# SQUARE HOLLOW SECTION

## Product Range

12mm X 12mm to 300mm X 300mm

## Thickness

1mm to 12mm

**SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2**

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | |
|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ |
| | | | $cm^4$ | $cm^4$ | cm | cm |
| 12X12X1.6 | 0.47 | 0.60 | 0.10 | 0.10 | 0.41 | 0.41 |
| 12X12X2.0 | 0.55 | 0.70 | 0.11 | 0.11 | 0.40 | 0.40 |
| 15X15X1.6 | 0.62 | 0.79 | 0.23 | 0.23 | 0.54 | 0.54 |
| 15X15X2.0 | 0.74 | 0.94 | 0.25 | 0.25 | 0.52 | 0.52 |
| 15X15X2.2 | 0.79 | 1.00 | 0.25 | 0.25 | 0.50 | 0.50 |
| 20X20X1.6 | 0.87 | 1.11 | 0.61 | 0.61 | 0.74 | 0.74 |
| 20X20X2.0 | 1.05 | 1.34 | 0.69 | 0.69 | 0.72 | 0.72 |
| 20X20X2.2 | 1.13 | 1.44 | 0.73 | 0.73 | 0.71 | 0.71 |
| 20X20X2.6 | 1.29 | 1.64 | 0.78 | 0.78 | 0.69 | 0.69 |
| 25X25X1.6 | 1.12 | 1.43 | 1.28 | 1.28 | 0.95 | 0.95 |
| 25X25X2.0 | 1.37 | 1.74 | 1.48 | 1.48 | 0.92 | 0.92 |
| 25X25X2.2 | 1.48 | 1.88 | 1.57 | 1.57 | 0.91 | 0.91 |
| 25X25X2.6 | 1.70 | 2.16 | 1.72 | 1.72 | 0.89 | 0.89 |
| 25X25X2.9 | 1.84 | 2.35 | 1.81 | 1.81 | 0.88 | 0.88 |
| 30X30X1.6 | 1.37 | 1.75 | 2.31 | 2.31 | 1.15 | 1.15 |
| 30X30X2.0 | 1.68 | 2.14 | 2.72 | 2.72 | 1.13 | 1.13 |
| 30X30X2.2 | 1.82 | 2.32 | 2.91 | 2.91 | 1.12 | 1.12 |
| 30X30X2.6 | 2.10 | 2.68 | 3.23 | 3.23 | 1.10 | 1.10 |
| 30X30X2.9 | 2.30 | 2.93 | 3.44 | 3.44 | 1.08 | 1.08 |
| 30X30X3.0 | 2.36 | 3.01 | 3.50 | 3.50 | 1.08 | 1.08 |
| 30X30X3.2 | 2.49 | 3.17 | 3.62 | 3.62 | 1.07 | 1.07 |
| 30X30X4.0 | 2.94 | 3.75 | 3.97 | 3.97 | 1.03 | 1.03 |
| 30X30X5.0 | 3.42 | 4.36 | 4.16 | 4.16 | 0.98 | 0.98 |
| 30X30X6.0 | 3.79 | 4.83 | 4.12 | 4.12 | 0.92 | 0.92 |
| 32X32X1.6 | 1.48 | 1.88 | 2.84 | 2.84 | 1.23 | 1.23 |
| 32X32X2.0 | 1.81 | 2.30 | 3.36 | 3.36 | 1.21 | 1.21 |
| 32X32X2.2 | 1.96 | 2.50 | 3.60 | 3.60 | 1.20 | 1.20 |
| 32X32X2.6 | 2.26 | 2.88 | 4.02 | 4.02 | 1.18 | 1.18 |
| 32X32X2.9 | 2.48 | 3.16 | 4.30 | 4.30 | 1.17 | 1.17 |
| 32X32X3.2 | 2.68 | 3.42 | 4.54 | 4.54 | 1.15 | 1.15 |
| 38X38X1.6 | 1.77 | 2.26 | 4.92 | 4.92 | 1.48 | 1.48 |

## SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | | Elastic Modulus | | Plastic Modulus | | Torsional Constants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ | $Z_{xx}$ | $Z_{yy}$ | $S_{xx}$ | $S_{yy}$ | J | C |
| | | | $cm^4$ | $cm^4$ | cm | cm | $cm^3$ | $cm^3$ | $cm^3$ | $cm^3$ | $cm^4$ | $cm^3$ |
| 40X40X3.0 | 3.30 | 4.21 | 9.32 | 9.32 | 1.49 | 1.49 | 4.66 | 4.66 | 5.72 | 5.72 | 14.72 | 6.53 |
| 40X40X3.2 | 3.49 | 4.45 | 9.72 | 9.72 | 1.48 | 1.48 | 4.86 | 4.86 | 6.01 | 6.01 | 15.19 | 6.73 |
| 40X40X3.6 | 3.85 | 4.91 | 10.45 | 10.45 | 1.46 | 1.46 | 5.23 | 5.23 | 6.53 | 6.53 | 15.86 | 7.02 |
| 40X40X4.0 | 4.20 | 5.35 | 11.07 | 11.07 | 1.44 | 1.44 | 5.54 | 5.54 | 7.01 | 7.01 | 16.15 | 7.19 |
| 40X40X5.0 | 4.99 | 6.36 | 12.26 | 12.26 | 1.39 | 1.39 | 6.13 | 6.13 | 8.02 | 8.02 | 15.15 | 6.99 |
| 40X40X6.0 | 5.68 | 7.23 | 12.94 | 12.94 | 1.34 | 1.34 | 6.47 | 6.47 | 8.76 | 8.76 | 11.76 | 5.89 |
| 40X40X8.0 | 6.74 | 8.59 | 13.03 | 13.03 | 1.23 | 1.23 | 6.52 | 6.52 | 9.50 | 9.50 | 2.17 | 1.81 |
| 45X45X1.6 | 2.13 | 2.71 | 8.41 | 8.41 | 1.76 | 1.76 | 3.74 | 3.74 | 4.38 | 4.38 | 13.47 | 5.54 |
| 45X45X2.0 | 2.62 | 3.34 | 10.12 | 10.12 | 1.74 | 1.74 | 4.50 | 4.50 | 5.32 | 5.32 | 16.31 | 6.61 |
| 45X45X2.2 | 2.86 | 3.64 | 10.92 | 10.92 | 1.73 | 1.73 | 4.86 | 4.86 | 5.78 | 5.78 | 17.63 | 7.10 |
| 45X45X2.6 | 3.33 | 4.24 | 12.42 | 12.42 | 1.71 | 1.71 | 5.52 | 5.52 | 6.64 | 6.64 | 20.01 | 7.98 |
| 45X45X2.9 | 3.67 | 4.67 | 13.45 | 13.45 | 1.70 | 1.70 | 5.98 | 5.98 | 7.25 | 7.25 | 21.57 | 8.55 |
| 45X45X3.2 | 4.00 | 5.09 | 14.41 | 14.41 | 1.68 | 1.68 | 6.41 | 6.41 | 7.83 | 7.83 | 22.91 | 9.05 |
| 45X45X3.6 | 4.42 | 5.63 | 15.57 | 15.57 | 1.66 | 1.66 | 6.92 | 6.92 | 8.55 | 8.55 | 24.33 | 9.58 |
| 45X45X4.0 | 4.83 | 6.15 | 16.61 | 16.61 | 1.64 | 1.64 | 7.39 | 7.39 | 9.22 | 9.22 | 25.31 | 9.96 |
| 50X50X1.6 | 2.38 | 3.03 | 11.71 | 11.71 | 1.97 | 1.97 | 4.69 | 4.69 | 5.46 | 5.46 | 18.68 | 6.95 |
| 50X50X2.0 | 2.94 | 3.74 | 14.15 | 14.15 | 1.95 | 1.95 | 5.66 | 5.66 | 6.66 | 6.66 | 22.75 | 8.35 |
| 50X50X2.2 | 3.20 | 4.08 | 15.30 | 15.30 | 1.94 | 1.94 | 6.12 | 6.12 | 7.24 | 7.24 | 24.66 | 9.00 |
| 50X50X2.6 | 3.74 | 4.76 | 17.47 | 17.47 | 1.92 | 1.92 | 6.99 | 6.99 | 8.34 | 8.34 | 28.19 | 10.18 |
| 50X50X2.9 | 4.12 | 5.25 | 18.98 | 18.98 | 1.90 | 1.90 | 7.60 | 7.60 | 9.13 | 9.13 | 30.58 | 10.98 |
| 50X50X3.0 | 4.25 | 5.41 | 19.47 | 19.47 | 1.90 | 1.90 | 7.79 | 7.79 | 9.39 | 9.39 | 31.33 | 11.22 |
| 50X50X3.2 | 4.50 | 5.73 | 20.40 | 20.40 | 1.89 | 1.89 | 8.16 | 8.16 | 9.89 | 9.89 | 32.72 | 11.68 |
| 50X50X3.6 | 4.98 | 6.35 | 22.15 | 22.15 | 1.87 | 1.87 | 8.86 | 8.86 | 10.84 | 10.84 | 35.16 | 12.49 |
| 50X50X4.0 | 5.46 | 6.95 | 23.74 | 23.74 | 1.85 | 1.85 | 9.50 | 9.50 | 11.73 | 11.73 | 37.09 | 13.14 |
| 50X50X4.5 | 6.02 | 7.67 | 25.50 | 25.50 | 1.82 | 1.82 | 10.20 | 10.20 | 12.76 | 12.76 | 38.72 | 13.72 |
| 50X50X5.0 | 6.56 | 8.36 | 27.04 | 27.04 | 1.80 | 1.80 | 10.82 | 10.82 | 13.70 | 13.70 | 39.43 | 14.04 |
| 50X50X6.0 | 7.56 | 9.63 | 29.45 | 29.45 | 1.75 | 1.75 | 11.78 | 11.78 | 15.32 | 15.32 | 37.97 | 13.86 |
| 50X50X8.0 | 9.26 | 11.79 | 31.94 | 31.94 | 1.65 | 1.65 | 12.78 | 12.78 | 17.55 | 17.55 | 24.10 | 10.19 |
| 60X60X2.0 | 3.56 | 4.54 | 25.14 | 25.14 | 2.35 | 2.35 | 8.38 | 8.38 | 9.79 | 9.79 | 40.19 | 12.44 |
| 60X60X2.2 | 3.89 | 4.96 | 27.27 | 27.27 | 2.34 | 2.34 | 9.09 | 9.09 | 10.66 | 10.66 | 43.74 | 13.46 |
| 60X60X2.6 | 4.55 | 5.80 | 31.33 | 31.33 | 2.32 | 2.32 | 10.45 | 10.45 | 12.34 | 12.34 | 50.48 | 15.37 |

## SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | |
|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ |
| | | | $cm^4$ | $cm^4$ | cm | cm |
| 72X72X2.6 | 5.53 | 7.04 | 55.82 | 55.82 | 2.82 | 2.82 |
| 72X72X2.9 | 6.12 | 7.80 | 61.18 | 61.18 | 2.80 | 2.80 |
| 72X72X3.2 | 6.70 | 8.54 | 66.32 | 66.32 | 2.79 | 2.79 |
| 72X72X3.6 | 7.47 | 9.52 | 72.86 | 72.86 | 2.77 | 2.77 |
| 72X72X4.0 | 8.22 | 10.47 | 79.03 | 79.03 | 2.75 | 2.75 |
| 72X72X4.5 | 9.13 | 11.63 | 86.24 | 86.24 | 2.72 | 2.72 |
| 72X72X5.0 | 10.02 | 12.76 | 92.91 | 92.91 | 2.70 | 2.70 |
| 72X72X6.0 | 11.70 | 14.91 | 104.71 | 104.71 | 2.65 | 2.65 |
| 72X72X8.0 | 14.78 | 18.83 | 122.48 | 122.48 | 2.55 | 2.55 |
| 75X75X2.0 | 4.51 | 5.74 | 50.49 | 50.49 | 2.97 | 2.97 |
| 75X75X2.2 | 4.93 | 6.28 | 54.93 | 54.93 | 2.96 | 2.96 |
| 75X75X2.6 | 5.78 | 7.36 | 63.48 | 63.48 | 2.94 | 2.94 |
| 75X75X2.9 | 6.40 | 8.15 | 69.62 | 69.62 | 2.92 | 2.92 |
| 75X75X3.0 | 6.60 | 8.41 | 71.62 | 71.62 | 2.92 | 2.92 |
| 75X75X3.2 | 7.01 | 8.93 | 75.53 | 75.53 | 2.91 | 2.91 |
| 75X75X3.6 | 7.81 | 9.95 | 83.06 | 83.06 | 2.89 | 2.89 |
| 75X75X4.0 | 8.60 | 10.95 | 90.19 | 90.19 | 2.87 | 2.87 |
| 75X75X4.5 | 9.55 | 12.17 | 98.55 | 98.55 | 2.85 | 2.85 |
| 75X75X5.0 | 10.49 | 13.36 | 106.33 | 106.33 | 2.82 | 2.82 |
| 75X75X6.0 | 12.27 | 15.63 | 120.16 | 120.16 | 2.77 | 2.77 |
| 80X80X2.0 | 4.82 | 6.14 | 61.70 | 61.70 | 3.17 | 3.17 |
| 80X80X2.2 | 5.28 | 6.72 | 67.17 | 67.17 | 3.16 | 3.16 |
| 80X80X2.6 | 6.19 | 7.88 | 77.75 | 77.75 | 3.14 | 3.14 |
| 80X80X2.9 | 6.85 | 8.73 | 85.36 | 85.36 | 3.13 | 3.13 |
| 80X80X3.2 | 7.51 | 9.57 | 92.71 | 92.71 | 3.11 | 3.11 |
| 80X80X3.6 | 8.38 | 10.67 | 102.11 | 102.11 | 3.09 | 3.09 |
| 80X80X4.0 | 9.22 | 11.75 | 111.04 | 111.04 | 3.07 | 3.07 |
| 80X80X4.5 | 10.26 | 13.07 | 121.58 | 121.58 | 3.05 | 3.05 |
| 80X80X5.0 | 11.27 | 14.36 | 131.44 | 131.44 | 3.03 | 3.03 |
| 80X80X6.0 | 13.21 | 16.83 | 149.18 | 149.18 | 2.98 | 2.98 |
| 91.5X91.5X2.0 | 5.54 | 7.06 | 93.52 | 93.52 | 3.64 | 3.64 |

## SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | | Elastic Modulus | | Plastic Modulus | | Torsional Constants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ | $Z_{xx}$ | $Z_{yy}$ | $S_{xx}$ | $S_{yy}$ | J | C |
| | | | $cm^4$ | $cm^4$ | cm | cm | $cm^3$ | $cm^3$ | $cm^3$ | $cm^3$ | $cm^4$ | $cm^3$ |
| 100X100X2.6 | 7.82 | 9.96 | 156.01 | 156.01 | 3.96 | 3.96 | 31.21 | 31.21 | 36.15 | 36.15 | 247.10 | 46.50 |
| 100X100X2.9 | 8.67 | 11.05 | 171.86 | 171.86 | 3.94 | 3.94 | 34.38 | 34.38 | 39.95 | 39.95 | 273.33 | 51.14 |
| 100X100X3.0 | 8.96 | 11.41 | 177.05 | 177.05 | 3.94 | 3.94 | 35.41 | 35.41 | 41.21 | 41.21 | 281.94 | 52.65 |
| 100X100X3.2 | 9.52 | 12.13 | 187.28 | 187.28 | 3.93 | 3.93 | 37.46 | 37.46 | 43.69 | 43.69 | 298.95 | 55.63 |
| 100X100X3.6 | 10.64 | 13.55 | 207.19 | 207.19 | 3.91 | 3.91 | 41.44 | 41.44 | 48.56 | 48.56 | 332.08 | 61.37 |
| 100X100X4.0 | 11.74 | 14.95 | 226.35 | 226.35 | 3.89 | 3.89 | 45.27 | 45.27 | 53.30 | 53.30 | 363.96 | 66.82 |
| 100X100X4.5 | 13.09 | 16.67 | 249.29 | 249.29 | 3.87 | 3.87 | 49.86 | 49.86 | 59.04 | 59.04 | 401.89 | 73.25 |
| 100X100X5.0 | 14.41 | 18.36 | 271.10 | 271.10 | 3.84 | 3.84 | 54.22 | 54.22 | 64.59 | 64.59 | 437.53 | 79.22 |
| 100X100X6.0 | 16.98 | 21.63 | 311.47 | 311.47 | 3.79 | 3.79 | 62.30 | 62.30 | 75.10 | 75.10 | 501.21 | 89.77 |
| 100X100X8.0 | 21.82 | 27.79 | 379.77 | 379.77 | 3.70 | 3.70 | 75.96 | 75.96 | 93.83 | 93.83 | 593.41 | 105.11 |
| 110X110X2.6 | 8.64 | 11.00 | 209.69 | 209.69 | 4.37 | 4.37 | 38.13 | 38.13 | 44.05 | 44.05 | 330.92 | 56.88 |
| 110X110X2.9 | 9.58 | 12.21 | 231.26 | 231.26 | 4.35 | 4.35 | 42.05 | 42.05 | 48.73 | 48.73 | 366.47 | 62.65 |
| 110X110X3.2 | 10.53 | 13.41 | 252.31 | 252.31 | 4.34 | 4.34 | 45.88 | 45.88 | 53.33 | 53.33 | 401.33 | 68.25 |
| 110X110X3.6 | 11.77 | 14.99 | 279.58 | 279.58 | 4.32 | 4.32 | 50.84 | 50.84 | 59.34 | 59.34 | 446.64 | 75.46 |
| 110X110X4.0 | 12.99 | 16.55 | 305.94 | 305.94 | 4.30 | 4.30 | 55.63 | 55.63 | 65.21 | 65.21 | 490.52 | 82.35 |
| 110X110X4.5 | 14.50 | 18.47 | 337.63 | 337.63 | 4.28 | 4.28 | 61.39 | 61.39 | 72.35 | 72.35 | 543.21 | 90.54 |
| 110X110X5.0 | 15.98 | 20.36 | 367.95 | 367.95 | 4.25 | 4.25 | 66.90 | 66.90 | 79.27 | 79.27 | 593.30 | 98.24 |
| 110X110X6.0 | 18.86 | 24.03 | 424.57 | 424.57 | 4.20 | 4.20 | 77.20 | 77.20 | 92.46 | 92.46 | 684.89 | 112.13 |
| 110X110X8.0 | 24.33 | 30.99 | 522.39 | 522.39 | 4.11 | 4.11 | 94.98 | 94.98 | 116.29 | 116.29 | 828.32 | 133.69 |
| 120X120X2.6 | 9.45 | 12.04 | 274.44 | 274.44 | 4.77 | 4.77 | 45.74 | 45.74 | 52.73 | 52.73 | 431.73 | 68.30 |
| 120X120X2.9 | 10.50 | 13.37 | 302.98 | 302.98 | 4.76 | 4.76 | 50.50 | 50.50 | 58.37 | 58.37 | 478.54 | 75.32 |
| 120X120X3.2 | 11.53 | 14.69 | 330.88 | 330.88 | 4.75 | 4.75 | 55.15 | 55.15 | 63.93 | 63.93 | 524.57 | 82.16 |
| 120X120X3.6 | 12.90 | 16.43 | 367.12 | 367.12 | 4.73 | 4.73 | 61.19 | 61.19 | 71.21 | 71.21 | 584.63 | 90.98 |
| 120X120X4.0 | 14.25 | 18.15 | 402.28 | 402.28 | 4.71 | 4.71 | 67.05 | 67.05 | 78.33 | 78.33 | 643.08 | 99.48 |
| 120X120X4.5 | 15.91 | 20.27 | 444.70 | 444.70 | 4.68 | 4.68 | 74.12 | 74.12 | 87.01 | 87.01 | 713.71 | 109.63 |
| 120X120X5.0 | 17.55 | 22.36 | 485.47 | 485.47 | 4.66 | 4.66 | 80.92 | 80.92 | 95.45 | 95.45 | 781.43 | 119.26 |
| 120X120X6.0 | 20.75 | 26.43 | 562.16 | 562.16 | 4.61 | 4.61 | 93.70 | 93.70 | 111.61 | 111.61 | 907.27 | 136.89 |
| 120X120X8.0 | 26.84 | 34.19 | 696.82 | 696.82 | 4.51 | 4.51 | 116.14 | 116.14 | 141.14 | 141.14 | 1114.50 | 165.47 |
| 125X125X2.6 | 9.86 | 12.56 | 311.30 | 311.30 | 4.98 | 4.98 | 49.81 | 49.81 | 57.36 | 57.36 | 488.99 | 74.40 |
| 125X125X2.9 | 10.95 | 13.95 | 343.81 | 343.81 | 4.96 | 4.96 | 55.01 | 55.01 | 63.52 | 63.52 | 542.22 | 82.09 |
| 125X125X3.2 | 12.03 | 15.33 | 375.64 | 375.64 | 4.95 | 4.95 | 60.11 | 60.11 | 69.59 | 69.59 | 594.61 | 89.59 |

