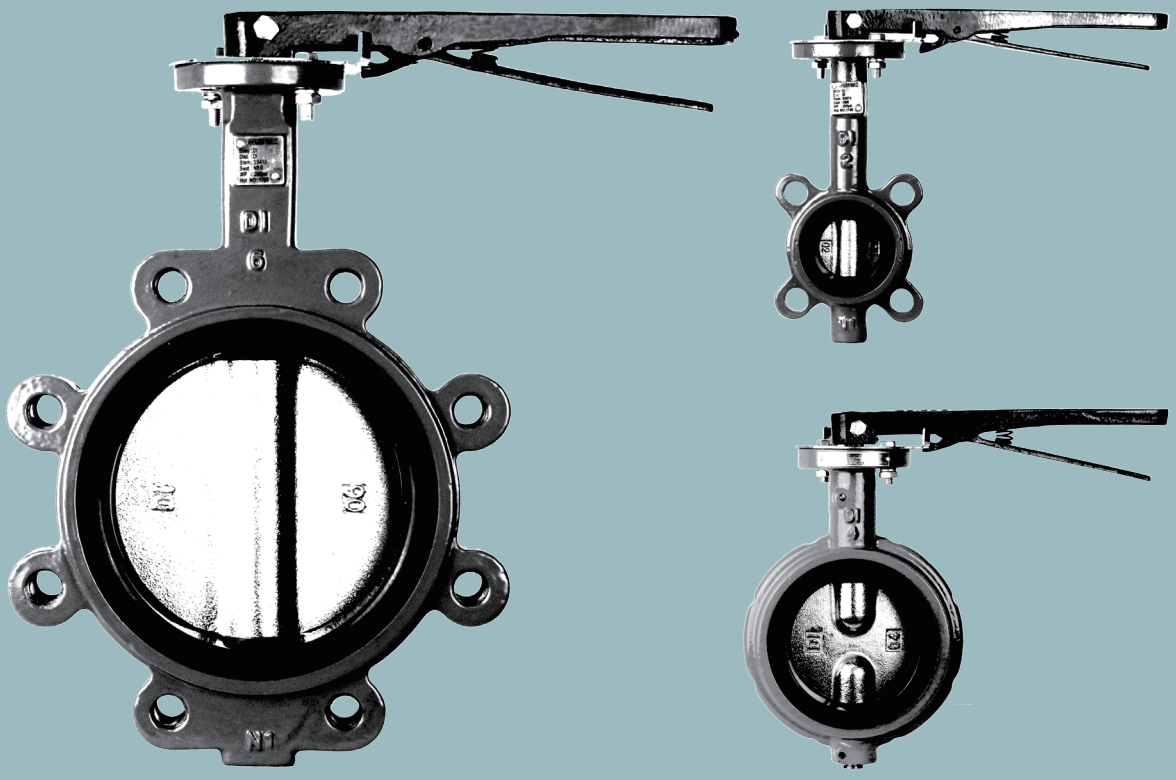
Butterfly Valve



4E Valve U.S.A.

4E Valve is a Texas corporation company focused on delivering high-quality flow control products to oil and gas, petrochemical, food, refinery, marine, mining, power and water treatment industries. We specialize in valve wholesale, with a core specialty of inventory of API 6D, 600, 602, 603, IBBM, CE & ISO 9001 certified valves.

4E Valve was established in 1993 in Houston, Texas with a vision to bring the best value valves to our customers. The company name comes from the four 'E's, which represent Excellent Quality, Extraordinary Service, Expedite Delivery and Extensive Inventory.

In more than 20 years of operation, 4E Valve has become a recognized valve distributor in the U.S.A. and beyond, with a brand new 47,000 square foot warehouse facility in Houston, Texas, we will continue to provide support to every industry and our customers with best value valves.

4E Valve always put our customers' interests before ours.

Call us
+1 (281)494-4300
800-496-4042

Fax us
+1 (281)494-0090

Email us
joe@4evalve.com
jenny@4evalve.com
william@4evalve.com
sales@4evalve.com
ben@4evalve.com

U.S.A Office
10700 Corporate Dr. #124
Stafford, TX 77477
U.S.A.

Check Our Website
www.4Evalve.com

4EXCELLENT QUALITY
4EXTRAORDINARY SERVICE
4EXPEDITE DELIVERY
4EXTENSIVE INVENTORY

4E Butterfly Valve Brochure
May 2020

4E MANUFACTURER

a. b.
c.
d.

4E Manufacture's
a. Foundry
b. Machining Center
c. Testing Stations

4E U.S.A.
d. 4E New Warehouse in Houston (2019)

4E WAREHOUSE

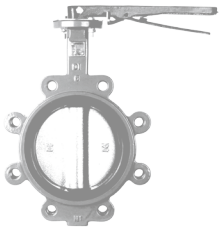
Brand new 47,000 square feet 4E warehouse located in Southwest Houston. (in construction)

Ready in Summer 2020.

