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A trusted name in industrial valve company

**TRIPLE
OFFSET
BUTTERFLY
VALVE**

PRESSURE CLASS:

150-600

SIZE RANGE:

3" to 48"

API STANDARDS: 609

ASME B16.34

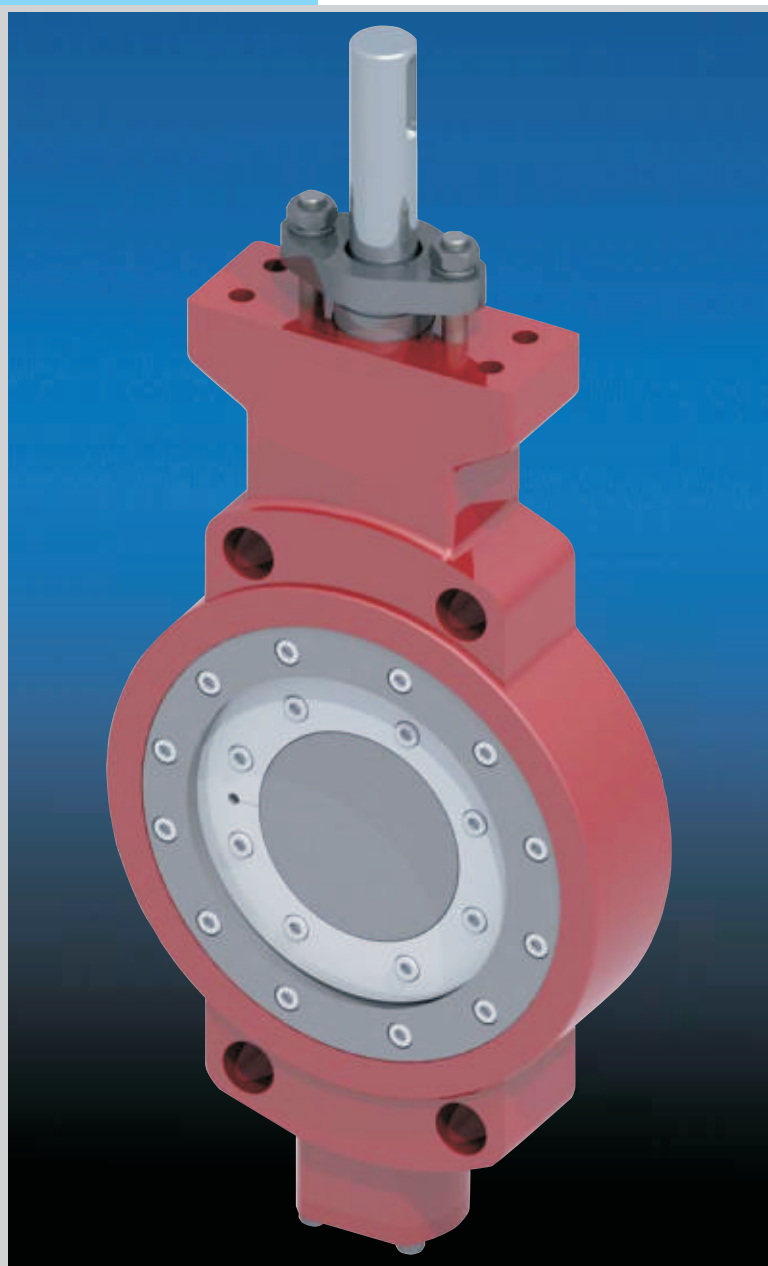




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Flanged Type Butterfly Valve

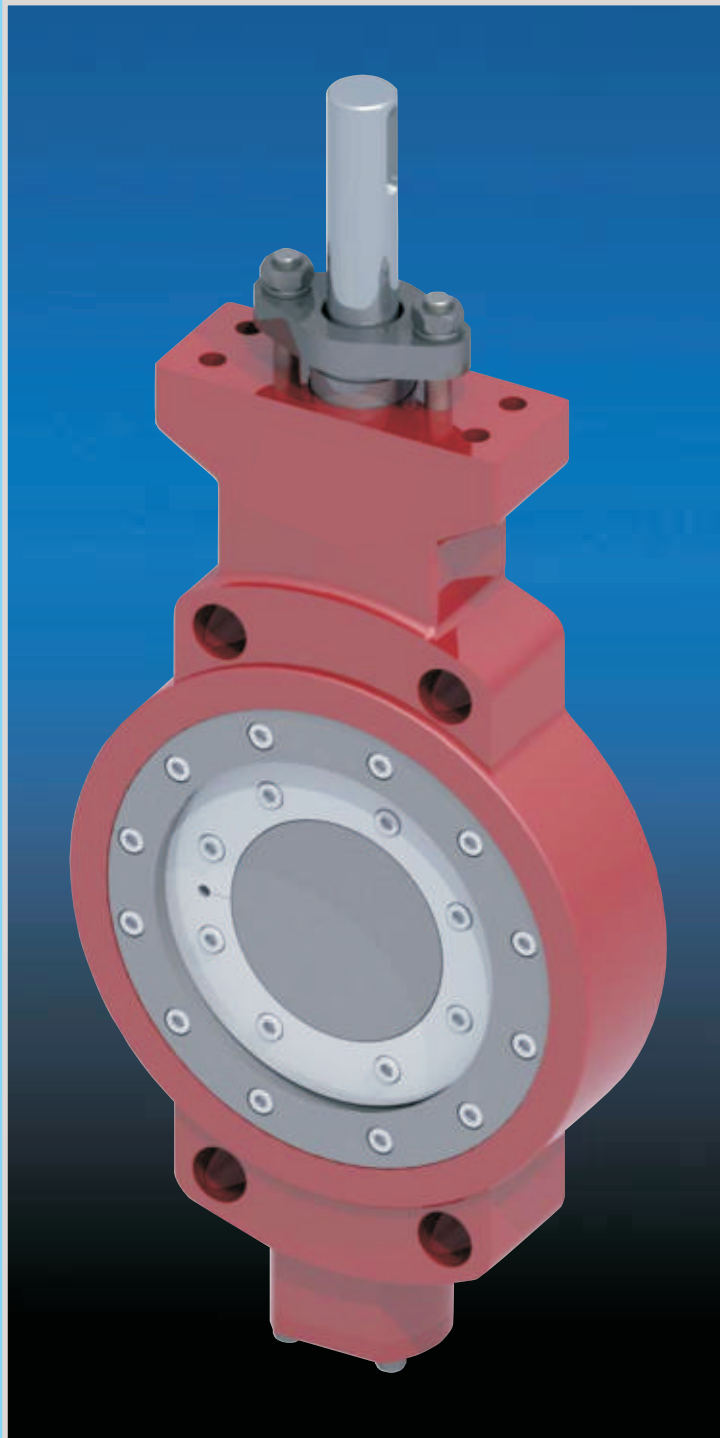
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Fastwell Triple Offset Butterfly Valve is from the family of quarter-turn valves. This valve is designed and manufactured to meet API 609 and ASME B16.34 specifications.

DESCRIPTION OF VALVE

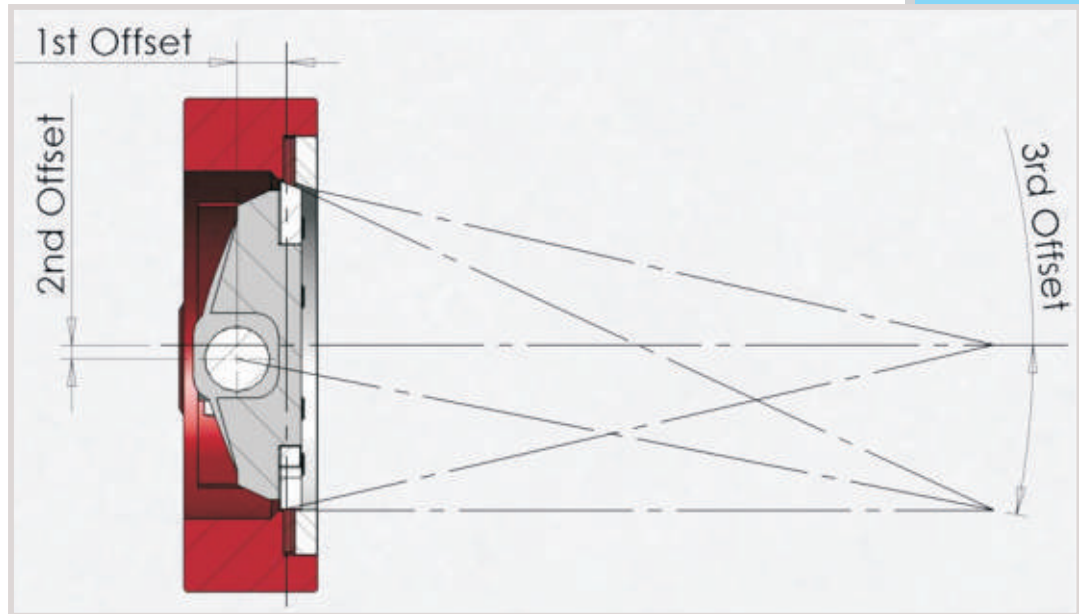
- Sizes from 3" (80mm) to 48" (1200mm) are standard.
- 150, 300 & 600 ASME Class ratings are standard.



