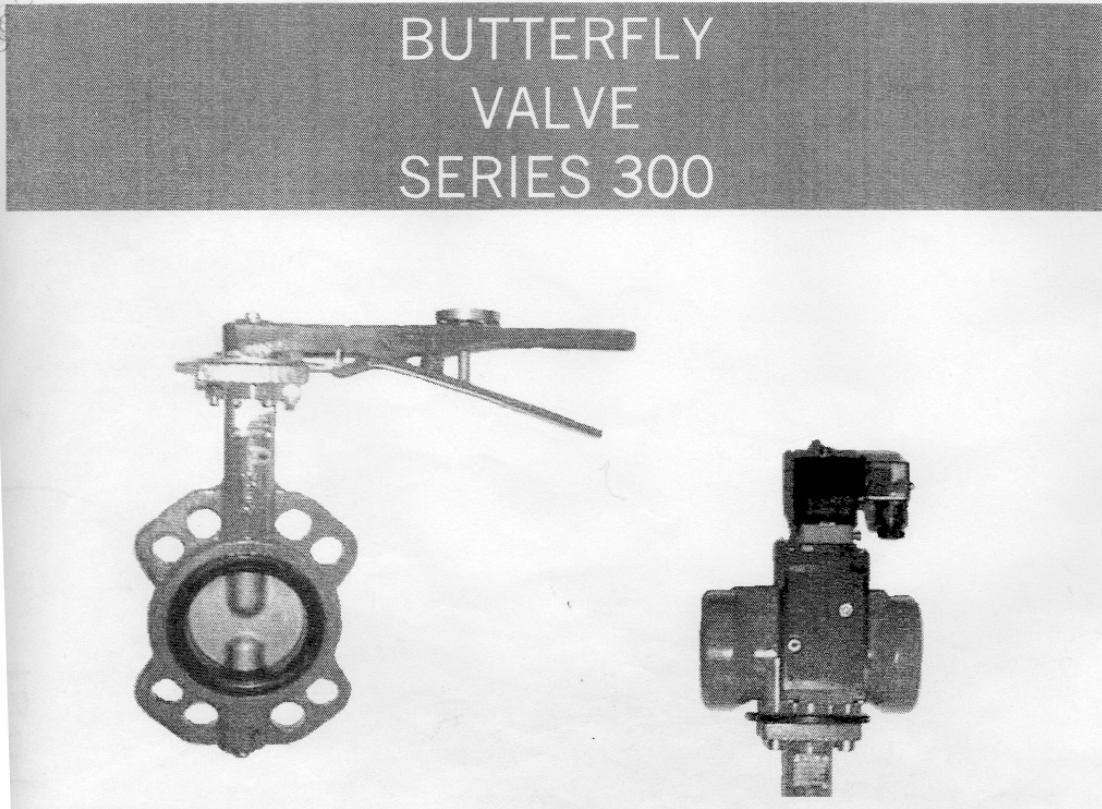


# BUTTERFLY VALVE VALVE SERIES 300



## Mounting Flange:

ISO 5211 mounting flange accommodates direct mounting of all types of actuators, including; handles, gear operators, electric and pneumatic

