

# Models: 87 and 88

## Ductile Iron Butterfly Valves Sizes: 30" thru 48" (760 thru 1200mm)

### Pressure / Temperature – Non-Shock

Model	Size	Material	Rating
87L,	30" and	Ductile	150psi @ 100°F
88L	36"	Iron	10.3 bar @ 38°C

Max. temp. can be limited by gasket material. Consult factory.  
100% Hydrostatically tested.



Model 88

### Typical Service

These soft-seated butterfly valves are designed for a variety of general applications in the control of water, air, oil, gases, and corrosive media.

They are equally effective for on/off, throttling, isolation, and dead-end service requirements.

### Features

- Model 88 is a full threaded lug valve.
- Model 87 is drilled for installation with studs and nuts.
- Manual, worm-gear operators are standardly furnished on all 30" thru 48" (760 and 1200mm) Series 87 and 88 butterfly valves. ISO 5211 mounting pad easily accepts electric or pneumatic actuation.
- Dual 431 stainless steel shaft design reduces seat friction to provide longer service life.
- Bi-directional shaft seal prevents external contamination of stem area and provides a backup for the primary shaft seal formed by the disc/seat interface.
- Standardly supplied with ASTM-A536 ductile iron body, the full lug butterfly valve is designed for use between ANSI 125 and ANSI 150 flanges. Face-to-face dimensions comply with API-609 and MSS-SP-67.
- Disc edge is machined and polished 360° to assure leak tight shutoff while minimizing operating torque. Disc-to-shaft connection is provided by stainless steel precision taper pins that are vibration proof.
- Aluminum backed, non-collapsible, resilient seat is mechanically secured to provide dead-end service to the full 150psi (10.3 bar) pressure rating.

### Performance Considerations

- Guidelines for throttling service:
  - Liquids – Line velocity should not exceed 20 ft./sec.
  - Gases – Line velocity should not exceed 15,000 ft./min.

### Materials

	87 and 88
Body	ASTM A-536 Ductile Iron
Bushing	Bronze
Stem O-rings	Buna-N
Disc	ASTM A-148 Aluminum Bronze ASTM A-351 316 Stainless Steel
Shaft	431 Stainless Steel
Seat	EPDM: 5°F to 248°F (-15°C to 120°C) Buna-N: 14°F to 176°F (-10°C to 80°C)

Note: Do not use EPDM when hydrocarbons are present.

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

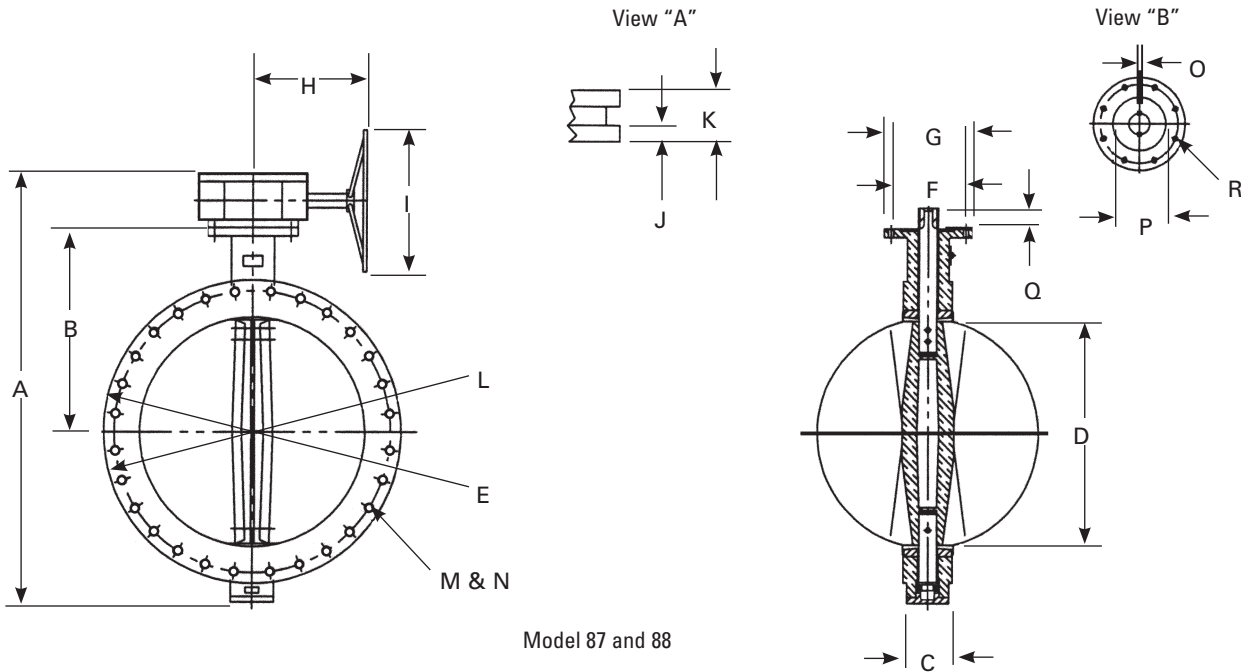
Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Dimensions and Weights



SIZE		A		B		C		D		E		F		G		H		I		J	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
30	760	54.79	1391	25.98	660	6.57	167	28.56	725.5	38.74	984	10.00	254	11.81	300	14.86	377.5	17.99	457	2.12	54
36	900	61.72	1567	28.34	720	7.99	203	33.09	840.5	45.98	1168	10.00	254	11.81	300	17.83	453	17.99	457	2.36	60
42	1050	74.13	1882	33.78	858	9.88	251	39.33	999	52.99	1346	10.00	254	11.81	300	17.71	450	17.99	457	2.59	66
48	1200	81.78	2077	37.03	940.7	10.86	276	44.35	1126.6	59.48	1511	11.73	298	13.78	350	19.05	484	17.99	457	2.75	70

SIZE		K		L		M	N (87)*	N (88)	O	P	Q	R	WEIGHT					
in.	mm	in.	mm	in.	mm	Number of Holes	Size of Holes	Size of Holes	in.	mm	in.	mm	in.	mm	lbs.	kgs.		
30	760	6.57	167	36.00	914.5	28	1 1/4	1 1/4 - 7UNC - 2B	.709	18	7.87	200	2.480	63	.709	18	1388	630
36	900	7.99	203	42.74	1085.8	32	1 1/2	1 1/2 - 6UNC - 2B	.787	20	7.87	200	3.937	100	.709	18	2058	934
42	1050	9.88	251	49.50	1257.3	36	1 1/2	1 1/2 - 6UNC - 2B	.984	25	7.87	200	5.512	140	.709	18	2794	1268
48	1200	10.86	276	56.00	1422.4	44	1 1/2	1 1/2 - 6UNC - 2B	1.102	28	9.05	230	5.512	140	.866	22	3954	1794

SEATING TORQUE 150psi (10.3 bar) EPDM (in./lbs.)			
Valve Size		Normal Conditions	
in.	mm	WET	DRY
30	760	33,336	50,004
36	900	46,528	69,792
42	1050	79,864	119,796
48	1200	111,112	166,668

C <sub>v</sub> RATING (FULL OPEN)		
Valve Size		C <sub>v</sub> Rating
in.	mm	
30	760	58,121
36	900	86,375
42	1050	135,24
48	1200	176,640

\* Four of the holes are tapped to the N(88) thread size.

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