

CHINJIU 成就[®]

ĐƠN VỊ PHÂN PHỐI

CÔNG TY TNHH SX TM DV DƯƠNG HOÀNG PHÁT

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CHINJIU 成就[®]

温州成就法兰制造有限公司
WENZHOU CHENGJIU FLANGE MANUFACTURING CO.,LTD.

WENZHOU CHENGJIU FLANGE MANUFACTURING CO.,LTD.

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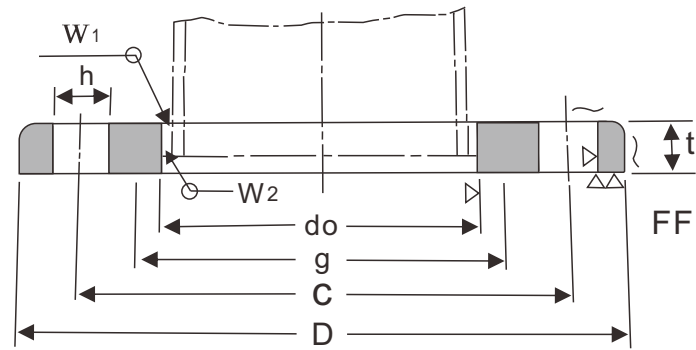
**WENZHOU CHENGJIU FLANGE
MANUFACTURING CO.,LTD.**



1K KS V 7805 JIS F 7805

SLIP-ON FLANGE

FLANGE FOR EXH.GAS PIPE(F-TYPE)

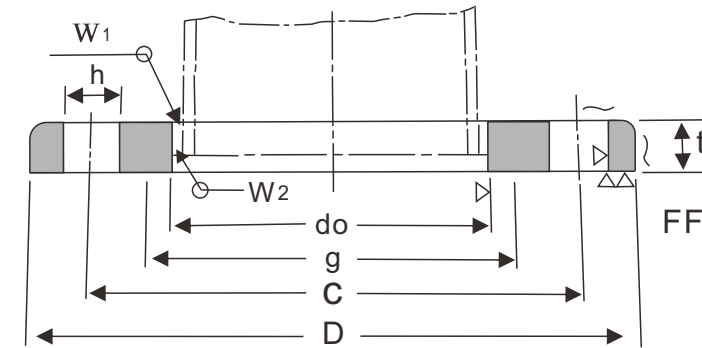


Unit:mm

| N/D | PIPE | | FLANGE | | | BOLT HOLE | | | BOLT (M) | W'T (KG) |
|-------|--------|------|---------|----|------|-----------|----|-----|----------|----------|
| | O/D(d) | D | I/D(do) | T | C | N | H | | | |
| 25 | 34.0 | 95 | 34.5 | 10 | 75 | 4 | 12 | M10 | 0.45 | |
| (32) | 42.7 | 115 | 43.2 | 12 | 90 | 4 | 15 | M12 | 0.73 | |
| 40 | 48.6 | 120 | 49.1 | 12 | 95 | 4 | 15 | M12 | 0.83 | |
| 50 | 60.5 | 130 | 61.1 | 14 | 105 | 4 | 15 | M12 | 1.06 | |
| 65 | 76.3 | 155 | 77.1 | 14 | 130 | 4 | 15 | M12 | 1.48 | |
| 80 | 89.1 | 180 | 90.0 | 14 | 145 | 4 | 19 | M16 | 1.97 | |
| 100 | 114.3 | 200 | 115.4 | 16 | 165 | 8 | 19 | M16 | 2.35 | |
| 125 | 139.8 | 235 | 141.2 | 16 | 200 | 8 | 19 | M16 | 3.20 | |
| 150 | 165.2 | 265 | 166.6 | 16 | 230 | 8 | 19 | M16 | 3.90 | |
| 200 | 216.3 | 320 | 218.0 | 16 | 280 | 8 | 23 | M20 | 5.00 | |
| 250 | 267.4 | 385 | 269.5 | 16 | 345 | 12 | 23 | M20 | 6.83 | |
| 300 | 318.5 | 430 | 321.0 | 16 | 390 | 12 | 23 | M20 | 7.45 | |
| 350 | 355.6 | 480 | 358.1 | 16 | 435 | 12 | 25 | M22 | 9.45 | |
| 400 | 406.4 | 540 | 409.0 | 16 | 495 | 16 | 25 | M22 | 11.43 | |
| 450 | 457.2 | 605 | 460.0 | 16 | 555 | 16 | 25 | M22 | 14.40 | |
| 500 | 508.0 | 655 | 511.0 | 16 | 605 | 20 | 25 | M22 | 15.73 | |
| (550) | 555.8 | 660 | 562.0 | 16 | 620 | 16 | 23 | M20 | 12.00 | |
| 600 | 609.6 | 710 | 613.0 | 16 | 670 | 16 | 23 | M20 | 12.12 | |
| (650) | 660.4 | 760 | 664.0 | 16 | 720 | 16 | 23 | M20 | 12.15 | |
| 700 | 711.2 | 815 | 715.0 | 16 | 775 | 16 | 23 | M20 | 14.26 | |
| 750 | 762.0 | 865 | 766.0 | 16 | 825 | 20 | 23 | M20 | 14.88 | |
| 800 | 812.8 | 915 | 817.0 | 16 | 875 | 20 | 23 | M20 | 15.70 | |
| (850) | 863.6 | 965 | 868.0 | 16 | 925 | 20 | 23 | M20 | 16.50 | |
| 900 | 914.4 | 1025 | 919.0 | 18 | 980 | 20 | 25 | M22 | 21.48 | |
| (950) | 962.0 | 1075 | 967.0 | 18 | 1030 | 20 | 25 | M22 | 21.97 | |
| 1000 | 1016.0 | 1125 | 1021.0 | 18 | 1080 | 20 | 25 | M22 | 23.38 | |
| 1050 | 1062.0 | 1175 | 1067.0 | 18 | 1130 | 24 | 25 | M22 | 25.21 | |
| 1100 | 1117.6 | 1225 | 1122.0 | 18 | 1180 | 24 | 25 | M22 | 25.16 | |
| 1150 | 1162.0 | 1275 | 1167.0 | 18 | 1230 | 24 | 25 | M22 | 26.64 | |
| 1200 | 1219.0 | 1325 | 1224.0 | 18 | 1280 | 24 | 25 | M22 | 27.60 | |
| 1250 | 1262.0 | 1375 | 1267.0 | 18 | 1330 | 28 | 25 | M22 | 29.72 | |
| 1300 | 1312.0 | 1425 | 1317.0 | 18 | 1380 | 28 | 25 | M22 | 30.92 | |
| 1350 | 1371.6 | 1475 | 1376.0 | 18 | 1430 | 28 | 25 | M22 | 32.38 | |
| 1400 | 1412.0 | 1525 | 1417.0 | 20 | 1480 | 28 | 25 | M22 | 37.02 | |
| 1450 | 1462.0 | 1595 | 1467.0 | 20 | 1540 | 28 | 27 | M24 | 45.81 | |
| 1500 | 1524.0 | 1645 | 1529.0 | 20 | 1590 | 28 | 27 | M24 | 46.88 | |
| 1600 | 1612.0 | 1745 | 1617.0 | 20 | 1690 | 28 | 27 | M24 | 50.54 | |
| 1700 | 1712.0 | 1845 | 1717.0 | 20 | 1790 | 28 | 27 | M24 | 53.70 | |
| 1800 | 1812.0 | 1950 | 1817.0 | 20 | 1895 | 32 | 27 | M24 | 58.90 | |
| 1900 | 1912.0 | 2050 | 1917.0 | 20 | 1995 | 32 | 27 | M24 | 62.18 | |
| 2000 | 2012.0 | 2150 | 2017.0 | 20 | 2095 | 36 | 27 | M24 | 65.10 | |
| 2100 | 2116.0 | 2250 | 2121.0 | 24 | 2195 | 36 | 27 | M24 | 79.55 | |
| 2200 | 2216.0 | 2350 | 2221.0 | 24 | 2295 | 40 | 27 | M24 | 82.94 | |
| 2300 | 2316.0 | 2450 | 2321.0 | 24 | 2395 | 40 | 27 | M24 | 86.75 | |
| 2400 | 2416.0 | 2550 | 2421.0 | 24 | 2495 | 40 | 27 | M24 | 89.71 | |
| 2500 | 2516.0 | 2650 | 2521.0 | 24 | 2595 | 48 | 27 | M24 | 93.52 | |
| 2600 | 2616.0 | 2750 | 2621.0 | 24 | 2695 | 48 | 27 | M24 | 97.34 | |

2K KSB 1511-1987 JIS B 2220-1977

SLIP-ON FLANGE



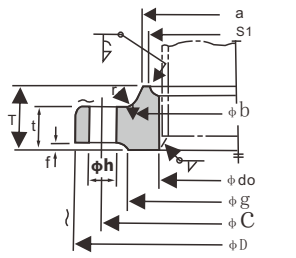
Unit:mm

| Nominal Bore of Flange | Outside Diam, of Applicable Pipe | Inside Diam, of Flange do | Sectional Dimensions | | Bolt Hole | | | Nominal Bolt Size |
|------------------------|----------------------------------|---------------------------|----------------------|------|-----------|----|----|-------------------|
| | | | t | D | C | h | N | |
| 450A | 457.2 | 460 | 22 | 605 | 555 | 23 | 16 | M20 |
| 500A | 508.0 | 511 | 22 | 655 | 605 | 23 | 20 | M20 |
| 550A | 558.8 | 562 | 24 | 720 | 665 | 25 | 20 | M22 |
| 600A | 609.6 | 613 | 24 | 770 | 715 | 25 | 20 | M22 |
| 650A | 660.4 | 664 | 24 | 825 | 770 | 25 | 24 | M22 |
| 700A | 711.2 | 715 | 24 | 875 | 820 | 25 | 24 | M22 |
| 750A | 762.0 | 766 | 24 | 945 | 880 | 27 | 24 | M24 |
| 800A | 812.8 | 817 | 24 | 995 | 930 | 27 | 24 | M24 |
| (850A) | 863.6 | 868 | 24 | 1045 | 980 | 27 | 24 | M24 |
| 900A | 914.4 | 919 | 24 | 1094 | 1030 | 27 | 24 | M24 |
| 1000A | 1016.0 | 1021 | 26 | 1195 | 1130 | 27 | 28 | M24 |
| (1100A) | 1117.6 | 1123 | 26 | 1305 | 1240 | 27 | 28 | M24 |
| 1200A | 1219.2 | 1224 | 26 | 1420 | 1350 | 27 | 32 | M24 |
| 1350A | 1371.6 | 1377 | 26 | 1575 | 1505 | 27 | 32 | M24 |
| 1500A | 1524.0 | 1529 | 28 | 1730 | 1660 | 27 | 36 | M24 |

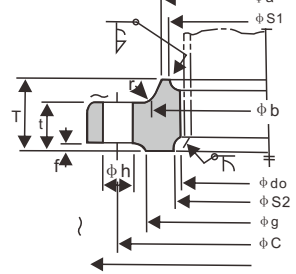
30K KS B1511(KS B 1503) JIS B 2220-2004

SLIP-ON WELDING STEEL PIPE FLANGE

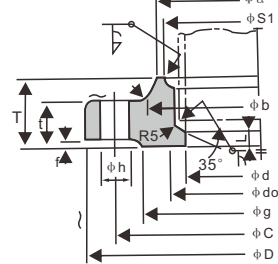
TYPE A
NOMINAL SIZE 10-50mm



TYPE B
NOMINAL SIZE 10-50mm



TYPE C
NOMINAL SIZE 65-600mm



* The surface finish (~) is in the case of die forging.

Unit:mm

| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Inside Dia. of Flange do | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | | | | Bolt Hole | | | Reference | | | | | Approx. Weight (kg) |
|------------------------|---------------------------------|--------------------------|--------------------------|--------------------------------|----|-------------|-----|---------|---|-----|-------|--------------------|-----------------------|-------------|-------------------|-----|-----------|----|---|---|------|---------------------|
| | | | | t | T | Dia. of Hub | | Rdd-ius | f | g | d | Bolt Circle Dia. C | Num-ber of Bolt Holes | Hole Dia. h | Nominal Bolt Size | S1 | m | S2 | n | l | | |
| | | | | | | a | b | | | | | | | | | | | | | | | |
| 10 | 17.3 | 17.8 | 110 | 16 | 24 | 30 | 34 | 4 | 1 | 52 | - | 75 | 4 | 19 | M16 | - | - | - | - | - | 0.99 | |
| 15 | 21.7 | 22.2 | 115 | 18 | 26 | 36 | 40 | 5 | 1 | 55 | - | 80 | 4 | 19 | M16 | 31 | 4 | 40 | 5 | - | 1.23 | |
| 20 | 27.2 | 27.7 | 120 | 18 | 28 | 42 | 46 | 5 | 1 | 60 | - | 85 | 4 | 19 | M16 | 37 | 5 | 44 | 5 | - | 1.34 | |
| 25 | 34.0 | 34.5 | 130 | 20 | 30 | 50 | 54 | 5 | 1 | 70 | - | 95 | 4 | 19 | M16 | 44 | 6 | 52 | 5 | - | 1.76 | |
| 32 | 42.7 | 43.2 | 140 | 22 | 32 | 60 | 64 | 6 | 2 | 80 | - | 105 | 4 | 19 | M16 | 52 | 6 | 60 | 5 | - | 2.15 | |
| 40 | 48.6 | 49.1 | 160 | 22 | 34 | 66 | 70 | 6 | 2 | 90 | - | 120 | 4 | 23 | M20 | 58 | 6 | 66 | 5 | - | 2.82 | |
| 50 | 60.5 | 61.1 | 165 | 22 | 36 | 82 | 86 | 6 | 2 | 105 | - | 130 | 8 | 19 | M16 | 70 | 6.5 | 78 | 5 | - | 2.89 | |
| 65 | 76.3 | 77.1 | 200 | 26 | 40 | 102 | 106 | 8 | 2 | 130 | 65.9 | 160 | 8 | 23 | M20 | 96 | 9.5 | 94 | 5 | 6 | 4.70 | |
| 80 | 89.1 | 90.0 | 210 | 28 | 44 | 115 | 121 | 8 | 2 | 140 | 78.1 | 170 | 8 | 23 | M20 | 109 | 9.5 | - | - | 6 | 5.36 | |
| (90) | 101.6 | 102.6 | 230 | 30 | 46 | 128 | 134 | 8 | 2 | 150 | 90.2 | 185 | 8 | 25 | M22 | 122 | 9.5 | - | - | 6 | 6.85 | |
| 100 | 114.3 | 115.4 | 240 | 32 | 48 | 141 | 147 | 8 | 2 | 160 | 102.3 | 195 | 8 | 25 | M22 | 135 | 9.5 | - | - | 6 | 7.89 | |
| 125 | 139.8 | 141.2 | 275 | 36 | 54 | 166 | 172 | 8 | 2 | 195 | 126.6 | 230 | 8 | 25 | M22 | 160 | 9.5 | - | - | 6 | 11.4 | |
| 150 | 165.2 | 166.6 | 325 | 38 | 58 | 196 | 204 | 8 | 2 | 235 | 151.0 | 275 | 12 | 27 | M24 | 186 | 9.5 | - | - | 6 | 16.7 | |
| 200 | 216.3 | 218.0 | 370 | 42 | 64 | 248 | 256 | 8 | 2 | 280 | 199.9 | 320 | 12 | 27 | M24 | 237 | 9.5 | - | - | 6 | 20.6 | |
| 250 | 267.4 | 269.5 | 450 | 48 | 72 | 306 | 314 | 10 | 2 | 345 | 248.8 | 390 | 12 | 22 | M30 | 290 | 10 | - | - | 6 | 36.1 | |
| 300 | 318.5 | 321.0 | 515 | 52 | 78 | 360 | 370 | 10 | 3 | 405 | 297.9 | 450 | 16 | 33 | M30 | 345 | 12 | - | - | 6 | 49.9 | |
| 350 | 355.6 | 358.1 | 560 | 54 | 84 | 402 | 412 | 12 | 3 | 450 | 333.4 | 495 | 16 | 33 | M30 | 383 | 13 | - | - | 6 | 61.2 | |
| 400 | 406.4 | 409.0 | 630 | 60 | 92 | 456 | 468 | 15 | 3 | 510 | 381.0 | 560 | 16 | 39 | M36 | 435 | 14 | - | - | 7 | 85.2 | |

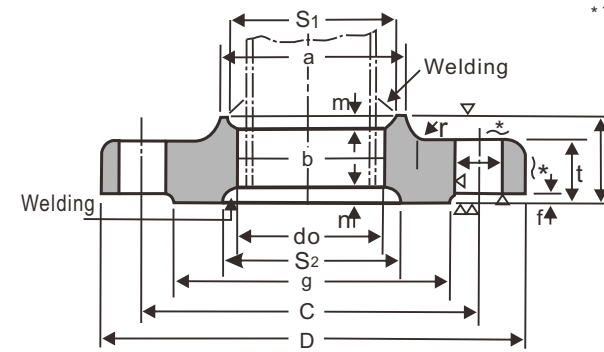
Notes:

- Flanges of parenthesized nominal diameter had better not be used.
- d is an example of pipe thickness for schedule 40 of KS D3562 and KS D3507 (JIS G3454, JIS G3456).if required, purchaser can specify for other pipe wall thickness.
- This diameters of bolt holes(h) shall be in accordance with Class 3 of KS B1007(Grade 3 of JIS B1001) where the nominal designation of screw thread of bolt is not more than M16, and in accordance with Class 2 of KS B1007(Grade 2 of JIS B1001) where the nominal designation of screw thread of bolt is not less than M30×3.
- The dimension of the notch(m,n,S,, Sa) for welding can decide between concerned parties agreement between parties concerned.

40K JIS B 2216

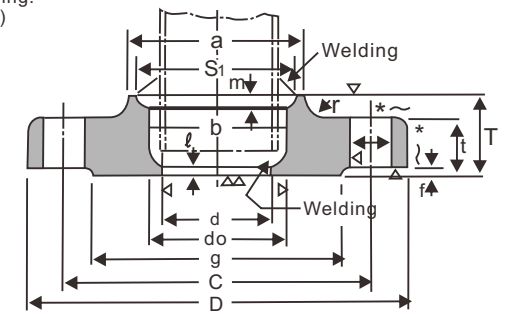
40KG/cm² SLIP-ON WELDING PIPE FLANGE

NOMINAL SIZE 10-65mm



* The surface finish is in the case of forging. (Δ:in other cases)

NOMINAL SIZE 65-400mm



Unit:mm

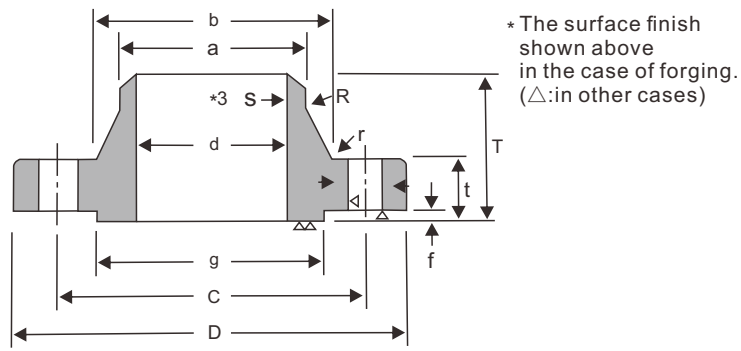
| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Inside Dia. of Flange do | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | | | | Bolt Hole | | | Reference | | | | | Approx. Weight (kg) |
|------------------------|---------------------------------|--------------------------|--------------------------|--------------------------------|----|-------------|-----|---------|---|-----|-------|--------------------|-----------------------|-------------|-------------------|-------|-----------|-------|-----|-------|--|---------------------|
| | | | | t | T | Dia. of Hub | | Rdd-ius | f | g | d | Bolt Circle Dia. C | Num-ber of Bolt Holes | Hole Dia. h | Nominal Bolt Size | S1 | m | S2 | n | | | |
| | | | | | | a | b | | | | | | | | | | | | | | | |
| 10 | 17.3 | 17.8 | 110 | 18 | 26 | 34 | 38 | 5 | 1 | 52 | - | 75 | 4 | 19 | M16 | 28.0 | 6 | 28.0 | 5 | 1.11 | | |
| 15 | 21.7 | 22.2 | 115 | 20 | 30 | 39 | 43 | 5 | 1 | 55 | - | 80 | 4 | 19 | M16 | 32.5 | 6 | 32.5 | 5 | 1.39 | | |
| 20 | 27.2 | 27.7 | 120 | 20 | 30 | 45 | 49 | 5 | 1 | 60 | - | 85 | 4 | 19 | M16 | 38.0 | 6 | 38.0 | 5 | 1.51 | | |
| 25 | 34.0 | 34.5 | 130 | 22 | 32 | 55 | 59 | 5 | 1 | 70 | - | 95 | 4 | 19 | M16 | 47.8 | 6 | 47.8 | 5 | 1.97 | | |
| 32 | 42.7 | 43.2 | 140 | 24 | 35 | 64 | 68 | 6 | 2 | 80 | - | 105 | 4 | 19 | M16 | 56.5 | 6 | 56.5 | 5 | 2.50 | | |
| 40 | 48.6 | 49.1 | 160 | 24 | 35 | 70 | 74 | 6 | 2 | 90 | - | 120 | 4 | 23 | M20 | 62.5 | 6 | 62.5 | 5 | 3.26 | | |
| 50 | 60.5 | 61.1 | 165 | 26 | 38 | 86 | 90 | 6 | 2 | 105 | - | 130 | 8 | 19 | M16 | 74.5 | 6 | 74.5 | 5.5 | 3.47 | | |
| 65 | 76.3 | 77.1 | 200 | 30 | 44 | 106 | 110 | 8 | 2 | 130 | 62.3 | 160 | 8 | 23 | M20 | 91.5 | 7 | 91.5 | 7 | 5.97 | | |
| 80 | 89.1 | 90.0 | 210 | 32 | 46 | 118 | 124 | 8 | 2 | 140 | 73.9 | 170 | 8 | 23 | M20 | 105.5 | 7.5 | 105.5 | 7 | 6.76 | | |
| 100 | 114.3 | 115.4 | 250 | 36 | 52 | 145 | 151 | 8 | 2 | 165 | 97.1 | 205 | 8 | 25 | M22 | 133.0 | 8.5 | 133.0 | 7 | 10.48 | | |
| 125 | 139.8 | 141.2 | 300 | 40 | 58 | 182 | 188 | 8 | 2 | 200 | 120.8 | 250 | 8 | 27 | M24 | 160.5 | 9.5 | 160.0 | 7 | 16.97 | | |
| 150 | 165.2 | 166.6 | 355 | 44 | 64 | 200 | 208 | 8 | 2 | 240 | 143.2 | 295 | 12 | 33 | M30 | 188.0 | 11 | 188.0 | 7 | 22.6 | | |
| 200 | 216.3 | 218.0 | 405 | 50 | 72 | 255 | 263 | 8 | 2 | 290 | 190.9 | 345 | 12 | 33 | M30 | 243.0 | 13 | 243.0 | 7 | 34.9 | | |
| 250 | 267.4 | 269.5 | 475 | 56 | 80 | 310 | 318 | 10 | 2 | 355 | 237.2 | 410 | 12 | 33 | M30 | 298.0 | 15 | 298.0 | 7 | 41.1 | | |

Notes:

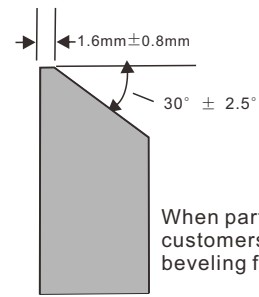
- As far as possible, nominal diameter in parenthesis should be avoid from use.
- The dimensional tolerance shall confirm to JIS B2203.
- The flange gasket surface is based on large raised facing specified in JIS B2202. But, if necessary, facings other than the large raised facing specified in JIS B2201 can be designated by customers.
- Size d is an example of pipe thickness for schedule 40 of JIS G3454 and JIS G3456. When other size is necessary, customer can order it at will.
- Refer to JIS B2216.

10K 10K WELDING NECK FLANGE

10Kg/cm²



Reference: Beveling



Unit:mm

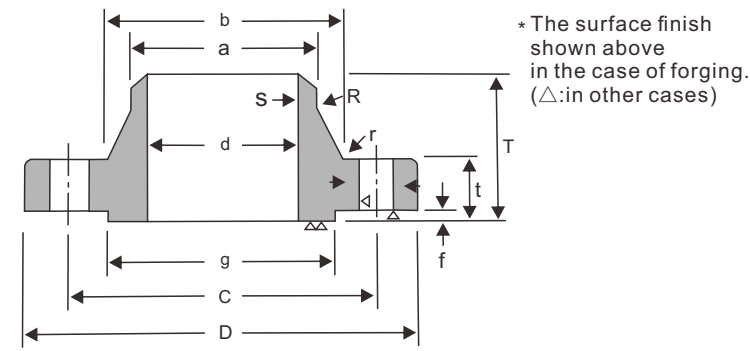
| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Inside Dia. of Flange d | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | Bolt Hole | | | Nominal Bolt Size | Length of wecr Depat P*4 |
|------------------------|---------------------------------|------------------------------|--------------------------|--------------------------------|-----------------|-------------|-----|--------------------------|---------------|-----------------------|--------------------|------------------------|-------------|-------------------|--------------------------|
| | | | | t | T ^{*1} | Dia. of Hub | | Rdd -ius r ^{*2} | Raised Face f | Dia. of Raised Face g | Bolt Circle Dia. C | Num -ber of Bolt Holes | Hole Dia. h | | |
| | | | | | | a | b | | | | | | | | |
| 10 | 17.3 | | 90 | 12 | 28.9 | 17.3 | 25 | 4 | 1 | 46 | 65 | 4 | 15 | M12 | 3.5 |
| 15 | 21.7 | | 95 | 12 | 30.6 | 21.7 | 33 | 4 | 1 | 51 | 70 | 4 | 15 | M12 | 4.5 |
| 20 | 27.2 | | 100 | 14 | 33.9 | 27.2 | 38 | 4 | 1 | 56 | 75 | 4 | 15 | M12 | 6.4 |
| 25 | 34.0 | | 125 | 14 | 36.3 | 34.0 | 47 | 4 | 1 | 67 | 90 | 4 | 19 | M16 | 6.0 |
| 32 | 42.7 | | 135 | 16 | 40.3 | 42.7 | 57 | 5 | 2 | 76 | 100 | 4 | 19 | M16 | 6.4 |
| 40 | 48.6 | | 140 | 16 | 41.2 | 48.6 | 64 | 5 | 2 | 81 | 105 | 4 | 19 | M16 | 5.9 |
| 50 | 60.5 | | 155 | 16 | 42.9 | 60.5 | 77 | 5 | 2 | 96 | 120 | 4 | 19 | M16 | 6.3 |
| 65 | 76.3 | | 175 | 18 | 53.0 | 76.3 | 97 | 5 | 2 | 116 | 140 | 4 | 19 | M16 | 9.1 |
| 80 | 89.1 | | 185 | 18 | 53.0 | 89.1 | 109 | 6 | 2 | 126 | 150 | 8 | 19 | M16 | 9.6 |
| (90) | 101.6 | To be specified by purchaser | 195 | 18 | 50.6 | 101.6 | 120 | 6 | 2 | 136 | 160 | 8 | 19 | M16 | 9.6 |
| 100 | 114.3 | | 210 | 18 | 54.3 | 114.3 | 135 | 6 | 2 | 151 | 175 | 8 | 19 | M16 | 10.4 |
| 125 | 139.8 | | 250 | 20 | 56.2 | 139.8 | 160 | 6 | 2 | 182 | 210 | 8 | 23 | M20 | 10.9 |
| 150 | 165.2 | | 280 | 22 | 65.3 | 165.2 | 190 | 6 | 2 | 212 | 240 | 8 | 23 | M20 | 12.3 |
| (175) | 190.7 | | 305 | 22 | 66.1 | 190.7 | 215 | 6 | 2 | 237 | 265 | 12 | 23 | M20 | 13.7 |
| 200 | 216.3 | | 330 | 22 | 66.1 | 216.3 | 240 | 6 | 2 | 262 | 290 | 12 | 23 | M20 | 14.4 |
| (225) | 241.8 | | 350 | 22 | 62.3 | 241.8 | 262 | 6 | 2 | 282 | 310 | 12 | 23 | M20 | 15.0 |
| 250 | 267.4 | | 400 | 24 | 70.7 | 267.4 | 292 | 6 | 2 | 324 | 355 | 12 | 25 | M22 | 15.9 |
| 300 | 318.5 | | 445 | 24 | 75.9 | 318.5 | 346 | 6 | 3 | 368 | 400 | 16 | 25 | M22 | 17.5 |
| 350 | 355.6 | | 490 | 26 | 83.0 | 355.6 | 386 | 8 | 3 | 413 | 445 | 16 | 25 | M22 | 19.0 |
| 400 | 406.4 | | 560 | 28 | 94.4 | 406.4 | 442 | 8 | 3 | 475 | 510 | 16 | 27 | M24 | 21.9 |
| 450 | 457.2 | | 620 | 30 | 107.9 | 457.2 | 502 | 10 | 3 | 530 | 565 | 20 | 27 | M24 | 21.9 |
| 500 | 508.0 | 675 | 30 | 110.2 | 508.0 | 554 | 10 | 3 | 585 | 620 | 20 | 27 | M24 | 22.7 | |
| 550 | 558.8 | 745 | 32 | 119.9 | 558.8 | 610 | 10 | 3 | 640 | 680 | 20 | 33 | M30 | 23.9 | |
| 600 | 609.6 | 795 | 32 | 123.6 | 609.6 | 662 | 10 | 3 | 690 | 730 | 24 | 33 | M30 | 26.1 | |

Notes:

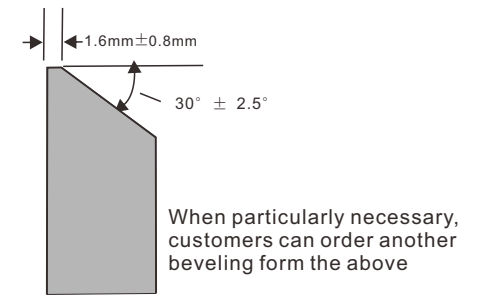
- *1*2*4 Dimensions of "T""r""s""P" are maker, Won's standard.
- *2 Under nominal size 225m/m & under dimension of "b" is maker, Won's standard
- All dimensions of flange was designed on JIS B 2220 & B 1503 base.

20K WELDING NECK FLANGE

20Kg/cm²



Reference: Beveling



Unit:mm

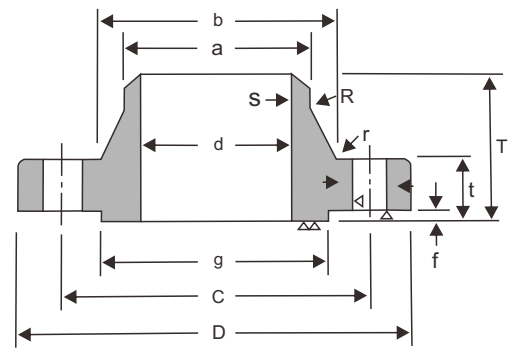
| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | | | | Bolt Hole | | | Nominal Bolt Size |
|------------------------|---------------------------------|--------------------------|--------------------------------|---|-------|-----|---|-------|------|--------|---|-----|--------------------|------------------------|-------------|-------------------|
| | | | t | d | a | b | S | T | P | Radius | f | g | Bolt Circle Dia. C | Num -ber of Bolt Holes | Hole Dia. h | |
| | | | | | | | | | | | | | | | | |
| 10 | 17.3 | 90 | 14 | | 17.3 | 32 | | 35.9 | 3.5 | 4 | 1 | 46 | 65 | 4 | 15 | M12 |
| 15 | 21.7 | 95 | 14 | | 21.7 | 36 | | 36.4 | 4.5 | 4 | 1 | 51 | 70 | 4 | 15 | M12 |
| 20 | 27.2 | 100 | 16 | | 27.2 | 42 | | 40.9 | 6.4 | 4 | 1 | 56 | 75 | 4 | 15 | M12 |
| 25 | 34.0 | 125 | 16 | | 34.0 | 50 | | 42.0 | 6.0 | 4 | 1 | 67 | 90 | 4 | 19 | M16 |
| 32 | 42.7 | 135 | 18 | | 42.7 | 60 | | 46.0 | 6.4 | 5 | 2 | 76 | 100 | 4 | 19 | M16 |
| 40 | 48.6 | 140 | 18 | | 48.6 | 66 | | 45.7 | 5.9 | 5 | 2 | 81 | 105 | 4 | 19 | M16 |
| 50 | 60.5 | 155 | 18 | | 60.5 | 80 | | 48.7 | 6.3 | 5 | 2 | 96 | 120 | 8 | 19 | M16 |
| 65 | 76.3 | 175 | 20 | | 76.3 | 104 | | 63.7 | 9.1 | 5 | 2 | 116 | 140 | 8 | 19 | M16 |
| 80 | 89.1 | 200 | 22 | | 89.1 | 117 | | 66.5 | 9.6 | 6 | 2 | 132 | 160 | 8 | 23 | M20 |
| 90 | 101.6 | 210 | 24 | | 101.6 | 130 | | 68.9 | 9.4 | 6 | 2 | 145 | 170 | 8 | 23 | M20 |
| 100 | 114.3 | 225 | 24 | | 114.3 | 142 | | 69.0 | 10.4 | 6 | 2 | 160 | 185 | 8 | 23 | M20 |
| 125 | 139.8 | 270 | 26 | | 139.6 | 172 | | 77.2 | 10.9 | 6 | 2 | 195 | 225 | 8 | 25 | M22 |
| 150 | 165.2 | 305 | 28 | | 165.2 | 202 | | 86.3 | 12.3 | 6 | 2 | 230 | 260 | 12 | 25 | M22 |
| 200 | 216.3 | 350 | 30 | | 216.3 | 252 | | 89.0 | 14.4 | 6 | 2 | 275 | 305 | 12 | 25 | M22 |
| 250 | 267.4 | 430 | 34 | | 267.4 | 312 | | 105.7 | 15.9 | 6 | 2 | 345 | 380 | 12 | 27 | M24 |
| 300 | 318.5 | 480 | 36 | | 318.5 | 364 | | 110.4 | 17.5 | 8 | 3 | 395 | 430 | 16 | 27 | M24 |
| 350 | 355.6 | 540 | 40 | | 355.6 | 408 | | 124.5 | 19.0 | 8 | 3 | 440 | 480 | 16 | 33 | M30×3 |
| 400 | 406.4 | 605 | 46 | | 406.4 | 456 | | 129.9 | 21.9 | 10 | 3 | 495 | 540 | 16 | 33 | M30×3 |
| 450 | 457.2 | 675 | 48 | | 457.2 | 514 | | 140.9 | 21.9 | 10 | 3 | 560 | 605 | 20 | 33 | M30×3 |
| 500 | 508.0 | 730 | 50 | | 508.0 | 568 | | 147.7 | 22.7 | 10 | 3 | 615 | 660 | 20 | 33 | M30×3 |
| 550 | 558.0 | 795 | 52 | | 558.8 | 622 | | 154.9 | 23.9 | 10 | 3 | 670 | 720 | 20 | 39 | M36×3 |
| 600 | 609.6 | 845 | 54 | | 609.6 | 676 | | 163.1 | 26.1 | 10 | 3 | 720 | 770 | 24 | 39 | M36×3 |

Notes:

1. Dimensions are maker Won Flange standard and design base is JIS B 2220-1984

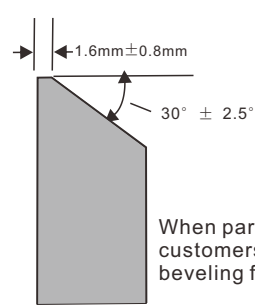
30K WELDING NECK FLANGE

30Kg/cm²



* The surface finish shown above in the case of forging. (△: in other cases)

Reference: Beveling



When particularly necessary, customers can order another beveling form the above

Unit:mm

| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | | | | Bolt Hole | | | Nominal Bolt Size | Approx. Weight (kg) | |
|------------------------|---------------------------------|--------------------------|--------------------------------|------------------------------|-------|-----|---|---|-----|--------|----|---|--------------------|-----------------------|-------------|-------------------|---------------------|-------|
| | | | t | d | a | b | S | T | P | Radius | f | g | Bolt Circle Dia. C | Num-ber of Bolt Holes | Hole Dia. h | | | |
| 15 | 21.7 | 115 | 18 | | 22.0 | 40 | | | 45 | 20 | 6 | 1 | 55 | 80 | 4 | 19 | M16 | 1.33 |
| 20 | 27.2 | 120 | 18 | | 27.5 | 44 | | | 45 | 20 | 6 | 1 | 60 | 85 | 4 | 19 | M16 | 1.47 |
| 25 | 34.0 | 130 | 20 | | 34.4 | 52 | | | 48 | 20 | 6 | 1 | 70 | 95 | 4 | 19 | M16 | 1.95 |
| 32 | 42.7 | 140 | 22 | | 43.1 | 62 | | | 52 | 30 | 6 | 2 | 80 | 105 | 4 | 19 | M16 | 2.43 |
| 40 | 48.6 | 160 | 22 | | 49.1 | 70 | | | 54 | 30 | 6 | 2 | 90 | 120 | 4 | 23 | M20 | 3.16 |
| 50 | 60.5 | 165 | 22 | | 61.0 | 84 | | | 57 | 30 | 8 | 2 | 105 | 130 | 8 | 19 | M16 | 3.33 |
| 65 | 76.3 | 200 | 23 | To be specified by purchaser | 76.9 | 104 | | | 69 | 30 | 8 | 2 | 130 | 160 | 8 | 23 | M20 | 5.91 |
| 80 | 89.1 | 210 | 28 | | 89.7 | 118 | | | 73 | 30 | 8 | 2 | 140 | 170 | 8 | 23 | M20 | 7.05 |
| 90 | 101.6 | 230 | 30 | | 102.3 | 130 | | | 74 | 30 | 8 | 2 | 150 | 185 | 8 | 25 | M22 | 8.54 |
| 100 | 114.3 | 240 | 32 | To be specified by purchaser | 115.1 | 142 | | | 76 | 30 | 8 | 2 | 160 | 195 | 8 | 25 | M22 | 9.72 |
| 125 | 139.8 | 275 | 36 | | 140.7 | 172 | | | 86 | 50 | 10 | 2 | 195 | 230 | 8 | 25 | M22 | 14.4 |
| 150 | 165.2 | 325 | 38 | | 166.2 | 202 | | | 95 | 50 | 10 | 2 | 235 | 275 | 12 | 27 | M24 | 20.6 |
| 200 | 316.3 | 370 | 42 | To be specified by purchaser | 217.5 | 254 | | | 102 | 50 | 10 | 2 | 280 | 320 | 12 | 27 | M24 | 28.7 |
| 250 | 267.4 | 450 | 48 | | 268.7 | 312 | | | 118 | 50 | 12 | 2 | 345 | 390 | 12 | 33 | M30×3 | 47.3 |
| 300 | 318.5 | 515 | 52 | | 320.0 | 366 | | | 127 | 50 | 15 | 3 | 405 | 450 | 16 | 33 | M30×3 | 62.8 |
| 350 | 355.6 | 560 | 54 | To be specified by purchaser | 357.2 | 406 | | | 134 | 80 | 15 | 3 | 450 | 495 | 16 | 33 | M30×3 | 77.0 |
| 400 | 406.4 | 630 | 60 | | 408.3 | 462 | | | 149 | 80 | 20 | 3 | 510 | 560 | 16 | 39 | M36×3 | 108.0 |

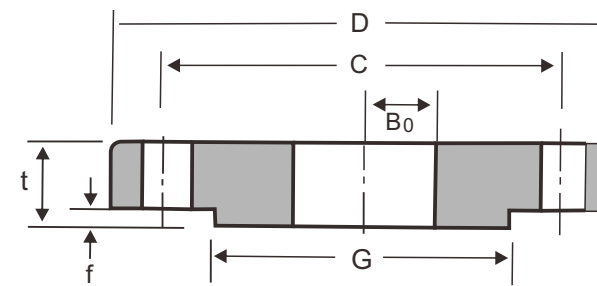
Notes:

- Flanges of parenthesized nominal diameter had better not be used.
- The Flange gasket surface is based on "large raised facing specified in JIS B 2202. If necessary, customers can order for other types of facing.
- Size d and size s are example for schedule 40 of JIS G 3454 and JIS G 3456. Customers can also order for other sizes.
- For dimensional tolerance: refer to JIS B 2203.
- Material Carbon Steel: S25C specified in JIS G 4051, or SF45 specified in JIS G 3201.
Molybdenum Steel: 1/2 Mo Steel specified in tables 1 and 2 of JIS B 2215.
Chromium-Molybdenum steel: 1/4 Cr 1/2 Mo Steel specified in tables 1 and 2 of JIS B 2215.

