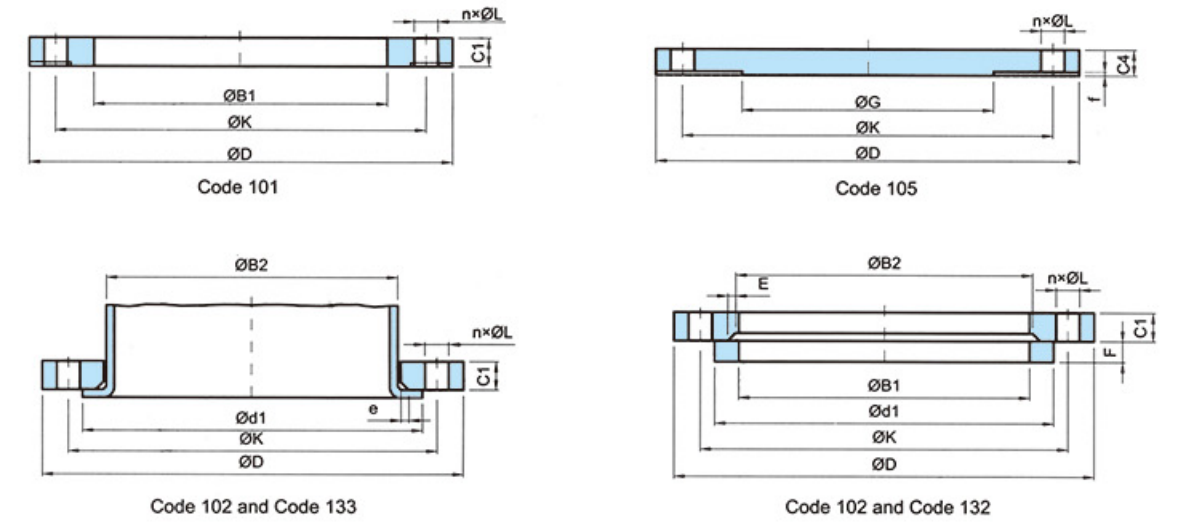
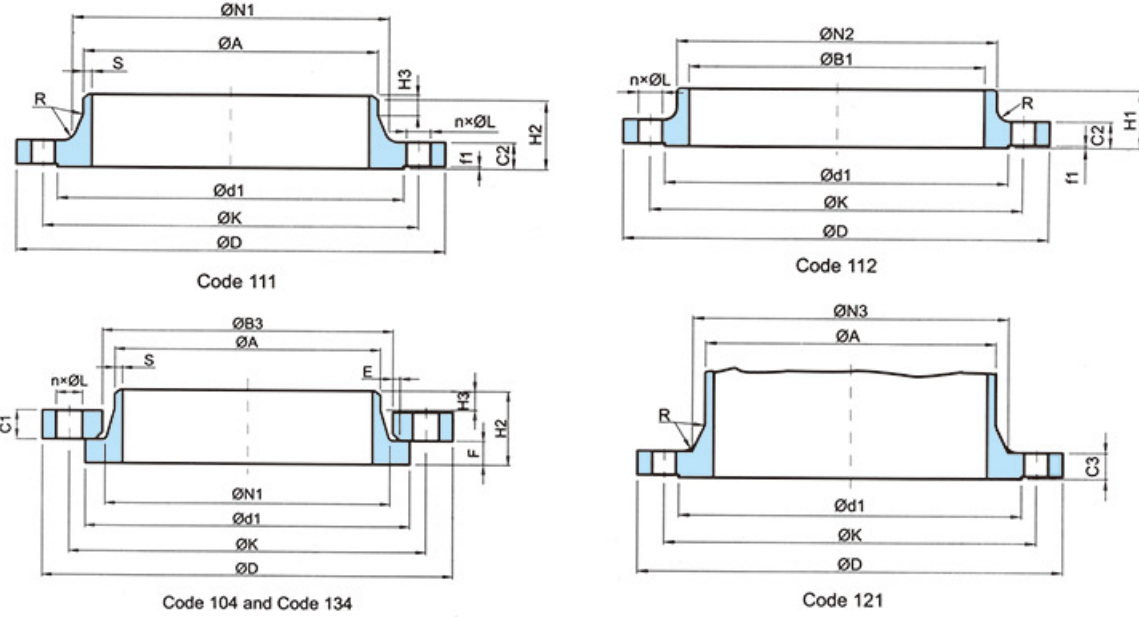


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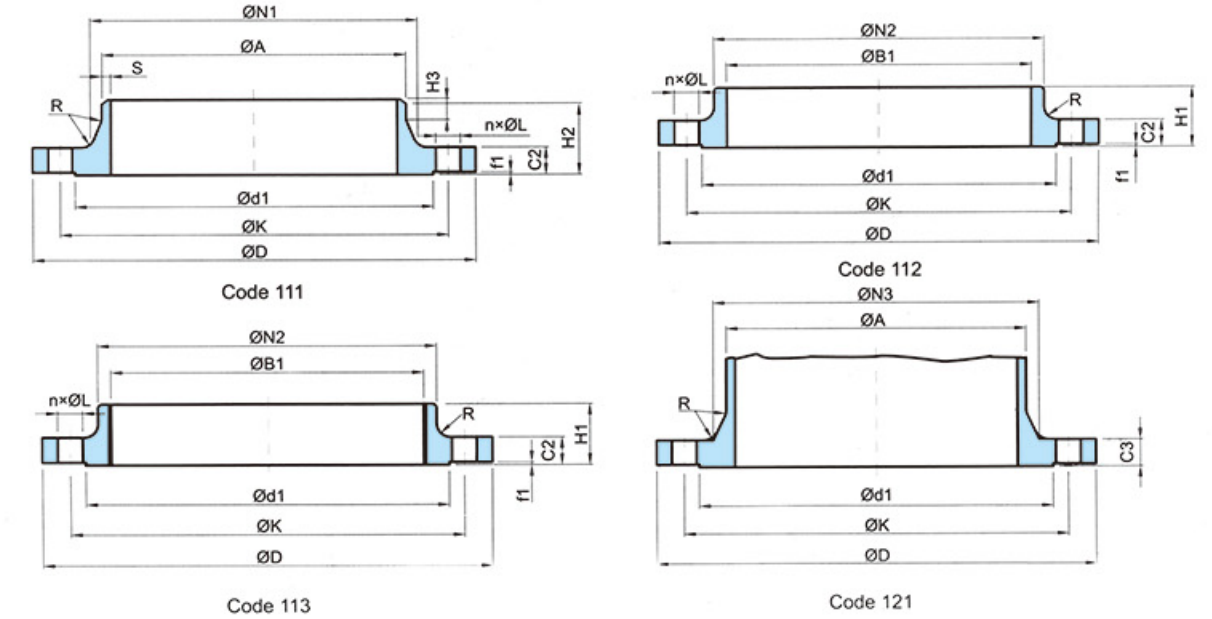
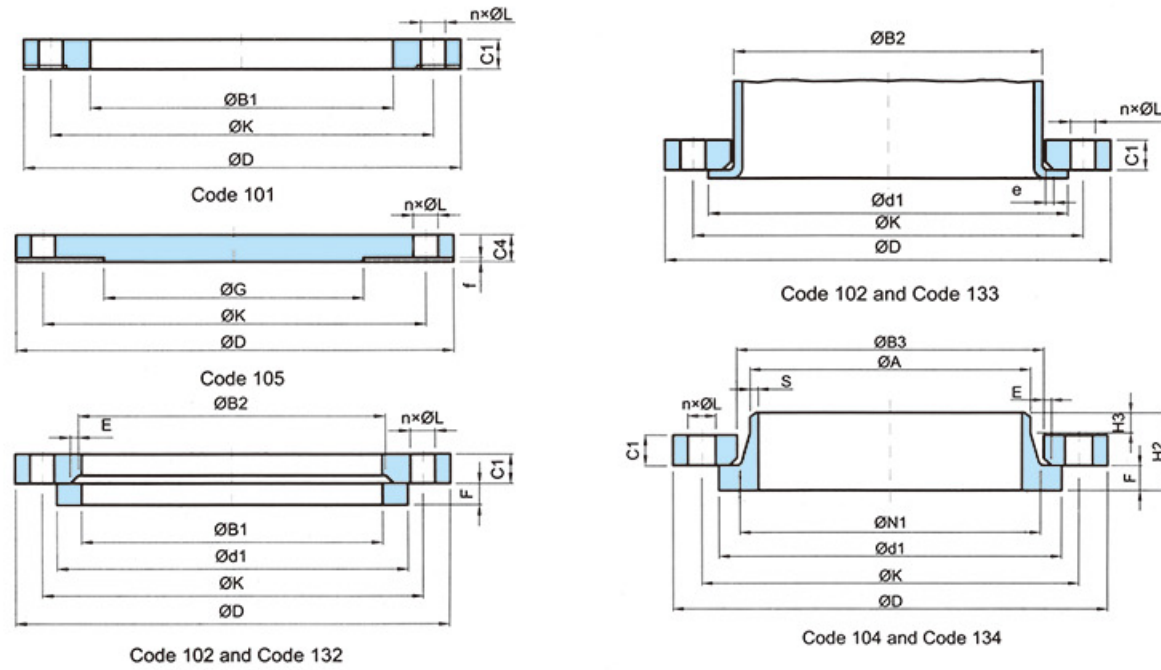


| C4 | E | F | G | H1 | H2 | H3 | N1 | N2 | N3 | R | S | DN |
|----------------|------------|------------|------|-----|------------|------------|------------|-----|------|-------------------|----------------------|------|
| Type of Flange | | | | | | | | | | | | |
| 105 | 102 104 | 132 134 | 105 | 112 | 111 134 | 111 134 | 111 134 | 112 | 121 | 111 112 121 | 111 134 | |
| 14 | 3 | 12 | - | 20 | 35 | 6 | 28 | 30 | 28 | 3 | 1.8 | 10 |
| 14 | 3 | 12 | - | 20 | 35 | 6 | 32 | 35 | 32 | 3 | 2.0 | 15 |
| 16 | 4 | 14 | - | 24 | 38 | 6 | 39 | 45 | 40 | 4 | 2.3 | 20 |
| 16 | 4 | 14 | - | 24 | 38 | 6 | 46 | 52 | 50 | 4 | 2.6 | 25 |
| 16 | 5 | 14 | - | 26 | 40 | 6 | 56 | 60 | 60 | 5 | 2.6 | 32 |
| 16 | 5 | 14 | - | 26 | 42 | 7 | 64 | 70 | 70 | 5 | 2.6 | 40 |
| 18 | 5 | 16 | - | 28 | 45 | 8 | 74 | 84 | 84 | 5 | 2.9 | 50 |
| 18 | 6 | 16 | 55 | 32 | 45 | 10 | 92 | 104 | 104 | 6 | 2.9 | 65 |
| 20 | 6 | 16 | 70 | 34 | 50 | 10 | 110 | 118 | 120 | 6 | 3.2 | 80 |
| 20 | 6 | 18 | 90 | 40 | 52 | 12 | 130 | 140 | 140 | 6 | 3.6 | 100 |
| 22 | 6 | 18 | 115 | 44 | 55 | 12 | 158 | 168 | 170 | 6 | 4.0 | 125 |
