

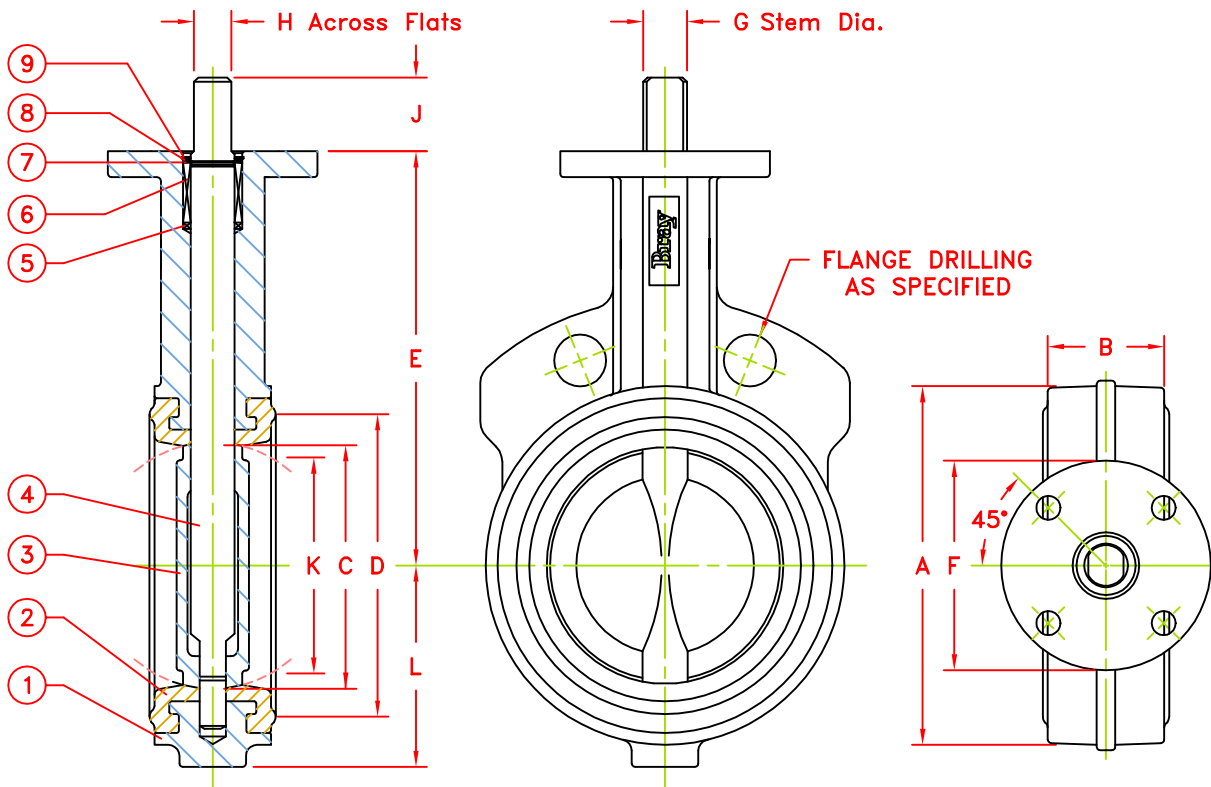
SERIES 30
ES12A-0012
Date: June 1993

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Valve Size	A	B	C	D	E	F	BC	Top Plate No. of Holes	Drilling Hole Diameter	G	H	J	K	L	Adapter Code	Weight (kg)
50	94	43	51	72	140	90	70	4	9.5	14	10	32	33	56	A	3.0
65	106	46	64	85	152	90	70	4	9.5	14	10	32	49	63	A	3.9
80	124	46	76	102	159	90	70	4	9.5	14	10	32	65	71	A	4.3
100	154	52	102	131	178	90	70	4	9.5	16	11	32	91	86	B	5.4
125	181	56	127	156	190	90	70	4	9.5	19	13	32	118	102	C	7.3
150	206	56	146	178	203	90	70	4	9.5	19	13	32	138	115	C	9.1
200	267	60	197	241	241	150	125	4	14	22	16	32	189	146	D	15.9
250	324	68	248	291	273	150	125	4	14	30	22	50	242	181	E	22.7
300	378	78	298	342	311	150	125	4	14	30	22	50	291	206	E	39.5