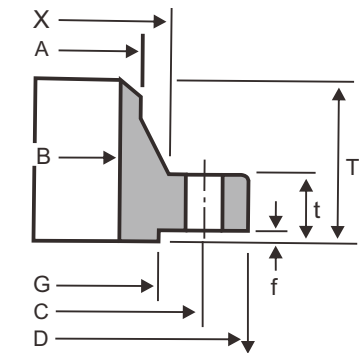
40K WELDING NECK STEEL PIPE FLANGE

40Kg/cm² JIS B 2210-1984

PL-Type



WN-Type



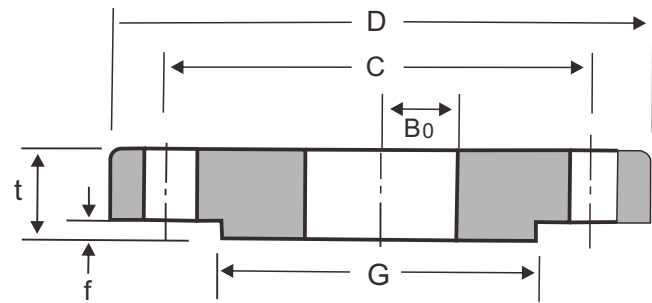
Unit:mm

| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | | | | Approx. Weight(kg) | | | | | | | |
|------------------------|---------------------------------|--------------------------|--------------------------------|----|---|-----|-----|-----------------------|-------------|------------------------------|------|-----|--------------------|---------|---------|---------|----|-----|-----|-----|
| | | | bo | t | f | G | C | Num-ber of Bolt Holes | Hole Dia. h | B | A | X | T | PL Type | BL Type | WN Type | | | | |
| 10 | 17.3 | 110 | 17.8 | 18 | 1 | 52 | 75 | 4 | 19 | | | | | | 17.3 | 38 | 53 | 1.2 | 1.2 | 1.3 |
| 15 | 21.7 | 115 | 22.2 | 20 | 1 | 55 | 80 | 4 | 19 | | | | | | 21.7 | 40 | 53 | 1.3 | 1.4 | 1.5 |
| 20 | 27.2 | 120 | 27.7 | 20 | 1 | 60 | 85 | 4 | 19 | | | | | | 27.2 | 45 | 58 | 1.5 | 1.6 | 1.7 |
| 25 | 34.0 | 130 | 34.5 | 22 | 1 | 70 | 95 | 4 | 19 | | | | | | 34.0 | 54 | 63 | 1.9 | 2.1 | 2.2 |
| 32 | 42.7 | 140 | 43.2 | 24 | 2 | 80 | 105 | 4 | 19 | | | | | | 42.7 | 62 | 69 | 2.4 | 2.7 | 2.8 |
| 40 | 48.6 | 160 | 49.1 | 24 | 2 | 90 | 120 | 4 | 23 | | | | | | 48.6 | 72 | 72 | 3.1 | 3.5 | 3.5 |
| 50 | 60.5 | 165 | 61.1 | 26 | 2 | 105 | 130 | 8 | 19 | To be specified by purchaser | | | | | 60.5 | 88 | 75 | 3.3 | 3.9 | 4.1 |
| 65 | 76.3 | 200 | 77.1 | 30 | 2 | 130 | 160 | 8 | 23 | | 76.3 | 108 | 81 | 5.5 | 6.6 | 6.9 | | | | |
| 80 | 89.1 | 210 | 90.0 | 32 | 2 | 140 | 170 | 8 | 23 | | 89.1 | 119 | 85 | 6.4 | 8.0 | 7.9 | | | | |
| 90 | 101.6 | 230 | 102.6 | 34 | 2 | 150 | 185 | 8 | 25 | 101.6 | 130 | 88 | 7.9 | 10.1 | 9.4 | | | | | |
| 100 | 114.3 | 250 | 115.4 | 36 | 2 | 165 | 205 | 8 | 25 | 114.3 | 146 | 104 | 9.9 | 12.9 | 12.3 | | | | | |
| 125 | 139.8 | 300 | 141.2 | 40 | 2 | 200 | 250 | 8 | 27 | 139.8 | 186 | 112 | 15.9 | 20.8 | - | | | | | |
| 150 | 165.2 | 355 | 166.6 | 44 | 2 | 240 | 295 | 12 | 33 | 165.2 | 215 | 120 | 23.2 | 30.8 | 30.6 | | | | | |
| 200 | 216.3 | 405 | 218.0 | 50 | 2 | 290 | 345 | 12 | 33 | 216.3 | 270 | 135 | 32.1 | 46.8 | 41.6 | | | | | |
| 250 | 267.4 | 475 | 269.5 | 56 | 2 | 355 | 410 | 12 | 33 | 267.4 | 333 | 154 | 48.6 | 73.8 | 68.1 | | | | | |
| 300 | 318.5 | 540 | 321.0 | 60 | 3 | 410 | 470 | 16 | 39 | 318.5 | 400 | 159 | 61.1 | 99.4 | 96.0 | | | | | |
| 350 | 355.6 | 585 | 358.1 | 64 | 3 | 455 | 515 | 16 | 39 | 355.6 | 432 | 168 | 75.2 | 126.1 | 115.0 | | | | | |
| 400 | 406.4 | 645 | 409.0 | 70 | 3 | 515 | 570 | 16 | 39 | 406.4 | 466 | 181 | 97.4 | 170.0 | 143.0 | | | | | |

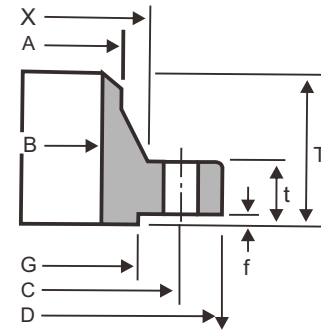
63K WELDING NECK STEEL PIPE FLANGE

63Kg/cm² JIS B 2210-1984

PL-Type



WN-Type



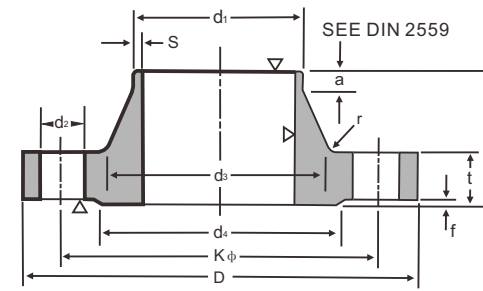
Unit:mm

| Nominal Bore of Flange | Outside Dia. of Applicable Pipe | Outside Dia. of Flange D | Sectional Dimensions of Flange | | | | | | | | | | Approx. Weight(kg) | | | |
|------------------------|---------------------------------|--------------------------|--------------------------------|----|---|-----|-----|-----------------------|-------------|------------------------------|-------|-----|--------------------|---------|---------|---------|
| | | | bo | t | f | G | C | Num-ber of Bolt Holes | Hole Dia. h | B | A | X | T | PL Type | BL Type | WN Type |
| 10 | 17.3 | 115 | 17.8 | 23 | 1 | 52 | 80 | 4 | 19 | | 17.3 | 40 | 61 | 1.6 | 1.7 | 1.6 |
| 15 | 21.7 | 120 | 22.2 | 23 | 1 | 55 | 85 | 4 | 19 | | 21.7 | 42 | 61 | 1.8 | 1.9 | 1.9 |
| 20 | 27.2 | 135 | 27.7 | 25 | 1 | 60 | 95 | 4 | 23 | | 27.2 | 46 | 71 | 2.4 | 2.5 | 2.5 |
| 25 | 34.0 | 140 | 34.5 | 27 | 1 | 70 | 100 | 4 | 23 | | 34.0 | 56 | 74 | 2.7 | 2.9 | 3.5 |
| 32 | 42.7 | 150 | 43.2 | 30 | 2 | 80 | 110 | 4 | 23 | | 42.7 | 60 | 75 | 3.4 | 3.8 | 3.7 |
| 40 | 48.6 | 175 | 49.1 | 32 | 2 | 90 | 130 | 4 | 25 | | 48.6 | 75 | 85 | 5.1 | 5.6 | 5.5 |
| 50 | 60.5 | 185 | 61.1 | 34 | 2 | 105 | 145 | 8 | 23 | To be specified by purchaser | 60.5 | 92 | 104 | 5.5 | 6.3 | 6.5 |
| 65 | 76.3 | 220 | 77.1 | 38 | 2 | 130 | 175 | 8 | 25 | | 76.3 | 118 | 107 | 5.8 | 7.2 | 10.3 |
| 80 | 89.1 | 230 | 90.0 | 40 | 2 | 140 | 185 | 8 | 25 | | 89.1 | 130 | 120 | 9.9 | 11.9 | 12.4 |
| 90 | 101.6 | 255 | 102.6 | 42 | 2 | 150 | 205 | 8 | 27 | | 101.6 | 140 | 126 | 12.7 | 15.4 | 15.2 |
| 100 | 114.3 | 270 | 115.4 | 44 | 2 | 165 | 220 | 8 | 27 | | 114.3 | 154 | 126 | 14.7 | 18.3 | 17.7 |
| 125 | 139.8 | 325 | 141.2 | 50 | 2 | 200 | 265 | 8 | 33 | | 139.8 | 190 | 128 | 23.8 | 30.0 | - |
| 150 | 165.2 | 365 | 166.6 | 54 | 2 | 240 | 305 | 12 | 33 | | 165.2 | 230 | 173 | 30.9 | 40.2 | 39.4 |
| 200 | 216.3 | 425 | 218.0 | 60 | 2 | 290 | 360 | 12 | 33 | | 216.3 | 280 | 215 | 44.6 | 62.3 | 60.1 |
| 250 | 267.4 | 500 | 269.5 | 68 | 2 | 355 | 430 | 12 | 39 | | 267.4 | 348 | 256 | 67.1 | 97.7 | 114.0 |
| 300 | 318.5 | 560 | 321.0 | 77 | 3 | 410 | 485 | 16 | 39 | | 318.5 | 402 | 286 | 88.9 | 138.1 | 154.0 |
| 350 | 355.6 | 615 | 358.1 | 81 | 3 | 455 | 530 | 16 | 46 | 355.6 | 438 | 301 | 108.5 | 172.9 | 191.0 | |
| 400 | 406.4 | 680 | 409.0 | 89 | 3 | 515 | 590 | 16 | 46 | 406.4 | 490 | 314 | 144.2 | 236.5 | 247.0 | |

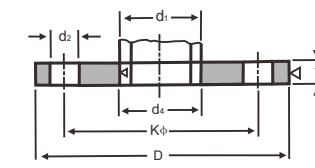
6BAR

DIN 2573 SLIP-ON FLANGE
DIN 2527 BLIND FLNAGE
DIN 2631 WELDING NECK FLANGE

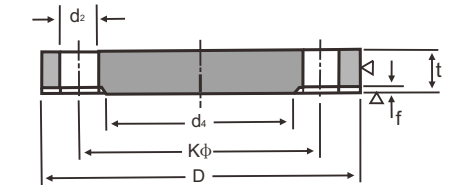
WELDING NECK



SLIP-ON



BLIND



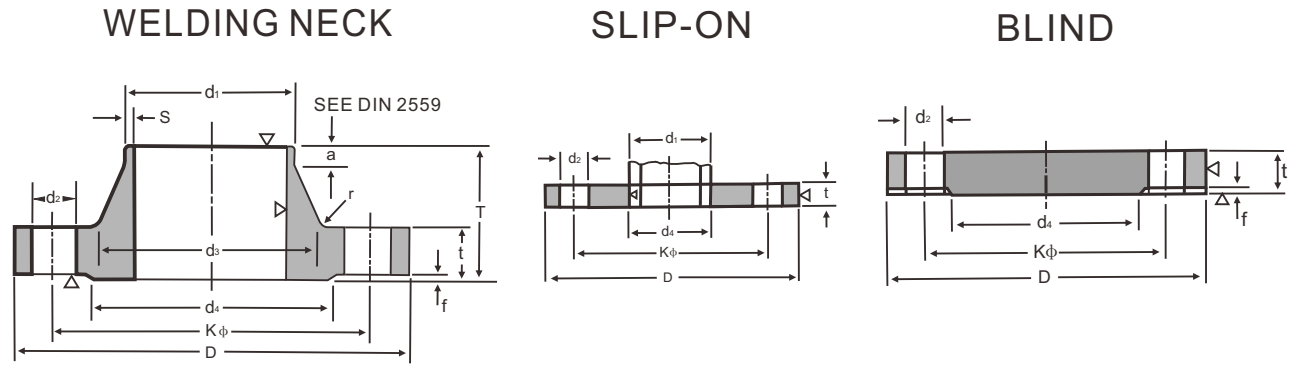
Unit:mm

| Nominal Bore | d1 | D | Common Dimension | | | k | T | Hub | | | Raised Face | | Drilling | | | Approx. Weight(kg) | | | |
|--------------|--------------|------|------------------|---------|-------|------|----|-----------|-----|----|-------------|------|----------|----------------|--------------|--------------------|----------|----------|-------|
| | | | Welding Neck | Slip-on | Blind | | | d3 | s | r | a | d4 | f | Number of Bolt | Dia. of Bolt | d2 | DIN 2573 | DIN 2631 | |
| 10 | 14 (17.2") | 75 | 12 | 12 | 12 | 50 | 28 | 22 (26) | 1.8 | 4 | 6 | 35 | 2 | 4 | M10 | - | 11.5 | 0.036 | 0.335 |
| 15 | 20 (21.3") | 80 | 12 | 12 | 12 | 55 | 30 | 28 (30) | 2.0 | 4 | 6 | 40 | 2 | 4 | M10 | - | 11.5 | 0.410 | 0.392 |
| 20 | 25 (26.9") | 90 | 14 | 14 | 14 | 65 | 32 | 35 (38) | 2.3 | 4 | 6 | 50 | 2 | 4 | M10 | - | 11.5 | 0.600 | 0.592 |
| 25 | 30 (33.7") | 100 | 14 | 14 | 14 | 75 | 35 | 40 (42) | 2.6 | 4 | 6 | 60 | 2 | 4 | M10 | - | 11.5 | 0.740 | 0.747 |
| 32 | 38 (42.4") | 120 | 14 | 16 | 14 | 90 | 35 | 50 (55) | 2.6 | 6 | 6 | 70 | 2 | 4 | M12 (1/2") | 14 | 1.19 | 1.05 | |
| 40 | 44.5 (48.3") | 130 | 14 | 16 | 14 | 100 | 38 | 58 (62) | 2.6 | 6 | 7 | 80 | 3 | 4 | M12 (1/2") | 14 | 1.39 | 1.18 | |
| 50 | 57 (60.3") | 140 | 14 | 16 | 14 | 110 | 38 | 70 (74) | 2.9 | 6 | 8 | 90 | 3 | 4 | M12 (1/2") | 14 | 1.35 | 1.34 | |
| 65 | 76.1 (88.9") | 160 | 14 | 16 | 14 | 130 | 38 | 88 | 2.9 | 6 | 9 | 110 | 3 | 4 | M12 (1/2") | 14 | 1.89 | 1.67 | |
| 80 | 76.1 (88.9") | 190 | 16 | 18 | 16 | 150 | 42 | 102 | 3.2 | 8 | 10 | 128 | 3 | 4 | M16 (5/8") | 18 | 2.98 | 2.71 | |
| 100 | 108 (114.3") | 210 | 16 | 18 | 16 | 170 | 45 | 122 (130) | 3.6 | 8 | 10 | 148 | 3 | 4 | M16 (5/8") | 18 | 3.46 | 3.24 | |
| 125 | 133 (139.7") | 240 | 18 | 20 | 18 | 200 | 48 | 148 (155) | 4.0 | 8 | 10 | 178 | 3 | 8 | M16 (5/8") | 18 | 4.60 | 4.49 | |
| 150 | 159 (168.3") | 265 | 18 | 20 | 18 | 225 | 48 | 172 (184) | 4.5 | 10 | 12 | 202 | 3 | 8 | M16 (5/8") | 18 | 5.22 | 5.15 | |
| 200 | 216 (219.1") | 320 | 20 | 22 | 20 | 280 | 55 | 230 (236) | 5.9 | 10 | 15 | 258 | 3 | 8 | M16 (5/8") | 18 | 7.15 | 7.78 | |
| 250 | 267 (273") | 375 | 22 | 24 | 22 | 335 | 60 | 282 (290) | 6.2 | 12 | 15 | 312 | 3 | 12 | M16 (5/8") | 18 | 9.61 | 10.8 | |
| 300 | 318 (323.9") | 440 | 22 | 24 | 22 | 395 | 62 | 335 (342) | 7.1 | 12 | 15 | 365 | 4 | 12 | M20 (3/4") | 23 | 12.6 | 14.0 | |
| 350 | 355.6 (368) | 490 | 22 | 26 | 22 | 445 | 62 | 385 | 7.1 | 12 | 15 | 415 | 4 | 12 | M20 (3/4") | 23 | 15.6 | 16.1 | |
| 400 | 406.4 (419) | 540 | 22 | 28 | 22 | 495 | 65 | 438 | 7.1 | 12 | 15 | 455 | 4 | 16 | M20 (3/4") | 23 | 18.4 | 18.3 | |
| 500 | 508 (521) | 645 | 24 | 30 | 24 | 600 | 68 | 538 | 7.1 | 12 | 15 | 570 | 4 | 20 | M20 (3/4") | 23 | 24.5 | 24.6 | |
| 600 | 609.6 (622) | 755 | 24 | | | 705 | 70 | 640 | 7.1 | 12 | 16 | 670 | 5 | 20 | M24 (7/8") | 27 | | | |
| 700 | 711.2 (720) | 860 | 24 | | | 810 | 70 | 740 | 7.1 | 12 | 16 | 775 | 5 | 24 | M24 (7/8") | 27 | | | |
| 800 | 812.8 (820) | 975 | 24 | | | 920 | 70 | 842 | 7.1 | 12 | 16 | 880 | 5 | 24 | M27 (1") | 30 | | | |
| 900 | 914.4 (920) | 1075 | 26 | | | 1020 | 70 | 942 | 7.1 | 12 | 16 | 980 | 5 | 24 | M27 (1") | 30 | | | |
| 1000 | 1016 (1020) | 1175 | 26 | | | 1120 | 70 | 1045 | 7.1 | 16 | 16 | 1080 | 5 | 28 | M27 (1") | 30 | | | |

Notes: Out side diameter of pipe complies with ISO recomendation R64

10BAR

DIN 2576 SLIP-ON FLANGE
DIN 2527 BLIND FLNAGE
DIN 2632 WELDING NECK FLANGE



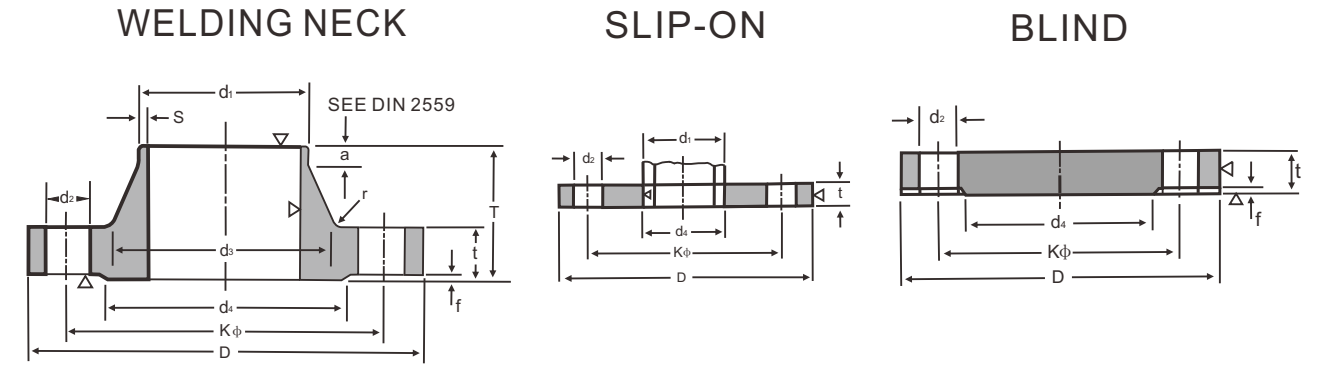
Unit:mm

| Bore | | Common Dimension | | | | | Hub | | | | Raised Face | | Drilling | | | Approx. Weight(kg) | | |
|---------------|--------------|------------------|--------------|---------|-------|------|-----|---------|------|----|-------------|------|----------|----------------|--------------|--------------------|----------|----------|
| Nom-inal Bore | d1 | D | t | | | k | T | d3 | s | r | a | d4 | f | Number of Bolt | Dia. of Bolt | d2 | DIN 2576 | DIN 2632 |
| | | | Welding Neck | Slip-on | Blind | | | | | | | | | | | | | |
| 10 | 14 (17.2") | 90 | 14 | 14 | 14 | 60 | 35 | 25/28 | 1.8 | 4 | 6 | 40 | 2 | 4 | M12 (1/2") | 14 | 0.613 | 0.580 |
| 15 | 20 (21.3") | 95 | 14 | 14 | 14 | 65 | 35 | 30/32 | 2.0 | 4 | 6 | 45 | 2 | 4 | M12 (1/2") | 14 | 0.675 | 0.648 |
| 20 | 25 (26.9") | 105 | 16 | 16 | 16 | 75 | 38 | 38/40 | 2.3 | 4 | 6 | 58 | 2 | 4 | M12 (1/2") | 14 | 0.947 | 0.952 |
| 25 | 30 (33.7") | 115 | 16 | 16 | 16 | 85 | 38 | 42/45 | 2.6 | 4 | 6 | 68 | 2 | 4 | M12 (1/2") | 14 | 1.14 | 1.14 |
| 32 | 38 (42.4") | 140 | 16 | 16 | 16 | 100 | 40 | 52/56 | 2.6 | 6 | 6 | 78 | 2 | 4 | M16 (5/8") | 18 | 1.66 | 1.69 |
| 40 | 44.5 (48.3") | 150 | 16 | 16 | 16 | 110 | 42 | 60/64 | 2.6 | 6 | 7 | 88 | 3 | 4 | M16 (5/8") | 18 | 1.89 | 1.86 |
| 50 | 57 (60.3") | 165 | 18 | 18 | 18 | 125 | 45 | 72/75 | 2.9 | 6 | 8 | 102 | 3 | 4 | M16 (5/8") | 18 | 2.51 | 2.53 |
| 65 | 76.1 (88.9") | 185 | 18 | 18 | 18 | 145 | 45 | 90 | 2.9 | 6 | 10 | 122 | 3 | 4 | M16 (5/8") | 18 | 3.00 | 3.06 |
| 80 | 76.1 (88.9") | 200 | 20 | 20 | 20 | 160 | 50 | 105 | 3.2 | 8 | 10 | 138 | 3 | 4 | M16 (5/8") | 18 | 3.79 | 3.70 |
| 100 | 108 (114.3") | 220 | 20 | 20 | 20 | 180 | 52 | 125/131 | 3.6 | 8 | 12 | 158 | 3 | 8 | M16 (5/8") | 18 | 4.20 | 4.62 |
| 125 | 133 (139.7") | 250 | 22 | 22 | 22 | 210 | 55 | 150/156 | 4.0 | 8 | 12 | 188 | 3 | 8 | M16 (5/8") | 18 | 5.71 | 6.30 |
| 150 | 159 (168.3") | 285 | 22 | 22 | 22 | 240 | 55 | 175/184 | 4.5 | 10 | 12 | 212 | 3 | 8 | M20 (3/4") | 23 | 6.72 | 7.75 |
| 200 | 216 (219.1") | 340 | 24 | 24 | 24 | 295 | 62 | 232/235 | 5.9 | 10 | 16 | 268 | 3 | 8 | M20 (3/4") | 23 | 9.50 | 11.30 |
| 250 | 267 (273") | 395 | 26 | 26 | 26 | 350 | 68 | 285/292 | 6.3 | 12 | 16 | 320 | 3 | 12 | M20 (3/4") | 23 | 12.5 | 14.70 |
| 300 | 318 (323.9") | 445 | 26 | 26 | 28 | 400 | 68 | 335/344 | 7.1 | 12 | 16 | 370 | 4 | 12 | M20 (3/4") | 23 | 14.4 | 17.60 |
| 350 | 355.6 (368) | 505 | 26 | 28 | 30 | 460 | 68 | 385 | 7.1 | 12 | 16 | 430 | 4 | 16 | M20 (3/4") | 23 | 20.6 | 21.40 |
| 400 | 406.4 (419) | 565 | 26 | 32 | 32 | 515 | 72 | 440 | 7.1 | 12 | 16 | 482 | 4 | 16 | M24 (7/8") | 27 | 27.9 | 26.10 |
| 500 | 508 (521) | 670 | 28 | 38 | 34 | 620 | 75 | 542 | 7.1 | 12 | 16 | 585 | 4 | 20 | M24 (7/8") | 27 | 41.1 | 34.70 |
| 600 | 609.6 (622) | 780 | 28 | | | 725 | 80 | 642 | 7.1 | 12 | 18 | 685 | 5 | 20 | M27 (1") | 30 | | |
| 700 | 711.2 (720) | 895 | 30 | | | 840 | 80 | 745 | 8.0 | 12 | 18 | 800 | 5 | 24 | M27 (1") | 30 | | |
| 800 | 812.8 (820) | 1015 | 32 | | | 950 | 90 | 850 | 8.0 | 12 | 18 | 905 | 5 | 24 | M30 (1 1/8") | 33 | | |
| 900 | 914.4 (920) | 1115 | 34 | | | 1050 | 95 | 950 | 10.0 | 12 | 20 | 1005 | 5 | 28 | M30 (1 1/8") | 33 | | |
| 1000 | 1016 (1020) | 1230 | 34 | | | 1160 | 95 | 1052 | 10.0 | 16 | 20 | 1110 | 5 | 28 | M33 (1 1/4") | 36 | | |

Notes: Out side diameter of pipe complies with ISO recommendation R64

16BAR

DIN 2543 SLIP-ON FLANGE
DIN 2527 BLIND FLNAGE
DIN 2633 WELDING NECK FLANGE



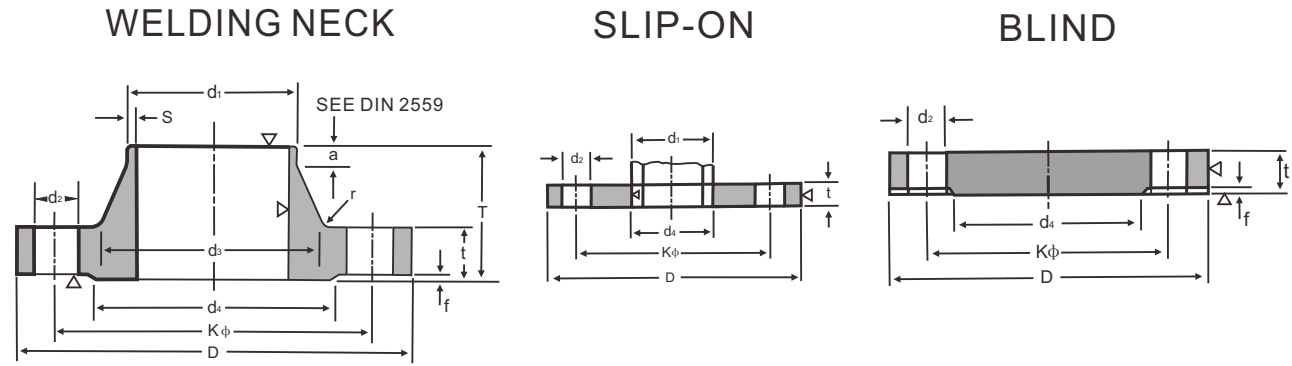
Unit:mm

| Bore | | Common Dimension | | | | | Hub | | | | Raised Face | | Drilling | | | Approx. Weight(kg) | | |
|---------------|--------------|------------------|--------------|---------|-------|------|-----|---------|------|----|-------------|------|----------|----------------|--------------|--------------------|----------|----------|
| Nom-inal Bore | d1 | D | t | | | k | T | d3 | s | r | a | d4 | f | Number of Bolt | Dia. of Bolt | d2 | DIN 2543 | DIN 2633 |
| | | | Welding Neck | Slip-on | Blind | | | | | | | | | | | | | |
| 10 | 14 (17.2") | 90 | 14 | | 14 | 60 | 35 | 25/28 | 1.8 | 4 | 6 | 40 | 2 | 4 | M12 (1/2") | 14 | 0.63 | 0.580 |
| 15 | 20 (21.3") | 95 | 14 | 14 | 14 | 65 | 35 | 30/32 | 2.0 | 4 | 6 | 45 | 2 | 4 | M12 (1/2") | 14 | 0.72 | 0.648 |
| 20 | 25 (26.9") | 105 | 16 | 16 | 16 | 75 | 38 | 38/40 | 2.3 | 4 | 6 | 58 | 2 | 4 | M12 (1/2") | 14 | 1.01 | 0.952 |
| 25 | 30 (33.7") | 115 | 16 | 16 | 16 | 85 | 38 | 42/45 | 2.6 | 4 | 6 | 68 | 2 | 4 | M12 (1/2") | 14 | 1.23 | 1.14 |
| 32 | 38 (42.4") | 140 | 16 | 16 | 16 | 100 | 40 | 52/56 | 2.6 | 6 | 6 | 78 | 2 | 4 | M16 (5/8") | 18 | 1.80 | 1.69 |
| 40 | 44.5 (48.3") | 150 | 16 | 16 | 16 | 110 | 42 | 60/64 | 2.6 | 6 | 7 | 88 | 3 | 4 | M16 (5/8") | 18 | 2.09 | 1.86 |
| 50 | 57 (60.3") | 165 | 18 | 18 | 18 | 125 | 45 | 72/75 | 2.9 | 6 | 8 | 102 | 3 | 4 | M16 (5/8") | 18 | 2.88 | 2.53 |
| 65 | 76.1 (88.9") | 185 | 18 | 18 | 18 | 145 | 45 | 90 | 2.9 | 6 | 10 | 122 | 3 | 4 | M16 (5/8") | 18 | 3.66 | 3.06 |
| 80 | 76.1 (88.9") | 200 | 20 | 20 | 20 | 160 | 50 | 105 | 3.2 | 8 | 10 | 138 | 3 | 8 | M16 (5/8") | 18 | 4.77 | 3.70 |
| 100 | 108 (114.3") | 220 | 20 | 20 | 20 | 180 | 52 | 125/131 | 3.6 | 8 | 12 | 158 | 3 | 8 | M16 (5/8") | 18 | 5.65 | 4.62 |
| 125 | 133 (139.7") | 250 | 22 | 22 | 22 | 210 | 55 | 150/156 | 4.0 | 8 | 12 | 188 | 3 | 8 | M16 (5/8") | 18 | 8.42 | 6.30 |
| 150 | 159 (168.3") | 285 | 22 | 22 | 22 | 240 | 55 | 175/184 | 4.5 | 10 | 12 | 212 | 3 | 8 | M20 (3/4") | 23 | 10.4 | 7.75 |
| 200 | 216 (219.1") | 340 | 24 | 24 | 24 | 295 | 62 | 232/235 | 5.9 | 10 | 16 | 268 | 3 | 12 | M20 (3/4") | 23 | 16.1 | 11.00 |
| 250 | 267 (273") | 395 | 26 | 26 | 26 | 350 | 68 | 285/292 | 6.3 | 12 | 16 | 320 | 3 | 12 | M24 (7/8") | 27 | 24.9 | 15.6 |
| 300 | 318 (323.9") | 460 | 28 | 28 | 28 | 410 | 78 | 335/344 | 7.1 | 12 | 16 | 378 | 4 | 12 | M24 (7/8") | 27 | 35.1 | 22 |
| 350 | 355.6 (368) | 520 | 30 | 30 | 30 | 470 | 82 | 390 | 8.0 | 12 | 16 | 438 | 4 | 16 | M24 (7/8") | 27 | 47.8 | 28.7 |
| 400 | 406.4 (419) | 580 | 32 | 32 | 32 | 525 | 85 | 445 | 8.0 | 12 | 16 | 490 | 4 | 16 | M27 (1") | 30 | 63.5 | 36.3 |
| 500 | 508 (521) | 715 | 34 | 36 | 34 | 650 | 90 | 548 | 8.0 | 12 | 16 | 610 | 4 | 20 | M30 (1 1/8") | 33 | 102.0 | 59.3 |
| 600 | 609.6 (622) | 840 | 36 | 40 | | 770 | 95 | 652 | 8.8 | 12 | 18 | 725 | 5 | 20 | M33 (1 1/4") | 36 | | |
| 700 | 711.2 (720) | 910 | 36 | | | 840 | 100 | 755 | 8.8 | 12 | 18 | 795 | 5 | 24 | M33 (1 1/4") | 36 | | |
| 800 | 812.8 (820) | 1025 | 38 | | | 950 | 105 | 855 | 10.0 | 12 | 20 | 900 | 5 | 24 | M36 (1 3/8") | 39 | | |
| 900 | 914.4 (920) | 1125 | 40 | | | 1050 | 110 | 955 | 10.0 | 12 | 20 | 1000 | 5 | 28 | M36 (1 3/8") | 39 | | |
| 1000 | 1016 (1020) | 1255 | 42 | | | 1170 | 120 | 1058 | 10.0 | 16 | 20 | 1115 | 5 | 28 | M39 (1 1/2") | 42 | | |

Notes: Out side diameter of pipe complies with ISO recommendation R64

25BAR

DIN 2544 SLIP-ON FLANGE
DIN 2527 BLIND FLNAGE
DIN 2634 WELDING NECK FLANGE



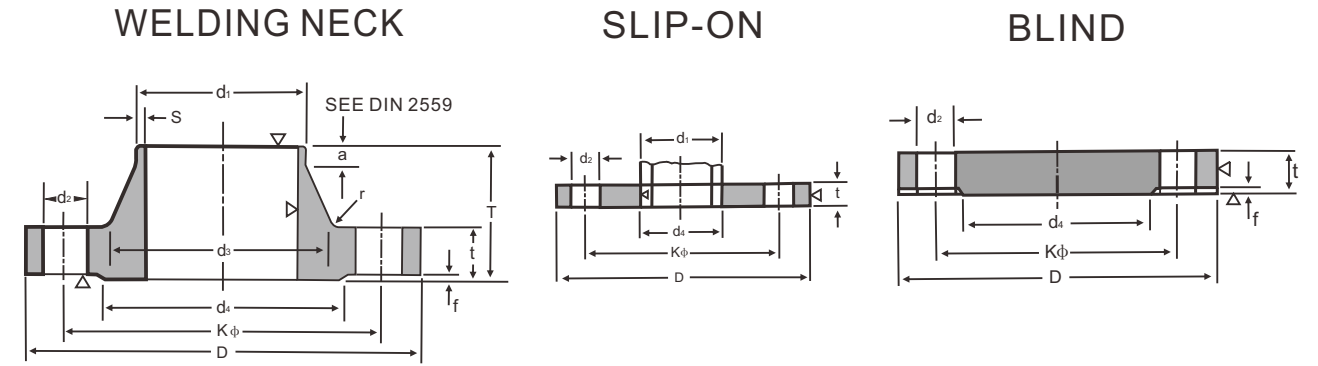
Unit:mm

| Bore | | Common Dimension | | | | | Hub | | | | Raised Face | | Drilling | | | Approx. Weight(kg) | | |
|---------------|---------------|------------------|----------------|---------|-------|------|-----|---------|------|----|-------------|------|----------|----------------|--------------|--------------------|----------|----------|
| Nom-inal Bore | d1 | D | t | | | k | T | d3 | s | r | a | d4 | f | Number of Bolt | Dia. of Bolt | d2 | DIN 2544 | DIN 2634 |
| | | | Welding Necksf | Slip-on | Blind | | | | | | | | | | | | | |
| 10 | 14 (17.2°) | 90 | 16 | | 16 | 60 | 35 | 25/28 | 1.8 | 4 | 6 | 40 | 2 | 4 | M12 (1/2") | 14 | 0.72 | 0.661 |
| 15 | 20 (21.3°) | 95 | 16 | 16 | 16 | 65 | 38 | 30/32 | 2.0 | 4 | 6 | 45 | 2 | 4 | M12 (1/2") | 14 | 0.81 | 0.746 |
| 20 | 25 (26.9°) | 105 | 18 | 18 | 18 | 75 | 40 | 38/40 | 2.3 | 4 | 6 | 58 | 2 | 4 | M12 (1/2") | 14 | 1.24 | 1.06 |
| 25 | 30 (33.7°) | 115 | 18 | 18 | 18 | 85 | 40 | 42/46 | 2.6 | 4 | 6 | 68 | 2 | 4 | M12 (1/2") | 14 | 1.38 | 1.29 |
| 32 | 38 (42.4°) | 140 | 18 | 18 | 18 | 100 | 42 | 52/56 | 2.6 | 6 | 6 | 78 | 2 | 4 | M16 (5/8") | 18 | 2.03 | 1.88 |
| 40 | 44.5 (48.3°) | 150 | 18 | 18 | 18 | 110 | 45 | 60/64 | 2.6 | 6 | 7 | 88 | 3 | 4 | M16 (5/8") | 18 | 2.35 | 2.34 |
| 50 | 57 (60.3°) | 165 | 20 | 20 | 20 | 125 | 48 | 72/75 | 2.9 | 6 | 8 | 102 | 3 | 4 | M16 (5/8") | 18 | 3.20 | 2.82 |
| 65 | | 185 | 22 | 22 | 22 | 145 | 52 | 90 | 2.9 | 6 | 10 | 122 | 3 | 8 | M16 (5/8") | 18 | 4.29 | 3.74 |
| 80 | 76.1* (88.9°) | 200 | 24 | 24 | 24 | 160 | 58 | 105 | 3.2 | 8 | 12 | 138 | 3 | 8 | M16 (5/8") | 18 | 5.88 | 4.75 |
| 100 | 108 (114.3°) | 235 | 24 | 24 | 24 | 190 | 65 | 128/134 | 3.6 | 8 | 12 | 162 | 3 | 8 | M20 (3/4") | 23 | 7.54 | 6.52 |
| 125 | 133 (139.7°) | 270 | 26 | 26 | 26 | 220 | 68 | 155/162 | 4.0 | 8 | 12 | 188 | 3 | 8 | M24 (7/8") | 27 | 10.8 | 9.07 |
| 150 | 159 (168.3°) | 300 | 28 | 28 | 28 | 250 | 75 | 182/192 | 4.5 | 10 | 12 | 218 | 3 | 8 | M24 (7/8") | 27 | 14.5 | 11.8 |
| 200 | 216 (219.1°) | 360 | 30 | 30 | 30 | 310 | 80 | 240/244 | 6.3 | 10 | 16 | 278 | 3 | 12 | M24 (7/8") | 27 | 22.3 | 17.0 |
| 250 | 267 (273°) | 425 | 32 | 32 | 32 | 370 | 88 | 292/298 | 7.1 | 12 | 18 | 335 | 3 | 12 | M27 (1") | 30 | 33.5 | 24.4 |
| 300 | 318 (323.9°) | 485 | 34 | 34 | 34 | 430 | 92 | 345/352 | 8.0 | 12 | 18 | 395 | 4 | 16 | M27 (1") | 30 | 46.3 | 31.2 |
| 350 | 355.6* (368°) | 555 | 38 | 38 | 38 | 490 | 100 | 398 | 8.0 | 12 | 20 | 450 | 4 | 16 | M30 (1 1/8") | 33 | 68.0 | 45.0 |
| 400 | 406.4* (419°) | 620 | 40 | 40 | 40 | 550 | 110 | 452 | 8.8 | 12 | 20 | 505 | 4 | 16 | M33 (1 1/4") | 36 | 89.7 | 58.7 |
| 500 | 508* (521°) | 730 | 44 | 44 | 44 | 660 | 125 | 558 | 10.0 | 12 | 20 | 615 | 4 | 20 | M33 (1 1/4") | 36 | 138.0 | 86.1 |
| 600 | 609.6* (622°) | 845 | 46 | | | 770 | 125 | 660 | 11.0 | 12 | 20 | 720 | 5 | 20 | M36 (1 3/8") | 39 | | 101.0 |
| 700 | 711.2* (720°) | 960 | 46 | | | 875 | 125 | 760 | 12.5 | 12 | 20 | 820 | 5 | 24 | M39 (1 1/2") | 42 | | 134.0 |
| 800 | 812.8* (820°) | 1085 | 50 | | | 990 | 135 | 865 | 14.2 | 12 | 22 | 930 | 5 | 24 | M45 (1 3/4") | 48 | | 183.0 |
| 900 | 914.4* (920°) | 1185 | 54 | | | 1090 | 145 | 968 | 16.0 | 12 | 24 | 1030 | 5 | 28 | M45 (1 3/4") | 48 | | 232.0 |
| 1000 | 1016* (1020°) | 1320 | 58 | | | 1210 | 155 | 1070 | 17.5 | 16 | 24 | 1140 | 5 | 28 | M52 (2") | 56 | | 302.0 |

Notes: Out side diameter of pipe complies with ISO recommendation R64

40BAR

DIN 2545 SLIP-ON FLANGE
DIN 2527 BLIND FLNAGE
DIN 2635 WELDING NECK FLANGE

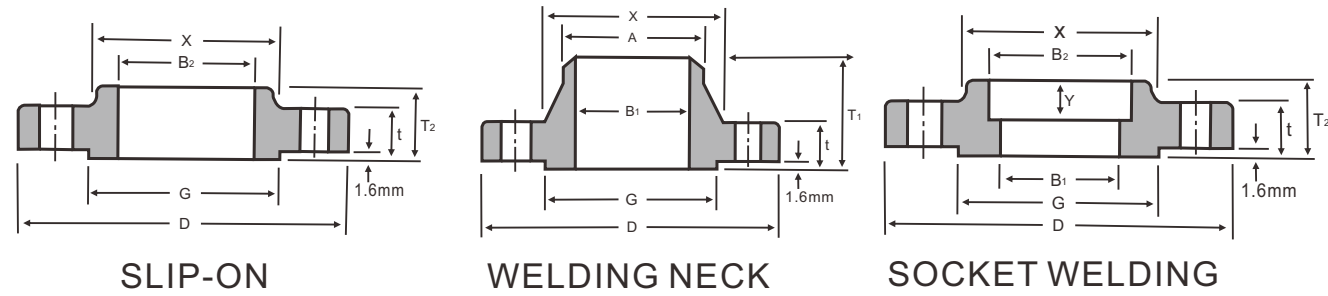


Unit:mm

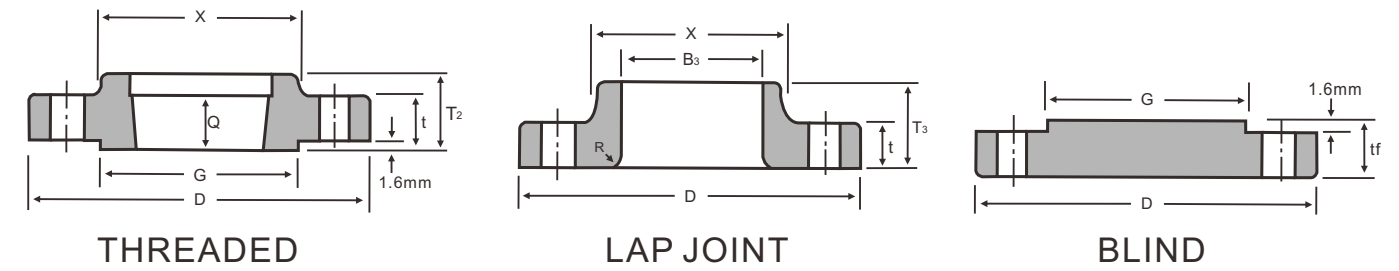
| Bore | | Common Dimension | | | | | Hub | | | | Raised Face | | Drilling | | | Approx. Weight(kg) | | |
|---------------|---------------|------------------|----------------|---------|-------|-----|-----|---------|------|----|-------------|-----|----------|----------------|--------------|--------------------|----------|----------|
| Nom-inal Bore | d1 | D | t | | | k | T | d3 | s | r | a | d4 | f | Number of Bolt | Dia. of Bolt | d2 | DIN 2545 | DIN 2635 |
| | | | Welding Necksf | Slip-on | Blind | | | | | | | | | | | | | |
| 10 | 14 (17.2°) | 90 | 16 | | 16 | 60 | 35 | 25/28 | 1.8 | 4 | 6 | 40 | 2 | 4 | M12 (1/2") | 14 | 0.72 | 0.661 |
| 15 | 20 (21.3°) | 95 | 16 | 16 | 16 | 65 | 38 | 30/32 | 2.0 | 4 | 6 | 45 | 2 | 4 | M12 (1/2") | 14 | 0.81 | 0.746 |
| 20 | 25 (26.9°) | 105 | 18 | 18 | 18 | 75 | 40 | 38/40 | 2.3 | 4 | 6 | 58 | 2 | 4 | M12 (1/2") | 14 | 1.24 | 1.06 |
| 25 | 30 (33.7°) | 115 | 18 | 18 | 18 | 85 | 40 | 42/46 | 2.6 | 4 | 6 | 68 | 2 | 4 | M12 (1/2") | 14 | 1.38 | 1.29 |
| 32 | 38 (42.4°) | 140 | 18 | 18 | 18 | 100 | 42 | 52/56 | 2.6 | 6 | 6 | 78 | 2 | 4 | M16 (5/8") | 18 | 2.03 | 1.88 |
| 40 | 44.5 (48.3°) | 150 | 18 | 18 | 18 | 110 | 45 | 60/64 | 2.6 | 6 | 7 | 88 | 3 | 4 | M16 (5/8") | 18 | 2.35 | 2.34 |
| 50 | 57 (60.3°) | 165 | 20 | 20 | 20 | 125 | 48 | 72/75 | 2.9 | 6 | 8 | 102 | 3 | 4 | M16 (5/8") | 18 | 3.20 | 2.82 |
| 65 | 76.1* (88.9°) | 185 | 22 | 22 | 22 | 145 | 52 | 90 | 2.9 | 6 | 10 | 122 | 3 | 8 | M16 (5/8") | 18 | 4.29 | 3.74 |
| 80 | 88.9* | 200 | 24 | 24 | 24 | 160 | 58 | 105 | 3.2 | 8 | 12 | 138 | 3 | 8 | M16 (5/8") | 18 | 5.88 | 4.75 |
| 100 | 108 (114.3°) | 235 | 24 | 24 | 24 | 190 | 65 | 128/134 | 3.6 | 8 | 12 | 162 | 3 | 8 | M20 (3/4") | 23 | 7.54 | 6.52 |
| 125 | 133 (139.7°) | 270 | 26 | 26 | 26 | 220 | 68 | 155/162 | 4.0 | 8 | 12 | 188 | 3 | 8 | M24 (7/8") | 27 | 10.8 | 9.07 |
| 150 | 159 (168.3°) | 300 | 28 | 28 | 28 | 250 | 75 | 182/192 | 4.5 | 10 | 12 | 218 | 3 | 8 | M24 (7/8") | 27 | 14.5 | 11.8 |
| 175 | 191 (193.7°) | 350 | 32 | 32 | 32 | 295 | 82 | 215/218 | 5.6 | 10 | 15 | 260 | 3 | 12 | M27 (1") | 30 | 22.1 | 18.2 |
| 200 | 216 (219.1°) | 375 | 34 | 34 | 34 | 320 | 88 | 240/244 | 6.3 | 10 | 16 | 285 | 3 | 12 | M27 (1") | 30 | 27.2 | 21.5 |
| 250 | 267 (273°) | 450 | 38 | 38 | 38 | 385 | 105 | 298/306 | 7.1 | 12 | 18 | 345 | 3 | 12 | M30 (1 1/8") | 33 | 43.8 | 34.9 |
| 300 | 318 (323.9°) | 515 | 42 | 42 | 42 | 450 | 115 | 352/362 | 8.0 | 12 | 18 | 410 | 4 | 16 | M30 (1 1/8") | 33 | 63.3 | 49.7 |
| 350 | 355.6* (368°) | 580 | 46 | 46 | 46 | 510 | 125 | 408 | 8.8 | 12 | 20 | 465 | 4 | 16 | M33 (1 1/4") | 36 | 89.5 | 68.1 |
| 400 | 406.9* (419°) | 660 | 50 | 50 | 50 | 585 | 135 | 462 | 11.0 | 12 | 20 | 535 | 4 | 16 | M36 (1 3/8") | 39 | 127.0 | 96.5 |
| 500 | 508* (521°) | 755 | 52 | 52 | 52 | 670 | 140 | 562 | 14.2 | 12 | 20 | 615 | 4 | 20 | M39 (1 1/2") | 42 | 172.0 | 117.0 |

Notes: Out side diameter of pipe complies with ISO recommendation R64

CLASS 150 FLANGE



CLASS 150 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness of Flange Min. | Thickness Lap Joint Min. | Out side Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min | Bore | | | Corner Radius of bore of Lapped Flange and pipe | Depth of Socket |
|-----------------------|----------------------------|--------------------------|--------------------------|----------------------------------|-----------------|--|-----------------------------------|--------|--------------|----------------------------|-------------------------------|-------------|-------------------------------|---|-----------------|
| | | | | | | | Threaded/ Slip-on/ Socket Welding | Lapped | Welding Neck | | Slip-on/ Socket Welding, Min. | Lapped Min. | Welding Neck/ Socket Welding. | | |
| | | | | | | | | | | | | | | | |
| 1/2 | 90.00 | 9.60 | 11.20 | 34.90 | 30.00 | 21.30 | 14.00 | 16.00 | 46.00 | 16.00 | 22.20 | 22.90 | 15.8 | 3.00 | 10.00 |
| 3/4 | 100.00 | 11.20 | 12.70 | 42.90 | 38.00 | 26.70 | 14.00 | 16.00 | 51.00 | 16.60 | 27.70 | 28.20 | 20.9 | 3.00 | 11.00 |
| 1 | 110.00 | 12.70 | 14.30 | 50.80 | 49.00 | 33.40 | 16.00 | 17.00 | 54.00 | 17.00 | 34.50 | 34.90 | 26.6 | 3.00 | 13.00 |
| 1 1/4 | 115.00 | 14.30 | 15.90 | 63.50 | 59.00 | 42.20 | 19.00 | 21.00 | 56.00 | 21.00 | 43.20 | 43.70 | 35.1 | 5.00 | 14.00 |
| 1 1/2 | 125.00 | 15.90 | 17.50 | 73.00 | 65.00 | 48.30 | 21.00 | 22.00 | 60.00 | 22.00 | 49.50 | 50.00 | 40.9 | 6.00 | 16.00 |
| 2 | 150.00 | 17.50 | 19.10 | 92.10 | 78.00 | 60.30 | 24.00 | 25.00 | 62.00 | 25.00 | 61.90 | 62.50 | 52.5 | 8.00 | 17.00 |
| 2 1/2 | 180.00 | 20.70 | 22.30 | 104.80 | 90.00 | 73.00 | 27.00 | 29.00 | 68.00 | 29.00 | 74.60 | 75.40 | 62.7 | 8.00 | 19.00 |
| 3 | 190.00 | 22.30 | 23.90 | 127.00 | 108.00 | 88.90 | 29.00 | 30.00 | 68.00 | 30.00 | 90.70 | 91.40 | 77.9 | 10.00 | 21.00 |
| 3 1/2 | 215.00 | 22.30 | 23.90 | 139.70 | 122.00 | 101.60 | 30.00 | 32.00 | 70.00 | 32.00 | 103.40 | 104.10 | 90.1 | 10.00 | |
| 4 | 230.00 | 22.30 | 23.90 | 157.20 | 135.00 | 114.30 | 32.00 | 33.00 | 75.00 | 33.00 | 116.10 | 116.80 | 102.3 | 11.00 | |
| 5 | 255.00 | 22.30 | 23.90 | 185.70 | 164.00 | 141.30 | 35.00 | 36.00 | 87.00 | 36.00 | 143.80 | 144.40 | 128.2 | 11.00 | |
| 6 | 280.00 | 23.90 | 25.40 | 215.90 | 192.00 | 168.30 | 38.00 | 40.00 | 87.00 | 40.00 | 170.70 | 171.40 | 154.1 | 13.00 | |
| 8 | 345.00 | 27.00 | 28.60 | 269.90 | 246.00 | 219.10 | 43.00 | 44.00 | 100.00 | 44.00 | 221.50 | 222.20 | 202.7 | 13.00 | |
| 10 | 405.00 | 28.60 | 30.20 | 323.80 | 305.00 | 273.00 | 48.00 | 49.00 | 100.00 | 49.00 | 276.20 | 277.40 | 254.6 | 13.00 | |
| 12 | 485.00 | 30.20 | 31.80 | 381.00 | 365.00 | 323.80 | 54.00 | 56.00 | 113.00 | 56.00 | 327.00 | 328.20 | 304.8 | 13.00 | |
| 14 | 535.00 | 33.40 | 35.00 | 412.80 | 400.00 | 355.60 | 56.00 | 79.00 | 125.00 | 57.00 | 359.20 | 360.20 | | 13.00 | |
| 16 | 595.00 | 35.00 | 36.60 | 469.90 | 457.00 | 406.40 | 62.00 | 87.00 | 125.00 | 64.00 | 410.50 | 411.20 | To be specified by purchaser | 13.00 | |
| 18 | 635.00 | 38.10 | 39.70 | 533.40 | 505.00 | 457.00 | 67.00 | 97.00 | 138.00 | 68.00 | 461.80 | 462.30 | | 13.00 | |
| 20 | 700.00 | 41.30 | 42.90 | 584.20 | 559.00 | 508.00 | 71.00 | 103.00 | 143.00 | 73.00 | 513.10 | 514.40 | | 13.00 | |
| 24 | 815.00 | 46.10 | 47.70 | 692.20 | 663.00 | 610.00 | 81.00 | 111.00 | 151.00 | 83.00 | 616.00 | 616.00 | | 13.00 | |