| 22 | 6 | 20 | 140 | 44 | 55 | 12 | 184 | 195 | 190 | 8 | 4.5 | 150 |
| 24 | 6 | 20 | 190 | 44 | 62 | 16 | 234 | 246 | 246 | 8 | 5.6 | 200 |
| 26 | 8 | 22 | 235 | 46 | 68 | 16 | 288 | 298 | 298 | 10 | 6.3 | 250 |
| 26 | 8 | 22 | 285 | 46 | 68 | 16 | 342 | 350 | 348 | 10 | 7.1 | 300 |
| 26 | 8 | 22 | 325 | 53 | 68 | 16 | 390 | 400 | 408 | 10 | 7.1 | 350 |
| 26 | 8 | 24 | 375 | 57 | 72 | 16 | 440 | 450 | 456 | 10 | 7.1 | 400 |
| 28 | 8 | 24 | 425 | 63 | 72 | 16 | 488 | 502 | 502 | 12 | 7.1 | 450 |
| 28 | 8 | 26 | 475 | 67 | 75 | 16 | 540 | 559 | 559 | 12 | 7.1 | 500 |
| 34 | 8 | 26 | 575 | 75 | 80 | 18 | 640 | 658 | 658 | 12 | 7.1 | 600 |
| 38 | - | - | 670 | - | 80 | 18 | 764 | - | 772 | 12 | 8.0 | 700 |
| 42 | - | - | 770 | - | 90 | 18 | 848 | - | 876 | 12 | 8.0 | 800 |
| 46 | - | - | 860 | - | 95 | 20 | 948 | - | 976 | 12 | 10.0 | 900 |
| 52 | - | - | 960 | - | 95 | 20 | 1050 | - | 1080 | 12 | 10.0 | 1000 |
| 60 | - | - | 1160 | - | 115 | 25 | 1256 | - | 1292 | 12 | 11.0 | 1200 |
| - | - | - | - | - | 120 | 25 | 1460 | - | 1496 | 12 | 12.0 | 1400 |
| - | - | - | - | - | 130 | 25 | 1666 | - | 1712 | 12 | 14.0 | 1600 |
| - | - | - | - | - | 140 | 30 | 1866 | - | 1910 | 15 | 15.0 | 1800 |
| - | - | - | - | - | 150 | 30 | 2070 | - | 2120 | 15 | 16.0 | 2000 |
| - | - | - | - | - | 160 | 35 | 2275 | - | - | 18 | See Note 8 To tables | 2200 |