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



9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS																														
<table border="1"> <tr> <td>Valve Size _____ Flg. Drilling _____</td> <td colspan="2" rowspan="2"> BRAY CONTROLS (UK) LTD. The High Performance Company A Subsidiary of BRAY INTERNATIONAL, Inc. </td> <td rowspan="2"> PARTS LIST AND DIMENSIONS (Metric) BUTTERFLY VALVE, SERIES 30 SIZES 50 - 300mm </td> <td rowspan="2"> </td> </tr> <tr> <td>Pressure Rating _____</td> </tr> <tr> <td>Customer/Project _____</td> <td>Series</td> <td>Size</td> <td>Part No.</td> <td>Material Trim Code</td> <td>Drawing No.</td> </tr> <tr> <td>Inq./P.O. No. _____</td> <td></td> <td></td> <td></td> <td></td> <td>ES12A-0012</td> </tr> <tr> <td>Bray Order No. _____</td> <td colspan="5"></td> </tr> <tr> <td>Certified Correct By _____ Date _____</td> <td colspan="5"></td> </tr> </table>						Valve Size _____ Flg. Drilling _____	BRAY CONTROLS (UK) LTD. The High Performance Company A Subsidiary of BRAY INTERNATIONAL, Inc.		PARTS LIST AND DIMENSIONS (Metric) BUTTERFLY VALVE, SERIES 30 SIZES 50 - 300mm		Pressure Rating _____	Customer/Project _____	Series	Size	Part No.	Material Trim Code	Drawing No.	Inq./P.O. No. _____					ES12A-0012	Bray Order No. _____						Certified Correct By _____ Date _____					
Valve Size _____ Flg. Drilling _____	BRAY CONTROLS (UK) LTD. The High Performance Company A Subsidiary of BRAY INTERNATIONAL, Inc.		PARTS LIST AND DIMENSIONS (Metric) BUTTERFLY VALVE, SERIES 30 SIZES 50 - 300mm																																
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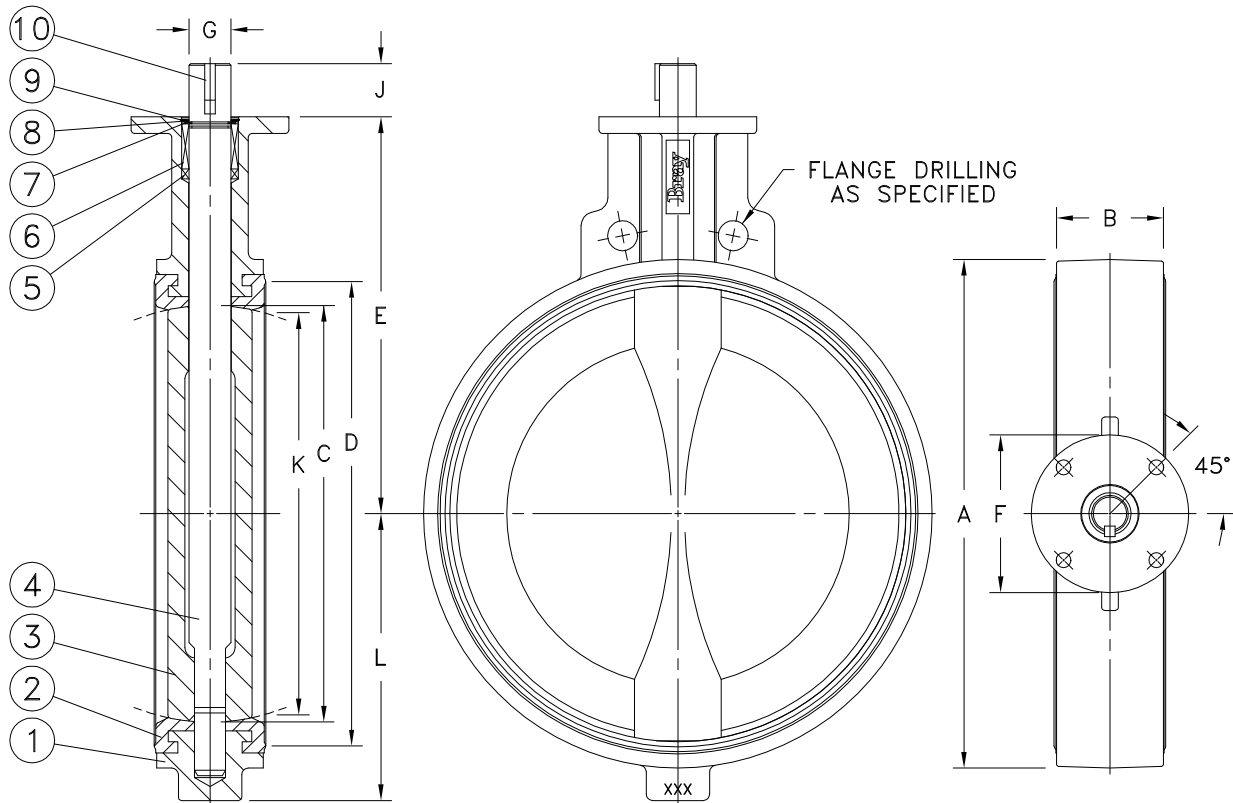
SERIES 30
ES12A-0013
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Valve Size	A	B	C	D	E	F	Top BC	Plate No. of Holes	Drilling Hole Diameter	G	J	Key Size	K	L	Adapter Code	Weight (kg)
350	430	78	337	388	346	150	125	4	14	35	51	10x10	331	238	F	53.5
400	484	102	387	442	375	150	125	4	14	35	51	10x10	377	273	F	83.9
450	537	108	438	495	406	210	165	4	21	50	64	12x10	428	305	G	96.2
500	591	127	489	548	438	210	165	4	21	50	64	12x10	475	348	G	139.0