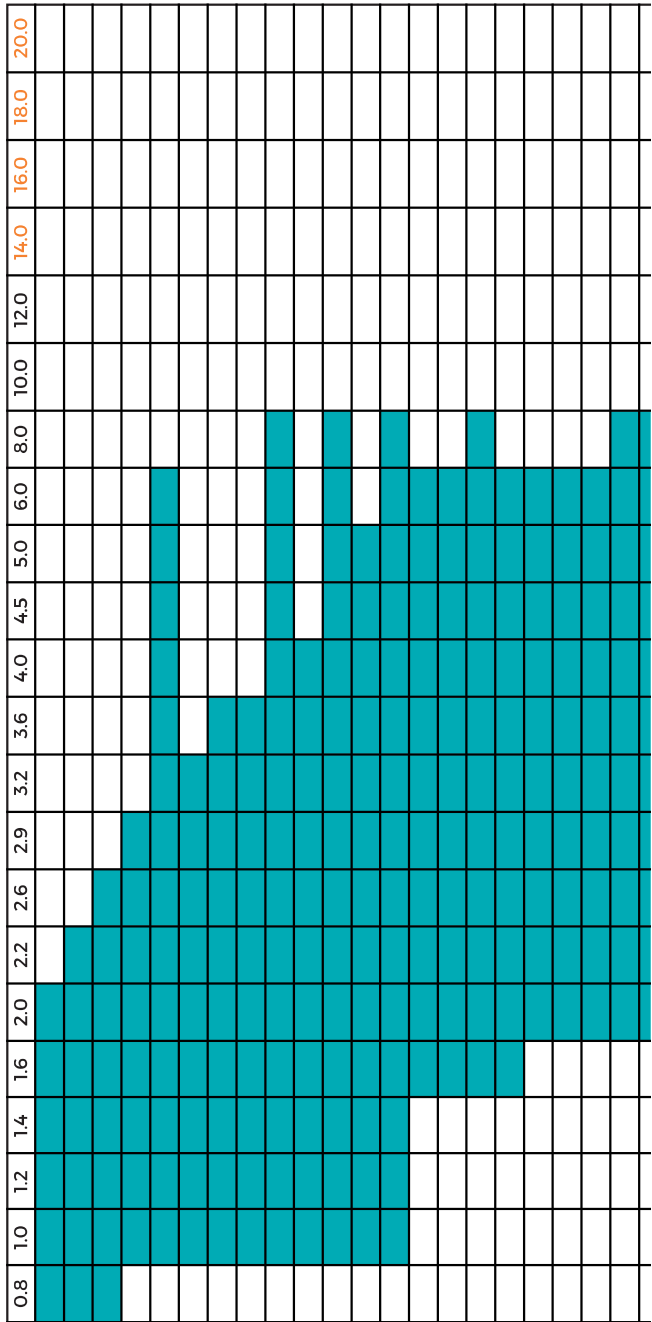
## SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | |
|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ |
| | | | $cm^4$ | $cm^4$ | cm | cm |
| 140X140X5.0 | 20.69 | 26.36 | 790.56 | 790.56 | 5.48 | 5.48 |
| 140X140X6.0 | 24.52 | 31.23 | 920.43 | 920.43 | 5.43 | 5.43 |
| 140X140X8.0 | 31.86 | 40.59 | 1153.92 | 1153.92 | 5.33 | 5.33 |
| 150X150X2.9 | 13.23 | 16.85 | 603.62 | 603.62 | 5.99 | 5.99 |
| 150X150X3.2 | 14.55 | 18.53 | 660.62 | 660.62 | 5.97 | 5.97 |
| 150X150X3.6 | 16.29 | 20.75 | 735.09 | 735.09 | 5.95 | 5.95 |
| 150X150X4.0 | 18.02 | 22.95 | 807.82 | 807.82 | 5.93 | 5.93 |
| 150X150X4.5 | 20.15 | 25.67 | 896.30 | 896.30 | 5.91 | 5.91 |
| 150X150X5.0 | 22.26 | 28.36 | 982.12 | 982.12 | 5.88 | 5.88 |
| 150X150X6.0 | 26.40 | 33.63 | 1145.91 | 1145.91 | 5.84 | 5.84 |
| 150X150X8.0 | 34.38 | 43.79 | 1443.00 | 1443.00 | 5.74 | 5.74 |
| 150X150X10.0 | 41.93 | 53.42 | 1701.21 | 1701.21 | 5.64 | 5.64 |
| 175X175X4.0 | 21.16 | 26.95 | 1303.12 | 1303.12 | 6.95 | 6.95 |
| 175X175X4.5 | 23.68 | 30.17 | 1448.83 | 1448.83 | 6.93 | 6.93 |
| 175X175X5.0 | 26.19 | 33.36 | 1590.86 | 1590.86 | 6.91 | 6.91 |
| 175X175X6.0 | 31.11 | 39.63 | 1864.03 | 1864.03 | 6.86 | 6.86 |
| 175X175X8.0 | 40.66 | 51.79 | 2367.89 | 2367.89 | 6.76 | 6.76 |
| 175X175X10.0 | 49.78 | 63.42 | 2817.20 | 2817.20 | 6.66 | 6.66 |
| 180X180X4.0 | 21.78 | 27.75 | 1421.74 | 1421.74 | 7.16 | 7.16 |
| 180X180X4.5 | 24.39 | 31.07 | 1581.26 | 1581.26 | 7.13 | 7.13 |
| 180X180X5.0 | 26.97 | 34.36 | 1736.87 | 1736.87 | 7.11 | 7.11 |
| 180X180X6.0 | 32.05 | 40.83 | 2036.52 | 2036.52 | 7.06 | 7.06 |
| 180X180X8.0 | 41.91 | 53.39 | 2590.73 | 2590.73 | 6.97 | 6.97 |
| 180X180X10.0 | 51.35 | 65.42 | 3086.93 | 3086.93 | 6.87 | 6.87 |
| 200X200X4.0 | 24.30 | 30.95 | 1968.13 | 1968.13 | 7.97 | 7.97 |
| 200X200X4.5 | 27.22 | 34.67 | 2191.54 | 2191.54 | 7.95 | 7.95 |
| 200X200X5.0 | 30.11 | 38.36 | 2410.09 | 2410.09 | 7.93 | 7.93 |
| 200X200X6.0 | 35.82 | 45.63 | 2832.75 | 2832.75 | 7.88 | 7.88 |
| 200X200X8.0 | 46.94 | 59.79 | 3621.63 | 3621.63 | 7.78 | 7.78 |
| 200X200X10.0 | 57.63 | 73.42 | 4337.63 | 4337.63 | 7.69 | 7.69 |
| 200X200X12.0 | 67.93 | 86.53 | 4983.59 | 4983.59 | 7.59 | 7.59 |

## SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | | Elastic Modulus | | Plastic Modulus | | Torsional Constants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ | $Z_{xx}$ | $Z_{yy}$ | $S_{xx}$ | $S_{yy}$ | J | C |
| | | | $cm^4$ | $cm^4$ | cm | cm | $cm^3$ | $cm^3$ | $cm^3$ | $cm^3$ | $cm^4$ | $cm^3$ |
| 225X225X12.0 | 77.35 | 98.53 | 7305.19 | 7305.19 | 8.61 | 8.61 | 649.36 | 649.36 | 776.62 | 776.62 | 11787.46 | 944.78 |
| 250X250X5.0 | 37.96 | 48.36 | 4805.01 | 4805.01 | 9.97 | 9.97 | 384.41 | 384.41 | 442.26 | 442.26 | 7537.06 | 574.38 |
| 250X250X6.0 | 45.24 | 57.63 | 5672.00 | 5672.00 | 9.92 | 9.92 | 453.76 | 453.76 | 524.45 | 524.45 | 8956.46 | 676.88 |
| 250X250X8.0 | 59.50 | 75.79 | 7315.65 | 7315.65 | 9.82 | 9.82 | 585.26 | 585.26 | 682.67 | 682.67 | 11677.65 | 869.16 |
| 250X250X10.0 | 73.33 | 93.42 | 8841.86 | 8841.86 | 9.73 | 9.73 | 707.35 | 707.35 | 832.79 | 832.79 | 14217.20 | 1044.13 |
| 250X250X12.0 | 86.77 | 110.53 | 10254.21 | 10254.21 | 9.63 | 9.63 | 820.34 | 820.34 | 974.94 | 974.94 | 16545.51 | 1201.32 |
| 275X275X5.0 | 41.89 | 53.36 | 6443.20 | 6443.20 | 10.99 | 10.99 | 468.60 | 468.60 | 538.02 | 538.02 | 10073.49 | 700.64 |
| 275X275X6.0 | 49.95 | 63.63 | 7617.53 | 7617.53 | 10.94 | 10.94 | 554.01 | 554.01 | 638.71 | 638.71 | 11986.16 | 827.20 |
| 275X275X8.0 | 65.78 | 83.79 | 9855.94 | 9855.94 | 10.85 | 10.85 | 716.80 | 716.80 | 833.31 | 833.31 | 15676.96 | 1066.43 |
| 275X275X10.0 | 81.18 | 103.42 | 11950.66 | 11950.66 | 10.75 | 10.75 | 869.14 | 869.14 | 1018.95 | 1018.95 | 19161.08 | 1286.77 |
| 275X275X12.0 | 96.19 | 122.53 | 13905.64 | 13905.64 | 10.65 | 10.65 | 1011.32 | 1011.32 | 1195.75 | 1195.75 | 22405.82 | 1487.80 |
| 300X300X6.0 | 54.66 | 69.63 | 9963.67 | 9963.67 | 11.96 | 11.96 | 664.25 | 664.25 | 764.23 | 764.23 | 15628.84 | 992.52 |
| 300X300X8.0 | 72.06 | 91.79 | 12925.07 | 12925.07 | 11.87 | 11.87 | 861.68 | 861.68 | 998.95 | 998.95 | 20491.03 | 1283.68 |
| 300X300X10.0 | 89.03 | 113.42 | 15713.90 | 15713.90 | 11.77 | 11.77 | 1047.60 | 1047.60 | 1223.86 | 1223.86 | 25120.26 | 1554.40 |
| 300X300X12.0 | 105.61 | 134.53 | 18334.49 | 18334.49 | 11.67 | 11.67 | 1222.30 | 1222.30 | 1439.07 | 1439.07 | 29480.79 | 1804.25 |
| 200X200X14.0 | 77.80 | 99.11 | 5562.26 | 5562.26 | 7.49 | 7.49 | 556.23 | 556.23 | 678.74 | 678.74 | 8857.57 | 787.40 |
| 250X250X14.0 | 99.78 | 127.11 | 11556.23 | 11556.23 | 9.53 | 9.53 | 924.50 | 924.50 | 1109.22 | 1109.22 | 18633.47 | 1340.24 |
| 300X300X14.0 | 121.76 | 155.11 | 20791.11 | 20791.11 | 11.58 | 11.58 | 1386.08 | 1386.08 | 1644.70 | 1644.70 | 33537.11 | 2032.77 |
| 300X300X16.0 | 137.51 | 175.17 | 23088.02 | 23088.02 | 11.48 | 11.48 | 1539.21 | 1539.21 | 1840.89 | 1840.89 | 37254.21 | 2239.48 |
| 300X300X18.0 | 152.84 | 194.70 | 25229.41 | 25229.41 | 11.38 | 11.38 | 1681.97 | 1681.97 | 2027.73 | 2027.73 | 40597.89 | 2423.87 |
| 300X300X20.0 | 167.75 | 213.70 | 27219.42 | 27219.42 | 11.29 | 11.29 | 1814.63 | 1814.63 | 2205.36 | 2205.36 | 43535.12 | 2585.43 |
| 350X350X6.0 | 64.08 | 81.63 | 16007.75 | 16007.75 | 14.00 | 14.00 | 914.73 | 914.73 | 1049.01 | 1049.01 | 24978.15 | 1368.15 |
| 350X350X8.0 | 84.62 | 107.79 | 20849.89 | 20849.89 | 13.91 | 13.91 | 1191.43 | 1191.43 | 1375.23 | 1375.23 | 32863.45 | 1778.17 |
| 350X350X10.0 | 104.73 | 133.42 | 25453.75 | 25453.75 | 13.81 | 13.81 | 1454.50 | 1454.50 | 1689.92 | 1689.92 | 40459.45 | 2164.61 |
| 350X350X12.0 | 124.45 | 158.53 | 29824.41 | 29824.41 | 13.72 | 13.72 | 1704.26 | 1704.26 | 1993.20 | 1993.20 | 47724.46 | 2527.06 |
| 350X350X14.0 | 143.74 | 183.11 | 33966.90 | 33966.90 | 13.62 | 13.62 | 1940.97 | 1940.97 | 2285.19 | 2285.19 | 54616.80 | 2865.08 |
| 350X350X16.0 | 162.63 | 207.17 | 37886.23 | 37886.23 | 13.52 | 13.52 | 2164.93 | 2164.93 | 2566.00 | 2566.00 | 61095.07 | 3178.23 |
| 350X350X18.0 | 181.10 | 230.70 | 41587.35 | 41587.35 | 13.43 | 13.43 | 2376.42 | 2376.42 | 2835.77 | 2835.77 | 67118.34 | 3466.01 |
| 350X350X20.0 | 199.15 | 253.70 | 45075.16 | 45075.16 | 13.33 | 13.33 | 2575.73 | 2575.73 | 3094.60 | 3094.60 | 72646.48 | 3727.92 |
| 400X400X6.0 | 73.50 | 93.63 | 24104.23 | 24104.23 | 16.04 | 16.04 | 1205.22 | 1205.22 | 1378.79 | 1378.79 | 37454.37 | 1803.77 |
| 400X400X8.0 | 97.18 | 123.79 | 31490.11 | 31490.11 | 15.95 | 15.95 | 1574.51 | 1574.51 | 1811.51 | 1811.51 | 49394.86 | 2352.64 |
| 400X400X10.0 | 120.43 | 153.42 | 38561.41 | 38561.41 | 15.85 | 15.85 | 1928.08 | 1928.08 | 2230.98 | 2230.98 | 60984.67 | 2874.77 |
| 400X400X12.0 | 143.29 | 182.53 | 45323.97 | 45323.97 | 15.76 | 15.76 | 2266.20 | 2266.20 | 2637.33 | 2637.33 | 72176.20 | 3369.78 |
| 400X400X14.0 | 165.72 | 211.11 | 51783.59 | 51783.59 | 15.66 | 15.66 | 2589.18 | 2589.18 | 3030.67 | 3030.67 | 82921.80 | 3837.25 |
| 400X400X16.0 | 187.75 | 239.17 | 57946.03 | 57946.03 | 15.57 | 15.57 | 2897.31 | 2897.31 | 3411.12 | 3411.12 | 93173.85 | 4276.74 |
| 400X400X18.0 | 209.36 | 266.70 | 63816.99 | 63816.99 | 15.47 | 15.47 | 3190.85 | 3190.85 | 3778.81 | 3778.81 | 102885.06 | 4687.80 |
| 400X400X20.0 | 230.55 | 293.70 | 69402.13 | 69402.13 | 15.37 | 15.37 | 3470.11 | 3470.11 | 4133.85 | 4133.85 | 112008.61 | 5069.94 |
| 450X450X8.0 | 109.74 | 139.79 | 45245.73 | 45245.73 | 17.99 | 17.99 | 2010.93 | 2010.93 | 2307.79 | 2307.79 | 70685.24 | 3007.10 |

