

Double Eccentric Design Offset Disc Double Flange Butterfly Valve

FlowBiz offers double eccentric butterfly valves that incorporate an accessible replaceable seat for on/off control applications for gasses and liquids in the power, marine, chemical, and petrochemical industries, offshore.

The main features of the Double Eccentric Butterfly valves are that it has a double offset shaft position. The seat is easily replaceable, and the end connections are standardised. The user has an option for a polymer or metal seat.

Size Range : 2 1/2 inch to 48 inch (65mm to 1200mm)

Standard

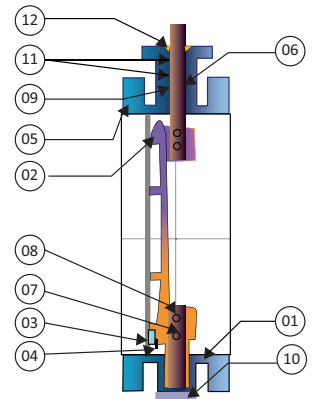
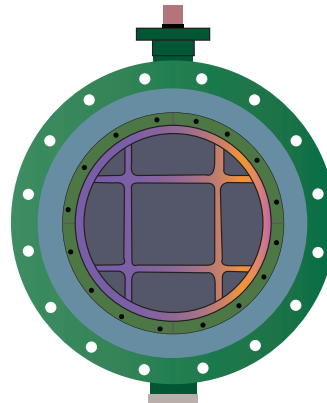
Design and Manufacturing	: API 609 / BS 5155 / BSEN 593 / IS 13095 / AWWA C - 504
Valve Face to Face Dimensions	: API 609 (Short Pattern) / BS 5155 (Short Pattern) : / IS 13095 (Short Pattern) / AWWA C - 504 (Short Pattern)
Flange Standard Conformity	: ASME B 16.5 Class 150 (Upto 24") : ASME B 16.47 Series "A" Class 150 (Above 26" to 48") : AWWA C - 207, IS 1538, BS 5404, IS 6392
Inspection & Testing	: API 598 / BS 6755 / AWWA C - 504,
Pressure Temperature Rating	: ASME B16.34
Top Flange Dimensions	: Bolt Hole ISO 5211
Stem Dimensions	: Square Drive to ISO 5211
Leakage Class	: Class VI as per ANSI B 16, 16.104

Note : For, Sea Water Application, Ebonite Lining On Request.



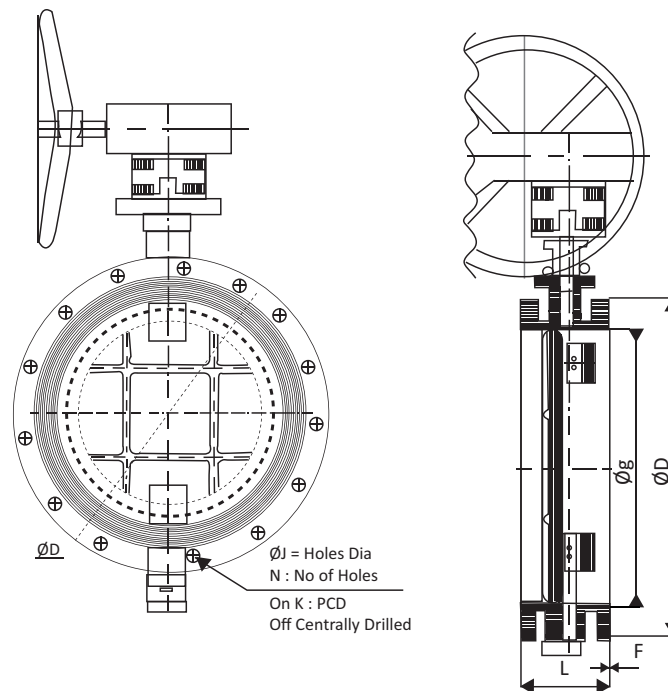
PRESSURE / TEMPERATURE RATING	
PRESSURE RATING	150# (PN 10 / PN 16 / PN 25)
OPERATING TEMPERATURE	NBR : -10° C to +90° C
	EPDM : -20° C to +120° C
	VITON : -0° C to +220° C
	PTFE : -25° C to +180° C
	RPTFE : -25° C to +220° C

