

# High Performance Butterfly Valve

## Carbon Steel, Lug, 300 Class, ISO 5211 Mounting Pad



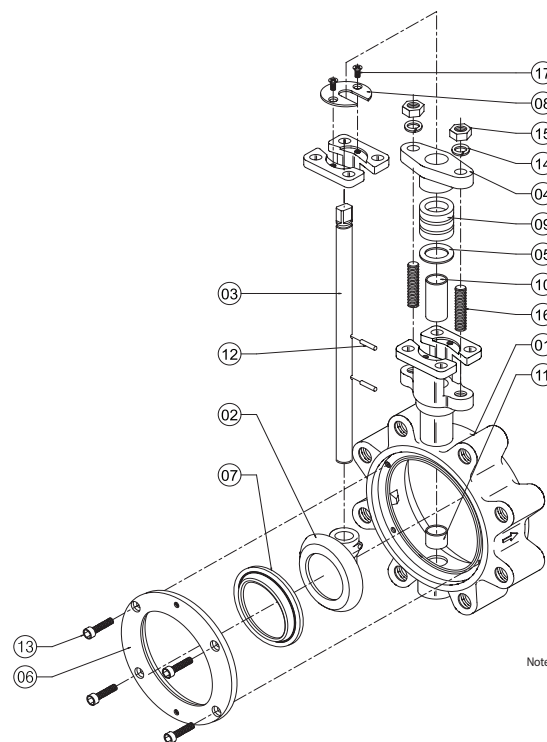
HPBFV-600-CS-300

### Features:

- Bubble-tight Shut-off Design
- Corrosion Resistant One-Piece Body
- Durable One-Piece Stem  
A564 Gr.630/17-4 PH® Materials
- 29 in-Hg vacuum rating
- ISO 5211 Mounting Pad
  - 2-12" – Square Design
- Dual Offset Disc Design
- Internal Stop to Prevent Disc Over-travel
- High Performance Lug Body Provides Bi-Directional Dead-End Services

### Valve Rating:

- Basic Design: API 609, MSS-SP-68, BS 5155, ISO 5752
- Pressure / Temperature Rating: ANSI B16.34
- Shell/Seat Test: API 598, MSS-SP-61
- Working Pressure: Clas 300 (740 psig)
- Metal to Metal Seat Leakage:  
Class IV per ASME/FCI 70-2



