

Models: 51, 52, 53

Wafer, Full Lug and Semi-Lug Butterfly Valves Sizes: 2" - 12" (50 - 300mm)

Pressure / Temperature – Non-Shock		
Model	Material	Rating
51, 52	Cast Iron	250psi @ 100°F
53D	Carbon Steel	250psi @ 100°F
53H	Stainless Steel	250psi @ 100°F

In accordance with ANSI B16.1 or B16.5
Max. temp can be limited by seat material.
See Elastomer Guide in Technical Data Section.



Model 51



Model 52



Model 53

Typical Service

- These soft-seated butterfly valves are designed for a variety of general applications in the control of water, steam, air, oil, and gases.
- They are equally effective for on-off, throttling, isolation, and dead end requirements.
- They are especially well suited for higher velocity service and vacuum service to 28" Hg.

Features

- Dual durometer seat features a tough wear resistant elastomer bonded to a phenolic backup ring.
 - The soft elastic seat portion provides positive sealing
 - The backup ring provides strength for vacuum or high velocity services
 - The combination eliminates the need for flange gaskets
- Stem seals include a primary seal between the disc hub and the seat hub, along with secondary O-ring seals at the top and bottom of the seat
 - This retains lubrication and prevents corrosion from outside elements.
- Stem is retained in the body for blowout proof design
- Many material options available. See introductory pages of the Butterfly Valve section of the Mueller Steam Specialty Engineering binder for How to Order instructions and standard materials.
- A variety of operators can be supplied
 - Multi-position lever operator
 - Gear Operator
 - Pneumatic, hydraulic, or electric actuators with solenoids, limit switches, positioners and more, consult factory

Construction

- Wafer, Full Lug, and Semi-Lug designs
- Available from 2" to 12". See Models 51M, 52M for larger size valves
- Fit ANSI Class 125 and 150 flanges

Performance Considerations

- Seat and body material selections will limit temperature range
- Seat and body materials must be chosen carefully for compatibility with corrosive media applications.
- Guidelines for throttling service:
 - Liquids – Line velocity should not exceed 20 ft/sec
 - Gases – Line velocity should not exceed 15,000 ft/min.

Materials

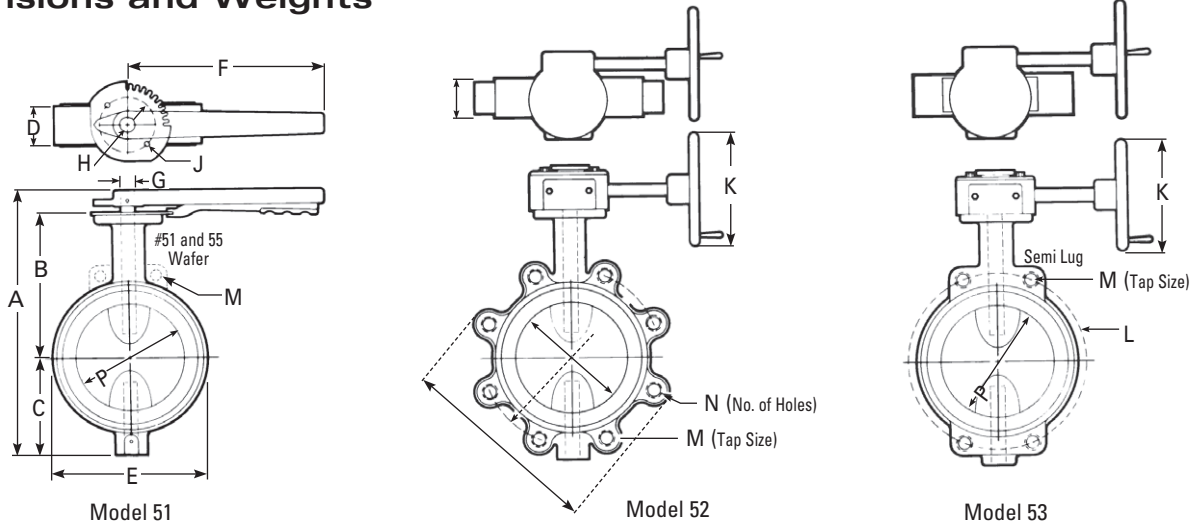
	51, 52, 53	53D	53H
Body	Cast Iron ASTM A126 Gr. B	Carbon Steel ASTM A126 WCB	Stainless Steel ASTM A351 CF8M
Stem	316 SS, 416 SS	416 SS	316 SS
Disc	Ni Coated Ductile Iron, 316 SS, Bronze	316 SS	316 SS
Seat	EPDM, Buna-N	EPDM	EPDM
O-Ring Seals	EPDM, Buna-N	EPDM	EPDM