Address
6907 Brasada Dr., Houston, TX 77085

4E BUTTERFLY VALVES

INSTALLATION - MAINTENANCE & REPAIR



BASIC PRECAUTIONS

1. Only personnel qualified and experienced in valve maintenance and installation should attempted to work on valves.
2. All standard safety precautions should be observed.
3. Use proper tools.
4. Have proper replacement parts.
5. If possible, remove valve from the line so that work can be done in a controlled, clean and well lighted area.

INSTALLATION

1. Butterfly Valves are designed for installation between 125# cast iron flat face flanges or Class 150# Raised Face flanges. Resilient seated butterfly valves do not require gaskets for installation. **CLEAN ALL FLANGE SURFACES THUROUGHLY BEFORE INSTALLING.**
2. Butterfly valves should be centered between the flanges by installing bolts through the alignment lugs and rotating the valve into position. There should be full and even contact between the elastomer and the flange face. The valve should be installed with the disc in the almost closed position Never force the valve into place if flange spacing is too small damage may occur to the elastomer.
3. Prior to tightening any flange bolts, the valve should be carefully cycled to the open position to check for possible disc interference. Always Tighten Bolts in a Criss Cross Pattern. Never over tighten bolts.
4. Tighten the bolts to obtain metal to metal contact between the body and the flange. Never overtighten bolts. Measure Flange Thickness and the Face to Face Thickness of the valve to determine proper bolt length.
5. Verify the gear operator travel stops after installation. Adjust as necessary.

OPERATION

Manual butterfly valves can be operated by a lever handle or a gear operator. It is usually recommended that gear operators be used for valves 8" and larger. The Standard Locking Lever gives an indication of disc position. Gear operators provide position indication with an indicator dial located on the top of the operator. Valves that are used infrequently should be cycled on a regular basis from open to closed to prevent the build-up of material inside the valve.

INSPECTION & MAINTENANCE

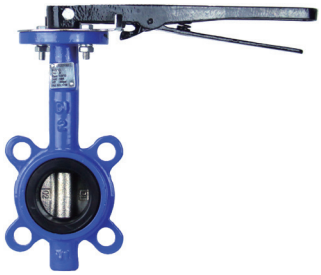
Butterfly valves require no routine maintenance. Periodic cycling of the valve is highly recommended.

REPAIR PARTS

Under normal conditions, spare parts are not required. Consult factory for availability of repair parts.

4E Ball Valves - Index

4E Ductile Iron Butterfly Valves, Buna & Viton Seat in Stock



200PSI WAFER STYLE
IS 2” —12" BO 14” —36"
FIG.# 4E-A200-B (Buna Seat)
4E-A200-V (Viton Seat)

200PSI WAFER NOTCHED STYLE
IS 2” —6" BO 8” —12"
FIG.# 4E-IS200-B (Buna Seat)
4E-IS200-V (Viton Seat)

200PSI LUG STYLE
IS 2” —12" BO 14” —36"
FIG.# 4E-LT200-B (Buna Seat)
4E-LT200-V (Viton Seat)

IS - IN STOCK
BO - BACK ORDER

WARRANTY

LIMITED WARRANTY: 1. 4E Valve warrants to the original purchaser, for a period of one year from and after the date of delivery to the original purchaser, that its products will be free from defects in workmanship and materials, not caused or resulting from improper usage or application, improper installation, improper maintenance, repair, modification or alteration. In the event the original purchase shall determine that a product purchased from 4E is defective in workmanship or materials, the customer shall notify the 4E Warranty Representative within 24 hours from such determination, followed by written notice to such effect within 7 days therefrom, addressed to: 4E VALVE CO., P.O. BOX 721109, HOUSTON, TX 77272-1109.

2. In the event 4E shall determine that the product is defective based upon such examination of the product which 4E may deem appropriate, 4E shall thereupon, at its sole option, cause the defective product to be (a) repaired, (b) replaced with a substantially identical product, or (c) accept the return of a defective product and refund the purchasing price to the original purchaser, but shall in no event bear any installation, reinstallation, engineering or other costs incurred in connection with repair or replacement.

3. Since 4E shall not provided engineering and/or suitability of application or installation services for a purchaser, the selection, suitability, installation and fitness of all products sold by 4E shall be deemed to have been determined exclusively by and within the result from the selection, application, suitability, fitness or installation of its products.

4. The foregoing constitutes the sole obligation of 4E with respect to respect to defective products purchased from it and in no manner shall 4E assume or be liable for any other expenses, incidental or consequential damages, losses, lost profits, dowtime or otherwise, whether directly or indirectly suffered, or in any other manner relating to or as the result of any defect or failure of any product that it may sell.

5. Except as otherwise provided herein, 4E MAKES NO WARRANTIES OR REPRESENTATION, WHETHER EXPRESS OR IMPLIED, OF ANY KIND WHATSOEVER WITH RESPECT TO GOODS AND PRODUCTS SOLD BY IT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO PERSON IS AUTHORIZED TO GRANT OR EXTEND ANY WARRANTY OR REPRESENTATION ON BEHALF OF 4E OTHER THAN AS SET FORTH HEREIN.

