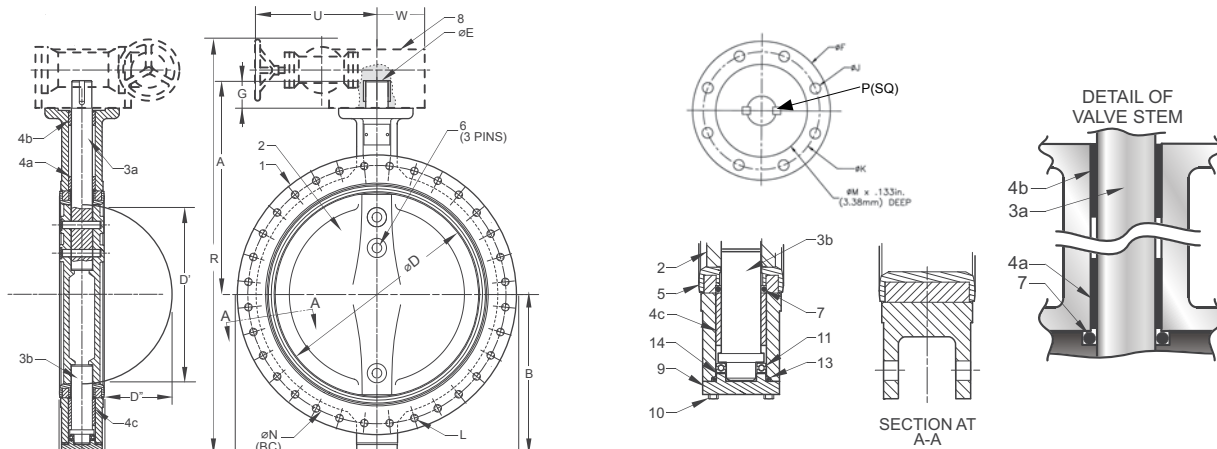


ML Series* 30"- 48"

Iron Butterfly Valve
150 psi Non-Shock WOG
ASME B16.47 Series A Flanges
Specifications: MSS SP-67 Type 1



MATERIALS LIST

ITEM	PART	MATERIALS
1	BODY	CAST IRON ASTM A126 CL. B DUCTILE IRON ASTM A536
2	DISC	ALUMINUM BRONZE ASTM B 148 ** C95400 NP DUCTILE IRON ASTM A536 STAINLESS STEEL ASTM A351 CF8M
3a	UPPER STEM	STAINLESS STEEL TYPE 416 (2)
3b	LOWER STEM	STAINLESS STEEL TYPE 416 (2)
4a	UPPER STEM BEARING, SHORT	CAST BRASS
4b	UPPER STEM BEARING, LONG	CAST BRASS
4c	LOWER STEM BEARING	CAST BRASS
5	LINER	BUNA EPDM VITON
6	STEM PIN	STAINLESS STEEL TYPE 302
7	LINER O-RING	BUNA
8	OPERATOR	GEAR OPERATOR ACTUATOR-AIR/AIR (1) ACTUATOR-AIR/SPRING (1) ACTUATOR-ELECTRIC (1)
9	BOTTOM CAP	ASTM A126 CL.B
10	BOTTOM CAP FASTENING BOLTS	CARBON STEEL 8.8
11	THRUST BEARING	AISI-1020
12	KEY	SS410
13	BOTTOM CAP O-RING	BUNA
14	THRUST BEARING GASKET	ASTM A570 Gr. 33

- (1) - Consult Automation Department.
 (2) - CF8M Disc Carries 316 Stem.