Notes:

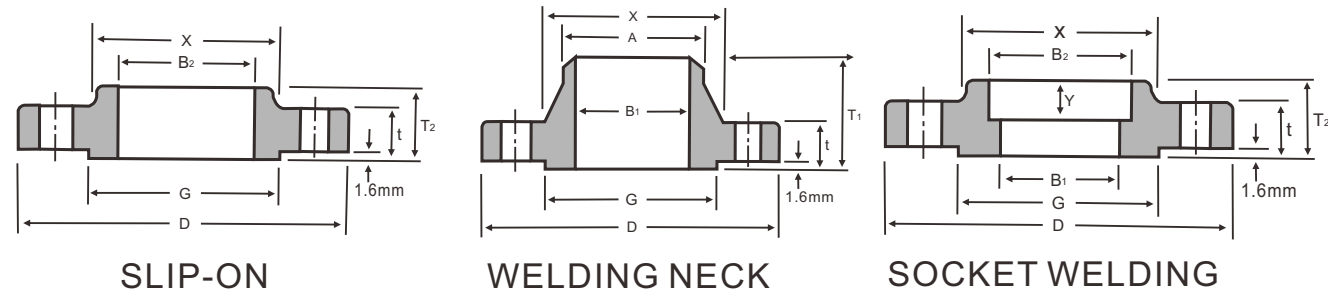
- (1) For the Bore(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in ' Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

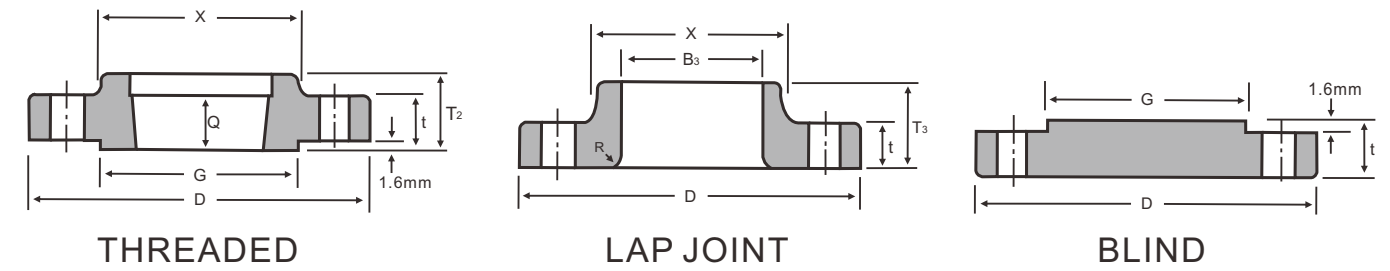
| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|------------|--------------------|--------|------------------|--------|-----------|--------|--------|--------|----------------|------|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | Socket Welding | | |
| | | | | | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | |
| 60.30 | 4 | 5/8 | 1/2 | 50.00 | 55.00 | - | 0.51 | 1.12 | 0.47 | 1.04 | 0.51 | 1.12 | 0.47 | 1.04 | 0.47 | 1.04 | 1/2 |
| 69.90 | 4 | 5/8 | 1/2 | 50.00 | 65.00 | - | 0.73 | 1.61 | 0.58 | 1.28 | 0.64 | 1.41 | 0.63 | 1.39 | 0.59 | 1.30 | 3/4 |
| 79.40 | 4 | 5/8 | 1/2 | 55.00 | 65.00 | 75.00 | 1.07 | 2.36 | 0.86 | 1.90 | 0.93 | 2.05 | 0.94 | 2.07 | 0.87 | 1.92 | 1 |
| 88.90 | 4 | 5/8 | 1/2 | 55.00 | 70.00 | 85.00 | 1.40 | 3.09 | 1.08 | 2.38 | 1.16 | 2.56 | 1.23 | 2.71 | 1.11 | 2.45 | 1 1/4 |
| 98.40 | 4 | 5/8 | 1/2 | 65.00 | 70.00 | 85.00 | 1.81 | 3.99 | 1.41 | 3.11 | 1.51 | 3.33 | 1.62 | 3.54 | 1.45 | 3.20 | 1 1/2 |
| 120.70 | 4 | 3/4 | 5/8 | 70.00 | 85.00 | 95.00 | 2.59 | 5.71 | 2.26 | 4.98 | 2.38 | 5.25 | 2.64 | 5.82 | 2.33 | 5.14 | 2 |
| 139.70 | 4 | 3/4 | 5/8 | 75.00 | 90.00 | 100.00 | 4.28 | 9.44 | 3.43 | 7.56 | 3.60 | 7.94 | 4.06 | 8.95 | 3.55 | 7.83 | 2 1/2 |
| 152.40 | 4 | 3/4 | 5/8 | 75.00 | 90.00 | 100.00 | 5.18 | 11.42 | 3.87 | 8.53 | 4.04 | 8.91 | 4.90 | 10.80 | 4.02 | 8.86 | 3 |
| 177.80 | 8 | 3/4 | 5/8 | 75.00 | 90.00 | 100.00 | 5.45 | 12.02 | 4.99 | 11.00 | 4.99 | 11.00 | 5.90 | 13.01 | | | 3 1/2 |
| 190.50 | 8 | 3/4 | 5/8 | 75.00 | 90.00 | 100.00 | 7.32 | 16.14 | 5.75 | 12.68 | 5.96 | 13.14 | 7.41 | 16.34 | | | 4 |
| 215.90 | 8 | 7/8 | 3/4 | 85.00 | 95.00 | 100.00 | 8.91 | 19.64 | 6.22 | 13.71 | 6.44 | 14.20 | 8.76 | 19.31 | | | 5 |
| 241.30 | 8 | 7/8 | 3/4 | 85.00 | 100.00 | 110.00 | 11.26 | 24.82 | 7.38 | 16.27 | 7.59 | 16.73 | 11.31 | 24.93 | | | 6 |
| 298.50 | 8 | 7/8 | 3/4 | 90.00 | 110.00 | 115.00 | 17.68 | 38.98 | 12.36 | 27.25 | 12.66 | 27.91 | 19.92 | 43.92 | | | 8 |
| 362.00 | 12 | 1 | 7/8 | 100.00 | 115.00 | 120.00 | 24.79 | 54.65 | 17.10 | 37.70 | 16.78 | 36.99 | 29.39 | 64.79 | | | 10 |
| 431.80 | 12 | 1 | 7/8 | 100.00 | 120.00 | 125.00 | 38.98 | 85.94 | 27.68 | 61.02 | 28.30 | 62.39 | 43.70 | 96.34 | | | 12 |
| 476.30 | 12 | 1 1/8 | 1 | 115.00 | 135.00 | 135.00 | 51.71 | 114.00 | 35.20 | 77.60 | 41.50 | 91.49 | 59.42 | 131.00 | | | 14 |
| 539.80 | 16 | 1 1/8 | 1 | 115.00 | 135.00 | 145.00 | 64.41 | 142.00 | 42.18 | 92.99 | 52.98 | 116.80 | 77.11 | 170.00 | | | 16 |
| 577.90 | 16 | 1 1/4 | 1 1/8 | 125.00 | 145.00 | 145.00 | 74.00 | 164.99 | 49.71 | 109.59 | 59.00 | 130.07 | 94.80 | 209.00 | | | 18 |
| 635.00 | 20 | 1 1/4 | 1 1/8 | 140.00 | 160.00 | 160.00 | 89.36 | 197.01 | 65.50 | 144.40 | 72.12 | 159.00 | 123.38 | 272.01 | | | 20 |
| 749.30 | 20 | 1 3/8 | 1 1/4 | 150.00 | 170.00 | 185.00 | 119.66 | 263.81 | 90.50 | 199.52 | 99.02 | 218.30 | 188.24 | 415.00 | | | 24 |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside(bearing surface for boling) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 300 FLANGE



CLASS 300 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness of Flange Min. | Thickness of Lap Joint Min. | Outside Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min. | Bore | | | Corner Radius of bore of Lapped Flange and pipe | Corner bore Threaded Flange Min. | Depth of Socket | |
|-----------------------|----------------------------|--------------------------|-----------------------------|---------------------------------|-----------------|--|-----------------------------------|--------|--------------|-----------------------------|-------------------------------|-------------|-------------------------------|---|----------------------------------|-----------------|------|
| | | | | | | | Threaded/ Slip-on/ Socket Welding | Lapped | Welding Neck | | Slip-on/ Socket Welding, Min. | Lapped Min. | Welding Neck/ Socket Welding. | | | | Bore |
| | | | | | | | | | | | | | | | | | |
| O | Tf [Notes (2)-(3)] | R | X | A[Note(4)] | Y | | | T | B | | | B1[Note(6)] | r | Q | D | | |
| 1/2 | 95.00 | 12.70 | 14.30 | 34.90 | 38.00 | 21.30 | 21.00 | 22.00 | 51.00 | 16.00 | 22.20 | 22.90 | 15.8 | 3.00 | 23.6 | 10.00 | |
| 3/4 | 115.00 | 14.30 | 15.90 | 42.90 | 48.00 | 26.70 | 24.00 | 25.00 | 56.00 | 16.00 | 27.70 | 28.20 | 20.9 | 3.00 | 29.0 | 11.00 | |
| 1 | 125.00 | 15.90 | 17.50 | 50.80 | 54.00 | 33.40 | 25.00 | 27.00 | 60.00 | 18.00 | 34.50 | 34.90 | 26.6 | 3.00 | 35.8 | 13.00 | |
| 1 1/4 | 135.00 | 17.50 | 19.10 | 63.50 | 64.00 | 42.20 | 25.00 | 27.00 | 64.00 | 21.00 | 43.20 | 43.70 | 35.1 | 5.00 | 44.4 | 14.00 | |
| 1 1/2 | 155.00 | 19.10 | 20.70 | 73.00 | 70.00 | 48.30 | 29.00 | 30.00 | 67.00 | 23.00 | 49.50 | 50.00 | 40.9 | 6.00 | 50.3 | 16.00 | |
| 2 | 165.00 | 20.70 | 22.30 | 92.10 | 84.00 | 60.30 | 32.00 | 33.00 | 68.00 | 29.00 | 61.90 | 62.50 | 52.5 | 8.00 | 63.5 | 17.00 | |
| 2 1/2 | 190.00 | 23.90 | 25.40 | 104.80 | 100.00 | 73.00 | 37.00 | 38.00 | 75.00 | 32.00 | 74.60 | 75.40 | 62.7 | 8.00 | 76.2 | 19.00 | |
| 3 | 210.00 | 27.00 | 28.60 | 127.00 | 117.00 | 88.90 | 41.00 | 43.00 | 78.00 | 32.00 | 90.70 | 91.40 | 77.9 | 10.00 | 92.2 | 21.00 | |
| 3 1/2 | 230.00 | 28.60 | 30.20 | 139.70 | 133.00 | 101.60 | 43.00 | 44.00 | 79.00 | 37.00 | 103.40 | 104.10 | 90.1 | 10.00 | 104.9 | | |
| 4 | 255.00 | 30.20 | 31.80 | 157.20 | 146.00 | 114.30 | 46.00 | 48.00 | 84.00 | 37.00 | 116.10 | 116.80 | 102.3 | 11.00 | 117.6 | | |
| 5 | 280.00 | 33.40 | 35.00 | 185.70 | 178.00 | 141.30 | 49.00 | 51.00 | 97.00 | 43.00 | 143.80 | 144.40 | 128.2 | 11.00 | 144.4 | | |
| 6 | 320.00 | 35.00 | 36.60 | 215.90 | 206.00 | 168.30 | 51.00 | 52.00 | 97.00 | 47.00 | 170.70 | 171.40 | 154.1 | 13.00 | 171.4 | | |
| 8 | 380.00 | 39.70 | 41.30 | 269.90 | 260.00 | 219.10 | 60.00 | 62.00 | 110.00 | 51.00 | 221.50 | 222.20 | 202.7 | 13.00 | 222.2 | | |
| 10 | 445.00 | 46.10 | 47.70 | 323.80 | 321.00 | 273.00 | 65.00 | 95.00 | 116.00 | 56.00 | 276.20 | 277.40 | 254.6 | 13.00 | 276.2 | | |
| 12 | 520.00 | 49.30 | 50.80 | 381.00 | 375.00 | 323.80 | 71.00 | 102.00 | 129.00 | 61.00 | 327.00 | 328.20 | 304.8 | 13.00 | 328.6 | | |
| 14 | 585.00 | 52.40 | 54.00 | 412.80 | 425.00 | 355.60 | 75.00 | 111.00 | 141.00 | 64.00 | 359.20 | 360.20 | | 13.00 | 360.4 | | |
| 16 | 650.00 | 55.60 | 57.20 | 469.90 | 483.00 | 406.40 | 81.00 | 121.00 | 144.00 | 69.00 | 410.50 | 411.20 | To be specified by purchaser | 13.00 | 411.2 | | |
| 18 | 710.00 | 58.80 | 60.40 | 533.40 | 533.40 | 457.00 | 87.00 | 130.00 | 157.00 | 70.00 | 461.80 | 462.30 | | 13.00 | 462.0 | | |
| 20 | 775.00 | 62.00 | 63.50 | 584.20 | 587.00 | 508.00 | 94.00 | 140.00 | 160.00 | 74.00 | 513.10 | 514.40 | | 13.00 | 512.8 | | |
| 24 | 915.00 | 68.30 | 69.90 | 692.20 | 702.00 | 610.00 | 105.00 | 152.00 | 167.00 | 83.00 | 616.00 | 616.00 | | 13.00 | 614.4 | | |

Notes:

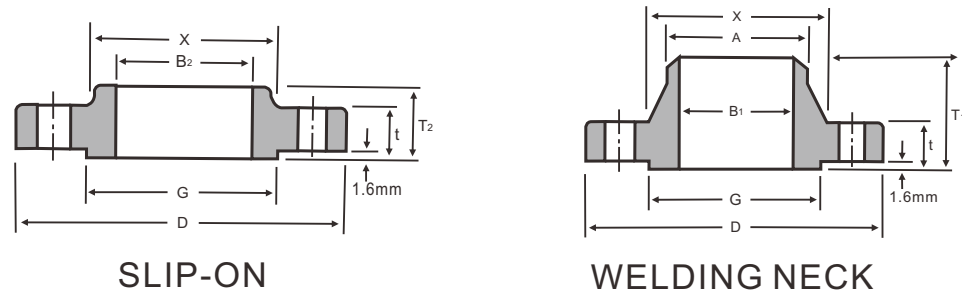
- (1) For the Bore(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in 'Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

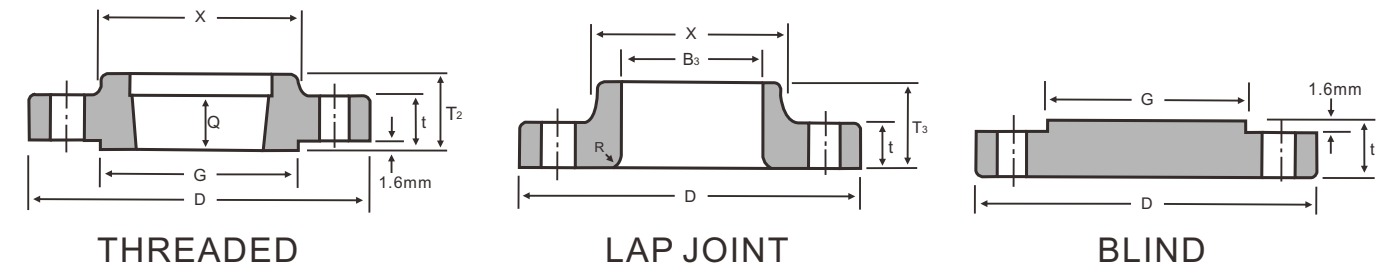
| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|-------------|--------------------|--------------|--------|------------------|--------|-----------|--------|--------|------|----------------|-------|--|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | Socket Welding | | | |
| | | | | | Raised Face | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | | |
| 66.70 | 4 | 5/8 | 1/2 | 55.00 | 65.00 | 75.00 | 0.78 | 1.72 | 0.62 | 1.34 | 0.61 | 1.34 | 0.62 | 1.37 | 0.62 | 1.37 | 1/2 | | |
| 82.60 | 4 | 3/4 | 5/8 | 65.00 | 75.00 | 90.00 | 1.34 | 2.95 | 1.15 | 2.54 | 1.15 | 2.54 | 1.16 | 2.56 | 1.19 | 2.62 | 3/4 | | |
| 88.90 | 4 | 3/4 | 5/8 | 65.00 | 75.00 | 90.00 | 1.64 | 3.62 | 1.39 | 3.06 | 1.38 | 3.04 | 1.42 | 3.13 | 1.44 | 3.17 | 1 | | |
| 98.40 | 4 | 3/4 | 5/8 | 70.00 | 85.00 | 95.00 | 2.06 | 4.54 | 1.67 | 3.68 | 1.66 | 3.66 | 1.79 | 3.95 | 1.73 | 3.81 | 1 1/4 | | |
| 114.30 | 4 | 7/8 | 3/4 | 75.00 | 90.00 | 100.00 | 3.06 | 6.75 | 2.53 | 5.58 | 2.52 | 5.56 | 2.68 | 5.91 | 2.62 | 5.78 | 1 1/2 | | |
| 127.00 | 8 | 3/4 | 5/8 | 75.00 | 90.00 | 100.00 | 3.40 | 7.50 | 2.80 | 6.17 | 2.79 | 6.15 | 3.09 | 6.81 | 2.94 | 6.48 | 2 | | |
| 149.20 | 8 | 7/8 | 3/4 | 85.00 | 100.00 | 115.00 | 5.31 | 11.71 | 4.25 | 9.37 | 4.22 | 9.30 | 4.75 | 10.47 | 4.49 | 9.90 | 2 1/2 | | |
| 168.30 | 8 | 7/8 | 3/4 | 90.00 | 110.00 | 120.00 | 7.32 | 16.14 | 5.81 | 12.81 | 5.78 | 12.74 | 6.79 | 14.97 | 6.20 | 13.67 | 3 | | |
| 184.20 | 8 | 7/8 | 3/4 | 95.00 | 110.00 | 125.00 | 8.17 | 18.01 | 7.72 | 17.02 | 7.72 | 17.02 | 9.53 | 21.01 | | | 3 1/2 | | |
| 200.00 | 8 | 7/8 | 3/4 | 95.00 | 115.00 | 125.00 | 11.30 | 24.91 | 10.13 | 22.33 | 10.07 | 22.20 | 12.00 | 26.46 | | | 4 | | |
| 235.00 | 8 | 7/8 | 3/4 | 110.00 | 120.00 | 135.00 | 15.12 | 33.33 | 12.58 | 27.73 | 12.52 | 27.60 | 15.96 | 35.19 | | | 5 | | |
| 269.90 | 12 | 7/8 | 3/4 | 110.00 | 120.00 | 140.00 | 19.68 | 43.39 | 16.04 | 35.36 | 15.95 | 35.16 | 21.20 | 46.74 | | | 6 | | |
| 330.20 | 12 | 1 | 7/8 | 120.00 | 140.00 | 150.00 | 30.48 | 67.20 | 24.50 | 54.01 | 24.37 | 53.73 | 34.60 | 76.28 | | | 8 | | |
| 387.40 | 16 | 1 1/8 | 1 | 140.00 | 160.00 | 170.00 | 43.74 | 96.43 | 34.16 | 75.31 | 39.92 | 88.01 | 55.34 | 122.00 | | | 10 | | |
| 450.80 | 16 | 1 1/4 | 1 1/8 | 145.00 | 170.00 | 185.00 | 64.41 | 142.00 | 51.26 | 113.01 | 58.70 | 129.41 | 78.90 | 173.96 | | | 12 | | |
| 514.40 | 20 | 1 1/4 | 1 1/8 | 160.00 | 180.00 | 190.00 | 88.30 | 194.67 | 72.12 | 159.00 | 83.46 | 184.00 | 107.06 | 236.00 | | | 14 | | |
| 571.50 | 20 | 1 3/8 | 1 1/4 | 165.00 | 190.00 | 205.00 | 112.94 | 248.99 | 90.40 | 199.30 | 106.14 | 234.00 | 139.25 | 306.99 | | | 16 | | |
| 628.60 | 24 | 1 3/8 | 1 1/4 | 170.00 | 195.00 | 210.00 | 138.34 | 304.99 | 109.00 | 240.30 | 133.95 | 295.31 | 176.90 | 390.00 | | | 18 | | |
| 685.80 | 24 | 1 3/8 | 1 1/4 | 185.00 | 205.00 | 220.00 | 167.37 | 368.99 | 136.00 | 299.83 | 157.65 | 347.56 | 223.17 | 492.01 | | | 20 | | |
| 812.80 | 24 | 1 5/8 | 1 1/2 | 205.00 | 230.00 | 255.00 | 235.41 | 518.99 | 204.00 | 449.74 | 240.40 | 529.99 | 342.00 | 753.98 | | | 24 | | |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 400 FLANGE



CLASS 400 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness Lap Joint Min. | Out side Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min | Bore | | | Corner Radius of bore of Lapped Flange and pipe | Corner bore Threaded Flange Min. | |
|-----------------------|----------------------------|--------------------------|----------------------------------|-----------------|--|--|--------|--------------|----------------------------|---------------|-------------|------------------------------|---|----------------------------------|--|
| | | | | | | Threaded/ Slip-on | Lapped | Welding Neck | | Slip-on/ Min. | Lapped Min. | Welding Neck | | | |
| | O | tf | R | X | A[Note(2)] | Y | | | T | B | | | r | Q | |
| 1/2 | | | | | | | | | | | | | | | |
| 3/4 | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 1 1/4 | | | | | | | | | | | | | | | |
| 1 1/2 | | | | | | Use Class 600 Dimensions in these sizes[Note(3)] | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 2 1/2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |
| 3 1/2 | | | | | | | | | | | | | | | |
| 4 | 255.00 | 35.00 | 157.20 | 146.00 | 114.30 | 51.00 | 51.00 | 89.00 | 37.00 | 116.10 | 116.80 | | 11.00 | 117.6 | |
| 5 | 280.00 | 38.10 | 185.70 | 178.00 | 141.30 | 54.00 | 54.00 | 102.00 | 43.00 | 143.80 | 144.50 | | 11.00 | 144.4 | |
| 6 | 320.00 | 41.30 | 215.90 | 206.00 | 168.30 | 57.00 | 57.00 | 103.00 | 46.00 | 170.70 | 171.40 | | 13.00 | 171.4 | |
| 8 | 380.00 | 47.70 | 269.90 | 260.00 | 219.10 | 68.00 | 68.00 | 117.00 | 51.00 | 221.50 | 222.20 | | 13.00 | 222.2 | |
| 10 | 445.00 | 54.00 | 323.80 | 321.00 | 273.00 | 73.00 | 102.00 | 124.00 | 56.00 | 276.20 | 277.40 | To be specified by purchaser | 13.00 | 276.2 | |
| 12 | 520.00 | 57.20 | 381.00 | 375.00 | 323.80 | 79.00 | 108.00 | 137.00 | 61.00 | 327.00 | 328.20 | | 13.00 | 328.6 | |
| 14 | 585.00 | 60.40 | 412.80 | 425.00 | 355.60 | 84.00 | 117.00 | 149.00 | 64.00 | 359.20 | 360.20 | | 13.00 | 360.4 | |
| 16 | 650.00 | 63.50 | 469.90 | 483.00 | 406.40 | 94.00 | 127.00 | 152.00 | 69.00 | 410.50 | 411.20 | | 13.00 | 411.2 | |
| 18 | 710.00 | 66.70 | 533.40 | 533.00 | 457.00 | 98.00 | 137.00 | 165.00 | 70.00 | 461.80 | 462.30 | | 13.00 | 462.0 | |
| 20 | 775.00 | 69.90 | 584.20 | 587.00 | 508.00 | 102.00 | 146.00 | 168.00 | 74.00 | 513.10 | 514.40 | | 13.00 | 512.8 | |
| 24 | 915.00 | 76.20 | 692.20 | 702.00 | 610.00 | 114.00 | 159.00 | 175.00 | 83.00 | 616.00 | 616.00 | | 13.00 | 614.4 | |

Notes:

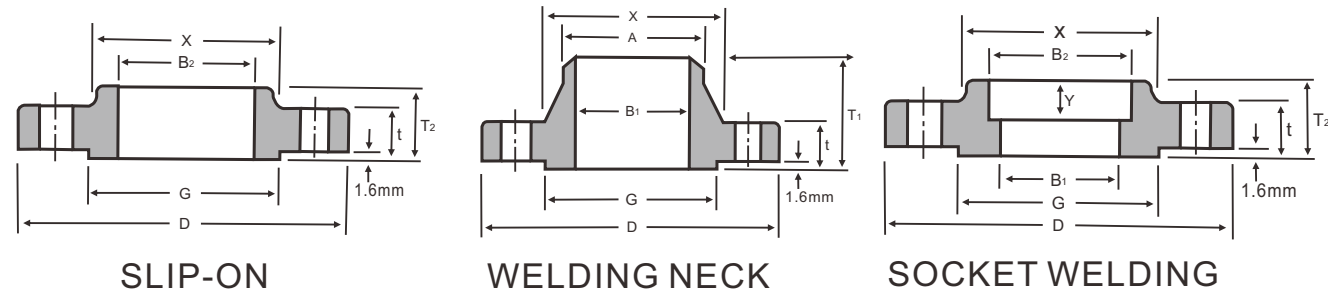
- (1) For the Bore(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in 'Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

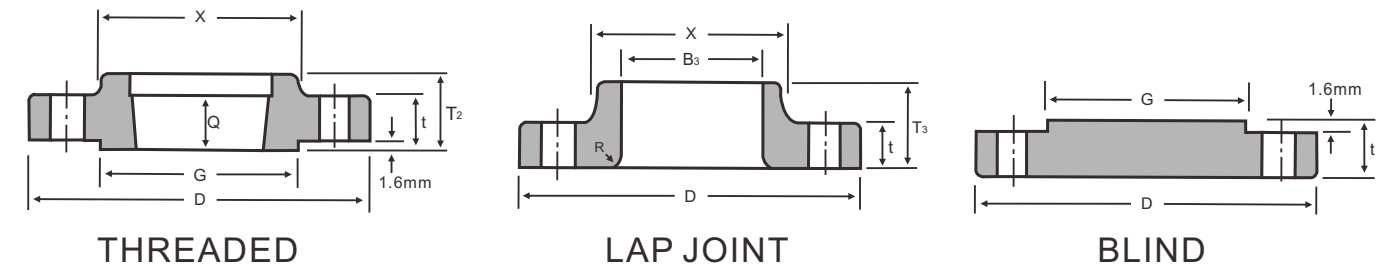
| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|-------------|--------------------|--------|------------------|--------|-----------|--------|--------|--------|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | |
| | | | | | Raised Face | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb |
| 200.00 | 8 | 1 | 7/8 | 140.00 | 135.00 | 140.00 | 13.61 | 30.00 | 10.89 | 24.01 | 9.98 | 22.00 | 14.40 | 31.75 | 4 |
| 235.00 | 8 | 1 | 7/8 | 145.00 | 135.00 | 145.00 | 17.69 | 39.00 | 14.07 | 31.02 | 13.15 | 28.99 | 19.50 | 42.99 | 5 |
| 269.90 | 12 | 1 | 7/8 | 150.00 | 145.00 | 150.00 | 22.23 | 49.01 | 19.98 | 44.05 | 16.78 | 37.00 | 27.67 | 61.00 | 6 |
| 330.00 | 12 | 1 1/8 | 1 | 170.00 | 165.00 | 170.00 | 35.38 | 78.00 | 30.40 | 67.01 | 26.16 | 57.67 | 45.36 | 100.00 | 8 |
| 387.40 | 16 | 1 1/4 | 1 1/8 | 190.00 | 185.00 | 190.00 | 49.89 | 109.99 | 41.28 | 91.01 | 43.09 | 95.00 | 68.00 | 149.91 | 10 |
| 450.80 | 16 | 1 3/8 | 1 1/4 | 205.00 | 195.00 | 205.00 | 72.57 | 159.99 | 59.02 | 130.12 | 68.95 | 152.01 | 98.00 | 216.05 | 12 |
| 514.40 | 20 | 1 3/8 | 1 1/4 | 210.00 | 205.00 | 210.00 | 105.69 | 233.01 | 81.72 | 180.16 | 95.25 | 209.99 | 131.66 | 290.26 | 14 |
| 571.50 | 20 | 1 1/2 | 1 3/8 | 220.00 | 215.00 | 220.00 | 133.36 | 294.01 | 106.69 | 235.21 | 127.00 | 279.99 | 167.00 | 368.17 | 16 |
| 628.60 | 24 | 1 1/2 | 1 3/8 | 230.00 | 220.00 | 230.00 | 158.90 | 350.31 | 129.39 | 285.26 | 156.49 | 345.00 | 206.57 | 455.41 | 18 |
| 685.80 | 24 | 1 5/8 | 1 1/2 | 240.00 | 235.00 | 250.00 | 193.00 | 425.41 | 152.00 | 335.10 | 190.51 | 420.00 | 261.00 | 575.41 | 20 |
| 812.80 | 24 | 1 7/8 | 1 3/4 | 265.00 | 260.00 | 280.00 | 281.48 | 620.56 | 231.54 | 510.46 | 278.96 | 615.00 | 395.00 | 870.83 | 24 |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside(bearing surface for boling) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 600 FLANGE



CLASS 600 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness Lap Joint Min. | Out side Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min | Bore | | | Corner Radius of bore of Lapped Flange and pipe | Corner bore Threaded Flange Min. | Depth of Socket |
|-----------------------|----------------------------|--------------------------|----------------------------------|-----------------|--|-----------------------------------|--------|--------------|----------------------------|-------------------------------|-------------|-------------------------------|---|----------------------------------|-----------------|
| | | | | | | Threaded/ Slip-on/ Socket Welding | Lapped | Welding Neck | | Slip-on/ Socket Welding, Min. | Lapped Min. | Welding Neck/ Socket Welding. | | | |
| | | | | | | | | | | | | | | | |
| O | tf | R | X | A[Note(2)] | Y | | | T | B | | | r | Q | D | |
| 1/2 | 95.00 | 14.30 | 34.90 | 38.00 | 21.30 | 22.00 | 22.00 | 52.00 | 16.00 | 22.20 | 22.90 | | 3.00 | 23.6 | 10.00 |
| 3/4 | 115.00 | 15.90 | 42.90 | 48.00 | 26.70 | 25.00 | 25.00 | 57.00 | 16.00 | 27.70 | 28.20 | | 3.00 | 29.0 | 11.00 |
| 1 | 125.00 | 17.50 | 50.80 | 54.00 | 33.40 | 27.00 | 27.00 | 62.00 | 18.00 | 34.50 | 34.90 | | 3.00 | 35.8 | 13.00 |
| 1 1/4 | 135.00 | 20.70 | 63.50 | 64.00 | 42.20 | 29.00 | 29.00 | 67.00 | 21.00 | 43.20 | 43.70 | | 5.00 | 44.4 | 14.00 |
| 1 1/2 | 155.00 | 22.30 | 73.00 | 70.00 | 48.30 | 32.00 | 32.00 | 70.00 | 23.00 | 49.50 | 50.00 | | 6.00 | 50.6 | 16.00 |
| 2 | 165.00 | 25.40 | 92.10 | 84.00 | 60.30 | 37.00 | 37.00 | 73.00 | 29.00 | 61.90 | 62.50 | | 8.00 | 63.5 | 17.00 |
| 2 1/2 | 190.00 | 28.60 | 104.80 | 100.00 | 73.00 | 41.00 | 41.00 | 79.00 | 32.00 | 74.60 | 75.40 | | 8.00 | 76.2 | 19.00 |
| 3 | 210.00 | 31.80 | 127.00 | 117.00 | 88.90 | 46.00 | 46.00 | 83.00 | 35.00 | 90.70 | 91.40 | | 10.00 | 92.2 | 21.00 |
| 3 1/2 | 230.00 | 35.00 | 139.70 | 133.00 | 101.60 | 49.00 | 49.00 | 86.00 | 40.00 | 103.40 | 104.10 | | 10.00 | 104.9 | |
| 4 | 275.00 | 38.10 | 157.20 | 152.00 | 114.30 | 54.00 | 54.00 | 102.00 | 42.00 | 116.10 | 116.80 | To be specified by purchaser | 11.00 | 117.6 | |
| 5 | 330.00 | 44.50 | 185.70 | 189.00 | 141.30 | 60.00 | 60.00 | 114.00 | 48.00 | 143.80 | 144.40 | | 11.00 | 144.4 | |
| 6 | 355.00 | 47.70 | 215.90 | 222.00 | 168.30 | 67.00 | 67.00 | 117.00 | 51.00 | 170.70 | 171.40 | | 13.00 | 171.4 | |
| 8 | 420.00 | 55.60 | 269.90 | 273.00 | 219.10 | 76.00 | 76.00 | 133.00 | 58.00 | 221.50 | 222.20 | | 13.00 | 222.2 | |
| 10 | 510.00 | 63.50 | 323.80 | 343.00 | 273.00 | 86.00 | 111.00 | 152.00 | 66.00 | 276.20 | 277.40 | | 13.00 | 276.2 | |
| 12 | 560.00 | 66.70 | 381.00 | 400.00 | 323.80 | 92.00 | 117.00 | 156.00 | 70.00 | 327.00 | 328.20 | | 13.00 | 328.6 | |
| 14 | 605.00 | 69.90 | 412.80 | 432.00 | 355.60 | 94.00 | 127.00 | 165.00 | 74.00 | 359.20 | 360.20 | | 13.00 | 360.4 | |
| 16 | 685.00 | 76.20 | 469.90 | 495.00 | 406.40 | 106.00 | 140.00 | 178.00 | 78.00 | 410.50 | 411.20 | | 13.00 | 411.2 | |
| 18 | 745.00 | 82.60 | 533.40 | 546.00 | 457.00 | 117.00 | 152.00 | 184.00 | 80.00 | 461.80 | 462.30 | | 13.00 | 462.0 | |
| 20 | 815.00 | 88.90 | 584.20 | 610.00 | 508.00 | 127.00 | 165.00 | 190.00 | 83.00 | 513.10 | 514.40 | | 13.00 | 512.8 | |
| 24 | 940.00 | 101.60 | 692.20 | 718.00 | 610.00 | 140.00 | 184.00 | 203.00 | 93.00 | 616.00 | 616.00 | | 13.00 | 614.4 | |

Notes:

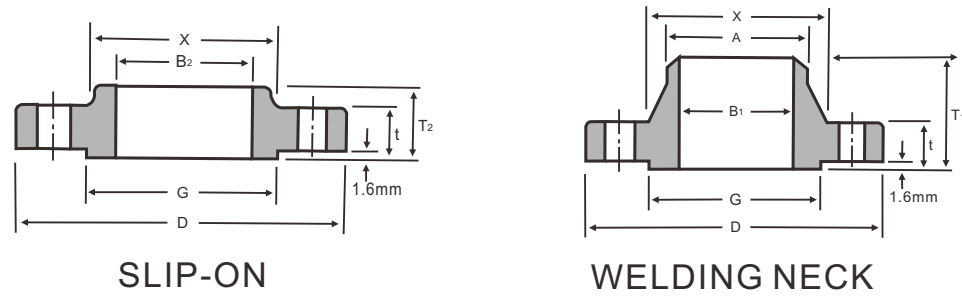
- (1) For the Bore(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in 'Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

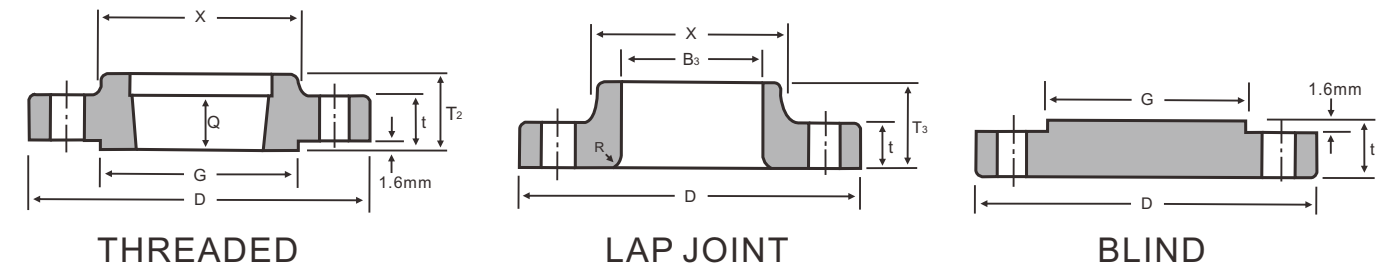
| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|-------------|--------------------|--------------|--------|------------------|--------|-----------|--------|---------|------|----------------|-------|--|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | Socket Welding | | | |
| | | | | | Raised Face | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | | |
| 66.70 | 4 | 5/8 | 1/2 | 75.00 | 70.00 | 75.00 | 0.90 | 1.98 | 0.91 | 2.01 | 0.80 | 1.76 | 0.91 | 2.01 | 0.91 | 2.01 | 1/2 | | |
| 82.60 | 4 | 3/4 | 5/8 | 90.00 | 85.00 | 90.00 | 1.59 | 3.51 | 1.40 | 3.09 | 1.36 | 3.00 | 1.40 | 3.09 | 1.36 | 3.00 | 3/4 | | |
| 88.90 | 4 | 3/4 | 5/8 | 90.00 | 85.00 | 90.00 | 1.90 | 4.19 | 1.70 | 3.75 | 1.59 | 3.51 | 1.81 | 3.99 | 1.81 | 3.99 | 1 | | |
| 98.40 | 4 | 3/4 | 5/8 | 95.00 | 90.00 | 95.00 | 2.49 | 5.49 | 2.27 | 5.00 | 2.04 | 4.50 | 2.40 | 5.29 | 2.60 | 5.73 | 1 1/4 | | |
| 114.30 | 4 | 7/8 | 3/4 | 110.00 | 100.00 | 110.00 | 3.63 | 8.00 | 3.10 | 6.83 | 2.95 | 6.50 | 3.40 | 7.50 | 3.18 | 7.01 | 1 1/2 | | |
| 127.00 | 8 | 3/4 | 5/8 | 110.00 | 100.00 | 110.00 | 4.54 | 10.01 | 3.63 | 8.00 | 3.63 | 8.00 | 4.40 | 9.70 | 3.90 | 8.60 | 2 | | |
| 149.20 | 8 | 7/8 | 3/4 | 120.00 | 115.00 | 120.00 | 6.35 | 14.00 | 5.44 | 11.99 | 4.99 | 11.00 | 6.80 | 14.99 | 5.90 | 13.01 | 2 1/2 | | |
| 168.30 | 8 | 7/8 | 3/4 | 125.00 | 120.00 | 125.00 | 8.16 | 17.99 | 7.26 | 16.01 | 6.35 | 14.00 | 8.90 | 19.62 | 7.40 | 16.31 | 3 | | |
| 184.20 | 8 | 1 | 7/8 | 140.00 | 135.00 | 140.00 | 11.80 | 26.01 | 9.53 | 21.01 | 9.08 | 20.02 | 13.17 | 29.03 | | | 3 1/2 | | |
| 215.90 | 8 | 1 | 7/8 | 145.00 | 140.00 | 145.00 | 16.78 | 36.99 | 14.97 | 33.00 | 14.06 | 31.00 | 18.60 | 41.01 | | | 4 | | |
| 266.70 | 8 | 1 1/8 | 1 | 165.00 | 160.00 | 165.00 | 30.87 | 68.06 | 28.50 | 62.83 | 27.50 | 60.63 | 30.84 | 67.99 | | | 5 | | |
| 292.10 | 12 | 1 1/8 | 1 | 170.00 | 165.00 | 170.00 | 36.77 | 81.06 | 36.32 | 80.07 | 35.38 | 78.00 | 38.00 | 83.78 | | | 6 | | |
| 349.20 | 12 | 1 1/4 | 1 1/8 | 190.00 | 185.00 | 195.00 | 50.80 | 111.99 | 44.00 | 97.00 | 50.80 | 111.99 | 62.20 | 137.13 | | | 8 | | |
| 431.80 | 16 | 1 3/8 | 1 1/4 | 215.00 | 210.00 | 215.00 | 86.26 | 190.17 | 76.20 | 167.99 | 74.00 | 163.14 | 102.00 | 224.87 | | | 10 | | |
| 489.00 | 20 | 1 3/8 | 1 1/4 | 220.00 | 215.00 | 220.00 | 102.51 | 226.00 | 97.52 | 214.99 | 108.86 | 240.00 | 132.00 | 291.01 | | | 12 | | |
| 527.00 | 20 | 1 1/2 | 1 3/8 | 235.00 | 230.00 | 235.00 | 121.56 | 267.99 | 102.00 | 224.87 | 111.00 | 244.71 | 158.00 | 348.33 | | | 14 | | |
| 603.20 | 20 | 1 5/8 | 1 1/2 | 255.00 | 250.00 | 255.00 | 177.06 | 390.35 | 149.82 | 330.30 | 165.71 | 365.33 | 224.73 | 495.44 | | | 16 | | |
| 654.00 | 20 | 1 3/4 | 1 5/8 | 275.00 | 265.00 | 275.00 | 215.65 | 475.43 | 180.10 | 397.05 | 195.00 | 427.70 | 285.00 | 628.32 | | | 18 | | |
| 723.90 | 24 | 1 3/4 | 1 5/8 | 285.00 | 280.00 | 290.00 | 267.86 | 590.53 | 231.54 | 510.46 | 258.78 | 570.51 | 365.00 | 804.69 | | | 20 | | |
| 838.20 | 24 | 2 | 1 7/8 | 330.00 | 325.00 | 335.00 | 372.00 | 820.12 | 330.00 | 727.53 | 362.00 | 798.07 | 533.45 | 1176.06 | | | 24 | | |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside(bearing surface for boling) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 900 FLANGE



CLASS 900 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness Lap Joint Min. | Out side Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min | Bore | | | Corner Radius of bore of Lapped Flange and pipe | Corner bore Threaded Flange Min. | | |
|-----------------------|----------------------------|--------------------------|----------------------------------|-----------------|--|---|--------|--------------|----------------------------|---------------|-------------|--------------|---|----------------------------------|--|--|
| | | | | | | Threaded/ Slip-on | Lapped | Welding Neck | | Slip-on/ Min. | Lapped Min. | Welding Neck | | | | |
| O | tf | R | X | A[Note(2)] | Y | | | T | B | | | r | Q | | | |
| 1/2 | | | | | | | | | | | | | | | | |
| 3/4 | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | |
| 1 1/4 | | | | | | Use Class 1500 Dimensions in these sizes[Note(3)] | | | | | | | | | | |
| 1 1/2 | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | |
| 2 1/2 | | | | | | | | | | | | | | | | |
| 3 | 240.00 | 38.10 | 127.00 | 127.00 | 88.90 | 54.00 | 54.00 | 102.00 | 42.00 | 90.70 | 91.40 | | 10.00 | 92.2 | | |
| 4 | 290.00 | 44.50 | 157.20 | 159.00 | 114.30 | 70.00 | 70.00 | 114.00 | 48.00 | 116.10 | 116.80 | | 11.00 | 117.6 | | |
| 5 | 350.00 | 50.80 | 185.70 | 190.00 | 141.30 | 79.00 | 79.00 | 127.00 | 54.00 | 143.80 | 144.40 | | 11.00 | 144.4 | | |
| 6 | 380.00 | 55.60 | 215.90 | 235.00 | 168.30 | 86.00 | 86.00 | 140.00 | 58.00 | 170.70 | 171.40 | | 13.00 | 171.4 | | |
| 8 | 470.00 | 63.50 | 269.90 | 298.00 | 219.10 | 102.00 | 114.00 | 162.00 | 64.00 | 221.50 | 222.20 | | 13.00 | 222.2 | | |
| 10 | 545.00 | 69.90 | 323.80 | 368.00 | 273.00 | 108.00 | 127.00 | 184.00 | 72.00 | 276.20 | 277.40 | | 13.00 | 276.2 | | |
| 12 | 610.00 | 79.40 | 381.00 | 419.00 | 323.80 | 117.00 | 143.00 | 200.00 | 77.00 | 327.00 | 328.20 | | 13.00 | 328.6 | | |
| 14 | 640.00 | 85.80 | 412.80 | 451.00 | 355.60 | 130.00 | 156.00 | 213.00 | 83.00 | 359.20 | 360.20 | | 13.00 | 360.4 | | |
| 16 | 705.00 | 88.90 | 469.90 | 508.00 | 406.40 | 133.00 | 165.00 | 216.00 | 86.00 | 410.50 | 411.20 | | 13.00 | 411.2 | | |
| 18 | 785.00 | 101.60 | 533.40 | 565.00 | 457.00 | 152.00 | 190.00 | 229.00 | 89.00 | 461.80 | 462.30 | | 13.00 | 462.0 | | |
| 20 | 855.00 | 108.00 | 584.20 | 622.00 | 508.00 | 159.00 | 210.00 | 248.00 | 93.00 | 513.10 | 514.40 | | 13.00 | 512.8 | | |
| 24 | 1040.00 | 139.70 | 692.20 | 749.00 | 610.00 | 203.00 | 267.00 | 292.00 | 102.00 | 616.00 | 616.00 | | 13.00 | 614.4 | | |

