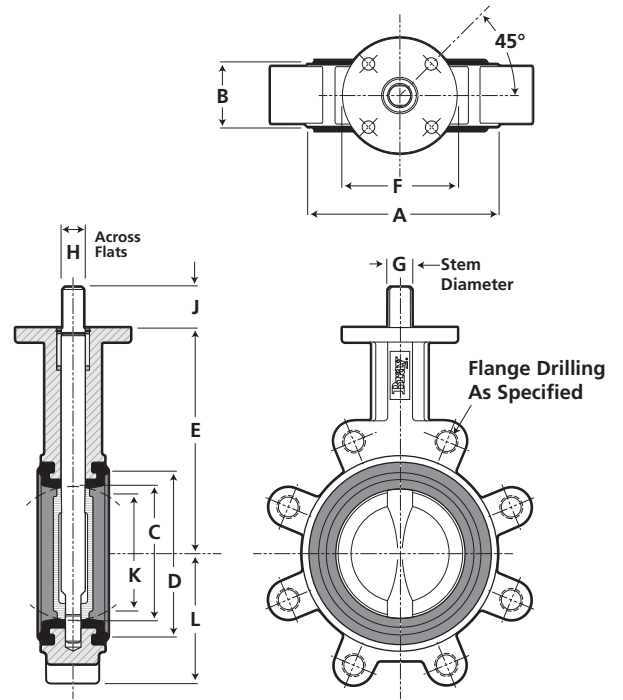
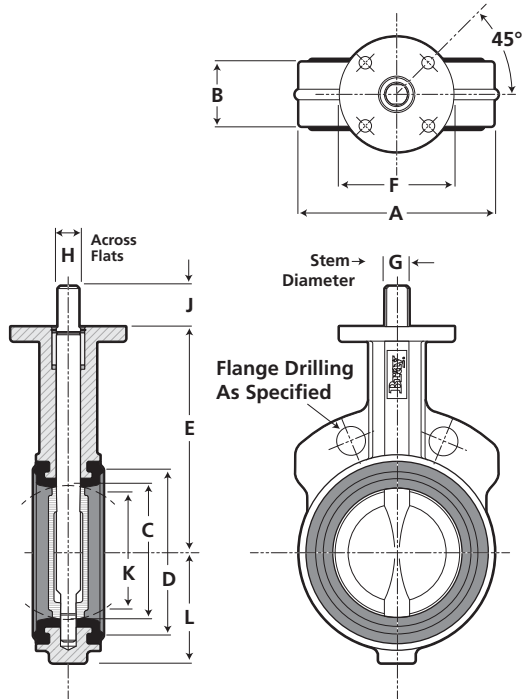


## Series 30 Wafer

## Series 31 Lug



IMPERIAL DIMENSIONS: Inches															Lug Bolting Data						
Valve Size	A	B	C	D	E	F	Top Plate Drilling			G	H	J	K	L		Adapter Code	Weight (lbs.)		Bolt Circle	No of Holes	Threads ISO Coarse
							BC	No of Holes	Hole Diameter					Wafer	Lug		Wafer	Lug			
2	3.69	1.62	2.00	2.85	5.50	3.54	2.76	4	.39	.55	.39	1.25	1.32	2.22	2.30	A	5.5	7.0	4.75	4	5/8-11
2 1/2	4.19	1.75	2.50	3.36	6.00	3.54	2.76	4	.39	.55	.39	1.25	1.91	2.47	2.57	A	7.0	8.0	5.50	4	5/8-11
3	4.88	1.75	3.00	4.15	6.25	3.54	2.76	4	.39	.55	.39	1.25	2.55	2.81	2.81	A	7.5	9.0	6.00	4	5/8-11
4	6.06	2.00	4.00	5.16	7.00	3.54	2.76	4	.39	.63	.43	1.25	3.57	3.41	4.09	B	11.5	15.0	7.50	8	5/8-11
5	7.06	2.12	5.00	6.16	7.50	3.54	2.76	4	.39	.75	.51	1.25	4.63	4.03	4.61	C	14.0	20.0	8.50	8	3/4-10
6	8.12	2.12	5.75	7.02	8.00	3.54	2.76	4	.39	.75	.51	1.25	5.45	4.53	5.06	C	17.0	23.0	9.50	8	3/4-10
8	10.50	2.50	7.75	9.47	9.50	5.91	4.92	4	.57	.87	.63	1.25	7.45	5.75	6.05	D	34.0	42.0	11.75	8	3/4-10
10	12.75	2.50	9.75	11.47	10.72	5.91	4.92	4	.57	1.18	.87	2.00	9.53	7.12	7.69	E	49.0	66.0	14.25	12	7/8-9
12	14.88	3.00	11.75	13.47	12.25	5.91	4.92	4	.57	1.18	.87	2.00	11.47	8.12	9.02	E	67.0	88.0	17.00	12	7/8-9

