



Type SCC

**Swing Check Valve**  
**Cast Steel, Pressure seal bonnet**  
**Butt weld ends**

**2" - 24" (50-600 mm)**  
**Class 900, 1500, 2500**

**Design in accordance with ASME B16.34**

## Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-aggressive media
- Further applications on request

## Operating Data

- Pressure up to 431 bar ( 6250 psi )
- Temperature up to +650°C/1200°F
- Minimum temperature is 0°C (less than 0°C on request)
- Pressure-temperature ratings as per ASME B 16.34, Standard class

## Materials

- ASTM A 216 WCB from 0°C to 425°C
- ASTM A 217 WC6/WC9 from 0°C to 593°C
- ASTM A 217 C12A from 0°C to 650°C

## Design

- As per ASME B 16.34
- Pressure Seal Bonnet Design
- Stellite hard-faced Seats & Disc surface
- Graphite gaskets

## Variants on Request

- Special class execution
- Other Material of construction

## Remarks :

(Type Series Booklet References)

|                                |                    |
|--------------------------------|--------------------|
| SICCA 800-2500 GTF / GLF / PCF | : 7240.1/12-11     |
| SICCA 900-2500 GTC             | : 7241.2/12-11     |
| SICCA 900-2500 GLC             | : 7242.2/12-11     |
| SICCA 150-600 GTC              | : 7244.2/12-11     |
| SICCA 150-600 GLC              | : 7245.2/12-11     |
| SICCA 150-600 SCC              | : 7246.2/12-11     |
| Operating instructions no.     | : 0500.80/05-18 G3 |

## On all enquiries / orders please specify :

1. Type
2. ASME Pressure class
3. Size
4. Design pressure/temperature
5. Operating pressure
6. Operating temperature
7. Differential pressure
8. Material of construction
9. Flow medium
10. Flow rate Min. / Max.
11. Type of end connection
12. Pipe Schedule, ID / OD
13. Variants
14. Type Series Booklet no.
15. Valve data sheet (if applicable)

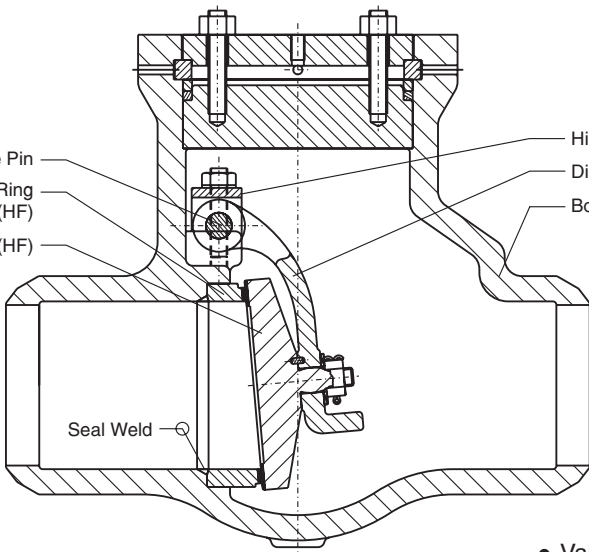
When ordering spares, indicate valve serial number.



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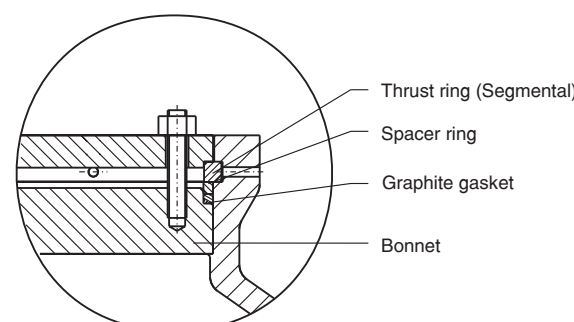


**Product features to our customer benefit**



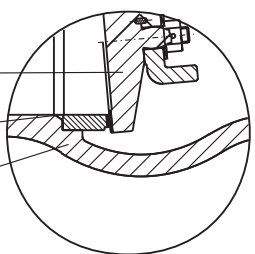
Labels in diagram: Inside Hinge Pin, Body Seat Ring St6 (HF), Disc Seats St6 (HF), Seal Weld, Hinge Bracket, Disc Carrier, Body.

