

CM CONTROLS

High Performance Butterfly Valves 2 through 24 Inch



CM CONTROLS

Website: cmcontrols.ca

CM Controls
3900 101 Street NW
Edmonton, Alberta
T6E 0A5
Ph: 780 437 3055
Email: info@cmcontrols.ca

FEATURES

CM Controls offers two styles of high-performance double eccentric quarter turn Butterfly Valves. Series BFH-200 is a wafer style Butterfly Valve, while the Series BFH-400 is a lug style Butterfly Valve.

Both series are available in 2 through 24 inch valve size, ASME class 150/300.

Standard body material is CF8M, other materials may be available upon request. Standard seat material is PTFE with a temperature range of -40°C to 150°C (-40°F to 302°F).

The one-piece shaft design offers a blowout proof stem and anti static device.

The CM Controls BFH Series is NACE capable and suitable for use in Sour Service applications.

Operators available include either a manual gear operator, or handle. Automation operation may be provided by using quarter turn actuators, utilizing ISO 5211 standard mounting interface.

Canadian Registration Number (CRN) OC 17475 2

CM CONTROLS - Butterfly Valve Configuration Chart

SIZE	MODEL	OPERATION TYPE	PRESSURE	CONNECTION TYPE	BODY MATERIAL	SEAT MATERIAL
12	CBFH	1	11	AE	10	01
↓		↓	↓	↓	↓	↓
1=1" 2=2" 3=3" 4=4" 6=6" 8=8" 10=10" 12=12" 14=14" 16=16" 20=20" 24=24" 30=30" 36=36"		0 = BARE 1 = LEVER 2 = GEAR	11 = 150 12 = 300	AE = WAFER AF = LUG	10 = CF8M 11 = WCB 12 = LCC	01 = TFM 1600

FOR ALL STOCK MODELS - DISK MATERIAL = CF8M
STEM MATERIAL = 17-4

Always follow safety and lockout precautions, and ensure proper bolting procedures are followed. Inspect components prior to installation to make sure line is clean and clear from debris.

INSTALLATION

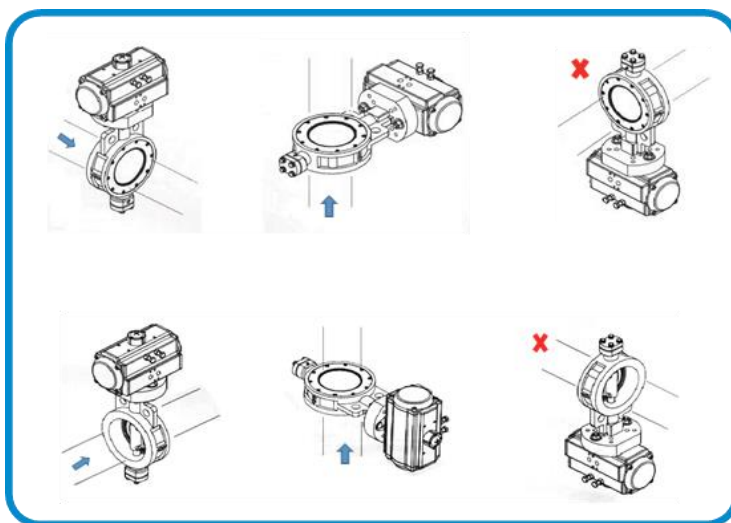
1. Place valve disc in the closed position.
2. Note the direction of the flow arrow located on the valve body. For extended service life and performance, install the valve with the seat in the upstream position.
3. While the valve may be installed in any orientation, it is recommended to be installed in the horizontal, intermediate or vertical positions.
4. Align the valve with gasket (not supplied) and pipeline flange. Fibre gaskets of 1/16" or less or metallic wound are suitable.
5. Place the lower flange bolts to support the valve between the flanges. Do not tighten at this point.
6. Install remaining bolts, and tighten using proper bolting procedures, ensuring a uniform compression of the gasket for best seal.

*Although the CM Butterfly Valve may be installed for flow in either direction, reverse flow may shorten the service life and may require more frequent inspections or maintenance.

OPERATION

CM Controls Butterfly Valves may be operated with optional manual lever operator, or gear operator. Pneumatic or Electric actuators may also be used as part of a complete installation alternative.

Installation Orientation

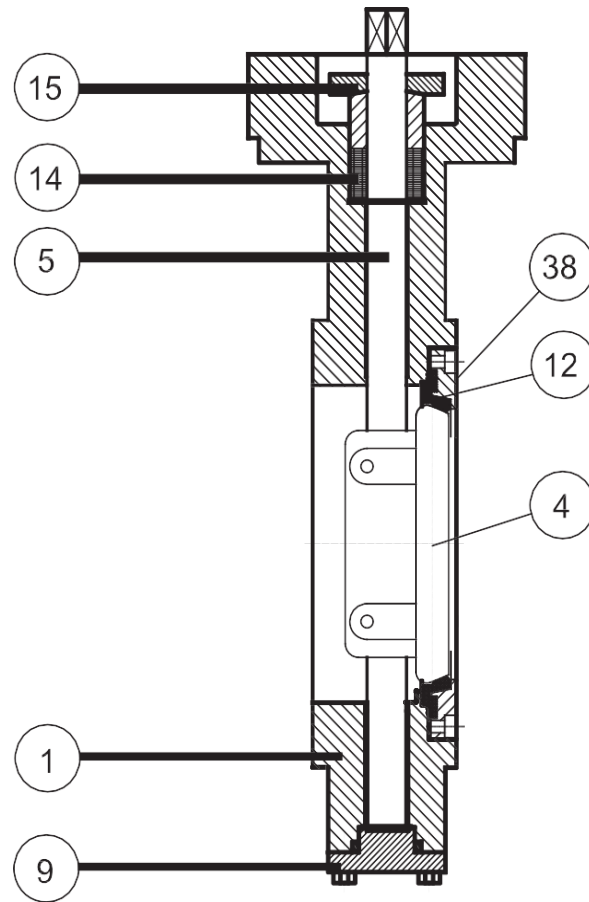


Actuator Mounting Position and Styles

Actuator		Valve Open	Actuator Position			
Mounting	Action		1	2	3	4
Right Hand	PDTO	FWD				
		REV				
	PDTC	FWD				
		REV				
Left Hand	PDTC	FWD				
		REV				
	PDTO	FWD				
		REV				

PDTC – Push Down To Close
 PDTO – Push Down To Open

FWD – Forward Flow
 REV – Reverse Flow
 Lever Arrows indicate direction of actuator to close valve.

