MANIFEST ALLOYS

# Stainless Steel Pipe Size Chart

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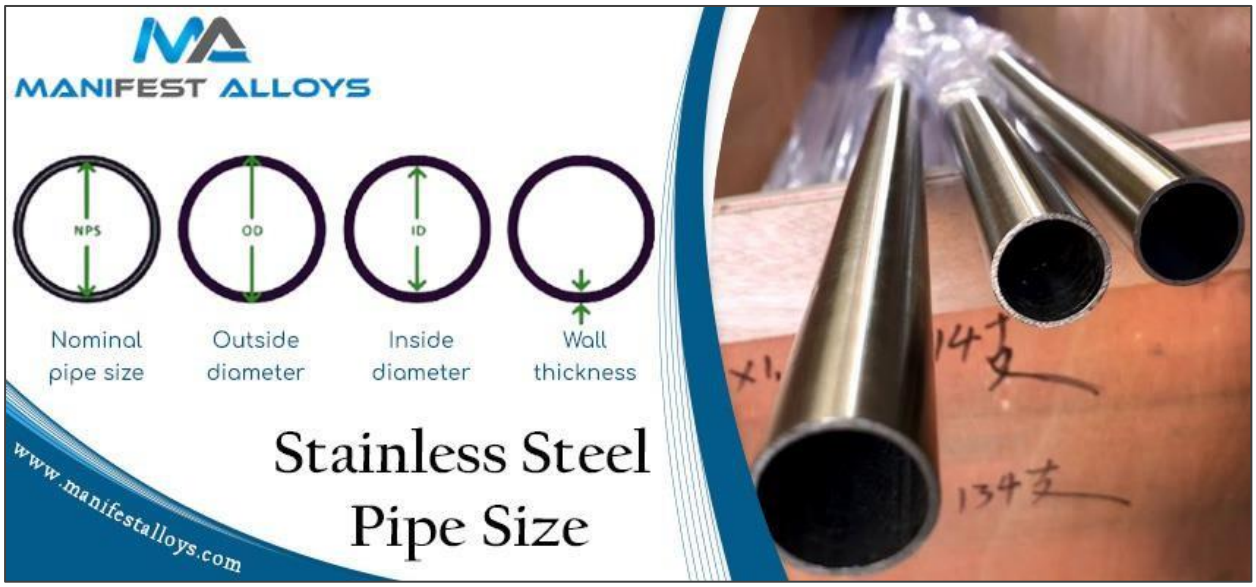
# Stainless Steel Pipe Size Chart




| Nom Bore | mm | | 3 | 6 | 10 | 15 | 20 | 25 | 32 |
|---|---|---|---|---|---|---|---|---|---|
| SS pipe size | INCH | | 01/8 | 01/4 | 03/8 | 01/2 | 03/4 | 1 | 1 1/4 |
| **Outside Dia** | mm | | 10.3 | 13.7 | 17.1 | 21.3 | 26.7 | 33.4 | 42.2 |
| **Sch-5S** | Wt | mm | 1.24 | 1.24 | 1.24 | 1.65 | 1.65 | 1.65 | 1.65 |
| | Weight | (Kg/mt) | 0.276 | 0.39 | 0.49 | 0.8 | 1.03 | 1.3 | 1.65 |
| **Sch-10S** | Wt | mm | 1.24 | 1.65 | 1.65 | 2.11 | 2.11 | 2.77 | 2.77 |
| | Weight | (Kg/mt) | 0.28 | 0.49 | 0.63 | 1 | 1.28 | 2.09 | 2.7 |
| **Sch-40S** | Wt | mm | 1.73 | 2.24 | 2.31 | 2.77 | 2.87 | 3.38 | 3.56 |
| | Weight | (Kg/mt) | 0.37 | 0.631 | 0.845 | 1.27 | 1.68 | 2.5 | 3.38 |
| **Sch-80S** | Wt | mm | 2.41 | 3.02 | 3.2 | 3.75 | 3.91 | 4.55 | 4.85 |
| | Weight | (Kg/mt) | 0.47 | 0.8 | 1.1 | 1.62 | 2.2 | 3.24 | 4.47 |
| **Sch-160S** | Wt | mm | - | - | - | 4.75 | 5.54 | 6.35 | 6.35 |
| | Weight | (Kg/mt) | - | - | - | 1.94 | 2.89 | 4.24 | 5.61 |
| **Sch-XXS** | Wt | mm | - | - | - | 7.47 | 7.82 | 9.09 | 9.7 |