| - | - | - | - | - | 170 | 35 | 2478 | - | - | 18 | | 2400 |
| - | - | - | - | - | 180 | 40 | 2680 | - | - | 18 | | 2600 |
| - | - | - | - | - | 190 | 40 | 2882 | - | - | 18 | | 2800 |
| - | - | - | - | - | 200 | 45 | 3085 | - | - | 18 | | 3000 |

| DN | d 1 | f 1 | D | K | L | n | A | B1 | B2 | B3 | C1 | C2 | C3 |
|------|------|-----|-----------------------------|------|----|----|--------|-------|-----|-------------------|-------------------|-----|-----|
| | | | Type of Flange | | | | | | | | | | |
| | | | 101,102,104,105,111,112,121 | | | | | | | 111 121 134 | 101 112 132 | 102 | 104 |
| 10 | 40 | 2 | 90 | 60 | 14 | 4 | 17.2 | 18.0 | 21 | 31 | 14 | 14 | 14 |
| 15 | 45 | 2 | 95 | 65 | 14 | 4 | 21.3 | 22.0 | 25 | 35 | 14 | 14 | 14 |
| 20 | 58 | 2 | 105 | 75 | 14 | 4 | 26.9 | 27.5 | 31 | 42 | 16 | 16 | 16 |
| 25 | 68 | 2 | 115 | 85 | 14 | 4 | 33.7 | 34.5 | 38 | 49 | 16 | 16 | 16 |
| 32 | 78 | 2 | 140 | 100 | 18 | 4 | 42.4 | 43.5 | 47 | 59 | 18 | 16 | 16 |
| 40 | 88 | 3 | 150 | 110 | 18 | 4 | 48.3 | 49.5 | 53 | 67 | 18 | 16 | 16 |
| 50 | 102 | 3 | 165 | 125 | 18 | 4 | 60.3 | 61.5 | 65 | 77 | 20 | 18 | 18 |
| 65 | 122 | 3 | 185 | 145 | 18 | 4+ | 76.1 | 77.5 | 81 | 96 | 20 | 18 | 18 |
| 80 | 138 | 3 | 200 | 160 | 18 | 8 | 88.9 | 90.5 | 94 | 114 | 20 | 20 | 20 |
| 100 | 162 | 3 | 220 | 180 | 18 | 8 | 114.3 | 116.0 | 120 | 134 | 22 | 20 | 20 |
