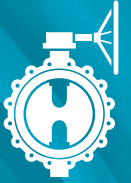


**HIGH PERFORMANCE
BUTTERFLY VALVES**

ESFEROMATIC



SIZE RANGE 2" THRU 24"
OPTIONAL THRU 120"
ANSI CLASS 150 TO 900

**BUTTERFLY
SERIES 630 / 730**



**AVAILABLE WITH
SOFT AND METAL SEATING**

Flo-Tite's high performance butterfly was introduced in 1987. The MAX-SEAL valve is the result of years of experience in the design and manufacture of ball and butterfly valves. All valves are leak tested per MSS-SP61 standards, and tagged per MSS-SP25 & API 609B specifications. Testing per API 598 can be provided as an option.

A) Flow Way Direction, Slot on top stem indicates positive disc position.

B) Mounting Top Flange, Meets ISO5211 pattern providing low cost "Near Direct Mount" actuation capability.

C) Extra Long Neck, Provides path for heat dissipation and allows space for insulation.

D) Stem Seal, Self-lubricating PTFE V-rings prevent leakage to atmosphere.

E) O-Ring, Serves as first line of defense for stem leakage.

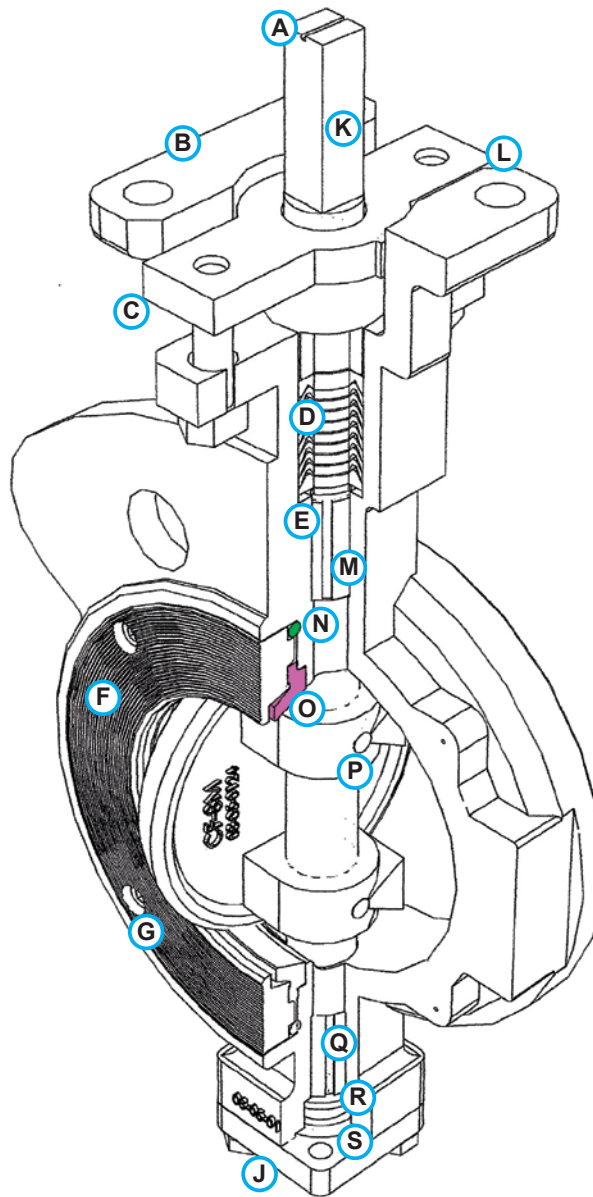
F) Retainer Cover, Maintains seat integrity prior to installation. Interchangeable with any seat option. Standard surface finish is 125 to 200 AARH. Compatible with both standard and spiral-wound gasket designs.

G) Retainer Fasteners, SS set screws provide ease of seat replacement.

H) Over Travel Stop, Integrally cased into body, prevents disc from rotating in wrong quadrant and damaging seat.

I) Anti-Static Grounding, provided by stem ball at the very end of the stem shaft.

J) Bottom Flange Cover, Equalizes pressure under shaft, eliminating "piston" effect at higher pressure.



K) Blow-out Proof Shaft, 17-4Ph stainless steel stem provides excellent strength, alignment and rigid support to disc.

L) Easy-Access Parking Gland, Provides means for packing adjust-ment even when "Direct-mount" actuation and insulation are utilized.

M) Top Stem Bearings, Top RPTFE/SS self-lubricating bearings provide excellent stem support and shaft alignment.

N) O-Ring, Extra Protection for leakage through body and seat retainer.

O) Soft Seat, One-piece solid RPTFE static and dynamic seat design seals at both high and low pressures.

P) Wedge Pins, Provide positive mechanical attachment of disc to shaft.

Q) Bottom Stem Bearings, Bottom RPTFE/SS self-lubricating bearings provide excellent stem support and shaft alignment.

R) Shaft Retainer, Provides positive stem retention.

S) Bottom Packing, The lower shaft utilizes seal in the body to prevent external leakage and simplify valve maintenance.