No.	Description	Material	Qty.
1	Body	C.I. / WCB / CF8 / CF8M / D.I	01
2	Disc	C.I. / WCB / CF8 / CF8M / D.I	01
3	Retainer	M.S. / CF8 / CF8M	01
4	Disc Seal Ring	PTFE / RPTFE / NBR / EPDM / Viton	01
5	Body Seal Ring	S.S. 304 / 316	01
6	Shaft	S.S. 304 / 316 / 410	01
7	Stem Shaft	S.S. 304 / 316 / 410	01
8	Disc Pin	S.S. 304 / 316 / 410	04
9	Flange Side Washer	S.S. 304 / 316 / 410	01
10	Stem Square	M.S. / CF8 / CF8M	01
11	Gland Seal Set	PTFE / RPTFE / EPDM / Viton	05
12	Gland Plate	M.S. / CF8 / CF8M	01



Notes : We have Successfully carried out proof of design test on these rubber seated butterfly valve as per AWWA C -504





Dimensions :			B 16.5 150# & 16.47 "A" 150#				(All Dimensions are in mm)		
Valve Model	Valve Size		L API - 609	$\varnothing D$	$\varnothing g$	F	$\varnothing J$ Hole Dia	N Nos. of hole	K : PCD
	MM	Inch							
FB-BOD - 65	65	2½"	112	180	104.8	2	19.05	04	139.7
FB-BOD - 80	80	3"	114	190	127	2	19.05	04	152.4
FB-BOD - 100	100	4"	127	230	157.2	2	19.05	08	190.5
FB-BOD - 125	125	5"	140	255	185.7	2	22.2	08	215.9
FB-BOD - 150	150	6"	140	280	215.9	2	22.2	08	241.3
FB-BOD - 200	200	8"	152	345	269.9	2	22.2	08	298.5
FB-BOD - 250	250	10"	165	405	323.8	2	25.4	12	362
FB-BOD - 300	300	12"	178	485	381	2	25.4	12	431.8
FB-BOD - 350	350	14"	190	535	412.8	2	28.6	12	476.3
FB-BOD - 400	400	16"	216	595	469.9	2	28.6	16	539.8
FB-BOD - 450	450	18"	222	635	533.4	2	31.75	16	577.9
FB-BOD - 500	500	20"	229	700	584.2	2	31.75	20	635
FB-BOD - 600	600	24"	267	815	692.2	2	34.9	20	749.3
FB-BOD - 650	650	26"	292	870	749	2	34.9	24	806.4
FB-BOD - 700	700	28"	292	925	800	2	34.9	28	863.6
FB-BOD - 750	750	30"	318	985	857	2	34.9	28	914.4
FB-BOD - 800	800	32"	318	1060	914	2	41.3	28	977.9
FB-BOD - 850	850	34"	324	1110	965	2	41.3	32	1028.7
FB-BOD - 900	900	36"	330	1170	1022	2	41.3	32	1085.8
FB-BOD - 1000	1000	40"	410	1290	1124	2	41.3	36	1200.2
FB-BOD - 1050	1050	42"	410	1345	1194	2	41.3	36	1257.3
FB-BOD - 1200	1200	48"	470	1510	1359	2	41.3	44	1422.4



Dimension :		PN 10							(All Dimensions are in mm)	
Valve Model	Valve Size		L API - 609	øD	øg	F	øJ Hole Dia	N	K : PCD	
	MM	Inch								
FB-BOD - 80	80	3"	114	200	133	3	18	04	160	
FB-BOD - 100	100	4"	127	220	153	3	19	08	180	
FB-BOD - 150	150	6"	140	285	209	3	23	08	240	
FB-BOD - 200	200	8"	152	340	264	3	23	08	295	
FB-BOD - 250	250	10"	165	395	319	3	23	12	350	
FB-BOD - 300	300	12"	178	445	367	4	23	12	400	
FB-BOD - 350	350	14"	190	505	427	4	23	16	460	
FB-BOD - 400	400	16"	216	565	477	4	28	16	515	
FB-BOD - 450	450	18"	222	615	527	4	28	20	565	
FB-BOD - 500	500	20"	229	670	582	4	28	20	620	
FB-BOD - 600	600	24"	267	780	682	5	31	20	725	
FB-BOD - 650	650	26"	N.A	N.A	N.A.	N.A.	N.A.	N.A.	N.A.	
FB-BOD - 700	700	28"	292	895	797	5	31	24	840	
FB-BOD - 750	750	30"	318	960	857	5	31	24	900	
FB-BOD - 800	800	32"	318	1015	904	5	34	24	950	
FB-BOD - 900	900	36"	330	1115	1004	5	34	28	1050	
FB-BOD - 1000	1000	40"	410	1230	1111	5	36	28	1160	
FB-BOD - 1200	1200	48"	470	1455	1328	5	40	32	1380	