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



10	KEY	1			
9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____	 BRAY CONTROLS (UK) LTD. A Subsidiary of BRAY INTERNATIONAL, Inc.	Bray										
Pressure Rating _____												
Customer/Project _____												
Inq./P.O. No. _____												
Bray Order No. _____	PARTS LIST and DIMENSIONS (Metric) BUTTERFLY VALVE, SERIES 30 SIZES 350 - 500mm											
Certified Correct By _____ Date _____	<table border="1"> <thead> <tr> <th>Series</th> <th>Size</th> <th>Part No.</th> <th>Material Trim Code</th> <th>Drawing No.</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td>ES12A-0013</td> </tr> </tbody> </table>	Series	Size	Part No.	Material Trim Code	Drawing No.					ES12A-0013	
Series	Size	Part No.	Material Trim Code	Drawing No.								
				ES12A-0013								

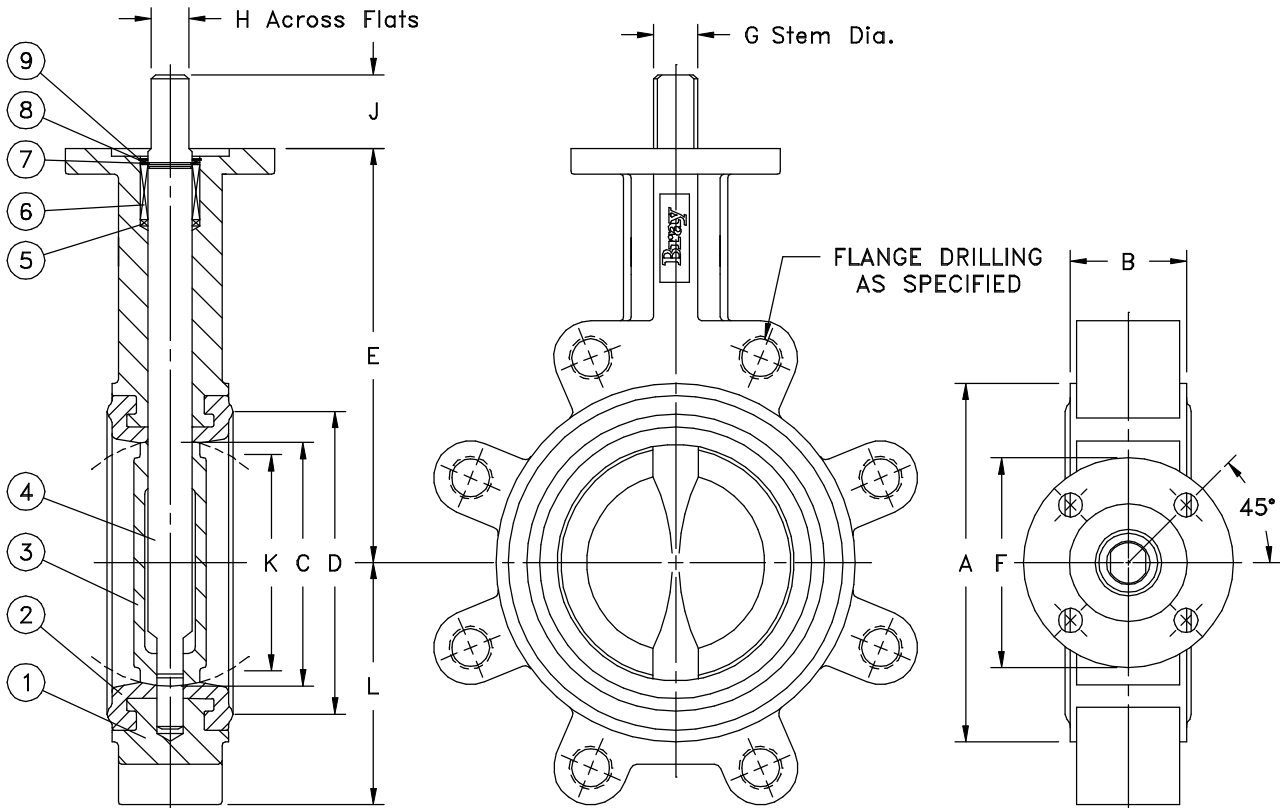
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SERIES 31
ES12A-0014
Date: August 1993

Valve Size	A	B	C	D	E	F	BC	Top Plate Drilling		G	H	J	K	L	Lug BC	Bolting No. of Holes	Data Threads ISO-Coarse	Adapter Code	Weight (Kg.)
								No. of Holes	Hole Diameter										
50	94	43	51	72	140	90	70	4	10	14	10	32	30	58				A	3.0
65	106	46	64	85	152	90	70	4	10	14	10	32	46	65				A	3.5
80	124	46	76	102	159	90	70	4	10	14	10	32	63	71				A	4.0
100	154	52	102	131	178	90	70	4	10	16	11	32	89	104				B	7.0
125	181	56	127	156	190	90	70	4	10	19	13	32	116	117				C	9.0
150	206	56	146	178	203	90	70	4	10	19	13	32	137	129				C	10.5
200	267	60	197	240	241	150	125	4	14	22	16	32	189	154				D	19.0
250	324	68	248	291	273	150	125	4	14	30	22	51	240	195				E	30.0
300	378	78	298	342	311	150	125	4	14	30	22	51	290	229				E	40.0

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



9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____
 Pressure Rating _____
 Customer/Project _____
 Inq./P.O. No. _____
 Bray Order No. _____
 Certified Correct By _____ Date _____

The High Performance Company

BRAY VALVE & CONTROLS

A Subsidiary of BRAY INTERNATIONAL, Inc.