| Nom Bore | mm | | 40 | 50 | 65 | 80 | 100 | 125 |
|---|---|---|---|---|---|---|---|---|
| | INCH | | 1 1/2 | 2 | 2 1/2 | 3 | 4 | 5 |
| Outside Dia | mm | | 48.3 | 60.3 | 73 | 88.9 | 114.3 | 141.3 |
| Sch-5S | Wt | mm | 1.65 | 1.65 | 2.11 | 2.11 | 2.11 | 2.77 |
| | Weight | (Kg/mt) | 1.91 | 2.4 | 3.69 | 4.51 | 5.84 | 9.47 |
| Sch-10S | Wt | mm | 2.77 | 2.77 | 3.05 | 3.05 | 3.05 | 3.4 |
| | Weight | (Kg/mt) | 3.11 | 3.93 | 5.26 | 6.45 | 8.36 | 11.57 |
| Sch-40S | Wt | mm | 3.68 | 3.91 | 5.16 | 5.49 | 6.02 | 6.55 |
| | Weight | (Kg/mt) | 4.05 | 5.44 | 8.63 | 11.3 | 16.07 | 21.8 |
| Sch-80S | Wt | mm | 5.08 | 5.54 | 7.01 | 7.62 | 8.56 | 9.53 |
| | Weight | (Kg/mt) | 5.41 | 7.48 | 11.4 | 15.2 | 22.3 | 31.97 |
| Sch-160S | Wt | mm | 7.14 | 8.74 | 9.53 | 11.1 | 13.49 | 15.88 |
| | Weight | (Kg/mt) | 7.25 | 11.1 | 14.9 | 21.3 | 33.54 | 49.11 |
| Sch-XXS | Wt | mm | 10.16 | 11.07 | 14.2 | 15.24 | 17.12 | 19.05 |
| | Weight | (Kg/mt) | 9.54 | 13.44 | 20.39 | 27.65 | 41.03 | 57.43 |

| Nom Bore | mm | | 150 | 200 | 250 | 300 | 350 | 400 |
|---|---|---|---|---|---|---|---|---|
| | INCH | | 6 | 8 | 10 | 12 | 14 | 16 |
| Outside Dia | mm | | 168.3 | 219.1 | 273.1 | 323.9 | 355.6 | 406.4 |
| Sch-5S | Wt | mm | 2.77 | 2.77 | 3.4 | 3.96 | 3.96 | 4.19 |
| | Weight | (Kg/mt) | 11.32 | 14.79 | 22.63 | 31.25 | 34.36 | 41.56 |
| Sch-10S | Wt | mm | 3.4 | 3.76 | 4.19 | 4.57 | 4.78 | 4.78 |
| | Weight | (Kg/mt) | 13.84 | 19.96 | 27.78 | 36 | 41.3 | 47.29 |
| Sch-40S | Wt | mm | 7.11 | 8.18 | 9.27 | 9.52 | 11.13 | 12.7 |
| | Weight | (Kg/mt) | 28.3 | 42.6 | 60.5 | 73.88 | 94.59 | 123.3 |
| Sch-80S | Wt | mm | 10.97 | 12.7 | 12.7 | 12.7 | 19.05 | 21.41 |
| | Weight | (Kg/mt) | 42.7 | 64.6 | 96 | 132 | 158.08 | 203.33 |
| Sch-160S | Wt | mm | 18.2 | 23 | 28.6 | 33.32 | 35.71 | 40.46 |
| | Weight | (Kg/mt) | 67.56 | 111.2 | 172.4 | 238.76 | 281.7 | 365.11 |
| Sch-XXS | Wt | mm | 21.95 | 22.23 | 25.4 | 25.4 | - | - |
| | Weight | (Kg/mt) | 79.22 | 107.8 | 155.15 | 186.97 | - | - |

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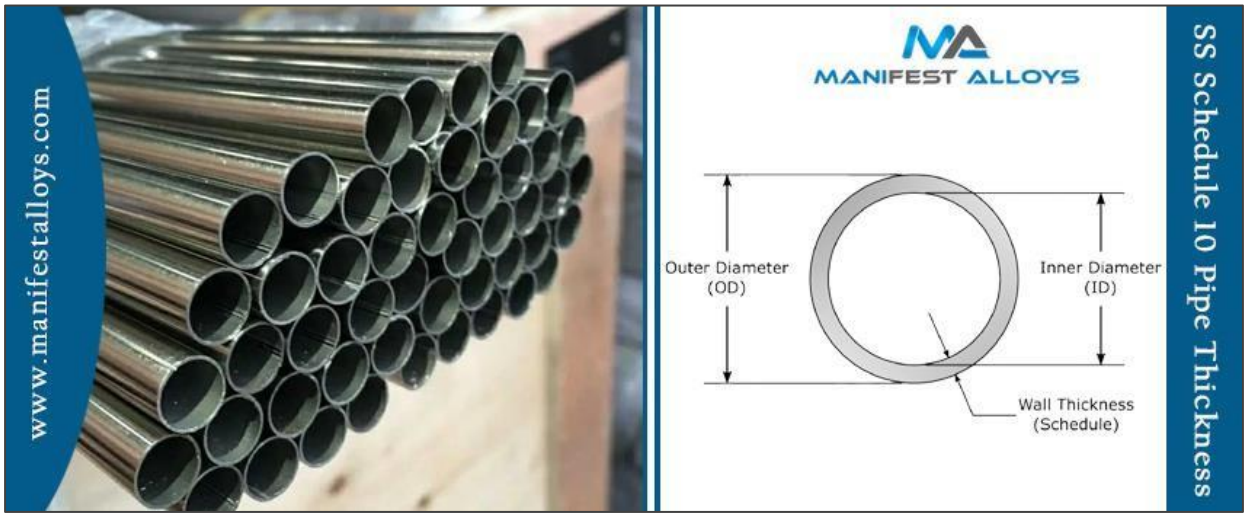
# SS Schedule 10 Pipe Thickness




