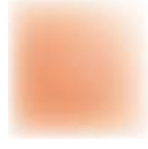


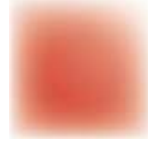
GATE VALVE



GLOBE VALVE



CHECK VALVE



BALL VALVE



Y STRAINER - NEEDLE VALVE  
BUTTERFLY VALVE

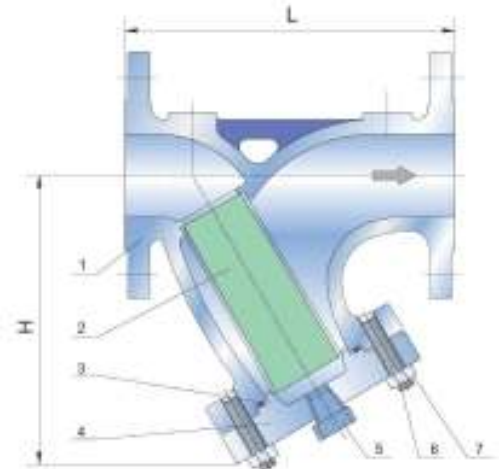


TECHNICAL DATA

# SPECIFICATION

## MANUFACTURING STANDARDS

General Design	ASME/ANSI B16.34
Fire Safe Design	API 6FA
Face To Face	ASME/ANSI B16.10
Flange End	ASME/ANSI B16.5 & B16.47
Inspection & Test	API 598 / API 6D
Features	Perforated Screen, Drain Plug



## STANDARD PARTS & MATERIAL

No.	Parts	Carbon Steel	Stainless Steel	
1	Body	A216 WCB	A351 CF8	A351 CF8M
2	Cover	A216 WCB	A351 CF8	A351 CF8M
3	Screen	SS304/SS316	SS304	SS316
4	Gasket	Graphite		
5	Plug	A105	SS304	SS316
6	Cover Bolt	A193 B7	A193 B8	A193 B8M
7	Cover Nut	A194 2H	A194 8	A194 8M

Other valve material composition are available.

CLASS 150 ASME B16.34	Size (In)	L	H	Plug Size (In)	Wt. (Kg)
	2	200 ( 7.87)	133 ( 5.23)	0.50	8
	2.1/2	248 ( 9.76)	165 ( 6.50)	1.00	13
	3	256 (10.08)	178 ( 7.01)	1.00	15
	4	308 (12.13)	210 ( 8.27)	1.50	25
	5	397 (15.63)	286 (11.26)	2.00	40
	6	470 (18.50)	343 (13.50)	2.00	69
	8	543 (21.37)	394 (15.51)	2.00	100
	10	660 (25.98)	470 (18.50)	2.00	145
	12	759 (29.88)	565 ( 22.24)	2.00	250
	14	914 (35.98)	635 (25.00)	2.00	442
16	1056 (41.57)	673 (26.50)	2.00	741	

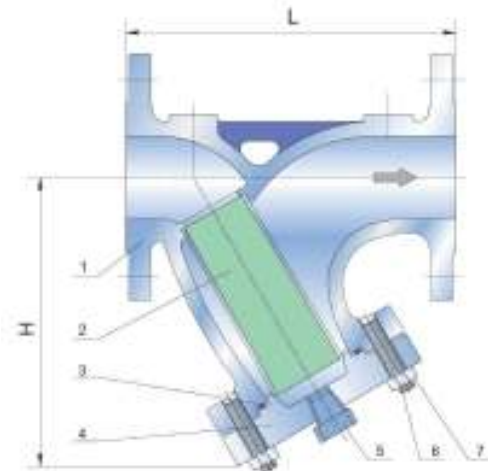
Standard Fig. No. 9A1C1

Unit : mm (inch)

# SPECIFICATION

## MANUFACTURING STANDARDS

General Design	ASME/ANSI B16.34
Fire Safe Design	API 6FA
Face To Face	ASME/ANSI B16.10
Flange End	ASME/ANSI B16.5 & B16.47
Inspection & Test	API 598 / API 6D
Features	Perforated Screen, Drain Plug



