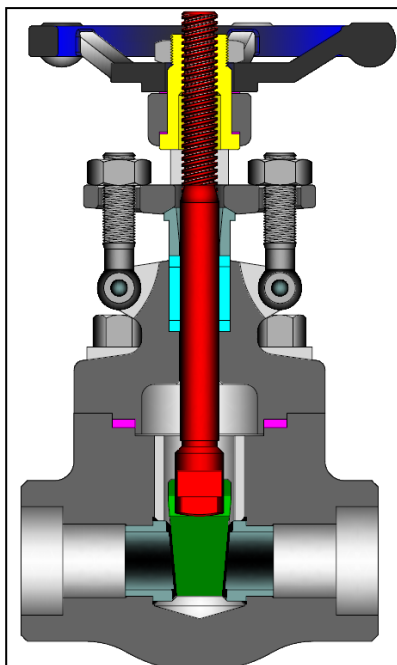


## API 602 GATE VALVES

FORGED CARBON, STAINLESS STEEL OR ALLOY STEEL

1/4" - 2" (6 - 50 mm)

ASME CLASSES 150 -2680



| Class | Bore     | Fig. No. |
|-------|----------|----------|
| 150   | Standard | GA01     |
|       | Full     | GAL1     |
| 300   | Standard | GA03     |
|       | Full     | GAL3     |
| 600   | Standard | GA06     |
|       | Full     | GAL6     |
| 800   | Standard | GA08     |
|       | Full     | GAL8     |
| 1500  | Standard | GA15     |
|       | Full     | GAL5     |
| 1680  | Standard | GA16     |
| 2500  | Standard | GA25     |
| 2690  | Standard | GA26     |

### DESIGN FEATURES:

- Wedges are accurately guided thru the entire stroke.
- Standard trim is stellite faced seat rings, 13% chrome wedge seat surfaces, and 13% chrome stem (API trim 8). Other trims available on request.
- Seat faces lapped for smooth finish and superior sealing.
- Stems are non-rotating with surface finish to maximize packing seal for low fugitive emissions.
- Each valve is shell, seat and backseat pressure tested per industry standard API 598.
- Gland is two piece gland / gland flange design for optimal alignment and uniform packing compression.

### STANDARD MATERIALS (Other materials available)

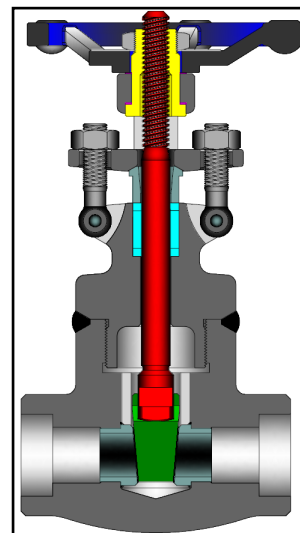
| PART                            | MATERIALS                      |              |          |                            |
|---------------------------------|--------------------------------|--------------|----------|----------------------------|
| Body                            | A105                           | A182 F11     | A182 F22 | A182F316 (1)               |
| Bonnet                          | A105                           | A182 F11     | A182 F22 | A182 F316                  |
| Wedge                           | SST 420                        |              |          | A182 F316                  |
| Seat Ring                       | SST 410 + Stellite 6 Faced     |              |          | SST 316                    |
| Stem                            | A182 F6a                       |              |          | A182 F316                  |
| Stem Bushing                    | A 439 Ductile NI-Resist Gr. D2 |              |          |                            |
| Gland Flange                    | A105                           |              |          | Series 300 SST             |
| Eye Bolt                        | A193 Gr. B7                    | A193 Gr. B16 |          | A193 Gr. B8M               |
| Eye Bolt Nut                    | A194 Gr. 2H                    | A194 Gr. 7   |          | A194 Gr.8M                 |
| Gland                           | SST 420                        |              |          | SST 316                    |
| Packing                         | Graphite                       |              |          | PTFE                       |
| Packing Washer / Packing Spacer | SST 410                        |              |          | SST 316                    |
| Gasket (2)                      | Spiral Wound SST with Graphite |              |          | Spiral Wound SST with PTFE |
| Hand Wheel                      | Malleable Iron or Steel        |              |          |                            |
| Hand Wheel Nut                  | Malleable Iron or Steel        |              |          |                            |
| Key                             | Steel                          |              |          |                            |
| Body / Bonnet Bolting (2)       | A193 Gr. B7                    | A193 Gr. B16 |          | A193 Gr. B8M               |
| Identification Plate            | Series 300 SST                 |              |          |                            |

