

# FORGED STEEL VALVES



DOUGLAS CHERO SpA  
**dc** FORGED VALVES



Our Factory

**Douglas Chero** was established in 1974, in the industrial area of Carpaneto Piacentino, Piacenza. The factory covers an area of 30,000 m<sup>2</sup> (of which 8,900 m<sup>2</sup> are building).

Since its early days, Douglas Chero specialized itself in the manufacturing of forged steel valves for petrochemical plants.

A brief resume of our range is as follows:

- **Types** gate, globe, piston check, ball check, swing check
- **Sizes** 1/4" up to 2"
- **Pressures** from class 150 to class 4500
- **Executions** OS&Y, ISRS.
- **Materials** carbon steel, stainless steel, alloys, special alloys (e.g. Monel®, Inconel®, Incoloy®, Hastelloy®, Duplex, Superduplex, etc.)

First production was of 3.000 pieces of valves per month with a 30,000 pieces of valves per month being currently manufactured.

**Registered Office**

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Phone: 02/70601536  
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**Factory, Sales & Administrative Offices**

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29013 Carpaneto Piacentino  
(PIACENZA) - ITALY  
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VALVES ARE MANUFACTURED ACCORDING TO **ISO 9001**.

CERTIFIED BY DET NORSKE VERITAS WITH No. SQ 0026-IT Rev. 01



VALVES ARE MANUFACTURED ACCORDING TO TÜV AD-Merkblatt  
**HP 0 / TRD 201** REGISTRATION No. 04702 6279

VALVES ARE MANUFACTURED ACCORDING TO RWTÜV  
**TRB 801 No. 45**



***PRODUCTION***

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**dc**



**DOUGLAS CHERO**  
**dc**

***GATE***  
***VALVES***



**dc**

**DOUGLAS CHERO**  
**dc**

***GLOBE***  
***VALVES***

**dc**



**DOUGLAS CHERO**  
**dc**

***CHECK  
VALVES***



### Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

### Test pressure (ASTM A105)

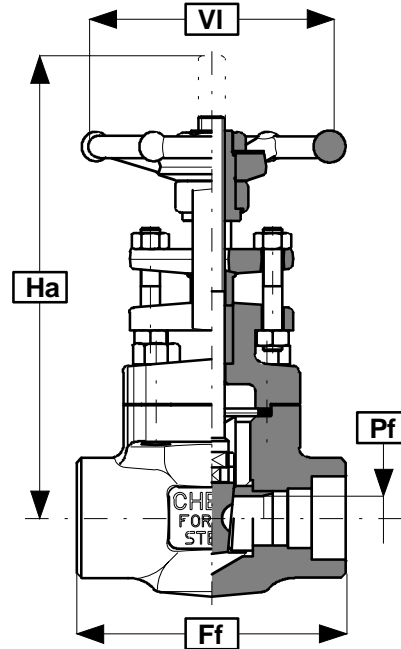
**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** API 602, BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-BS 6755 (Pt.1)

### Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |



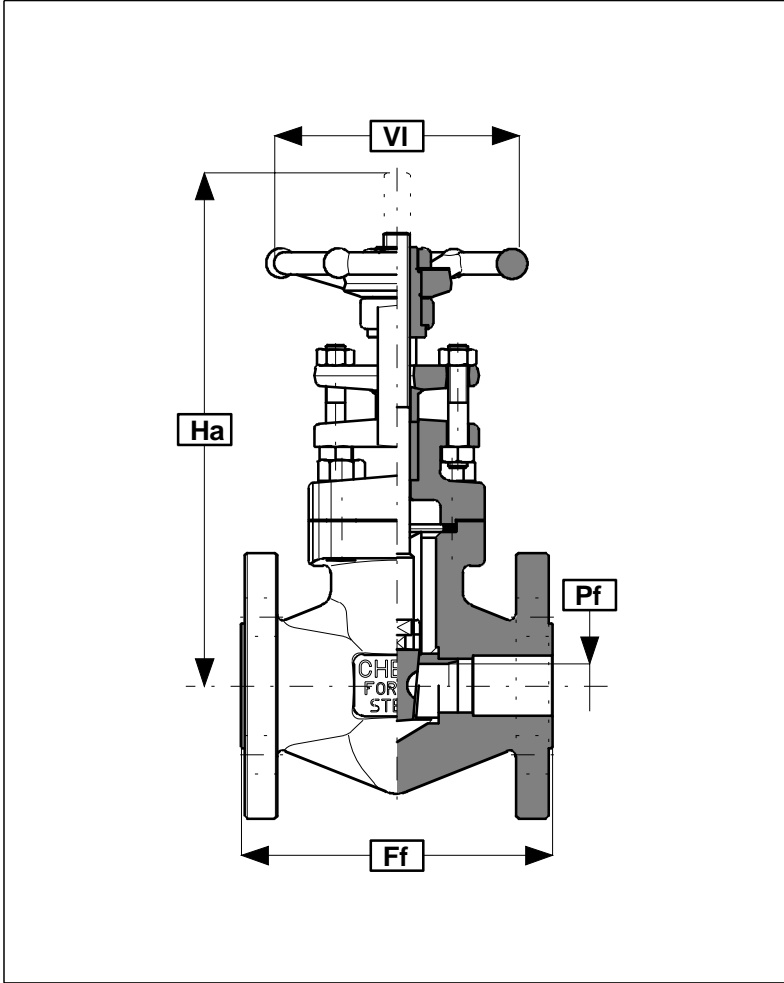
### CONVENTIONAL BORE

|                    |  |  | 1/2"     | 3/4"     | 1"       | 1.1/4"   | 1.1/2"    | 2"        |
|--------------------|--|--|----------|----------|----------|----------|-----------|-----------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15  | 90 3,54  | 110 4,33 | 127 5,00 | 127 5,00  | 130 5,12  |
| <b>Ha (mm/in)</b>  |  |  | 145 5,70 | 156 6,14 | 186 7,32 | 216 8,50 | 255 10,04 | 273 10,75 |
| <b>VI (mm/in)</b>  |  |  | 90 3,54  | 90 3,54  | 100 3,94 | 120 4,72 | 140 5,51  | 140 5,51  |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39  | 14 0,55  | 18 0,71  | 24 0,95  | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  |  | 1,7 3,74 | 2,1 4,62 | 3,3 7,3  | 5,2 11,4 | 7,0 15,4  | 9,1 20,0  |
| <b>Catal. no.</b>  |  |  | R252/xx  | R253/xx  | R254/xx  | R255/xx  | R256/xx   | R257/xx   |

### FULL BORE

|                    | 1/4"     | 3/8"     | 1/2"     | 3/4"     | 1"       | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 80 3,15  | 80 3,15  | 90 3,54  | 110 4,33 | 127 5,00 | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 143 5,63 | 145 5,71 | 156 6,14 | 186 7,32 | 216 8,50 | 255 10,04 | 273 10,75 | 334 13,15 |
| <b>VI (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54  | 100 3,94 | 120 4,72 | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 8,5 0,33 | 10 0,39  | 14 0,55  | 18 0,71  | 24 0,94  | 31 1,22   | 36,5 1,44 | 48 1,89   |
| <b>Wt. (kg/lb)</b> | 1,8 4,0  | 1,8 4,0  | 2,2 4,8  | 3,4 7,5  | 5,3 11,7 | 7,1 15,6  | 9,2 20,2  | 14,2 31,2 |
| <b>Catal. no.</b>  | F210/xx  | F211/xx  | F212/xx  | F213/xx  | F214/xx  | F215/xx   | F216/xx   | F217/xx   |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73



### Ratings (ASTM A105)

150 p.s.i. @ 550°F  
285 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic: (minimum)**  
Body - 450 p.s.i.  
Seat - 325 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** API 602, BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** API 598-BS 6755 (Pt.1)

### Connections (xx)

**RF** Raised face (std.)  
**FF** Flat finish

| CONVENTIONAL BORE  |  |           |      |           |      |           |      |           |       |           |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff (mm/in)</b>  |  | 107,9     | 4,25 | 117,5     | 4,63 | 127,0     | 5,00 | 165,1     | 6,50  | 177,8     | 7,00  |
| <b>Ha (mm/in)</b>  |  | 179       | 7,05 | 186       | 7,32 | 208       | 8,19 | 255       | 10,04 | 273       | 10,75 |
| <b>VI (mm/in)</b>  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 | 140       | 5,51  | 140       | 5,51  |
| <b>Pf (mm/in)</b>  |  | 10        | 0,39 | 14        | 0,55 | 18        | 0,71 | 31        | 1,22  | 36,5      | 1,44  |
| <b>Wt. (kg/lb)</b> |  | 3,2       | 7,0  | 4,1       | 9,0  | 5,8       | 12,8 | 10        | 22,0  | 13,1      | 28,8  |
| <b>Catal. no.</b>  |  | R252/15xx |      | R253/15xx |      | R254/15xx |      | R256/15xx |       | R257/15xx |       |

| FULL BORE          |  |           |      |           |      |           |      |           |       |           |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff (mm/in)</b>  |  | 107,9     | 4,25 | 117,5     | 4,63 | 127,0     | 5,00 | 165,1     | 6,50  | 177,8     | 7,00  |
| <b>Ha (mm/in)</b>  |  | 183       | 7,20 | 191       | 7,52 | 216       | 8,50 | 273       | 10,75 | 314       | 12,36 |
| <b>VI (mm/in)</b>  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 | 140       | 5,51  | 200       | 7,87  |
| <b>Pf (mm/in)</b>  |  | 14        | 0,55 | 18        | 0,71 | 24        | 0,94 | 36,5      | 1,44  | 48        | 1,89  |
| <b>Wt. (kg/lb)</b> |  | 3,1       | 6,8  | 4         | 8,8  | 5,7       | 12,5 | 12,6      | 27,7  | 15,8      | 34,8  |
| <b>Catal. no.</b>  |  | F212/15xx |      | F213/15xx |      | F214/15xx |      | F216/15xx |       | F217/15xx |       |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74, 75



# GATE VALVES - 300 - Bolted bonnet - Flanged Rf/Rj

## Ratings (ASTM A105)

300 p.s.i. @ 850°F  
740 p.s.i. @ 100°F

## Test pressure (ASTM A105)

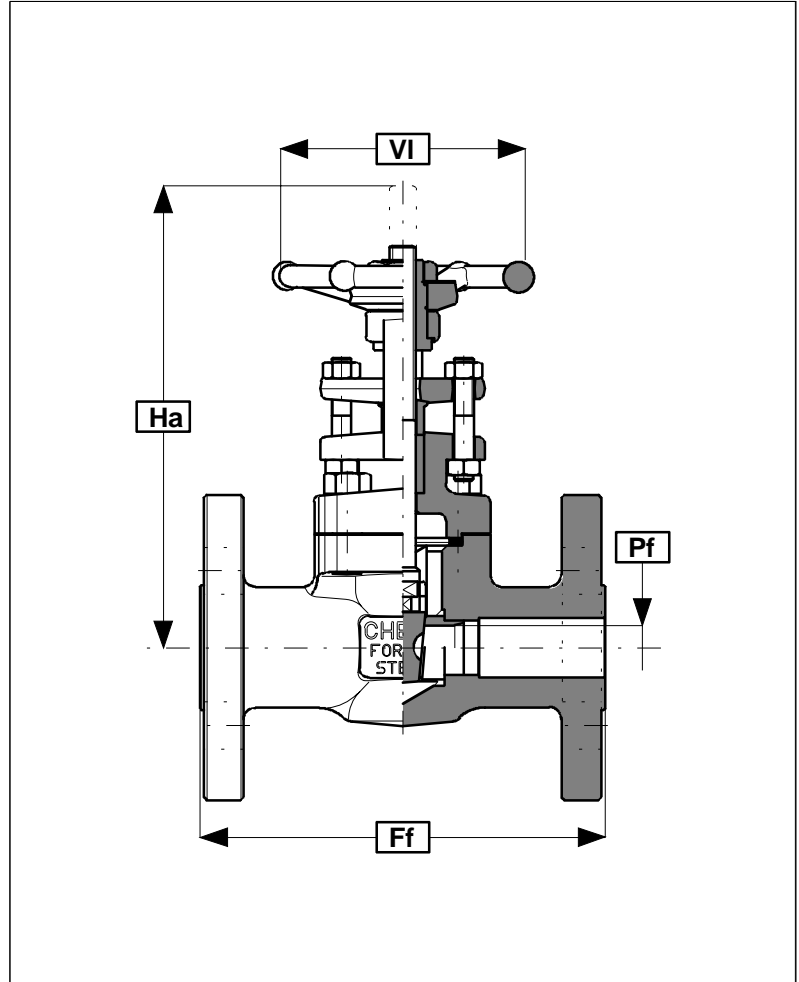
**Hydraulic:** (minimum)  
Body - 1125 p.s.i.  
Seat - 825 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** API 602, BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** API 598-BS 6755 (Pt.1)

## Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |



| CONVENTIONAL BORE  |  |           |      |           |      |           |      |           |       |           |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff</b> (mm/in)  |  | 139,7     | 5,50 | 152,4     | 6,00 | 165,1     | 6,50 | 190,5     | 7,50  | 215,9     | 8,50  |
| <b>Ha</b> (mm/in)  |  | 145       | 5,71 | 156       | 6,14 | 186       | 7,32 | 255       | 10,04 | 273       | 10,75 |
| <b>VI</b> (mm/in)  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 | 140       | 5,51  | 140       | 5,51  |
| <b>Pf</b> (mm/in)  |  | 10        | 0,39 | 14        | 0,55 | 18        | 0,71 | 31        | 1,22  | 36,5      | 1,44  |
| <b>Wt.</b> (kg/lb) |  | 3,8       | 8,4  | 5,4       | 11,9 | 6,5       | 14,3 | 13,1      | 28,8  | 17,3      | 38,1  |
| <b>Catal. no.</b>  |  | R252/30xx |      | R253/30xx |      | R254/30xx |      | R256/30xx |       | R257/30xx |       |

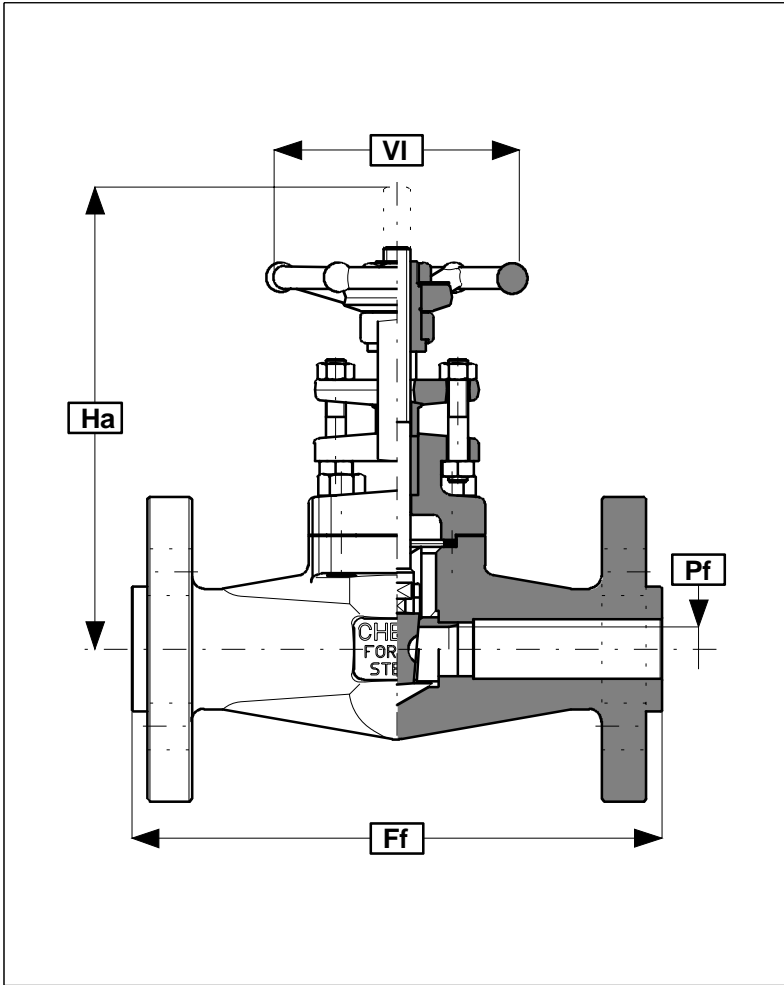
| FULL BORE          |  |           |      |           |      |           |      |           |       |           |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff</b> (mm/in)  |  | 139,7     | 5,50 | 152,4     | 6,00 | 165,1     | 6,5  | 190,5     | 7,50  | 215,9     | 8,50  |
| <b>Ha</b> (mm/in)  |  | 193       | 7,60 | 190       | 7,48 | 216       | 8,50 | 273       | 10,75 | 314       | 12,36 |
| <b>VI</b> (mm/in)  |  | 90        | 3,54 | 100       | 3,94 | 120       | 4,72 | 140       | 5,51  | 200       | 7,87  |
| <b>Pf</b> (mm/in)  |  | 14        | 0,55 | 18        | 0,71 | 24        | 0,94 | 36,5      | 1,44  | 48        | 1,89  |
| <b>Wt.</b> (kg/lb) |  | 4,5       | 9,9  | 6,0       | 13,2 | 7,6       | 16,7 | 14,0      | 32,6  | 18,8      | 41,4  |
| <b>Catal. no.</b>  |  | F212/30xx |      | F213/30xx |      | F214/30xx |      | F216/30xx |       | F217/30xx |       |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to face dimensions on page 74,75





# GATE VALVES - 600 - Bolted bonnet - Flanged Rf/Rj



### Ratings (ASTM A105)

600 p.s.i. @ 850°F  
1480 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 2225 p.s.i.  
Seat - 1650 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** API 602, BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** API 598-BS 6755 (Pt.1)

### Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |

| CONVENTIONAL BORE  |  |  |           |      |           |      |           |      |  |           |       |           |       |
|--------------------|--|--|-----------|------|-----------|------|-----------|------|--|-----------|-------|-----------|-------|
|                    |  |  | 1/2"      |      | 3/4"      |      | 1"        |      |  | 1.1/2"    |       | 2"        |       |
| <b>Ff (mm/in)</b>  |  |  | 165,1     | 6,50 | 190,5     | 7,50 | 215,9     | 8,50 |  | 241,3     | 9,50  | 292,1     | 11,50 |
| <b>Ha (mm/in)</b>  |  |  | 145       | 5,71 | 156       | 6,14 | 186       | 7,32 |  | 255       | 10,04 | 273       | 10,75 |
| <b>VI (mm/in)</b>  |  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 |  | 140       | 5,51  | 140       | 5,51  |
| <b>Pf (mm/in)</b>  |  |  | 10        | 0,39 | 14        | 0,55 | 18        | 0,71 |  | 31        | 1,22  | 36,5      | 1,44  |
| <b>Wt. (kg/lb)</b> |  |  | 3,5       | 7,7  | 5,8       | 12,8 | 7,4       | 16,3 |  | 14,3      | 31,5  | 18,8      | 41,4  |
| <b>Catal. no.</b>  |  |  | R252/60xx |      | R253/60xx |      | R254/60xx |      |  | R256/60xx |       | R257/60xx |       |

| FULL BORE          |  |  |           |      |           |      |           |      |  |           |       |           |       |
|--------------------|--|--|-----------|------|-----------|------|-----------|------|--|-----------|-------|-----------|-------|
|                    |  |  | 1/2"      |      | 3/4"      |      | 1"        |      |  | 1.1/2"    |       | 2"        |       |
| <b>Ff (mm/in)</b>  |  |  | 165,1     | 6,50 | 190,5     | 7,50 | 215,9     | 8,50 |  | 241,3     | 9,50  | 292,1     | 11,50 |
| <b>Ha (mm/in)</b>  |  |  | 176       | 6,93 | 206       | 8,11 | 216       | 8,50 |  | 255       | 10,04 | 334       | 13,15 |
| <b>VI (mm/in)</b>  |  |  | 90        | 3,54 | 100       | 3,94 | 120       | 4,72 |  | 140       | 5,51  | 200       | 7,87  |
| <b>Pf (mm/in)</b>  |  |  | 14        | 0,55 | 18        | 0,71 | 24        | 0,94 |  | 34        | 1,34  | 48        | 1,89  |
| <b>Wt. (kg/lb)</b> |  |  | 3,9       | 8,6  | 7,0       | 15,4 | 10,3      | 22,7 |  | 16,5      | 36,3  | 25,0      | 55,0  |
| <b>Catal. no.</b>  |  |  | F212/60xx |      | F213/60xx |      | F214/60xx |      |  | F216/60xx |       | F217/60xx |       |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on pag 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75





# GATE VALVES - 800 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

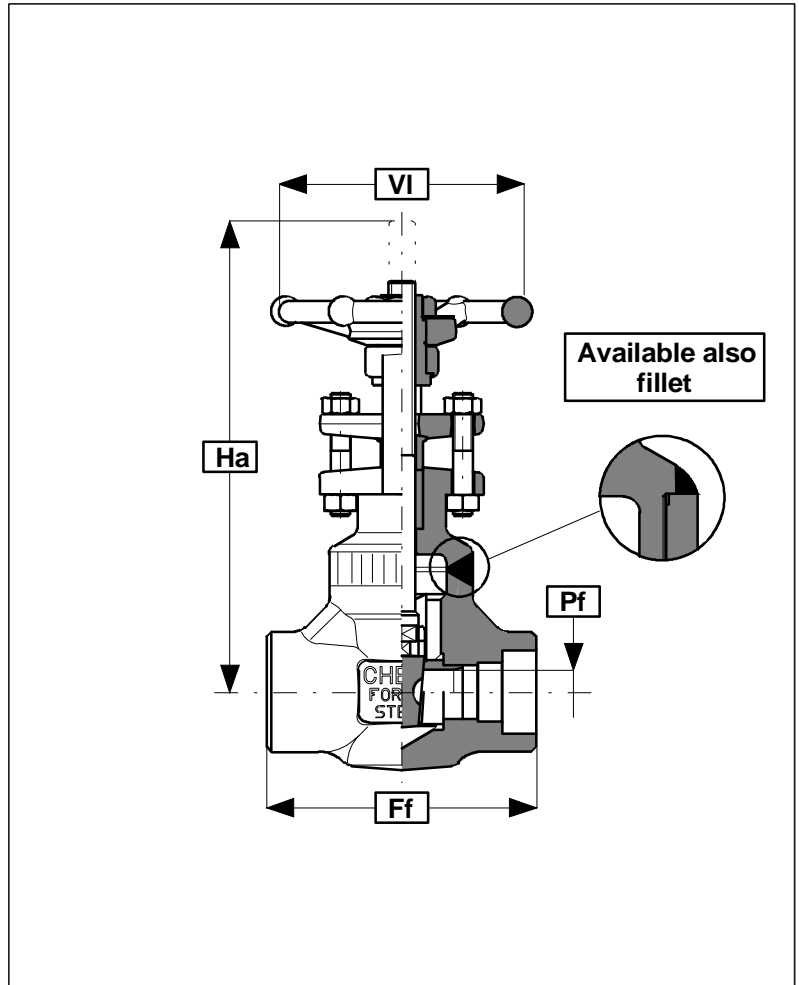
**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** API 602, BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |



## CONVENTIONAL BORE

|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|--|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  |
| <b>Ha (mm/in)</b>  |  |  | 150 5,91  | 157 6,18  | 188 7,40  | 220 8,66  | 248 9,76  | 274 10,79 |
| <b>VI (mm/in)</b>  |  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  |  | 1,4 3,1   | 1,7 3,7   | 2,8 6,2   | 4,4 9,7   | 5,6 12,3  | 7,6 16,7  |
| <b>Catal. no.</b>  |  |  | R252WB/xx | R253WB/xx | R254WB/xx | R255WB/xx | R256WB/xx | R257WB/xx |

## FULL BORE

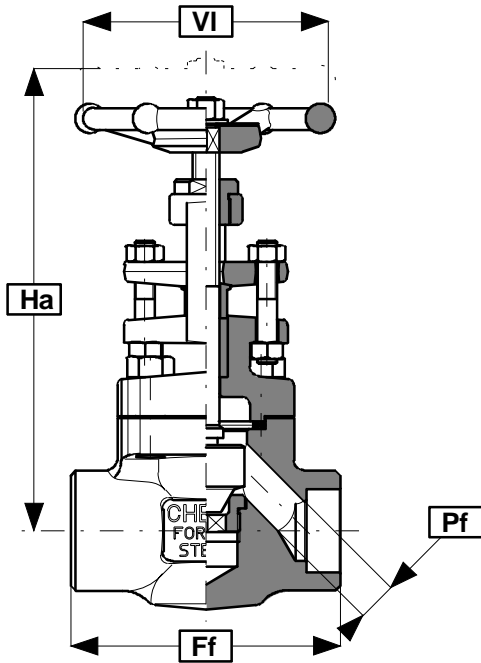
|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 150 5,91  | 150 5,91  | 157 6,18  | 188 7,40  | 220 8,66  | 248 9,76  | 274 10,79 | 334 13,15 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 8,5 0,33  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 | 48 1,9    |
| <b>Wt. (kg/lb)</b> | 1,5 3,3   | 1,5 3,3   | 1,8 4,0   | 2,9 6,4   | 4,5 9,9   | 5,7 12,5  | 7,7 16,9  | 12,2 26,8 |
| <b>Catal. no.</b>  | F210WB/xx | F211WB/xx | F212WB/xx | F213WB/xx | F214WB/xx | F215WB/xx | F216WB/xx | F217WB/xx |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# GLOBE VALVES - 800 - Bolted bonnet - Sw/Npt/Bw



## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TS</b> SW/NPT       |                        |
| <b>TH</b> Threaded NPT |                        |
| <b>SE</b> SW (in)/NPT  |                        |
| <b>SU</b> SW (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |

## REDUCED BORE

|                    |  |  | 1/2"     | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
|--------------------|--|--|----------|-----------|-----------|-----------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15  | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>  |  |  | 152 5,98 | 159 6,26  | 182 7,17  | 214 8,43  | 283 11,14              | 306 12,05              |
| <b>VI (mm/in)</b>  |  |  | 90 3,54  | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               |
| <b>Pf (mm/in)</b>  |  |  | 9 0,35   | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b> |  |  | 1,7 3,7  | 2 4,4     | 3,2 7,0   | 5,3 11,7  | 7,8 17,2               | 10,6 23,3              |
| <b>Catal. no.</b>  |  |  | R352/xx  | R353/xx   | R354/xx   | R355/xx   | R356/xx                | R357/xx                |

## FULL BORE

|                    | 1/4"     | 3/8"     | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
|--------------------|----------|----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  | 80 3,15  | 80 3,15  | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>  | 150 5,91 | 152 5,98 | 159 6,26  | 182 7,17  | 214 8,43  | 283 11,14              | 306 12,05              | 327 12,87              |
| <b>VI (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               | 200 7,87               |
| <b>Pf (mm/in)</b>  | 6 0,24   | 9 0,35   | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 40 <sup>(6)</sup> 1,57 |
| <b>Wt. (kg/lb)</b> | 1,8 4,0  | 1,8 4,0  | 2,1 4,6   | 3,3 7,3   | 5,4 11,9  | 7,9 17,4               | 10,7 23,5              | 16 35,2                |
| <b>Catal. no.</b>  | F310/xx  | F311/xx  | F312/xx   | F313/xx   | F314/xx   | F315/xx                | F316/xx                | F317/xx                |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) SW, NPT & BW dimensions on page 73

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat  
6) Pf = 45 with integral stellited seat





# GLOBE VALVES - 150 - Bolted bonnet - Flanged Rf

## Ratings (ASTM A105)

150 p.s.i. @ 550°F  
285 p.s.i. @ 100°F

## Test pressure (ASTM A105)

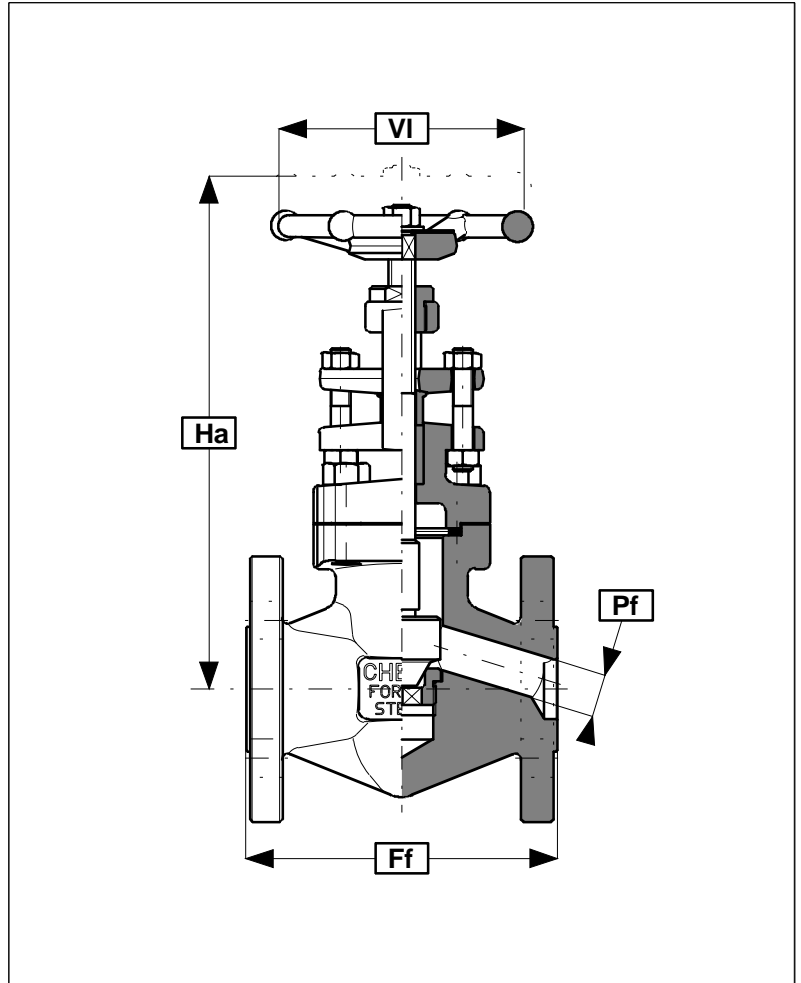
**Hydraulic:** (minimum)  
Body - 450 p.s.i.  
Seat - 325 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

**RF** Raised face (std.)  
**FF** Flat finish



| REDUCED BORE       |  |           |      |           |      |           |      |                   |       |                   |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-------------------|-------|-------------------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"            |       | 2"                |       |
| <b>Ff</b> (mm/in)  |  | 107,9     | 4,25 | 117,5     | 4,63 | 127,0     | 5,00 | 165,1             | 6,50  | 203,2             | 8,00  |
| <b>Ha</b> (mm/in)  |  | 186       | 7,32 | 189       | 7,44 | 203       | 7,99 | 283               | 11,14 | 314               | 12,36 |
| <b>VI</b> (mm/in)  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 | 140               | 5,51  | 140               | 5,51  |
| <b>Pf</b> (mm/in)  |  | 9         | 0,35 | 12,5      | 0,49 | 17,5      | 0,69 | 28 <sup>(4)</sup> | 1,10  | 32 <sup>(5)</sup> | 1,26  |
| <b>Wt.</b> (kg/lb) |  | 3,1       | 6,8  | 4         | 8,8  | 5,7       | 12,5 | 10,6              | 23,3  | 15,4              | 33,9  |
| <b>Catal. no.</b>  |  | R352/15xx |      | R353/15xx |      | R354/15xx |      | R356/15xx         |       | R357/15xx         |       |

| FULL BORE          |  |           |      |           |      |           |      |           |       |           |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff</b> (mm/in)  |  | 107,9     | 4,25 | 117,5     | 4,63 | 127,0     | 5,00 | 165,1     | 6,50  | 203,2     | 8,00  |
| <b>Ha</b> (mm/in)  |  | 188       | 7,40 | 192       | 7,56 | 207       | 8,15 | 283       | 11,14 | 314       | 12,36 |
| <b>VI</b> (mm/in)  |  | 90        | 3,54 | 100       | 3,94 | 120       | 4,72 | 140       | 5,51  | 200       | 7,87  |
| <b>Pf</b> (mm/in)  |  | 12,5      | 0,49 | 17,5      | 0,69 | 22,5      | 0,89 | 32        | 1,26  | 38        | 1,57  |
| <b>Wt.</b> (kg/lb) |  | 3         | 6,6  | 3,9       | 8,6  | 5,6       | 12,3 | 10,6      | 23,3  | 15,8      | 34,8  |
| <b>Catal. no.</b>  |  | F312/15xx |      | F313/15xx |      | F314/15xx |      | F316/15xx |       | F317/15xx |       |

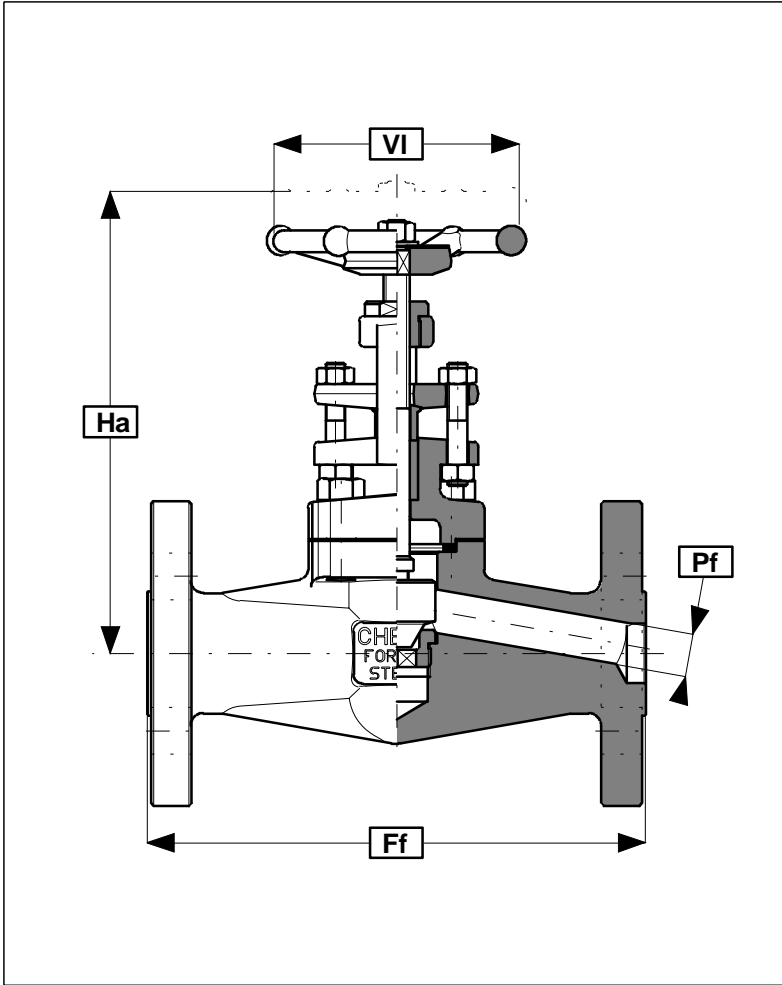
1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat





# GLOBE VALVES - 300 - Bolted bonnet - Flanged Rf/Rj



## Ratings (ASTM A105)

300 p.s.i. @ 850°F  
740 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 1125 p.s.i.  
Seat - 825 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |

| REDUCED BORE       |  |           |      |           |      |           |      |                   |       |                   |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-------------------|-------|-------------------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"            |       | 2"                |       |
| <b>Ff (mm/in)</b>  |  | 152,4     | 5,98 | 177,8     | 7,00 | 203,2     | 8,00 | 228,6             | 9,00  | 266,7             | 10,50 |
| <b>Ha (mm/in)</b>  |  | 152       | 5,98 | 159       | 6,26 | 182       | 7,17 | 283               | 11,14 | 306               | 12,05 |
| <b>VI (mm/in)</b>  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 | 140               | 5,51  | 140               | 5,51  |
| <b>Pf (mm/in)</b>  |  | 9         | 0,35 | 12,5      | 0,49 | 17,5      | 0,69 | 28 <sup>(4)</sup> | 1,10  | 32 <sup>(5)</sup> | 1,26  |
| <b>Wt. (kg/lb)</b> |  | 3,4       | 7,5  | 4,8       | 10,6 | 7,0       | 15,4 | 14,2              | 31,2  | 17,4              | 38,3  |
| <b>Catal. no.</b>  |  | R352/30xx |      | R353/30xx |      | R354/30xx |      | R356/30xx         |       | R357/30xx         |       |

| FULL BORE          |  |           |      |           |      |           |      |           |       |           |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff (mm/in)</b>  |  | 152,4     | 5,98 | 177,8     | 7,00 | 203,2     | 8,00 | 228,6     | 9,00  | 266,7     | 10,50 |
| <b>Ha (mm/in)</b>  |  | 152       | 5,98 | 159       | 6,26 | 182       | 7,17 | 283       | 11,14 | 306       | 12,05 |
| <b>VI (mm/in)</b>  |  | 90        | 3,54 | 100       | 3,94 | 120       | 4,72 | 140       | 5,51  | 200       | 7,87  |
| <b>Pf (mm/in)</b>  |  | 13        | 0,51 | 17,5      | 0,69 | 22,5      | 0,89 | 34        | 1,34  | 45        | 1,77  |
| <b>Wt. (kg/lb)</b> |  | 3,4       | 7,5  | 4,8       | 10,6 | 7,0       | 15,4 | 14,2      | 31,2  | 17,4      | 38,3  |
| <b>Catal. no.</b>  |  | F312/30xx |      | F313/30xx |      | F314/30xx |      | F316/30xx |       | F317/30xx |       |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat





# GLOBE VALVES - 600 - Bolted bonnet - Flanged Rf/Rj

## Ratings (ASTM A105)

600 p.s.i. @ 850°F  
1480 p.s.i. @ 100°F

## Test pressure (ASTM A105)

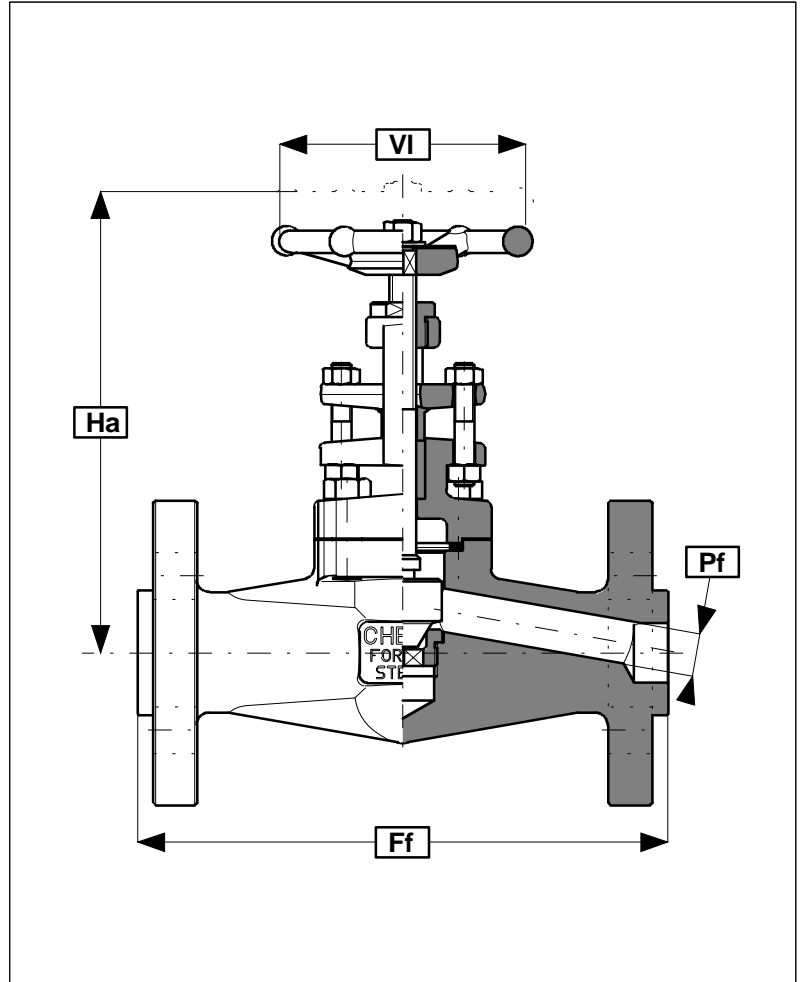
**Hydraulic:** (minimum)  
Body - 2225 p.s.i.  
Seat - 1650 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |



## REDUCED BORE

|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"            |       | 2"                |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-------------------|-------|-------------------|-------|
| <b>Ff (mm/in)</b>  |  | 165,1     | 6,50 | 190,5     | 7,50 | 215,9     | 8,50 | 241,3             | 9,50  | 292,1             | 11,50 |
| <b>Ha (mm/in)</b>  |  | 152       | 5,98 | 159       | 6,26 | 182       | 7,17 | 283               | 11,14 | 306               | 12,05 |
| <b>VI (mm/in)</b>  |  | 90        | 3,54 | 90        | 3,54 | 100       | 3,94 | 140               | 5,51  | 140               | 5,51  |
| <b>Pf (mm/in)</b>  |  | 9         | 0,35 | 12,5      | 0,49 | 17,5      | 0,69 | 28 <sup>(4)</sup> | 1,10  | 32 <sup>(5)</sup> | 1,26  |
| <b>Wt. (kg/lb)</b> |  | 3,6       | 7,9  | 5,1       | 11,2 | 7,8       | 17,2 | 14,2              | 31,2  | 19,4              | 42,7  |
| <b>Catal. no.</b>  |  | R352/60xx |      | R353/60xx |      | R354/60xx |      | R356/60xx         |       | R357/60xx         |       |

## FULL BORE

|                    |  | 1/2"      |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
|--------------------|--|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
| <b>Ff (mm/in)</b>  |  | 165,1     | 6,50 | 190,5     | 7,50 | 215,9     | 8,50 | 241,3     | 9,50  | 292,1     | 11,50 |
| <b>Ha (mm/in)</b>  |  | 159       | 6,26 | 182       | 7,17 | 214       | 8,43 | 306       | 12,05 | 327       | 12,87 |
| <b>VI (mm/in)</b>  |  | 90        | 3,54 | 100       | 3,94 | 120       | 4,72 | 140       | 5,51  | 200       | 7,87  |
| <b>Pf (mm/in)</b>  |  | 12        | 0,47 | 17,5      | 0,69 | 22,5      | 0,89 | 34        | 1,34  | 45        | 1,77  |
| <b>Wt. (kg/lb)</b> |  | 3,8       | 8,4  | 6,8       | 15,0 | 10,3      | 22,7 | 17,8      | 39,2  | 26,8      | 59,0  |
| <b>Catal. no.</b>  |  | F312/60xx |      | F313/60xx |      | F314/60xx |      | F316/60xx |       | F317/60xx |       |

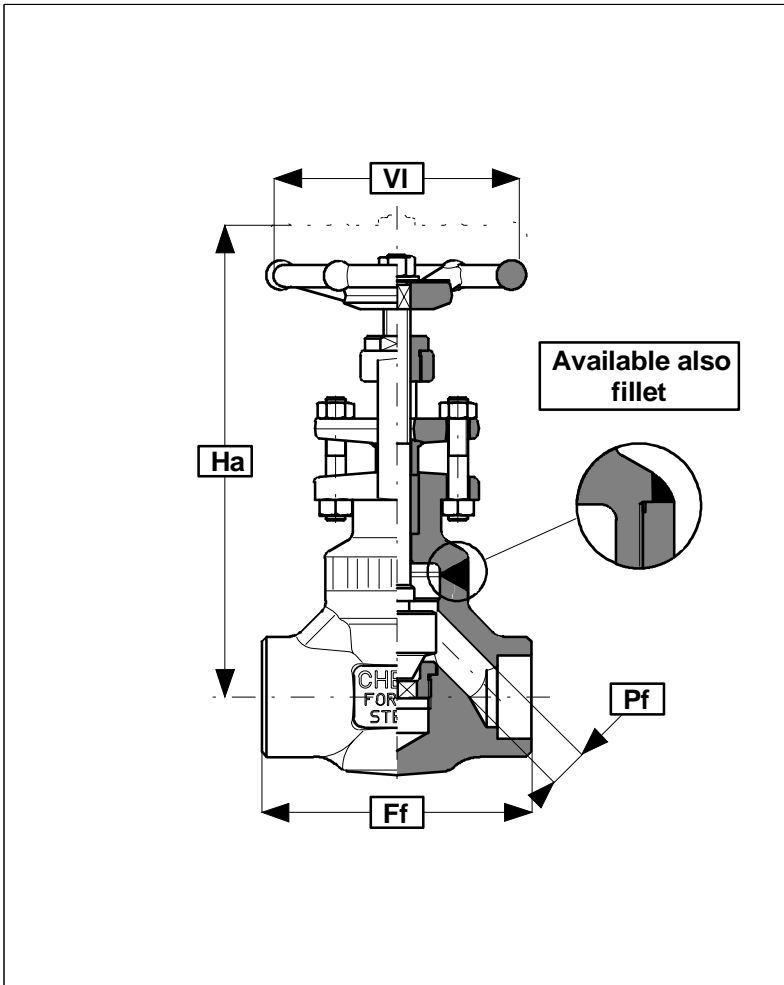
1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat





# GLOBE VALVES - 800 - Welded bonnet - Sw/Npt/Bw



### Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

|                     |                |
|---------------------|----------------|
| <b>Construction</b> | BS 5352        |
| <b>Socket weld</b>  | ASME B16.11    |
| <b>Threaded</b>     | ASME B1.20.1   |
| <b>Butt weld</b>    | ASME B16.25    |
| <b>Test</b>         | BS 6755 (Pt.1) |

### Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TS</b> Sw/NPT       |                        |
| <b>TH</b> Threaded NPT |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |

| REDUCED BORE       |  |  |           |           |           |           |                        |                        |
|--------------------|--|--|-----------|-----------|-----------|-----------|------------------------|------------------------|
|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
| <b>Ff (mm/in)</b>  |  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>  |  |  | 153 6,02  | 158 6,22  | 179 7,05  | 220 8,66  | 250 9,84               | 274 10,79              |
| <b>VI (mm/in)</b>  |  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               |
| <b>Pf (mm/in)</b>  |  |  | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b> |  |  | 1,4 3,1   | 1,6 3,5   | 3 6,6     | 4,8 10,6  | 6,8 15,0               | 9,4 20,7               |
| <b>Catal. no.</b>  |  |  | R352WB/xx | R353WB/xx | R354WB/xx | R355WB/xx | R356WB/xx              | R357WB/xx              |

| FULL BORE          |           |           |           |           |           |                        |                        |                        |
|--------------------|-----------|-----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>  | 150 5,91  | 153 6,02  | 158 6,22  | 179 7,05  | 220 8,66  | 250 9,84               | 274 10,79              | 327 12,87              |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               | 200 7,87               |
| <b>Pf (mm/in)</b>  | 6,5 0,26  | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 38 <sup>(6)</sup> 1,50 |
| <b>Wt. (kg/lb)</b> | 1,4 3,1   | 1,4 3,1   | 1,6 3,5   | 3,0 6,6   | 4,8 10,7  | 6,8 15,0               | 9,4 20,7               | 14,6 32,1              |
| <b>Catal. no.</b>  | F310WB/xx | F311WB/xx | F312WB/xx | F313WB/xx | F314WB/xx | F315WB/xx              | F316WB/xx              | F317WB/xx              |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat  
6) Pf = 42 with integral stellited seat





# CHECK VALVES - 800 - Bolted cover - Sw/Npt/Bw

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

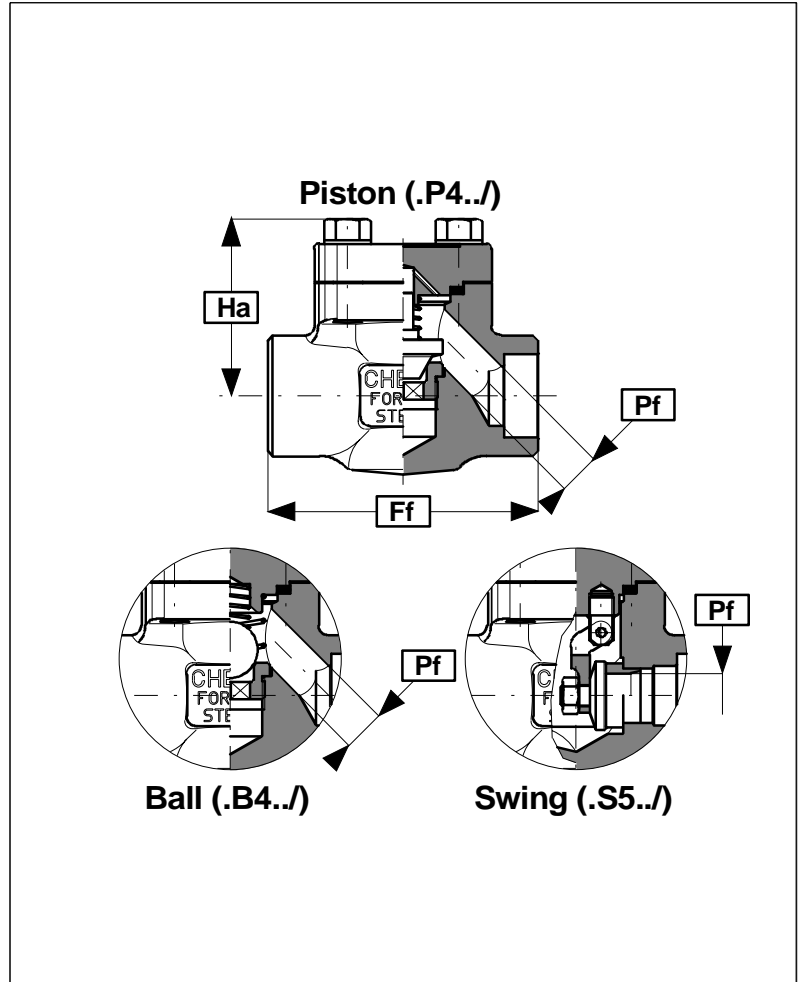
**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
not applicable