200 PSI WAFER STYLE BUTTERFLY VALVE, Page 1/2

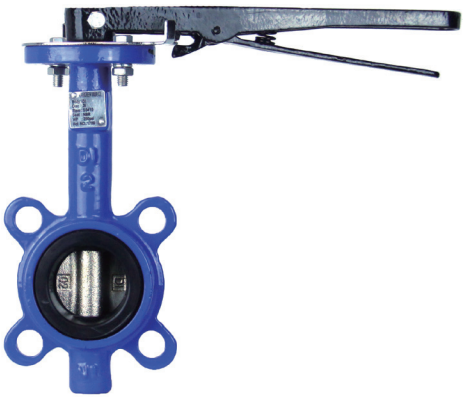
FIG.# 4E-A200-B (Buna Seat); 4E-A200-V (Viton Seat);

Pressure: 200 psi; ANSI Class 125/150 Capable;
Stocking Sizes: 2"- 12"
Back Order Sizes: 14" - 36"

		Shell	Seal
Testing Pressure	Hydrostatic	2" - 12": 300 psi	2" - 12": 220 psi
		14" - 24": 225 psi	14" - 24": 165 psi
		30" - 36": 150 psi	30" - 36": 110 psi
Standard	Inspection & Test	API 598	
	End Standard	ANSI B16.5 CL150	
	Design	API 609	

Features

Long neck; Pinless Disk; Alignment Holes;
Ductile Iron body with Epoxy Coating;
Seat material available in Buna, Viton or EPDM;
Double D Shaft Stem Style;
Operational Style: Lever and Gear Operator (12" and up)



MATERIAL LIST

No.	Part Name	Material	
1.	Body	Ductile Iron	
2.	Disc	Ductile Iron (Nickel Plated)	CF8M
3.	Seat	BUNA- N	Viton
4.	Stem	Double D Style SS 410	
5.	Bushing	PTFE	
6.	O - Ring	BUNA- N	Viton

NOTE: 1. Lever and Gear Operator must be specified at the point of order.
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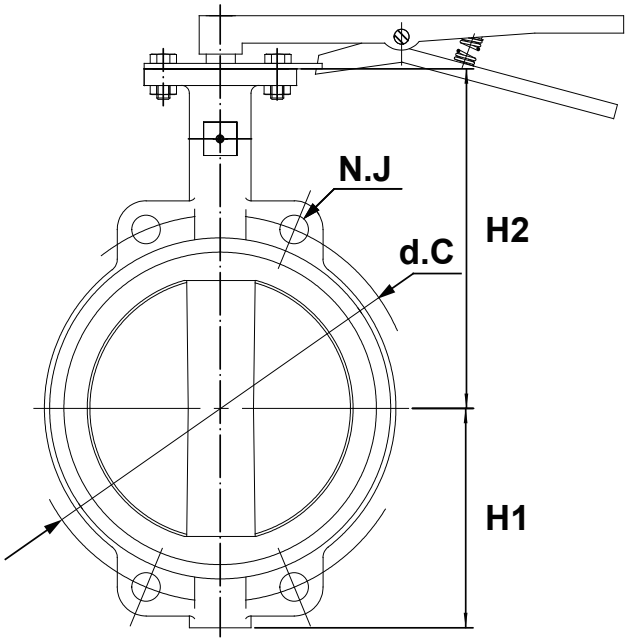
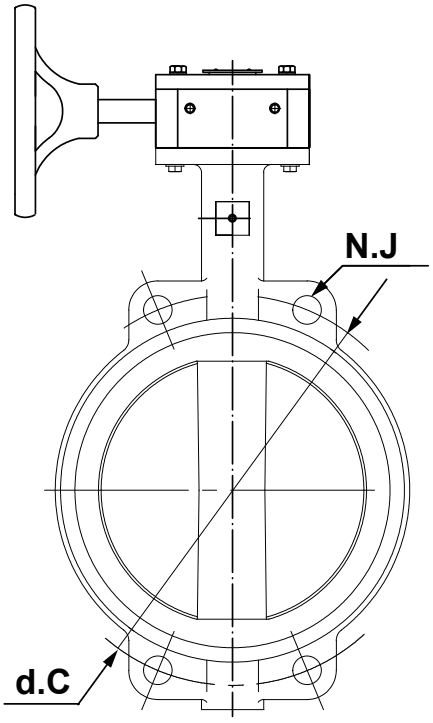
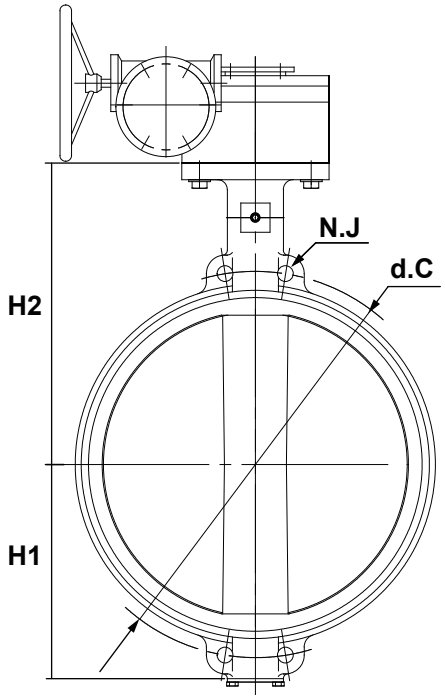