CLASS 300 ASME B16.34	Size (In)	L	H	Plug Size (In)	Wt. (Kg)
	2	219 ( 8.62)	133 ( 5.24)	0.50	10
	2.1/2	269 (10.59)	165 ( 6.50)	1.00	14
	3	305 (12.00)	178 ( 7.00)	1.00	22
	4	368 (14.49)	210 ( 8.27)	1.50	40
	5	491 (19.33)	343 (13.50)	2.00	79
	6	491 (19.33)	343 (13.50)	2.00	79
	8	594 (23.39)	400 (15.75)	2.00	136
	10	695 (27.36)	470 (18.50)	2.00	200
	12	813 (32.00)	565 (22.24)	2.00	295
	14	914 (35.98)	635 (25.00)	2.00	619
	16	1056 (41.57)	673 (26.50)	2.00	878

Standard Fig. No. 9A1C3

CLASS 600 ASME B16.34	Size (In)	L	H	Plug Size (In)	Wt. (Kg)
	2	279 (10.98)	178 ( 7.00)	0.50	18
	2.1/2	305 (12.00)	210 ( 8.27)	1.00	27
	3	343 (13.50)	235 ( 9.25)	1.25	35
	4	456 (17.95)	318 (12.52)	1.50	73
	5	565 (22.24)	381 (15.00)	2.00	115
	6	651 (25.63)	508 (20.00)	2.00	165
	8	806 (31.73)	610 (24.02)	2.00	304
	10	957 (37.67)	724 (28.50)	2.00	495
	12	1156 ( 45.51)	876 (34.49)	2.00	708

Standard Fig. No. 9A1C6

Unit : mm (inch)

## SPECIFICATION

## MANUFACTURING STANDARDS

General Design	ASME/ANSI B16.34
Construction	Investment Cast / Bar stock Body
Features	Soft or metal seat Bonnet with locking pin O-ring seal
Fire Safe Design	API 6FA
Ratings	6000 PSI / 10000 PSI
Connection	Threaded ASME B1.20.1 Male / Female x Female NPT

## STANDARD PARTS &amp; MATERIAL

No.	Parts	6000 WOG Series NA28M60	10000 WOG Series NA28M100
1	Body	SS 316	
2	Bonnet	SS 316	
3	Stem	SS 316 / NITRONIC 60	
4	Seat	DELRIN / PEEK / SS 316	SS 316
5	Stem Seal	PTFE	
6	Stem Packing	NYLON	
7	O-ring	VITON	

Other valve material composition are available.

6000 PSI WOG	Port	Size (In)	Bore Size	End to End (L)	Center to Lever (H)	Length of Handle (mm)
	FULL BORE	1/4	4.7 (0.19)	50.8 (2.00)	83.5 (3.29)	65
		1/2	7.0 (0.28)	63.5 (2.50)	96.8 (3.81)	91
		3/4	9.5 (0.37)	75.0 (2.95)	114.0 (4.49)	100
		1	11.8 (0.46)	100.0 (3.94)	133.9 (5.27)	120

Unit : mm (inch)



10000 PSI WOG	Port	Size (In)	Bore Size	End to End (L)	Center to Lever (H)	Length of Handle (mm)
	FULL BORE	1/4	4.8 (0.19)	73.2 (2.89)	78.6 (3.09)	72
		1/2	4.8 (0.19)	73.2 (2.89)	78.6 (3.09)	72

Unit : mm (inch)

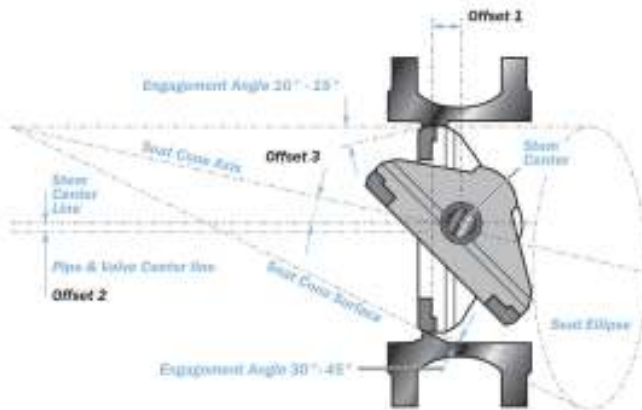


## BUTTERFLY VALVE APPLICATION

Butterfly valve derives its name from the action of its disc which operates at right angle to flow. It is designed for flow isolation. The disc impinges against a seat liner to provide sealing with low operating torque. Compact and with simple construction, butterfly valves facilitate easy pipe arrangement. Butterfly valves are quick acting with good regulating characteristics. Compact and light with low pressure isolation. They range in a wide range of size and can be controlled by a notched handle, gear, or pneumatic or electric actuators.