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |



## REDUCED BORE

|                                 | 1/2"     | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
|---------------------------------|----------|-----------|-----------|-----------|------------------------|------------------------|
| <b>Ff (mm/in)</b>               | 80 3,15  | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>               | 50 1,97  | 56 2,20   | 74 2,91   | 79 3,11   | 100 3,94               | 109 4,29               |
| <b>Pf<sup>(7)</sup> (mm/in)</b> | 9 0,35   | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b>              | 1,1 2,4  | 1,8 4,0   | 2,6 5,7   | 3,6 7,9   | 5,5 12,1               | 8,4 18,5               |
| <b>Catal. no.</b>               | Rtt52/xx | Rtt53/xx  | Rtt54/xx  | Rtt55/xx  | Rtt56/xx               | Rtt57/xx               |

## FULL BORE

|                                 | 1/4"     | 3/8"     | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
|---------------------------------|----------|----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
| <b>Ff (mm/in)</b>               | 80 3,15  | 80 3,15  | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>               | 50 1,97  | 50 1,97  | 56 2,20   | 74 2,91   | 79 3,11   | 100 3,94               | 109 4,29               | 135 5,31               |
| <b>Pf<sup>(7)</sup> (mm/in)</b> | 6,5 0,26 | 9 0,35   | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 38 <sup>(6)</sup> 1,50 |
| <b>Wt. (kg/lb)</b>              | 1,1 2,4  | 1,1 2,4  | 1,8 4,0   | 2,6 5,7   | 3,6 7,9   | 5,5 12,1               | 8,4 18,5               | 11,8 26,0              |
| <b>Catal. no.</b>               | Ftt10/xx | Ftt11/xx | Ftt12/xx  | Ftt13/xx  | Ftt14/xx  | Ftt15/xx               | Ftt16/xx               | Ftt17/xx               |

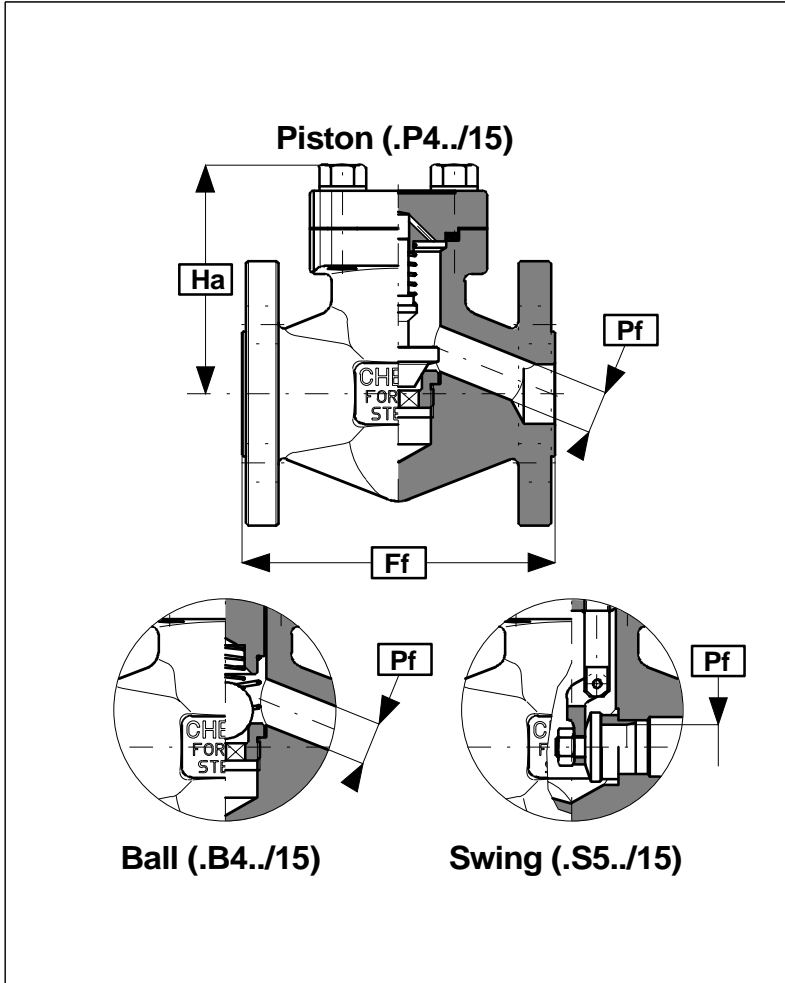
1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) SW, NPT & BW dimensions on page 73

4) Pf = 29,5 with integral stellite seat  
5) Pf = 35 with integral stellite seat  
6) Pf = 42 with integral stellite seat

7) Dimensions for piston & ball type; for swing see pag.4  
8) Code It is replaced by kind of check valve (drawing above)



# CHECK VALVES - 150 - Bolted cover - Flanged Rf



## Ratings (ASTM A105)

150 p.s.i. @ 550°F  
285 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic: (minimum)**  
Body - 450 p.s.i.  
Seat - 325 p.s.i.  
**Air under water:**  
not applicable

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

**RF** Raised face (std.)  
**FF** Flat finish

| REDUCED BORE                    |  |  |            |      |            |      |            |      |                   |      |                   |      |
|---------------------------------|--|--|------------|------|------------|------|------------|------|-------------------|------|-------------------|------|
|                                 |  |  | 1/2"       |      | 3/4"       |      | 1"         |      | 1.1/2"            |      | 2"                |      |
| <b>Ff (mm/in)</b>               |  |  | 107,9      | 4,25 | 117,5      | 4,63 | 127,0      | 5,00 | 165,1             | 6,50 | 203,2             | 8,00 |
| <b>Ha (mm/in)</b>               |  |  | 84         | 3,31 | 87         | 3,43 | 92         | 3,62 | 97                | 3,82 | 124               | 4,88 |
| <b>Pf<sup>(6)</sup> (mm/in)</b> |  |  | 9          | 0,35 | 12,5       | 0,49 | 17,5       | 0,69 | 28 <sup>(4)</sup> | 1,10 | 32 <sup>(5)</sup> | 1,26 |
| <b>Wt. (kg/lb)</b>              |  |  | 2,6        | 5,7  | 3,8        | 8,4  | 5,1        | 11,2 | 8,4               | 18,5 | 14,2              | 31,2 |
| <b>Catal. no.</b>               |  |  | Rtt52/15xx |      | Rtt53/15xx |      | Rtt54/15xx |      | Rtt56/15xx        |      | Rtt57/15xx        |      |

| FULL BORE                       |  |  |            |      |            |      |            |      |            |      |            |      |
|---------------------------------|--|--|------------|------|------------|------|------------|------|------------|------|------------|------|
|                                 |  |  | 1/2"       |      | 3/4"       |      | 1"         |      | 1.1/2"     |      | 2"         |      |
| <b>Ff (mm/in)</b>               |  |  | 107,9      | 4,25 | 117,5      | 4,63 | 127,0      | 5,00 | 165,1      | 6,50 | 203,2      | 6,50 |
| <b>Ha (mm/in)</b>               |  |  | 84         | 3,31 | 87         | 3,43 | 92         | 3,62 | 110        | 4,33 | 124        | 4,88 |
| <b>Pf<sup>(6)</sup> (mm/in)</b> |  |  | 12,5       | 0,49 | 17,5       | 0,69 | 22,5       | 0,89 | 32         | 1,38 | 38         | 1,50 |
| <b>Wt. (kg/lb)</b>              |  |  | 2,6        | 5,7  | 3,8        | 8,4  | 5,1        | 11,2 | 8,4        | 18,5 | 14,7       | 31,2 |
| <b>Catal. no.</b>               |  |  | Ftt12/15xx |      | Ftt13/15xx |      | Ftt14/15xx |      | Ftt16/15xx |      | Ftt17/15xx |      |

1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70,71,72  
3) Flanges & face-to-face dimensions on page 74,75

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat  
6) Dimensions for piston & ball type; for swing see page 4

7) Code tt is replaced by kind of check valve (drawing above)





# CHECK VALVES - 300 - Bolted cover - Flanged Rf/Rj

## Ratings (ASTM A105)

300 p.s.i. @ 850°F  
740 p.s.i. @ 100°F

## Test pressure (ASTM A105)

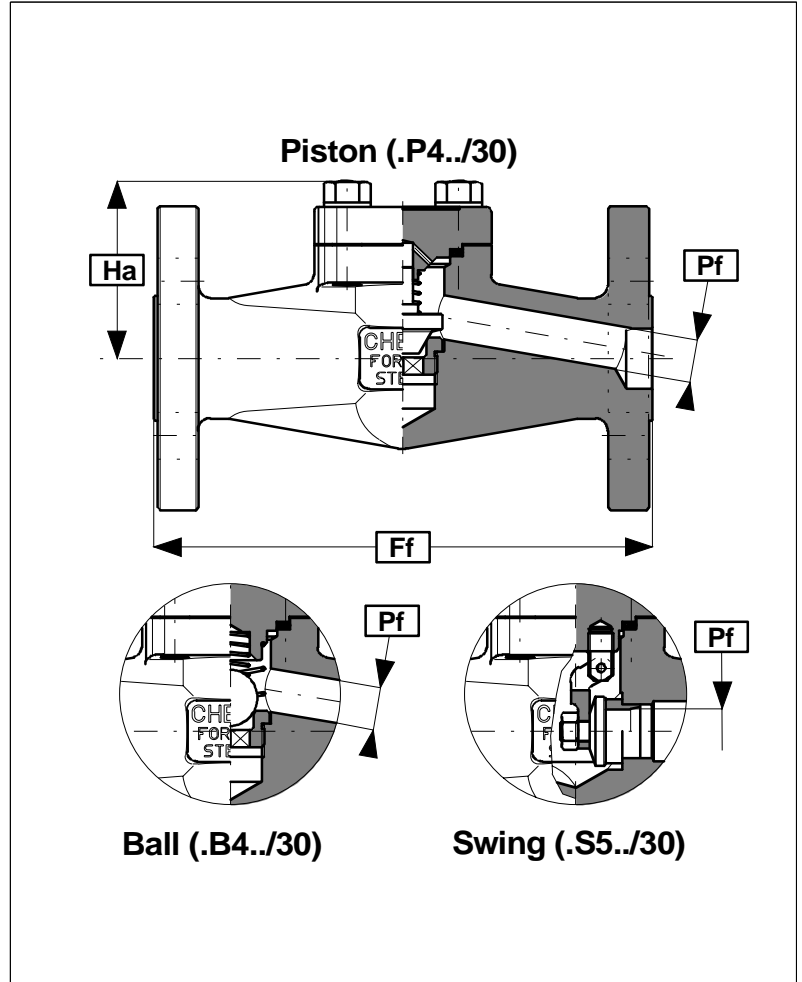
**Hydraulic: (minimum)**  
Body - 1125 p.s.i.  
Seat - 825 p.s.i.  
**Air under water:**  
not applicable

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |



| REDUCED BORE                   |  |            |      |            |      |                      |      |                      |      |                   |       |
|--------------------------------|--|------------|------|------------|------|----------------------|------|----------------------|------|-------------------|-------|
|                                |  | 1/2"       |      | 3/4"       |      | 1"                   |      | 1.1/2"               |      | 2"                |       |
| <b>Ff (mm/in)</b>              |  | 152,4      | 6,00 | 177,8      | 7,00 | 203,2 <sup>(6)</sup> | 8,00 | 228,6 <sup>(6)</sup> | 9,00 | 266,7             | 10,50 |
| <b>Ha (mm/in)</b>              |  | 50         | 1,97 | 56         | 2,20 | 74                   | 2,91 | 100                  | 3,94 | 109               | 4,29  |
| <b>Pf<sup>(7)</sup>(mm/in)</b> |  | 9          | 0,35 | 12,5       | 0,49 | 17,5                 | 0,69 | 28 <sup>(4)</sup>    | 1,10 | 32 <sup>(5)</sup> | 1,26  |
| <b>Wt. (kg/lb)</b>             |  | 2,5        | 5,5  | 4,2        | 9,2  | 5,7                  | 12,5 | 11,2                 | 24,6 | 14,4              | 31,7  |
| <b>Catal. no.</b>              |  | Rtt52/30xx |      | Rtt53/30xx |      | Rtt54/30xx           |      | Rtt56/30xx           |      | Rtt57/30xx        |       |

| FULL BORE                      |  |            |      |            |      |                      |      |                      |      |            |       |
|--------------------------------|--|------------|------|------------|------|----------------------|------|----------------------|------|------------|-------|
|                                |  | 1/2"       |      | 3/4"       |      | 1"                   |      | 1.1/2"               |      | 2"         |       |
| <b>Ff (mm/in)</b>              |  | 152,4      | 6,00 | 177,8      | 7,00 | 203,2 <sup>(6)</sup> | 8,00 | 228,6 <sup>(6)</sup> | 9,00 | 266,7      | 10,50 |
| <b>Ha (mm/in)</b>              |  | 50         | 1,97 | 56         | 2,20 | 92                   | 3,62 | 110                  | 4,33 | 140        | 5,51  |
| <b>Pf<sup>(7)</sup>(mm/in)</b> |  | 12,5       | 0,49 | 17,5       | 0,69 | 22,5                 | 0,89 | 35                   | 1,38 | 45         | 1,77  |
| <b>Wt. (kg/lb)</b>             |  | 2,5        | 5,5  | 4,2        | 9,2  | 5,7                  | 12,5 | 11,2                 | 24,6 | 14,4       | 31,7  |
| <b>Catal. no.</b>              |  | Ftt52/30xx |      | Ftt53/30xx |      | Ftt54/30xx           |      | Ftt56/30xx           |      | Ftt57/30xx |       |

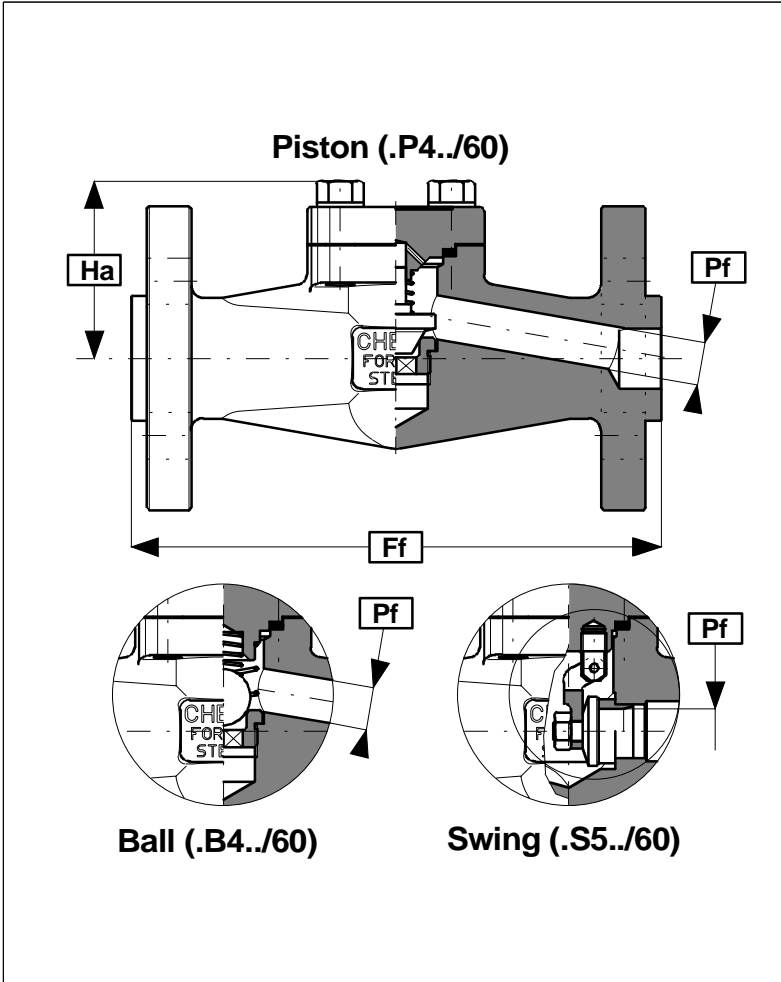
1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to face dimensions on page 74,75

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat  
6) Swing 1"=215,9 (8,50) - Swing 1.1/2" = 241,3 (9,50)

7) Dimensions for piston & ball type; for swing see page 4  
8) Code it is replaced by kind of check valve (drawing above)



# CHECK VALVES - 600 - Bolted cover - Flanged Rf/Rj



## Ratings (ASTM A105)

600 p.s.i. @ 850°F  
1480 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic: (minimum)**  
Body - 2225 p.s.i.  
Seat - 1650 p.s.i.  
**Air under water:**  
not applicable

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|           |                    |           |              |
|-----------|--------------------|-----------|--------------|
| <b>RF</b> | Raised face (std.) | <b>LF</b> | Large female |
| <b>RJ</b> | Ring joint         | <b>LG</b> | Large groove |
| <b>SF</b> | Small female       | <b>LM</b> | Large male   |
| <b>SG</b> | Small groove       | <b>LT</b> | Large tongue |
| <b>SM</b> | Small male         |           |              |
| <b>ST</b> | Small tongue       |           |              |

| REDUCED BORE                    |  |            |      |            |      |            |      |                   |      |                   |       |
|---------------------------------|--|------------|------|------------|------|------------|------|-------------------|------|-------------------|-------|
|                                 |  | 1/2"       |      | 3/4"       |      | 1"         |      | 1.1/2"            |      | 2"                |       |
| <b>Ff (mm/in)</b>               |  | 165,1      | 6,50 | 190,5      | 7,50 | 215,9      | 8,50 | 241,3             | 9,50 | 292,1             | 11,50 |
| <b>Ha (mm/in)</b>               |  | 50         | 1,97 | 56         | 2,20 | 74         | 2,91 | 100               | 3,94 | 109               | 4,29  |
| <b>Pf<sup>(6)</sup> (mm/in)</b> |  | 9          | 0,35 | 12,5       | 0,49 | 17,5       | 0,69 | 28 <sup>(4)</sup> | 1,10 | 32 <sup>(5)</sup> | 1,26  |
| <b>Wt. (kg/lb)</b>              |  | 3,1        | 6,8  | 5          | 11,0 | 7,3        | 16,1 | 12                | 26,4 | 16,6              | 36,5  |
| <b>Catal. no.</b>               |  | Rtt52/60xx |      | Rtt53/60xx |      | Rtt54/60xx |      | Rtt56/60xx        |      | Rtt57/60xx        |       |

| FULL BORE                       |  |            |      |            |      |            |      |            |      |            |       |
|---------------------------------|--|------------|------|------------|------|------------|------|------------|------|------------|-------|
|                                 |  | 1/2"       |      | 3/4"       |      | 1"         |      | 1.1/2"     |      | 2"         |       |
| <b>Ff (mm/in)</b>               |  | 165,1      | 6,50 | 190,5      | 7,50 | 215,9      | 8,50 | 241,3      | 9,50 | 292,1      | 11,50 |
| <b>Ha (mm/in)</b>               |  | 50         | 1,97 | 56         | 2,20 | 92         | 3,62 | 110        | 4,33 | 140        | 5,51  |
| <b>Pf<sup>(6)</sup> (mm/in)</b> |  | 12,5       | 0,49 | 17,5       | 0,69 | 22,5       | 0,89 | 35         | 1,38 | 45         | 1,77  |
| <b>Wt. (kg/lb)</b>              |  | 3,1        | 6,8  | 5          | 11,0 | 7,3        | 16,1 | 12         | 26,4 | 16,6       | 36,5  |
| <b>Catal. no.</b>               |  | Ftt52/60xx |      | Ftt53/60xx |      | Ftt54/60xx |      | Ftt56/60xx |      | Ftt57/60xx |       |

1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat  
6) Dimensions for piston & ball type; for swing see page 4

7) Code tt is replaced by kind of check valve (drawing above)





# CHECK VALVES - 800 - Welded cover - Sw/Npt/Bw

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

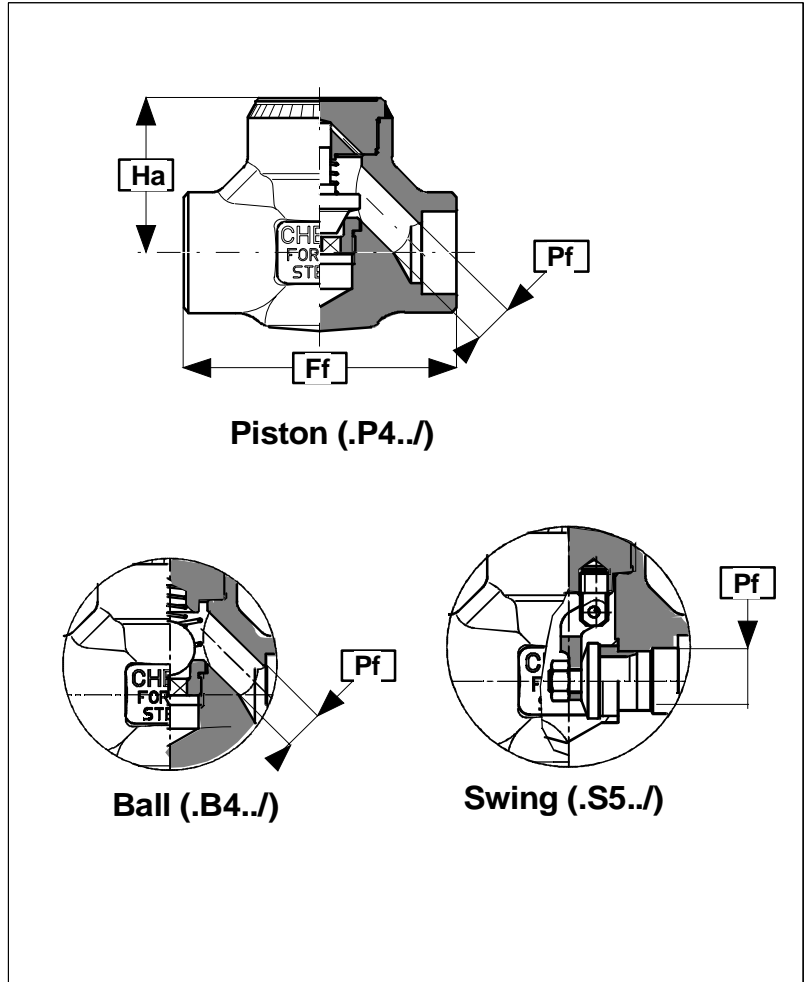
**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
not applicable

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |



| REDUCED BORE       |  |  |             |             |             |             |                        |                        |
|--------------------|--|--|-------------|-------------|-------------|-------------|------------------------|------------------------|
|                    |  |  | 1/2"        | 3/4"        | 1"          | 1.1/4"      | 1.1/2"                 | 2"                     |
| <b>Ff (mm/in)</b>  |  |  | 80 3,15     | 90 3,54     | 110 4,33    | 127 5,00    | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>  |  |  | 48 1,89     | 51 2,01     | 63 2,48     | 71 2,80     | 86 3,39                | 99 3,90                |
| <b>Pf (mm/in)</b>  |  |  | 9 0,35      | 12,5 0,49   | 17,5 0,69   | 22,5 0,89   | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b> |  |  | 0,8 1,8     | 1,1 2,4     | 2,0 4,4     | 3,3 7,3     | 4,9 10,8               | 7,3 16,1               |
| <b>Catal. no.</b>  |  |  | Rtt452WC/xx | Rtt453WC/xx | Rtt454WC/xx | Rtt455WC/xx | Rtt456WC/xx            | Rtt457WC/xx            |

| FULL BORE          |             |             |             |             |             |                        |                        |                        |
|--------------------|-------------|-------------|-------------|-------------|-------------|------------------------|------------------------|------------------------|
|                    | 1/4"        | 3/8"        | 1/2"        | 3/4"        | 1"          | 1.1/4"                 | 1.1/2"                 | 2"                     |
| <b>Ff (mm/in)</b>  | 80 3,15     | 80 3,15     | 90 3,54     | 110 4,33    | 127 5,00    | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>  | 48 1,89     | 48 1,89     | 51 2,01     | 63 2,48     | 71 2,80     | 86 3,39                | 99 3,90                | 121 4,76               |
| <b>Pf (mm/in)</b>  | 6,5 0,26    | 9 0,35      | 12,5 0,49   | 17,5 0,69   | 22,5 0,89   | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 38 <sup>(6)</sup> 1,50 |
| <b>Wt. (kg/lb)</b> | 0,8 1,8     | 0,8 1,8     | 1,1 2,4     | 2,0 4,4     | 3,3 7,3     | 4,9 10,8               | 7,3 16,1               | 11,9 26,2              |
| <b>Catal. no.</b>  | Ftt410WC/xx | Ftt411WC/xx | Ftt412WC/xx | Ftt413WC/xx | Ftt414WC/xx | Ftt415WC/xx            | Ftt416WC/xx            | Ftt417WC/xx            |

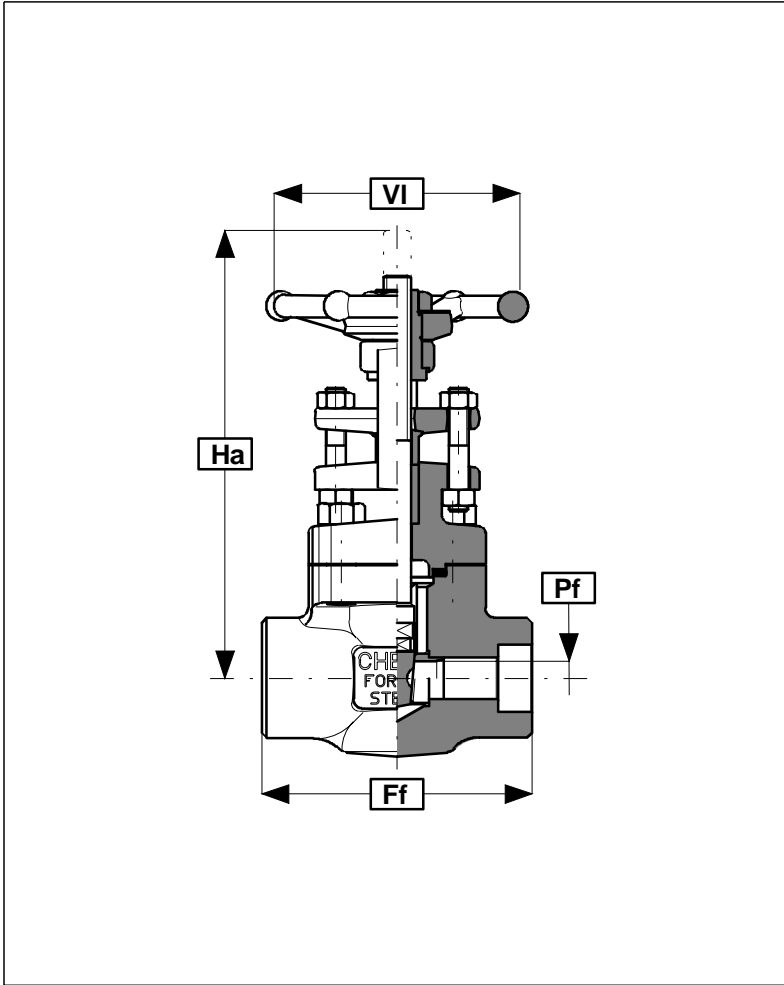
1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) SW, NPT & BW dimensions on page 73

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat  
6) Pf = 42 with integral stellited seat





# "Compact" GATE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw



| Ratings (ASTM A105) |
|---------------------|
| 1500 p.s.i. @ 850°F |
| 3705 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic:</b> (minimum) |
| Body - 5575 p.s.i.          |
| Seat - 4100 p.s.i.          |
| <b>Air under water:</b>     |
| Seat - 85 p.s.i.            |

| Standards                      |
|--------------------------------|
| <b>Construction</b> API 602    |
| <b>Socket weld</b> ASME B16.11 |
| <b>Threaded</b> ASME B1.20.1   |
| <b>Butt weld</b> ASME B16.25   |
| <b>Test</b> API 598            |

| Connections (xx)        |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw(e)/NPT     |                        |
| <b>SU</b> Sw(u)/NPT     |                        |
| <b>B6</b> Butt weld 160 |                        |

| CONVENTIONAL BORE  |          |          |          |          |          |          |           |           |
|--------------------|----------|----------|----------|----------|----------|----------|-----------|-----------|
|                    | 1/4"     | 3/8"     | 1/2"     | 3/4"     | 1"       | 1.1/4"   | 1.1/2"    | 2"        |
| <b>Ff (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54  | 110 4,33 | 127 5,00 | 127 5,00 | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 163 6,42 | 163 6,42 | 163 6,42 | 180 7,09 | 212 8,35 | 245 9,65 | 266 10,47 | 318 12,52 |
| <b>VI (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54  | 100 3,94 | 120 4,72 | 140 5,51 | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 8,5 0,33 | 8,5 0,33 | 10 0,39  | 14 0,55  | 18 0,71  | 24 0,94  | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> | 2,3 5,1  | 2,3 5,1  | 2,3 5,1  | 3,7 8,1  | 5,4 11,9 | 7,4 16,3 | 9,6 21,1  | 15,1 33,2 |
| <b>Catal. no.</b>  | X650/xx  | X651/xx  | X652/xx  | X653/xx  | X654/xx  | X655/xx  | X656/xx   | X657/xx   |

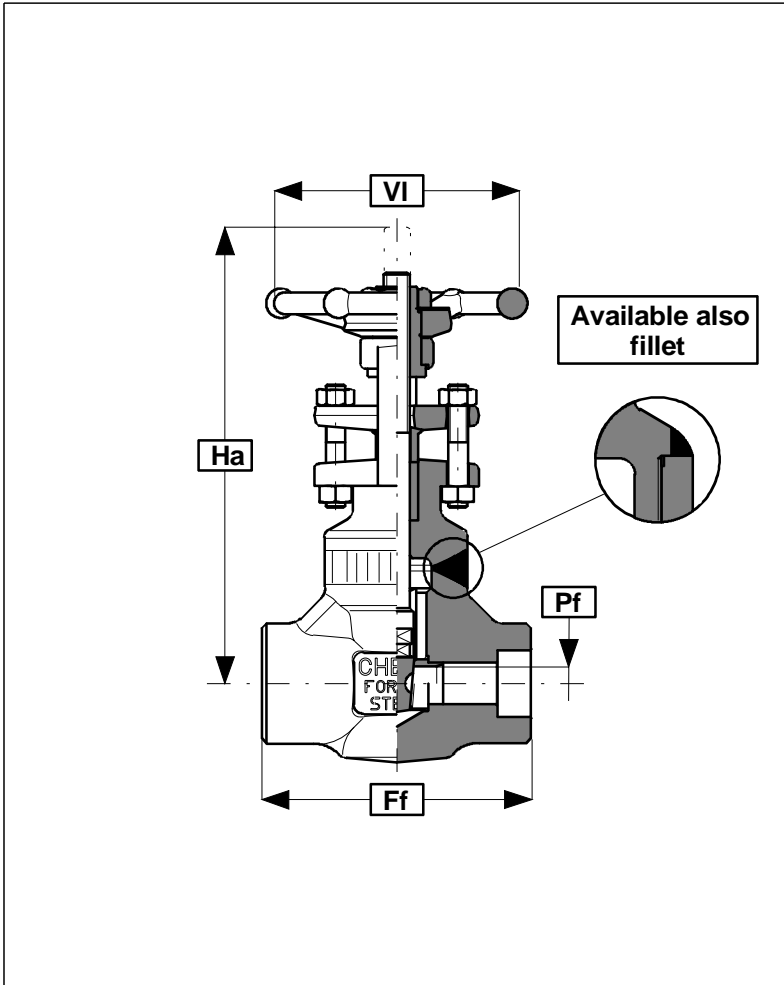
|  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67, type A  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73





# "Compact" GATE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw



| Ratings (ASTM A105) |
|---------------------|
| 1500 p.s.i. @ 850°F |
| 3705 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic:</b> (minimum) |
| Body - 5575 p.s.i.          |
| Seat - 4100 p.s.i.          |
| <b>Air under water:</b>     |
| Seat - 85 p.s.i.            |

| Standards                      |
|--------------------------------|
| <b>Construction</b> API 602    |
| <b>Socket weld</b> ASME B16.11 |
| <b>Threaded</b> ASME B1.20.1   |
| <b>Butt weld</b> ASME B16.25   |
| <b>Test</b> API 598            |

| Connections (xx)        |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw(e)/NPT     |                        |
| <b>SU</b> Sw(u)/NPT     |                        |
| <b>B6</b> Butt weld 160 |                        |

| CONVENTIONAL BORE  |           |           |           |           |           |           |           |           |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
| <b>Ff (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 170 6,69  | 170 6,69  | 170 6,69  | 183 7,20  | 219 8,62  | 247 9,72  | 274 10,79 | 331 13,03 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 8,5 0,33  | 8,5 0,33  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> | 2,2 4,8   | 2,2 4,8   | 2,2 4,8   | 3,3 7,3   | 5,0 11,0  | 6,4 14,1  | 8,7 19,1  | 13,6 29,9 |
| <b>Catal. no.</b>  | X650WB/xx | X651WB/xx | X652WB/xx | X653WB/xx | X654WB/xx | X655WB/xx | X656WB/xx | X657WB/xx |

|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67, type A  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73





# "Compact" GLOBE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

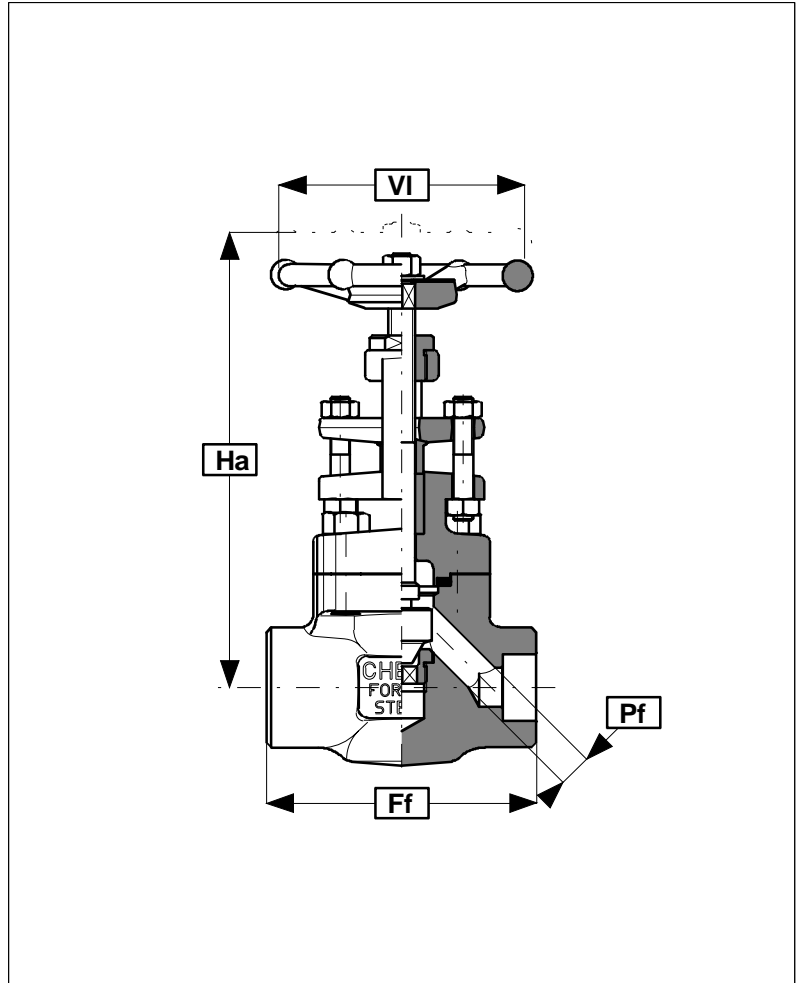
Seat - 85 p.s.i.

## Standards

**Construction** founded on API 602  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** founded on API 598

## Connections (xx)

|                         |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Threaded NPT  |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |



## CONVENTIONAL BORE

|                    | 1/4"     | 3/8"     | 1/2"     | 3/4"      | 1"       | 1.1/4"   | 1.1/2"    | 2"        |
|--------------------|----------|----------|----------|-----------|----------|----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54  | 110 4,33  | 127 5,00 | 155 6,10 | 170 6,69  | 210 8,27  |
| <b>Ha (mm/in)</b>  | 169 6,65 | 169 6,65 | 169 6,65 | 181 7,13  | 210 8,27 | 246 9,69 | 255 10,04 | 307 12,09 |
| <b>VI (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54  | 100 3,94  | 120 4,72 | 140 5,51 | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 6,5 0,26 | 9 0,35   | 10 0,39  | 13,5 0,53 | 18 0,71  | 24 0,94  | 29 1,14   | 35 1,38   |
| <b>Wt. (kg/lb)</b> | 2,4 5,3  | 2,4 5,3  | 2,4 5,3  | 3,7 8,1   | 5,5 12,1 | 8,3 18,3 | 11,4 25,1 | 16,8 37,0 |
| <b>Catal. no.</b>  | X750/xx  | X751/xx  | X752/xx  | X753/xx   | X754/xx  | X755/xx  | X756/xx   | X757/xx   |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Compact" GLOBE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

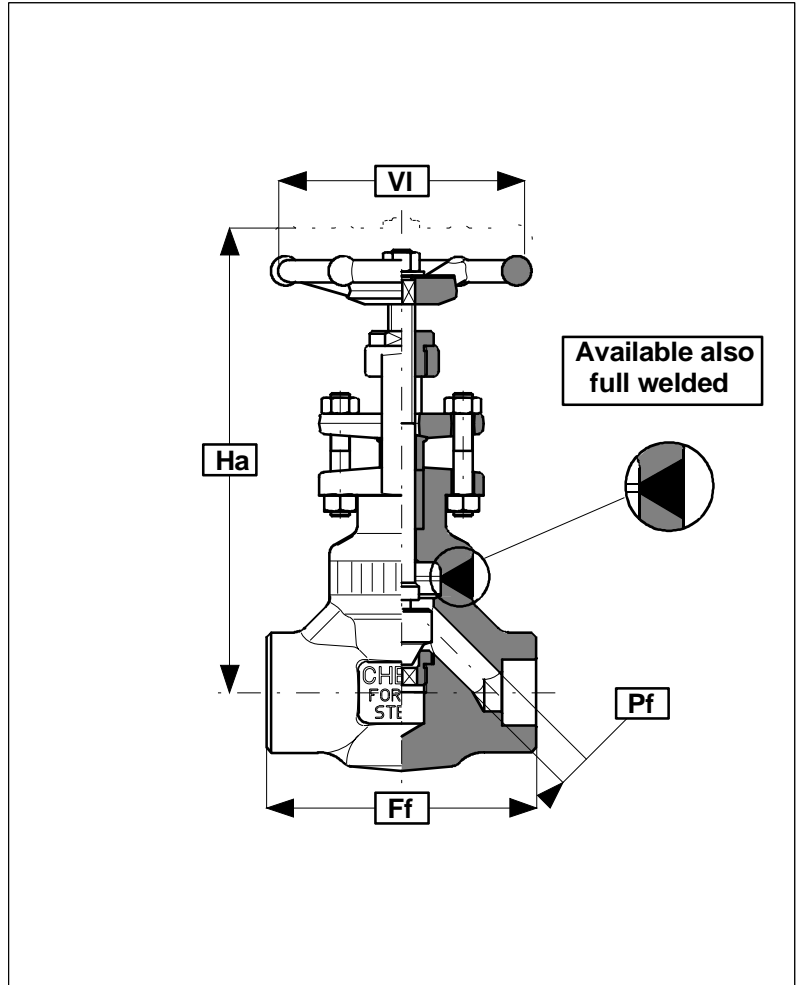
**Hydraulic:** (minimum)  
Body - 5575 p.s.i.  
Seat - 4100 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** founded on API 602  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** founded on API 598

## Connections (xx)

|                         |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |



## CONVENTIONAL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10  | 170 6,69  | 210 8,27  |
| <b>Ha (mm/in)</b>  | 177 6,97  | 177 6,97  | 177 6,97  | 185 7,28  | 214 8,43  | 244 9,61  | 270 10,63 | 330 12,99 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 6,5 0,26  | 9 0,35    | 10 0,39   | 13,5 0,53 | 18 0,71   | 24 0,94   | 29 1,14   | 35 1,38   |
| <b>Wt. (kg/lb)</b> | 2,1 4,6   | 2,1 4,6   | 2,1 4,6   | 3,4 7,48  | 5,4 11,9  | 7,6 16,7  | 10,5 23,1 | 16,5 36,3 |
| <b>Catal. no.</b>  | X750WB/xx | X751WB/xx | X752WB/xx | X753WB/xx | X754WB/xx | X755WB/xx | X756WB/xx | X757WB/xx |

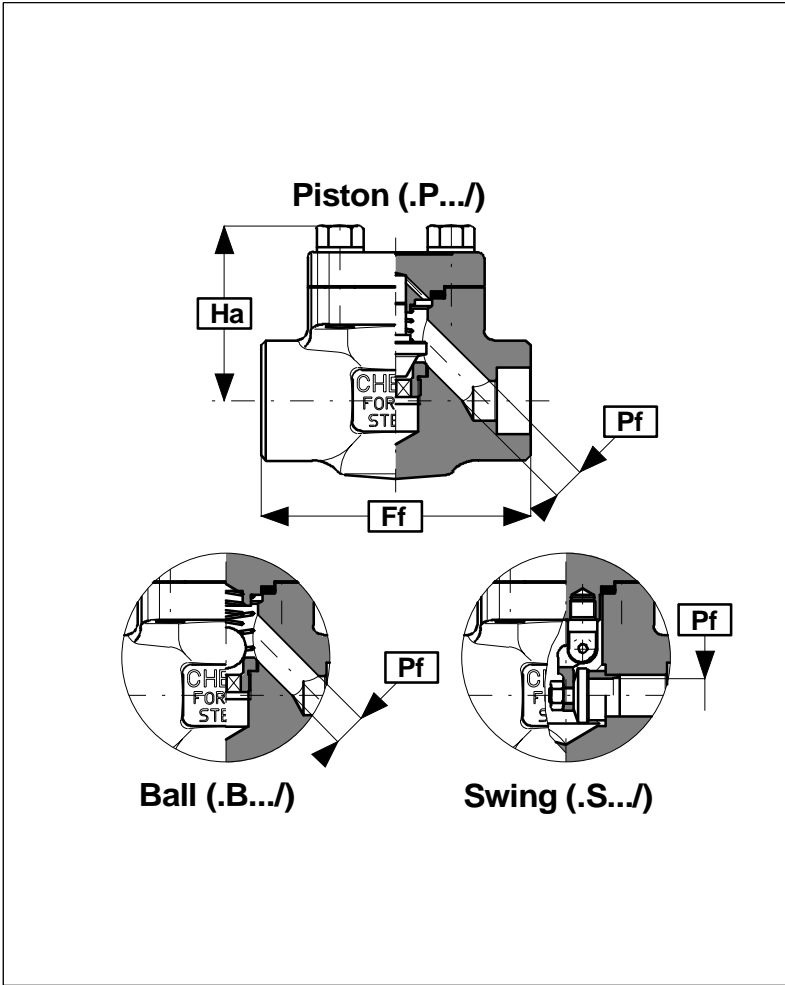
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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Compact" CHECK VALVES - 1500 - Bolted cover - Sw/Npt/Bw



| Ratings (ASTM A105) |
|---------------------|
| 1500 p.s.i. @ 850°F |
| 3705 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic:</b> (minimum) |
| Body - 5575 p.s.i.          |
| Seat - 4100 p.s.i.          |
| <b>Air under water:</b>     |
| not applicable              |

| Standards                              |
|--|
| <b>Construction</b> founded on API 602 |
| <b>Socket weld</b> ASME B16.11         |
| <b>Threaded</b> ASME B1.20.1           |
| <b>Butt weld</b> ASME B16.25           |
| <b>Test</b> founded on API 598         |

| Connections (xx)        |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |

| CONVENTIONAL BORE               |          |          |          |           |          |          |          |            |
|---------------------------------|----------|----------|----------|-----------|----------|----------|----------|------------|
|                                 | 1/4"     | 3/8"     | 1/2"     | 3/4"      | 1"       | 1.1/4"   | 1.1/2"   | 2"         |
| <b>Ff</b> (mm/in)               | 90 3,54  | 90 3,54  | 90 3,54  | 110 4,33  | 127 5,00 | 155 6,10 | 170 6,69 | 210 8,27   |
| <b>Ha</b> (mm/in)               | 56 2,20  | 56 2,20  | 56 2,20  | 74 2,91   | 79 3,11  | 100 3,94 | 109 4,29 | 135 5,31   |
| <b>Pf<sup>(4)</sup></b> (mm/in) | 6,5 0,26 | 9 0,35   | 10 0,39  | 13,5 0,53 | 18 0,71  | 24 0,94  | 28 1,10  | 35 1,38    |
| <b>Wt.</b> (kg/lb)              | 2,2 4,8  | 2,2 4,8  | 2,2 4,8  | 3,0 6,6   | 4,1 9,0  | 6,2 13,6 | 9,4 20,7 | 13,3 29,26 |
| <b>Catal. no.</b>               | Xt850/xx | Xt851/xx | Xt852/xx | Xt853/xx  | Xt854/xx | Xt855/xx | Xt856/xx | Xt857/xx   |

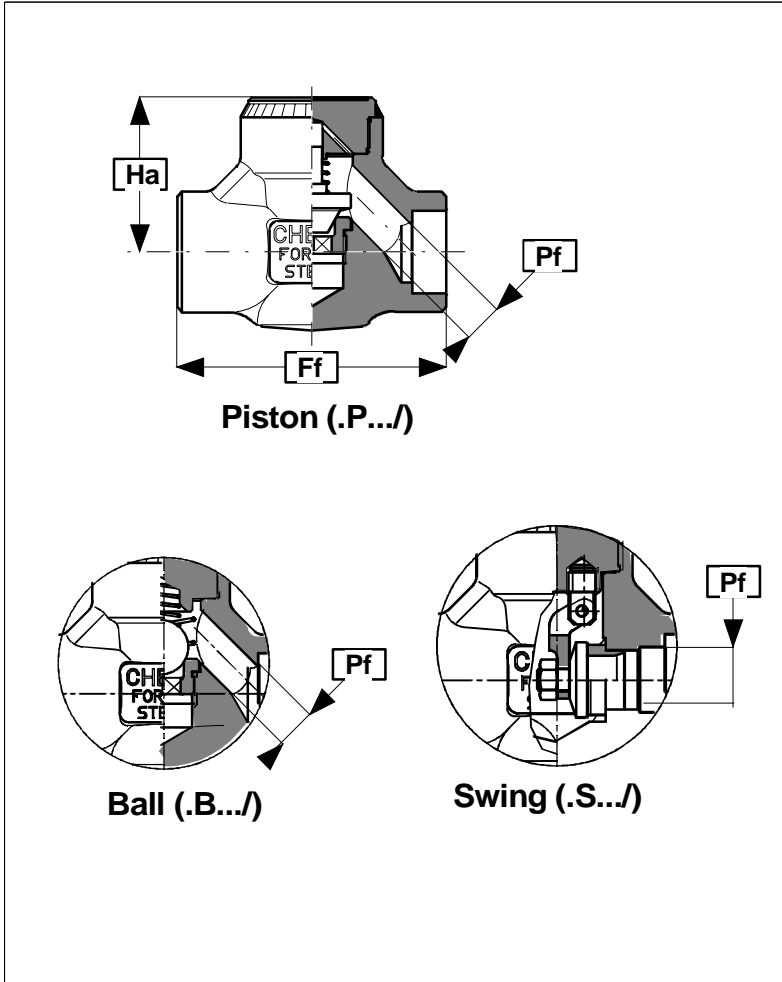
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1) Standard and alternative valve materials on page 67, type B  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73  
 4) Dimensions for piston & ball type; for swing see page 19  
 5) Code t is replaced by kind of check valve (drawing above)





# "Compact" CHECK VALVES - 1500 - Welded cover - Sw/Npt/Bw



| Ratings (ASTM A105) |
|---------------------|
| 1500 p.s.i. @ 850°F |
| 3705 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic: (minimum)</b> |
| Body - 5575 p.s.i.          |
| Seat - 4100 p.s.i.          |
| <b>Air under water:</b>     |
| not applicable              |

| Standards                              |
|--|
| <b>Construction</b> founded on API 602 |
| <b>Socket weld</b> ASME B16.11         |
| <b>Threaded</b> ASME B1.20.1           |
| <b>Butt weld</b> ASME B16.25           |
| <b>Test</b> founded on API 598         |

| Connections (xx)        |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |

| CONVENTIONAL BORE  |            |            |            |            |            |            |            |            |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                    | 1/4"       | 3/8"       | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"     | 2"         |
| <b>Ff (mm/in)</b>  | 90 3,54    | 90 3,54    | 90 3,54    | 110 4,33   | 127 5,00   | 155 6,10   | 170 6,69   | 210 8,27   |
| <b>Ha (mm/in)</b>  | 50 1,97    | 50 1,97    | 50 1,97    | 56 2,20    | 67 2,64    | 82 3,23    | 99 3,90    | 121 4,76   |
| <b>Pf (mm/in)</b>  | 6,5 0,26   | 9 0,35     | 10 0,39    | 13,5 0,53  | 18 0,71    | 24 0,94    | 29 1,14    | 35 1,38    |
| <b>Wt. (kg/lb)</b> | 1,4 3,1    | 1,4 3,1    | 1,4 3,1    | 2,3 5,1    | 3,8 8,4    | 5,6 12,3   | 8,3 18,3   | 13,4 29,5  |
| <b>Catal. no.</b>  | Xi850WC/xx | Xi851WC/xx | Xi852WC/xx | Xi853WC/xx | Xi854WC/xx | Xi855WC/xx | Xi856WC/xx | Xi857WC/xx |

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1) Standard and alternative valve materials on page 67, type B  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73  
 4) Dimensions for piston & ball type; for swing see page 19  
 5) Code t is replaced by kind of check valve (drawing above)





# GATE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

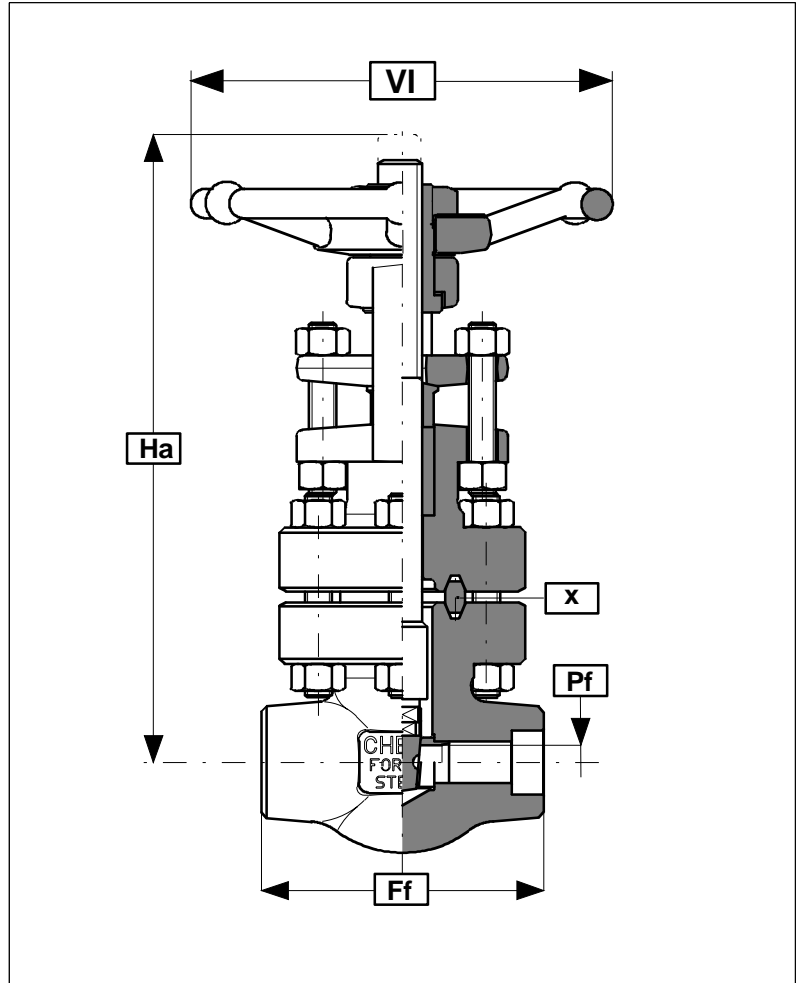
Seat - 85 p.s.i.