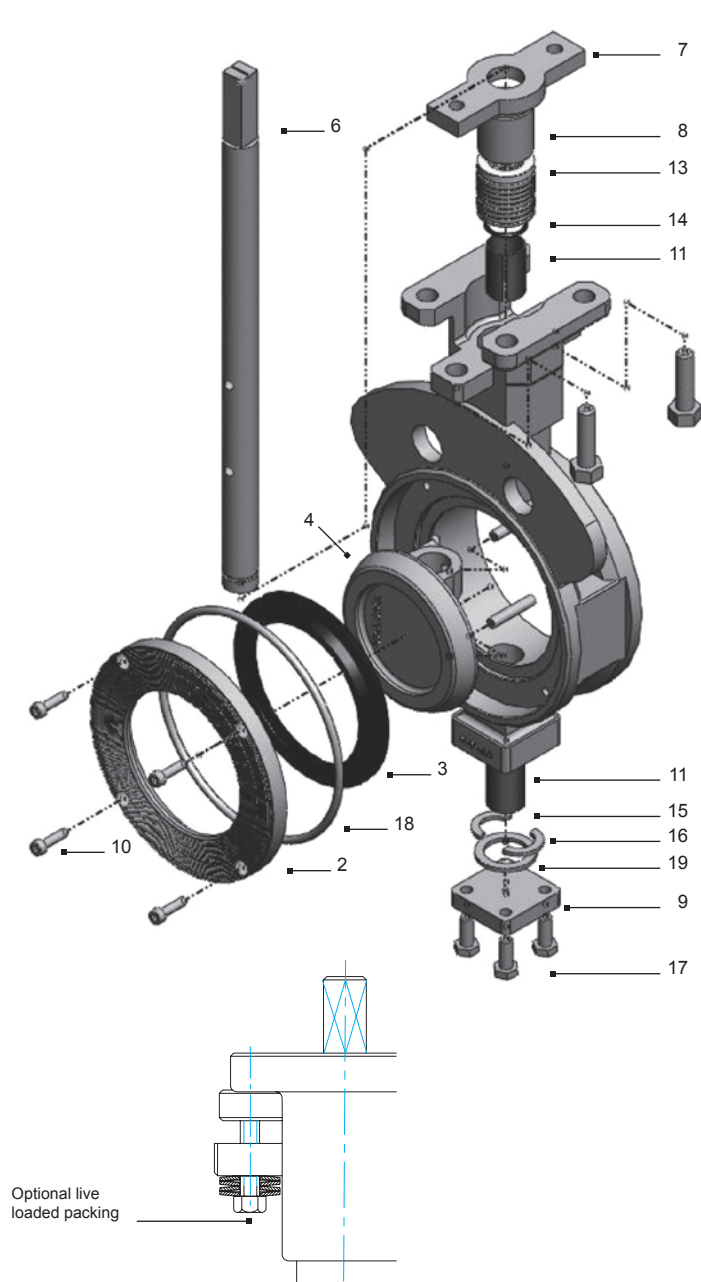
Flo-Tite/Max-Seal 630/730 Series High Performance Butterfly Valves, serving Multi-National end users in a wide range of applications in many industries including:

- | | | |
|----------------------------|---------------------------|---------------------------------------|
| 1 Chemical & petrochemical | 5 Food industries | 9 Steel & iron industries |
| 2 Power generation plants | 6 LNG, HRSG industries | 10 Pulp & paper plants |
| 3 Ship building industries | 7 Oil refinery industries | 11 Coal & mining industries |
| 4 Fiber industries | 8 Desalination industries | 12 Higher Pressure HVAC Applications. |

Specific descriptions, dimensions and construction details illustrated may vary slightly from this bulletin. They are for general use only. We reserve the right to revise or modify product design without prior notice.

| N° | Part | Q'ty | Material | Code |
|----|------------------|-------|---|----------------------|
| 1 | Valve Body | 1 | Carbon Steel A216 Gr WCB SS304 A351 Gr CF8 SS316 A351 Gr CF8M Ductile Iron ASTM A395 | CS S4 SS DI |
| 2 | Seat Retainer | 1 | Carbon Steel A216 Gr WCB SS304 A351 Gr CF8 SS316 A351 Gr CF8M | CS S4 SS |
| 3 | Seat | 1 | PTFE RPTFE Metal | T R M |
| 4 | Disc | 1 | SS304 A351 Gr CF8 SS316 A351 Gr CF8M | S4 SS |
| 5 | Disc Pin | 2 | SS304 A276 Tp 304 17-4PH SS316 A276 Tp 316 | S4 S7 SS |
| 6 | Stem | 1 | SS304 A276 Tp 304 SS316 A276 Tp 316 17-4PH A564 G4 630 | S4 SS S7 |
| 7 | Packing Gland | 1 | SS304 A351 Gr CF8 | S4 |
| 8 | Packing Follower | 1 | SS304 A351 Gr CF8 | S4 |
| 9 | Bottom Cover | 1 | Carbon Steel A576 Gr 1045 SS304 A276 Tp 304 SS316 A276 Tp 316 | CS S4 SS |
| 10 | Retainer Bolt | 1 set | SS304 A193 Gr B8 SS316 A193 Gr B8M | S4 SS |
| 11 | Stem Bearing | 2 | Stainless Steel & RTFE | SS |
| 12 | Gland Bolt | 2 | SS304 A193 Gr B8 | S4 |
| 13 | Packing | 1 set | PTFE/GRAPHITE | T / G |
| 14 | Packing Retainer | 1 | Viton | V |
| 15 | Shaft Retainer | 1 | SS304 A276 Tp 304 SS316 A276 Tp 316 | S4 SS |
| 16 | Bottom Packing | 1 | PTFE | T |
| 17 | Bottom Bolt | 1 | SS304 A193 Gr B8 | S4 |
| 18 | O Ring | 1 | Nitrile | N |
| 19 | Stem Ball | 1 | Stainless Steel | S |

Exploded View



* Special material can be produced to meet customer's special requirements.

