

# FlowLine *Series 70W*



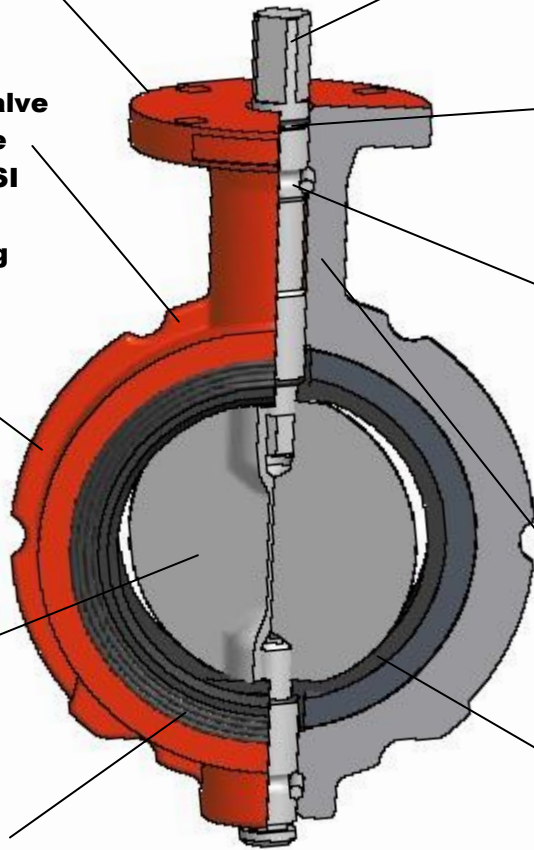
**Oil Field and Marine Butterfly Valves**

**Sizes 2"- 12"**

# FEATURES

The **Series 70W** Wafer Style Butterfly Valve is a purpose-built valve made for harsh and demanding working environments. It incorporates a standard body material of ductile iron, shortened-neck, and 30% larger shaft diameter. The Series 70W will mount between ANSI 125/150 slip-on, weld-neck, screwed-end, and TTMA light weight flanges. All valves are bi-directionally tested to 200 psi. The top mounting plate and upper shaft connection interchanges with other existing valve manufacturers.

- **Top flange interchanges with other American valve manufacturers.**
- **Short-neck notched valve body will allow it to be installed between ANSI 125/150 and Tank Trailers Manufacturing (TTMA) flanges.**
- **Single Rib polyester powder coated body provides strength and corrosion resistance.**
- **Disc is streamlined, providing higher flows without restrictions.**
- **Multi-ribbed seat face provides for a positive flange seal.**
- **Shaft drive connects directly to actuation, without couplers.**
- **Environmental shaft seal keeps contamination from shaft bore.**
- **Offset shaft retainers mechanically retain upper and lower shaft, ensuring a true blow-out proof design.**
- **Short neck allows for installation in tight areas.**
- **A phenolic backing ring vulcanized to the elastomer prevents “seat creep” or other movement of the seat.**



## COMPONENTS

Qty	Description
1	Body
1	Disc
1	Seat
1	Upper Stem
1	Lower Stem
3	O-Rings
2	Retainer Pins

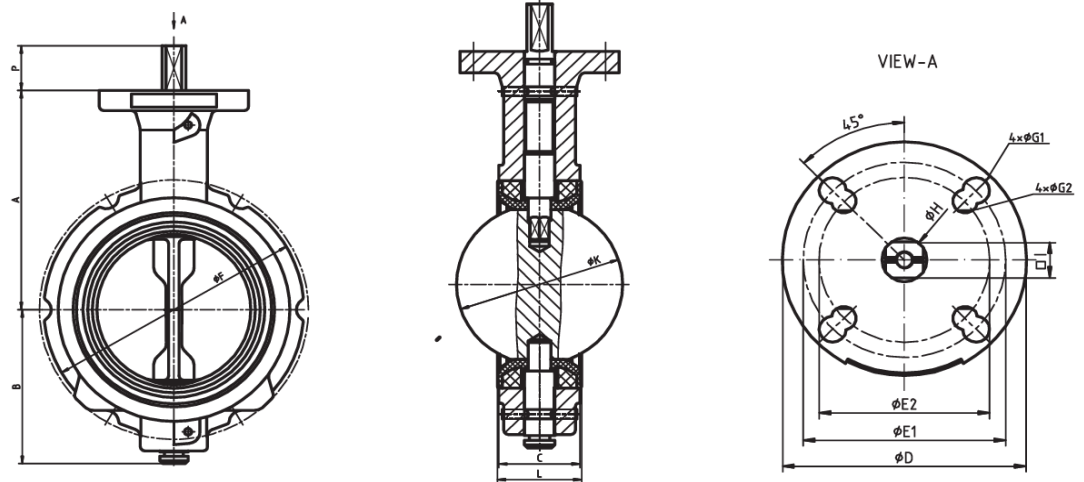
## COATINGS

Flow Line Series 70W Butterfly Valve bodies are polyester coated, as standard. Polyester is a significant upgrade to paint or two-part epoxy coatings. Our standard polyester coating offers outstanding protection against abrasion and corrosion. The Flow Line Polyester coating is not affected by outdoor exposure and maintains excellent resistance to UV rays.