## SHS (Square Hollow Section) Size Range



# RECTANGULAR HOLLOW SECTION

**Product Range**

26mm X 13mm to 400mm X 200mm

**Thickness**

1mm to 12mm

**RECTANGULAR HOLLOW SECTION (RHS) IS : 492**

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | |
|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ |
| | | | $cm^4$ | $cm^4$ | cm | cm |
| 26X13X1.6 | 0.85 | 1.08 | 0.83 | 0.27 | 0.88 | 0.50 |
| 26X13X2.0 | 1.02 | 1.30 | 0.94 | 0.30 | 0.85 | 0.48 |
| 30X20X1.6 | 1.12 | 1.43 | 1.66 | 0.88 | 1.08 | 0.78 |
| 30X20X2.0 | 1.37 | 1.74 | 1.94 | 1.02 | 1.06 | 0.77 |
| 30X20X2.2 | 1.48 | 1.88 | 2.05 | 1.08 | 1.04 | 0.76 |
| 40X10X1.6 | 1.12 | 1.43 | 2.25 | 0.22 | 1.25 | 0.39 |
| 40X10X2.0 | 1.37 | 1.74 | 2.60 | 0.25 | 1.22 | 0.38 |
| 40X20X1.6 | 1.37 | 1.75 | 3.43 | 1.15 | 1.40 | 0.81 |
| 40X20X2.0 | 1.68 | 2.14 | 4.05 | 1.34 | 1.38 | 0.79 |
| 40X20X2.2 | 1.82 | 2.32 | 4.32 | 1.43 | 1.36 | 0.79 |
| 40X20X2.6 | 2.10 | 2.68 | 4.81 | 1.57 | 1.34 | 0.77 |
| 40X25X1.6 | 1.50 | 1.91 | 4.02 | 1.93 | 1.45 | 1.01 |
| 40X25X2.0 | 1.84 | 2.34 | 4.77 | 2.28 | 1.43 | 0.99 |
| 40X25X2.2 | 1.99 | 2.54 | 5.11 | 2.43 | 1.42 | 0.98 |
| 40X25X2.6 | 2.31 | 2.94 | 5.72 | 2.71 | 1.39 | 0.96 |
| 50X25X1.6 | 1.75 | 2.23 | 7.02 | 2.37 | 1.77 | 1.03 |
| 50X25X2.0 | 2.15 | 2.74 | 8.38 | 2.81 | 1.75 | 1.01 |
| 50X25X2.2 | 2.34 | 2.98 | 9.01 | 3.01 | 1.74 | 1.01 |
| 50X25X2.6 | 2.72 | 3.46 | 10.16 | 3.36 | 1.71 | 0.99 |
| 50X30X1.6 | 1.88 | 2.39 | 7.96 | 3.60 | 1.82 | 1.23 |
| 50X30X2.0 | 2.31 | 2.94 | 9.54 | 4.29 | 1.80 | 1.21 |
| 50X30X2.2 | 2.51 | 3.20 | 10.27 | 4.61 | 1.79 | 1.20 |
| 50X30X2.6 | 2.92 | 3.72 | 11.62 | 5.19 | 1.77 | 1.18 |
| 50X30X2.9 | 3.21 | 4.09 | 12.54 | 5.58 | 1.75 | 1.17 |
| 60X40X1.6 | 2.38 | 3.03 | 15.22 | 8.16 | 2.24 | 1.64 |
| 60X40X2.0 | 2.94 | 3.74 | 18.41 | 9.83 | 2.22 | 1.62 |
| 60X40X2.2 | 3.20 | 4.08 | 19.92 | 10.62 | 2.21 | 1.61 |
| 60X40X2.6 | 3.74 | 4.76 | 22.76 | 12.09 | 2.19 | 1.59 |
| 60X40X2.9 | 4.12 | 5.25 | 24.74 | 13.11 | 2.17 | 1.58 |
| 60X40X3.0 | 4.25 | 5.41 | 25.38 | 13.44 | 2.17 | 1.58 |
| 60X40X3.2 | 4.50 | 5.73 | 26.61 | 14.07 | 2.15 | 1.57 |