*Consult factory for additional options.

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

Dimensions and Weights



SIZE	DIMENSIONS															WEIGHT		
	A	B	C	D	E		F	G	H	J	K	L	M	N	P	Q	lbs.	kgs.
in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	51, 52 in. mm	53 in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	# of Holes	in. mm	in. mm		
51																		
2 50	9 5/8 238	5 5/8 137	3 7/6	1 3/4 45	4 1/4 108	4 1/4 108	8 203	0.56 14	3 3/4 83	3/8 7	6 152	4 3/4 121	5/8-11	4	2 51	6 152	8 4	
2 1/2 65	10 15/16 259	5 15/16 151	3 1/4 83	1 7/8 48	4 15/16 124	4 15/16 124	8 203	0.56 14	3 3/4 83	3/8 7	6 152	5 1/2 140	5/8-11	4	2 1/2 64	7 178	9 4	
3 80	10 11/16 272	6 152	3 11/16 94	1 7/8 48	5 1/16 138	5 1/16 138	8 203	0.56 14	3 3/4 83	3/8 7	6 152	6 152	5/8-11	4	3 7/6	7 1/2 191	9 4	
4 100	13 330	7 178	4 13/16 122	2 1/8 54	6 15/16 176	6 1/16 154	11 279	0.69 17	3 3/4 83	3/8 7	6 152	7 1/2 191	5/8-11	8	4 102	9 3/8 214	13 6	
5 125	14 356	7 9/16 192	5 1/4 133	2 1/4 57	7 3/4 197	7 1/2 191	11 279	0.69 17	3 3/4 83	3/8 7	6 152	8 1/2 216	3/4-10	8	5 127	10 254	18 8	
6 150	15 386	7 15/16 202	5 7/8 149	2 1/4 57	8 3/4 222	8 1/16 205	11 279	0.81 21	3 3/4 83	3/8 7	6 152	9 1/2 241	3/4-10	8	6 152	11 1/4 286	20 9	
8 200	17 3/4 451	9 3/16 233	6 15/16 176	2 1/2 64	11 279	10 3/4 273	16 406	0.94 24	4 3/4 121	17/32 14	10 254	11 3/4 299	3/4-10	8	8 203	13 3/4 349	34 15	
10 250	20 1/2 521	10 1/2 267	8 3/8 213	2 13/16 71	13 3/8 340	13 3/8 333	16 406	1.12 29	4 3/4 121	17/33 14	10 254	14 1/4 362	7/8-9	12	10 254	16 406	61 28	
12 300	23 1/2 597	12 1/16 306	9 13/16 249	3 3/8 79	16 406	15 381	16 406	1.25 32	4 3/4 121	17/34 14	10 254	17 432	7/8-9	12	12 304	18 482	93 42	
52																		
2 50	9 5/8 238	5 5/8 137	3 7/6	1 3/4 45	4 1/4 108	4 1/4 108	8 203	0.56 14	3 3/4 83	3/8 7	6 152	4 3/4 121	5/8-11	4	2 51	6 152	8 4	
2 1/2 65	10 15/16 259	5 15/16 151	3 1/4 83	1 7/8 48	4 15/16 124	4 15/16 124	8 203	0.56 14	3 3/4 83	3/8 7	6 152	5 1/2 140	5/8-11	4	2 1/2 64	7 178	11 5	
3 80	10 11/16 272	6 152	3 11/16 94	1 7/8 48	5 1/16 138	5 1/16 138	8 203	0.56 14	3 3/4 83	3/8 7	6 152	6 152	5/8-11	4	3 7/6	7 1/2 191	11 5	