## O-Ring:

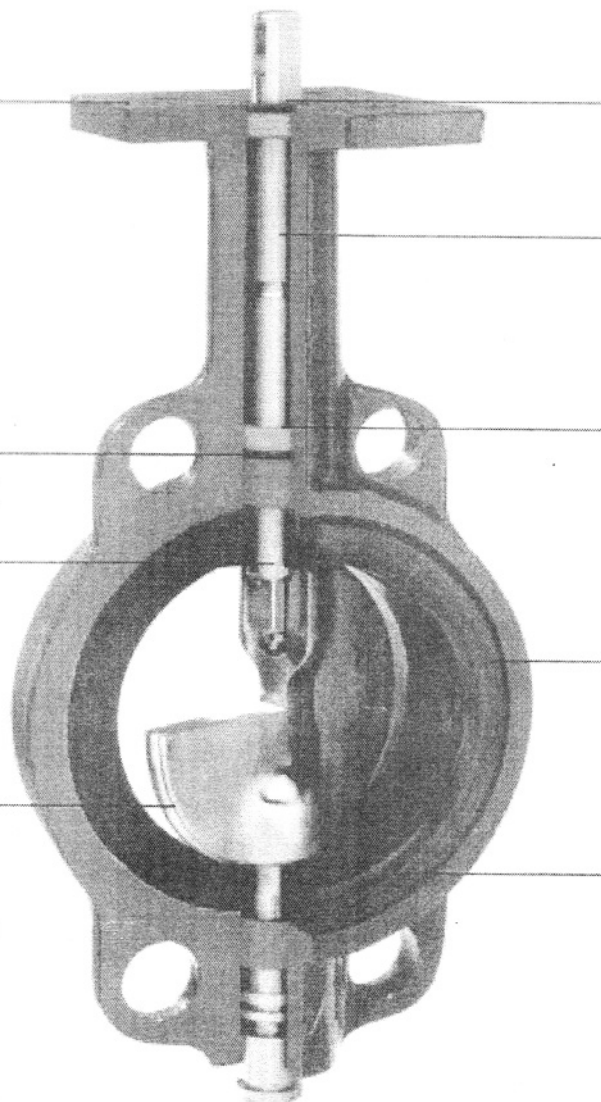
Tertiary stem seal provide further assurance against stem leakage.

## Hub-seal:

Smooth finished disc flats mate with seat flats to give a highly efficient primary seal that prevents leakage into the shaft area and minimizes torque.

## Disc:

Precision profile provides bubble-tight shut-off, assures minimum torque and longer seat life. Maximum flow is achieved by eliminating the "through shaft" and external disc fasteners.



## Weather Seal:

O-ring seals keep dust and moisture from entering the upper stem.

## Stem:

Stub shaft design allows the disc to float within the flow-way increasing cycle life.

## Bushings:

Stem bushings reduce torque and isolate the stem from the valve body, preventing seizure of the stem due to corrosion in the stem journal. (4 Bushings)

## Seat Face:

Seat to flange seal eliminates the need for flange gaskets.

## Seat:

Phenolic-backed seat non-collapsible, stretch-resistant, blow-out proof and replaceable in the field.

Series 300 Butterfly Valves

Available in Sizes 2" to 12"

Available in Wafer or Lug style body

Wafer body features four alignment holes

Pressure Ratings for tight shut off at temperatures up to the maximum limit of the seat material:

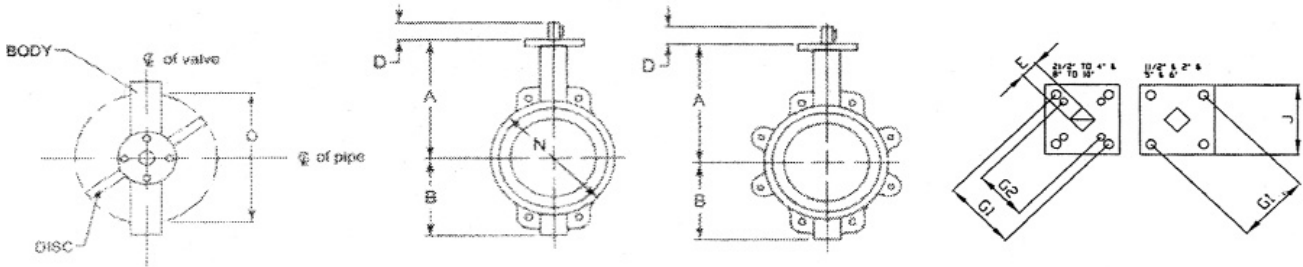
2" to 12" 200 psi, 125psi for Teflon seat.

Ideal for on - off or throttling services

Available with handles, manual gear operators and electric or pneumatic actuators

Operator can be mounted perpendicular to the pipeline  
Designed to comply with MSS SP - 67 and API609. For exact valve measurements, see dimension table.

