

BRAY / McCANNALOK

41R High Performance Valves for the SUGAR INDUSTRY



- Steam Valves for Evaporators
- Evaporator Steam and Escape Valves
- 100% Bi-directional Bubbletight
- Large Cv
- Easy Automation
- Award-winning Design
- Lighter Weight

BRAY / McCANNALOK

SERIES 41 R EVAPORATOR STEAM VALVE

Zero Leakage Butterfly Valves

- 100 PSI Rated
- Double Flanged Design
- -20°F to 500°F (-29°C to 260°C)
- Zero-Leakage, Bi-directional Shut-off to full rated Pressure



Bray Controls is proud to offer the Bray/McCannalok line of specially designed high performance butterfly valves for the Sugar Industry. These valves are structured to handle the low pressure steam of evaporators. This is also the same valve that for 30 years has proven to be the leader in double offset design for the process industry.

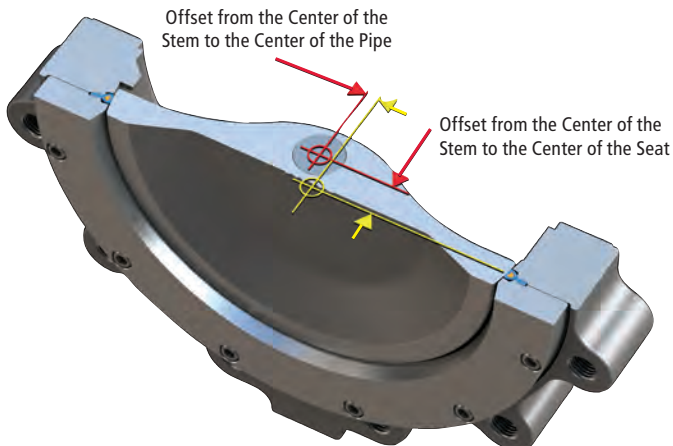
This valve incorporates the same proven design features of the standard Bray/McCannalok valve but in a lighter, more economical configuration specifically designed for the sugar industry steam services. It can be used along with the standard higher pressure Bray/McCannalok butterfly valves and shares the same spare parts, thereby reducing the need for special or different inventory.

For over 30 years the reliability of the Bray/McCannalok has been conclusively proven, both in lab tests and thousands of field applications.

The Bray/McCannalok's unique, patented design received Chemical Processing's Vaaler Award for Best Product shortly after it was introduced. The simple, innovative design offers rugged reliability and extremely easy maintenance in the field. Independent and internal tests have proven Bray/McCannalok's superior service life capability, with zero-leakage shut-off through over 100,000 cycles. The Bray/McCannalok valves can be easily automated with manual, pneumatic or electric actuators.

After a test of over 100,000 cycles at 720 psi, the seat remained in excellent condition, continuing to provide a bi-directional zero-leakage seal. Even after more than 878,000 cycles at 2 psi, the Bray/McCannalok High Performance Valve still sealed zero-leakage in both directions.

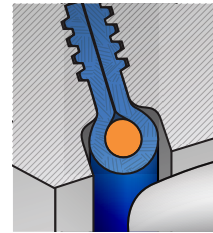
DOUBLE OFFSET STEM AND DISC DESIGN



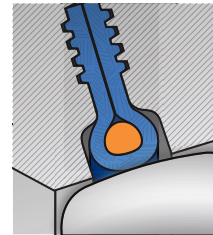
SEAT DESIGN: THE HEART OF THE BRAY/ McCANNALOK VALVE

The unique, two-part seat assembly consists of a resilient energizer which is totally encapsulated by the seat. The assembly is locked in the body recess by a full-faced seat retainer. This simple, reliable and proven combination results in many exclusive advantages including:

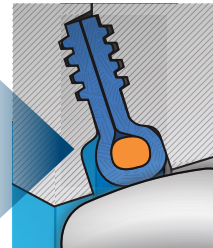
- The energizer is completely isolated from all contact with the line media by the seat.
- Serrations in the seat retainer and body recess secure the seat assembly in place regardless of disc position.
- The full-faced retainer is bolted to the body, locking the seat in the correct position. The seat is secured even without the mating flange.
- The closely confined and well supported seat is energized by the disc and line pressure. The higher the pressure, the tighter the seal. In low pressure and vacuum applications, the energized seat offers superior sealing and longer service life than many other designs.
- Line media is sealed to zero-leakage in both directions.
- The seat is self-adjusting for wear and temperature changes.
- Seat replacement is extremely easy. Just remove the seat retainer, rotate the disc into the closed position and place a new seat assembly in the machined recess of the body. This simple procedure will not disturb the disc or stem.



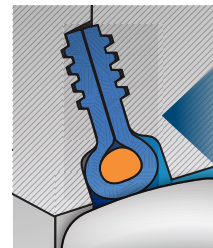
Seat non-compressed as disc approaches.



Disc in closed position; with no line pressure.



Disc in closed position; line pressure applied from the left.



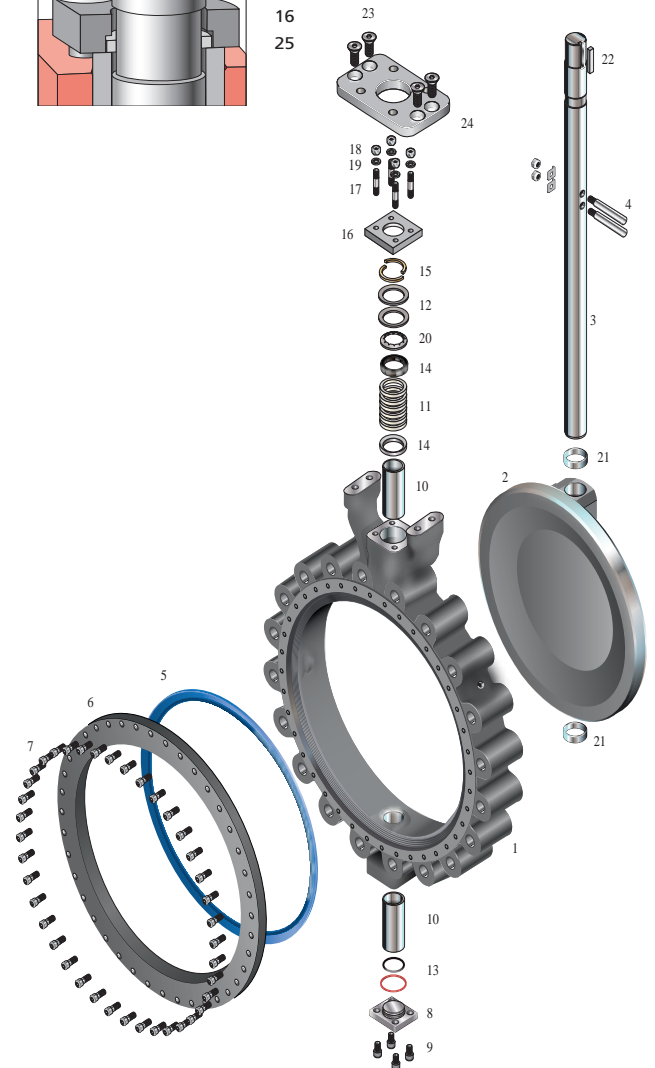
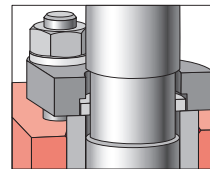
Disc in closed position; line pressure applied from the right.