ASSEMBLY

Item #	Description	Material
1	BODY	WCB/LCC/CF8/CF8M
4	DISC	CF8/CF8M
5	STEM	17-4PH
9	CAP	WCB/LCC/CF8/CF8M
12	SEAT	PTFE
14	STEM PACKING	GRAPHITE
15	GLAND	20#/304/316
38	SEAT RETAINER	WCB/LCC/304/316

Bolting Stud Lengths for Piping – Wafer Series

BFH200: ASME Class 150 - WAFER Series – Stud Bolt			
Valve Size - In	Bolt Size/Thread Type	Qty	Length - In
2	5/8" - 11 unc	4	5.375
3	5/8" - 11 unc	4	6.00
4	5/8" - 11 unc	8	6.125
6	3/4" - 10 unc	8	6.875
8	3/4" - 10 unc	8	7.375
10	7/8" - 9 unc	12	8.125
12	7/8" - 9 unc	12	8.750
14	1" - 8 unc	12	9.875
16	1" - 8 unc	16	10.250
18	1-1/8" - 8 un	12	11.500
20	1-1/8" - 8 un	16	12.250
24	1-1/4" - 8 un	16	14.000

BFH200: ASME Class 300 - WAFER Series – Stud Bolt			
Valve Size - In	Bolt Size/Thread Type	Qty	Length - In
2	5/8" - 11 unc	8	5.750
3	3/4" - 10 unc	8	8.750
4	3/4" - 10 unc	8	7.375
6	3/4" - 10 unc	12	7.875
8	7/8" - 9 unc	12	9.125
10	1" - 8 unc	12	10.500
12	1-1/8" - 8 un	12	11.500
14	1-1/8" - 8 un	16	12.000
16	1-1/4" - 8 un	16	13.000
18	1-1/4" - 8 un	20	14.000
20	1-1/4" - 8 un	20	15.000
24	1-1/2" - 8 un	20	16.500

Bolting Stud Lengths for Piping – Lug Series

BFH400: ASME Class 150 - LUG Series – Stud Bolt			
Valve Size - In	Bolt Size/Thread Type	Qty	Length - In
2	5/8" - 11 unc	8	2.375
3	5/8" - 11 unc	8	2.750
4	5/8" - 11 unc	16	2.750
6	3/4" - 10 unc	16	3.250
8	3/4" - 10 unc	16	3.375
10	7/8" - 9 unc	24	3.750
12	7/8" - 9 unc	24	4.000
14	1" - 8 unc	24	4.375
16	1" - 8 unc	32	4.625
18	1-1/8" - 8 un	32	5.000
20	1-1/8" - 8 un	32	5.125
24	1-1/4" - 8 un	32	5.625

BFH400: ASME Class 300 - LUG Series – Stud Bolt			
Valve Size - In	Bolt Size/Thread Type	Qty	Length - In
2	5/8" - 11 unc	8	2.375
3	5/8" - 11 unc	8	2.750
4	5/8" - 11 unc	16	2.750
6	3/4" - 10 unc	16	3.250
8	3/4" - 10 unc	16	3.375
10	7/8" - 9 unc	24	3.750
12	7/8" - 9 unc	24	4.000
14	1-1/8" - 8 un	32	6.000
16	1-1/4" - 8 un	32	6.500
18	1-1/4" - 8 un	40	6.500
20	1-1/4" - 8 un	40	7.000
24	1-1/2" - 8 un	40	8.000

FLOW COEFFICIENTS

VALVE SIZE	C _v Value @ Disc Opening Angle								
	Inch	10°	20°	30°	40°	50°	60°	70°	80°
2"	3	9	15	23	34	48	80	89	100
3"	6	19	38	59	89	126	208	235	265
4"	9	32	64	100	150	213	355	399	453
6"	22	77	153	240	359	510	847	958	1085
8"	41	141	282	441	663	941	1562	1762	2000
10"	67	233	465	728	1090	1553	2574	2904	3300
12"	96	334	668	1047	1568	2234	3705	4180	4750
14"	116	406	815	1275	1913	2723	4519	5098	5792
16"	161	561	1122	1763	2644	3765	6248	7049	8010
18"	218	763	1526	2398	3597	5123	8502	9592	10900
20"	290	1015	2030	3190	4785	6815	11310	12760	14500
24"	438	1530	3060	4808	7211	10270	17043	19228	21850

Approximate Shipping Weights:

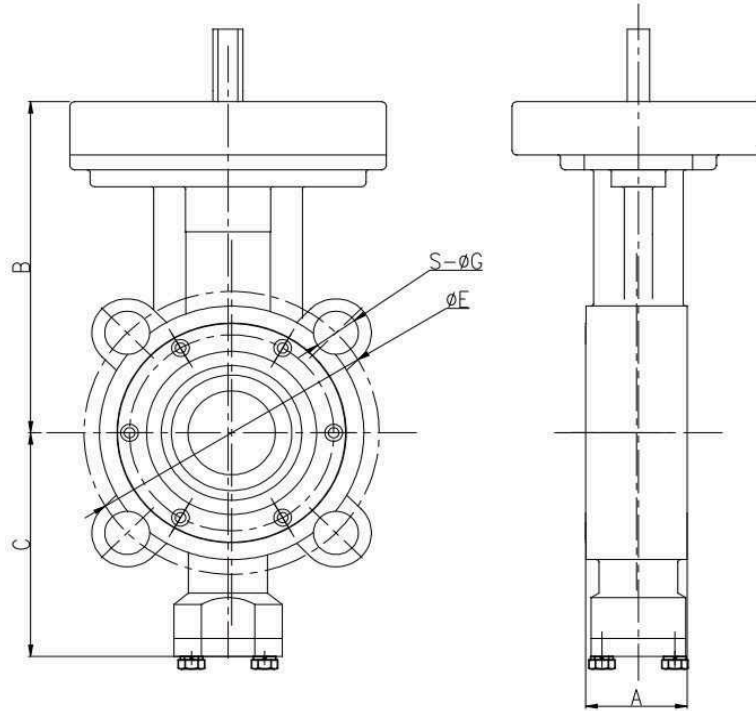
Size	Lug Type (kg) Bare Shaft		Wafer Type(kg) Bare Shaft	
	Class150	Class 300	Class150	Class 300
2"	6.23	7.07	6.1	6.86
3"	8.74	10.11	6.86	6.91
4"	13.01	13.4	8.15	8.12
6"	18.43	26.28	14.14	16.95
8"	30.84	48.8	24.12	31.63
10"	49.16	68.5	34.08	51.7
12"	72.34	99.1	44.72	69.7

TORQUES – CM Series BFH

CM Series BFH – Class 150		
Size - In	Torque – Nm (no safety factor)	Torque – in lbs (no safety factor)
2	20	177.01
3	38	336.33
4	55	486.79
6	130	1150.6
8	190	1681.64
10	280	2478.21
12	390	3451.79
14	650	5752.98
16	900	7965.67
18	1100	9735.82
20	1500	13276.12
24	2300	20356.72