High performance butterfly valve model number codes

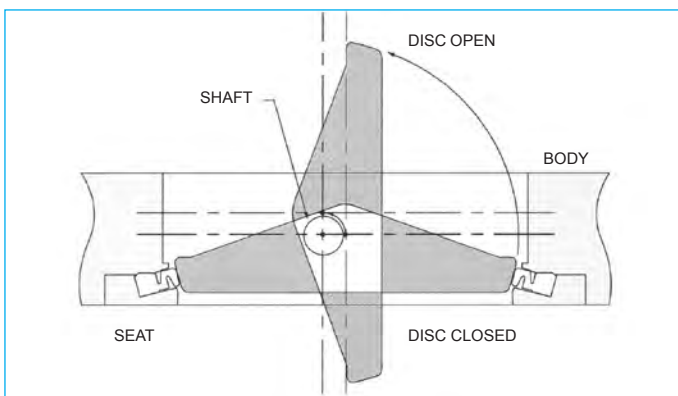
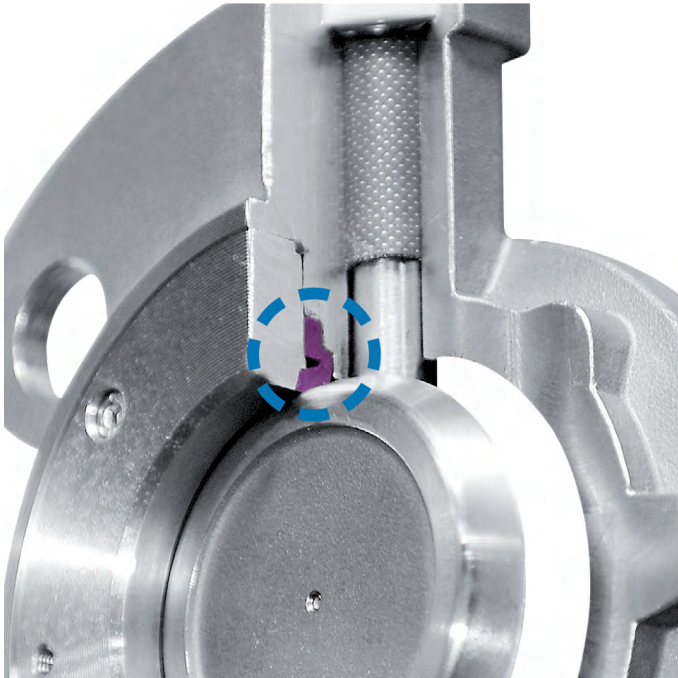
| Model | Pressure Class | | Body Material | | Disc Material | | Stem Material | | Seat Material | | Stem Seal | | Operator | |
|-------------------------|----------------|-----|---------------|----|---------------|----|---------------|----|---------------|---|-----------|---|-----------|---|
| | 150 | 630 | 316SS | SS | 316SS | SS | 316SS | SS | PTFE | T | PTFE | T | Lever | L |
| Wafe BW Lug BL | 300 | 730 | WCB | CS | 304SS | SS | 17-4ph | S7 | RPTFE | R | RPTFE | R | Gear | G |
| | 600 | 830 | Ductile Iron | DI | | | 304SS | S4 | Metal | M | Graphite | G | Bare Stem | N |

Ordering example by part number

| Wafer | Class150 | 316SS | 316SS | 17-4ph | RPTFE | Graphite | Lever |
|-------|----------------|-------|-------|--------|-------|-----------|----------|
| Model | Pressure Class | Body | Disc | Stem | Seat | Stem Seal | Operator |
| BW | 630 | SS | SS | S7 | R | G | L |

Eccentric Double Offset Design Seating

The double offset shaft/disc design ensures bi-directional sealing throughout the full pressure range of the valve. The cam-like action produced by the offset stem and disc, effectively lifts the disc off the seat during the initial opening of the valve, reducing seat wear and eliminating seat deformation at the top and bottom. When the disc is in the open position, there is no contact between the disc and seat. Operating torques are reduced and seat life is extended.



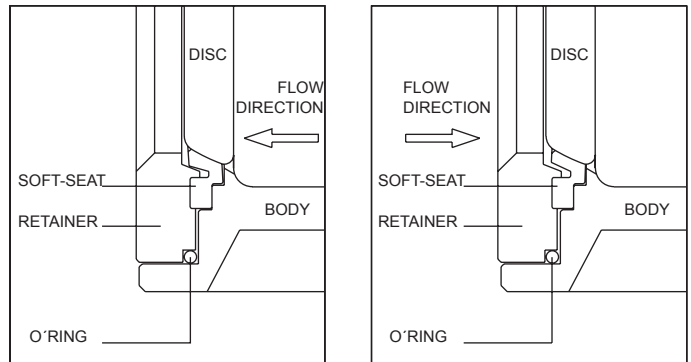
Vacuum Service

The drop tight sealing capabilities of MAX-SEAL valves are excellent for vacuum service. Soft seated standard valves are suitable for vacuum service to 20 microns. Denote vacuum service on the order.

Dead End Service

MAX-SEAL lug bodies for dead-end service are offered as standard in full ANSI Class 150 and 300. Structural Characteristics of the MAX-SEAL High Performance Butterfly Valve Seat Design

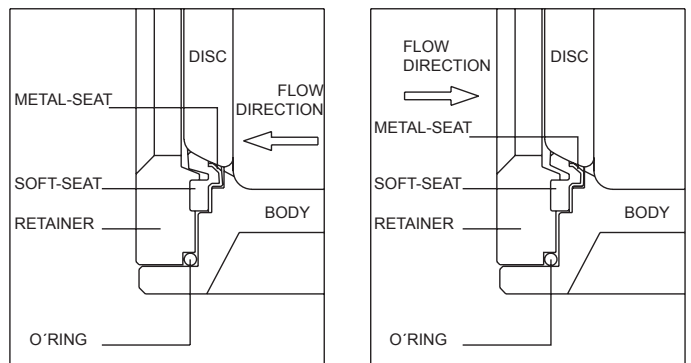
Soft Seat High Performance Butterfly Valve



Seat material Maximum Working Temperature

- PTFE-SEAT 190°C (375°F)
- RPTFE-SEAT 230°C (446°F)
- PEEK-SEAT 270°C (529°F)
- TFM-SEAT 246°C (475°F)
- UHMWPE-SEAT 82°C (180°F)

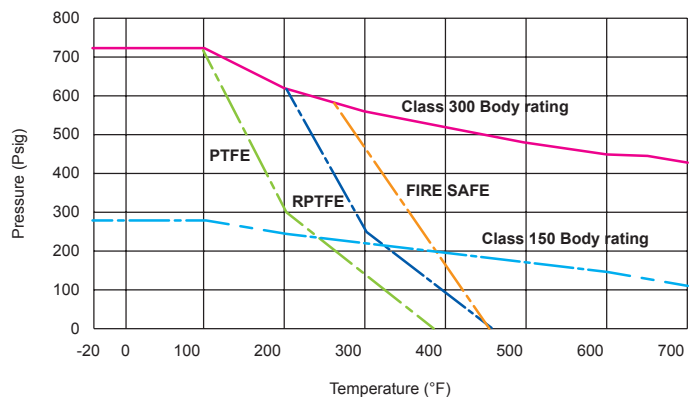
Fire-Safe Seat High Performance Butterfly Valve



Seat material Maximum Working Temperature

- SS316L *RPTFE 230°C (446°F)
- FIRE-SAFE to API 607 5th Edition
- SEAT LEAKAGE - Leakage of soft seated version is ZERO

