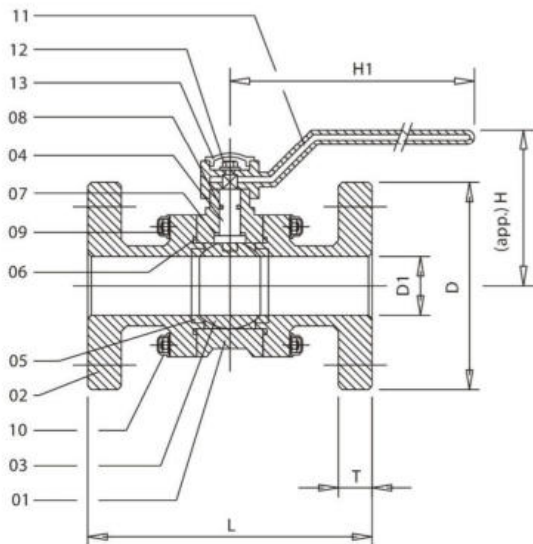
PP (POLYPROPYLENE) | HDPE (HIGH DENSITY POLYETHYLENE) ISOTACTIC PP | PVDF (POLYVINYLIDENE FLUORIDE)

AVAILABLE SIZE :

½" (15 NB) to 12" (300 NB)



PP / HDPE BALL VALVE - Flange End



NO.	DESCRIPTION	MATERIAL OPTION	QTY.
01	BODY	PP / HDPE / ISOPP / PVDF	1
02	SIDE PIECE/CONNECTOR	PP / HDPE / ISOPP / PVDF	2
03	BALL	PP / HDPE / ISOPP / PVDF	1
04	STEM/SPINDLE	M.S./S.S.PP/ISOPP/PVDF COATED	1
05	SEAT RING	PTFE	2
06	CONNECTOR SEAL	NEOPRENE RUBBER / PTFE	2
07	STEM SEAL RING	PTFE	1
08	STEM O-RING	NEOPRENE	1
09	STUD, NUT & WASHER	M.S. (EN8) / S.S. 316	REQ.
10	NUT CAP	PP	REQ.
11	HANDLE	M.S. PP COATED	1
12	HANDLE HEX. PIN	M.S. (EN8) / S.S. 316	1
13	HANDLE CAP	PP	1

SIZE		CODE	ØD	ØD1	L	T	H	H1
IN.	NB							
½"	15	P1BF01	100.0	13.5	129.0	13.0	69.0	131.0
¾"	20	P1BF02	101.0	19.0	142.0	14.0	75.0	131.0
1"	25	P1BF03	121.0	25.0	158.0	21.0	92.0	161.0
1 ½"	40	P1BF04	138.0	38.0	182.0	22.0	111.0	205.0
2"	50	P1BF05	165.0	50.0	210.0	23.0	122.0	205.0
2 ½"	65	P1BF06	182.0	63.5	234.0	25.0	140.0	262.0
3"	80	P1BF07	200.0	75.0	252.0	25.0	148.0	262.0
4"	100	P1BF08	226.0	100.0	297.0	28.0	170.0	335.0
6"	150	P1BF09	303.0	150.0	425.0	32.0	236.0	498.0
8"	200	P1BF10	360.0	200.0	497.0	32.0	283.0	498.0
10"	250	P1BF11	Available On Request					
12"	300	P1BF12	Available On Request					

ALL DIMENSIONS ARE IN MM

(±2 MM)

WORKING PRESSURE		
BODY	SEAT	TEMP.
150 PSI	100 PSI	80° C

Note : We will also provide in :

- SS 316 Parts (Stem, Fasteners)
- Glass Filled Ball, PVDF Ball,
- M.O.C.: PVDF / PP-H for details & prices Contact us.
- Material Code P1 : Polypropylene



Pressure Reducing Valve-DS-451



Technical Specifications

Size	1/2" Through 2" Screwed End & Flanged End
Rating	ASME Class 150# & 300#
Material	WCB/ CF8/ CF8M/ Alloy Steel
Media	Steam, Air, Gas, Liquid
Inlet Pressure	Up to 500 PSI-G
Outlet Pressure	2 to 450 PSI-G
Temperature	-40 to 350 Deg. C

This model is used for general service. self contained pressure reducing regulators. Unit handles inlet pressure up to 400 psig (27.6 Barg) and outlet pressure from 2 to 250 psig (0.14 to 17.2 Barg) in multiple spring ranges. it is utilized for the majority of industrial pressure reducing application.

Single Stage Pressure Regulator DS-101

Technical Specifications

Size	1/4" Through 1" Screwed End
Rating	4000 PSI-G
Material	SS 304/ SS 316/ Alloy Steel
Media	Air, Gas
Inlet Pressure	3600 PSI-G with P.T.F.E & 6000 PSI-G with PEEK
Outlet Pressure	0 to 500 PSI-G
Temperature	Up to 250 Deg. C

Pressure reducing regulators controls outlet pressure by balancing as adjustable spring force against the forces causes by inlet and outlet pressures. The spring force is adjusted by turning the knob, which sets the desired outlet pressure. As inlet pressure decreases the force balance changes to compensate outlet pressure will increase. This supply pressure effect is a function of the design and type of regulators.

- Convoluted non-perforated diaphragm.
- Metal to metal diaphragm seal
- Low internal volume
- Single piece cap design provides liner load on the diaphragm seal
- High flow, dual gauze type filter positively retained in inlet port.





METFLOW ENGINEERS

THE COMPLETE SOLUTION



Government Of India
Ministry Of Commerce and Industry
Directorate General of Foreign Trade

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