Notes:

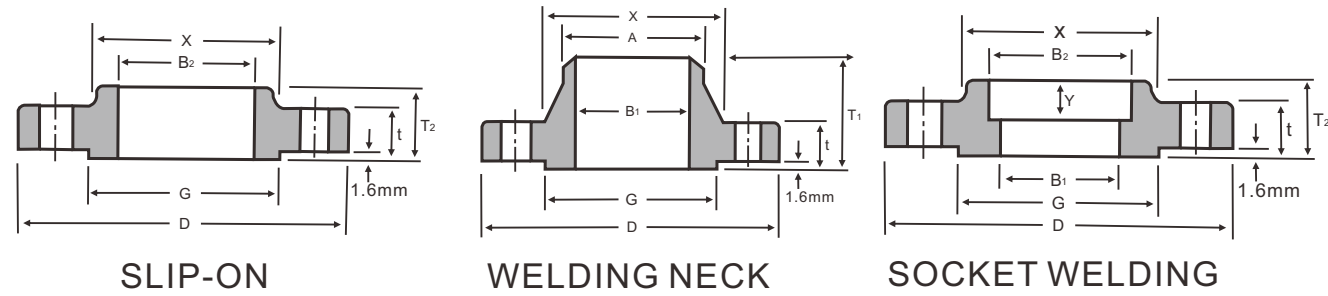
- (1) For the Bore'(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in 'Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

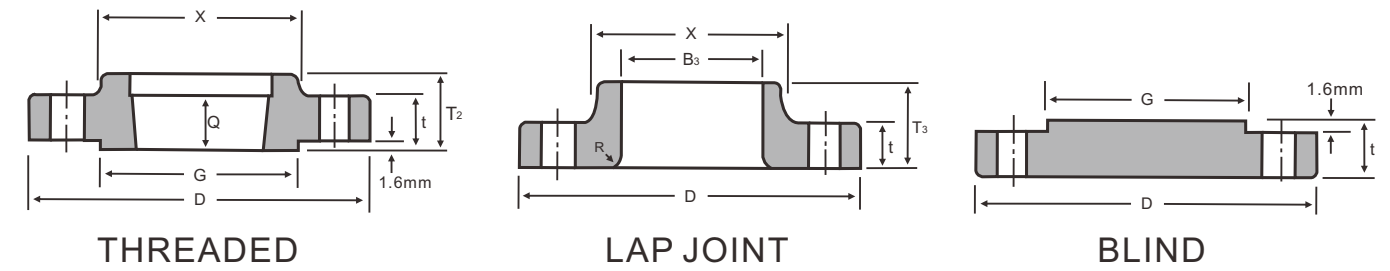
| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|-------------|--------------------|---------|------------------|---------|-----------|---------|--------|---------|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | |
| | | | | | Raised Face | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb |
| 190.50 | 8 | 1 | 7/8 | 145.00 | 140.00 | 145.00 | 15.00 | 33.07 | 11.80 | 26.01 | 11.34 | 25.00 | 13.17 | 29.03 | 3 |
| 235.00 | 8 | 1 1/4 | 1 1/8 | 170.00 | 165.00 | 170.00 | 23.13 | 50.99 | 23.20 | 51.15 | 22.60 | 49.82 | 24.50 | 54.01 | 4 |
| 279.40 | 8 | 1 3/8 | 1 1/8 | 190.00 | 185.00 | 190.00 | 38.50 | 84.88 | 37.65 | 83.00 | 36.74 | 81.00 | 39.46 | 86.99 | 5 |
| 317.50 | 12 | 1 1/4 | 1 1/8 | 190.00 | 185.00 | 195.00 | 49.89 | 109.99 | 48.30 | 106.48 | 47.50 | 104.72 | 51.50 | 113.54 | 6 |
| 393.70 | 12 | 1 1/2 | 1 3/8 | 220.00 | 215.00 | 220.00 | 79.45 | 175.16 | 75.00 | 165.35 | 86.00 | 189.60 | 89.00 | 196.21 | 8 |
| 469.90 | 16 | 1 1/2 | 1 3/8 | 235.00 | 230.00 | 235.00 | 118.04 | 260.23 | 111.13 | 245.00 | 125.64 | 276.99 | 131.54 | 290.00 | 10 |
| 533.40 | 20 | 1 1/2 | 1 3/8 | 255.00 | 250.00 | 255.00 | 157.00 | 346.13 | 146.00 | 321.87 | 167.00 | 368.17 | 187.00 | 412.26 | 12 |
| 558.80 | 20 | 1 5/8 | 1 1/2 | 275.00 | 265.00 | 280.00 | 181.60 | 400.36 | 172.36 | 379.99 | 180.07 | 396.99 | 224.07 | 493.99 | 14 |
| 616.00 | 20 | 1 3/4 | 1 5/8 | 285.00 | 280.00 | 290.00 | 224.73 | 495.44 | 192.95 | 425.39 | 211.11 | 465.42 | 272.40 | 600.54 | 16 |
| 685.80 | 20 | 2 | 1 7/8 | 325.00 | 320.00 | 335.00 | 308.72 | 680.61 | 272.40 | 600.54 | 295.10 | 650.58 | 385.90 | 850.76 | 18 |
| 749.30 | 20 | 2 1/8 | 2 | 350.00 | 345.00 | 360.00 | 376.82 | 830.75 | 331.42 | 730.66 | 367.74 | 810.73 | 488.00 | 1075.86 | 20 |
| 901.70 | 20 | 2 5/8 | 2 1/2 | 440.00 | 430.00 | 455.00 | 685.00 | 1510.17 | 632.00 | 1393.36 | 700.00 | 1543.24 | 905.00 | 1995.18 | 24 |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside(bearing surface for boling) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 1500 FLANGE



CLASS 1500 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness Lap Joint Min. | Out side Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min | Bore | | | Corner Radius of bore of Lapped Flange and pipe | Corner bore Threaded Flange Min. | Depth of Socket |
|-----------------------|----------------------------|--------------------------|----------------------------------|-----------------|--|-----------------------------------|--------|--------------|----------------------------|-------------------------------|-------------|-------------------------------|---|----------------------------------|-----------------|
| | | | | | | Threaded/ Slip-on/ Socket Welding | Lapped | Welding Neck | | Slip-on/ Socket Welding, Min. | Lapped Min. | Welding Neck/ Socket Welding. | | | |
| | | | | | | | | | | | | | | | |
| O | tf | R | X | A[Note(2)] | Y | | | T | B | | | r | Q | D | |
| 1/2 | 120.00 | 22.30 | 34.90 | 38.00 | 21.30 | 32.00 | 32.00 | 60.00 | 23.00 | 22.20 | 22.90 | | 3.00 | 23.6 | 10.00 |
| 3/4 | 130.00 | 25.40 | 42.90 | 44.00 | 26.70 | 35.00 | 35.00 | 70.00 | 26.00 | 27.70 | 28.20 | | 3.00 | 29.0 | 11.00 |
| 1 | 150.00 | 28.60 | 50.80 | 52.00 | 33.40 | 41.00 | 41.00 | 73.00 | 29.00 | 34.50 | 34.90 | | 3.00 | 35.8 | 13.00 |
| 1 1/4 | 160.00 | 28.60 | 63.50 | 64.00 | 42.20 | 41.00 | 41.00 | 73.00 | 31.00 | 43.20 | 43.70 | | 5.00 | 44.4 | 14.00 |
| 1 1/2 | 180.00 | 31.80 | 73.00 | 70.00 | 48.30 | 44.00 | 44.00 | 83.00 | 32.00 | 49.50 | 50.00 | | 6.00 | 50.6 | 16.00 |
| 2 | 215.00 | 38.10 | 92.10 | 105.00 | 60.30 | 57.00 | 57.00 | 102.00 | 39.00 | 61.90 | 62.50 | | 8.00 | 63.5 | 17.00 |
| 2 1/2 | 245.00 | 41.30 | 104.80 | 124.00 | 73.00 | 64.00 | 64.00 | 105.00 | 48.00 | 74.60 | 75.40 | | 8.00 | 76.2 | 19.00 |
| 3 | 265.00 | 47.70 | 127.00 | 133.00 | 88.90 | | 73.00 | 117.00 | | | 91.40 | | 10.00 | | |
| 4 | 310.00 | 54.00 | 157.20 | 162.00 | 114.30 | | 90.00 | 124.00 | | | 116.80 | | 11.00 | | |
| 5 | 375.00 | 73.10 | 185.70 | 197.00 | 141.30 | | 105.00 | 156.00 | | | 144.40 | | 11.00 | | |
| 6 | 395.00 | 82.60 | 215.90 | 229.00 | 168.30 | | 119.00 | 171.00 | | | 171.40 | | 13.00 | | |
| 8 | 485.00 | 92.10 | 269.90 | 292.00 | 219.10 | | 143.00 | 213.00 | | | 222.20 | | 13.00 | | |
| 10 | 585.00 | 108.00 | 323.80 | 368.00 | 273.00 | | 178.00 | 254.00 | | | 277.40 | | 13.00 | | |
| 12 | 675.00 | 123.90 | 381.00 | 451.00 | 323.80 | | 219.00 | 283.00 | | | 328.20 | | 13.00 | | |
| 14 | 750.00 | 133.40 | 412.80 | 495.00 | 355.60 | | 241.00 | 298.00 | | | 360.20 | | 13.00 | | |
| 16 | 825.00 | 146.10 | 469.90 | 552.00 | 406.40 | | 260.00 | 311.00 | | | 411.20 | | 13.00 | | |
| 18 | 915.00 | 162.00 | 533.40 | 597.00 | 457.00 | | 276.00 | 327.00 | | | 462.30 | | 13.00 | | |
| 20 | 985.00 | 177.80 | 584.20 | 641.00 | 508.00 | | 292.00 | 356.00 | | | 514.40 | | 13.00 | | |
| 24 | 1170.00 | 203.20 | 692.20 | 760.00 | 610.00 | | 330.00 | 406.00 | | | 616.00 | | 13.00 | | |

Notes:

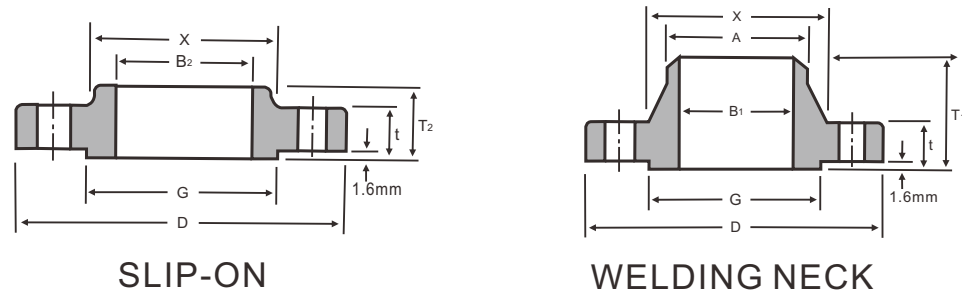
- (1) For the Bore(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in 'Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

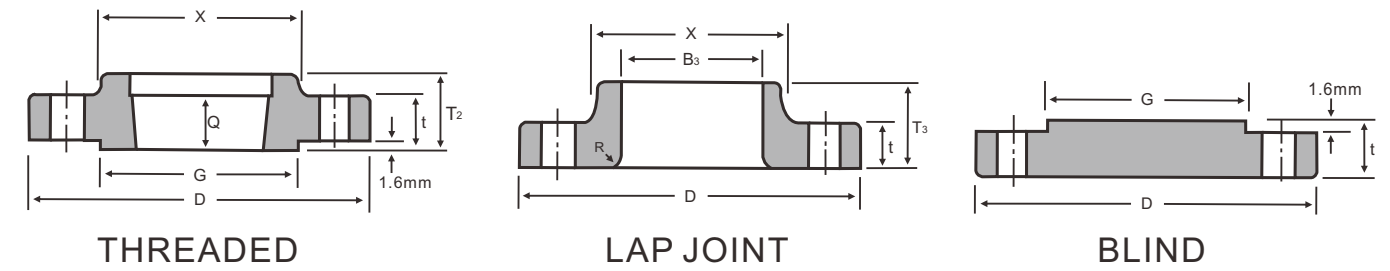
| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|-------------|--------------------|--------------|--------|------------------|---------|-----------|---------|---------|-------|----------------|-------|--|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | Socket Welding | | | |
| | | | | | Raised Face | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | | |
| 82.60 | 4 | 7/8 | 3/4 | 110.00 | 100.00 | 110.00 | 2.10 | 4.63 | 1.81 | 3.99 | 1.81 | 3.99 | 1.90 | 4.19 | 1.81 | 3.99 | 1/2 | | |
| 88.90 | 4 | 7/8 | 3/4 | 115.00 | 110.00 | 115.00 | 2.72 | 6.00 | 2.40 | 5.29 | 2.30 | 5.07 | 2.70 | 5.95 | 2.81 | 6.19 | 3/4 | | |
| 101.60 | 4 | 1 | 7/8 | 125.00 | 120.00 | 125.00 | 3.86 | 8.51 | 3.41 | 7.52 | 3.40 | 7.50 | 4.09 | 9.02 | 3.61 | 7.96 | 1 | | |
| 111.10 | 4 | 1 | 7/8 | 125.00 | 120.00 | 125.00 | 4.54 | 10.01 | 4.10 | 9.04 | 4.09 | 9.02 | 4.54 | 10.01 | 4.99 | 11.00 | 1 1/4 | | |
| 123.80 | 4 | 1 1/8 | 1 | 140.00 | 135.00 | 140.00 | 5.90 | 13.01 | 5.45 | 12.02 | 5.40 | 11.90 | 5.90 | 13.01 | 6.76 | 14.90 | 1 1/2 | | |
| 165.10 | 8 | 1 | 7/8 | 145.00 | 140.00 | 145.00 | 10.89 | 24.01 | 9.98 | 22.00 | 9.53 | 21.01 | 11.34 | 25.00 | 10.89 | 24.01 | 2 | | |
| 190.50 | 8 | 1 1/8 | 1 | 160.00 | 150.00 | 160.00 | 16.33 | 36.00 | 15.80 | 34.83 | 13.15 | 28.99 | 16.00 | 35.27 | 16.34 | 36.02 | 2 1/2 | | |
| 203.50 | 8 | 1 1/4 | 1 1/8 | 180.00 | 170.00 | 180.00 | 21.79 | 48.04 | 21.77 | 47.99 | 17.24 | 39.01 | 21.79 | 48.04 | | | 3 | | |
| 241.30 | 8 | 1 3/8 | 1 1/4 | 195.00 | 190.00 | 195.00 | 31.30 | 69.00 | 31.00 | 68.34 | 29.00 | 63.93 | 33.11 | 73.00 | | | 4 | | |
| 292.10 | 8 | 1 5/8 | 1 1/2 | 250.00 | 240.00 | 250.00 | 59.02 | 130.12 | 58.80 | 129.63 | 54.00 | 119.05 | 60.00 | 132.28 | | | 5 | | |
| 317.50 | 12 | 1 1/2 | 1 5/8 | 260.00 | 255.00 | 265.00 | 74.91 | 165.15 | 74.00 | 163.14 | 62.00 | 136.69 | 75.00 | 165.35 | | | 6 | | |
| 393.70 | 12 | 1 3/4 | 1 5/8 | 290.00 | 285.00 | 325.00 | 123.83 | 273.00 | 117.73 | 259.55 | 129.73 | 286.01 | 136.98 | 301.99 | | | 8 | | |
| 482.60 | 12 | 2 | 1 7/8 | 335.00 | 330.00 | 345.00 | 205.93 | 454.00 | 197.49 | 435.39 | 220.19 | 485.44 | 229.97 | 507.00 | | | 10 | | |
| 571.50 | 16 | 2 1/8 | 2 | 375.00 | 370.00 | 385.00 | 306.00 | 674.61 | 264.00 | 582.02 | 286.02 | 630.57 | 316.00 | 696.66 | | | 12 | | |
| 635.00 | 16 | 2 3/8 | 2 1/4 | 405.00 | 400.00 | 425.00 | 416.00 | 917.12 | | | 404.06 | 890.80 | 421.00 | 928.15 | | | 14 | | |
| 704.80 | 16 | 2 5/8 | 2 1/2 | 445.00 | 440.00 | 470.00 | 567.50 | 1251.12 | | | 522.10 | 1151.03 | 559.00 | 1232.38 | | | 16 | | |
| 774.70 | 16 | 2 7/8 | 2 3/4 | 495.00 | 490.00 | 525.00 | 736.00 | 1622.60 | | | 669.65 | 1476.33 | 761.00 | 1677.72 | | | 18 | | |
| 831.80 | 16 | 3 1/8 | 3 | 540.00 | 535.00 | 565.00 | 929.00 | 2048.09 | | | 805.85 | 1776.60 | 967.00 | 2131.87 | | | 20 | | |
| 990.60 | 16 | 3 5/8 | 3 1/2 | 615.00 | 610.00 | 650.00 | 1504.00 | 3315.75 | | | 1285.55 | 2834.15 | 1568.00 | 3456.85 | | | 24 | | |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside(bearing surface for boling) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 2500 FLANGE



CLASS 2500 FLANGE



ANSI B16.5 FORGED FLANGE

Unit:mm

| Nominal Pipe Size NPS | Outside Diameter of Flange | Thickness Lap Joint Min. | Out side Diameter of Raised Face | Diameter of Hub | Hub Diameter Beginning of Chamfer Welding Neck | Length thru hub | | | Thread Length Threaded Min | Bore | | Corner Radius of bore of Lapped Flange and pipe | Corner bore Threaded Flange Min. |
|-----------------------|----------------------------|--------------------------|----------------------------------|-----------------|--|-------------------|--------|--------------|----------------------------|-------------|------------------------------|---|----------------------------------|
| | | | | | | Threaded/ Slip-on | Lapped | Welding Neck | | Lapped Min. | Welding Neck | | |
| | | | | | | | | | | | | | |
| 1/2 | 135.00 | 30.20 | 34.90 | 43.00 | 21.30 | 40.00 | 40.00 | 73.00 | 29.00 | 22.90 | | 3.00 | 23.6 |
| 3/4 | 140.00 | 31.80 | 42.90 | 51.00 | 26.70 | 43.00 | 43.00 | 79.00 | 32.00 | 28.20 | | 3.00 | 29.0 |
| 1 | 160.00 | 35.00 | 50.80 | 57.00 | 33.40 | 48.00 | 48.00 | 89.00 | 35.00 | 34.90 | | 3.00 | 35.8 |
| 1 1/4 | 185.00 | 38.10 | 63.50 | 73.00 | 42.20 | 52.00 | 52.00 | 95.00 | 39.00 | 43.70 | | 5.00 | 44.4 |
| 1 1/2 | 205.00 | 44.50 | 73.00 | 79.00 | 48.30 | 60.00 | 60.00 | 111.00 | 45.00 | 50.00 | | 6.00 | 50.6 |
| 2 | 235.00 | 50.90 | 92.10 | 95.00 | 60.30 | 70.00 | 70.00 | 127.00 | 51.00 | 62.50 | | 8.00 | 63.5 |
| 2 1/2 | 265.00 | 57.20 | 104.80 | 114.00 | 73.00 | 79.00 | 79.00 | 143.00 | 58.00 | 75.40 | To be specified by purchaser | 8.00 | 76.2 |
| 3 | 305.00 | 66.70 | 127.00 | 133.00 | 88.90 | | | 92.00 | 168.00 | 91.40 | | 10.00 | |
| 4 | 355.00 | 76.20 | 157.20 | 165.00 | 114.30 | | | 108.00 | 190.00 | 116.80 | | 11.00 | |
| 5 | 420.00 | 92.10 | 185.70 | 203.00 | 141.30 | | | 130.00 | 229.00 | 144.40 | | 11.00 | |
| 6 | 485.00 | 108.00 | 215.90 | 235.00 | 168.30 | | | 152.00 | 273.00 | 171.40 | 13.00 | | |
| 8 | 550.00 | 127.00 | 269.90 | 305.00 | 219.10 | | | 178.00 | 318.00 | 222.20 | 13.00 | | |
| 10 | 675.00 | 165.10 | 323.80 | 375.00 | 273.00 | | | 229.00 | 419.00 | 277.40 | 13.00 | | |
| 12 | 760.00 | 184.20 | 381.00 | 441.00 | 323.80 | | | 254.00 | 464.00 | 328.20 | 13.00 | | |

Notes:

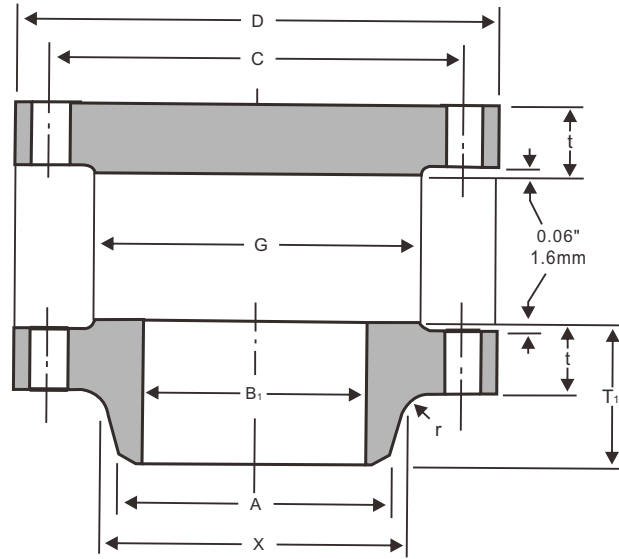
- (1) For the Bore'(Bi) other than Standard Wall Thickness, refer to page 116.
- (2) Class 150 flanges except Lap Joint will be furnished with 0.06"(1.6mm) raised face, which is included in 'Thickness'(t) and Length through Hub'(T1),(T2).
- (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

Unit:mm

| Drilling Template | | | | Bolt Length | | | Approximate Weight | | | | | | | | Nominal Pipe Size |
|-------------------------|-----------------|------------------------|------------------------|---------------------|------------------|------------|--------------------|---------|------------------|---------|-----------|---------|--------|---------|-------------------|
| Diameter of Bolt Circle | Number of Holes | Diameter of Holes, in. | Diameter of bolts, in. | Machine Bolt Length | Stud bolt length | | Welding Neck | | Slip-on Threaded | | Lap Joint | | Blind | | |
| | | | | | Raised Face | Ring Joint | Kg | Lb | Kg | Lb | Kg | Lb | Kg | Lb | |
| 88.90 | 4 | 7/8 | 3/4 | 120.00 | 115.00 | 120.00 | 3.18 | 7.01 | 3.18 | 7.01 | 3.00 | 6.61 | 3.18 | 7.01 | 1/2 |
| 95.20 | 4 | 7/8 | 3/4 | 125.00 | 120.00 | 125.00 | 4.08 | 8.99 | 4.08 | 8.99 | 3.63 | 8.00 | 4.54 | 10.01 | 3/4 |
| 108.00 | 4 | 1 | 7/8 | 140.00 | 135.00 | 140.00 | 5.45 | 12.02 | 5.44 | 11.99 | 4.99 | 11.00 | 5.44 | 11.99 | 1 |
| 130.20 | 4 | 1 1/8 | 1 | 150.00 | 145.00 | 150.00 | 9.07 | 20.00 | 8.16 | 17.99 | 7.26 | 16.01 | 8.16 | 17.99 | 1 1/4 |
| 146.00 | 4 | 1 1/4 | 1 1/8 | 170.00 | 165.00 | 170.00 | 11.35 | 25.02 | 11.00 | 24.25 | 9.99 | 22.02 | 10.44 | 23.02 | 1 1/2 |
| 171.40 | 8 | 1 1/8 | 1 | 180.00 | 170.00 | 180.00 | 19.07 | 42.04 | 17.25 | 38.03 | 16.80 | 37.04 | 17.71 | 39.04 | 2 |
| 196.80 | 8 | 1 1/4 | 1 1/8 | 195.00 | 190.00 | 205.00 | 23.61 | 52.05 | 24.97 | 55.05 | 24.06 | 53.04 | 25.42 | 56.04 | 2 1/2 |
| 228.60 | 8 | 1 3/8 | 1 1/4 | 220.00 | 215.00 | 230.00 | 42.68 | 94.09 | 37.68 | 83.07 | 36.32 | 80.07 | 39.04 | 86.07 | 3 |
| 273.00 | 8 | 1 5/8 | 1 1/2 | 255.00 | 250.00 | 260.00 | 64.00 | 141.10 | 58.00 | 127.87 | 54.48 | 120.11 | 60.38 | 133.12 | 4 |
| 323.80 | 8 | 1 7/8 | 1 3/4 | 300.00 | 290.00 | 310.00 | 110.68 | 244.01 | 95.25 | 209.99 | 92.53 | 203.99 | 101.15 | 223.00 | 5 |
| 368.30 | 8 | 2 1/8 | 2 | 345.00 | 335.00 | 355.00 | 176.46 | 389.03 | 146.51 | 323.00 | 143.01 | 315.28 | 156.63 | 345.31 | 6 |
| 438.20 | 12 | 2 1/8 | 2 | 380.00 | 375.00 | 395.00 | 261.27 | 576.00 | 219.99 | 485.00 | 213.38 | 470.42 | 240.62 | 530.48 | 8 |
| 539.80 | 12 | 2 5/8 | 2 1/2 | 490.00 | 485.00 | 510.00 | 484.43 | 1067.99 | 419.57 | 924.99 | 408.60 | 900.81 | 465.36 | 1025.94 | 10 |
| 619.10 | 12 | 2 7/8 | 2 3/4 | 540.00 | 535.00 | 560.00 | 692.35 | 1526.37 | 590.20 | 1301.17 | 572.95 | 1263.14 | 664.06 | 1464.00 | 12 |

- (4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
- (5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(1).
- (6) Depth of Socket (Y) is covered by ANSI B16.5 only sizes through 3 inch, over 3 inches at the manufacturer's option

CLASS 150 FLANGE



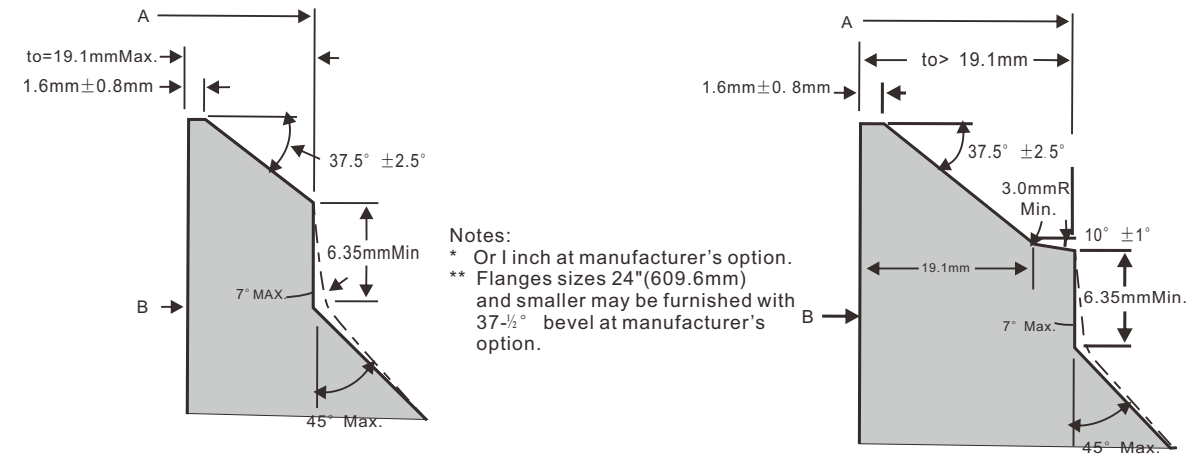
ANSI/ASME B16.47 SERIES A FLANGE

Unit:mm

| Nominal Pipe Size | Outside Diam. | O.D.of Raised Face | Diam. at Base of Hub | Thickness | BORE | |
|-------------------|---------------|--------------------|----------------------|-----------|----------------|--------|
| | | | | | Wall Thickness | |
| | | | | | 9.5mm | 12.7mm |
| | D | G | X | t | B1 | |
| 12 | 483 | 381.0 | 365.3 | 31.8 | 304.8 | 298.5 |
| 14 | 533 | 412.8 | 400.1 | 35.1 | 336.6 | 330.2 |
| 16 | 597 | 469.9 | 457.2 | 36.6 | 387.4 | 381.0 |
| 18 | 635 | 533.4 | 505.0 | 39.6 | 438.2 | 431.8 |
| 20 | 699 | 584.2 | 558.8 | 42.9 | 489.0 | 482.6 |
| 22 | 749 | 641.4 | 609.6 | 46.0 | 539.8 | 533.4 |
| 24 | 813 | 692.2 | 663.4 | 47.8 | 590.6 | 584.2 |
| 26 | 870 | 749.3 | 676.1 | 68.3 | 641.4 | 635.0 |
| 28 | 927 | 800.1 | 726.9 | 71.4 | 692.2 | 685.8 |
| 30 | 984 | 857.3 | 781.1 | 74.7 | 743.0 | 736.6 |
| 32 | 1060 | 914.4 | 831.9 | 81.0 | 793.8 | 787.4 |
| 34 | 1111 | 965.2 | 882.7 | 82.6 | 844.6 | 838.2 |
| 36 | 1168 | 1022.4 | 933.5 | 90.4 | 895.4 | 889.0 |
| 38 | 1238 | 1073.2 | 990.6 | 87.4 | 946.2 | 939.8 |
| 40 | 1289 | 1124.0 | 1041.4 | 90.4 | 997.0 | 990.6 |
| 42 | 1346 | 1193.8 | 1092.2 | 96.8 | 1047.8 | 1041.4 |
| 44 | 1403 | 1244.6 | 1143.0 | 101.6 | 1098.6 | 1092.2 |
| 46 | 1454 | 1295.4 | 1196.8 | 103.1 | 1149.4 | 1143.0 |
| 48 | 1511 | 1358.9 | 1247.6 | 108.0 | 1200.2 | 1193.8 |
| 50 | 1568 | 1409.7 | 1301.8 | 111.3 | 1251.0 | 1244.6 |
| 52 | 1626 | 1460.5 | 1352.6 | 115.8 | 1301.8 | 1295.4 |
| 54 | 1683 | 1511.3 | 1403.4 | 120.7 | 1352.6 | 1346.2 |
| 56 | 1746 | 1574.8 | 1457.5 | 124.0 | 1403.4 | 1397.0 |
| 58 | 1803 | 1625.6 | 1508.3 | 128.5 | 1454.2 | 1447.8 |
| 60 | 1854 | 1676.4 | 1559.1 | 131.8 | 1505.0 | 1498.6 |

Notes:
 (1) For the Bore'(B1) other than wall thickness 0.375"(9.5mm) and 0.500"(127mm), refer to page 71.
 (2) Class 150 flanges Will be furnished with 0.06"(1.6mm) raised face, which is included in Thickness'(t) and Length through Hub'(T)
 (3) Dimensional tolerances are in accordance with ANSI B16.5

WELDING-ENDS FOR WELDING-NECK FLANGE



BEVLE FOR WALL THICKNESS (t) O.19 IN. TO O.88 IN. INCLUSIVE

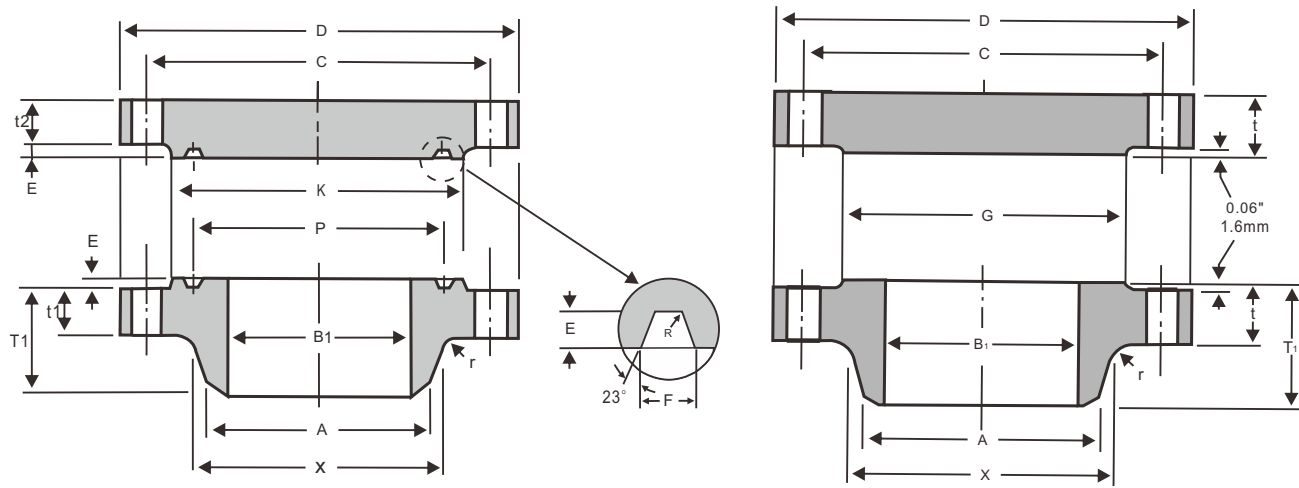
BEVLE FOR WALL THICKNESS (t) GREATER THAN O.88 IN.

Unit:mm

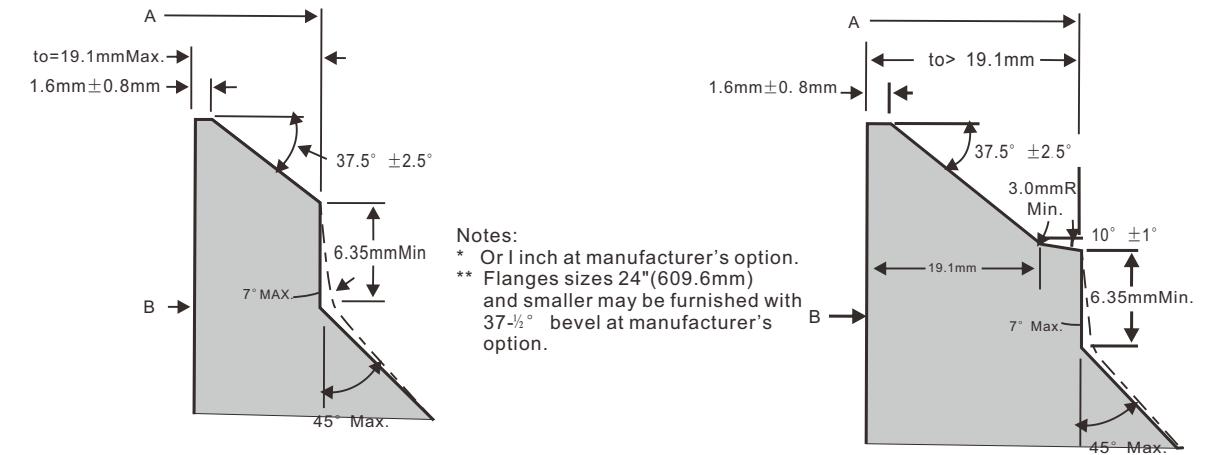
| Nominal Pipe Size | Length thru Hub | Diam. of Hub Bevel | Radius of Fillet | DRILLING | | |
|-------------------|-----------------|--------------------|------------------|-------------------|-----------------|---------------|
| | | | | Bolt Circle Diam. | Number of Holes | Diam of Holes |
| | | | | | | |
| | T1 | A | r | C | | |
| 12 | 114.3 | 323.9 | 9.7 | 431.8 | 12 | 25.4 |
| 14 | 127.0 | 355.6 | 9.7 | 476.3 | 12 | 28.4 |
| 16 | 127.0 | 406.4 | 9.7 | 539.8 | 16 | 28.4 |
| 18 | 139.7 | 457.2 | 9.7 | 577.9 | 16 | 31.8 |
| 20 | 144.5 | 508.0 | 9.7 | 635.0 | 20 | 31.8 |
| 22 | 149.4 | 558.8 | 9.7 | 692.2 | 20 | 35.1 |
| 24 | 152.4 | 609.6 | 9.7 | 749.3 | 20 | 35.1 |
| 26 | 120.7 | 660.4 | 9.7 | 806.5 | 24 | 35.1 |
| 28 | 125.5 | 711.2 | 11.2 | 863.6 | 28 | 35.1 |
| 30 | 136.7 | 762.0 | 11.2 | 914.4 | 28 | 35.1 |
| 32 | 144.5 | 812.8 | 11.2 | 977.9 | 28 | 41.1 |
| 34 | 149.4 | 863.6 | 12.7 | 1028.7 | 32 | 41.1 |
| 36 | 157.2 | 914.4 | 12.7 | 1085.9 | 32 | 41.1 |
| 38 | 157.2 | 965.2 | 12.7 | 1149.4 | 32 | 41.1 |
| 40 | 163.6 | 1016.0 | 12.7 | 1200.2 | 36 | 41.1 |
| 42 | 171.5 | 1066.8 | 12.7 | 1257.3 | 36 | 41.1 |
| 44 | 177.8 | 1117.6 | 12.7 | 1314.5 | 40 | 41.1 |
| 46 | 185.7 | 1168.4 | 12.7 | 1365.3 | 40 | 41.1 |
| 48 | 192.0 | 1219.2 | 12.7 | 1422.4 | 44 | 41.1 |
| 50 | 203.2 | 1270.0 | 12.7 | 1479.6 | 44 | 47.8 |
| 52 | 209.6 | 1320.8 | 12.7 | 1536.7 | 44 | 47.8 |
| 54 | 215.9 | 1371.6 | 12.7 | 1593.9 | 44 | 47.8 |
| 56 | 228.6 | 1422.4 | 12.7 | 1651.0 | 48 | 47.8 |
| 58 | 235.0 | 1473.2 | 12.7 | 1708.2 | 48 | 47.8 |
| 60 | 239.8 | 1524.0 | 12.7 | 1759.0 | 52 | 47.8 |

(4) Maximum Pressure Rating for raised face flanges is 285 psi(19.5 BARS) at atmospheric temperature.
 (5) Flange dimensions of size 12"(3048mm) through 24"(609.6mm) flanges (except 22"(558.8mm) are in accordance with ANSI B16.5

CLASS 300 FLANGE



WELDING-ENDS FOR WELDING-NECK FLANGE



BEVLE FOR WALL THICKNESS (t) O.19 IN. TO O.88 IN. INCLUSIVE

BEVLE FOR WALL THICKNESS (t) GREATER THAN O.88 IN.

ANSI/ASME B16.47 SERIES A FLANGE

Unit:mm

| Nominal Pipe Size | Outside Diam. | O.D. of Raised Face | Diam. at Base of Hub | Thickness | | BORE | | Length thru Hub | Diam. of Hub at Bevel | Radius of Fillet |
|-------------------|---------------|---------------------|----------------------|--------------|-------|----------------|--------|-----------------|-----------------------|------------------|
| | | | | Welding Neck | Blind | Wall Thickness | | | | |
| | | | | | | 9.5mm | 12.7mm | | | |
| D | G | X | t1 | t2 | B1 | T1 | A | r | | |
| 12 | 521 | 381.0 | 374.7 | 50.8 | 50.8 | 304.8 | 298.5 | 130.0 | 323.9 | 9.7 |
| 14 | 584 | 412.8 | 425.5 | 53.8 | 53.8 | 336.6 | 330.2 | 142.7 | 355.6 | 9.7 |
| 16 | 648 | 469.9 | 482.6 | 57.2 | 57.2 | 387.4 | 381.0 | 146.1 | 406.4 | 9.7 |
| 18 | 711 | 533.4 | 533.4 | 60.5 | 60.5 | 438.2 | 431.8 | 158.8 | 457.2 | 9.7 |
| 20 | 775 | 584.2 | 587.2 | 63.5 | 63.5 | 489.0 | 482.6 | 162.1 | 508.0 | 9.7 |
| 22 | 838 | 641.4 | 641.4 | 66.5 | 66.5 | 539.8 | 533.4 | 165.1 | 558.8 | 9.7 |
| 24 | 914 | 692.2 | 701.5 | 69.9 | 69.9 | 590.6 | 584.2 | 168.1 | 609.6 | 9.7 |
| 26 | 972 | 749.3 | 720.9 | 79.2 | 84.1 | 641.4 | 635.0 | 184.2 | 660.4 | 9.7 |
| 28 | 1035 | 800.1 | 774.7 | 85.9 | 90.4 | 692.2 | 685.8 | 196.9 | 711.2 | 11.2 |
| 30 | 1092 | 857.3 | 827.0 | 91.9 | 95.3 | 743.0 | 736.6 | 209.6 | 762.0 | 11.2 |
| 32 | 1149 | 914.4 | 881.1 | 98.6 | 100.1 | 793.8 | 787.4 | 222.3 | 812.8 | 11.2 |
| 34 | 1207 | 965.2 | 936.8 | 101.6 | 104.6 | 844.6 | 838.2 | 231.6 | 863.6 | 12.7 |
| 36 | 1270 | 1022.4 | 990.6 | 104.6 | 111.3 | 895.4 | 889.0 | 241.3 | 914.4 | 12.7 |
| 38 | 1168 | 1028.7 | 993.6 | 108.0 | 108.0 | 946.2 | 939.8 | 180.8 | 965.2 | 12.7 |
| 40 | 1238 | 1085.9 | 1047.8 | 114.3 | 114.3 | 997.0 | 990.6 | 193.5 | 1016.0 | 12.7 |
| 42 | 1289 | 1136.7 | 1098.6 | 119.1 | 119.1 | 1047.8 | 1041.4 | 200.2 | 1066.8 | 12.7 |
| 44 | 1353 | 1193.8 | 1149.4 | 124.0 | 124.0 | 1098.6 | 1092.2 | 206.2 | 1117.6 | 12.7 |
| 46 | 1416 | 1244.6 | 1203.5 | 128.5 | 128.5 | 1149.4 | 1143.0 | 215.9 | 1168.4 | 12.7 |
| 48 | 1467 | 1301.8 | 1254.3 | 133.4 | 133.4 | 1200.2 | 1193.8 | 223.8 | 1219.2 | 12.7 |
| 50 | 1530 | 1358.9 | 1305.1 | 139.7 | 139.7 | 1251.0 | 1244.6 | 231.6 | 1270.0 | 12.7 |
| 52 | 1581 | 1409.7 | 1355.9 | 144.5 | 144.5 | 1301.8 | 1295.4 | 238.3 | 1320.8 | 12.7 |
| 54 | 1657 | 1466.9 | 1409.7 | 152.4 | 152.4 | 1352.6 | 1346.2 | 252.5 | 1371.6 | 12.7 |
| 56 | 1708 | 1517.7 | 1463.5 | 153.9 | 153.9 | 1403.4 | 1397.0 | 260.4 | 1422.4 | 12.7 |
| 58 | 1759 | 1574.8 | 1514.3 | 158.8 | 158.8 | 1454.2 | 1447.8 | 266.7 | 1473.2 | 12.7 |
| 60 | 1810 | 1625.6 | 1565.1 | 163.6 | 163.6 | 1505.0 | 1498.6 | 273.1 | 1524.0 | 12.7 |

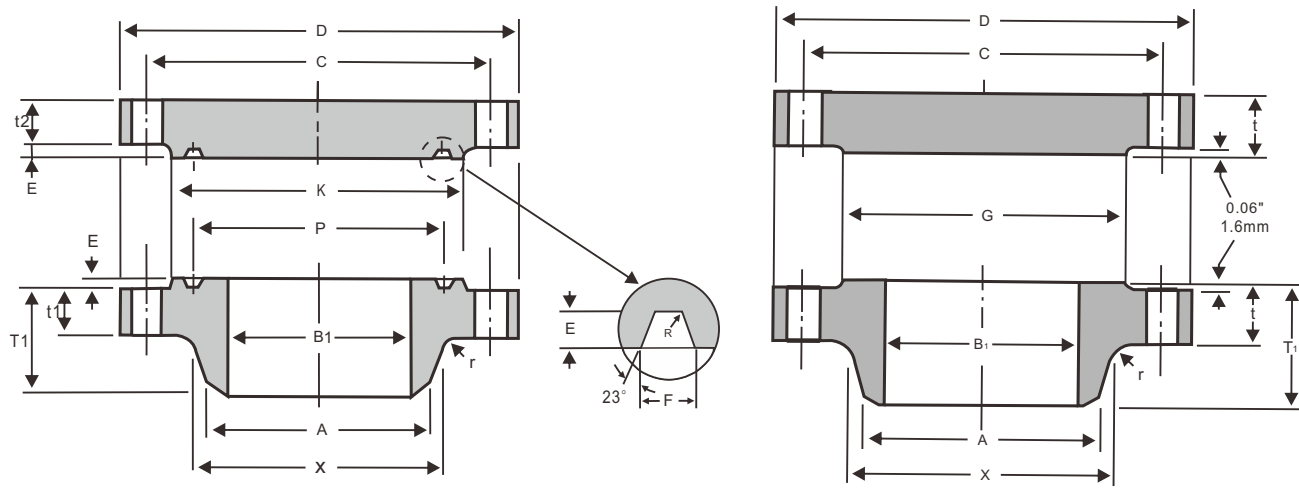
Notes:
 (1) For the Bore'(B1) other than wall thickness 0.375"(9.5mm) and 0.500"(127mm), refer to page 71.
 (2) Class 300 flanges Will be furnished with 0.06"(1.6mm) raised face, which is included in Thickness'(t) and Length through Hub'(T)
 (3) Dimensional tolerances are in accordance with ANSI B16.5

Unit:mm

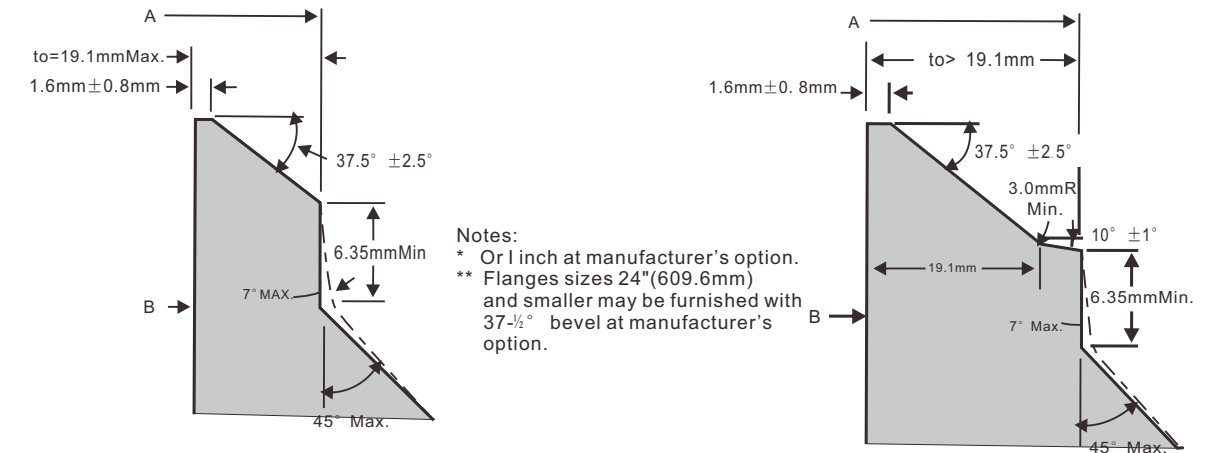
| Nominal Pipe Size | DRILLING | | | Pitch Diam. | GROOVE DIMENSIONS | | | Diam. of Raised Face | Ring and Groove Number |
|-------------------|-------------------|-----------------|---------------|-------------|-------------------|-------|--------|----------------------|------------------------|
| | Bolt Circle Diam. | Number of Holes | Diam of Holes | | Width | Depth | Radius | | |
| | | | | | | | | | |
| 12 | 450.9 | 16 | 31.8 | 381.0 | 11.9 | 7.9 | 0.8 | 412.8 | R57 |
| 14 | 514.4 | 20 | 31.8 | 419.1 | 11.9 | 7.9 | 0.8 | 457.2 | R61 |
| 16 | 571.5 | 20 | 35.1 | 469.9 | 11.9 | 7.9 | 0.8 | 508.0 | R65 |
| 18 | 628.7 | 24 | 35.1 | 533.4 | 11.9 | 7.9 | 0.8 | 574.5 | R69 |
| 20 | 685.8 | 24 | 35.1 | 584.2 | 13.5 | 9.5 | 1.5 | 635.0 | R73 |
| 22 | 743.0 | 24 | 41.1 | 635.0 | 15.1 | 11.1 | 1.5 | 685.8 | R81 |
| 24 | 812.8 | 24 | 41.1 | 692.2 | 16.7 | 11.1 | 1.5 | 749.3 | R77 |
| 26 | 876.3 | 28 | 44.5 | 749.3 | 19.8 | 12.7 | 1.5 | 809.6 | R93 |
| 28 | 939.8 | 28 | 44.5 | 800.1 | 19.8 | 12.7 | 1.5 | 860.6 | R94 |
| 30 | 997.0 | 28 | 47.8 | 857.3 | 19.8 | 12.7 | 1.5 | 917.4 | R95 |
| 32 | 1054.1 | 28 | 50.8 | 914.4 | 23.0 | 14.3 | 1.5 | 984.3 | R96 |
| 34 | 1104.9 | 28 | 50.8 | 965.2 | 23.0 | 14.3 | 1.5 | 1035.1 | R97 |
| 36 | 1168.4 | 32 | 53.8 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 38 | 1092.2 | 32 | 41.1 | | | | | | |
| 40 | 1155.7 | 32 | 44.5 | | | | | | |
| 42 | 1206.5 | 32 | 44.5 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 44 | 1263.7 | 32 | 47.8 | | | | | | |
| 46 | 1320.8 | 28 | 50.8 | | | | | | |
| 48 | 1371.6 | 32 | 50.8 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 50 | 1428.8 | 32 | 53.8 | | | | | | |
| 52 | 1479.6 | 32 | 53.8 | | | | | | |
| 54 | 1549.4 | 28 | 60.5 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 56 | 1600.2 | 28 | 60.5 | | | | | | |
| 58 | 1651.0 | 32 | 60.5 | | | | | | |
| 60 | 1701.8 | 32 | 60.5 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |

(4) Maximum Pressure Rating for raised face flanges is 740 psi(51 BARS) at atmospheric temperature.
 (5) Flange dimensions of size 12"(304.8mm) through 24"(609.6mm) flanges(except 22"(658.8mm)) are in accordance with ANSIB165
 (6) For sizes 26"(660.4mm) and larger ' Diameter of Hub at Bevel(A)' are in accordance with ASME Boiler and pressure vessel code.