- Valves meets ASME 16.34 requirements
- Inside hinge pin mounted design - no leakage path to atmosphere
- Self aligning free floating and non-rotating disc
- Designed to open at low differential pressures



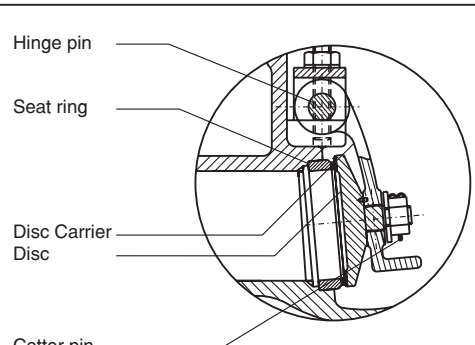
**Pressure seal**

- Die-moulded graphite gasket
- Segmental ring arrangement with knock out holes provides for easy disassembly



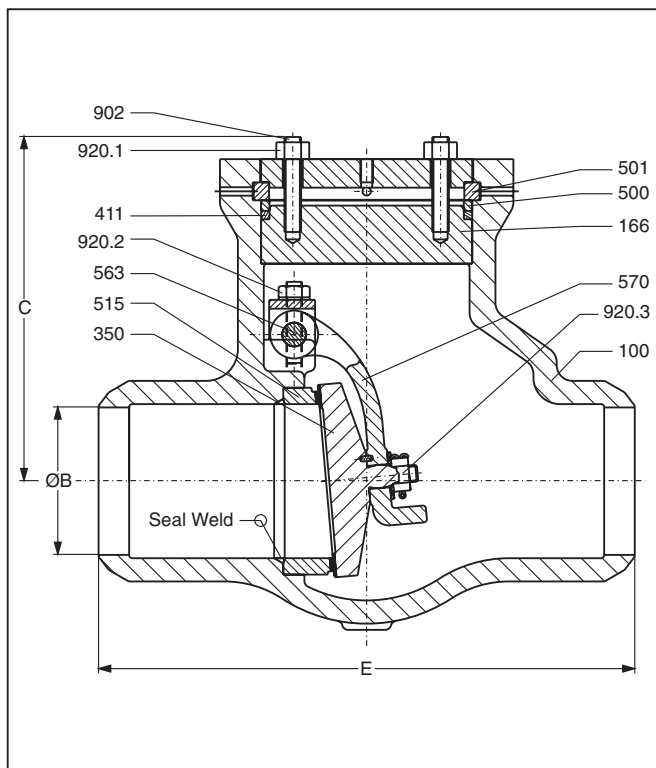
**Flow Seal**

- Fully stellited, body & Disc seat
- Seat rings - seal welded to body
- Lapped Seat & Disc faces for leak tightness



**Disc Design**

- Self aligning disc ensures perfect seating
- Designed to open at low differential pressure



### Design Specifications

General valve design & pressure, temperature rating : ASME B 16.34  
 Butt weld end design : ASME B 16.25  
 End to end dimension : ASME B 16.10  
 Testing : API 598

### Dimensions in mm

#### Class 900

|                          | 2"    | 3"    | 4"    | 6"    | 8"    | 10"   | 12"   |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|
| <b>E</b>                 | 215.9 | 304.8 | 355.6 | 508.0 | 660.4 | 787.4 | 914.4 |
| <b>ØB*</b>               | 49.2  | 73.5  | 92.0  | 140.0 | 182.5 | 230.0 | 273.0 |
| <b>C<sub>(max)</sub></b> | 180.0 | 240.0 | 290.0 | 320.0 | 375.0 | 440.0 | 500.0 |

\* Schedule 80 up to 3". Schedule 120 for 4" and above.  
 Alternate schedule on request.