1. Threaded and weld end valve bodies A182 F316L
2. Welded bonnet design also available.

### Design Specifications

| Item                           | Applicable Specification |
|--------------------------------|--------------------------|
| Wall thickness                 | API 602                  |
| Pressure - temperature ratings | ASME B16.34              |
| General valve design           | API 602 & B16.34         |
| End to End dimensions          | ASME B16.10              |
| Flange design                  | ASME B16.5               |
| Thread design                  | ASME B1.20.1             |
| Butt Weld design               | ASME B16.25              |
| Socket Weld design             | ASME B16.11              |
| Materials                      | ASTM                     |

**NOTE:** See page 43 for flow, safety and maintenance information.



Welded Bonnet Design

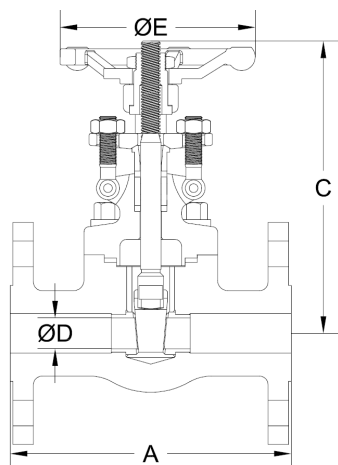
- End Flanges have the following raised faces per ASME B16.5:  
Classes 150-300: 1/16" (2mm).  
Classes 600: 1/4" (7mm).
- Weld ends are available per ASME B16.25/B16.11 or per customer's specification.
- Extended body ends available on gate valves.
- Other available options as follows:
  - » Alternate valve materials such as chrome and stainless steel alloys
  - » Alternate trim materials
  - » NACE service
  - » Special cleaning for applications such as oxygen or chlorine
  - » Other options available as specified.

# GATE VALE DIMENSIONS CLASS 150 - 800

| SIZE | ASME 150      |     |      |     | ASME 300      |     |      |     | ASME 600      |     |      |     |
|------|---------------|-----|------|-----|---------------|-----|------|-----|---------------|-----|------|-----|
|      | Bolted Bonnet |     |      |     | Bolted Bonnet |     |      |     | Bolted Bonnet |     |      |     |
|      | Standard Bore |     |      |     | Standard Bore |     |      |     | Standard Bore |     |      |     |
| in   | A             | C   | D    | E   | A             | C   | D    | E   | A             | C   | D    | E   |
| mm   | FE            |     |      |     | FE            |     |      |     | FE            |     |      |     |
| ½    | 4.25          | 6   | 0.5  | 3.9 | 5.5           | 6   | 0.5  | 3.9 | 6.5           | 6   | 0.5  | 3.9 |
| 13   | 108           | 153 | 13   | 100 | 140           | 153 | 13   | 100 | 165           | 153 | 13   | 100 |
| ¾    | 4.62          | 6   | 0.5  | 3.9 | 6             | 6   | 0.5  | 3.9 | 7.5           | 6   | 0.5  | 3.9 |
| 19   | 117           | 153 | 13   | 100 | 152           | 153 | 13   | 100 | 190           | 153 | 13   | 100 |
| 1    | 5             | 7.3 | 0.71 | 4.9 | 6.5           | 7.3 | 0.71 | 4.9 | 8.5           | 7.3 | 0.71 | 4.9 |
| 25   | 127           | 185 | 18   | 125 | 165           | 185 | 18   | 125 | 216           | 185 | 18   | 125 |
| 1¼   | 5.5           | 8.7 | 0.94 | 6.3 | 7             | 8.7 | 0.94 | 6.3 | 9             | 8.7 | 0.94 | 6.3 |
| 32   | 140           | 222 | 24   | 160 | 178           | 222 | 24   | 160 | 229           | 222 | 24   | 160 |
| 1½   | 6.5           | 9.4 | 1.14 | 6.3 | 7.5           | 9.4 | 1.14 | 6.3 | 9.5           | 9.4 | 1.14 | 6.3 |
| 38   | 165           | 240 | 29   | 160 | 190           | 240 | 29   | 160 | 241           | 240 | 29   | 160 |
| 2    | 7             | 11  | 1.46 | 7.1 | 8.5           | 11  | 1.46 | 7.1 | 11.5          | 11  | 1.46 | 7.1 |
| 50   | 178           | 279 | 37   | 180 | 216           | 279 | 37   | 180 | 292           | 279 | 37   | 180 |