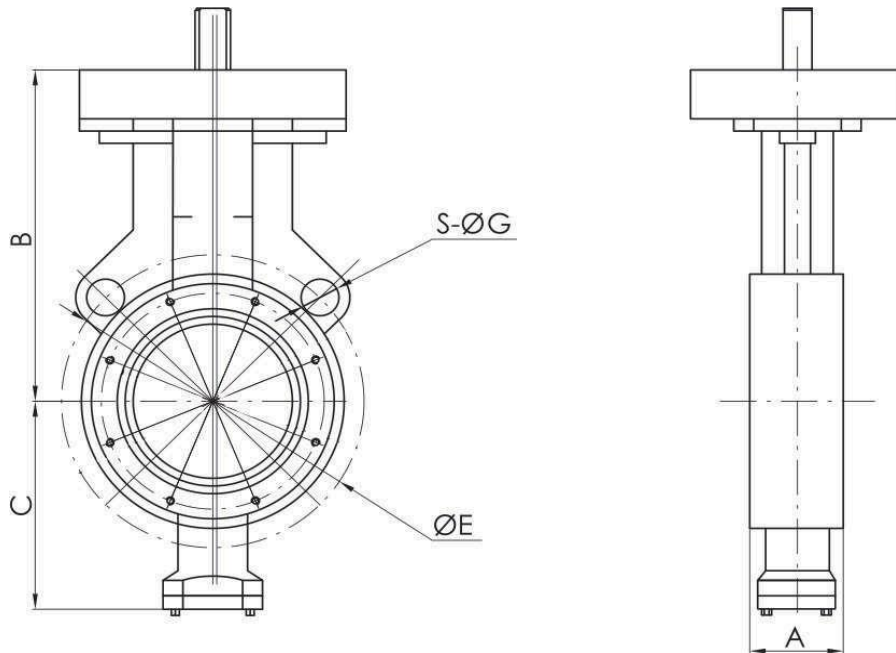
CM Series BFH – Class 300		
Size - In	Torque – Nm (no safety factor)	Torque – in lbs (no safety factor)
2	40	354.03
3	51	451.39
4	88	778.87
6	190	1681.64
8	374	3310.18
10	586	5186.54
12	810	7169.1
14	1385	12258.28
16	1946	17223.55
18	2460	21772.83
20	2960	26198.21
24	4195	37128.88

DIMENSIONS - BFH 200 Wafer Style



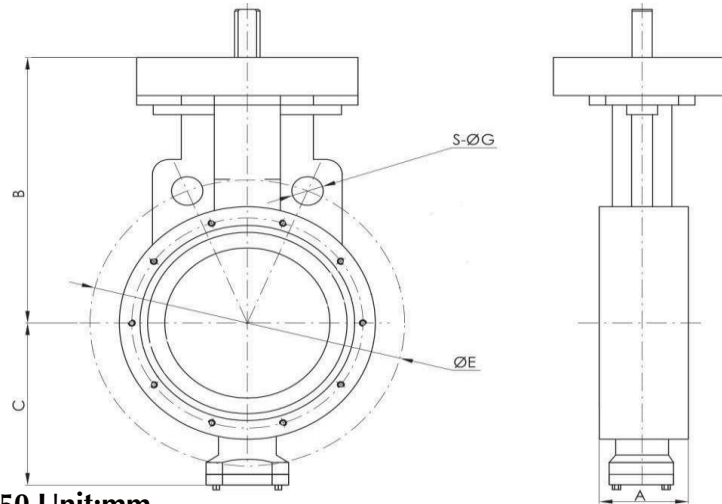
BFH200 - CLASS150 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
2"	43	147	107	121	4-Ø17.5	70	4-Ø9.5	102	4-Ø11.1



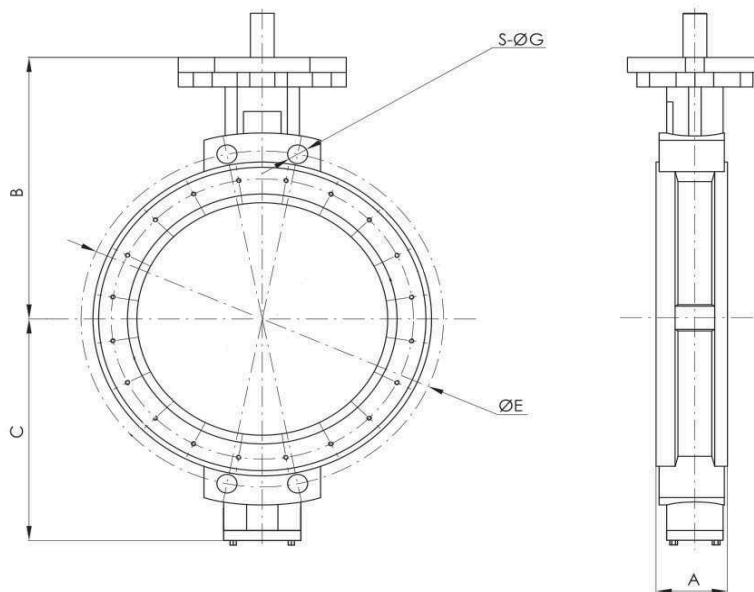
BFH200 - CLASS 150 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
3"	47	172	121	152	2-Ø19	70	4-Ø9.5	102	4-Ø11.1



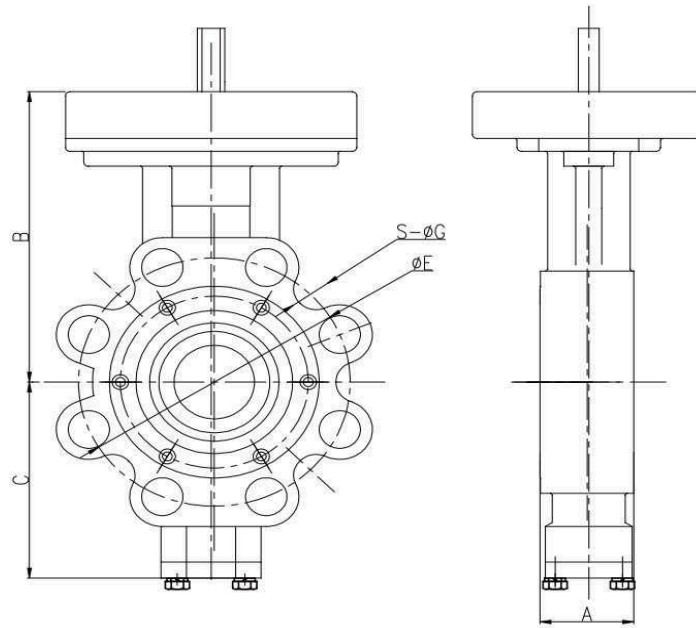
BFH200 - CLASS150 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
4"	54	177	131	191	2-Ø19	70	4-Ø9.5	102	4-Ø11.1
6"	57	221	172	241	2-Ø23	70	4-Ø9.5	102	4-Ø11.1
8"	64	265	203	298.5	2-Ø23	102	4-Ø11.1	140	4-Ø18
10"	72	300	239	362	2-Ø25	125	4-Ø14.3	-	-
12"	81	325	280	432	2-Ø25	125	4-Ø14.3	-	-
14"	92	407	316	476	2-Ø29	125	4-Ø14.3	-	-
16"	102	425	364	540	2-Ø29	125	4-Ø14.3	165	4-Ø21