- Wafer, Lug and Flanged constructions.
- Face-to-Face lengths are as per ASME B16.10, API 609, ISO 5752 and BS5155 are available.
- Testing according to API 598. Other testing standards such as ISO 5208 are available upon request.
- Triple offset valves are bidirectional.
- Fire Safe certified as per API 607.
- Gear operator can be attached with bracket with the ISO 5211 bolt pattern.
- Fastwell Triple Offset Butterfly Valves have a center disc mounted to the vertical stem with disc pins.
- The disc is mounted eccentric from the stem and valve axis.
- When the stem rotates, the disc rotates about the vertical stem axis to close or open the valve.
- The Body has a metal seat with laminated graphite.
- Conical body seat and disc for creating third offset to reduce the seat wear.
- The stem is a blowout proof design which prevents the stem from blowing out in case of stem breakage.
- The seat is retained by the seat retainer in the seat pocket with retainer screws, which prevents the seat from blow-out during operation.
- The seat can be changed between soft seat, metal seat and fire safe seat without changing the seat retainer which is bolted to the body.
- Tight shutoff leakage class VI is achievable.
- High temperature up to 750F (400C).

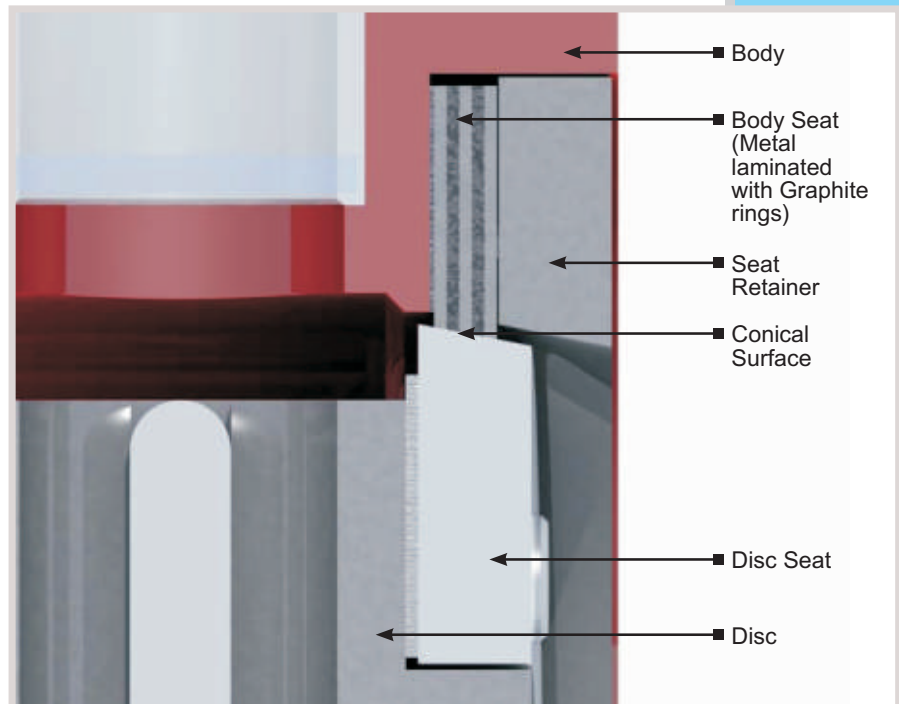
TRIPLE ECCENTRIC DISC-SHAFT

- The 1st offset increases the sealing capacity.
- 2nd offset reduces the running torque and friction between disc and seat.
- 3rd offset, the cone shaped disc seat and body seat help prevent abrasion of the seat.



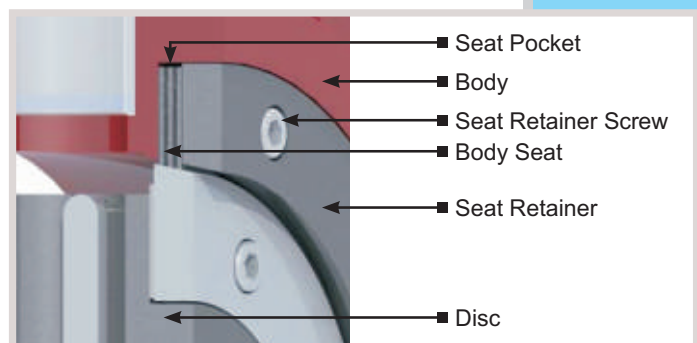
LAMINATED BODY SEAT

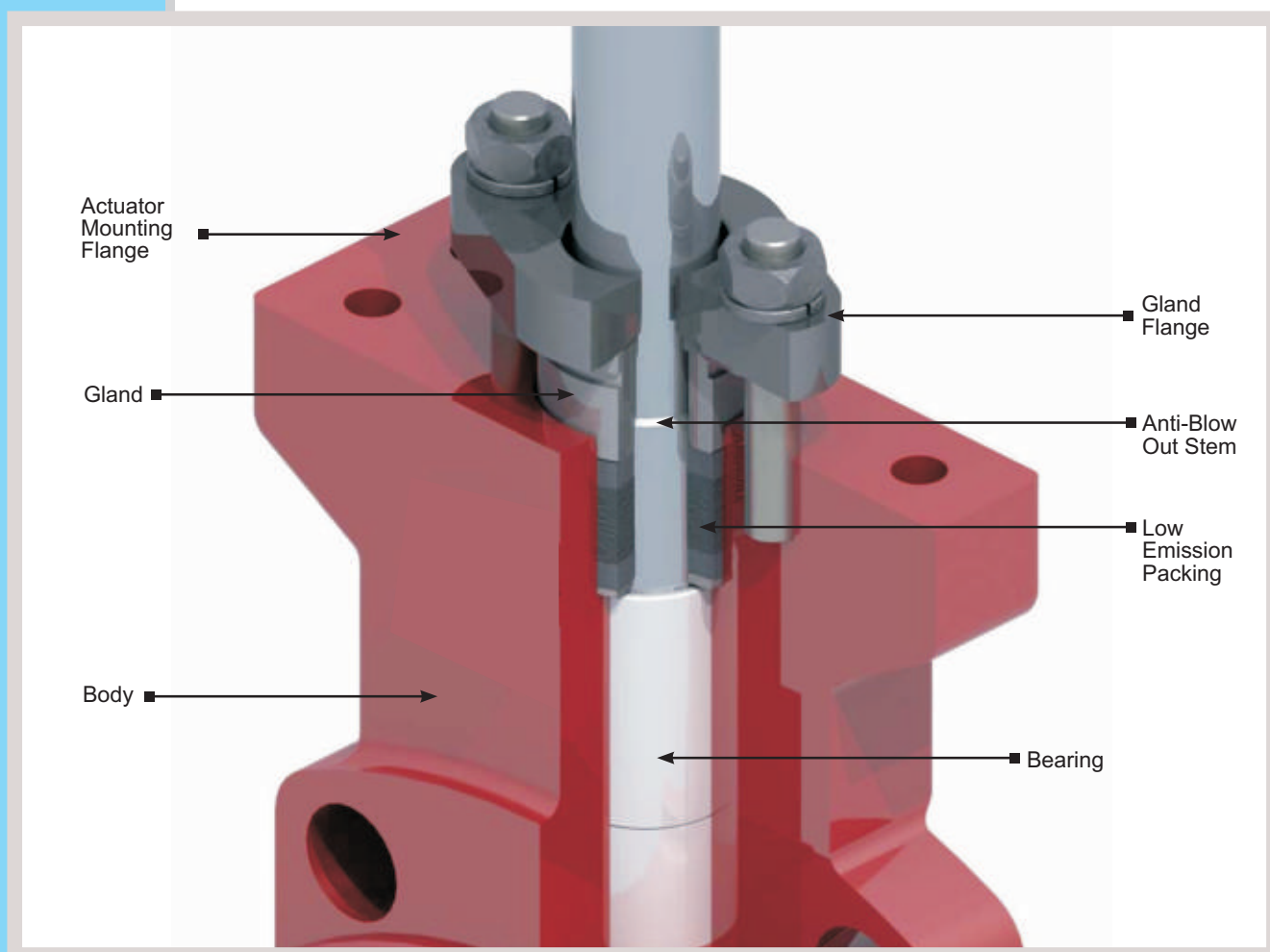
- Metallic Seat (red color) are laminated with graphite (black color).
- Laminated seat fixed to the body does not face the flow directly. Due to this feature the seat wear is minimized and hence the seat lasts longer.
- The conical surface of the disc develops less friction to the fluid flow when the valve is in the fully open position and allows the flow to move smoothly around the seat. Hence the pressure drop will be minimized.



BLOW-OUT PROOF SEAT

- Fastwell Triple Offset Butterfly Valve has a unique seat and seat retainer design to minimize the seat movement.
- The seat retainer is bolted to the body, the retainer plate holds the seat in the seat pocket and hence a seat blow-out is avoided.





BLOW-OUT PROOF STEM

- The Stem has an anti-blowout groove to protect the stem from blowout in case of stem breakage.
- Low emission packing prevents any leakage of medium into the atmosphere.