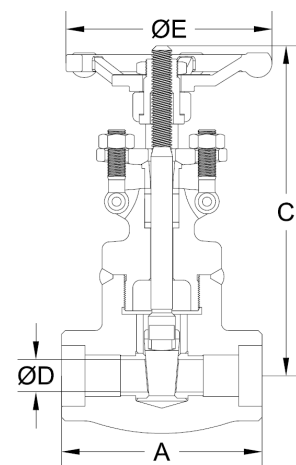
| SIZE | ASME 800      |     |      |     |           |      |      |     |               |     |      |     |
|------|---------------|-----|------|-----|-----------|------|------|-----|---------------|-----|------|-----|
|      | Bolted Bonnet |     |      |     |           |      |      |     | Welded Bonnet |     |      |     |
|      | Standard Bore |     |      |     | Full Bore |      |      |     | Standard Bore |     |      |     |
| in   | A             | C   | D    | E   | A         | C    | D    | E   | A             | C   | D    | E   |
| mm   | WE            |     |      |     | WE        |      |      |     | WE            |     |      |     |
| ¼    | 3.11          | 5.9 | 0.31 | 3.9 | -         | -    | -    | -   | 3.11          | 6.2 | 0.31 | 3.9 |
| 6    | 79            | 149 | 8    | 100 | -         | -    | -    | -   | 79            | 157 | 8    | 100 |
| 3/8  | 3.11          | 5.9 | 0.39 | 3.9 | -         | -    | -    | -   | 3.11          | 6.2 | 0.39 | 3.9 |
| 10   | 79            | 149 | 10   | 100 | -         | -    | -    | -   | 79            | 157 | 10   | 100 |
| ½    | 3.11          | 6   | 0.5  | 3.9 | 3.62      | 6    | 0.5  | 3.9 | 3.11          | 6.3 | 0.5  | 3.9 |
| 13   | 79            | 153 | 13   | 100 | 92        | 153  | 13   | 100 | 79            | 161 | 13   | 100 |
| ¾    | 3.62          | 6   | 0.5  | 3.9 | 4.37      | 7.3  | 0.71 | 4.9 | 3.62          | 6.3 | 0.5  | 3.9 |
| 19   | 92            | 153 | 13   | 100 | 111       | 185  | 18   | 125 | 92            | 161 | 13   | 100 |
| 1    | 4.37          | 7.3 | 0.71 | 4.9 | 4.72      | 8.7  | 0.94 | 6.3 | 4.37          | 7.5 | 0.71 | 4.9 |
| 25   | 111           | 185 | 18   | 125 | 120       | 222  | 24   | 160 | 111           | 190 | 18   | 125 |
| 1¼   | 4.72          | 8.7 | 1.14 | 6.3 | 4.72      | 9.4  | 1.14 | 6.3 | 4.72          | 8.7 | 1.14 | 6.3 |
| 32   | 120           | 222 | 29   | 160 | 120       | 240  | 29   | 160 | 120           | 220 | 29   | 160 |
| 1½   | 4.72          | 9.4 | 1.14 | 6.3 | 5.51      | 11   | 1.46 | 7.1 | 4.72          | 9.4 | 1.14 | 6.3 |
| 38   | 120           | 240 | 29   | 160 | 140       | 279  | 37   | 180 | 120           | 240 | 29   | 160 |
| 2    | 5.51          | 11  | 1.46 | 7.1 | 6.3       | 13.1 | 1.89 | 7.9 | 5.51          | 11  | 1.46 | 7.1 |
| 50   | 140           | 279 | 37   | 180 | 160       | 333  | 48   | 200 | 140           | 279 | 37   | 180 |