Compatible with ANSI 125/150, PN10/16, BS 10 Table E



Dimensions 2" to 24"

| DN  | Size   | A     | B   | C     | D  | E     | F      | G       | J  | KG<br>(Lugged) | KG<br>(Wafer) |
|-----|--------|-------|-----|-------|----|-------|--------|---------|----|----------------|---------------|
| 40  | 1 1/2" | 130   | 64  | 36    | 13 | 10X10 | 7      | F05     | 70 | 3.00           | 2.50          |
| 50  | 2"     | 162   | 80  | 44.45 | 13 | 10X10 | 7      | F05     | 70 | 3.18           | 2.72          |
| 65  | 2.5"   | 174.5 | 89  | 47.63 | 13 | 10X10 | 7 (9)  | F05/F07 | 70 | 3.63           | 3.18          |
| 80  | 3"     | 181   | 95  | 47.63 | 13 | 10X10 | 7 (9)  | F05/F07 | 70 | 6.35           | 4.54          |
| 100 | 4"     | 200   | 114 | 53.98 | 13 | 12X12 | 7 (9)  | F05/F07 | 70 | 11.79          | 5.90          |
| 125 | 5"     | 212.7 | 127 | 57.15 | 13 | 14X14 | 9      | F07     | 70 | 12.70          | 8.16          |
| 150 | 6"     | 225.4 | 139 | 57.15 | 18 | 14X14 | 9      | F07     | 70 | 14.06          | 9.07          |
| 200 | 8"     | 260.3 | 175 | 63.5  | 18 | 17X17 | 9 (10) | F07/F10 | 95 | 22.23          | 14.51         |
| 250 | 10"    | 292   | 214 | 69.85 | 18 | 22X22 | 9 (10) | F07/F10 | 95 | 32.66          | 19.05         |
| 300 | 12"    | 336.5 | 242 | 79.38 | 18 | 22X22 | 9 (10) | F07/F10 | 95 | 47.63          | 31.75         |

Dimension C, face to face, is listed with elastomer in the relaxed condition. Approximately 3mm total compression is required for proper sealing with pipe flanges.

Seat Temperature Ratings

| Material                  | Temperature Range °F |     | Temperature Range °C |     |
|---------------------------|----------------------|-----|----------------------|-----|
|                           | From                 | To  | From                 | To  |
| Buna-N                    | 10                   | 180 | -12                  | 82  |
| Abrasive Resistant Buna-N | 10                   | 180 | -12                  | 82  |
| Neoprene                  | 20                   | 200 | -7                   | 93  |
| EPDM                      | -30                  | 275 | -34                  | 135 |
| EPDM, Food Grade          | -30                  | 225 | -34                  | 107 |
| Hypalon                   | 0                    | 275 | -18                  | 135 |
| Viton                     | -22                  | 572 | -30                  | 300 |

### Valve Seating Torques (Nm)

| Valve Size | Differential Pressure |         |         |         | PNEUMATIC ACTUATOR |               |                   |
|------------|-----------------------|---------|---------|---------|--------------------|---------------|-------------------|
|            | 50 psi                | 100 psi | 150 psi | 200 psi | DOUBLE ACTING      | SINGLE ACTING | ELECTRIC ACTUATOR |
| 2"         | 11.30                 | 11.98   | 12.54   | 13.22   | P00                | P05S          | ELEEK20           |
| 2 1/2"     | 16.95                 | 18.42   | 19.89   | 21.35   | P05                | P15S          | ELEEK35           |
| 3"         | 23.39                 | 24.86   | 26.21   | 27.57   | P05                | P15S          | ELEEK35           |
| 4"         | 32.77                 | 36.49   | 40.34   | 44.06   | P10                | P20S          | ELEEK60           |
| 5"         | 47.79                 | 54.35   | 61.01   | 67.56   | P15                | P25S          | ELEEK150          |
| 6"         | 67.68                 | 78.07   | 88.47   | 98.86   | P20                | P30S          | ELEEK150          |
| 8"         | 119.76                | 133.66  | 147.67  | 161.57  | P25                | P40S          | POA               |
| 10"        | 188.80                | 211.51  | 234.33  | 257.04  | P30                | P40S          | POA               |
| 12"        | 290.15                | 315.79  | 341.55  | 367.20  | P30                | P50S          | POA               |

All torques shown on the chart are based on test data using water @ 60°F. For torques using dry gases, multiply these numbers by 1.6. For torques involving other media, please consult sales.