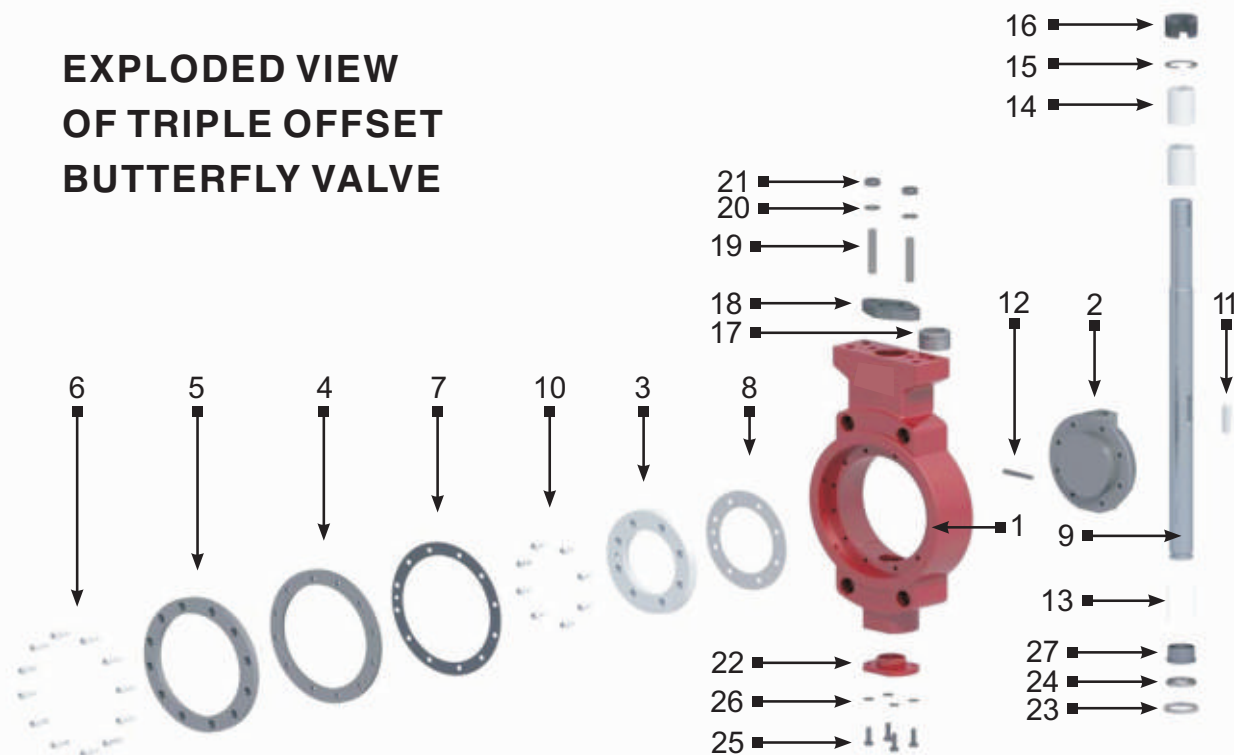
Direct Actuator Mounting

- Fastwell Triple Offset Butterfly Valve allows mounting of an actuator with a mounting bracket.
- The Mounting Flange is drilled with ISO 5211 hole pattern.

STANDARD PARTS & MATERIALS

NO.	PART NAME	STANDARD	
1	Body	A216-WCB	A351-CF8M
2	Disc	A216-WCB	A351-CF8M
3	Disc Seat	Stainless Steel 316	Stainless Steel 316
4	Body Seat	Laminated Stainless Steel 316/ Graphite	Laminated Stainless Steel 316/ Graphite
5	Seat Retainer	Steel	Stainless Steel 316
6	Seat Retainer Screw	Stainless Steel	Stainless Steel
7	Body Seat Gasket	Graphite	Graphite
8	Disc Seat Gasket	Graphite	Graphite
9	Stem	A564-630 H1100	A564-630 H1100
10	Disc Seat Screw	Stainless Steel	Stainless Steel
11	Key	630SS	630SS
12	Disc Pin	Stainless Steel 316	Stainless Steel 316
13	Stem Bearing	Stainless Steel 304 + Nitr. or Hcr.	Stainless Steel 316 + Nitr. or Hcr.
14	Collar	Stainless Steel 304	Stainless Steel 316
15	Packing Retainer	Stainless Steel 316	Stainless Steel 316
16	Packing	Graphite	Graphite
17	Packing Gland	Stainless Steel 304	Stainless Steel 316
18	Gland Flange	Stainless Steel 304	Stainless Steel 316
19	Stud Bolt	Stainless Steel	Stainless Steel
20	Spring Washer	Stainless Steel	Stainless Steel
21	Nut	Stainless Steel	Stainless Steel
22	End Cap	Steel	Stainless Steel 316
23	End Gasket	Graphite	Graphite
24	Shaft Retainer	Stainless Steel 316	Stainless Steel 316
25	End Cap Screw	Stainless Steel	Stainless Steel
26	Spring Washer	Stainless Steel	Stainless Steel
27	Thrust Bearing	Stainless Steel 304	Stainless Steel 316

EXPLODED VIEW OF TRIPLE OFFSET BUTTERFLY VALVE



Example: 8" Figure #TO15W-1-A467-GO

TO	15	W	-	1	-	A	4	6	7	-	GO
1.	2.	3.		4.		5.	6.	7.	8.		9.

8" CLASS 150 TRIPLE OFFSET BUTTERFLY VALVE, WAFER TYPE, A216 WCB BODY, A351 CF8M DISC, 17-4PH STEM, 316SS/GRAPHITE SEAT, FIRESAFE, GEAR OP.

1. MODEL

TO - TRIPLE OFFSET BUTTERFLY VALVE

2. RATING

15 - CLASS 150
30 - CLASS 300

60 - CLASS 600

3. END CONNECTION

W - WAFER
L - LUG

DF - DOUBLE FLANGE

4. TYPE

1 - FIRE-SAFE

5. MATERIAL (BODY)

A - WCB
C - LCC
D - LCB

M - CF8
N - CF8M
O - CF3

X - OTHER

6. MATERIAL (DISC)

1 - WCB + ENP
3 - CF8

4 - CF8M
X - OTHER

7. STEM

6 - 17-4PH
X - OTHER

8. SEAT

7 - 316SS/GRAPHITE
X - OTHER

9. OPERATOR

- LEVER
GO - GEAR OPERATOR

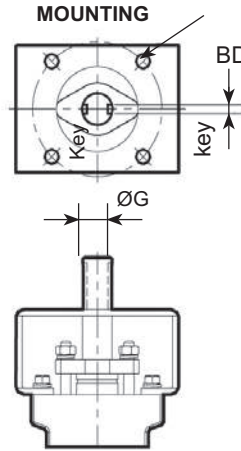
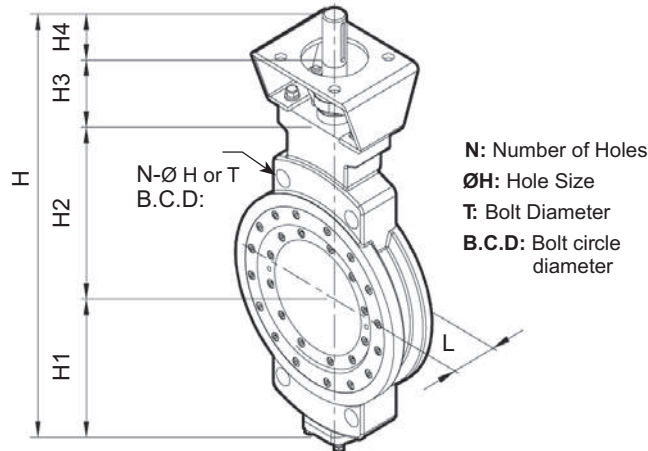
B - BARE STEM

10. SPECIAL REQUIREMENT

N - NACE MR-01-75
S - SUPPLY COMPLETE INFORMATION

EB - EXTENDED BONNET

TRIPLE OFFSET BUTTERFLY VALVE WAFER TYPE



n-øh2 Holes

n: Number of Holes
 Øh2: Hole Size
 T: Bolt Diameter
 BD: Bolt circle diameter

NOTE

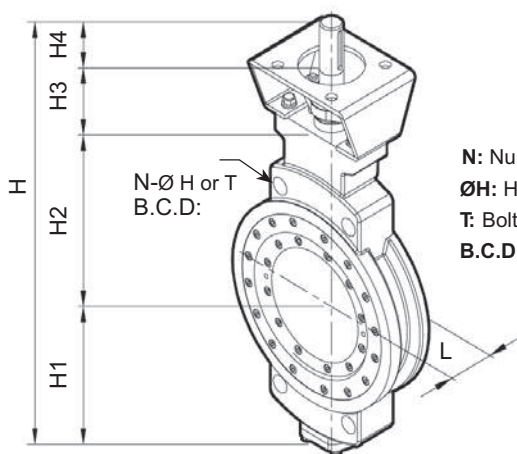
1. Flange Dimensions: ANSI B16.5 & ANSI B16.47 Series A

2. Mounting Dimensions is based on ISO 5211 but Adjustable.

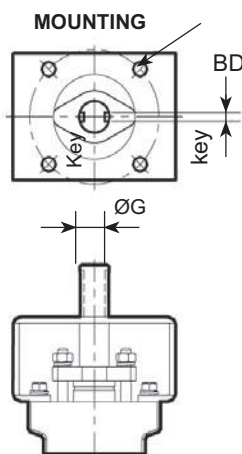
3. Dimensions are subject to change without notice.