Bolted Bonnet Flanged Ends Design

**WE** = Socket Weld / Threaded Ends  
**FE** = Flanged ends

**C** = Center to top open



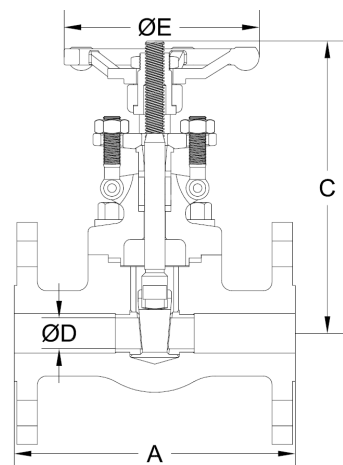
Welded Bonnet Socket Weld Ends Design

**ADDITIONAL SIZES, MATERIALS AND CLASSES AVAILABLE UPON REQUEST.**

2503 Spring Grove Avenue, Cincinnati, OH 45214 • 800.888.2583 • [www.powellvalves.com](http://www.powellvalves.com)

# GATE VALVE DIMENSIONS (CLASS 1500 - 2680)

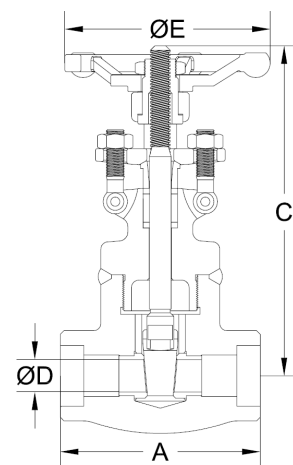
| SIZE | ASME 1500 & 1690 |      |      |      |      |           |      |      |      |               |      |      |      |           |      |      |     |
|------|------------------|------|------|------|------|-----------|------|------|------|---------------|------|------|------|-----------|------|------|-----|
|      | Bolted Bonnet    |      |      |      |      |           |      |      |      | Welded Bonnet |      |      |      |           |      |      |     |
|      | Standard Bore    |      |      |      |      | Full Bore |      |      |      | Standard Bore |      |      |      | Full Bore |      |      |     |
| in   | A                |      | C    | D    | E    | A         | C    | D    | E    | A             | C    | D    | E    | A         | C    | D    | E   |
| mm   | FE               | WE   |      |      |      | WE        |      |      |      | WE            |      |      |      | WE        |      |      |     |
| ¼    | -                | 3.11 | 6.9  | 0.31 | 3.9  | -         | -    | -    | -    | 3.11          | 6.9  | 0.31 | 3.9  | -         | -    | -    | -   |
| 6    | -                | 79   | 175  | 8    | 100  | -         | -    | -    | -    | 79            | 175  | 8    | 100  | -         | -    | -    | -   |
| 3/8  | -                | 3.62 | 7    | 0.5  | 3.9  | -         | -    | -    | -    | 3.62          | 6.9  | 0.5  | 3.9  | -         | -    | -    | -   |
| 10   | -                | 92   | 178  | 13   | 100  | -         | -    | -    | -    | 92            | 175  | 13   | 100  | -         | -    | -    | -   |
| ½    | 8.5              | 3.62 | 7.1  | 0.5  | 4.9  | 4.37      | 7.1  | 0.5  | 4.9  | 3.62          | 7.1  | 0.5  | 4.9  | 4.37      | 7.1  | 0.5  | 4.9 |
| 13   | 216              | 92   | 181  | 13   | 125  | 111       | 181  | 13   | 125  | 92            | 181  | 13   | 125  | 111       | 181  | 13   | 125 |
| ¾    | 9                | 4.37 | 7.1  | 0.5  | 4.9  | 4.72      | 8.6  | 0.71 | 6.3  | 4.37          | 7.1  | 0.5  | 4.9  | 4.72      | 8.6  | 0.71 | 6.3 |
| 19   | 229              | 111  | 181  | 13   | 125  | 120       | 218  | 18   | 160  | 111           | 181  | 13   | 125  | 120       | 218  | 18   | 160 |
| 1    | 10               | 4.72 | 8.6  | 0.71 | 6.3  | 4.72      | 9.3  | 0.94 | 6.3  | 4.72          | 8.6  | 0.71 | 6.3  | 4.72      | 9.3  | 0.94 | 6.3 |
| 25   | 254              | 120  | 218  | 18   | 160  | 120       | 237  | 24   | 160  | 120           | 218  | 18   | 160  | 120       | 237  | 24   | 160 |
| 1¼   | 11               | 4.72 | 9.3  | 0.94 | 6.3  | 5.51      | 10.8 | 1.14 | 7.1  | 4.72          | 9.3  | 0.94 | 6.3  | 5.51      | 10.8 | 1.14 | 7.1 |
| 32   | 279              | 120  | 237  | 24   | 160  | 140       | 274  | 29   | 180  | 120           | 237  | 24   | 160  | 140       | 274  | 29   | 180 |