TEST	RESULT
Salty Fog Test	No change in excess of 2000 hours
Outdoor Weathering (UV Rays)	No noticeable change in excess of 12 months
50% Sulfuric Acid Test	No change for 48 hours

# ENGINEERING

## DIMENSIONS



Size	A	B	C	D	E1	E2	F	G1	G2	H	K	L	I	P	Wgt
2"	3.94	2.99	1.63	4.02	3.25	2.76	4.08	0.41	0.39	0.75	2.11	1.72	0.63	0.98	5
2 1/2"	4.53	3.33	1.75	4.02	3.25	2.76	4.88	0.41	0.39	0.75	2.54	1.85	0.63	1.02	6
3"	4.88	3.58	1.74	4.02	3.25	2.76	5.35	0.41	0.39	0.75	3.11	1.85	0.63	0.98	7
4"	6.02	4.21	2.0	4.02	3.25	2.76	6.85	0.41	0.39	0.75	4.11	2.09	0.63	1.26	10
5"	5.98	4.8	2.13	4.02	3.25	2.76	7.84	0.41	0.39	0.94	5.12	2.23	0.63	1.26	13
6"	6.52	5.3	2.13	4.02	3.25	2.76	8.74	0.41	0.39	0.94	6.12	2.23	0.63	1.22	13
8"	8.14	6.98	2.5	6.02	5.0	4.02	10.98	0.53	0.47	1.25	8.14	2.61	0.87	1.22	30
10"	9.37	8.21	2.5	6.02	5.0	4.02	13.39	0.53	0.47	1.25	10.08	2.61	0.87	1.22	42
12"	10.89	9.76	3	6.02	5.0	4.02	16.07	0.53	0.47	1.56	12.08	3.1	1.13	1.26	68

## TORQUE

Shutoff Pressure	2"	2	3"	4"	5"	6"	8"	10"	12"
<b>50 psi</b>	90	130	200	350	535	770	1350	2100	3000
<b>100 psi</b>	94	138	212	382	597	876	1600	2580	3800
<b>175 psi</b>	10	150	230	430	690	1035	1975	3300	5000

## CV VALUES

Degrees	2"	2	3"	4"	5"	6"	8"	10"	12"
<b>30°</b>	14	21	31	55	86	123	217	334	451
<b>50°</b>	45	63	98	173	268	384	679	104	1500
<b>90°</b>	15	266	457	860	132	202	354	558	8080

## MATERIALS OF CONSTRUCTION

### Body

- Ductile Iron ASTM A-395

### Disc

- Coated Ductile Iron ASTM A-536 (65-45-12)
- 316 Stainless Steel ASTM A-251 (CF8M)

### Stem

- 416 Stainless Steel ASTM A-582 Type 416
- 316 Stainless Steel ASTM A-276 Type 316

### Seat

- Buna N-FDA Food Grade 0° to +180°
- EPDM FDA Food Grade -30° to +275°
- Viton® - FDA Food Grade 0° to +375°
- Hypalon 0° to -180°
- Red Natural Rubber 0° to -275°

Viton® is a registered trademark of the E.I. DuPont De Nemours Company. FKM is the ASTM D1418 designation for Fluorinated Hydrocarbon elastomers, such as Viton® (DuPont) and Flourel® (3M).

## RECOMMENDED SPECIFICATIONS

- One-piece ribbed ductile iron body provides strength.
- Versatile body design allows a choice of ANSI 125/150 or TTMA light-weight flanges.
- Streamline disc design with no eternal fasteners allows higher Cv with lower pressure-drop seals, as standard.
- Upper and lower shaft to be 30% greater diameter for added strength.
- A 360° radial shaft seal between the seat and disc journals, that is pressure responsive for positive sealing.
- Valve to be Flow Line Series 70W.

### Notes:

- ◆ Torque chart is to be used as a guide only.
- ◆ These torque ratings do not apply to every possible service criteria, which may affect seating and unseating torque.
- ◆ Torque vales are applicable to Flow Line Series 70W.
- ◆ Dynamic Torque should always be a consideration when sizing valves with high differential pressures.
- ◆ For 3-Way tee assembly, multiply the above torques by 1.5.
- ◆ Valve is to be operated a minimum of once each month.
- ◆ Temperature is well within resilient seat limits.
- ◆ Line media is self lubricating. (Aqueous liquids)
- ◆ Minor chemical attacks on seat.
- ◆ Disc corrosion and media deposits to be mild.

# ACTUATION



## Applicable Standards

- ANSI B16.1 Conforms to ANSI Class 125 flange drilling.
- ANSI B16.5 Conforms to ANSI 150 flange drilling.
- ANSI B16.42 Conforms to ANSI Class 150 flange drilling, body-wall thickness, and pressure-temperature ratings.
- ANSI B16.104 Exceeds Class VI shutoff requirements.
- API 609 Butterfly Valve Category A.
- AWWA C504 Diameter of stainless steel shaft exceeds AWWA Class 75B standard. Body-wall thickness exceeds the AWWA Class 150B standard for butterfly valves.
- MSS SP-25 Markings and identification conform to requirements.
- MSS SP-67 Butterfly valves
- ISO 5211 Actuator Mounting
- USCG Category "A" Title 46, CFR, Part 56
- ABS American Bureau of Shipping
- MRO 175 NACE

## Warranty

All products manufactured by Flow Line Valve and Controls, LLC. Are warranted against defects in material and workmanship for a period of 2 years following the date of purchase.

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