| Nom size (inches) | OD (mm) | Wall thickness (mm) |
|---|---|---|
| 1/4" NPS8 | 13.7 | 1.65 |
| 1/8" NPS6 | 10.3 | 1.24 |
| 3/8" NPS10 | 17.1 | 1.65 |
| 3/4" NPS20 | 26.7 | 2.11 |
| 1/2" NPS15 | 21.3 | 2.11 |
| 1 1/2" NPS40 | 48.3 | 2.77 |
| 1" NPS25 | 33.4 | 2.77 |
| 2 1/2" NPS65 | 73 | 3.05 |
| 2" NPS50 | 60.3 | 2.77 |
| 3" NPS80 | 88.9 | 3.05 |
| 4" NPS100 | 114.3 | 3.05 |
| 3 1/2" NPS90 | 101.6 | 3.05 |
| 5" NPS125 | 141.3 | 3.4 |
| 8" NPS200 | 219.1 | 3.76 |

| Nom size (inches) | OD (mm) | Wall thickness (mm) |
|---|---|---|
| 16" NPS400 | 406.4 | 6.35 |
| 14" NPS350 | 355.6 | 6.35 |
| 18" NPS450 | 457 | 6.35 |
| 22" NPS550 | 559 | 6.35 |
| 20" NPS500 | 508 | 6.35 |
| 24" NPS600 | 610 | 6.35 |
| 28" NPS700 | 711 | 7.92 |
| 26" NPS650 | 660 | 7.92 |
| 32" NPS800 | 813 | 7.92 |
| 30" NPS750 | 762 | 7.92 |
| 36" NPS900 | 914 | 7.92 |
| 34" NPS850 | 864 | 7.92 |

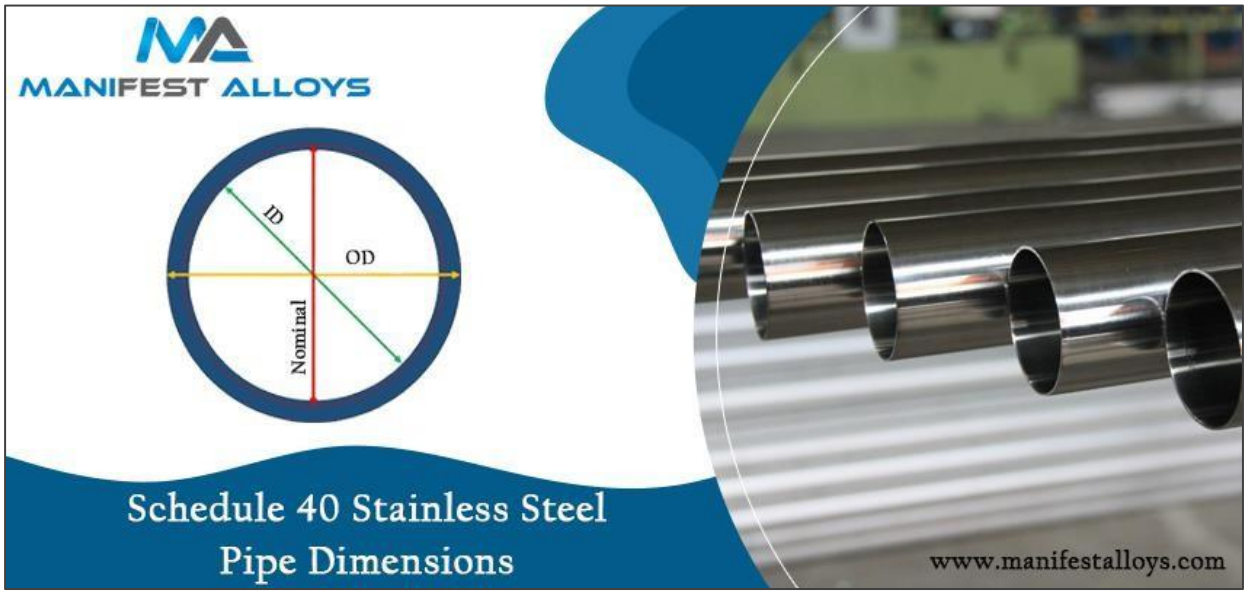
# Stainless Steel Welded Pipe Pressure Rating