Materials of Construction

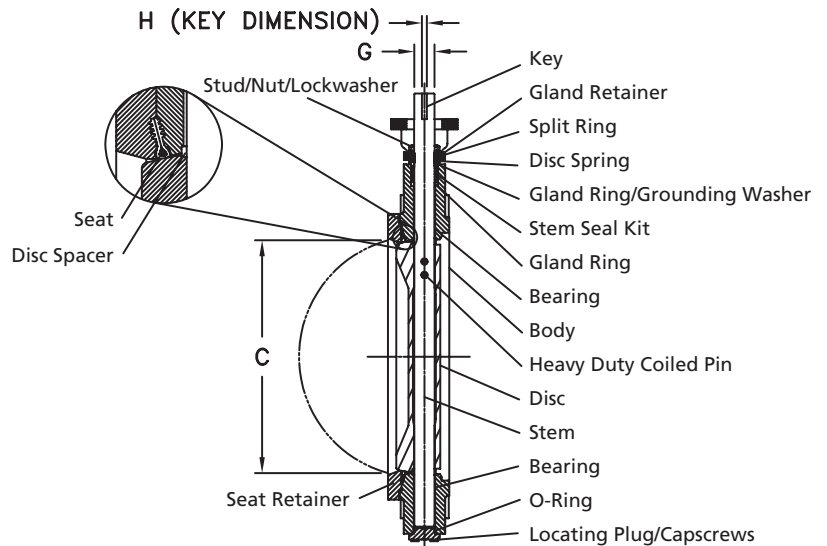
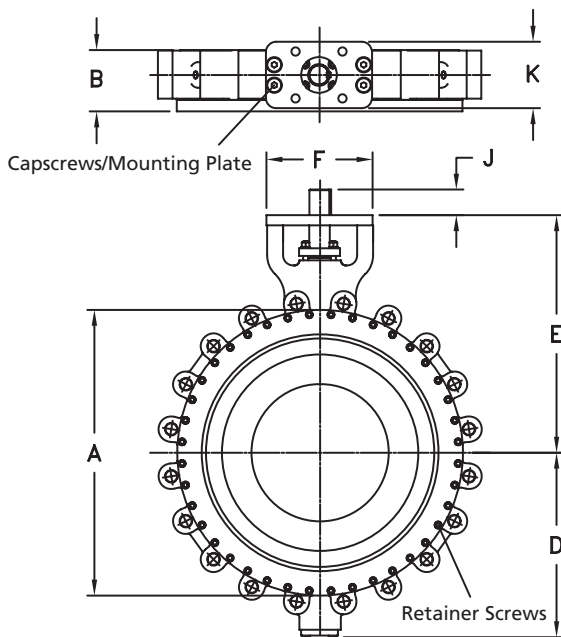
ITEM	NAME	MATERIAL
1	Body	Phosphatized Ductile Iron Phosphatized Carbon Steel
2	Disc	Carbon Steel with Stainless Steel Edge
3	Stem	17-4 PH Stainless Steel
4	Heavy Duty Coiled Pin	420 Stainless Steel
5	Seat	RPTFE♦
6	Seat Retainer	Phosphatized Carbon Steel
7	Retainer Screws	Carbon Steel
8	Locating Plug	Phosphatized Carbon Steel
9	Capscrews	Carbon Steel
10	Bearing	316 Stainless Steel with TFE
11	Stem Seal Kit	PTFE
12	Disc Spring	18-8 Stainless Steel
13	O-Ring	PTFE
14	Gland Ring	316 Stainless Steel
15	Split Ring	18-8 Stainless Steel
16	Gland Retainer	Phosphatized Carbon Steel
17	Stud	316 Stainless Steel
18	Nut	18-8 Stainless Steel
19	Lock Washer	18-8 Stainless Steel
20	Grounding Washer	18-8 Stainless Steel
21	Disk Spacers	316 Stainless Steel
22	Key	18-8 Stainless Steel
23	Capscrews	Carbon Steel
24	Mounting Plate	Phosphatized Carbon Steel
25	Retaining Ring	18-8 Stainless Steel

BLOW-OUT PROOF STEM



♦ RTFE is supplied by Bray as RPTFE (reinforced polytetrafluoroethylene).