PARTS LIST AND DIMENSIONS (Metric)
 BUTTERFLY VALVE, SERIES 31 SIZES 50-300

Series	Size	Part No.	Material Trim Code	Drawing No.
				ES12A-0014

Bray

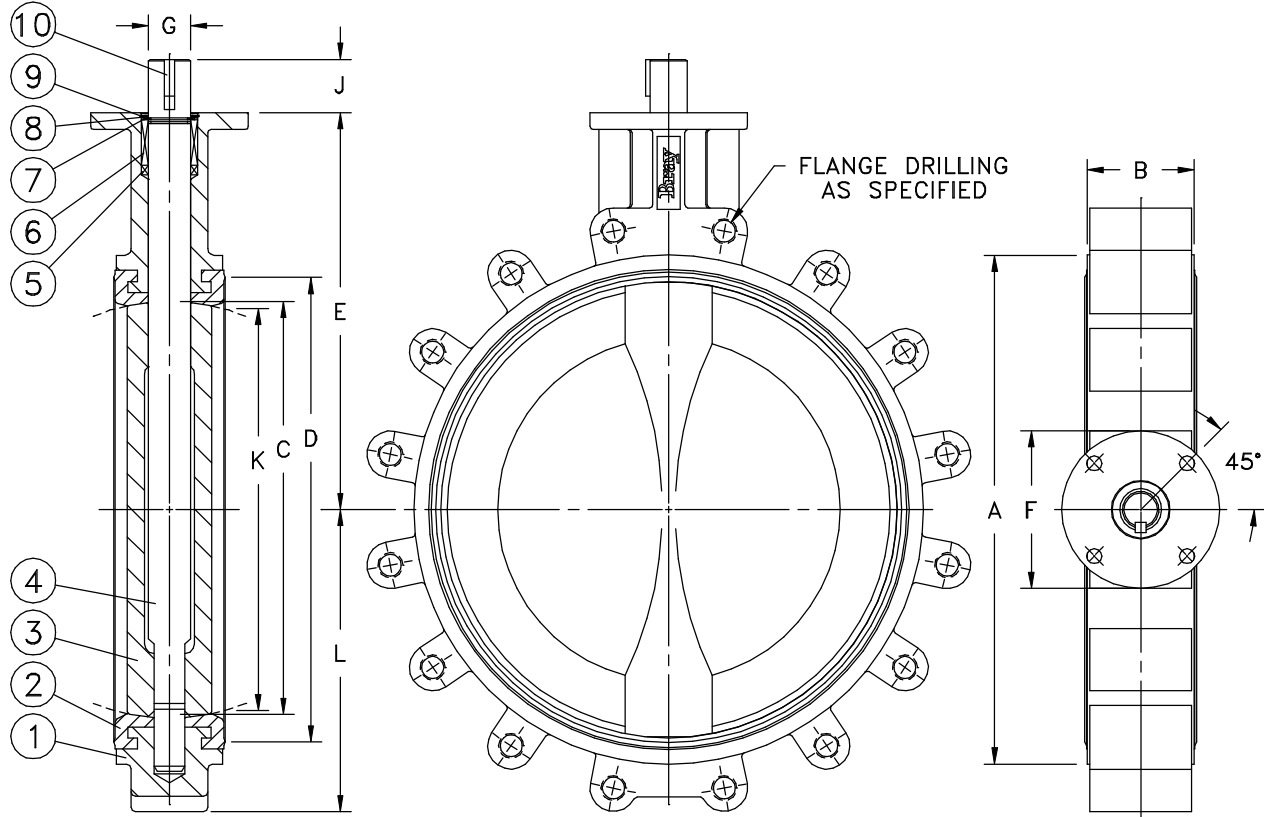
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SERIES 31
ES12A-0015
Date: August 1993

Valve Size	A	B	C	D	E	F	BC	Top Plate No. of Holes	Drilling Hole Diameter	G	J	Key Size	K	L	Lug BC	Bolting No. of Holes	Data Threads ISO-Coarse	Adapter Code	Weight (Kg.)
350	433	78	337	388	346	150	125	4	14	35	51	10x10	330	252				F	52.0
400	488	102	387	435	375	150	125	4	14	35	51	10x10	376	287				F	75.0
450	536	114	438	495	406	210	165	4	20	50	64	10x12	426	309				G	102.5
500	590	127	489	548	438	210	165	4	20	50	64	10x12	475	356				G	138.5

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



10	KEY	1			
9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____
 Pressure Rating _____
 Customer/Project _____
 Inq./P.O. No. _____
 Bray Order No. _____
 Certified Correct By _____ Date _____



The High Performance Company

BRAY VALVE & CONTROLS

A Subsidiary of BRAY INTERNATIONAL, Inc.