DIMENSIONS

	INCHES DN	VALVE SIZE			
		30	36	42	48
A	INCHES	29.72	33.46	39.69	42.95
	mm	755	850	1008	1091
B	INCHES	22.01	25.83	30.60	34.02
	mm	559	656	777	864
øC	INCHES	38.74	45.98	53.00	59.49
	mm	984	1168	1346	1511
øD	INCHES	29.29	34.04	40.55	45.67
	mm	744	864	1030	1160
D ¹ (Chord Dia.)	INCHES	28.56	33.10	39.33	44.35
	mm	725	840	999	1126
D ¹¹ (Intrusion)	INCHES	11.30	13.00	15.20	17.10
	mm	287	330	386	434
øE	INCHES	2.49	2.95	3.35	4.13
	mm	63	75	85	105
øF (Mtg. Flange)	INCHES	11.81	11.81	11.81	13.78
	mm	300	300	300	350
G	INCHES	3.74	5.12	5.91	5.91
	mm	95	130	150	150
H (Body Width)	INCHES	6.50	8.00	9.88	10.88
	mm	165	203	251	276
H ¹ (Liner Width)	INCHES	6.89	8.31	10.27	11.26
	mm	175	211	261	286
øJ	INCHES		0.71		0.87
	mm		18		22
øK B.C.	INCHES		10.00		11.73
	mm		254		298
L	No. of Holes (per Flange)	See Flange Bolting Table in Butterfly Catalog			
	Thread				
	Bolt Size				
øM	INCHES		7.87		9.06
	mm		200		230
øN	INCHES	36.00	42.75	49.50	56.00
	mm	914	1086	1257	1422
P (Square Key Size)	INCHES	0.71	0.79	0.87	1.10
	mm	18	20	22	28
R	INCHES	62.80	68.98	79.17	89.43
	mm	1595	1752	2011	2271.5
U	INCHES	13.23	14.06	14.06	17.72
	mm	336	357	357	450
W	INCHES	5.75	6.65	6.65	7.13
	mm	146	169	169	181

***Note:** The wetted surface of this product (In any material combination.) contacted by consumable water contains less than one quarter of one percent (.25%) of lead by weight.

****Recommend Aluminum Bronze Disc in Water Service.**

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⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit www.p65warnings.ca.gov.



M**L****2****3****4****V****A**

VALVE SERIES	BODY STYLE	OPERATOR	BODY MATERIAL	DISC MATERIAL	LINER MATERIAL	SPECIAL OPTIONS
H - H SERIES (250 PSI)	L - LUG BODY	1 - VALVE ONLY	2 - CAST IRON*	2 - NICKEL PLATED DUCTILE IRON	B - BUNA-N	S - 316 STEM W/AB OR NP DISC
M - M SERIES	W - WAFER BODY	2 - LEVER HANDLE	3 - DUCTILE IRON	3 - ALUMINUM/BRONZE	E - EPDM	A - EPOXY COATED BODY
O - O SERIES		3 - GEAR OPERATOR		4 - CF8M(316) STAINLESS STEEL	H - HYPALON	AD - ASSEMBLE DRY-NO
U - U SERIES (75 PSI)		5 - GEAR W/MEMORY STOP	*MILWAUKEE VALVE	7 - NYLON COATED DUCTILE IRON	NB - FDA BLACK NEOPRENE	
		9 - GEAR WITH LOCK	RESERVES THE RIGHT TO	8 - EPOXY COATED DUCTILE IRON	NW - FDA WHITE NEOPRENE	
			UPGRADE THE BODY		T - TEFLON OVER BUNA	
			WITHOUT NOTICE FOR NO		(AVAILABLE W/SS DISC ONLY)	
			ADDITIONAL COST.		V - VITON	
		*PNEUMATIC AND ELECTRIC				
		ACTUATION OPTIONS AVAILABLE				

Rev 7/1/2020

BUTTERFLY FEATURES & OPTIONS

STANDARD FEATURES

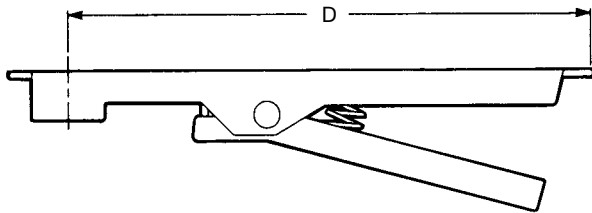
HEAVY DUTY DESIGN
 PHENOLIC CARTRIDGE DESIGN
 LOW TORQUE LINER
 BUBBLE TIGHT SHUT OFF
 LOW TORQUE POLYMER BEARING STD
 DEAD END SERVICE (LUG ONLY)
 FIELD REPAIRABLE

EXTENDED NECK BODY
 LOW PROFILE DISC
 BLOWOUT PROOF STEMS
 STAINLESS STEEL STEMS (416)
 BI-DIRECTIONAL SHUT OFF (EXCEPT AS NOTED)
 VACUUM RATINGS TO 29" OF MERCURY