CLASS 150

							FLANGE DIMENSIONS				MOUNTING DIMENSIONS			
SIZE	H	H1	H2	H3	H4	L	B.C.D	N	ØH or T	ØG	Key (mm)	BD	n	Øh2
3	14	4.53	5.3	2.95	1.38	1.93	6	2	0.75	0.75	6x6	4	4	0.43
4	16.06	5.63	6.3	2.95	1.38	2.13	7.5	4	0.75	0.87	8X7	4	4	0.43
6	19.9	6.9	8.27	3.15	1.57	2.28	9.5	4	0.87	0.98	8x7	4	4	0.43
8	22.17	7.8	9.25	3.15	1.97	2.52	11.75	4	0.87	1.14	8x7	4.92	4	0.51
10	26.26	9.53	10.83	3.54	2.36	2.83	14.25	4	1	1.38	10x8	5.51	4	0.71
12	28.03	10.51	11.61	3.54	2.36	3.23	17	4	1	1.5	12x8	5.51	4	0.71
14	31.3	11.61	12.6	4.72	2.36	3.62	18.75	4	1"x8unc	1.5	12x8	6.5	4	0.87
16	35.04	12.8	14.57	4.72	2.95	4.02	21.25	4	1"x8unc	1.85	14x9	6.5	4	0.87
18	38.78	14.57	16.54	4.72	2.95	4.49	22.75	4	1 1/8"x8unc	2.13	16x10	6.5	4	0.87
20	40.75	15.94	17.13	4.72	2.95	5	25	4	1 1/8"x8unc	2.13	16x10	10	8	0.75
24	49.21	18.9	20.28	5.51	4.53	6.06	29.5	4	1 1/4"x8unc	2.76	20x12	10	8	0.75
26	52.76	20.87	21.85	5.51	4.53	6.5	31.75	4	1 1/4"x8unc	2.76	20x12	11.73	8	0.91
28	55.71	22.05	22.83	6.3	4.53	6.5	34	4	1 1/4"x8unc	3.15	22x14	14.02	9	1.3
30	59.06	23.23	25	6.3	4.53	7.48	36	4	1 1/4"x8unc	3.15	22x14	14.02	8	1.3
32	62.2	24.8	25.98	6.3	5.12	7.48	38.5	4	1 1/2"x8unc	3.54	25x14	14.02	8	1.3
34	65.16	26.57	27.17	6.3	5.12	7.99	40.5	4	1 1/2"x8unc	3.94	28x16	14.02	8	1.3
36	67.91	27.56	28.15	7.09	5.12	7.99	42.75	4	1 1/2"x8unc	3.94	28x16	15.98	8	1.54
40	72.64	30.71	29.72	7.09	5.12	8.5	47.25	8	1 1/2"x8unc	3.94	28x16	15.98	8	1.54
42	74.02	31.5	30.31	7.09	5.12	9.49	49.5	8	1 1/2"x8unc	4.33	32x18	15.98	8	1.54
46	80.91	34.45	33.07	7.09	6.3	10	53.75	8	1 1/2"x8unc	4.72	32x18	15.98	8	1.54
48	84.25	35.83	34.25	7.87	6.3	10	56	8	1 1/2"x8unc	4.72	32x18	19.02	12	1.54



N: Number of Holes
ØH: Hole Size
T: Bolt Diameter
B.C.D: Bolt circle diameter



n-Øh2 Holes

n: Number of Holes
Øh2: Hole Size
T: Bolt Diameter
BD: Bolt circle diameter

NOTE

1. Flange Dimensions: ANSI B16.5 & ANSI B16.47 Series A
2. Mounting Dimensions is based on ISO 5211 but Adjustable.
3. Dimensions are subject to change without notice.

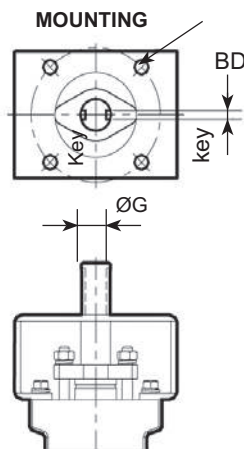
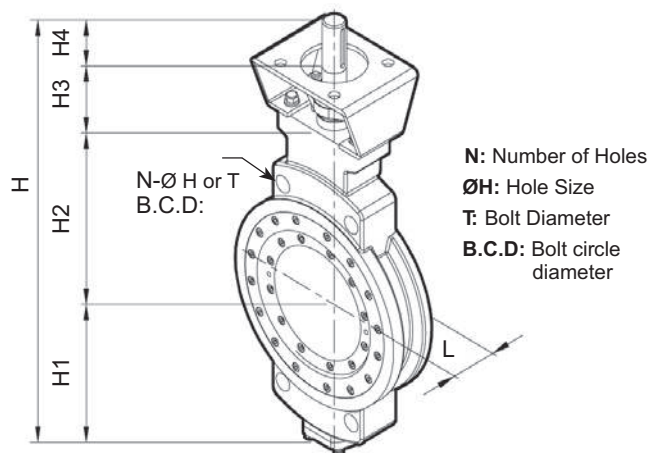
CLASS 300

							FLANGE DIMENSIONS				MOUNTING DIMENSIONS			
Size	H	H1	H2	H3	H4	L	B.C.D	N	ØH or T	ØG	Key (mm)	BD	n	Øh2
3	13.98	4.53	5.31	2.76	1.38	1.93	6.62	4	3/4"x10unc	0.75	6x6	4.02	4	0.43
4	16.06	5.63	6.3	2.76	1.38	2.13	7.88	4	3/4"x10unc	0.87	8x7	4.02	4	0.43
6	21.26	7.28	8.86	3.15	1.97	2.32	10.62	4	3/4"x10unc	1.14	8x7	4.92	4	0.51
8	25.39	8.86	10.63	3.54	2.36	2.87	13	4	7/8"x9unc	1.38	10x8	5.51	4	0.71
10	28.15	10.04	11.81	3.94	2.36	3.27	15.25	4	1"x8unc	1.5	12x8	6.5	4	0.87
12	31.5	11.42	12.99	4.72	2.36	3.62	17.75	4	1 1/8"x8un	1.65	12x8	6.5	4	0.87
14	36.02	13.39	14.96	4.72	2.95	4.61	20.25	4	1 1/8"x8un	2.05	16x10	6.5	4	0.87
16	39.37	14.37	16.93	5.12	2.95	5.24	22.5	4	1 1/4"x8un	2.36	16x10	10	8	0.75
18	45.08	16.54	18.5	5.51	4.53	5.87	24.75	4	1 1/4"x8un	2.56	20x12	11.73	8	0.91
20	49.02	18.5	20.47	5.51	4.53	6.26	27	4	1 1/4"x8un	2.76	20x12	11.73	8	0.91
24	54.72	20.67	23.23	6.3	4.53	7.13	32	4	1 1/2"x8un	3.15	22x14	14.02	8	1.3
26	59.25	22.64	25.2	6.3	5.12	8.27	34.5	4	1 5/8"x8un	3.54	25x14	14.02	8	1.3
28	62.2	24.8	25.98	6.3	5.12	9.02	37	4	1 5/8"x8un	3.94	28x16	14.02	8	1.3
30	65.16	26.38	26.57	7.09	5.12	9.06	39.25	4	1 3/4"x8un	4.33	32x18	15.98	8	1.54
32	67.72	27.56	27.95	7.09	5.12	9.49	41.5	4	1 7/8"x8un	4.33	32x18	15.98	8	1.54
34	72.24	28.74	29.33	7.87	6.3	9.49	43.5	4	1 7/8"x8un	4.72	32x18	15.98	8	1.54
36	75.2	29.92	30.31	7.87	7.09	10.75	46	8	2"x8un	5.12	36x20	19.02	12	1.54

CLASS 600

							FLANGE DIMENSIONS				MOUNTING DIMENSIONS			
Size	H	H1	H2	H3	H4	L	B.C.D	N	ØH or T	ØG	Key (mm)	BD	n	Øh2
4	19.49	6.1	8.27	3.15	1.97	2.64	8.5	4	7/8"x9unc	1.14	8x7	4.92	4	0.51
6	25	8.66	10.04	3.94	2.36	3.19	11.5	4	1"x8unc	1.5	12x8	6.5	4	0.87
8	29.72	9.84	12.2	4.72	2.95	4.09	13.75	4	1 1/8"x8un	1.77	14x9	6.5	4	0.87
10	33.07	11.61	13.78	4.72	2.95	4.61	17	4	1 1/4"x8un	2.13	16x10	10	8	0.75
12	37.6	12.99	15.35	4.72	4.53	5.51	19.25	4	1 1/4"x8un	2.56	20x12	10	8	0.75
14	42.72	14.96	17.72	5.51	4.53	6.1	20.75	4	1 3/8"x8un	2.76	20x12	11.73	8	0.91
16	46.65	16.93	19.69	5.51	4.53	7.01	23.75	4	1 1/2"x8un	3.15	22x14	11.73	8	0.91
18	50.2	18.31	20.47	6.3	5.12	7.87	25.75	4	1 5/8"x8un	3.54	25x14	14.02	8	1.3
20	51.18	19.69	20.08	6.3	5.12	8.5	28.5	4	1 5/8"x8un	3.94	28x16	14.02	8	1.3
24	59.45	23.62	23.62	7.09	5.12	9.13	33	4	1 7/8"x8un	4.33	32x18	15.98	8	1.54