## Standards

|              |                |
|--------------|----------------|
| Construction | BS 5352        |
| Socket weld  | ASME B16.11    |
| Threaded     | ASME B1.20.1   |
| Butt weld    | ASME B16.25    |
| Test         | BS 6755 (Pt.1) |

## Connections (xx)

|                         |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw(e)/NPT     |                        |
| <b>SU</b> Sw(u)/NPT     |                        |
| <b>B6</b> Butt weld 160 |                        |



X) Gasket=Spiral wound. RJ gasket available on request.

### STANDARD BORE

|                    |  |  | 1/2"      | 3/4"      | 1"        |  | 1.1/2"    | 2"        |
|--------------------|--|--|-----------|-----------|-----------|--|-----------|-----------|
| <b>Ff</b> (mm/in)  |  |  | 110 4,33  | 115 4,53  | 130 5,12  |  | 210 8,27  | 240 9,45  |
| <b>Ha</b> (mm/in)  |  |  | 212 8,35  | 256 10,09 | 272 10,79 |  | 411 16,18 | 422 16,6  |
| <b>VI</b> (mm/in)  |  |  | 120 4,72  | 175 6,89  | 175 6,89  |  | 260 10,24 | 260 10,24 |
| <b>Pf</b> (mm/in)  |  |  | 11,5 0,45 | 15 0,59   | 19,5 0,77 |  | 32 1,26   | 40 1,57   |
| <b>Wt.</b> (kg/lb) |  |  | 5,9 13,0  | 8,4 18,5  | 9,8 21,6  |  | 26,8 59,0 | 35,4 77,9 |
| <b>Catal. no.</b>  |  |  | 652/xx    | 653/xx    | 654/xx    |  | 656/xx    | 657/xx    |

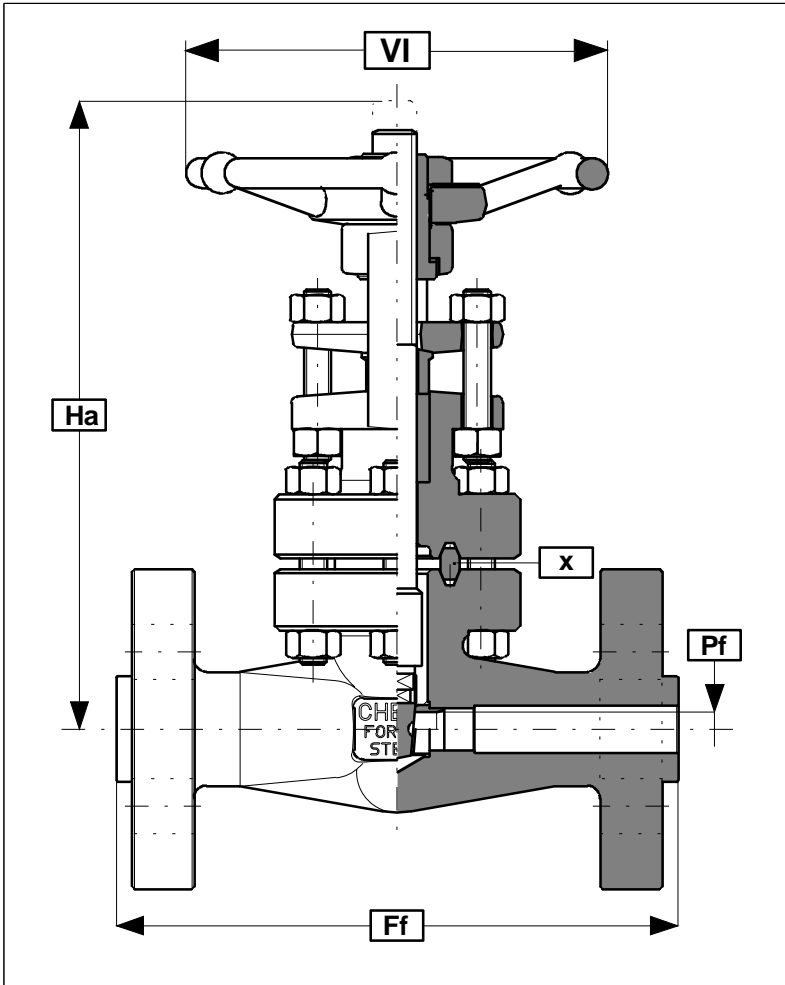
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1) Standard and alternative valve materials on page 67  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# GATE VALVES - 1500 - Bolted bonnet - Flanged Rf/Rj



### Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic: (minimum)**  
Body - 5575 p.s.i.  
Seat - 4100 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

### Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |

X ) Gasket=Spiral wound. RJ gasket available on request.

### STANDARD BORE

|                    | 1/2"      |      | 3/4"      |       | 1"        |       | 1.1/2"    |       | 2"        |       |
|--------------------|-----------|------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
| <b>Ff (mm/in)</b>  | 215,9     | 8,50 | 228,6     | 9,00  | 254,0     | 10,00 | 304,8     | 12,00 | 368,3     | 14,50 |
| <b>Ha (mm/in)</b>  | 212       | 8,35 | 256       | 10,08 | 272       | 10,71 | 411       | 16,18 | 422       | 16,61 |
| <b>VI (mm/in)</b>  | 120       | 4,72 | 175       | 6,89  | 175       | 6,89  | 260       | 10,24 | 260       | 10,24 |
| <b>Pf (mm/in)</b>  | 11,5      | 0,45 | 15        | 0,59  | 19,5      | 0,77  | 32        | 1,26  | 40        | 1,57  |
| <b>Wt. (kg/lb)</b> | 9,7       | 21,3 | 15,5      | 34,1  | 17,5      | 38,5  | 38,5      | 84,7  | 56,0      | 123,2 |
| <b>Catal. no.</b>  | 652/150xx |      | 653/150xx |       | 654/150xx |       | 656/150xx |       | 657/150xx |       |

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1) Standard and alternative valve materials on page 67  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75





# GATE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

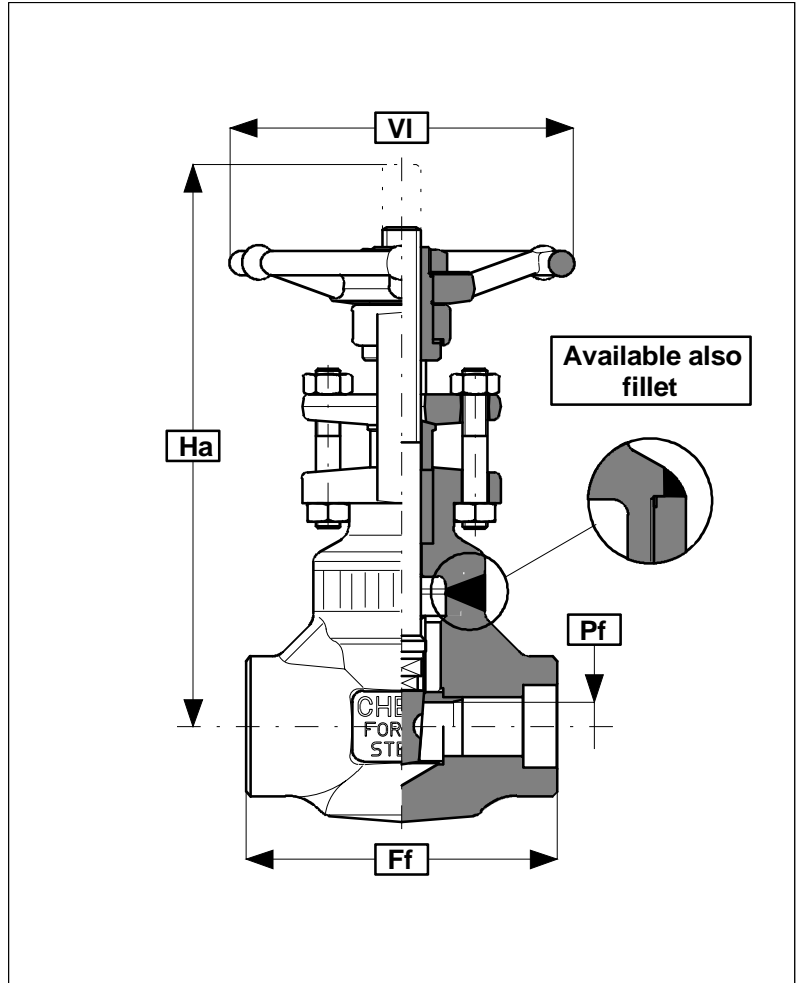
Seat - 85 p.s.i.

## Standards

|              |                |
|--------------|----------------|
| Construction | BS 5352        |
| Socket weld  | ASME B16.11    |
| Threaded     | ASME B1.20.1   |
| Butt weld    | ASME B16.25    |
| Test         | BS 6755 (Pt.1) |

## Connections (xx)

|                                    |                        |
|------------------------------------|------------------------|
| <b>SW</b> Socket weld threaded NPT | <b>B8</b> Butt weld 80 |
| <b>TS</b> Sw/NPT                   |                        |
| <b>SE</b> Sw(e)/NPT                |                        |
| <b>SU</b> Sw(u)/NPT                |                        |
| <b>B6</b> Butt weld 160            |                        |



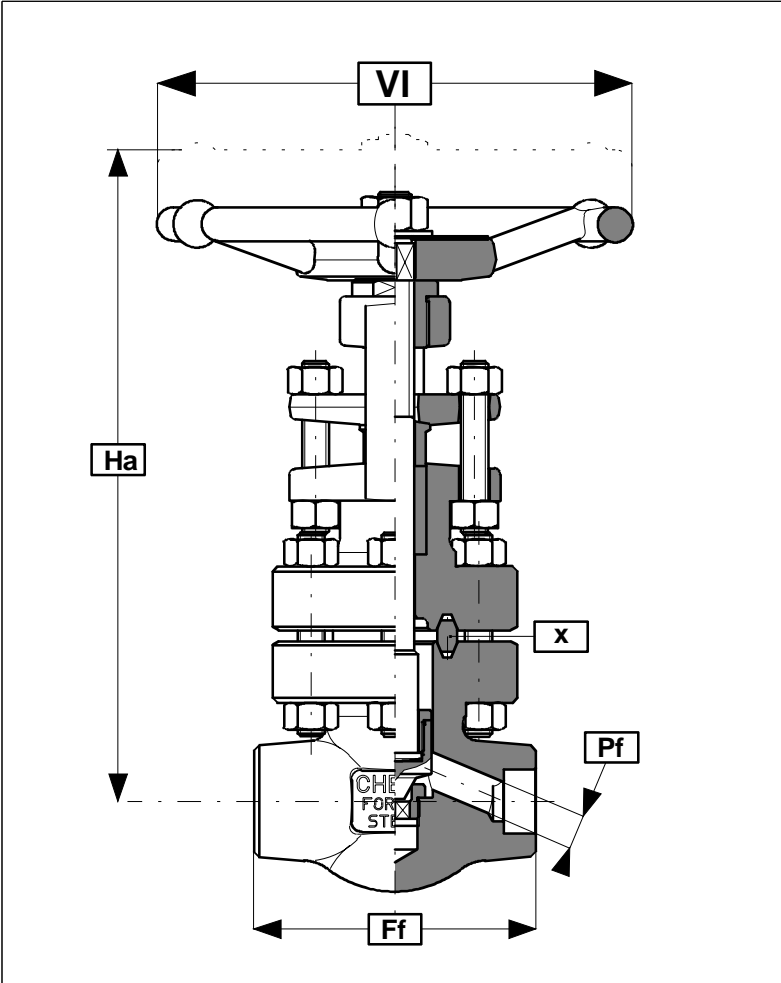
## STANDARD BORE

|                    |  |  | 1/2"             |                 | 3/4"             |  | 1" |  |  | 1.1/2"           |                  | 2" |  |
|--------------------|--|--|------------------|-----------------|------------------|--|----|--|--|------------------|------------------|----|--|
| <b>Ff</b> (mm/in)  |  |  | <b>90</b> 3,54   | <b>110</b> 4,33 | <b>127</b> 5,00  |  |    |  |  | <b>130</b> 5,12  | <b>150</b> 5,90  |    |  |
| <b>Ha</b> (mm/in)  |  |  | <b>175</b> 6,88  | <b>217</b> 8,54 | <b>234</b> 9,54  |  |    |  |  | <b>295</b> 11,61 | <b>375</b> 14,76 |    |  |
| <b>VI</b> (mm/in)  |  |  | <b>120</b> 4,72  | <b>175</b> 6,89 | <b>175</b> 6,89  |  |    |  |  | <b>200</b> 7,87  | <b>260</b> 10,24 |    |  |
| <b>Pf</b> (mm/in)  |  |  | <b>11,5</b> 0,45 | <b>15</b> 0,59  | <b>19,5</b> 0,77 |  |    |  |  | <b>32</b> 1,26   | <b>40</b> 1,57   |    |  |
| <b>Wt.</b> (kg/lb) |  |  | <b>2,0</b> 4,4   | <b>3,2</b> 7,0  | <b>4,9</b> 10,8  |  |    |  |  | <b>8,5</b> 18,7  | <b>15</b> 33     |    |  |
| <b>Catal. no.</b>  |  |  | <b>652WB/xx</b>  | <b>653WB/xx</b> | <b>654WB/xx</b>  |  |    |  |  | <b>656WB/xx</b>  | <b>657WB/xx</b>  |    |  |

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1) Standard and alternative valve materials on page 67  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73




**Ratings (ASTM A105)**

 1500 p.s.i. @ 850°F  
 3705 p.s.i. @ 100°F

**Test pressure (ASTM A105)**
**Hydraulic: (minimum)**  
 Body - 5575 p.s.i.  
 Seat - 4100 p.s.i.  
**Air under water:**  
 Seat - 85 p.s.i.

**Standards**
**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

**Connections (xx)**

|                         |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |

X) Gasket=Spiral wound.RJ gasket available on request.

**STANDARD BORE**

|                    |  | 1/2"     | 3/4"      | 1"        |  | 1.1/2"    | 2"        |
|--------------------|--|----------|-----------|-----------|--|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 110 4,33 | 115 4,53  | 130 5,12  |  | 210 8,27  | 240 9,45  |
| <b>Ha (mm/in)</b>  |  | 218 8,58 | 274 10,79 | 286 11,26 |  | 427 16,8  | 433 17,05 |
| <b>VI (mm/in)</b>  |  | 120 4,72 | 175 6,89  | 175 6,89  |  | 260 10,24 | 260 10,24 |
| <b>Pf (mm/in)</b>  |  | 11 0,43  | 14,5 0,57 | 19 0,75   |  | 31 1,22   | 37,5 1,48 |
| <b>Wt. (kg/lb)</b> |  | 5,6 12,3 | 8,0 17,6  | 9,3 20,5  |  | 26,2 57,6 | 34,5 75,9 |
| <b>Catal. no.</b>  |  | 752/xx   | 753/xx    | 754/xx    |  | 756/xx    | 757/xx    |

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 1) Standard and alternative valve materials on page 66, type A  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73




# GLOBE VALVES - 1500 - Bolted bonnet - Flanged Rf/Rj

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

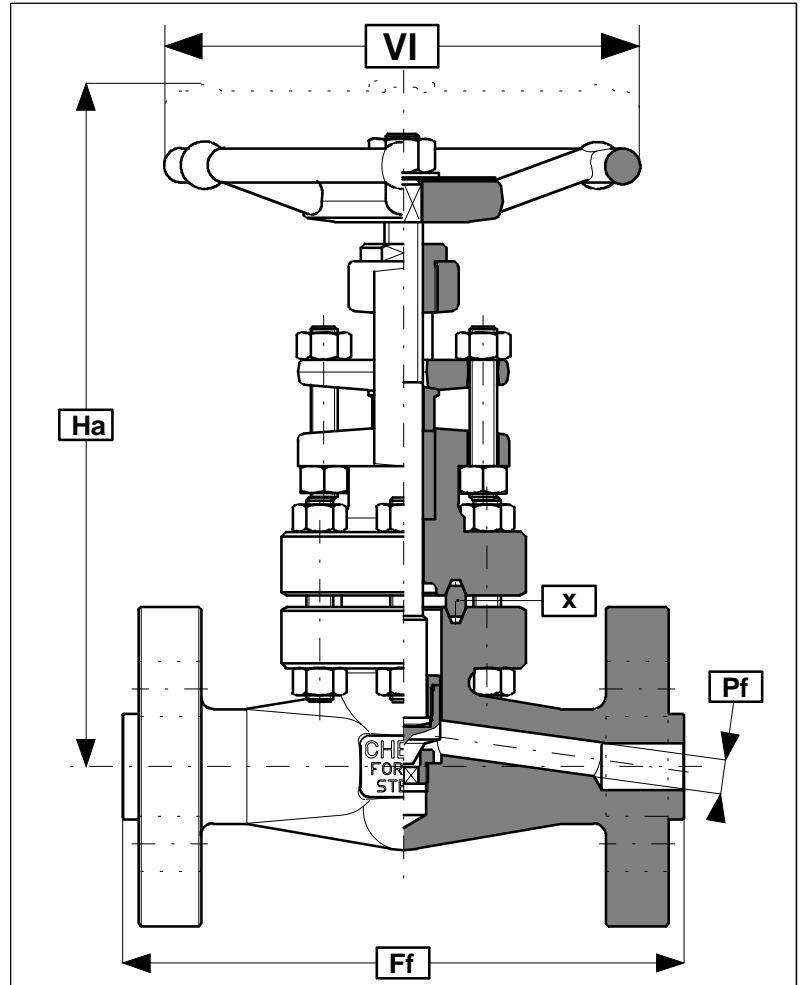
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Flanged** ASME B16.5, ASME B16.10  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                              |                        |
|------------------------------|------------------------|
| <b>RF</b> Raised face (std.) | <b>LF</b> Large female |
| <b>RJ</b> Ring joint         | <b>LG</b> Large groove |
| <b>SF</b> Small female       | <b>LM</b> Large male   |
| <b>SG</b> Small groove       | <b>LT</b> Large tongue |
| <b>SM</b> Small male         |                        |
| <b>ST</b> Small tongue       |                        |



X ) Gasket=Spiral wound. RJ gasket available on request.

### STANDARD BORE

|                    |  | 1/2"      |      | 3/4"      |       | 1"        |       | 1.1/2"    |       | 2"        |       |
|--------------------|--|-----------|------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
| <b>Ff (mm/in)</b>  |  | 215,9     | 8,49 | 228,6     | 9,00  | 254,0     | 10,00 | 304,8     | 12,00 | 368,3     | 14,50 |
| <b>Ha (mm/in)</b>  |  | 218       | 8,58 | 274       | 10,79 | 286       | 11,26 | 427       | 16,81 | 433       | 17,05 |
| <b>VI (mm/in)</b>  |  | 120       | 4,72 | 175       | 6,89  | 175       | 6,89  | 260       | 10,24 | 260       | 10,24 |
| <b>Pf (mm/in)</b>  |  | 11        | 0,43 | 14,5      | 0,57  | 19        | 0,75  | 31        | 1,22  | 37,5      | 1,48  |
| <b>Wt. (kg/lb)</b> |  | 9,4       | 20,7 | 15,2      | 33,44 | 17,3      | 38,1  | 37,9      | 83,4  | 55,2      | 121,4 |
| <b>Catal. no.</b>  |  | 752/150xx |      | 753/150xx |       | 754/150xx |       | 756/150xx |       | 757/150xx |       |

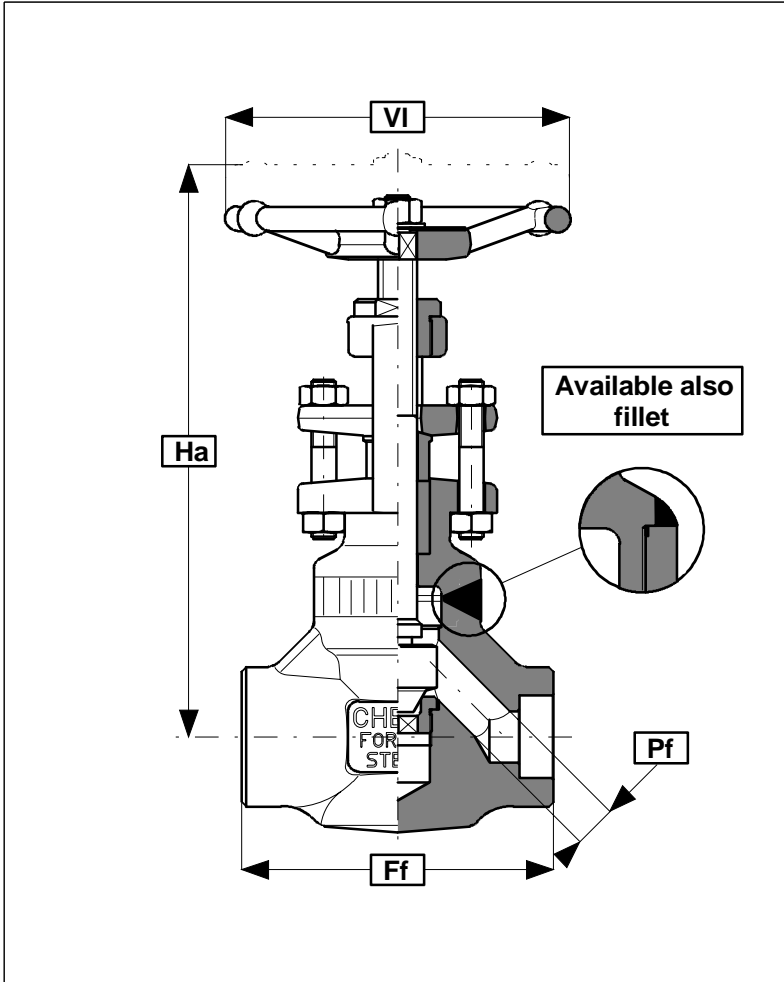
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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 74,75





# GLOBE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw



### Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 5575 p.s.i.  
Seat - 4100 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

### Connections (xx)

|                         |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |

### STANDARD BORE

|                    |  | 1/2"     |      | 3/4"     |      | 1"       |      | 1.1/2"   |       | 2"       |       |
|--------------------|--|----------|------|----------|------|----------|------|----------|-------|----------|-------|
| <b>Ff (mm/in)</b>  |  | 90       | 3,54 | 110      | 4,33 | 127      | 5,00 | 170      | 6,69  | 210      | 8,26  |
| <b>Ha (mm/in)</b>  |  | 203      | 7,99 | 227      | 8,94 | 233      | 9,17 | 310      | 12,20 | 402      | 15,83 |
| <b>VI (mm/in)</b>  |  | 120      | 4,72 | 175      | 6,89 | 175      | 6,89 | 200      | 7,87  | 260      | 10,24 |
| <b>Pf (mm/in)</b>  |  | 11       | 0,43 | 14,5     | 0,57 | 19       | 0,75 | 31       | 1,22  | 37,5     | 1,48  |
| <b>Wt. (kg/lb)</b> |  | 1,9      | 4,2  | 3,3      | 7,4  | 5,2      | 11,4 | 10,3     | 22,7  | 17,8     | 39,16 |
| <b>Catal. no.</b>  |  | 752WB/xx |      | 753WB/xx |      | 754WB/xx |      | 756WB/xx |       | 757WB/xx |       |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# CHECK VALVES - 1500 - Bolted cover - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

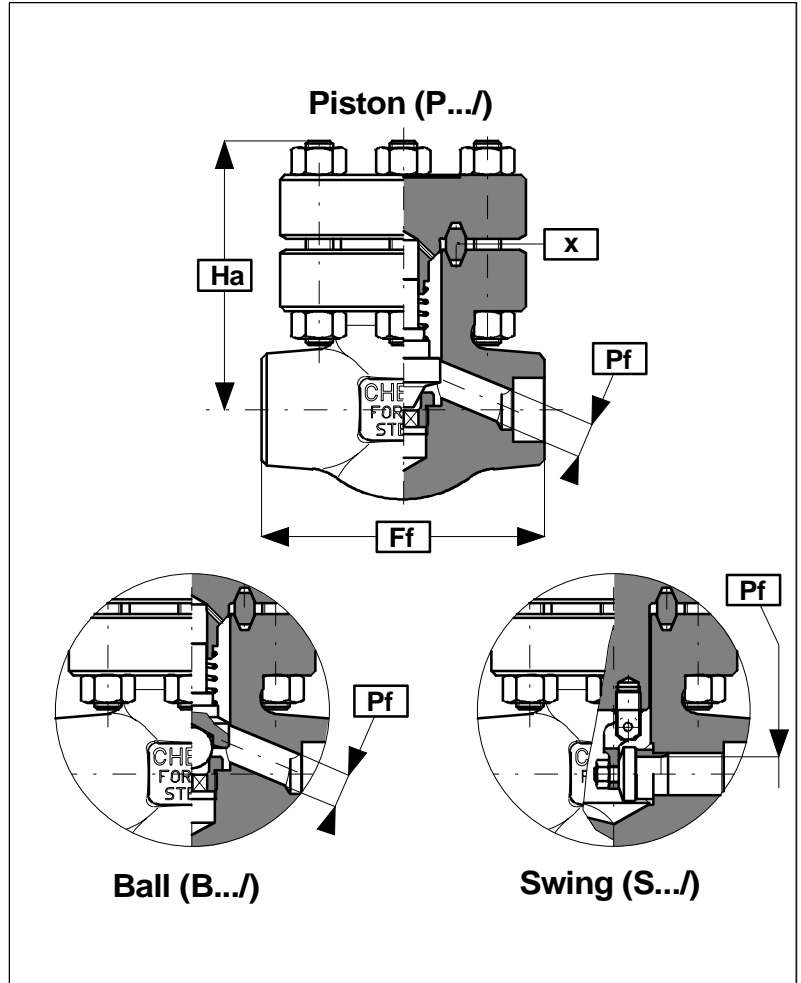
not applicable

## Standards

|              |                |
|--------------|----------------|
| Construction | BS 5352        |
| Socket weld  | ASME B16.11    |
| Threaded     | ASME B1.20.1   |
| Butt weld    | ASME B16.25    |
| Test         | BS 6755 (Pt.1) |

## Connections (xx)

|    |               |    |              |
|----|---------------|----|--------------|
| SW | Socket weld   | B8 | Butt weld 80 |
| TH | Threaded NPT  |    |              |
| TS | Sw/NPT        |    |              |
| SE | Sw (in)/NPT   |    |              |
| SU | Sw (out)/NPT  |    |              |
| B6 | Butt weld 160 |    |              |



X) Gasket=Spiral wound. RJ gasket available on request.

|                           |  | STANDARD BORE |      |         |      |         |      |         |      |         |      |
|---------------------------|--|---------------|------|---------|------|---------|------|---------|------|---------|------|
|                           |  | 1/2"          |      | 3/4"    |      | 1"      |      | 1.1/2"  |      | 2"      |      |
| Ff (mm/in)                |  | 110           | 4,33 | 115     | 4,53 | 130     | 5,12 | 210     | 8,27 | 240     | 9,45 |
| Ha (mm/in)                |  | 93            | 3,66 | 109     | 4,29 | 122     | 4,80 | 158     | 6,22 | 171     | 6,73 |
| Pf <sup>(4)</sup> (mm/in) |  | 11            | 0,43 | 14,5    | 0,57 | 19      | 0,75 | 31      | 1,22 | 37,5    | 1,48 |
| Wt. (kg/lb)               |  | 3,8           | 8,4  | 5,9     | 13,0 | 6,8     | 15,0 | 18,8    | 41,4 | 23,7    | 52,1 |
| Catal. no.                |  | t852/xx       |      | t853/xx |      | t854/xx |      | t856/xx |      | t857/xx |      |

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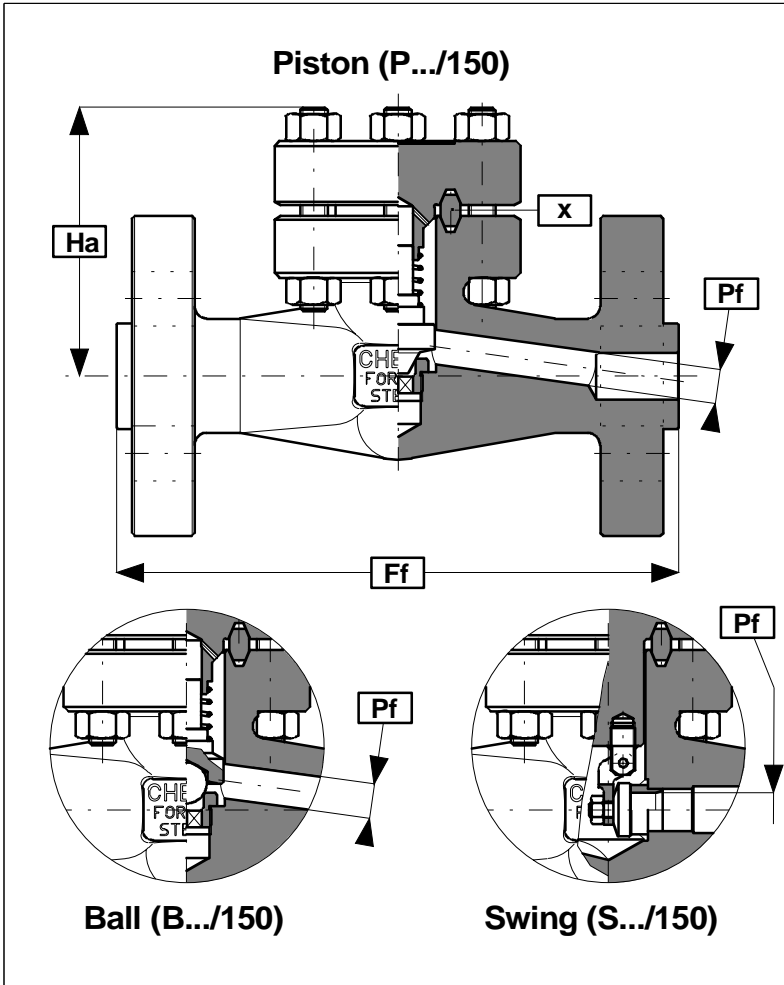
1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73

4) Dimensions for piston & ball type; swing see page 25  
5) Code t is replaced by kind of check valve (drawing above)





# CHECK VALVES - 1500 - Bolted cover - Flanged Rf/Rj



| Ratings (ASTM A105) |
|---------------------|
| 1500 p.s.i. @ 850°F |
| 3705 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic: (minimum)</b> |
| Body - 5575 p.s.i.          |
| Seat - 4100 p.s.i.          |
| <b>Air under water:</b>     |
| not applicable              |

| Standards                              |
|--|
| <b>Construction</b> BS 5352            |
| <b>Flanged</b> ASME B16.5, ASME B16.10 |
| <b>Test</b> BS 6755 (Pt.1)             |

| Connections (xx) |                    |           |              |
|------------------|--------------------|-----------|--------------|
| <b>RF</b>        | Raised face (std.) | <b>LF</b> | Large female |
| <b>RJ</b>        | Ring joint         | <b>LG</b> | Large groove |
| <b>SF</b>        | Small female       | <b>LM</b> | Large male   |
| <b>SG</b>        | Small groove       | <b>LT</b> | Large tongue |
| <b>SM</b>        | Small male         |           |              |
| <b>ST</b>        | Small tongue       |           |              |

X )Gasket=Spiral wound. RJ gasket available on request.

| STANDARD BORE                   |  |            |      |            |      |            |       |            |       |            |       |
|---------------------------------|--|------------|------|------------|------|------------|-------|------------|-------|------------|-------|
|                                 |  | 1/2"       |      | 3/4"       |      | 1"         |       | 1.1/2"     |       | 2"         |       |
| <b>Ff (mm/in)</b>               |  | 215,9      | 8,50 | 228,6      | 9,00 | 254,0      | 10,00 | 304,8      | 12,00 | 368,3      | 14,50 |
| <b>Ha (mm/in)</b>               |  | 93         | 3,66 | 109        | 4,29 | 122        | 4,80  | 158        | 6,22  | 171        | 6,73  |
| <b>Pf<sup>(4)</sup> (mm/in)</b> |  | 11         | 0,43 | 14,5       | 0,57 | 19         | 0,75  | 31         | 1,22  | 37,5       | 1,48  |
| <b>Wt. (kg/lb)</b>              |  | 7,5        | 16,5 | 10,9       | 24,0 | 14,4       | 31,7  | 30,3       | 67,0  | 44,0       | 96,8  |
| <b>Catal. no.</b>               |  | t852/150xx |      | t853/150xx |      | t854/150xx |       | t856/150xx |       | t857/150xx |       |

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1) Standard and alternative valve materials on page 67, type B  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) Flanges & face-to-face dimensions on page 74,75  
 4) Dimensions for piston & ball type; swing see page 25  
 5) Code t is replaced by kind of check valve (drawing above)





# CHECK VALVES - 1500 - Welded cover - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

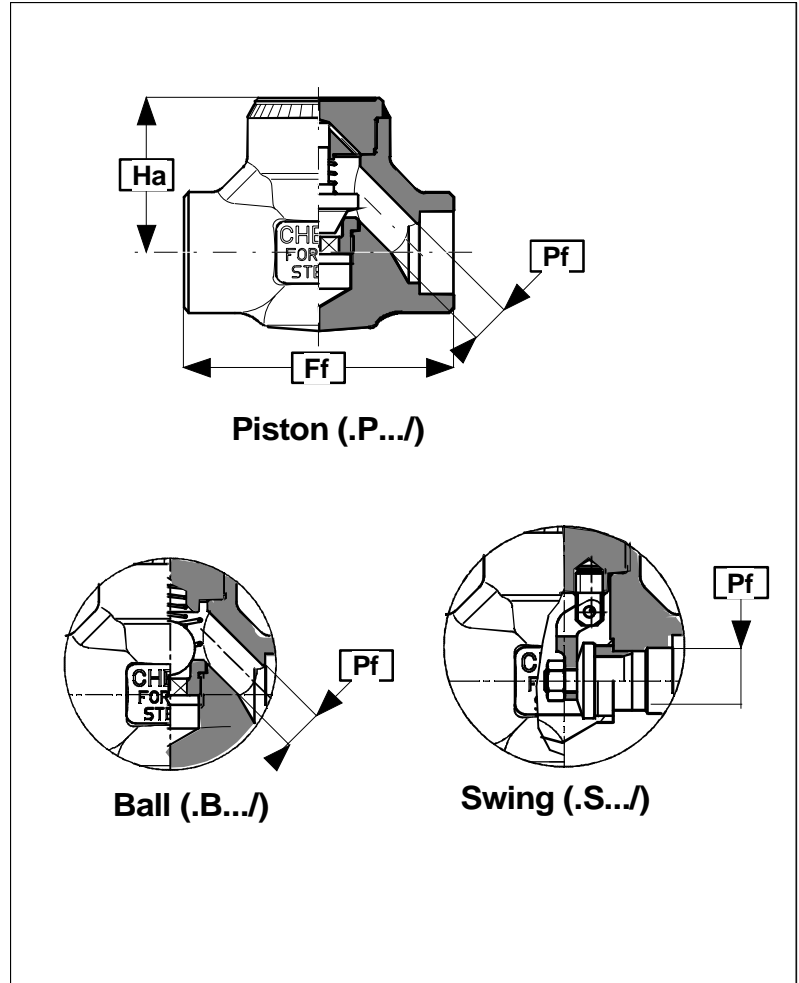
not applicable

## Standards

|              |                |
|--------------|----------------|
| Construction | BS 5352        |
| Socket weld  | ASME B16.11    |
| Threaded     | ASME B1.20.1   |
| Butt weld    | ASME B16.25    |
| Test         | BS 6755 (Pt.1) |

## Connections (xx)

|                         |                        |
|-------------------------|------------------------|
| <b>SW</b> Socket weld   | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT  |                        |
| <b>TS</b> Sw/NPT        |                        |
| <b>SE</b> Sw (in)/NPT   |                        |
| <b>SU</b> Sw (out)/NPT  |                        |
| <b>B6</b> Butt weld 160 |                        |



|                    |  | STANDARD BORE    |                  |                  |  |    |  |                  |                  |    |  |
|--------------------|--|------------------|------------------|------------------|--|----|--|------------------|------------------|----|--|
|                    |  | 1/2"             |                  | 3/4"             |  | 1" |  | 1.1/2"           |                  | 2" |  |
| <b>Ff</b> (mm/in)  |  | <b>90</b> 3,54   | <b>110</b> 4,33  | <b>127</b> 5,00  |  |    |  | <b>170</b> 6,69  | <b>210</b> 8,26  |    |  |
| <b>Ha</b> (mm/in)  |  | <b>51</b> 2,01   | <b>57</b> 2,24   | <b>62</b> 2,44   |  |    |  | <b>90</b> 3,54   | <b>117</b> 4,61  |    |  |
| <b>Pf</b> (mm/in)  |  | <b>11</b> 0,43   | <b>14,5</b> 0,57 | <b>19</b> 0,75   |  |    |  | <b>31</b> 1,22   | <b>37,5</b> 1,48 |    |  |
| <b>Wt.</b> (kg/lb) |  | <b>1,4</b> 3,1   | <b>2,4</b> 5,3   | <b>3,8</b> 8,4   |  |    |  | <b>8,0</b> 17,6  | <b>14,5</b> 31,9 |    |  |
| <b>Catal. no.</b>  |  | <b>t852WC/xx</b> | <b>t853WC/xx</b> | <b>t854WC/xx</b> |  |    |  | <b>t856WC/xx</b> | <b>t857WC/xx</b> |    |  |

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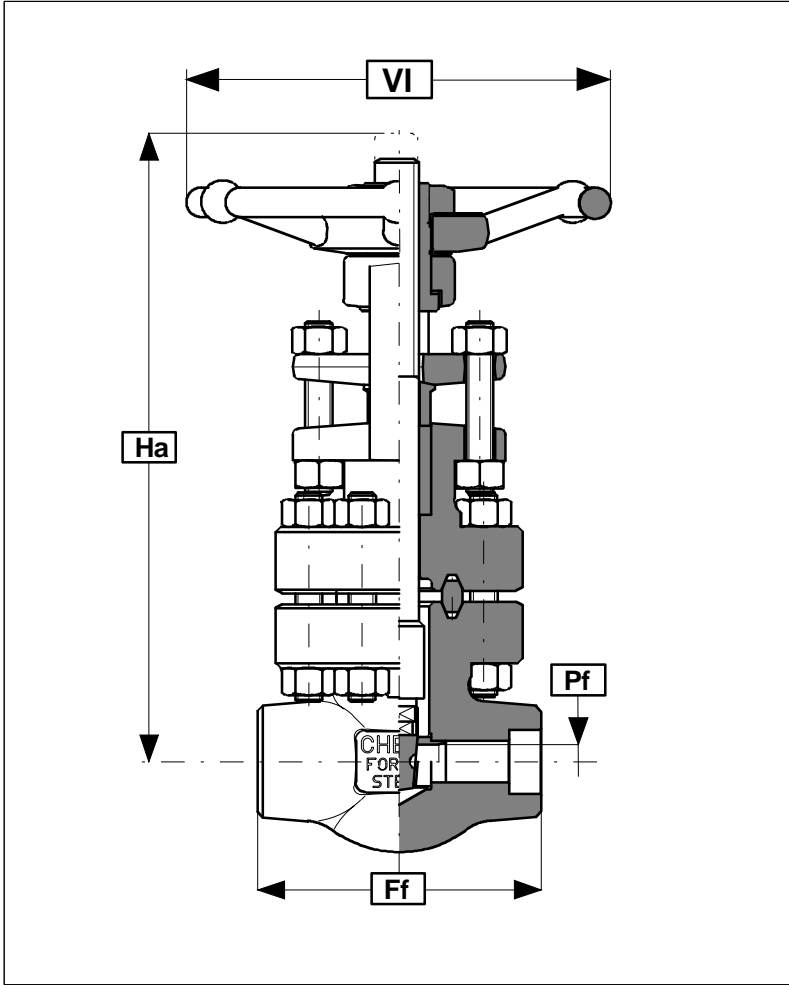
1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) SW, NPT & BW dimensions on page 73

4) Dimensions for piston & ball type; for swing see page 27  
5) Code t is replaced by kind of check valve (drawing above)





# GATE VALVES - 2500 - Bolted bonnet - Sw/Npt/Bw



### Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 9275 p.s.i.  
Seat - 6800 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** founded on ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

### Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw(e)/NPT     |                         |
| <b>SU</b> Sw8u)/NPT     |                         |
| <b>B6</b> Butt weld 160 |                         |

### STANDARD BORE

|                    |  | 1/2"     | 3/4"      | 1"        |  | 1.1/2"    | 2"        |
|--------------------|--|----------|-----------|-----------|--|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 110 4,33 | 115 4,53  | 130 5,12  |  | 210 8,27  | 240 9,45  |
| <b>Ha (mm/in)</b>  |  | 212 8,35 | 256 10,08 | 272 10,71 |  | 411 16,18 | 422 16,61 |
| <b>VI (mm/in)</b>  |  | 140 5,51 | 200 7,87  | 200 7,87  |  | 260 10,24 | 350 13,77 |
| <b>Pf (mm/in)</b>  |  | 10 0,48  | 14 0,55   | 18 0,71   |  | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  | 6,1 13,4 | 8,7 19,1  | 10,2 22,4 |  | 27,4 60,3 | 36,2 79,6 |
| <b>Catal. no.</b>  |  | 1052/xx  | 1053/xx   | 1054/xx   |  | 1056/xx   | 1057/xx   |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# GATE VALVES - 2500 - Bolted bonnet - Flanged Rf/Rj

## Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 9275 p.s.i.  
Seat - 6800 p.s.i.

### Air under water:

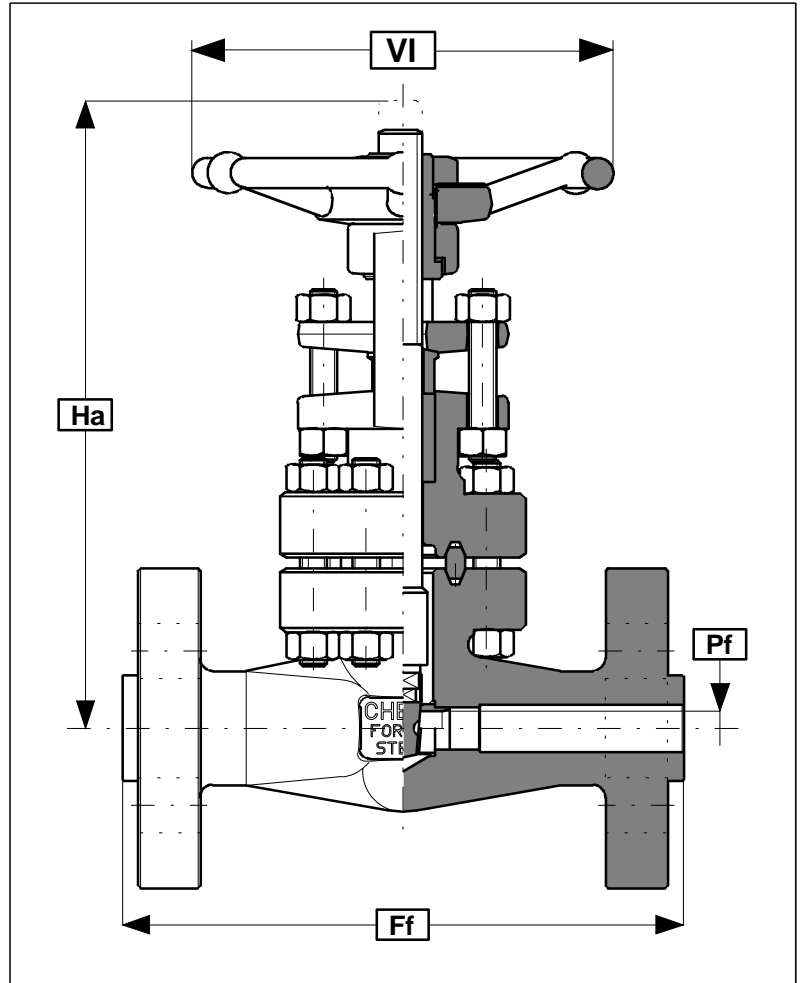
Seat - 85 p.s.i.

## Standards

**Construction** founded on ASME B16.34  
**Flanged** ASME B16.5, ASME B16.10  
**Test** API 598-ASME B16.34

## Connections (xx)

|           |                    |           |              |
|-----------|--------------------|-----------|--------------|
| <b>RF</b> | Raised face (std.) | <b>LF</b> | Large female |
| <b>RJ</b> | Ring joint         | <b>LG</b> | Large groove |
| <b>SF</b> | Small female       | <b>LM</b> | Large male   |
| <b>SG</b> | Small male         | <b>LT</b> | Large tongue |
| <b>SM</b> | Small male         |           |              |
| <b>ST</b> | Small tongue       |           |              |



## STANDARD BORE

|                    |  | 1/2"        | 3/4"        | 1"          |  | 1.1/2"      | 2"          |
|--------------------|--|-------------|-------------|-------------|--|-------------|-------------|
| <b>Ff (mm/in)</b>  |  | 263,5 10,37 | 273,0 10,75 | 308,0 12,13 |  | 384,2 15,13 | 450,8 17,75 |
| <b>Ha (mm/in)</b>  |  | 212 8,35    | 256 10,08   | 272 10,71   |  | 411 16,18   | 422 16,61   |
| <b>VI (mm/in)</b>  |  | 140 5,51    | 200 7,87    | 200 7,87    |  | 260 10,24   | 350 13,77   |
| <b>Pf (mm/in)</b>  |  | 10 0,39     | 14 0,55     | 18 0,71     |  | 31 12,21    | 36,5 1,44   |
| <b>Wt. (kg/lb)</b> |  | 9,9 21,8    | 15,8 34,8   | 17,9 39,4   |  | 39,1 86,3   | 56,8 125,0  |
| <b>Catal. no.</b>  |  | 1052/250xx  | 1053/250xx  | 1054/250xx  |  | 1056/250xx  | 1057/250xx  |

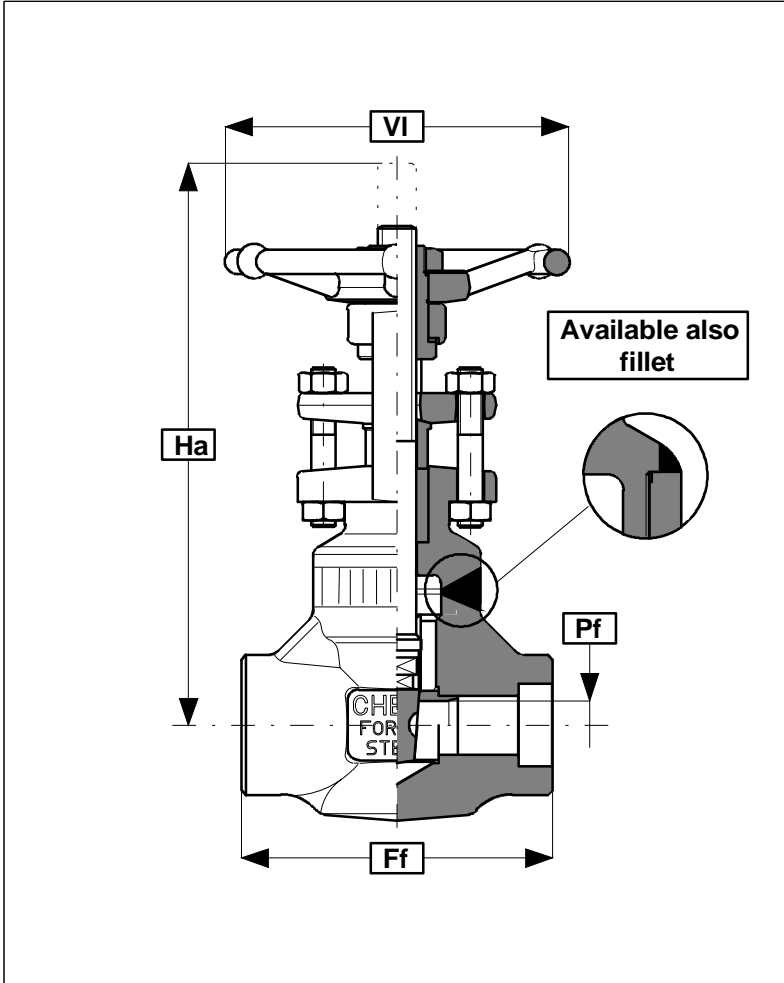
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|  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) Flanges & face-to-face dimensions on page 74, 75





# GATE VALVES - 2500 - Welded bonnet - Sw/Npt/Bw



### Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 9275 p.s.i.  
Seat - 6800 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** founded on ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

### Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw(e)/NPT     |                         |
| <b>SU</b> Sw(u)/NPT     |                         |
| <b>B6</b> Butt weld 160 |                         |

|                    |  | STANDARD BORE |      |           |      |           |      |           |       |           |       |
|--------------------|--|---------------|------|-----------|------|-----------|------|-----------|-------|-----------|-------|
|                    |  | 1/2"          |      | 3/4"      |      | 1"        |      | 1.1/2"    |       | 2"        |       |
| <b>Ff</b> (mm/in)  |  | 110           | 4,33 | 127       | 5,00 | 127       | 5,00 | 150       | 5,91  | 240       | 9,45  |
| <b>Ha</b> (mm/in)  |  | 198           | 7,80 | 225       | 8,85 | 243       | 9,57 | 387       | 15,24 | 403       | 15,87 |
| <b>VI</b> (mm/in)  |  | 140           | 5,51 | 200       | 7,87 | 200       | 7,87 | 260       | 10,24 | 350       | 13,78 |
| <b>Pf</b> (mm/in)  |  | 10            | 0,39 | 14        | 0,55 | 18        | 0,71 | 31        | 1,22  | 36,5      | 1,44  |
| <b>Wt.</b> (kg/lb) |  | 2,6           | 5,72 | 4,0       | 8,8  | 5,9       | 13,0 | 10,0      | 22,0  | 29        | 63,8  |
| <b>Catal. no.</b>  |  | 1052WB/xx     |      | 1053WB/xx |      | 1054WB/xx |      | 1056WB/xx |       | 1057WB/xx |       |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# GLOBE VALVES - 2500 - Bolted bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 9275 p.s.i.  
Seat - 6800 p.s.i.