PARTS LIST and DIMENSIONS (Metric)
 BUTTERFLY VALVE, SERIES 31 SIZES 350 - 500

Series	Size	Part No.	Material Trim Code	Drawing No.
				ES12A-0015

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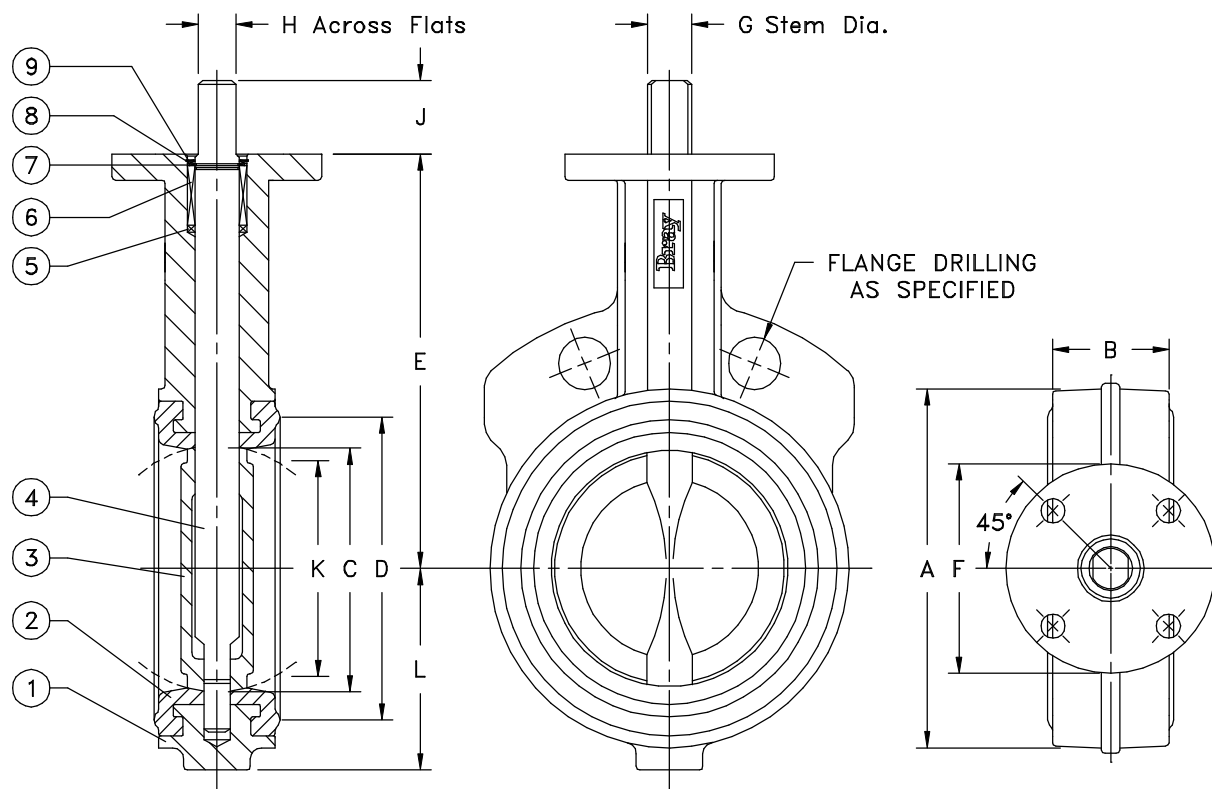
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SERIES 30
ES11A-0010
Date: June 1993



Valve Size	A	B	C	D	E	F	Top Plate BC	Drilling No. of Holes	Hole Diameter	G	H	J	K	L	Adapter Code	Weight
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	A	5.5
2½	4.19	1.75	2.50	3.34	6.00	3.54	2.76	4	.39	.55	.39	1.25	1.91	2.47	A	7.0
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	A	7.5
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	B	11.5
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	C	14.0
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	C	17.0
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	D	34.0
10	12.75	2.50	9.75	11.47	10.75	5.91	4.92	4	.57	1.18	.87	2.00	9.53	7.12	E	49.0
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	E	67.0

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



9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____	 <p>BRAY VALVE & CONTROLS A Subsidiary of BRAY INTERNATIONAL, Inc.</p>				
Pressure Rating _____					
Customer/Project _____					
Inq./P.O. No. _____					
Bray Order No. _____					
Certified Correct By _____ Date _____	PARTS LIST AND DIMENSIONS (Inches) BUTTERFLY VALVE, SERIES 30 SIZES 2"-12"				
	Series	Size	Part No.	Material Trim Code	Drawing No. ES11A-0010

