



## PRESSURE/TEMPERATURE RATINGS

### ASME B16.34 VALVES

Emerson valve materials that conform to ASME 16.34 standard class pressure/temperature ratings.

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#### **IMPORTANT INFORMATION FOR TABLES**

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1. Emerson valves conforming to ASME B16.34 standard have specific pressure/temperature limits depending on component materials. Use the material reference in the table when determining pressure/temperature ratings of valves used in accordance with the ASME standard.
2. Table information is extracted from the Valve-Flanged, Threaded, and Welding End, ASME Standard B16.34. These tables must be used in accordance with the ASME standard. The user is advised that a valve used under the jurisdiction of the ASME Boiler and Pressure Vessel Code, ASME Code for Pressure Piping, or governmental regulations is subject to any limitation of that code or regulation. This includes any maximum temperature limitation for a material or rule governing the use of a material at a low temperature.
3. Flanged end ratings terminate at 1000°F (538°C)
4. At temperatures over 1000°F (538°C), use material only when carbon content is 0.04% or higher.

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 150 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp °F | Working pressure (psig) - Cast materials |           |           |           |               |                |           |           | Working pressure (psig) - Forged materials |     |     |       |      |      |       |
|-----------------|--|-----------|-----------|-----------|---------------|----------------|-----------|-----------|--|-----|-----|-------|------|------|-------|
|                 | ASTM A216                                | ASTM A217 | ASTM A217 | ASTM A217 | ASTM A351 CF8 | ASTM A351 CF8M | ASTM A352 | ASTM A352 | A105 & A350                                |     |     | F304L |      |      |       |
|                 | WCB                                      | WC6       | WC9       | C5        | ASTM A351 CF3 | ASTM A351 CF3M | LCB       | LCC       | -LF2                                       | F5  | F11 | F22   | F304 | F316 | F316L |
| -20 to 100      | 285                                      | 290       | 290       | 290       | 275           | 275            | 265       | 290       | 285  | 290 | 290 | 290   | 275  | 275  | 230   |
| 200             | 260                                      | 260       | 260       | 260       | 230           | 235            | 250       | 260       | 260  | 260 | 260 | 260   | 230  | 235  | 195   |
| 300             | 230                                      | 230       | 230       | 230       | 205           | 215            | 230       | 230       | 230  | 230 | 230 | 230   | 205  | 215  | 175   |
| 400             | 200                                      | 200       | 200       | 200       | 190           | 195            | 200       | 200       | 200  | 200 | 200 | 200   | 190  | 195  | 160   |
| 500             | 170                                      | 170       | 170       | 170       | 170           | 170            | 170       | 170       | 170  | 170 | 170 | 170   | 170  | 170  | 145   |
| 600             | 140                                      | 140       | 140       | 140       | 140           | 140            | 140       | 140       | 140  | 140 | 140 | 140   | 140  | 140  | 140   |
| 650             | 125                                      | 125       | 125       | 125       | 125           | 125            | 125       | 125       | 125  | 125 | 125 | 125   | 125  | 125  | 125   |
| 700             | 110                                      | 110       | 110       | 110       | 110           | 110            | 110       | 110       | 110  | 110 | 110 | 110   | 110  | 110  | 110   |
| 750             | 95                                       | 95        | 95        | 95        | 95            | 95             | 95        | 95        | 95   | 95  | 95  | 95    | 95   | 95   | 95    |
| 800             | 80                                       | 80        | 80        | 80        | 80            | 80             | 80        | 80        | 80   | 80  | 80  | 80    | 80   | 80   | 80    |
| 850             | 65                                       | 65        | 65        | 65        | 65            | 65             | 65        | 65        | 65   | 65  | 65  | 65    | 65   | 65   | 65    |
| 900             | 50                                       | 50        | 50        | 50        | 50            | 50             | 50        | 50        | 50   | 50  | 50  | 50    | 50   | 50   | -     |
| 950             | 35                                       | 35        | 35        | 35        | 35            | 35             | 35        | 35        | 35   | -   | 35  | 35    | 35   | 35   | -     |
| 1000            | 20                                       | 20        | 20        | 20        | 20            | 20             | 20        | 20        | 20   | -   | 20  | 20    | 20   | 20   | -     |
| 1050            | -  | 20        | 20        | 20        | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1100            | -  | 20        | 20        | 20        | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1150            | -  | 20        | 20        | 20        | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1200            | -  | 15        | 20        | 15        | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1250            | -  | -         | -         | -         | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1300            | -  | -         | -         | -         | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1350            | -  | -         | -         | -         | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1400            | -  | -         | -         | -         | 20            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1450            | -  | -         | -         | -         | 15            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |
| 1500            | -  | -         | -         | -         | 10            | 20             | -         | -         | -  | -   | -   | -     | -    | -    | -     |

### ASME CLASS 150 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

| Service temp °C | Working pressure (bar) - Cast materials |           |           |           |               |                |           |           | Working pressure (psig) - Forged materials |      |      |       |      |      |       |
|-----------------|---|-----------|-----------|-----------|---------------|----------------|-----------|-----------|--|------|------|-------|------|------|-------|
|                 | ASTM A216                               | ASTM A217 | ASTM A217 | ASTM A217 | ASTM A351 CF8 | ASTM A351 CF8M | ASTM A352 | ASTM A352 | A105 & A350                                |      |      | F304L |      |      |       |
|                 | WCB                                     | WC6       | WC9       | C5        | ASTM A351 CF3 | ASTM A351 CF3M | LCB       | LCC       | -LF2                                       | F5   | F11  | F22   | F304 | F316 | F316L |
| -29 to 38       | 19.6                                    | 19.8      | 19.8      | 20.0      | 19.0          | 19.0           | 18.4      | 19.8      | 19.6                                       | 20   | 19.8 | 19.8  | 19   | 19   | 15.9  |
| 50              | 19.2                                    | 19.5      | 19.5      | 19.5      | 18.3          | 18.4           | 18.2      | 19.5      | 19.2                                       | 19.5 | 19.5 | 19.5  | 18.3 | 18.4 | 15.3  |
| 100             | 17.7                                    | 17.7      | 17.7      | 17.7      | 15.7          | 16.2           | 17.4      | 17.7      | 17.7                                       | 17.7 | 17.7 | 17.7  | 15.7 | 16.2 | 13.3  |
| 150             | 15.8                                    | 15.8      | 15.8      | 15.8      | 14.2          | 14.8           | 15.8      | 15.8      | 15.8                                       | 15.8 | 15.8 | 15.8  | 14.2 | 14.8 | 12    |
| 200             | 13.8                                    | 13.8      | 13.8      | 13.8      | 13.2          | 13.7           | 13.8      | 13.8      | 13.8                                       | 13.8 | 13.8 | 13.8  | 13.2 | 13.7 | 11.2  |
| 250             | 12.1                                    | 12.1      | 12.1      | 12.1      | 12.1          | 12.1           | 12.1      | 12.1      | 12.1                                       | 12.1 | 12.1 | 12.1  | 12.1 | 12.1 | 10.5  |
| 300             | 10.2                                    | 10.2      | 10.2      | 10.2      | 10.2          | 10.2           | 10.2      | 10.2      | 10.2                                       | 10.2 | 10.2 | 10.2  | 10.2 | 10.2 | 10    |
| 325             | 9.3                                     | 9.3       | 9.3       | 9.3       | 9.3           | 9.3            | 9.3       | 9.3       | 9.3  | 9.3  | 9.3  | 9.3   | 9.3  | 9.3  | 9.3   |
| 350             | 8.4                                     | 8.4       | 8.4       | 8.4       | 8.4           | 8.4            | 8.4       | 8.4       | 8.4  | 8.4  | 8.4  | 8.4   | 8.4  | 8.4  | 8.4   |
| 375             | 7.4                                     | 7.4       | 7.4       | 7.4       | 7.4           | 7.4            | 7.4       | 7.4       | 7.4  | 7.4  | 7.4  | 7.4   | 7.4  | 7.4  | 7.4   |
| 400             | 6.5                                     | 6.5       | 6.5       | 6.5       | 6.5           | 6.5            | 6.5       | 6.5       | 6.5  | 6.5  | 6.5  | 6.5   | 6.5  | 6.5  | 6.5   |
| 425             | 5.5                                     | 5.5       | 5.5       | 5.5       | 5.5           | 5.5            | 5.5       | 5.5       | 5.5  | 5.5  | 5.5  | 5.5   | 5.5  | 5.5  | 5.5   |
| 450             | 4.6                                     | 4.6       | 4.6       | 4.6       | 4.6           | 4.6            | 4.6       | 4.6       | 4.6  | 4.6  | 4.6  | 4.6   | 4.6  | 4.6  | 4.6   |
| 475             | 3.7                                     | 3.7       | 3.7       | 3.7       | 3.7           | 3.7            | 3.7       | 3.7       | -  | 3.7  | 3.7  | 3.7   | 3.7  | 3.7  | -     |
| 500             | 2.8                                     | 2.8       | 2.8       | 2.8       | 2.8           | 2.8            | 2.8       | 2.8       | -  | 2.8  | 2.8  | 2.8   | 2.8  | 2.8  | -     |
| 538             | 1.4                                     | 1.4       | 1.4       | 1.4       | 1.4           | 1.4            | 1.4       | 1.4       | -  | -    | 1.4  | 1.4   | 1.4  | 1.4  | -     |
| 550             | -                                       | 1.4       | 1.4       | 1.4       | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 575             | -                                       | 1.4       | 1.4       | 1.4       | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 600             | -                                       | 1.4       | 1.4       | 1.4       | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 625             | -                                       | 1.4       | 1.4       | 1.4       | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 650             | -                                       | 1.1       | 1.1       | 0.9       | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 675             | -                                       | -         | -         | -         | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 700             | -                                       | -         | -         | -         | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 725             | -                                       | -         | -         | -         | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 750             | -                                       | -         | -         | -         | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 775             | -                                       | -         | -         | -         | 1.4           | 1.4            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 800             | -                                       | -         | -         | -         | 1.2           | 1.2            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 816             | -                                       | -         | -         | -         | 1.0           | 1.0            | -         | -         | -  | -    | -    | -     | -    | -    | -     |

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 300 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp °F | Working pressure (psig) - Cast materials |               |               |              |               |               |                |                | Working pressure (psig) - Forged materials |               |             |     |     |     |     |     |       |
|-----------------|--|---------------|---------------|--------------|---------------|---------------|----------------|----------------|--|---------------|-------------|-----|-----|-----|-----|-----|-------|
|                 | ASTM A216 WCB                            | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8 | ASTM A351 CF3 | ASTM A351 CF8M | ASTM A351 CF3M | ASTM A352 LCB                              | ASTM A352 LCC | A105 & A350 |     |     |     |     |     | F304L |
|                 | -LF2                                     | F5            | F11           | F22          | F304          | F316          | F316L          |                |  |               |             |     |     |     |     |     |       |
| -20 to 100      | 740                                      | 750           | 750           | 750          | 720           | 720           | 720            | 720            | 695  | 750           | 740         | 750 | 750 | 750 | 720 | 720 | 600   |
| 200             | 675                                      | 750           | 750           | 745          | 600           | 600           | 620            | 620            | 655  | 750           | 675         | 745 | 750 | 750 | 600 | 620 | 505   |
| 300             | 655                                      | 720           | 730           | 715          | 540           | 540           | 560            | 560            | 640  | 730           | 655         | 715 | 720 | 730 | 540 | 560 | 455   |
| 400             | 635                                      | 695           | 705           | 705          | 495           | 495           | 515            | 515            | 620  | 705           | 635         | 705 | 695 | 705 | 495 | 515 | 415   |
| 500             | 600                                      | 665           | 665           | 665          | 465           | 465           | 480            | 480            | 585  | 665           | 600         | 665 | 665 | 665 | 465 | 480 | 380   |
| 600             | 550                                      | 605           | 605           | 605          | 435           | 435           | 450            | 450            | 535  | 605           | 550         | 605 | 605 | 605 | 435 | 450 | 360   |
| 650             | 535                                      | 590           | 590           | 590          | 430           | 430           | 445            | 445            | 525  | 590           | 535         | 590 | 590 | 590 | 430 | 445 | 350   |
| 700             | 535                                      | 570           | 570           | 570          | 425           | 425           | 430            | 430            | 520  | 570           | 535         | 570 | 570 | 570 | 425 | 430 | 345   |
| 750             | 505                                      | 530           | 530           | 530          | 415           | 415           | 425            | 425            | 475  | 505           | 505         | 530 | 530 | 530 | 415 | 425 | 335   |
| 800             | 410                                      | 510           | 510           | 510          | 405           | 405           | 420            | 420            | 390  | 410           | 410         | 510 | 510 | 510 | 105 | 420 | 330   |
| 850             | 270                                      | 485           | 485           | 485          | 395           | 395           | 420            | 420            | 270  | 270           | 270         | 485 | 485 | 485 | 395 | 415 | 320   |
| 900             | 170                                      | 450           | 450           | 370          | 390           | 390           | 415            | 415            | 170  | 170           | 170         | 370 | 450 | 450 | 390 | 385 | -     |
| 950             | 105                                      | 320           | 375           | 275          | 380           | 380           | 385            | 385            | 105  | 105           | -           | 275 | 320 | 375 | 380 | 350 | -     |
| 1000            | 50                                       | 215           | 260           | 200          | 320           | 320           | 350            | 350            | 50   | 50            | -           | 200 | 215 | 260 | 320 | 345 | -     |
| 1050            | -  | 145           | 175           | 145          | 310           | 310           | 345            | 345            | -  | -             | -           | 145 | 145 | 175 | 310 | 305 | -     |
| 1100            | -  | 95            | 110           | 100          | 255           | 255           | 305            | 305            | -  | -             | -           | 100 | 95  | 110 | 255 | 235 | -     |
| 1150            | -  | 60            | 70            | 60           | 200           | 200           | 235            | 235            | -  | -             | -           | 60  | 60  | 70  | 200 | 185 | -     |
| 1200            | -  | 40            | 40            | 35           | 155           | 155           | 185            | 185            | -  | -             | -           | 35  | 40  | 40  | 155 | 145 | -     |
| 1250            | -  | -             | -             | -            | 115           | 115           | 145            | 145            | -  | -             | -           | -   | -   | -   | 115 | 115 | -     |
| 1300            | -  | -             | -             | -            | 85            | 85            | 115            | 115            | -  | -             | -           | -   | -   | -   | 85  | -   | -     |
| 1350            | -  | -             | -             | -            | 60            | 60            | 95             | 95             | -  | -             | -           | -   | -   | -   | -   | -   | -     |
| 1400            | -  | -             | -             | -            | 50            | 50            | 75             | 75             | -  | -             | -           | -   | -   | -   | -   | -   | -     |
| 1450            | -  | -             | -             | -            | 35            | 35            | 60             | 60             | -  | -             | -           | -   | -   | -   | -   | -   | -     |
| 1500            | -  | -             | -             | -            | 25            | 25            | 40             | 40             | -  | -             | -           | -   | -   | -   | -   | -   | -     |