| 125 | 188 | 3 | 250 | 210 | 18 | 8 | 139.7 | 141.5 | 145 | 162 | 22 | 22 | 22 |
| 150 | 212 | 3 | 285 | 240 | 22 | 8 | 168.3 | 170.5 | 174 | 188 | 24 | 22 | 22 |
| 200 | 268 | 3 | 340 | 295 | 22 | 8 | 219.1 | 221.5 | 226 | 240 | 24 | 24 | 24 |
| 250 | 320 | 3 | 395 | 350 | 22 | 12 | 273.0 | 276.5 | 281 | 294 | 26 | 26 | 26 |
| 300 | 370 | 4 | 445 | 400 | 22 | 12 | 323.9 | 327.5 | 333 | 348 | 26 | 26 | 26 |
| 350 | 430 | 4 | 505 | 460 | 22 | 16 | 355.6 | 359.5 | 365 | 400 | 28 | 26 | 26 |
| 400 | 482 | 4 | 565 | 515 | 26 | 16 | 406.4 | 411.0 | 416 | 450 | 32 | 26 | 26 |
| 450 | 532 | 4 | 615 | 565 | 26 | 20 | 457.0 | 462.0 | 467 | 498 | 36 | 28 | 28 |
| 500 | 585 | 4 | 670 | 620 | 26 | 20 | 508.0 | 513.5 | 519 | 550 | 38 | 28 | 28 |
| 600 | 685 | 5 | 780 | 725 | 30 | 20 | 610.0 | 616.5 | 622 | 650 | 42 | 28 | 28 |
| 700 | 800 | 5 | 895 | 840 | 30 | 24 | 711.0 | - | - | - | - | 30 | 34 |
| 800 | 905 | 5 | 1015 | 950 | 33 | 24 | 813.0 | - | - | - | - | 32 | 36 |
| 900 | 1005 | 5 | 1115 | 1050 | 33 | 28 | 914.0 | - | - | - | - | 34 | 38 |
| 1000 | 1110 | 5 | 1230 | 1160 | 36 | 28 | 1016.0 | - | - | - | - | 34 | 38 |
| 1200 | 1330 | 5 | 1455 | 1380 | 39 | 32 | 1220.0 | - | - | - | - | 38 | 44 |
| 1400 | 1535 | 5 | 1675 | 1590 | 42 | 36 | 1420.0 | - | - | - | - | 42 | 48 |
| 1600 | 1760 | 5 | 1915 | 1820 | 48 | 40 | 1620.0 | - | - | - | - | 46 | 52 |