4 100	13 331	7 178	4 13/16 122	2 1/8 54	6 15/16 176	6 1/16 154	11 279	0.69 17	3 3/4 83	3/8 7	6 152	7 1/2 191	5/8-11	8	4 102	9 3/8 214	18 8	
5 125	14 356	7 9/16 192	5 1/4 133	2 1/4 57	7 3/4 197	7 1/2 191	11 279	0.69 17	3 3/4 83	3/8 7	6 152	8 1/2 216	3/4-10	8	5 127	10 254	22 10	
6 150	15 386	7 15/16 202	5 7/8 149	2 1/4 57	8 3/4 222	8 1/16 205	11 279	0.81 21	3 3/4 83	3/8 7	6 152	9 1/2 241	3/4-10	8	6 152	11 1/4 286	25 11	
8 200	17 3/4 451	9 3/16 233	6 15/16 176	2 1/2 64	11 279	10 3/4 273	16 406	0.94 24	4 3/4 121	17/32 14	10 254	11 3/4 299	3/4-10	8	8 203	13 3/4 349	42 19	
10 250	20 1/2 521	10 1/2 267	8 3/8 213	2 13/16 71	13 3/8 340	13 3/8 333	16 406	1.12 29	4 3/4 121	17/33 14	10 254	14 1/4 362	7/8-9	12	10 254	16 406	72 33	
12 300	23 1/2 597	12 1/16 306	9 13/16 249	3 3/8 79	16 406	15 381	16 406	1.25 32	4 3/4 121	17/34 14	10 254	17 432	7/8-9	12	12 304	18 482	110 50	
53																		
2 50	9 5/8 238	5 5/8 137	3 7/6	1 3/4 45	4 1/4 108	4 1/4 108	8 203	0.56 14	3 3/4 83	3/8 7	6 152	4 3/4 121	5/8-11	4	2 51	6 152	8 4	
2 1/2 65	10 15/16 259	5 15/16 151	3 1/4 83	1 7/8 48	4 15/16 124	4 15/16 124	8 203	0.56 14	3 3/4 83	3/8 7	6 152	5 1/2 140	5/8-11	4	2 1/2 64	7 178	9 4	
3 80	10 11/16 272	6 152	3 11/16 94	1 7/8 48	5 1/16 138	5 1/16 138	8 203	0.56 14	3 3/4 83	3/8 7	6 152	6 152	5/8-11	4	3 7/6	7 1/2 191	9 4	
4 100	13 331	7 178	4 13/16 122	2 1/8 54	6 15/16 176	6 1/16 154	11 279	0.69 17	3 3/4 83	3/8 7	6 152	7 1/2 191	5/8-11	8	4 102	9 3/8 214	16 7	
5 125	14 356	7 9/16 192	5 1/4 133	2 1/4 57	7 3/4 197	7 1/2 191	11 279	0.69 17	3 3/4 83	3/8 7	6 152	8 1/2 216	3/4-10	8	5 127	10 254	20 9	
6 150	15 386	7 15/16 202	5 7/8 149	2 1/4 57	8 3/4 222	8 1/16 205	11 279	0.81 21	3 3/4 83	3/8 7	6 152	9 1/2 241	3/4-10	8	6 152	11 1/4 286	23 10	
8 200	17 3/4 451	9 3/16 233	6 15/16 176	2 1/2 64	11 279	10 3/4 273	16 406	0.94 24	4 3/4 121	17/32 14	10 254	11 3/4 299	3/4-10	8	8 203	13 3/4 349	38 17	
10 250	20 1/2 521	10 1/2 267	8 3/8 213	2 13/16 71	13 3/8 340	13 3/8 333	16 406	1.12 29	4 3/4 121	17/33 14	10 254	14 1/4 362	7/8-9	12	10 254	16 406	66 30	
12 300	23 1/2 597	12 1/16 306	9 13/16 249	3 3/8 79	16 406	15 381	16 406	1.25 32	4 3/4 121	17/34 14	10 254	17 432	7/8-9	12	12 304	18 482	101 46	

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