## MANUFACTURING STANDARDS

General Design	API 609, BS 5155, ASME B16.34
Fire Safe Design	API 607 / API 6FA
Flange End	ASME/ANSI B16.5 & B16.47
Inspection & Test	API 598
Type	Wafer, Lug, Flanged
Operation	Lever , Gear , Actuators



### 1. Single Offset

The center of rotation is moved back from the centerline of the valve disc. The seat and seal are designed conically and on center. This design relies on a frictional, interference seal.

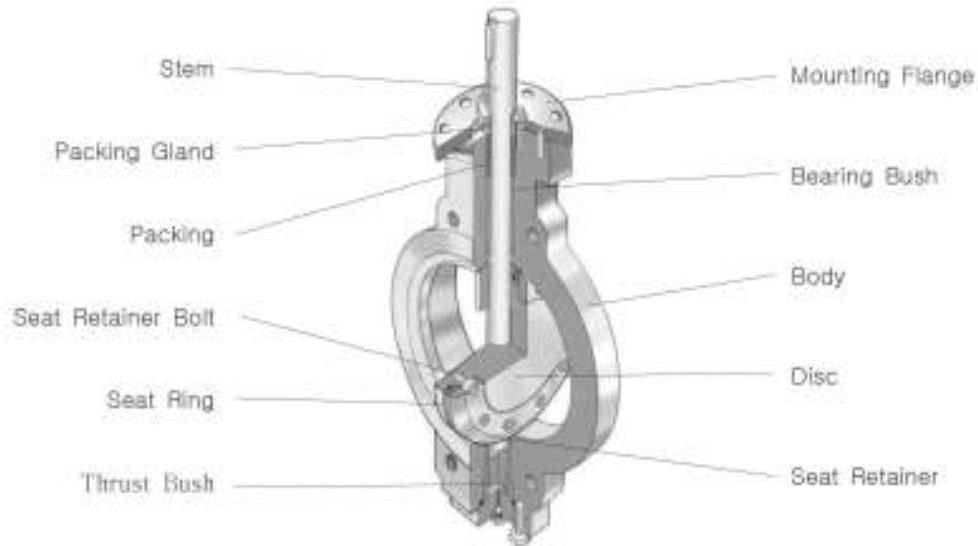
### 2. Double Offset

The center of rotation is moved back from the centerline of the valve body. The seat and seal design remains conically and on center. This provided eccentric rotation of the disc which swung the seal ring completely off the seat upon opening.

### 3. Triple Offset

The centerline of the cone is rotated away from the valve centerline resulting in an ellipsoidal profile, providing the third offset. Seat seal interference is completely eliminated ensuring long sealing life. The triple offset design is ideally suited to metal sealing providing high performance on multiple applications

# SPECIFICATION



## STANDARD PARTS & MATERIAL

No.	Parts	Material		
		Carbon Steel	SS304	SS316
1	Body	A 216 WCB	A351-CF8	A351-CF8M
2	Disc	WCB/CF8/CF8M	A351-CF8	A351-CF8M
3	Seat Ring	Soft (NBR/EPDM/PTFE), Metal (SS304/SS316/Stellite)		
4	Seat Retainer	A105/F304/F316	A182-F304	A182-F316
5	Seat Retainer Bolt	Stainless Steel		
6	Stem	17-4PH/A182-F6a/SS304/SS316		
7	Bearing Bush	SS+PTFE/Graphite		
8	Packing	PTFE/Graphite		
9	Packing Gland	A105/F304/F316	A182-F304	A182-F316
10	Mounting Flange	A105	A105/F304	A104/F316
11	Thrust Bushing	SS+PTFE/Graphite		

Other valve material composition are available.