### Air under water:

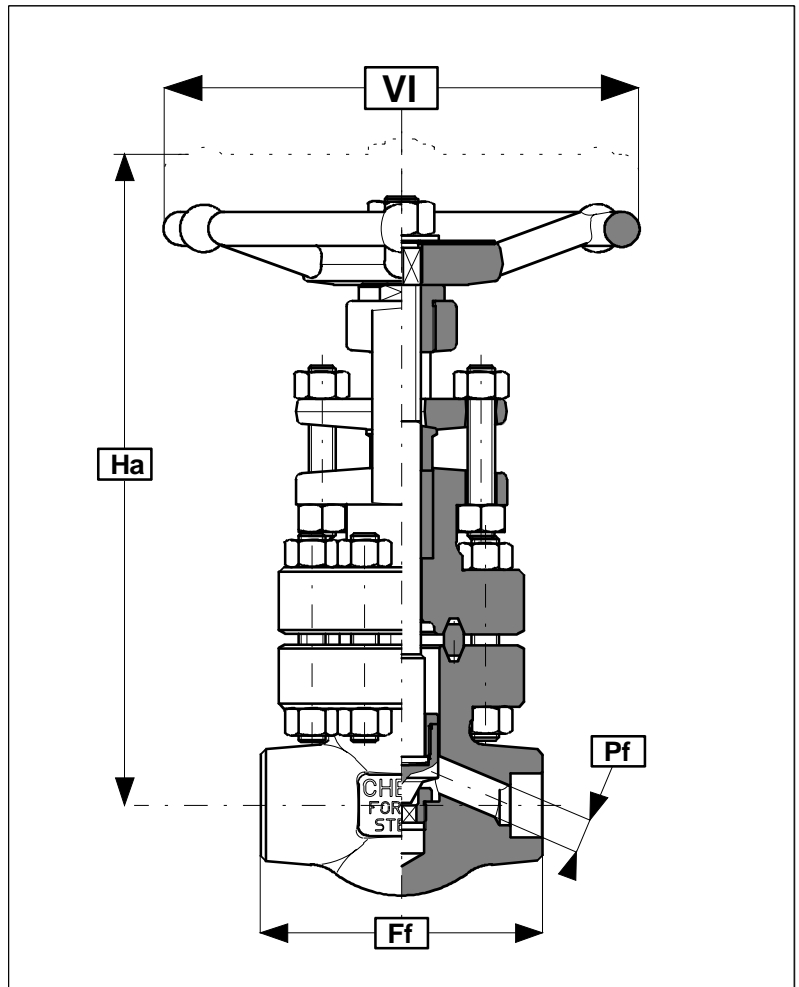
Seat - 85 p.s.i.

## Standards

**Construction** founded on ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

## Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |



## STANDARD BORE

|                    |  | 1/2"     | 3/4"      | 1"        |  | 1.1/2"    | 2"        |
|--------------------|--|----------|-----------|-----------|--|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 110 4,33 | 115 4,52  | 130 5,12  |  | 210 8,27  | 240 9,45  |
| <b>Ha (mm/in)</b>  |  | 218 8,58 | 260 10,24 | 268 10,55 |  | 427 16,81 | 433 17,05 |
| <b>VI (mm/in)</b>  |  | 140 5,51 | 200 7,87  | 200 7,87  |  | 260 10,24 | 350 13,77 |
| <b>Pf (mm/in)</b>  |  | 10 0,39  | 13 0,51   | 18 0,71   |  | 25 0,98   | 34 1,33   |
| <b>Wt. (kg/lb)</b> |  | 5,8 13,0 | 8,3 18,3  | 9,7 21,3  |  | 26,8 59,0 | 35,3 77,7 |
| <b>Catal. no.</b>  |  | 1152/xx  | 1153/xx   | 1154/xx   |  | 1156/xx   | 1157/xx   |

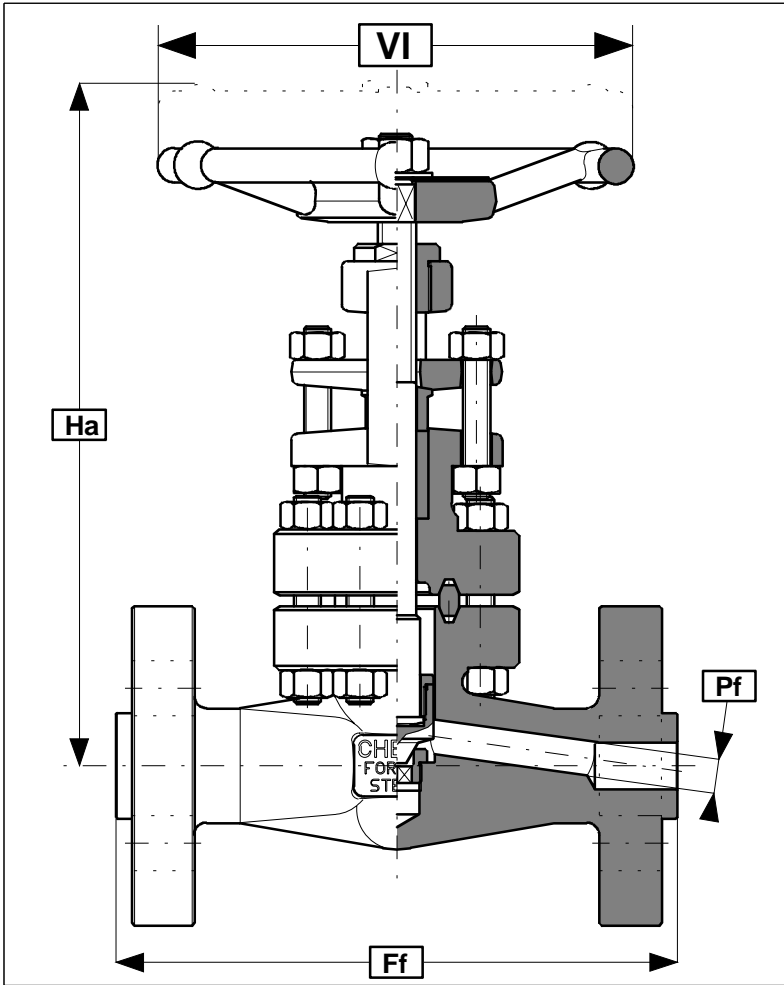
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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70,71,72  
3) SW, NPT & BW dimensions on page 73





# GLOBE VALVES - 2500 - Bolted bonnet - Flanged Rf/Rj



### Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 9275 p.s.i.  
Seat - 6800 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** founded on ASME B16.34  
**Flanged** ASME B16.5, ASME B16.10  
**Test** API 598-ASME B16.34

### Connections (xx)

|           |                    |           |              |
|-----------|--------------------|-----------|--------------|
| <b>RF</b> | Raised face (std.) | <b>LF</b> | Large female |
| <b>RJ</b> | Ring joint         | <b>LG</b> | Large groove |
| <b>SF</b> | Small female       | <b>LM</b> | Large male   |
| <b>SG</b> | Small groove       | <b>LT</b> | Large tongue |
| <b>SM</b> | Small male         |           |              |
| <b>ST</b> | Small tongue       |           |              |

### STANDARD BORE

|                    |  | 1/2"       |       | 3/4"       |       | 1"         |       | 1.1/2"     |       | 2"         |       |
|--------------------|--|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|
| <b>Ff (mm/in)</b>  |  | 263,5      | 10,37 | 273,0      | 10,75 | 308,0      | 12,13 | 384,2      | 15,13 | 450,8      | 17,15 |
| <b>Ha (mm/in)</b>  |  | 218        | 8,58  | 274        | 10,79 | 286        | 11,26 | 427        | 16,81 | 433        | 17,05 |
| <b>VI (mm/in)</b>  |  | 140        | 5,51  | 200        | 7,87  | 200        | 7,87  | 260        | 10,24 | 350        | 13,77 |
| <b>Pf (mm/in)</b>  |  | 10         | 0,39  | 13         | 0,51  | 18         | 0,71  | 25         | 0,98  | 34         | 1,33  |
| <b>Wt. (kg/lb)</b> |  | 9,6        | 21,1  | 15,4       | 33,9  | 17,4       | 38,3  | 38,5       | 84,7  | 55,9       | 123,0 |
| <b>Catal. no.</b>  |  | 1152/250xx |       | 1153/250xx |       | 1154/250xx |       | 1156/250xx |       | 1157/250xx |       |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70,71,72  
3) Flanges & face-to-face dimensions on page 74,75





# GLOBE VALVES - 2500 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 9275 p.s.i.  
Seat - 6800 p.s.i.

### Air under water:

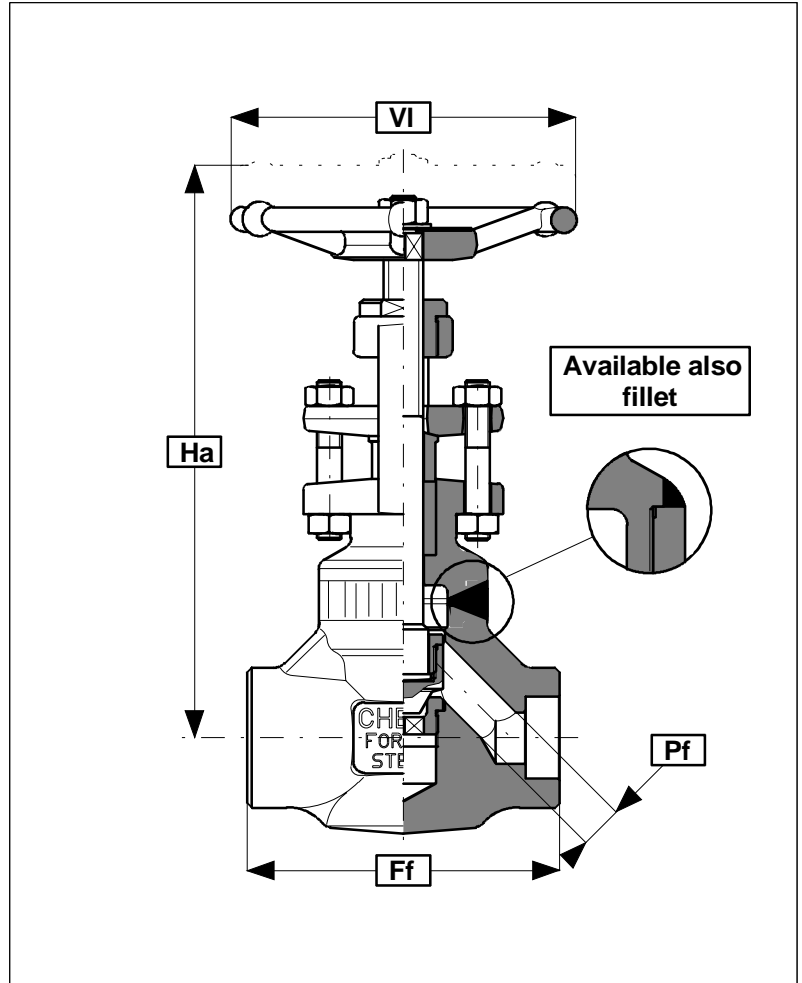
Seat - 85 p.s.i.

## Standards

**Construction** founded on ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

## Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |



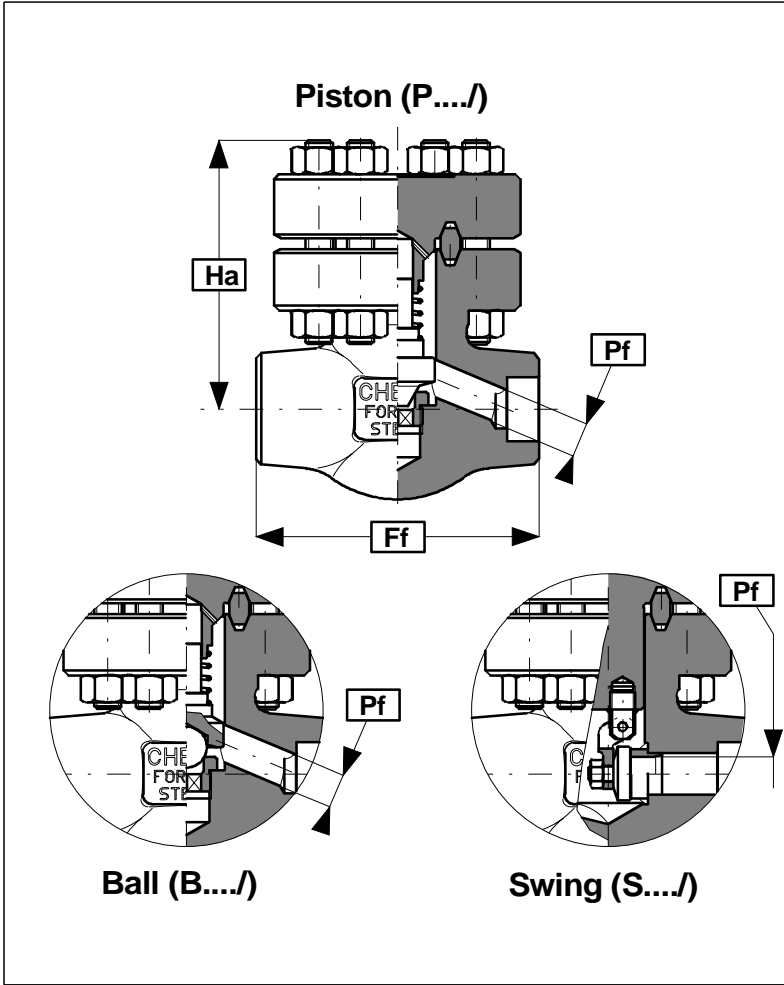
## STANDARD BORE

|                    |  | 1/2"      | 3/4"      | 1"        |  | 1.1/2"    | 2"        |
|--------------------|--|-----------|-----------|-----------|--|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 110 4,33  | 127 4,33  | 155 6,10  |  | 210 8,27  | 240 9,45  |
| <b>Ha (mm/in)</b>  |  | 209 8,22  | 238 9,37  | 257 10,11 |  | 386 15,20 | 407 16,02 |
| <b>VI (mm/in)</b>  |  | 140 5,51  | 200 7,87  | 200 7,87  |  | 260 10,24 | 350 13,78 |
| <b>Pf (mm/in)</b>  |  | 10 0,39   | 13 0,51   | 18 0,71   |  | 25 0,98   | 34 1,33   |
| <b>Wt. (kg/lb)</b> |  | 2,5 5,5   | 4,1 9,0   | 6,2 13,6  |  | 11,8 26,0 | 28 61,6   |
| <b>Catal. no.</b>  |  | 1152WB/xx | 1153WB/xx | 1154WB/xx |  | 1156WB/xx | 1157WB/xx |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





| Ratings (ASTM A105) |
|---------------------|
| 2500 p.s.i. @ 850°F |
| 6170 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic:</b> (minimum) |
| Body - 9275 p.s.i.          |
| Seat - 6800 p.s.i.          |
| <b>Air under water:</b>     |
| not applicable              |

| Standards           |                        |
|---------------------|------------------------|
| <b>Construction</b> | founded on ASME B16.34 |
| <b>Socket weld</b>  | ASME B16.11            |
| <b>Threaded</b>     | ASME B1.20.1           |
| <b>Butt weld</b>    | ASME B16.25            |
| <b>Test</b>         | API 598-ASME B16.34    |

| Connections (xx)        |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |

| STANDARD BORE                  |  |  |          |          |          |  |           |           |
|--------------------------------|--|--|----------|----------|----------|--|-----------|-----------|
|                                |  |  | 1/2"     | 3/4"     | 1"       |  | 1.1/2"    | 2"        |
| <b>Ff (mm/in)</b>              |  |  | 110 4,33 | 115 4,53 | 130 5,12 |  | 210 8,27  | 240 9,45  |
| <b>Ha (mm/in)</b>              |  |  | 93 3,66  | 109 4,29 | 122 4,80 |  | 158 6,22  | 171 6,73  |
| <b>Pf<sup>(4)</sup>(mm/in)</b> |  |  | 10 0,39  | 13 0,51  | 18 0,71  |  | 25 0,98   | 34 1,33   |
| <b>Wt. (kg/lb)</b>             |  |  | 4,0 8,8  | 6,2 13,6 | 7,2 15,8 |  | 19,4 42,7 | 24,5 53,9 |
| <b>Catal. no.</b>              |  |  | t1252/xx | t1253/xx | t1254/xx |  | t1256/xx  | t1257/xx  |

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1) Standard and alternative valve materials on page 67, type B  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73  
 4) Dimensions for piston & ball type;swing see page 34  
 5) Code t is replaced by kind of check valve (drawing above)





# CHECK VALVES - 2500 - Bolted cover - Flanged Rf/Rj

## Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 9275 p.s.i.  
Seat - 6800 p.s.i.

### Air under water:

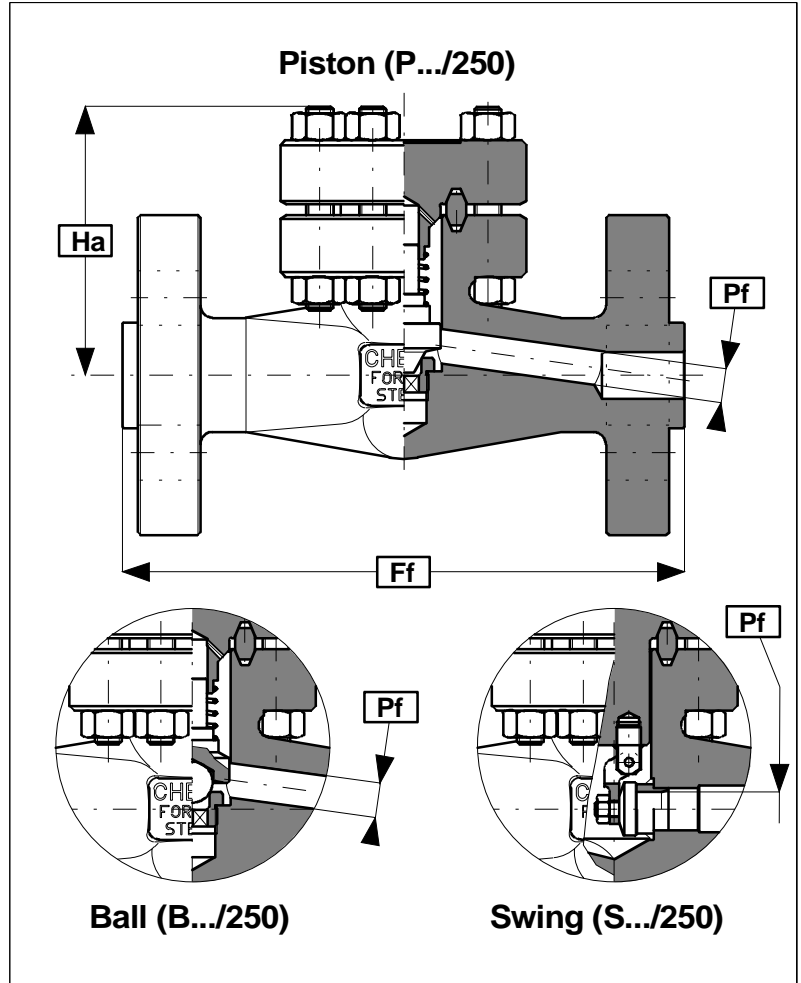
not applicable

## Standards

**Construction** founded on ASME B16.34  
**Flanged** ASME B16.5, ASME B16.10  
**Test** API 598-ASME B16.34

## Connections (xx)

|           |                    |           |              |
|-----------|--------------------|-----------|--------------|
| <b>RF</b> | Raised face (std.) | <b>LF</b> | Large female |
| <b>RJ</b> | Ring joint         | <b>LG</b> | Large groove |
| <b>SF</b> | Small female       | <b>LM</b> | Large male   |
| <b>SG</b> | Small groove       | <b>LT</b> | Large tongue |
| <b>SM</b> | Small male         |           |              |
| <b>ST</b> | Small tongue       |           |              |



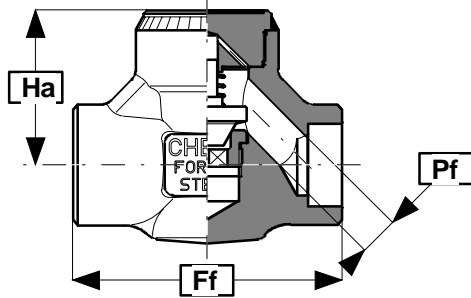
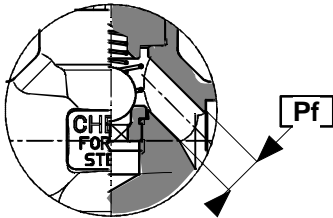
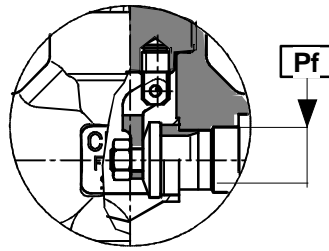
|                                 |  | STANDARD BORE |       |             |       |             |       |             |       |             |       |
|---------------------------------|--|---------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
|                                 |  | 1/2"          |       | 3/4"        |       | 1"          |       | 1.1/2"      |       | 2"          |       |
| <b>Ff</b> (mm/in)               |  | 263,5         | 10,37 | 273,0       | 10,75 | 308,0       | 12,13 | 384,2       | 15,13 | 450,8       | 17,75 |
| <b>Ha</b> (mm/in)               |  | 93            | 3,66  | 109         | 4,29  | 122         | 4,80  | 158         | 6,22  | 171         | 6,73  |
| <b>Pf<sup>(4)</sup></b> (mm/in) |  | 10            | 0,39  | 13          | 0,51  | 18          | 0,71  | 25          | 0,98  | 34          | 1,33  |
| <b>Wt.</b> (kg/lb)              |  | 8,5           | 18,7  | 12,5        | 27,5  | 19,2        | 42,2  | 40,8        | 89,8  | 59,0        | 129,8 |
| <b>Catal. no.</b>               |  | t1252/250xx   |       | t1253/250xx |       | t1254/250xx |       | t1256/250xx |       | t1257/250xx |       |

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1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) Flanges & face-to-face dimensions on page 73, 74

4) Dimensions for piston & ball type; swing on page 34  
5) Code tt is replaced by kind of check valve (drawing above)




**Piston (.P.../)**

**Ball (.B.../)**

**Swing (.S.../)**
**Ratings (ASTM A105)**

 2500 p.s.i. @ 850°F  
 6170 p.s.i. @ 100°F

**Test pressure (ASTM A105)**
**Hydraulic: (minimum)**  
 Body - 9275 p.s.i.  
 Seat - 6800 p.s.i.  
**Air under water:**  
 not applicable

**Standards**
**Construction** *founded on ASME B16.34*  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

**Connections (xx)**

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |

**STANDARD BORE**

|                    |  |  | 1/2"       | 3/4"       | 1"         |  | 1.1/2"     | 2"         |
|--------------------|--|--|------------|------------|------------|--|------------|------------|
| <b>Ff (mm/in)</b>  |  |  | 110 4,33   | 127 5,00   | 155 6,10   |  | 210 8,27   | 240 9,45   |
| <b>Ha (mm/in)</b>  |  |  | 60 2,36    | 71 2,80    | 85 3,35    |  | 120 4,72   | 130 5,12   |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39    | 13 0,51    | 18 0,71    |  | 25 0,98    | 34 1,33    |
| <b>Wt. (kg/lb)</b> |  |  | 2,0 4,4    | 3,2 7,0    | 4,8 10,6   |  | 9,6 21,1   | 16 35,2    |
| <b>Catal. no.</b>  |  |  | t1252WC/xx | t1253WC/xx | t1254WC/xx |  | t1256WC/xx | t1257WC/xx |

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 1) Standard and alternative valve materials on page 67, type B  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73

 4) Dimensions for piston & ball type; for swing see page 35  
 5) Code t is replaced by kind of check valve (drawing above)




# "Cryogenic" GATE VALVES - 800 - Bolted bonnet - Sw/Npt

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

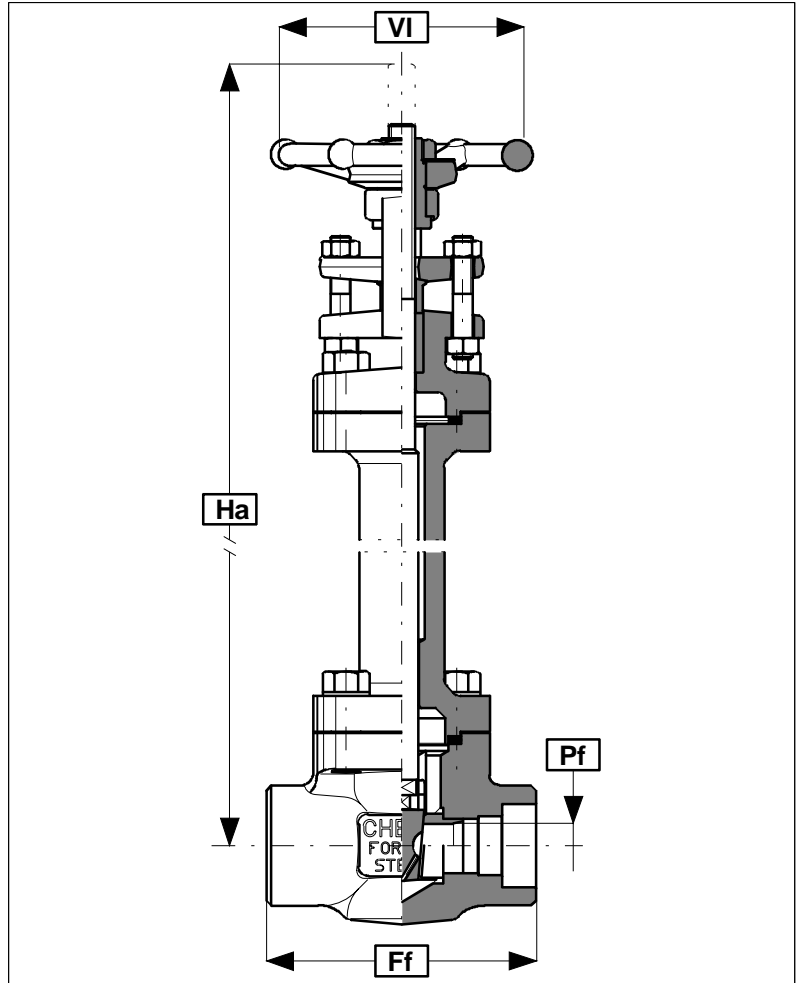
**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** founded on API 602, BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** founded on API 598-BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |



## CONVENTIONAL BORE

|                    |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  |
| <b>Ha (mm/in)</b>  |  | 333 13,11 | 367 14,45 | 406 15,98 | 463 18,23 | 508 20,00 | 534 21,02 |
| <b>VI (mm/in)</b>  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  |
| <b>Pf (mm/in)</b>  |  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  | 3,1 6,8   | 3,6 7,9   | 5,7 12,5  | 8,8 19,4  | 11,7 25,7 | 14,4 31,7 |
| <b>Catal. no.</b>  |  | CR252B/xx | CR253B/xx | CR254B/xx | CR255B/xx | CR256B/xx | CR257B/xx |

## FULL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 333 13,11 | 333 13,11 | 367 14,45 | 406 15,98 | 463 18,23 | 508 20,00 | 534 21,02 | 658 25,91 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 9 0,35    | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 | 48 1,89   |
| <b>Wt. (kg/lb)</b> | 3,1 6,8   | 3,1 6,8   | 3,6 7,9   | 5,7 12,5  | 8,8 19,4  | 11,7 25,7 | 14,4 31,7 | 22,2 49,0 |
| <b>Catal. no.</b>  | CF210B/xx | CF211B/xx | CF212B/xx | CF213B/xx | CF214B/xx | CF215B/xx | CF216B/xx | CF217B/xx |

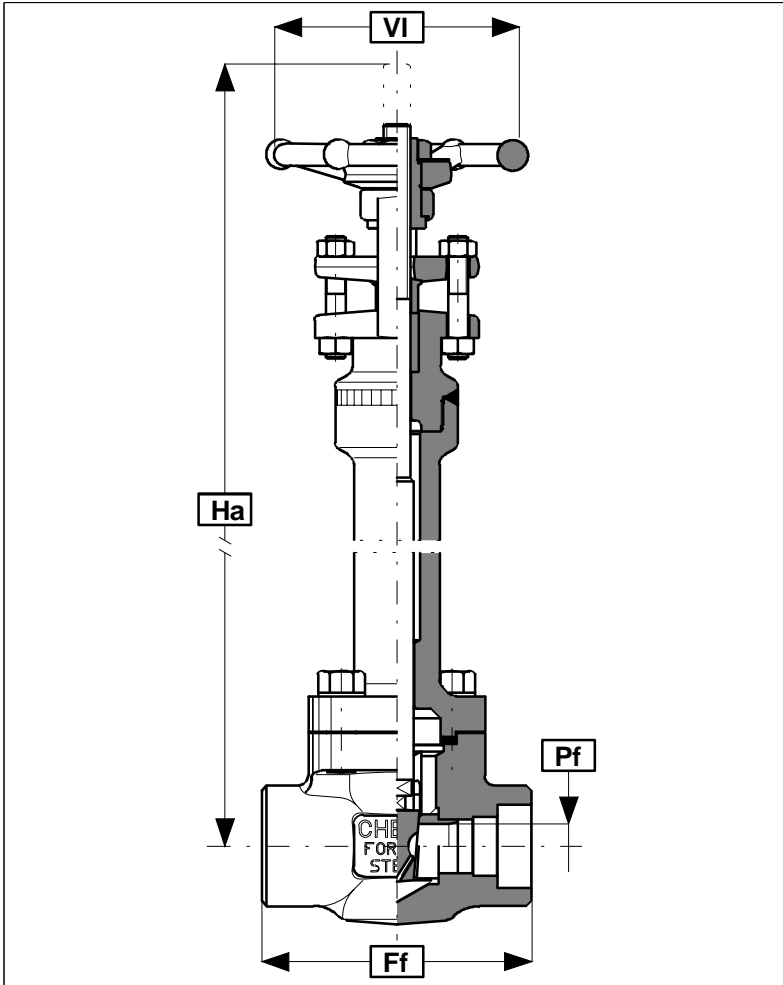
1) Standard and alternative valve materials on page 67, type C  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) SW & NPT dimensions on page 73

4) On request flanged ends can be supplied; body dimensions on page 5,6,7  
5) For Ha Length in according to customer desire extension should be welded





# "Cryogenic" GATE VALVES - 800 - Welded bonnet - Sw/Npt



### Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** founded on API 602, BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** founded on API 598-BS 6755 (Pt.1)

### Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |

### CONVENTIONAL BORE

|                    |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  |
| <b>Ha (mm/in)</b>  |  | 333 13,11 | 367 14,45 | 406 15,98 | 463 18,23 | 508 20,00 | 534 21,02 |
| <b>VI (mm/in)</b>  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  |
| <b>Pf (mm/in)</b>  |  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  | 3,1 6,8   | 3,6 7,9   | 5,7 12,5  | 8,8 19,4  | 11,7 25,7 | 14,4 31,7 |
| <b>Catal. no.</b>  |  | CR252/xx  | CR253/xx  | CR254/xx  | CR255/xx  | CR256/xx  | CR257/xx  |

### FULL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 330 12,99 | 333 13,11 | 367 14,45 | 406 15,98 | 463 18,23 | 508 20,00 | 534 21,02 | 658 25,91 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 9 0,35    | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 | 48 1,89   |
| <b>Wt. (kg/lb)</b> | 3,1 6,8   | 3,1 6,8   | 3,6 7,9   | 5,7 12,5  | 8,8 19,4  | 11,7 25,7 | 14,4 31,7 | 22,2 48,8 |
| <b>Catal. no.</b>  | CF210/xx  | CF211/xx  | CF212/xx  | CF213/xx  | CF214/xx  | CF215/xx  | CF216/xx  | CF217/xx  |

1) Standard and alternative valve materials on page 67, type C  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73

4) On request flanged ends can be supplied; body dimensions on page 5,6,7  
5)For Ha Length in according to customer desire extension should be welded





# "Cryogenic" GLOBE VALVES - 800 - Bolted bonnet - Sw/Npt

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 3000 p.s.i.  
Seat - 2175 p.s.i.

### Air under water:

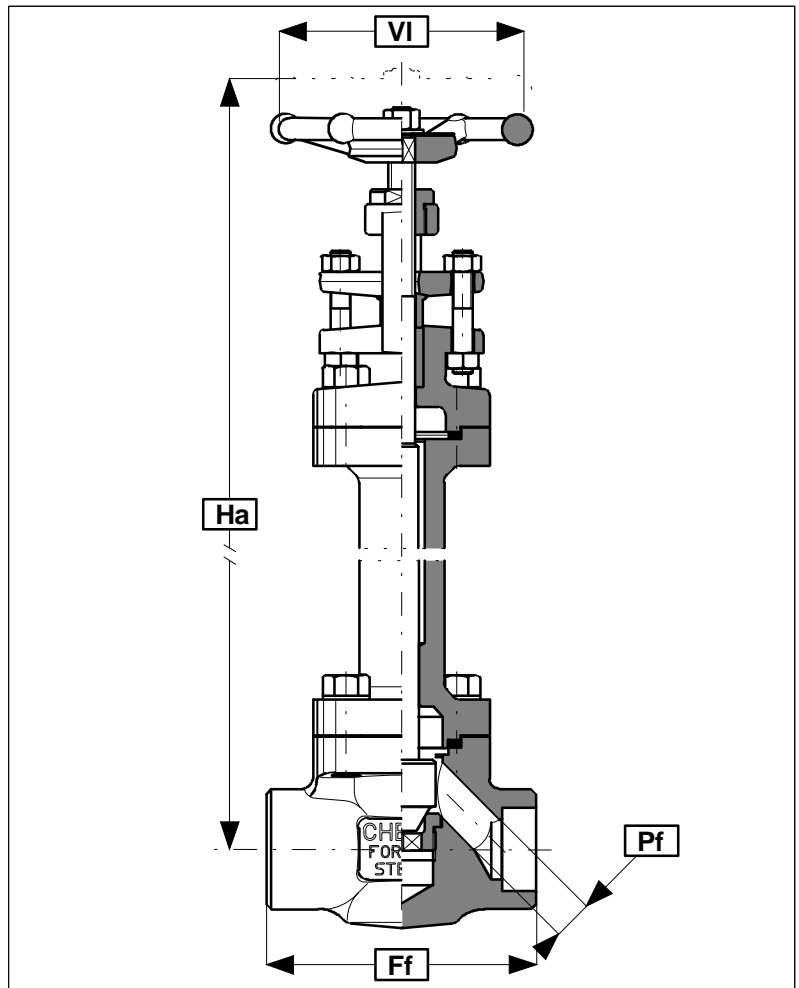
Seat - 85 p.s.i.

## Standards

**Construction** founded on BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** founded on BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |



## REDUCED BORE

|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
|--------------------|--|--|-----------|-----------|-----------|-----------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>  |  |  | 333 13,11 | 365 14,37 | 401 15,79 | 462 18,19 | 507 19,96              | 531 20,91              |
| <b>VI (mm/in)</b>  |  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               |
| <b>Pf (mm/in)</b>  |  |  | 9 0,35    | 12 0,47   | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b> |  |  | 3,1 6,8   | 3,6 7,9   | 5,7 12,5  | 8,8 19,4  | 11,7 25,7              | 14,4 31,7              |
| <b>Catal. no.</b>  |  |  | CR352B/xx | CR353B/xx | CR354B/xx | CR355B/xx | CR356B/xx              | CR357B/xx              |

## FULL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
|--------------------|-----------|-----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>  | 333 13,11 | 333 13,11 | 365 14,37 | 401 15,79 | 462 18,19 | 507 19,96              | 531 20,91              | 637 25,08              |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               | 200 7,87               |
| <b>Pf (mm/in)</b>  | 6,5 0,26  | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 40 <sup>(6)</sup> 1,57 |
| <b>Wt. (kg/lb)</b> | 3,1 6,8   | 3,1 6,8   | 3,6 7,9   | 5,7 12,5  | 8,8 19,4  | 11,7 25,7              | 14,4 31,7              | 22,2 49,0              |
| <b>Catal. no.</b>  | CF310B/xx | CF311B/xx | CF312B/xx | CF313B/xx | CF314B/xx | CF315B/xx              | CF316B/xx              | CF317B/xx              |

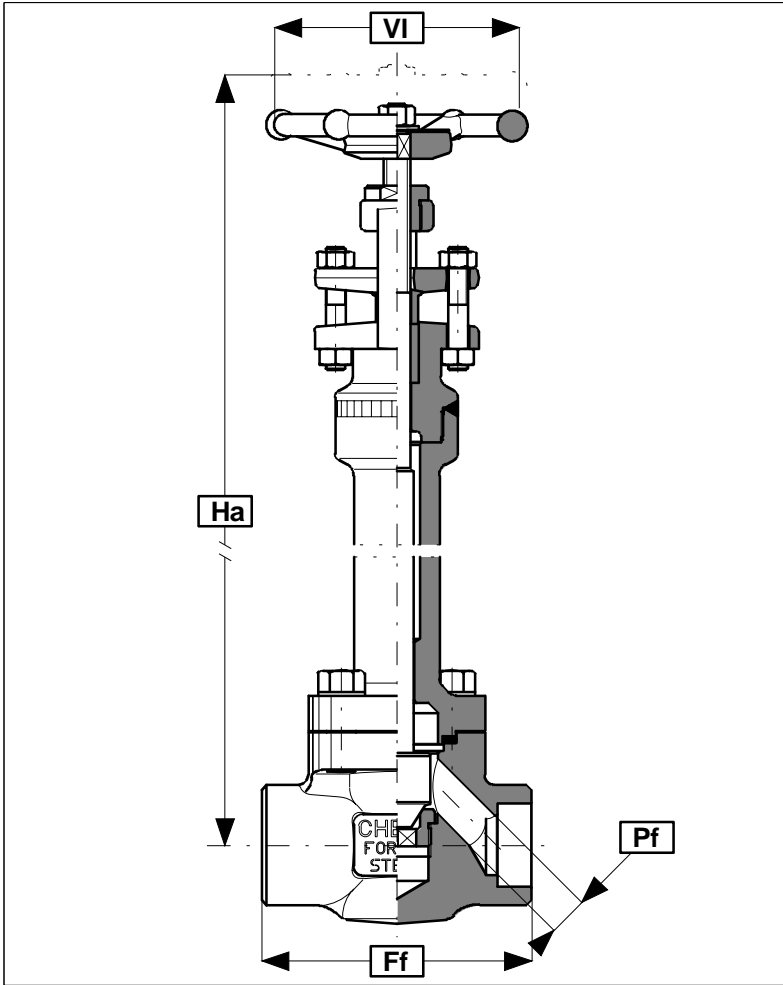
1) Standard and alternative valve materials on page 67, type C  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73  
4) Pf = 29,5 with integral stellited seat

5) Pf = 35 with integral stellited seat  
6) Pf = 45 with integral stellited seat  
7) On request flanged ends can be supplied; body dimensions on page 10,11,12  
8) For Ha Length in according to customer desire extension should be welded





# "Cryogenic" GLOBE VALVES - 800 - Welded bonnet - Sw/Npt



## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** founded on BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** founded on BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |

## REDUCED BORE

|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
|--------------------|--|--|-----------|-----------|-----------|-----------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>  |  |  | 333 13,11 | 365 14,37 | 401 15,79 | 462 18,19 | 507 19,96              | 531 20,91              |
| <b>VI (mm/in)</b>  |  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               |
| <b>Pf (mm/in)</b>  |  |  | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b> |  |  | 2,6 5,7   | 3,1 6,8   | 5,2 11,4  | 8,6 18,9  | 12,4 27,3              | 15,7 34,5              |
| <b>Catal. no.</b>  |  |  | CR352/xx  | CR353/xx  | CR354/xx  | CR355/xx  | CR356/xx               | CR357/xx               |

## FULL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
|--------------------|-----------|-----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>  | 333 12,99 | 333 13,11 | 365 14,37 | 401 15,79 | 462 18,19 | 507 19,96              | 531 20,91              | 637 25,08              |
| <b>VI (mm/in)</b>  | 90 13,11  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               | 200 7,87               |
| <b>Pf (mm/in)</b>  | 6,5 0,26  | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 40 <sup>(6)</sup> 1,57 |
| <b>Wt. (kg/lb)</b> | 2,6 5,7   | 2,6 5,7   | 3,1 6,8   | 5,2 11,4  | 8,6 18,9  | 12,4 27,3              | 15,7 34,5              | 23,4 51,5              |
| <b>Catal. no.</b>  | CF310/xx  | CF311/xx  | CF312/xx  | CF313/xx  | CF314/xx  | CF315/xx               | CF316/xx               | CF317/xx               |

1) Standard and alternative valve materials on page 67, type C  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73  
4) Pf = 29,5 with integral stellited seat

5) Pf = 35 with integral stellited seat  
6) Pf = 45 with integral stellited seat  
7) On request flanged ends can be supplied; body dimensions on page 10,11,12  
8) For Ha Length in according to customer desire extension should be welded





# "Bellows sealed" GATE VALVES - 800 - Bolted bonnet - Sw/Npt

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1440 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 2180 p.s.i.  
Seat - 1495 p.s.i.

### Air under water:

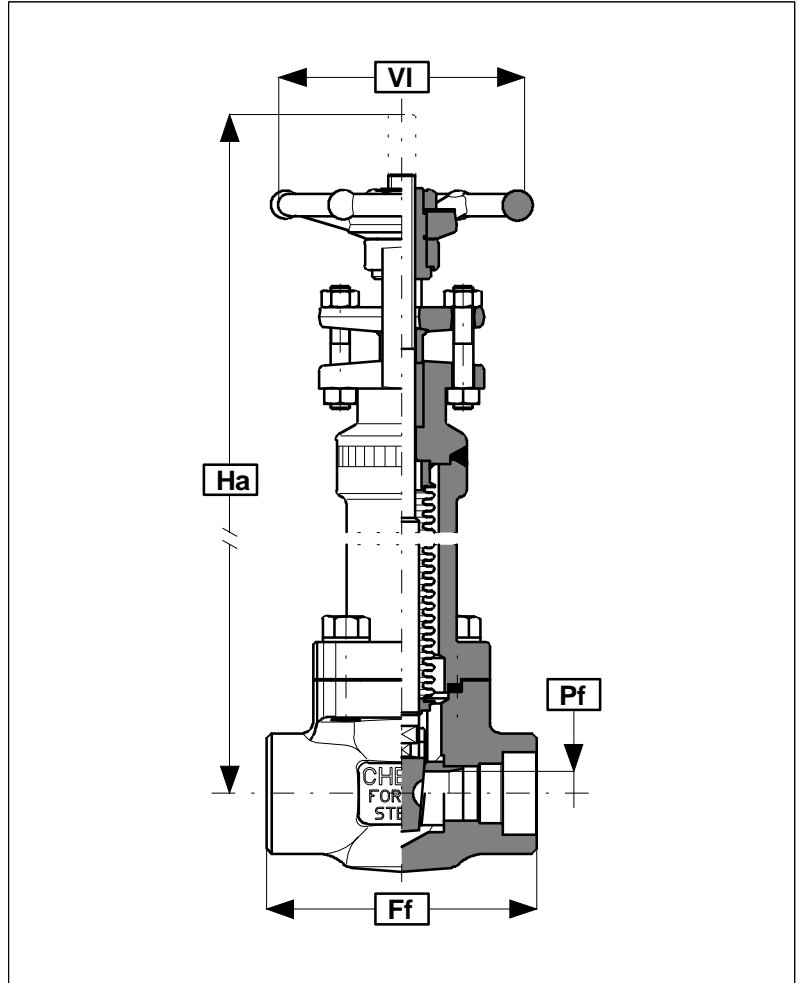
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |



## REDUCED BORE

|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|--|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  |
| <b>Ha (mm/in)</b>  |  |  | 256 10,08 | 267 10,51 | 300 11,81 | 344 13,54 | 421 16,57 | 433 17,05 |
| <b>VI (mm/in)</b>  |  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  |  | 3,0 6,6   | 3,4 7,5   | 5,3 11,7  | 7,7 16,9  | 11,0 24,2 | 14,2 31,2 |
| <b>Catal. no.</b>  |  |  | SR252B/xx | SR253B/xx | SR254B/xx | SR255B/xx | SR256B/xx | SR257B/xx |

## FULL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 256 10,08 | 256 10,08 | 267 10,51 | 300 11,81 | 344 13,54 | 421 16,57 | 433 17,05 | 560 22,05 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 8,5 0,33  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 | 48 1,89   |
| <b>Wt. (kg/lb)</b> | 3,0 6,6   | 3,0 6,6   | 3,4 7,5   | 5,3 11,7  | 7,7 17,1  | 11,0 24,4 | 14,2 31,2 | 25,0 55,0 |
| <b>Catal. no.</b>  | SF210B/xx | SF211B/xx | SF212B/xx | SF213B/xx | SF214B/xx | SF215B/xx | SF216B/xx | SF217B/xx |

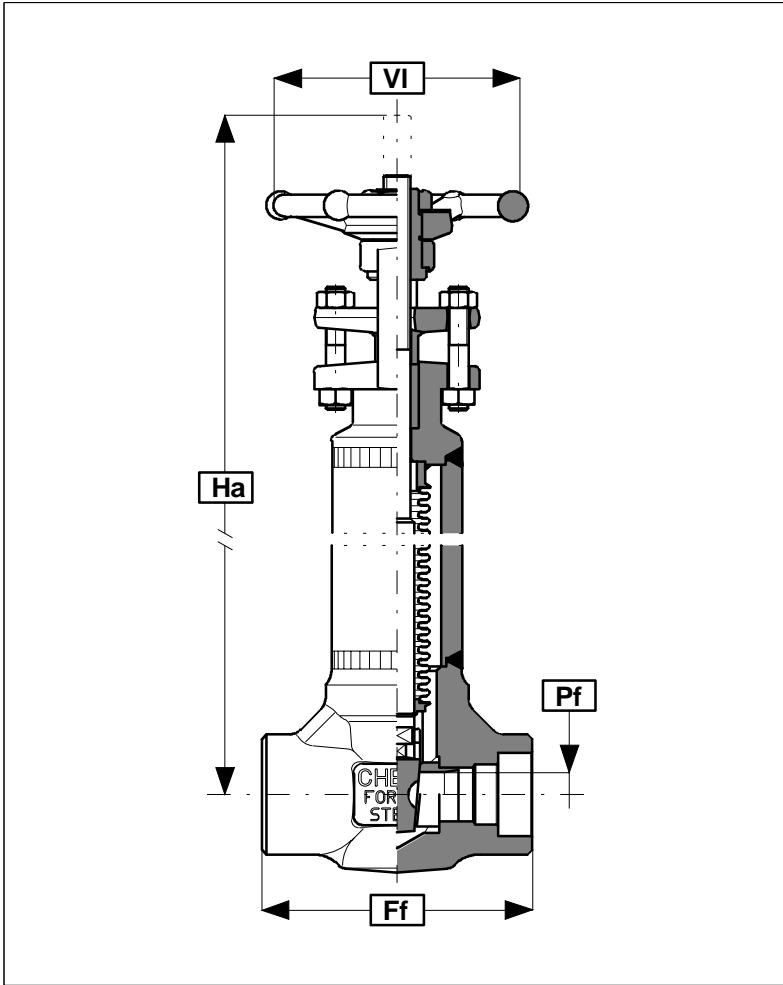
1) Standard and alternative valve materials on page 67, type D  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71, 72  
3) SW & NPT dimensions on page 73

4) On request flanged ends can be supplied; body dimensions on page 5,6,7





# "Bellows sealed" GATE VALVES - 800 - Welded bonnet - Sw/Npt



| Ratings (ASTM A105) |
|---------------------|
| 800 p.s.i. @ 850°F  |
| 1440 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic:</b> (minimum) |
| Body - 2180 p.s.i.          |
| Seat - 1495 p.s.i.          |
| <b>Air under water:</b>     |
| Seat - 85 p.s.i.            |

| Standards                      |
|--------------------------------|
| <b>Construction</b> BS 5352    |
| <b>Socket weld</b> ASME B16.11 |
| <b>Threaded</b> ASME B1.20.1   |
| <b>Test</b> BS 6755 (Pt.1)     |

| Connections (xx)       |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |

| REDUCED BORE       |  |  |           |           |           |           |           |           |
|--------------------|--|--|-----------|-----------|-----------|-----------|-----------|-----------|
|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
| <b>Ff (mm/in)</b>  |  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  |
| <b>Ha (mm/in)</b>  |  |  | 256 10,08 | 267 10,51 | 300 11,81 | 344 13,54 | 421 16,57 | 433 17,05 |
| <b>VI (mm/in)</b>  |  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 |
| <b>Wt. (kg/lb)</b> |  |  | 2,7 5,9   | 3,1 6,8   | 4,7 10,3  | 6,9 15,2  | 9,5 20,9  | 12,6 27,7 |
| <b>Catal. no.</b>  |  |  | SR252/xx  | SR253/xx  | SR254/xx  | SR255/xx  | SR256/xx  | SR257/xx  |

| FULL BORE          |           |           |           |           |           |           |           |           |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
| <b>Ff (mm/in)</b>  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 127 5,00  | 130 5,12  | 150 5,91  |
| <b>Ha (mm/in)</b>  | 256 10,08 | 256 10,08 | 267 10,51 | 300 11,81 | 344 13,54 | 421 16,57 | 433 17,05 | 560 22,05 |
| <b>VI (mm/in)</b>  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf (mm/in)</b>  | 8,5 0,33  | 10 0,39   | 14 0,55   | 18 0,71   | 24 0,94   | 31 1,22   | 36,5 1,44 | 48 1,89   |
| <b>Wt. (kg/lb)</b> | 2,7 5,9   | 2,7 5,9   | 3,1 6,8   | 4,7 10,3  | 6,9 15,2  | 9,5 20,9  | 12,6 27,7 | 25,0 55,0 |
| <b>Catal. no.</b>  | SF210/xx  | SF211/xx  | SF212/xx  | SF213/xx  | SF214/xx  | SF215/xx  | SF216/xx  | SF217/xx  |

1) Standard and alternative valve materials on page 67, type D  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW & NPT dimensions on page 73





# "Bellows sealed" GLOBE VALVES - 800 - Bolted bonnet - Sw/Npt

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1440 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 2180 p.s.i.  
Seat - 1495 p.s.i.