### ASME CLASS 300 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

| Service temp °C | Working pressure (bar) - Cast materials |               |               |              |               |               |                |                | Working pressure (psig) - Forged materials |               |             |      |      |      |      |      |       |
|-----------------|---|---------------|---------------|--------------|---------------|---------------|----------------|----------------|--|---------------|-------------|------|------|------|------|------|-------|
|                 | ASTM A216 WCB                           | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8 | ASTM A351 CF3 | ASTM A351 CF8M | ASTM A351 CF3M | ASTM A352 LCB                              | ASTM A352 LCC | A105 & A350 |      |      |      |      |      | F304L |
|                 | -LF2                                    | F5            | F11           | F22          | F304          | F316          | F316L          |                |  |               |             |      |      |      |      |      |       |
| -29 to 38       | 51.1                                    | 51.7          | 51.7          | 51.7         | 49.6          | 49.6          | 49.6           | 49.6           | 48.0                                       | 51.7          | 51.1        | 51.7 | 51.7 | 51.7 | 49.6 | 49.6 | 41.4  |
| 50              | 50.1                                    | 51.7          | 51.7          | 51.7         | 47.8          | 47.8          | 48.1           | 48.1           | 47.5                                       | 51.7          | 50.1        | 51.7 | 51.7 | 51.7 | 47.8 | 48.1 | 40.0  |
| 100             | 46.6                                    | 51.5          | 51.5          | 51.5         | 40.9          | 40.9          | 42.2           | 42.2           | 45.3                                       | 51.5          | 46.6        | 51.5 | 51.5 | 51.5 | 40.9 | 42.2 | 34.8  |
| 150             | 45.1                                    | 49.7          | 50.3          | 50.3         | 37.0          | 37.0          | 38.5           | 38.5           | 43.9                                       | 50.2          | 45.1        | 50.3 | 49.7 | 50.3 | 37.0 | 38.5 | 31.4  |
| 200             | 43.8                                    | 48.0          | 48.6          | 48.6         | 35.4          | 35.4          | 35.7           | 35.7           | 42.5                                       | 48.6          | 43.8        | 48.6 | 48.0 | 48.6 | 35.4 | 35.7 | 29.2  |
| 250             | 41.9                                    | 46.3          | 46.3          | 46.3         | 32.5          | 32.5          | 33.4           | 33.4           | 40.8                                       | 46.3          | 41.9        | 46.3 | 46.3 | 46.3 | 32.5 | 33.4 | 27.5  |
| 300             | 39.8                                    | 42.9          | 42.9          | 42.9         | 30.9          | 30.9          | 31.6           | 31.6           | 38.7                                       | 42.9          | 39.8        | 42.9 | 42.9 | 42.9 | 30.9 | 31.6 | 26.1  |
| 325             | 38.7                                    | 41.4          | 41.4          | 41.4         | 30.2          | 30.2          | 30.9           | 30.9           | 37.6                                       | 41.4          | 38.7        | 41.4 | 41.4 | 41.4 | 30.2 | 30.9 | 25.5  |
| 350             | 37.6                                    | 40.3          | 40.3          | 40.3         | 29.6          | 29.6          | 30.3           | 30.3           | 36.4                                       | 40.0          | 37.6        | 40.3 | 40.3 | 40.3 | 29.6 | 30.3 | 25.1  |
| 375             | 36.4                                    | 38.9          | 38.9          | 38.9         | 29.0          | 29.0          | 29.9           | 29.9           | 35.0                                       | 37.8          | 36.4        | 38.9 | 38.9 | 38.9 | 29.0 | 29.9 | 24.8  |
| 400             | 34.7                                    | 36.5          | 36.5          | 36.5         | 28.4          | 28.4          | 29.4           | 29.4           | 32.6                                       | 34.7          | 34.7        | 36.5 | 36.5 | 36.5 | 28.4 | 29.4 | 24.3  |
| 425             | 28.8                                    | 35.2          | 35.2          | 35.2         | 28.0          | 28.0          | 29.1           | 29.1           | 27.3                                       | 28.8          | 28.8        | 35.2 | 35.2 | 35.2 | 28.0 | 29.1 | 23.9  |
| 450             | 23.0                                    | 33.7          | 33.7          | 33.7         | 27.4          | 27.4          | 28.8           | 28.8           | 21.6                                       | 23.0          | 23.0        | 33.7 | 33.7 | 33.7 | 27.4 | 28.8 | 23.4  |
| 475             | 17.4                                    | 31.7          | 31.7          | 27.9         | 26.9          | 26.9          | 28.7           | 28.7           | 15.7                                       | 17.1          | 17.4        | 27.9 | 31.7 | 31.7 | 26.9 | 28.7 | -     |
| 500             | 11.8                                    | 25.7          | 28.2          | 21.4         | 26.5          | 26.5          | 28.2           | 28.2           | 11.1                                       | 11.6          | -           | 21.4 | 25.7 | 28.2 | 26.5 | 28.2 | -     |
| 538             | 5.9                                     | 14.9          | 18.4          | 13.7         | 24.4          | 24.4          | 25.2           | 25.2           | 5.9  | 5.9           | -           | 13.7 | 14.9 | 18.4 | 24.4 | 25.2 | -     |
| 550             | -                                       | 12.7          | 15.6          | 12.0         | 23.6          | 23.6          | 25.0           | 25.0           | -  | -             | -           | 12.0 | 12.7 | 15.6 | 23.6 | 25.0 | -     |
| 575             | -                                       | 8.8           | 10.5          | 8.9          | 20.8          | 20.8          | 24.0           | 24.0           | -  | -             | -           | 8.9  | 8.8  | 10.5 | 20.8 | 24.0 | -     |
| 600             | -                                       | 6.1           | 6.9           | 6.2          | 16.9          | 16.9          | 19.9           | 19.9           | -  | -             | -           | 6.2  | 6.1  | 6.9  | 16.9 | 19.9 | -     |
| 625             | -                                       | 4.3           | 4.5           | 4.0          | 13.8          | 13.8          | 15.8           | 15.8           | -  | -             | -           | 4.0  | 4.3  | 4.5  | 13.8 | 15.8 | -     |
| 650             | -                                       | 2.8           | 2.8           | 2.4          | 11.3          | 11.3          | 12.7           | 12.7           | -  | -             | -           | 2.4  | 2.8  | 2.8  | 11.3 | 12.7 | -     |
| 675             | -                                       | -             | -             | -            | 9.3           | 9.3           | 10.3           | 10.3           | -  | -             | -           | -    | -    | -    | 9.3  | 10.3 | -     |
| 700             | -                                       | -             | -             | -            | 8.0           | 8.0           | 8.4            | 8.4            | -  | -             | -           | -    | -    | -    | 8.0  | -    | -     |
| 725             | -                                       | -             | -             | -            | 6.8           | 6.8           | 7.0            | 7.0            | -  | -             | -           | -    | -    | -    | -    | -    | -     |
| 750             | -                                       | -             | -             | -            | 5.8           | 5.8           | 5.9            | 5.9            | -  | -             | -           | -    | -    | -    | -    | -    | -     |
| 775             | -                                       | -             | -             | -            | 4.6           | 4.6           | 4.6            | 4.6            | -  | -             | -           | -    | -    | -    | -    | -    | -     |
| 800             | -                                       | -             | -             | -            | 3.5           | 3.5           | 3.5            | 3.5            | -  | -             | -           | -    | -    | -    | -    | -    | -     |
| 816             | -                                       | -             | -             | -            | 2.8           | 2.8           | 2.8            | 2.8            | -  | -             | -           | -    | -    | -    | -    | -    | -     |

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 600 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp °F | Working pressure (psig) - Cast materials |               |               |              |               |               |                |                |               | Working pressure (psig) - Forged materials |             |      |      |      |      |      |       |
|-----------------|--|---------------|---------------|--------------|---------------|---------------|----------------|----------------|---------------|--|-------------|------|------|------|------|------|-------|
|                 | ASTM A216 WCB                            | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8 | ASTM A351 CF3 | ASTM A351 CF8M | ASTM A351 CF3M | ASTM A352 LCB | ASTM A352 LCC                              | A105 & A350 |      |      |      |      |      | F304L |
|                 |  |               |               |              |               |               |                |                |               |  | -LF2        | F5   | F11  | F22  | F304 | F316 | F316L |
| -20 to 100      | 1480                                     | 1500          | 1500          | 1500         |               | 1440          |                | 1440           | 1390          | 1500                                       | 1480        | 1500 | 1500 | 1500 | 1440 | 1440 | 1200  |
| 200             | 1350                                     | 1500          | 1500          | 1490         |               | 1200          |                | 1240           | 1315          | 1500                                       | 1350        | 1490 | 1500 | 1500 | 1200 | 1240 | 1015  |
| 300             | 1315                                     | 1445          | 1455          | 1430         |               | 1080          |                | 1120           | 1275          | 1455                                       | 1315        | 1430 | 1445 | 1455 | 1080 | 1120 | 910   |
| 400             | 1270                                     | 1385          | 1410          | 1410         |               | 995           |                | 1025           | 1235          | 1410                                       | 1270        | 1410 | 1385 | 1410 | 995  | 1025 | 825   |
| 500             | 1200                                     | 1330          | 1330          | 1330         |               | 930           |                | 995            | 1165          | 1330                                       | 1200        | 1330 | 1330 | 1330 | 930  | 955  | 765   |
| 600             | 1095                                     | 1210          | 1210          | 1210         |               | 875           |                | 900            | 1065          | 1210                                       | 1095        | 1210 | 1210 | 1210 | 875  | 900  | 720   |
| 650             | 1075                                     | 1175          | 1175          | 1175         |               | 860           |                | 890            | 1045          | 1175                                       | 1075        | 1175 | 1175 | 1175 | 860  | 890  | 700   |
| 700             | 1065                                     | 1135          | 1135          | 1135         |               | 850           |                | 870            | 1035          | 1135                                       | 1065        | 1135 | 1135 | 1136 | 850  | 870  | 685   |
| 750             | 1010                                     | 1065          | 1065          | 1055         |               | 830           |                | 855            | 945           | 1010                                       | 1010        | 1055 | 1065 | 1065 | 830  | 855  | 670   |
| 800             | 825                                      | 1015          | 1015          | 1015         |               | 805           |                | 845            | 780           | 825  | 825         | 1015 | 1015 | 1015 | 805  | 845  | 660   |
| 850             | 535                                      | 975           | 975           | 965          |               | 790           |                | 835            | 535           | 535  | 535         | 965  | 975  | 975  | 790  | 835  | 645   |
| 900             | 345                                      | 900           | 900           | 740          |               | 780           |                | 830            | 345           | 345  | 345         | 740  | 900  | 900  | 780  | 830  | -     |
| 950             | 205                                      | 640           | 755           | 550          |               | 765           |                | 775            | 205           | 205  | -           | 550  | 640  | 755  | 765  | 775  | -     |
| 1000            | 105                                      | 430           | 520           | 400          |               | 640           |                | 700            | 105           | 105  | -           | 400  | 430  | 520  | 640  | 700  | -     |
| 1050            | -  | 290           | 350           | 290          |               | 615           |                | 685            | -             | -  | -           | 290  | 290  | 350  | 615  | 685  | -     |
| 1100            | -  | 190           | 220           | 200          |               | 515           |                | 610            | -             | -  | -           | 200  | 190  | 220  | 515  | 610  | -     |
| 1150            | -  | 125           | 135           | 125          |               | 400           |                | 475            | -             | -  | -           | 125  | 125  | 135  | 400  | 475  | -     |
| 1200            | -  | 75            | 80            | 70           |               | 310           |                | 370            | -             | -  | -           | 70   | 75   | 80   | 310  | 370  | -     |
| 1250            | -  | -             | -             | -            |               | 225           |                | 295            | -             | -  | -           | -    | -    | -    | 225  | 295  | -     |
| 1300            | -  | -             | -             | -            |               | 170           |                | 235            | -             | -  | -           | -    | -    | -    | 170  | 235  | -     |
| 1350            | -  | -             | -             | -            |               | 125           |                | 190            | -             | -  | -           | -    | -    | -    | -    | -    | -     |
| 1400            | -  | -             | -             | -            |               | 95            |                | 150            | -             | -  | -           | -    | -    | -    | -    | -    | -     |
| 1450            | -  | -             | -             | -            |               | 70            |                | 115            | -             | -  | -           | -    | -    | -    | -    | -    | -     |
| 1500            | -  | -             | -             | -            |               | 55            |                | 85             | -             | -  | -           | -    | -    | -    | -    | -    | -     |