CLASS 400 FLANGE



WELDING-ENDS FOR WELDING-NECK FLANGE



BEVLE FOR WALL THICKNESS (t) O.19 IN. TO O.88 IN. INCLUSIVE

BEVLE FOR WALL THICKNESS (t) GREATER THAN O.88 IN.

ANSI/ASME B16.47 SERIES A FLANGE

Unit:mm

| Nominal Pipe Size | Outside Diam. | O.D. of Raised Face | Diam. at Base of Hub | Thickness | | BORE | | Length thru Hub | Diam. of Hub at Bevel | Radius of Fillet |
|-------------------|---------------|---------------------|----------------------|--------------|-------|----------------|--------|-----------------|-----------------------|------------------|
| | | | | Welding Neck | Blind | Wall Thickness | | | | |
| | | | | | | 9.5mm | 12.7mm | | | |
| D | G | X | t1 | t2 | B1 | T1 | A | r | | |
| 12 | 521 | 381.0 | 374.7 | 57.2 | 57.2 | 304.8 | 298.5 | 136.7 | 323.9 | 11.2 |
| 14 | 584 | 412.8 | 425.5 | 60.5 | 60.5 | 336.6 | 330.2 | 149.4 | 355.6 | 11.2 |
| 16 | 648 | 469.9 | 482.6 | 63.5 | 63.5 | 387.4 | 381.0 | 152.4 | 406.4 | 11.2 |
| 18 | 711 | 533.4 | 533.4 | 66.5 | 66.5 | 438.2 | 431.8 | 165.1 | 457.2 | 11.2 |
| 20 | 775 | 584.2 | 587.2 | 69.9 | 69.9 | 489.0 | 482.6 | 168.1 | 508.0 | 11.2 |
| 22 | 838 | 641.4 | 641.4 | 73.2 | 73.2 | 539.8 | 533.4 | 171.5 | 558.8 | 11.2 |
| 24 | 914 | 692.2 | 701.5 | 76.2 | 76.2 | 590.6 | 584.2 | 174.8 | 609.6 | 11.2 |
| 26 | 972 | 749.3 | 726.9 | 88.9 | 98.6 | 641.4 | 635.0 | 193.5 | 660.4 | 11.2 |
| 28 | 1035 | 800.1 | 782.6 | 95.3 | 104.6 | 692.2 | 685.8 | 206.2 | 711.2 | 12.7 |
| 30 | 1092 | 857.3 | 836.7 | 101.6 | 111.3 | 743.0 | 736.6 | 218.9 | 762.0 | 12.7 |
| 32 | 1149 | 914.4 | 889.0 | 108.0 | 115.8 | 793.8 | 787.4 | 231.6 | 812.8 | 12.7 |
| 34 | 1207 | 965.2 | 944.6 | 111.3 | 122.2 | 844.6 | 838.2 | 241.3 | 863.6 | 14.2 |
| 36 | 1270 | 1022.4 | 1000.3 | 114.3 | 128.5 | 895.4 | 889.0 | 251.0 | 914.4 | 14.2 |
| 38 | 1207 | 1035.1 | 1003.3 | 124.0 | 124.0 | 946.2 | 939.8 | 206.2 | 965.2 | 14.2 |
| 40 | 1270 | 1092.2 | 1054.1 | 130.0 | 130.0 | 997.0 | 990.6 | 215.9 | 1016.0 | 14.2 |
| 42 | 1321 | 1143.0 | 1107.9 | 133.4 | 133.4 | 1047.8 | 1041.4 | 223.8 | 1066.8 | 14.2 |
| 44 | 1384 | 1200.2 | 1158.7 | 139.7 | 139.7 | 1098.6 | 1092.2 | 233.4 | 1117.6 | 14.2 |
| 46 | 1441 | 1257.3 | 1212.9 | 146.1 | 146.1 | 1149.4 | 1143.0 | 244.3 | 1168.4 | 14.2 |
| 48 | 1511 | 1308.1 | 1267.0 | 152.4 | 152.4 | 1200.2 | 1193.8 | 257.0 | 1219.2 | 14.2 |
| 50 | 1568 | 1361.9 | 1320.8 | 157.2 | 158.8 | 1251.0 | 1244.6 | 268.2 | 1270.0 | 14.2 |
| 52 | 1619 | 1412.7 | 1371.6 | 162.1 | 163.6 | 1301.8 | 1295.4 | 276.4 | 1320.8 | 14.2 |
| 54 | 1702 | 1470.2 | 1425.4 | 169.9 | 171.5 | 1352.6 | 1346.2 | 289.1 | 1371.6 | 14.2 |
| 56 | 1753 | 1527.0 | 1479.6 | 174.8 | 176.3 | 1403.4 | 1397.0 | 298.5 | 1422.4 | 14.2 |
| 58 | 1803 | 1577.8 | 1530.4 | 177.8 | 180.8 | 1454.2 | 1447.8 | 306.3 | 1473.2 | 14.2 |
| 60 | 1886 | 1635.3 | 1584.5 | 185.7 | 189.0 | 1505.0 | 1498.6 | 319.0 | 1524.0 | 14.2 |

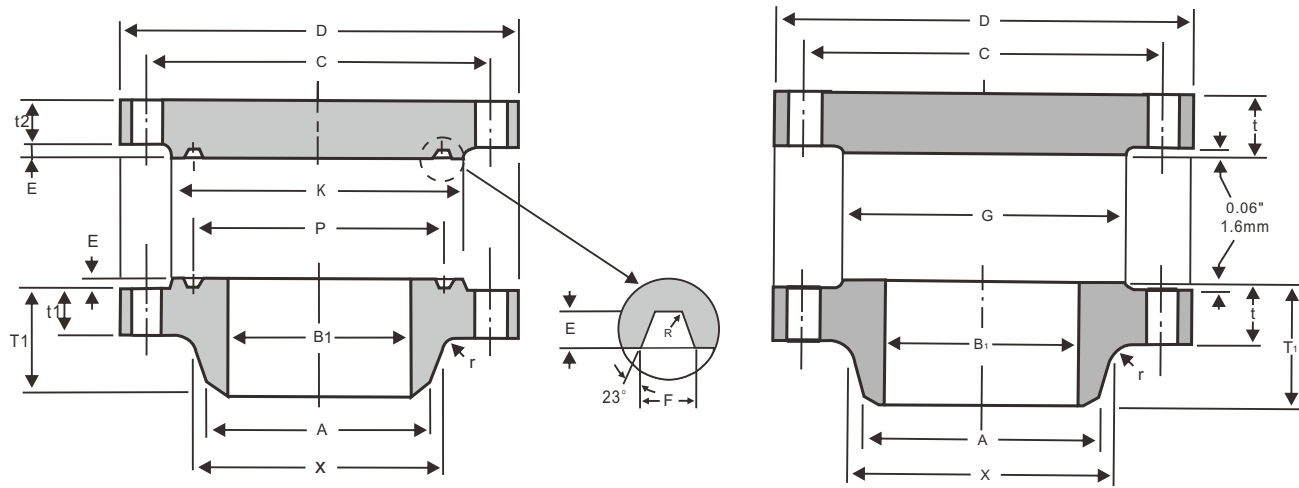
Notes:
 (1) For the Bore'(B1) other than wall thickness 0.375"(9.5mm) and 0.500"(127mm), refer to page 71.
 (2) Class 400 flanges Will be furnished with 0.25"(6.4mm) raised face, which is included in Thickness'(t) and Length through Hub'(T)
 (3) Dimensional tolerances are in accordance with ANSI B16.5

Unit:mm

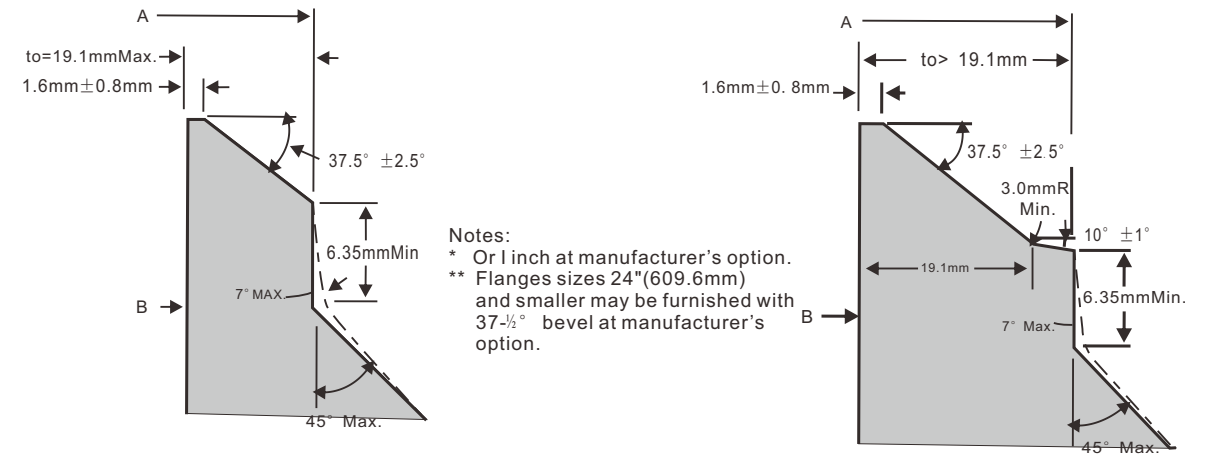
| Nominal Pipe Size | DRILLING | | | Pitch Diam. | GROOVE DIMENSIONS | | | Diam. of Raised Face | Ring and Groove Number |
|-------------------|-------------------|-----------------|---------------|-------------|-------------------|-------|--------|----------------------|------------------------|
| | Bolt Circle Diam. | Number of Holes | Diam of Holes | | Width | Depth | Radius | | |
| | | | | | | | | | |
| 12 | 450.9 | 16 | 35.1 | 381.0 | 11.9 | 7.9 | 0.8 | 412.8 | R57 |
| 14 | 514.4 | 20 | 35.1 | 419.1 | 11.9 | 7.9 | 0.8 | 457.2 | R61 |
| 16 | 571.5 | 20 | 35.1 | 469.9 | 11.9 | 7.9 | 0.8 | 508.0 | R65 |
| 18 | 628.7 | 24 | 38.1 | 533.4 | 11.9 | 7.9 | 0.8 | 574.5 | R69 |
| 20 | 685.8 | 24 | 41.1 | 584.2 | 13.5 | 9.5 | 1.5 | 635.0 | R73 |
| 22 | 743.0 | 24 | 44.5 | 635.0 | 15.1 | 11.1 | 1.5 | 685.8 | R81 |
| 24 | 812.8 | 24 | 47.8 | 692.2 | 16.7 | 11.1 | 1.5 | 749.3 | R77 |
| 26 | 876.3 | 28 | 47.8 | 749.3 | 19.8 | 12.7 | 1.5 | 809.6 | R93 |
| 28 | 939.8 | 28 | 50.8 | 800.1 | 19.8 | 12.7 | 1.5 | 860.6 | R94 |
| 30 | 997.0 | 28 | 53.8 | 857.3 | 19.8 | 12.7 | 1.5 | 917.4 | R95 |
| 32 | 1054.1 | 28 | 53.8 | 914.4 | 23.0 | 14.3 | 1.5 | 984.3 | R96 |
| 34 | 1104.9 | 28 | 53.8 | 965.2 | 23.0 | 14.3 | 1.5 | 1035.1 | R97 |
| 36 | 1168.4 | 32 | 53.8 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 38 | 1117.6 | 32 | 47.8 | | | | | | |
| 40 | 1174.8 | 32 | 50.8 | | | | | | |
| 42 | 1225.6 | 32 | 50.8 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 44 | 1282.7 | 32 | 53.8 | | | | | | |
| 46 | 1339.9 | 36 | 53.8 | | | | | | |
| 48 | 1403.4 | 28 | 60.5 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 50 | 1460.5 | 32 | 60.5 | | | | | | |
| 52 | 1511.3 | 32 | 60.5 | | | | | | |
| 54 | 1581.2 | 28 | 66.5 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 56 | 1632.0 | 32 | 66.5 | | | | | | |
| 58 | 1682.8 | 32 | 66.5 | | | | | | |
| 60 | 1752.6 | 32 | 73.2 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |

(4) Maximum Pressure Rating for raised face flanges is 985 psi(51 BARS) at atmospheric temperature.
 (5) Flange dimensions of size 12"(304.8mm) through 24"(609.6mm) flanges(except 22"(658.8mm)) are in accordance with ANSIB165
 (6) For sizes 26"(660.4mm) and larger ' Diameter of Hub at Bevel(A)' are in accordance with ASME Boiler and pressure vessel code.

CLASS 600 FLANGE



WELDING-ENDS FOR WELDING-NECK FLANGE



BEVLE FOR WALL THICKNESS (t) O.19 IN. TO O.88 IN. INCLUSIVE

BEVLE FOR WALL THICKNESS (t) GREATER THAN O.88 IN.

ANSI/ASME B16.47 SERIES A FLANGES

Unit:mm

| Nominal Pipe Size | Outside Diam. | O.D. of Raised Face | Diam. at Base of Hub | Thickness | | BORE | | Length thru Hub | Diam. of Hub at Bevel | Radius of Fillet |
|-------------------|---------------|---------------------|----------------------|--------------|-------|----------------|--------|-----------------|-----------------------|------------------|
| | | | | Welding Neck | Blind | Wall Thickness | | | | |
| | | | | | | 9.5mm | 12.7mm | | | |
| D | G | X | t1 | t2 | B1 | T1 | A | r | | |
| 12 | 559 | 381.0 | 400.1 | 66.5 | 66.5 | 304.8 | 298.5 | 155.4 | 323.9 | 11.2 |
| 14 | 603 | 412.8 | 431.8 | 69.9 | 69.9 | 336.6 | 330.2 | 165.1 | 355.6 | 11.2 |
| 16 | 686 | 469.9 | 495.3 | 76.2 | 76.2 | 387.4 | 381.0 | 177.8 | 406.4 | 11.2 |
| 18 | 743 | 533.4 | 546.1 | 82.6 | 82.6 | 438.2 | 431.8 | 184.2 | 457.2 | 11.2 |
| 20 | 813 | 584.2 | 609.6 | 88.9 | 88.9 | 489.0 | 482.6 | 190.5 | 508.0 | 11.2 |
| 22 | 870 | 641.4 | 666.8 | 95.3 | 95.3 | 539.8 | 533.4 | 196.9 | 558.8 | 11.2 |
| 24 | 940 | 692.2 | 717.6 | 101.6 | 101.6 | 590.6 | 584.2 | 203.2 | 609.6 | 11.2 |
| 26 | 1016 | 749.3 | 747.8 | 108.0 | 125.5 | 641.4 | 635.0 | 222.3 | 660.4 | 12.7 |
| 28 | 1073 | 800.1 | 803.1 | 111.3 | 131.8 | 692.2 | 685.8 | 235.0 | 711.2 | 12.7 |
| 30 | 1130 | 857.3 | 862.1 | 114.3 | 139.7 | 743.0 | 736.6 | 247.7 | 762.0 | 12.7 |
| 32 | 1194 | 914.4 | 917.4 | 117.3 | 147.6 | 793.8 | 787.4 | 260.4 | 812.8 | 12.7 |
| 34 | 1245 | 965.2 | 973.1 | 120.7 | 153.9 | 844.6 | 838.2 | 269.7 | 863.6 | 14.2 |
| 36 | 1314 | 1022.4 | 1031.7 | 124.0 | 162.1 | 895.4 | 889.0 | 282.4 | 914.3 | 14.2 |
| 38 | 1270 | 1054.1 | 1022.4 | 152.4 | 155.4 | 946.2 | 939.8 | 254.0 | 965.2 | 14.2 |
| 40 | 1321 | 1111.3 | 1073.2 | 158.8 | 162.1 | 997.0 | 990.6 | 263.7 | 1016.0 | 14.2 |
| 42 | 1403 | 1168.4 | 1127.3 | 168.1 | 171.5 | 1047.8 | 1041.4 | 279.4 | 1066.8 | 14.2 |
| 44 | 1454 | 1225.6 | 1181.1 | 173.0 | 177.8 | 1098.6 | 1092.2 | 289.1 | 1117.6 | 14.2 |
| 46 | 1511 | 1276.4 | 1234.9 | 179.3 | 185.7 | 1149.4 | 1143.0 | 300.0 | 1168.4 | 14.2 |
| 48 | 1594 | 1333.5 | 1289.1 | 189.0 | 195.3 | 1200.2 | 1193.8 | 316.0 | 1219.2 | 14.2 |
| 50 | 1670 | 1384.3 | 1343.2 | 196.9 | 203.2 | 1251.0 | 1244.6 | 328.7 | 1270.0 | 14.2 |
| 52 | 1721 | 1435.1 | 1394.0 | 203.2 | 209.6 | 1301.8 | 1295.4 | 336.6 | 1320.8 | 14.2 |
| 54 | 1778 | 1492.3 | 1447.8 | 209.6 | 217.4 | 1352.6 | 1346.2 | 349.3 | 1371.6 | 14.2 |
| 56 | 1854 | 1543.1 | 1501.9 | 217.4 | 225.6 | 1403.4 | 1397.0 | 362.0 | 1422.4 | 15.7 |
| 58 | 1905 | 1600.2 | 1552.4 | 222.3 | 231.6 | 1454.2 | 1447.8 | 369.8 | 1473.2 | 15.7 |
| 60 | 1994 | 1657.4 | 1609.9 | 233.4 | 242.8 | 1505.0 | 1498.6 | 388.9 | 1524.0 | 17.5 |

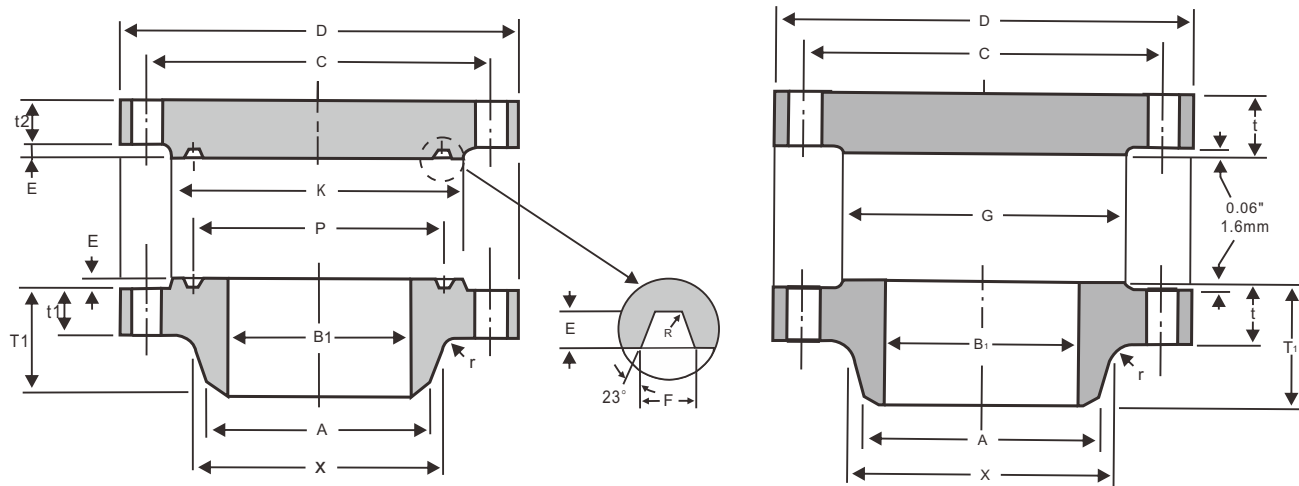
Notes:
 (1) For the Bore'(B1) other than wall thickness 0.375"(9.5mm) and 0.500"(127mm), refer to page 71.
 (2) Class 400 flanges Will be furnished with 0.25"(6.35mm) raised face, which is included in Thickness'(t) and Length through Hub'(T)
 (3) Dimensional tolerances are in accordance with ANSI B16.5

Unit:mm

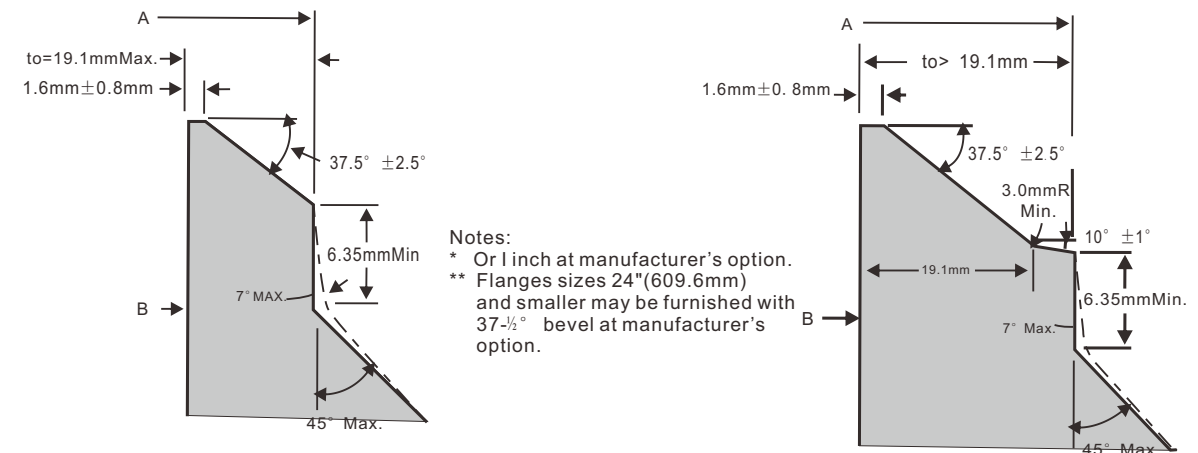
| Nominal Pipe Size | DRILLING | | | Pitch Diam. | GROOVE DIMENSIONS | | | Diam. of Raised Face | Ring and Groove Number |
|-------------------|-------------------|-----------------|---------------|-------------|-------------------|-------|--------|----------------------|------------------------|
| | Bolt Circle Diam. | Number of Holes | Diam of Holes | | Width | Depth | Radius | | |
| | | | | | | | | | |
| 12 | 489.0 | 20 | 35.1 | 381.0 | 11.9 | 7.9 | 0.8 | 412.8 | R57 |
| 14 | 527.1 | 20 | 38.1 | 419.1 | 11.9 | 7.9 | 0.8 | 457.2 | R61 |
| 16 | 603.3 | 20 | 41.1 | 469.9 | 11.9 | 7.9 | 0.8 | 508.0 | R65 |
| 18 | 654.1 | 20 | 44.5 | 533.4 | 11.9 | 7.9 | 0.8 | 574.5 | R69 |
| 20 | 723.9 | 24 | 44.5 | 584.2 | 13.5 | 9.5 | 1.5 | 635.0 | R73 |
| 22 | 777.7 | 24 | 47.8 | 635.0 | 15.1 | 11.1 | 1.5 | 685.8 | R81 |
| 24 | 838.2 | 24 | 50.8 | 692.2 | 16.7 | 11.1 | 1.5 | 749.3 | R77 |
| 26 | 914.4 | 28 | 50.8 | 749.3 | 19.8 | 12.7 | 1.5 | 809.8 | R93 |
| 28 | 965.2 | 28 | 53.8 | 800.1 | 19.8 | 12.7 | 1.5 | 860.6 | R94 |
| 30 | 1022.4 | 28 | 53.8 | 857.3 | 19.8 | 12.7 | 1.5 | 917.4 | R95 |
| 32 | 1079.5 | 28 | 60.5 | 914.4 | 23.0 | 14.3 | 1.5 | 984.3 | R96 |
| 34 | 1130.3 | 28 | 60.5 | 965.2 | 23.0 | 14.3 | 1.5 | 1035.1 | R97 |
| 36 | 1193.8 | 28 | 66.5 | 1022.4 | 23.0 | 14.3 | 1.5 | 1092.2 | R98 |
| 38 | 1162.1 | 28 | 60.5 | | | | | | |
| 40 | 1212.9 | 32 | 60.5 | | | | | | |
| 42 | 1282.7 | 28 | 66.5 | | | | | | |
| 44 | 1333.5 | 32 | 66.5 | | | | | | |
| 46 | 1390.7 | 32 | 66.5 | | | | | | |
| 48 | 1460.5 | 32 | 73.2 | | | | | | |
| 50 | 1524.0 | 28 | 79.2 | | | | | | |
| 52 | 1574.8 | 32 | 79.2 | | | | | | |
| 54 | 1632.0 | 32 | 79.2 | | | | | | |
| 56 | 1695.5 | 32 | 85.9 | | | | | | |
| 58 | 1746.3 | 32 | 85.9 | | | | | | |
| 60 | 1822.5 | 28 | 91.9 | | | | | | |

(4) Maximum Pressure Rating for raised face flanges is 1480 psi(102.1 BARS) at atmospheric temperature.
 (5) Flange dimensions of size 12"(304.8mm) through 24"(609.6mm) flanges(except 22"(658.8mm)) are in accordance with ANSIB165
 (6) For sizes 26"(660.4mm) and larger ' Diameter of Hub at Bevel(A)' are in accordance with ASME Boiler and pressure vessel code.

CLASS 900 FLANGE



WELDING-ENDS FOR WELDING-NECK FLANGE



BEVLE FOR WALL THICKNESS (t) O.19 IN. TO O.88 IN. INCLUSIVE

BEVLE FOR WALL THICKNESS (t) GREATER THAN O.88 IN.

ANSI/ASME B16.47 SERIES A FLANGE

Unit:mm

| Nominal Pipe Size | Outside Diam. | O.D. of Raised Face | Diam. at Base of Hub | Thickness | | BORE | | Length thru Hub | Diam. of Hub at Bevel | Radius of Fillet |
|-------------------|---------------|---------------------|----------------------|--------------|-------|----------------|--------|-----------------|-----------------------|------------------|
| | | | | Welding Neck | Blind | Wall Thickness | | | | |
| | | | | | | 9.5mm | 12.7mm | | | |
| D | G | X | t1 | t2 | B1 | T1 | A | r | | |
| 12 | 610 | 381.0 | 419.1 | 79.2 | 79.2 | 304.8 | 298.5 | 200.2 | 323.9 | 11.2 |
| 14 | 641 | 412.8 | 450.9 | 85.9 | 85.9 | 336.6 | 330.2 | 212.9 | 355.6 | 11.2 |
| 16 | 705 | 469.9 | 508.0 | 88.9 | 88.9 | 387.4 | 381.0 | 215.9 | 406.4 | 11.2 |
| 18 | 787 | 533.4 | 565.2 | 101.6 | 101.6 | 438.2 | 431.8 | 228.6 | 457.2 | 11.2 |
| 20 | 857 | 584.2 | 622.3 | 108.0 | 108.0 | 489.0 | 482.6 | 247.7 | 508.0 | 11.2 |
| 24 | 1041 | 692.2 | 749.3 | 139.7 | 139.7 | 590.6 | 584.2 | 292.1 | 609.6 | 11.2 |
| 26 | 1086 | 749.3 | 774.7 | 139.7 | 160.3 | 641.4 | 635.0 | 285.8 | 660.4 | 11.2 |
| 28 | 1168 | 800.1 | 831.9 | 142.7 | 171.5 | 692.2 | 685.8 | 298.5 | 711.2 | 12.7 |
| 30 | 1232 | 857.3 | 889.0 | 149.4 | 182.4 | 743.0 | 736.6 | 311.2 | 762.6 | 12.7 |
| 32 | 1314 | 914.4 | 946.2 | 158.8 | 193.5 | 793.8 | 787.4 | 330.2 | 812.8 | 12.7 |
| 34 | 1397 | 965.2 | 1006.3 | 165.1 | 204.7 | 844.6 | 838.2 | 349.3 | 863.6 | 14.2 |
| 36 | 1461 | 1022.4 | 1063.8 | 171.5 | 214.4 | 895.4 | 889.0 | 362.0 | 914.4 | 14.2 |
| 38 | 1461 | 1098.6 | 1073.2 | 190.5 | 215.9 | 946.2 | 939.8 | 352.6 | 965.2 | 19.1 |
| 40 | 1511 | 1162.1 | 1127.3 | 196.9 | 223.8 | 997.0 | 990.6 | 363.5 | 1016.0 | 20.6 |
| 42 | 1562 | 1212.9 | 1176.3 | 206.2 | 231.6 | 1047.8 | 1041.4 | 371.3 | 1066.8 | 20.6 |
| 44 | 1648 | 1270.0 | 1234.9 | 214.4 | 242.8 | 1198.6 | 1092.2 | 390.7 | 1117.6 | 22.4 |
| 46 | 1734 | 1333.5 | 1292.4 | 225.6 | 255.5 | 1149.4 | 1143.0 | 411.0 | 1168.4 | 22.4 |
| 48 | 1784 | 1384.3 | 1343.2 | 233.4 | 263.7 | 1200.2 | 1193.8 | 419.1 | 1219.2 | 23.9 |

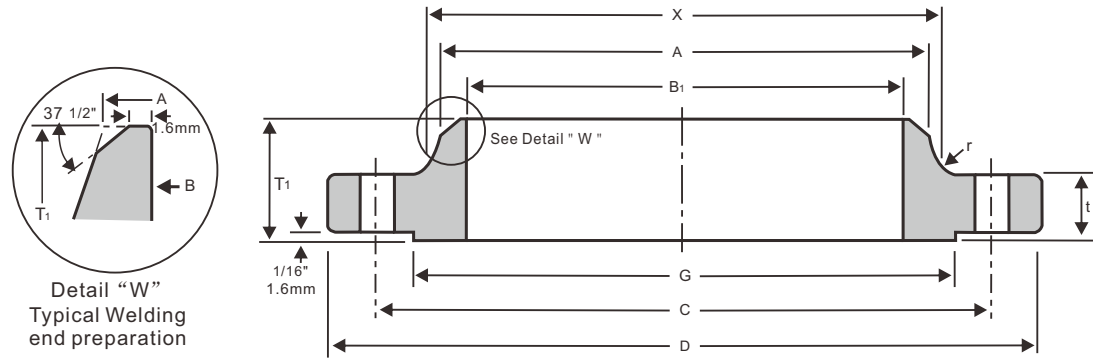
Notes:
 (1) For the Bore'(B1) other than wall thickness 0.375"(9.5mm) and 0.500"(127mm), refer to page 71.
 (2) Class 400 flanges Will be furnished with 0.25"(6.35mm) raised face, which is included in Thickness'(t) and Length through Hub'(T)
 (3) Dimensional tolerances are in accordance with ANSI B16.5

Unit:mm

| Nominal Pipe Size | DRILLING | | | Pitch Diam. | GROOVE DIMENSIONS | | | Diam. of Raised Face | Ring and Groove Number |
|-------------------|-------------------|-----------------|---------------|-------------|-------------------|-------|--------|----------------------|------------------------|
| | Bolt Circle Diam. | Number of Holes | Diam of Holes | | Width | Depth | Radius | | |
| | | | | | | | | | |
| 12 | 533.4 | 20 | 38.1 | 381.0 | 11.9 | 7.9 | 0.8 | 419.1 | R57 |
| 14 | 558.8 | 20 | 41.1 | 419.1 | 16.7 | 11.1 | 1.5 | 466.9 | R62 |
| 16 | 616.0 | 20 | 44.5 | 469.9 | 16.7 | 11.1 | 1.5 | 523.7 | R66 |
| 18 | 685.8 | 20 | 50.8 | 533.4 | 19.8 | 12.7 | 1.5 | 593.9 | R70 |
| 20 | 749.3 | 20 | 53.8 | 584.2 | 19.8 | 12.7 | 1.5 | 647.7 | R74 |
| 24 | 901.7 | 20 | 66.5 | 692.2 | 27.0 | 15.9 | 2.3 | 771.7 | R78 |
| 26 | 952.5 | 20 | 73.2 | 749.3 | 30.2 | 17.5 | 2.3 | 831.9 | R100 |
| 28 | 1022.4 | 20 | 79.2 | 800.1 | 33.3 | 17.5 | 2.3 | 889.0 | R101 |
| 30 | 1085.9 | 20 | 79.2 | 857.3 | 33.3 | 17.5 | 2.3 | 946.2 | R102 |
| 32 | 1155.7 | 20 | 85.9 | 914.4 | 33.3 | 17.5 | 2.3 | 1003.3 | R103 |
| 34 | 1225.6 | 20 | 91.9 | 965.2 | 36.5 | 20.6 | 2.3 | 1066.8 | R104 |
| 36 | 1289.1 | 20 | 91.9 | 1022.4 | 36.5 | 20.6 | 2.3 | 1124.0 | R105 |
| 38 | 1289.1 | 20 | 91.9 | | | | | | |
| 40 | 1339.9 | 24 | 91.9 | | | | | | |
| 42 | 1390.7 | 24 | 91.9 | | | | | | |
| 44 | 1463.5 | 24 | 98.6 | | | | | | |
| 46 | 1536.7 | 24 | 104.6 | | | | | | |
| 48 | 1587.5 | 24 | 104.6 | | | | | | |

(4) Maximum Pressure Rating for raised face flanges is 220 psi(153.1 BARS) at atmospheric temperature.
 (5) Flange dimensions of size 12"(304.8mm) through 24"(609.6mm) flanges(except 22"(658.8mm)) are in accordance with ANSIB165
 (6) For sizes 26"(660.4mm) and larger ' Diameter of Hub at Bevel(A)' are in accordance with ASME Boiler and pressure vessel code.

