

CARBON STEEL FLANGES – PRESSURE TEMPERATURE RATINGS (POST 1974)

Table 1

| CLASS | 150 CLASS | | | 300 CLASS | | | 600 CLASS | | | 900 CLASS | | | 1500 CLASS | | |
|------------|--------------|------|-----|--------------|------|-----|--------------|------|------|--------------|------|------|--------------|------|------|
| | 1.1 | 1.2 | 1.4 | 1.1 | 1.2 | 1.4 | 1.1 | 1.2 | 1.4 | 1.1 | 1.2 | 1.4 | 1.1 | 1.2 | 1.4 |
| Materials | Carbon Steel | | | Carbon Steel | | | Carbon Steel | | | Carbon Steel | | | Carbon Steel | | |
| Temp °F | Norm | High | Low | Norm | High | Low | Norm | High | Low | Norm | High | Low | Norm | High | Low |
| -20 to 100 | 285 | 290 | 235 | 740 | 750 | 615 | 1480 | 1500 | 1235 | 2220 | 2250 | 1850 | 3705 | 3750 | 3085 |
| 200 | 260 | 280 | 215 | 675 | 750 | 565 | 1360 | 1500 | 1130 | 2035 | 2250 | 1695 | 3395 | 3750 | 2830 |
| 300 | 230 | 230 | 210 | 655 | 730 | 545 | 1310 | 1455 | 1090 | 1965 | 2185 | 1635 | 3270 | 3640 | 2725 |
| 400 | 200 | 200 | 200 | 635 | 705 | 525 | 1265 | 1405 | 1055 | 1900 | 2110 | 1580 | 3170 | 3520 | 2635 |
| 500 | 170 | 170 | 170 | 605 | 665 | 500 | 1206 | 1330 | 1005 | 1810 | 1995 | 1505 | 3015 | 3325 | 2510 |
| 600 | 140 | 140 | 140 | 570 | 605 | 475 | 1135 | 1210 | 945 | 1705 | 1815 | 1420 | 2840 | 3025 | 2365 |
| 650 | 125 | 125 | 125 | 550 | 590 | 455 | 1100 | 1175 | 915 | 1650 | 1765 | 1370 | 2745 | 2940 | 2285 |
| 700 | 100 | 110 | 110 | 530 | 555 | 440 | 1060 | 1135 | 885 | 1590 | 1665 | 1325 | 2655 | 2775 | 2210 |
| 750 | 95 | 95 | 95 | 505 | 505 | 430 | 1015 | 1015 | 855 | 1520 | 1520 | 1285 | 2535 | 2535 | 2140 |
| 800 | 80 | 80 | 80 | 410 | 410 | 370 | 825 | 825 | 740 | 1235 | 1235 | 1110 | 2055 | 2055 | 1850 |
| 850 | | | | | 320 | | | 640 | | | 955 | | | 1595 | |
| 900 | | | | | 225 | | | 445 | | | 67 | | | 1115 | |

CARBON STEEL FLANGES PRESSURE TEMPERATURE RATINGS Table 2

| MATERIAL GROUP | MATERIALS (SPEC – GRADE) | SEE NOTES |
|----------------|--|--|
| 1.1 | A105(1), A216-WCB(1), A515-70(1) A516-70(1)(4), A350-LF6CL1(5) A350-LF2(1), A537-CL.1(5), A350-LF3 | (1) (1) (4) (5) (1) (5) |
| 1.2 | A203-B(1), A203-E(1), A216-WCC(1), A352-LCC(2) A350-LF6CL2(5), A352-LC2, A352-LC3 | (1) (2) (5) |
| 1.3 | A352-LBC(2), A217-WC(6)(7) A351-LC(2), A515-65(1) A516-65(1)(4) A203-A(1), A203-D(1) | (2) (6) (7) (2) (1) (1) (4) (1) |
| 1.4 | A515-60(1) A516-60(1)(4) A350-LF1(1) | (1) (1) (4) (1) |

NOTES:

- (1) Permissible but not recommended for prolonged use above 800°F.
- (2) Not to be used over 650°F
- (3) Not to be used over 1000°F
- (4) Not to be used over 850°F
- (5) Not to be used over 500°F
- (6) Permissible but not recommended for prolonged use above 875°F
- (7) Use normalized and tempered material only.

Chart indicates Material Group 1.1-1.4 – Carbon Steel Flanges.

Refer to ANSI B16.5-1981 for complete listing of flange materials and ratings.