## RECTANGULAR HOLLOW SECTION (RHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | | Elastic Modulus | | Plastic Modulus | | Torsional Constants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ | $Z_{xx}$ | $Z_{yy}$ | $S_{xx}$ | $S_{yy}$ | J | C |
| | | | $cm^4$ | $cm^4$ | cm | cm | $cm^3$ | $cm^3$ | $cm^3$ | $cm^3$ | $cm^4$ | $cm^3$ |
| 75X25X3.0 | 4.25 | 5.41 | 32.72 | 5.49 | 2.46 | 1.01 | 8.73 | 4.40 | 11.69 | 5.21 | 15.44 | 7.55 |
| 75X50X1.6 | 3.01 | 3.83 | 30.51 | 16.39 | 2.82 | 2.07 | 8.14 | 6.56 | 9.75 | 7.40 | 34.07 | 10.70 |
| 75X50X2.0 | 3.72 | 4.74 | 37.16 | 19.91 | 2.80 | 2.05 | 9.91 | 7.97 | 11.96 | 9.06 | 41.75 | 12.96 |
| 75X50X2.2 | 4.07 | 5.18 | 40.35 | 21.59 | 2.79 | 2.04 | 10.76 | 8.64 | 13.03 | 9.87 | 45.43 | 14.02 |
| 75X50X2.6 | 4.76 | 6.06 | 46.44 | 24.78 | 2.77 | 2.02 | 12.39 | 9.92 | 15.10 | 11.43 | 52.42 | 16.02 |
| 75X50X2.9 | 5.26 | 6.70 | 50.77 | 27.04 | 2.75 | 2.01 | 13.54 | 10.82 | 16.60 | 12.55 | 57.31 | 17.40 |
| 75X50X3.2 | 5.75 | 7.33 | 54.90 | 29.18 | 2.74 | 2.00 | 14.64 | 11.68 | 18.04 | 13.63 | 61.88 | 18.69 |
| 75X50X3.6 | 6.40 | 8.15 | 60.10 | 31.86 | 2.72 | 1.98 | 16.03 | 12.75 | 19.90 | 15.01 | 67.44 | 20.23 |
| 75X50X4.0 | 7.03 | 8.95 | 64.96 | 34.34 | 2.69 | 1.96 | 17.33 | 13.74 | 21.66 | 16.33 | 72.33 | 21.59 |
| 80X40X1.6 | 2.88 | 3.67 | 30.71 | 10.52 | 2.89 | 1.69 | 7.68 | 5.26 | 9.47 | 5.87 | 25.48 | 8.99 |
| 80X40X2.0 | 3.56 | 4.54 | 37.36 | 12.72 | 2.87 | 1.67 | 9.34 | 6.36 | 11.61 | 7.17 | 31.08 | 10.84 |
| 80X40X2.2 | 3.89 | 4.96 | 40.53 | 13.76 | 2.86 | 1.67 | 10.14 | 6.88 | 12.64 | 7.80 | 33.72 | 11.71 |
| 80X40X2.6 | 4.55 | 5.80 | 46.58 | 15.74 | 2.83 | 1.65 | 11.65 | 7.87 | 14.64 | 9.01 | 38.68 | 13.31 |
| 80X40X2.9 | 5.03 | 6.41 | 50.87 | 17.11 | 2.82 | 1.63 | 12.72 | 8.56 | 16.07 | 9.88 | 42.09 | 14.40 |
| 80X40X3.0 | 5.19 | 6.61 | 52.25 | 17.56 | 2.81 | 1.63 | 13.07 | 8.78 | 16.54 | 10.16 | 43.16 | 14.74 |
| 80X40X3.2 | 5.50 | 7.01 | 54.94 | 18.41 | 2.80 | 1.62 | 13.74 | 9.21 | 17.46 | 10.72 | 45.21 | 15.39 |
| 80X40X3.6 | 6.12 | 7.79 | 60.05 | 20.02 | 2.78 | 1.60 | 15.02 | 10.01 | 19.23 | 11.77 | 48.88 | 16.56 |
| 80X40X4.0 | 6.71 | 8.55 | 64.79 | 21.49 | 2.75 | 1.59 | 16.20 | 10.75 | 20.91 | 12.77 | 51.97 | 17.55 |
| 96X48X1.6 | 3.49 | 4.44 | 54.03 | 18.57 | 3.49 | 2.05 | 11.26 | 7.74 | 13.82 | 8.58 | 44.69 | 13.26 |
| 96X48X2.0 | 4.32 | 5.50 | 66.04 | 22.59 | 3.47 | 2.03 | 13.76 | 9.42 | 17.00 | 10.52 | 54.83 | 16.09 |
| 96X48X2.2 | 4.73 | 6.02 | 71.82 | 24.51 | 3.45 | 2.02 | 14.97 | 10.22 | 18.54 | 11.47 | 59.70 | 17.44 |
| 96X48X2.6 | 5.53 | 7.04 | 82.96 | 28.19 | 3.43 | 2.00 | 17.29 | 11.75 | 21.55 | 13.30 | 69.03 | 19.99 |
| 96X48X2.9 | 6.12 | 7.80 | 90.94 | 30.79 | 3.41 | 1.99 | 18.95 | 12.83 | 23.73 | 14.63 | 75.62 | 21.77 |
| 96X48X3.2 | 6.70 | 8.54 | 98.61 | 33.28 | 3.40 | 1.97 | 20.55 | 13.87 | 25.85 | 15.91 | 81.83 | 23.43 |
| 96X48X3.6 | 7.47 | 9.52 | 108.35 | 36.40 | 3.37 | 1.96 | 22.58 | 15.17 | 28.58 | 17.56 | 89.50 | 25.47 |
| 96X48X4.0 | 8.22 | 10.47 | 117.54 | 39.32 | 3.35 | 1.94 | 24.49 | 16.39 | 31.21 | 19.14 | 96.41 | 27.30 |
| 96X48X4.5 | 9.13 | 11.63 | 128.30 | 42.68 | 3.32 | 1.92 | 26.73 | 17.79 | 34.34 | 21.01 | 103.91 | 29.30 |
| 100X50X1.6 | 3.63 | 4.63 | 61.29 | 21.08 | 3.64 | 2.13 | 12.26 | 8.44 | 15.04 | 9.33 | 50.65 | 14.45 |
| 100X50X2.0 | 4.51 | 5.74 | 74.98 | 25.67 | 3.61 | 2.11 | 15.00 | 10.27 | 18.50 | 11.46 | 62.21 | 17.57 |
| 100X50X2.2 | 4.93 | 6.28 | 81.59 | 27.87 | 3.60 | 2.11 | 16.32 | 11.15 | 20.19 | 12.50 | 67.79 | 19.05 |
| 100X50X2.6 | 5.78 | 7.36 | 94.33 | 32.09 | 3.58 | 2.09 | 18.87 | 12.84 | 23.48 | 14.51 | 78.48 | 21.86 |

## RECTANGULAR HOLLOW SECTION (RHS) IS : 492

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | |
|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ |
| | | | $cm^4$ | $cm^4$ | cm | cm |
| 120X60X2.9 | 7.76 | 9.89 | 183.65 | 62.60 | 4.31 | 2.52 |
| 120X60X3.2 | 8.52 | 10.85 | 199.88 | 67.95 | 4.29 | 2.50 |
| 120X60X3.6 | 9.51 | 12.11 | 220.75 | 74.77 | 4.27 | 2.48 |
| 120X60X4.0 | 10.48 | 13.35 | 240.74 | 81.25 | 4.25 | 2.47 |
| 120X60X4.5 | 11.67 | 14.87 | 264.52 | 88.88 | 4.22 | 2.44 |
| 120X60X5.0 | 12.84 | 16.36 | 286.97 | 95.99 | 4.19 | 2.42 |
| 120X60X6.0 | 15.10 | 19.23 | 328.01 | 108.77 | 4.13 | 2.38 |
| 150X25X1.6 | 4.26 | 5.43 | 124.73 | 6.76 | 4.79 | 1.12 |
| 150X25X2.0 | 5.29 | 6.74 | 152.77 | 8.11 | 4.76 | 1.10 |
| 150X25X2.2 | 5.79 | 7.38 | 166.32 | 8.74 | 4.75 | 1.09 |
| 150X25X2.6 | 6.80 | 8.66 | 192.52 | 9.91 | 4.71 | 1.07 |
| 150X50X1.6 | 4.89 | 6.23 | 168.78 | 30.45 | 5.20 | 2.21 |
| 150X50X2.0 | 6.08 | 7.74 | 207.53 | 37.20 | 5.18 | 2.19 |
| 150X50X2.2 | 6.66 | 8.48 | 226.40 | 40.45 | 5.17 | 2.18 |
| 150X50X2.6 | 7.82 | 9.96 | 263.14 | 46.71 | 5.14 | 2.17 |
| 150X50X2.9 | 8.67 | 11.05 | 289.82 | 51.19 | 5.12 | 2.15 |
| 150X50X3.0 | 8.96 | 11.41 | 298.55 | 52.65 | 5.12 | 2.15 |
| 150X50X3.2 | 9.52 | 12.13 | 315.76 | 55.50 | 5.10 | 2.14 |
| 150X50X3.6 | 10.64 | 13.55 | 349.22 | 60.98 | 5.08 | 2.12 |
| 150X50X4.0 | 11.74 | 14.95 | 381.39 | 66.16 | 5.05 | 2.10 |
| 150X50X4.5 | 13.09 | 16.67 | 419.82 | 72.23 | 5.02 | 2.08 |
| 150X50X5.0 | 14.41 | 18.36 | 456.29 | 77.87 | 4.99 | 2.06 |
| 150X75X2.6 | 8.84 | 11.26 | 333.75 | 114.61 | 5.44 | 3.19 |
| 150X75X2.9 | 9.81 | 12.50 | 368.27 | 126.19 | 5.43 | 3.18 |
| 150X75X3.2 | 10.78 | 13.73 | 401.98 | 137.44 | 5.41 | 3.16 |
| 150X75X3.6 | 12.05 | 15.35 | 445.69 | 151.94 | 5.39 | 3.15 |
| 150X75X4.0 | 13.31 | 16.95 | 488.00 | 165.88 | 5.37 | 3.13 |
| 150X75X5.0 | 16.38 | 20.86 | 587.74 | 198.36 | 5.31 | 3.08 |
| 150X75X6.0 | 19.33 | 24.63 | 679.08 | 227.56 | 5.25 | 3.04 |
| 150X100X2.9 | 10.95 | 13.95 | 446.72 | 240.24 | 5.66 | 4.15 |
| 150X100X3.2 | 12.03 | 15.33 | 488.19 | 262.27 | 5.64 | 4.14 |