TRIPLE OFFSET BUTTERFLY VALVE LUG TYPE



n-Øh2 Holes

n: Number of Holes

Øh2: Hole Size

T: Bolt Diameter

BD: Bolt circle diameter

NOTE

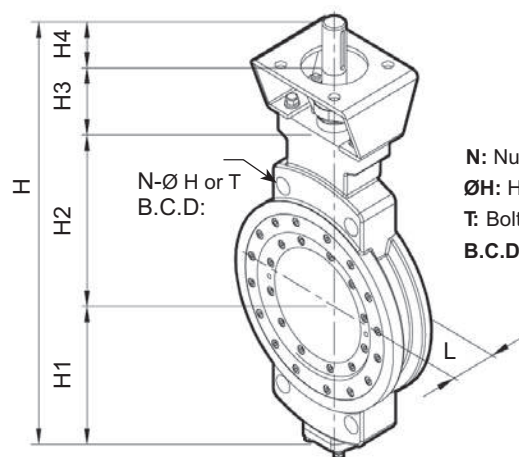
1. Flange Dimensions: ANSI B:16.5 & ANSI B16.47 Series A

2. Mounting Dimensions is based on ISO 5211 but Adjustable.

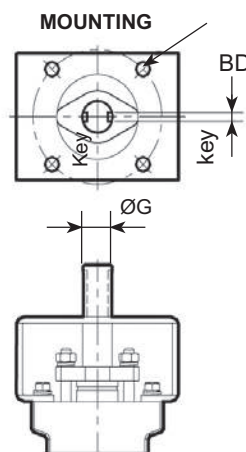
3. Dimensions are subject to change without notice.

CLASS 150

SIZE							FLANGE DIMENSIONS				MOUNTING DIMENSIONS			
	H	H1	H2	H3	H4	L	B.C.D	N	ØH or T	Ø G	Key (mm)	BD	n	Øh2
3	13.98	4.53	5.31	2.76	1.38	1.93	6	4	5/8"x11unc	0.75	6x6	4.02	4	0.43
4	16.06	5.63	6.3	2.76	1.38	2.13	7.5	8	5/8"x11unc	0.87	8x7	4.02	4	0.43
6	19.88	6.89	8.27	3.15	1.57	2.28	9.5	8	3/4"x10unc	1.02	8x7	4.02	4	0.43
8	22.17	7.8	9.25	3.15	1.97	2.52	11.75	8	3/4"x10unc	1.14	8x7	4.92	4	0.51
10	26.26	9.53	10.83	3.54	2.36	2.83	14.25	12	7/8"x9unc	1.38	10x8	5.51	4	0.71
12	28.03	10.51	11.61	3.54	2.36	3.23	17	12	7/8"x9unc	1.5	12x8	6.5	4	0.87
14	31.3	11.61	12.6	4.72	2.36	3.62	18.75	12	1"x8unc	1.5	12x8	6.5	4	0.87
16	35.04	12.8	14.57	4.72	2.95	4.02	21.25	16	1"x8unc	1.85	14x9	6.5	4	0.87
18	38.78	14.57	16.54	4.72	2.95	4.49	22.75	16	1 1/8"x8un	2.05	16x10	6.5	4	0.87
20	40.75	15.94	17.13	4.72	2.95	5	25	20	1 1/8"x8un	2.13	16x10	10	8	0.75
24	49.21	18.9	20.28	5.51	4.53	6.06	29.5	20	1 1/4"x8un	2.76	20x12	10	8	0.75
26	52.76	20.87	21.85	5.51	4.53	6.5	31.75	24	1 1/4"x8un	2.76	20x12	11.73	8	0.91
28	55.71	22.05	22.83	6.3	4.53	6.5	34	28	1 1/4"x8un	3.15	22x14	14.02	8	1.3
30	59.65	23.23	25	6.3	5.12	7.48	36	28	1 1/4"x8un	3.35	25x14	14.02	8	1.3
32	62.2	24.8	25.98	6.3	5.12	7.48	38.5	28	1 1/2"x8un	3.54	25x14	14.02	8	1.3
34	65.16	26.57	27.17	6.3	5.12	7.99	40.5	32	1 1/2"x8un	3.94	28x16	14.02	8	1.3
36	67.91	27.56	28.15	7.09	5.12	7.99	42.75	32	1 1/2"x8un	3.94	28x16	15.98	8	1.54
40	72.64	30.71	29.72	7.09	5.12	8.5	47.25	36	1 1/2"x8un	3.94	28x16	15.98	8	1.54
42	74.02	31.5	30.31	7.09	5.12	9.49	49.5	36	1 1/2"x8un	4.33	32x18	15.98	8	1.54
46	80.91	34.45	33.07	7.09	6.3	10	53.75	40	1 1/2"x8un	4.72	32x18	15.98	8	1.54
48	84.25	35.83	34.25	7.87	6.3	10	56	44	1 1/2"x8un	4.72	32x18	19.02	12	1.54



N: Number of Holes
 ØH: Hole Size
 T: Bolt Diameter
 B.C.D: Bolt circle diameter



n-Øh2 Holes

n: Number of Holes
 Øh2: Hole Size
 T: Bolt Diameter
 BD: Bolt circle diameter

NOTE

1. Flange Dimensions: ANSI B16.5 & ANSI B16.47 Series A
2. Mounting Dimensions is based on ISO 5211 but Adjustable.
3. Dimensions are subject to change without notice.

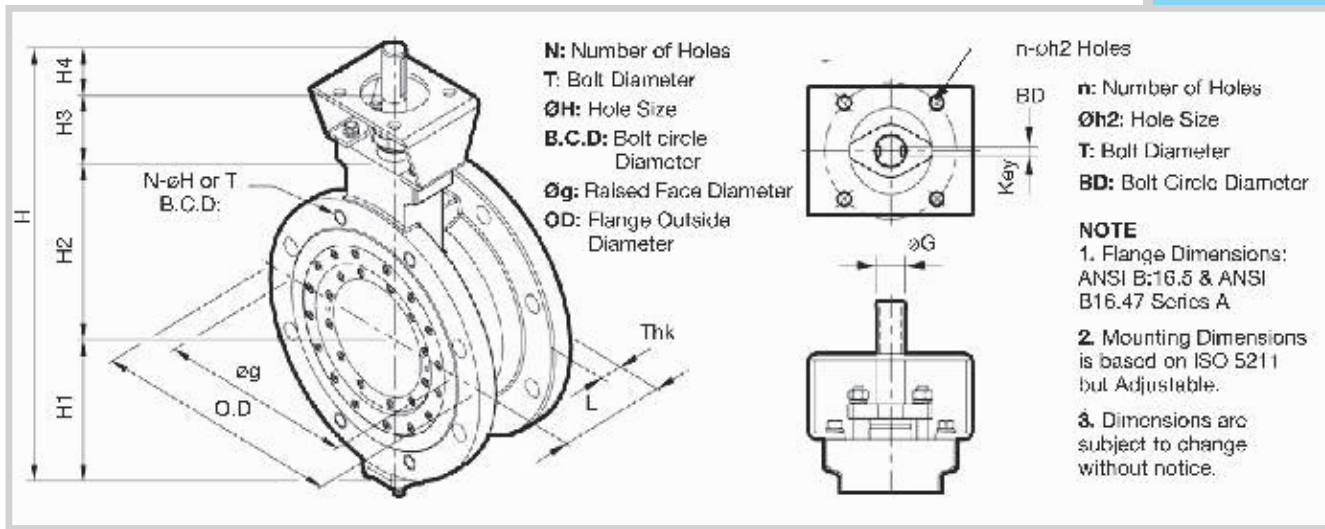
CLASS 300

							FLANGE DIMENSIONS				MOUNTING DIMENSIONS			
Size	H	H1	H2	H3	H4	L	B.C.D	N	ØH or T	ØG	Key (mm)	BD	n	Øh2
3	13.98	4.53	5.31	2.76	1.38	1.93	6.62	8	3/4"x10unc	0.75	6x6	4.02	4	0.43
4	16.06	5.63	6.3	2.76	1.38	2.13	7.88	8	3/4"x10unc	0.87	8x7	4.02	4	0.43
6	21.26	7.28	8.86	3.15	1.97	2.32	10.62	12	3/4"x10unc	1.14	8x7	4.92	4	0.51
8	25.39	8.86	10.63	3.54	2.36	2.87	13	12	7/8"x9unc	1.38	10x8	5.51	4	0.71
10	28.15	10.04	11.81	3.94	2.36	3.27	15.25	16	1"x8unc	1.5	12x8	6.5	4	0.87
12	31.5	11.42	12.99	4.72	2.36	3.62	17.75	16	1 1/8"x8un	1.65	12x8	6.5	4	0.87
14	36.02	13.39	14.96	4.72	2.95	4.61	20.25	20	1 1/8"x8un	2.05	16x10	6.5	4	0.87
16	39.37	14.37	16.93	5.12	2.95	5.24	22.5	20	1 1/4"x8un	2.36	16x10	10	8	0.75
18	45.08	16.54	18.5	5.51	4.53	5.87	24.75	24	1 1/4"x8un	2.56	20x12	11.73	8	0.91
20	49.02	18.5	20.47	5.51	4.53	6.26	27	24	1 1/4"x8un	2.76	20x12	11.73	8	0.91
24	54.72	20.67	23.23	6.3	4.53	7.13	32	24	1 1/2"x8un	3.15	22x14	14.02	8	1.3
26	59.25	22.64	25.2	6.3	5.12	8.27	34.5	28	1 5/8"x8un	3.54	25x14	14.02	8	1.3
28	62.2	24.8	25.98	6.3	5.12	9.02	37	28	1 5/8"x8un	3.94	28x16	14.02	8	1.3
30	65.16	26.38	26.57	7.09	5.12	9.06	39.25	28	1 3/4"x8un	4.33	32x18	15.98	8	1.54
32	67.72	27.56	27.95	7.09	5.12	9.49	41.5	28	1 7/8"x8un	4.33	32x18	15.98	8	1.54
34	72.24	28.74	29.33	7.87	6.3	9.49	43.5	28	1 7/8"x8un	4.72	32x18	15.98	8	1.54
36	75.2	29.92	30.31	7.87	7.09	10.75	46	32	2"x8un	5.12	36x20	19.02	12	1.54