CLASS 75 FLANGE ASME B16, 47 SER, B(API 605)

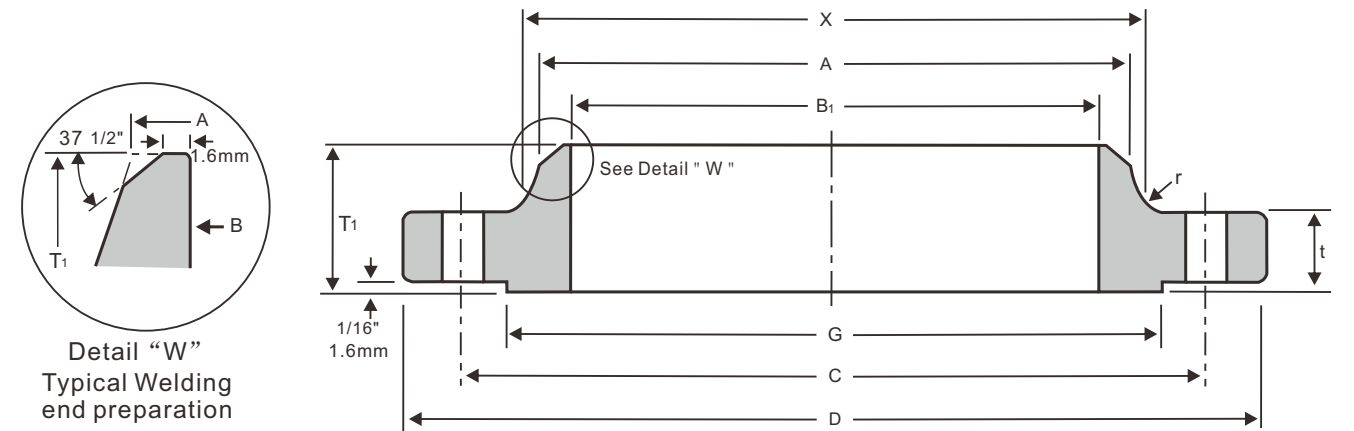


Unit:mm

| Nominal Pipe Size | Outside Diam. | O. D. of Raised Face | Diam. at Base of Hub | Thickness | BORE | | | Length thru Hub | Diam. of Hub at Bevel | Radius of base at Hub | DRILLING | | | Approximate Weight Pounds(KG) |
|-------------------|---------------|----------------------|----------------------|-----------|----------------|--------|--------|-----------------|-----------------------|-----------------------|-------------------|-----------------|---------------|-------------------------------|
| | | | | | Wall Thickness | | | | | | Bolt Circle Diam. | Number of Holes | Diam of Holes | |
| | | | | | 6. 35mm | 9.5mm | 12.7mm | | | | | | | |
| D | G | X | t | B1 | | | T1 | A | r | C | | | | |
| 26 | 762 | 704.9 | 676.1 | 33.3 | 647.7 | 641.4 | 635.0 | 58.7 | 661.9 | 7.9 | 723.9 | 36 | 19.1 | 63.9 (29.01) |
| 28 | 813 | 755.7 | 726.9 | 33.3 | 698.5 | 692.2 | 685.8 | 62.0 | 712.7 | 7.9 | 774.7 | 40 | 19.1 | 68.3 (31.01) |
| 30 | 864 | 806.5 | 777.7 | 33.3 | 749.3 | 743.0 | 736.6 | 65.0 | 763.5 | 7.9 | 825.5 | 44 | 19.1 | 777.2 (35.05) |
| 32 | 914 | 857.3 | 828.5 | 35.1 | 800.1 | 793.8 | 787.4 | 69.9 | 814.3 | 7.9 | 876.3 | 48 | 19.1 | 105.8 (48.03) |
| 34 | 965 | 908.1 | 879.3 | 35.1 | 850.9 | 844.6 | 838.2 | 73.2 | 865.1 | 7.9 | 927.1 | 52 | 19.1 | 110.2 (50.03) |
| 36 | 1034 | 965.2 | 935.0 | 36.6 | 901.7 | 895.4 | 889.0 | 85.9 | 915.9 | 9.7 | 992.1 | 40 | 22.4 | 136.7 (62.06) |
| 38 | 1084 | 1016.0 | 985.8 | 38.1 | 952.5 | 946.2 | 939.8 | 88.9 | 966.7 | 9.7 | 1042.9 | 40 | 22.4 | 154.3 (70.05) |
| 40 | 1135 | 1066.8 | 1036.6 | 38.1 | 1003.3 | 997.0 | 990.6 | 91.9 | 1017.5 | 9.7 | 1093.7 | 44 | 22.4 | 163.1 (74.05) |
| 42 | 1186 | 1117.6 | 1087.4 | 39.6 | 1054.1 | 1047.8 | 1041.4 | 95.3 | 1068.3 | 9.7 | 1144.5 | 48 | 22.4 | 169.8 (77.09) |
| 44 | 1251 | 1174.8 | 1140.0 | 42.9 | 1104.9 | 1098.0 | 1092.0 | 104.6 | 1119.1 | 9.7 | 1203.5 | 36 | 25.4 | 180.8 (82.08) |
| 46 | 1302 | 1225.6 | 1190.8 | 44.5 | 1155.7 | 1149.4 | 1143.0 | 108.0 | 1169.9 | 9.7 | 1254.3 | 40 | 25.4 | 231.5 (105.01) |
| 48 | 1353 | 1276.4 | 1241.6 | 46.0 | 1206.5 | 1200.2 | 1193.8 | 111.3 | 1220.7 | 9.7 | 1305.1 | 44 | 25.4 | 264.6 (120.03) |
| 50 | 1403 | 1327.2 | 1293.9 | 47.8 | 1257.3 | 1251.0 | 1244.6 | 115.8 | 1271.5 | 9.7 | 1355.9 | 44 | 24.4 | 295.8 (134.28) |
| 52 | 1457 | 1378.0 | 1344.7 | 47.8 | 1308.1 | 1301.8 | 1295.4 | 120.7 | 1322.3 | 9.7 | 1409.7 | 48 | 25.4 | 313.2 (142.18) |
| 54 | 1508 | 1428.8 | 1397.0 | 49.3 | 1358.9 | 1352.6 | 1346.2 | 125.5 | 1373.1 | 9.7 | 1460.5 | 48 | 25.4 | 396.8 (180.15) |
| 56 | 1575 | 1485.9 | 1450.8 | 50.8 | 1409.5 | 1454.2 | 1447.8 | 134.9 | 1423.9 | 11.2 | 1521.0 | 40 | 28.4 | (184.58) |
| 58 | 1626 | 1536.7 | 1501.6 | 52.3 | 1511.3 | 1505.0 | 1498.6 | 138.2 | 1474.7 | 11.2 | 1571.8 | 44 | 28.4 | 430.8(195.56) |
| 60 | 1676 | 1587.5 | 1552.4 | 55.6 | 1403.4 | 1397.0 | 1498.6 | 144.5 | 1525.5 | 11.2 | 1622.6 | 44 | 28.4 | 463.0(210.20) |

Unit:mm

CLASS 300 FLANGE



| Nominal Pipe Size | Outside Diam. | O. D. of Raised Face | Diam. at Base of Hub | Thickness | | BORE | | | Length thru Hub | Diam. of Hub at Bevel | Radius of base at Hub | DRILLING | | | Approximate Weight Pounds(KG) |
|-------------------|---------------|----------------------|----------------------|-----------|-------|----------------|--------|--------|-----------------|-----------------------|-----------------------|-------------------|-----------------|---------------|-------------------------------|
| | | | | WNK | Blind | Wall Thickness | | | | | | Bolt Circle Diam. | Number of Holes | Diam of Holes | |
| | | | | | | 6. 35mm | 9.5mm | 12.7mm | | | | | | | |
| D | G | X | t1 | t2 | B1 | | | T1 | A | r | C | | | | |
| 26 | 867 | 736.6 | 701.5 | 88.9 | 88.9 | 647.7 | 641.4 | 635.0 | 144.5 | 665.2 | 14.2 | 803.1 | 32 | 35.1 | 440.9 (200.17) |
| 28 | 921 | 787.4 | 755.7 | 88.9 | 88.9 | 698.5 | 692.2 | 685.8 | 149.4 | 716.0 | 14.2 | 857.3 | 36 | 35.1 | 463.0 (210.20) |
| 30 | 991 | 844.6 | 812.8 | 93.7 | 93.7 | 749.3 | 743.0 | 736.6 | 158.0 | 768.4 | 14.2 | 920.8 | 36 | 38.1 | 595.2 (270.22) |
| 32 | 1054 | 901.7 | 863.6 | 103.1 | 103.1 | 800.1 | 793.8 | 787.4 | 168.1 | 819.2 | 15.7 | 977.9 | 32 | 41.1 | 727.5 (330.29) |
| 34 | 1108 | 952.5 | 917.4 | 103.1 | 103.1 | 850.9 | 844.6 | 838.2 | 173.0 | 870.0 | 15.7 | 1031.7 | 36 | 41.1 | 793.7 (360.34) |
| 36 | 1171 | 1009.7 | 965.2 | 103.1 | 103.1 | 901.7 | 895.4 | 889.0 | 180.8 | 920.8 | 15.7 | 1089.2 | 32 | 44.5 | 903.9 (410.37) |
| 38 | 1222 | 1060.5 | 1016.0 | 111.3 | 111.2 | 952.5 | 946.2 | 939.8 | 192.0 | 971.6 | 15.7 | 1140.0 | 36 | 44.5 | 1256.6 (570.50) |
| 40 | 1273 | 1114.6 | 1066.8 | 115.8 | 115.8 | 1003.3 | 997.0 | 990.6 | 198.4 | 1022.4 | 15.7 | 1190.8 | 40 | 44.5 | 1455.0 (660.57) |
| 42 | 1334 | 1168.4 | 1117.6 | 119.1 | 119.1 | 1054.1 | 1047.8 | 1041.4 | 204.7 | 1074.7 | 15.7 | 1244.6 | 36 | 47.8 | 1587.3 (720.63) |
| 44 | 1384 | 1219.2 | 1173.2 | 127.0 | 127.0 | 1104.9 | 1098.6 | 1092.2 | 214.4 | 1125.5 | 15.7 | 1295.4 | 40 | 47.8 | 1763.7 (800.72) |
| 46 | 1461 | 1270.0 | 1128.9 | 128.5 | 130.0 | 1155.7 | 1149.4 | 1143.0 | 222.3 | 1176.3 | 15.7 | 1365.3 | 36 | 50.8 | 2138.5 (970.88) |
| 48 | 1511 | 1327.2 | 1277.9 | 128.5 | 134.8 | 1206.5 | 1200.2 | 1193.8 | 223.8 | 1227.1 | 15.7 | 1416.1 | 40 | 50.8 | 2182.5 (990.86) |
| 50 | 1562 | 1378.0 | 1330.5 | 138.2 | 139.7 | 1257.3 | 1251.0 | 1244.6 | 235.0 | 1277.9 | 15.7 | 1466.9 | 44 | 50.8 | 2308.2 (1047.92) |
| 52 | 1613 | 1428.8 | 1382.8 | 142.7 | 144.2 | 1308.1 | 1301.8 | 1295.4 | 242.8 | 1328.7 | 15.7 | 1517.7 | 48 | 50.8 | 2453.3 (1113.74) |
| 54 | 1673 | 1479.6 | 1435.1 | 136.7 | 149.3 | 1358.9 | 1352.6 | 1346.2 | 239.8 | 1379.5 | 15.7 | 1577.8 | 48 | 50.8 | 2557.3 (1161.01) |
| 56 | 1765 | 1536.7 | 1493.8 | 153.9 | 156.9 | 1409.7 | 1403.4 | 1397.0 | 268.2 | 1422.4 | 17.5 | 1651.0 | 36 | 60.5 | 2942.9 (1336.08) |
| 58 | 1827 | 1593.9 | 1547.9 | 153.9 | 162.0 | 1460.5 | 1454.2 | 1447.8 | 274.6 | 1481.1 | 17.5 | 1721.2 | 40 | 60.5 | 3144.5 (1427.60) |
| 60 | 1878 | 1651.0 | 1598.7 | 150.9 | 166.6 | 1511.3 | 1505.0 | 1498.6 | 271.5 | 1531.9 | 17.5 | 1763.8 | 40 | 60.5 | 3196.7 (1451.30) |

CLASS 150 FLANGES

Unit:mm

| Nominal Pipe Size | Outside Diam. | O. D. of Raised Face | Diam. at Base of Hub | Thickness | BORE | | | Length thru Hub | Diam. of Hub at Bevel | Radius of base at Hub | DRILLING | | | Approximate Weight Pounds(KG) |
|-------------------|---------------|----------------------|----------------------|-----------|----------------|--------|--------|-----------------|-----------------------|-----------------------|-------------------|-----------------|---------------|-------------------------------|
| | | | | | Wall Thickness | | | | | | Bolt Circle Diam. | Number of Holes | Diam of Holes | |
| | | | | | 6. 35mm | 9.5mm | 12.7mm | | | | | | | |
| D | G | X | t | B1 | | | T1 | A | r | C | | | | |
| 26 | 786 | 711.2 | 684.3 | 41.1 | 647.7 | 641.4 | 635.0 | 88.9 | 661.9 | 9.7 | 744.5 | 36 | 22.4 | 114.6 (52.03) |
| 28 | 837 | 762.0 | 735.1 | 44.5 | 698.5 | 692.2 | 685.8 | 95.3 | 712.7 | 9.7 | 795.3 | 40 | 22.4 | 127.9 (58.07) |
| 30 | 887 | 812.8 | 787.4 | 44.5 | 749.3 | 743.0 | 736.6 | 100.1 | 763.5 | 9.7 | 846.1 | 44 | 22.4 | 143.4 (65.06) |
| 32 | 941 | 863.6 | 839.7 | 46.0 | 800.1 | 793.8 | 787.4 | 108.0 | 814.3 | 9.7 | 900.2 | 48 | 22.4 | 187.4 (85.08) |
| 34 | 1005 | 920.8 | 892.0 | 49.3 | 850.9 | 844.6 | 838.2 | 110.2 | 865.1 | 9.7 | 957.3 | 40 | 25.4 | 220.5 (100.11) |
| 36 | 1057 | 971.6 | 944.6 | 52.3 | 901.7 | 895.4 | 889.0 | 117.3 | 915.9 | 9.7 | 1009.7 | 44 | 25.4 | 253.5 (115.09) |
| 38 | 1124 | 1022.4 | 997.0 | 53.8 | 952.5 | 946.2 | 939.8 | 124.01 | 968.2 | 9.7 | 1069.8 | 40 | 28.4 | 297.5(135.07) |
| 40 | 1175 | 1079.5 | 1049.3 | 55.6 | 1003.3 | 997.0 | 990.6 | 128.5 | 1019.0 | 9.7 | 1120.6 | 44 | 28.4 | 330.7(150.14) |
| 42 | 1226 | 1130.3 | 1101.9 | 58.7 | 1054.1 | 1047.8 | 1041.4 | 133.4 | 1069.8 | 11.2 | 1171.4 | 48 | 28.4 | 363.8(165.17) |
| 44 | 1276 | 1181.1 | 1152.7 | 60.5 | 1104.9 | 1098.6 | 1092.2 | 136.7 | 1120.6 | 11.2 | 1222.2 | 52 | 28.4 | 440.9 (200.17) |
| 46 | 1341 | 1234.9 | 1205.0 | 62.0 | 1155.7 | 1149.4 | 1143.0 | 144.5 | 1171.4 | 11.2 | 1284.2 | 40 | 31.8 | 463.0 (210.20) |
| 48 | 1392 | 1289.1 | 1257.3 | 65.0 | 1206.5 | 1200.2 | 1193.8 | 149.4 | 1222.2 | 11.2 | 1335.0 | 44 | 31.8 | 529.1 (240.21) |
| 50 | 1443 | 1339.9 | 1308.1 | 68.3 | 1257.3 | 1251.0 | 1244.6 | 153.9 | 1273.0 | 11.2 | 1385.8 | 48 | 31.8 | 552.4 (250.27) |
| 52 | 1494 | 1390.7 | 1360.4 | 69.9 | 1308.1 | 1301.8 | 1295.4 | 157.2 | 1323.8 | 11.2 | 1436.6 | 52 | 31.8 | 585.9 (265.77) |
| 54 | 1549 | 1441.5 | 1412.7 | 71.4 | 1358.9 | 1352.6 | 1346.2 | 162.1 | 1374.6 | 11.2 | 1492.3 | 56 | 31.8 | 683.4 (310.26) |
| 56 | 1600 | 1492.3 | 1465.3 | 73.2 | 1409.7 | 1403.4 | 1397.0 | 166.6 | 1425.4 | 14.2 | 1543.1 | 60 | 31.8 | 674.8 (306.08) |
| 58 | 1675 | 1543.1 | 1516.1 | 74.7 | 1460.5 | 1454.2 | 1447.8 | 174.8 | 1476.2 | 14.2 | 1611.4 | 48 | 35.1 | 810.6 (367.76) |
| 60 | 1726 | 1600.2 | 1570.0 | 76.2 | 1511.3 | 1505.0 | 1498.6 | 179.3 | 1527.0 | 14.2 | 1662.2 | 52 | 35.1 | 903.9 (410.37) |

Notes:

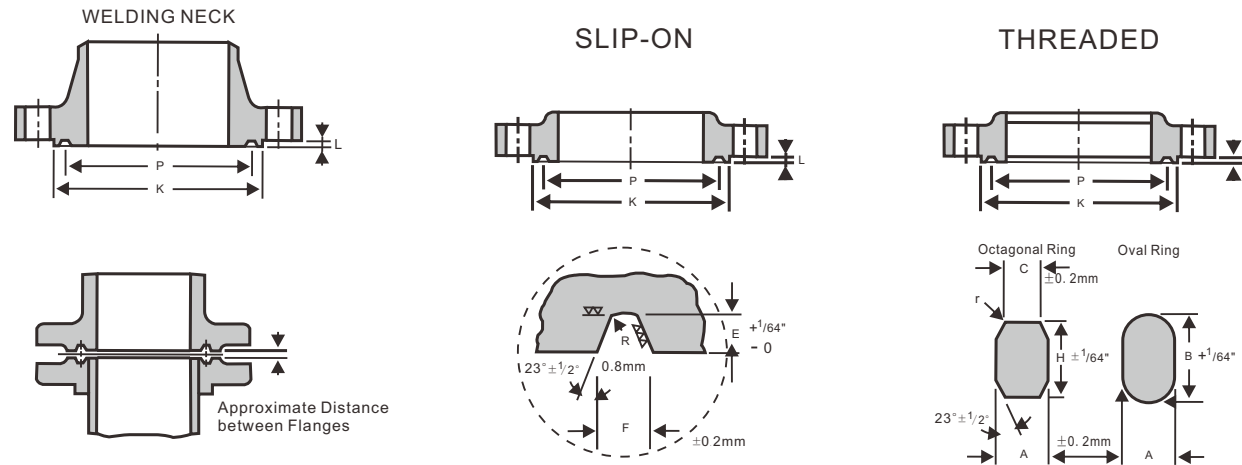
- (1) For the inside diameter of pipes (corresponding to Bore'(B1) of Welding Neck Flanges), refer to page 71.
- (2) Class 75 flanges Will be furnished with 0.06"(1.6mm) raised face, which is included in Thickness'(t) and Lengththrough Hub'(T1)
- (3) Dimensional tolerances are in accordance with ANSI B16.5

Notes:

- (1) For the inside diameter of pipes (corresponding to Bore'(B1) of Welding Neck Flanges), refer to page 71.
- (2) Class 300 flanges Will be furnished with 0.06"(1.6mm) raised face, which is included in Thickness'(t) and Lengththrough Hub'(T1)
- (3) Dimensional tolerances are in accordance with ANSI B16.5

CLASS 150 FLANGES

RING JOINT FLANGE FACING DIMENSIONS



ANSI B16.5 FORGED FLANGE

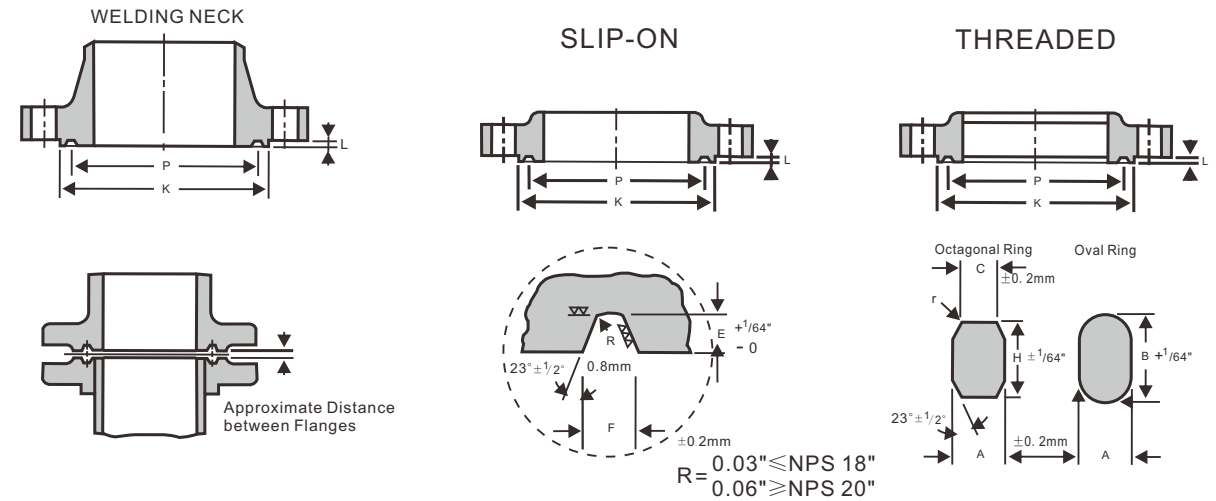
Unit:mm

| Nominal Pipe Size | Pitch Diam. of Ring and Groove | Width of Ring | HEIGHT OF RING | | Width of Flat on Octagonal Rings | Width of Groove | Depth of Groove | Diameter of Raised Face for Ring Joint or Lapped | Ring Number | Approximate Distance Between Flanges of Ring Joints When Ring is Compressed |
|-------------------|--------------------------------|---------------|----------------|-----------|----------------------------------|-----------------|-----------------|--|-------------|---|
| | | | Oval | Octagonal | | | | | | |
| | | | P | A | | | | | | |
| 1 | 47.6 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 63.5 | R15 | 4.1 |
| 1 1/4 | 57.2 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 73.2 | R17 | 4.1 |
| 1 1/2 | 65.1 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 82.6 | R19 | 4.1 |
| 2 | 82.6 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 101.6 | R22 | 4.1 |
| 2 1/2 | 101.6 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 120.7 | R25 | 4.1 |
| 3 | 114.3 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 133.4 | R29 | 4.1 |
| 3 1/2 | 131.8 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 153.9 | R33 | 4.1 |
| 4 | 149.2 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 171.5 | R36 | 4.1 |
| 5 | 171.5 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 193.5 | R40 | 4.1 |
| 6 | 193.7 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 218.9 | R43 | 4.1 |
| 8 | 247.7 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 273.1 | R48 | 4.1 |
| 10 | 304.8 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 330.2 | R52 | 4.1 |
| 12 | 381.0 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 406.4 | R56 | 4.1 |
| 14 | 396.9 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 425.5 | R59 | 3.0 |
| 16 | 454.0 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 482.6 | R64 | 3.0 |
| 18 | 517.5 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 546.1 | R68 | 3.0 |
| 20 | 558.8 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 596.9 | R72 | 3.0 |
| 24 | 673.1 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 711.2 | R76 | 3.0 |

Notes:
 Unless otherwise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
 The depth of groove is added to the minimum flange thickness.
 * Raised face "L" is equal to groove dimension "E" but is not subject to tolerances for "E".
 * A plus tolerance of 3/64 in. for height B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in. throughout its entire circumference.
 Dimension "R" is max.
 Radius "r" is 1/16" for ring width 7/8" and less and 3/32" for ring width 1" (25.4mm) and over.

CLASS 300/400/600 FLANGES

RING JOINT FLANGE FACING DIMENSIONS



ANSI B16.5 FORGED FLANGE

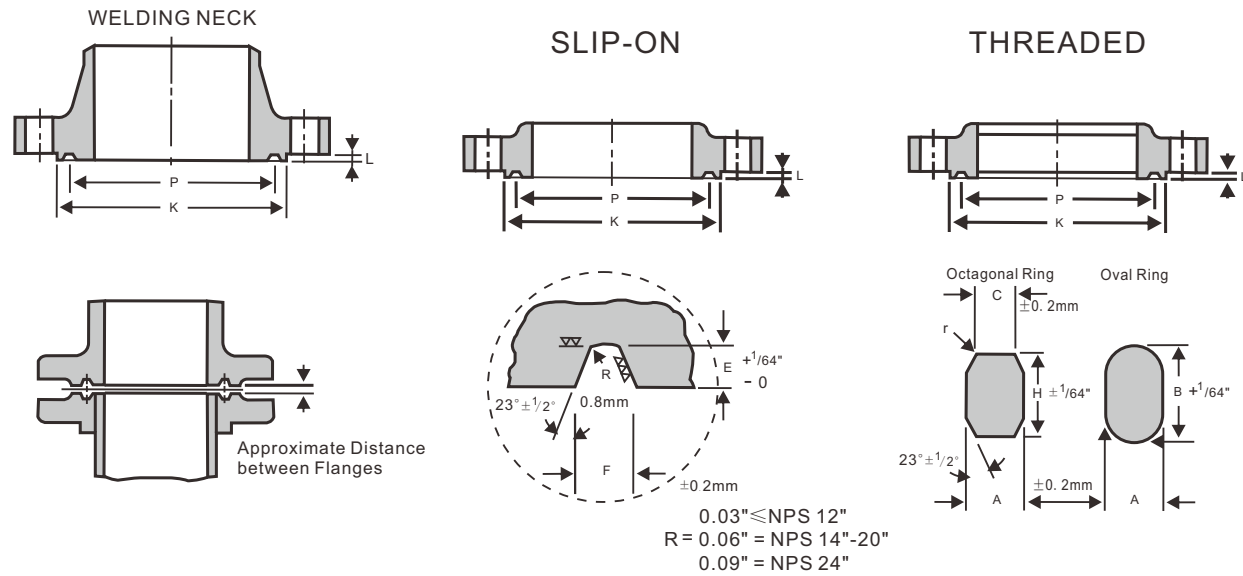
Unit:mm

| Nominal Pipe Size | Pitch Diam. of Ring and Groove | Width of Ring | HEIGHT OF RING | | Width of Flat on Octagonal Rings | Width of Groove | Depth of Groove | Diameter of Raised Face for Ring Joint or Lapped | Ring Number | Approximate Distance Between Flanges of Ring Joints When Ring is Compressed | | |
|-------------------|--------------------------------|---------------|----------------|-----------|----------------------------------|-----------------|-----------------|--|-------------|---|-----------|-----------|
| | | | Oval | Octagonal | | | | | | Class 300 | Class 400 | Class 600 |
| | | | P | A | | | | | | | | |
| 1/2 | 34.1 | 6.4 | 11.1 | 9.5 | 4.3 | 7.1 | 5.6 | 50.8 | R11 | 3.0 | - | 3.0 |
| 3/4 | 42.9 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 63.5 | R13 | 4.1 | - | 4.1 |
| 1 | 50.8 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 69.9 | R16 | 4.1 | - | 4.1 |
| 1 1/4 | 60.3 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 79.5 | R18 | 4.1 | - | 4.1 |
| 1 1/2 | 68.3 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 90.4 | R20 | 4.1 | - | 4.1 |
| 2 | 82.6 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 108.0 | R23 | 5.6 | - | 4.8 |
| 2 1/2 | 101.6 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 127.0 | R26 | 5.6 | - | 4.8 |
| 3 | 123.8 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 146.1 | R31 | 5.6 | - | 4.8 |
| 3 1/2 | 131.8 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 158.8 | R34 | 5.6 | - | 4.8 |
| 4 | 149.2 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 174.8 | R37 | 5.6 | 5.6 | 4.8 |
| 5 | 181.0 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 209.6 | R41 | 5.6 | 5.6 | 4.8 |
| 6 | 211.2 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 241.3 | R45 | 5.6 | 5.6 | 4.8 |
| 8 | 269.9 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 301.8 | R49 | 5.6 | 5.6 | 4.8 |
| 10 | 323.9 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 355.6 | R53 | 5.6 | 5.6 | 4.8 |
| 12 | 381.0 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 412.8 | R57 | 5.6 | 5.6 | 4.8 |
| 14 | 419.1 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 457.2 | R61 | 5.6 | 5.6 | 4.8 |
| 16 | 469.9 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 508.0 | R65 | 5.6 | 5.6 | 4.8 |
| 18 | 533.4 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 574.8 | R69 | 5.6 | 5.6 | 4.8 |
| 20 | 584.2 | 12.7 | 19.1 | 17.5 | 8.7 | 13.5 | 9.5 | 635.0 | R73 | 5.6 | 5.6 | 4.8 |
| 24 | 692.2 | 15.9 | 22.2 | 20.7 | 10.5 | 16.7 | 11.1 | 749.3 | R77 | 6.4 | 6.4 | 5.6 |

Notes:
 Unless otherwise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
 The depth of groove is added to the minimum flange thickness.
 * Raised face "L" is equal to groove dimension "E" but is not subject to tolerances for "E".
 * A plus tolerance of 3/64 in. for height B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in. throughout its entire circumference.
 Dimension "R" is max.
 Radius "r" is 1/16" for ring width 7/8" and less and 3/32" for ring width 1" (25.4mm) and over.

CLASS 900 FLANGES

RING JOINT FLANGE FACING DIMENSIONS



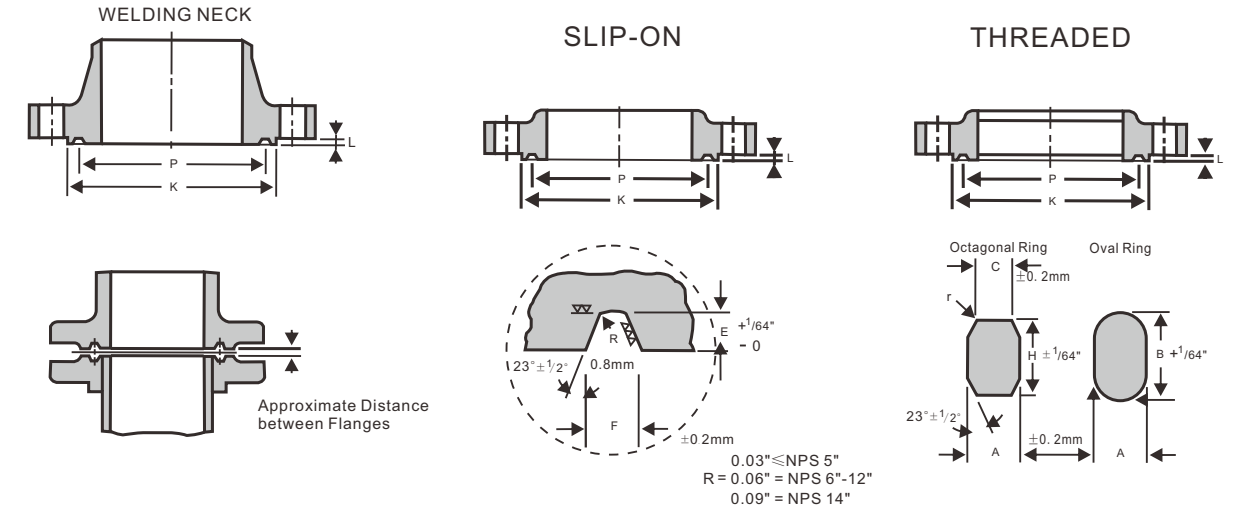
Unit:mm

| Nominal Pipe Size | Pitch Diam. of Ring and Groove P | Width of Ring A | HEIGHT OF RING | | Width of Flat on Octagonal Rings C | Width of Groove F | Depth of Groove E(L*) | Diameter of Raised Face for Ring Joint or Lapped K(Min) | Ring Number | Approximate Distance Between Flanges of Ring Joints When Ring is Compressed |
|---|-------------------------------------|--------------------|----------------|-----------|---------------------------------------|----------------------|--------------------------|--|-------------|---|
| | | | Oval | Octagonal | | | | | | |
| | | | B | H | | | | | | |
| For size 2 1/2 and smaller, use Class 1500 Ring Joint Flanges | | | | | | | | | | |
| 3 | 123.8 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 155.4 | R31 | 4.1 |
| 4 | 149.2 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 180.8 | R37 | 4.1 |
| 5 | 181.0 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 215.9 | R41 | 4.1 |
| 6 | 211.2 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 241.3 | R45 | 4.1 |
| 8 | 269.9 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 307.8 | R49 | 4.1 |
| 10 | 323.9 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 362.0 | R53 | 4.1 |
| 12 | 381.0 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 419.1 | R57 | 4.1 |
| 14 | 419.1 | 15.9 | 22.2 | 20.7 | 10.5 | 16.7 | 11.1 | 466.9 | R62 | 4.1 |
| 16 | 469.9 | 15.9 | 22.2 | 20.7 | 10.5 | 16.7 | 11.1 | 523.7 | R66 | 4.1 |
| 18 | 533.4 | 19.1 | 25.4 | 23.8 | 11.1 | 19.8 | 12.7 | 593.9 | R70 | 4.8 |
| 20 | 584.2 | 19.1 | 25.4 | 23.8 | 12.3 | 19.8 | 12.7 | 647.7 | R74 | 4.8 |
| 24 | 692.2 | 25.4 | 33.4 | 31.8 | 17.3 | 27.0 | 15.9 | 717.7 | R78 | 5.6 |

Notes:
 Unless otherwise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
 The depth of groove is added to the minimum flange thickness.
 * Raised face "L" is equal to groove dimension "E" but is not subject to tolerances for "E".
 * A plus tolerance of 3/64 in. for height B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in. throughout its entire circumference.
 Dimension "R" is max.
 Radius "r" is 1/16" for ring width 7/8" and less and 3/32" for ring width 1" (25.4mm) and over.

CLASS 1500 FLANGES

RING JOINT FLANGE FACING DIMENSIONS



ANSI B16.5 FORGED FLANGE

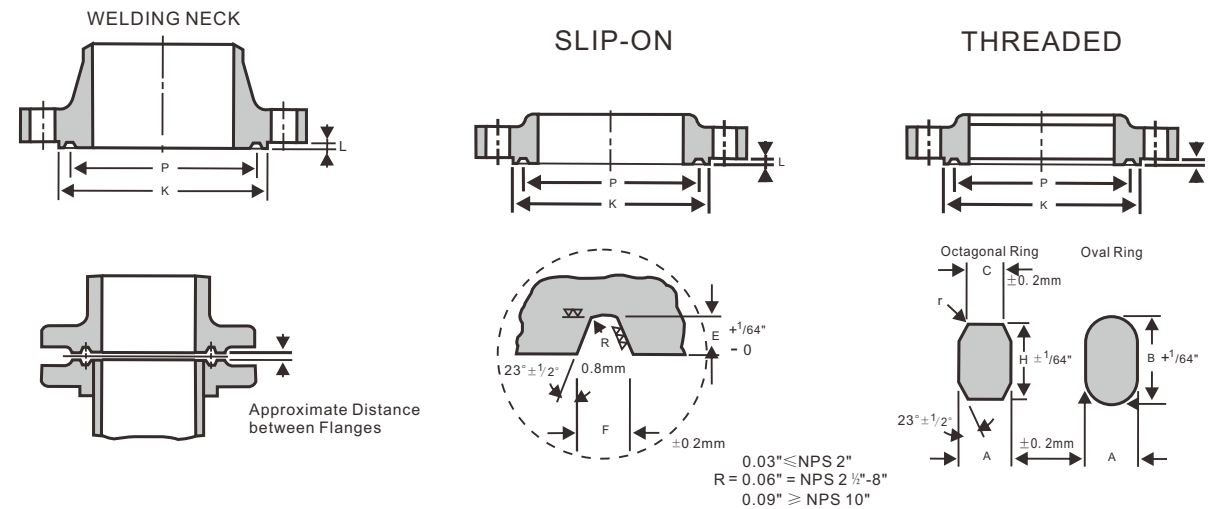
Unit:mm

| Nominal Pipe Size | Pitch Diam. of Ring and Groove P | Width of Ring A | HEIGHT OF RING | | Width of Flat on Octagonal Rings C | Width of Groove F | Depth of Groove E(L*) | Diameter of Raised Face for Ring Joint or Lapped K(Min) | Ring Number | Approximate Distance Between Flanges of Ring Joints When Ring is Compressed |
|-------------------|-------------------------------------|--------------------|----------------|-----------|---------------------------------------|----------------------|--------------------------|--|-------------|---|
| | | | Oval | Octagonal | | | | | | |
| | | | B | H | | | | | | |
| 1/2 | 39.7 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 60.5 | R12 | 4.1 | |
| 3/4 | 44.5 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 66.8 | R14 | 4.1 | |
| 1 | 50.8 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 71.4 | R16 | 4.1 | |
| 1 1/4 | 60.3 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 81.0 | R18 | 4.1 | |
| 1 1/2 | 68.3 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 92.2 | R20 | 4.1 | |
| 2 | 95.3 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 124.0 | R24 | 3.0 | |
| 2 1/2 | 108.0 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 136.7 | R27 | 3.0 | |
| 3 | 136.5 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 168.4 | R35 | 3.0 | |
| 4 | 161.9 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 193.8 | R39 | 3.0 | |
| 5 | 193.7 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 228.6 | R44 | 3.0 | |
| 6 | 211.2 | 12.7 | 19.1 | 17.5 | 8.7 | 13.5 | 247.7 | R46 | 3.0 | |
| 8 | 269.9 | 15.9 | 22.2 | 20.7 | 10.5 | 16.7 | 317.5 | R50 | 4.1 | |
| 10 | 323.9 | 15.9 | 22.2 | 20.7 | 10.5 | 16.7 | 371.6 | R54 | 4.1 | |
| 12 | 381.0 | 22.2 | 28.6 | 27.0 | 14.8 | 23.0 | 438.2 | R58 | 4.8 | |
| 14 | 419.1 | 25.4 | 33.4 | 31.8 | 17.3 | 27.0 | 489.0 | R63 | 5.6 | |
| 16 | 469.9 | 28.6 | 36.5 | 34.9 | 19.8 | 30.2 | 546.1 | R67 | 7.9 | |
| 18 | 533.4 | 28.6 | 36.5 | 34.9 | 19.8 | 30.2 | 612.9 | R71 | 7.9 | |
| 20 | 584.2 | 31.8 | 39.7 | 38.1 | 22.3 | 33.4 | 673.1 | R75 | 9.7 | |
| 24 | 692.2 | 34.9 | 44.5 | 41.3 | 24.8 | 36.5 | 793.8 | R79 | 11.2 | |

Notes:
 Unless otherwise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
 The depth of groove is added to the minimum flange thickness.
 * Raised face "L" is equal to groove dimension "E" but is not subject to tolerances for "E".
 * A plus tolerance of 3/64 in. for height B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in. throughout its entire circumference.
 Dimension "R" is max.
 Radius "r" is 1/16" for ring width 7/8" and less and 3/32" for ring width 1" (25.4mm) and over.

CLASS 2500 FLANGE

RING JOINT FLANGE FACING DIMENSIONS



ANSI B16.5 FORGED FLANGE

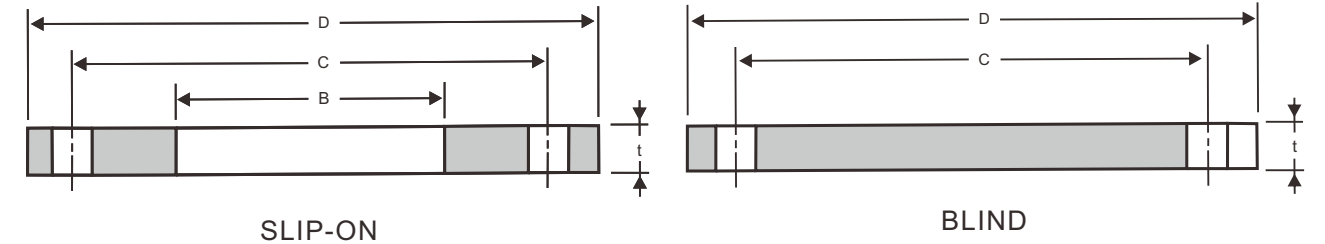
Unit:mm

| Nominal Pipe Size | Pitch Diam. of Ring and Groove | Width of Ring | HEIGHT OF RING | | Width of Flat on Octagonal Rings | Width of Groove | Depth of Groove | Diameter of Raised Face for Ring Joint or Lapped | Ring Number | Approximate Distance Between Flanges of Ring Joints When Ring is Compressed |
|-------------------|--------------------------------|---------------|----------------|-----------|----------------------------------|-----------------|-----------------|--|-------------|---|
| | | | Oval | Octagonal | | | | | | |
| | | | P | A | | | | | | |
| 1/2 | 42.9 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 65.0 | R13 | 4.1 |
| 3/4 | 50.8 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 73.2 | R16 | 4.1 |
| 1 | 60.3 | 8.0 | 14.3 | 12.7 | 5.2 | 8.7 | 6.4 | 82.6 | R18 | 4.1 |
| 1 1/4 | 72.2 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 101.6 | R21 | 3.0 |
| 1 1/2 | 82.6 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 114.3 | R23 | 3.0 |
| 2 | 101.6 | 11.1 | 17.5 | 15.9 | 7.7 | 11.9 | 7.9 | 133.4 | R26 | 3.0 |
| 2 1/2 | 111.1 | 12.7 | 19.1 | 17.5 | 8.7 | 13.5 | 9.5 | 149.4 | R28 | 3.0 |
| 3 | 127.0 | 12.7 | 19.1 | 17.5 | 8.7 | 13.5 | 9.5 | 168.4 | R32 | 3.0 |
| 4 | 157.2 | 15.9 | 22.2 | 20.7 | 10.5 | 16.7 | 11.1 | 203.2 | R38 | 4.1 |
| 5 | 190.5 | 19.1 | 25.4 | 23.8 | 12.3 | 19.8 | 12.7 | 241.3 | R42 | 4.1 |
| 6 | 228.6 | 19.1 | 25.4 | 23.8 | 12.3 | 19.8 | 12.7 | 279.4 | R47 | 4.1 |
| 8 | 279.4 | 22.2 | 28.6 | 27.0 | 14.8 | 23.0 | 14.3 | 339.9 | R51 | 4.8 |
| 10 | 342.9 | 28.6 | 36.5 | 34.9 | 19.8 | 30.2 | 17.5 | 425.5 | R55 | 6.4 |
| 12 | 406.4 | 31.8 | 39.7 | 38.1 | 22.3 | 33.4 | 17.5 | 495.3 | R60 | 7.9 |

Notes:
 Unless otherwise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
 The depth of groove is added to the minimum flange thickness.
 * Raised face "L" is equal to groove dimension "E" but is not subject to tolerances for "E".
 * A plus tolerance of 3/64 in. for height B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in. throughout its entire circumference.
 Dimension "R" is max.
 Radius "r" is 1/16" for ring width 7/8" and less and 3/32" for ring width 1" (25.4mm) and over.

CLASS B&D FLANGE TABLE 2

AWWA Standard Steel Ring Flanges, Class B(86psi) and Class D (175-150 psi)



AWWA C207

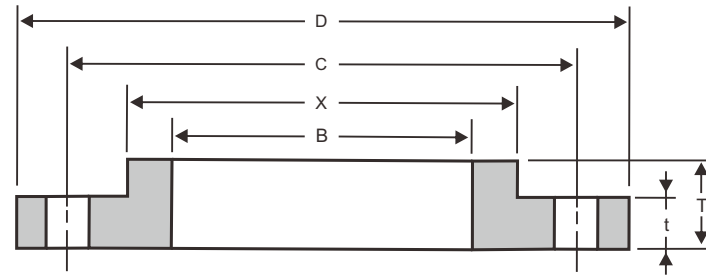
Unit:mm

| Nominal Pipe Size | Outside Diam. | Bore | Thickness | | | | DRILLING | | |
|-------------------|---------------|--------|------------|-------|------------|-------|-------------------|-----------------|---------------|
| | | | Class B(t) | | Class D(t) | | Bolt Circle Diam. | Number of Holes | Diam of Holes |
| | | | Slip-on | Blind | Slip-on | Blind | | | |
| 4 | 228.6 | 116.1 | 15.9 | 15.9 | 15.9 | 15.9 | 190.5 | 8 | 19.1 |
| 5 | 254.0 | 143.8 | 15.9 | 15.9 | 15.9 | 16.5 | 215.9 | 8 | 22.2 |
| 6 | 279.4 | 170.7 | 17.5 | 17.5 | 17.5 | 17.6 | 241.3 | 8 | 22.2 |
| 8 | 342.9 | 221.5 | 17.5 | 17.5 | 17.5 | 20.6 | 298.5 | 8 | 22.2 |
| 10 | 406.4 | 276.4 | 17.5 | 17.5 | 17.5 | 24.2 | 362.0 | 12 | 25.4 |
| 12 | 482.6 | 327.2 | 17.5 | 18.3 | 20.6 | 28.4 | 431.8 | 12 | 25.4 |
| 14 | 533.4 | 360.4 | 17.5 | 20.1 | 23.8 | 28.8 | 476.3 | 12 | 28.6 |
| 16 | 596.9 | 411.2 | 17.5 | 22.7 | 25.4 | 32.1 | 539.8 | 16 | 28.6 |
| 18 | 635.0 | 462.0 | 17.5 | 24.1 | 27.0 | 33.8 | 577.9 | 16 | 31.8 |
| 20 | 698.5 | 512.8 | 17.5 | 26.4 | 28.6 | 36.8 | 635.0 | 20 | 31.8 |
| 22 | 749.3 | 563.6 | 19.1 | 28.8 | 30.2 | 39.8 | 692.2 | 20 | 34.9 |
| 24 | 812.8 | 614.4 | 19.1 | 30.9 | 31.8 | 42.2 | 749.3 | 20 | 34.9 |
| 26 | 870.0 | 665.2 | 20.6 | 33.2 | 33.3 | 45.4 | 806.5 | 24 | 34.9 |
| 28 | 927.1 | 716.0 | 22.2 | 35.5 | 33.3 | 48.4 | 863.6 | 28 | 34.9 |
| 30 | 984.3 | 766.8 | 22.2 | 37.5 | 34.9 | 51.0 | 914.4 | 28 | 34.9 |
| 32 | 1060.5 | 817.6 | 23.8 | 40.2 | 38.1 | 54.6 | 977.9 | 28 | 41.3 |
| 34 | 1111.3 | 868.4 | 23.8 | 42.2 | 38.1 | 57.2 | 1028.7 | 32 | 41.3 |
| 36 | 1168.4 | 919.2 | 25.4 | 44.5 | 41.3 | 60.2 | 1085.9 | 32 | 41.3 |
| 38 | 1238.3 | 970.0 | 25.4 | 47.1 | 41.3 | 63.7 | 1149.4 | 32 | 41.3 |
| 40 | 1289.1 | 1020.8 | 25.4 | 49.1 | 41.3 | 66.3 | 1200.2 | 36 | 41.3 |
| 42 | 1346.2 | 1071.6 | 28.6 | 51.4 | 44.5 | 69.3 | 1257.3 | 36 | 41.3 |
| 44 | 1403.4 | 1122.4 | 28.6 | 53.7 | 44.5 | 72.4 | 1314.5 | 40 | 41.3 |
| 46 | 1454.2 | 1173.2 | 28.6 | 55.7 | 44.5 | 75.0 | 1365.3 | 40 | 41.3 |
| 48 | 1511.3 | 1224.0 | 31.8 | 58.0 | 47.6 | 78.0 | 1422.4 | 44 | 41.3 |
| 50 | 1568.5 | 1274.8 | 31.8 | 60.4 | 50.8 | 81.2 | 1479.6 | 44 | 47.6 |
| 52 | 1625.6 | 1325.6 | 31.8 | 62.7 | 50.8 | 84.2 | 1536.7 | 44 | 47.6 |
| 54 | 1682.8 | 1376.4 | 34.9 | 65.0 | 54.0 | 87.2 | 1593.9 | 44 | 47.6 |
| 60 | 1854.2 | 1528.8 | 38.1 | 71.6 | 57.2 | 96.0 | 1759.0 | 52 | 47.6 |
| 66 | 2032.0 | 1681.2 | 41.3 | 78.5 | 63.5 | 105.1 | 1930.4 | 52 | 47.6 |
| 72 | 2197.1 | 1833.6 | 44.5 | 85.2 | 66.7 | 113.8 | 2095.5 | 60 | 47.6 |
| 78 | 2362.2 | 1986.0 | 50.8 | 91.9 | 69.9 | 122.5 | 2260.6 | 64 | 54.0 |
| 84 | 2533.7 | 2138.4 | 50.8 | 98.6 | 73.0 | 131.2 | 2425.7 | 64 | 54.0 |
| 90 | 2705.1 | 2290.8 | 57.2 | 105.3 | 76.2 | 140.0 | 2590.8 | 68 | 60.3 |
| 96 | 2876.6 | 2443.2 | 57.2 | 111.9 | 82.6 | 148.8 | 2755.9 | 68 | 60.3 |
| 102 | 3048.0 | 2595.6 | 63.5 | 118.5 | 82.6 | 157.6 | 2908.3 | 72 | 67 |
| 108 | 3219.5 | 2748.0 | 63.5 | 125.1 | 85.7 | 166.4 | 3067.1 | 72 | 67 |
| 114 | 3390.9 | 2900.4 | 69.9 | 131.7 | 88.9 | 175.2 | 3219.5 | 76 | 73 |
| 120 | 3562.4 | 3052.8 | 69.9 | 138.3 | 88.9 | 184.0 | 3371.9 | 76 | 73 |

Notes:
 (1) For standard finishes for contact face, refer to page 99.
 (2) The Bore(B) shall be 3/16 in. larger than the nominal outside diameter of the pipe, unless otherwise specified

CLASS B&D FLANGES TABLE 3

AWWA Standard Steel Ring Flange, Class B(86psi) and Class D (175-150 psi)



SLIP-ON

AWWA C207

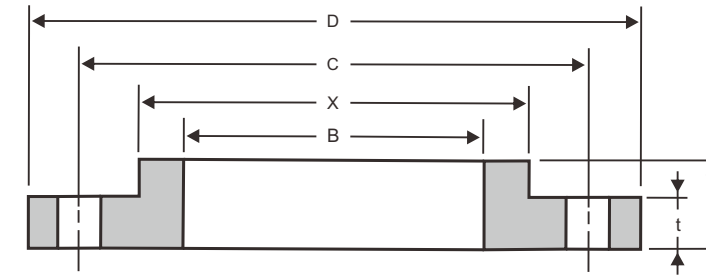
Unit:mm

| Nominal Pipe Size | Outside Diam. D | Bore B | Thickness t | Length Through Hub T | Diam. of Hub at Base X | DRILLING | | |
|-------------------|--------------------|-----------|----------------|-------------------------|---------------------------|------------------------|-----------------|---------------|
| | | | | | | Bolt Circle Diam. C | Number of Holes | Diam of Holes |
| 4 | 228.6 | 116.1 | 12.7 | 22.2 | 134.9 | 190.5 | 8 | 19.1 |
| 5 | 254.0 | 143.8 | 14.3 | 31.8 | 160.3 | 215.9 | 8 | 22.2 |
| 6 | 279.4 | 170.7 | 14.3 | 31.8 | 192.1 | 241.3 | 8 | 22.2 |
| 8 | 342.9 | 221.5 | 14.3 | 31.8 | 246.1 | 298.5 | 8 | 22.2 |
| 10 | 406.4 | 276.4 | 17.5 | 31.8 | 304.8 | 362.0 | 12 | 25.4 |
| 12 | 482.6 | 327.2 | 17.5 | 31.8 | 365.1 | 431.8 | 12 | 25.4 |
| 14 | 533.4 | 360.4 | 19.1 | 31.8 | 400.1 | 476.3 | 12 | 28.6 |
| 16 | 596.9 | 411.2 | 19.1 | 31.8 | 457.2 | 539.8 | 16 | 28.6 |
| 18 | 635.0 | 462.0 | 19.1 | 31.8 | 504.8 | 577.9 | 16 | 31.8 |
| 20 | 698.5 | 512.8 | 19.1 | 31.8 | 558.8 | 635.0 | 20 | 31.8 |
| 22 | 749.3 | 563.6 | 25.4 | 44.5 | 616.0 | 692.2 | 20 | 34.9 |
| 24 | 812.8 | 614.4 | 25.4 | 44.5 | 663.6 | 749.3 | 20 | 34.9 |
| 26 | 870.0 | 665.2 | 25.4 | 44.5 | 723.9 | 806.5 | 24 | 34.9 |
| 28 | 927.1 | 716.0 | 25.4 | 44.5 | 774.7 | 863.6 | 28 | 34.9 |
| 30 | 984.3 | 766.8 | 25.4 | 44.5 | 825.5 | 914.4 | 28 | 34.9 |
| 32 | 1060.5 | 817.6 | 28.6 | 44.5 | 882.7 | 977.9 | 28 | 41.3 |
| 34 | 1111.3 | 868.4 | 28.6 | 44.5 | 933.5 | 1028.7 | 32 | 41.3 |
| 36 | 1168.4 | 919.2 | 28.6 | 44.5 | 984.3 | 1085.9 | 32 | 41.3 |
| 38 | 1238.3 | 970.0 | 28.6 | 44.5 | 1035.1 | 1149.4 | 32 | 41.3 |
| 40 | 1289.1 | 1220.8 | 28.6 | 44.5 | 1092.2 | 1200.2 | 36 | 41.3 |
| 42 | 1346.2 | 1071.6 | 31.8 | 44.5 | 1143.0 | 1257.3 | 36 | 41.3 |
| 44 | 1403.4 | 1122.4 | 31.8 | 57.2 | 1193.8 | 1314.5 | 40 | 41.3 |
| 46 | 1454.2 | 1173.2 | 31.8 | 57.2 | 1244.6 | 1365.3 | 40 | 41.3 |
| 48 | 1511.3 | 1224.0 | 34.9 | 63.5 | 1295.4 | 1422.4 | 44 | 41.3 |
| 50 | 1568.5 | 1274.8 | 34.9 | 63.5 | 1346.2 | 1479.6 | 44 | 47.6 |
| 52 | 1625.6 | 1325.6 | 34.9 | 63.5 | 1397.0 | 1536.7 | 44 | 47.6 |
| 54 | 1682.8 | 1376.4 | 34.9 | 63.5 | 1447.8 | 1593.9 | 44 | 47.6 |
| 60 | 1854.2 | 1528.8 | 38.1 | 69.9 | 1600.2 | 1759.0 | 52 | 47.6 |
| 66 | 2032.0 | 1681.2 | 38.1 | 69.9 | 1752.6 | 1930.4 | 52 | 47.6 |
| 72 | 2197.1 | 1833.6 | 38.1 | 69.9 | 1905.0 | 2095.5 | 60 | 47.6 |
| 78 | 2362.2 | 1986.0 | 44.5 | 76.2 | 2063.8 | 2260.6 | 64 | 54.0 |
| 84 | 2533.7 | 2138.4 | 44.5 | 76.2 | 2222.5 | 2425.7 | 64 | 54.0 |
| 90 | 2705.1 | 2290.8 | 50.8 | 82.6 | 2381.3 | 2590.8 | 68 | 60.3 |
| 96 | 2876.6 | 2443.2 | 50.8 | 82.6 | 2540.0 | 2755.9 | 68 | 60.3 |
| 102 | 3048.0 | 2595.6 | 57.2 | 88.9 | 2686.1 | 2908.3 | 72 | 67 |
| 108 | 3219.5 | 2748.0 | 57.2 | 88.9 | 2832.1 | 3067.1 | 72 | 67 |
| 114 | 3390.9 | 2900.4 | 63.5 | 95.3 | 2990.9 | 3219.5 | 76 | 73 |
| 120 | 3562.4 | 3052.8 | 63.5 | 95.3 | 3149.6 | 3371.9 | 76 | 73 |

Notes:
 (1) For standard finishes for contact face, refer to page 99.
 (2) For Slip-on Flanges, (Hub Type Flanges), the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.
 (3) The Bore(B) shall be 3/16 in. larger than the nominal outside diameter of the pipe, unless otherwise specified.