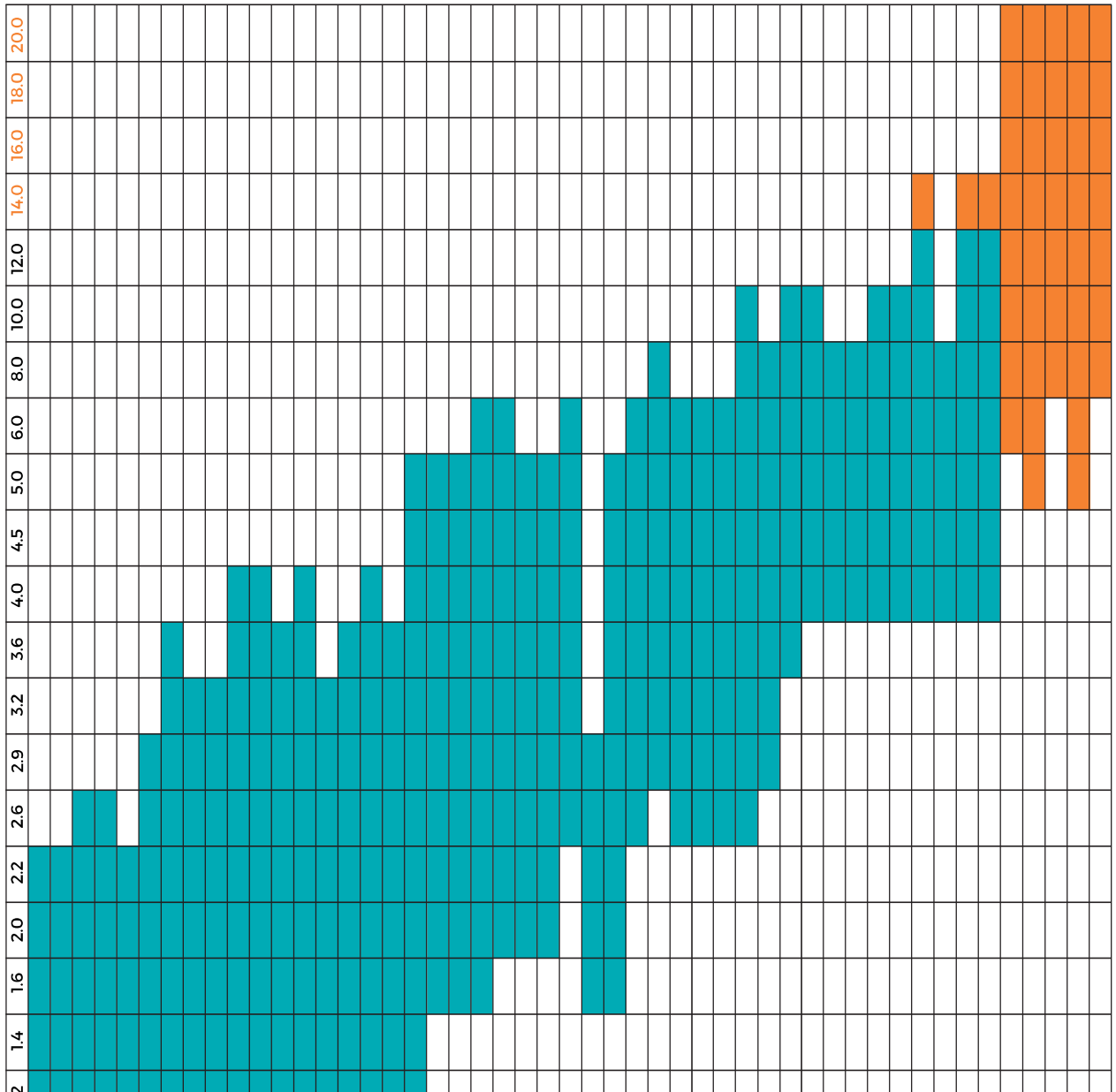
## RECTANGULAR HOLLOW SECTION (RHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | | Elastic Modulus | | Plastic Modulus | | Torsional Constants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ | $Z_{xx}$ | $Z_{yy}$ | $S_{xx}$ | $S_{yy}$ | J | C |
| | | | $cm^4$ | $cm^4$ | cm | cm | $cm^3$ | $cm^3$ | $cm^3$ | $cm^3$ | $cm^4$ | $cm^3$ |
| 200X100X8.0 | 34.38 | 43.79 | 2146.21 | 719.19 | 7.00 | 4.05 | 214.63 | 143.84 | 272.79 | 167.43 | 1765.96 | 240.49 |
| 240X120X4.0 | 21.78 | 27.75 | 2110.72 | 725.35 | 8.72 | 5.11 | 175.90 | 120.90 | 216.01 | 134.01 | 1745.55 | 207.11 |
| 240X120X5.0 | 26.97 | 34.36 | 2579.67 | 882.47 | 8.66 | 5.07 | 214.98 | 147.08 | 265.58 | 164.45 | 2141.72 | 251.48 |
| 240X120X6.0 | 32.05 | 40.83 | 3025.91 | 1030.45 | 8.61 | 5.02 | 252.16 | 171.75 | 313.41 | 193.69 | 2517.16 | 292.80 |
| 240X120X8.0 | 41.91 | 53.39 | 3851.84 | 1299.95 | 8.49 | 4.93 | 320.99 | 216.66 | 403.89 | 248.66 | 3196.64 | 366.11 |
| 250X100X4.0 | 21.16 | 26.95 | 2091.66 | 502.99 | 8.81 | 4.32 | 167.34 | 100.60 | 210.41 | 110.90 | 1335.40 | 177.41 |
| 250X100X5.0 | 26.19 | 33.36 | 2553.76 | 609.85 | 8.75 | 4.28 | 204.31 | 121.97 | 258.51 | 135.84 | 1631.59 | 214.59 |
| 250X100X6.0 | 31.11 | 39.63 | 2992.34 | 709.63 | 8.69 | 4.23 | 239.39 | 141.93 | 304.85 | 159.70 | 1908.64 | 248.83 |
| 250X100X8.0 | 40.66 | 51.79 | 3800.53 | 888.89 | 8.57 | 4.14 | 304.05 | 177.78 | 392.27 | 204.23 | 2397.53 | 308.31 |
| 250X150X4.0 | 24.30 | 30.95 | 2696.87 | 1234.24 | 9.33 | 6.31 | 215.75 | 164.57 | 259.61 | 183.27 | 2696.49 | 274.12 |
| 250X150X5.0 | 30.11 | 38.36 | 3304.18 | 1507.95 | 9.28 | 6.27 | 264.34 | 201.06 | 319.76 | 225.48 | 3322.96 | 334.43 |
| 250X150X6.0 | 35.82 | 45.63 | 3885.56 | 1768.35 | 9.23 | 6.23 | 310.85 | 235.78 | 378.05 | 266.28 | 3924.87 | 391.36 |
| 250X150X8.0 | 46.94 | 59.79 | 4972.24 | 2250.41 | 9.12 | 6.14 | 397.78 | 300.06 | 489.07 | 343.71 | 5043.97 | 494.90 |
| 250X150X10.0 | 57.63 | 73.42 | 5960.20 | 2682.88 | 9.01 | 6.04 | 476.82 | 357.72 | 592.79 | 415.67 | 6032.07 | 584.33 |
| 280X100X4.0 | 23.04 | 29.35 | 2785.31 | 558.32 | 9.74 | 4.36 | 198.96 | 111.67 | 252.63 | 122.42 | 1543.27 | 199.54 |
| 280X100X5.0 | 28.54 | 36.36 | 3406.60 | 677.60 | 9.68 | 4.32 | 243.33 | 135.52 | 310.80 | 150.09 | 1886.82 | 241.68 |
| 280X100X6.0 | 33.94 | 43.23 | 3998.76 | 789.27 | 9.62 | 4.27 | 285.63 | 157.86 | 367.00 | 176.62 | 2209.32 | 280.67 |
| 300X150X4.0 | 27.44 | 34.95 | 4196.67 | 1447.46 | 10.96 | 6.44 | 279.78 | 193.00 | 341.98 | 212.47 | 3455.16 | 330.97 |
| 300X150X5.0 | 34.04 | 43.36 | 5153.13 | 1770.87 | 10.90 | 6.39 | 343.55 | 236.12 | 421.90 | 261.73 | 4261.58 | 404.51 |
| 300X150X6.0 | 40.53 | 51.63 | 6073.51 | 2079.57 | 10.85 | 6.35 | 404.91 | 277.28 | 499.63 | 309.48 | 5039.24 | 474.31 |
| 300X150X8.0 | 53.22 | 67.79 | 7807.95 | 2654.12 | 10.73 | 6.26 | 520.53 | 353.89 | 648.55 | 400.51 | 6496.60 | 602.47 |
| 300X150X10.0 | 65.48 | 83.42 | 9403.90 | 3173.71 | 10.62 | 6.17 | 626.93 | 423.17 | 788.86 | 485.67 | 7804.31 | 715.07 |
| 300X200X4.0 | 30.58 | 38.95 | 5072.88 | 2736.56 | 11.41 | 8.38 | 338.20 | 273.66 | 401.18 | 304.84 | 5589.58 | 447.72 |
| 300X200X5.0 | 37.96 | 48.36 | 6241.05 | 3360.92 | 11.36 | 8.34 | 416.07 | 336.10 | 495.65 | 376.37 | 6919.17 | 549.43 |
| 300X200X6.0 | 45.24 | 57.63 | 7370.23 | 3962.19 | 11.31 | 8.29 | 491.35 | 396.22 | 587.83 | 446.07 | 8214.59 | 646.97 |
| 300X200X8.0 | 59.50 | 75.79 | 9513.66 | 5097.04 | 11.20 | 8.20 | 634.25 | 509.71 | 765.35 | 579.99 | 10688.71 | 829.36 |
| 300X200X10.0 | 73.33 | 93.42 | 11507.24 | 6144.30 | 11.10 | 8.11 | 767.15 | 614.43 | 933.86 | 706.73 | 12983.61 | 994.50 |
| 300X200X12.0 | 86.77 | 110.53 | 13354.97 | 7107.11 | 10.99 | 8.02 | 890.34 | 710.72 | 1093.47 | 826.41 | 15071.27 | 1141.95 |
| 350X250X5.0 | 45.81 | 58.36 | 10519.88 | 6305.84 | 13.43 | 10.39 | 601.14 | 504.47 | 709.04 | 564.76 | 12375.85 | 814.43 |
| 350X250X6.0 | 54.66 | 69.63 | 12457.31 | 7458.44 | 13.38 | 10.35 | 711.85 | 596.68 | 842.61 | 670.85 | 14733.26 | 962.58 |
| 350X250X8.0 | 72.06 | 91.79 | 16170.48 | 9659.06 | 13.27 | 10.26 | 924.03 | 772.73 | 1101.63 | 876.27 | 19295.99 | 1243.82 |

## RECTANGULAR HOLLOW SECTION (RHS) IS : 492
## UPCOMING S

| Dimension | Weight | Area | Moment of Inertia | | Radius of Gyration | |
|---|---|---|---|---|---|---|
| mm | kg/m | cm2 | $I_{xx}$ | $I_{yy}$ | $R_{xx}$ | $R_{yy}$ |
| | | | $cm^4$ | $cm^4$ | cm | cm |
| 400X300X10.0 | 104.73 | 133.42 | 30954.74 | 19920.57 | 15.23 | 12.22 |
| 400X300X12.0 | 124.45 | 158.53 | 36288.45 | 23314.01 | 15.13 | 12.13 |
| 400X300X14.0 | 143.74 | 183.11 | 41349.30 | 26521.41 | 15.03 | 12.03 |
| 400X300X16.0 | 162.63 | 207.17 | 46142.73 | 29547.33 | 14.92 | 11.94 |
| 400X300X18.0 | 181.10 | 230.70 | 50674.11 | 32396.29 | 14.82 | 11.85 |
| 400X300X20.0 | 199.15 | 253.70 | 54948.80 | 35072.75 | 14.72 | 11.76 |
| 500X200X6.0 | 64.08 | 81.63 | 25690.13 | 6221.07 | 17.74 | 8.73 |
| 500X200X8.0 | 84.62 | 107.79 | 33466.50 | 8047.87 | 17.62 | 8.64 |
| 500X200X10.0 | 104.73 | 133.42 | 40860.16 | 9757.63 | 17.50 | 8.55 |
| 500X200X12.0 | 124.45 | 158.53 | 47877.48 | 11354.15 | 17.38 | 8.46 |
| 500X200X14.0 | 143.74 | 183.11 | 54524.82 | 12841.14 | 17.26 | 8.37 |
| 500X200X16.0 | 162.63 | 207.17 | 60808.49 | 14222.30 | 17.13 | 8.29 |
| 500X200X18.0 | 181.10 | 230.70 | 66734.75 | 15501.28 | 17.01 | 8.20 |
| 500X200X20.0 | 199.15 | 253.70 | 72309.80 | 16681.66 | 16.88 | 8.11 |
| 500X300X8.0 | 97.18 | 123.79 | 43149.92 | 19747.90 | 18.67 | 12.63 |
| 500X300X10.0 | 120.43 | 153.42 | 52866.82 | 24127.24 | 18.56 | 12.54 |
| 500X300X12.0 | 143.29 | 182.53 | 62169.00 | 28293.53 | 18.46 | 12.45 |
| 500X300X14.0 | 165.72 | 211.11 | 71063.12 | 32251.70 | 18.35 | 12.36 |
| 500X300X16.0 | 187.75 | 239.17 | 79555.80 | 36006.64 | 18.24 | 12.27 |
| 500X300X18.0 | 209.36 | 266.70 | 87653.63 | 39563.17 | 18.13 | 12.18 |
| 500X300X20.0 | 230.55 | 293.70 | 95363.14 | 42926.09 | 18.02 | 12.09 |
| 600X200X6.0 | 73.50 | 93.63 | 40672.54 | 7350.51 | 20.84 | 8.86 |
| 600X200X8.0 | 97.18 | 123.79 | 53127.31 | 9523.28 | 20.72 | 8.77 |
| 600X200X10.0 | 120.43 | 153.42 | 65043.47 | 11564.30 | 20.59 | 8.68 |
| 600X200X12.0 | 143.29 | 182.53 | 76428.61 | 13477.67 | 20.46 | 8.59 |
| 600X200X14.0 | 165.72 | 211.11 | 87290.27 | 15267.43 | 20.33 | 8.50 |
| 600X200X16.0 | 187.75 | 239.17 | 97635.94 | 16937.61 | 20.20 | 8.42 |
| 600X200X18.0 | 209.36 | 266.70 | 107473.08 | 18492.16 | 20.07 | 8.33 |
| 600X200X20.0 | 230.55 | 293.70 | 116809.10 | 19935.00 | 19.94 | 8.24 |
| 600X300X8.0 | 109.74 | 139.79 | 67146.73 | 23159.31 | 21.92 | 12.87 |
| 600X300X10.0 | 136.13 | 173.42 | 82450.14 | 28333.90 | 21.80 | 12.78 |
| 600X300X12.0 | 162.13 | 206.53 | 97176.13 | 33273.05 | 21.69 | 12.69 |
| 600X300X14.0 | 187.70 | 239.11 | 111332.56 | 37981.99 | 21.58 | 12.60 |
| 600X300X16.0 | 212.87 | 271.17 | 124927.25 | 42465.94 | 21.46 | 12.51 |
| 600X300X18.0 | 237.62 | 302.70 | 137967.96 | 46730.05 | 21.35 | 12.42 |