Pressure temperature rating:

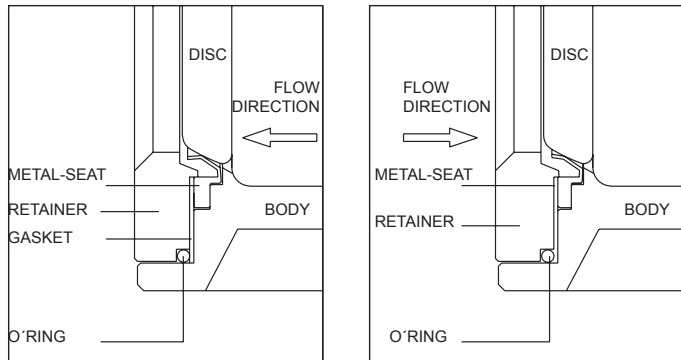


Steam Service

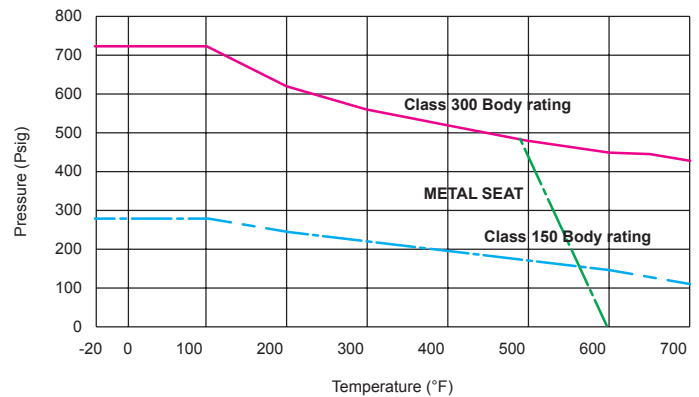
MAX-SEAL standard valves are ideally suited for saturated steam applications to 120 psig steam (RPTFE seat). Carbon filled TFM seats and high temperature graphite stem packing can handle pressure up to 200 psig steam.

The Max-Seal metal seated valves are designed to provide high performance service in abrasive, dirty and/or high temperature applications. Uniquely designed for reliable, tight shut-off-performance up to ANSI-FCI 70-2 Class V leakage criteria.

Metal Seat High Performance Butterfly Valve



Pressure temperature rating:



Seat material Maximum Working Temperature. METAL-SEAT 315°C (600°F) (316L). Class V of ANSIB16. 104 leakage rate.

Product identification:

Every Max-Seal valve has a special identification tag attached to the valve body. Information includes valve figure number, the size and pressure class, the materials of construction, and the operating pressures and temperatures.

The metal tag also includes a serial number; The serial number is recorded by the Flo-Tite Quality Control Department along with the test results and material certification data, for individual traceability and certification of every valve produced.

A wider selection of higher pressures & sizes reaching up to 120 inch, ANSI Class 300, 600 & 900 are available on a special order basis.

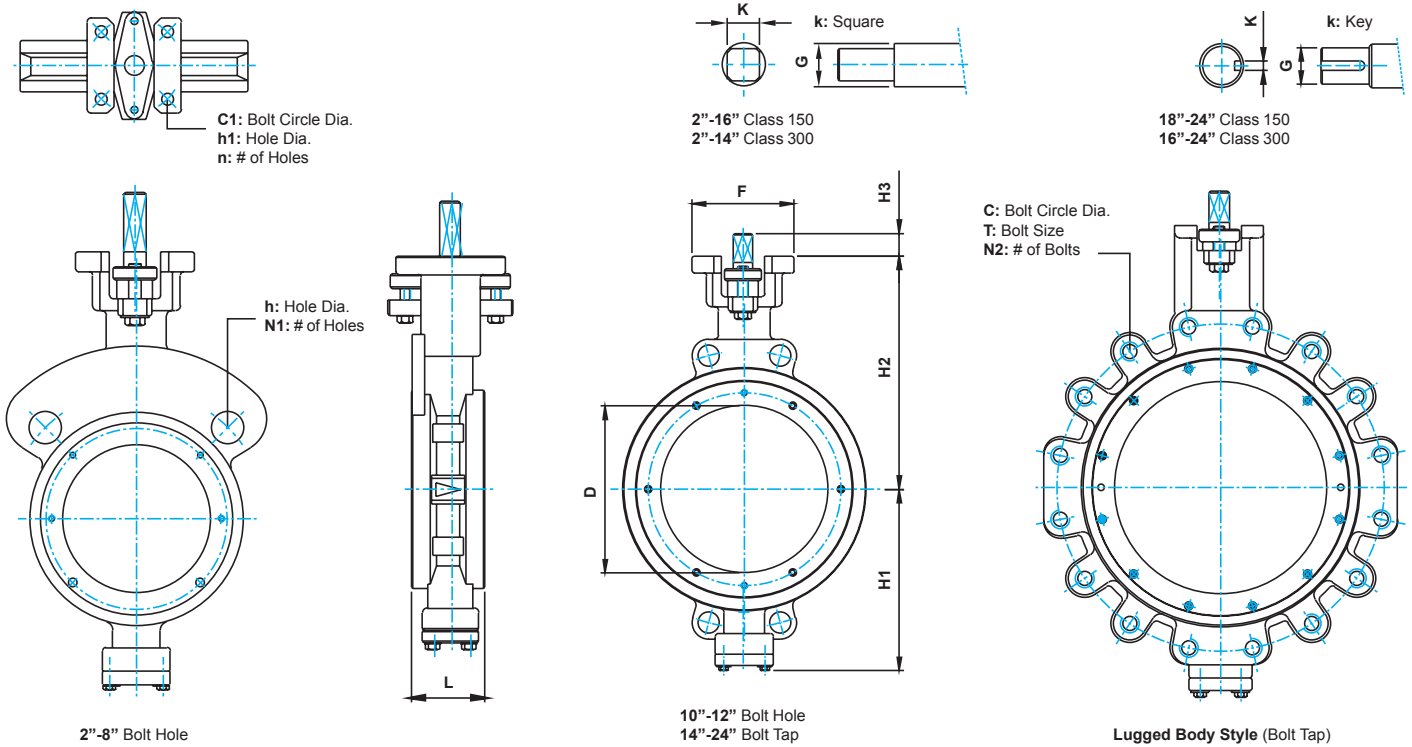
Every Valve is Strength Tested. Shell tested to 150% of rated pressure with the disc open. Hydrostatic seat tested for bi-directional positive shutoff without leakage at 110% of rated pressure.