#### Class 1500

|                          | 2"    | 3"    | 4"    | 6"    | 8"    | 10"   | 12"   | 14"    | 16"    |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| <b>E</b>                 | 215.9 | 304.8 | 406.4 | 558.8 | 711.2 | 863.6 | 990.6 | 1066.8 | 1194.0 |
| <b>ØB*</b>               | 43.0  | 66.5  | 87.5  | 132.0 | 173.0 | 216.0 | 257.0 | 284.0  | 325.5  |
| <b>C<sub>(max)</sub></b> | 230.0 | 270.0 | 315.0 | 400.0 | 440.0 | 475.0 | 630.0 | 700.0  | 770.0  |

\* Schedule 160. Alternate schedule on request.

#### Class 2500

|                          | 2"    | 3"    | 4"    | 6"    | 8"    | 10"   | 12"    |
|--------------------------|-------|-------|-------|-------|-------|-------|--------|
| <b>E</b>                 | 279.4 | 368.3 | 457.2 | 609.4 | 762.0 | 914.4 | 1041.4 |
| <b>ØB*</b>               | 38.0  | 58.5  | 80.0  | 124.5 | 173.0 | 216.0 | 257.0  |
| <b>C<sub>(max)</sub></b> | 225.0 | 270.0 | 315.0 | 390.0 | 425.0 | 500.0 | 630.0  |

\* Schedule XXS up to 6". Schedule 160 for 8" and above.  
 Alternate schedule on request.

**For details of higher size valves refer to P & A Coimbatore**

### Materials

| Part No.  | Description  | Material             |                      |                      |                                 |
|-----------|--------------|----------------------|----------------------|----------------------|---------------------------------|
|           |              |                      |                      |                      |                                 |
| 100       | Body         | A 216-WCB            | A 217-WC9            | A 217-WC6            | A217-C12A                       |
| 166       | Bonnet       | A 216-WCB            | A 217-WC9            | A 217-WC6            | A217-C12A+ST6                   |
| 350       | Disc         | A 216-WCB+ST6        | A 217-WC9+ST6        | A 217-WC9+ST6        | A182-F91+ST6 /<br>A217-C12A+ST6 |
| 411       | Gasket       | Graphite             | Graphite             | Graphite             | Graphite                        |
| 500       | Spacer Ring  | A 217-CA15/A 182-F22 | A 217-CA15/A 182-F22 | A 217-CA15/A 182-F22 | A217-CA15/A182-F22              |
| 501       | Trust Ring   | A 182-F22/A 217-WC9  | A 182-F22/A 217-WC9  | A 182-F22/ A 217-WC9 | A182-F22                        |
| 515       | Seat Ring    | A 105+ST6            | A 182-F22+ST6        | A 182-F22+ST6        | A217-C12A /<br>A182-F91+ST6     |
| 563       | Hinge Pin    | A 479 410 - 2        | A 479 410 - 2        | A 479 410 - 2        | A 479 410 - 2                   |
| 570       | Disc Carrier | A 216-WCB            | A 217-WC9            | A 217-WC9            | A217-C12A                       |
| 902       | Stud         | A 193-B7             | A 193-B16            | A 193-B16            | A193-B16                        |
| 920.1/2/3 | Hex. Nut     | A 194-2H             | A 194-4 / 7          | A 194-4 / 7          | A194-4/7                        |

**Testing**

| Test / Test pressure | #900               |      | #1500              |      | #2500              |      | Testing medium |
|----------------------|--------------------|------|--------------------|------|--------------------|------|----------------|
|                      | kg/cm <sup>2</sup> | psi  | kg/cm <sup>2</sup> | psi  | kg/cm <sup>2</sup> | psi  |                |
| Shell                | 238                | 3375 | 396                | 5625 | 660                | 9375 | Water          |
| Seat                 | 174                | 2475 | 291                | 4125 | 484                | 6875 |                |