OPERATORS

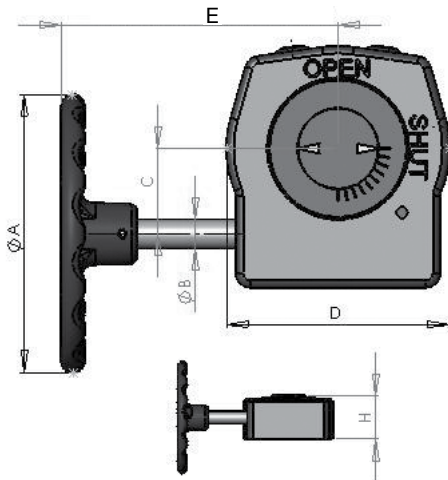
MANUAL

10 POSITION, PAD LOCKABLE, DUCTILE IRON LEVER HANDLE –STD, EPOXY COATING OPTIONAL.



VALVE SIZE	PART NUMBER	T-DIMENSION (inches)
2, 2-1/2, 3	84016-LL	9.50
4, 5	84016-RL	11.00
6	84016-SL	11.00
8	84016-UL	15.00
10, 12	84016-WL	15.00

WEATHER RESISTENT GEAR OPERATOR, CAST IRON, MEMORY STOP AND LOCKING DEVICE OPTIONAL.



VALVE SIZE	PART NUMBER	GEAR RATIO	ØA	ØB	C	D	E	H
2-3	8115-24N-L	24:1	6.00	0.63	1.80	4.20	8.80	2.30
4-5	8115-24N-R	24:1	6.00	0.63	1.80	4.20	8.80	2.30
6	8115-24N-S	24:1	6.00	0.63	1.80	4.20	8.80	2.30
8	8115-30N-U	30:1	9.00	0.75	2.60	6.03	8.50	3.23
10-12	8115-30N-W	30:1	9.00	0.75	2.60	6.03	8.50	3.23
14-16	8115-48N-16	50:1	12.00	0.75	3.10	6.97	13.40	3.46
18-20	8115-65N-20	80:1	12.00	1.00	4.93	10.30	12.60	4.63
24	8115-78N-24	120:1	16.00	1.00	4.93	10.30	12.60	6.00

ACTUATORS

PNEUMATIC OPERATORS
 DOUBLE ACTING OPERATORS
 SPRING-RETURN ACTUATORS
 SOLENOID VALVES
 ACTUATOR BRACKETS
 LIMIT SWITCHES
 VALVE POSITIONERS

120 VOLT AC AND DC VOLTAGES
 NEMA 4 AND 7 HOUSING
 4-20 mA DC VALVE POSITIONERS
 ACTUATOR BRACKETS
 EXTRA LIMIT SWITCHES
 ELECTRIC ACTUATORS

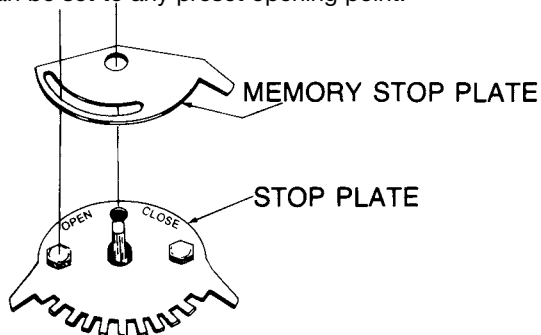
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OPTIONS & ACCESSORIES

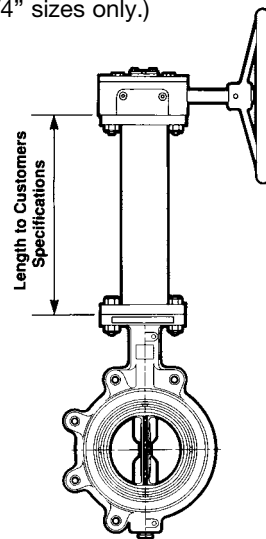
MEMORY STOP

The "MS" Memory Stop provides an adjustable stop when the valve is used in a balancing application. The Memory Stop can be set to any preset opening point.



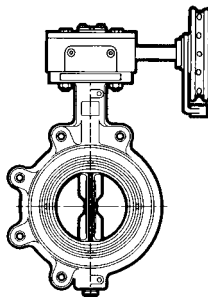
STEM EXTENSION

Provides means of operation at a required distance away from the valve body. Manual or automatic, actuators are easily adapted to mounting flange on the extension. To order, specify distance from valve mounting-flange to base of operator. (Please note: Butterball® extension stems are available in 1-1/4" and 2-1/4" sizes only.)