Note: K dimension is disc chordal dimension at valve face.

METRIC DIMENSIONS: Millimeters															Lug Bolting Data						
Valve Size	A	B	C	D	E	F	Top Plate Drilling			G	H	J	K	L		Adapter Code	Weight (Kg)		Bolt Circle	No of Holes	Threads ISO Coarse
							BC	No of Holes	Hole Diameter					Wafer	Lug		Wafer	Lug			
50	94	41.2	51	72	140	90	70	4	10	14	10	32	34	56	58	A	2.5	3	121	4	5/8-11
65	106	44.5	64	85	152	90	70	4	10	14	10	32	49	63	65	A	3	3.5	140	4	5/8-11
80	124	44.5	76	102	159	90	70	4	10	14	10	32	65	71	71	A	3.5	4	152	4	5/8-11
100	154	50.8	102	131	178	90	70	4	10	16	11	32	91	87	104	B	5	7	191	8	5/8-11
125	181	54.0	127	156	190	90	70	4	10	19	13	32	118	102	117	C	6	9	216	8	3/4-10
150	206	54.0	146	178	203	90	70	4	10	19	13	32	138	115	129	C	8	10	241	8	3/4-10
200	267	63.5	197	240	241	150	125	4	14	22	16	32	189	146	154	D	15	19	298	8	3/4-10
250	324	63.5	248	291	273	150	125	4	14	30	22	51	242	181	195	E	22	30	362	12	7/8-9
300	378	76.2	298	342	311	150	125	4	14	30	22	51	291	206	229	E	30	40	432	12	7/8-9

Note: K dimension is disc chordal dimension at valve face.

Drawings are for reference only. Please refer to Bray ES drawings on the Bray website, www.bray.com. Bray reserves the right to change product dimensions without notice.