**Pressure Temperature Rating - Standard Class**
**Rating for Group 1.1 Material : A 216 Gr. WCB <sup>(1)</sup>**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2220.0 | 156.1              | 3705.0 | 260.5              | 6170.0 | 433.8              |
| 200         | 93.3      | 2035.0 | 143.1              | 3395.0 | 238.7              | 5655.0 | 397.6              |
| 300         | 148.9     | 1965.0 | 138.2              | 3270.0 | 229.9              | 5450.0 | 383.2              |
| 400         | 204.4     | 1900.0 | 133.6              | 3170.0 | 222.9              | 5280.0 | 371.2              |
| 500         | 260.0     | 1810.0 | 127.3              | 3015.0 | 212.0              | 5025.0 | 353.3              |
| 600         | 315.6     | 1705.0 | 119.9              | 2840.0 | 199.7              | 4730.0 | 332.6              |
| 650         | 343.3     | 1650.0 | 116.0              | 2745.0 | 193.0              | 4575.0 | 321.7              |
| 700         | 371.1     | 1590.0 | 111.8              | 2665.0 | 187.4              | 4425.0 | 311.1              |
| 750         | 398.9     | 1520.0 | 106.9              | 2535.0 | 178.2              | 4230.0 | 297.4              |
| 800         | 426.7     | 1235.0 | 86.8               | 2055.0 | 144.5              | 3430.0 | 241.2              |
| 850         | 454.4     | 955.0  | 67.1               | 1595.0 | 112.1              | 2655.0 | 186.7              |
| 900         | 482.2     | 690.0  | 48.5               | 1150.0 | 80.9               | 1915.0 | 134.6              |
| 950         | 510.0     | 410.0  | 28.8               | 685.0  | 48.2               | 1145.0 | 80.5               |
| 1000        | 537.8     | 255.0  | 17.9               | 430.0  | 30.2               | 715.0  | 50.3               |

1) Permissible, but not recommended for prolonged use above 800°F

**Rating for Group 1.9 Material : A 217 Gr. WC6 <sup>(1)(2)</sup>**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2165.0 | 152.2              | 3610.0 | 253.8              | 6015.0 | 422.9              |
| 400         | 204.4     | 2080.0 | 146.2              | 3465.0 | 243.6              | 5775.0 | 406.0              |
| 500         | 260.0     | 1995.0 | 140.3              | 3325.0 | 233.8              | 5540.0 | 389.5              |
| 600         | 315.6     | 1815.0 | 127.6              | 3025.0 | 212.7              | 5040.0 | 354.3              |
| 650         | 343.3     | 1765.0 | 124.1              | 2940.0 | 206.7              | 4905.0 | 344.9              |
| 700         | 371.1     | 1705.0 | 119.9              | 2840.0 | 199.7              | 4730.0 | 332.6              |
| 750         | 398.9     | 1595.0 | 112.1              | 2660.0 | 187.0              | 4430.0 | 311.5              |
| 800         | 426.7     | 1525.0 | 107.2              | 2540.0 | 178.6              | 4230.0 | 297.4              |
| 850         | 454.4     | 1460.0 | 102.6              | 2435.0 | 171.2              | 4060.0 | 285.4              |
| 900         | 482.2     | 1350.0 | 94.9               | 2245.0 | 157.8              | 3745.0 | 263.3              |
| 950         | 510.0     | 955.0  | 67.1               | 1595.0 | 112.1              | 2655.0 | 186.7              |
| 1000        | 537.8     | 650.0  | 45.7               | 1080.0 | 75.9               | 1800.0 | 126.6              |
| 1050        | 565.6     | 430.0  | 30.2               | 720.0  | 50.6               | 1200.0 | 84.4               |
| 1100        | 593.3     | 290.0  | 20.4               | 480.0  | 33.7               | 800.0  | 56.2               |
| 1150        | 621.1     | 195.0  | 13.7               | 325.0  | 22.8               | 545.0  | 38.3               |
| 1200        | 648.9     | 125.0  | 8.8                | 205.0  | 14.4               | 345.0  | 24.3               |