### Air under water:

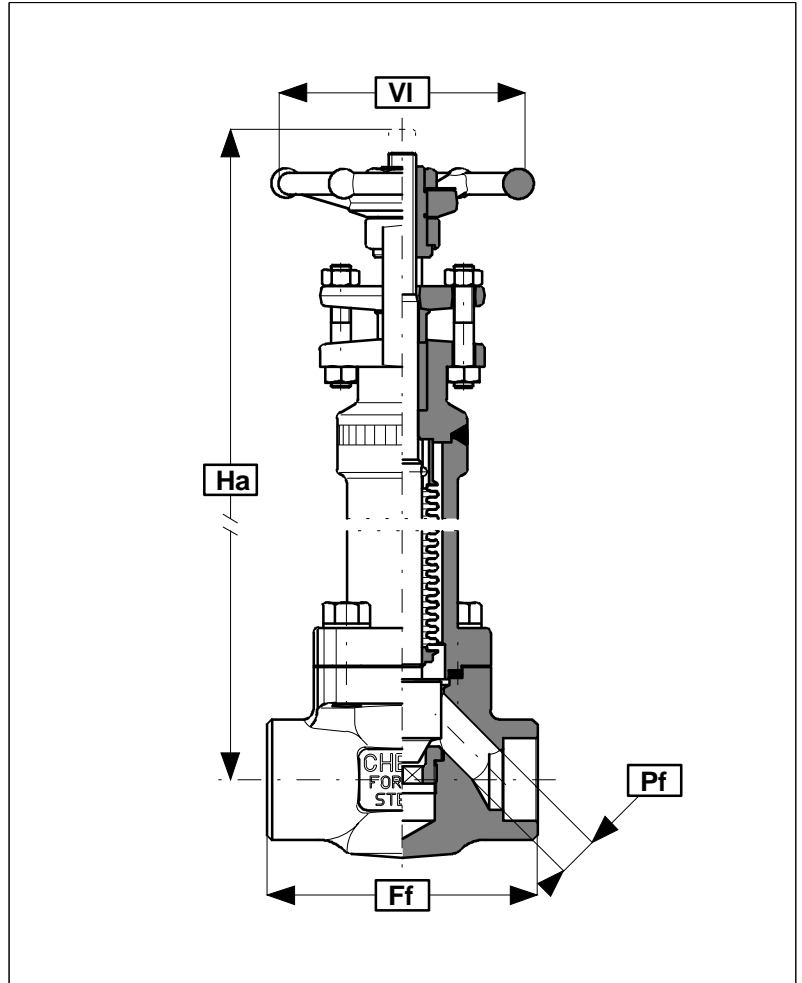
Seat - 85 p.s.i.

## Standards

**Construction** BS 5253  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |



## REDUCED BORE

|                    |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
|--------------------|--|-----------|-----------|-----------|-----------|------------------------|------------------------|
| <b>Ff</b> (mm/in)  |  | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha</b> (mm/in)  |  | 234 9,21  | 243 9,56  | 290 11,41 | 320 12,59 | 363 14,29              | 389 15,31              |
| <b>VI</b> (mm/in)  |  | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               |
| <b>Pf</b> (mm/in)  |  | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt.</b> (kg/lb) |  | 2,5 5,5   | 2,8 6,2   | 5,2 11,4  | 7,5 16,5  | 11,4 25,1              | 15,4 33,9              |
| <b>Catal. no.</b>  |  | SR352B/xx | SR353B/xx | SR354B/xx | SR355B/xx | SR356B/xx              | SR357B/xx              |

## FULL BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
|--------------------|-----------|-----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
| <b>Ff</b> (mm/in)  | 80 3,15   | 80 3,15   | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha</b> (mm/in)  | 234 9,21  | 234 9,21  | 243 9,56  | 290 11,41 | 320 13,04 | 363 14,29              | 389 15,31              | 442 17,40              |
| <b>VI</b> (mm/in)  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               | 200 7,87               |
| <b>Pf</b> (mm/in)  | 6 0,24    | 9 0,35    | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 40 <sup>(6)</sup> 1,57 |
| <b>Wt.</b> (kg/lb) | 2,6 5,7   | 2,6 5,7   | 2,9 6,4   | 5,3 11,7  | 7,6 16,7  | 11,5 25,3              | 15,5 34,1              | 23,4 51,5              |
| <b>Catal. no.</b>  | SF310B/xx | SF311B/xx | SF312B/xx | SF313B/xx | SF314B/xx | SF315B/xx              | SF316B/xx              | SF317B/xx              |

1) Standard and alternative valve materials on page 67, type D

2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72

3) SW & NPT dimensions on page 73

4) Pf = 29,5 with integral stellite seat

5) Pf = 35 with integral stellite seat

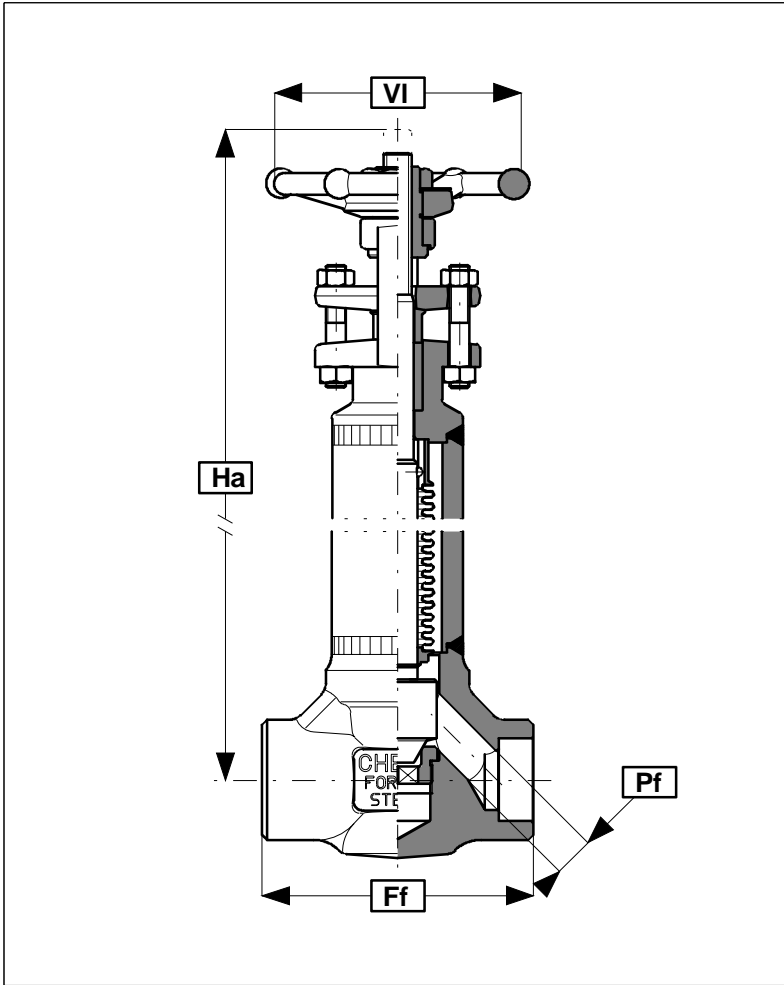
6) Pf = 45 with integral stellite seat

7) On request flanged ends can be supplied; body dimensions on page 10,11,12





# "Bellows sealed" GLOBE VALVES-800-Welded bonnet-Sw/Npt



## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1440 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 2180 p.s.i.  
Seat - 1495 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |

## REDUCED BORE

|                    |  | 1/2"     | 3/4"      | 1"        | 1.1/4"    | 1.1/2"                 | 2"                     |
|--------------------|--|----------|-----------|-----------|-----------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  |  | 80 3,15  | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               |
| <b>Ha (mm/in)</b>  |  | 235 9,25 | 259 10,20 | 302 11,89 | 329 12,95 | 354 13,94              | 390 15,35              |
| <b>VI (mm/in)</b>  |  | 90 3,54  | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               |
| <b>Pf (mm/in)</b>  |  | 9 0,35   | 12,5 0,49 | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt. (kg/lb)</b> |  | 2,3 5,1  | 2,6 5,7   | 4,3 9,5   | 6,8 15,0  | 9,6 21,1               | 13,8 30,4              |
| <b>Catal. no.</b>  |  | SR352/xx | SR353/xx  | SR354/xx  | SR355/xx  | SR356/xx               | SR357/xx               |

## FULL BORE

|                    | 1/4"     | 3/8"     | 1/2"      | 3/4"      | 1"        | 1.1/4"                 | 1.1/2"                 | 2"                     |
|--------------------|----------|----------|-----------|-----------|-----------|------------------------|------------------------|------------------------|
| <b>Ff (mm/in)</b>  | 80 3,15  | 80 3,15  | 90 3,54   | 110 4,33  | 127 5,00  | 155 6,10               | 170 6,69               | 210 8,27               |
| <b>Ha (mm/in)</b>  | 235 9,25 | 235 9,25 | 259 10,20 | 302 11,89 | 329 12,95 | 354 13,94              | 390 15,35              | 442 17,40              |
| <b>VI (mm/in)</b>  | 90 3,54  | 90 3,54  | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51               | 140 5,51               | 200 7,87               |
| <b>Pf (mm/in)</b>  | 6 0,24   | 9 0,35   | 12,5 0,4  | 17,5 0,69 | 22,5 0,89 | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 | 40 <sup>(6)</sup> 1,57 |
| <b>Wt. (kg/lb)</b> | 2,4 5,4  | 2,4 5,4  | 2,7 6,1   | 4,6 10,5  | 7,3 16,5  | 10,2 23,1              | 14,5 32,9              | 23,4 51,1              |
| <b>Catal. no.</b>  | SF310/xx | SF311/xx | SF312/xx  | SF313/xx  | SF314/xx  | SF315/xx               | SF316/xx               | SF317/xx               |

1) Standard and alternative valve materials on page 67, type D  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73  
4) Pf = 29,5 with integral stellite seat

5) Pf = 35 with integral stellite seat  
6) Pf = 45 with integral stellite seat





# "Y" GLOBE VALVES - 800 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 3000 p.s.i.  
Seat - 2175 p.s.i.

### Air under water:

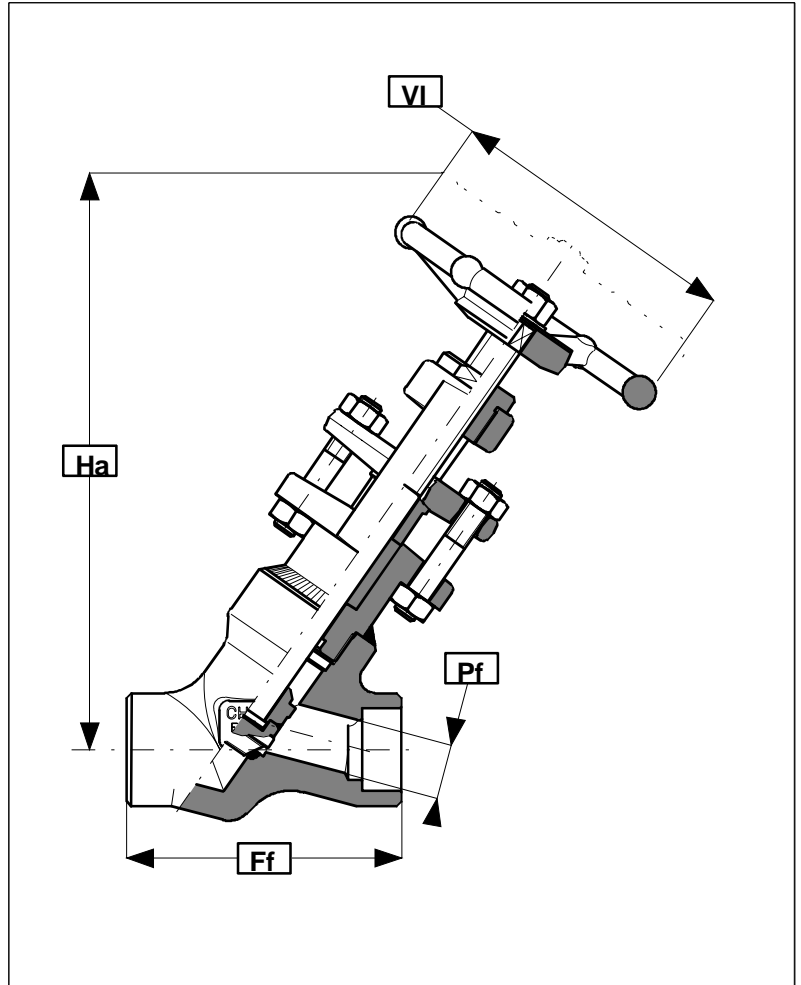
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |



## STANDARD BORE

|                    | 1/4"      | 3/8"      | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff</b> (mm/in)  | 80 3,15   | 80 3,15   | 80 3,15   | 100 3,94  | 110 4,33  | 120 4,72  | 160 6,30  | 190 7,48  |
| <b>Ha</b> (mm/in)  | 147 5,79  | 147 5,79  | 147 5,79  | 186 7,32  | 220 8,66  | 235 9,25  | 305 12,01 | 352 13,86 |
| <b>VI</b> (mm/in)  | 90 3,54   | 90 3,54   | 90 3,54   | 100 3,94  | 120 4,72  | 140 5,51  | 140 5,51  | 200 7,87  |
| <b>Pf</b> (mm/in)  | 8 0,31    | 9 0,35    | 12 0,47   | 18 0,7    | 22,5 0,89 | 29,5 1,16 | 35 1,38   | 45,5 1,79 |
| <b>Wt.</b> (kg/lb) | 2,4 5,3   | 2,4 5,3   | 2,4 5,3   | 3,0 6,6   | 4,0 8,8   | 8,0 17,6  | 10,0 22,0 | 16,0 35,2 |
| <b>Catal. no.</b>  | Y310WB/xx | Y311WB/xx | Y312WB/xx | Y313WB/xx | Y314WB/xx | Y315WB/xx | Y316WB/xx | Y317WB/xx |

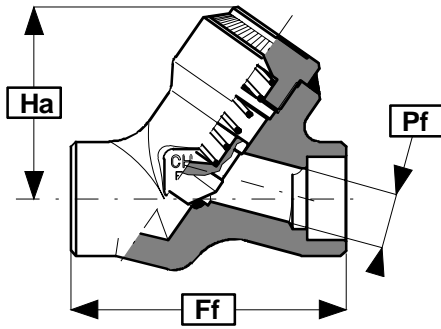
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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Y" CHECK VALVES - 800 - Welded cover - Sw/Npt/Bw



### Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
not applicable

### Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

### Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |

### STANDARD BORE

|                    | 1/4"       | 3/8"       | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"     | 2"         |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Ff</b> (mm/in)  | 80 3,15    | 80 3,15    | 80 3,15    | 100 3,94   | 110 4,33   | 120 4,72   | 160 6,30   | 190 7,48   |
| <b>Ha</b> (mm/in)  | 58 2,28    | 58 2,28    | 58 2,28    | 74 2,91    | 80 3,15    | 86 3,39    | 118 4,65   | 142 5,59   |
| <b>Pf</b> (mm/in)  | 8 0,31     | 9 0,35     | 12,5 0,49  | 18 0,7     | 22,5 0,89  | 29,5 1,16  | 35 1,38    | 45,5 1,79  |
| <b>Wt.</b> (kg/lb) | 1,5 3,3    | 1,5 3,3    | 1,5 3,3    | 2,5 5,5    | 3,0 6,6    | 5,5 12,1   | 6,0 13,2   | 9,0 19,8   |
| <b>Catal. no.</b>  | YP410WC/xx | YP411WC/xx | YP412WC/xx | YP413WC/xx | YP414WC/xx | YP415WC/xx | YP416WC/xx | YP417WC/xx |

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1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Y" GLOBE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 5575 p.s.i.  
Seat - 4100 p.s.i.

### Air under water:

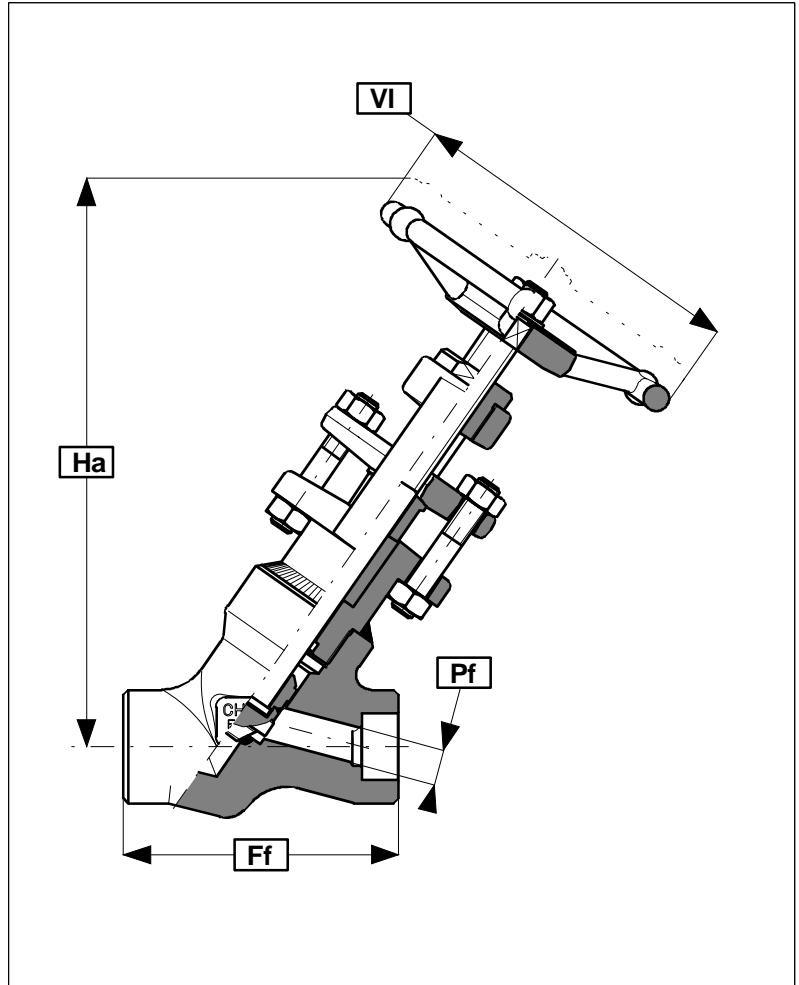
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352-ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                         |
|------------------------|-------------------------|
| <b>SW</b> Socket weld  | <b>B6</b> Butt weld 160 |
| <b>TH</b> Threaded NPT |                         |
| <b>TS</b> Sw/NPT       |                         |
| <b>SE</b> Sw (in)/NPT  |                         |
| <b>SU</b> Sw (out)/NPT |                         |
| <b>B8</b> Butt weld 80 |                         |



## STANDARD BORE

|                    |  |  | 1/2"      | 3/4"      | 1"        | 1.1/4"    | 1.1/2"    | 2"        |
|--------------------|--|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Ff (mm/in)</b>  |  |  | 100 3,94  | 110 4,33  | 120 4,72  | 160 6,30  | 190 7,48  | 190 7,48  |
| <b>Ha (mm/in)</b>  |  |  | 186 7,32  | 220 8,66  | 229 9,02  | 305 12,01 | 348 13,70 | 389 15,31 |
| <b>VI (mm/in)</b>  |  |  | 120 3,94  | 175 6,89  | 175 6,89  | 200 7,87  | 200 7,87  | 260 10,24 |
| <b>Pf (mm/in)</b>  |  |  | 12 0,47   | 16 0,63   | 20 0,79   | 28 1,10   | 32 1,26   | 43 1,69   |
| <b>Wt. (kg/lb)</b> |  |  | 3,0 6,6   | 4,0 8,8   | 7,0 15,4  | 10,5 23,1 | 15,0 33,0 | 19,0 41,0 |
| <b>Catal. no.</b>  |  |  | Y752WB/xx | Y753WB/xx | Y754WB/xx | Y755WB/xx | Y756WB/xx | Y757WB/xx |

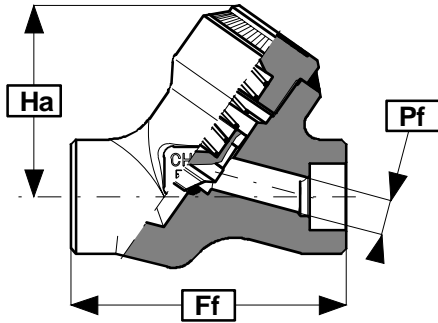
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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Y" CHECK VALVES - 1500 - Welded cover - Sw/Npt/Bw



### Ratings (ASTM A105)

1500 p.s.i. @ 850°F  
3705 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 5575 p.s.i.  
Seat - 4100 p.s.i.  
**Air under water:**  
not applicable

### Standards

**Construction** BS 5352-ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** BS 6755 (Pt.1)

### Connections (xx)

|                        |                         |
|------------------------|-------------------------|
| <b>SW</b> Socket weld  | <b>B6</b> Butt weld 160 |
| <b>TH</b> Threaded NPT |                         |
| <b>TS</b> Sw/NPT       |                         |
| <b>SE</b> Sw (in)/NPT  |                         |
| <b>SU</b> Sw (out)/NPT |                         |
| <b>B8</b> Butt weld 80 |                         |

### STANDARD BORE

|                    |  | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"     | 2"         |
|--------------------|--|------------|------------|------------|------------|------------|------------|
| <b>Ff (mm/in)</b>  |  | 100 3,94   | 110 4,33   | 120 4,72   | 160 6,30   | 190 7,48   | 190 7,48   |
| <b>Ha (mm/in)</b>  |  | 80 3,15    | 87 3,43    | 90 3,54    | 121 4,76   | 146 5,75   | 146 5,75   |
| <b>Pf (mm/in)</b>  |  | 12 0,47    | 16 0,63    | 20 0,79    | 28 1,10    | 32 1,26    | 43 1,69    |
| <b>Wt. (kg/lb)</b> |  | 2,5 5,5    | 3,0 6,6    | 4,5 9,9    | 5,5 12,1   | 8 17,6     | 9,5 20,9   |
| <b>Catal. no.</b>  |  | YP852WC/xx | YP853WC/xx | YP854WC/xx | YP855WC/xx | YP856WC/xx | YP857WC/xx |

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1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Y" GLOBE VALVES - 2500 - Welded bonnet - Sw/Npt/Bw

## Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 9275 p.s.i.  
Seat - 6800 p.s.i.

### Air under water:

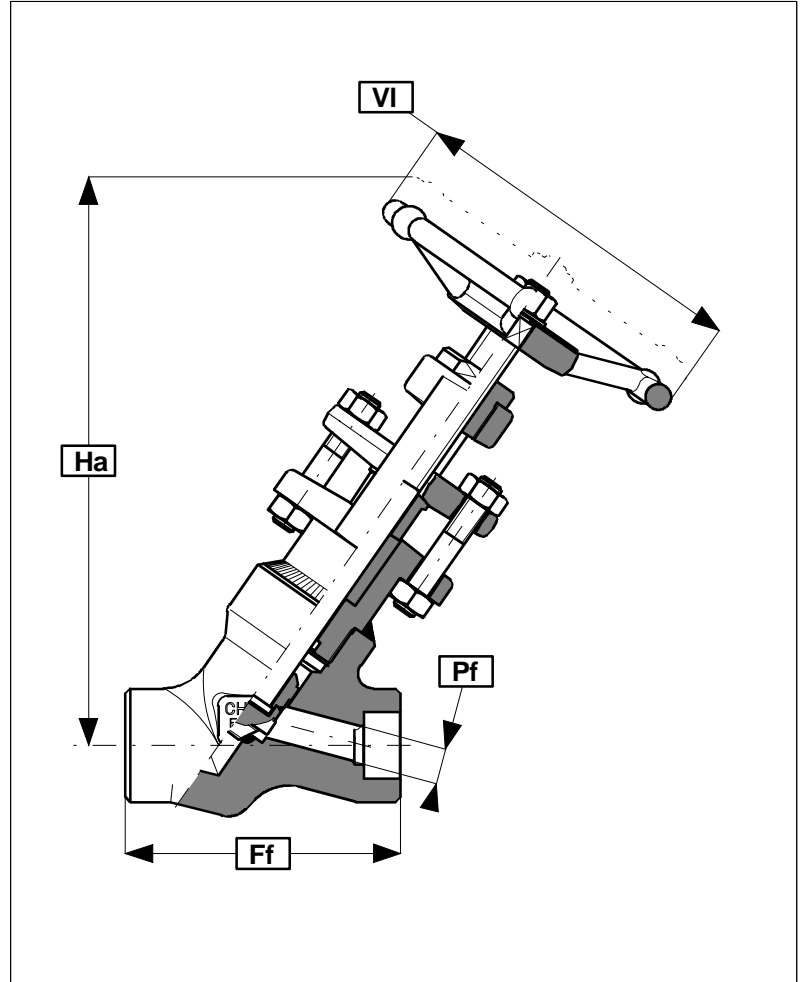
Seat - 85 p.s.i.

## Standards

**Construction** founded on ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** founded on API 598-ASME B16.34

## Connections (xx)

|                        |                         |
|------------------------|-------------------------|
| <b>SW</b> Socket weld  | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT |                         |
| <b>TS</b> Sw/NPT       |                         |
| <b>SE</b> Sw (in)/NPT  |                         |
| <b>SU</b> Sw (out)/NPT |                         |
| <b>B6</b> But weld 160 |                         |



## STANDARD BORE

|                    |  |  | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"     | 2"         |
|--------------------|--|--|------------|------------|------------|------------|------------|------------|
| <b>Ff (mm/in)</b>  |  |  | 110 4,33   | 120 4,72   | 120 4,72   | 190 7,48   | 190 7,48   | 210 8,27   |
| <b>Ha (mm/in)</b>  |  |  | 217 8,54   | 276 10,87  | 276 10,87  | 388 15,28  | 388 15,28  | 402 15,83  |
| <b>VI (mm/in)</b>  |  |  | 140 5,51   | 200 7,87   | 200 7,87   | 260 10,24  | 260 10,24  | 350 13,78  |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39    | 13 0,51    | 18 0,71    | 24 0,94    | 28 1,10    | 35 1,38    |
| <b>Wt. (kg/lb)</b> |  |  | 4,0 8,8    | 5,0 11,0   | 11,0 24,2  | 11,0 24,2  | 17,0 37,4  | 23,0 50,6  |
| <b>Catal. no.</b>  |  |  | Y1152WB/xx | Y1153WB/xx | Y1154WB/xx | Y1155WB/xx | Y1156WB/xx | Y1157WB/xx |

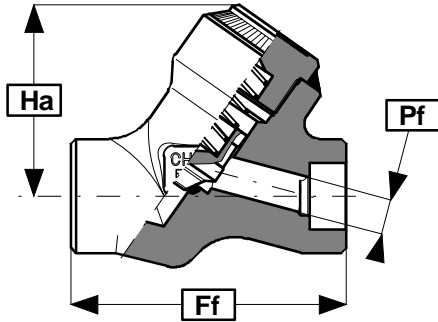
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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





# "Y" CHECK VALVES - 2500 - Welded cover - Sw/Npt/Bw



### Ratings (ASTM A105)

2500 p.s.i. @ 850°F  
6170 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 9275 p.s.i.  
Seat - 6800 p.s.i.  
**Air under water:**  
not applicable

### Standards

**Construction** founded on ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** founded on API 598-ASME B16.34

### Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |

### STANDARD BORE

|                    |  |  | 1/2"        | 3/4"        | 1"          | 1.1/4"      | 1.1/2"      | 2"          |
|--------------------|--|--|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Ff</b> (mm/in)  |  |  | 110 4,33    | 120 4,72    | 120 4,72    | 190 7,48    | 190 7,48    | 210 8,27    |
| <b>Ha</b> (mm/in)  |  |  | 87 3,43     | 92 3,62     | 92 3,62     | 146 5,75    | 146 5,75    | 158 6,22    |
| <b>Pf</b> (mm/in)  |  |  | 10 0,39     | 13 0,51     | 18 0,73     | 24 0,97     | 28 1,14     | 35 1,38     |
| <b>Wt.</b> (kg/lb) |  |  | 3,2 7,0     | 4,5 9,9     | 4,5 9,9     | 9,5 20,9    | 9,5 20,9    | 12,0 26,4   |
| <b>Catal. no.</b>  |  |  | YP1252WC/xx | YP1253WC/xx | YP1254WC/xx | YP1255WC/xx | YP1256WC/xx | YP1257WC/xx |

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1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70,71,72  
3) SW, NPT & BW dimensions on page 73





# "Isrs" GATE VALVES - 800 - Welded bonnet - Sw/Npt

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

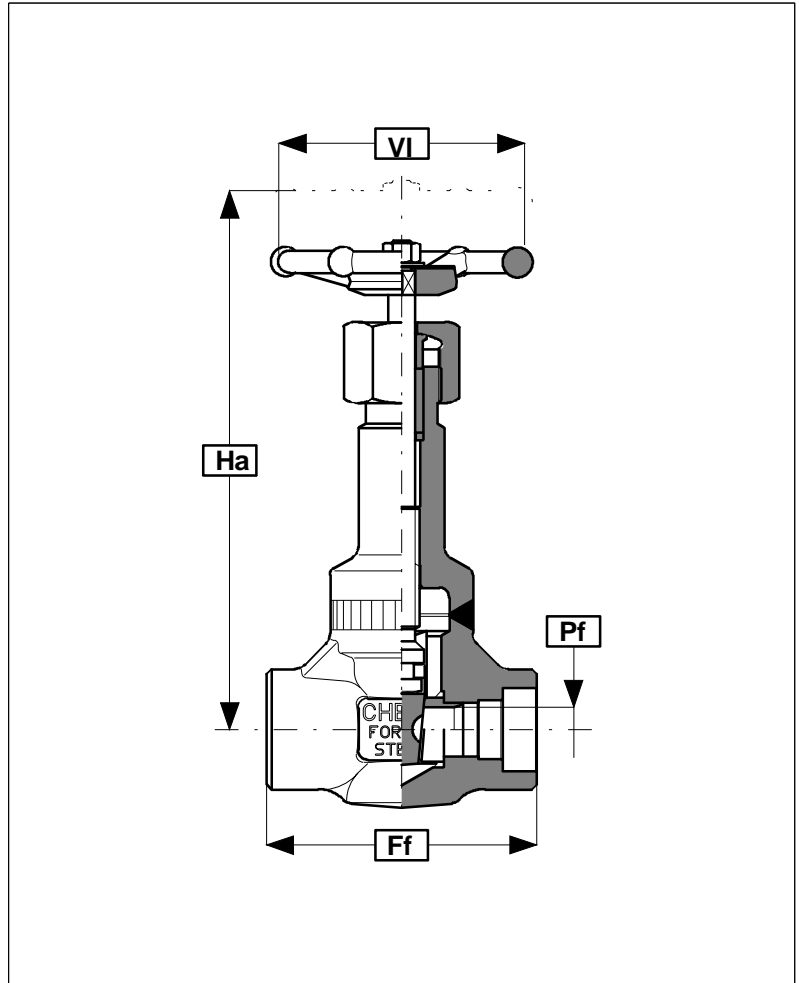
**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** API 602, BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** API 598-BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |



## CONVENTIONAL BORE

|                    |  |  | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"     | 2"         |
|--------------------|--|--|------------|------------|------------|------------|------------|------------|
| <b>Ff (mm/in)</b>  |  |  | 80 3,15    | 90 3,54    | 110 4,33   | 127 5,00   | 127 5,00   | 130 5,12   |
| <b>Ha (mm/in)</b>  |  |  | 158 6,22   | 183 7,20   | 201 7,91   | 255 10,03  | 276 10,87  | 310 12,21  |
| <b>VI (mm/in)</b>  |  |  | 90 3,54    | 90 3,54    | 100 3,94   | 120 4,72   | 140 5,51   | 140 5,51   |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39    | 14 0,55    | 18 0,71    | 24 0,94    | 31 1,22    | 36,5 1,44  |
| <b>Wt. (kg/lb)</b> |  |  | 1,5 3,3    | 1,9 4,2    | 3,2 7,0    | 4,9 10,8   | 6,2 13,6   | 8,4 18,5   |
| <b>Catal. no.</b>  |  |  | IR252WF/xx | IR253WF/xx | IR254WF/xx | IR255WF/xx | IR256WF/xx | IR257WF/xx |

## FULL BORE

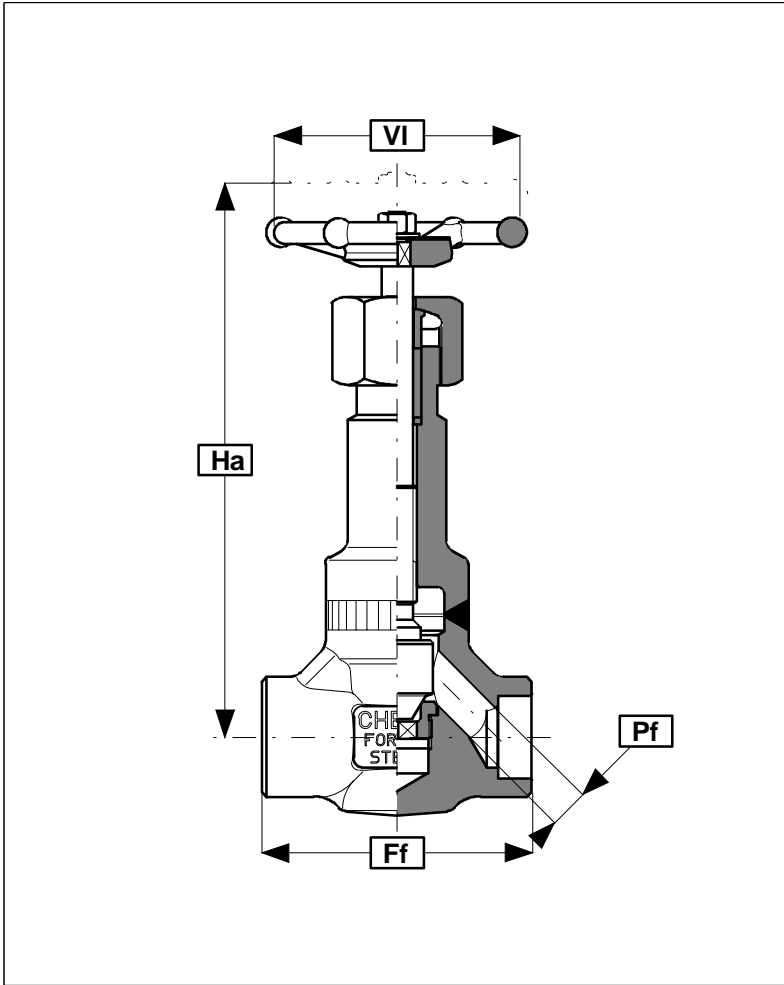
| <b>Ff (mm/in)</b>  |  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|--|
| <b>Ha (mm/in)</b>  |  |  |  |  |  |  |  |  |
| <b>VI (mm/in)</b>  |  |  |  |  |  |  |  |  |
| <b>Pf (mm/in)</b>  |  |  |  |  |  |  |  |  |
| <b>Wt. (kg/lb)</b> |  |  |  |  |  |  |  |  |
| <b>Catal. no.</b>  |  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67, type E  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73





# "Isrs" GLOBE VALVES - 800 - Welded bonnet - Sw/Npt



## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

## Standards

**Construction** BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** BS 6755 (Pt.1)

## Connections (xx)

|                        |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw (in)/NPT  |                        |
| <b>SU</b> Sw (out)/NPT |                        |
| <b>B4</b> Butt weld 40 |                        |

## REDUCED BORE

|                    |  |  | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"                 | 2"                     |
|--------------------|--|--|------------|------------|------------|------------|------------------------|------------------------|
| <b>Ff</b> (mm/in)  |  |  | 80 3,15    | 90 3,54    | 110 4,33   | 127 6,10   | 155 6,10               | 170 6,69               |
| <b>Ha</b> (mm/in)  |  |  | 162 6,38   | 189 7,44   | 222 8,74   | 250 9,84   | 278 10,95              | 314 12,36              |
| <b>VI</b> (mm/in)  |  |  | 90 3,54    | 90 3,54    | 100 3,94   | 120 4,72   | 140 5,51               | 140 5,51               |
| <b>Pf</b> (mm/in)  |  |  | 9 0,35     | 12,5 0,49  | 17,5 0,69  | 22,5 0,88  | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt.</b> (kg/lb) |  |  | 1,5 3,3    | 1,8 4,0    | 3,3 7,3    | 5,5 12,1   | 8 17,6                 | 10,6 23,3              |
| <b>Catal. no.</b>  |  |  | IR352WF/xx | IR353WF/xx | IR354WF/xx | IR355WF/xx | IR356WF/xx             | IR357WF/xx             |

## FULL BORE

| <b>Ff</b> (mm/in)  |  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|--|
| <b>Ha</b> (mm/in)  |  |  |  |  |  |  |  |  |
| <b>VI</b> (mm/in)  |  |  |  |  |  |  |  |  |
| <b>Pf</b> (mm/in)  |  |  |  |  |  |  |  |  |
| <b>Wt.</b> (kg/lb) |  |  |  |  |  |  |  |  |
| <b>Catal. no.</b>  |  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67, type E  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73

4) Pf = 29,5 with integral stellited seat  
5) Pf = 35 with integral stellited seat





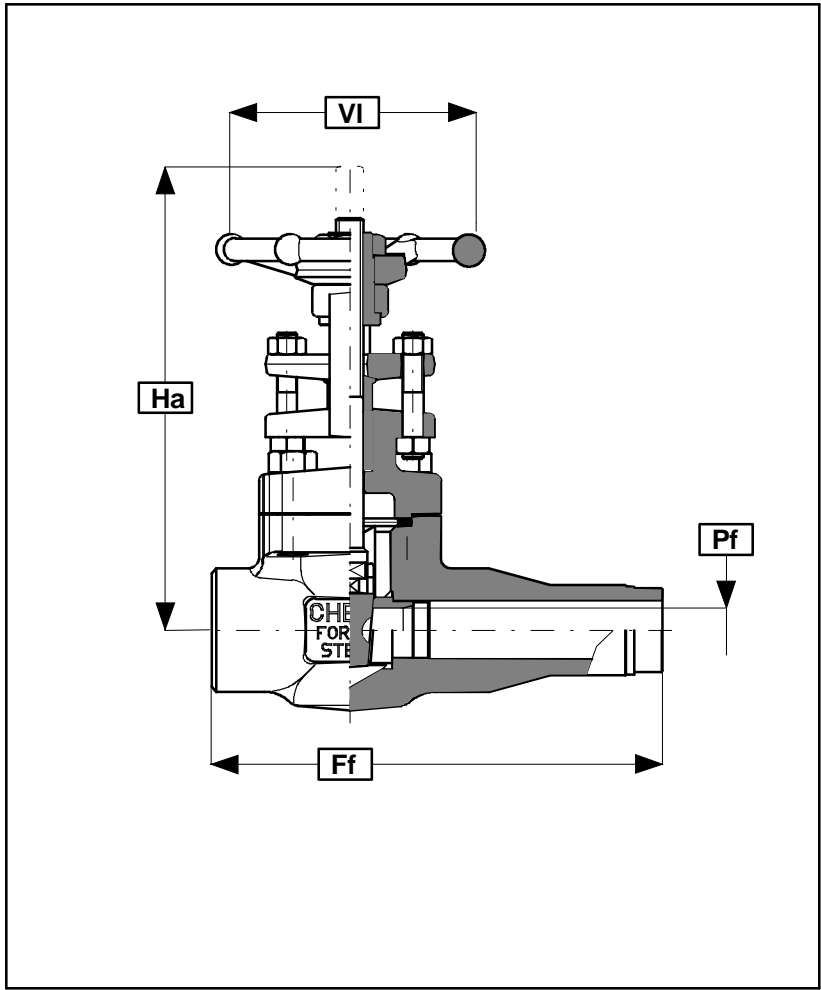
**"Ext. body" GATE VALVES - 800 - Bolted bonnet - Sw/Npt/BW**

| Ratings (ASTM A105) |  |
|---------------------|--|
| 800 p.s.i. @ 850°F  |  |
| 1975 p.s.i. @ 100°F |  |

| Test pressure (ASTM A105)   |  |
|-----------------------------|--|
| <b>Hydraulic: (minimum)</b> |  |
| Body - 3000 p.s.i.          |  |
| Seat - 2175 p.s.i.          |  |
| <b>Air under water:</b>     |  |
| Seat - 85 p.s.i.            |  |

| Standards           |                        |
|---------------------|------------------------|
| <b>Construction</b> | API 602, API 606       |
| <b>Socket weld</b>  | ASME B16.11            |
| <b>Threaded</b>     | ASME B1.20.1           |
| <b>Butt weld</b>    | ASME B16.25            |
| <b>Test</b>         | API 598-BS 6755 (Pt.1) |

| Connections (xx)         |                           |
|--------------------------|---------------------------|
| <b>SNS</b> Sw/ext. Sw    | <b>BNS</b> BW80/ext. Sw   |
| <b>SNT</b> Sw/ext. NPT   | <b>BNT</b> BW80/ext. NPT  |
| <b>SNB</b> Sw/ext. BW80  | <b>BNB</b> BW80/ext. BW80 |
| <b>TNS</b> NPT/ext. Sw   |                           |
| <b>TNT</b> NPT/ext. NPT  |                           |
| <b>TNB</b> NPT/ext. BW80 |                           |



| CONVENTIONAL BORE  |  |  |          |          |          |        |           |           |
|--------------------|--|--|----------|----------|----------|--------|-----------|-----------|
|                    |  |  | 1/2"     | 3/4"     | 1"       | 1.1/2" |           | 2"        |
| <b>Ff</b> (mm/in)  |  |  | 145 5,71 | 160 6,30 | 190 7,48 |        | 224 8,82  | 240 9,45  |
| <b>Ha</b> (mm/in)  |  |  | 145 5,70 | 156 6,14 | 186 7,32 |        | 255 10,04 | 273 10,75 |
| <b>VI</b> (mm/in)  |  |  | 90 3,54  | 90 3,54  | 100 3,94 |        | 140 5,51  | 140 5,51  |
| <b>Pf</b> (mm/in)  |  |  | 10 0,39  | 14 0,55  | 18 0,71  |        | 31 1,22   | 36,5 1,44 |
| <b>Wt.</b> (kg/lb) |  |  | 1,9 4,2  | 2,4 5,3  | 3,8 8,4  |        | 7,7 16,9  | 7,7 16,9  |
| <b>Catal. no.</b>  |  |  | R252/xNx | R253/xNx | R254/xNx |        | R256/xNx  | R257/xNx  |

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1) Standard and alternative valve materials on page 67, type A  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73





**"Ext. body" GATE VALVES - 800 - Welded bonnet - Sw/Npt/BW**

**Ratings (ASTM A105)**

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

**Test pressure (ASTM A105)**

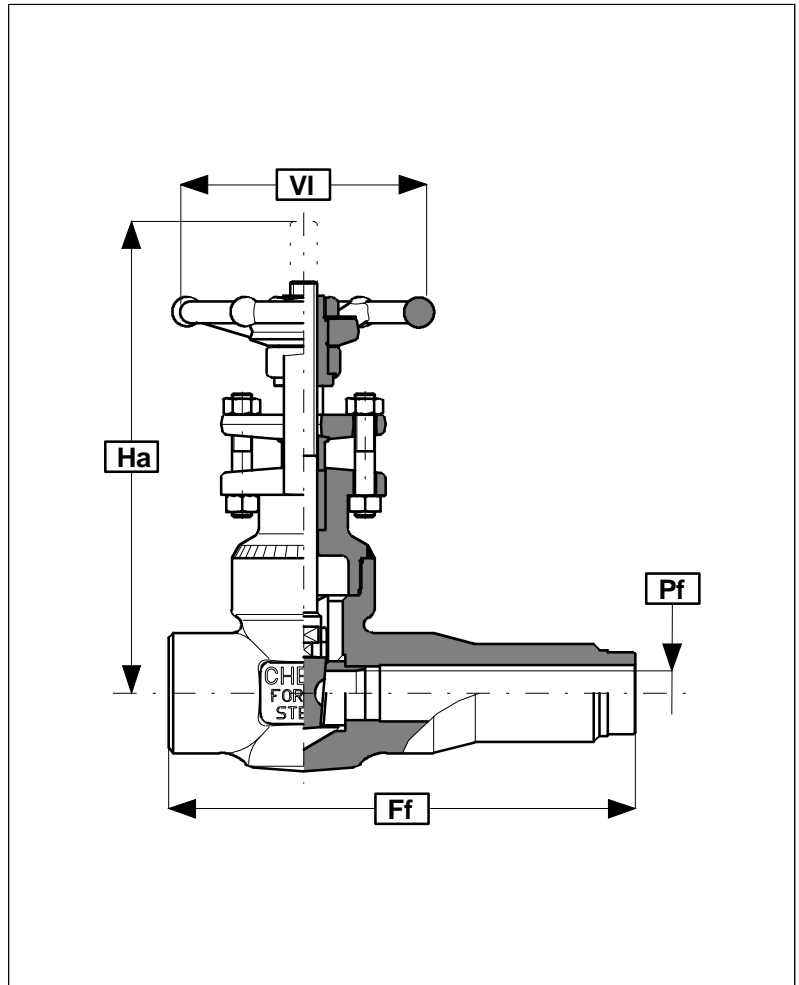
**Hydraulic: (minimum)**  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

**Standards**

**Construction** API 602, API 606  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-BS 6755 (Pt.1)

**Connections (xx)**

|                          |                           |
|--------------------------|---------------------------|
| <b>SNS</b> Sw/ext. Sw    | <b>BNS</b> BW80/ext. Sw   |
| <b>SNT</b> Sw/ext. NPT   | <b>BNT</b> BW80/ext. NPT  |
| <b>SNB</b> Sw/ext. BW80  | <b>BNB</b> BW80/ext. BW80 |
| <b>TNS</b> NPT/ext. Sw   |                           |
| <b>TNT</b> NPT/ext. NPT  |                           |
| <b>TNB</b> NPT/ext. BW80 |                           |



**CONVENTIONAL BORE**

|                    |  |  | 1/2"       |      | 3/4"       |      | 1"         |      |  | 1.1/2"     |      | 2"         |       |
|--------------------|--|--|------------|------|------------|------|------------|------|--|------------|------|------------|-------|
| <b>Ff (mm/in)</b>  |  |  | 145        | 5,71 | 160        | 6,30 | 190        | 7,48 |  | 224        | 8,82 | 240        | 9,45  |
| <b>Ha (mm/in)</b>  |  |  | 150        | 5,91 | 157        | 6,18 | 188        | 7,40 |  | 248        | 9,76 | 273        | 10,75 |
| <b>VI (mm/in)</b>  |  |  | 90         | 3,54 | 90         | 3,54 | 100        | 3,94 |  | 140        | 5,51 | 140        | 5,51  |
| <b>Pf (mm/in)</b>  |  |  | 10         | 0,39 | 14         | 0,55 | 18         | 0,71 |  | 31         | 1,22 | 36,5       | 1,44  |
| <b>Wt. (kg/lb)</b> |  |  | 1,6        | 3,5  | 2,0        | 4,4  | 3,2        | 7,0  |  | 6,2        | 13,6 | 8,3        | 18,5  |
| <b>Catal. no.</b>  |  |  | R252WB/xNx |      | R253WB/xNx |      | R254WB/xNx |      |  | R256WB/xNx |      | R257WB/xNx |       |