## RHS (Rectangular Hollow Section ) Sizes




**TENSILE PROPERTIES OF STEEL TUBES FOR STRUCTURAL PURPOSE**
IS 1161:2014, TABLE 2, (Clauses 3.1 and 11.2)

| S. No. | Grade | Tensile Strength | Yield Strength | Elongation on Gauge Length |
|---|---|---|---|---|
| | | *Min* | *Min* | $5.65\sqrt{S_o}$ *Min* |
| | | MPa | MPa | Percent |
| 1 | YSt 210 | 330 | 210 | 20 |
| 2 | YSt 240 | 410 | 240 | 17 |
| 3 | YSt 310 | 450 | 310 | 14 |
| 4 | YSt 355 | 490 | 355 | 10 |

**CHEMICAL & MECHANICA**
IS 2062:2011 (Clauses 5, 8.1, 8.2, 10

| Grade Designation | Ladle Analysis, Percent, Max | | | | | Carbon Equivlent |
|---|---|---|---|---|---|---|
| | C | Mn | S | P | Si | (CE), Max |
| E 250 | 0.22 | 1.50 | 0.045 | 0.045 | 0.40 | 0.41 |
| E 300 | 0.20 | 1.50 | 0.045 | 0.045 | 0.45 | 0.44 |
| E 350 | 0.20 | 1.55 | 0.045 | 0.045 | 0.45 | 0.47 |
| E 410 | 0.20 | 1.60 | 0.045 | 0.045 | 0.45 | 0.50 |

**CHEMICAL COMPOSITION & MEC**
IS 10748:2004 Table 1 & 3 (Clauses

| Grade | Ladle Analysis, Percent, Max | | | | Carbon Equivlent |
|---|---|---|---|---|---|
| | C | Mn | S | P | (CE), Max |
| 1 | 0.10 | 0.50 | 0.040 | 0.040 | - |
| 2 | 0.12 | 0.60 | 0.040 | 0.040 | - |
| 3 | 0.16 | 1.20 | 0.040 | 0.040 | - |
| 4 | 0.20 | 1.30 | 0.040 | 0.040 | 0.45 |
| 5 | 0.25 | 1.30 | 0.040 | 0.040 | 0.45 |

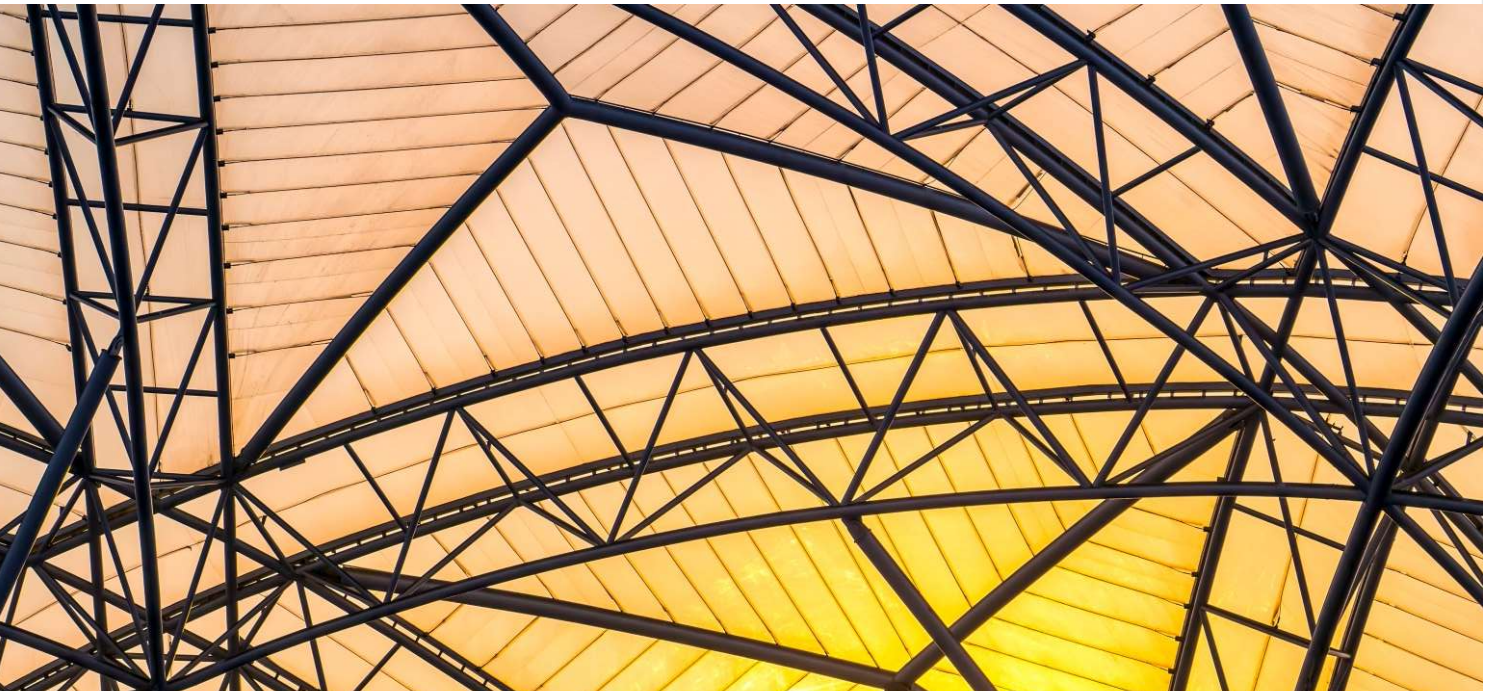
# CIRCULAR HOLLOW SECTION

**Product Range**

21.3mm to 355.6mm

**Thickness**

1mm to 10mm



## CIRCULAR HOLLOW SECTION FOR STRUCTURAL PU

| Outside Diameter | Thickness | Mass | Area of Cross Section | Internal Volume | Moment of Inertia | M |
|---|---|---|---|---|---|---|
| mm | mm | kg/m | $cm^2$ | $cm^3/m$ | $cm^4$ | |
| 21.30 | 1.60 | 0.78 | 0.99 | 257 | 0.48 | |
| 21.30 | 1.80 | 0.87 | 1.10 | 246 | 0.53 | |
| 21.30 | 2.00 | 0.95 | 1.21 | 235 | 0.57 | |
| 21.30 | 2.30 | 1.08 | 1.37 | 219 | 0.63 | |
| 21.30 | 2.60 | 1.20 | 1.53 | 204 | 0.68 | |
| 21.30 | 2.90 | 1.32 | 1.68 | 189 | 0.73 | |
| 26.90 | 1.60 | 1.00 | 1.27 | 441 | 1.02 | |
| 26.90 | 1.80 | 1.11 | 1.42 | 426 | 1.12 | |
| 26.90 | 2.00 | 1.23 | 1.56 | 412 | 1.22 | |
| 26.90 | 2.30 | 1.40 | 1.78 | 391 | 1.36 | |
| 26.90 | 2.60 | 1.56 | 1.98 | 370 | 1.48 | |
| 26.90 | 2.90 | 1.72 | 2.19 | 350 | 1.60 | |
| 33.70 | 1.60 | 1.27 | 1.61 | 731 | 2.08 | |
| 33.70 | 1.80 | 1.42 | 1.80 | 712 | 2.30 | |
| 33.70 | 2.00 | 1.56 | 1.99 | 693 | 2.51 | |
| 33.70 | 2.30 | 1.78 | 2.27 | 665 | 2.81 | |
| 33.70 | 2.60 | 1.99 | 2.54 | 638 | 3.09 | |
| 33.70 | 2.90 | 2.20 | 2.81 | 611 | 3.36 | |
| 33.70 | 3.20 | 2.41 | 3.07 | 585 | 3.60 | |
| 33.70 | 3.60 | 2.67 | 3.40 | 552 | 3.91 | |
| 38.10 | 3.00 | 2.60 | 3.31 | 809 | 5.13 | |
| 38.10 | 4.00 | 3.36 | 4.29 | 712 | 6.31 | |
| 38.10 | 5.00 | 4.08 | 5.20 | 620 | 7.28 | |
| 38.10 | 6.00 | 4.75 | 6.05 | 535 | 8.07 | |
| 38.10 | 8.00 | 5.94 | 7.56 | 384 | 9.17 | |
| 42.40 | 1.60 | 1.61 | 2.05 | 1207 | 4.27 | |
| 42.40 | 1.80 | 1.80 | 2.30 | 1182 | 4.74 | |
| 42.40 | 2.00 | 1.99 | 2.54 | 1158 | 5.19 | |
| 42.40 | 2.30 | 2.27 | 2.90 | 1122 | 5.84 | |
| 42.40 | 2.60 | 2.55 | 3.25 | 1087 | 6.46 | |
| 42.40 | 2.90 | 2.83 | 3.60 | 1052 | 7.06 | |
| 42.40 | 3.20 | 3.09 | 3.94 | 1018 | 7.62 | |
| 42.40 | 3.60 | 3.45 | 4.39 | 973 | 8.33 | |
| 48.30 | 1.60 | 1.84 | 2.35 | 1598 | 6.41 | |
| 48.30 | 1.80 | 2.06 | 2.63 | 1569 | 7.12 | |