| Pipe Size (in) | OD (in) | Wt (in) | Pressure Rating (psig) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SS Pipe Thickness | | | Temperature °F | | | | | | | |
| | | | 200 | 100 | 400 | 300 | 600 | 500 | 700 | 650 |
| | | | Allowable Stress (psi) | | | | | | | |
| | | | 1670 | 1670 | 1550 | 1670 | 1350 | 1440 | 1290 | 1320 |
| 1" | 1.315 | 0.179 | 3061 | 3061 | 3061 | 2841 | 2475 | 2640 | 2420 | 2310 |
| | 1.315 | 0.133 | 2205 | 2205 | 2205 | 2047 | 1783 | 1902 | 1743 | 1664 |
| | 1.315 | 0.25 | 4493 | 4493 | 4493 | 4170 | 3632 | 3874 | 3552 | 3390 |
| 1 1/2" | 1.9 | 0.2 | 2303 | 2303 | 2303 | 2138 | 1862 | 1986 | 1821 | 1738 |
| | 1.9 | 0.145 | 1629 | 1629 | 1629 | 1512 | 1317 | 1404 | 1287 | 1229 |
| | 1.9 | 0.281 | 3362 | 3362 | 3362 | 3120 | 2717 | 2899 | 2657 | 2536 |
| 2" | 2.375 | 0.218 | 1985 | 1985 | 1985 | 1843 | 1605 | 1712 | 1569 | 1498 |
| | 2.375 | 0.154 | 1371 | 1371 | 1371 | 1272 | 1108 | 1182 | 1083 | 1034 |
| | 2.375 | 0.344 | 3283 | 3283 | 3283 | 3047 | 2654 | 2831 | 2595 | 2477 |

| Pipe Size (in) | OD (in) | Wt (in) | Pressure Rating (psig) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SS Pipe Size | | | Temperature °F | | | | | | | |
| | | | 200 | 100 | 400 | 300 | 600 | 500 | 700 | 650 |
| | | | Allowable Stress (psi) | | | | | | | |
| | | | 1670 | 1670 | 1550 | 1670 | 1350 | 1440 | 1290 | 1320 |
| 3" | 3.5 | 0.3 | 1844 | 1844 | 1844 | 1712 | 1491 | 1590 | 1458 | 1391 |
| | 3.5 | 0.216 | 1301 | 1301 | 1301 | 1208 | 1052 | 1122 | 1028 | 982 |
| | 3.5 | 0.438 | 2787 | 2787 | 2787 | 2587 | 2253 | 2403 | 2203 | 2103 |
| 4" | 4.5 | 0.337 | 1596 | 1596 | 1482 | 1596 | 1291 | 1377 | 1233 | 1262 |
| | 4.5 | 0.237 | 1102 | 1102 | 1023 | 1102 | 891 | 950 | 851 | 871 |
| | 4.5 | 0.531 | 2611 | 2611 | 2424 | 2611 | 2111 | 2552 | 2017 | 2064 |
| 5" | 5.563 | 0.375 | 1428 | 1428 | 1325 | 1428 | 1154 | 1231 | 1103 | 1129 |
| | 5.563 | 0.258 | 965 | 965 | 896 | 965 | 780 | 832 | 746 | 763 |
| | 5.563 | 0.625 | 2474 | 2474 | 2296 | 2474 | 2000 | 2133 | 1911 | 1955 |