2”- 12”

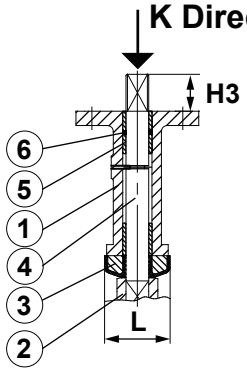


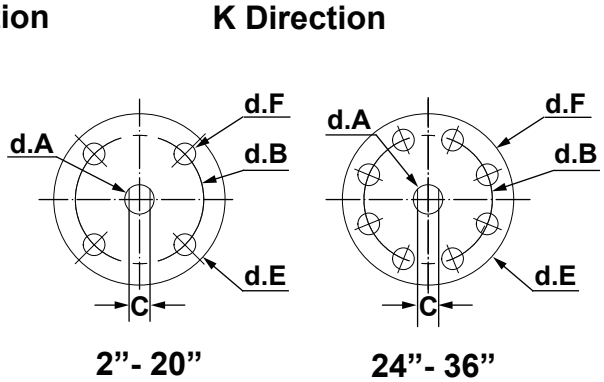
14”

200 PSI WAFER STYLE BUTTERFLY VALVE, Page 2/2



16”- 36”





NOTE:
3. 'd.' is the abbreviation for diameter.
4. Dimension 'N' is applicable to Lug Style Valves. Dimension 'M' is unified Inch Screw Thread, coarse pitch series (UNC) per ANSI B1.1.
5. Dimensions and weights are for reference only. Weights 14" - 36" include gear operator.

DIMENSIONS & WEIGHT

SIZE		unit	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
H1		inch	2.992	3.504	3.74	4.488	5	5.512	6.969	7.992	9.528	10.512	11.732	12.52	13.74	17.48	19.528	23.346
		mm	76	89	95	114	127	140	177	203	242	267	298	318	349	444	496	593
H2		inch	6.378	6.89	7.126	7.874	8.386	8.858	10.236	11.496	13.189	14.488	15.748	16.614	18.858	22.126	25.512	30.236
		mm	162	175	181	200	213	225	260	292	335	368	400	422	479	562	648	768
H3		inch	1.181	1.181	1.181	1.181	1.181	1.181	1.417	1.417	1.417	1.772	2.008	2.008	2.52	2.756	2.835	3.031
		mm	30	30	30	30	30	30	36	36	36	45	51	51	64	70	72	77
L		inch	1.811	1.929	1.929	2.165	2.303	2.323	2.52	2.815	3.189	3.13	3.543	4.291	5.315	6.181	6.811	8.307
		mm	46	49	49	55	58.5	59	64	71.5	81	79.5	90	109	135	157	173	211
d.A		inch	0.5	0.5	0.5	0.622	0.75	0.75	0.874	1.126	1.252	1.252	1.311	1.496	1.62	1.994	2.494	2.923
		mm	12.7	12.7	12.7	15.8	19.05	19.05	22.2	28.6	31.8	31.8	33.3	38	41.15	50.65	63.35	74.25
ANSI B16.5	d.C	inch	4.744	5.492	6.004	7.5	8.504	9.508	11.752	14.252	17.008	18.74	21.24	22.756	25	29.508	36.004	42.756
		mm	120.5	139.5	152.5	190.5	216	214.5	298.5	362	432	476	539.5	578	635	749.5	914.5	1086
	N.J	Qty.	4	4	4	8	8	8	8	12	12	12	16	16	20	20	28	32
		inch	0.748	0.748	0.748	0.748	0.866	0.866	0.866	0.984	0.984	1.142	1.142	1.26	1.26	1.378	1.378	1.614
		mm	19	19	19	19	22	22	22	25	25	29	29	32	32	35	35	41
d.E		inch	3.543	3.543	3.543	3.543	3.543	3.543	4.921	4.921	5.906	5.906	8.268	8.268	8.268	11.811	11.811	11.811
		mm	90	90	90	90	90	90	125	125	150	150	210	210	210	300	300	300
d.B		inch	2.756	2.756	2.756	2.756	2.756	2.756	4.016	4.016	4.921	4.921	6.496	6.496	6.496	10	10	10
		mm	70	70	70	70	70	70	102	102	125	125	165	165	165	254	254	254
d.F		inch	0.354	0.354	0.354	0.354	0.354	0.354	0.433	0.433	0.512	0.512	0.866	0.866	0.866	0.709	0.709	0.709
		mm	9	9	9	9	9	9	11	11	13	13	22	22	22	18	18	18
C		inch	0.394	0.394	0.394	0.472	0.551	0.551	0.669	0.866	0.945	0.945	1.063	1.063	1.26	1.417	1.752	2.047
		mm	10	10	10	12	14	14	17	22	24	24	27	27	32	36	44.5	52
Weight		lbs.	6.504	8.664	8.708	11.861	15.895	18.497	30.865	41.403	66.58	112.44	202.83	240.30	335.10	571	906.1	1036.2
		kgs.	2.95	3.93	3.95	5.38	7.21	8.39	14	18.78	30.2	51	92	109	152	259	411	470
Torque		N·m	20	28	38	71	115	170	330	510	660	820	1400	1200	2100	2800	3900	5800