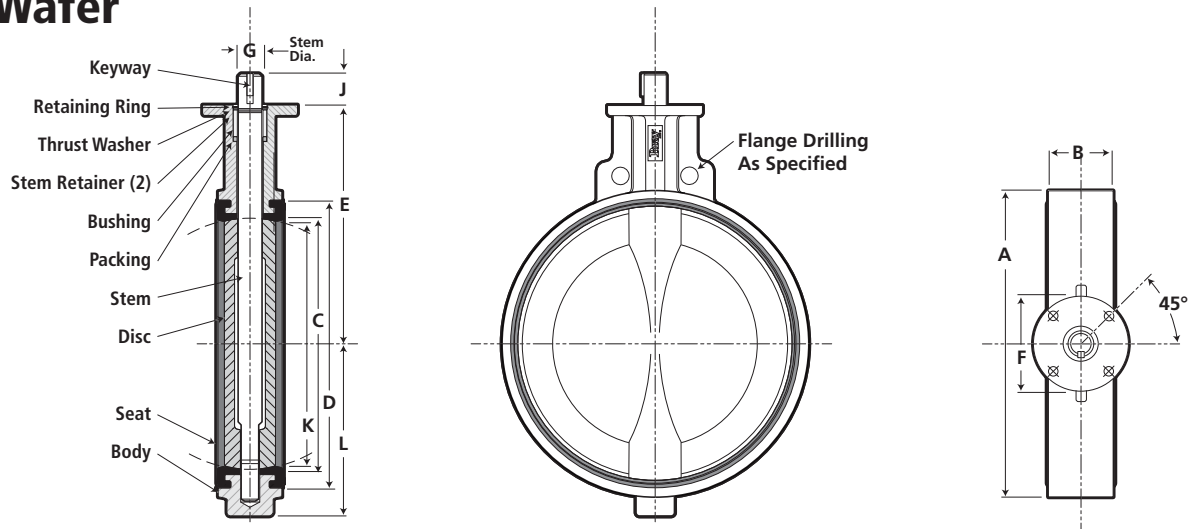
### SR Drawing #30/31-2/12-in

Customer/Project: \_\_\_\_\_

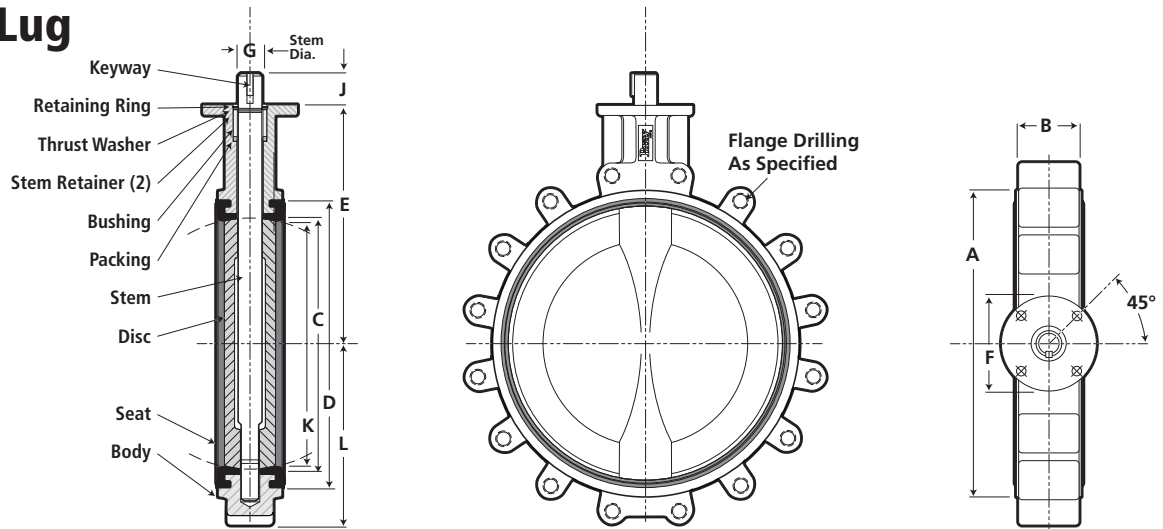
Inquire/P.O. No.: \_\_\_\_\_

Bray Order No.: \_\_\_\_\_

## Series 30 Wafer



## Series 31 Lug



IMPERIAL DIMENSIONS: Inches																	Lug Bolting Data				
Valve Size	A	B	C	D	E	F	Top Plate Drilling			G	J	Key Size	K	L		Adapter Code	Weight (lbs.)		Bolt Circle	No of Holes	Threads ISO Coarse
							BC	No of Holes	Hole Diameter					Wafer	Lug		Wafer	Lug			
14	17.05	3.00	13.25	15.28	13.62	5.91	4.92	4	.57	1.38	2.00	.39x.39	13.04	9.38	9.93	F	95	114	18.75	12	1-8
16	19.21	4.00	15.25	17.14	14.75	5.91	4.92	4	.57	1.38	2.00	.39x.39	14.85	10.75	11.30	F	135	166	21.25	16	1-8
18	21.12	4.25	17.25	19.47	16.00	8.27	6.50	4	.81	1.97	2.50	.47x.39	16.85	12.00	12.15	G	200	226	22.75	16	1 1/8-7
20	23.25	5.00	19.25	21.59	17.25	8.27	6.50	4	.81	1.97	2.50	.47x.39	18.73	14.00	14.00	G	260	305	25.00	20	1 1/8-7

Note: K dimension is disc chordal dimension at valve face.