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

**Rating for Group 1.10 Material : A 217 Gr. WC9 <sup>(1)(2)</sup>**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2185.0 | 153.6              | 3640.0 | 255.9              | 6070.0 | 426.8              |
| 400         | 204.4     | 2115.0 | 148.7              | 3530.0 | 248.2              | 5880.0 | 413.4              |
| 500         | 260.0     | 1995.0 | 140.3              | 3325.0 | 233.8              | 5540.0 | 389.5              |
| 600         | 315.6     | 1815.0 | 127.6              | 3025.0 | 212.7              | 5040.0 | 354.3              |
| 650         | 343.3     | 1765.0 | 124.1              | 2940.0 | 206.7              | 4905.0 | 344.9              |
| 700         | 371.1     | 1705.0 | 119.9              | 2840.0 | 199.7              | 4730.0 | 332.6              |
| 750         | 398.9     | 1595.0 | 112.1              | 2660.0 | 187.0              | 4430.0 | 311.5              |
| 800         | 426.7     | 1525.0 | 107.2              | 2540.0 | 178.6              | 4230.0 | 297.4              |
| 850         | 454.4     | 1460.0 | 102.6              | 2435.0 | 171.2              | 4060.0 | 285.4              |
| 900         | 482.2     | 1350.0 | 94.9               | 2245.0 | 157.8              | 3745.0 | 263.3              |
| 950         | 510.0     | 1160.0 | 81.6               | 1930.0 | 135.7              | 3220.0 | 226.4              |
| 1000        | 537.8     | 800.0  | 56.2               | 1335.0 | 93.9               | 2230.0 | 156.8              |
| 1050        | 565.6     | 525.0  | 36.9               | 875.0  | 61.5               | 1454.0 | 102.2              |
| 1100        | 593.3     | 330.0  | 23.2               | 550.0  | 38.7               | 915.0  | 64.3               |
| 1150        | 621.1     | 205.0  | 14.4               | 345.0  | 24.3               | 570.0  | 40.1               |
| 1200        | 648.9     | 125.0  | 8.8                | 205.0  | 14.4               | 345.0  | 24.3               |

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

**Rating for Group 1.15 Material : A 217 Gr. C12A**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2185.0 | 153.6              | 3640.0 | 255.9              | 6070.0 | 426.8              |
| 400         | 204.4     | 2115.0 | 148.7              | 3530.0 | 248.2              | 5880.0 | 413.4              |
| 500         | 260.0     | 1995.0 | 140.3              | 3325.0 | 233.8              | 5540.0 | 389.5              |
| 600         | 315.6     | 1815.0 | 127.6              | 3025.0 | 212.7              | 5040.0 | 354.3              |
| 650         | 343.3     | 1765.0 | 124.1              | 2940.0 | 206.7              | 4905.0 | 344.9              |
| 700         | 371.1     | 1705.0 | 119.9              | 2840.0 | 199.7              | 4730.0 | 332.6              |
| 750         | 398.9     | 1595.0 | 112.1              | 2660.0 | 187.0              | 4430.0 | 311.5              |
| 800         | 426.7     | 1525.0 | 107.2              | 2540.0 | 178.6              | 4230.0 | 297.4              |
| 850         | 454.4     | 1460.0 | 102.6              | 2435.0 | 171.2              | 4060.0 | 285.4              |
| 900         | 482.2     | 1350.0 | 94.9               | 2245.0 | 157.8              | 3745.0 | 263.3              |
| 950         | 510.0     | 1160.0 | 81.6               | 1930.0 | 135.7              | 3220.0 | 226.4              |
| 1000        | 537.8     | 1090.0 | 76.6               | 1820.0 | 128.0              | 3030.0 | 213.0              |
| 1050        | 565.6     | 1080.0 | 75.9               | 1800.0 | 126.6              | 3000.0 | 210.9              |
| 1100        | 593.3     | 905.0  | 63.6               | 1510.0 | 106.2              | 2515.0 | 176.8              |
| 1150        | 621.1     | 670.0  | 47.1               | 1115.0 | 78.4               | 1855.0 | 130.4              |
| 1200        | 648.9     | 430.0  | 30.2               | 720.0  | 50.6               | 1200.0 | 84.4               |