| 1800 | 1960 | 5 | 2115 | 2020 | 48 | 44 | 1820.0 | - | - | - | - | 50 | 56 |
| 2000 | 2170 | 5 | 2325 | 2230 | 48 | 48 | 2020.0 | - | - | - | - | 54 | 60 |
| 2200 | 2370 | 6 | 2550 | 2440 | 56 | 52 | 2220.0 | - | - | - | - | 58 | - |
| 2400 | 2570 | 6 | 2760 | 2650 | 56 | 56 | 2420.0 | - | - | - | - | 65 | - |
| 2600 | 2780 | 6 | 2960 | 2850 | 56 | 60 | 2620.0 | - | - | - | - | 66 | - |
| 2800 | 3000 | 6 | 3180 | 3070 | 56 | 64 | 2820.0 | - | - | - | - | 70 | - |
| 3000 | 3210 | 6 | 3405 | 3290 | 62 | 68 | 3020.0 | - | - | - | - | 75 | - |

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| DN | d 1 | f 1 | Type of Flange | | | | | | | | | | |
|------|------|-----|----------------|------|----|----|--------|-------|-----|-----|-----|----|----|
| | | | D | K | L | n | A | B1 | B2 | B3 | C1 | C2 | C3 |
| 10 | 40 | 2 | 90 | 60 | 14 | 4 | 17.2 | 18.0 | 21 | 31 | 14 | 14 | 14 |
| 15 | 45 | 2 | 95 | 65 | 14 | 4 | 21.3 | 22.0 | 25 | 35 | 14 | 14 | 14 |
| 20 | 58 | 2 | 105 | 75 | 14 | 4 | 26.9 | 27.5 | 31 | 42 | 16 | 16 | 16 |
| 25 | 68 | 2 | 115 | 85 | 14 | 4 | 33.7 | 34.5 | 38 | 49 | 16 | 16 | 16 |
| 32 | 78 | 2 | 140 | 100 | 18 | 4 | 42.4 | 43.5 | 47 | 59 | 18 | 16 | 16 |
| 40 | 88 | 3 | 150 | 110 | 18 | 4 | 48.3 | 49.5 | 53 | 67 | 18 | 16 | 16 |
| 50 | 102 | 3 | 165 | 125 | 18 | 4 | 60.3 | 61.5 | 65 | 77 | 20 | 18 | 18 |