# SPECIFICATION

# BUTTERFLY VALVE



LUG TYPE



WAFER TYPE



FLANGE TYPE

CLASS 150	SIZE (In)	H1	H2	L			Weight (Kg)		
				Lug	Wafer	Flg.	Lug	Wafer	Flg.
	2	305 (12.00)	105 ( 4.13)	43 (1.69)	43 (1.69)	108 ( 4.25)	5	4	8
2.1/2	315 (12.40)	115 ( 4.53)	46 (1.81)	46 (1.81)	112 ( 4.41)	7	5	10	
3	330 (12.99)	125 ( 4.92)	48 (1.89)	48 (1.89)	114 ( 4.49)	9	7	12	
4	360 (14.17)	150 ( 5.91)	54 (2.13)	54 (2.13)	127 ( 5.00)	12	10	16	
5	450 (17.71)	160 ( 6.30)	64 (2.52)	64 (2.52)	140 ( 5.51)	16	14	21	
6	475 (18.70)	185 ( 7.28)	57 (2.25)	57 (2.25)	140 ( 5.51)	14	11	21	
8	525 (20.67)	245 ( 9.65)	64 (2.52)	64 (2.52)	152 ( 9.98)	32	25	54	
10	520 (20.47)	275 ( 10.83)	71 (2.80)	71 (2.80)	165 ( 6.50)	48	39	82	
12	660 (25.98)	315 (12.40)	81 (3.12)	81 (3.12)	178 ( 7.00)	70	51	136	
14	670 (26.38)	330 (12.99)	92 (3.62)	92 (3.62)	190 ( 7.48)	102	80	151	
16	730 (28.74)	365 (14.37)	102 (4.02)	102 (4.02)	216 ( 8.50)	144	104	213	
18	810 (31.89)	390 (15.35)	114 (4.49)	114 (4.49)	222 ( 8.74)	188	153	313	
20	885 (34.84)	430 (16.93)	127 (5.00)	127 (5.00)	229 ( 9.02)	244	192	386	
24	940 (37.00)	470 (18.50)	154 (6.06)	154 (6.06)	267 (10.51)	378	288	552	

Standard Fig. No. BA1C1

CLASS 300	SIZE (In)	H1	H2	L			Weight (Kg)		
				Lug	Wafer	Flg.	Lug	Wafer	Flg.
	2	305 (12.00)	105 ( 4.13)	43 (1.69)	43 (1.69)	108 ( 4.25)	10	6	13
2.1/2	315 (12.40)	115 ( 4.53)	46 (1.81)	46 (1.81)	112 ( 4.41)	11	7	15	
3	330 (12.99)	125 ( 4.92)	48 (1.89)	48 (1.89)	114 ( 4.49)	13	9	17	
4	360 (14.17)	150 ( 5.91)	54 (2.13)	54 (2.13)	127 ( 5.00)	16	12	21	
5	450 (17.71)	160 ( 6.30)	64 (2.52)	64 (2.52)	140 ( 5.51)	19	15	28	
6	475 (18.70)	185 ( 7.28)	59 (2.32)	57 (2.25)	140 ( 5.51)	24	19	34	
8	525 (20.67)	245 ( 9.65)	73 (2.87)	64 (2.52)	152 ( 9.98)	45	33	63	
10	520 (20.47)	275 ( 10.83)	83 (3.27)	71 (2.80)	165 ( 6.50)	69	54	93	
12	660 (25.98)	315 (12.40)	92 (3.62)	81 (3.12)	178 ( 7.00)	98	72	158	
14	670 (26.38)	330 (12.99)	117 (4.61)	92 (3.62)	190 ( 7.48)	164	125	254	
16	730 (28.74)	365 (14.37)	133 (5.24)	102 (4.02)	216 ( 8.50)	245	139	335	
18	810 (31.89)	390 (15.35)	149 (5.87)	114 (4.49)	222 ( 8.74)	393	252	533	
20	885 (34.84)	430 (16.93)	159 (6.26)	127 (5.00)	229 ( 9.02)	490	284	674	
24	940 (37.00)	470 (18.50)	181 (7.13)	154 (6.06)	267 (10.51)	834	509	1121	

Standard Fig. No. BA1C3

Unit : mm (inch)

# GLT VALVES