METRIC DIMENSIONS: Millimeters																	Lug Bolting Data				
Valve Size	A	B	C	D	E	F	Top Plate Drilling			G	J	Key Size	K	L		Adapter Code	Weight (Kg)		Bolt Circle	No of Holes	Threads ISO Coarse
							BC	No of Holes	Hole Diameter					Wafer	Lug		Wafer	Lug			
350	433	76.2	337	388	346	150	125	4	14	35	51	10x10	331	238	252	F	43	52	476	12	1-8
400	488	101.6	387	442	375	150	125	4	14	35	51	10x10	377	273	287	F	61	75	540	16	1-8
450	536	108.0	438	495	406	210	165	4	21	50	64	12x10	428	305	309	G	91	103	578	16	1 1/8-7
500	591	127.0	489	548	438	210	165	4	21	50	64	12x10	476	348	358	G	118	138	635	20	1 1/8-7

Note: K dimension is disc chordal dimension at valve face.

Drawings are for reference only. Please refer to Bray ES drawings on the Bray website, www.bray.com. Bray reserves the right to change product dimensions without notice.

SR Drawing #30/31-14/20-in

Customer/Project: \_\_\_\_\_

Inquire/P.O. No.: \_\_\_\_\_

Bray Order No.: \_\_\_\_\_

## VALVE DETAILS

- > Series 30/31 Resilient Seated Butterfly Valve
- > Wafer | Lug
- > NPS 2 to 20 | DN 50 to 500

## BODY

- > Shall be one-piece wafer or lug design with extended neck to allow for 2" of piping insulation.
- > Flange locating holes shall be provided on wafer bodies to allow for quick and precise alignment during valve installation.
- > Flange hole drilling per international flange standard as specified.
- > The only internal wetted parts of the valve should be the disc and seat.

## DISC

- > Disc edge and hub on metal discs shall be spherically machined and hand polished for torque and maximum sealing capability.

## STEM

- > Shall be one-piece design.
- > Disc to stem connection shall be an internal double "D" design with no possible leak paths in the disc-to-stem connection. External disc-to-stem connections such as disc screws or pins are not allowed.
- > Stem shall be mechanically retained in the body neck and no part of the stem shall be exposed to the line media.
- > Stem shall not be a wetted part.

## SEAT

- > Shall be tongue-and-groove seat with a primary hub seal and a molded flange O-ring for weld neck and slip-on flanges.
- > The seat shall totally encapsulate the body isolating it from the line media and no flange gaskets shall be required.
- > Seat shall be peroxide cured to prevent oxidation on seat surface to ensure low torques through life of the valve.

## PACKING AND BEARINGS

- > A non-corrosive bushing and a self-adjusting stem seal shall be provided.
- > No field adjustment shall be necessary to maintain optimum field performance.

## APPROVALS AND CERTIFICATIONS

- > CE/PED Certification
- > NSF/ANSI 61 and 372
- > SIL
- > ABS
- > Bureau Veritas
- > DNV



## VALVE ACTUATOR MOUNTING PAD

- > ISO 5211

## TESTING

- > Manufactured, assembled, and tested in compliance with a written ISO 9001 Quality Assurance Program.
- > Valve shall be tested to 110% of the rated pressure.

## PRESSURE RATINGS

- > Valve shall be rated for bubble-tight shut-off at pressure rating shown below.

### BI-DIRECTIONAL

#### Standard Disc

- > NPS 2 to 12 | DN 50 to 300
  - 175 psi (12.0 bar)
- > NPS 14 to 20 | DN 350 to 500
  - 150 psi (10.3 bar)

### DEAD-END SERVICE (LUG BODY ONLY WITH DOWNSTREAM FLANGE REMOVED)

#### Standard Disc

- > NPS 2 to 12 | DN 50 to 300
  - 75 psi (5.2 bar)
- > NPS 14 to 20 | DN 350 to 500
  - 50 psi (3.4 bar)