### ASME CLASS 600 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

| Service temp °C | Working pressure (bar) - Cast materials |               |               |              |               |               |                |                |               | Working pressure (bar) - Forged materials |             |       |       |       |      |      |       |
|-----------------|---|---------------|---------------|--------------|---------------|---------------|----------------|----------------|---------------|---|-------------|-------|-------|-------|------|------|-------|
|                 | ASTM A216 WCB                           | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8 | ASTM A351 CF3 | ASTM A351 CF8M | ASTM A351 CF3M | ASTM A352 LCB | ASTM A352 LCC                             | A105 & A350 |       |       |       |      |      | F304L |
|                 |   |               |               |              |               |               |                |                |               |   | -LF2        | F5    | F11   | F22   | F304 | F316 | F316L |
| -29 to 38       | 102.1                                   | 103.4         | 103.4         | 103.4        |               | 99.3          |                | 99.3           | 96.0          | 103.4                                     | 102.1       | 103.4 | 103.4 | 103.4 | 99.3 | 99.3 | 82.7  |
| 50              | 100.2                                   | 103.4         | 103.4         | 103.4        |               | 95.6          |                | 96.2           | 94.9          | 103.4                                     | 100.2       | 103.4 | 103.4 | 103.4 | 95.6 | 96.2 | 80.0  |
| 100             | 93.2                                    | 103.0         | 103.0         | 103.0        |               | 81.7          |                | 84.4           | 90.7          | 103.0                                     | 93.2        | 103.0 | 103.0 | 103.0 | 81.7 | 84.4 | 69.6  |
| 150             | 90.2                                    | 99.5          | 100.3         | 100.3        |               | 74.0          |                | 77.0           | 87.9          | 100.3                                     | 90.2        | 100.3 | 99.5  | 100.3 | 74.0 | 77.0 | 62.8  |
| 200             | 87.6                                    | 95.9          | 97.2          | 97.2         |               | 69.0          |                | 71.3           | 85.1          | 97.2                                      | 87.6        | 97.2  | 95.9  | 97.2  | 69.0 | 71.3 | 58.3  |
| 250             | 83.9                                    | 92.7          | 92.7          | 92.7         |               | 65.0          |                | 66.8           | 81.6          | 92.7                                      | 83.9        | 92.7  | 92.7  | 92.7  | 65.0 | 66.8 | 54.9  |
| 300             | 79.6                                    | 85.7          | 85.7          | 85.7         |               | 61.8          |                | 63.2           | 77.4          | 85.7                                      | 79.6        | 85.7  | 85.7  | 85.7  | 61.8 | 63.2 | 52.1  |
| 325             | 77.4                                    | 82.6          | 82.6          | 82.6         |               | 60.4          |                | 61.8           | 75.2          | 82.6                                      | 77.4        | 82.6  | 82.6  | 82.6  | 60.4 | 61.8 | 51.0  |
| 350             | 75.1                                    | 80.4          | 80.4          | 80.4         |               | 59.3          |                | 60.7           | 72.8          | 80.0                                      | 75.1        | 80.4  | 80.4  | 80.4  | 59.3 | 60.7 | 50.1  |
| 375             | 72.7                                    | 77.6          | 77.6          | 77.6         |               | 58.1          |                | 59.8           | 69.9          | 75.7                                      | 72.7        | 77.6  | 77.6  | 77.6  | 58.1 | 59.8 | 49.5  |
| 400             | 69.4                                    | 73.3          | 73.3          | 73.3         |               | 56.9          |                | 58.9           | 65.2          | 69.4                                      | 69.4        | 73.3  | 73.3  | 73.3  | 56.9 | 58.9 | 48.6  |
| 425             | 57.5                                    | 70.0          | 70.0          | 70.0         |               | 56.0          |                | 58.3           | 54.6          | 57.5                                      | 57.5        | 70.0  | 70.0  | 70.0  | 56.0 | 58.3 | 47.7  |
| 450             | 46.0                                    | 67.7          | 67.7          | 67.7         |               | 54.8          |                | 57.7           | 43.2          | 46.0                                      | 46.0        | 67.7  | 67.7  | 67.7  | 54.8 | 57.7 | 46.8  |
| 475             | 34.9                                    | 63.4          | 63.4          | 55.7         |               | 53.9          |                | 57.3           | 31.3          | 34.2                                      | 34.9        | 55.7  | 63.4  | 63.4  | 53.9 | 57.3 | -     |
| 500             | 23.5                                    | 51.5          | 56.5          | 42.8         |               | 53.0          |                | 56.5           | 22.1          | 23.2                                      | -           | 42.8  | 51.5  | 56.5  | 53.0 | 56.5 | -     |
| 538             | 11.8                                    | 29.8          | 36.9          | 27.4         |               | 48.9          |                | 50.0           | 11.8          | 11.8                                      | -           | 27.4  | 29.8  | 36.9  | 48.9 | 50.0 | -     |
| 550             | -                                       | 25.4          | 31.3          | 24.1         |               | 47.1          |                | 49.8           | -             | -   | -           | 24.1  | 25.4  | 31.3  | 47.1 | 49.8 | -     |
| 575             | -                                       | 17.6          | 21.1          | 17.8         |               | 41.7          |                | 47.9           | -             | -   | -           | 17.8  | 17.6  | 21.1  | 41.7 | 47.9 | -     |
| 600             | -                                       | 12.2          | 13.8          | 12.5         |               | 33.8          |                | 39.8           | -             | -   | -           | 12.5  | 12.2  | 13.8  | 33.8 | 39.8 | -     |
| 625             | -                                       | 8.5           | 8.9           | 8.0          |               | 27.6          |                | 31.6           | -             | -   | -           | 8.0   | 8.5   | 8.9   | 27.6 | 31.6 | -     |
| 650             | -                                       | 5.7           | 5.7           | 4.7          |               | 22.5          |                | 25.3           | -             | -   | -           | 4.7   | 5.7   | 5.7   | 22.5 | 25.3 | -     |
| 675             | -                                       | -             | -             | -            |               | 18.7          |                | 20.6           | -             | -   | -           | -     | -     | -     | 18.7 | 20.6 | -     |
| 700             | -                                       | -             | -             | -            |               | 16.1          |                | 16.8           | -             | -   | -           | -     | -     | -     | 16.1 | 16.8 | -     |
| 725             | -                                       | -             | -             | -            |               | 13.5          |                | 14.0           | -             | -   | -           | -     | -     | -     | -    | -    | -     |
| 750             | -                                       | -             | -             | -            |               | 11.6          |                | 11.7           | -             | -   | -           | -     | -     | -     | -    | -    | -     |
| 775             | -                                       | -             | -             | -            |               | 9.0           |                | 9.0            | -             | -   | -           | -     | -     | -     | -    | -    | -     |
| 800             | -                                       | -             | -             | -            |               | 7.0           |                | 7.0            | -             | -   | -           | -     | -     | -     | -    | -    | -     |
| 816             | -                                       | -             | -             | -            |               | 5.9           |                | 5.9            | -             | -   | -           | -     | -     | -     | -    | -    | -     |

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 800 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp °F | Working pressure (psig) - Cast materials |           |           |           |               |                |           |           | Working pressure (psig) - Forged materials |      |      |       |      |      |       |
|-----------------|--|-----------|-----------|-----------|---------------|----------------|-----------|-----------|--|------|------|-------|------|------|-------|
|                 | ASTM A216                                | ASTM A217 | ASTM A217 | ASTM A217 | ASTM A351 CF8 | ASTM A351 CF8M | ASTM A352 | ASTM A352 | A105 & A350                                |      |      | F304L |      |      |       |
|                 | WCB                                      | WC6       | WC9       | C5        | ASTM A351 CF3 | ASTM A351 CF3M | LCB       | LCC       | -LF2                                       | F5   | F11  | F22   | F304 | F316 | F316L |
| -20 to 100      | 1975                                     | 2000      | 2000      | 2000      | 1920          | 1920           | 1860      | 2000      | 1975                                       | 2000 | 2000 | 2000  | 1920 | 1920 | 1600  |
| 200             | 1810                                     | 2000      | 2000      | 2000      | 1600          | 1655           | 1760      | 2000      | 1800                                       | 2000 | 1900 | 1910  | 1600 | 1655 | 1350  |
| 300             | 1745                                     | 1925      | 1940      | 1940      | 1435          | 1495           | 1700      | 1940      | 1750                                       | 1940 | 1795 | 1805  | 1410 | 1495 | 1210  |
| 400             | 1690                                     | 1850      | 1880      | 1880      | 1325          | 1370           | 1640      | 1875      | 1690                                       | 1880 | 1755 | 1730  | 1255 | 1370 | 1100  |
| 500             | 1610                                     | 1775      | 1775      | 1775      | 1240          | 1275           | 1565      | 1775      | 1595                                       | 1775 | 1710 | 1705  | 1165 | 1275 | 1020  |
| 600             | 1515                                     | 1615      | 1615      | 1615      | 1180          | 1205           | 1470      | 1615      | 1460                                       | 1615 | 1615 | 1615  | 1105 | 1205 | 960   |
| 650             | 1465                                     | 1570      | 1570      | 1570      | 1150          | 1180           | 1420      | 1570      | 1430                                       | 1570 | 1570 | 1570  | 1090 | 1185 | 935   |
| 700             | 1415                                     | 1515      | 1515      | 1515      | 1125          | 1160           | 1365      | 1480      | 1420                                       | 1515 | 1515 | 1515  | 1075 | 1150 | 915   |
| 750             | 1350                                     | 1420      | 1420      | 1420      | 1100          | 1140           | 1270      | 1350      | 1345                                       | 1420 | 1420 | 1420  | 1060 | 1130 | 895   |
| 800             | 1100                                     | 1355      | 1355      | 1355      | 1080          | 1125           | 1045      | 1100      | 1100                                       | 1325 | 1355 | 1355  | 1050 | 1105 | 875   |
| 850             | 850                                      | 1300      | 1300      | 1300      | 1055          | 1115           | 795       | 850       | 715  | 1170 | 1300 | 1300  | 1035 | 1080 | 860   |
| 900             | 615                                      | 1200      | 1200      | 995       | 1035          | 1105           | 540       | 595       | 460  | 940  | 1200 | 1200  | 1025 | 1050 | -     |
| 950             | 365                                      | 850       | 1025      | 735       | 1020          | 1030           | 365       | 365       | -  | 695  | 1005 | 1005  | 1000 | 1030 | -     |
| 1000            | 225                                      | 575       | 710       | 530       | 945           | 970            | 225       | 225       | -  | 510  | 595  | 715   | 860  | 970  | -     |
| 1050            | -  | 385       | 465       | 385       | 865           | 960            | -         | -         | -  | 375  | 365  | 530   | 825  | 860  | -     |
| 1100            | -  | 255       | 295       | 265       | 685           | 815            | -         | -         | -  | 275  | 225  | 300   | 685  | 735  | -     |
| 1150            | -  | 175       | 180       | 165       | 545           | 630            | -         | -         | -  | 185  | 140  | 275   | 520  | 550  | -     |
| 1200            | -  | 110       | 110       | 95        | 440           | 495            | -         | -         | -  | 120  | 95   | 145   | 415  | 485  | -     |
| 1250            | -  | -         | -         | -         | 355           | 390            | -         | -         | -  | -    | -    | -     | 295  | 365  | -     |
| 1300            | -  | -         | -         | -         | 300           | 310            | -         | -         | -  | -    | -    | -     | 220  | -    | -     |
| 1350            | -  | -         | -         | -         | 250           | 255            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 1400            | -  | -         | -         | -         | 200           | 200            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 1450            | -  | -         | -         | -         | 155           | 155            | -         | -         | -  | -    | -    | -     | -    | -    | -     |
| 1500            | -  | -         | -         | -         | 110           | 110            | -         | -         | -  | -    | -    | -     | -    | -    | -     |