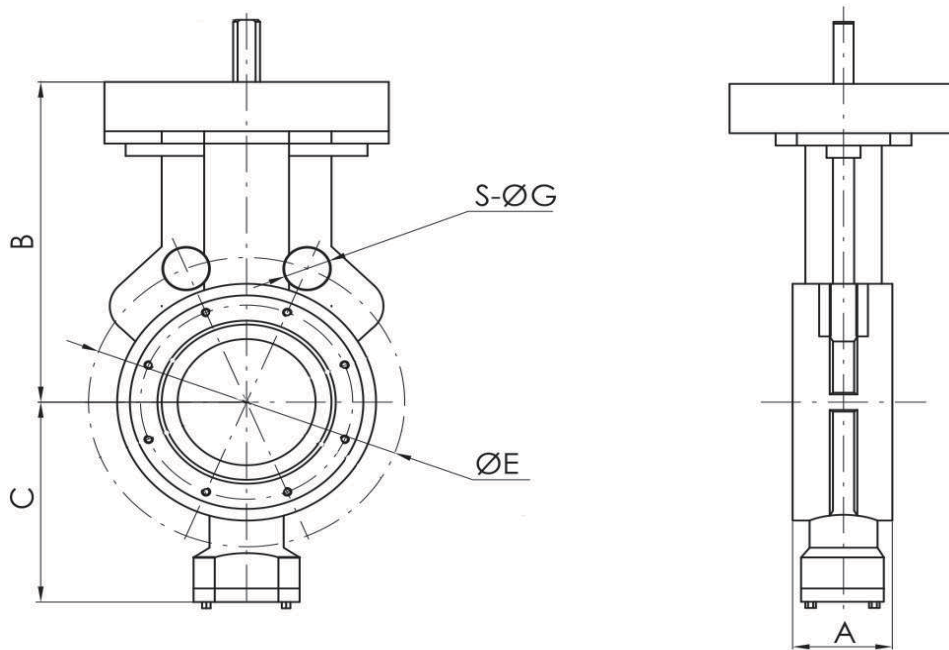
BFH200 - CLASS 150 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
18"	114	450	389	578	4-1 1/8"-8UN-38	125	4-Ø14.3	165	4-Ø21
20"	127	481	428	635	4-1 1/8"-8UN-38	125	4-Ø14.3	165	4-Ø21
24"	154	590	500	749	4-1 1/4"-8UN-38	165	4-Ø21	254	8-Ø18



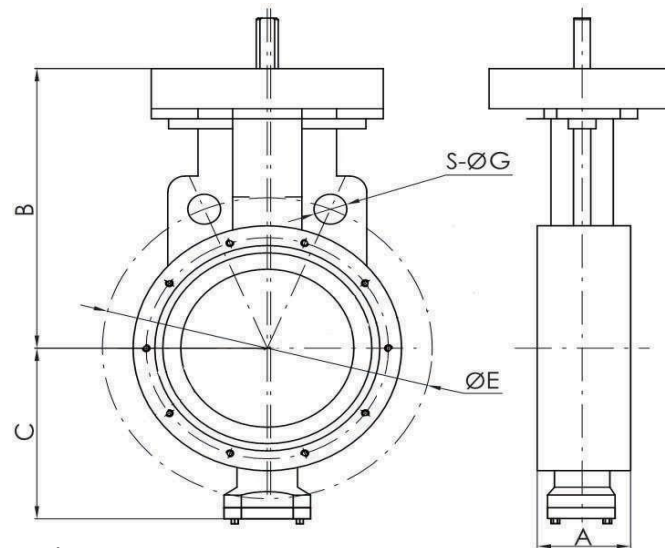
BFH200-CLASS 300 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
2"	43	146	107	127	8-Ø17.5	70	4-Ø9.5	102	4-Ø11.1



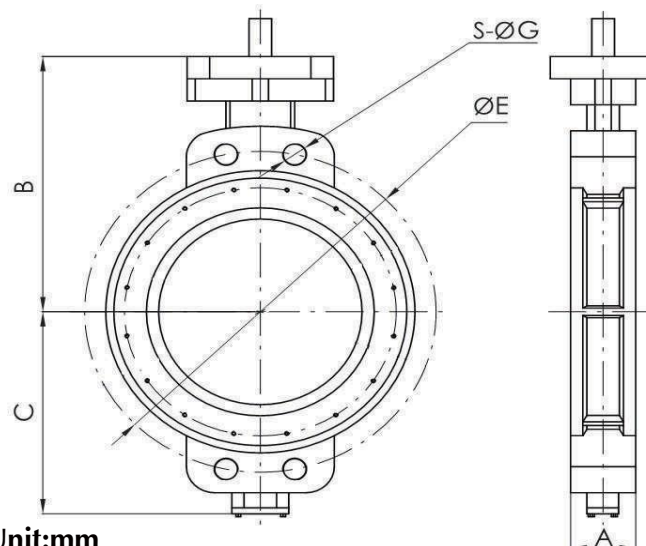
BFH200-CLASS 300 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
3"	47	172	121	168	2-Ø22	70	4-Ø9.5	102	4-Ø11.1



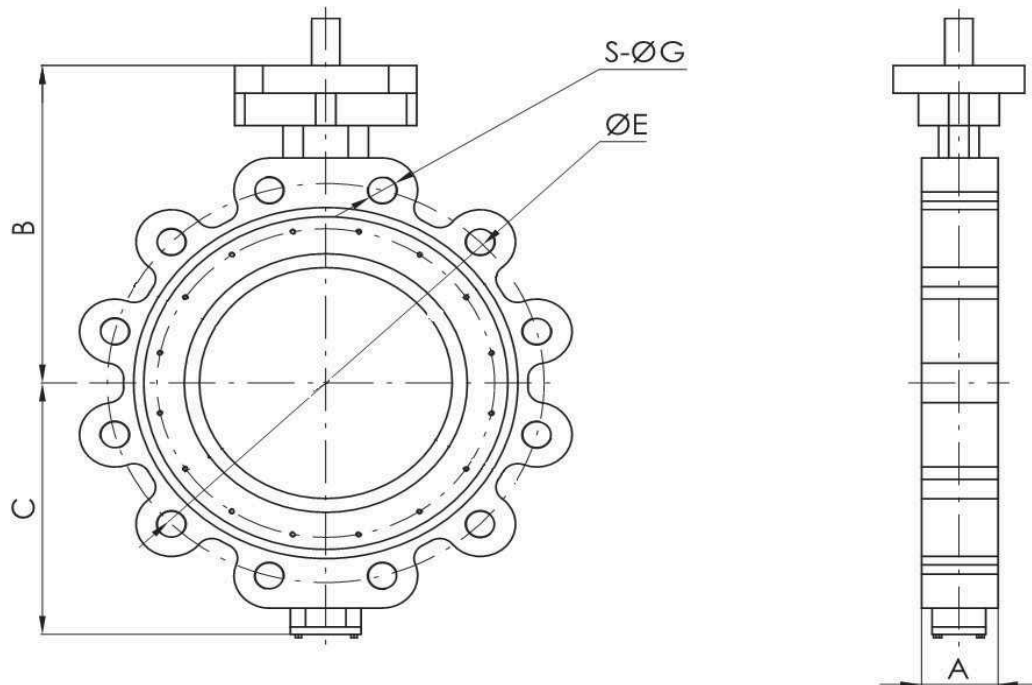
BFH200 – CLASS 300 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
4"	54	177	131	200	2-Ø22	70	4-Ø9.5	102	4-Ø11.1
6"	59	240	200	270	2-Ø22	70	4-Ø9.5	102	4-Ø11.1