| 1½   | 12               | 5.51 | 10.8 | 1.14 | 7.1  | 6.3       | 12.6 | 1.46 | 7.9  | 5.51          | 10.8 | 1.14 | 7.1  | 6.3       | 12.6 | 1.46 | 7.9 |
| 38   | 305              | 140  | 274  | 29   | 180  | 160       | 319  | 37   | 200  | 140           | 274  | 29   | 180  | 160       | 319  | 37   | 200 |
| 2    | 14.5             | 6.3  | 12.6 | 1.46 | 7.9  | 9.1       | 13.6 | 1.89 | 7.9  | 6.3           | 12.6 | 1.46 | 7.9  | 9.1       | 13.6 | 1.89 | 7.9 |
| 50   | 368              | 160  | 319  | 37   | 200  | 230       | 345  | 48   | 200  | 160           | 319  | 37   | 200  | 230       | 345  | 48   | 200 |
| SIZE | ASME 2500 & 2680 |      |      |      |      |           |      |      |      |               |      |      |      |           |      |      |     |
|      | Bolted Bonnet    |      |      |      |      |           |      |      |      | Welded Bonnet |      |      |      |           |      |      |     |
|      | Standard Bore    |      |      |      |      |           |      |      |      | Standard Bore |      |      |      |           |      |      |     |
| in   | A                |      | C    | D    | E    | A         |      | C    | D    | E             | A    |      | C    | D         | E    |      |     |
| mm   | WE               | WE   |      |      |      | WE        | WE   |      |      |               | WE   |      |      |           |      |      |     |
| ½    | 5.91             |      | 11.2 | 0.55 | 6.3  | 5.91      |      | 10   | 0.55 | 6.3           | 5.91 |      | 10   | 0.55      | 6.3  |      |     |
| 13   | 150              |      | 284  | 14   | 160  | 150       |      | 253  | 14   | 160           | 150  |      | 253  | 14        | 160  |      |     |
| ¾    | 5.91             |      | 11.2 | 0.55 | 6.3  | 5.91      |      | 10   | 0.55 | 6.3           | 5.91 |      | 10   | 0.55      | 6.3  |      |     |
| 19   | 150              |      | 284  | 14   | 160  | 150       |      | 253  | 14   | 160           | 150  |      | 253  | 14        | 160  |      |     |
| 1    | 6.69             |      | 12.9 | 0.75 | 7.9  | 6.69      |      | 11.5 | 0.75 | 7.9           | 6.69 |      | 11.5 | 0.75      | 7.9  |      |     |
| 25   | 170              |      | 327  | 19   | 200  | 170       |      | 291  | 19   | 200           | 170  |      | 291  | 19        | 200  |      |     |
| 1¼   | 7.87             |      | 14.7 | 1    | 9.8  | 7.87      |      | 13.3 | 1    | 9.8           | 7.87 |      | 13.3 | 1         | 9.8  |      |     |
| 32   | 200              |      | 374  | 25   | 250  | 200       |      | 339  | 25   | 250           | 200  |      | 339  | 25        | 250  |      |     |
| 1½   | 7.87             |      | 14.8 | 1.1  | 9.8  | 7.87      |      | 13.5 | 1.1  | 9.8           | 7.87 |      | 13.5 | 1.1       | 9.8  |      |     |
| 38   | 200              |      | 377  | 28   | 250  | 200       |      | 342  | 28   | 250           | 200  |      | 342  | 28        | 250  |      |     |
| 2    | 9.84             |      | 17.1 | 1.38 | 11.8 | 9.84      |      | 15.7 | 1.38 | 11.8          | 9.84 |      | 15.7 | 1.38      | 11.8 |      |     |
| 50   | 250              |      | 434  | 35   | 300  | 250       |      | 398  | 35   | 300           | 250  |      | 398  | 35        | 300  |      |     |