| Pipe Size (in) | OD (in) | Wt (in) | Pressure Rating (psig) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SS Pipe Thickness | | | Temperature °F | | | | | | | |
| | | | 200 | 100 | 400 | 300 | 600 | 500 | 700 | 650 |
| | | | Allowable Stress (psi) | | | | | | | |
| | | | 1670 | 1670 | 1550 | 1670 | 1350 | 1440 | 1290 | 1320 |
| 6" | 6.625 | 0.432 | 1379 | 1379 | 1280 | 1379 | 1115 | 1189 | 1065 | 1090 |
| | 6.625 | 0.28 | 877 | 877 | 814 | 877 | 709 | 756 | 677 | 693 |
| | 6.625 | 0.719 | 2382 | 2382 | 2211 | 2382 | 1925 | 2054 | 1840 | 1883 |
| 8" | 8.625 | 0.5 | 1218 | 1218 | 1131 | 1218 | 985 | 1050 | 941 | 963 |
| | 8.625 | 0.322 | 771 | 771 | 716 | 771 | 623 | 665 | 596 | 610 |
| | 8.625 | 0.906 | 2298 | 2298 | 2133 | 2298 | 1858 | 1982 | 1775 | 1817 |
| 10" | 10.75 | 0.594 | 1159 | 1159 | 1075 | 1159 | 937 | 999 | 895 | 916 |
| | 10.75 | 0.365 | 699 | 699 | 649 | 699 | 565 | 603 | 540 | 553 |
| | 10.75 | 1.125 | 2289 | 2289 | 2124 | 2289 | 1850 | 1974 | 1768 | 1809 |

# Schedule 40 Stainless Steel Pipe Dimensions




| NPS | Wall Thickness | OD | Weight (kg/m) |
|---|---|---|---|
| Schedule 40 stainless steel pipe dimensions mm | | | |
| (inches) | (mm) | (mm) | |
| 1" DN25 | 3.38 | 33.4 | 2.52 |
| ¾" DN20 | 2.87 | 26.7 | 1.7 |
| ½" DN15 | 2.77 | 21.3 | 1.27 |
| 1 ¼" DN32 | 3.56 | 42.2 | 3.41 |
| 2"DN50 | 3.91 | 60.3 | 5.47 |
| 1 ½" DN40 | 3.68 | 48.3 | 4.08 |
| 2 ½" DN65 | 5.16 | 73 | 8.69 |
| 3 ½" | 5.74 | 101.6 | 13.66 |

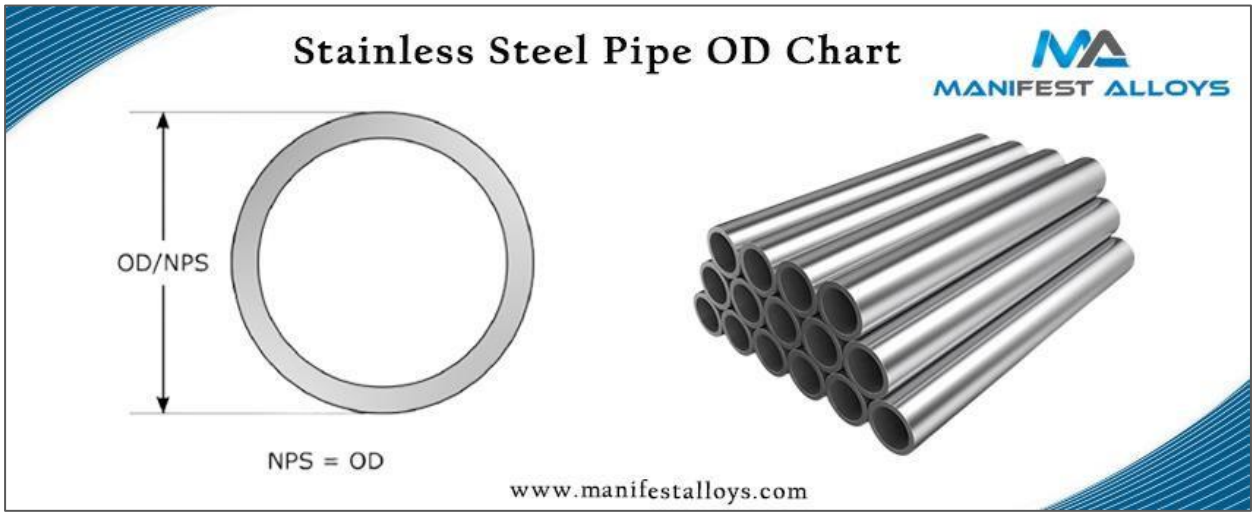
| NPS | Wall Thickness | OD | Weight (kg/m) |
|---|---|---|---|
| SS Pipe Dimensions | | | |
| (inches) | (mm) | (mm) | |
| 3" DN80 | 5.49 | 88.9 | 11.36 |
| 4" DN100 | 6.02 | 114.3 | 16.18 |
| 6" DN150 | 7.11 | 168.3 | 28.44 |
| 5" DN125 | 6.55 | 141.3 | 21.91 |
| 8" DN200 | 8.18 | 219.1 | 42.82 |
| 12" DN300 | 9.53 | 323.9 | 74.28 |
| 10" DN250 | 9.27 | 273.1 | 60.7 |