Short Neck Wafer Notched Style (aka. Industrial Style)
FIG.# 4E-IS200-B (Buna Seat); 4E-IS200-V (Viton Seat);

Pressure: 200 psi; ANSI Class 125/150 Capable;
Stocking Sizes: 2"- 12"
Back Order Sizes: 14" - 36"

		Shell	Seal
Testing Pressure	Hydrostatic	2" - 12": 300 psi	2" - 12": 220 psi
		14" - 24": 225 psi	14" - 24": 165 psi
		30" - 36": 150 psi	30" - 36": 110 psi
Standard	Inspection & Test		API 598
	End Standard		ANSI B16.5 CL150
	Design		API 609

Short neck; Pinless Disk; Notched Body;
Ductile Iron body with Epoxy Coating;
Seat material available in Buna, Viton or EPDM;
Double D Shaft (in stock) Stem or Square Shaft Style;
Operational Style: Lever

MATERIAL LIST

No.	Part Name	Material	
1.	Body	Ductile Iron	
2.	Disc	Ductile Iron (Nickel Plated)	CF8M
3.	Seat	BUNA- N	Viton
4.	Stem	Double D Style SS 410	
5.	Bushing	PTFE	
6.	O - Ring	BUNA- N	Viton

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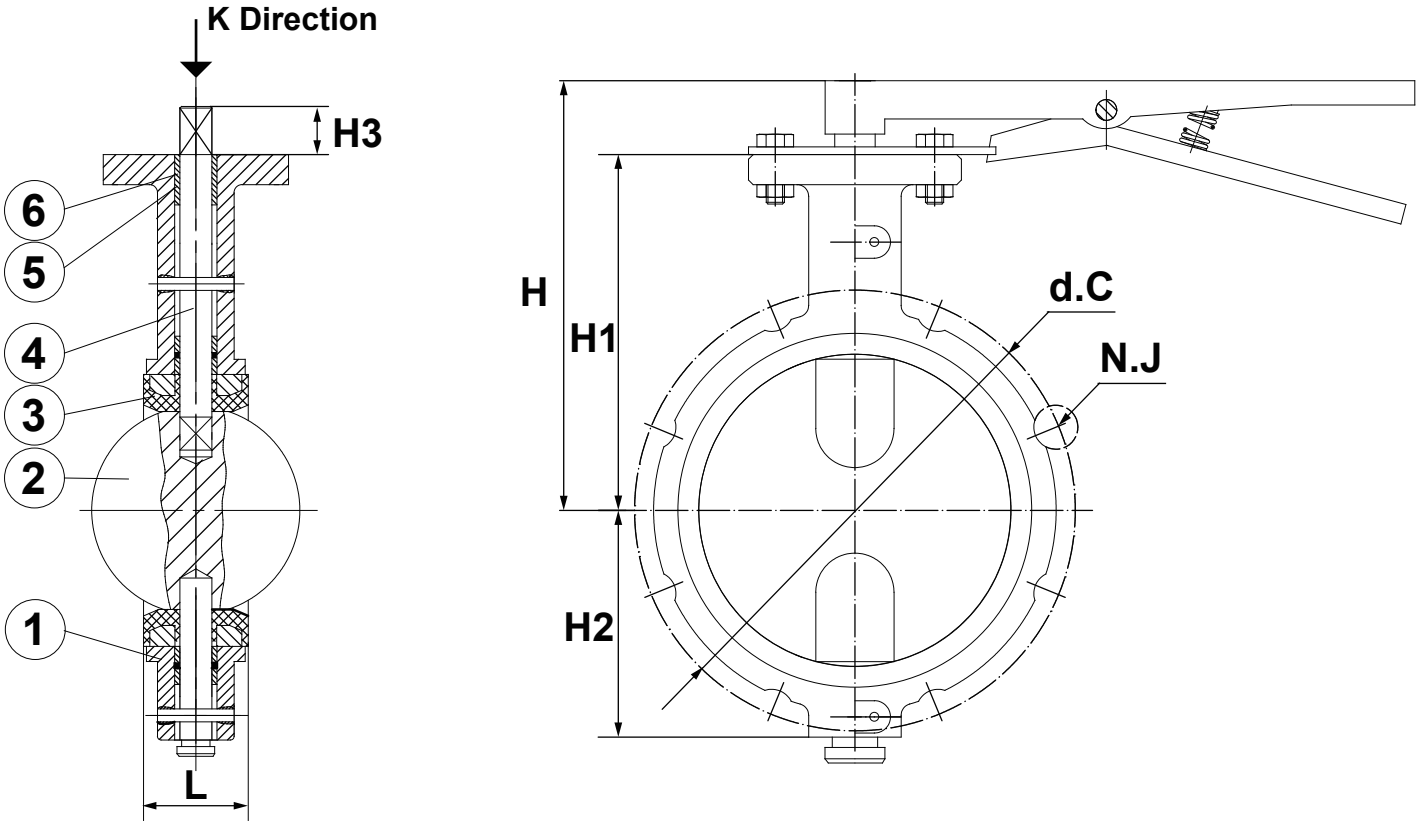

