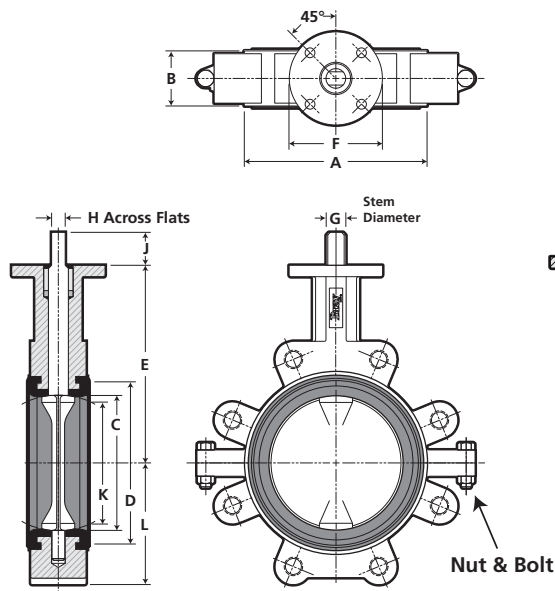
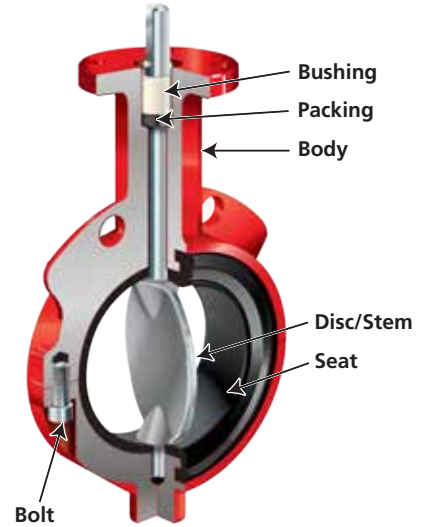
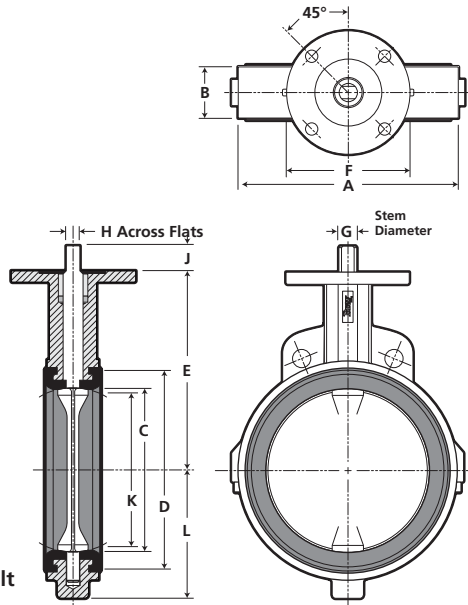


Series 21 Lug



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 Course
							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	12	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 Course
							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	80	4	M16
40	80	32	47	64	105	65	50	4	7	10	8	25	34	55	55	AA	1.4	2.0	99	4	M16
50	94	43	51	72	140	90	70	4	9.5	14	10	32	34	56	58	A	2.5	3.2	125	4	M16
65	106	46	64	85	152	90	70	4	9.5	14	10	32	49	63	65	A	2.9	4.1	145	4	M16
80	124	46	76	102	159	90	70	4	9.5	14	10	32	65	71	71	A	3.2	4.3	160	8	M16
100	154	52	102	131	178	90	70	4	9.5	16	11	32	91	90	104	B	5	7	180	8	M16
125	181	56	127	156	191	90	70	4	9.5	19	13	32	118	109	117	C	6	10	210	8	M16
150	206	56	146	178	203	90	70	4	9.5	19	13	32	138	121	129	C	8	11	240	8	M16
200	267	60	197	241	241	150	125	4	14	22	16	32	189	153	155	D	15	20	295	8	M20
250	324	68	248	291	273	150	125	4	14	30	22	51	242	188	195	E	21	30	350	12	M20
300	378	78	298	342	311	150	125	4	14	30	22	51	291	214	229	E	31	46	400	12	M20

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.