CLASS 600

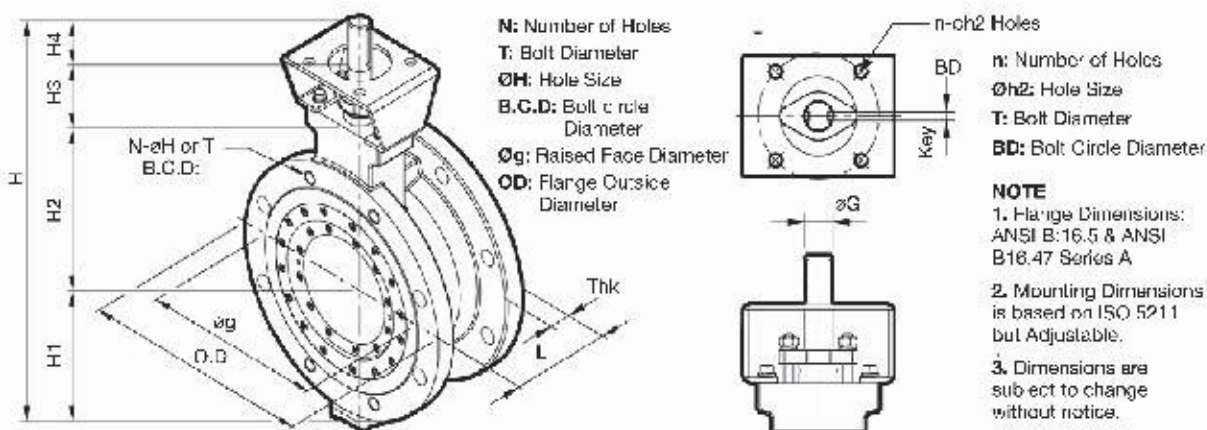
							FLANGE DIMENSIONS				MOUNTING DIMENSIONS			
Size	H	H1	H2	H3	H4	L	B.C.D	N	ØH or T	ØG	Key (mm)	BD	n	Øh2
4	19.49	6.1	8.27	3.15	1.97	2.64	8.5	8	7/8"x9unc	1.14	8x7	4.92	4	0.51
6	25	8.66	10.04	3.94	2.36	3.19	11.5	12	1"x8unc	1.5	12x8	6.5	4	0.87
8	29.72	9.84	12.2	4.72	2.95	4.09	13.75	12	1 1/8"x8un	1.77	14x9	6.5	4	0.87
10	33.07	11.61	13.78	4.72	2.95	4.61	17	16	1 1/4"x8un	2.13	16x10	10	8	0.75
12	37.6	12.99	15.35	4.72	4.53	5.51	19.25	20	1 1/4"x8un	2.56	20x12	10	8	0.75
14	42.72	14.96	17.72	5.51	4.53	6.1	20.75	20	1 3/8"x8un	2.76	20x12	11.73	8	0.91
16	46.65	16.93	19.69	5.51	4.53	7.01	23.75	20	1 1/2"x8un	3.15	22x14	11.73	8	0.91
18	50.2	18.31	20.47	6.3	5.12	7.87	25.75	20	1 5/8"x8un	3.54	25x14	14.02	8	1.3
20	51.18	19.69	20.08	6.3	5.12	8.5	28.5	24	1 5/8"x8un	3.94	28x16	14.02	8	1.3
24	59.45	23.62	23.62	7.09	5.12	9.13	33	24	1 7/8"x8un	4.33	32x18	15.98	8	1.54

TRIPLE OFFSET BUTTERFLY VALVE FLANGE TYPE



CLASS 150

			FLANGE DIMENSIONS								MOUNTING DIMENSIONS							
SIZE	H	H1	H2	H3	H4	L	O.D.	Øg	B.C.D	Thk	N	ØH	T	ØG	Key	BD	n	Øh2
3	13.98	4.53	5.31	2.76	1.38	4.49	7.5	5	6	0.94	4	0.75	5/8"x11unc	0.75	6x6	4.02	4	0.43
4	16.06	5.63	6.3	2.76	1.38	5	9	6.19	7.5	0.94	8	0.75	5/8"x11unc	0.87	8x7	4.02	4	0.43
6	19.88	6.89	8.27	3.15	1.57	5.51	11	8.5	9.5	1	8	0.87	3/4"x10unc	1.02	8x7	4.02	4	0.43
8	22.17	7.8	9.25	3.15	1.97	5.98	13.5	10.62	11.75	1.12	8	0.87	3/4"x10unc	1.14	8x7	4.92	4	0.51
10	26.26	9.53	10.83	3.54	2.36	6.5	16	12.75	14.25	1.19	12	1	7/8"x9unc	1.38	10x8	5.51	4	0.71
12	28.03	10.51	11.61	3.54	2.36	7.01	19	15	17	1.25	12	1	7/8"x9unc	1.5	12x8	6.5	4	0.87
14	31.3	11.61	12.6	4.72	2.36	7.48	21	16.25	18.75	1.38	12	1.13	1"x8unc	1.5	12x8	6.5	4	0.87
16	35.04	12.8	14.57	4.72	2.95	8.5	23.48	18.5	21.25	1.44	16	1.13	1"x8unc	1.85	14x9	6.5	4	0.87
18	38.78	14.57	16.54	4.72	2.95	8.74	25	21	22.75	1.56	16	1.25	1 1/8"x8un	2.05	16x10	6.5	4	0.87
20	40.75	15.94	17.13	4.72	2.95	9.02	27.5	23	25	1.69	20	1.25	1 1/8"x8un	2.13	16x10	10	8	0.75
24	49.21	18.9	20.28	5.51	4.53	10.51	32	27.25	29.5	1.88	20	1.37	1 1/4"x8un	2.76	20x12	10	8	0.75
26	52.76	20.87	21.85	5.51	4.53	10.51	34.25	29.5	31.75	2.69	24	1.37	1 1/4"x8un	2.76	20x12	11.73	8	0.91
28	55.71	22.05	22.83	6.3	4.53	11.5	36.5	31.5	34	2.81	28	1.37	1 1/4"x8un	3.15	22x14	14.02	8	1.3
30	59.65	23.23	25	6.3	5.12	12.52	38.75	33.75	36	2.94	28	1.37	1 1/4"x8un	3.35	25x14	14.02	8	1.3
32	62.2	24.8	25.98	6.3	5.12	12.52	41.75	36	38.5	3.19	28	1.63	1 1/2"x8un	3.54	25x14	14.02	8	1.3
34	65.16	26.57	27.17	6.3	5.12	12.99	43.75	38	40.5	3.25	32	1.63	1 1/2"x8un	3.94	28x16	14.02	8	1.3
36	67.91	27.56	28.15	7.09	5.12	12.99	46	40.25	42.75	3.56	32	1.63	1 1/2"x8un	3.94	28x16	15.98	8	1.54
40	72.64	30.71	29.72	7.09	5.12	16.14	50.75	44.25	47.25	3.56	36	1.63	1 1/2"x8un	3.94	28x16	15.98	8	1.54
42	74.02	31.5	30.31	7.09	5.12	16.14	53	47	49.5	3.81	36	1.63	1 1/2"x8un	4.33	32x18	15.98	8	1.54
46	80.91	34.45	33.07	7.09	6.3	18.5	57.25	51	53.75	4.06	40	1.63	1 1/2"x8un	4.72	32x18	15.98	8	1.54
48	84.25	35.83	34.25	7.87	6.3	18.5	59.5	53.5	56	4.25	44	1.63	1 1/2"x8un	4.72	32x18	19.02	12	1.54