Note : Dimension Class ANSI 300

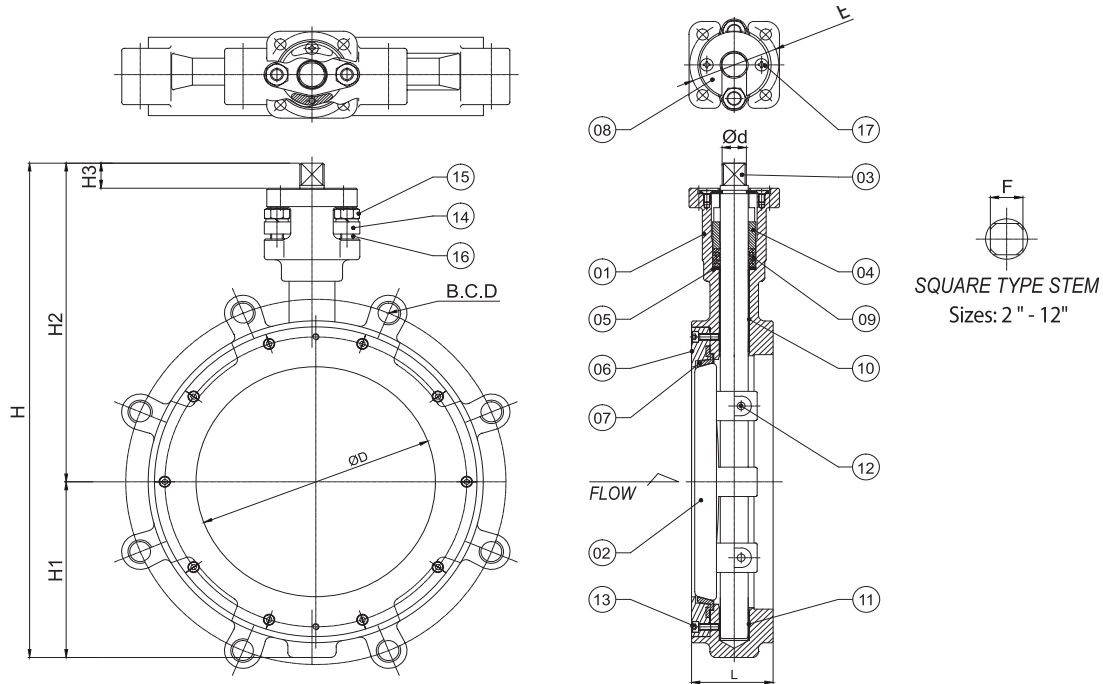
### Material Specifications

| No. | Part             | RPTFE Seat   | Quantity |
|-----|------------------|--------------|----------|
| 1   | Body             | A216 WCB     | 1        |
| 2   | Disc             | A351 CF8M    | 1        |
| 3   | Stem             | A564 Gr. 630 | 1        |
| 4   | Gland Flange     | A216 WCB     | 1        |
| 5   | Packing Retainer | A276 TP 316  | 1        |
| 6   | Retainer Ring    | A351 CF8M    | 1        |
| 7   | Seat             | RPTFE        | 1        |
| 8   | Top Retainer     | A283D-A36    | 1        |
| 9   | Grand Packing    | Graphite     | 3        |
| 10  | Upper Bearing    | RPTFE+316SS  | 1        |
| 11  | Lower Bearing    | RPTFE+316SS  | 1        |
| 12  | Disc Pin         | A276 TP 316  | 2        |
| 13  | Hex Socket Bolt  | A283D-A36    | 4 ~ 14   |
| 14  | Spring Washer    | A283D-A36    | 2        |
| 15  | Hex Nut          | A283D-A36    | 2        |
| 16  | Stud Bolt        | A283D-A36    | 2        |
| 17  | Flat Head Screw  | A283D-A36    | 2        |



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Dimensions



| Size (in) | H     | H1   | H2    | H3   | Ød   | F    | ØD    | E   | L    | B.C.D | n* | h*   | Bolt Size       |
|-----------|-------|------|-------|------|------|------|-------|-----|------|-------|----|------|-----------------|
| 2"        | 8.63  | 2.36 | 6.27  | 0.60 | 0.51 | 0.43 | 1.65  | F07 | 1.73 | 5.00  | 8  | 0.75 | 5/8" x 1-1/2"   |
| 2-1/2"    | 9.54  | 2.76 | 6.77  | 0.60 | 0.63 | 0.55 | 2.40  | F07 | 1.81 | 5.87  | 8  | 0.87 | 3/4" x 1-3/4"   |
| 3"        | 9.85  | 3.01 | 6.84  | 0.60 | 0.63 | 0.55 | 2.91  | F07 | 1.89 | 6.63  | 8  | 0.87 | 3/4" x 1-3/4"   |
| 4"        | 11.07 | 3.54 | 7.53  | 0.70 | 0.63 | 0.55 | 3.70  | F07 | 2.13 | 7.87  | 8  | 0.87 | 3/4" x 2-1/4"   |
| 5"        | 12.55 | 4.09 | 8.45  | 0.70 | 0.71 | 0.55 | 4.65  | F07 | 2.24 | 9.25  | 8  | 0.87 | 3/4" x 2-1/4"   |
| 6"        | 13.62 | 4.53 | 9.09  | 0.75 | 0.91 | 0.67 | 5.51  | F07 | 2.28 | 10.63 | 12 | 0.87 | 3/4" x 2-1/2"   |
| 8"        | 15.91 | 5.65 | 10.26 | 0.81 | 1.10 | 0.87 | 7.40  | F10 | 2.87 | 13.00 | 12 | 1.00 | 7/8" x 2-7/8"   |
| 10"       | 18.44 | 6.69 | 11.75 | 0.81 | 1.10 | 0.87 | 9.39  | F10 | 3.25 | 15.25 | 16 | 1.13 | 1" x 3-1/4"     |
| 12"       | 20.71 | 7.83 | 12.88 | 0.95 | 1.10 | 0.87 | 11.02 | F10 | 3.62 | 17.75 | 16 | 1.25 | 1-1/8" x 3-1/2" |

\*Note: n = number of bolt holes  
h = bolt hole diameter

## Torque Data

ACTUAL TORQUE: lbf.inch

RPTFE SEAT

| SIZE   | 150 PSIG | 500 PSIG |
|--------|----------|----------|
| 2"     | 220      | 520      |
| 2-1/2" | 220      | 520      |
| 3"     | 220      | 520      |
| 4"     | 250      | 670      |
| 5"     | 600      | 1120     |
| 6"     | 600      | 1120     |
| 8"     | 1000     | 2440     |
| 10"    | 1800     | 4640     |
| 12"    | 2790     | 7480     |

There are multiple factors that affect the torque required to operate butterfly valves. Please consult Jomar Valve for additional assistance.