**SERIES 30
ES11A-0011**

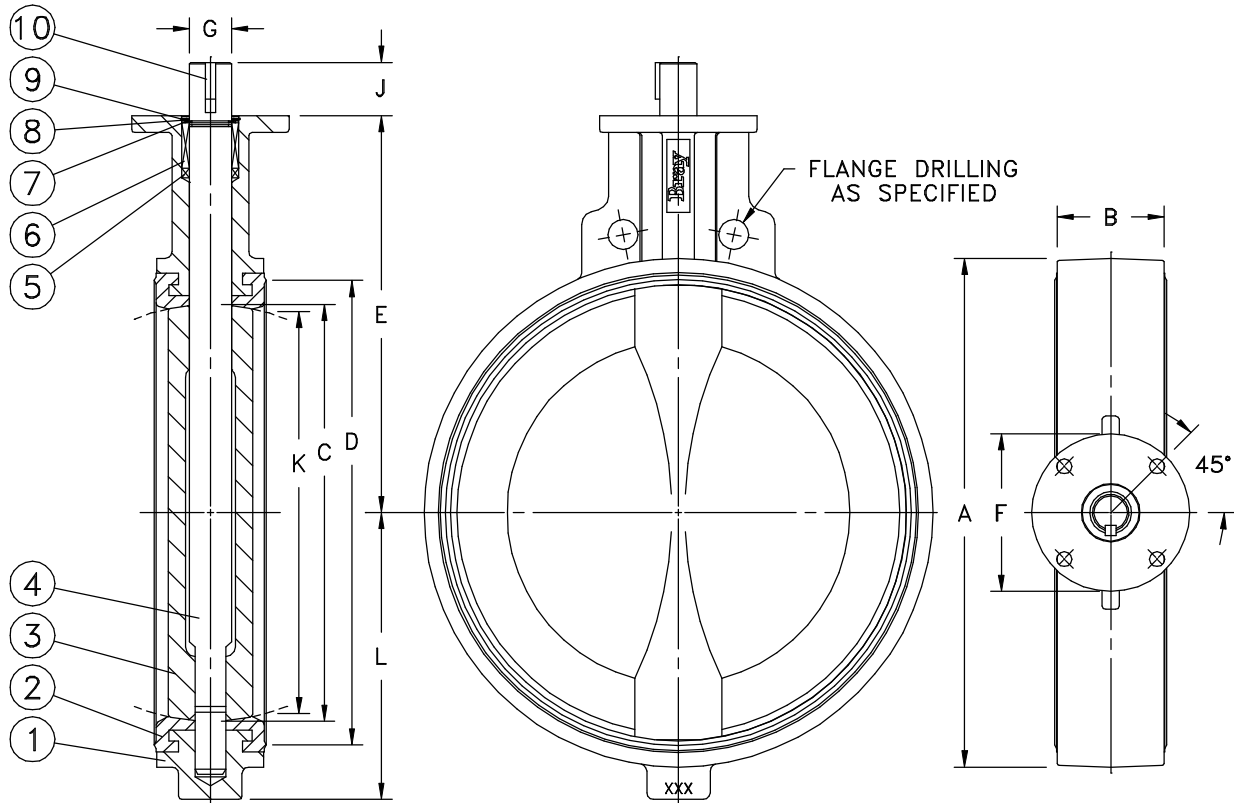
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Valve Size	A	B	C	D	E	F	BC	Top Plate No. of Holes	Drilling Hole Diameter	G	J	Key Size	K	L	Adapter Code	Weight
14"	17.05	3.00	13.25	15.28	13.62	5.91	4.92	4	.57	1.38	2.00	.39x.39	13.04	9.38	F	95
16"	19.21	4.00	15.25	17.41	14.75	5.91	4.92	4	.57	1.38	2.00	.39x.39	14.85	10.75	F	135
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	G	200
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	13.72	G	260

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



10	KEY	1			
9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____
 Pressure Rating _____
 Customer/Project _____
 Inq./P.O. No. _____
 Bray Order No. _____
 Certified Correct By _____ Date _____



BRAY VALVE & CONTROLS
 A Subsidiary of BRAY INTERNATIONAL, Inc.

PARTS LIST and DIMENSIONS (Inches)
 BUTTERFLY VALVE, SERIES 30 SIZES 14"-20"