### ASME CLASS 800 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

| Service temp °C | Working pressure (bar) - Cast materials |           |           |           |               |                |           |           | Working pressure (bar) - Forged materials |       |       |       |       |       |       |
|-----------------|---|-----------|-----------|-----------|---------------|----------------|-----------|-----------|---|-------|-------|-------|-------|-------|-------|
|                 | ASTM A216                               | ASTM A217 | ASTM A217 | ASTM A217 | ASTM A351 CF8 | ASTM A351 CF8M | ASTM A352 | ASTM A352 | A105 & A350                               |       |       | F304L |       |       |       |
|                 | WCB                                     | WC6       | WC9       | C5        | ASTM A351 CF3 | ASTM A351 CF3M | LCB       | LCC       | -LF2                                      | F5    | F11   | F22   | F304  | F316  | F316L |
| -29 to 38       | 136.2                                   | 137.9     | 137.9     | 137.9     | 132.4         | 132.4          | 128.1     | 137.9     | 136.2                                     | 137.9 | 137.9 | 137.9 | 132.4 | 132.4 | 110.3 |
| 50              | 133.7                                   | 137.9     | 137.9     | 137.9     | 127.5         | 128.3          | 126.6     | 137.9     | 133.7                                     | 137.9 | 137.9 | 137.9 | 127.5 | 128.3 | 106.7 |
| 100             | 124.3                                   | 137.3     | 137.4     | 137.4     | 109.0         | 112.5          | 120.9     | 137.4     | 124.3                                     | 137.4 | 137.3 | 137.4 | 109.0 | 112.5 | 92.8  |
| 150             | 120.2                                   | 132.6     | 133.8     | 133.8     | 98.7          | 102.7          | 117.2     | 133.8     | 120.2                                     | 133.8 | 132.6 | 133.8 | 98.7  | 102.7 | 83.7  |
| 200             | 116.8                                   | 127.9     | 129.6     | 129.6     | 91.9          | 95.1           | 113.4     | 129.6     | 116.8                                     | 129.6 | 129.9 | 129.6 | 91.9  | 95.1  | 77.8  |
| 250             | 111.8                                   | 123.6     | 123.6     | 123.6     | 86.7          | 89.0           | 108.7     | 123.6     | 111.8                                     | 123.6 | 123.6 | 123.6 | 86.7  | 89.0  | 73.2  |
| 300             | 106.2                                   | 114.3     | 114.3     | 114.3     | 82.4          | 84.3           | 103.2     | 114.3     | 106.2                                     | 114.3 | 114.3 | 114.3 | 82.4  | 84.3  | 69.5  |
| 325             | 103.2                                   | 110.2     | 110.2     | 110.2     | 80.6          | 82.4           | 100.2     | 110.2     | 103.2                                     | 110.2 | 110.2 | 110.2 | 80.6  | 82.4  | 67.9  |
| 350             | 100.2                                   | 107.3     | 107.3     | 107.3     | 79.0          | 80.9           | 97.1      | 106.7     | 100.2                                     | 107.3 | 107.3 | 107.3 | 79.0  | 80.9  | 66.8  |
| 375             | 97.0                                    | 103.5     | 103.5     | 103.5     | 77.4          | 79.7           | 93.2      | 100.9     | 97.0                                      | 103.5 | 103.5 | 103.5 | 77.4  | 79.7  | 66.0  |
| 400             | 92.6                                    | 97.6      | 97.6      | 97.6      | 75.8          | 78.5           | 87.0      | 92.6      | 92.6                                      | 97.6  | 97.6  | 97.6  | 75.8  | 78.5  | 64.8  |
| 425             | 76.7                                    | 93.4      | 93.4      | 93.4      | 74.7          | 77.7           | 72.8      | 76.7      | 76.7                                      | 93.4  | 93.4  | 93.4  | 74.7  | 77.7  | 63.6  |
| 450             | 61.3                                    | 90.2      | 90.2      | 90.2      | 73.1          | 76.9           | 57.6      | 61.3      | 61.3                                      | 90.2  | 90.2  | 90.2  | 73.1  | 76.9  | 62.4  |
| 475             | 46.5                                    | 84.5      | 84.5      | 74.3      | 71.8          | 76.4           | 41.8      | 45.6      | 46.5                                      | 74.3  | 84.5  | 84.5  | 71.8  | 76.4  | -     |
| 500             | 31.4                                    | 68.6      | 75.3      | 57.0      | 70.7          | 75.3           | 29.5      | 30.9      | -   | 57.0  | 68.6  | 75.3  | 70.7  | 75.3  | -     |
| 538             | 15.7                                    | 39.7      | 49.2      | 36.5      | 65.2          | 66.8           | 15.7      | 15.7      | -   | 36.5  | 39.7  | 49.2  | 65.2  | 66.8  | -     |
| 550             | -                                       | 33.9      | 41.7      | 32.1      | 62.8          | 66.5           | -         | -         | -   | 32.1  | 33.9  | 41.7  | 62.8  | 66.5  | -     |
| 575             | -                                       | 23.5      | 28.1      | 21.7      | 55.6          | 63.8           | -         | -         | -   | 21.7  | 23.5  | 28.1  | 55.6  | 63.8  | -     |
| 600             | -                                       | 16.3      | 18.4      | 16.6      | 45.0          | 53.1           | -         | -         | -   | 16.6  | 16.3  | 18.4  | 45.0  | 53.1  | -     |
| 625             | -                                       | 11.4      | 11.9      | 10.7      | 36.8          | 42.1           | -         | -         | -   | 10.7  | 11.4  | 11.9  | 36.8  | 42.1  | -     |
| 650             | -                                       | 7.6       | 7.6       | 6.3       | 30.0          | 33.8           | -         | -         | -   | 6.3   | 7.6   | 7.6   | 30.0  | 33.8  | -     |
| 675             | -                                       | -         | -         | -         | 24.9          | 27.5           | -         | -         | -   | -     | -     | -     | 24.9  | 27.5  | -     |
| 700             | -                                       | -         | -         | -         | 21.4          | 22.3           | -         | -         | -   | -     | -     | -     | 21.4  | -     | -     |
| 725             | -                                       | -         | -         | -         | 18.0          | 18.7           | -         | -         | -   | -     | -     | -     | -     | -     | -     |
| 750             | -                                       | -         | -         | -         | 15.4          | 15.6           | -         | -         | -   | -     | -     | -     | -     | -     | -     |
| 775             | -                                       | -         | -         | -         | 12.1          | 12.1           | -         | -         | -   | -     | -     | -     | -     | -     | -     |
| 800             | -                                       | -         | -         | -         | 9.3           | 9.3            | -         | -         | -   | -     | -     | -     | -     | -     | -     |
| 816             | -                                       | -         | -         | -         | -             | -              | -         | -         | -   | -     | -     | -     | -     | -     | -     |

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 900 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp °F | Working pressure (psig) - Cast materials |               |               |              |                                |                                  |               |               | Working pressure (psig) - Forged materials |      |      |      |      |       |      |
|-----------------|--|---------------|---------------|--------------|--------------------------------|----------------------------------|---------------|---------------|--|------|------|------|------|-------|------|
|                 | ASTM A216 WCB                            | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8<br>ASTM A351 CF3 | ASTM A351 CF8M<br>ASTM A351 CF3M | ASTM A352 LCB | ASTM A352 LCC | A105 & A350                                |      |      |      |      |       |      |
|                 | F5                                       | F11           | F22           | F304         | F316                           | F316L                            | F304L         | -LF2          | F5   | F11  | F22  | F304 | F316 | F316L |      |
| -20 to 100      | 2220                                     | 2250          | 2250          | 2250         | 2160                           | 2160                             | 2085          | 2250          | 2220                                       | 2250 | 2250 | 2250 | 2160 | 2160  | 1800 |
| 200             | 2025                                     | 2250          | 2250          | 2235         | 1800                           | 1860                             | 1970          | 2250          | 2025                                       | 2235 | 2250 | 2250 | 1800 | 1860  | 1520 |
| 300             | 1970                                     | 2165          | 2185          | 2150         | 1620                           | 1680                             | 1915          | 2185          | 1970                                       | 2150 | 2165 | 2185 | 1620 | 1680  | 1360 |
| 400             | 1900                                     | 2080          | 2115          | 2115         | 1490                           | 1540                             | 1850          | 2115          | 1900                                       | 2115 | 2080 | 2115 | 1490 | 1540  | 1240 |
| 500             | 1795                                     | 1995          | 1995          | 1995         | 1395                           | 1435                             | 1745          | 1995          | 1795                                       | 1995 | 1995 | 1995 | 1395 | 1435  | 1145 |
| 600             | 1640                                     | 1815          | 1815          | 1815         | 1310                           | 1355                             | 1600          | 1815          | 1640                                       | 1815 | 1815 | 1815 | 1316 | 1355  | 1080 |
| 650             | 1610                                     | 1765          | 1765          | 1765         | 1290                           | 1330                             | 1570          | 1765          | 1610                                       | 1765 | 1765 | 1765 | 1290 | 1330  | 1050 |
| 700             | 1600                                     | 1705          | 1705          | 1705         | 1275                           | 1305                             | 1555          | 1705          | 1600                                       | 1705 | 1705 | 1705 | 1275 | 1305  | 1030 |
| 750             | 1510                                     | 1595          | 1595          | 1585         | 1245                           | 1280                             | 1420          | 1510          | 1510                                       | 1585 | 1595 | 1595 | 1245 | 1280  | 1010 |
| 800             | 1235                                     | 1525          | 1525          | 1525         | 1210                           | 1265                             | 1175          | 1235          | 1235                                       | 1525 | 1525 | 1525 | 1210 | 1265  | 985  |
| 850             | 805                                      | 1460          | 1460          | 1450         | 1190                           | 1255                             | 805           | 805           | 805  | 1450 | 1460 | 1460 | 1190 | 1255  | 965  |
| 900             | 515                                      | 1350          | 1350          | 1110         | 1165                           | 1245                             | 515           | 515           | 515  | 1110 | 1350 | 1350 | 1165 | 1245  | -    |
| 950             | 310                                      | 955           | 1130          | 825          | 1145                           | 1160                             | 310           | 310           | -  | 825  | 9550 | 1130 | 1145 | 1160  | -    |
| 1000            | 155                                      | 650           | 780           | 595          | 965                            | 1050                             | 155           | 155           | -  | 595  | 650  | 780  | 965  | 1050  | -    |
| 1050            | -  | 430           | 525           | 430          | 925                            | 1030                             | -             | -             | -  | 430  | 430  | 525  | 925  | 1030  | -    |
| 1100            | -  | 290           | 330           | 300          | 770                            | 915                              | -             | -             | -  | 300  | 290  | 330  | 770  | 915   | -    |
| 1150            | -  | 185           | 205           | 185          | 595                            | 710                              | -             | -             | -  | 185  | 185  | 205  | 595  | 710   | -    |
| 1200            | -  | 115           | 125           | 105          | 465                            | 555                              | -             | -             | -  | 105  | 115  | 125  | 465  | 555   | -    |
| 1250            | -  | -             | -             | -            | 340                            | 440                              | -             | -             | -  | -    | -    | -    | 340  | 440   | -    |
| 1300            | -  | -             | -             | -            | 255                            | 350                              | -             | -             | -  | -    | -    | -    | 255  | 350   | -    |
| 1350            | -  | -             | -             | -            | 185                            | 290                              | -             | -             | -  | -    | -    | -    | -    | -     | -    |
| 1400            | -  | -             | -             | -            | 145                            | 225                              | -             | -             | -  | -    | -    | -    | -    | -     | -    |
| 1450            | -  | -             | -             | -            | 105                            | 175                              | -             | -             | -  | -    | -    | -    | -    | -     | -    |
| 1500            | -  | -             | -             | -            | 80                             | 125                              | -             | -             | -  | -    | -    | -    | -    | -     | -    |