Bolted Bonnet Flanged Ends Design

**WE** = Socket Weld / Threaded Ends  
**FE** = Flanged ends

**C** = Center to top open



Welded Bonnet Socket Weld Ends Design

**ADDITIONAL SIZES, MATERIALS AND CLASSES AVAILABLE UPON REQUEST.**

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# API 602 GATE VALVES

FORGED CARBON, STAINLESS STEEL OR ALLOY STEEL

1/4" - 2" (6 - 50 mm)

ASME CLASSES 150 - 2680

| SIZE | ASME 150         |    |      | ASME 300      |           |      | ASME 600      |     |               | ASME 800      |           |      |                  |     |      |               |               |      |           |     |    |
|------|------------------|----|------|---------------|-----------|------|---------------|-----|---------------|---------------|-----------|------|------------------|-----|------|---------------|---------------|------|-----------|-----|----|
|      | Bolted Bonnet    |    |      | Bolted Bonnet |           |      | Bolted Bonnet |     |               | Bolted Bonnet |           |      |                  |     |      | Welded Bonnet |               |      |           |     |    |
|      | Standard Bore    |    |      | Standard Bore |           |      | Standard Bore |     |               | Standard Bore |           |      | Full Bore        |     |      | Standard Bore |               |      | Full Bore |     |    |
| in   | WT               | LB | CV   | WT            | LB        | CV   | WT            | LB  | CV            | WT            | LB        | CV   | WT               | LB  | CV   | WT            | LB            | CV   | WT        | LB  | CV |
| mm   | FE               | KG |      | FE            | KG        |      | FE            | KG  |               | FE            | KG        |      | WE               | KG  |      | WE            | KG            |      | WE        | KG  |    |
| ¼    | -                | -  | -    | -             | -         | -    | -             | -   | -             | 4.2           | 5         | -    | -                | -   | -    | 3.7           | 5             | -    | -         | -   | -  |
| 6    | -                | -  | -    | -             | -         | -    | -             | -   | -             | 1.9           | -         | -    | -                | -   | -    | 1.7           | -             | -    | -         | -   | -  |
| 3/8  | -                | -  | -    | -             | -         | -    | -             | -   | -             | 4.2           | 8         | -    | -                | -   | -    | 3.7           | 8             | -    | -         | -   | -  |
| 10   | -                | -  | -    | -             | -         | -    | -             | -   | -             | 1.9           | -         | -    | -                | -   | -    | 1.7           | -             | -    | -         | -   | -  |
| ½    | 6.6              | -  | 13   | 7.9           | -         | 13   | 9.3           | -   | 13            | 4.4           | 13        | 7.3  | 13               | -   | -    | 4             | 13            | 7.1  | -         | 13  | -  |
| 13   | 3                | -  | -    | 3.6           | -         | -    | 4.2           | -   | -             | 2             | -         | 3.3  | -                | -   | -    | 1.8           | -             | 3.2  | -         | -   | -  |
| ¾    | 7.7              | -  | 13   | 10.8          | -         | 13   | 12.8          | -   | 13            | 4.9           | 13        | 8.4  | 25               | -   | -    | 4.4           | 13            | 8.2  | -         | 25  | -  |