We also test for absence of leakage into valve shaft bearing areas. Only valves meeting a positive shut-off standard are approved for shipment.

Standard Specifications

- Body Style: Wafer, Lug
- Valve Size: 2"-40" (50-1000mm)
- Rating: ANSI Class 150, ANSI Class 300
- Applicable Flange Standard: ANSI B16.5
- Face to Face Dimensions: API 609, MSS SP68, ISO5752
- Actuator Mounting Flange: ISO 5211
- Valve Design: MSS SP-68
- Valve Design: API 609
- Valve Marking: MSS SP-25
- Valve Testing: API 598 Inspection and Testing
- Valve Testing: MSS SP-61 Testing of Steel Valves
- Valve Design: ANSI B16.34
- Valve Material: NACE MR-01-TS
- Valve to have Official API Monogram
- Valve to API Specification Q1
- Valve to API ISO 9001:2000





Note
1) Face to face Dimension: comply to API 609 Category B, ISO-7252 Short / 2) End Connection Flange Dimension: comply to ANSI-B16.47. C/F Factory for larger sizes from 28" thru 120".

ANSI Class 150 High Performance Butterfly Valves - MODEL 630

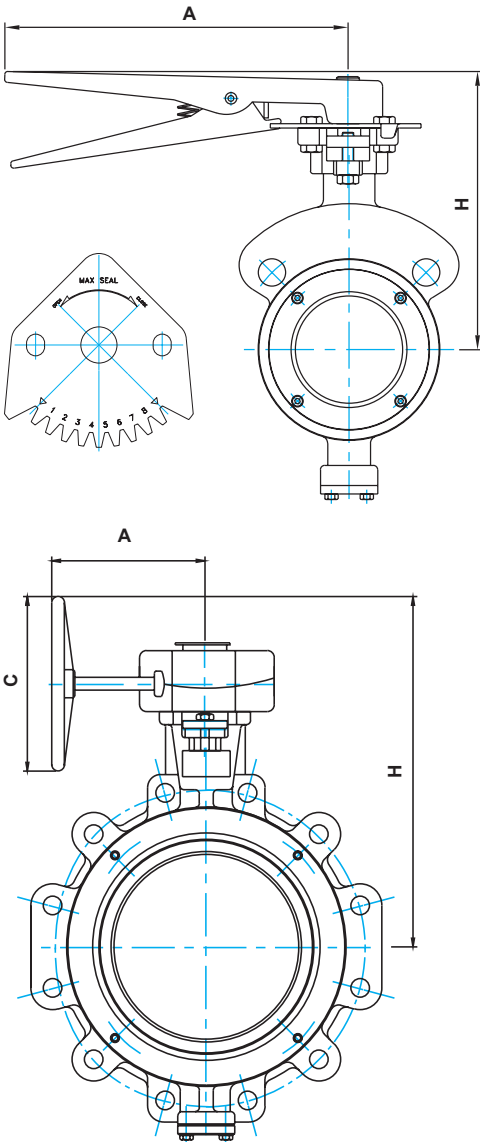
| Size | d | L | H1 | | H2 | | H3 | F | G | K | LUG / WAFER DRILLING | | | | TOP PLATE DRILLING | | | | Weight Lb | | |
|------|-------|------|-------|-------|-------|-------|------|------|-------|-----------|----------------------|------|------------|----|--------------------|------|---|------|-----------|-------|-------|
| | | | Wafer | Lug | Wafer | Lug | | | | | C | h | T | N1 | N2 | C1 | n | h1 | ISO | Wafer | Lug |
| 2" | 1.93 | 1.69 | 3.31 | 3.31 | 4.84 | 4.84 | 1.38 | 2.76 | 0.512 | 0.433 | 4.75 | 0.79 | 5/8-11unc | 2 | 4 | 2.76 | 4 | 0.39 | F07 | 6.0 | 11.5 |
| 2.5" | 2.44 | 1.81 | 3.66 | 3.66 | 5.67 | 5.67 | 1.38 | 2.76 | 0.512 | 0.433 | 5.50 | 0.79 | 5/8-11unc | 2 | 4 | 2.76 | 4 | 0.39 | F07 | 8.5 | 16.0 |
| 3" | 2.87 | 1.89 | 4.13 | 4.06 | 6.06 | 6.06 | 1.38 | 2.76 | 0.630 | 0.433 | 6.00 | 0.79 | 5/8-11unc | 2 | 4 | 2.76 | 4 | 0.39 | F07 | 10.5 | 20.5 |
| 4" | 3.74 | 2.13 | 4.65 | 4.57 | 6.85 | 6.85 | 1.38 | 2.76 | 0.630 | 0.433 | 7.50 | 0.79 | 5/8-11unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | 14.0 | 26.5 |
| 5" | 4.72 | 2.20 | 5.39 | - | 7.68 | - | 1.38 | 2.76 | 0.748 | 0.551 | 8.50 | 0.91 | 3/4-10unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | C/F | C/F |
| 6" | 5.55 | 2.24 | 6.14 | 5.98 | 8.50 | 8.66 | 1.38 | 2.76 | 0.866 | 0.669 | 9.50 | 0.91 | 3/4-10unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | 27.5 | 39.5 |
| 8" | 7.64 | 2.52 | 7.28 | 6.97 | 9.84 | 10.04 | 1.97 | 4.53 | 1.102 | 0.866 | 11.75 | 0.91 | 3/4-10unc | 2 | 8 | 4.02 | 4 | 0.47 | F10 | 46.0 | 62.0 |
| 10" | 9.41 | 2.83 | 9.17 | 8.98 | 11.22 | 11.14 | 1.97 | 4.53 | 1.181 | 0.866 | 14.25 | 1.02 | 7/8-9unc | 4 | 12 | 4.92 | 4 | 0.51 | F12 | 73.5 | 100.5 |
| 12" | 11.30 | 3.19 | 10.24 | 10.12 | 12.80 | 12.80 | 1.97 | 5.12 | 1.378 | 1.063 | 17.00 | 1.02 | 7/8-9unc | 4 | 12 | 4.92 | 4 | 0.59 | F12 | 106.5 | 157.5 |
| 14" | 13.03 | 3.62 | 11.65 | 12.05 | 14.57 | 14.57 | 1.97 | 5.12 | 1.575 | 1.063 | 18.75 | 1.14 | 1-8unc | 4 | 12 | 4.92 | 4 | 0.59 | F12 | C/F | 178.0 |
| 16" | 15.08 | 4.02 | 13.35 | 13.35 | 16.54 | 16.54 | 2.17 | 6.10 | 1.772 | 1.417 | 21.25 | 1.14 | 1-8unc | 4 | 16 | 5.51 | 4 | 0.75 | F14 | C/F | C/F |
| 18" | 17.09 | 4.49 | 14.29 | 14.29 | 17.52 | 17.52 | 3.15 | 6.50 | 1.969 | 0.63x0.39 | 22.75 | | 1-1/8-8unc | 4 | 16 | 6.50 | 4 | 0.91 | F16 | C/F | C/F |
| 20" | 18.98 | 5.00 | 16.46 | 16.46 | 19.69 | 19.29 | 3.15 | 6.50 | 2.165 | 0.63x0.39 | 25.00 | | 1-1/8-8unc | 4 | 20 | 6.50 | 4 | 0.91 | F16 | C/F | C/F |
| 22" | 20.47 | 6.06 | 17.05 | - | 20.87 | - | 3.15 | 9.06 | 2.362 | 0.71x0.43 | 27.25 | | 1-1/4-8unc | 4 | 20 | 10.0 | 8 | 0.75 | F25 | C/F | C/F |
| 24" | 22.83 | 6.06 | 18.43 | 18.43 | 22.64 | 22.64 | 4.33 | 9.84 | 2.559 | 0.79x0.47 | 29.50 | | 1-1/4-8unc | 4 | 20 | 10.0 | 8 | 0.75 | F25 | C/F | C/F |