## Pressure Temperature Rating - Special Class

**Rating for Group 1.1 Material : A 216 Gr. WCB <sup>(1)</sup>**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2220.0 | 156.1              | 3700.0 | 260.1              | 6170.0 | 439.4              |
| 400         | 204.4     | 2200.0 | 154.7              | 3665.0 | 257.7              | 6105.0 | 429.2              |
| 500         | 260.0     | 2200.0 | 154.7              | 3665.0 | 257.7              | 6105.0 | 429.2              |
| 600         | 315.6     | 2200.0 | 154.7              | 3665.0 | 257.7              | 6105.0 | 429.2              |
| 650         | 343.3     | 2145.0 | 150.8              | 3575.0 | 251.3              | 5960.0 | 419.0              |
| 700         | 371.1     | 2075.0 | 145.9              | 3455.0 | 242.9              | 5760.0 | 405.0              |
| 750         | 398.9     | 1905.0 | 133.9              | 3170.0 | 222.9              | 5285.0 | 371.6              |
| 800         | 426.7     | 1545.0 | 108.6              | 2570.0 | 180.7              | 4285.0 | 301.3              |
| 850         | 454.4     | 1195.0 | 84.0               | 1995.0 | 140.3              | 3320.0 | 233.4              |
| 900         | 482.2     | 860.0  | 60.5               | 1435.0 | 100.9              | 2395.0 | 168.4              |
| 950         | 510.0     | 515.0  | 36.2               | 855.0  | 60.1               | 1430.0 | 100.5              |
| 1000        | 537.8     | 320.0  | 22.5               | 535.0  | 37.6               | 895.0  | 62.9               |

1) Permissible, but not recommended for prolonged use above 800°F

**Rating for Group 1.9 Material : A 217 Gr. WC6 <sup>(1)(2)</sup>**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 400         | 204.4     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 500         | 260.0     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 600         | 315.6     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 650         | 343.3     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 700         | 371.1     | 2200.0 | 154.7              | 3665.0 | 257.7              | 6110.0 | 429.6              |
| 750         | 398.9     | 2185.0 | 153.6              | 3645.0 | 256.3              | 6070.0 | 426.8              |
| 800         | 426.7     | 2160.0 | 151.9              | 3600.0 | 253.1              | 6000.0 | 421.8              |
| 850         | 454.4     | 2030.0 | 142.7              | 3385.0 | 238.0              | 5645.0 | 396.9              |
| 900         | 482.2     | 1760.0 | 123.7              | 2935.0 | 206.4              | 4895.0 | 344.2              |
| 950         | 510.0     | 1195.0 | 84.0               | 1995.0 | 140.3              | 3320.0 | 233.4              |
| 1000        | 537.8     | 810.0  | 56.9               | 1350.0 | 94.9               | 2250.0 | 158.2              |
| 1050        | 565.6     | 540.0  | 38.0               | 900.0  | 63.3               | 1500.0 | 105.5              |
| 1100        | 593.3     | 360.0  | 25.3               | 600.0  | 42.2               | 1000.0 | 70.3               |
| 1150        | 621.1     | 245.0  | 17.2               | 405.0  | 28.5               | 680.0  | 47.8               |
| 1200        | 648.9     | 155.0  | 10.9               | 255.0  | 17.9               | 430.0  | 30.2               |