Series	Size	Part No.	Material Trim Code	Drawing No.
				ES11A-0011

Bray

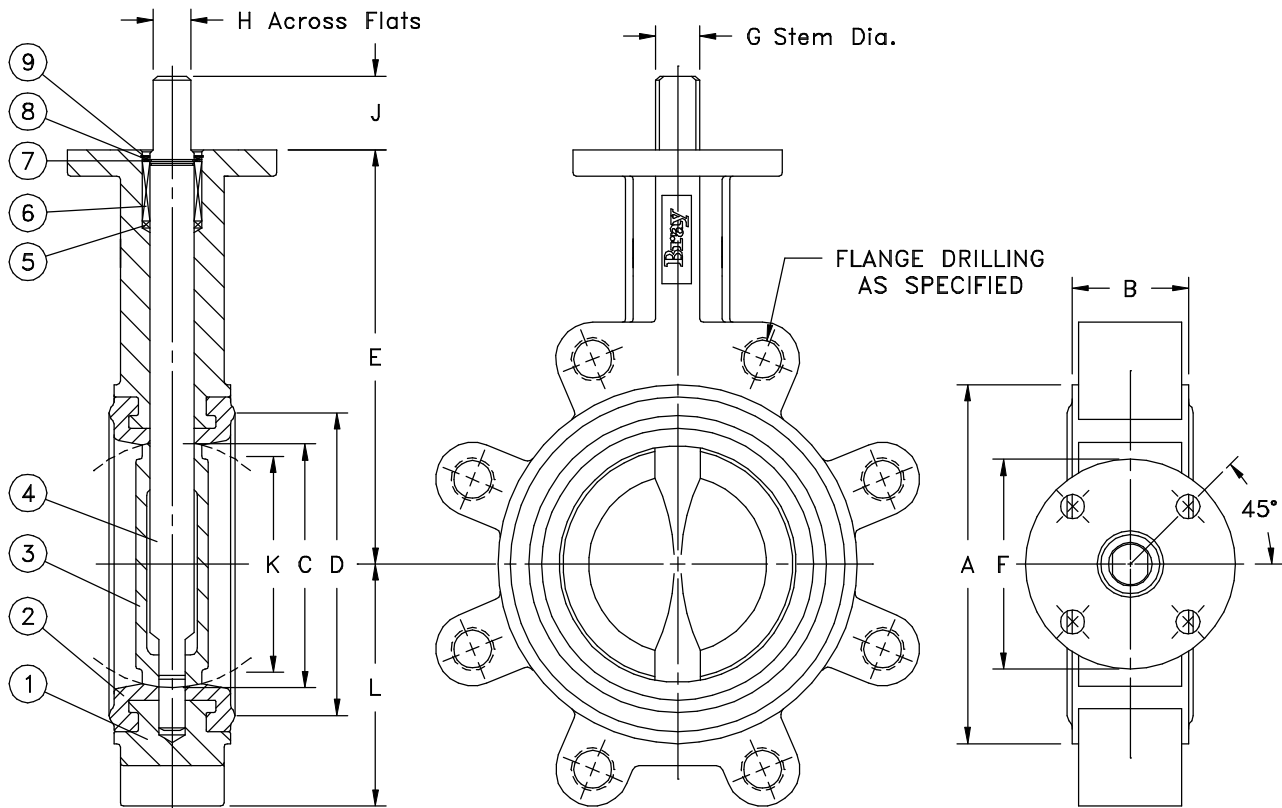
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SERIES 31
ES11A-0014
Date: June 1993

Valve Size	A	B	C	D	E	F	Top BC	Plate No. of Holes	Drilling Hole Diameter	G	H	J	K	L	Lug BC	Bolting No. of Holes	Data Threads UNC-2B	Adapter Code	Weight
2	3.69	1.62	2.00	2.84	5.50	3.54	2.76	4	.39	.55	.39	1.25	1.32	2.30	4.75	4	.62-11	A	7.0
2½	4.19	1.75	2.50	3.34	6.00	3.54	2.76	4	.39	.55	.39	1.25	1.91	2.57	5.50	4	.62-11	A	8.0
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	6.00	4	.62-11	A	9.0
4	6.06	2.00	4.00	5.16	7.00	3.54	2.76	4	.39	.63	.43	1.25	3.57	4.09	7.50	8	.62-11	B	15.0
5	7.12	2.12	5.00	6.16	7.50	3.54	2.76	4	.39	.75	.51	1.25	4.63	4.61	8.50	8	.75-10	C	20.0
6	8.12	2.12	5.75	7.02	8.00	3.54	2.76	4	.39	.75	.51	1.25	5.45	5.06	9.50	8	.75-10	C	23.0
8	10.50	2.50	7.75	9.47	9.50	5.91	4.92	4	.57	.87	.63	1.25	7.45	6.05	11.75	8	.75-10	D	42.0
10	12.75	2.50	9.75	11.47	10.75	5.91	4.92	4	.57	1.18	.87	2.00	9.53	7.69	14.25	12	.88-9	E	66.0
12	14.88	3.00	11.75	13.47	12.25	5.91	4.92	4	.57	1.18	.87	2.00	11.47	9.02	17.00	12	.88-9	E	88.0

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



9	RETAINING RING	1			
8	THRUST WASHER	1			
7	STEM RETAINER	2			
6	BUSHING	1			
5	PACKING	1			
4	STEM	1			
3	DISC	1			
2	SEAT	1			
1	BODY	1			

ITEM No.	NAME	No. REQUIRED	SERIES/PART No.	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____
 Pressure Rating _____
 Customer/Project _____
 Inq./P.O. No. _____
 Bray Order No. _____
 Certified Correct By _____ Date _____



BRAY VALVE & CONTROLS

A Subsidiary of BRAY INTERNATIONAL, Inc.