CLASS B&D FLANGE TABLE 4

AWWA Standard Steel Hub Flange, Class E (275 psi)



SLIP-ON

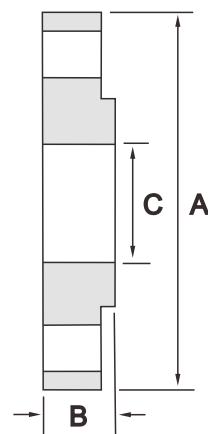
AWWA C207

Unit:mm

| Nominal Pipe Size | Outside Diam. D | Bore B | Thickness t | Length Through Hub T | Diam. of Hub at Base X | DRILLING | | |
|-------------------|--------------------|-----------|----------------|-------------------------|---------------------------|------------------------|-----------------|---------------|
| | | | | | | Bolt Circle Diam. C | Number of Holes | Diam of Holes |
| 4 | 228.6 | 116.1 | 23.8 | 33.3 | 134.9 | 190.5 | 8 | 19.1 |
| 5 | 254.0 | 143.8 | 23.8 | 36.5 | 163.5 | 215.9 | 8 | 22.2 |
| 6 | 279.4 | 170.7 | 25.4 | 39.7 | 192.1 | 241.3 | 8 | 22.2 |
| 8 | 342.9 | 221.5 | 28.6 | 44.5 | 246.1 | 298.5 | 8 | 22.2 |
| 10 | 406.4 | 276.4 | 30.2 | 49.2 | 304.8 | 362.0 | 12 | 25.4 |
| 12 | 482.6 | 327.2 | 31.8 | 55.6 | 365.1 | 431.8 | 12 | 25.4 |
| 14 | 533.4 | 360.4 | 34.9 | 57.2 | 400.1 | 476.3 | 12 | 28.6 |
| 16 | 596.9 | 411.2 | 36.5 | 63.5 | 457.2 | 539.8 | 16 | 28.6 |
| 18 | 635.0 | 462.0 | 39.7 | 68.3 | 504.8 | 577.9 | 16 | 31.8 |
| 20 | 698.5 | 512.8 | 42.9 | 73.0 | 558.8 | 635.0 | 20 | 31.8 |
| 22 | 749.3 | 563.6 | 46.0 | 79.4 | 609.6 | 692.2 | 20 | 34.9 |
| 24 | 812.8 | 614.4 | 47.6 | 82.6 | 663.6 | 749.3 | 20 | 34.9 |
| 26 | 870.0 | 665.2 | 50.8 | 85.7 | 723.9 | 806.5 | 24 | 34.9 |
| 28 | 927.1 | 716.0 | 52.4 | 87.3 | 781.1 | 863.6 | 28 | 34.9 |
| 30 | 984.3 | 766.8 | 54.0 | 88.9 | 831.9 | 914.4 | 28 | 34.9 |
| 32 | 1060.5 | 817.6 | 57.2 | 92.1 | 889.0 | 977.9 | 28 | 41.3 |
| 34 | 1111.3 | 868.4 | 58.7 | 93.7 | 939.8 | 1028.7 | 32 | 41.3 |
| 36 | 1168.4 | 919.2 | 60.3 | 95.3 | 997.0 | 1085.9 | 32 | 41.3 |
| 38 | 1238.3 | 970.0 | 60.3 | 95.3 | 1060.5 | 1149.4 | 32 | 41.3 |
| 40 | 1289.1 | 1020.8 | 63.5 | 98.4 | 1111.3 | 1200.2 | 36 | 41.3 |
| 42 | 1346.2 | 1071.6 | 66.7 | 101.6 | 1168.4 | 1257.3 | 36 | 41.3 |
| 44 | 1403.4 | 1122.4 | 66.7 | 101.6 | 1219.2 | 1314.5 | 40 | 41.3 |
| 46 | 1454.2 | 1173.2 | 68.3 | 103.2 | 1270.0 | 1365.3 | 40 | 41.3 |
| 48 | 1511.3 | 1224.0 | 69.9 | 104.8 | 1327.2 | 1422.4 | 44 | 41.3 |
| 50 | 1568.5 | 1274.8 | 69.9 | 104.8 | 1378.0 | 1479.6 | 44 | 47.6 |
| 52 | 1625.6 | 1325.6 | 73.0 | 108.0 | 1435.1 | 1536.7 | 44 | 47.6 |
| 54 | 1682.8 | 1376.4 | 76.2 | 111.1 | 1492.3 | 1593.9 | 44 | 47.6 |
| 60 | 1854.2 | 1525.8 | 79.4 | 114.3 | 1657.4 | 1759.0 | 52 | 47.6 |
| 66 | 2032.0 | 1681.2 | 85.7 | 123.8 | 1816.1 | 1930.4 | 52 | 47.6 |
| 72 | 2197.1 | 1833.6 | 88.9 | 127.0 | 1993.9 | 2095.5 | 60 | 47.6 |
| 78 | 2362.2 | 1986.0 | 98.4 | 136.5 | 2146.3 | 2260.6 | 64 | 54.0 |
| 84 | 2533.7 | 2138.4 | 98.4 | 136.5 | 2298.7 | 2425.7 | 64 | 54.0 |
| 90 | 2705.1 | 2290.8 | 108.0 | 146.1 | 2457.5 | 2590.8 | 68 | 60.3 |
| 96 | 2876.6 | 2443.2 | 108.0 | 146.1 | 2609.9 | 2755.9 | 68 | 60.3 |
| 102 | 3048.0 | 2595.6 | 117.5 | 155.6 | 2762.3 | 2908.3 | 72 | 67 |
| 108 | 3219.5 | 2748.0 | 117.5 | 155.6 | 2908.3 | 3067.1 | 72 | 67 |
| 114 | 3390.9 | 2900.4 | 127.0 | 165.1 | 3079.8 | 3219.5 | 76 | 73 |
| 120 | 3562.4 | 3052.8 | 127.0 | 165.1 | 3251.2 | 3371.9 | 76 | 73 |

Notes:
 (1) For standard finishes for contact face, refer to page 99.
 (2) For Slip-on Flanges, (Hub Type Flanges), the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.
 (3) The Bore(B) shall be 3/16 in. larger than the nominal outside diameter of the pipe, unless otherwise specified.

Bs4504英标标准的法兰



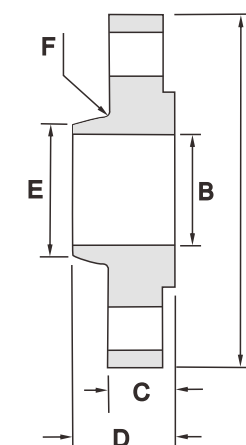
| DN | PN | A mm | B mm | C mm |
|-----|-------|------|------|-------|
| 10 | 2.5,6 | 75 | 12 | 18.0 |
| | 10&16 | 90 | 14 | |
| | 25&40 | 90 | 14 | |
| 15 | 2.5,6 | 80 | 12 | 22 |
| | 10&16 | 95 | 14 | |
| | 25&40 | 95 | 14 | |
| 20 | 2.5,6 | 90 | 14 | 27.5 |
| | 10&16 | 105 | 16 | |
| | 25&40 | 105 | 16 | |
| 25 | 2.5,6 | 100 | 14 | 34.5 |
| | 10&16 | 115 | 16 | |
| | 25&40 | 115 | 16 | |
| 32 | 2.5,6 | 120 | 16 | 43.5 |
| | 10&16 | 140 | 18 | |
| | 25&40 | 140 | 18 | |
| 40 | 2.5,6 | 130 | 16 | 49.5 |
| | 10&16 | 150 | 18 | |
| | 25&40 | 150 | 18 | |
| 50 | 2.5,6 | 140 | 16 | 61.5 |
| | 10&16 | 165 | 20 | |
| | 25&40 | 165 | 20 | |
| 65 | 2.5,6 | 160 | 16 | 77.5 |
| | 10&16 | 185 | 20 | |
| | 25&40 | 185 | 22 | |
| 80 | 2.5,6 | 190 | 18 | 90.5 |
| | 10&16 | 200 | 20 | |
| | 25&40 | 200 | 24 | |
| 100 | 2.5,6 | 210 | 18 | 116.0 |
| | 10&16 | 220 | 22 | |
| | 25&40 | 235 | 26 | |
| 125 | 2.5,6 | 240 | 20 | 141.5 |
| | 10&16 | 250 | 22 | |
| | 25&40 | 270 | 28 | |
| 150 | 2.5,6 | 265 | 20 | 170.5 |
| | 10&16 | 285 | 24 | |
| | 25&40 | 300 | 30 | |
| 200 | 2.5,6 | 320 | 22 | 221.5 |
| | 10&16 | 340 | 24 | |
| | 25 | 360 | 32 | |
| 250 | 40 | 375 | 36 | 276.5 |
| | 2.5,6 | 375 | 24 | |
| | 10 | 395 | 26 | |
| | 16 | 405 | 29 | |
| 250 | 25 | 425 | 35 | |
| | 40 | 450 | 42 | |

| DN | PN | A mm | B mm | C mm |
|------|-------|------|------|------------------------------|
| 300 | 2.5,6 | 440 | 24 | 327.5 |
| | 10 | 445 | 26 | |
| | 16 | 460 | 32 | |
| | 25 | 485 | 38 | |
| 350 | 40 | 515 | 48 | 359.5 |
| | 2.5,6 | 490 | 26 | |
| | 10 | 505 | 28 | |
| | 16 | 520 | 35 | |
| 350 | 25 | 555 | 42 | 359.5 |
| | 40 | 580 | 54 | |
| | 2.5,6 | 540 | 28 | |
| | 10 | 565 | 32 | |
| 400 | 16 | 580 | 38 | 411.0 |
| | 25 | 620 | 46 | |
| | 40 | 660 | 60 | |
| | 2.5,6 | 595 | 30 | |
| 450 | 10 | 615 | 36 | 462.0 |
| | 16 | 640 | 42 | |
| | 25 | 670 | 50 | |
| | 40 | 685 | 66 | |
| 500 | 2.5,6 | 645 | 30 | 513.5 |
| | 10 | 670 | 38 | |
| | 16 | 715 | 46 | |
| | 25 | 730 | 56 | |
| 500 | 40 | 755 | 72 | 513.5 |
| | 2.5,6 | 755 | 32 | |
| | 10 | 780 | 42 | |
| | 16 | 840 | 52 | |
| 600 | 25 | 845 | 68 | 616.5 |
| | 40 | 890 | 84 | |
| | 2.5 | 860 | 36 | |
| | 2.5 | 975 | 38 | |
| 700 | 2.5 | 1075 | 40 | To be specified by purchaser |
| 1000 | 2.5 | 1175 | 42 | |
| 1200 | 2.5 | 1375 | 44 | |
| 1400 | 2.5 | 1575 | 48 | |
| 1600 | 2.5 | 1790 | 51 | |
| 1800 | 2.5 | 1990 | 54 | |
| 2000 | 2.5 | 2190 | 58 | |

Notes

- Dimension B is the flange thickness with or without a raised face.
- For drilling details see page 8-64.
- For tolerances see page 8-61.
- For facing types and dimensions see page 8-62.

Bs4504英标标准的法兰



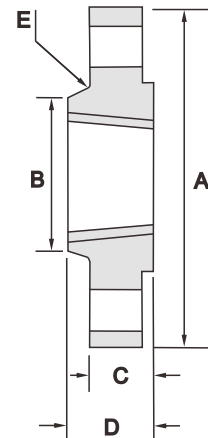
| DN | PN | A mm | B mm | C mm | D mm | E mm | F mm |
|-----|-------|------|-------|------|------|------|------|
| 10 | 6 | 75 | 12 | 20 | 25 | 3 | |
| | 10&16 | 90 | 18.0 | 14 | 20 | | |
| | 25&40 | 90 | 16 | 22 | 30 | | |
| | 6 | 80 | 12 | 20 | 30 | | |
| 15 | 10&16 | 95 | 22 | 14 | 20 | 30 | 3 |
| | 25&40 | 95 | 16 | 22 | 35 | 4 | |
| | 6 | 90 | 14 | 24 | 40 | | |
| 20 | 10&16 | 105 | 27.5 | 16 | 24 | | 45 |
| | 25&40 | 105 | 18 | 26 | 45 | 5 | |
| | 6 | 100 | 14 | 24 | 50 | | |
| 25 | 10&16 | 115 | 34.5 | 16 | 24 | | 52 |
| | 25&40 | 115 | 18 | 28 | 52 | 5 | |
| | 6 | 120 | 14 | 26 | 60 | | |
| 32 | 10&16 | 140 | 43.5 | 16 | 26 | | 60 |
| | 25&40 | 140 | 18 | 30 | 60 | 5 | |
| | 6 | 130 | 14 | 26 | 70 | | |
| 40 | 10&16 | 150 | 49.5 | 16 | 26 | | 70 |
| | 25&40 | 150 | 18 | 32 | 70 | 5 | |
| | 6 | 140 | 14 | 28 | 80 | | |
| 50 | 10&16 | 165 | 61.5 | 18 | 28 | | 84 |
| | 25&40 | 165 | 20 | 34 | 84 | 6 | |
| | 6 | 160 | 14 | 32 | 100 | | |
| 65 | 10&16 | 185 | 77.5 | 18 | 32 | | 104 |
| | 25&40 | 185 | 22 | 38 | 104 | 6 | |
| | 6 | 190 | 16 | 34 | 110 | | |
| 80 | 10&16 | 200 | 90.5 | 20 | 34 | | 118 |
| | 25&40 | 200 | 24 | 40 | 118 | 6 | |
| | 6 | 210 | 16 | 40 | 130 | | |
| 100 | 10&16 | 220 | 116.0 | 20 | 40 | | 140 |
| | 25&40 | 235 | 24 | 44 | 145 | 6 | |
| | 6 | 240 | 18 | 44 | 160 | | |
| 125 | 10&16 | 250 | 141.5 | 22 | 44 | | 168 |
| | 25&40 | 270 | 26 | 48 | 170 | 8 | |
| | 6 | 265 | 18 | 44 | 185 | | |
| 150 | 10&16 | 285 | 170.5 | 22 | 44 | | 195 |
| | 25&40 | 300 | 28 | 75 | 190 | 8 | |

Notes

- The hubs of slip on (code 112) flanges are parallel or have a draft <7 degrees.
- For drilling details see page 8-64.
- For tolerances see page 8-61.
- For facing types and dimensions see page 8-62.

| DN | PN | A mm | B mm | C mm | D mm | E mm | F mm |
|-----|-------|------|-------|------|------|------|------|
| 200 | 6 | 320 | 20 | 44 | 240 | 8 | |
| | 10&16 | 340 | 221.5 | 24 | 44 | | 246 |
| | 25 | 360 | 30 | 52 | 256 | | |
| | 40 | 375 | 34 | 52 | 260 | | |
| 250 | 6 | 375 | 22 | 44 | 295 | 10 | |
| | 10 | 395 | 26 | 46 | 298 | | |
| | 16 | 405 | 276.5 | 26 | 46 | | 298 |
| | 25 | 425 | 32 | 60 | 310 | | |
| 250 | 40 | 450 | 38 | 60 | 312 | 10 | |
| | 6 | 440 | 22 | 44 | 355 | | |
| | 10 | 445 | 26 | 46 | 350 | | |
| | 16 | 460 | 327.5 | 28 | 46 | | 350 |
| 300 | 25 | 485 | 34 | 67 | 364 | 10 | |
| | 40 | 515 | 42 | 67 | 380 | | |
| | 6 | 505 | 359.5 | 26 | 53 | | 400 |
| | 16 | 520 | 359.0 | 30 | 57 | | 400 |
| 350 | 25 | 555 | 38 | 72 | 418 | 10 | |
| | 40 | 580 | 359.5 | 46 | 72 | | 424 |
| | 10 | 565 | 26 | 57 | 456 | | |
| | 16 | 580 | 411.0 | 32 | 63 | | 456 |
| 400 | 25 | 620 | 40 | 78 | 472 | 10 | |
| | 40 | 660 | 50 | 78 | 478 | | |
| | 10 | 615 | 28 | 63 | 502 | | |
| | 16 | 640 | 462.0 | 34 | 68 | | 502 |
| 450 | 25 | 670 | 42 | 84 | 520 | 12 | |
| | 40 | 685 | 50 | 84 | 522 | | |
| | 10 | 670 | 28 | 67 | 559 | | |
| | 16 | 715 | 513.5 | 34 | 73 | | 559 |
| 500 | 25 | 730 | 44 | 90 | 580 | 12 | |
| | 40 | 755 | 52 | 90 | 576 | | |
| | 10 | 780 | 28 | 75 | 658 | | |
| | 16 | 840 | 616.5 | 36 | 83 | | 658 |
| 600 | 25 | 845 | 46 | 100 | 684 | 12 | |
| | 40 | 890 | 60 | 100 | 686 | | |
| | - | - | - | - | - | | - |
| | - | - | - | - | - | | - |

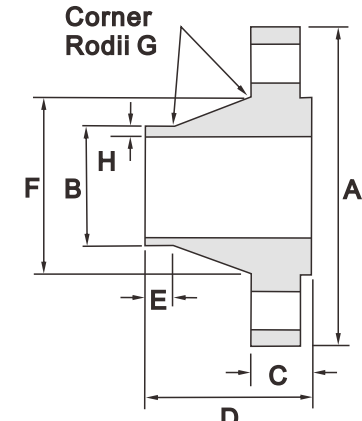
Bs4504英标标准的法兰



| DN | PN | A mm | B mm | C mm | D mm | E mm |
|-----|----|------|------|------|------|------|
| 10 | 6 | 75 | 25 | 12 | 20 | |
| | 16 | 90 | 30 | 14 | 20 | 3 |
| | 40 | 90 | 30 | 16 | 22 | |
| 15 | 6 | 80 | 30 | 12 | 20 | |
| | 16 | 95 | 35 | 14 | 20 | 3 |
| | 40 | 95 | 35 | 16 | 22 | |
| 20 | 6 | 90 | 40 | 14 | 24 | |
| | 16 | 105 | 45 | 16 | 24 | 4 |
| | 40 | 105 | 45 | 18 | 26 | |
| 25 | 6 | 100 | 50 | 14 | 24 | |
| | 16 | 115 | 52 | 16 | 24 | 4 |
| | 40 | 115 | 52 | 18 | 28 | |
| 32 | 6 | 120 | 60 | 14 | 26 | |
| | 16 | 140 | 60 | 16 | 26 | 5 |
| | 40 | 140 | 60 | 18 | 30 | |
| 40 | 6 | 130 | 70 | 14 | 26 | |
| | 16 | 150 | 70 | 16 | 26 | 5 |
| | 40 | 150 | 70 | 18 | 32 | |
| 50 | 6 | 140 | 80 | 14 | 28 | |
| | 16 | 165 | 84 | 18 | 28 | 5 |
| | 40 | 165 | 84 | 20 | 34 | |
| 65 | 6 | 160 | 100 | 14 | 32 | |
| | 16 | 185 | 104 | 18 | 32 | 6 |
| | 40 | 185 | 104 | 22 | 38 | |
| 80 | 6 | 190 | 110 | 16 | 34 | |
| | 16 | 200 | 118 | 20 | 34 | 6 |
| | 40 | 200 | 118 | 24 | 40 | |
| 100 | 6 | 210 | 130 | 16 | 40 | |
| | 16 | 220 | 140 | 20 | 40 | 6 |
| | 40 | 235 | 145 | 24 | 44 | |

- Notes
- Threaded flange (code 113) threads are tapered or parallel. BS 21 or ANSI/ASME B1.20.1 threads may be specified (see Section 10).
 - The hubs of threaded (code 113) flanges are parallel or have a draft < 7 degrees.
 - For drilling details see page 8-64.
 - For tolerances see page 8-61.
 - For facing types and dimensions see page 8-62.

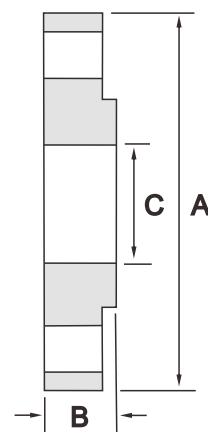
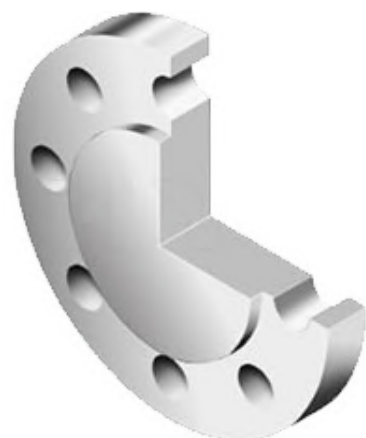
Bs4504英标标准的法兰



| DN | PN | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm |
|----|-------|------|------|------|------|------|------|------|------|
| 10 | 2.5,6 | 75 | | 12 | 28 | | 26 | | 1.8 |
| | 10 | 90 | | 14 | 35 | | 28 | | 1.8 |
| | 16 | 90 | 17.2 | 14 | 35 | 6 | 28 | 3 | 1.8 |
| | 25 | 90 | | 16 | 35 | | 28 | | 1.8 |
| | 40 | 90 | | 16 | 35 | | 28 | | 1.8 |
| 15 | 2.5,6 | 80 | | 12 | 30 | | 30 | | 2 |
| | 10 | 95 | | 14 | 35 | | 32 | | 2 |
| | 16 | 95 | 21.3 | 14 | 35 | 6 | 32 | 3 | 2 |
| | 25 | 95 | | 16 | 38 | | 32 | | 2 |
| | 40 | 95 | | 16 | 38 | | 32 | | 2 |
| 20 | 2.5,6 | 90 | | 14 | 32 | | 38 | | 2.3 |
| | 10 | 105 | | 16 | 38 | | 39 | | 2.3 |
| | 16 | 105 | 26.9 | 16 | 38 | 6 | 39 | 4 | 2.3 |
| | 25 | 105 | | 18 | 40 | | 40 | | 2.3 |
| | 40 | 105 | | 18 | 40 | | 40 | | 2.3 |
| 25 | 2.5,6 | 100 | | 14 | 35 | | 42 | | 2.6 |
| | 10 | 115 | | 16 | 38 | | 46 | | 2.6 |
| | 16 | 115 | 33.7 | 16 | 38 | 6 | 46 | 4 | 2.6 |
| | 25 | 115 | | 18 | 40 | | 46 | | 2.6 |
| | 40 | 115 | | 18 | 40 | | 46 | | 2.6 |
| 32 | 2.5,6 | 120 | | 14 | 35 | | 55 | | 2.6 |
| | 10 | 140 | | 16 | 40 | | 56 | | 2.6 |
| | 16 | 140 | 42.4 | 16 | 40 | 6 | 56 | 5 | 2.6 |
| | 25 | 140 | | 18 | 42 | | 56 | | 2.6 |
| | 40 | 140 | | 18 | 42 | | 56 | | 2.6 |
| 40 | 2.5,6 | 130 | | 14 | 38 | | 62 | | 2.6 |
| | 10 | 150 | | 16 | 42 | | 64 | | 2.6 |
| | 16 | 150 | 48.3 | 16 | 42 | 7 | 64 | 5 | 2.6 |
| | 25 | 150 | | 18 | 45 | | 64 | | 2.6 |
| | 40 | 150 | | 18 | 45 | | 64 | | 2.6 |
| 50 | 2.5,6 | 140 | | 14 | 38 | | 74 | | 2.9 |
| | 10 | 165 | | 18 | 45 | | 74 | | 2.9 |
| | 16 | 165 | 60.3 | 18 | 45 | 8 | 74 | 5 | 2.9 |
| | 25 | 165 | | 20 | 48 | | 74 | | 2.9 |
| | 40 | 165 | | 20 | 48 | | 74 | | 2.9 |
| 65 | 2.5,6 | 160 | | 14 | 38 | | 88 | | 2.9 |
| | 10 | 185 | | 18 | 45 | | 92 | | 2.9 |
| | 16 | 185 | 76.1 | 18 | 45 | 10 | 92 | 6 | 2.9 |
| | 25 | 185 | | 22 | 52 | | 92 | | 2.9 |
| | 40 | 185 | | 22 | 52 | | 92 | | 2.9 |
| 80 | 2.5,6 | 190 | | 16 | 42 | | 102 | | 3.2 |
| | 10 | 200 | | 20 | 50 | | 110 | | 3.2 |
| | 16 | 200 | 88.9 | 20 | 50 | | 110 | 6 | 3.2 |
| | 25 | 200 | | 24 | 58 | | 110 | | 3.2 |
| | 40 | 200 | | 24 | 58 | | 110 | | 3.2 |

| DN | PN | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm |
|-----|-------|------|-------|------|------|------|------|------|------|
| 100 | 2.5,6 | 210 | | 16 | 45 | 10 | 130 | | 3.6 |
| | 10 | 220 | | 20 | 52 | | 130 | | 3.6 |
| | 16 | 220 | 114.3 | 20 | 52 | 12 | 130 | 6 | 3.6 |
| | 25 | 235 | | 24 | 65 | | 134 | | 3.6 |
| | 40 | 235 | | 24 | 65 | | 134 | | 3.6 |
| 125 | 2.5,6 | 240 | | 18 | 48 | 10 | 155 | | 4 |
| | 10 | 250 | | 22 | 55 | | 158 | | 4 |
| | 16 | 250 | 139.7 | 22 | 55 | 12 | 158 | 6 | 4 |
| | 25 | 270 | | 26 | 68 | | 162 | | 4 |
| | 40 | 270 | | 26 | 68 | | 162 | | 4 |
| 150 | 2.5,6 | 265 | | 18 | 48 | | 184 | | 4.5 |
| | 10 | 285 | | 22 | 55 | | 184 | | 4.5 |
| | 16 | 285 | 168.3 | 22 | 55 | 12 | 184 | 8 | 4.5 |
| | 25 | 300 | | 28 | 75 | | 190 | | 4.5 |
| | 40 | 300 | | 28 | 75 | | 190 | | 4.5 |
| 200 | 2.5,6 | 320 | | 20 | 55 | 15 | 236 | | 5.6 |
| | 10 | 340 | | 24 | 62 | | 234 | | 5.6 |
| | 16 | 340 | 219.1 | 24 | 62 | 16 | 234 | 8 | 5.6 |
| | 25 | 360 | | 30 | 80 | | 244 | | 6.3 |
| | 40 | 375 | | 34 | 88 | | 244 | | 6.3 |
| 250 | 2.5,6 | 375 | | 22 | 60 | 15 | 290 | | 6.3 |
| | 10 | 395 | | 26 | 68 | | 288 | | 6.3 |
| | 16 | 405 | 273 | 26 | 70 | 16 | 288 | 10 | 6.3 |
| | 25 | 425 | | 32 | 88 | | 296 | | 7.1 |
| | 40 | 450 | | 38 | 105 | | 306 | | 7.1 |
| 300 | 2.5,6 | 440 | | 22 | 62 | 15 | 342 | | 7.1 |
| | 10 | 445 | | 26 | 68 | | 342 | | 7.1 |
| | 16 | 460 | 323.9 | 28 | 78 | 16 | 342 | 10 | 7.1 |
| | 25 | 485 | | 34 | 92 | | 350 | | 8 |
| | 40 | 515 | | 42 | 115 | | 362 | | 8 |
| 350 | 2.5,6 | 490 | | 22 | 62 | 15 | 385 | | 7.1 |
| | 10 | 505 | | 26 | 68 | | 390 | | 7.1 |
| | 16 | 520 | 355.6 | 30 | 82 | 16 | 390 | 10 | 8 |
| | 25 | 555 | | 38 | 100 | | 398 | | 8 |
| | 40 | 580 | | 46 | 125 | | 408 | | 8.8 |
| 400 | 2.5,6 | 540 | | 22 | 65 | 15 | 438 | | 7.1 |
| | 10 | 565 | | 26 | 72 | | 440 | | 7.1 |
| | 16 | 585 | 406.4 | 32 | 85 | 16 | 444 | 10 | 8 |
| | 25 | 620 | | 40 | 110 | | 452 | | 8.8 |
| | 40 | 660 | | 50 | 135 | | 462 | | 11 |
| 450 | 2.5,6 | 595 | | 24 | 65 | 15 | 492 | | 7.1 |
| | 10 | 615 | | 28 | 72 | | 488 | | 7.1 |
| | 16 | 640 | 457 | 34 | 87 | 16 | 490 | 12 | 8 |
| | 25 | 670 | | 42 | 110 | | 500 | | 8.8 |
| | 40 | 685 | | 50 | 135 | | 500 | | 12.5 |

Bs4504英标标准的法兰

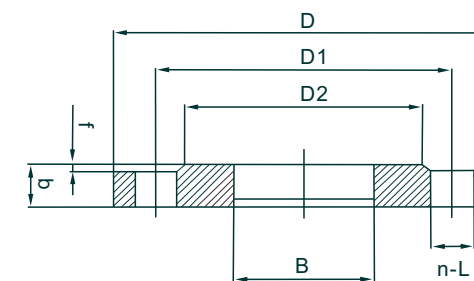


| DN | PN | A mm | B mm | C mm |
|-----|-------|------|------|------|
| 10 | 2.5,6 | 75 | 12 | - |
| | 10&16 | 90 | 14 | - |
| | 25&40 | 90 | 16 | - |
| 15 | 2.5&6 | 80 | 12 | - |
| | 10&16 | 95 | 14 | - |
| | 25&40 | 95 | 16 | - |
| 20 | 2.5&6 | 90 | 14 | - |
| | 10&16 | 105 | 16 | - |
| | 25&40 | 105 | 18 | - |
| 25 | 2.5&6 | 100 | 14 | - |
| | 10&16 | 115 | 16 | - |
| | 25&40 | 115 | 18 | - |
| 32 | 2.5&6 | 120 | 14 | - |
| | 10&16 | 140 | 16 | - |
| | 25&40 | 140 | 18 | - |
| 40 | 2.5&6 | 130 | 14 | - |
| | 10&16 | 150 | 16 | - |
| | 25&40 | 150 | 18 | - |
| 50 | 2.5&6 | 140 | 14 | - |
| | 10&16 | 165 | 18 | - |
| | 25&40 | 165 | 20 | - |
| 65 | 2.5&6 | 160 | 14 | 55 |
| | 10&16 | 185 | 18 | 55 |
| | 25&40 | 185 | 22 | 55 |
| 80 | 2.5&6 | 190 | 16 | 70 |
| | 10&16 | 200 | 20 | 70 |
| | 25&40 | 200 | 24 | 70 |
| 100 | 2.5&6 | 210 | 16 | 90 |
| | 10&16 | 220 | 20 | 90 |
| | 25&40 | 235 | 24 | 90 |
| 125 | 2.5&6 | 240 | 18 | 115 |
| | 10&16 | 250 | 22 | 115 |
| | 25&40 | 270 | 26 | 115 |
| 150 | 2.5&6 | 265 | 18 | 140 |
| | 10&16 | 285 | 22 | 140 |
| | 25&40 | 300 | 28 | 140 |
| 200 | 2.5&6 | 320 | 20 | 190 |
| | 10&16 | 340 | 24 | 190 |
| | 25 | 360 | 30 | 190 |
| 250 | 40 | 375 | 34 | 190 |
| | 2.5&6 | 375 | 22 | 235 |
| | 10 | 395 | 26 | 235 |
| | 16 | 405 | 26 | 235 |
| 300 | 25 | 425 | 32 | 235 |
| | 40 | 450 | 38 | 235 |

| DN | PN | A mm | B mm | C mm |
|------|-------|------|------|------|
| 300 | 2.5,6 | 440 | 22 | 285 |
| | 10 | 445 | 26 | 285 |
| | 16 | 460 | 28 | 285 |
| | 25 | 485 | 34 | 285 |
| | 40 | 515 | 42 | 285 |
| 350 | 2.5,6 | 490 | 22 | 325 |
| | 10 | 502 | 26 | 325 |
| | 16 | 520 | 30 | 325 |
| | 25 | 555 | 38 | 325 |
| | 40 | 580 | 46 | 325 |
| 400 | 2.5,6 | 540 | 22 | 375 |
| | 10 | 565 | 26 | 375 |
| | 16 | 580 | 32 | 375 |
| | 25 | 620 | 40 | 375 |
| | 40 | 660 | 50 | 375 |
| 450 | 2.5,6 | 595 | 24 | 425 |
| | 10 | 615 | 28 | 425 |
| | 16 | 640 | 34 | 425 |
| | 25 | 670 | 42 | 425 |
| | 40 | 685 | 54 | 425 |
| 500 | 2.5,6 | 645 | 24 | 475 |
| | 10 | 670 | 28 | 475 |
| | 16 | 715 | 36 | 475 |
| | 25 | 730 | 45 | 475 |
| | 40 | 755 | 56 | 475 |
| 600 | 2.5,6 | 755 | 34 | 575 |
| | 10 | 780 | 34 | 575 |
| | 16 | 840 | 44 | 575 |
| | 25 | 845 | 54 | 575 |
| | 40 | 890 | 70 | 575 |
| 700 | 2.5 | 860 | 36 | - |
| | 6 | 860 | 38 | - |
| | 10 | 895 | 38 | 670 |
| | 16 | 910 | 48 | 670 |
| | 2.5 | 975 | 38 | - |
| 800 | 6 | 975 | 42 | - |
| | 10 | 1015 | 42 | 770 |
| | 16 | 1025 | 52 | 770 |
| | 2.5 | 1075 | 40 | - |
| | 6 | 1075 | 46 | - |
| 900 | 10 | 1115 | 46 | 860 |
| | 16 | 1125 | 58 | 860 |
| | 2.5 | 1175 | 42 | - |
| | 6 | 1175 | 52 | - |
| | 10 | 1230 | 52 | 960 |
| 1000 | 16 | 1255 | 64 | 960 |
| | 2.5 | 1375 | 44 | - |
| | 6 | 1405 | 60 | - |
| | 10 | 1455 | 60 | 1160 |
| | 16 | 1485 | 76 | 1160 |
| 1200 | 2.5 | 1575 | 48 | - |
| | 6 | 1630 | 68 | - |
| | 2.5 | 1790 | 51 | - |
| | 6 | 1830 | 76 | - |
| | 2.5 | 1990 | 54 | - |
| 1800 | 6 | 2045 | 84 | - |
| | 2.5 | 2190 | 58 | - |
| | 6 | 2265 | 92 | - |

- Notes
- Dimension B is the flange thickness with or without a raised face.
 - Dimension C is the maximum diameter of the centre portion of a blank flange face which need not be machined.
 - For drilling details see page 8-64.
 - For tolerances see page 8-61.
 - For facing types and dimensions see page 8-62.

GOST/ГCOT 12820-80 FLANGE FORGED



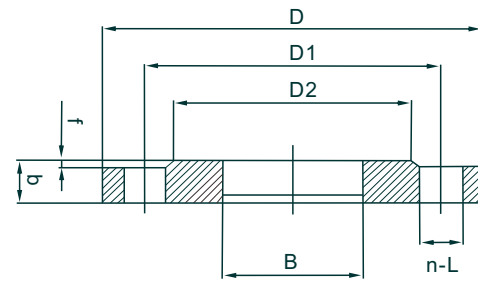
Давление PN = 0.6 МПа (6 кгс/с м²)

| Наименование | D, мм | D1, мм | dB, мм | b, мм | d, мм | OTB., WT | Масса, Kr |
|--|-------|--------|--------|-------|-------|----------|-----------|
| Фланец плоский ГОСТ 12820-80 (01) 1-15-6 | 80 | 55 | 19 | 10 | 11 | 4 | 0.33 |
| Фланец плоский ГОСТ 12820-80 (01) 1-20-6 | 90 | 65 | 26 | 12 | | | 0.53 |
| Фланец плоский ГОСТ 12820-80 (01) 1-25-6 | 100 | 75 | 33 | 12 | | | 0.64 |
| Фланец плоский ГОСТ 12820-80 (01) 1-32-6 | 120 | 90 | 39 | 13 | 14 | | 1.01 |
| Фланец плоский ГОСТ 12820-80 (01) 1-40-6 | 130 | 100 | 46 | 13 | | | 1.21 |
| Фланец плоский ГОСТ 12820-80 (01) 1-50-6 | 140 | 110 | 59 | 13 | | | 1.33 |
| Фланец плоский ГОСТ 12820-80 (01) 1-65-6 | 160 | 130 | 78 | 13 | | | 1.63 |
| Фланец плоский ГОСТ 12820-80 (01) 1-80-6 | 185 | 150 | 91 | 15 | 18 | | 2.44 |
| Фланец плоский ГОСТ 12820-80 (01) 1-100-6 | 205 | 170 | 110 | 15 | | | 2.85 |
| Фланец плоский ГОСТ 12820-80 (01) 1-125-6 | 235 | 200 | 135 | 17 | | 8 | 3.88 |
| Фланец плоский ГОСТ 12820-80 (01) 1-150-6 | 260 | 225 | 161 | 17 | | | 4.39 |
| Фланец плоский ГОСТ 12820-80 (01) 1-200-6 | 315 | 280 | 222 | 19 | | | 5.89 |
| Фланец плоский ГОСТ 12820-80 (01) 1-250-6 | 370 | 335 | 273 | 20 | | 12 | 7.67 |
| Фланец плоский ГОСТ 12820-80 (01) 1-300-6 | 435 | 395 | 325 | 20 | 22 | | 10.28 |
| Фланец плоский ГОСТ 12820-80 (01) 1-350-6 | 485 | 445 | 377 | 22 | | | 12.58 |
| Фланец плоский ГОСТ 12820-80 (01) 1-400-6 | 535 | 495 | 426 | 24 | | 16 | 15.2 |
| Фланец плоский ГОСТ 12820-80 (01) 1-500-6 | 640 | 600 | 530 | 25 | | | 19.72 |
| Фланец плоский ГОСТ 12820-80 (01) 1-600-6 | 755 | 705 | 630 | 25 | 26 | 20 | 26.24 |
| Фланец плоский ГОСТ 12820-80 (01) 1-800-6 | 975 | 920 | 820 | 27 | 30 | 24 | 46.14 |
| Фланец плоский ГОСТ 12820-80 (01) 1-1000-6 | 1175 | 1120 | 1020 | 31 | | 28 | 64.14 |
| Фланец плоский ГОСТ 12820-80 (01) 1-1200-6 | 1400 | 1340 | 1220 | 34 | 33 | 32 | 99.03 |

Давление PN = 1.0 МПа (10 кгс/с м²)

| Наименование | D, мм | D1, мм | dB, мм | b, мм | d, мм | OTB., WT | Масса, Kr |
|--|-------|--------|--------|-------|-------|----------|-----------|
| Фланец плоский ГОСТ 12820-80 (01) 1-15-6 | 95 | 65 | 19 | 10 | 14 | 4 | 0.51 |
| Фланец плоский ГОСТ 12820-80 (01) 1-20-6 | 105 | 75 | 26 | 12 | | | 0.74 |
| Фланец плоский ГОСТ 12820-80 (01) 1-25-6 | 115 | 85 | 33 | 12 | | | 0.89 |
| Фланец плоский ГОСТ 12820-80 (01) 1-32-6 | 135 | 100 | 39 | 14 | 18 | | 1.4 |
| Фланец плоский ГОСТ 12820-80 (01) 1-40-6 | 145 | 110 | 46 | 15 | | | 1.71 |
| Фланец плоский ГОСТ 12820-80 (01) 1-50-6 | 160 | 125 | 59 | 15 | | | 2.06 |
| Фланец плоский ГОСТ 12820-80 (01) 1-65-6 | 180 | 145 | 78 | 17 | | | 2.8 |
| Фланец плоский ГОСТ 12820-80 (01) 1-80-6 | 195 | 160 | 91 | 17 | | | 3.19 |
| Фланец плоский ГОСТ 12820-80 (01) 1-100-6 | 215 | 180 | 110 | 19 | | 8 | 3.96 |
| Фланец плоский ГОСТ 12820-80 (01) 1-125-6 | 245 | 210 | 135 | 21 | | | 5.4 |
| Фланец плоский ГОСТ 12820-80 (01) 1-150-6 | 280 | 240 | 161 | 21 | 22 | | 6.62 |
| Фланец плоский ГОСТ 12820-80 (01) 1-200-6 | 335 | 295 | 222 | 21 | | | 8.05 |
| Фланец плоский ГОСТ 12820-80 (01) 1-250-6 | 390 | 350 | 273 | 23 | | 12 | 10.65 |
| Фланец плоский ГОСТ 12820-80 (01) 1-300-6 | 440 | 400 | 325 | 24 | | | 12.9 |
| Фланец плоский ГОСТ 12820-80 (01) 1-350-6 | 500 | 460 | 377 | 24 | | 16 | 15.85 |
| Фланец плоский ГОСТ 12820-80 (01) 1-400-6 | 565 | 515 | 426 | 26 | 26 | | 21.56 |
| Фланец плоский ГОСТ 12820-80 (01) 1-500-6 | 670 | 620 | 530 | 28 | | 20 | 27.7 |
| Фланец плоский ГОСТ 12820-80 (01) 1-600-6 | 780 | 725 | 630 | 31 | 30 | | 39.4 |
| Фланец плоский ГОСТ 12820-80 (01) 1-800-6 | 1010 | 950 | 820 | 37 | 33 | 24 | 79.16 |
| Фланец плоский ГОСТ 12820-80 (01) 1-1000-6 | 1220 | 1160 | 1020 | 43 | | 28 | 118.43 |
| Фланец плоский ГОСТ 12820-80 (01) 1-1200-6 | 1455 | 1380 | 1220 | 51 | 39 | 32 | 197.44 |