# SS Tube Thickness Chart in mm

| Tube OD (mm) | Tube OD (inch) | Wt (mm) | Wt (inch) | BWG |
|---|---|---|---|---|
| 4.78 | 0.188 | 0.89 | 0.035 | 20 |
| 12.7 | 0.5 | 0.89 | 0.035 | 20 |
| | | 1.25 | 0.049 | 18 |
| | | 1.65 | 0.65 | 16 |
| 6.35 | 0.25 | 0.51 | 0.02 | |
| | | 0.71 | 0.028 | 22 |
| | | 0.89 | 0.035 | 20 |
| | | 1.25 | 0.049 | 18 |
| | | 1.65 | 0.065 | 16 |
| 7.95 | 0.313 | 0.89 | 0.035 | 20 |
| | | 1.25 | 0.049 | 18 |
| 31.75 | 1.25 | 2.11 | 0.083 | 14 |
| | | 3.05 | 0.12 | 11 |
| | | 1.65 | 0.065 | 16 |
| 9.53 | 0.375 | 0.89 | 0.035 | 20 |
| | | 0.71 | 0.028 | 22 |
| | | 1.65 | 0.065 | 16 |
| | | 1.25 | 0.049 | 18 |
| 15.88 | 0.625 | 1.25 | 0.049 | 18 |

| Tube OD (inch) | Tube OD (mm) | Wt (inch) | Wt (mm) | BWG |
|---|---|---|---|---|
| 1.875 | 47.63 | 0.065 | 1.65 | 16 |
| 1.375 | 34.93 | 0.035 | 0.89 | 20 |
| 1.5 | 38.1 | 0.083 | 2.11 | 14 |
| | | 0.065 | 1.65 | 16 |
| | | 0.049 | 1.25 | 18 |
| | | 0.12 | 3.05 | 11 |
| 1.75 | 44.45 | 0.065 | 1.65 | 16 |
| | | 0.035 | 0.89 | 20 |
| | | 0.083 | 2.11 | 14 |
| 1.125 | 28.58 | 0.065 | 1.65 | 16 |
| 2 | 50.8 | 0.065 | 1.65 | 16 |
| | | 0.049 | 1.25 | 18 |
| | | 0.12 | 3.05 | 11 |
| | | 0.083 | 2.11 | 14 |
| 2.125 | 53.98 | 0.065 | 1.65 | 16 |
| 2.25 | 57.15 | 0.12 | 3.05 | 11 |
| | | 0.065 | 1.65 | 16 |
| | | 0.083 | 2.11 | 14 |
| 2.5 | 63.5 | 0.083 | 2.11 | 14 |
| | | 0.065 | 1.65 | 16 |
| 4.25 | 108 | 0.12 | 3.05 | 11 |
| 3 | 76.2 | 0.065 | 1.65 | 16 |
| | | 0.049 | 1.25 | 18 |
| | | 0.12 | 3.05 | 11 |
| | | 0.083 | 2.11 | 14 |

# Stainless Steel Pipe OD Chart




| Pipe Sizes | | 10 | 8 | 11 | 9 | 12 |
|---|---|---|---|---|---|---|
| OD (inch) | | 10.75 | 8.625 | 11.75 | 9.625 | 12.75 |
| Pipe Schedule | 5s | .13415.19 | .1099.914 | | | .15621.07 |
| | 5 | .13415.19 | .1099.914 | | | .16522.18 |
| | 10s | .16518.65 | .14813.40 | | | .18024.16 |
| | 10 | .16518.70 | .14813.40 | | | .18024.20 |
| | 20 | .25028.04 | .25022.36 | | | .25033.38 |
| | 30 | .30734.24 | .27724.70 | | | .33043.77 |
| | 40s & Std. | .36540.48 | .32228.55 | .37545.55 | .34233.90 | .37549.56 |
| | 40 | .36540.48 | .32228.55 | | | .40653.53 |
| | 60 | .50054.74 | .40635.64 | | | .56273.16 |
| | 80s & E.H. | .50054.74 | .50043.39 | .50060.07 | .50048.72 | .50065.42 |
| | 80 | .59364.33 | .50043.39 | | | .68788.51 |
| | 100 | .71876.93 | .59350.87 | | | .843107.20 |
| | 120 | .84389.20 | .71860.93 | | | 1.000125.50 |
| | 140 | 1.000104.10 | .81267.76 | | | 1.125139.70 |