| 19   | 3.5              | -  | -    | 4.9           | -         | -    | 5.8           | -   | -             | 2.2           | -         | 3.8  | -                | -   | -    | 2             | -             | 3.7  | -         | -   | -  |
| 1    | 12.1             | -  | 30   | 15.4          | -         | 30   | 19.4          | -   | 30            | 7.9           | 30        | 12.8 | 45               | -   | -    | 7.5           | 30            | 12.6 | -         | 45  | -  |
| 25   | 5.5              | -  | -    | 7             | -         | -    | 8.8           | -   | -             | 3.6           | -         | 5.8  | -                | -   | -    | 3.4           | -             | 5.7  | -         | -   | -  |
| 1¼   | 15               | -  | 70   | 20.7          | -         | 70   | 26.7          | -   | 70            | 13.7          | 70        | 14.8 | 70               | -   | -    | 11.7          | 70            | 14.6 | -         | 70  | -  |
| 32   | 6.8              | -  | -    | 9.4           | -         | -    | 12.1          | -   | -             | 6.2           | -         | 6.7  | -                | -   | -    | 5.3           | -             | 6.6  | -         | -   | -  |
| 1½   | 22.9             | -  | 70   | 29.3          | -         | 70   | 34.4          | -   | 70            | 13.7          | 70        | 22.7 | 110              | -   | -    | 13.2          | 70            | 22.5 | -         | 110 | -  |
| 38   | 10.4             | -  | -    | 13.3          | -         | -    | 15.6          | -   | -             | 6.2           | -         | 10.3 | -                | -   | -    | 6             | -             | 10.2 | -         | -   | -  |
| 2    | 31.7             | -  | 120  | 39.7          | -         | 80   | 43            | -   | 120           | 21.4          | 120       | 33.5 | 220              | -   | -    | 20.9          | 120           | 33.3 | -         | 220 | -  |
| 50   | 14.4             | -  | -    | 18            | -         | -    | 19.5          | -   | -             | 9.7           | -         | 15.2 | -                | -   | -    | 9.5           | -             | 15.1 | -         | -   | -  |
| SIZE | ASME 1500 & 1690 |    |      |               |           |      |               |     |               |               |           |      | ASME 2500 & 2680 |     |      |               |               |      |           |     |    |
|      | Bolted Bonnet    |    |      |               |           |      |               |     | Welded Bonnet |               |           |      | Bolted Bonnet    |     |      |               | Welded Bonnet |      |           |     |    |
|      | Standard Bore    |    |      |               | Full Bore |      |               |     | Standard Bore |               | Full Bore |      | Standard Bore    |     |      |               | Standard Bore |      |           |     |    |
| in   | WT               | LB | WT   | LB            | CV        | WT   | LB            | CV  | WT            | LB            | CV        | WT   | LB               | CV  | WT   | LB            | CV            | WT   | LB        | CV  |    |
| mm   | FE               | KG | WE   | KG            |           | WE   | KG            |     | WE            | KG            |           | WE   | KG               |     | WE   | KG            |               | WE   | KG        |     | WE |
| ¼    | -                | -  | 6.6  | -             | 5         | -    | -             | -   | 6.2           | 5             | -         | -    | -                | -   | -    | -             | -             | -    | -         | -   |    |