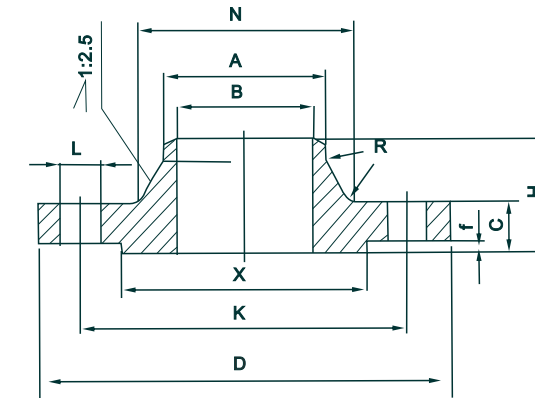
GOST/ГОСТ 12820-80 FLANGE FORGED



| Давление PN = 1.6 МПа (16 кгс/с м ²) | | | | | | | |
|--|-------|--------|--------|-------|-------|---------|-----------|
| Наименование | D, мм | D1, мм | dB, мм | b, мм | d, мм | OTB.,WT | Масса, Kr |
| Фланец плоский ГОСТ 12820-80 (01) 1-15-6 | 95 | 65 | 19 | 12 | 14 | 4 | 0.61 |
| Фланец плоский ГОСТ 12820-80 (01) 1-20-6 | 105 | 75 | 26 | 14 | | | 0.86 |
| Фланец плоский ГОСТ 12820-80 (01) 1-25-6 | 115 | 85 | 33 | 16 | | | 1.17 |
| Фланец плоский ГОСТ 12820-80 (01) 1-32-6 | 135 | 100 | 39 | 16 | 18 | | 1.58 |
| Фланец плоский ГОСТ 12820-80 (01) 1-40-6 | 145 | 110 | 46 | 17 | | | 1.96 |
| Фланец плоский ГОСТ 12820-80 (01) 1-50-6 | 160 | 125 | 59 | 19 | | | 2.58 |
| Фланец плоский ГОСТ 12820-80 (01) 1-65-6 | 180 | 145 | 78 | 21 | | | 3.42 |
| Фланец плоский ГОСТ 12820-80 (01) 1-80-6 | 195 | 160 | 91 | 21 | | | 3.71 |
| Фланец плоский ГОСТ 12820-80 (01) 1-100-6 | 215 | 180 | 110 | 23 | | 8 | 4.73 |
| Фланец плоский ГОСТ 12820-80 (01) 1-125-6 | 245 | 210 | 135 | 25 | | | 6.38 |
| Фланец плоский ГОСТ 12820-80 (01) 1-150-6 | 280 | 240 | 161 | 25 | 22 | | 7.81 |
| Фланец плоский ГОСТ 12820-80 (01) 1-200-6 | 335 | 295 | 222 | 27 | | 12 | 10.1 |
| Фланец плоский ГОСТ 12820-80 (01) 1-250-6 | 405 | 355 | 273 | 28 | 26 | | 14.49 |
| Фланец плоский ГОСТ 12820-80 (01) 1-300-6 | 460 | 410 | 325 | 28 | | | 17.78 |
| Фланец плоский ГОСТ 12820-80 (01) 1-350-6 | 520 | 470 | 377 | 30 | | 16 | 22.88 |
| Фланец плоский ГОСТ 12820-80 (01) 1-400-6 | 580 | 525 | 426 | 34 | 30 | | 31 |
| Фланец плоский ГОСТ 12820-80 (01) 1-500-6 | 710 | 650 | 530 | 44 | 33 | 20 | 57.01 |
| Фланец плоский ГОСТ 12820-80 (01) 1-600-6 | 840 | 770 | 630 | 45 | 39 | | 80.03 |
| Фланец плоский ГОСТ 12820-80 (01) 1-800-6 | 1020 | 950 | 820 | 49 | | 24 | 104.41 |
| Фланец плоский ГОСТ 12820-80 (01) 1-1000-6 | 1255 | 1170 | 1020 | 58 | 45 | 28 | 179.37 |
| Фланец плоский ГОСТ 12820-80 (01) 1-1200-6 | 1485 | | 1220 | 71 | 52 | 32 | 297.78 |

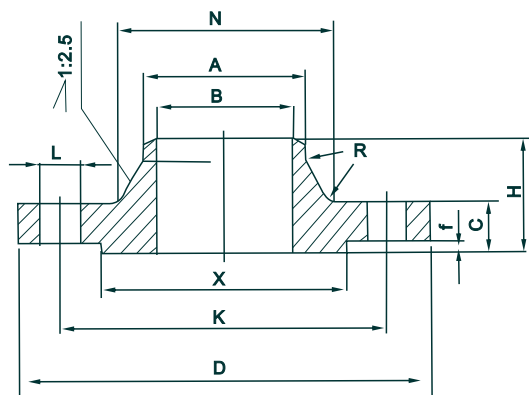
| Давление PN = 2.5 МПа (25 кгс/с м ²) | | | | | | | |
|--|-------|--------|--------|-------|-------|---------|-----------|
| Наименование | D, мм | D1, мм | dB, мм | b, мм | d, мм | OTB.,WT | Масса, Kr |
| Фланец плоский ГОСТ 12820-80 (01) 1-15-6 | 95 | 65 | 19 | 14 | 14 | 4 | 0.7 |
| Фланец плоский ГОСТ 12820-80 (01) 1-20-6 | 105 | 75 | 26 | 16 | | | 1 |
| Фланец плоский ГОСТ 12820-80 (01) 1-25-6 | 115 | 85 | 33 | 16 | | | 1.2 |
| Фланец плоский ГОСТ 12820-80 (01) 1-32-6 | 135 | 100 | 39 | 18 | 18 | | 1.8 |
| Фланец плоский ГОСТ 12820-80 (01) 1-40-6 | 145 | 110 | 46 | 19 | | | 2.2 |
| Фланец плоский ГОСТ 12820-80 (01) 1-50-6 | 160 | 125 | 59 | 21 | | | 2.7 |
| Фланец плоский ГОСТ 12820-80 (01) 1-65-6 | 180 | 145 | 78 | 21 | | 8 | 3.2 |
| Фланец плоский ГОСТ 12820-80 (01) 1-80-6 | 195 | 160 | 91 | 23 | | | 4.1 |
| Фланец плоский ГОСТ 12820-80 (01) 1-100-6 | 230 | 190 | 110 | 25 | 22 | | 5.9 |
| Фланец плоский ГОСТ 12820-80 (01) 1-125-6 | 270 | 220 | 135 | 27 | 26 | | 8.3 |
| Фланец плоский ГОСТ 12820-80 (01) 1-150-6 | 300 | 250 | 161 | 27 | | | 10.1 |
| Фланец плоский ГОСТ 12820-80 (01) 1-200-6 | 360 | 310 | 222 | 29 | | 12 | 13.3 |
| Фланец плоский ГОСТ 12820-80 (01) 1-250-6 | 425 | 370 | 273 | 31 | 30 | | 18.9 |
| Фланец плоский ГОСТ 12820-80 (01) 1-300-6 | 485 | 430 | 325 | 32 | | 16 | 23.9 |
| Фланец плоский ГОСТ 12820-80 (01) 1-350-6 | 550 | 490 | 377 | 38 | 33 | | 34.4 |
| Фланец плоский ГОСТ 12820-80 (01) 1-400-6 | 610 | 550 | 426 | 40 | | | 44.6 |
| Фланец плоский ГОСТ 12820-80 (01) 1-500-6 | 730 | 660 | 530 | 48 | 39 | 20 | 67.3 |
| Фланец плоский ГОСТ 12820-80 (01) 1-600-6 | 840 | 770 | 630 | 49 | | | 90.87 |
| Фланец плоский ГОСТ 12820-80 (01) 1-800-6 | 1075 | 990 | 820 | 63 | 45 | 24 | 181.43 |

GOST/ГОСТ 12821-80 FLANGE FORGED
PN0.6MPa, PN6



| 公称 口径 DN | 法兰 端外径 (管子外径) A | 连接尺寸 | | | | | 密封面尺寸 | | 法兰 厚度 C | 法兰 高度 H | 法兰 内径 B | 颈部 直径 N _{max} | 圆角 半径 R | 法兰 理论 重量 kg |
|----------------|--------------------------|----------------------|-------------------|-----------------------|---------|------------------|-------|---|---------------|---------------|---------------|------------------------------|---------------|----------------------|
| | | 法兰外径 D 系列1/系列2 | 螺栓孔中 心圆直径 K | 螺栓孔直径 L 系列1/系列2 | 螺栓、螺柱 | | d | f | | | | | | |
| | | | | | 数量 n | 螺纹Th. 系列1/系列2 | | | | | | | | |
| 10 | 14 | 75 | 50 | 12 | 4 | M10 | 32 | 2 | 12 | 25 | 8 | 22 | 4 | 0.35 |
| 15 | 18 | 80 | 55 | 12 | 4 | M10 | 40 | 2 | 12 | 30 | 12 | 28 | 4 | 0.40 |
| 20 | 25 | 90 | 65 | 12 | 4 | M10 | 50 | 2 | 12 | 32 | 18 | 36 | 4 | 0.54 |
| 25 | 32 | 100 | 75 | 12 | 4 | M10 | 60 | 2 | 14 | 32 | 25 | 42 | 4 | 0.78 |
| 32 | 38 | 120 | 90 | 14 | 4 | M12 | 70 | 2 | 14 | 35 | 31 | 50 | 4 | 1.08 |
| 40 | 45 | 130 | 100 | 14 | 4 | M12 | 80 | 3 | 14 | 38 | 38 | 60 | 4 | 1.25 |
| 50 | 57 | 140 | 110 | 14 | 4 | M12 | 90 | 3 | 14 | 38 | 49 | 70 | 4 | 1.42 |
| 65 | 73 | 160 | 130 | 14 | 4 | M12 | 110 | 3 | 14 | 38 | 66 | 88 | 4 | 1.80 |
| 80 | 89 | 190/185 | 150 | 18 | 4 | M16 | 125 | 3 | 16 | 40 | 78 | 102 | 5 | 2.85 |
| 100 | 108 | 210/205 | 170 | 18 | 4 | M16 | 145 | 3 | 16 | 42 | 96 | 122 | 5 | 3.45 |
| 125 | 133 | 240/235 | 200 | 18 | 8 | M16 | 175 | 3 | 18 | 44 | 121 | 148 | 5 | 4.73 |
| 150 | 159 | 265/260 | 225 | 18 | 8 | M16 | 200 | 3 | 20 | 46 | 146 | 172 | 5 | 5.49 |
| (175) | 194 | 290 | 255 | 18 | 8 | M16 | 230 | 3 | 20 | 50 | 177 | 210 | 5 | 7.17 |
| 200 | 219 | 320/310 | 280 | 18 | 8 | M16 | 255 | 3 | 20 | 55 | 202 | 235 | 5 | 8.56 |
| (225) | 245 | 340 | 305 | 18 | 8 | M16 | 280 | 3 | 22 | 55 | 226 | 260 | 6 | 9.30 |
| 250 | 273 | 375/370 | 335 | 18 | 12 | M16 | 310 | 3 | 22 | 60 | 254 | 288 | 6 | 11.80 |
| 300 | 325 | 440/435 | 395 | 23 | 12 | M20 | 362 | 4 | 22 | 60 | 303 | 340 | 6 | 15.27 |
| 350 | 377 | 490/485 | 445 | 23 | 12 | M20 | 412 | 4 | 22 | 60 | 351 | 390 | 6 | 18.23 |
| 400 | 426 | 540/535 | 495 | 23 | 16 | M20 | 462 | 4 | 22 | 62 | 398 | 440 | 6 | 21.40 |
| 450 | 480 | 595/590 | 550 | 23 | 16 | M20 | 518 | 4 | 22 | 62 | 450 | 494 | 6 | 24.95 |
| 500 | 530 | 645/640 | 600 | 23 | 16 | M20 | 568 | 4 | 24 | 62 | 501 | 545 | 6 | 28.82 |
| 600 | 630 | 755 | 705 | 26/25 | 20 | M24/M22 | 670 | 5 | 24 | 74 | 602 | 650 | 8 | 37.76 |
| 700 | 720 | 860 | 810 | 26/25 | 24 | M24/M22 | 775 | 5 | 24 | 74 | 692 | 740 | 10 | 46.53 |
| 800 | 820 | 975 | 920 | 30 | 24 | M27 | 880 | 5 | 24 | 85 | 792 | 844 | 12 | 60.15 |
| 900 | 920 | 1075 | 1020 | 30 | 24 | M27 | 980 | 5 | 26 | 88 | 892 | 944 | 12 | 71.94 |
| 1000 | 1020 | 1175 | 1120 | 30 | 28 | M27 | 1080 | 5 | 26 | 88 | 992 | 1044 | 12 | 79.29 |
| 1200 | 1220 | 1405/1400 | 1340 | 34 | 32 | M30 | 1292 | 5 | 28 | 90 | 1192 | 1248 | 12 | 113.61 |
| 1400 | 1420 | 1630/1620 | 1560 | 34 | 36 | M30 | 1510 | 5 | 32 | 106 | 1392 | 1456 | 14 | 172.47 |

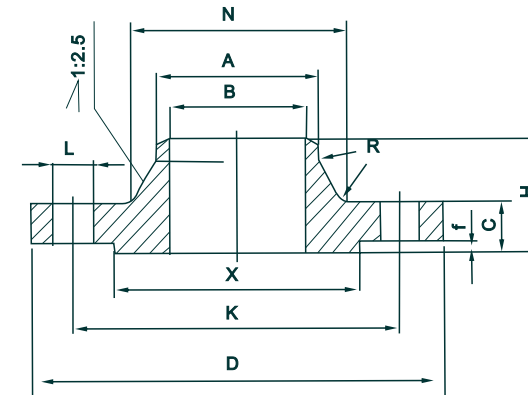
GOST/ГОСТ 12821-80 FLANGE FORGED PN1.0MPa, PN10



mm

| 公称 通径 DN | 法兰焊 端外径 (管子外径) A | 连接尺寸 | | | | | 密封面尺寸 | | 法兰 厚度 C | 法兰 高度 H | 法兰 内径 B | 颈部 直径 N _{max} | 圆角 半径 R | 法兰 理论 重量 kg |
|----------------|---------------------------|----------------------|-------------------|-----------------------|---------|------------------|-------|---|---------------|---------------|---------------|------------------------------|---------------|----------------------|
| | | 法兰外径 D 系列1/系列2 | 螺栓孔中 心圆直径 K | 螺栓孔直径 L 系列1/系列2 | 螺栓、螺柱 | | d | f | | | | | | |
| | | | | | 数量 n | 螺纹Th. 系列1/系列2 | | | | | | | | |
| 10 | 14 | 90 | 60 | 14 | 4 | M12 | 40 | 2 | 12 | 35 | 8 | 25 | 4 | 0.52 |
| 15 | 18 | 95 | 65 | 14 | 4 | M12 | 45 | 2 | 12 | 35 | 12 | 30 | 4 | 0.59 |
| 20 | 25 | 105 | 75 | 14 | 4 | M12 | 55 | 2 | 14 | 38 | 18 | 38 | 4 | 0.88 |
| 25 | 32 | 115 | 85 | 14 | 4 | M12 | 65 | 2 | 14 | 40 | 25 | 45 | 4 | 1.06 |
| 32 | 38 | 140/135 | 100 | 18 | 4 | M16 | 78 | 2 | 16 | 42 | 31 | 55 | 4 | 1.72 |
| 40 | 45 | 150/145 | 110 | 18 | 4 | M16 | 85 | 3 | 16 | 45 | 38 | 62 | 4 | 1.90 |
| 50 | 57 | 165/160 | 125 | 18 | 4 | M16 | 100 | 3 | 16 | 45 | 49 | 76 | 4 | 2.35 |
| 65 | 73 | 185/180 | 145 | 18 | 4 | M16 | 125 | 3 | 18 | 48 | 66 | 94 | 5 | 3.26 |
| 80 | 89 | 200/195 | 160 | 18 | 4 | M16 | 135 | 3 | 18 | 50 | 78 | 105 | 5 | 3.77 |
| 100 | 108 | 220/215 | 180 | 18 | 8 | M16 | 155 | 3 | 20 | 52 | 96 | 128 | 5 | 4.91 |
| 125 | 133 | 250/245 | 210 | 18 | 8 | M16 | 185 | 3 | 22 | 60 | 121 | 156 | 6 | 6.91 |
| 150 | 159 | 285/280 | 240 | 23 | 8 | M20 | 210 | 3 | 22 | 60 | 146 | 180 | 6 | 8.38 |
| (175) | 194 | 310 | 270 | 23 | 8 | M20 | 240 | 3 | 22 | 60 | 177 | 210 | 6 | 9.39 |
| 200 | 219 | 340/335 | 295 | 23 | 8 | M20 | 265 | 3 | 22 | 62 | 202 | 240 | 6 | 11.27 |
| (225) | 245 | 365 | 325 | 23 | 8 | M20 | 295 | 3 | 22 | 65 | 226 | 268 | 8 | 13.11 |
| 250 | 273 | 395/390 | 350 | 23 | 12 | M20 | 320 | 3 | 24 | 65 | 254 | 290 | 8 | 14.78 |
| 300 | 325 | 445/440 | 400 | 23 | 12 | M20 | 368 | 4 | 26 | 65 | 303 | 345 | 8 | 18.85 |
| 350 | 377 | 505/500 | 460 | 23 | 16 | M20 | 428 | 4 | 26 | 65 | 351 | 400 | 8 | 24.18 |
| 400 | 426 | 565 | 515 | 26/25 | 16 | M24/M22 | 482 | 4 | 26 | 65 | 398 | 445 | 10 | 28.74 |
| 450 | 480 | 615 | 565 | 26/25 | 20 | M24/M22 | 582 | 4 | 26 | 70 | 450 | 500 | 12 | 34.21 |
| 500 | 530 | 670 | 620 | 26/25 | 20 | M24/M22 | 585 | 4 | 28 | 78 | 501 | 550 | 12 | 40.15 |
| 600 | 630 | 780 | 725 | 30 | 24 | M27 | 685 | 5 | 28 | 90 | 602 | 650 | 12 | 50.45 |
| 700 | 720 | 895 | 840 | 30 | 24 | M27 | 800 | 5 | 30 | 90 | 692 | 744 | 14 | 68.71 |
| 800 | 820 | 1015/1010 | 950 | 34 | 24 | M30 | 905 | 5 | 32 | 106 | 792 | 850 | 14 | 94.12 |
| 900 | 920 | 1115/1110 | 1050 | 34 | 28 | M30 | 1005 | 5 | 34 | 108 | 892 | 950 | 14 | 109.74 |
| 1000 | 1020 | 1230/1220 | 1160 | 36/34 | 28 | M33/M30 | 1115 | 5 | 34 | 108 | 992 | 1050 | 14 | 128.08 |
| 1200 | 1220 | 1455/1450 | 1380 | 41 | 32 | M36 | 1325 | 5 | 38 | 112 | 1192 | 1256 | 18 | 182.96 |

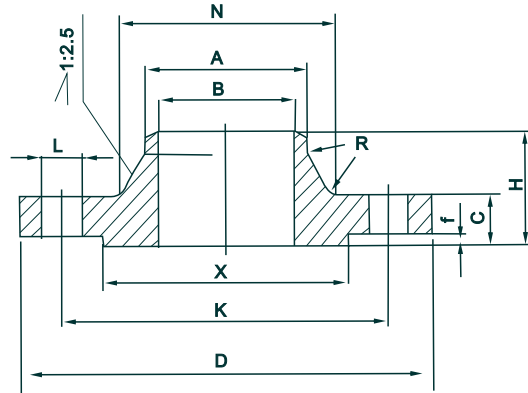
GOST/ГОСТ 12821-80 FLANGE FORGED PN1.6MPa, PN16



mm

| 公称 通径 DN | 法兰焊 端外径 (管子外径) A | 连接尺寸 | | | | | 密封面尺寸 | | 法兰 厚度 C | 法兰 高度 H | 法兰 内径 B | 颈部 直径 N _{max} | 圆角 半径 R | 法兰 理论 重量 kg |
|----------------|---------------------------|----------------------|-------------------|-----------------------|---------|------------------|-------|---|---------------|---------------|---------------|------------------------------|---------------|----------------------|
| | | 法兰外径 D 系列1/系列2 | 螺栓孔中 心圆直径 K | 螺栓孔直径 L 系列1/系列2 | 螺栓、螺柱 | | d | f | | | | | | |
| | | | | | 数量 n | 螺纹Th. 系列1/系列2 | | | | | | | | |
| 10 | 14 | 90 | 60 | 14 | 4 | M12 | 40 | 2 | 14 | 35 | 8 | 26 | 4 | 0.61 |
| 15 | 18 | 95 | 65 | 14 | 4 | M12 | 45 | 2 | 14 | 35 | 12 | 30 | 4 | 0.69 |
| 20 | 25 | 105 | 75 | 14 | 4 | M12 | 55 | 2 | 14 | 38 | 18 | 38 | 4 | 0.88 |
| 25 | 32 | 115 | 85 | 14 | 4 | M12 | 65 | 2 | 14 | 40 | 25 | 45 | 4 | 1.06 |
| 32 | 38 | 140/135 | 100 | 18 | 4 | M16 | 78 | 2 | 16 | 42 | 31 | 55 | 4 | 1.72 |
| 40 | 45 | 150/145 | 110 | 18 | 4 | M16 | 85 | 3 | 16 | 45 | 38 | 64 | 4 | 1.93 |
| 50 | 57 | 165/160 | 125 | 18 | 4 | M16 | 100 | 3 | 16 | 48 | 49 | 76 | 5 | 2.36 |
| 65 | 73 | 185/180 | 145 | 18 | 4 | M16 | 120 | 3 | 18 | 50 | 66 | 94 | 5 | 3.28 |
| 80 | 89 | 200/195 | 160 | 18 | 8 | M16 | 135 | 3 | 20 | 52 | 78 | 105 | 5 | 4.17 |
| 100 | 108 | 220/215 | 180 | 18 | 8 | M16 | 155 | 3 | 20 | 52 | 96 | 130 | 5 | 4.99 |
| 125 | 133 | 250/245 | 210 | 18 | 8 | M16 | 185 | 3 | 22 | 60 | 121 | 156 | 6 | 6.91 |
| 150 | 159 | 285/280 | 240 | 23 | 8 | M20 | 210 | 3 | 22 | 60 | 146 | 180 | 6 | 8.38 |
| (175) | 194 | 310 | 270 | 23 | 8 | M20 | 240 | 3 | 24 | 60 | 177 | 210 | 6 | 10.05 |
| 200 | 219 | 340/335 | 295 | 23 | 12 | M20 | 265 | 3 | 24 | 62 | 202 | 240 | 6 | 11.78 |
| (225) | 245 | 365 | 325 | 23 | 12 | M20 | 295 | 3 | 24 | 68 | 226 | 268 | 6 | 13.85 |
| 250 | 273 | 405 | 355 | 26/25 | 12 | M24/M22 | 320 | 3 | 26 | 68 | 254 | 292 | 8 | 16.92 |
| 300 | 325 | 460 | 410 | 26/25 | 12 | M24/M22 | 375 | 4 | 28 | 70 | 303 | 346 | 8 | 22.29 |
| 350 | 377 | 520 | 470 | 26/25 | 16 | M24/M22 | 435 | 4 | 32 | 78 | 351 | 400 | 8 | 31.90 |
| 400 | 426 | 580 | 525 | 30 | 16 | M27 | 485 | 4 | 36 | 90 | 398 | 450 | 10 | 43.50 |
| 450 | 480 | 640 | 585 | 30 | 20 | M27 | 545 | 4 | 38 | 95 | 450 | 506 | 10 | 53.90 |
| 500 | 530 | 715/705 | 650 | 34 | 20 | M30 | 608 | 4 | 42 | 98 | 501 | 559 | 10 | 71.84 |
| 600 | 630 | 840 | 770 | 36/41 | 20 | M33/M36 | 718 | 5 | 46 | 105 | 602 | 660 | 10 | 101.26 |
| 700 | 720 | 910 | 840 | 36/41 | 24 | M33/M36 | 788 | 5 | 48 | 110 | 692 | 750 | 12 | 108.20 |
| 800 | 820 | 1025/1020 | 950 | 41 | 24 | M36 | 898 | 5 | 50 | 115 | 792 | 850 | 12 | 134.77 |
| 900 | 920 | 1125/1120 | 1050 | 41 | 28 | M36 | 998 | 5 | 52 | 122 | 892 | 958 | 12 | 156.97 |
| 1000 | 1020 | 1255 | 1170 | 42/48 | 28 | M39/M42 | 1110 | 5 | 54 | 125 | 992 | 1060 | 12 | 207.33 |
| 1200 | 1220 | 1485 | 1390 | 48/54 | 32 | M45/M48 | 1325 | 5 | 56 | 135 | 1192 | 1268 | 15 | 286.77 |

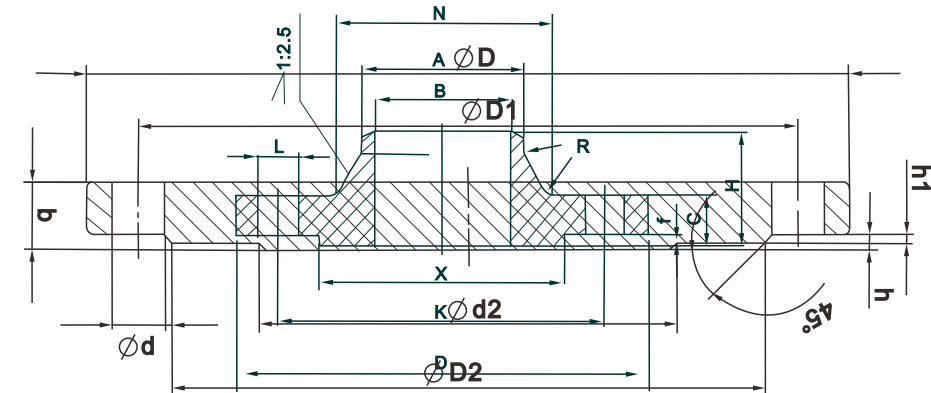
GOST/ГОСТ 12821-80 FLANGE FORGED PN2.5MPa, PN25



mm

| 公称 通径 DN | 法兰焊 端外径 (管子外径) A | 连接尺寸 | | | | | 密封面尺寸 | | 法兰 厚度 C | 法兰 高度 H | 法兰 内径 B | 颈部 直径 N _{max} | 圆角 半径 R | 法兰 理论 重量 kg |
|----------------|---------------------------|----------------------|------------------------------|-----------------------|---------|------------------|-------|---|---------------|---------------|---------------|------------------------------|---------------|----------------------|
| | | 法兰外径 D 系列1/系列2 | 螺栓孔中 心圆直径 K 系列1/系列2 | 螺栓孔直径 L 系列1/系列2 | 螺栓、螺柱 | | d | f | | | | | | |
| | | | | | 数量 n | 螺纹Th. 系列1/系列2 | | | | | | | | |
| 10 | 14 | 90 | 60 | 14 | 4 | M12 | 40 | 2 | 16 | 35 | 8 | 26 | 4 | 0.70 |
| 15 | 18 | 95 | 65 | 14 | 4 | M12 | 45 | 2 | 16 | 35 | 12 | 30 | 5 | 0.77 |
| 20 | 25 | 105 | 75 | 14 | 4 | M12 | 55 | 2 | 16 | 36 | 18 | 38 | 5 | 0.97 |
| 25 | 32 | 115 | 85 | 14 | 4 | M12 | 65 | 2 | 16 | 38 | 25 | 45 | 5 | 1.18 |
| 32 | 38 | 140/135 | 100 | 18 | 4 | M16 | 78 | 2 | 18 | 45 | 31 | 56 | 5 | 1.95 |
| 40 | 45 | 150/145 | 110 | 18 | 4 | M16 | 85 | 3 | 18 | 48 | 38 | 64 | 5 | 2.17 |
| 50 | 57 | 165/160 | 125 | 18 | 4 | M16 | 100 | 3 | 20 | 48 | 49 | 76 | 5 | 2.91 |
| 65 | 73 | 185/180 | 145 | 18 | 8 | M16 | 120 | 3 | 22 | 52 | 66 | 96 | 6 | 3.87 |
| 80 | 89 | 200/195 | 160 | 18 | 8 | M16 | 135 | 3 | 22 | 55 | 78 | 110 | 6 | 4.57 |
| 100 | 108 | 230 | 190 | 23 | 8 | M20 | 160 | 3 | 24 | 62 | 96 | 132 | 6 | 6.46 |
| 125 | 133 | 270 | 220 | 26/25 | 8 | M24/M22 | 188 | 3 | 26 | 68 | 121 | 160 | 8 | 9.40 |
| 150 | 159 | 300 | 250 | 26/25 | 8 | M24/M22 | 218 | 3 | 28 | 72 | 146 | 186 | 8 | 12.18 |
| (175) | 194 | 330 | 280 | 26/25 | 12 | M24/M22 | 248 | 3 | 28 | 75 | 177 | 216 | 8 | 13.75 |
| 200 | 219 | 360 | 310 | 26/25 | 12 | M24/M22 | 278 | 3 | 30 | 80 | 202 | 245 | 8 | 17.39 |
| (225) | 245 | 396 | 340 | 30 | 12 | M27 | 302 | 3 | 32 | 80 | 226 | 270 | 8 | 21.45 |
| 250 | 273 | 425 | 370 | 30 | 12 | M27 | 332 | 3 | 32 | 85 | 254 | 300 | 10 | 24.37 |
| 300 | 325 | 485 | 430 | 30 | 16 | M27 | 390 | 4 | 36 | 92 | 303 | 352 | 10 | 33.37 |
| 350 | 377 | 555/550 | 490 | 34 | 16 | M30 | 448 | 4 | 40 | 98 | 351 | 406 | 10 | 47.80 |
| 400 | 426 | 620/610 | 550 | 36/34 | 16 | M33/M30 | 505 | 4 | 44 | 115 | 398 | 464 | 10 | 67.55 |
| 450 | 480 | 670/660 | 600 | 36/34 | 20 | M33/M30 | 555 | 4 | 46 | 115 | 450 | 514 | 12 | 75.46 |
| 500 | 530 | 730 | 660 | 36/41 | 20 | M33/M36 | 610 | 4 | 48 | 120 | 500 | 570 | 12 | 92.55 |
| 600 | 630 | 845/840 | 770 | 41 | 20 | M36 | 718 | 5 | 54 | 130 | 600 | 670 | 12 | 126.00 |
| 700 | 720 | 960/955 | 875 | 42/48 | 24 | M39/M42 | 815 | 5 | 58 | 140 | 690 | 766 | 12 | 169.82 |
| 800 | 820 | 1085/1070 | 990 | 48/48 | 24 | M45/M42 | 930 | 5 | 60 | 150 | 790 | 874 | 15 | 220.45 |

GOST/ГОСТ 12821-80 FLANGE FORGED PN4.0MPa, PN40



mm

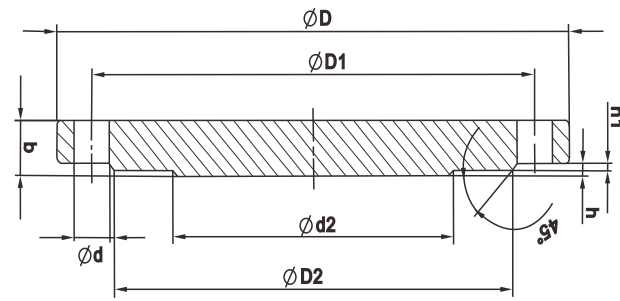
| 公称 通径 DN | 法兰焊 端外径 (管子外径) A | 连接尺寸 | | | | | 密封面尺寸 | | 法兰 厚度 C | 法兰 高度 H | 法兰 内径 B | 颈部 直径 N _{max} | 圆角 半径 R | 法兰 理论 重量 kg |
|----------------|---------------------------|----------------------|------------------------------|-----------------------|---------|------------------|-------|---|---------------|---------------|---------------|------------------------------|---------------|----------------------|
| | | 法兰外径 D 系列1/系列2 | 螺栓孔中 心圆直径 K 系列1/系列2 | 螺栓孔直径 L 系列1/系列2 | 螺栓、螺柱 | | d | f | | | | | | |
| | | | | | 数量 n | 螺纹Th. 系列1/系列2 | | | | | | | | |
| 10 | 14 | 90 | 60 | 14 | 4 | M12 | 40 | 2 | 16 | 35 | 8 | 26 | 4 | 0.70 |
| 15 | 18 | 95 | 65 | 14 | 4 | M12 | 45 | 2 | 16 | 35 | 12 | 30 | 5 | 0.77 |
| 20 | 25 | 105 | 75 | 14 | 4 | M12 | 55 | 2 | 16 | 36 | 18 | 38 | 5 | 0.97 |
| 25 | 32 | 115 | 85 | 14 | 4 | M12 | 65 | 2 | 16 | 38 | 25 | 45 | 5 | 1.18 |
| 32 | 38 | 140/135 | 100 | 18 | 4 | M16 | 78 | 2 | 18 | 45 | 31 | 56 | 5 | 1.95 |
| 40 | 45 | 150/145 | 110 | 18 | 4 | M16 | 85 | 3 | 18 | 48 | 38 | 64 | 5 | 2.17 |
| 50 | 57 | 165/160 | 125 | 18 | 4 | M16 | 100 | 3 | 20 | 48 | 48 | 76 | 5 | 2.94 |
| 65 | 73 | 185/180 | 145 | 18 | 8 | M16 | 120 | 3 | 22 | 52 | 66 | 96 | 6 | 3.87 |
| 80 | 89 | 200/195 | 160 | 18 | 8 | M16 | 135 | 3 | 24 | 58 | 78 | 112 | 6 | 5.02 |
| 100 | 108 | 235/230 | 190 | 23 | 8 | M20 | 160 | 3 | 26 | 68 | 96 | 138 | 6 | 7.63 |
| 125 | 133 | 270 | 220 | 26/25 | 8 | M24/M22 | 188 | 3 | 28 | 68 | 120 | 160 | 8 | 10.12 |
| 150 | 159 | 300 | 250 | 26/25 | 8 | M24/M22 | 218 | 3 | 30 | 72 | 145 | 186 | 8 | 13.03 |
| (175) | 194 | 350 | 295 | 30 | 12 | M27 | 258 | 3 | 36 | 88 | 177 | 226 | 10 | 20.51 |
| 200 | 219 | 375 | 320 | 30 | 12 | M27 | 282 | 3 | 38 | 88 | 200 | 250 | 10 | 24.11 |
| (225) | 245 | 415 | 355 | 34 | 12 | M30 | 315 | 3 | 40 | 98 | 226 | 280 | 10 | 30.79 |
| 250 | 273 | 450/445 | 385 | 34 | 12 | M30 | 345 | 3 | 42 | 102 | 252 | 310 | 10 | 37.96 |
| 300 | 325 | 515/510 | 450 | 34 | 16 | M30 | 408 | 4 | 46 | 116 | 301 | 368 | 12 | 53.30 |
| 350 | 377 | 580/270 | 510 | 36/34 | 16 | M33/M30 | 465 | 4 | 52 | 120 | 351 | 418 | 12 | 71.79 |
| 400 | 426 | 660/655 | 585 | 41 | 16 | M36 | 535 | 4 | 58 | 142 | 398 | 480 | 12 | 107.72 |
| 450 | 480 | 685/680 | 610 | 41 | 20 | M36 | 560 | 4 | 60 | 146 | 448 | 530 | 14 | 108.50 |
| 500 | 530 | 755 | 670 | 42/48 | 20 | M39/M42 | 612 | 4 | 62 | 156 | 495 | 580 | 15 | 137.30 |

注：1、表1~5中系列1法兰连接尺寸与国标及德国法兰标准尺寸互换；系列2尺寸与原机标法兰尺寸互换；新产品设计应优先采用系列1尺寸。
2、表1~5中列出的法兰理论重量是指系列2法兰。

附加说明：

本标准由机械工业部机械标准化研究所提出并归口。
本标准由机械工业部机械标准化研究所、哈尔滨锅炉厂和河北省石油化工高压管件厂起草。
本标准主要起草人李俊英、吴桢家、张风林。

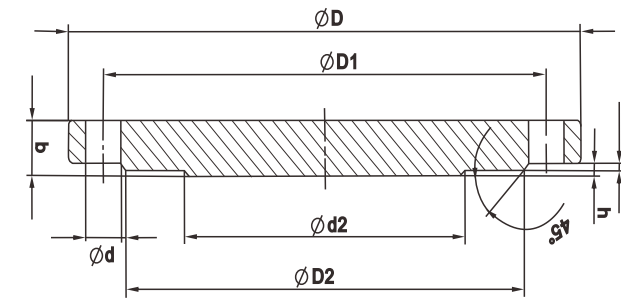
GOST/ГОСТ 12836-67 FLANGE FORGED



| MM | D,MM | D1,MM | D2,MM | b,MM | d2,MM | d,MM | h1,MM | h,MM | К-ВОТБ.Н, WT. | Масса, Kr |
|---------------------------|------|-------|-------|------|-------|------|-------|------|------------------|--------------|
| Py = 1,0 МПа (10 кгс/см2) | | | | | | | | | | |
| 15 | 95 | 65 | 45 | 12 | 10 | 14 | 2 | 2 | 4 | 0.43 |
| 20 | 105 | 75 | 58 | 12 | 16 | 14 | 2 | 2 | 4 | 0.55 |
| 25 | 115 | 85 | 68 | 12 | 22 | 14 | 2 | 2 | 4 | 0.67 |
| 32 | 135 | 100 | 78 | 12 | 28 | 18 | 2 | 2 | 4 | 0.91 |
| 40 | 145 | 110 | 88 | 14 | 36 | 18 | 3 | 2 | 4 | 1.24 |
| 50 | 160 | 125 | 102 | 14 | 46 | 18 | 3 | 2 | 4 | 1.55 |
| 65 | 180 | 145 | 122 | 14 | 60 | 18 | 3 | 2 | 4 | 2.04 |
| 80 | 195 | 160 | 138 | 14 | 76 | 18 | 3 | 2 | 4 | 2.44 |
| 100 | 215 | 180 | 158 | 14 | 94 | 18 | 3 | 2 | 8 | 2.97 |
| 125 | 245 | 210 | 188 | 16 | 118 | 18 | 3 | 2 | 8 | 4.69 |
| 150 | 280 | 240 | 212 | 16 | 142 | 23 | 3 | 2 | 8 | 6.07 |
| 200 | 335 | 295 | 268 | 16 | 196 | 23 | 3 | 2 | 8 | 9.09 |
| 250 | 390 | 350 | 320 | 18 | 244 | 23 | 3 | 2 | 12 | 14.26 |
| 300 | 440 | 400 | 370 | 20 | 294 | 23 | 4 | 3 | 12 | 19.88 |
| 350 | 500 | 460 | 430 | 24 | 344 | 23 | 4 | 3 | 16 | 31.94 |
| 400 | 565 | 515 | 482 | 26 | 390 | 27 | 4 | 3 | 16 | 44.43 |
| 500 | 670 | 620 | 585 | 30 | 490 | 27 | 4 | 3 | 20 | 74.31 |
| 600 | 780 | 725 | 685 | 34 | 590 | 30 | 5 | 4 | 20 | 119.27 |
| 800 | 1010 | 950 | 905 | 42 | 780 | 33 | 5 | 4 | 24 | 242.06 |
| 1000 | 1220 | 1160 | 1110 | 50 | 980 | 33 | 5 | 4 | 28 | 429.64 |
| 1200 | 1455 | 1380 | 1325 | 55 | 1180 | 40 | 5 | 4 | 32 | 673.13 |

| MM | D,MM | D1,MM | D2,MM | b,MM | d2,MM | d,MM | h1,MM | h,MM | К-ВОТБ.Н, WT. | Масса, Kr |
|---------------------------|------|-------|-------|------|-------|------|-------|------|------------------|--------------|
| Py = 1,6 МПа (16 кгс/см2) | | | | | | | | | | |
| 15 | 95 | 65 | 45 | 12 | 10 | 14 | 2 | 2 | 4 | 0.43 |
| 20 | 105 | 75 | 58 | 12 | 16 | 14 | 2 | 2 | 4 | 0.55 |
| 25 | 115 | 85 | 68 | 12 | 22 | 14 | 2 | 2 | 4 | 0.67 |
| 32 | 135 | 100 | 78 | 12 | 28 | 18 | 2 | 2 | 4 | 0.91 |
| 40 | 145 | 110 | 88 | 14 | 36 | 18 | 3 | 2 | 4 | 1.24 |
| 50 | 160 | 125 | 102 | 14 | 46 | 18 | 3 | 2 | 4 | 1.55 |
| 65 | 180 | 145 | 122 | 14 | 60 | 18 | 3 | 2 | 4 | 2.04 |
| 80 | 195 | 160 | 138 | 14 | 76 | 18 | 3 | 2 | 4 | 2.44 |
| 100 | 215 | 180 | 158 | 16 | 94 | 18 | 3 | 2 | 8 | 3.51 |
| 125 | 245 | 210 | 188 | 16 | 118 | 18 | 3 | 2 | 8 | 4.69 |
| 150 | 280 | 240 | 212 | 18 | 142 | 23 | 3 | 2 | 8 | 6.99 |
| 200 | 335 | 295 | 268 | 20 | 196 | 23 | 3 | 2 | 12 | 11.49 |
| 250 | 405 | 355 | 320 | 24 | 244 | 27 | 3 | 2 | 12 | 19.74 |
| 300 | 460 | 410 | 378 | 28 | 294 | 27 | 4 | 3 | 12 | 29.58 |
| 350 | 520 | 470 | 438 | 32 | 344 | 27 | 4 | 3 | 16 | 44.22 |
| 400 | 580 | 525 | 490 | 34 | 390 | 30 | 4 | 3 | 16 | 59.86 |
| 500 | 710 | 650 | 610 | 40 | 490 | 33 | 4 | 3 | 20 | 102.69 |
| 600 | 840 | 770 | 720 | 45 | 590 | 40 | 5 | 4 | 20 | 161.98 |
| 800 | 1020 | 950 | 900 | 52 | 780 | 40 | 5 | 4 | 24 | 300.60 |
| 1000 | 1255 | 1170 | 1110 | 63 | 980 | 46 | 5 | 4 | 28 | 542.16 |
| 1200 | 1485 | 1390 | 1325 | 75 | 1180 | 52 | 5 | 4 | 32 | 922.18 |

GOST/ГОСТ 12836-67 FLANGE FORGED



| MM | D,MM | D1,MM | D2,MM | b,MM | d2,MM | d,MM | h1,MM | h,MM | К-ВОТБ.Н, WT. | Масса, Kr |
|---------------------------|------|-------|-------|------|-------|------|-------|------|------------------|--------------|
| Py = 2.5 МПа (25 кгс/см2) | | | | | | | | | | |
| 15 | 95 | 65 | 45 | 12 | 10 | 14 | 2 | 2 | 4 | 0.43 |
| 20 | 105 | 75 | 58 | 12 | 16 | 14 | 2 | 2 | 4 | 0.55 |
| 25 | 115 | 85 | 68 | 12 | 22 | 14 | 2 | 2 | 4 | 0.67 |
| 32 | 135 | 100 | 78 | 12 | 28 | 18 | 2 | 2 | 4 | 0.91 |
| 40 | 145 | 110 | 88 | 14 | 36 | 18 | 3 | 2 | 4 | 1.24 |
| 50 | 160 | 125 | 102 | 14 | 46 | 18 | 3 | 2 | 4 | 1.55 |
| 65 | 180 | 145 | 122 | 16 | 60 | 18 | 3 | 2 | 8 | 2.29 |
| 80 | 195 | 160 | 138 | 18 | 76 | 18 | 3 | 2 | 8 | 3.21 |
| 100 | 230 | 190 | 162 | 20 | 94 | 23 | 3 | 2 | 8 | 5.07 |
| 125 | 270 | 220 | 188 | 22 | 118 | 27 | 3 | 2 | 8 | 7.83 |
| 150 | 300 | 250 | 218 | 24 | 142 | 27 | 3 | 2 | 8 | 10.95 |
| 200 | 360 | 310 | 278 | 26 | 196 | 27 | 3 | 2 | 12 | 17.51 |
| 250 | 425 | 370 | 335 | 30 | 244 | 30 | 3 | 2 | 12 | 28.93 |
| 300 | 485 | 430 | 390 | 34 | 294 | 30 | 4 | 3 | 16 | 42.00 |
| 350 | 550 | 490 | 450 | 38 | 344 | 33 | 4 | 3 | 16 | 61.48 |
| 400 | 610 | 550 | 505 | 40 | 390 | 33 | 4 | 3 | 16 | 84.12 |
| 500 | 730 | 660 | 615 | 48 | 490 | 40 | 4 | 3 | 20 | 140.22 |
| 600 | 840 | 770 | 720 | 50 | 590 | 40 | 5 | 4 | 20 | 194.50 |
| 800 | 1075 | 990 | 930 | 63 | 780 | 46 | 5 | 4 | 24 | 409.07 |

| MM | D,MM | D1,MM | D2,MM | b,MM | d2,MM | d,MM | h1,MM | h,MM | К-ВОТБ.Н, WT. | Масса, Kr |
|---------------------------|------|-------|-------|------|-------|------|-------|------|------------------|--------------|
| Py = 4.0 МПа (40 кгс/см2) | | | | | | | | | | |
| 15 | 95 | 65 | 45 | 16 | 10 | 14 | 2 | 2 | 4 | 0.63 |
| 20 | 105 | 75 | 58 | 16 | 16 | 14 | 2 | 2 | 4 | 0.80 |
| 25 | 115 | 85 | 68 | 16 | 22 | 14 | 2 | 2 | 4 | 0.98 |
| 32 | 135 | 100 | 78 | 16 | 28 | 18 | 2 | 2 | 4 | 1.33 |
| 40 | 145 | 110 | 88 | 16 | 36 | 18 | 3 | 2 | 4 | 1.49 |
| 50 | 160 | 125 | 102 | 18 | 46 | 18 | 3 | 2 | 4 | 2.15 |
| 65 | 180 | 145 | 122 | 20 | 60 | 18 | 3 | 2 | 8 | 3.03 |
| 80 | 195 | 160 | 138 | 22 | 76 | 18 | 3 | 2 | 8 | 4.08 |
| 100 | 230 | 190 | 162 | 24 | 94 | 23 | 3 | 2 | 8 | 6.27 |
| 125 | 270 | 220 | 188 | 28 | 118 | 27 | 3 | 2 | 8 | 10.31 |
| 150 | 300 | 250 | 218 | 30 | 142 | 27 | 3 | 2 | 8 | 14.07 |
| 200 | 375 | 320 | 280 | 38 | 196 | 30 | 3 | 2 | 12 | 28.30 |
| 250 | 445 | 385 | 345 | 45 | 244 | 33 | 3 | 2 | 12 | 48.50 |
| 300 | 510 | 450 | 410 | 48 | 294 | 33 | 4 | 3 | 16 | 66.99 |
| 350 | 570 | 510 | 465 | 50 | 344 | 33 | 4 | 3 | 16 | 88.90 |
| 400 | 655 | 585 | 535 | 56 | 390 | 40 | 4 | 3 | 16 | 131.59 |
| 500 | 755 | 670 | 615 | 70 | 490 | 46 | 4 | 3 | 20 | 218.77 |