CLASS 300

							FLANGE DIMENSIONS				MOUNTING DIMENSIONS							
SIZE	H	H1	H2	H3	H4	L	O.D	Øg	B.C.D	Thk	N	ØH	T	ØG	Key	BD	n	Øh2
3	13.98	4.53	5.31	2.76	1.38	4.49	8.25	5	6.62	1.12	8	0.87	3/4"x10unc	0.75	6x6	4.02	4	0.43
4	16.06	5.63	6.3	2.76	1.38	5	10	6.19	7.88	1.25	8	0.87	3/4"x10unc	0.87	8x7	4.02	4	0.43
6	21.26	7.28	8.86	3.15	1.97	5.51	12.5	8.5	10.62	1.44	12	0.87	3/4"x10unc	1.14	8x7	4.92	4	0.51
8	25.39	8.86	10.63	3.54	2.36	5.98	15	10.62	13	1.62	12	1	7/8"x9unc	1.38	10x8	5.51	4	0.71
10	28.15	10.04	11.81	3.94	2.36	6.5	17.5	12.75	15.25	1.88	16	1.13	1"x8unc	1.5	12x8	6.5	4	0.87
12	31.5	11.42	12.99	4.72	2.36	7.01	20.5	15	17.75	2	16	1.25	1 1/8"x8un	1.65	12x8	6.5	4	0.87
14	36.02	13.39	14.96	4.72	2.95	7.48	23	16.25	20.25	2.12	20	1.25	1 1/8"x8un	2.05	16x10	6.5	4	0.87
16	39.37	14.37	16.93	5.12	2.95	8.5	25.5	18.5	22.5	2.25	20	1.37	1 1/4"x8un	2.36	16x10	10	8	0.75
18	45.08	16.54	18.5	5.51	4.53	8.74	28	21	24.75	2.38	24	1.37	1 1/4"x8un	2.56	20x12	11.73	8	0.91
20	49.02	18.5	20.47	5.51	4.53	9.02	30.5	23	27	2.5	24	1.37	1 1/4"x8un	2.76	20x12	11.73	8	0.91
24	54.72	20.67	23.23	6.3	4.53	10.51	36	27.25	32	2.75	24	1.63	1 1/2"x8un	3.15	22x14	14.02	8	1.3
26	59.25	22.64	25.2	6.3	5.12	10.51	38.25	29.5	34.5	3.13	28	1.75	1 5/8"x8un	3.54	25x14	14.02	8	1.3
28	62.2	24.8	25.98	6.3	5.12	11.5	40.75	31.5	37	3.38	28	1.75	1 5/8"x8un	3.94	28x16	14.02	8	1.3
30	65.16	26.38	26.57	7.09	5.12	12.52	43	33.75	39.25	3.63	28	1.87	1 3/4"x8un	4.33	32x18	15.98	8	1.54
32	67.72	27.56	27.95	7.09	5.12	12.52	45.25	36	41.5	3.88	28	2	1 7/8"x8un	4.33	32x18	15.98	8	1.54
34	72.24	28.74	29.33	7.87	6.3	12.99	47.5	38	43.5	4	28	2	1 7/8"x8un	4.72	32x18	15.98	8	1.54
36	75.2	29.92	30.31	7.87	7.09	12.99	50	40.25	46	4.13	32	2.13	2"x8un	5.12	36x20	19.02	12	1.54

CLASS 600

							FLANGE DIMENSIONS				MOUNTING DIMENSIONS							
SIZE	H	H1	H2	H3	H4	L	O.D	Øg	B.C.D	Thk	N	ØH	T	ØG	Key	BD	n	Øh2
4	19.49	6.1	8.27	3.15	1.97	7.48	10.75	6.19	8.5	1.75	8	1	7/8"x9unc	1.14	8x7	4.92	4	0.51
6	25	8.66	10.04	3.94	2.36	8.27	14	8.5	11.5	2.13	12	1.13	1"x8unc	1.5	12x8	6.5	4	0.87
8	29.72	9.84	12.2	4.72	2.95	9.06	16.5	10.62	13.75	2.44	12	1.25	1 1/8"x8un	1.77	14x9	6.5	4	0.87
10	33.07	11.61	13.78	4.72	2.95	9.84	20	12.75	17	2.75	16	1.37	1 1/4"x8un	2.13	16x10	10	8	0.75
12	37.6	12.99	15.35	4.72	4.53	10.63	22	15	19.25	2.87	20	1.37	1 1/4"x8un	2.56	20x12	10	8	0.75
14	42.72	14.96	17.72	5.51	4.53	11.42	23.75	16.25	20.75	3	20	1.5	1 3/8"x8un	2.76	20x12	11.73	8	0.91
16	46.65	16.93	19.69	5.51	4.53	12.2	27	18.5	23.75	3.25	20	1.63	1 1/2"x8un	3.15	22x14	11.73	8	0.91
18	50.2	18.31	20.47	6.3	5.12	12.99	29.25	21	25.75	3.5	20	1.75	1 5/8"x8un	3.54	25x14	14.02	8	1.3
20	51.18	19.69	20.08	6.3	5.12	13.78	32	23	28.5	3.75	24	1.75	1 5/8"x8un	3.94	28x16	14.02	8	1.3
24	59.45	23.62	23.62	7.09	5.12	15.35	37	27.25	33	4.25	24	2	1 7/8"x8un	4.33	32x18	15.98	8	1.54

PRESSURE - TEMPERATURE RATINGS



ASME B16.34-2009

COLD WORKING PRESSURE, psig										
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
150	-20 to 100	285	290	290	290	290	290	275	275	230
	200	260	260	260	260	260	260	230	230	200
	300	230	230	230	230	230	230	205	205	180
	400	200	200	200	200	200	200	190	190	160
	500	170	170	170	170	170	170	170	170	150
	600	140	140	140	140	140	140	140	140	140
	650	125	125	125	125	125	125	125	125	
	700	110	110	110	110	110	110	110	110	
	750	95	95	95	95	95	95	95	95	
	800	80	80	80	80	80	80	80	80	
	850	65	65	65	65	65	65	65	65	
	900	50	50	50	50	50	50	50	50	
	950	35	35	35	35	35	35	35	35	
	1000	20	20	20	20	20	20	20	20	
	1050			20 (a)	20 (a)	20 (a)	20 (a)	20(a)	20(a)	
	1100			20 (a)	20 (a)	20 (a)	20 (a)	20(a)	20(a)	
	1150			20 (a)	20 (a)	20 (a)	20 (a)	20(a)	20(a)	
	1200			15 (a)	15 (a)	15 (a)	20 (a)	20(a)	20(a)	
	1250							20(a)	20(a)	
	1300							20(a)	20(a)	
	1350							20(a)	20(a)	
	1400							20(a)	20(a)	
	1450							20(a)	20(a)	
	1500							15(a)	15(a)	
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
300	-20 to 100	740	750	750	750	750	750	720	720	600
	200	680	750	750	750	750	750	600	620	520
	300	655	730	720	730	730	730	540	560	465
	400	635	705	695	705	705	705	495	515	420
	500	605	665	665	665	665	665	465	480	390
	600	570	605	605	605	605	605	440	450	360
	650	550	590	590	590	590	590	430	440	
	700	530	555	570	570	570	570	420	435	
	750	505	505	530	530	530	530	415	425	
	800	410	410	510	510	510	510	405	420	
	850	320	320	485	485	485	485	395	420	
	900	230	225	450	450	375	450	390	415	
	950	135	135	320	385	275	375	380	385	
	1000	85	85	215	265	200	255	355	365	
	1050			145	175	145	170	325	360	
	1100			95	110	100	115	255	305	
	1150			65	70	60	75	205	235	
	1200			40	40	35	50	165	185	
	1250							135	145	
	1300							115	115	
	1350							95	95	
	1400							75	75	
	1450							60	60	
	1500							40	40	

(a) – Permissible, but not recommended for prolonged usage

COLD WORKING PRESSURE, psig

CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
600	-20 to 100	1480	1500	1500	1500	1500	1500	1440	1440	1200
	200	1360	1500	1500	1500	1500	1500	1200	1240	1035
	300	1310	1455	1445	1455	1455	1455	1075	1120	930
	400	1265	1405	1385	1410	1410	1410	995	1025	845
	500	1205	1330	1330	1330	1330	1330	930	955	780
	600	1135	1210	1210	1210	1210	1210	885	900	720
	650	1100	1175	1175	1175	1175	1175	865	885	
	700	1060	1110	1135	1135	1135	1135	845	870	
	750	1015	1015	1065	1065	1065	1065	825	855	
	800	825	825	1015	1015	1015	1015	810	845	
	850	640	640	975	975	975	975	790	835	
	900	460	445	900	900	745	900	780	830	
	950	275	275	640	755	550	755	765	775	
	1000	170	170	430	535	400	505	710	725	
	1050			290	350	290	345	650	720	
	1100			190	220	200	225	515	610	
	1150			130	135	125	150	410	475	
	1200			80	80	70	105	330	370	
	1250							265	295	
	1300							225	235	
	1350							185	190	
	1400							150	150	
	1450							115	115	
	1500							85	85	
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
900	-20 to 100	2200	2250	2250	2250	2250	2250	2160	2160	1800
	200	2035	2250	2250	2250	2250	2250	1800	1860	1555
	300	1965	2185	2165	2185	2185	2185	1615	1680	1395
	400	1900	2110	2080	2115	2115	2115	1490	1540	1265
	500	1810	1995	1995	1995	1995	1995	1395	1435	1165
	600	1705	1815	1815	1815	1815	1815	1325	1355	1080
	650	1650	1765	1765	1765	1765	1765	1295	1325	
	700	1590	1665	1705	1705	1705	1705	1265	1305	
	750	1520	1520	1595	1595	1595	1595	1240	1280	
	800	1235	1235	1525	1525	1525	1525	1215	1265	
	850	955	955	1460	1460	1460	1460	1190	1255	
	900	690	670	1350	1350	1120	1350	1165	1245	
	950	410	410	955	1160	825	1130	1145	1160	
	1000	255	255	650	800	595	760	1065	1090	
	1050			430	525	430	515	975	1080	
	1100			290	330	300	340	770	915	
	1150			195	205	185	225	615	710	
	1200			125	125	105	155	495	555	
	1250							400	440	
	1300							340	350	
	1350							280	290	
	1400							225	225	
	1450							175	175	
	1500							125	125	