Valve Weights are for Bare Stem Valves

ANSI Class 300 High Performance Butterfly Valves - MODEL 730

| Size | d | L | H1 | | H2 | | H3 | F | G | K | LUG / WAFER DRILLING | | | | TOP PLATE DRILLING | | | | Weight Lb | | |
|------|-------|------|-------|-------|-------|-------|------|-------|-------|-----------|----------------------|------|------------|----|--------------------|------|---|------|-----------|-------|-------|
| | | | Wafer | Lug | Wafer | Lug | | | | | C | h | T | N1 | N2 | C1 | n | h1 | ISO | Wafer | Lug |
| 2" | 1.93 | 1.69 | 3.31 | 3.43 | 4.84 | 4.84 | 1.38 | 2.76 | 0.512 | 0.433 | 5.00 | 0.79 | 5/8-11unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | C/F | 11.5 |
| 2.5" | 2.44 | 1.81 | 3.66 | 3.86 | 6.06 | 5.67 | 1.38 | 2.76 | 0.512 | 0.433 | 5.88 | 0.91 | 3/4-10unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | C/F | 16.0 |
| 3" | 2.87 | 1.89 | 4.13 | 4.13 | 6.06 | 6.06 | 1.38 | 2.76 | 0.630 | 0.433 | 6.62 | 0.91 | 3/4-10unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | C/F | 20.0 |
| 4" | 3.74 | 2.13 | 4.65 | 4.72 | 6.85 | 6.85 | 1.38 | 2.76 | 0.630 | 0.433 | 7.88 | 0.91 | 3/4-10unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | C/F | 26.5 |
| 5" | 4.72 | 2.20 | 5.39 | - | 7.68 | - | 1.38 | 2.76 | 0.748 | 0.551 | 9.25 | 0.91 | 3/4-10unc | 2 | 8 | 2.76 | 4 | 0.39 | F07 | C/F | C/F |
| 6" | 5.55 | 2.32 | 6.14 | 6.89 | 8.50 | 9.06 | 1.38 | 2.76 | 0.866 | 0.669 | 10.63 | 0.91 | 3/4-10unc | 2 | 12 | 2.76 | 4 | 0.39 | F07 | C/F | 52 |
| 8" | 7.64 | 2.87 | 7.83 | 7.83 | 10.63 | 10.63 | 1.97 | 4.53 | 1.181 | 0.866 | 13.00 | 1.02 | 7/8-9unc | 2 | 12 | 4.92 | 4 | 0.51 | F12 | C/F | 94.5 |
| 10" | 9.41 | 3.27 | 9.49 | 9.61 | 12.28 | 12.28 | 1.97 | 5.12 | 1.378 | 1.063 | 15.25 | | 1-8unc | 4 | 16 | 4.92 | 4 | 0.51 | F12 | C/F | 145 |
| 12" | 11.30 | 3.62 | 10.83 | 10.83 | 14.29 | 14.29 | 1.97 | 6.50 | 1.772 | 1.417 | 17.75 | | 1-1/8-8unc | 4 | 16 | 5.51 | 4 | 0.75 | F14 | C/F | 228.5 |
| 14" | 13.03 | 4.61 | 12.72 | 12.72 | 15.55 | 15.55 | 2.17 | 6.69 | 1.969 | 0.63x0.39 | 20.25 | | 1-1/8-8unc | 4 | 20 | 6.50 | 4 | 0.91 | F16 | C/F | C/F |
| 16" | 15.08 | 5.24 | 13.86 | 13.86 | 17.32 | 17.32 | 3.15 | 6.50 | 2.165 | 0.63x0.39 | 22.50 | | 1-1/4-8unc | 4 | 20 | 6.50 | 4 | 0.91 | F16 | C/F | C/F |
| 18" | 17.01 | 5.87 | 15.31 | 15.31 | 19.09 | 19.09 | 3.15 | 7.09 | 2.559 | 0.79x0.47 | 24.75 | | 1-1/4-8unc | 4 | 24 | 6.50 | 4 | 0.91 | F16 | C/F | C/F |
| 20" | 17.01 | 6.26 | 16.46 | 16.46 | 21.26 | 21.26 | 3.15 | 11.81 | 2.756 | 0.79x0.47 | 27.00 | | 1-1/4-8unc | 4 | 24 | 10.0 | 8 | 0.75 | F25 | C/F | C/F |
| 24" | 22.83 | 7.13 | 19.02 | - | 24.61 | - | 4.33 | 11.81 | 3.346 | 0.98x0.55 | 32.00 | | 1-1/2-8unc | 4 | 24 | 10.0 | 8 | 0.75 | F25 | C/F | C/F |

Valve Weights are for Bare Stem Valves



Latch Lock Handle 10 degree Increments with off stop to prevent over travel can also be used with a padlock.
Optional: infinite throttling plate.