Dimension :		PN 16							(All Dimensions are in mm)	
Valve Model	Valve Size		L API - 609	øD	øg	F	øJ Hole Dia	N Nos. of Hole	K : PCD	
	MM	Inch								
FB-BOD - 65	65	2½"	112	185	122	3	18	04	145	
FB-BOD - 80	80	3"	114	200	138	3	18	08	160	
FB-BOD - 100	100	4"	127	220	158	3	18	08	180	
FB-BOD - 150	150	6"	140	285	212	3	22	08	240	
FB-BOD - 200	200	8"	152	340	268	3	22	12	295	
FB-BOD - 250	250	10"	165	405	320	3	26	12	355	
FB-BOD - 300	300	12"	178	460	378	4	26	12	410	
FB-BOD - 350	350	14"	190	520	438	4	26	16	470	
FB-BOD - 400	400	16"	216	580	490	4	30	16	525	
FB-BOD - 450	450	18"	222	640	490	4	30	20	585	
FB-BOD - 500	500	20"	229	715	610	4	33	20	650	
FB-BOD - 600	600	24"	267	840	725	5	36	20	770	
FB-BOD - 650	650	26"	N.A	N.A	N.A.	N.A.	N.A.	N.A.	N.A.	
FB-BOD - 700	700	28"	292	910	795	5	36	24	840	
FB-BOD - 750	750	30"	N.A.	N.A.	N.A.	N.A.	31	N.A.	N.A.	
FB-BOD - 800	800	32"	318	1025	900	5	39	24	950	
FB-BOD - 900	900	36"	330	1125	1000	5	39	28	1050	
FB-BOD - 1000	1000	40"	410	1255	1115	5	42	28	1170	
FB-BOD - 1200	1200	48"	470	1485	1330	5	48	32	1390	



Dimension :		AWWA C - 207			(All Dimensions are in mm)			
Valve Model	Valve Size		L AWWA C -504	øD	b	øJ	N	K : PCD
	MM	Inch						
FB-BOD - 65	65	2½"	127	180	16	19.05	4	139.7
FB-BOD - 80	80	3"	127	190	16	19.05	4	152.4
FB-BOD - 100	100	4"	127	228.6	16	19.05	8	190.5
FB-BOD - 125	125	5"	127	254	16	19.05	8	215.9
FB-BOD - 150	150	6"	127	279.4	17.5	22.35	8	241.3
FB-BOD - 200	200	8"	152	343	17.5	22.35	8	298.45
FB-BOD - 250	250	10"	203	406.4	17.5	25.4	12	361.95
FB-BOD - 300	300	12"	203	482.6	20.6	25.4	12	431.8
FB-BOD - 350	350	14"	203	533.4	23.8	28.45	12	476.25
FB-BOD - 400	400	16"	203	596.9	25.5	28.45	16	539.75
FB-BOD - 450	450	18"	203	635	27	31.75	16	577.85
FB-BOD - 500	500	20"	203	698.5	28.5	31.75	20	635
FB-BOD - 600	600	24"	203	812.8	30.2	35.05	20	749.3
FB-BOD - 650	650	26"	305	869.9	31.5	35.05	24	806.45
FB-BOD - 700	700	28"	305	927.1	35.5	35.05	28	863.6
FB-BOD - 750	750	30"	305	984.25	35.5	35.05	28	914.4
FB-BOD - 800	800	32"	305	1060.45	38	41.15	28	977.9
FB-BOD - 850	850	34"	305	1111.25	38	41.15	32	1028.7
FB-BOD - 900	900	36"	305	1168.4	41	41.15	32	1085.85
FB-BOD - 1000	1000	40"	305	1289	41	41.15	36	1200.15
FB-BOD - 1050	1050	42"	305	1346.2	44.5	41.15	36	1257.3
FB-BOD - 1200	1200	48"	381	1511.3	47.5	41.15	44	1422.4



Double Eccentric Design Offset Disc Double Flange Butterfly Valve 300 Class

FlowBiz offers double eccentric butterfly valves that incorporate an accessible replaceable seat for on/off control applications for gasses and liquids in the power, marine, chemical, and petrochemical industries, offshore.

