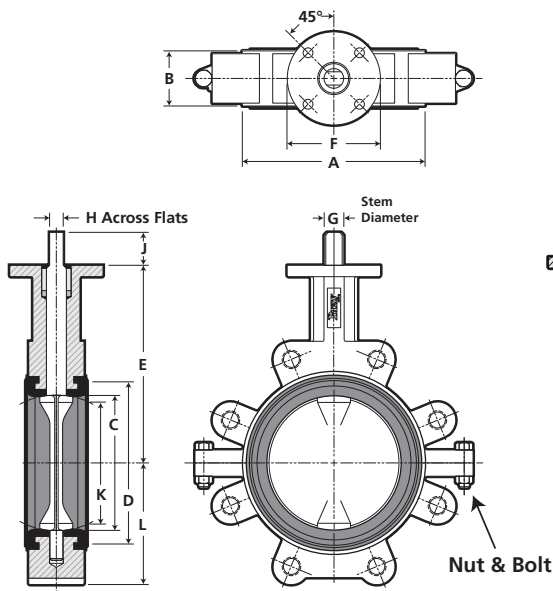
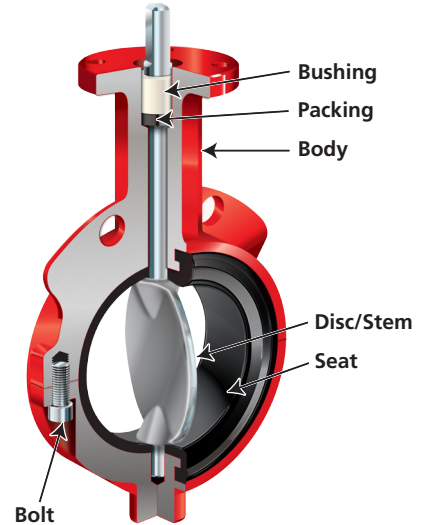
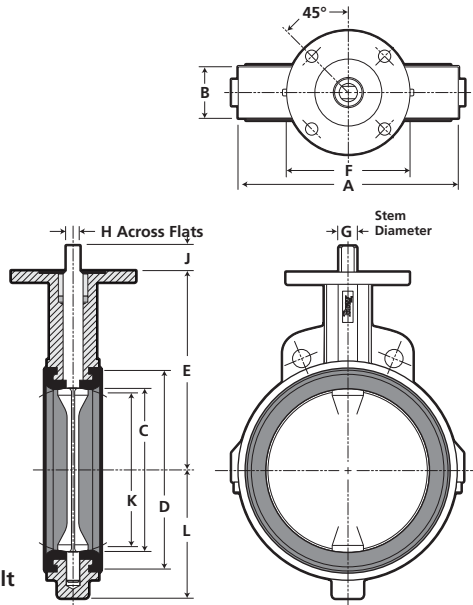


**Series 21 Lug**



**Series 20 Wafer**



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			
1	2.36	1.18	1.25	1.73	3.54	2.56	1.97	4	.28	.39	.32	1.00	.44	1.65	1.65	AA	2.0	3.0	3.12	4	1/2-13
1 1/2	3.16	1.26	1.84	2.53	4.12	2.56	1.97	4	.28	.39	.32	1.00	1.35	2.15	2.15	AA	3.0	4.5	3.88	4	1/2-13
2	3.69	1.62	2.00	2.84	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	3.34	6.00	3.54	2.76	4	.39	.55	.39	1.25	1.91	2.47	2.57	A	6.5	9.0	5.50	4	5/8-11
3	4.88	1.75	3.00	4.03	6.25	3.54	2.76	4	.39	.55	.39	1.25	2.55	2.81	2.81	A	7.0	9.5	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	3.56	4.09	B	11.0	16.0	7.50	8	5/8-11
5	7.12	2.12	5.00	6.16	7.50	3.54	2.76	4	.39	.75	.51	1.25	4.63	4.28	4.61	C	14.0	22.0	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	4.78	5.08	C	17.0	25.0	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	6.03	6.12	D	32.0	45.0	11.75	8	3/4-10
10	12.75	2.50	9.75	11.47	10.75	5.91	4.92	4	.57	1.18	.87	2.00	9.53	7.41	7.69	E	47.0	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	8.41	9.02	E	68.0	102.0	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			
25	60	30	32	44	90	65	50	4	7	10	8	25	11	42	42	AA	0.9	1.4	85	4	M12
40	80	33	47	64	105	65	50	4	7	10	8	25	35	55	55	AA	1.3	2.0	110	4	M12
50	94	43	51	72	140	90	70	4	10	14	10	32	31	56	56	A	2.5	3.2	125	4	M16
65	106	46	64	85	152	90	70	4	10	14	10	32	47	63	63	A	2.9	4.1	145	4	M16
80	124	46	76	102	159	90	70	4	10	14	10	32	63	71	71	A	3.2	4.3	160	8	M16
100	154	52	102	131	178	90	70	4	10	16	11	32	90	90	90	B	5	7.2	180	8	M16
125	181	56	127	156	190	90	70	4	10	19	13	32	116	109	109	C	6.4	10	210	8	M20
150	206	56	146	178	203	90	70	4	10	19	13	32	137	121	121	C	7.7	11.3	240	8	M20
200	267	60	197	240	241	150	125	4	14	22	16	32	190	153	153	D	14.5	20.4	295	8	M20
250	324	68	248	291	273	150	125	4	14	30	22	51	240	188	188	E	21.3	30	355	12	M22
300	378	78	298	342	311	150	125	4	14	30	22	51	290	214	214	E	30.8	46.3	410	12	M22

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.