### ASME CLASS 900 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

| Service temp °C | Working pressure (bar) - Cast materials |               |               |              |                                |                                  |               |               | Working pressure (bar) - Forged materials |       |       |       |       |       |       |
|-----------------|---|---------------|---------------|--------------|--------------------------------|----------------------------------|---------------|---------------|---|-------|-------|-------|-------|-------|-------|
|                 | ASTM A216 WCB                           | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8<br>ASTM A351 CF3 | ASTM A351 CF8M<br>ASTM A351 CF3M | ASTM A352 LCB | ASTM A352 LCC | A105 & A350                               |       |       |       |       |       |       |
|                 | F5                                      | F11           | F22           | F304         | F316                           | F316L                            | F304L         | -LF2          | F5  | F11   | F22   | F304  | F316  | F316L |       |
| -29 to 38       | 153.2                                   | 155.1         | 155.1         | 155.1        | 148.9                          | 148.9                            | 144.1         | 155.1         | 153.2                                     | 155.1 | 155.1 | 155.1 | 148.9 | 148.9 | 124.1 |
| 50              | 150.4                                   | 155.1         | 155.1         | 155.1        | 143.5                          | 144.3                            | 142.4         | 155.1         | 150.4                                     | 155.1 | 155.1 | 155.1 | 143.5 | 144.3 | 120.1 |
| 100             | 139.8                                   | 154.4         | 154.6         | 154.6        | 122.6                          | 126.6                            | 136.0         | 154.6         | 139.8                                     | 154.6 | 154.4 | 154.6 | 122.6 | 126.6 | 104.4 |
| 150             | 135.2                                   | 149.2         | 150.6         | 150.6        | 111.0                          | 115.5                            | 131.8         | 150.5         | 135.2                                     | 150.6 | 149.2 | 150.6 | 111.0 | 115.5 | 94.2  |
| 200             | 131.4                                   | 143.9         | 145.8         | 145.8        | 103.4                          | 107.0                            | 127.6         | 145.8         | 131.4                                     | 145.8 | 143.9 | 145.8 | 103.4 | 107.0 | 87.5  |
| 250             | 125.8                                   | 139.0         | 139.0         | 139.0        | 97.5                           | 100.1                            | 122.3         | 139.0         | 125.8                                     | 139.0 | 139.0 | 139.0 | 97.5  | 100.1 | 82.4  |
| 300             | 119.5                                   | 128.6         | 128.6         | 128.6        | 92.7                           | 94.9                             | 116.1         | 128.6         | 119.5                                     | 128.6 | 128.6 | 128.6 | 92.7  | 94.9  | 78.2  |
| 325             | 116.1                                   | 124.0         | 124.0         | 124.0        | 90.7                           | 92.7                             | 112.7         | 124.0         | 116.1                                     | 124.0 | 124.0 | 124.0 | 90.7  | 92.7  | 76.4  |
| 350             | 112.7                                   | 120.7         | 120.7         | 120.7        | 88.9                           | 91.0                             | 109.2         | 120.1         | 112.7                                     | 120.7 | 120.7 | 120.7 | 88.9  | 91.0  | 75.2  |
| 375             | 109.1                                   | 116.5         | 116.5         | 116.5        | 87.1                           | 89.6                             | 104.9         | 113.5         | 109.1                                     | 116.5 | 116.5 | 116.5 | 87.1  | 89.6  | 74.3  |
| 400             | 104.2                                   | 109.8         | 109.8         | 109.8        | 85.3                           | 88.3                             | 97.9          | 104.2         | 104.2                                     | 109.8 | 109.8 | 109.8 | 85.3  | 88.3  | 72.9  |
| 425             | 86.3                                    | 105.1         | 105.1         | 105.1        | 84.0                           | 87.4                             | 81.9          | 86.3          | 86.3                                      | 105.1 | 105.1 | 105.1 | 84.0  | 87.4  | 71.6  |
| 450             | 69.0                                    | 101.4         | 101.4         | 101.4        | 82.2                           | 86.5                             | 64.8          | 69.0          | 69.0                                      | 101.4 | 101.4 | 101.4 | 82.2  | 86.5  | 70.2  |
| 475             | 52.3                                    | 95.1          | 95.1          | 83.6         | 80.8                           | 86.0                             | 47.0          | 51.3          | 52.3                                      | 83.6  | 95.1  | 95.1  | 80.8  | 86.0  | -     |
| 500             | 35.3                                    | 77.2          | 84.7          | 64.1         | 79.5                           | 84.7                             | 33.2          | 34.7          | -   | 64.1  | 77.2  | 84.7  | 79.5  | 84.7  | -     |
| 538             | 17.7                                    | 44.7          | 55.3          | 41.1         | 73.3                           | 75.2                             | 17.7          | 17.7          | -   | 41.1  | 44.7  | 55.3  | 73.3  | 75.2  | -     |
| 550             | -                                       | 38.1          | 46.9          | 36.1         | 70.7                           | 74.8                             | -             | -             | -   | 36.1  | 38.1  | 46.9  | 70.7  | 74.8  | -     |
| 575             | -                                       | 26.4          | 31.6          | 26.7         | 62.5                           | 71.8                             | -             | -             | -   | 26.7  | 26.4  | 31.6  | 62.5  | 71.8  | -     |
| 600             | -                                       | 18.3          | 20.7          | 18.7         | 50.6                           | 59.7                             | -             | -             | -   | 18.7  | 18.3  | 20.7  | 50.6  | 59.7  | -     |
| 625             | -                                       | 12.8          | 13.4          | 12.0         | 41.4                           | 47.4                             | -             | -             | -   | 12.0  | 12.8  | 13.4  | 41.4  | 47.4  | -     |
| 650             | -                                       | 8.5           | 8.5           | 7.1          | 33.8                           | 38.0                             | -             | -             | -   | 7.1   | 8.5   | 8.5   | 33.8  | 38.0  | -     |
| 675             | -                                       | -             | -             | -            | 28.0                           | 31.0                             | -             | -             | -   | -     | -     | -     | 28.0  | 31.0  | -     |
| 700             | -                                       | -             | -             | -            | 24.1                           | 25.1                             | -             | -             | -   | -     | -     | -     | 24.1  | 25.1  | -     |
| 725             | -                                       | -             | -             | -            | 20.3                           | 21.0                             | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 750             | -                                       | -             | -             | -            | 17.3                           | 17.6                             | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 775             | -                                       | -             | -             | -            | 13.7                           | 13.7                             | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 800             | -                                       | -             | -             | -            | 10.5                           | 10.5                             | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 816             | -                                       | -             | -             | -            | 8.6                            | 8.6                              | -             | -             | -   | -     | -     | -     | -     | -     | -     |

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 1500 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp<br>°F | Working pressure (psig) - Cast materials |           |           |           |               |                |           |           | Working pressure (psig) - Forged materials |      |      |      |       |      |       |  |
|--------------------|--|-----------|-----------|-----------|---------------|----------------|-----------|-----------|--|------|------|------|-------|------|-------|--|
|                    | ASTM A216                                | ASTM A217 | ASTM A217 | ASTM A217 | ASTM A351 CF8 | ASTM A351 CF8M | ASTM A352 | ASTM A352 | A105 & A350                                |      |      |      | F304L |      |       |  |
|                    | WCB                                      | WC6       | WC9       | C5        | ASTM A351 CF3 | ASTM A351 CF3M | LCB       | LCC       | -LF2                                       | F5   | F11  | F22  | F304  | F316 | F316L |  |
| -20 to 100         | 3705                                     | 3750      | 3750      | 3750      | 3600          | 3600           | 3470      | 3750      | 3705                                       | 3750 | 3750 | 3750 | 3600  | 3600 | 3000  |  |
| 200                | 3375                                     | 3750      | 3750      | 3725      | 3000          | 3095           | 3280      | 3750      | 3375                                       | 3725 | 3750 | 3750 | 3000  | 3095 | 2530  |  |
| 300                | 3280                                     | 3610      | 3640      | 3580      | 2700          | 2795           | 3190      | 3640      | 3280                                       | 3580 | 3610 | 3640 | 2700  | 2795 | 2270  |  |
| 400                | 3170                                     | 3465      | 3530      | 3530      | 2485          | 2570           | 3085      | 3530      | 3170                                       | 3530 | 3465 | 3530 | 2485  | 2570 | 2065  |  |
| 500                | 2995                                     | 3325      | 3325      | 3325      | 2330          | 2390           | 2910      | 3325      | 2995                                       | 3326 | 3325 | 3325 | 2330  | 2390 | 1910  |  |
| 600                | 2735                                     | 3025      | 3025      | 3025      | 2185          | 2255           | 2665      | 3025      | 2735                                       | 3025 | 3025 | 3025 | 2185  | 2255 | 1800  |  |
| 650                | 2685                                     | 2940      | 2940      | 2940      | 2150          | 2220           | 2615      | 2940      | 2685                                       | 2940 | 2940 | 2940 | 2050  | 2220 | 1750  |  |
| 700                | 2665                                     | 2840      | 2840      | 2840      | 2125          | 2170           | 2590      | 2840      | 2665                                       | 2840 | 2840 | 2840 | 2125  | 2170 | 1715  |  |
| 750                | 2520                                     | 2660      | 2660      | 2640      | 2075          | 2135           | 2365      | 2520      | 2520                                       | 2640 | 2660 | 2660 | 2075  | 2135 | 1680  |  |
| 800                | 2060                                     | 2540      | 2540      | 2540      | 2015          | 2110           | 1955      | 2060      | 2060                                       | 2540 | 2540 | 2540 | 2015  | 2110 | 1645  |  |
| 850                | 1340                                     | 2435      | 2435      | 2415      | 1980          | 2090           | 1340      | 1340      | 1340                                       | 2415 | 2435 | 2435 | 1980  | 2090 | 1610  |  |
| 900                | 860                                      | 2245      | 2245      | 1850      | 1945          | 2075           | 860       | 860       | 860  | 1850 | 2245 | 2245 | 1945  | 2075 | -     |  |
| 950                | 515                                      | 1595      | 1885      | 1370      | 1910          | 1930           | 515       | 515       | -  | 1370 | 1595 | 1885 | 1910  | 1930 | -     |  |
| 1000               | 260                                      | 1080      | 1305      | 995       | 1605          | 1750           | 260       | 260       | -  | 995  | 1080 | 1305 | 1605  | 1750 | -     |  |
| 1050               | -  | 720       | 875       | 720       | 1545          | 1720           | -         | -         | -  | 720  | 720  | 875  | 1545  | 1720 | -     |  |
| 1100               | -  | 480       | 550       | 495       | 1285          | 1525           | -         | -         | -  | 495  | 480  | 550  | 1285  | 1525 | -     |  |
| 1150               | -  | 310       | 345       | 310       | 995           | 1185           | -         | -         | -  | 310  | 310  | 345  | 995   | 1185 | -     |  |
| 1200               | -  | 190       | 205       | 170       | 770           | 925            | -         | -         | -  | 170  | 190  | 205  | 770   | 925  | -     |  |
| 1250               | -  | -         | -         | -         | 565           | 735            | -         | -         | -  | -    | -    | -    | 565   | 735  | -     |  |
| 1300               | -  | -         | -         | -         | 430           | 585            | -         | -         | -  | -    | -    | -    | 430   | 585  | -     |  |
| 1350               | -  | -         | -         | -         | 310           | 480            | -         | -         | -  | -    | -    | -    | -     | -    | -     |  |
| 1400               | -  | -         | -         | -         | 240           | 380            | -         | -         | -  | -    | -    | -    | -     | -    | -     |  |
| 1450               | -  | -         | -         | -         | 170           | 290            | -         | -         | -  | -    | -    | -    | -     | -    | -     |  |
| 1500               | -  | -         | -         | -         | 135           | 205            | -         | -         | -  | -    | -    | -    | -     | -    | -     |  |