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1) Standard and alternative valve materials on page 67, type A  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73





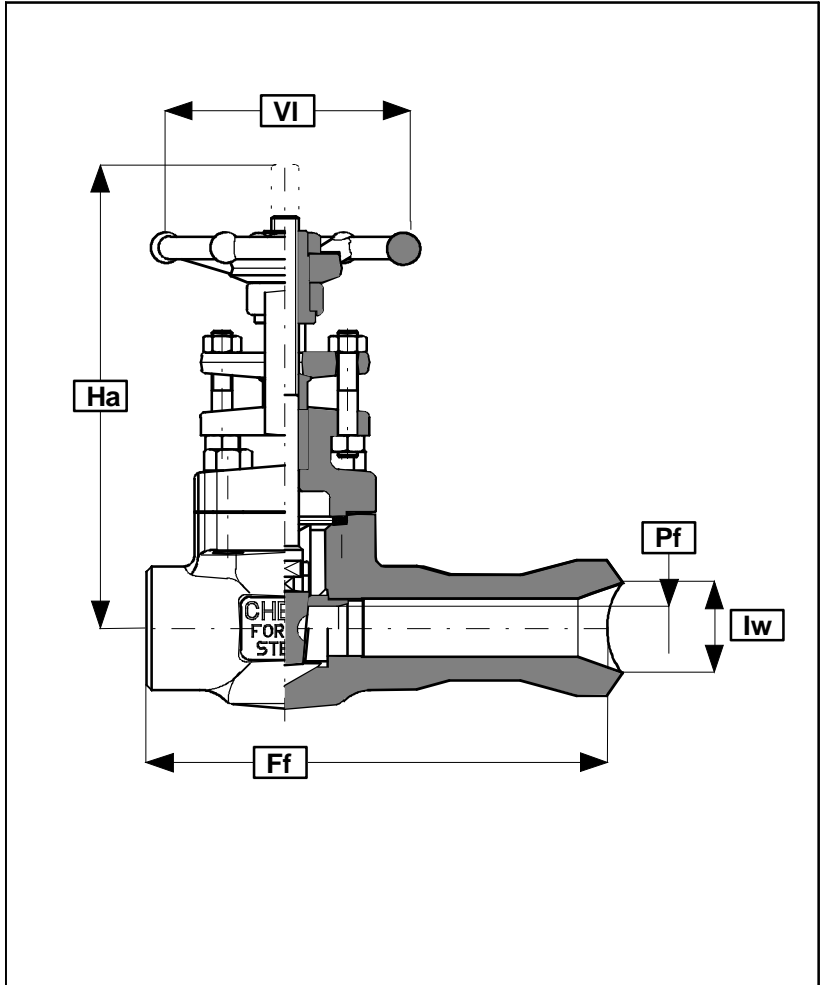
**"Ext. Weld." GATE VALVES - 800 - Bolted bonnet - Sw/Npt-Weld**

| Ratings (ASTM A105) |  |
|---------------------|--|
| 800 p.s.i. @ 850°F  |  |
| 1975 p.s.i. @ 100°F |  |

| Test pressure (ASTM A105)   |  |
|-----------------------------|--|
| <b>Hydraulic: (minimum)</b> |  |
| Body - 3000 p.s.i.          |  |
| Seat - 2175 p.s.i.          |  |
| <b>Air under water:</b>     |  |
| Seat - 85 p.s.i.            |  |

| Standards           |                        |
|---------------------|------------------------|
| <b>Construction</b> | API 602, API 606       |
| <b>Socket weld</b>  | ASME B16.11            |
| <b>Threaded</b>     | ASME B1.20.1           |
| <b>Test</b>         | API 598-BS 6755 (Pt.1) |

| Connections (xx)        |  |
|-------------------------|--|
| <b>SNW</b> Sw/ext. Weld |  |
| <b>TNW</b> Sw/ext. Weld |  |



| CONVENTIONAL BORE  |      |  |            |      |            |      |            |      |        |            |       |                   |       |
|--------------------|------|--|------------|------|------------|------|------------|------|--------|------------|-------|-------------------|-------|
|                    |      |  | 1/2"       |      | 3/4"       |      | 1"         |      | 1.1/4" | 1.1/2"     |       | 2" <sup>(4)</sup> |       |
| <b>Ff (mm/in)</b>  |      |  | <b>208</b> | 8,19 | <b>218</b> | 8,58 | <b>244</b> | 9,60 |        | <b>263</b> | 10,35 | <b>268</b>        | 10,55 |
| <b>Ha (mm/in)</b>  |      |  | <b>208</b> | 5,90 | <b>156</b> | 6,14 | <b>186</b> | 7,32 |        | <b>255</b> | 10,04 | <b>273</b>        | 10,75 |
| <b>VI (mm/in)</b>  |      |  | <b>90</b>  | 3,54 | <b>90</b>  | 3,54 | <b>100</b> | 3,94 |        | <b>140</b> | 5,51  | <b>140</b>        | 5,51  |
| <b>Pf (mm/in)</b>  |      |  | <b>10</b>  | 0,39 | <b>14</b>  | 0,55 | <b>18</b>  | 0,71 |        | <b>31</b>  | 1,22  | <b>36,5</b>       |       |
| <b>Iw (mm/in)</b>  | 1,44 |  | <b>22</b>  | 0,87 | <b>30</b>  | 1,18 | <b>36</b>  | 1,42 |        | <b>50</b>  | 1,97  | <b>65</b>         | 2,56  |
| <b>Wt. (kg/lb)</b> | 29,7 |  | <b>2,5</b> | 5,5  | <b>2,8</b> | 6,2  | <b>5</b>   | 11   |        | <b>9,8</b> | 21,56 | <b>13,5</b>       |       |

| Catal. no. |  |  | R252/xNW | R253/xNW | R254/xNW |  | R256/xNW | R257/xNW |
|------------|--|--|----------|----------|----------|--|----------|----------|
|            |  |  |          |          |          |  |          |          |
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|            |  |  |          |          |          |  |          |          |

1) Standard and alternative valve materials on page 67, type A  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW, NPT & BW dimensions on page 73  
 4) 2" : WELDED EXTENSION





**"Ext. Weld." GATE VALVES- 800 - Welded bonnet-Sw/Npt-Weld**

**Ratings (ASTM A105)**

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

**Test pressure (ASTM A105)**

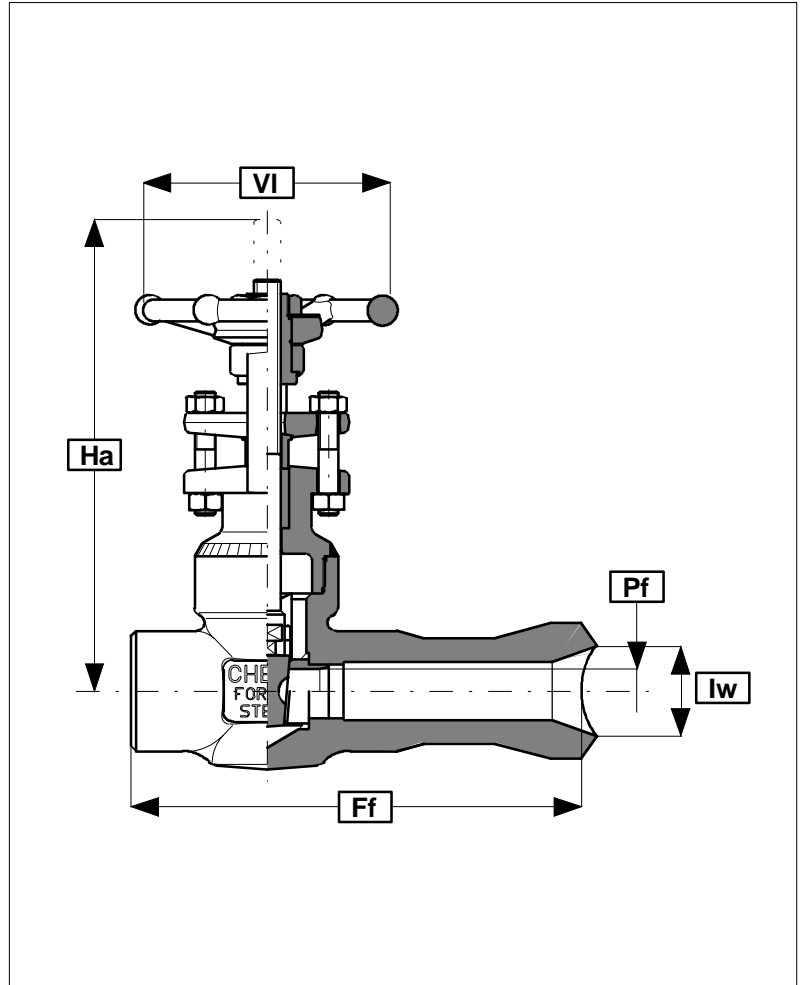
**Hydraulic: (minimum)**  
Body - 3000 p.s.i.  
Seat - 2175 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

**Standards**

**Construction** API 602, API 606  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** API 598-BS 6755 (Pt.1)

**Connections (xx)**

**SNW** Sw/ext. Weld  
**TNW** Sw/ext. Weld



**CONVENTIONAL BORE**

|                    |  |  | 3/4"              |                   | 1"                |  |                   | 1.1/2"            |  | 2" |  |
|--------------------|--|--|-------------------|-------------------|-------------------|--|-------------------|-------------------|--|----|--|
| <b>Ff (mm/in)</b>  |  |  | <b>208</b> 8,19   | <b>218</b> 8,58   | <b>244</b> 9,60   |  | <b>263</b> 10,35  | <b>268</b> 10,55  |  |    |  |
| <b>Ha (mm/in)</b>  |  |  | <b>150</b> 5,90   | <b>157</b> 6,18   | <b>188</b> 7,40   |  | <b>248</b> 9,76   | <b>274</b> 10,79  |  |    |  |
| <b>VI (mm/in)</b>  |  |  | <b>90</b> 3,54    | <b>90</b> 3,54    | <b>100</b> 3,94   |  | <b>140</b> 5,51   | <b>140</b> 5,51   |  |    |  |
| <b>Pf (mm/in)</b>  |  |  | <b>10</b> 0,39    | <b>14</b> 0,55    | <b>18</b> 0,71    |  | <b>31</b> 1,22    | <b>36,5</b> 1,44  |  |    |  |
| <b>lw (mm/in)</b>  |  |  | <b>22</b> 0,87    | <b>30</b> 1,18    | <b>36</b> 1,42    |  | <b>50</b> 1,97    | <b>65</b> 2,56    |  |    |  |
| <b>Wt. (kg/lb)</b> |  |  | <b>2,2</b> 4,84   | <b>2,5</b> 5,5    | <b>4,7</b> 10,3   |  | <b>9</b> 19,8     | <b>12,7</b> 27,94 |  |    |  |
| <b>Catal. no.</b>  |  |  | <b>R252WB/xNW</b> | <b>R253WB/xNW</b> | <b>R254WB/xNW</b> |  | <b>R256WB/xNW</b> | <b>R257WB/xNW</b> |  |    |  |

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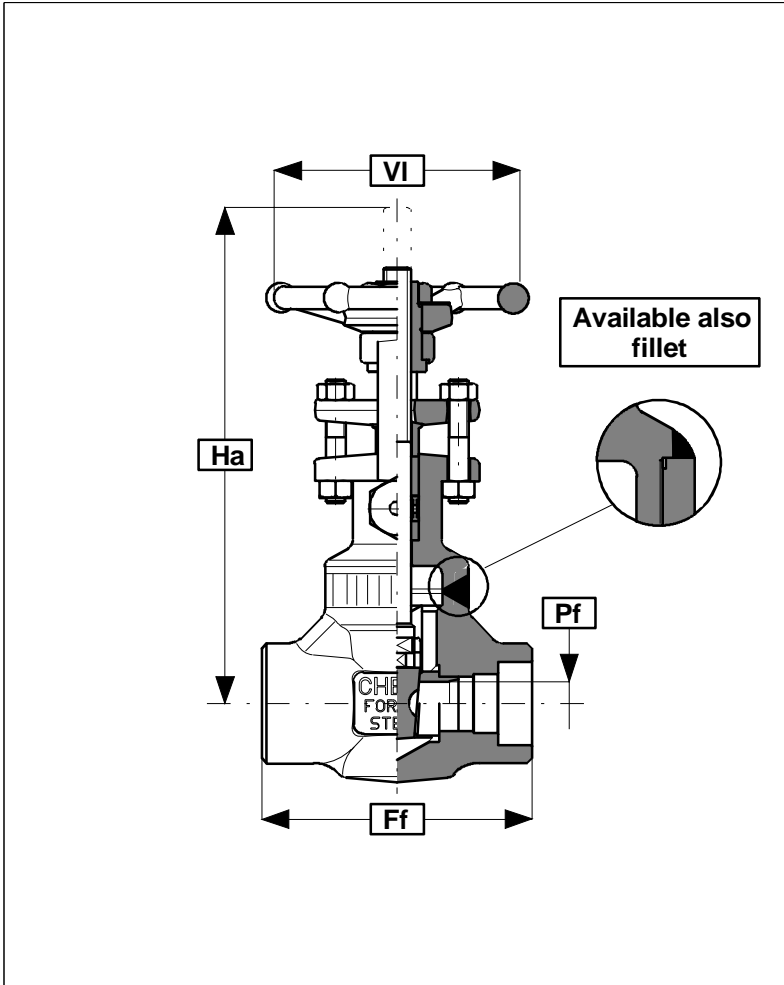
1) Standard and alternative valve materials on page 67, type  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73

4) 2": WELDED EXTENSION





# "Lantern ring" GATE VALVES - 800 - Welded bonnet - Sw/Npt



| Ratings (ASTM A105) |
|---------------------|
| 800 p.s.i. @ 850°F  |
| 1975 p.s.i. @ 100°F |

| Test pressure (ASTM A105)   |
|-----------------------------|
| <b>Hydraulic:</b> (minimum) |
| Body - 3000 p.s.i.          |
| Seat - 2175 p.s.i.          |
| <b>Air under water:</b>     |
| Seat - 85 p.s.i.            |

| Standards                                       |
|---|
| <b>Construction</b> founded on API 602, BS 5352 |
| <b>Socket weld</b> ASME B16.11                  |
| <b>Threaded</b> ASME B1.20.1                    |
| <b>Test</b> founded on API 598-BS 6755 (Pt.1)   |

| Connections (xx)       |                        |
|------------------------|------------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld 80 |
| <b>TH</b> Threaded NPT |                        |
| <b>TS</b> Sw/NPT       |                        |
| <b>SE</b> Sw(e)/NPT    |                        |
| <b>SU</b> Sw(u)/NPT    |                        |
| <b>B4</b> Butt weld 40 |                        |

| CONVENTIONAL BORE  |  |  |            |            |            |            |            |            |  |
|--------------------|--|--|------------|------------|------------|------------|------------|------------|--|
|                    |  |  | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"     | 2"         |  |
| <b>Ff (mm/in)</b>  |  |  | 80 3,15    | 90 3,54    | 110 4,33   | 127 5,00   | 127 5,00   | 130 5,12   |  |
| <b>Ha (mm/in)</b>  |  |  | 164 6,46   | 171 6,73   | 204 8,03   | 240 9,45   | 268 10,55  | 296 11,65  |  |
| <b>VI (mm/in)</b>  |  |  | 90 3,54    | 90 3,54    | 100 3,94   | 120 4,72   | 140 5,51   | 140 5,51   |  |
| <b>Pf (mm/in)</b>  |  |  | 10 0,39    | 14 0,55    | 18 0,71    | 24 0,94    | 31 1,22    | 36,5 1,44  |  |
| <b>Wt. (kg/lb)</b> |  |  | 1,6 3,5    | 1,9 4,2    | 3,1 6,8    | 4,2 9,24   | 6,1 13,4   | 8,2 18,0   |  |
| <b>Catal. no.</b>  |  |  | LR252WB/xx | LR253WB/xx | LR254WB/xx | LR255WB/XX | LR256WB/xx | LR257WB/xx |  |

| FULL BORE          |  |  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|--|--|
|                    |  |  |  |  |  |  |  |  |  |
| <b>Ff (mm/in)</b>  |  |  |  |  |  |  |  |  |  |
| <b>Ha (mm/in)</b>  |  |  |  |  |  |  |  |  |  |
| <b>VI (mm/in)</b>  |  |  |  |  |  |  |  |  |  |
| <b>Pf (mm/in)</b>  |  |  |  |  |  |  |  |  |  |
| <b>Wt. (kg/lb)</b> |  |  |  |  |  |  |  |  |  |
| <b>Catal. no.</b>  |  |  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67, type A  
 2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
 3) SW & NPT dimensions on page 73  
 4) Available also for vacuum service





# "Lantern ring" GLOBE VALVES- 800 - Welded bonnet - Sw/Npt

## Ratings (ASTM A105)

800 p.s.i. @ 850°F  
1975 p.s.i. @ 100°F

## Test pressure (ASTM A105)

### Hydraulic: (minimum)

Body - 3000 p.s.i.  
Seat - 2175 p.s.i.

### Air under water:

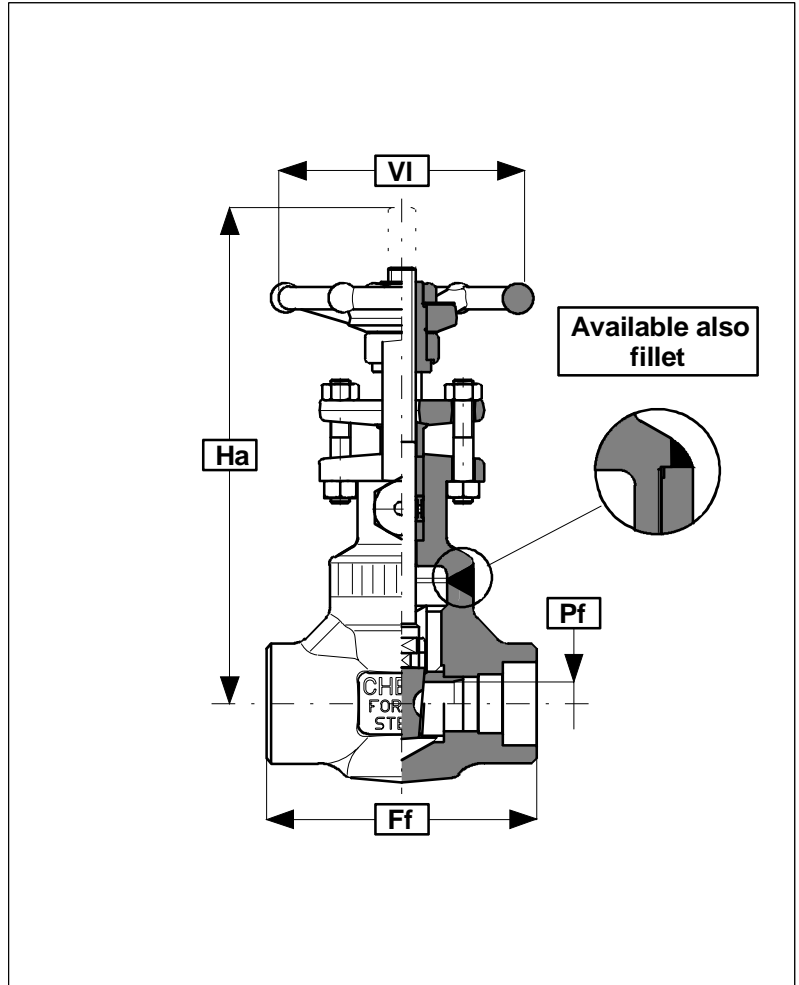
Seat - 85 p.s.i.

## Standards

**Construction** founded on BS 5352  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Test** founded on BS 6755 (Pt.1)

## Connections (xx)

|                        |                       |
|------------------------|-----------------------|
| <b>SW</b> Socket weld  | <b>B8</b> Butt weld80 |
| <b>TH</b> Threaded NPT |                       |
| <b>TS</b> Sw/NPT       |                       |
| <b>SE</b> Sw (in)/NPT  |                       |
| <b>SU</b> Sw (out)/NPT |                       |
| <b>B4</b> Butt weld 40 |                       |



## REDUCED BORE

|                    |  | 1/2"       | 3/4"       | 1"         | 1.1/4"     | 1.1/2"                 | 2"                     |
|--------------------|--|------------|------------|------------|------------|------------------------|------------------------|
| <b>Ff</b> (mm/in)  |  | 80 3,15    | 90 3,54    | 110 4,33   | 127 5,00   | 155 6,10               | 170 6,69               |
| <b>Ha</b> (mm/in)  |  | 163 6,42   | 168 6,61   | 191 7,52   | 240 9,45   | 262 10,31              | 288 11,34              |
| <b>VI</b> (mm/in)  |  | 90 3,54    | 90 3,54    | 100 3,94   | 120 4,72   | 140 5,51               | 140 5,51               |
| <b>Pf</b> (mm/in)  |  | 9 0,35     | 12 0,47    | 17,5 0,69  | 22,5 0,89  | 28 <sup>(4)</sup> 1,10 | 32 <sup>(5)</sup> 1,26 |
| <b>Wt.</b> (kg/lb) |  | 1,6 3,5    | 1,8 4,0    | 3,3 7,3    | 5,2 11,44  | 7,1 15,6               | 9,9 21,8               |
| <b>Catal. no.</b>  |  | LR352WB/xx | LR353WB/xx | LR354WB/xx | LR355WB/xx | LR356WB/xx             | LR357WB/xx             |

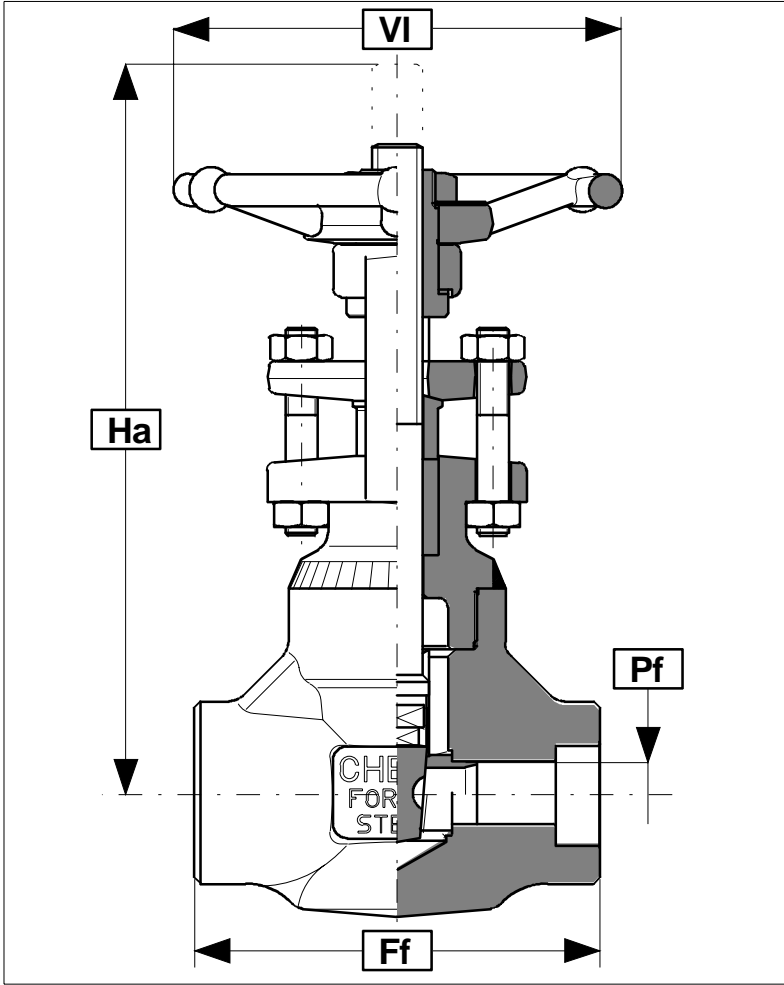
## FULL BORE

| <b>Ff</b> (mm/in)  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|
| <b>Ha</b> (mm/in)  |  |  |  |  |  |  |  |
| <b>VI</b> (mm/in)  |  |  |  |  |  |  |  |
| <b>Pf</b> (mm/in)  |  |  |  |  |  |  |  |
| <b>Wt.</b> (kg/lb) |  |  |  |  |  |  |  |
| <b>Catal. no.</b>  |  |  |  |  |  |  |  |

1) Standard and alternative valve materials on page 67  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW & NPT dimensions on page 73

4) Pf = 29,5 with integral stellite seat  
5) Pf = 35 with integral stellite seat  
6) Available also for Vacuum Service




**Ratings (ASTM A105)**

4010 p.s.i. @ 850°F  
11110 p.s.i. @ 100°F

**Test pressure (ASTM A105)**

**Hydraulic: (minimum)**  
Body - 16650 p.s.i.  
Seat - 12210 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

**Standards**

**Construction** ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

**Connections (xx)**

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw(e)/NPT     |                         |
| <b>SU</b> Sw(u)/NPT     |                         |
| <b>B6</b> Butt weld 160 |                         |

|                    |  | STANDARD BORE |      |           |       |           |       |           |       |           |       |
|--------------------|--|---------------|------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
|                    |  | 1/2"          |      | 3/4"      |       | 1"        |       | 1.1/2"    |       | 2"        |       |
| <b>Ff (mm/in)</b>  |  | 127           | 5,00 | 127       | 5,00  | 130       | 5,12  | 240       | 9,45  | 240       | 9,45  |
| <b>Ha (mm/in)</b>  |  | 234           | 9,21 | 259       | 10,20 | 323       | 12,72 | 431       | 16,97 | 486       | 19,13 |
| <b>VI (mm/in)</b>  |  | 175           | 6,89 | 200       | 7,87  | 260       | 10,24 | 350       | 13,78 | 350       | 13,78 |
| <b>Pf (mm/in)</b>  |  | 8             | 0,31 | 11        | 0,43  | 15        | 0,59  | 25        | 0,98  | 30        | 1,18  |
| <b>Wt. (kg/lb)</b> |  | 4,1           | 9,0  | 6,2       | 13,6  | 11,8      | 26,0  | 28,0      | 61,6  | 42,0      | 92,4  |
| <b>Catal. no.</b>  |  | 2052WB/xx     |      | 2053WB/xx |       | 2054WB/xx |       | 2056WB/xx |       | 2057WB/xx |       |

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1) Standard and alternative valve materials on page 72, type A  
2) Complete Pressure-Temperature ratings on page 73, 74, 75, 76, 77.  
3) SW, NPT & BW dimensions on page 78.

**Ratings (ASTM A105)**

4010 p.s.i. @ 850°F  
11110 p.s.i. @ 100°F

**Test pressure (ASTM A105)**
**Hydraulic: (minimum)**

Body - 16650 p.s.i.  
Seat - 12210 p.s.i.

**Air under water:**

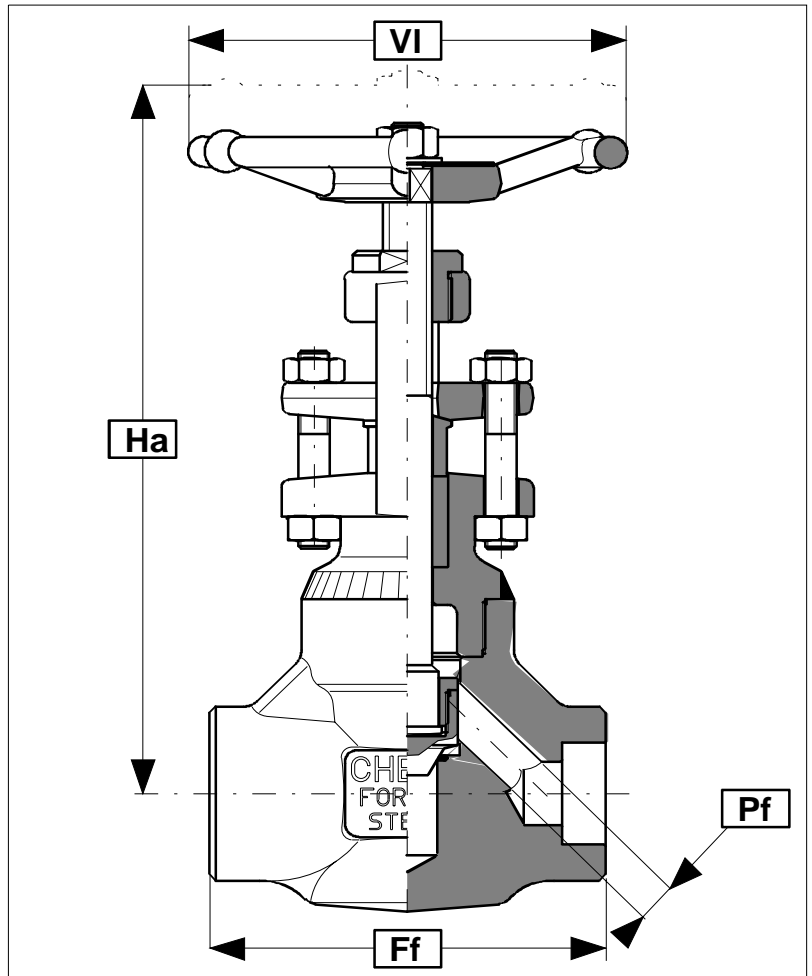
Seat - 85 p.s.i.

**Standards**

**Construction** ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

**Connections (xx)**

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |


**STANDARD BORE**

|                    |  | 1/2"      | 3/4"      | 1"        |  | 1.1/2"    | 2"        |
|--------------------|--|-----------|-----------|-----------|--|-----------|-----------|
| <b>Ff (mm/in)</b>  |  | 127 5,00  | 155 6,10  | 170 6,69  |  | 240 9,45  | 240 9,45  |
| <b>Ha (mm/in)</b>  |  | 230 9,06  | 277 10,90 | 335 13,18 |  | 431 16,97 | 450 17,72 |
| <b>VI (mm/in)</b>  |  | 175 6,89  | 200 7,87  | 260 10,24 |  | 350 13,78 | 350 13,78 |
| <b>Pf (mm/in)</b>  |  | 7 0,28    | 11 0,43   | 14 0,55   |  | 25 0,98   | 30 1,18   |
| <b>Wt. (kg/lb)</b> |  | 4,1 9,0   | 6,2 13,6  | 11,8 26,0 |  | 28,0 61,6 | 42 92,4   |
| <b>Catal. no.</b>  |  | 2152WB/xx | 2153WB/xx | 2154WB/xx |  | 2156WB/xx | 2157WB/xx |

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1) Standard and alternative valve materials on page 72, type A  
2) Complete Pressure-Temperature ratings on page 73 , 74 , 75 , 76 , 77.  
3) SW, NPT & BW dimensions on page 78.



# "Y" GLOBE VALVES - 4500 - Welded bonnet - Sw/Npt/Bw

### Ratings (ASTM A105)

4010 p.s.i. @ 850°F  
11110 p.s.i. @ 100°F

### Test pressure (ASTM A105)

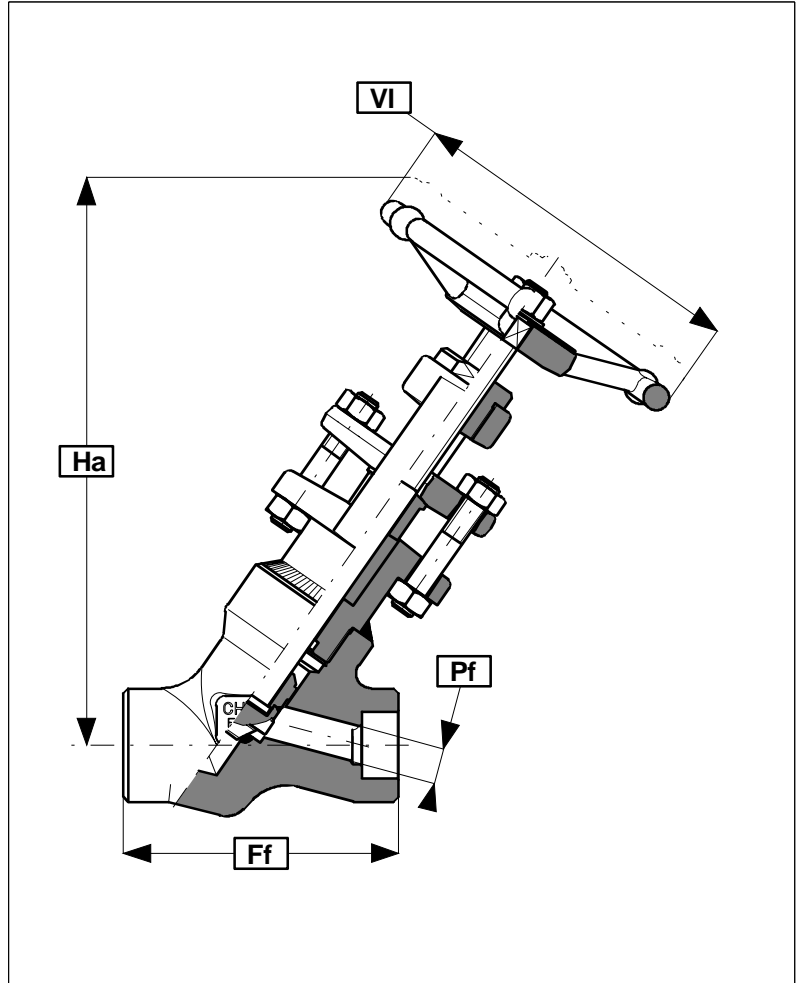
**Hydraulic:** (minimum)  
Body - 16650 p.s.i.  
Seat - 12210 p.s.i.  
**Air under water:**  
Seat - 85 p.s.i.

### Standards

**Construction** ASME B16.34  
**Socket weld** ASME B16.11  
**Threaded** ASME B1.20.1  
**Butt weld** ASME B16.25  
**Test** API 598-ASME B16.34

### Connections (xx)

|                        |                         |
|------------------------|-------------------------|
| <b>SW</b> Socket weld  | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT |                         |
| <b>TS</b> Sw/NPT       |                         |
| <b>SE</b> Sw (in)/NPT  |                         |
| <b>SU</b> Sw (out)/NPT |                         |
| <b>B6</b> But weld 160 |                         |



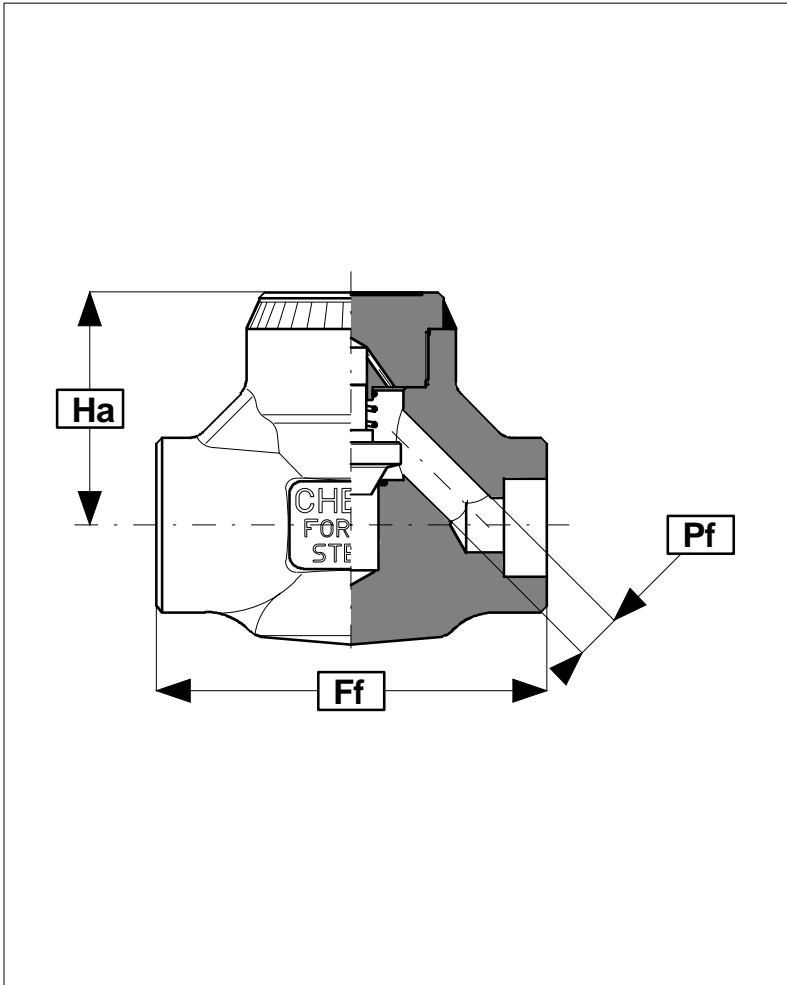
### STANDARD BORE

|                    |  | 1/2"       | 3/4"       | 1"         |  | 1.1/2"     | 2"         |
|--------------------|--|------------|------------|------------|--|------------|------------|
| <b>Ff (mm/in)</b>  |  | 120 4,72   | 160 6,30   | 190 7,48   |  | 210 8,27   | 230 9,06   |
| <b>Ha (mm/in)</b>  |  | 243 9,57   | 322 12,67  | 378 14,88  |  | 452 17,79  | 520 20,47  |
| <b>VI (mm/in)</b>  |  | 175 7,87   | 200 7,87   | 260 10,24  |  | 350 13,78  | 350 13,78  |
| <b>Pf (mm/in)</b>  |  | 7 0,28     | 11 0,43    | 14 0,55    |  | 25 0,98    | 30 1,18    |
| <b>Wt. (kg/lb)</b> |  | 7,0 15,4   | 8,4 18,5   | 14,6 37,1  |  | 23,0 50,6  | 42,0 97,4  |
| <b>Catal. no.</b>  |  | Y2152WB/xx | Y2153WB/xx | Y2154WB/xx |  | Y2156WB/xx | Y2157WB/xx |

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1) Standard and alternative valve materials on page 72, type A  
2) Complete Pressure-Temperature ratings on page 73, 74, 75, 76, 77.  
3) SW, NPT & BW dimensions on page 78.





### Ratings (ASTM A105)

4010 p.s.i. @ 850°F  
11110 p.s.i. @ 100°F

### Test pressure (ASTM A105)

#### Hydraulic: (minimum)

Body - 16650 p.s.i.  
Seat - 12210 p.s.i.

**Air under water:**  
not applicable

### Standards

|                     |                     |
|---------------------|---------------------|
| <b>Construction</b> | ASME B16.34         |
| <b>Socket weld</b>  | ASME B16.11         |
| <b>Threaded</b>     | ASME B1.20.1        |
| <b>Butt weld</b>    | ASME B16.25         |
| <b>Test</b>         | API 598-ASME B16.34 |

### Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |

|                    |  | STANDARD BORE |      |            |      |            |      |            |      |            |      |
|--------------------|--|---------------|------|------------|------|------------|------|------------|------|------------|------|
|                    |  | 1/2"          |      | 3/4"       |      | 1"         |      | 1.1/2"     |      | 2"         |      |
| <b>Ff</b> (mm/in)  |  | 127           | 5,00 | 155        | 6,10 | 170        | 6,69 | 240        | 9,45 | 240        | 9,45 |
| <b>Ha</b> (mm/in)  |  | 75            | 2,95 | 90         | 3,54 | 125        | 4,92 | 145        | 5,71 | 140        | 5,51 |
| <b>Pf</b> (mm/in)  |  | 7             | 0,28 | 11         | 0,43 | 15         | 0,59 | 25         | 0,98 | 30         | 1,33 |
| <b>Wt.</b> (kg/lb) |  | 3,2           | 7,0  | 4,8        | 10,6 | 8          | 17,6 | 16         | 35,2 | 26         | 57,2 |
| <b>Catal. no.</b>  |  | P2252WC/xx    |      | P2253WC/xx |      | P2254WC/xx |      | P2256WC/xx |      | P2257WC/xx |      |

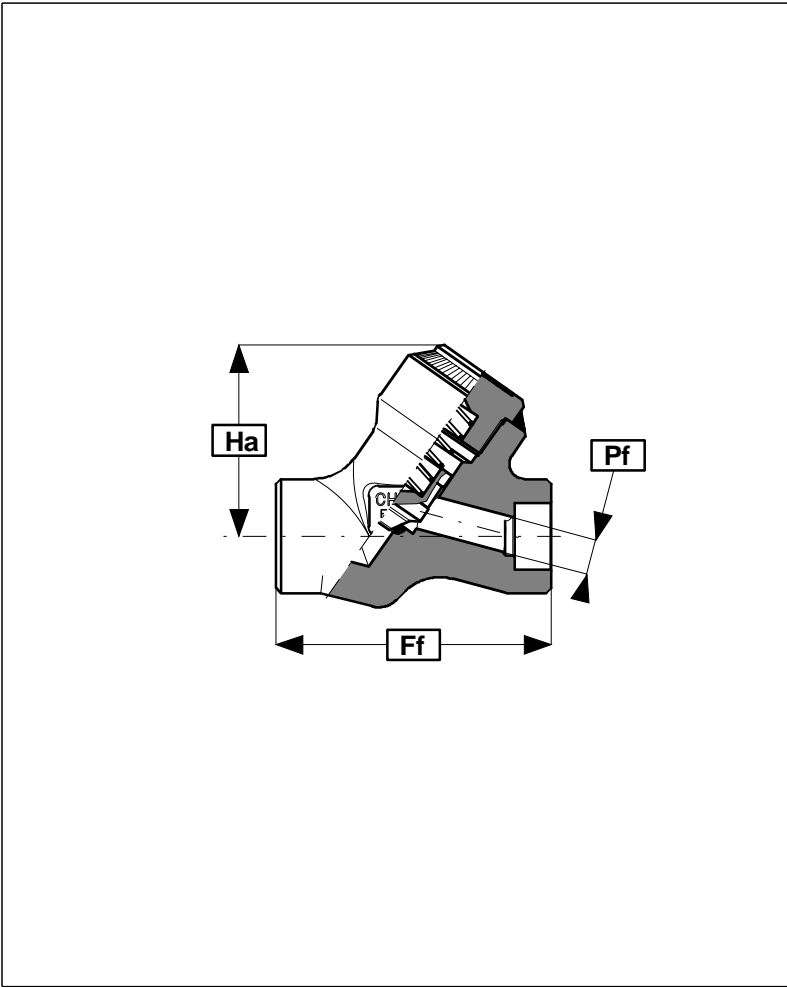
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1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70, 71,72  
3) SW, NPT & BW dimensions on page 73

4) Dimensions for piston & ball type; for swing see page 35  
5) Code t is replaced by kind of check valve (drawing above)



# "Y" CHECK VALVES - 4500 - Welded cover - Sw/Npt/Bw



### Ratings (ASTM A105)

4010 p.s.i. @ 850°F  
11110 p.s.i. @ 100°F

### Test pressure (ASTM A105)

**Hydraulic:** (minimum)  
Body - 16650 p.s.i.  
Seat - 12210 p.s.i.  
**Air under water:**  
not applicable

### Standards

|                     |                     |
|---------------------|---------------------|
| <b>Construction</b> | ASME B16.34         |
| <b>Socket weld</b>  | ASME B16.11         |
| <b>Threaded</b>     | ASME B1.20.1        |
| <b>Butt weld</b>    | ASME B16.25         |
| <b>Test</b>         | API 598-ASME B16.34 |

### Connections (xx)

|                         |                         |
|-------------------------|-------------------------|
| <b>SW</b> Socket weld   | <b>BX</b> Butt weld XXS |
| <b>TH</b> Threaded NPT  |                         |
| <b>TS</b> Sw/NPT        |                         |
| <b>SE</b> Sw (in)/NPT   |                         |
| <b>SU</b> Sw (out)/NPT  |                         |
| <b>B6</b> Butt weld 160 |                         |

### STANDARD BORE

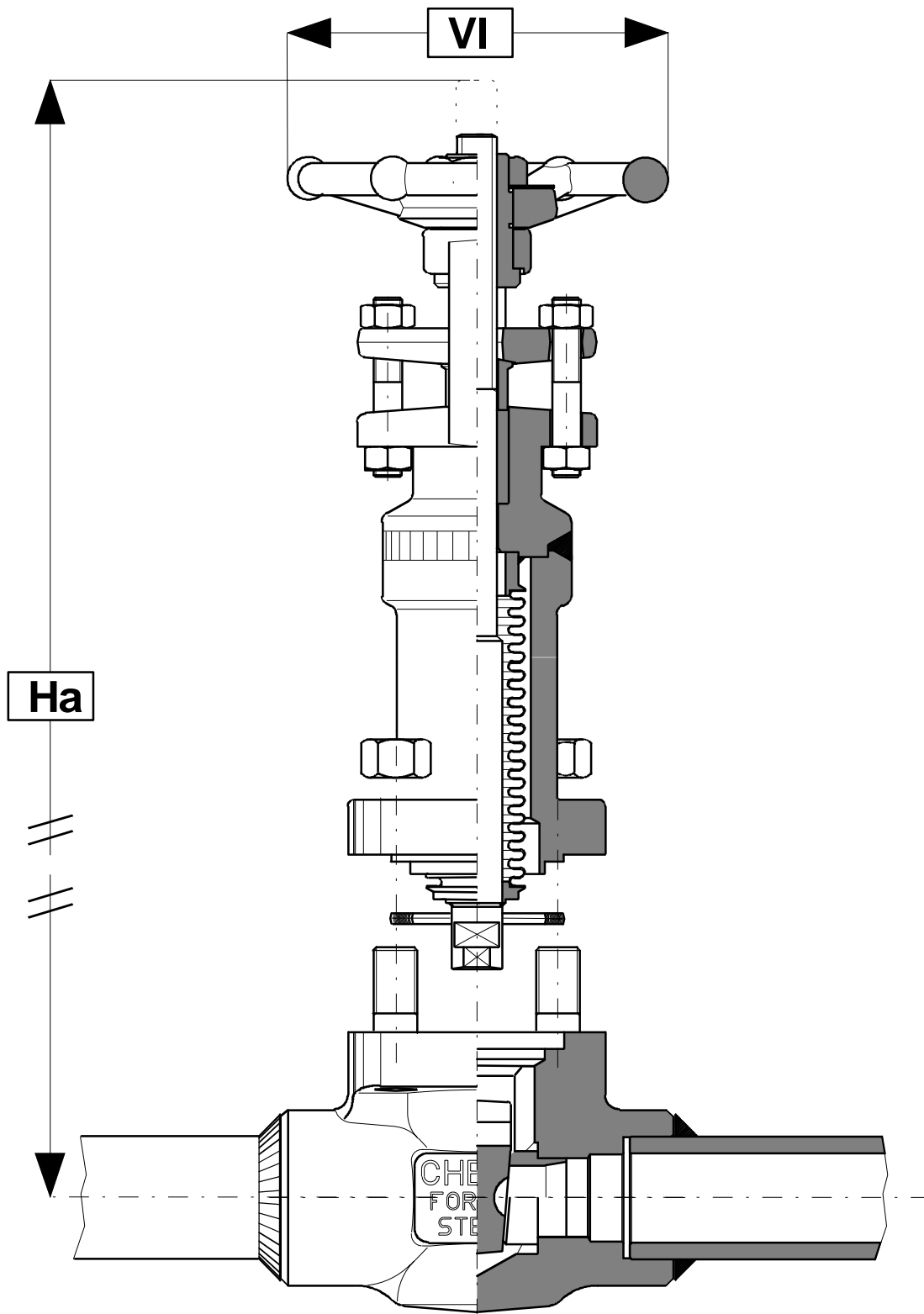
|                    |  | 1/2"        | 3/4"        | 1"          |  | 1.1/2"      | 2"          |
|--------------------|--|-------------|-------------|-------------|--|-------------|-------------|
| <b>Ff (mm/in)</b>  |  | 120 4,72    | 160 6,30    | 190 7,48    |  | 210 8,27    | 230 9,06    |
| <b>Ha (mm/in)</b>  |  | 90 3,54     | 120 4,72    | 145 5,71    |  | 160 6,30    | 200 7,87    |
| <b>Pf (mm/in)</b>  |  | 7 0,28      | 11 0,43     | 14 0,55     |  | 25 0,98     | 30 1,18     |
| <b>Wt. (kg/lb)</b> |  | 4,5 9,9     | 7,5 16,5    | 9,5 20,9    |  | 12,0 26,4   | 23,0 50,6   |
| <b>Catal. no.</b>  |  | YP2252WC/xx | YP2253WC/xx | YP2254WC/xx |  | YP2256WC/xx | YP2257WC/xx |

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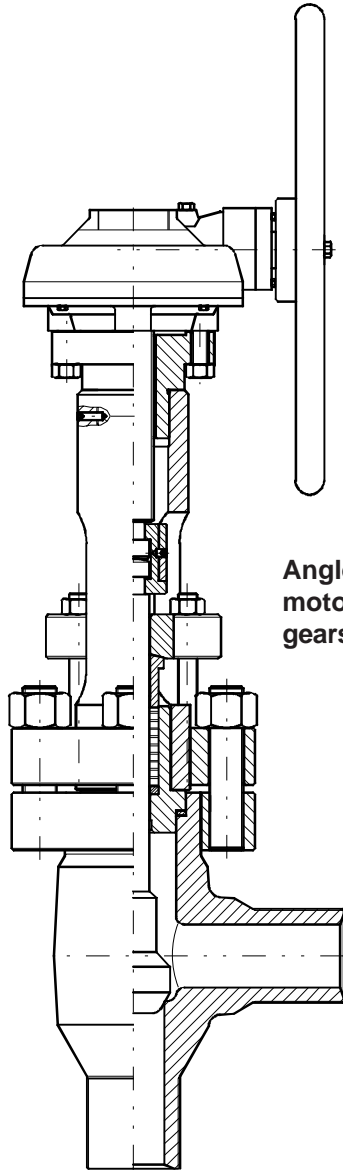
1) Standard and alternative valve materials on page 67, type B  
2) Complete Pressure-Temperature ratings on page 68, 69, 70,71,72  
3) SW, NPT & BW dimensions on page 73