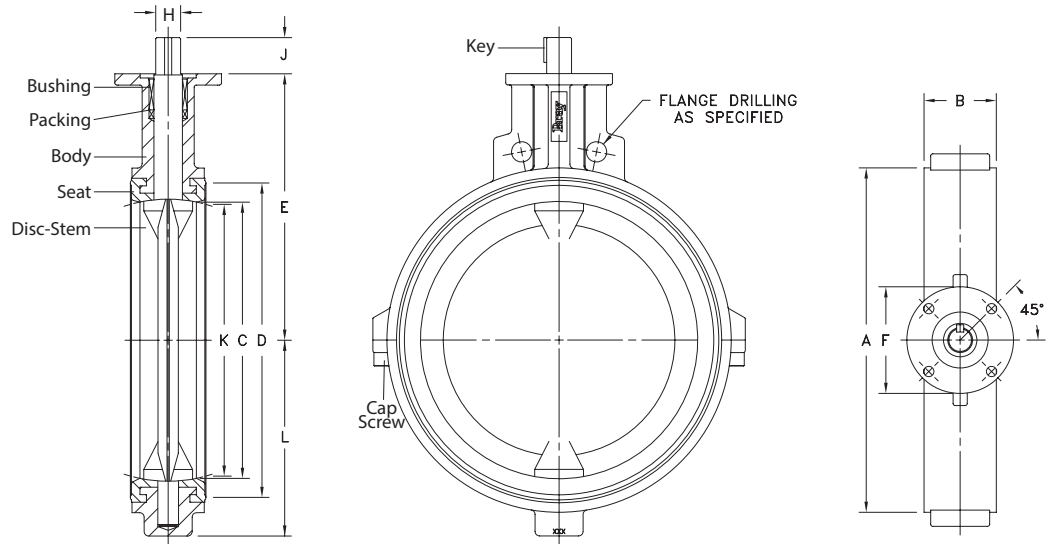
**SR Drawing #20/21-1/12-in** January - 2015

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

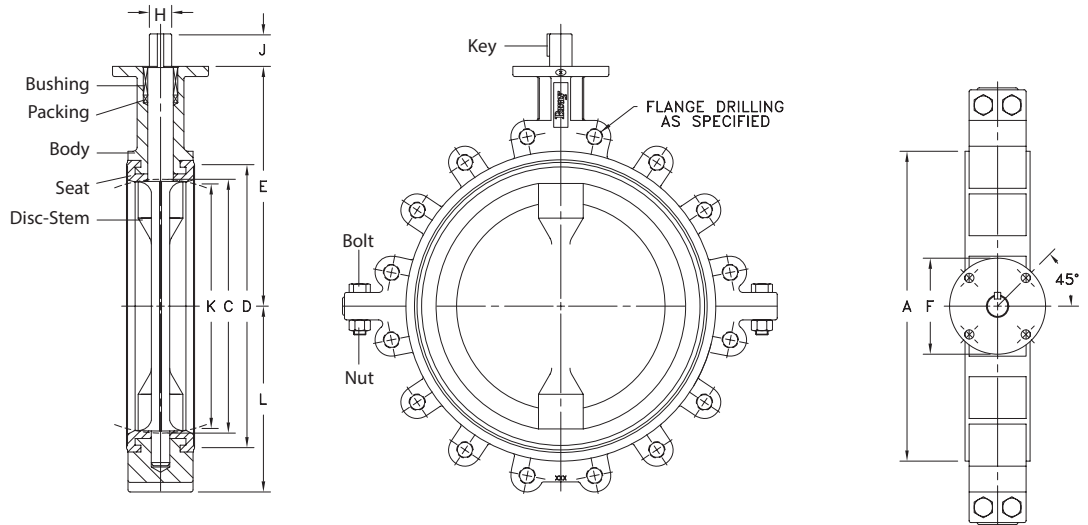
Customer/Project: \_\_\_\_\_

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

**Series 20 Wafer**



**Series 21 Lug**



IMPERIAL DIMENSIONS: Inches																	Lug Bolting Data				
Valve Size	A	B	C	D	E	F	Top Plate Drilling			H	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	9.61	9.93	F	96.5	120	18.75	12	1.00-8
16	19.21	4.00	15.25	17.41	14.75	5.91	4.92	4	.57	1.38	2.00	.39x.39	14.85	11.52	11.51	F	134	172	21.25	16	1.00-8
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	13.44	13.44	G	203	236	22.75	16	1.12-7
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	14.46	14.46	G	264	312	25.00	20	1.12-7

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			H	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	336	388	346	150	125	4	14	35	51	10x10	331	244	252	F	44	44	460	12	M24
400	488	102	387	442	375	150	125	4	14	35	51	10x10	377	293	292	F	61	61	515	16	M24
450	536	108	438	494	406	210	165	4	20	50	64	12x10	428	341	341	G	92	92	565	16	M30
500	590	127	489	548	438	210	165	4	20	50	64	12x10	476	367	367	G	120	120	620	20	M30

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 #20/21-14/20-in** January - 2015

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

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