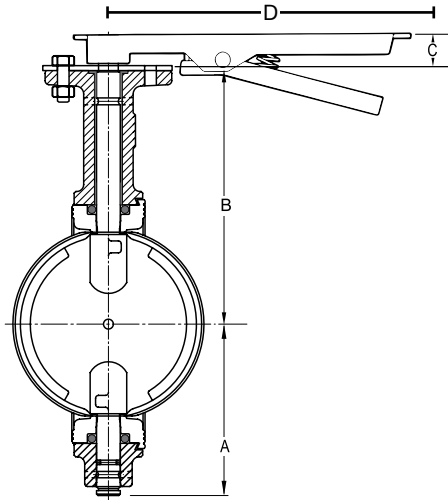


CHAINWHEEL

The chain wheel provides for remote operation of the valve in high, normally out-of-reach locations. Attaches to the gear operator easily for quick valve open/close response. Sprocket rim is aluminum; chain is steel. Specify the handwheel diameter ("A" dimension) and chain length. Chainwheel sold separately.

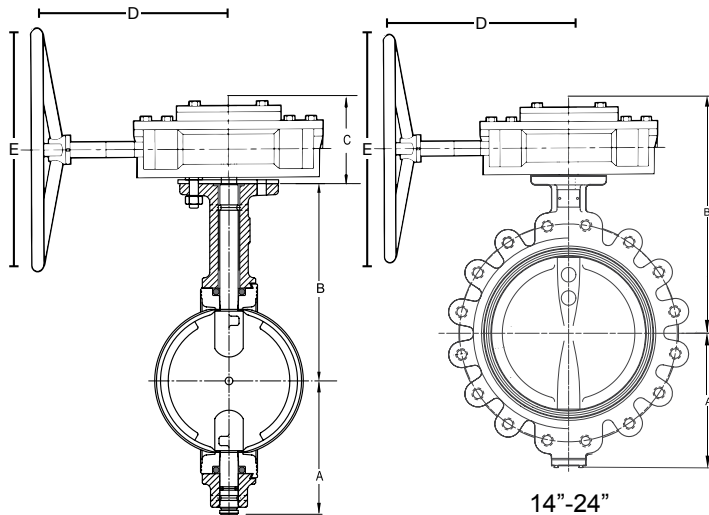


Butterfly Height With Lever or Gear Operator Wafer and Lug Styles



2"-12"

Butterfly with Lever Handle						
Size		A	B	C	D	Height
2"	INCHES	3.06	5.50	1.13	9.50	9.69
2 1/2"	INCHES	3.31	6.00	1.13	9.50	10.44
3"	INCHES	3.75	6.25	1.13	9.50	11.13
4"	INCHES	4.25	7.00	1.13	11.00	12.38
5"	INCHES	4.94	7.53	1.13	11.00	13.60
6"	INCHES	5.56	8.00	1.13	11.00	14.69
8"	INCHES	5.56	9.38	1.50	15.00	16.44
10"	INCHES	7.88	10.56	1.50	15.00	19.94
12"	INCHES	9.25	12.06	1.50	15.00	22.81



2"-12"

14"-24"

Butterfly with Gear Operator							
Size		A	B	C	D	E	Height
2"	INCHES	3.06	5.50	2.30	8.80	6.00	10.86
2 1/2"	INCHES	3.31	6.00	2.30	8.80	6.00	11.61
3"	INCHES	3.75	6.25	2.30	8.80	6.00	12.30
4"	INCHES	4.25	7.00	2.30	8.80	6.00	13.55
5"	INCHES	4.94	7.53	2.30	8.80	6.00	14.77
6"	INCHES	5.56	8.00	2.30	8.80	6.00	15.86
8"	INCHES	5.56	9.38	3.23	8.50	9.00	18.17
10"	INCHES	7.88	10.56	3.23	8.50	9.00	21.67
12"	INCHES	9.25	12.06	3.23	8.50	9.00	24.54
14"	INCHES	11.56	17.25	-	13.40	12.00	28.81
16"	INCHES	12.69	18.75	-	13.40	12.00	31.44
18"	INCHES	13.63	19.63	-	12.60	12.00	33.26
20"	INCHES	15.13	20.88	-	12.60	12.00	36.01
24"	INCHES	18.06	25.00	-	12.60	16.00	43.06

Note: 30"-48" Please see specification sheet.

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