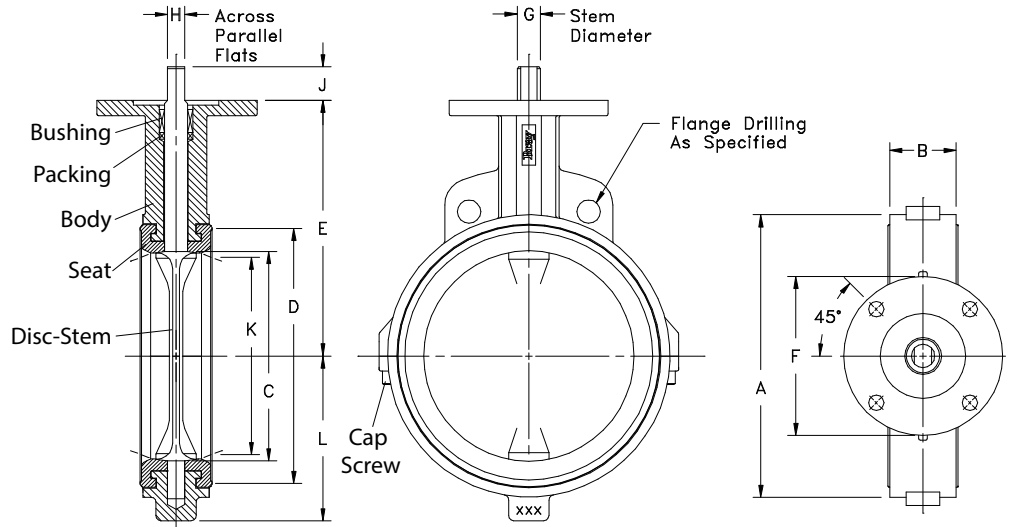
SR Drawing #20/21-1/12-im August 2012- Rev. 0

Inquire/P.O. No.: _____

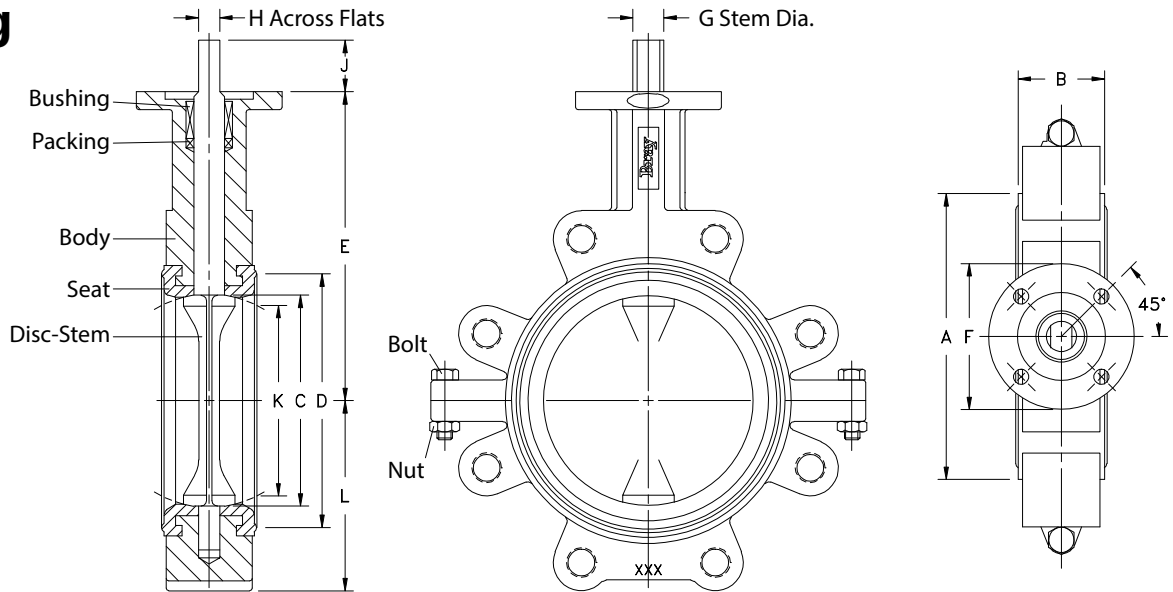
Customer/Project: _____

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			G	J	Key Size	K	L		Adapter Code	Weight (lbs.)		Bolt Circle	No of Holes	Threads ISO Course
							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	A	95	114	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	10.75	11.30	A	135	166	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	12.00	12.15	A	200	226	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	14.00	14.00	B	260	305	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			G	J	Key Size	K	L		Adapter Code	Weight (Kg)		Bolt Circle	No of Holes	Threads ISO Course
							BC	No of Holes	Hole Diameter					Wafer	Lug		Wafer	Lug			
350	433	76	337	388	346	150	125	4	14	35	51	10x10	331	238	252	A	43	52	460	12	M20
400	488	102	387	442	375	150	125	4	14	35	51	10x10	377	273	287	A	61	75	515	16	M24
450	536	108	438	495	406	210	165	4	21	50	64	12x10	428	305	309	A	91	103	565	16	M24
500	591	127	489	548	438	210	165	4	21	50	64	12x10	476	348	358	B	118	138	620	20	M24

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-im August 2012- Rev. 0

Inquire/P.O. No.: _____

Customer/Project: _____

Bray Order No.: _____