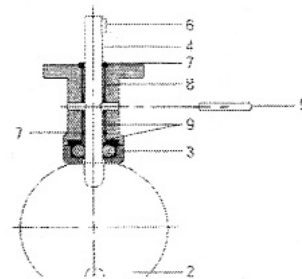
There is no safety factor included in the numbers shown on this chart. For actuating sizing, we recommend that you multiply these values by 1.2 for single valve applications, and 1.5 for 3-way ("tee") applications. Actuators shown are based on wet service and air supply of 6 bar to the actuator.

### C.v. Values-Valve Sizing Coefficients (UK GPM @ 1 Δ P)

| Size   | 20° | 30° | 40° | 50°  | 60°  | 70°  | 80°  | 90°  |
|--------|-----|-----|-----|------|------|------|------|------|
| 2"     | 2   | 6   | 16  | 30   | 52   | 70   | 96   | 100  |
| 2 1/2" | 3   | 8   | 20  | 39   | 65   | 94   | 152  | 162  |
| 3"     | 12  | 17  | 37  | 70   | 111  | 169  | 318  | 358  |
| 4"     | 25  | 43  | 83  | 137  | 225  | 350  | 585  | 691  |
| 5"     | 71  | 108 | 175 | 287  | 437  | 687  | 1124 | 1249 |
| 6"     | 137 | 187 | 300 | 475  | 683  | 1049 | 1561 | 1649 |
| 8"     | 175 | 250 | 400 | 650  | 1099 | 1899 | 3148 | 3223 |
| 10"    | 337 | 479 | 708 | 999  | 1582 | 2748 | 5079 | 5371 |
| 12"    | 458 | 625 | 999 | 1561 | 2373 | 4184 | 7744 | 8160 |

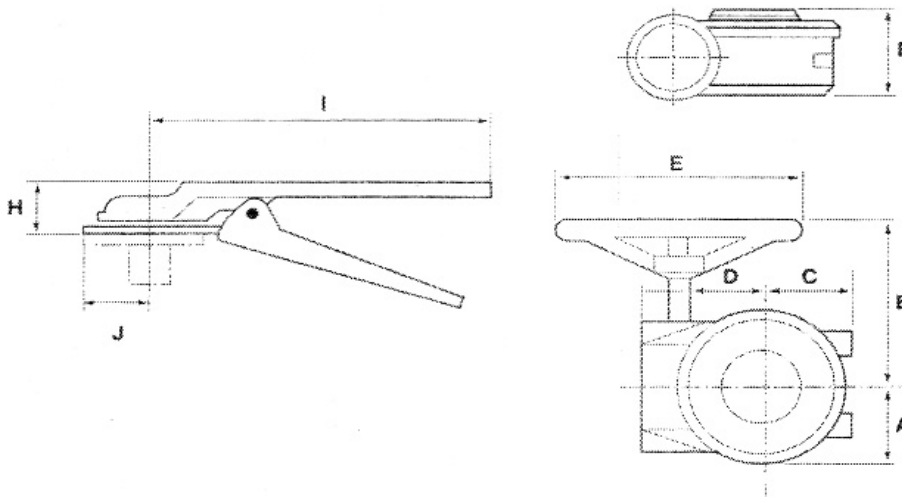
### Bill of Materials 2" to 30"