PRESSURE TEMPERATURE RATINGS



ASME B16.34-2009

COLD WORKING PRESSURE, psig										
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
1500	-20 to 100	3705	3750	3750	3750	3750	3750	3600	3600	3000
	200	3395	3750	3750	3750	3750	3750	3000	3095	3590
	300	3270	3640	3610	3640	3640	3640	2690	2795	2330
	400	3170	3520	3465	3530	3530	3530	2485	2570	2110
	500	3015	3325	3325	3325	3325	3325	2330	2390	1945
	600	2840	3025	3025	3025	3025	3025	2210	2255	1800
	650	2745	2940	2940	2940	2940	2940	2160	2210	
	700	2665	2775	2840	2840	2840	2840	2110	2170	
	750	2535	2535	2660	2660	2660	2660	2065	2135	
	800	2055	2055	2540	2540	2540	2540	2030	2110	
	850	1595	1595	2435	2435	2435	2435	1980	2090	
	900	1150	1115	2245	2245	1870	2245	1945	2075	
	950	685	685	1595	1930	1370	1885	1910	1930	
	1000	430	430	1080	1335	995	1270	1770	1820	
	1050			720	875	720	855	1630	1800	
	1100			480	550	495	565	1285	1525	
	1150			325	345	310	375	1030	1185	
	1200			205	205	170	255	825	925	
	1250							670	735	
	1300							565	585	
	1350							465	480	
	1400							380	380	
	1450							290	290	
	1500							205	205	
CLASS	TEMP °F	A216 WCB A105 & LF2	A352 LCC	A217 WC6 A182 F11	A217 WC9 A182 F22	A217 C5 A182 F5	A217 C12 A182 F9	A351 CF8 A182 F304	A351 CF8M A182 F316	A352 CN7M
2500	-20 to 100	6170	6250	6250	6250	6250	6250	6000	6000	5000
	200	5655	6250	6250	6250	6250	6250	5000	5160	4320
	300	5450	6070	6015	6070	6070	6070	4480	4660	3880
	400	2280	5865	5775	5880	5880	5880	4140	4280	3520
	500	5025	5540	5540	5540	5540	5540	3880	3980	3240
	600	4730	5040	5040	5040	5040	5040	3680	3760	3000
	650	4575	4905	4905	4905	4905	4905	3600	3680	
	700	4425	4630	4730	4730	4730	4730	3520	3620	
	750	4230	4230	4430	4430	4430	4430	3440	3560	
	800	3430	3430	4230	4230	4230	4230	3380	3520	
	850	2655	2655	4060	4060	4060	4060	3300	3480	
	900	1915	1855	3745	3745	3115	3745	3240	3460	
	950	1145	1145	2655	3220	2285	3145	3180	3220	
	1000	715	715	1800	2230	1655	2115	2950	3030	
	1050			1200	1455	1200	1430	2715	3000	
	1100			800	915	830	945	2145	2545	
	1150			545	570	515	630	1715	1970	
	1200			345	345	285	430	1370	1545	
	1250							1115	1230	
	1300							945	970	
	1350							770	800	
	1400							630	630	
	1450							485	485	
	1500							345	345	

SCOPE

These terms and conditions apply to all Fastwell valve products, and supersedes all previously published terms and conditions.

Hereafter, Fastwell Fitting Industries shall be referred to as Fastwell.

Special terms and conditions printed on a buyer's order will only apply insofar as they conform to the terms and conditions detailed on these pages. Terms and conditions of an order that change or modify those on this sheet shall not be binding on Fastwell.

APPROVAL

All quotations, contracts, orders, or agreements are subject to approval and/or acceptance by the main office of Fastwell.

We reserve the right to correct clerical or stenographic errors in quotations, orders, invoices, and other contracts, agreements, or documents.

PRICES

Possession of price lists will not be accepted by Fastwell as an obligation, or offer to sell the goods listed therein to anyone.

All prices contained therein are subject to change without notice, and supersede all previous lists. All orders will be invoiced at prices in effect at the time of shipment unless quoted in writing.

CHANGES

Orders cannot be cancelled or specifications be changed without the consent of Fastwell and then only in terms indemnifying Fastwell against loss.

QUOTATIONS

Goods quoted F.O.B. our service center are subject to prior sale. Prices quoted are valid only for the duration indicated in the quotation. Quoted prices supersede all previous prices, quotations, or contracts, and are subject to change without notice.

CANCELLATIONS

Orders placed with us cannot be cancelled without our prior written consent. A cancellation charge will be applicable as outlined in our quotation.

CLAIMS

All claims for shortages, corrections, or deductions must be made within 10 days after receipt of goods. Responsibility for goods lost or damaged in transit rests with carrier, and claims should be filed with the carrier by the consignee. Delivery of material to a common carrier shall be considered delivery to the buyer, and shall be at the buyers risk thereafter.

DELIVERY DELAYS

We assume no responsibility for delays in delivery, or defaults resulting from strikes, work stoppages, fires, floods, accidents, war, inability to obtain materials, or any other cause unavoidable and beyond our control.

TAXES

Fastwell quotations and/or contracts do not include any municipal, state, or federal sales, excise, use occupational, or other taxes, and any such tax, if paid by us will be charged to the purchaser.

CATALOG ILLUSTRATIONS

Catalog illustrations are actual representations of a certain size of each product line, but do not necessarily represent all sizes in details. We reserve the right to institute changes in materials, designs, and specifications without notice in keeping with our policy of continuing product improvement.

CATALOG WEIGHTS

Catalog weights represent average weights of products and are in no sense guaranteed.

RETURNS

See Return Goods Policy on next page.

SPECIAL ORDERS

Orders for special goods must be in writing and accompanied with detailed prints and/or sets of specifications, unless specifications on the orders are definite and complete. Orders will not be entered with the factory unless this is adhered to. Cancellation charges will be as outlined in our quotations.

FREIGHT TERMS

All shipments are F.O.B. our service centers. See current bulletin for freight allowance.

WARRANTY

See warranty on reverse side

RETURN GOOD POLICY



This policy supersedes all other policies for return goods.

I. Goods returned at customers request:

- A. Material must be:
 - 1. Of our manufacture.
 - 2. In clean, new and saleable condition. It must have been stored inside out of the weather.
 - 3. Shipped from one of our service centers within the 12 calendar months preceding the request for return, and the return will not cause inventory to exceed maximum allowable levels.
 - 4. Personally inspected by a Fastwell representative prior to its return.
 - 5. Special or non-standard items are non-returnable.
- B. Return shipments must be prepaid.
- C. Credit will be allowed at invoice price, less 25% handling cost, and less any freight paid by Fastwell
- D. A Return Goods Card must be furnished by a Fastwell representative after inspection of the material, and must be returned with the shipment.
- E. Shipments received without a Return Goods Authorization Card will be refused. Customer will be responsible for any storage and/or return freight.
- F. Material returned which is not of Fastwell manufacture, not in clean and saleable condition, or not authorized for return will be returned to the customer freight collect.

II. Goods returned because of an error by Fastwell

- A. Material must be in a clean, new, saleable condition.
- B. Return shipment should be made freight collect.
- C. Full credit will be allowed.
- D. Customer must receive Return Goods authorization prior to the return of the material. Return Goods Authorization Card must accompany shipment. Shipments received without Return Goods Authorization Card will be refused. Return Goods Authorization Card should be attached to the packing list.

All requests to return material to **Fastwell Fitting Industries** must be submitted in writing to our National Sales Manager for authorization.

WARRANTY

Fastwell Fitting Industries warrants each product sold, if the products are of our manufacture, against defects in material and workmanship under normal use and service for a period of one year after date of shipment.

This warranty is made to the buyer only, and does not extend to any other party. The obligation of Fastwell Valve International, Inc. under this warranty is limited to: (a) replacement of any part or parts proven defective in material or workmanship, (b) repair of the product F.O.B. the factory or service center, (c) refund of the purchase price. In the case of product or parts not wholly of Fastwell manufacture, Fastwell liability under this warranty shall be limited to the extent of Fastwell recovery from the manufacturer of such parts under its warranty to Fastwell. This warranty does not extend to any claims for labor, consequential damages, down time, or any other loss, damage, or expense of any kind arising out of the defect. We do not allow claims for unauthorized repairs, labor, or material. We are not responsible for loss of use, personal injury, lost profits, or any other damages whatsoever in connection with the warranties set forth.

No warranty shall apply to any product which has been modified or changed in design or function after leaving Fastwell facilities or which is misused or operated beyond its design capabilities, or used for other than its intended purpose. Purchasers of Fastwell products should consult knowledgeable advisors in the selection of product type and material of construction for their specific use. The buyer assumes all risk of this selection.

The buyer shall permit Fastwell or its authorized representative to inspect the product so that it may determine its obligation. Fastwell shall be entitled to the return of the defective product or parts. Buyer must notify Fastwell promptly upon discover of any claimed defect.

No material may be returned without first obtaining written permission from **Fastwell Fitting Industries**



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