BFH200-CLASS 300 Unit:mm

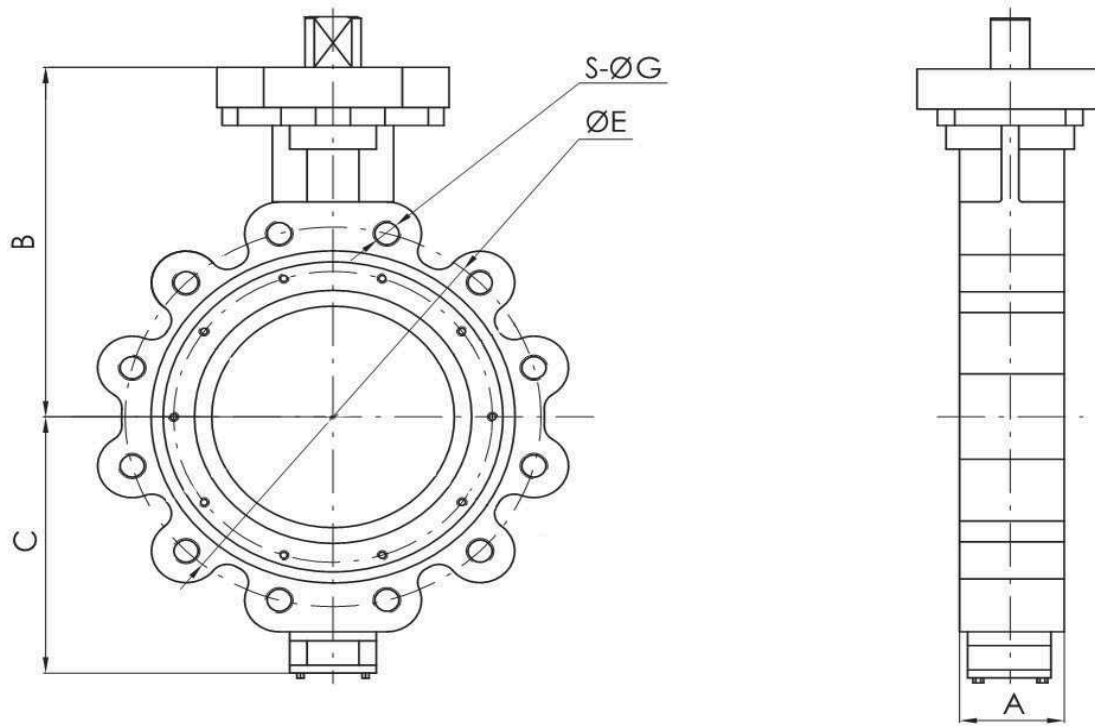
SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
8"	73	290	233	330.5	2-Ø25	102	4-Ø11.1	-	-
10"	83	313	239	387	4-1"-8UNC-22	125	4-Ø14.3	-	-
12"	92	355	280	451	4-1 1/8"-8UN-29	125	4-Ø14.3	-	-
14"	117	407	326	514	4-1 1/8"-8UN-47	125	4-Ø14.3	-	-
16"	133	465	416	571	4-1 1/4"-8UN-47	165	4-Ø21	-	-
18"	149	490	430	629	4-1 1/4"-8UN-47	165	4-Ø22	-	-
20"	159	570	458	686	4-1 1/4"-8UN-47	165	4-Ø22	-	-
24"	181	633	560	813	4-1 1/2"-8UN-57	165	4-Ø22	-	-



BFH400 – CLASS 150 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
2"	43	146	107	121	4-5/8"-11UNC	70	4-Ø9.5	102	4-Ø11.1
3"	47	172	121	152	4-5/8"-11UNC	70	4-Ø9.5	102	4-Ø11.1
4"	54	177	131	191	8-5/8"-11UNC	70	4-Ø9.5	102	4-Ø11.1
6"	57	221	172	241	8-3/4"-10UNC	70	4-Ø9.5	102	4-Ø11.1
8"	64	265	203	298.5	8-3/4"-10UNC	102	4-Ø11.1	-	-
10"	72	300	239	362	12-7/8"-9UNC	125	4-Ø14.3	-	-
12"	81	325	280	432	12-7/8"-9UNC	125	4-Ø14.3	-	-
14"	92	407	316	476	12-1"-8UNC	125	4-Ø14.3	-	-
16"	102	425	364	540	16-1"-8UNC	125	4-Ø14.3	165	4-Ø21
18"	114	450	389	578	16-1 1/8"-8UN-38	125	4-Ø14.3	165	4-Ø21
20"	127	481	428	635	20-1 1/8"-8UN-38	125	4-Ø14.3	165	4-Ø21
24"	154	590	500	749	20-1 1/4"-8UN-38	165	4-Ø21	254	8-Ø18