The main features of the Double Eccentric Butterfly valves are that it has a double offset shaft position. The seat is easily replaceable, and the end connections are standardised. The user has an option for a polymer or metal seat.

Size Range : 2 inch to 24 inch (50mm to 600mm)

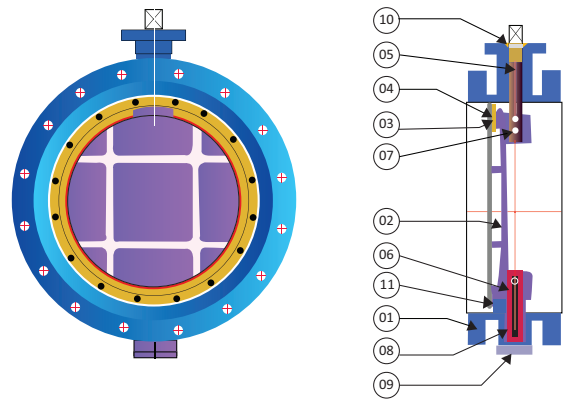
Applicable Standard

Design and Manufacturing	: API 609 / BS 5155 / BSEN 593 / IS 13095
Valve Face to Face Dimensions	: API 609 (Short Pattern) / BS 5155 (Long Pattern) : / IS 13095 (Long Pattern)
Flange Standard Conformity	: ASME / ANSI B 16.5 Class 300
Inspection & Testing	: API 598



PRESSURE / TEMPERATURE RATING	
PRESSURE RATING	300# (PN 25 / PN 40)
OPERATING TEMPERATURE	NBR : -10° C to +90° C / EPDM : -20° C to +120° C
	VITON : 0° C to +220° C / PTFE : -25° C to +180° C
	RPTFE : -25° C to +220° C

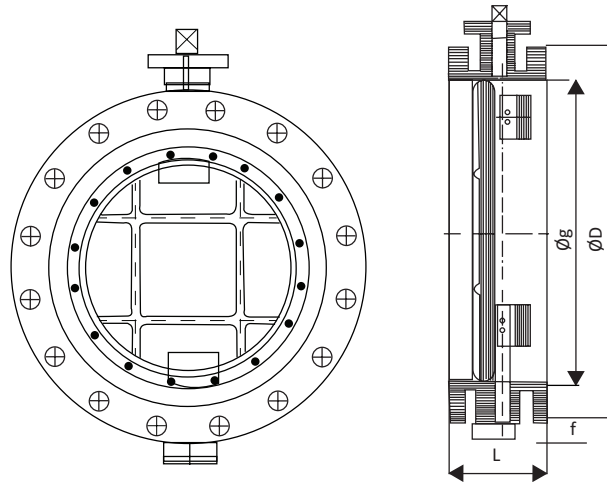
No.	Description	Material	Qty.
1	Body	ASTM A216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
2	Disc	ASTM A216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
3	Disc Seal Ring	PTFE / RPTFE / NBR / EPDM / Viton	01
4	Retainer	IS 2062 Gr. B.M.S / ASTM A 351 Gr. CF8 / Cf8M	01
5	Shaft	ASTM A 479 Type 410 / 304 / 316	01
6	Stem Shaft	ASTM A 479 Type 410 / 304 / 316	01
7	Disc Pin	S.S. 304	02
8	Stem Plate	M.S.	01
9	Shaft Bush	ASTM A - 479 Type 410 / 304 / 316	02
10	Gland Plate	M.S.	01
11	Body Seal Ring	ASTM A - 479 Type 304 / 316	01



Butterfly Values CV Valves 300#										
Valve Size		10°	20°	30°	40°	50°	60°	70°	80°	90°
MM	Inch									
150	6"	17.4	61	120	190	290	420	680	770	870
200	8"	27.2	100	200	300	460	640	1070	1200	1370
250	10"	42	150	290	460	690	980	1630	1840	2090
300	12"	59	200	410	650	970	1390	2300	2600	2950
350	14"	73	260	510	800	1200	1710	2840	3200	3640
400	16"	100	350	700	1100	1660	2360	3914	4410	5010
450	18"	120	440	870	1360	2040	2900	4810	5430	6170
500	20"	170	580	1160	1810	2720	3870	6400	7250	8250
600	24"	260	900	1800	2830	4250	6050	10000	11300	12900



