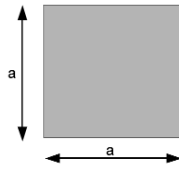


Square Bar



Metric Units

| Designation | | Area of Section A | Second Moment of Area I | Radius of Gyration r | Elastic Modulus Z | Plastic Modulus S |
|-------------|------------------|-------------------|-------------------------|----------------------|-------------------|-------------------|
| Size a | Mass per Metre | | | | | |
| mm | kg/m lb/ft | mm ² | mm ⁴ | mm | mm ³ | mm ³ |
| 9 | 0.64 0.43 | 81 | 547 | 2.60 | 122 | 182 |
| 10 | 0.79 0.53 | 100 | 833 | 2.89 | 167 | 250 |
| 12 | 1.13 0.76 | 144 | 1728 | 3.46 | 288 | 432 |
| 16 | 2.01 1.35 | 256 | 5461 | 4.62 | 683 | 1024 |
| 18 | 2.54 1.71 | 324 | 8748 | 5.20 | 972 | 1458 |
| 19 | 2.83 1.90 | 361 | 10860 | 5.48 | 1143 | 1715 |
| 20 | 3.14 2.11 | 400 | 13333 | 5.77 | 1333 | 2000 |
| 22 | 3.80 2.55 | 484 | 19521 | 6.35 | 1775 | 2662 |
| 25 | 4.91 3.30 | 625 | 32552 | 7.22 | 2604 | 3906 |
| 28 | 6.15 4.14 | 784 | 51221 | 8.08 | 3659 | 5488 |
| 30 | 7.07 4.75 | 900 | 67500 | 8.66 | 4500 | 6750 |
| 32 | 8.04 5.40 | 1024 | 87381 | 9.24 | 5461 | 8192 |
| 35 | 9.62 6.46 | 1225 | 125052 | 10.1 | 7146 | 10719 |
| 36 | 10.17 6.84 | 1296 | 139968 | 10.4 | 7776 | 11664 |
| 38 | 11.34 7.62 | 1444 | 173761 | 11.0 | 9145 | 13718 |
| 44 | 15.20 10.21 | 1936 | 312341 | 12.7 | 14197 | 21296 |
| 50 | 19.63 13.19 | 2500 | 520833 | 14.4 | 20833 | 31250 |
| 55 | 23.75 15.96 | 3025 | 762552 | 15.9 | 27729 | 41594 |
| 60 | 28.26 18.99 | 3600 | 1080000 | 17.3 | 36000 | 54000 |
| 65 | 33.17 22.29 | 4225 | 1487552 | 18.8 | 45771 | 68656 |
| 70 | 38.47 25.85 | 4900 | 2000833 | 20.2 | 57167 | 85750 |
| 75 | 44.16 29.67 | 5625 | 2636719 | 21.7 | 70313 | 105469 |
| 80 | 50.24 33.76 | 6400 | 3413333 | 23.1 | 85333 | 128000 |
| 85 | 56.72 38.11 | 7225 | 4350052 | 24.5 | 102354 | 153531 |
| 90 | 63.59 42.73 | 8100 | 5467500 | 26.0 | 121500 | 182250 |
| 95 | 70.85 47.61 | 9025 | 6787552 | 27.4 | 142896 | 214344 |
| 100 | 78.50 52.75 | 10000 | 8333333 | 28.9 | 166667 | 250000 |
| 110 | 94.99 63.83 | 12100 | 12200833 | 31.8 | 221833 | 332750 |
| 120 | 113.04 75.96 | 14400 | 17280000 | 34.6 | 288000 | 432000 |
| 130 | 132.67 89.15 | 16900 | 23800833 | 37.5 | 366167 | 549250 |
| 140 | 153.86 103.39 | 19600 | 32013333 | 40.4 | 457333 | 686000 |
| 150 | 176.63 118.69 | 22500 | 42187500 | 43.3 | 562500 | 843750 |
| 160 | 200.96 135.05 | 25600 | 54613333 | 46.2 | 682667 | 1024000 |