DIMENSIONS - BFH 400 Lug Style

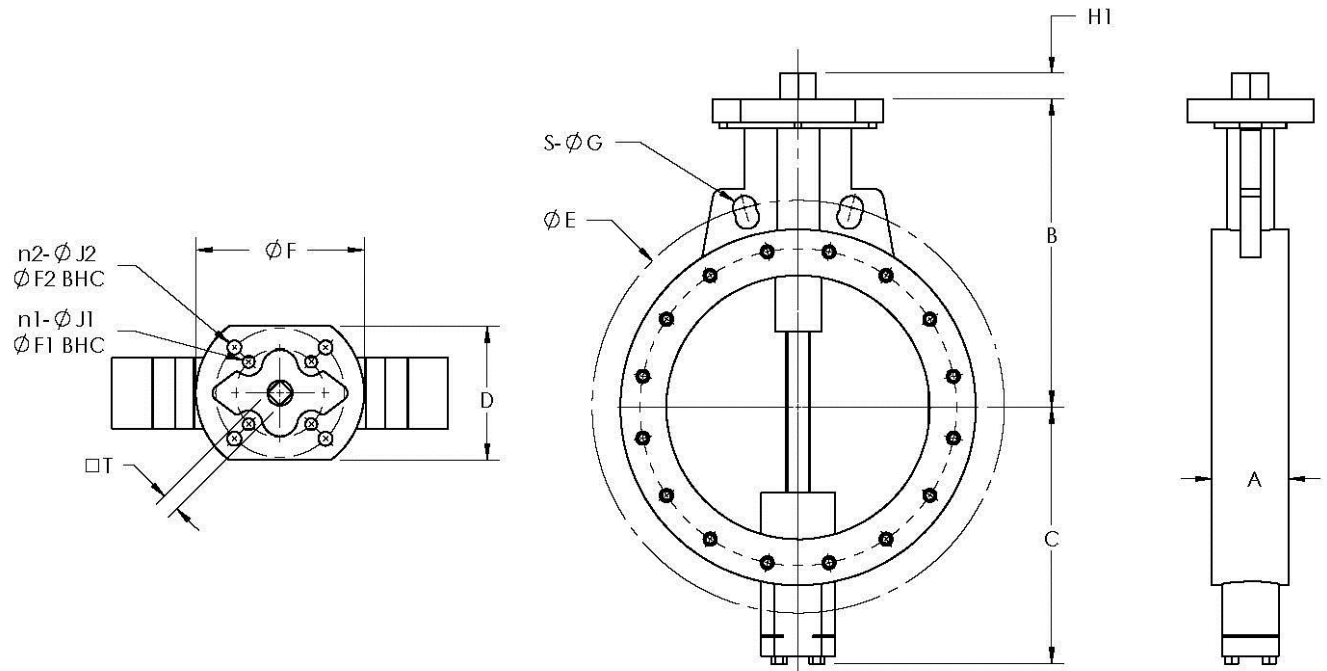


BFH400 - CLASS 300 Unit:mm

SIZE	A	B	C	ØE	S-ØG	ØF1	ØJ1	ØF2	ØJ2
2"	43	146	107	127	8-5/8"-11UNC	70	4-Ø9.5	102	4-Ø11.1
3"	47	172	121	168	8-3/4"-10UNC	70	4-Ø9.5	102	4-Ø11.1
4"	54	177	131	200	8-3/4"-10UNC	70	4-Ø9.5	102	4-Ø11.1
5"	59	213	170	235	8-3/4"-10UNC	70	4-Ø9.5	102	4-Ø11.1
6"	59	240	200	270	12-3/4"-10UNC	70	4-Ø9.5	102	4-Ø11.1
8"	73	290	233	330.5	12-7/8"-9UNC	102	4-Ø11.1	-	-
10"	83	313	239	387	16-1"-8UNC-22	125	4-Ø14.3	-	-
12"	92	355	280	451	16-1 1/8"-8UN-29	125	4-Ø14.3	-	-
14"	117	407	326	514	20-1 1/8"-8UN-29	165	4-Ø22	-	-
16"	133	465	416	571	20-1 1/4"-8UN-48	165	4-Ø22	-	-
18"	149	490	430	629	20-1 1/4"-8UN-48	165	4-Ø22	-	-
20"	159	570	458	686	20-1 1/4"-8UN-48	165	4-Ø22	-	-
24"	181	633	560	813	24-1 1/2"-8UN-57	254	8-Ø18	-	-

Top Works Mounting Dimensions

Series BFH200 Wafer Style - Class 150



BFH200 2-12" CL 150 WAFER TYPE BUTTERFLY VALVE DIMENSIONS - Inch

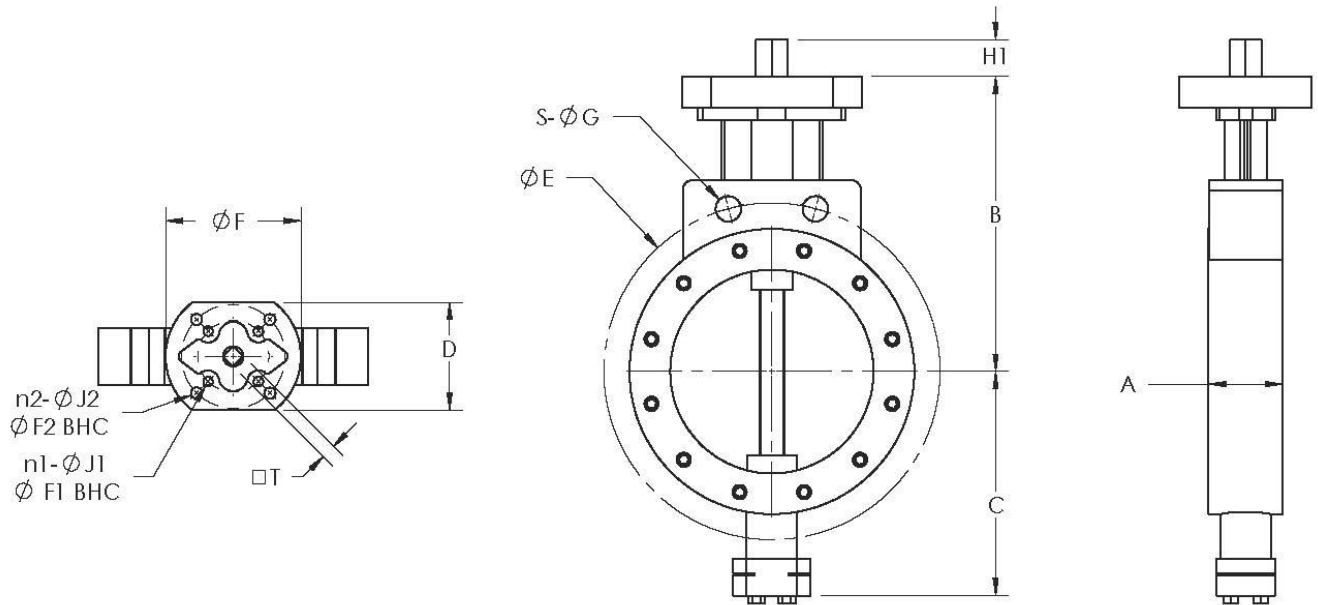
SIZE	A	B	C	ϕE	$S-\phi G$	$\phi F1$	$n1-\phi J1$	$\phi F2$	$n2-\phi J2$	T	H1	ϕF	D
2"	1.69	5.79	4.21	4.75	4- ϕ .69	2.756	4- ϕ .37	4.016	4- ϕ .44	.36	.98	5.25	4.21
3"	1.85	6.77	4.75	6.00	2- ϕ .75	2.756	4- ϕ .37	4.016	4- ϕ .44	.43	.93	5.25	4.21
4"	2.13	6.97	5.16	7.50	2- ϕ .75	2.756	4- ϕ .37	4.016	4- ϕ .44	.43	1.11	5.25	4.21
6"	2.24	8.70	6.77	9.50	2- ϕ .91	2.756	4- ϕ .37	4.016	4- ϕ .44	.55	1.2	5.25	4.21
8"	2.52	10.43	7.99	11.75	2- ϕ .91	4.016	4- ϕ .44	---	---	.67	1.37	7.00	5.20
10"	2.83	11.81	9.41	14.25	2- ϕ 1.02	4.921	4- ϕ .56	---	---	.87	1.06	7.00	5.20
12"	3.19	12.80	11.02	17.00	2- ϕ 1.02	4.921	4- ϕ .56	---	---	1.06	1.08	7.00	5.20

BFH200 2-12" CL 150 WAFER TYPE BUTTERFLY VALVE DIMENSIONS - mm

SIZE	A	B	C	ϕE	$S-\phi G$	$\phi F1$	$n1-\phi J1$	$\phi F2$	$n2-\phi J2$	T	H1	ϕF	D
2"	43	147	107	121	4- ϕ 17.5	70	4- ϕ 9.5	102	4- ϕ 11.1	9	24.9	133	107
3"	47	172	121	152	2- ϕ 19	70	4- ϕ 9.5	102	4- ϕ 11.1	11	23.6	133	107
4"	54	177	131	191	2- ϕ 19	70	4- ϕ 9.5	102	4- ϕ 11.1	11	28.2	133	107
6"	57	221	172	241	2- ϕ 23	70	4- ϕ 9.5	102	4- ϕ 11.1	14	30.5	133	107
8"	64	265	203	298.5	2- ϕ 23	102	4- ϕ 11.1	---	---	17	34.8	178	132
10"	72	300	239	362	2- ϕ 25	125	4- ϕ 14.3	---	---	22	26.9	178	132
12"	81	325	280	432	2- ϕ 25	125	4- ϕ 14.3	---	---	27	27.4	178	132