Valve Torque 300#							
Valve Size		10 Bar N-M	20 Bar N-M	25 Bar N-M	35 Bar N-M	40 Bar N-M	50 Bar N-M
MM	Inch						
80	3"	55	62	70	75	76	80
100	4"	72	89	104	111	114	125
125	5"	96	127	137	148	160	178
150	6"	126	138	178	194	205	220
200	8"	205	252	281	304	328	354
250	10"	325	468	503	560	594	663
300	12"	465	685	777	868	937	1005
350	14"	747	1126	1461	1776	1836	2021
400	16"	1065	1654	2020	2204	2448	2700
450	18"	1346	2143	2458	2938	3183	3428
500	20"	2014	3056	3590	3852	4244	4570
600	24"	3052	4578	5223	5876	6464	6921



ØJ = Hole Dia
N : No of Holes
On K : PCD

Dimensions :		300#		(All Dimensions are in mm)					
Valve Model	Valve Size		L	ØD	Øg	F	ØJ Hole Dia	N	K : PCD
	MM	Inch							
FB-BOD 3C - 50	50	2"	150	165.1	91.9	1.6	19.05	08	127
FB-BOD 3C - 65	65	2½"	170	190.5	104.6	1.6	22.35	08	149.35
FB-BOD 3C - 80	80	3"	180	209.55	127	1.6	22.35	08	168.14
FB-BOD 3C - 100	100	4"	190	254	157.2	1.6	22.35	08	200.0
FB-BOD 3C - 125	125	5"	200	279.4	185.6	1.6	22.35	08	234.9
FB-BOD 3C - 150	150	6"	210	317.5	215.9	1.6	22.35	12	269.9
FB-BOD 3C - 200	200	8"	230	381	270	1.6	25.4	12	330.2
FB-BOD 3C - 250	250	10"	250	444.5	323.8	1.6	28.5	16	387.35
FB-BOD 3C - 300	300	12"	270	520.7	381	1.6	31.75	16	450.9
FB-BOD 3C - 350	350	14"	290	584.2	412.75	1.6	31.75	20	514.35
FB-BOD 3C - 400	400	16"	310	647.7	469.9	1.6	35.0	20	571.5
FB-BOD 3C - 450	450	18"	330	711.2	533.4	1.6	35.0	24	628.6
FB-BOD 3C - 500	500	20"	350	774.7	584.2	1.6	35.0	24	685.8
FB-BOD 3C - 600	600	24"	390	914.4	692.15	1.6	41.14	24	812.8



Double Eccentric Design Offset Disc Double Flange Butterfly Valve 600 Class

FlowBiz offers double eccentric butterfly valves that incorporate an accessible replaceable seat for on/off control applications for gasses and liquids in the power, marine, chemical, and petrochemical industries, offshore.

The main features of the Double Eccentric Butterfly valves are that it has a double offset shaft position. The seat is easily replaceable, and the end connections are standardised. The user has an option for a polymer or metal seat.

Size Range : 3 inch to 24 inch (80mm to 600mm)

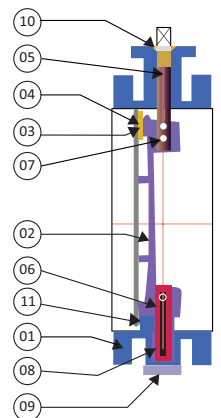
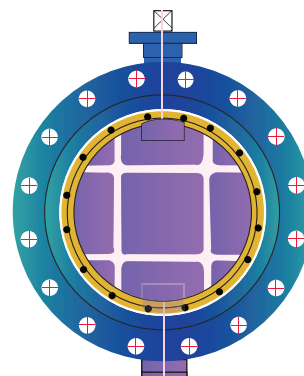
Standard

Design and Manufacturing	: API 609 / BS 5155 / BSEN 593 / IS 13095
Valve Face to Face Dimensions	: API 609 (Short Pattern) / BS 5155 (Long Pattern) : / IS 13095 (Long Pattern)
Flange Standard Conformity	: ASME / ANSI B 16.5 Class 600
Inspection & Testing	: API 598