Max-Seal offers a broad line of automation systems for precise proportioning or on-off control in either pneumatic or electrically powered units.

Actuator mounting flange

Universally designed to mount valve automation equipment complying to ISO 5211. Sizes 2" thru 14" Class 150 & 2" thru 12" Class 300 can be directly mounted, larger sizes require a mounting bracket. For direct mount option, a mounting plate spacer is usually needed to compensate for the longer shaft of butterfly valves.

Lock-lever type handle

| SIZE | 2" | 2.5" | 3" | 4" | 5" | 6" | 8" & Larger |
|------|------|------|------|------|-------|-------|------------------------------|
| H | 6.26 | 7.09 | 7.48 | 8.27 | 9.02 | 9.80 | Gear Operator is recommended |
| A | 8.78 | 8.78 | 8.78 | 8.78 | 10.35 | 10.35 | |



Worm gear type operator (ANSI Class 150)

| SIZE | 2" | 2.5" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 22" | 24" | 26" | 28" | 30" | 32" | 34" | 36" | 40" |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| H | 8.50 | 9.33 | 9.72 | 10.51 | 12.36 | 13.15 | 16.34 | 17.32 | 20.59 | 21.54 | 23.90 | 25.59 | 26.77 | 28.54 | 39.13 | 37.80 | 38.19 | 44.09 | 46.06 | 50.39 | 51.57 | 55.51 |
| C | 4.72 | 4.72 | 4.72 | 4.72 | 6.89 | 6.89 | 9.84 | 9.84 | 13.78 | 13.78 | 13.78 | 13.78 | 13.78 | 13.78 | 13.78 | 23.62 | 23.62 | 25.59 | 25.59 | 27.56 | 27.56 | 27.56 |
| A | 4.65 | 4.65 | 4.65 | 4.65 | 8.66 | 8.66 | 9.06 | 9.06 | 11.02 | 11.02 | 11.02 | 11.81 | 11.81 | 11.81 | 11.81 | 12.60 | 12.60 | 12.60 | 12.60 | 15.75 | 15.75 | 15.75 |

MAXSEAL 630, 730 Series CV value

| Size Inch | Class mm | Angle of opening | | | | | | | |
|-----------------------------|-------------|------------------|-------|-------|-------|-------|-------|------|------|
| | | 90° | 70° | 60° | 50° | 40° | 30° | 10° | |
| 2 | 50 | 150 | 93 | 65 | 46 | 31 | 21 | 13 | 2 |
| | | 300 | | | | | | | |
| 2 1/2 | 65 | 150 | 152 | 106 | 76 | 52 | 35 | 21 | 4 |
| | | 300 | 152 | | | | | | |
| 3 | 80 | 150 | 263 | 184 | 133 | 89 | 61 | 36 | 6 |
| | | 300 | 263 | | | | | | |
| 4 | 100 | 150 | 465 | 329 | 237 | 164 | 107 | 65 | 14 |
| | | 300 | 465 | | | | | | |
| 5 | 125 | 150 | 768 | 545 | 394 | 263 | 177 | 106 | 22 |
| | | 300 | 768 | | | | | | |
| 6 | 150 | 150 | 1162 | 813 | 606 | 404 | 268 | 167 | 40 |
| | | 300 | 1162 | | | | | | |
| 8 | 200 | 150 | 2121 | 1505 | 1091 | 742 | 490 | 293 | 66 |
| | | 300 | 1919 | 1364 | 990 | 672 | 444 | 268 | 61 |
| 10 | 250 | 150 | 3232 | 2293 | 1697 | 1131 | 742 | 449 | 101 |
| | | 300 | 2828 | 2005 | 1485 | 990 | 651 | 394 | 91 |
| 12 | 300 | 150 | 4747 | 3419 | 2545 | 1661 | 1091 | 667 | 152 |
| | | 300 | 4141 | 2985 | 2222 | 1449 | 954 | 581 | 131 |
| 14 | 350 | 150 | 5858 | 4101 | 2879 | 1970 | 1348 | 818 | 192 |
| | | 300 | 5555 | 3889 | 2732 | 1869 | 1278 | 778 | 182 |
| 16 | 400 | 150 | 8080 | 5727 | 3939 | 2747 | 1838 | 1121 | 253 |
| | | 300 | 7676 | 5439 | 3742 | 2611 | 1747 | 1066 | 237 |
| 18 | 450 | 150 | 10605 | 7474 | 5353 | 3555 | 2288 | 1475 | 343 |
| | | 300 | 9999 | 7050 | 5050 | 3353 | 2192 | 1389 | 323 |
| 20 | 500 | 150 | 14140 | 9999 | 7070 | 4848 | 3232 | 1959 | 434 |
| | | 300 | 13130 | 9582 | 6565 | 4505 | 3000 | 1818 | 404 |
| 24 | 600 | 150 | 21210 | 15049 | 10807 | 7373 | 4878 | 2969 | 657 |
| | | 300 | 19695 | 13978 | 10039 | 6848 | 4530 | 2757 | 611 |
| 26 | 650 | 150 | 25250 | 17877 | 12827 | 8686 | 5757 | 3535 | 788 |
| | | 300 | | | | | | | |
| 28 | 700 | 150 | 28381 | 20139 | 14403 | 9807 | 6555 | 4010 | 667 |
| | | 300 | | | | | | | |
| 30 | 750 | 150 | 33835 | 26391 | 15902 | 11166 | 7444 | 4737 | 677 |
| | | 300 | | | | | | | |
| 32 | 800 | 150 | 41410 | 29391 | 21109 | 14140 | 9494 | 5757 | 1162 |
| | | 300 | | | | | | | |
| 36 | 900 | 150 | 55550 | 43329 | 26109 | 18332 | 12221 | 7777 | 1111 |
| | | 300 | | | | | | | |
| 40 | 1000 | 150 | 70700 | 55146 | 33229 | 23331 | 15554 | 9898 | 1414 |
| | | 300 | | | | | | | |
| Pressure Recovery Factor FL | | | 0.59 | 0.61 | 0.68 | 0.74 | 0.80 | 0.82 | 0.88 |