| Pipe Size | | 16 | 14 | 20 | 18 | 24 | 22 |
|---|---|---|---|---|---|---|---|
| OD (inch) | | 16 | 14 | 20 | 18 | 24 | 22 |
| Pipe Schedules | 5s | .165 27.90 | .156 23.07 | .188 39.78 | .165 31.43 | .218 55.37 | .188 43.80 |
| | 10s | .188 31.75 | .188 27.73 | .218 46.05 | .188 35.76 | .250 63.41 | .218 50.71 |
| | 20 | .312 52.36 | .312 45.38 | .375 78.60 | .312 59.03 | .375 94.62 | .375 86.61 |
| | 10 | .250 42.05 | .250 36.71 | .250 52.73 | .250 47.39 | .250 63.41 | .250 58.07 |
| | 30 | .375 62.58 | .375 54.57 | .500 104.10 | .437 82.06 | .562 140.80 | .500 114.81 |
| | 40 | .500 82.77 | .437 63.37 | .593 122.90 | .562 104.20 | .687 171.20 | |
| | 40s & Std. | .375 62.58 | .375 54.57 | .375 78.60 | .375 70.59 | .375 94.62 | .375 86.61 |
| | 60 | .656 107.50 | .593 84.91 | .812 166.40 | .750 138.20 | .968 238.10 | .875 197.41 |

# Stainless Steel 304 Pipe Weight Chart

| Weight & Thickness Of SS Guage Pipes | | | | | | |
|---|---|---|---|---|---|---|
| | DIMENSION | Size | 1/2" | 5/8" | 3/4" | 1" |
| 10 SWG | | OD | 12.7 | 15.875 | 19.05 | 25.4 |
| 12 SWG | 3.2 mm | Weight/MTR | 0.754 | 1.006 | 1.258 | 1.762 |
| 16 SWG | 2.1 mm | | 0.552 | 0.718 | 0.883 | 1.214 |
| 14 SWG | 2.6 mm | | 0.651 | 0.856 | 1.061 | 1.47 |
| 18 SWG | 1.65 mm | | 0.452 | 0.582 | 0.712 | 0.972 |
| | 1.0 mm | | 0.29 | 0.369 | 0.448 | 0.605 |
| 19 SWG | 1.2 mm | | 0.342 | 0.437 | 0.531 | 0.72 |
| 10 SWG | | OD | 31.75 | 38.1 | 50.8 | 63.5 |
| 12 SWG | 3.2 mm | Weight/MTR | 2.266 | 2.77 | 3.778 | 4.786 |
| 16 SWG | 2.1 mm | | 1.544 | 1.875 | 2.537 | 3.198 |
| 14 SWG | 2.6 mm | | 1.88 | 2.289 | 3.108 | 3.928 |
| 18 SWG | 1.65 mm | | 1.232 | 1.492 | 2.012 | 2.531 |
| | 1.0 mm | | 0.763 | 0.92 | 1.235 | 1.55 |
| 19 SWG | 1.2 mm | | 0.909 | 1.098 | 1.476 | 1.854 |
| Check above ss pipe weight chart before buying the material | | | | | | |