Top Works Mounting Dimensions

Series BFH200 Wafer Style - Class 300



BFH200 2-12" CL 300 WAFER TYPE BUTTERFLY VALVE DIMENSIONS - Inch

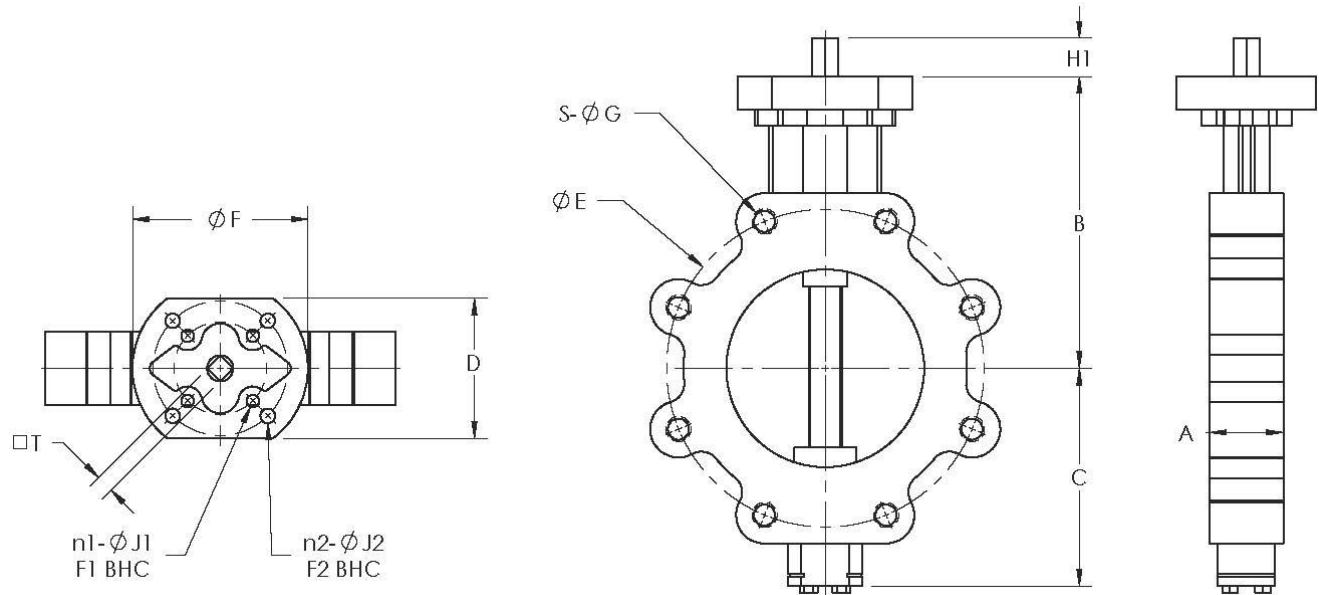
SIZE	A	B	C	ØE	S-ØG	ØF1	n1-Ø J1	ØF2	n2-Ø J2	T	H1	ØF	D
2"	1.69	5.75	4.21	5.00	8- Ø.689	2.756	4- Ø .37	4.016	4- Ø .44	.36	.96	5.25	4.21
3"	1.85	6.77	4.75	6.62	2- Ø.866	2.756	4- Ø.37	4.016	4- Ø .44	.43	.91	5.25	4.21
4"	2.13	6.97	5.16	7.88	2- Ø.866	2.756	4- Ø .37	4.016	4- Ø .44	.43	1.12	5.25	4.21
6"	2.32	9.45	7.87	10.63	2- Ø.866	2.756	4- Ø.37	4.016	4- Ø .44	.68	1.13	5.25	4.21
8"	2.87	11.42	9.17	13.00	2- Ø.984	4.016	4- Ø.44	---	---	.87	1.40	7.00	5.20
10"	3.27	12.32	9.41	15.25	4-1"-8UN .87	4.921	4- Ø.56	---	---	1.06	1.09	7.00	5.20
12"	3.62	13.98	11.02	17.75	4-1 1/8"-8UN 1.14	4.921	4- Ø.56	---	---	1.06	1.22	7.00	5.20

BFH200 2-12" CL 300 WAFER TYPE BUTTERFLY VALVE DIMENSIONS – mm

SIZE	A	B	C	E	S-ØG	ØF1	n1-Ø J1	ØF2	n2-Ø J2	T	H1	ØF	D
2"	43	146	107	127	8-Ø17.5	70	4-Ø9.5	102	4-Ø11.1	9	24.4	133	107
3"	47	172	121	168	2-Ø22	70	4-Ø9.5	102	4-Ø11.1	11	23.1	133	107
4"	54	177	131	200	2-Ø22	70	4- Ø9.5	102	4-Ø11.1	11	28.4	133	107
6"	59	240	200	270	2-Ø22	70	4-Ø9.5	102	4-Ø11.1	17	28.7	133	107
8"	73	290	233	330.5	2-Ø25	102	4-Ø11.1	---	---	22	35.6	178	132
10"	83	313	239	387	4-1"-8UN 22	125	4-Ø14.3	---	---	27	27.7	178	132
12"	92	355	280	451	4-1 1/8"-8UN 29	125	4-Ø14.3	---	---	27	31.0	178	132

Top Works Mounting Dimensions

Series BFH400 Lug Style - Class 150



BFH400 2-12" CL 150 LUG TYPE BUTTERFLYVALVE DIMENSIONS - Inch

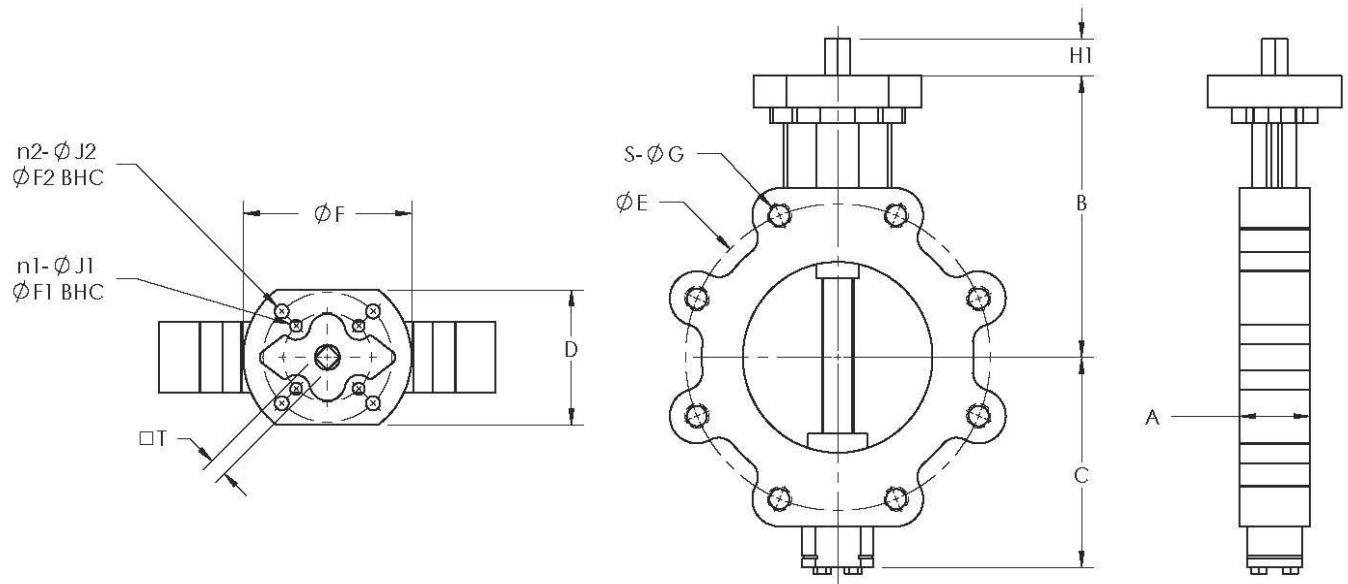
SIZE	A	B	C	ϕE	S- ϕG	$\phi F1$	n1- $\phi J1$	$\phi F2$	n2- $\phi J2$	T	H1	ϕF	D
2"	1.69	5.75	4.21	4.75	4-5/8"-11UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.36	.94	5.25	4.20
3"	1.85	6.77	4.75	6.00	4-5/8"-11UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.43	.93	5.25	4.20
4"	2.13	6.97	5.16	7.50	8-5/8"-11UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.43	1.17	5.25	4.20
6"	2.24	8.70	6.77	9.50	8-3/4"-10UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.55	1.15	5.25	4.20
8"	2.52	10.43	7.99	11.75	8-3/4"-10UNC	4.016	4- ϕ .44	---	---	.67	1.41	7.00	5.10
10"	2.83	11.81	9.41	14.25	12-7/8"-9UNC	4.921	4- ϕ .56	---	---	.87	1.04	7.00	5.24
12"	3.19	12.80	11.02	17.00	12-7/8"-9UNC	4.921	4- ϕ .56	---	---	.87	1.08	7.00	5.24