MAXSEAL 630 Series torque value, Class 150

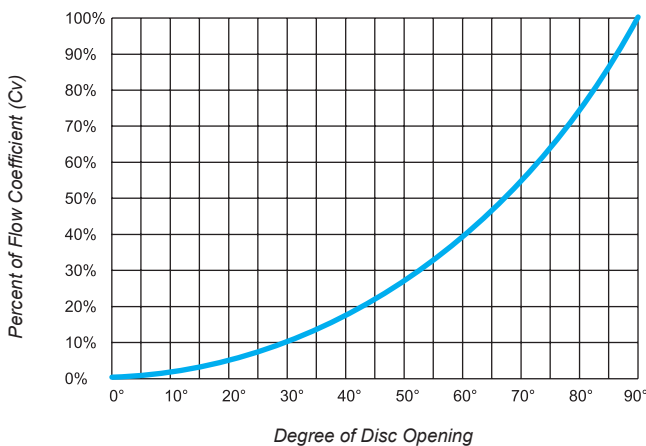
| Size Inch | mm | Soft Seated (Psi) | | | | Metal Seated (Psi) | | | |
|--------------|-----|-------------------|-------|-------|-------|--------------------|-------|-------|-------|
| | | 70 | 150 | 210 | 285 | 70 | 150 | 210 | 285 |
| 2 | 50 | 218 | 244 | 261 | 270 | 435 | 479 | 487 | 496 |
| 2 1/2 | 65 | 318 | 341 | 261 | 400 | 636 | 671 | 682 | 735 |
| 3 | 80 | 387 | 429 | 456 | 525 | 787 | 829 | 856 | 927 |
| 4 | 100 | 458 | 536 | 615 | 720 | 1008 | 1099 | 1151 | 1193 |
| 5 | 125 | 785 | 882 | 962 | 1250 | 1458 | 1634 | 1746 | 2067 |
| 6 | 150 | 978 | 1215 | 1417 | 1535 | 1890 | 2007 | 2125 | 2262 |
| 8 | 200 | 1327 | 1857 | 1960 | 2270 | 2535 | 2786 | 3095 | 3417 |
| 10 | 250 | 2099 | 2657 | 3200 | 3700 | 3599 | 4199 | 4956 | 5549 |
| 12 | 300 | 2918 | 3824 | 4729 | 5635 | 4528 | 5837 | 7144 | 8375 |
| 14 | 350 | 4325 | 5610 | 7165 | 9100 | 7913 | 10385 | 12858 | 13813 |
| 16 | 400 | 5624 | 7652 | 9734 | 12775 | 9464 | 13248 | 15614 | 21523 |
| 18 | 450 | 8130 | 10904 | 13356 | 17350 | 13380 | 17846 | 21811 | 25062 |
| 20 | 500 | 10022 | 15818 | 17182 | 24000 | 17454 | 22909 | 29454 | 37028 |
| 24 | 600 | 15195 | 20894 | 26117 | 31340 | 23268 | 30391 | 37513 | 47009 |

MAXSEAL 730 Series torque value, Class 300

| Size Inch | mm | Soft Seated (Psi) | | | | Metal Seated (Psi) | | | |
|--------------|-----|-------------------|-------|-------|-------|--------------------|-------|-------|-------|
| | | 150 | 350 | 600 | 740 | 150 | 350 | 600 | 740 |
| 2 | 50 | 353 | 444 | 466 | 478 | 671 | 727 | 773 | 784 |
| 2 1/2 | 65 | 444 | 554 | 596 | 610 | 846 | 915 | 970 | 1025 |
| 3 | 80 | 475 | 601 | 654 | 685 | 894 | 1006 | 1048 | 1160 |
| 4 | 100 | 674 | 980 | 1072 | 1180 | 1379 | 1608 | 1900 | 2007 |
| 5 | 125 | 975 | 1388 | 1618 | 1800 | 1866 | 2229 | 2543 | 2725 |
| 6 | 150 | 1138 | 1611 | 1862 | 1965 | 1891 | 2438 | 2777 | 2999 |
| 8 | 200 | 2055 | 2805 | 3278 | 3538 | 3309 | 4533 | 5266 | 5511 |
| 10 | 250 | 2888 | 4470 | 5282 | 5892 | 4571 | 6965 | 7952 | 8489 |
| 12 | 300 | 3992 | 6666 | 8039 | 8627 | 6092 | 12604 | 15237 | 17856 |
| 14 | 350 | 3992 | 11577 | 14472 | 15925 | 10136 | 17366 | 22190 | 24119 |
| 16 | 400 | 8847 | 16774 | 20323 | 22356 | 14227 | 25404 | 33534 | 35566 |
| 18 | 450 | 11749 | 13447 | 27769 | 29904 | 19225 | 36313 | 48060 | 52874 |
| 20 | 500 | 18577 | 33119 | 39141 | 42152 | 26872 | 53744 | 72938 | 79336 |
| 24 | 600 | 24193 | 41399 | 51232 | 54845 | 35190 | 65980 | 89074 | 98970 |

Flow Data Rated Cv

The volume of water in United States gallons per minute that will pass through a given valve opening with a pressure drop of 1 pound per square inch. (water at temp = 60 deg.f)



Valve Torque Vs Degree of Disc Opening

The torque in the table above is rated for maximum pressure drop when valve is in the closed position. Butterfly valve torque varies from full close to full open. It generally follows as indicated in the chart on the right.