# Stainless Steel Tube Tolerance Chart

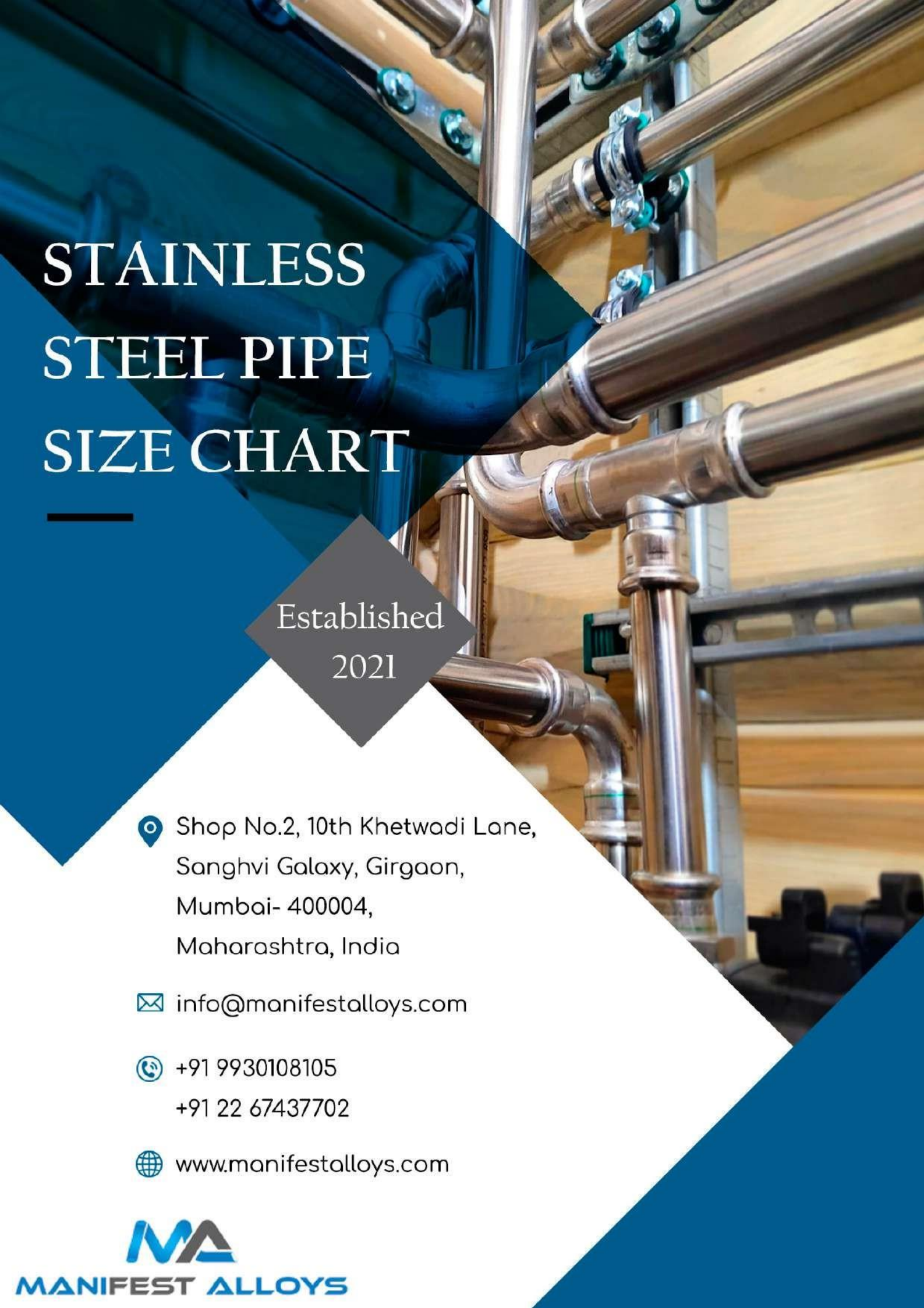
| Specification | | | ASTM-A213 | Heat Exchanger | Seamless Boiler | Superheater and |
|---|---|---|---|---|---|---|
| Allowable OD | Variation (mm) | Nomi | Under 25.4 | 50.8-63.5 excl | 25.4-38.1 incl | 38.1-50.8 excl |
| | | Over | 0.1016 | 0.254 | 0.1524 | 0.2032 |
| | | Under | 0.1016 | 0.254 | 0.1524 | 0.2032 |
| Allowable Wall Thck | | %Ove | 20 | 22 | 22 | 22 |
| | Thickness Variation | %Und | 0 | 0 | 0 | 0 |
| Exact Length | Tolerance in mm | Over | 3.175 | 4.46 | 3.175 | 3.176 |
| | | Under | 0 | 0 | 0 | 0 |
| Testing | | Flatteing Test | Tension Test | | Flare Test | Hardness Test |

| Specification | | | Tubes | | ASTM-A249 | |
|---|---|---|---|---|---|---|
| Allowable OD | Variation in mm | Nominal Diameter | 63.5 to 76.2<br>excl | 76.2 to 101.6 incl | 25.4 to 38.1<br>incl | Under 25.4 |
| | | Over | 0.3048 | 0.381 | 0.1524 | 0.1016 |
| | | Under | 0.3048 | 0.381 | 0.1524 | 0.1016 |
| Allowable Wall Thck | | %Over | 22 | 22 | 10 | 10 |
| | Thickness Variation | %Under | 0 | 0 | -10 | -10 |
| Exact Length | Tolerance in mm | Over | 4.76 | 4.76 | 3.175 | 3.175 |
| | | Under | 0 | 0 | 0 | 0 |
| Testing | | Flattening Test | 100% Hydrostatic test | Refer to ASTM A-450 | Tension Test | |

| Specification | | | Welded Boiler | Super Heat | Exchang-er tube | Condens Tubes | |
|---|---|---|---|---|---|---|---|
| Allowable OD | Variation in mm | Nominal Diameter | 38.1-50.8 Excl | 50.0-63.5 excl | 63.5-76.2 excl | 76.2-101.6 incl | |
| | | Over | 0.2032 | 0.254 | 0.3848 | 0.381 | |
| | | Under | 0.2032 | 0.254 | 0.3048 | 0.381 | Minimum Wall tubes, + 18% 0 available, On request |
| Allowable Wall Thck | | %Over | 10 | 10 | 10 | 10 | |
| | Thick Variation | %Under | -10 | -10 | -10 | -10 | |
| | | Under | 0 | 0 | 0 | 0 | |

## SS Pipe HSN Code

| Product | HSN Code |
|---|---|
| SS Pipe | 73041110 |



# STAINLESS STEEL PIPE SIZE CHART

Established
2021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