PRESSURE / TEMPERATURE RATING	
PRESSURE RATING	600# (PN 60)
OPERATING TEMPERATURE	NBR : - 10° C to +90° C
	EPDM : -20° C to +120° C
	VITON : 0° C to +220° C
	PTFE : -25° C to +180° C
	RPTFE : -25° C to +250° C



No.	Description	Material	Qty.
1	Body	ASTM A216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
2	Disc	ASTM A216 Gr. WCB / A 351 Gr. CF8 / CF8M	01
3	Disc Seal Ring	PTFE / RPTFE / NBR / EPDM / Viton	01
4	Retainer	IS 2062 Gr. B M.S / ASTM A 351 Gr. CF8 / CF8M	01
5	Shaft	ASTM A 479 Type 410 / 304 / 316	01
6	Stem Shaft	ASTM A 479 Type 410 / 304 / 316	01
7	Disc Pin	S.S. 304	02
8	Stem Plate	M.S.	01
9	Shaft Bush	ASTM A - 479 Type 410 / S.S. 304 / 316	01
10	Gland Plate	M.S.	01
11	Body Seal Ring	ASTM A - 479 Type SS 304 / 316	01



Butterfly Valve CV Values										
Valve Size		10 °	20 °	30 °	40 °	50 °	60 °	70°	80°	90°
MM	Inch									
80	3"	4	15.6	31.5	47.6	74.5	110	180	200	230
100	4"	8	27.9	56	90	130	190	310	350	400
125	5"	13.1	46	92	150	220	310	520	580	670
150	6"	19.9	70	140	220	330	480	780	890	1000
200	8"	36.3	130	260	400	610	860	1430	1600	1830
250	10"	56	200	390	620	920	1300	2170	2450	2780
300	12"	84	290	590	930	1400	1980	3290	3700	4200
350	14"	100	370	730	1140	1700	2500	4060	4570	5200
400	16"	140	480	960	1500	2300	3220	5340	6020	6840
450	18"	180	640	1260	2000	3000	4220	7000	7900	9000
500	20"	240	840	1680	2600	3950	5630	9300	10500	12000
600	24"	380	1300	2630	4200	6200	8800	14600	16500	18700

Valve Torque 600#						
Valve Size		30 Bar N-m	40 Bar N-m	60 Bar N-m	80 Bar N-m	100 Bar N-m
MM	Inch					
150	6"	600	700	850	1000	1300
200	8"	1000	1150	1400	1650	2100
250	10"	1650	1900	2300	2800	3800
300	12"	2400	2850	3450	4100	4900
350	14"	3400	4300	5350	6300	7500
400	16"	5000	6900	8900	9700	11500
450	18"	7000	9400	12000	14500	17000
500	20"	8700	12000	15000	18000	21000
600	24"	15000	21000	25700	30500	36000

Dimension :		600# (All Dimensions are in mm)								
Valve Model	Valve Size		L	øD	øg	B	F	øJ Hole Dia	N	K : PCD
	MM	Inch								
FB-BOD 6C - 80	80	3"	180	210	127	31.75	6.35	22.0	08	168.3
FB-BOD 6C - 100	100	4"	190	275	157	38.1	6.35	25.4	08	215.9
FB-BOD 6C - 125	125	5"	210	330	185	44.4	6.35	28.5	08	266.7
FB-BOD 6C - 150	150	6"	210	355	216	47.75	6.35	28.5	12	292.1
FB-BOD 6C - 200	200	8"	230	420	270	55.63	6.35	32.0	12	349.2
FB-BOD 6C - 250	250	10"	250	510	324	63.5	6.35	35.0	16	431.8
FB-BOD 6C - 300	300	12"	270	560	381	66.55	6.35	35.0	20	489.5
FB-BOD 6C - 350	350	14"	290	605	413	69.85	6.35	38.1	20	527.0
FB-BOD 6C - 400	400	16"	310	685	470	76.2	6.35	41.15	20	603.2
FB-BOD 6C - 450	450	18"	330	745	534	82.6	6.35	44.45	20	654.0
FB-BOD 6C - 500	500	20"	350	815	584	88.9	6.35	44.45	24	723.9
FB-BOD 6C - 600	600	24"	390	940	692	101.6	6.35	50	24	838.2