| 65 | 122 | 3 | 185 | 145 | 18 | 4+ | 76.1 | 77.5 | 81 | 96 | 20 | 18 | 18 |
| 80 | 138 | 3 | 200 | 160 | 18 | 8 | 88.9 | 90.5 | 94 | 114 | 20 | 20 | 20 |
| 100 | 162 | 3 | 220 | 180 | 18 | 8 | 114.3 | 116.0 | 120 | 134 | 22 | 20 | 20 |
| 125 | 188 | 3 | 250 | 210 | 18 | 8 | 139.7 | 141.5 | 145 | 162 | 22 | 22 | 22 |
| 150 | 212 | 3 | 285 | 240 | 22 | 8 | 168.3 | 170.5 | 174 | 188 | 24 | 22 | 22 |
| 200 | 268 | 3 | 340 | 295 | 22 | 12 | 219.1 | 221.5 | 226 | 240 | 26 | 24 | 24 |
| 250 | 320 | 3 | 405 | 355 | 26 | 12 | 273.0 | 276.5 | 281 | 294 | 29 | 26 | 26 |
| 300 | 378 | 4 | 460 | 410 | 26 | 12 | 323.9 | 327.5 | 333 | 348 | 32 | 28 | 28 |
| 350 | 438 | 4 | 520 | 470 | 26 | 16 | 355.6 | 359.0 | 365 | 400 | 35 | 30 | 30 |
| 400 | 490 | 4 | 580 | 525 | 30 | 16 | 406.4 | 411.0 | 416 | 454 | 38 | 32 | 32 |
| 450 | 550 | 4 | 640 | 585 | 30 | 20 | 457.0 | 462.0 | 467 | 500 | 42 | 34 | 34 |
| 500 | 610 | 4 | 715 | 650 | 33 | 20 | 508.0 | 513.5 | 510 | 556 | 46 | 34 | 36 |
| 600 | 725 | 5 | 840 | 770 | 36 | 20 | 610.0 | 616.5 | 622 | 660 | 52 | 36 | 40 |
| 700 | 795 | 5 | 910 | 840 | 36 | 24 | 711.0 | - | - | - | 60* | 36 | 42 |
| 800 | 900 | 5 | 1025 | 950 | 39 | 24 | 813.0 | - | - | - | 68* | 38 | 42 |
| 900 | 1000 | 5 | 1125 | 1050 | 39 | 28 | 914.0 | - | - | - | 76* | 40 | 44 |
| 1000 | 1115 | 5 | 1255 | 1170 | 42 | 28 | 1016.0 | - | -</ | | | | |