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

**Rating for Group 1.10 Material : A 217 Gr. WC9 <sup>(1)(2)</sup>**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2220.0 | 156.1              | 3695.0 | 259.8              | 6160.0 | 433.1              |
| 400         | 204.4     | 2185.0 | 153.6              | 3640.0 | 255.9              | 6065.0 | 426.4              |
| 500         | 260.0     | 2175.0 | 152.9              | 3620.0 | 254.5              | 6035.0 | 424.3              |
| 600         | 315.6     | 2165.0 | 152.2              | 3605.0 | 253.5              | 6010.0 | 422.5              |
| 650         | 343.3     | 2145.0 | 150.8              | 3580.0 | 251.7              | 5965.0 | 419.4              |
| 700         | 371.1     | 2120.0 | 149.1              | 3535.0 | 248.5              | 5895.0 | 414.5              |
| 750         | 398.9     | 2120.0 | 149.1              | 3535.0 | 248.5              | 5895.0 | 414.5              |
| 800         | 426.7     | 2120.0 | 149.1              | 3535.0 | 248.5              | 5895.0 | 414.5              |
| 850         | 454.4     | 2030.0 | 142.7              | 3385.0 | 238.0              | 5645.0 | 396.9              |
| 900         | 482.2     | 1800.0 | 126.6              | 3000.0 | 210.9              | 5000.0 | 351.5              |
| 950         | 510.0     | 1415.0 | 99.5               | 2360.0 | 165.9              | 3930.0 | 276.3              |
| 1000        | 537.8     | 1005.0 | 70.7               | 1670.0 | 117.4              | 2785.0 | 195.8              |
| 1050        | 565.6     | 655.0  | 46.1               | 1095.0 | 77.0               | 1820.0 | 128.0              |
| 1100        | 593.3     | 410.0  | 28.8               | 685.0  | 48.2               | 1145.0 | 80.5               |
| 1150        | 621.1     | 255.0  | 17.9               | 430.0  | 30.2               | 715.0  | 50.3               |
| 1200        | 648.9     | 155.0  | 10.9               | 255.0  | 17.9               | 430.0  | 30.2               |

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

**Rating for Group 1.15 Material : A 217 Gr. C12A**

| Temperature |           | # 900  |                    | # 1500 |                    | # 2500 |                    |
|-------------|-----------|--------|--------------------|--------|--------------------|--------|--------------------|
| °F          | °C        | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> | PSI    | Kg/cm <sup>2</sup> |
| -20 to 100  | -29 to 38 | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 200         | 93.3      | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 300         | 148.9     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 400         | 204.4     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 500         | 260.0     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 600         | 315.6     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 650         | 343.3     | 2250.0 | 158.2              | 3750.0 | 263.7              | 6250.0 | 439.4              |
| 700         | 371.1     | 2200.0 | 154.7              | 3665.0 | 257.7              | 6110.0 | 429.6              |
| 750         | 398.9     | 2185.0 | 153.6              | 3645.0 | 256.3              | 6070.0 | 426.8              |
| 800         | 426.7     | 2160.0 | 151.9              | 3600.0 | 253.1              | 6000.0 | 421.8              |
| 850         | 454.4     | 2030.0 | 142.7              | 3385.0 | 238.0              | 5645.0 | 396.9              |
| 900         | 482.2     | 1800.0 | 126.6              | 3000.0 | 210.9              | 5000.0 | 351.5              |
| 950         | 510.0     | 1415.0 | 99.5               | 2360.0 | 165.9              | 3930.0 | 276.3              |
| 1000        | 537.8     | 1260.0 | 88.6               | 2105.0 | 148.0              | 3505.0 | 246.4              |
| 1050        | 565.6     | 1260.0 | 88.6               | 2105.0 | 148.0              | 3505.0 | 246.4              |
| 1100        | 593.3     | 1130.0 | 79.4               | 1885.0 | 132.5              | 3145.0 | 221.1              |
| 1150        | 621.1     | 835.0  | 58.7               | 1395.0 | 98.1               | 2320.0 | 163.1              |
| 1200        | 648.9     | 540.0  | 38.0               | 900.0  | 63.3               | 1500.0 | 105.5              |