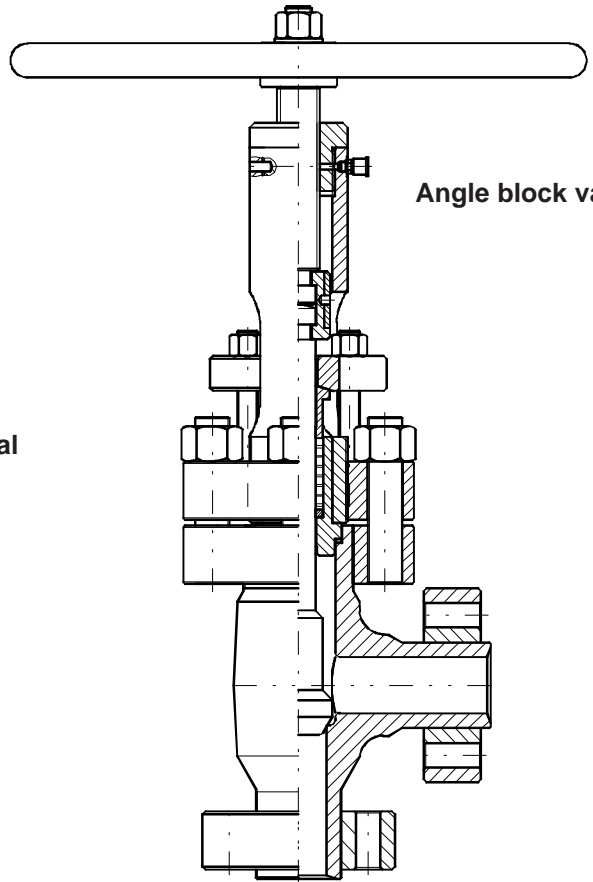
This kit allow the conversion, in the pipe line, from bolted bonnet valves to bellows leakproof valves



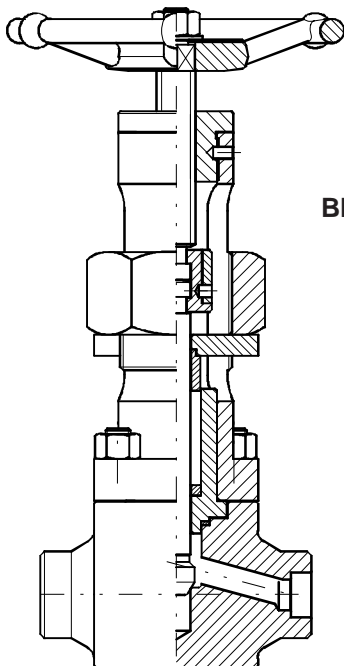
1)Ha & VI dimension on page 46



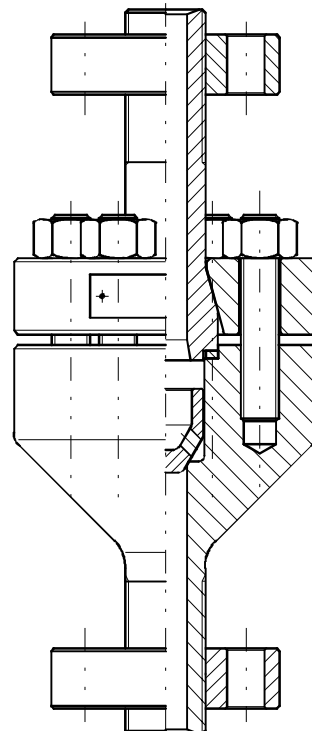
Angle block valve  
motorised and manual  
gears



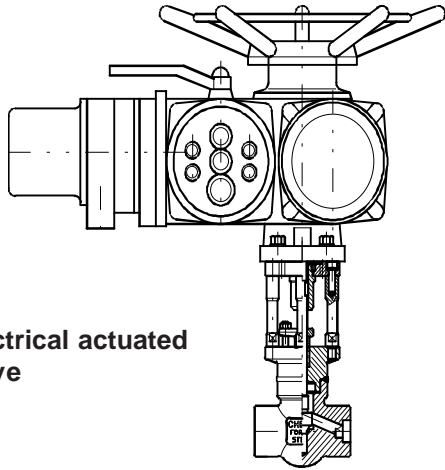
Angle block valve



Block valve

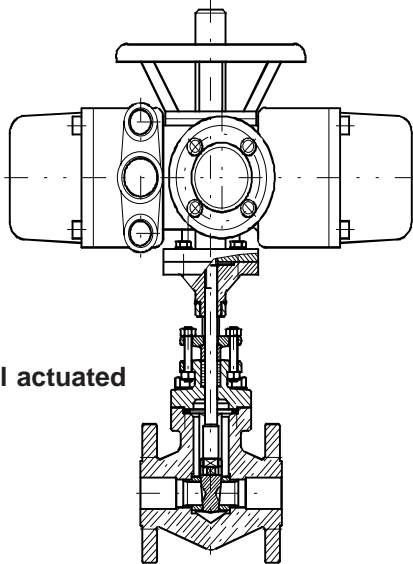
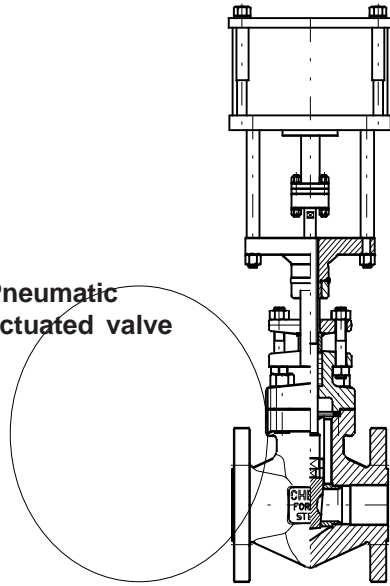


Vertical drop  
check valve



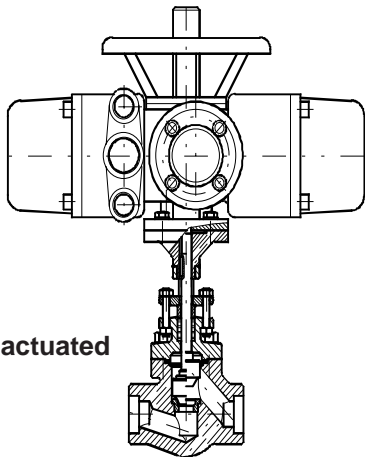
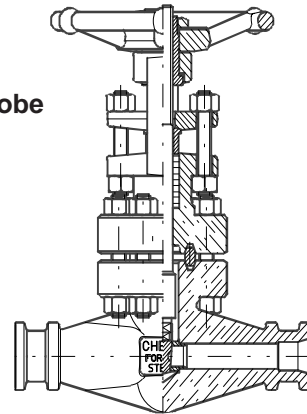
**Electrical actuated valve**

**Pneumatic actuated valve**



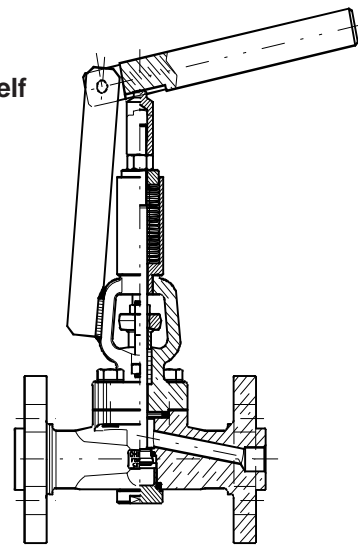
**Electrical actuated valve**

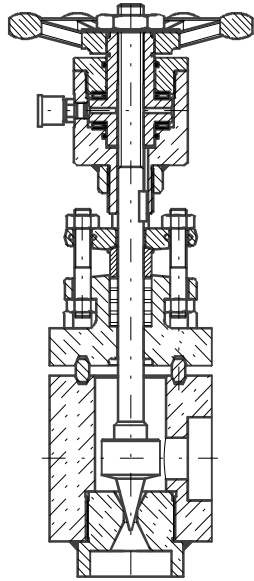
**Gate and globe valves with hubnes**



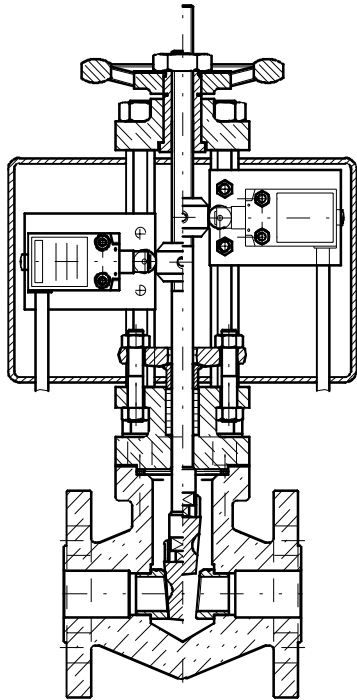
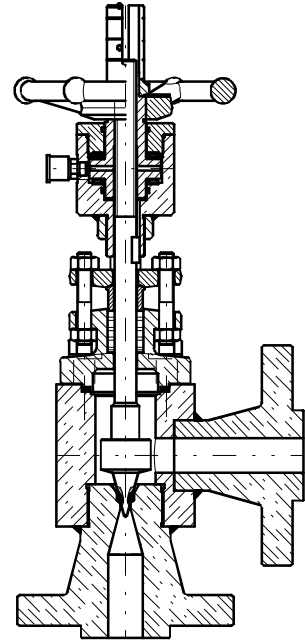
**Electrical actuated valve**

**Quick opening/Self closing valve**



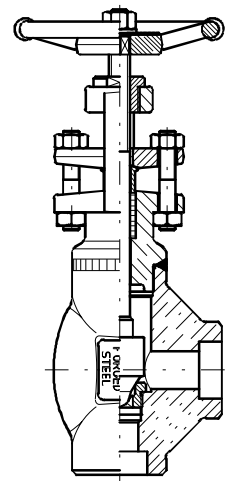


Continuous blowdown valve and position indicator

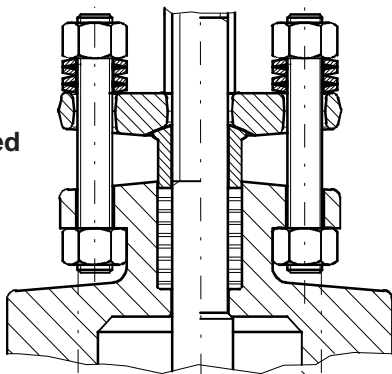


Equipped with limit switch

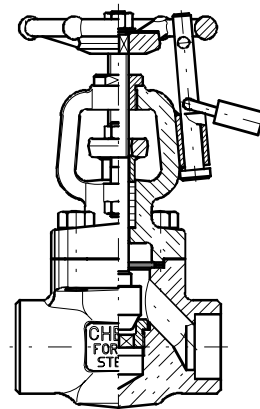
Angle valve



Spring loaded



Locking device



# *Appendices*

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## Standard & alternative materials

| Valves parts                       |                            |                                    |                           |  | Materials                         |   |   |  |  |
|------------------------------------|----------------------------|------------------------------------|---------------------------|--|-----------------------------------|---|---|--|--|
| Type A                             | Type B                     | Type C                             | Type D                    | Type E   |                                   |   |   |  |  |
| GATE GLOBE (Std.)                  | PIST./BALL SWING           | GATE GLOBE (Cryogenic)             | GATE GLOBE (Bellows)      | GATE GLOBE (Isrs)                                  | CARBON STEEL                      | KILLED CARBON STEEL   | ALLOY STEEL   | STAINLESS DUPLEX STEEL   | NICKEL STEEL   |
| Body Bonnet                        | Body<br>Cover<br>Extension | Body Bonnet<br>Extension           | Body Bonnet               | Body Bonnet<br><br>Packing nut                     | A105N                             | A350/LF2  | A182/F1<br>A182/F5<br>A182/F9<br>A182/F11<br>A182/F22<br>F44<br>F51<br>F53<br>F55 | A182/F304<br>A182/F304L<br>A182/F316<br>A182/F316L<br>A182/F321<br>A182/F347 | MONEL 400<br>INCONEL 600<br>INCONEL 625<br>INCOLOY 800H<br>INCOLOY 825<br>HASTELLOY C276<br>HASTELLOY B2 |
| Stem Wedge/Disc Seat/s<br>Disc nut | Disc/Ball Seat             | Stem Wedge/Disc Seat/s<br>Disc nut | Stem Wedge/Disc Seat/s    | Stem Wedge/Disc Seat/s<br>Disc nut<br>Packing ring | A182/F6<br>A182/F304<br>A182/F316 | A182/F6<br>A182/F304<br>A182/F316<br>F44<br>F51<br>F53<br>F55 | A182/F6<br>A182/F304<br>A182/F316<br>F44<br>F51<br>F53<br>F55                     | A182/F304<br>A182/F316<br>A182/F321<br>A182/F347                             | MONEL 400<br>INCONEL 600<br>INCONEL 625<br>INCOLOY 800H<br>INCOLOY 825<br>HASTELLOY C276<br>HASTELLOY B2 |
| Gl. packing                        |                            | Gl. packing                        | Gl. packing               |  | AISI 416/303/316                  | AISI 416/303/316  | AISI 416/303/316  | AISI 303/316   | AISI 303/316   |
| Yoke nut                           |                            | Yoke nut                           | Yoke nut                  |  | AISI 416                          | AISI 416  | AISI 416  | AISI 416   | AISI 416   |
| Gl. flange                         |                            | Gl. flange                         | Gl. flange                |  | A105N                             | A105N   | A182/F304   | A182/F304  | A182/F304  |
| Handwheel Hand. nut                |                            | Handwheel Hand. nut                | Handwheel Hand. nut       | Handwheel Hand. nut                                | Carbon steel                      | Carbon steel  | Carbon steel  | Carbon steel   | Carbon steel   |
|                                    | Spring                     |                                    |                           |  | Stainless steel                   | Stainless steel   | Stainless steel   | Stainless steel  | Stainless steel  |
| Gasket                             | Gasket                     | Gasket                             | Gasket                    |  | AISI 316+graph.                   | AISI 316+graph.   | AISI 316+graph.   | AISI 316+graph.  | AISI 316+graph.  |
| Packing                            |                            | Packing                            | Packing                   | Packing  | Graphite                          | Graphite  | Graphite  | Graphite   | Graphite   |
| Body studs<br>Body nuts            | Body studs<br>Body nuts    | Body studs<br>Body nuts            | Body studs<br>Body nuts   |  | A193/B7<br>A194/2H                | A193/B8<br>A194/Gr8   | A193/B16<br>A194/Gr4  | A193/B8<br>A194/Gr8  | A193/B8<br>A194/Gr8  |
| Gland studs<br>Gland nuts          |                            | Gland studs<br>Gland nuts          | Gland studs<br>Gland nuts |  | AISI 410<br>A194/2H               | A193/B8<br>A194/Gr8   | AISI 410<br>A194/2H   | A193/B8<br>A194/Gr8  | A193/B8<br>A194/Gr8  |
|                                    |                            | Bellow                             |                           |  | AISI 316L<br>HASTELLOY C276       | AISI 316L<br>HASTELLOY C276                                   | AISI 316L<br>HASTELLOY C276   | AISI 316L<br>HASTELLOY C276  | AISI 316L<br>HASTELLOY C276  |
|                                    | Swing hinge                |                                    |                           |  | A182/F6-F316                      | A182/F6-F316  | A182/F6-F316  | A182/F316  | A182/F316  |
| Identif. plate                     | Identif. plate             | Identif. plate                     | Identif. plate            | Identif. plate                                     | Aluminium                         | Aluminium   | Aluminium   | Aluminium  | Aluminium  |

Alternate material available.  
Stellited seat/s & wedge/disc on request.



## Working Pressure-Temperature by Classes

|      |     | <b>ASTM A105 - A350/LF2</b> |      |      |      |      |       |      |       |      |       |      |       |      |       |       |       |
|------|-----|-----------------------------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
| °F   | °C  | 150                         | PN20 | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|      |     | psig                        | bar  | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 285                         | 19.7 | 740  | 51.0 | 1480 | 102.1 | 1975 | 136.2 | 2220 | 153.1 | 3705 | 255.5 | 6170 | 425.5 | 11110 | 766.2 |
| 200  | 93  | 260                         | 17.9 | 675  | 46.6 | 1350 | 93.1  | 1800 | 124.1 | 2025 | 139.7 | 3375 | 232.8 | 5625 | 387.9 | 10120 | 697.9 |
| 300  | 149 | 230                         | 15.9 | 655  | 45.2 | 1315 | 90.7  | 1750 | 120.7 | 1970 | 135.9 | 3280 | 226.2 | 5470 | 377.2 | 9845  | 679.0 |
| 400  | 204 | 200                         | 13.8 | 635  | 43.8 | 1270 | 87.6  | 1690 | 116.6 | 1900 | 131.0 | 3170 | 218.6 | 5280 | 364.1 | 9505  | 655.5 |
| 500  | 260 | 170                         | 11.7 | 600  | 41.4 | 1200 | 82.8  | 1595 | 110.0 | 1795 | 123.8 | 2995 | 206.6 | 4990 | 344.1 | 8980  | 619.3 |
| 600  | 316 | 140                         | 9.7  | 550  | 37.9 | 1095 | 75.5  | 1460 | 100.7 | 1640 | 113.1 | 2735 | 188.6 | 4560 | 314.5 | 8210  | 566.2 |
| 650  | 343 | 125                         | 8.6  | 535  | 36.9 | 1075 | 74.1  | 1430 | 98.6  | 1610 | 111.0 | 2685 | 185.2 | 4475 | 308.6 | 8055  | 555.5 |
| 700  | 371 | 110                         | 7.6  | 535  | 36.9 | 1065 | 73.4  | 1420 | 97.9  | 1600 | 110.3 | 2665 | 183.8 | 4440 | 306.2 | 7990  | 551.0 |
| 750  | 399 | 95                          | 6.6  | 505  | 34.8 | 1010 | 69.7  | 1345 | 92.8  | 1510 | 104.1 | 2520 | 173.8 | 4200 | 289.7 | 7560  | 521.4 |
| 800  | 427 | 80                          | 5.5  | 410  | 28.3 | 825  | 56.9  | 1100 | 75.9  | 1235 | 85.2  | 2060 | 142.1 | 3430 | 236.6 | 6170  | 425.5 |
| 850  | 454 | 65                          | 4.5  | 270  | 18.6 | 535  | 36.9  | 715  | 49.3  | 805  | 55.5  | 1340 | 92.4  | 2230 | 153.8 | 4010  | 276.6 |
| 900  | 482 | 50                          | 3.4  | 170  | 11.7 | 345  | 23.8  | 460  | 31.7  | 515  | 35.5  | 860  | 59.3  | 1430 | 98.6  | 2570  | 177.2 |
| 950  | 510 | 35                          | 2.4  | 105  | 7.2  | 205  | 14.1  | 275  | 19.0  | 310  | 21.4  | 515  | 35.5  | 860  | 59.3  | 1545  | 106.6 |
| 1000 | 538 | 20                          | 1.4  | 50   | 3.4  | 105  | 7.2   | 140  | 9.7   | 155  | 10.7  | 260  | 17.9  | 430  | 29.7  | 770   | 53.1  |

|      |     | <b>ASTM A 182/F11-A182/F12</b> |       |      |      |      |       |      |       |      |       |      |       |      |       |       |       |
|------|-----|--------------------------------|-------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
| °F   | °C  | 150                            | PN20  | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|      |     | psig                           | bar   | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 290                            | 20    | 750  | 51.7 | 1500 | 103.4 | 2000 | 137.9 | 2250 | 155.2 | 3750 | 258.6 | 6250 | 431.0 | 11250 | 775.9 |
| 200  | 93  | 260                            | 17.93 | 750  | 51.7 | 1500 | 103.4 | 2000 | 137.9 | 2250 | 155.2 | 3750 | 258.6 | 6250 | 431.0 | 11250 | 775.9 |
| 300  | 149 | 230                            | 15.86 | 720  | 49.7 | 1445 | 99.7  | 1925 | 132.8 | 2165 | 149.3 | 3610 | 249.0 | 6015 | 414.8 | 10830 | 746.9 |
| 400  | 204 | 200                            | 13.79 | 695  | 47.9 | 1385 | 95.5  | 1850 | 127.6 | 2080 | 143.4 | 3465 | 239.0 | 5775 | 398.3 | 10400 | 717.2 |
| 500  | 260 | 170                            | 11.72 | 665  | 45.9 | 1330 | 91.7  | 1775 | 122.4 | 1995 | 137.6 | 3325 | 229.3 | 5540 | 382.1 | 9965  | 687.2 |
| 600  | 316 | 140                            | 9.655 | 605  | 41.7 | 1210 | 83.4  | 1615 | 111.4 | 1815 | 125.2 | 3025 | 208.6 | 5040 | 347.6 | 9070  | 625.5 |
| 650  | 343 | 125                            | 8.621 | 590  | 40.7 | 1175 | 81.0  | 1570 | 108.3 | 1765 | 121.7 | 2940 | 202.8 | 4905 | 338.3 | 8825  | 608.6 |
| 700  | 371 | 110                            | 7.586 | 570  | 39.3 | 1135 | 78.3  | 1515 | 104.5 | 1705 | 117.6 | 2840 | 195.9 | 4730 | 326.2 | 8515  | 587.2 |
| 750  | 399 | 95                             | 6.552 | 530  | 36.6 | 1065 | 73.4  | 1420 | 97.9  | 1595 | 110.0 | 2660 | 183.4 | 4430 | 305.5 | 7970  | 549.7 |
| 800  | 427 | 80                             | 5.517 | 510  | 35.2 | 1015 | 70.0  | 1355 | 93.4  | 1525 | 105.2 | 2540 | 175.2 | 4230 | 291.7 | 7610  | 524.8 |
| 850  | 454 | 65                             | 4.483 | 485  | 33.4 | 975  | 67.2  | 1300 | 89.7  | 1460 | 100.7 | 2435 | 167.9 | 4060 | 280.0 | 7305  | 503.8 |
| 900  | 482 | 50                             | 3.448 | 450  | 31.0 | 900  | 62.1  | 1200 | 82.8  | 1350 | 93.1  | 2245 | 154.8 | 3745 | 258.3 | 6740  | 464.8 |
| 950  | 510 | 35                             | 2.414 | 320  | 22.1 | 640  | 44.1  | 850  | 58.6  | 955  | 65.9  | 1595 | 110.0 | 2655 | 183.1 | 4785  | 330.0 |
| 1000 | 538 | 20                             | 1.379 | 215  | 14.8 | 430  | 29.7  | 575  | 39.7  | 650  | 44.8  | 1080 | 74.5  | 1800 | 124.1 | 3240  | 223.4 |
| 1050 | 566 | 20                             | 1.379 | 145  | 10.0 | 290  | 20.0  | 385  | 26.6  | 430  | 29.7  | 720  | 49.7  | 1200 | 82.8  | 2160  | 149.0 |
| 1100 | 593 | 20                             | 1.379 | 95   | 6.6  | 190  | 13.1  | 255  | 17.6  | 290  | 20.0  | 480  | 33.1  | 800  | 55.2  | 1440  | 99.3  |
| 1150 | 621 | 20                             | 1.379 | 60   | 4.1  | 125  | 8.6   | 165  | 11.4  | 185  | 12.8  | 310  | 21.4  | 515  | 35.5  | 925   | 63.8  |
| 1200 | 649 | 15                             | 1.034 | 40   | 2.8  | 75   | 5.2   | 100  | 6.9   | 115  | 7.9   | 190  | 13.1  | 315  | 21.7  | 565   | 39.0  |

■ For welding and valves only. Flanged end ratings terminate at 1000°F.

A105: permissible, but not recommended for prolonged usage above about 800°F.  
 A350/LF2: not to be used over 650°F.  
 A182/F11-A182/F12: permissible but not recommended for prolonged usage above about 1100°F.



## Working Pressure-Temperature by Classes

|      |     | <b>ASTM A182/F22</b> |      |      |      |      |       |      |       |      |       |      |       |      |       |       |       |
|------|-----|----------------------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
| °F   | °C  | 150                  | PN20 | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|      |     | psig                 | bar  | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 290                  | 20.0 | 750  | 51.7 | 1500 | 103.4 | 2000 | 137.9 | 2250 | 155.2 | 3750 | 258.6 | 6250 | 431.0 | 11250 | 775.9 |
| 200  | 93  | 260                  | 17.9 | 750  | 51.7 | 1500 | 103.4 | 2000 | 137.9 | 2250 | 155.2 | 3750 | 258.6 | 6250 | 431.0 | 11250 | 775.9 |
| 300  | 149 | 230                  | 15.9 | 730  | 50.3 | 1455 | 100.3 | 1940 | 133.8 | 2185 | 150.7 | 3640 | 251.0 | 6070 | 418.6 | 10925 | 753.4 |
| 400  | 204 | 200                  | 13.8 | 705  | 48.6 | 1410 | 97.2  | 1880 | 129.7 | 2115 | 145.9 | 3530 | 243.4 | 5880 | 405.5 | 10585 | 730.0 |
| 500  | 260 | 170                  | 11.7 | 665  | 45.9 | 1330 | 91.7  | 1775 | 122.4 | 1995 | 137.6 | 3325 | 229.3 | 5540 | 382.1 | 9965  | 687.2 |
| 600  | 316 | 140                  | 9.7  | 605  | 41.7 | 1210 | 83.4  | 1615 | 111.4 | 1815 | 125.2 | 3025 | 208.6 | 5040 | 347.6 | 9070  | 625.5 |
| 650  | 343 | 125                  | 8.6  | 590  | 40.7 | 1175 | 81.0  | 1570 | 108.3 | 1765 | 121.7 | 2940 | 202.8 | 4905 | 338.3 | 8825  | 608.6 |
| 700  | 371 | 110                  | 7.6  | 570  | 39.3 | 1135 | 78.3  | 1515 | 104.5 | 1705 | 117.6 | 2840 | 195.9 | 4730 | 326.2 | 8515  | 587.2 |
| 750  | 399 | 95                   | 6.6  | 530  | 36.6 | 1065 | 73.4  | 1420 | 97.9  | 1595 | 110.0 | 2660 | 183.4 | 4430 | 305.5 | 7970  | 549.7 |
| 800  | 427 | 80                   | 5.5  | 510  | 35.2 | 1015 | 70.0  | 1355 | 93.4  | 1525 | 105.2 | 2540 | 175.2 | 4230 | 291.7 | 7610  | 524.8 |
| 850  | 454 | 65                   | 4.5  | 485  | 33.4 | 975  | 67.2  | 1300 | 89.7  | 1460 | 100.7 | 2435 | 167.9 | 4060 | 280.0 | 7305  | 503.8 |
| 900  | 482 | 50                   | 3.4  | 450  | 31.0 | 900  | 62.1  | 1200 | 82.8  | 1350 | 93.1  | 2245 | 154.8 | 3745 | 258.3 | 6740  | 464.8 |
| 950  | 510 | 35                   | 2.4  | 375  | 25.9 | 755  | 52.1  | 1005 | 69.3  | 1130 | 77.9  | 1885 | 130.0 | 3145 | 216.9 | 5665  | 390.7 |
| 1000 | 538 | 20                   | 1.4  | 260  | 17.9 | 520  | 35.9  | 695  | 47.9  | 780  | 53.8  | 1305 | 90.0  | 2170 | 149.7 | 3910  | 269.7 |
| 1050 | 566 | 20                   | 1.4  | 175  | 12.1 | 350  | 24.1  | 465  | 32.1  | 525  | 36.2  | 875  | 60.3  | 1455 | 100.3 | 2625  | 181.0 |
| 1100 | 593 | 20                   | 1.4  | 110  | 7.6  | 220  | 15.2  | 295  | 20.3  | 330  | 22.8  | 550  | 37.9  | 915  | 63.1  | 1645  | 113.4 |
| 1150 | 621 | 20                   | 1.4  | 70   | 4.8  | 135  | 9.3   | 180  | 12.4  | 205  | 14.1  | 345  | 23.8  | 570  | 39.3  | 1030  | 71.0  |
| 1200 | 649 | 20                   | 1.4  | 40   | 2.8  | 80   | 5.5   | 110  | 7.6   | 125  | 8.6   | 205  | 14.1  | 345  | 23.8  | 615   | 42.4  |

### ASTM A182/F5

| °F   | °C  | 150  | PN20 | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|------|-----|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
|      |     | psig | bar  | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 290  | 20.0 | 750  | 51.7 | 1500 | 103.4 | 2000 | 137.9 | 2250 | 155.2 | 3750 | 258.6 | 6250 | 431.0 | 11250 | 775.9 |
| 200  | 93  | 260  | 17.9 | 745  | 51.4 | 1490 | 102.8 | 1985 | 136.9 | 2235 | 154.1 | 3725 | 256.9 | 6205 | 427.9 | 11170 | 770.3 |
| 300  | 149 | 230  | 15.9 | 715  | 49.3 | 1430 | 98.6  | 1910 | 131.7 | 2150 | 148.3 | 3580 | 246.9 | 5965 | 411.4 | 10740 | 740.7 |
| 400  | 204 | 200  | 13.8 | 705  | 48.6 | 1410 | 97.2  | 1880 | 129.7 | 2115 | 145.9 | 3530 | 243.4 | 5880 | 405.5 | 10585 | 730.0 |
| 500  | 260 | 170  | 11.7 | 665  | 45.9 | 1330 | 91.7  | 1775 | 122.4 | 1995 | 137.6 | 3325 | 229.3 | 5540 | 382.1 | 9965  | 687.2 |
| 600  | 316 | 140  | 9.7  | 605  | 41.7 | 1210 | 83.4  | 1615 | 111.4 | 1815 | 125.2 | 3025 | 208.6 | 5040 | 347.6 | 9070  | 625.5 |
| 650  | 343 | 125  | 8.6  | 590  | 40.7 | 1175 | 81.0  | 1570 | 108.3 | 1765 | 121.7 | 2940 | 202.8 | 4905 | 338.3 | 8825  | 608.6 |
| 700  | 371 | 110  | 7.6  | 570  | 39.3 | 1135 | 78.3  | 1515 | 104.5 | 1705 | 117.6 | 2840 | 195.9 | 4730 | 326.2 | 8515  | 587.2 |
| 750  | 399 | 95   | 6.6  | 530  | 36.6 | 1055 | 72.8  | 1410 | 97.2  | 1585 | 109.3 | 2640 | 182.1 | 4400 | 303.4 | 7920  | 546.2 |
| 800  | 427 | 80   | 5.5  | 510  | 35.2 | 1015 | 70.0  | 1355 | 93.4  | 1525 | 105.2 | 2540 | 175.2 | 4230 | 291.7 | 7610  | 524.8 |
| 850  | 454 | 65   | 4.5  | 485  | 33.4 | 965  | 66.6  | 1290 | 89.0  | 1450 | 100.0 | 2415 | 166.6 | 4030 | 277.9 | 7250  | 500.0 |
| 900  | 482 | 50   | 3.4  | 370  | 25.5 | 740  | 51.0  | 985  | 67.9  | 1110 | 76.6  | 1850 | 127.6 | 3085 | 212.8 | 5555  | 383.1 |
| 950  | 510 | 35   | 2.4  | 275  | 19.0 | 550  | 37.9  | 735  | 50.7  | 825  | 56.9  | 1370 | 94.5  | 2285 | 157.6 | 4115  | 283.8 |
| 1000 | 538 | 20   | 1.4  | 200  | 13.8 | 400  | 27.6  | 530  | 36.6  | 595  | 41.0  | 995  | 68.6  | 1655 | 114.1 | 2985  | 205.9 |
| 1050 | 566 | 20   | 1.4  | 145  | 10.0 | 290  | 20.0  | 385  | 26.6  | 430  | 29.7  | 720  | 49.7  | 1200 | 82.8  | 2160  | 149.0 |
| 1100 | 593 | 20   | 1.4  | 100  | 6.9  | 200  | 13.8  | 265  | 18.3  | 300  | 20.7  | 495  | 34.1  | 830  | 57.2  | 1490  | 102.8 |
| 1150 | 621 | 20   | 1.4  | 60   | 4.1  | 185  | 12.8  | 185  | 12.8  | 185  | 12.8  | 310  | 21.4  | 515  | 35.5  | 925   | 63.8  |
| 1200 | 649 | 20   | 1.4  | 35   | 2.4  | 105  | 7.2   | 105  | 7.2   | 105  | 7.2   | 170  | 11.7  | 285  | 19.7  | 515   | 35.5  |

For welding end valves only. Flanged end ratings terminate at 1000°F.

A182/F22: permissible, but not recommended for prolonged usage above about 1100°F.



# Working Pressure-Temperature by Classes

## ASTM A182/F9

| °F   | °C  | 150  | PN20 | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|------|-----|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
|      |     | psig | bar  | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 290  | 20,0 | 750  | 51,7 | 1500 | 103,4 | 2000 | 137,9 | 2250 | 155,2 | 3750 | 258,6 | 6250 | 431,0 | 11250 | 775,9 |
| 200  | 93  | 260  | 17,9 | 750  | 51,7 | 1500 | 103,4 | 2000 | 137,9 | 2250 | 155,2 | 3750 | 258,6 | 6250 | 431,0 | 11250 | 775,9 |
| 300  | 149 | 230  | 15,9 | 730  | 50,3 | 1455 | 100,3 | 1940 | 133,8 | 2185 | 150,7 | 3640 | 251,0 | 6070 | 418,6 | 10925 | 753,4 |
| 400  | 204 | 200  | 13,8 | 705  | 48,6 | 1410 | 97,2  | 1880 | 129,7 | 2115 | 145,9 | 3530 | 243,4 | 5880 | 405,5 | 10585 | 730,0 |
| 500  | 260 | 170  | 11,7 | 665  | 45,9 | 1330 | 91,7  | 1775 | 122,4 | 1995 | 137,6 | 3325 | 229,3 | 5540 | 382,1 | 9965  | 687,2 |
| 600  | 316 | 140  | 9,7  | 605  | 41,7 | 1210 | 83,4  | 1615 | 111,4 | 1815 | 125,2 | 3025 | 208,6 | 5040 | 347,6 | 9070  | 625,5 |
| 650  | 343 | 125  | 8,6  | 590  | 40,7 | 1175 | 81,0  | 1570 | 108,3 | 1765 | 121,7 | 2940 | 202,8 | 4905 | 338,3 | 8825  | 608,6 |
| 700  | 371 | 110  | 7,6  | 570  | 39,3 | 1135 | 78,3  | 1515 | 104,5 | 1705 | 117,6 | 2840 | 195,9 | 4730 | 326,2 | 8515  | 587,2 |
| 750  | 399 | 95   | 6,6  | 530  | 36,6 | 1065 | 73,4  | 1420 | 97,9  | 1595 | 110,0 | 2660 | 183,4 | 4430 | 305,5 | 7970  | 549,7 |
| 800  | 427 | 80   | 5,5  | 510  | 35,2 | 1015 | 70,0  | 1355 | 93,4  | 1525 | 105,2 | 2540 | 175,2 | 4230 | 291,7 | 7610  | 524,8 |
| 850  | 454 | 65   | 4,5  | 485  | 33,4 | 975  | 67,2  | 1300 | 89,7  | 1460 | 100,7 | 2435 | 167,9 | 4060 | 280,0 | 7305  | 503,8 |
| 900  | 482 | 50   | 3,4  | 450  | 31,0 | 900  | 62,1  | 1200 | 82,8  | 1350 | 93,1  | 2245 | 154,8 | 3745 | 258,3 | 6740  | 464,8 |
| 950  | 510 | 35   | 2,4  | 375  | 25,9 | 755  | 52,1  | 1005 | 69,3  | 1130 | 77,9  | 1885 | 130,0 | 3145 | 216,9 | 5655  | 390,0 |
| 1000 | 538 | 20   | 1,4  | 255  | 17,6 | 505  | 34,8  | 675  | 46,6  | 760  | 52,4  | 1270 | 87,6  | 2115 | 145,9 | 3805  | 262,4 |
| 1050 | 566 | 20   | 1,4  | 170  | 11,7 | 345  | 23,8  | 460  | 31,7  | 515  | 35,5  | 855  | 59,0  | 1430 | 98,6  | 2570  | 177,2 |
| 1100 | 593 | 20   | 1,4  | 115  | 7,9  | 225  | 15,5  | 300  | 20,7  | 340  | 23,4  | 565  | 39,0  | 945  | 65,2  | 1695  | 116,9 |
| 1150 | 621 | 20   | 1,4  | 75   | 5,2  | 150  | 10,3  | 200  | 13,8  | 225  | 15,5  | 375  | 25,9  | 630  | 43,4  | 1130  | 77,9  |
| 1200 | 649 | 20   | 1,4  | 50   | 3,4  | 105  | 7,2   | 140  | 9,7   | 155  | 10,7  | 255  | 17,6  | 430  | 29,7  | 770   | 53,1  |

For welding end valves only. Flanged end ratings terminate at 1000°F.

## ASTM A182/F304

| °F   | °C  | 150  | PN20 | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|------|-----|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
|      |     | psig | bar  | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 275  | 19,0 | 720  | 49,7 | 1440 | 99,3  | 1920 | 132,4 | 2160 | 149,0 | 3600 | 248,3 | 6000 | 413,8 | 10800 | 744,8 |
| 200  | 93  | 230  | 15,9 | 600  | 41,4 | 1200 | 82,8  | 1600 | 110,3 | 1800 | 124,1 | 3000 | 206,9 | 5000 | 344,8 | 9000  | 620,7 |
| 300  | 149 | 205  | 14,1 | 540  | 37,2 | 1080 | 74,5  | 1440 | 99,3  | 1620 | 111,7 | 2700 | 186,2 | 4500 | 310,3 | 8100  | 558,6 |
| 400  | 204 | 190  | 13,1 | 495  | 34,1 | 995  | 68,6  | 1325 | 91,4  | 1490 | 102,8 | 2485 | 171,4 | 4140 | 285,5 | 7450  | 513,8 |
| 500  | 260 | 170  | 11,7 | 465  | 32,1 | 930  | 64,1  | 1240 | 85,5  | 1395 | 96,2  | 2330 | 160,7 | 3880 | 267,6 | 6985  | 481,7 |
| 600  | 316 | 140  | 9,7  | 435  | 30,0 | 875  | 60,3  | 1165 | 80,3  | 1310 | 90,3  | 2185 | 150,7 | 3640 | 251,0 | 6550  | 451,7 |
| 650  | 343 | 125  | 8,6  | 430  | 29,7 | 860  | 59,3  | 1145 | 79,0  | 1290 | 89,0  | 2150 | 148,3 | 3580 | 246,9 | 6445  | 444,5 |
| 700  | 371 | 110  | 7,6  | 425  | 29,3 | 850  | 58,6  | 1135 | 78,3  | 1275 | 87,9  | 2125 | 146,6 | 3540 | 244,1 | 6370  | 439,3 |
| 750  | 399 | 95   | 6,6  | 415  | 28,6 | 830  | 57,2  | 1105 | 76,2  | 1245 | 85,9  | 2075 | 143,1 | 3460 | 238,6 | 6230  | 429,7 |
| 800  | 427 | 80   | 5,5  | 405  | 27,9 | 805  | 55,5  | 1075 | 74,1  | 1210 | 83,4  | 2015 | 139,0 | 3360 | 231,7 | 6050  | 417,2 |
| 850  | 454 | 65   | 4,5  | 395  | 27,2 | 790  | 54,5  | 1055 | 72,8  | 1190 | 82,1  | 1980 | 136,6 | 3300 | 227,6 | 5940  | 409,7 |
| 900  | 482 | 50   | 3,4  | 390  | 26,9 | 780  | 53,8  | 1035 | 71,4  | 1165 | 80,3  | 1945 | 134,1 | 3240 | 223,4 | 5830  | 402,1 |
| 950  | 510 | 35   | 2,4  | 380  | 26,2 | 765  | 52,8  | 1020 | 70,3  | 1145 | 79,0  | 1910 | 131,7 | 3180 | 219,3 | 5725  | 394,8 |
| 1000 | 538 | 20   | 1,4  | 320  | 22,1 | 640  | 44,1  | 855  | 59,0  | 965  | 66,6  | 1605 | 110,7 | 2675 | 184,5 | 4815  | 332,1 |
| 1050 | 566 | 20   | 1,4  | 310  | 21,4 | 615  | 42,4  | 820  | 56,6  | 925  | 63,8  | 1545 | 106,6 | 2570 | 177,2 | 4630  | 319,3 |
| 1100 | 593 | 20   | 1,4  | 255  | 17,6 | 515  | 35,5  | 685  | 47,2  | 770  | 53,1  | 1285 | 88,6  | 2145 | 147,9 | 3855  | 265,9 |
| 1150 | 621 | 20   | 1,4  | 200  | 13,8 | 400  | 27,6  | 530  | 36,6  | 595  | 41,0  | 995  | 68,6  | 1655 | 114,1 | 2985  | 205,9 |
| 1200 | 649 | 20   | 1,4  | 155  | 10,7 | 310  | 21,4  | 415  | 28,6  | 465  | 32,1  | 770  | 53,1  | 1285 | 88,6  | 2315  | 159,7 |
| 1250 | 677 | 20   | 1,4  | 115  | 7,9  | 225  | 15,5  | 300  | 20,7  | 340  | 23,4  | 565  | 39,0  | 945  | 65,2  | 1695  | 116,9 |
| 1300 | 704 | 20   | 1,4  | 85   | 5,9  | 170  | 11,7  | 225  | 15,5  | 255  | 17,6  | 430  | 29,7  | 715  | 49,3  | 1285  | 88,6  |
| 1350 | 732 | 20   | 1,4  | 60   | 4,1  | 125  | 8,6   | 165  | 11,4  | 185  | 12,8  | 310  | 21,4  | 515  | 35,5  | 925   | 63,8  |
| 1400 | 760 | 20   | 1,4  | 50   | 3,4  | 95   | 6,6   | 130  | 9,0   | 145  | 10,0  | 240  | 16,6  | 400  | 27,6  | 720   | 49,7  |
| 1450 | 788 | 15   | 1,0  | 35   | 2,4  | 70   | 4,8   | 95   | 6,6   | 105  | 7,2   | 170  | 11,7  | 285  | 19,7  | 515   | 35,5  |
| 1500 | 816 | 10   | 0,7  | 25   | 1,7  | 55   | 3,8   | 70   | 4,8   | 80   | 5,5   | 135  | 9,3   | 230  | 15,9  | 410   | 28,3  |

For welding end valves only. Flanged end ratings terminate at 1000°F.



## Working Pressure-Temperature by Classes

### ASTM A182/F316

| °F   | °C  | 150        | PN20 | 300        | PN50 | 600         | PN100 | 800         | PN130 | 900         | PN150 | 1500        | PN250 | 2500        | PN420 | 4500         | PN760 |
|------|-----|------------|------|------------|------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|--------------|-------|
|      |     | psig       | bar  | psig       | bar  | psig        | bar   | psig        | bar   | psig        | bar   | psig        | bar   | psig        | bar   | psig         | bar   |
| 100  | 38  | <b>275</b> | 19,0 | <b>720</b> | 49,7 | <b>1440</b> | 99,3  | <b>1920</b> | 132,4 | <b>2160</b> | 149,0 | <b>3600</b> | 248,3 | <b>6000</b> | 413,8 | <b>10800</b> | 744,8 |
| 200  | 93  | <b>235</b> | 16,2 | <b>620</b> | 42,8 | <b>1240</b> | 85,5  | <b>1655</b> | 114,1 | <b>1860</b> | 128,3 | <b>3095</b> | 213,4 | <b>5160</b> | 355,9 | <b>9290</b>  | 640,7 |
| 300  | 149 | <b>215</b> | 14,8 | <b>560</b> | 38,6 | <b>1120</b> | 77,2  | <b>1495</b> | 103,1 | <b>1680</b> | 115,9 | <b>2795</b> | 192,8 | <b>4660</b> | 321,4 | <b>8390</b>  | 578,6 |
| 400  | 204 | <b>195</b> | 13,4 | <b>515</b> | 35,5 | <b>1025</b> | 70,7  | <b>1370</b> | 94,5  | <b>1540</b> | 106,2 | <b>2570</b> | 177,2 | <b>4280</b> | 295,2 | <b>7705</b>  | 531,4 |
| 500  | 260 | <b>170</b> | 11,7 | <b>480</b> | 33,1 | <b>955</b>  | 65,9  | <b>1275</b> | 87,9  | <b>1435</b> | 99,0  | <b>2390</b> | 164,8 | <b>3980</b> | 274,5 | <b>7165</b>  | 494,1 |
| 600  | 316 | <b>140</b> | 9,7  | <b>450</b> | 31,0 | <b>900</b>  | 62,1  | <b>1205</b> | 83,1  | <b>1355</b> | 93,4  | <b>2255</b> | 155,5 | <b>3760</b> | 259,3 | <b>6770</b>  | 466,9 |
| 650  | 343 | <b>125</b> | 8,6  | <b>445</b> | 30,7 | <b>890</b>  | 61,4  | <b>1185</b> | 81,7  | <b>1330</b> | 91,7  | <b>2220</b> | 153,1 | <b>3700</b> | 255,2 | <b>6660</b>  | 459,3 |
| 700  | 371 | <b>110</b> | 7,6  | <b>430</b> | 29,7 | <b>870</b>  | 60,0  | <b>1160</b> | 80,0  | <b>1305</b> | 90,0  | <b>2170</b> | 149,7 | <b>3620</b> | 249,7 | <b>6515</b>  | 449,3 |
| 750  | 399 | <b>95</b>  | 6,6  | <b>425</b> | 29,3 | <b>855</b>  | 59,0  | <b>1140</b> | 78,6  | <b>1280</b> | 88,3  | <b>2135</b> | 147,2 | <b>3560</b> | 245,5 | <b>6410</b>  | 442,1 |
| 800  | 427 | <b>80</b>  | 5,5  | <b>420</b> | 29,0 | <b>845</b>  | 58,3  | <b>1125</b> | 77,6  | <b>1265</b> | 87,2  | <b>2110</b> | 145,5 | <b>3520</b> | 242,8 | <b>6335</b>  | 436,9 |
| 850  | 454 | <b>65</b>  | 4,5  | <b>420</b> | 29,0 | <b>835</b>  | 57,6  | <b>1115</b> | 76,9  | <b>1255</b> | 86,6  | <b>2090</b> | 144,1 | <b>3480</b> | 240,0 | <b>6265</b>  | 432,1 |
| 900  | 482 | <b>50</b>  | 3,4  | <b>415</b> | 28,6 | <b>830</b>  | 57,2  | <b>1105</b> | 76,2  | <b>1245</b> | 85,9  | <b>2075</b> | 143,1 | <b>3460</b> | 238,6 | <b>6230</b>  | 429,7 |
| 950  | 510 | <b>35</b>  | 2,4  | <b>385</b> | 26,6 | <b>775</b>  | 53,4  | <b>1030</b> | 71,0  | <b>1160</b> | 80,0  | <b>1930</b> | 133,1 | <b>3220</b> | 222,1 | <b>5795</b>  | 399,7 |
| 1000 | 538 | <b>20</b>  | 1,4  | <b>350</b> | 24,1 | <b>700</b>  | 48,3  | <b>935</b>  | 64,5  | <b>1050</b> | 72,4  | <b>1750</b> | 120,7 | <b>2915</b> | 201,0 | <b>5245</b>  | 361,7 |
| 1050 | 566 | <b>20</b>  | 1,4  | <b>345</b> | 23,8 | <b>685</b>  | 47,2  | <b>915</b>  | 63,1  | <b>1030</b> | 71,0  | <b>1720</b> | 118,6 | <b>2865</b> | 197,6 | <b>5155</b>  | 355,5 |
| 1100 | 593 | <b>20</b>  | 1,4  | <b>305</b> | 21,0 | <b>610</b>  | 42,1  | <b>815</b>  | 56,2  | <b>915</b>  | 63,1  | <b>1525</b> | 105,2 | <b>2545</b> | 175,5 | <b>4575</b>  | 315,5 |
| 1150 | 621 | <b>20</b>  | 1,4  | <b>235</b> | 16,2 | <b>475</b>  | 32,8  | <b>630</b>  | 43,4  | <b>710</b>  | 49,0  | <b>1185</b> | 81,7  | <b>1970</b> | 135,9 | <b>3550</b>  | 244,8 |
| 1200 | 649 | <b>20</b>  | 1,4  | <b>185</b> | 12,8 | <b>370</b>  | 25,5  | <b>495</b>  | 34,1  | <b>555</b>  | 38,3  | <b>925</b>  | 63,8  | <b>1545</b> | 106,6 | <b>2775</b>  | 191,4 |
| 1250 | 677 | <b>20</b>  | 1,4  | <b>145</b> | 10,0 | <b>295</b>  | 20,3  | <b>390</b>  | 26,9  | <b>440</b>  | 30,3  | <b>735</b>  | 50,7  | <b>1230</b> | 84,8  | <b>2210</b>  | 152,4 |
| 1300 | 704 | <b>20</b>  | 1,4  | <b>115</b> | 7,9  | <b>235</b>  | 16,2  | <b>310</b>  | 21,4  | <b>350</b>  | 24,1  | <b>585</b>  | 40,3  | <b>970</b>  | 66,9  | <b>1750</b>  | 120,7 |
| 1350 | 732 | <b>20</b>  | 1,4  | <b>95</b>  | 6,6  | <b>190</b>  | 13,1  | <b>255</b>  | 17,6  | <b>290</b>  | 20,0  | <b>480</b>  | 33,1  | <b>800</b>  | 55,2  | <b>1440</b>  | 99,3  |
| 1400 | 760 | <b>20</b>  | 1,4  | <b>75</b>  | 5,2  | <b>150</b>  | 10,3  | <b>200</b>  | 13,8  | <b>225</b>  | 15,5  | <b>380</b>  | 26,2  | <b>630</b>  | 43,4  | <b>1130</b>  | 77,9  |
| 1450 | 788 | <b>20</b>  | 1,4  | <b>60</b>  | 4,1  | <b>115</b>  | 7,9   | <b>155</b>  | 10,7  | <b>175</b>  | 12,1  | <b>290</b>  | 20,0  | <b>485</b>  | 33,4  | <b>875</b>   | 60,3  |
| 1500 | 816 | <b>20</b>  | 1,4  | <b>40</b>  | 2,8  | <b>85</b>   | 5,9   | <b>110</b>  | 7,6   | <b>125</b>  | 8,6   | <b>205</b>  | 14,1  | <b>345</b>  | 23,8  | <b>620</b>   | 42,8  |

For welding end valves only. Flanged end ratings terminate at 1000°F.