### ASME CLASS 1500 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

| Service temp<br>°C | Working pressure (bar) - Cast materials |           |           |           |               |                |           |           | Working pressure (bar) - Forged materials |       |       |       |       |       |       |  |
|--------------------|---|-----------|-----------|-----------|---------------|----------------|-----------|-----------|---|-------|-------|-------|-------|-------|-------|--|
|                    | ASTM A216                               | ASTM A217 | ASTM A217 | ASTM A217 | ASTM A351 CF8 | ASTM A351 CF8M | ASTM A352 | ASTM A352 | A105 & A350                               |       |       |       | F304L |       |       |  |
|                    | WCB                                     | WC6       | WC9       | C5        | ASTM A351 CF3 | ASTM A351 CF3M | LCB       | LCC       | -LF2                                      | F5    | F11   | F22   | F304  | F316  | F316L |  |
| -29 to 38          | 255.3                                   | 258.6     | 258.6     | 258.6     | 248.2         | 248.2          | 240.1     | 258.6     | 255.3                                     | 258.6 | 258.6 | 258.6 | 248.2 | 248.2 | 206.8 |  |
| 50                 | 250.6                                   | 258.6     | 258.6     | 258.6     | 239.1         | 240.6          | 237.3     | 258.6     | 250.6                                     | 258.6 | 258.6 | 258.6 | 239.1 | 240.6 | 200.1 |  |
| 100                | 233.0                                   | 257.4     | 257.6     | 257.6     | 204.3         | 211.0          | 226.7     | 257.6     | 233.0                                     | 257.6 | 257.4 | 257.6 | 204.3 | 211.0 | 173.9 |  |
| 150                | 225.4                                   | 248.7     | 250.8     | 250.8     | 185.0         | 192.5          | 219.7     | 250.8     | 225.4                                     | 250.8 | 248.7 | 250.8 | 185.0 | 192.5 | 157.0 |  |
| 200                | 219.0                                   | 239.8     | 243.4     | 243.4     | 172.4         | 178.3          | 212.7     | 243.2     | 219.0                                     | 243.4 | 239.8 | 243.4 | 172.4 | 178.3 | 145.8 |  |
| 250                | 209.7                                   | 231.8     | 231.8     | 231.8     | 162.4         | 166.9          | 203.9     | 231.8     | 209.7                                     | 231.8 | 231.8 | 231.8 | 162.4 | 166.9 | 137.3 |  |
| 300                | 199.1                                   | 214.4     | 214.4     | 214.4     | 154.6         | 158.1          | 193.4     | 214.4     | 199.1                                     | 214.4 | 214.4 | 214.4 | 154.6 | 158.1 | 130.3 |  |
| 325                | 193.6                                   | 206.6     | 206.6     | 206.6     | 151.1         | 154.4          | 187.9     | 206.6     | 193.6                                     | 206.6 | 206.6 | 206.6 | 151.1 | 154.4 | 127.4 |  |
| 350                | 187.8                                   | 201.1     | 201.1     | 201.1     | 148.1         | 151.6          | 182.0     | 200.1     | 187.8                                     | 201.1 | 201.1 | 201.1 | 148.1 | 151.6 | 125.4 |  |
| 375                | 181.8                                   | 194.1     | 194.1     | 194.1     | 145.2         | 149.4          | 174.9     | 189.2     | 181.8                                     | 194.1 | 194.1 | 194.1 | 145.2 | 149.4 | 123.8 |  |
| 400                | 173.6                                   | 183.1     | 183.1     | 183.1     | 142.2         | 147.2          | 163.1     | 173.6     | 173.6                                     | 183.1 | 183.1 | 183.1 | 142.2 | 147.2 | 121.5 |  |
| 425                | 143.8                                   | 175.1     | 175.1     | 175.1     | 140.0         | 145.7          | 136.5     | 143.8     | 143.8                                     | 175.1 | 175.1 | 175.1 | 140.0 | 145.7 | 119.3 |  |
| 450                | 115.0                                   | 169.0     | 169.0     | 169.0     | 137.0         | 144.2          | 107.9     | 115.0     | 115.0                                     | 169.0 | 169.0 | 169.0 | 137.0 | 144.2 | 117.1 |  |
| 475                | 87.2                                    | 158.2     | 158.2     | 139.3     | 134.7         | 143.4          | 78.3      | 85.4      | 87.2                                      | 139.3 | 158.2 | 158.2 | 134.7 | 143.4 | -     |  |
| 500                | 58.8                                    | 128.6     | 140.9     | 106.9     | 132.4         | 140.9          | 55.4      | 57.9      | -   | 106.9 | 128.6 | 140.9 | 132.4 | 140.9 | -     |  |
| 538                | 29.5                                    | 74.5      | 92.2      | 68.6      | 122.1         | 125.5          | 29.5      | 29.5      | -   | 68.6  | 74.5  | 92.2  | 122.1 | 125.5 | -     |  |
| 550                | -                                       | 63.5      | 78.2      | 60.2      | 117.8         | 124.9          | -         | -         | -   | 60.2  | 63.5  | 78.2  | 117.8 | 124.9 | -     |  |
| 575                | -                                       | 44.0      | 52.6      | 44.4      | 104.2         | 119.7          | -         | -         | -   | 44.4  | 44.0  | 52.6  | 104.2 | 119.7 | -     |  |
| 600                | -                                       | 30.5      | 34.4      | 31.2      | 84.4          | 99.5           | -         | -         | -   | 31.2  | 30.5  | 34.4  | 84.4  | 99.5  | -     |  |
| 625                | -                                       | 21.3      | 22.3      | 20.0      | 68.9          | 79.1           | -         | -         | -   | 20.0  | 21.3  | 22.3  | 68.9  | 79.1  | -     |  |
| 650                | -                                       | 14.2      | 14.2      | 11.8      | 56.3          | 63.3           | -         | -         | -   | 11.8  | 14.2  | 14.2  | 56.3  | 63.3  | -     |  |
| 675                | -                                       | -         | -         | -         | 46.7          | 51.6           | -         | -         | -   | -     | -     | -     | 46.7  | 51.6  | -     |  |
| 700                | -                                       | -         | -         | -         | 40.1          | 41.9           | -         | -         | -   | -     | -     | -     | 40.1  | 41.9  | -     |  |
| 725                | -                                       | -         | -         | -         | 33.8          | 34.9           | -         | -         | -   | -     | -     | -     | -     | -     | -     |  |
| 750                | -                                       | -         | -         | -         | 28.9          | 29.3           | -         | -         | -   | -     | -     | -     | -     | -     | -     |  |
| 775                | -                                       | -         | -         | -         | 22.8          | 22.8           | -         | -         | -   | -     | -     | -     | -     | -     | -     |  |
| 800                | -                                       | -         | -         | -         | 17.4          | 17.4           | -         | -         | -   | -     | -     | -     | -     | -     | -     |  |
| 816                | -                                       | -         | -         | -         | 14.1          | 14.1           | -         | -         | -   | -     | -     | -     | -     | -     | -     |  |

# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### ASME CLASS 2500 PRESSURE/TEMPERATURE RATINGS FOR VALVES (U.S. UNITS)

| Service temp °F | Working pressure (psig) - Cast materials |               |               |              |                             |                               |               |               | Working pressure (psig) - Forged materials |      |      |      |       |      |      |
|-----------------|--|---------------|---------------|--------------|-----------------------------|-------------------------------|---------------|---------------|--|------|------|------|-------|------|------|
|                 | ASTM A216 WCB                            | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8 ASTM A351 CF3 | ASTM A351 CF8M ASTM A351 CF3M | ASTM A352 LCB | ASTM A352 LCC | A105 & A350                                |      |      |      |       |      |      |
|                 | F5                                       | F11           | F22           | F304         | F316                        | F304L                         | -LF2          | F5            | F11  | F22  | F304 | F316 | F304L |      |      |
| -20 to 100      | 6170                                     | 6250          | 6250          | 6250         | 6000                        | 6000                          | 5785          | 6250          | 6170                                       | 6250 | 6250 | 6250 | 6000  | 6000 | 5000 |
| 200             | 5625                                     | 6250          | 6250          | 6205         | 5000                        | 5160                          | 5470          | 6250          | 5625                                       | 6205 | 6250 | 6250 | 5000  | 5160 | 4220 |
| 300             | 5470                                     | 6015          | 6070          | 5965         | 4500                        | 4660                          | 5315          | 6070          | 5470                                       | 5965 | 6015 | 6070 | 4500  | 4660 | 3780 |
| 400             | 5280                                     | 5775          | 5880          | 5880         | 4140                        | 4280                          | 5145          | 5880          | 5280                                       | 5880 | 5775 | 5880 | 4140  | 4280 | 3440 |
| 500             | 4990                                     | 5540          | 5540          | 5540         | 3880                        | 3980                          | 4850          | 5540          | 4990                                       | 5540 | 5540 | 5540 | 3880  | 3980 | 3180 |
| 600             | 4560                                     | 5040          | 5040          | 5040         | 3640                        | 3760                          | 4440          | 5040          | 4560                                       | 5040 | 5040 | 5040 | 3640  | 3760 | 3000 |
| 650             | 4475                                     | 4905          | 4905          | 4905         | 3580                        | 3700                          | 4355          | 4905          | 4475                                       | 4905 | 4905 | 4905 | 3580  | 3700 | 2920 |
| 700             | 4440                                     | 4730          | 4730          | 4730         | 3540                        | 3620                          | 4320          | 4730          | 4440                                       | 4730 | 4730 | 4730 | 3540  | 3620 | 2860 |
| 750             | 4200                                     | 4430          | 4430          | 4400         | 3460                        | 3560                          | 3945          | 4200          | 4200                                       | 4400 | 4430 | 4430 | 3460  | 3560 | 2800 |
| 800             | 3430                                     | 4230          | 4230          | 4230         | 3360                        | 3520                          | 3260          | 3430          | 3430                                       | 4230 | 4230 | 4230 | 3360  | 3520 | 2740 |
| 850             | 2230                                     | 4060          | 4060          | 4030         | 3300                        | 3480                          | 2230          | 2230          | 2230                                       | 4030 | 4060 | 4060 | 3300  | 3480 | 2680 |
| 900             | 1430                                     | 3745          | 3745          | 3085         | 3240                        | 3460                          | 1430          | 1430          | 1430                                       | 3085 | 3745 | 3745 | 3240  | 3460 | -    |
| 950             | 860                                      | 2655          | 3145          | 2285         | 3180                        | 3220                          | 860           | 860           | -  | 2285 | 2655 | 3145 | 3180  | 3220 | -    |
| 1000            | 430                                      | 1800          | 2170          | 1655         | 2675                        | 2915                          | 430           | 430           | -  | 1655 | 1800 | 2170 | 2675  | 2915 | -    |
| 1050            | 260                                      | 1200          | 1455          | 1200         | 2570                        | 2865                          | -             | -             | -  | 1200 | 1200 | 1455 | 2570  | 2865 | -    |
| 1100            | -  | 800           | 915           | 830          | 2145                        | 2545                          | -             | -             | -  | 830  | 800  | 915  | 2145  | 2545 | -    |
| 1150            | -  | 515           | 570           | 515          | 1655                        | 1970                          | -             | -             | -  | 515  | 515  | 570  | 1655  | 1970 | -    |
| 1200            | -  | 315           | 345           | 285          | 1285                        | 1545                          | -             | -             | -  | 285  | 315  | 345  | 1285  | 1545 | -    |
| 1250            | -  | -             | -             | -            | 945                         | 1230                          | -             | -             | -  | -    | -    | -    | 945   | 1230 | -    |
| 1300            | -  | -             | -             | -            | 715                         | 970                           | -             | -             | -  | -    | -    | -    | 715   | 970  | -    |
| 1350            | -  | -             | -             | -            | 515                         | 800                           | -             | -             | -  | -    | -    | -    | -     | -    | -    |
| 1400            | -  | -             | -             | -            | 400                         | 630                           | -             | -             | -  | -    | -    | -    | -     | -    | -    |
| 1450            | -  | -             | -             | -            | 285                         | 485                           | -             | -             | -  | -    | -    | -    | -     | -    | -    |
| 1500            | -  | -             | -             | -            | 230                         | 345                           | -             | -             | -  | -    | -    | -    | -     | -    | -    |