Other materials are available.
Please consult Bray representative for your specific application.



↳ Dimensions are different from the Series 41

IMPERIAL DIMENSIONS: Inches

Valve Size	A	B	C	D	E	F	G	H	J	K	Top Plate Drilling				Lug Bolting Data			Adapter Code	Weight (lbs.)
											BC	No. of Holes	Hole Dia.	Flange Type	BC	No. of Holes	Threads UN-2B		
24	27.96	6.00	22.50	18.05	23.25	10.38	1.97	.472 x .394	2.50	6.50	6.50	4	.81	F16	29.50	20	1-1/4-8	G	641
28	32.41	6.50	26.47	20.27	27.50	10.38	2.50	.625 x .625	4.00	6.50	6.50	4	.81	F16	34.00	28	1-1/4-8	H	931
30	34.41	7.50	28.31	21.24	28.50	10.38	2.50	.625 x .625	4.00	6.50	6.50	4	.81	F16	36.00	28	1-1/4-8	H	1187
32	37.62	7.50	30.19	22.18	29.50	10.38	2.50	.625 x .625	4.00	6.50	6.50	4	.81	F16	38.50	28	1-1/2-8	H	1377
36	39.87	8.26	34.00	24.37	30.50	15.38	3.00	.750 x .750	4.00	11.75	10.00	8	.67	F25	42.75	32	1-1/2-8	F25-2	1736
40	44.20	9.50	36.99	27.16	33.25	15.38	3.00	.750 x .750	4.00	11.75	10.00	8	.67	F25	47.25	36	1-1/2-8	F25-2	2660
42	46.20	9.50	39.05	28.16	34.25	15.38	3.00	.750 x .750	4.00	11.75	10.00	8	.67	F25	49.50	36	1-1/2-8	F25-2	2882
48	52.25	10.00	46.09	32.00	40.00	19.50	3.50	.875 x .625	5.25	13.50	11.73	8	.81	F30	56.00	44	1-1/2-8	F30-2	3864
54	66.38	10.75	52.45	35.50	44.25	19.50	4.00	1.000 x .750	5.25	13.50	11.73	8	.81	F30	62.75	44	1-3/4-8	F30-3	4824

METRIC DIMENSIONS: Millimeters

Valve Size	A	B	C	D	E	F	G	H	J	K	Top Plate Drilling				Lug Bolting Data			Adapter Code	Weight (kg.)
											BC	No. of Holes	Hole Dia.	Flange Type	BC	No. of Holes	Threads UN-2B		
600	710	152	572	458	591	264	50	12 x 10	64	165	165	4	21	F16	749	20	1-1/4-8	G	291
650	823	165	672	515	699	264	64	16 x 16	102	165	165	4	21	F16	864	28	1-1/4-8	H	422
750	874	191	719	539	724	264	64	16 x 16	102	165	165	4	21	F16	914	28	1-1/4-8	H	538
800	956	191	767	563	749	264	64	16 x 16	102	165	165	4	21	F16	978	28	1-1/2-8	H	625
900	1013	210	864	619	775	391	76	19 x 19	102	298	254	8	17	F25	1086	32	1-1/2-8	F25-2	787
1000	1123	241	940	690	845	391	76	19 x 19	102	298	254	8	17	F25	1200	36	1-1/2-8	F25-2	1207
1050	1173	241	992	715	870	391	76	19 x 19	102	298	254	8	17	F25	1257	36	1-1/2-8	F25-2	1307
1200	1327	254	1171	813	1016	495	89	22 x 16	133	343	298	8	21	F30	1422	44	1-1/2-8	F30-2	1753
1400	1686	273	1332	902	1124	495	102	25 x 19	133	343	298	8	21	F30	1594	44	1-3/4-8	F30-3	2188

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.

Inquire/P.O. No.: _____

Bray Order No.: _____

SR Drawing #41R-24/54-im August 2012- Rev. 0

Customer/Project: _____