## Flow Coefficient Charts

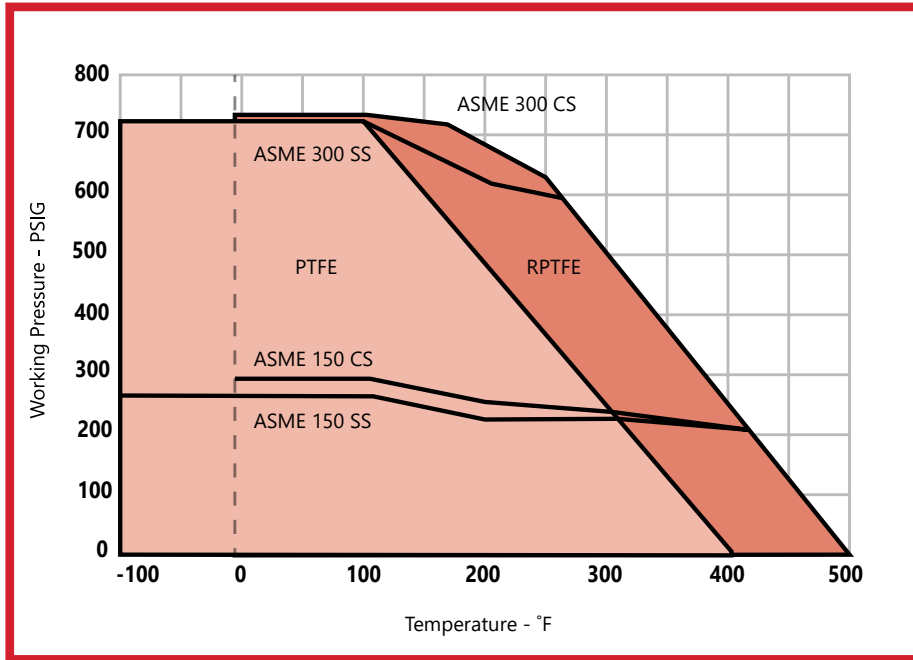
DISC OPENING

|        | 20° | 30° | 40°  | 50°  | 60°  | 70°  | 80°  | 90°  |
|--------|-----|-----|------|------|------|------|------|------|
| Inches | Cv  |     |      |      |      |      |      |      |
| 2"     | 6   | 13  | 24   | 36   | 52   | 71   | 95   | 100  |
| 2-1/2" | 8   | 19  | 34   | 52   | 75   | 102  | 136  | 143  |
| 3"     | 13  | 30  | 53   | 81   | 117  | 159  | 212  | 223  |
| 4"     | 25  | 58  | 104  | 157  | 228  | 310  | 414  | 435  |
| 5"     | 40  | 92  | 165  | 248  | 361  | 491  | 655  | 688  |
| 6"     | 60  | 139 | 250  | 377  | 546  | 744  | 992  | 1041 |
| 8"     | 109 | 255 | 459  | 692  | 1001 | 1365 | 1820 | 1911 |
| 10"    | 158 | 426 | 767  | 1156 | 1673 | 2282 | 3042 | 3194 |
| 12"    | 318 | 590 | 1063 | 1062 | 2319 | 3163 | 4217 | 4428 |

## Technical Data

### Pressure vs. Temperature

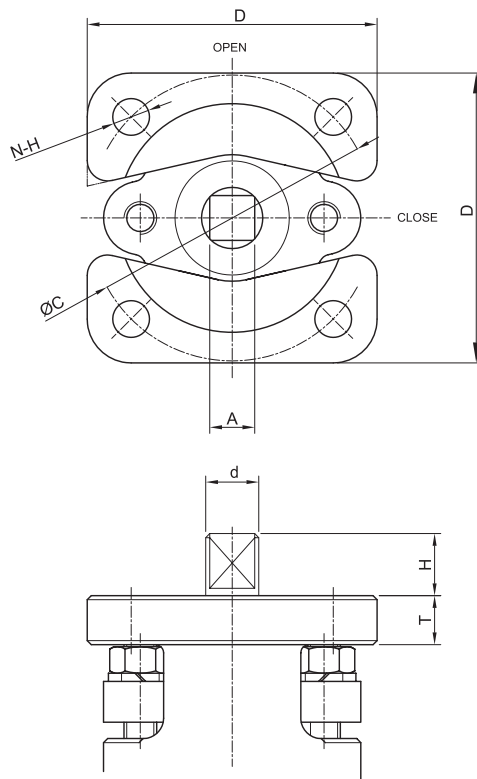
#### PTFE & RPTFE Seat



# Butterfly Valve Top Flange Dimensions

## High Performance Class 300

SIZE 2" - 12"



| SIZE   | d    | T    | ØC  | N-H  | A    | D    | B | W | H    | E |
|--------|------|------|-----|------|------|------|---|---|------|---|
| 2"     | 0.51 | 0.47 | F07 | 0.35 | 0.43 | 2.80 | - | - | 0.60 | - |
| 2-1/2" | 0.63 | 0.47 | F07 | 0.35 | 0.55 | 2.80 | - | - | 0.60 | - |
| 3"     | 0.63 | 0.47 | F07 | 0.35 | 0.55 | 2.80 | - | - | 0.60 | - |
| 4"     | 0.63 | 0.47 | F07 | 0.35 | 0.55 | 2.80 | - | - | 0.70 | - |
| 5"     | 0.71 | 0.55 | F07 | 0.35 | 0.55 | 2.80 | - | - | 0.70 | - |
| 6"     | 0.87 | 0.55 | F07 | 0.35 | 0.67 | 2.80 | - | - | 0.75 | - |
| 8"     | 1.10 | 0.63 | F10 | 0.43 | 0.87 | 3.74 | - | - | 0.81 | - |
| 10"    | 1.00 | 0.71 | F10 | 0.43 | 0.87 | 3.74 | - | - | 0.81 | - |
| 12"    | 1.10 | 0.71 | F10 | 0.43 | 0.87 | 3.74 | - | - | 0.95 | - |

## Material Selection / How to Order