| 6    | -                | -  | 3    | -             | -         | -    | -             | -   | 2.8           | -             | -         | -    | -                | -   | -    | -             | -             | -    | -         | -   |    |
| 3/8  | -                | -  | 7.1  | -             | 13        | -    | -             | -   | 6.6           | 13            | -         | -    | -                | -   | -    | -             | -             | -    | -         | -   |    |
| 10   | -                | -  | 3.2  | -             | -         | -    | -             | -   | 3             | -             | -         | -    | -                | -   | -    | -             | -             | -    | -         | -   |    |
| ½    | 15.9             | -  | 7.7  | -             | 13        | 9.5  | -             | 13  | 7.3           | 13            | 9.3       | 13   | 21.6             | 20  | 15   | 20            | -             | -    | -         | -   |    |
| 13   | 7.2              | -  | 3.5  | -             | -         | 4.3  | -             | -   | 3.3           | -             | 4.2       | -    | 9.8              | -   | 6.8  | -             | -             | -    | -         | -   |    |
| ¾    | 25.4             | -  | 8.8  | -             | 13        | 13.9 | -             | 25  | 8.2           | 13            | 13.7      | 25   | 22               | 20  | 15.4 | 20            | -             | -    | -         | -   |    |
| 19   | 11.5             | -  | 4    | -             | -         | 6.3  | -             | -   | 3.7           | -             | 6.2       | -    | 10               | -   | 7    | -             | -             | -    | -         | -   |    |
| 1    | 34.4             | -  | 13.2 | -             | 25        | 16.1 | -             | 45  | 12.6          | 25            | 15.9      | 45   | 49.6             | 25  | 22   | 25            | -             | -    | -         | -   |    |
| 25   | 15.6             | -  | 6    | -             | -         | 7.3  | -             | -   | 5.7           | -             | 7.2       | -    | 22.5             | -   | 10   | -             | -             | -    | -         | -   |    |
| 1¼   | 35.7             | -  | 15.4 | -             | 45        | 24.7 | -             | 70  | 14.8          | 45            | 24.5      | 70   | 69.9             | 55  | 43.4 | 55            | -             | -    | -         | -   |    |
| 32   | 16.2             | -  | 7    | -             | -         | 11.2 | -             | -   | 6.7           | -             | 11.1      | -    | 31.7             | -   | 19.7 | -             | -             | -    | -         | -   |    |
| 1½   | 49.8             | -  | 23.8 | -             | 70        | 35.1 | -             | 110 | 23.1          | 70            | 34.8      | 110  | 70.5             | 70  | 57.3 | 70            | -             | -    | -         | -   |    |
| 38   | 22.6             | -  | 10.8 | -             | -         | 15.9 | -             | -   | 10.5          | -             | 15.8      | -    | 32               | -   | 26   | -             | -             | -    | -         | -   |    |
| 2    | 62.2             | -  | 34.2 | -             | 120       | 36.4 | -             | 220 | 33.5          | 120           | 36.2      | 220  | 83.8             | 120 | 69.9 | 120           | -             | -    | -         | -   |    |
| 50   | 28.2             | -  | 15.5 | -             | -         | 16.5 | -             | -   | 15.2          | -             | 16.4      | -    | 38               | -   | 31.7 | -             | -             | -    | -         | -   |    |

FE = Flanged Ends

WE = Socket Weld / Threaded Ends

WT = Weight

CV = Flow Coefficient