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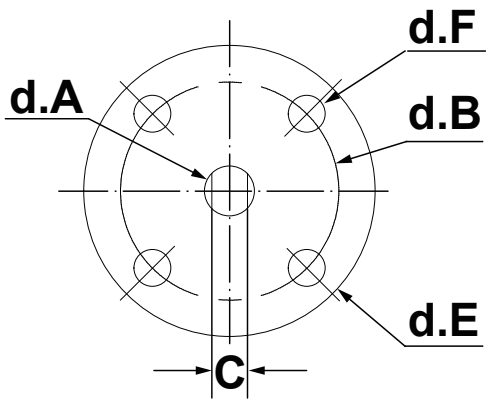
K Direction



NOTE:
3. 'd.' is the abbreviation for diameter.
4. Dimension 'N' is applicable to Lug Style Valves. Dimension 'M' is unified Inch Screw Thread, coarse pitch series (UNC) per ANSI B1.1.
5. Dimensions and weights are for reference only.

DIMENSIONS & WEIGHT

SIZE		unit	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
H		inch	5.157	5.709	6.299	7.205	7.244	7.756	9.331	11.417	12.441
		mm	131	145	160	183	184	197	237	290	316
H1		inch	3.976	4.528	4.921	6.024	6.063	6.575	8.15	10.118	11.024
		mm	101	115	125	153	154	167	207	257	280
H2		inch	2.756	3.031	3.307	3.858	4.331	4.961	6.102	7.402	9.449
		mm	70	77	84	98	110	126	155	188	240
H3		inch	1.181	1.181	1.181	1.181	1.181	1.181	1.417	1.417	1.417
		mm	30	30	30	30	30	30	36	36	36
L		inch	1.811	1.929	1.929	2.165	2.303	2.323	2.52	2.815	3.189
		mm	46	49	49	55	58.5	59	64	71.5	81
d.A		inch	0.5	0.5	0.5	0.622	0.75	0.75	0.874	1.126	1.252
		mm	12.7	12.7	12.7	15.8	19.05	19.05	22.2	28.6	31.8
ANSI B16.5	d.C	inch	4.744	5.492	6.004	7.5	8.504	9.508	11.752	14.252	17.008
		mm	120.5	139.5	152.5	190.5	216	241.5	298.5	362	432
	N.J	Qty.	4	4	4	8	8	8	8	12	12
		inch	0.748	0.748	0.748	0.748	0.866	0.866	0.866	0.984	0.984
		mm	19	19	19	19	22	22	22	25	25
d.E		inch	3.543	3.543	3.543	3.543	3.543	3.543	4.921	4.921	5.906
		mm	90	90	90	90	90	90	125	125	150
d.B		inch	2.756	2.756	2.756	2.756	2.756	2.756	4.016	4.016	4.921
		mm	70	70	70	70	70	70	102	102	125
d.F		inch	0.354	0.354	0.354	0.354	0.354	0.354	0.433	0.433	0.512
		mm	9	9	9	9	9	9	11	11	13
C		inch	0.394	0.394	0.394	0.472	0.551	0.551	0.669	0.866	0.945
		mm	10	10	10	12	14	14	17	22	24
Weight		lbs.	5.8643	7.4516	7.65	10.9129	13.1836	16.9535	29.3215	44.9743	70.9888
		kgs.	2.66	3.38	3.47	4.95	5.98	7.69	13.3	20.4	32.2
Torque		N·m	20	28	38	71	115	170	330	510	660

200 PSI LUG STYLE BUTTERFLY VALVE, Page 1/2

FIG.# 4E-LT200-B (Buna Seat); 4E-LT200-V (Viton Seat);

Pressure: 200 psi; ANSI Class 125/150 Capable;
Stocking Sizes: 2"- 12"
Back Order Sizes: 14" - 36"

Testing Pressure	Hydrostatic	Shell	Seal
		2" - 12": 300 psi	2" - 12": 220 psi
		14" - 24": 225 psi	14" - 24": 165 psi
		30" - 36": 150 psi	30" - 36": 110 psi
Standard		Inspection & Test	API 598
		End Standard	ANSI B16.5 CL150
		Design	API 609