| Item | Description | Materials | Optional Materials  |
|------|-------------|-----------|---|
| 1    | Body        | Cast Iron | Ductile Iron, Carbon Steel, Stainless Steel, Aluminium  |
| 2    | Disc        | 316 SS    | Ductile Iron ENP plated, Aluminium Bronze, Monel, SS PFA Coated, SS PPS Coated, Nylon Coated Ductile Iron   |
| 3    | Seat        | Buna-N    | EPDM, Neoprene (Black or White), Hypalon, Abrasive Resistant Buna-N, Viton, Food Grade EPDM, Teflon over EPDM (Max. Pressure 125psi), Silicon, Chloroprene. |
| 4    | Upper Shaft | 416 SS    | 316 SS, Monel   |



| SIZE   | RATING (BAR) | TIME (MIN) | RATING (BAR) | TIME (MIN) |
|--------|--------------|------------|--------------|------------|
| 1 1/2" | 24           | 0.25       | 17.6         | 0.25       |
| 2"     | 24           | 0.25       | 17.6         | 0.25       |
| 2 1/2" | 24           | 1          | 17.6         | 1          |
| 3"     | 24           | 1          | 17.6         | 1          |
| 4"     | 24           | 1          | 17.6         | 1          |
| 5"     | 24           | 1          | 17.6         | 1          |
| 6"     | 24           | 1          | 17.6         | 1          |
| 8"     | 24           | 2          | 17.6         | 2          |
| 10"    | 24           | 2          | 17.6         | 2          |
| 12"    | 24           | 2          | 17.6         | 2          |

### Manual Operators - Lever and Gear box



| DIMENSIONS |     |      |     |    |      |     |    |    |     |      |              |             |
|------------|-----|------|-----|----|------|-----|----|----|-----|------|--------------|-------------|
| Size       | DN  | A    | B   | C  | D    | E   | F  | H  | I   | J    | WEIGHT LEVER | WEIGHT GEAR |
| 1 1/2"     | 40  | 52.5 | 156 | 54 | 74.5 | 152 | 65 | 32 | 267 | 50.8 | 0.72         | 5.2         |
| 2"         | 50  | 52.5 | 156 | 54 | 74.5 | 152 | 65 | 32 | 267 | 50.8 | 0.72         | 5.2         |
| 2 1/2"     | 65  | 52.5 | 156 | 54 | 74.5 | 152 | 65 | 32 | 267 | 50.8 | 0.72         | 5.2         |
| 3"         | 80  | 52.5 | 156 | 54 | 74.5 | 152 | 65 | 32 | 267 | 50.8 | 0.72         | 5.2         |
| 4"         | 100 | 77   | 233 | 77 | 100  | 300 | 77 | 32 | 267 | 50.8 | 0.72         | 12.5        |
| 5"         | 125 | 77   | 233 | 77 | 100  | 300 | 77 | 32 | 267 | 50.8 | 0.72         | 12.5        |
| 6"         | 150 | 77   | 233 | 77 | 100  | 300 | 77 | 32 | 267 | 50.8 | 0.72         | 12.5        |
| 8"         | 200 | 82   | 226 | 82 | 118  | 300 | 77 | 45 | 360 | 76.2 | 1.8          | 14.3        |
| 10"        | 250 | 82   | 226 | 82 | 118  | 300 | 77 | 45 | 360 | 76.2 | 1.8          | 14.3        |
| 12"        | 300 | 82   | 226 | 82 | 118  | 300 | 77 | 45 | 360 | 76.2 | 1.8          | 14.3        |

| MATERIALS      |                        |                  |                   |
|----------------|------------------------|------------------|-------------------|
| LEVER OPERATOR |                        | GEARBOX OPERATOR |                   |
| LEVER          | Malleable Cast Iron    | BODY             | Cast Iron         |
| POSITION BAR   | Malleable Cast Iron    | GEAR             | Ductile Iron      |
| PIN            | Mn Steel               | WORM BAR         | Carbon Steel      |
| SPRING         | Mn Steel               | LEVER            | Carbon Steel      |
| BOLT & NUT     | Hard Carbon Steel      | WHEEL            | Cast Iron         |
| NOTCH PLATE    | Zn-Plated Carbon Steel | BOLT AND NUT     | Hard Carbon Steel |

SERIES 300 HYDROSTATIC TEST

SHELL TEST      SEALING TEST