### ASME CLASS 2500 PRESSURE/TEMPERATURE RATINGS FOR VALVES (METRIC UNITS)

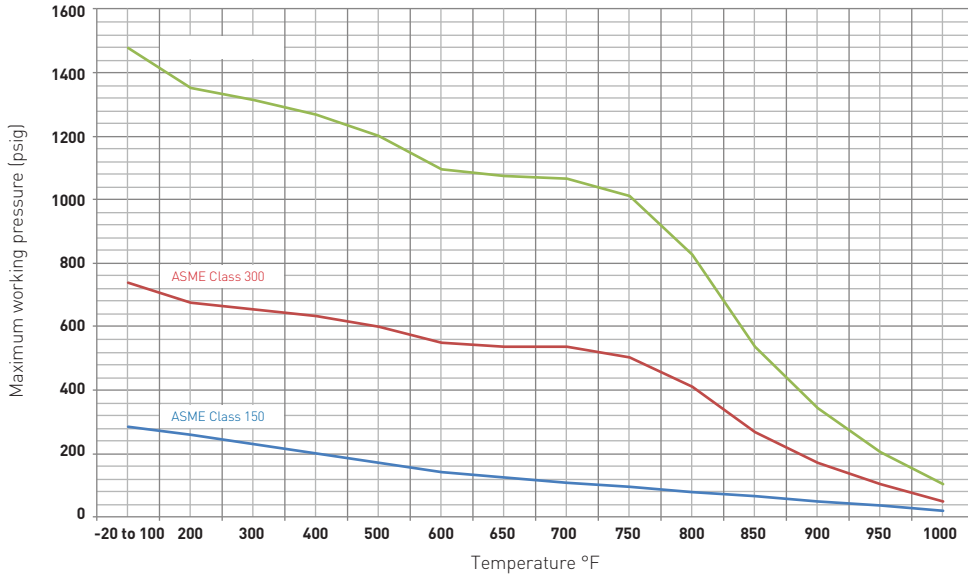
| Service temp °C | Working pressure (bar) - Cast materials |               |               |              |                             |                               |               |               | Working pressure (bar) - Forged materials |       |       |       |       |       |       |
|-----------------|---|---------------|---------------|--------------|-----------------------------|-------------------------------|---------------|---------------|---|-------|-------|-------|-------|-------|-------|
|                 | ASTM A216 WCB                           | ASTM A217 WC6 | ASTM A217 WC9 | ASTM A217 C5 | ASTM A351 CF8 ASTM A351 CF3 | ASTM A351 CF8M ASTM A351 CF3M | ASTM A352 LCB | ASTM A352 LCC | A105 & A350                               |       |       |       |       |       |       |
|                 | F5                                      | F11           | F22           | F304         | F316                        | F304L                         | -LF2          | F5            | F11                                       | F22   | F304  | F316  | F304L |       |       |
| -29 to 38       | 425.5                                   | 430.9         | 430.9         | 430.9        | 413.7                       | 413.7                         | 400.1         | 430.9         | 425.5                                     | 430.9 | 430.9 | 430.9 | 413.7 | 413.7 | 344.7 |
| 50              | 417.7                                   | 430.9         | 430.9         | 430.9        | 398.5                       | 400.9                         | 395.6         | 430.9         | 417.7                                     | 430.9 | 430.9 | 430.9 | 398.5 | 400.9 | 333.5 |
| 100             | 388.3                                   | 429.0         | 429.4         | 429.4        | 340.4                       | 351.6                         | 377.8         | 429.4         | 388.3                                     | 429.4 | 429.0 | 429.4 | 340.4 | 351.6 | 289.9 |
| 150             | 375.6                                   | 414.5         | 418.2         | 418.2        | 308.4                       | 320.8                         | 366.1         | 418.1         | 375.6                                     | 418.2 | 414.5 | 418.2 | 308.4 | 320.8 | 261.6 |
| 200             | 365.0                                   | 399.6         | 405.4         | 405.4        | 287.3                       | 297.2                         | 354.4         | 405.4         | 365.0                                     | 405.4 | 399.6 | 405.4 | 287.3 | 297.2 | 243.0 |
| 250             | 349.5                                   | 386.2         | 386.2         | 386.2        | 270.7                       | 278.1                         | 339.8         | 386.2         | 349.5                                     | 386.2 | 386.2 | 386.2 | 270.7 | 278.1 | 228.9 |
| 300             | 331.8                                   | 357.1         | 357.1         | 357.1        | 257.6                       | 263.5                         | 322.4         | 357.1         | 331.8                                     | 357.1 | 357.1 | 357.1 | 257.6 | 263.5 | 217.2 |
| 325             | 322.6                                   | 344.3         | 344.3         | 344.3        | 251.9                       | 257.4                         | 313.1         | 344.3         | 322.6                                     | 344.3 | 344.3 | 344.3 | 251.9 | 257.4 | 212.3 |
| 350             | 313.0                                   | 335.3         | 335.3         | 335.3        | 246.9                       | 252.7                         | 303.3         | 333.5         | 313.0                                     | 335.3 | 335.3 | 335.3 | 246.9 | 252.7 | 208.9 |
| 375             | 303.1                                   | 323.2         | 323.2         | 323.2        | 241.9                       | 249.0                         | 291.4         | 315.3         | 303.1                                     | 323.2 | 323.2 | 323.2 | 241.9 | 249.0 | 206.3 |
| 400             | 289.3                                   | 304.9         | 304.9         | 304.9        | 237.0                       | 245.3                         | 271.9         | 289.3         | 289.3                                     | 304.9 | 304.9 | 304.9 | 237.0 | 245.3 | 202.5 |
| 425             | 239.7                                   | 291.6         | 291.6         | 291.6        | 233.3                       | 242.9                         | 227.5         | 239.7         | 239.7                                     | 291.6 | 291.6 | 291.6 | 233.3 | 242.9 | 198.8 |
| 450             | 191.7                                   | 281.8         | 281.8         | 281.8        | 228.4                       | 240.4                         | 179.9         | 191.7         | 191.7                                     | 281.8 | 281.8 | 281.8 | 228.4 | 240.4 | 195.1 |
| 475             | 145.3                                   | 263.9         | 263.9         | 232.1        | 224.5                       | 238.9                         | 130.6         | 142.4         | 145.3                                     | 232.1 | 263.9 | 263.9 | 224.5 | 238.9 | -     |
| 500             | 97.9                                    | 214.4         | 235.0         | 178.2        | 220.7                       | 235.0                         | 92.3          | 96.5          | -   | 178.2 | 214.4 | 235.0 | 220.7 | 235.0 | -     |
| 538             | 49.2                                    | 124.1         | 153.7         | 114.3        | 203.6                       | 208.9                         | 49.2          | 49.2          | -   | 114.3 | 124.1 | 153.7 | 203.6 | 208.9 | -     |
| 550             | -                                       | 105.9         | 130.3         | 100.4        | 196.3                       | 208.0                         | -             | -             | -   | 100.4 | 105.9 | 130.3 | 196.3 | 208.0 | -     |
| 575             | -                                       | 73.4          | 87.7          | 74.0         | 173.7                       | 199.5                         | -             | -             | -   | 74.0  | 73.4  | 87.7  | 173.7 | 199.5 | -     |
| 600             | -                                       | 50.9          | 57.4          | 51.9         | 140.7                       | 165.9                         | -             | -             | -   | 51.9  | 50.9  | 57.4  | 140.7 | 165.9 | -     |
| 625             | -                                       | 35.5          | 37.2          | 33.3         | 114.9                       | 131.8                         | -             | -             | -   | 33.3  | 35.5  | 37.2  | 114.9 | 131.8 | -     |
| 650             | -                                       | 23.6          | 23.6          | 19.7         | 93.8                        | 105.5                         | -             | -             | -   | 19.7  | 23.6  | 23.6  | 93.8  | 105.5 | -     |
| 675             | -                                       | -             | -             | -            | 77.9                        | 86.0                          | -             | -             | -   | -     | -     | -     | 77.9  | 86.0  | -     |
| 700             | -                                       | -             | -             | -            | 66.9                        | 69.8                          | -             | -             | -   | -     | -     | -     | 66.9  | 69.8  | -     |
| 725             | -                                       | -             | -             | -            | 56.3                        | 58.2                          | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 750             | -                                       | -             | -             | -            | 48.1                        | 48.9                          | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 775             | -                                       | -             | -             | -            | 38.0                        | 38.0                          | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 800             | -                                       | -             | -             | -            | 29.2                        | 29.2                          | -             | -             | -   | -     | -     | -     | -     | -     | -     |
| 816             | -                                       | -             | -             | -            | 23.8                        | 23.8                          | -             | -             | -   | -     | -     | -     | -     | -     | -     |



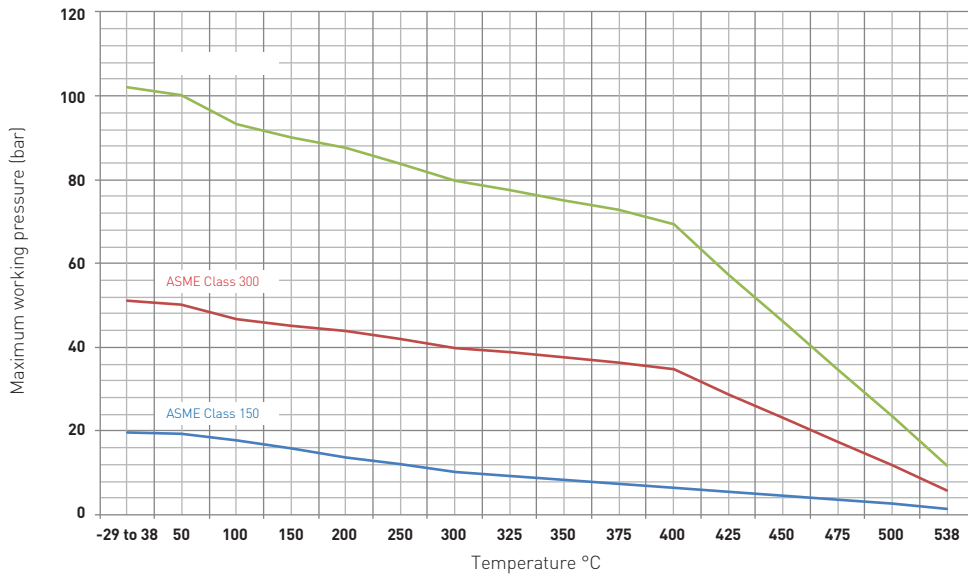
# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

PRESSURE TEMPERATURE RATING FOR CAST ASTM A216 WCB - U.S. UNITS



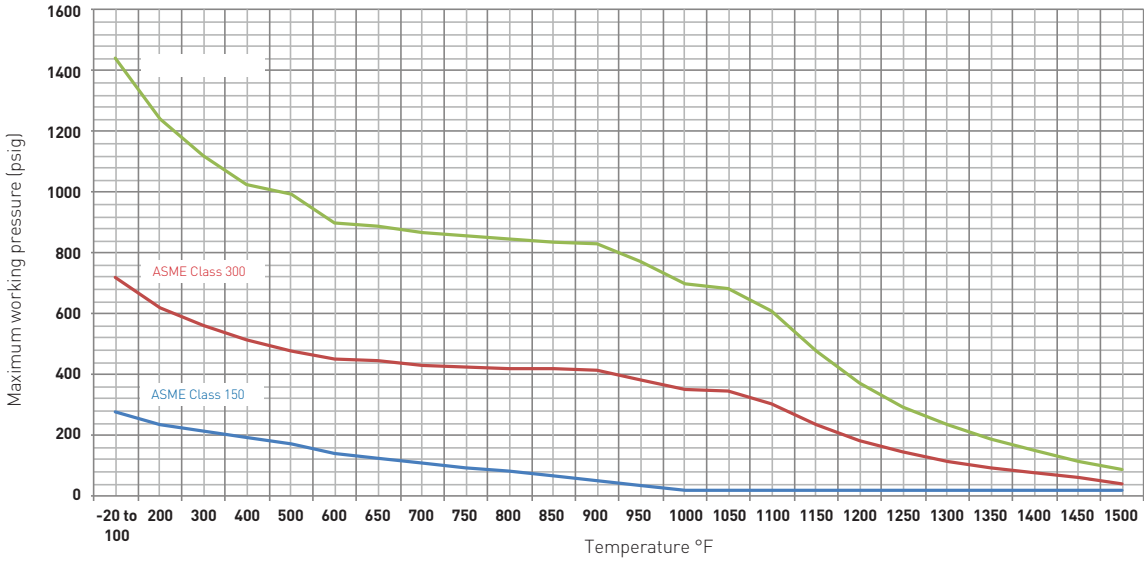
PRESSURE TEMPERATURE RATING FOR CAST ASTM A216 WCB - METRIC UNITS



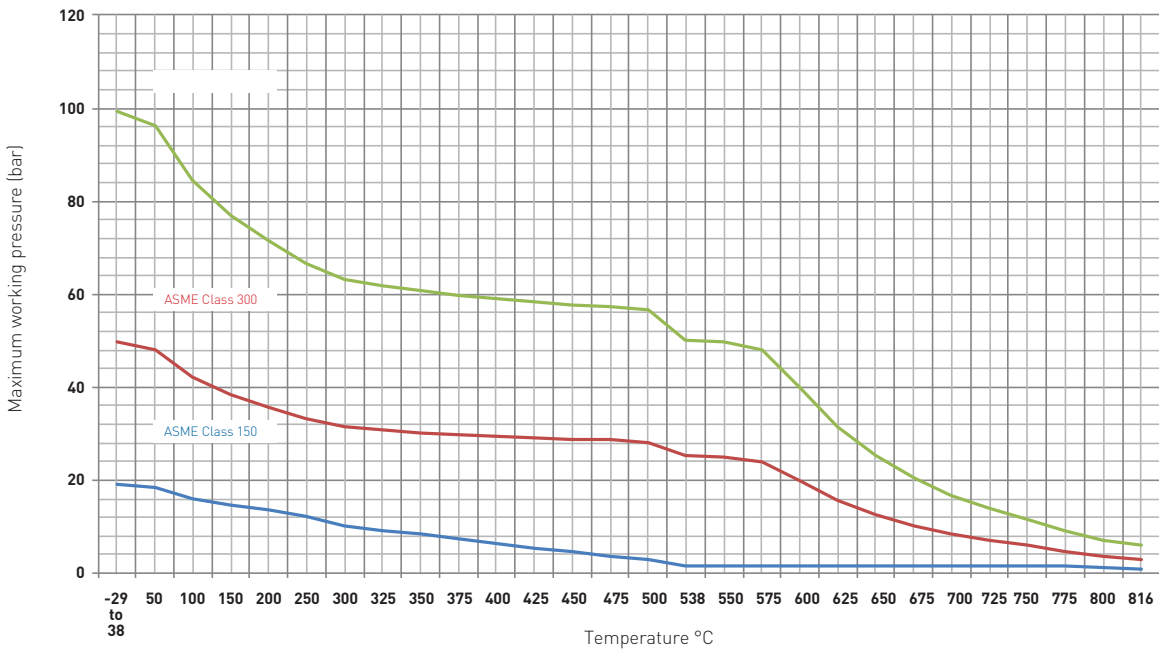
# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

PRESSURE TEMPERATURE RATING FOR CAST ASTM A351 CF8M, ASTM A351 CF3M - U.S. UNITS



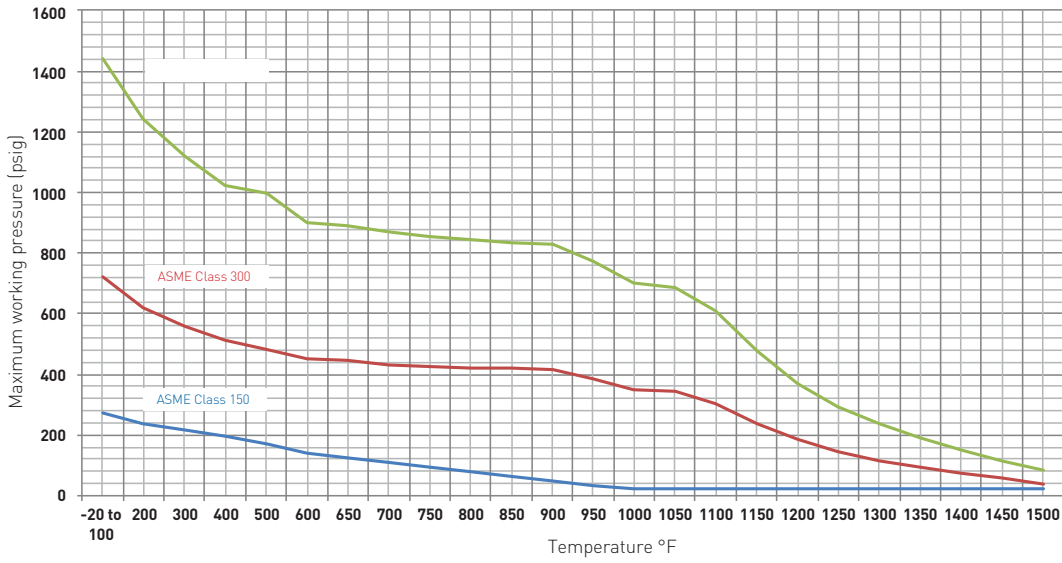
PRESSURE TEMPERATURE RATING FOR CAST ASTM A351 CF8M, ASTM A351 CF3M - METRIC UNITS