Features

Long neck; Pinless Disk; Ductile Iron body with Epoxy Coating;
Seat material available in Buna, Viton or EPDM
Double D Shaft Stem Style;
Operational Style: Lever and Gear Operator (10" and up)

MATERIAL LIST

No.	Part Name	Material	
1.	Body	Ductile Iron	
2.	Disc	Ductile Iron (Nickel Plated)	CF8M
3.	Seat	BUNA- N	Viton
4.	Stem	Double D Style SS 410	
5.	Bushing	PTFE	
6.	O - Ring	BUNA- N	Viton

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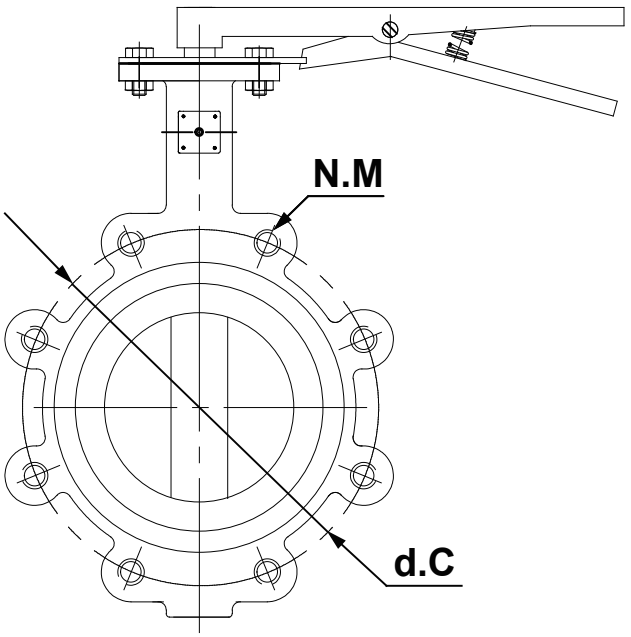
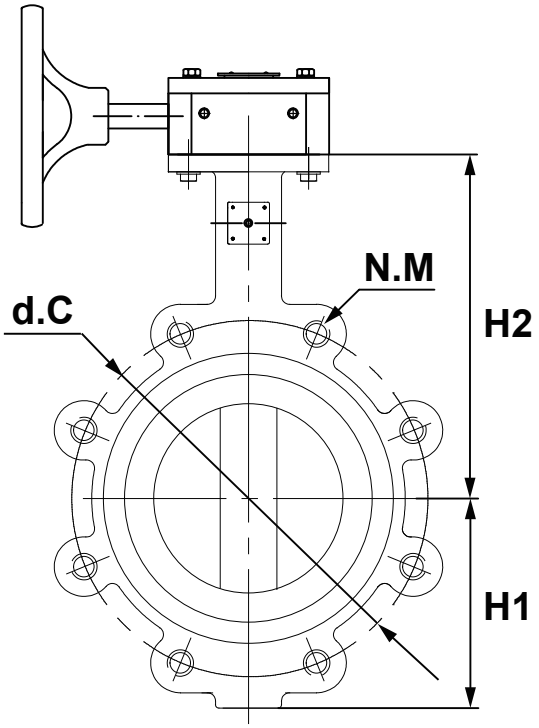


2”- 12”



14”

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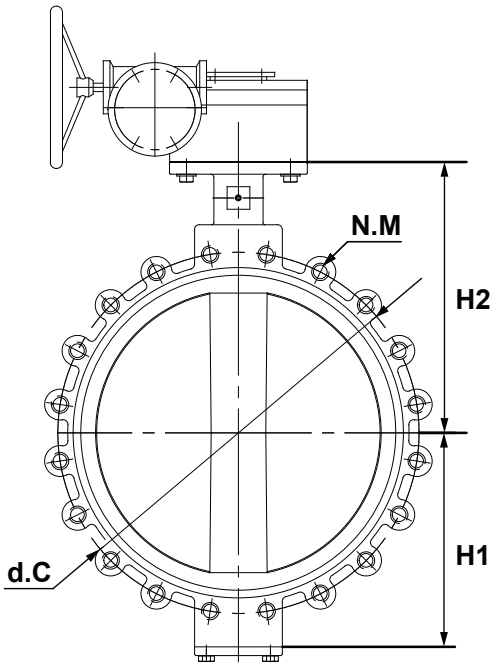
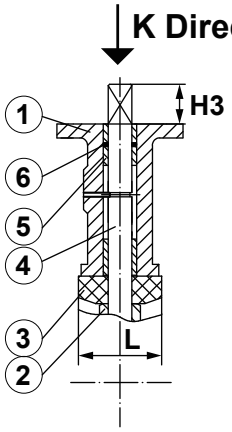
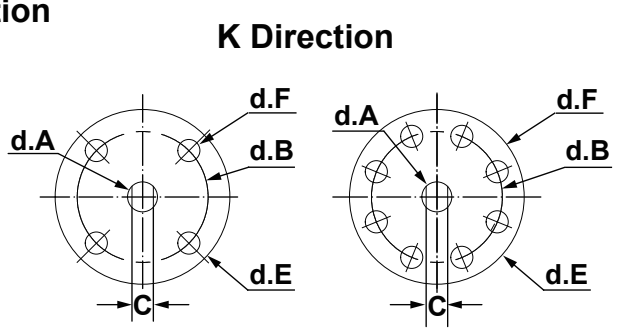
200 PSI LUG STYLE BUTTERFLY VALVE, Page 2/2