PARTS LIST AND DIMENSIONS (Inches)
 BUTTERFLY VALVE, SERIES 31 SIZES 2"-12"

Series	Size	Part No.	Material Trim Code	Drawing No.
				ES11A-0014

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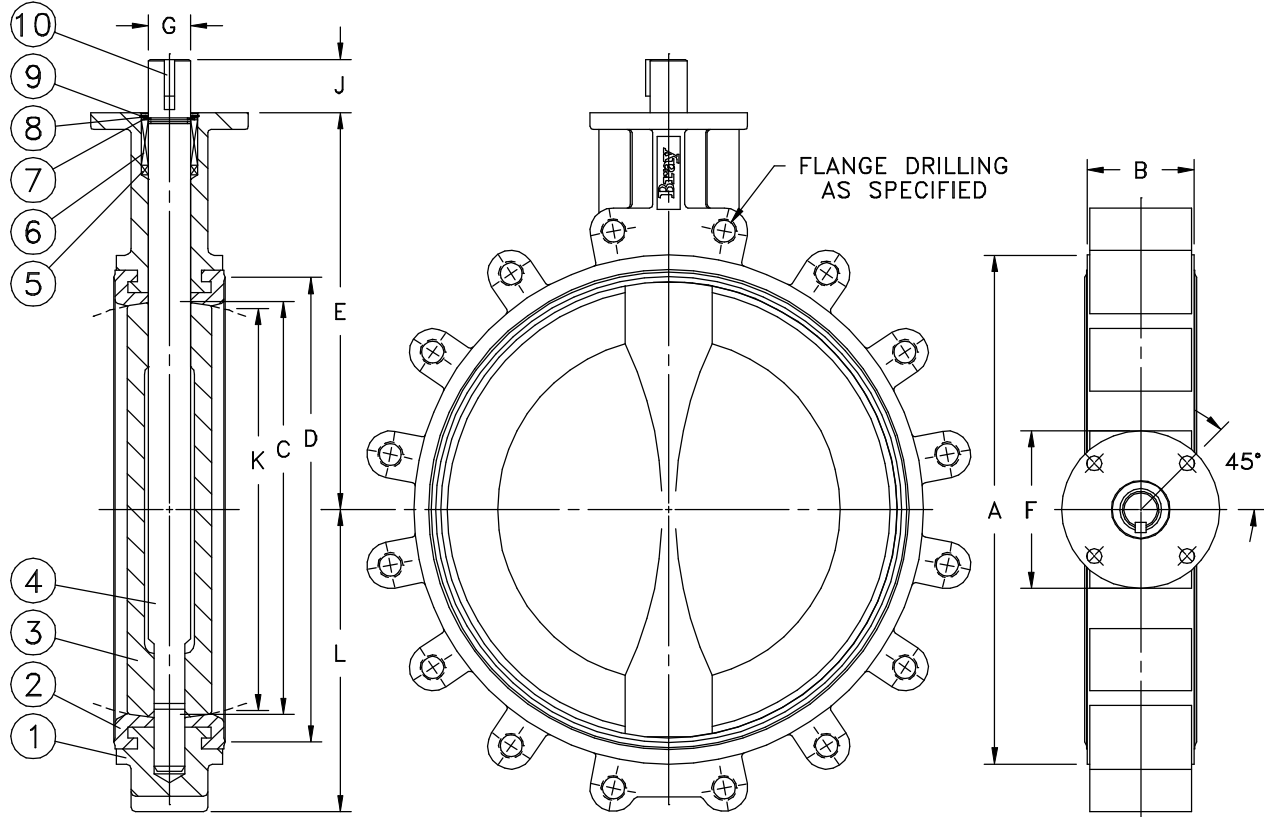
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SERIES 31
ES11A-0015
Date: June 1993

Valve Size	A	B	C	D	E	F	BC	Top Plate No. of Holes	Drilling Hole Diameter	G	J	Key Size	K	L	Lug BC	Bolting No. of Holes	Data Threads UNC-2B	Adapter Code	Weight
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	9.93	18.75	12	1.00-8	F	114
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	11.30	21.25	16	1.00-8	F	166
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	12.16	22.75	16	1.12-7	G	226
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	25.00	20	1.12-7	G	305

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



10	KEY	1		
9	RETAINING RING	1		
8	THRUST WASHER	1		
7	STEM RETAINER	2		
6	BUSHING	1		
5	PACKING	1		
4	STEM	1		
3	DISC	1		
2	SEAT	1		
1	BODY	1		

ITEM No.	NAME	No. REQUIRED	MATERIAL	SPECIFICATION/REMARKS
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Valve Size _____ Flg. Drilling _____
 Pressure Rating _____
 Customer/Project _____
 Inq./P.O. No. _____
 Bray Order No. _____
 Certified Correct By _____ Date _____



BRAY VALVE & CONTROLS
 A Division of BRAY INTERNATIONAL, Inc.

PARTS LIST and DIMENSIONS (Inches)
 BUTTERFLY VALVE, SERIES 31 SIZES 14"-20"

Series	Size	Part No.	Material Trim Code	Drawing No.
				ES11A-0015

Bray