BFH400 2-12" CL 150 LUG TYPE BUTTERFLYVALVE DIMENSIONS - mm

SIZE	A	B	C	ϕE	S- ϕG	$\phi F1$	n1- $\phi J1$	$\phi F2$	n2- $\phi J2$	T	H1	ϕF	D
2"	43	146	107	121	4-5/8"-11UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	9	23.9	133	107
3"	47	172	121	152	4-5/8"-11UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	11	23.6	133	107
4"	54	177	131	191	8-5/8"-11UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	11	29.7	133	107
6"	57	221	172	241	8-3/4"-10UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	14	29.2	133	107
8"	64	265	203	298.5	8-3/4"-10UNC	102	4- ϕ 11.1	---	---	17	35.8	178	130
10"	72	300	239	362	12-7/8"-9UNC	125	4- ϕ 14.3	---	---	22	26.4	178	133
12"	81	325	280	432	12-7/8"-9UNC	125	4- ϕ 14.3	---	---	22	27.4	178	133

Top Works Mounting Dimensions

Series BFH400 Lug Style - Class 300



BFH400 2-12" CL 300 LUG TYPE BUTTERFLY VALVE DIMENSIONS – Inch

SIZE	A	B	C	ϕE	S- ϕG	$\phi F1$	n1- $\phi J1$	$\phi F2$	n2- $\phi J2$	T	H1	ϕF	D
2"	1.69	5.75	4.21	5.00	8-5/8"-11UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.36	.99	5.2	4.2
3"	1.85	6.77	4.75	6.61	8-3/4"-10UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.43	.95	5.2	4.2
4"	2.13	6.97	5.16	7.87	8-3/4"-10UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.43	1.11	5.2	4.2
6"	2.32	9.45	7.87	10.63	12-3/4"-10UNC	2.756	4- ϕ .37	4.016	4- ϕ .44	.67	1.12	5.2	4.2
8"	2.87	11.42	9.17	13.00	12-7/8"-9UNC	4.016	4- ϕ .44	---	---	.86	1.45	7.0	5.2
10"	3.27	12.32	9.41	15.24	16-1"-8UNC .87	4.921	4- ϕ .56	---	---	1.06	1.10	7.0	5.2
12"	3.62	13.98	11.02	17.75	16-1 1/8"-8UN 1.14	4.921	4- ϕ .56	---	---	1.06	1.18	7.0	5.2

BFH400 2-12" CL 300 LUG TYPE BUTTERFLY VALVE DIMENSIONS - mm

SIZE	A	B	C	ϕE	S- ϕG	$\phi F1$	n1- $\phi J1$	$\phi F2$	n2- $\phi J2$	T	H1	ϕF	D
2"	43	146	107	127	8-5/8"-11UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	9	25.1	132	102
3"	47	172	121	168	8-3/4"-10UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	11	24.1	132	102
4"	54	177	131	200	8-3/4"-10UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	11	28.2	132	102
6"	59	240	200	270	12-3/4"-10UNC	70	4- ϕ 9.5	102	4- ϕ 11.1	17	28.4	132	102
8"	73	290	233	330.5	12-7/8"-9UNC	102	4- ϕ 11.1	---	---	22	36.8	178	132
10"	83	313	239	387	16-1"-8UNC 22	125	4- ϕ 14.3	---	---	27	27.9	178	132
12"	92	355	280	451	16-1 1/8"-8UN 29	125	4- ϕ 14.3	---	---	27	30.0	178	132

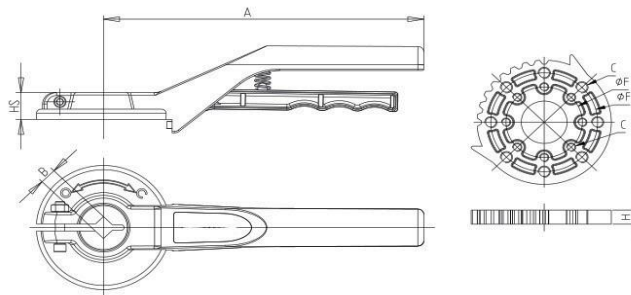
Accessories:

Manual Handle



MODEL	A	B	C	HS	F	H	WT(KG)
3260213-A	210	8/9/11/14/17	M6/M8	14-19	50/70	10	0.55
3260213-B	340	14/17/22	M8/M10	23-28	70/102	12	1.00

Unit - mm



Manual Gearbox



MODEL	SQUARE	ISO5211 FLANGE TYPE	ISO HOLES	HANDWHEEL	OUT/INPUT TORQUE RATIO	REFERENCE OUTPUT TORQUE(NM)	WT(KG)
3110213-A	8/9/11/14/17	F05/07	50/70	140	1 : 9.6	180	1.3
3110213-B	8/9/11/14/17	F07/09	70/90	200	1 : 12	300	2.2
3110213-C	17/19/22	F07/10	70/102	250	1 : 12.5	540	3.7
3110213-D	17/19/22	F10/12	102/125	300	1 : 12.5	675	5.0
3110213-E	22/27	F14	140	400	1 : 10	1310	9.0
3110213-F	22/27	F14	140	400	1 : 10	1500	9.8
3110213-G	22/27/ 50*14	F14	140	600	1 : 11	1790	12.0
3110213-H	36/ 50*14	F16	165	600	1 : 19	3250	17.5
3110213-I	60*18/ 80*22	F16/25	165/254	700	1 : 19	5500	28.5



CONTROLS

Head Office

3900 101 Street
Edmonton, Alberta
T6E 0A5
Canada
Office: (780) 437-3055
Fax: (780) 436 5461

Website: cmcontrols.ca

Email: info@cmcontrols.ca