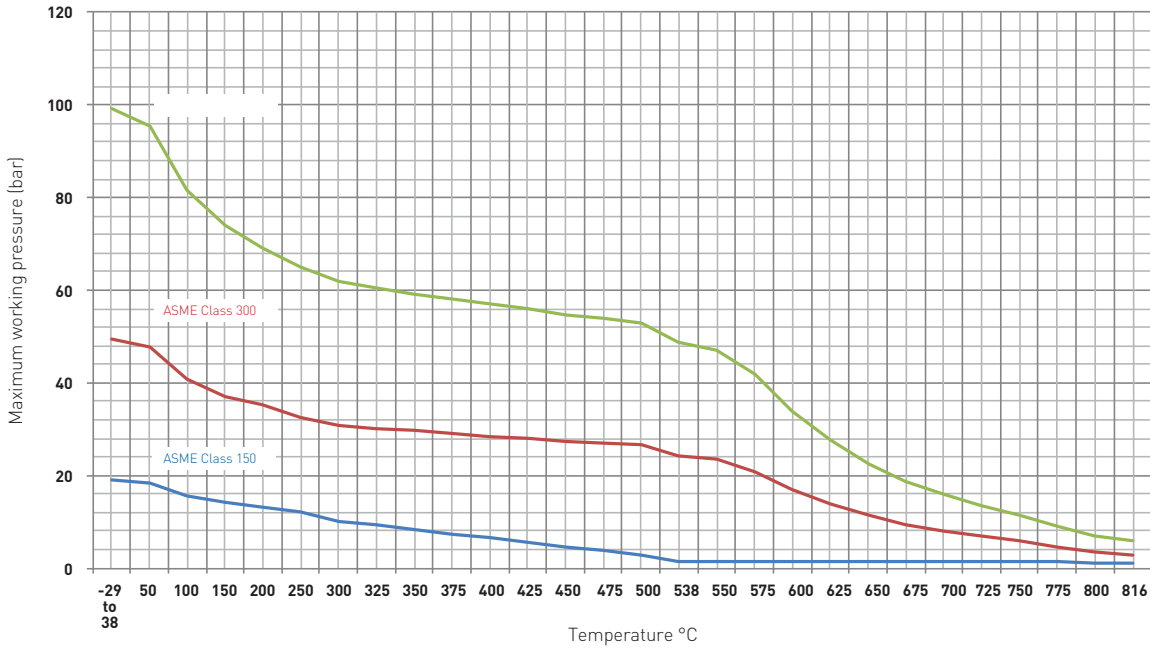
# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

PRESSURE TEMPERATURE RATING FOR CAST ASTM A351 CF8, ASTM A351 CF3M - U.S. UNITS



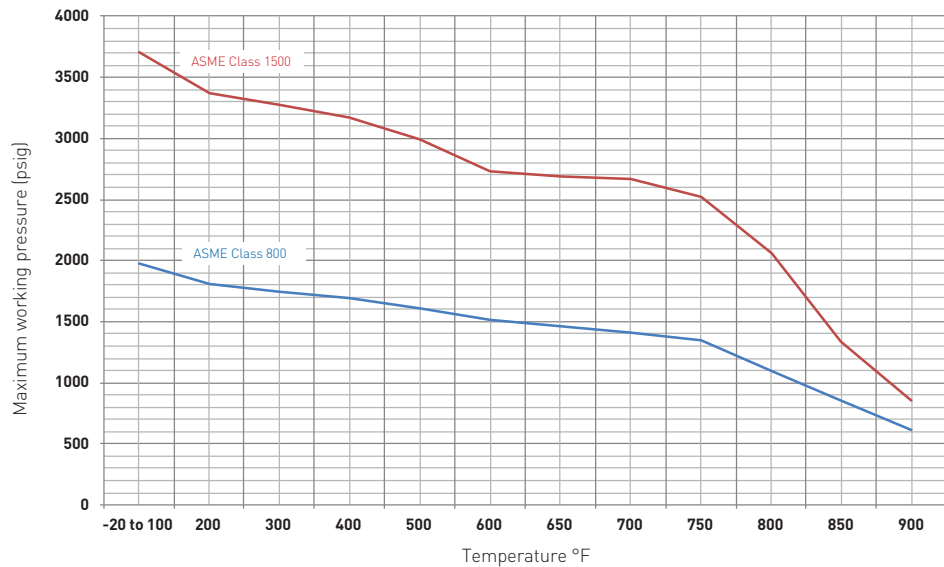
PRESSURE TEMPERATURE RATING FOR CAST ASTM A351 CF8, ASTM A351 CF3 - METRIC UNITS



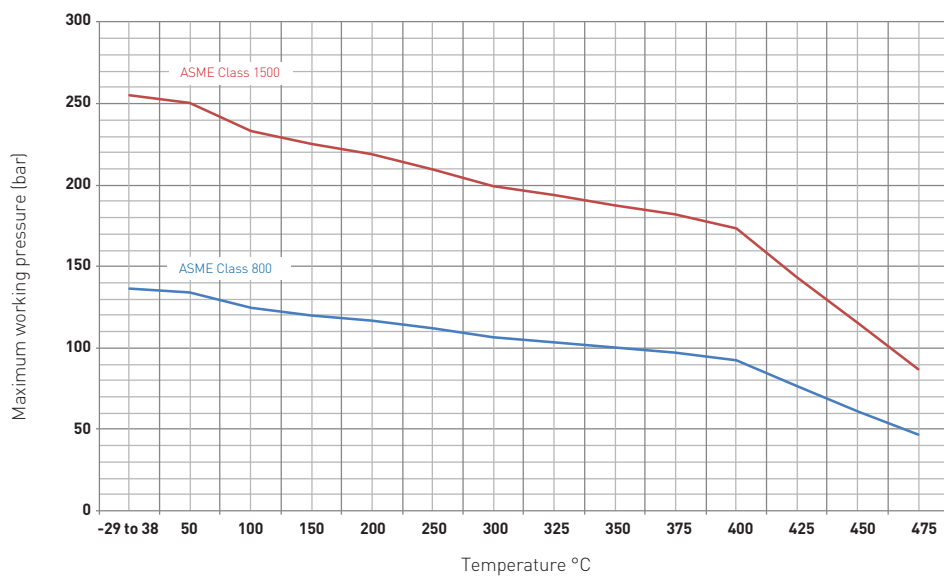
# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

PRESSURE TEMPERATURE RATING FOR FORGED A105 & A350-LF2 - U.S. UNITS



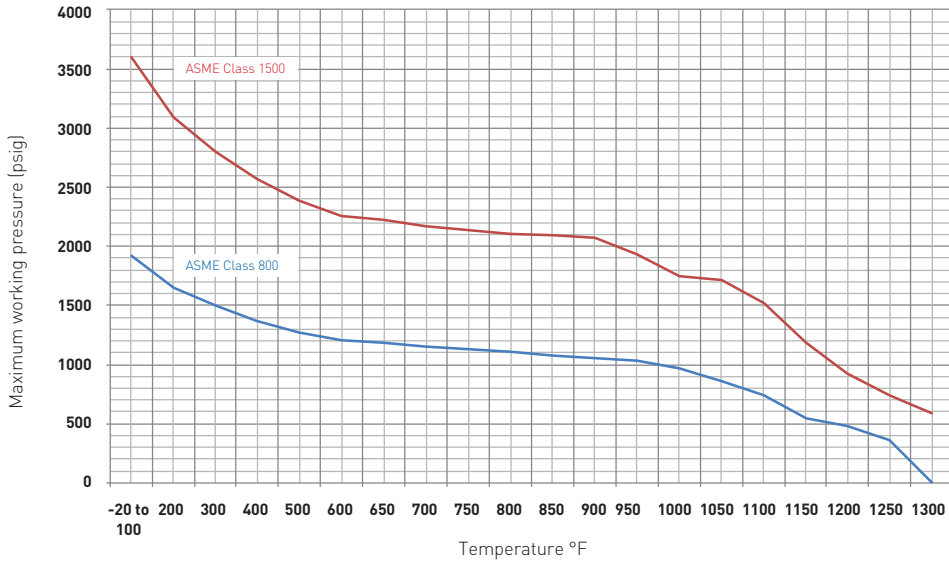
PRESSURE TEMPERATURE RATING FOR FORGED A105 & A350-LF2 - METRIC UNITS



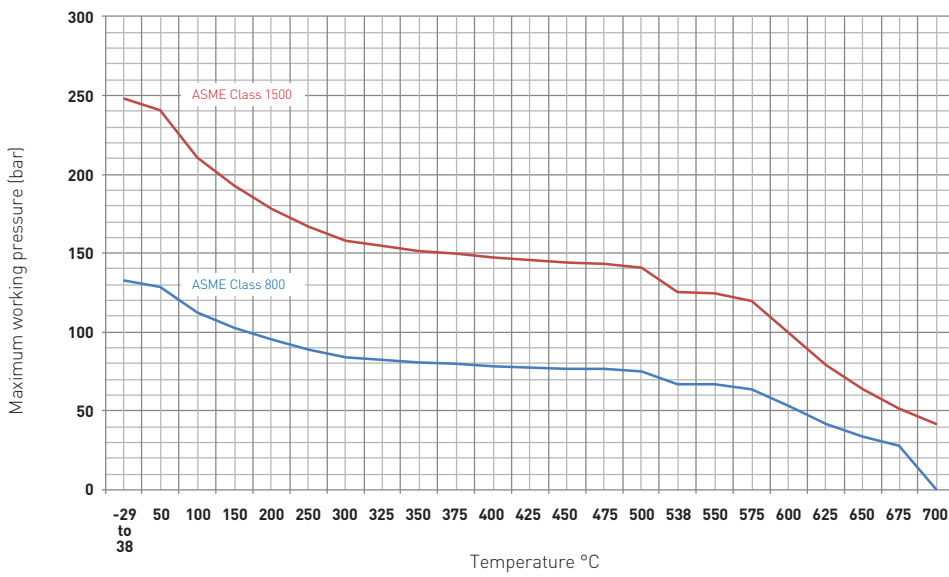
# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

### PRESSURE TEMPERATURE RATING FOR FORGED A182 F316 - U.S. UNITS



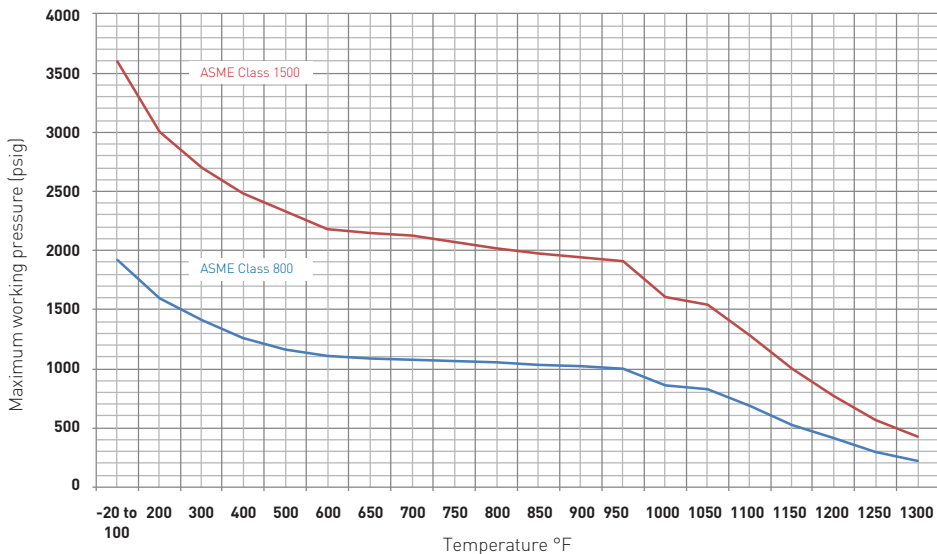
### PRESSURE TEMPERATURE RATING FOR FORGED A182 F316 - METRIC UNITS



# PRESSURE/TEMPERATURE RATINGS

## ASME B16.34 VALVES

PRESSURE TEMPERATURE RATING FOR FORGED A182 F304 - U.S. UNITS



PRESSURE TEMPERATURE RATING FOR FORGED A182 F304 - METRIC UNITS