16”- 36”





NOTE:

3. 'd.' is the abbreviation for diameter.
4. Dimension 'N' is applicable to Lug Style Valves. Dimension 'M' is unified Inch Screw Thread, coarse pitch series (UNC) per ANSI B1.1.
5. Dimensions and weights are for reference only. Weights 14" - 36" include gear operator.

DIMENSIONS & WEIGHT

SIZE		unit	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
H1		inch	2.992	3.153	3.74	4.488	5	5.512	6.811	7.992	9.331	11.024	11.969	14.252	14.485	17.48	23.701	23.74
		mm	76	80	95	114	127	140	173	203	237	280	304	362	368	444	602	603
H2		inch	6.378	6.89	7.126	7.874	8.386	8.858	10.236	11.496	13.268	14.488	15.748	16.732	18.898	22.126	25.512	26.85
		mm	162	175	181	200	213	225	260	292	337	368	400	425	480	562	648	682
H3		inch	1.181	1.181	1.181	1.181	1.181	1.181	1.417	1.417	1.417	1.772	2.008	2.008	2.52	2.756	2.835	3.031
		mm	30	30	30	30	30	30	36	36	36	45	51	51	64	70	72	77
L		inch	1.811	1.929	1.929	2.165	2.303	2.323	2.52	2.815	3.189	3.13	3.543	4.291	5.315	6.181	6.811	8.307
		mm	46	49	49	55	58.5	59	64	71.5	81	79.5	90	109	135	157	173	211
d.A		inch	0.5	0.5	0.5	0.622	0.75	0.75	0.874	1.126	1.252	1.252	1.311	1.496	1.62	1.994	2.494	2.923
		mm	12.7	12.7	12.7	15.8	19.05	19.05	22.2	28.6	31.8	31.8	33.3	38	41.15	50.65	63.35	74.25
ANSI B16.5	d.C	inch	4.744	5.492	6.004	7.5	8.504	9.508	11.752	14.252	17.008	18.74	21.24	22.756	25	29.508	36.004	42.756
		mm	120.5	139.5	152.5	190.5	216	241.5	298.5	362	432	476	539.5	578	635	749.5	914.5	1086
	N	Qty	4	4	4	8	8	8	8	12	12	12	16	16	20	20	28	32
	M	UNC	5/8"-11	5/8"-11	5/8"-11	5/8"-11	3/4"-10	3/4"-10	3/4"-10	7/8"-9	7/8"-9	1"-8	1"-8	1-1/8"-7	1-1/8"-7	1-1/4"-7	1-1/4"-7	1-1/2"-6
d.E		inch	3.543	3.543	3.543	3.543	3.543	3.543	4.921	4.921	5.906	5.906	8.268	8.268	8.268	11.811	11.811	11.811
		mm	90	90	90	90	90	90	125	125	150	150	210	210	210	300	300	300
d.B		inch	2.756	2.756	2.756	2.756	2.756	2.756	4.016	4.016	4.921	4.921	6.496	6.496	6.496	10	10	10
		mm	70	70	70	70	70	70	102	102	125	125	165	165	165	254	254	254
d.F		inch	0.354	0.354	0.354	0.354	0.354	0.354	0.433	0.433	0.512	0.512	0.866	0.866	0.866	0.709	0.709	0.709
		mm	9	9	9	9	9	9	11	11	13	13	22	22	22	18	18	18
C		inch	0.394	0.394	0.394	0.472	0.551	0.551	0.669	0.866	0.945	0.945	1.063	1.063	1.26	1.417	1.752	2.047
		mm	10	10	10	12	14	14	17	22	24	24	27	27	32	36	44.5	52
Weight		lbs.	8.07	9.83	10.58	15.92	20.68	23.74	36.00	57.32	84.11	136.69	242.51	302.03	429.90	716.50	1005.3	1790.2
		kgs.	3.66	4.46	4.8	7.22	9.38	10.77	16.33	26	38.15	62	110	137	195	325	456	812
Torque		N·m	20	28	38	71	115	170	330	510	660	820	1400	1200	2100	2800	3900	5800

Butterfly Valve

4E Valve

joe@4evalve.com | jenny@4evalve.com | william@4evalve.com | ben@4evalve.com | sales@4evalve.com

P. O. Box 721109
Houston, Texas 77272-1109
U. S. A.

phone +1(281)494-4300 | fax +1(281)494-0090