### ASTM A182/F304L - A182/F316L

| °F  | °C  | 150        | PN20 | 300        | PN50 | 600         | PN100 | 800         | PN130 | 900         | PN150 | 1500        | PN250 | 2500        | PN420 | 4500        | PN760 |
|-----|-----|------------|------|------------|------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
|     |     | psig       | bar  | psig       | bar  | psig        | bar   | psig        | bar   | psig        | bar   | psig        | bar   | psig        | bar   | psig        | bar   |
| 100 | 38  | <b>230</b> | 15,9 | <b>600</b> | 41,4 | <b>1200</b> | 82,8  | <b>1600</b> | 110,3 | <b>1800</b> | 124,1 | <b>3000</b> | 206,9 | <b>5000</b> | 344,8 | <b>9000</b> | 620,7 |
| 200 | 93  | <b>195</b> | 13,4 | <b>505</b> | 34,8 | <b>1015</b> | 70,0  | <b>1350</b> | 93,1  | <b>1520</b> | 104,8 | <b>2530</b> | 174,5 | <b>4220</b> | 291,0 | <b>7595</b> | 523,8 |
| 300 | 149 | <b>175</b> | 12,1 | <b>455</b> | 31,4 | <b>910</b>  | 62,8  | <b>1210</b> | 83,4  | <b>1360</b> | 93,8  | <b>2270</b> | 156,6 | <b>3780</b> | 260,7 | <b>6805</b> | 469,3 |
| 400 | 204 | <b>160</b> | 11,0 | <b>415</b> | 28,6 | <b>825</b>  | 56,9  | <b>1100</b> | 75,9  | <b>1240</b> | 85,5  | <b>2065</b> | 142,4 | <b>3440</b> | 237,2 | <b>6190</b> | 426,9 |
| 500 | 260 | <b>145</b> | 10,0 | <b>380</b> | 26,2 | <b>765</b>  | 52,8  | <b>1020</b> | 70,3  | <b>1145</b> | 79,0  | <b>1910</b> | 131,7 | <b>3180</b> | 219,3 | <b>5725</b> | 394,8 |
| 600 | 316 | <b>140</b> | 9,7  | <b>360</b> | 24,8 | <b>720</b>  | 49,7  | <b>960</b>  | 66,2  | <b>1080</b> | 74,5  | <b>1800</b> | 124,1 | <b>3000</b> | 206,9 | <b>5400</b> | 372,4 |
| 650 | 343 | <b>125</b> | 8,6  | <b>350</b> | 24,1 | <b>700</b>  | 48,3  | <b>935</b>  | 64,5  | <b>1050</b> | 72,4  | <b>1750</b> | 120,7 | <b>2920</b> | 201,4 | <b>5255</b> | 362,4 |
| 700 | 371 | <b>110</b> | 7,6  | <b>345</b> | 23,8 | <b>685</b>  | 47,2  | <b>915</b>  | 63,1  | <b>1030</b> | 71,0  | <b>1715</b> | 118,3 | <b>2860</b> | 197,2 | <b>5150</b> | 355,2 |
| 750 | 399 | <b>95</b>  | 6,6  | <b>335</b> | 23,1 | <b>670</b>  | 46,2  | <b>895</b>  | 61,7  | <b>1010</b> | 69,7  | <b>1680</b> | 115,9 | <b>2800</b> | 193,1 | <b>5040</b> | 347,6 |
| 800 | 427 | <b>80</b>  | 5,5  | <b>330</b> | 22,8 | <b>660</b>  | 45,5  | <b>875</b>  | 60,3  | <b>985</b>  | 67,9  | <b>1645</b> | 113,4 | <b>2740</b> | 189,0 | <b>4930</b> | 340,0 |
| 850 | 454 | <b>65</b>  | 4,5  | <b>320</b> | 22,1 | <b>645</b>  | 44,5  | <b>860</b>  | 59,3  | <b>965</b>  | 66,6  | <b>1610</b> | 111,0 | <b>2680</b> | 184,8 | <b>4825</b> | 332,8 |



# Working Pressure-Temperature by Classes

## ASTM A182/F321

| °F   | °C  | 150  | PN20 | 300  | PN50 | 600  | PN100 | 800    | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|------|-----|------|------|------|------|------|-------|--------|-------|------|-------|------|-------|------|-------|-------|-------|
|      |     | psig | bar  | psig | bar  | psig | bar   | psig   | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 275  | 19,0 | 720  | 49,7 | 1440 | 99,3  | 1920   | 132,4 | 2160 | 149,0 | 3600 | 248,3 | 6000 | 413,8 | 10800 | 744,8 |
| 200  | 93  | 245  | 16,9 | 645  | 44,5 | 1290 | 89,0  | 1720   | 118,6 | 1935 | 133,4 | 3230 | 222,8 | 5380 | 371,0 | 9685  | 667,9 |
| 300  | 149 | 230  | 15,9 | 595  | 41,0 | 1190 | 82,1  | 1585   | 109,3 | 1785 | 123,1 | 2975 | 205,2 | 4960 | 342,1 | 8930  | 615,9 |
| 400  | 204 | 200  | 13,8 | 550  | 37,9 | 1105 | 76,2  | 1470   | 101,4 | 1655 | 114,1 | 2760 | 190,3 | 4600 | 317,2 | 8280  | 571,0 |
| 500  | 260 | 170  | 11,7 | 515  | 35,5 | 1030 | 71,0  | 1375   | 94,8  | 1545 | 106,6 | 2570 | 177,2 | 4285 | 295,5 | 7715  | 532,1 |
| 600  | 316 | 140  | 9,7  | 485  | 33,4 | 975  | 67,2  | 1300   | 89,7  | 1460 | 100,7 | 2435 | 167,9 | 4060 | 280,0 | 7310  | 504,1 |
| 650  | 343 | 125  | 8,6  | 480  | 33,1 | 955  | 65,9  | 1275   | 87,9  | 1435 | 99,0  | 2390 | 164,8 | 3980 | 274,5 | 7165  | 494,1 |
| 700  | 371 | 110  | 7,6  | 465  | 32,1 | 930  | 64,1  | 1240   | 85,5  | 1395 | 96,2  | 2330 | 160,7 | 3880 | 267,6 | 6985  | 481,7 |
| 750  | 399 | 95   | 6,6  | 460  | 31,7 | 915  | 63,1  | 1220   | 84,1  | 1375 | 94,8  | 2290 | 157,9 | 3820 | 263,4 | 6875  | 474,1 |
| 800  | 427 | 80   | 5,5  | 450  | 31,0 | 900  | 62,1  | 1203,3 | 83,0  | 1355 | 93,4  | 2255 | 155,5 | 3760 | 259,3 | 6770  | 466,9 |
| 850  | 454 | 65   | 4,5  | 445  | 30,7 | 895  | 61,7  | 1190   | 82,1  | 1340 | 92,4  | 2230 | 153,8 | 3720 | 256,6 | 6695  | 461,7 |
| 900  | 482 | 50   | 3,4  | 440  | 30,3 | 885  | 61,0  | 1180   | 81,4  | 1325 | 91,4  | 2210 | 152,4 | 3680 | 253,8 | 6625  | 456,9 |
| 950  | 510 | 35   | 2,4  | 385  | 26,6 | 775  | 53,4  | 1030   | 71,0  | 1160 | 80,0  | 1930 | 133,1 | 3220 | 222,1 | 5795  | 399,7 |
| 1000 | 538 | 20   | 1,4  | 355  | 24,5 | 715  | 49,3  | 950    | 65,5  | 1070 | 73,8  | 1785 | 123,1 | 2970 | 204,8 | 5350  | 369,0 |
| 1050 | 566 | 20   | 1,4  | 315  | 21,7 | 625  | 43,1  | 835    | 57,6  | 940  | 64,8  | 1565 | 107,9 | 2605 | 179,7 | 4690  | 323,4 |
| 1100 | 593 | 20   | 1,4  | 270  | 18,6 | 545  | 37,6  | 725    | 50,0  | 815  | 56,2  | 1360 | 93,8  | 2265 | 156,2 | 4075  | 281,0 |
| 1150 | 621 | 20   | 1,4  | 235  | 16,2 | 370  | 25,5  | 595    | 41,0  | 710  | 49,0  | 1185 | 81,7  | 1970 | 135,9 | 3550  | 244,8 |
| 1200 | 649 | 20   | 1,4  | 185  | 12,8 | 365  | 25,2  | 490    | 33,8  | 555  | 38,3  | 925  | 63,8  | 1545 | 106,6 | 2775  | 191,4 |
| 1250 | 677 | 20   | 1,4  | 140  | 9,7  | 280  | 19,3  | 375    | 25,9  | 420  | 29,0  | 705  | 48,6  | 1170 | 80,7  | 2110  | 145,5 |
| 1300 | 704 | 20   | 1,4  | 110  | 7,6  | 220  | 15,2  | 295    | 20,3  | 330  | 22,8  | 550  | 37,9  | 915  | 63,1  | 1645  | 113,4 |
| 1350 | 732 | 20   | 1,4  | 85   | 5,9  | 170  | 11,7  | 225    | 15,5  | 255  | 17,6  | 430  | 29,7  | 715  | 49,3  | 1285  | 88,6  |
| 1400 | 760 | 20   | 1,4  | 65   | 4,5  | 130  | 9,0   | 175    | 12,1  | 195  | 13,4  | 325  | 22,4  | 545  | 37,6  | 975   | 67,2  |
| 1450 | 788 | 20   | 1,4  | 50   | 3,4  | 105  | 7,2   | 140    | 9,7   | 155  | 10,7  | 255  | 17,6  | 430  | 29,7  | 770   | 53,1  |
| 1500 | 816 | 20   | 1,4  | 40   | 2,8  | 75   | 5,2   | 100    | 6,9   | 115  | 7,9   | 190  | 13,1  | 315  | 21,7  | 565   | 39,0  |

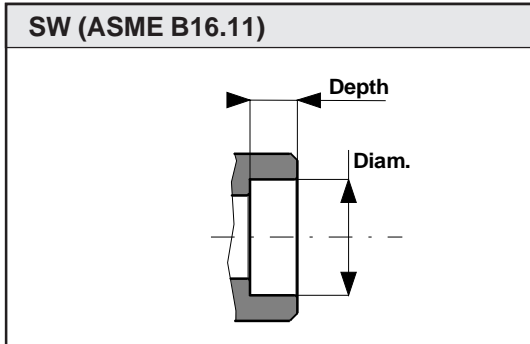
For welding end valves only. Flanged end ratings terminate at 1000°F.

## ASTM A182/F347

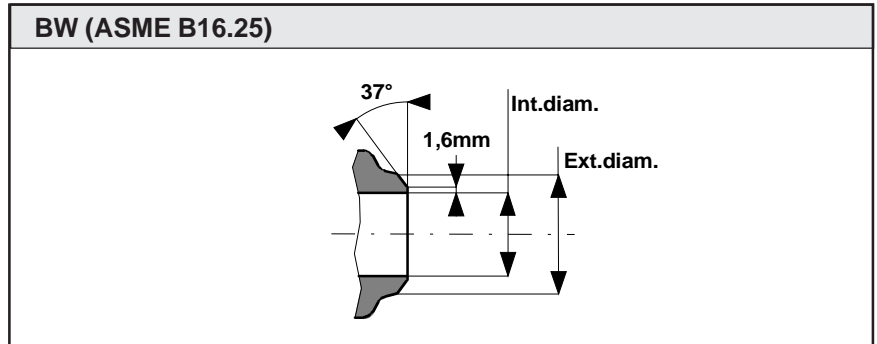
| °F   | °C  | 150  | PN20 | 300  | PN50 | 600  | PN100 | 800  | PN130 | 900  | PN150 | 1500 | PN250 | 2500 | PN420 | 4500  | PN760 |
|------|-----|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|
|      |     | psig | bar  | psig | bar  | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig | bar   | psig  | bar   |
| 100  | 38  | 275  | 19,0 | 720  | 49,7 | 1440 | 99,3  | 1920 | 132,4 | 2160 | 149,0 | 3600 | 248,3 | 6000 | 413,8 | 10800 | 744,8 |
| 200  | 93  | 255  | 17,6 | 660  | 45,5 | 1320 | 91,0  | 1760 | 121,4 | 1980 | 136,6 | 3300 | 227,6 | 5500 | 379,3 | 9900  | 682,8 |
| 300  | 149 | 230  | 15,9 | 615  | 42,4 | 1230 | 84,8  | 1640 | 113,1 | 1845 | 127,2 | 3070 | 211,7 | 5120 | 353,1 | 9215  | 635,5 |
| 400  | 204 | 200  | 13,8 | 575  | 39,7 | 1145 | 79,0  | 1530 | 105,5 | 1720 | 118,6 | 2870 | 197,9 | 4780 | 329,7 | 8615  | 594,1 |
| 500  | 260 | 170  | 11,7 | 540  | 37,2 | 1080 | 74,5  | 1440 | 99,3  | 1620 | 111,7 | 2700 | 186,2 | 4500 | 310,3 | 8100  | 558,6 |
| 600  | 316 | 140  | 9,7  | 515  | 35,5 | 1025 | 70,7  | 1370 | 94,5  | 1540 | 106,2 | 2570 | 177,2 | 4280 | 295,2 | 7705  | 531,4 |
| 650  | 343 | 125  | 8,6  | 505  | 34,8 | 1010 | 69,7  | 1345 | 92,8  | 1510 | 104,1 | 2520 | 173,8 | 4200 | 289,7 | 7560  | 521,4 |
| 700  | 371 | 110  | 7,6  | 495  | 34,1 | 990  | 68,3  | 1320 | 91,0  | 1485 | 102,4 | 2470 | 170,3 | 4120 | 284,1 | 7415  | 511,4 |
| 750  | 399 | 95   | 6,6  | 490  | 33,8 | 985  | 67,9  | 1310 | 90,3  | 1475 | 101,7 | 2460 | 169,7 | 4100 | 282,8 | 7380  | 509,0 |
| 800  | 427 | 80   | 5,5  | 485  | 33,4 | 975  | 67,2  | 1300 | 89,7  | 1460 | 100,7 | 2435 | 167,9 | 4060 | 280,0 | 7310  | 504,1 |
| 850  | 454 | 65   | 4,5  | 485  | 33,4 | 970  | 66,9  | 1295 | 89,3  | 1455 | 100,3 | 2425 | 167,2 | 4040 | 278,6 | 7270  | 501,4 |
| 900  | 482 | 50   | 3,4  | 450  | 31,0 | 900  | 62,1  | 1200 | 82,8  | 1350 | 93,1  | 2245 | 154,8 | 3745 | 258,3 | 6740  | 464,8 |
| 950  | 510 | 35   | 2,4  | 385  | 26,6 | 775  | 53,4  | 1030 | 71,0  | 1160 | 80,0  | 1930 | 133,1 | 3220 | 222,1 | 5795  | 399,7 |
| 1000 | 538 | 20   | 1,4  | 365  | 25,2 | 725  | 50,0  | 970  | 66,9  | 1090 | 75,2  | 1820 | 125,5 | 3030 | 209,0 | 5450  | 375,9 |
| 1050 | 566 | 20   | 1,4  | 360  | 24,8 | 720  | 49,7  | 960  | 66,2  | 1080 | 74,5  | 1800 | 124,1 | 3000 | 206,9 | 5400  | 372,4 |
| 1100 | 593 | 20   | 1,4  | 325  | 22,4 | 645  | 44,5  | 860  | 59,3  | 965  | 66,6  | 1610 | 111,0 | 2685 | 185,2 | 4835  | 333,4 |
| 1150 | 621 | 20   | 1,4  | 275  | 19,0 | 550  | 37,9  | 735  | 50,7  | 825  | 56,9  | 1370 | 94,5  | 2285 | 157,6 | 4115  | 283,8 |
| 1200 | 649 | 20   | 1,4  | 170  | 11,7 | 345  | 23,8  | 460  | 31,7  | 515  | 35,5  | 855  | 59,0  | 1430 | 98,6  | 2570  | 177,2 |
| 1250 | 677 | 20   | 1,4  | 125  | 8,6  | 245  | 16,9  | 330  | 22,8  | 370  | 25,5  | 615  | 42,4  | 1030 | 71,0  | 1850  | 127,6 |
| 1300 | 704 | 20   | 1,4  | 95   | 6,6  | 185  | 12,8  | 250  | 17,2  | 280  | 19,3  | 465  | 32,1  | 770  | 53,1  | 1390  | 95,9  |
| 1350 | 732 | 20   | 1,4  | 70   | 4,8  | 135  | 9,3   | 180  | 12,4  | 205  | 14,1  | 345  | 23,8  | 570  | 39,3  | 1030  | 71,0  |
| 1400 | 760 | 20   | 1,4  | 50   | 3,4  | 110  | 7,6   | 145  | 10,0  | 165  | 11,4  | 275  | 19,0  | 455  | 31,4  | 825   | 56,9  |
| 1450 | 788 | 15   | 1,0  | 40   | 2,8  | 80   | 5,5   | 110  | 7,6   | 125  | 8,6   | 205  | 14,1  | 345  | 23,8  | 615   | 42,4  |
| 1500 | 816 | 15   | 1,0  | 35   | 2,4  | 70   | 4,8   | 95   | 6,6   | 105  | 7,2   | 170  | 11,7  | 285  | 19,7  | 515   | 35,5  |

For welding end valves only. Flanged end ratings terminate at 1000°F.

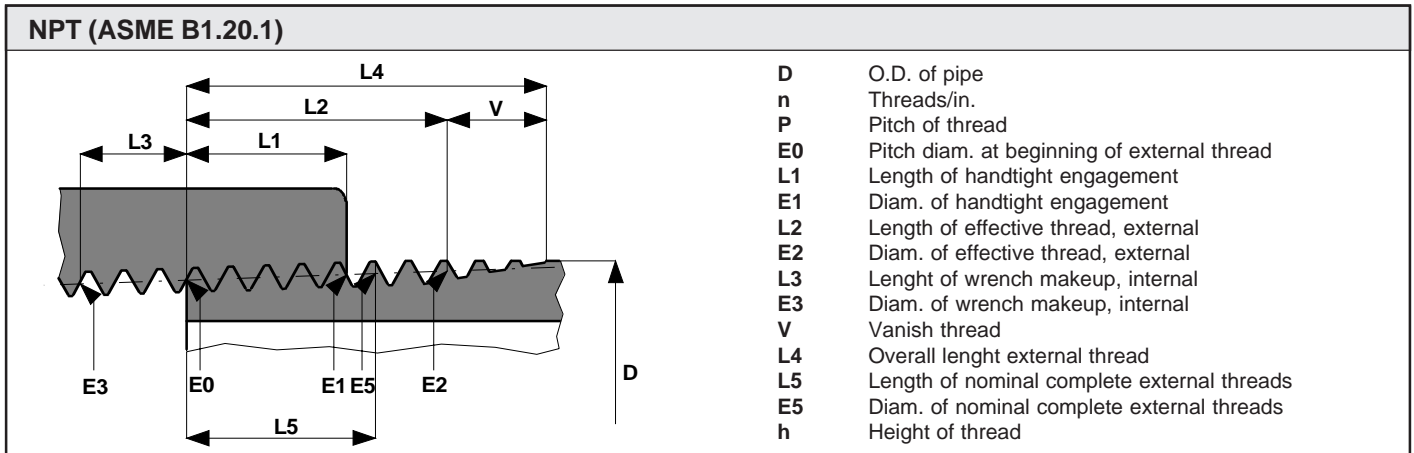
A182/F321-A182-F347: not to be used over 1000°F.



| Size   |             | Min. diam.     | Max. diam.     | Min. depth.   | Our depth   |
|--------|-------------|----------------|----------------|---------------|-------------|
| 1/4"   | m m.<br>in. | 14,10<br>0,555 | 14,35<br>0,565 | 9,65<br>0,38  | 10<br>0,394 |
| 3/8"   | m m.<br>in. | 17,53<br>0,690 | 17,78<br>0,700 | 9,65<br>0,38  | 10<br>0,394 |
| 1/2"   | m m.<br>in. | 21,72<br>0,855 | 21,97<br>0,865 | 9,65<br>0,38  | 10<br>0,394 |
| 3/4"   | m m.<br>in. | 27,05<br>1,065 | 27,30<br>1,075 | 12,70<br>0,50 | 13<br>0,512 |
| 1"     | m m.<br>in. | 33,78<br>1,330 | 34,04<br>1,340 | 12,70<br>0,50 | 14<br>0,551 |
| 1.1/4" | m m.<br>in. | 42,55<br>1,675 | 42,80<br>1,685 | 12,70<br>0,50 | 14<br>0,551 |
| 1.1/2" | m m.<br>in. | 48,64<br>1,915 | 48,90<br>1,925 | 12,70<br>0,50 | 14<br>0,551 |
| 2"     | m m.<br>in. | 61,11<br>2,406 | 61,37<br>2,416 | 15,75<br>0,62 | 16<br>0,630 |

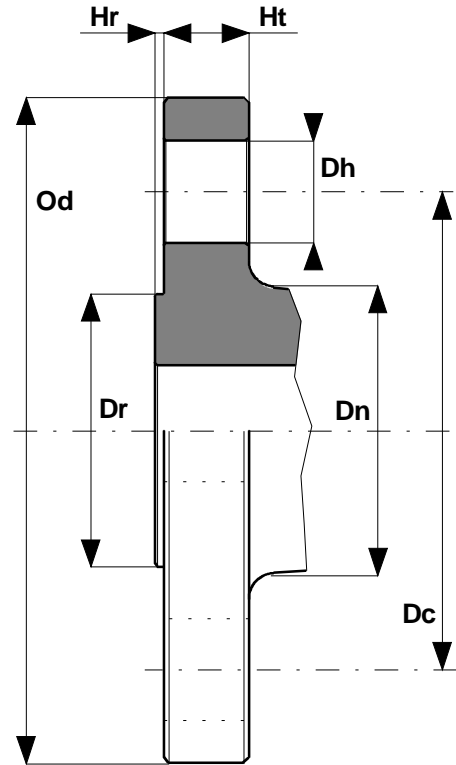


| Size   |             | Ext. diam.     | Internal diameter |                |                |                |                |                |
|--------|-------------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|
|        |             |                | sch. 5            | sch. 10        | sch. 40        | sch. 80        | sch. 160       | sch. XXS       |
| 1/4"   | m m.<br>in. | 13,72<br>0,540 | 10,41<br>0,410    | 9,25<br>0,364  | 7,67<br>0,302  |                |                |                |
| 3/8"   | m m.<br>in. | 17,15<br>0,675 | 13,84<br>0,545    | 12,52<br>0,493 | 10,74<br>0,423 |                |                |                |
| 1/2"   | m m.<br>in. | 21,34<br>0,840 | 18,03<br>0,710    | 17,12<br>0,674 | 15,80<br>0,622 | 13,87<br>0,546 | 11,84<br>0,466 | 6,40<br>0,252  |
| 3/4"   | m m.<br>in. | 26,67<br>1,050 | 23,37<br>0,920    | 22,45<br>0,884 | 20,93<br>0,824 | 18,85<br>0,742 | 15,60<br>0,614 | 11,02<br>0,434 |
| 1"     | m m.<br>in. | 33,40<br>1,315 | 30,10<br>1,185    | 27,86<br>1,097 | 26,64<br>1,049 | 24,31<br>0,957 | 20,70<br>0,815 | 15,21<br>0,599 |
| 1.1/4" | m m.<br>in. | 42,16<br>1,660 | 38,86<br>1,530    | 36,63<br>1,442 | 35,05<br>1,380 | 32,46<br>1,278 | 29,46<br>1,160 | 22,76<br>0,896 |
| 1.1/2" | m m.<br>in. | 48,26<br>1,900 | 44,96<br>1,770    | 42,72<br>1,682 | 40,89<br>1,610 | 38,10<br>1,500 | 33,99<br>1,338 | 27,94<br>1,100 |
| 2"     | m m.<br>in. | 60,33<br>2,375 | 57,02<br>2,245    | 54,79<br>2,157 | 52,50<br>2,067 | 49,25<br>1,939 | 42,90<br>1,689 | 38,18<br>1,503 |



| Size   |             | D              | n            | P             | E0             | L1             | E1             | L2             | E2             | L3            | E3             | V             | L4             | L5             | E5             | h             |
|--------|-------------|----------------|--------------|---------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|----------------|---------------|
| 1/4"   | m m.<br>in. | 13,72<br>0,540 | 0,71<br>18   | 1,41<br>0,056 | 12,13<br>0,477 | 5,79<br>0,228  | 12,49<br>0,492 | 10,21<br>0,402 | 12,76<br>0,503 | 4,23<br>0,167 | 11,86<br>0,467 | 4,90<br>0,193 | 15,10<br>0,595 | 7,38<br>0,291  | 12,59<br>0,496 | 1,13<br>0,044 |
| 3/8"   | m m.<br>in. | 17,15<br>0,675 | 0,71<br>18   | 1,41<br>0,056 | 15,55<br>0,612 | 6,10<br>0,240  | 15,93<br>0,627 | 10,36<br>0,408 | 16,19<br>0,638 | 4,23<br>0,167 | 15,28<br>0,602 | 4,90<br>0,193 | 15,26<br>0,601 | 7,54<br>0,297  | 16,02<br>0,631 | 1,13<br>0,044 |
| 1/2"   | m m.<br>in. | 21,34<br>0,840 | 0,55<br>14   | 1,81<br>0,071 | 19,26<br>0,758 | 8,13<br>0,320  | 19,77<br>0,778 | 13,56<br>0,534 | 20,11<br>0,792 | 5,44<br>0,214 | 18,92<br>0,745 | 6,29<br>0,248 | 19,85<br>0,782 | 9,93<br>0,391  | 19,88<br>0,783 | 1,45<br>0,057 |
| 3/4"   | m m.<br>in. | 26,67<br>1,050 | 0,55<br>14   | 1,81<br>0,071 | 24,58<br>0,968 | 8,61<br>0,339  | 25,12<br>0,989 | 13,86<br>0,546 | 25,45<br>1,002 | 5,44<br>0,214 | 24,24<br>0,954 | 6,29<br>0,248 | 20,15<br>0,794 | 10,23<br>0,403 | 25,22<br>0,993 | 1,45<br>0,057 |
| 1"     | m m.<br>in. | 33,40<br>1,315 | 0,45<br>11,5 | 2,21<br>0,087 | 30,83<br>1,214 | 10,16<br>0,400 | 31,46<br>1,239 | 17,34<br>0,683 | 31,91<br>1,256 | 6,63<br>0,261 | 30,41<br>1,197 | 7,66<br>0,302 | 25,01<br>0,985 | 12,93<br>0,509 | 31,63<br>1,245 | 1,77<br>0,070 |
| 1.1/4" | m m.<br>in. | 42,16<br>1,660 | 0,45<br>11,5 | 2,21<br>0,087 | 39,55<br>1,557 | 10,67<br>0,420 | 40,22<br>1,583 | 17,95<br>0,707 | 40,67<br>1,601 | 6,63<br>0,261 | 39,14<br>1,541 | 7,66<br>0,302 | 25,63<br>1,009 | 13,54<br>0,533 | 40,40<br>1,590 | 1,77<br>0,070 |
| 1.1/2" | m m.<br>in. | 48,26<br>1,900 | 0,45<br>11,5 | 2,21<br>0,087 | 45,62<br>1,796 | 10,67<br>0,420 | 46,29<br>1,822 | 18,38<br>0,724 | 46,77<br>1,841 | 6,63<br>0,261 | 45,21<br>1,780 | 7,66<br>0,302 | 26,04<br>1,025 | 13,96<br>0,550 | 46,49<br>1,830 | 1,77<br>0,070 |
| 2"     | m m.<br>in. | 60,33<br>2,375 | 0,45<br>11,5 | 2,21<br>0,087 | 57,63<br>2,269 | 11,07<br>0,436 | 58,33<br>2,296 | 19,22<br>0,757 | 58,83<br>2,316 | 6,63<br>0,261 | 57,22<br>2,253 | 7,66<br>0,302 | 26,88<br>1,058 | 14,80<br>0,583 | 58,56<br>2,305 | 1,77<br>0,070 |

| Size        |     | Od    | Dr   | Hr   | Ht   | Dn    | n | Dh   | Dc    |
|-------------|-----|-------|------|------|------|-------|---|------|-------|
| <b>150</b>  |     |       |      |      |      |       |   |      |       |
| 1/2"        | mm. | 88,9  | 35,1 | 1,6  | 9,6  | 30,2  | 4 | 15,7 | 60,5  |
|             | in. | 3,50  | 1,38 | 0,06 | 0,38 | 1,19  | 4 | 0,62 | 2,38  |
| 3/4"        | mm. | 98,6  | 42,9 | 1,6  | 11,1 | 38,1  | 4 | 15,7 | 69,9  |
|             | in. | 3,88  | 1,69 | 0,06 | 0,44 | 1,50  | 4 | 0,62 | 2,75  |
| 1"          | mm. | 108,0 | 50,8 | 1,6  | 12,6 | 49,3  | 4 | 15,7 | 79,2  |
|             | in. | 4,25  | 2,00 | 0,06 | 0,50 | 1,94  | 4 | 0,62 | 3,12  |
| 1.1/2"      | mm. | 127,0 | 73,2 | 1,6  | 15,9 | 65,0  | 4 | 15,7 | 98,6  |
|             | in. | 5,00  | 2,88 | 0,06 | 0,63 | 2,56  | 4 | 0,62 | 3,88  |
| 2"          | mm. | 152,4 | 91,9 | 1,6  | 17,5 | 77,7  | 4 | 19,1 | 120,7 |
|             | in. | 6,00  | 3,62 | 0,06 | 0,69 | 3,06  | 4 | 0,75 | 4,75  |
| <b>300</b>  |     |       |      |      |      |       |   |      |       |
| 1/2"        | mm. | 95,3  | 35,1 | 1,6  | 12,6 | 38,1  | 4 | 15,7 | 66,5  |
|             | in. | 3,75  | 1,38 | 0,06 | 0,50 | 1,50  | 4 | 0,62 | 2,62  |
| 3/4"        | mm. | 117,3 | 42,9 | 1,6  | 14,2 | 47,8  | 4 | 19,1 | 82,6  |
|             | in. | 4,62  | 1,69 | 0,06 | 0,56 | 1,88  | 4 | 0,75 | 3,25  |
| 1"          | mm. | 124,0 | 50,8 | 1,6  | 15,9 | 53,8  | 4 | 19,1 | 88,9  |
|             | in. | 4,88  | 2,00 | 0,06 | 0,63 | 2,12  | 4 | 0,75 | 3,50  |
| 1.1/2"      | mm. | 155,4 | 73,2 | 1,6  | 19,0 | 69,9  | 4 | 22,4 | 114,3 |
|             | in. | 6,12  | 2,88 | 0,06 | 0,75 | 2,75  | 4 | 0,88 | 4,50  |
| 2"          | mm. | 165,1 | 91,9 | 1,6  | 20,8 | 84,1  | 8 | 19,1 | 127,0 |
|             | in. | 6,50  | 3,62 | 0,06 | 0,82 | 3,31  | 8 | 0,75 | 5,00  |
| <b>600</b>  |     |       |      |      |      |       |   |      |       |
| 1/2"        | mm. | 95,3  | 35,1 | 6,4  | 14,2 | 38,1  | 4 | 15,7 | 66,5  |
|             | in. | 3,75  | 1,38 | 0,25 | 0,56 | 1,50  | 4 | 0,62 | 2,62  |
| 3/4"        | mm. | 117,3 | 42,9 | 6,4  | 15,7 | 47,8  | 4 | 19,1 | 82,6  |
|             | in. | 4,62  | 1,69 | 0,25 | 0,62 | 1,88  | 4 | 0,75 | 3,25  |
| 1"          | mm. | 124,0 | 50,8 | 6,4  | 17,5 | 53,8  | 4 | 19,1 | 88,9  |
|             | in. | 4,88  | 2,00 | 0,25 | 0,69 | 2,12  | 4 | 0,75 | 3,50  |
| 1.1/2"      | mm. | 155,4 | 73,2 | 6,4  | 22,4 | 69,9  | 4 | 22,4 | 114,3 |
|             | in. | 6,12  | 2,88 | 0,25 | 0,88 | 2,75  | 4 | 0,88 | 4,50  |
| 2"          | mm. | 165,1 | 91,9 | 6,4  | 25,4 | 84,1  | 8 | 19,1 | 127,0 |
|             | in. | 6,50  | 3,62 | 0,25 | 1,00 | 3,31  | 8 | 0,75 | 5,00  |
| <b>1500</b> |     |       |      |      |      |       |   |      |       |
| 1/2"        | mm. | 120,7 | 35,1 | 6,4  | 22,4 | 38,1  | 4 | 22,4 | 82,6  |
|             | in. | 4,75  | 1,38 | 0,25 | 0,88 | 1,50  | 4 | 0,88 | 3,25  |
| 3/4"        | mm. | 130,0 | 42,9 | 6,4  | 25,4 | 44,5  | 4 | 22,4 | 88,9  |
|             | in. | 5,12  | 1,69 | 0,25 | 1,00 | 1,75  | 4 | 0,88 | 3,50  |
| 1"          | mm. | 149,4 | 50,8 | 6,4  | 28,4 | 52,3  | 4 | 25,4 | 101,6 |
|             | in. | 5,88  | 2,00 | 0,25 | 1,12 | 2,06  | 4 | 1,00 | 4,00  |
| 1.1/2"      | mm. | 177,8 | 73,2 | 6,4  | 31,8 | 69,9  | 4 | 28,4 | 124,0 |
|             | in. | 7,00  | 2,88 | 0,25 | 1,25 | 2,75  | 4 | 1,12 | 4,88  |
| 2"          | mm. | 215,9 | 91,9 | 6,4  | 38,1 | 104,6 | 8 | 25,4 | 165,1 |
|             | in. | 8,50  | 3,62 | 0,25 | 1,50 | 4,12  | 8 | 1,00 | 6,50  |
| <b>2500</b> |     |       |      |      |      |       |   |      |       |
| 1/2"        | mm. | 133,4 | 35,1 | 6,4  | 30,2 | 42,9  | 4 | 22,4 | 88,9  |
|             | in. | 5,25  | 1,38 | 0,25 | 1,19 | 1,69  | 4 | 0,88 | 3,50  |
| 3/4"        | mm. | 139,7 | 42,9 | 6,4  | 31,8 | 50,8  | 4 | 22,4 | 95,3  |
|             | in. | 5,50  | 1,69 | 0,25 | 1,25 | 2,00  | 4 | 0,88 | 3,75  |
| 1"          | mm. | 158,8 | 50,8 | 6,4  | 35,1 | 57,2  | 4 | 25,4 | 108,0 |
|             | in. | 6,25  | 2,00 | 0,25 | 1,38 | 2,25  | 4 | 1,00 | 4,25  |
| 1.1/2"      | mm. | 203,2 | 73,2 | 6,4  | 44,5 | 79,2  | 4 | 31,8 | 146,1 |
|             | in. | 8,00  | 2,88 | 0,25 | 1,75 | 3,12  | 4 | 1,25 | 5,75  |
| 2"          | mm. | 235,0 | 91,9 | 6,4  | 50,8 | 95,3  | 8 | 28,4 | 171,5 |
|             | in. | 9,25  | 3,62 | 0,25 | 2,00 | 3,75  | 8 | 1,12 | 6,75  |



n Number of holes

### DIMENSIONAL TOLERANCES

|    | mm        | in          |
|----|-----------|-------------|
| Od | -1,6 +1,6 | -1/16 +1/16 |
| Dr | -0,4 +0,4 | -1/64 +1/64 |
| Dc | -0,8 +0,8 | -1/32 +1/32 |
| Dh | -0,4 +0,4 | -1/64 +1/64 |
| Ht | -0 +3,2   | -0 +1/8     |



## Face-to-face dimensions (ASME B16.10)

| Class 150                              |     |              |              |              |              |            |              |              |              |              |              |
|--|-----|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|--------------|
|  |     | 1/2"         |              | 3/4"         |              | 1"         |              | 1.1/2"       |              | 2"           |              |
|  |     | RF           | RJ           | RF           | RJ           | RF         | RJ           | RF           | RJ           | RF           | RJ           |
| Gate                                   | mm. | <b>107.9</b> | <b>119.1</b> | <b>117.5</b> | <b>130.2</b> | <b>127</b> | <b>139.7</b> | <b>165.1</b> | <b>177.8</b> | <b>177.8</b> | <b>190.5</b> |
|  | in. | 4.1/4        | 4.11/16      | 4.5/8        | 5.1/8        | 5          | 5.1/2        | 6.1/2        | 7            | 7            | 7.1/2        |
| Globe-Piston/Ball check<br>Swing check | mm. | <b>107.9</b> | <b>119.1</b> | <b>117.5</b> | <b>130.2</b> | <b>127</b> | <b>139.7</b> | <b>165.1</b> | <b>177.8</b> | <b>203.2</b> | <b>215.9</b> |
|  | in. | 4.1/4        | 4.11/16      | 4.5/8        | 5.1/8        | 5          | 5.1/2        | 6.1/2        | 7            | 8            | 8.1/2        |

| Class 300               |     |              |              |              |              |              |              |              |              |              |              |
|-------------------------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                         |     | 1/2"         |              | 3/4"         |              | 1"           |              | 1.1/2"       |              | 2"           |              |
|                         |     | RF           | RJ           | RF           | RJ           | RF           | RJ           | RF           | RJ           | RF           | RJ           |
| Gate                    | mm. | <b>139.7</b> | <b>150.8</b> | <b>152.4</b> | <b>165.1</b> | <b>165.1</b> | <b>177.8</b> | <b>190.5</b> | <b>203.2</b> | <b>215.9</b> | <b>231.8</b> |
|                         | in. | 5.1/2        | 5.15/16      | 6            | 6.1/2        | 6.1/2        | 7            | 7.1/2        | 8            | 8.1/2        | 9.1/8        |
| Globe-Piston/Ball check | mm. | <b>152.4</b> | <b>163.5</b> | <b>177.8</b> | <b>190.5</b> | <b>203.2</b> | <b>215.9</b> | <b>228.6</b> | <b>241.3</b> | <b>266.7</b> | <b>282.6</b> |
|                         | in. | 6            | 6.7/16       | 7            | 7.1/2        | 8            | 8.1/2        | 9            | 9.1/2        | 10.7/8       | 11.1/8       |
| Swing check             | mm. | <b>152.4</b> | <b>163.5</b> | <b>177.8</b> | <b>190.5</b> | <b>215.9</b> | <b>228.6</b> | <b>241.3</b> | <b>254</b>   | <b>266.7</b> | <b>282.6</b> |
|                         | in. | 6            | 6.7/16       | 7            | 7.1/2        | 8.1/2        | 9            | 9.1/2        | 10           | 10.7/8       | 11.1/8       |

| Class 600                                  |     |              |              |              |              |              |              |              |              |              |              |
|--|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  |     | 1/2"         |              | 3/4"         |              | 1"           |              | 1.1/2"       |              | 2"           |              |
|  |     | RF           | RJ           | RF           | RJ           | RF           | RJ           | RF           | RJ           | RF           | RJ           |
| Gate-Globe-Pist./Ball check<br>Swing check | mm. | <b>165.1</b> | <b>163.5</b> | <b>190.5</b> | <b>190.5</b> | <b>215.9</b> | <b>215.9</b> | <b>241.3</b> | <b>241.3</b> | <b>292.1</b> | <b>295.3</b> |
|  | in. | 6.1/2        | 6.7/16       | 7.1/2        | 7.1/2        | 8.1/2        | 8.1/2        | 9.1/2        | 9.1/2        | 11.1/2       | 11.5/8       |

| Class 1500                                 |     |              |              |              |              |            |            |              |              |              |              |
|--|-----|--------------|--------------|--------------|--------------|------------|------------|--------------|--------------|--------------|--------------|
|  |     | 1/2"         |              | 3/4"         |              | 1"         |            | 1.1/2"       |              | 2"           |              |
|  |     | RF           | RJ           | RF           | RJ           | RF         | RJ         | RF           | RJ           | RF           | RJ           |
| Gate-Globe-Pist./Ball check<br>Swing check | mm. | <b>215.9</b> | <b>215.9</b> | <b>228.6</b> | <b>228.6</b> | <b>254</b> | <b>254</b> | <b>304.8</b> | <b>304.8</b> | <b>368.3</b> | <b>371.5</b> |
|  | in. | 8.1/2        | 8.1/2        | 9            | 9            | 10         | 10         | 12           | 12           | 14.1/2       | 14.5/8       |

| Class 2500                                 |     |              |              |            |            |            |            |              |              |              |            |
|--|-----|--------------|--------------|------------|------------|------------|------------|--------------|--------------|--------------|------------|
|  |     | 1/2"         |              | 3/4"       |            | 1"         |            | 1.1/2"       |              | 2"           |            |
|  |     | RF           | RJ           | RF         | RJ         | RF         | RJ         | RF           | RJ           | RF           | RJ         |
| Gate-Globe-Pist./Ball check<br>Swing check | mm. | <b>263.5</b> | <b>263.5</b> | <b>273</b> | <b>273</b> | <b>308</b> | <b>308</b> | <b>384.2</b> | <b>387.3</b> | <b>450.8</b> | <b>454</b> |
|  | in. | 10.3/8       | 10.3/8       | 10.3/4     | 10.3/4     | 12.1/8     | 12.1/8     | 15.1/8       | 15.1/4       | 17.3/8       | 17.7/8     |

| Class 300 (Special face) |     |              |              |              |              |              |              |              |              |              |              |
|--------------------------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                          |     | 1/2"         |              | 3/4"         |              | 1"           |              | 1.1/2"       |              | 2"           |              |
|                          |     | RF           | RJ           | RF           | RJ           | RF           | RJ           | RF           | RJ           | RF           | RJ           |
|                          |     | LF-SF        | LM-SM        | LF-SF        | LM-SM        | LF-SF        | LM-SM        | LF-SF        | LM-SM        | LF-SF        | LM-SM        |
|                          |     | LG-SG        | LT-ST        | LG-SG        | LT-ST        | LG-SG        | LT-ST        | LG-SG        | LT-ST        | LG-SG        | LT-ST        |
| Gate                     | mm. | <b>149.2</b> | <b>152.4</b> | <b>161.9</b> | <b>165.1</b> | <b>174.6</b> | <b>177.8</b> | <b>200</b>   | <b>203.2</b> | <b>225.4</b> | <b>228.6</b> |
|                          | in. | 5.7/8        | 6            | 6.3/8        | 6.1/2        | 6.7/8        | 7            | 7.7/8        | 8            | 8.7/8        | 9            |
| Globe-Piston/Ball check  | mm. | <b>161.9</b> | <b>165.1</b> | <b>187.3</b> | <b>190.5</b> | <b>212.7</b> | <b>215.9</b> | <b>238.1</b> | <b>241.3</b> | <b>276.2</b> | <b>279.4</b> |
|                          | in. | 6.3/8        | 6.1/2        | 7.3/8        | 7.1/2        | 8.3/8        | 8.1/2        | 9.3/8        | 9.1/2        | 10.7/8       | 11           |
| Swing check              | mm. | <b>161.9</b> | <b>165.1</b> | <b>187.3</b> | <b>190.5</b> | <b>225.4</b> | <b>228.6</b> | <b>250.8</b> | <b>254</b>   | <b>276.2</b> | <b>279.4</b> |
|                          | in. | 6.3/8        | 6.1/2        | 7.3/8        | 7.1/2        | 8.7/8        | 9            | 9.7/8        | 10           | 10.7/8       | 11           |

RF = Raised face    LF = Large female    SG = Small groove    LT = Large tongue  
 RJ = Ring Joint    SF = Small female    LM = Large male    ST = Small tongue  
                          LG = Large groove    SM = Small male

|                    |   |
|--------------------|---|
| Presentation ..... | 1 |
|--------------------|---|

## **Production 2**

### **Class 150-300-600-800**

|  |    |
|--|----|
| GATE VALVES - 800 - Bolted bonnet - Sw/Npt/Bw .....      | 3  |
| GATE VALVES - 150 - Bolted bonnet - Flanged Rf .....     | 4  |
| GATE VALVES - 300 - Bolted bonnet - Flanged Rf/Rj .....  | 5  |
| GATE VALVES - 600 - Bolted bonnet - Flanged Rf/Rj .....  | 6  |
| GATE VALVES - 800 - Welded bonnet - Sw/Npt/Bw .....      | 7  |
| GLOBE VALVES - 800 - Bolted bonnet - Sw/Npt/Bw .....     | 8  |
| GLOBE VALVES - 150 - Bolted bonnet - Flanged Rf .....    | 9  |
| GLOBE VALVES - 300 - Bolted bonnet - Flanged Rf/Rj ..... | 10 |
| GLOBE VALVES - 600 - Bolted bonnet - Flanged Rf/Rj ..... | 11 |
| GLOBE VALVES - 800 - Welded bonnet - Sw/Npt/Bw .....     | 12 |
| CHECK VALVES - 800 - Bolted cover - Sw/Npt/Bw .....      | 13 |
| CHECK VALVES - 150 - Bolted cover - Flanged Rf .....     | 14 |
| CHECK VALVES - 300 - Bolted cover - Flanged Rf/Rj .....  | 15 |
| CHECK VALVES - 600 - Bolted cover - Flanged Rf/Rj .....  | 16 |
| CHECK VALVES - 800 - Welded cover - Sw/Npt/Bw .....      | 17 |

### **Class 1500 Compact**

|  |    |
|--|----|
| "COMPACT " GATE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw .....  | 18 |
| "COMPACT " GATE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw .....  | 19 |
| "COMPACT " GLOBE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw ..... | 20 |
| "COMPACT " GLOBE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw ..... | 21 |
| "COMPACT " CHECK VALVES - 1500 - Bolted cover - Sw/Npt/Bw .....  | 22 |
| "COMPACT " CHECK VALVES - 1500 - Welded cover - Sw/Npt/Bw .....  | 23 |

## Class 1500

|   |    |
|---|----|
| GATE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw .....      | 24 |
| GATE VALVES - 1500 - Bolted bonnet - Flanged Rf/Rj .....  | 25 |
| GATE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw .....      | 26 |
| GLOBE VALVES - 1500 - Bolted bonnet - Sw/Npt/Bw .....     | 27 |
| GLOBE VALVES - 1500 - Bolted bonnet - Flanged Rf/Rj ..... | 28 |
| GLOBE VALVES - 1500 - Welded bonnet - Sw/Npt/Bw .....     | 29 |
| CHECK VALVES - 1500 - Bolted cover - Sw/Npt/Bw .....      | 30 |
| CHECK VALVES - 1500 - Bolted cover - Flanged Rf/Rj .....  | 31 |
| CHECK VALVES - 1500 - Welded cover - Sw/Npt/Bw .....      | 32 |

## Class 2500

|   |    |
|---|----|
| GATE VALVES - 2500 - Bolted bonnet - Sw/Npt/Bw .....      | 33 |
| GATE VALVES - 2500 - Bolted bonnet - Flanged Rf/Rj .....  | 34 |
| GATE VALVES - 2500 - Welded bonnet - Sw/Npt/Bw .....      | 35 |
| GLOBE VALVES - 2500 - Bolted bonnet - Sw/Npt/Bw .....     | 36 |
| GLOBE VALVES - 2500 - Bolted bonnet - Flanged Rf/Rj ..... | 37 |
| GLOBE VALVES - 2500 - Welded bonnet - Sw/Npt/Bw .....     | 38 |
| CHECK VALVES - 2500 - Bolted cover - Sw/Npt/Bw .....      | 39 |
| CHECK VALVES - 2500 - Bolted cover - Flanged Rf/Rj .....  | 40 |
| CHECK VALVES - 2500 - Welded cover - Sw/Npt/Bw .....      | 41 |

## Special type

|   |    |
|---|----|
| "Cryogenic" GATE VALVES - 800 - Bolted bonnet -Sw/Npt.....        | 42 |
| "Cryogenic" GATE VALVES - 800 - Welded bonnet -Sw/Npt .....       | 43 |
| "Cryogenic" GLOBE VALVES - 800 - Bolted bonnet -Sw/Npt .....      | 44 |
| "Cryogenic" GLOBE VALVES - 800 - Welded bonnet -Sw/Npt .....      | 45 |
| <br>  |    |
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| "Bellows sealed" GATE VALVES - 800 - Welded bonnet -Sw/Npt .....  | 47 |
| "Bellows sealed" GLOBE VALVES - 800 - Bolted bonnet -Sw/Npt ..... | 48 |
| "Bellows sealed" GLOBE VALVES - 800 - Welded bonnet -Sw/Npt ..... | 49 |

**Special type**

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"Y" CHECK VALVES - 1500 - Welded cover - Sw/Npt/Bw ..... 53

"Y" GLOBE VALVES - 2500 - Welded bonnet - Sw/Npt/Bw ..... 54

"Y" CHECK VALVES - 2500 - Welded cover - Sw/Npt/Bw ..... 55

"Isrs" GATE VALVES - 800 - Welded bonnet - Sw/Npt ..... 56

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