## CIRCULAR HOLLOW SECTION FOR STRUCTURAL PURPOSES CONFORMING TO IS:1161 : 2014

| Outside Diameter | Thickness | Mass | Area of Cross Section | Internal Volume | Moment of Inertia | Elastic Modulus | Plastic Modulus | Radius of Gyration | Square of Radius of Gyration | Torsional Constant |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | mm | kg/m | $cm^2$ | $cm^3/m$ | $cm^4$ | $cm^3$ | $cm^3$ | cm | $cm^2$ | $cm^3$ |
| 60.30 | 1.60 | 2.32 | 2.95 | 2561 | 12.72 | 4.22 | 5.51 | 2.08 | 4.31 | 8.44 |
| 60.30 | 2.00 | 2.88 | 3.66 | 2489 | 15.58 | 5.17 | 6.80 | 2.06 | 4.25 | 10.34 |
| 60.30 | 2.30 | 3.29 | 4.19 | 2437 | 17.65 | 5.85 | 7.74 | 2.05 | 4.21 | 11.71 |
| 60.30 | 2.60 | 3.70 | 4.71 | 2384 | 19.65 | 6.52 | 8.66 | 2.04 | 4.17 | 13.04 |
| 60.30 | 2.90 | 4.11 | 5.23 | 2333 | 21.59 | 7.16 | 9.56 | 2.03 | 4.13 | 14.32 |
| 60.30 | 3.00 | 4.24 | 5.40 | 2316 | 22.22 | 7.37 | 9.86 | 2.03 | 4.12 | 14.74 |
| 60.30 | 3.20 | 4.51 | 5.74 | 2282 | 23.47 | 7.78 | 10.44 | 2.02 | 4.09 | 15.57 |
| 60.30 | 3.60 | 5.03 | 6.41 | 2215 | 25.87 | 8.58 | 11.59 | 2.01 | 4.03 | 17.16 |
| 60.30 | 4.00 | 5.55 | 7.07 | 2148 | 28.17 | 9.34 | 12.70 | 2.00 | 3.98 | 18.69 |
| 60.30 | 4.50 | 6.19 | 7.89 | 2067 | 30.90 | 10.25 | 14.04 | 1.98 | 3.92 | 20.50 |
| 60.30 | 5.00 | 6.82 | 8.69 | 1987 | 33.48 | 11.10 | 15.33 | 1.96 | 3.85 | 22.21 |
| 60.30 | 6.00 | 8.04 | 10.24 | 1832 | 38.18 | 12.66 | 17.76 | 1.93 | 3.73 | 25.33 |
| 60.30 | 8.00 | 10.32 | 13.14 | 1541 | 45.99 | 15.25 | 22.05 | 1.87 | 3.50 | 30.51 |
| 76.10 | 2.00 | 3.66 | 4.66 | 4083 | 31.98 | 8.40 | 10.98 | 2.62 | 6.87 | 16.81 |
| 76.10 | 2.30 | 4.19 | 5.33 | 4015 | 36.34 | 9.55 | 12.53 | 2.61 | 6.81 | 19.10 |
| 76.10 | 2.60 | 4.71 | 6.00 | 3948 | 40.59 | 10.67 | 14.05 | 2.60 | 6.76 | 21.34 |
| 76.10 | 2.90 | 5.24 | 6.67 | 3882 | 44.74 | 11.76 | 15.55 | 2.59 | 6.71 | 23.52 |
| 76.10 | 3.20 | 5.75 | 7.33 | 3816 | 48.78 | 12.82 | 17.02 | 2.58 | 6.66 | 25.64 |
| 76.10 | 3.60 | 6.44 | 8.20 | 3728 | 54.01 | 14.19 | 18.94 | 2.57 | 6.59 | 28.39 |
| 76.10 | 4.00 | 7.11 | 9.06 | 3642 | 59.06 | 15.52 | 20.81 | 2.55 | 6.52 | 31.04 |
| 76.10 | 4.50 | 7.95 | 10.12 | 3536 | 65.12 | 17.11 | 23.10 | 2.54 | 6.43 | 34.23 |
| 76.10 | 5.00 | 8.77 | 11.17 | 3432 | 70.92 | 18.64 | 25.32 | 2.52 | 6.35 | 37.28 |
| 76.10 | 6.00 | 10.37 | 13.21 | 3227 | 81.76 | 21.49 | 29.56 | 2.49 | 6.19 | 42.97 |
| 76.10 | 8.00 | 13.44 | 17.12 | 2837 | 100.59 | 26.44 | 37.27 | 2.42 | 5.88 | 52.87 |
| 76.10 | 9.00 | 14.90 | 18.97 | 2651 | 108.70 | 28.57 | 40.76 | 2.39 | 5.73 | 57.13 |
| 88.90 | 2.00 | 4.29 | 5.46 | 5661 | 51.57 | 11.60 | 15.11 | 3.07 | 9.44 | 23.20 |
| 88.90 | 2.30 | 4.91 | 6.26 | 5581 | 58.70 | 13.21 | 17.25 | 3.06 | 9.38 | 26.41 |
| 88.90 | 2.60 | 5.53 | 7.05 | 5502 | 65.68 | 14.78 | 19.37 | 3.05 | 9.32 | 29.55 |
| 88.90 | 2.90 | 6.15 | 7.84 | 5424 | 72.52 | 16.31 | 21.46 | 3.04 | 9.26 | 32.63 |
| 88.90 | 3.20 | 6.76 | 8.62 | 5346 | 79.21 | 17.82 | 23.51 | 3.03 | 9.19 | 35.64 |
| 88.90 | 3.60 | 7.57 | 9.65 | 5242 | 87.90 | 19.77 | 26.21 | 3.02 | 9.11 | 39.55 |
| 88.90 | 4.00 | 8.38 | 10.67 | 5140 | 96.34 | 21.67 | 28.85 | 3.00 | 9.03 | 43.35 |
| 88.90 | 4.50 | 9.37 | 11.93 | 5014 | 106.54 | 23.97 | 32.09 | 2.99 | 8.93 | 47.94 |
| 88.90 | 5.00 | 10.35 | 13.18 | 4889 | 116.37 | 26.18 | 35.24 | 2.97 | 8.83 | 52.36 |
| 88.90 | 6.00 | 12.27 | 15.63 | 4645 | 134.94 | 30.36 | 41.31 | 2.94 | 8.64 | 60.72 |

## CIRCULAR HOLLOW SECTION FOR STRUCTURAL PU

| Outside Diameter | Thickness | Mass | Area of Cross Section | Internal Volume | Moment of Inertia | N |
|---|---|---|---|---|---|---|
| mm | mm | kg/m | $cm^2$ | $cm^3/m$ | $cm^4$ | |
| 114.30 | 2.00 | 5.54 | 7.06 | 9555 | 111.27 | |
| 114.30 | 2.30 | 6.35 | 8.09 | 9452 | 126.95 | |
| 114.30 | 2.60 | 7.16 | 9.12 | 9348 | 142.37 | |
| 114.30 | 2.90 | 7.97 | 10.15 | 9246 | 157.55 | |
| 114.30 | 3.00 | 8.24 | 10.49 | 9212 | 162.55 | |
| 114.30 | 3.20 | 8.77 | 11.17 | 9144 | 172.47 | |
| 114.30 | 3.60 | 9.83 | 12.52 | 9009 | 191.98 | |
| 114.30 | 4.00 | 10.88 | 13.86 | 8875 | 211.07 | |
| 114.30 | 4.50 | 12.19 | 15.52 | 8709 | 234.32 | |
| 114.30 | 5.00 | 13.48 | 17.17 | 8544 | 256.92 | |
| 114.30 | 6.00 | 16.03 | 20.41 | 8219 | 300.21 | |
| 127.00 | 2.00 | 6.17 | 7.85 | 11882 | 153.44 | |
| 127.00 | 2.60 | 7.98 | 10.16 | 11652 | 196.65 | |
| 127.00 | 2.90 | 8.88 | 11.31 | 11537 | 217.78 | |
| 127.00 | 3.00 | 9.18 | 11.69 | 11499 | 224.75 | |
| 127.00 | 3.20 | 9.77 | 12.45 | 11423 | 238.60 | |
| 127.00 | 3.60 | 10.96 | 13.96 | 11272 | 265.87 | |
| 127.00 | 4.00 | 12.14 | 15.46 | 11122 | 292.61 | |
| 127.00 | 4.50 | 13.60 | 17.32 | 10936 | 325.29 | |
| 127.00 | 5.00 | 15.05 | 19.16 | 10751 | 357.14 | |
| 127.00 | 6.00 | 17.91 | 22.81 | 10387 | 418.44 | |
| 139.70 | 2.60 | 8.79 | 11.20 | 14208 | 263.21 | |
| 139.70 | 2.90 | 9.79 | 12.46 | 14082 | 291.68 | |
| 139.70 | 3.20 | 10.77 | 13.72 | 13956 | 319.78 | |
| 139.70 | 3.60 | 12.09 | 15.39 | 13789 | 356.65 | |
| 139.70 | 4.00 | 13.39 | 17.05 | 13623 | 392.86 | |
| 139.70 | 4.50 | 15.01 | 19.11 | 13417 | 437.20 | |
| 139.70 | 5.00 | 16.61 | 21.16 | 13212 | 480.54 | |
| 139.70 | 6.00 | 19.79 | 25.20 | 12808 | 564.26 | |
| 139.70 | 8.00 | 25.99 | 33.10 | 12018 | 720.29 | |
| 165.10 | 2.60 | 10.42 | 13.27 | 20081 | 438.23 | |
| 165.10 | 2.90 | 11.60 | 14.78 | 19931 | 486.13 | |
| 165.10 | 3.20 | 12.78 | 16.28 | 19781 | 533.48 | |
| 165.10 | 3.60 | 14.34 | 18.27 | 19582 | 595.79 | |
| 165.10 | 4.00 | 15.89 | 20.24 | 19384 | 657.16 | |

## CIRCULAR HOLLOW SECTION FOR STRUCTURAL PURPOSES CONFORMING TO IS:1161 : 2014

| Outside Diameter | Thickness | Mass | Area of Cross Section | Internal Volume | Moment of Inertia | Elastic Modulus | Plastic Modulus | Radius of Gyration | Square of Radius of Gyration | Torsional Constant |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | mm | kg/m | $cm^2$ | $cm^3/m$ | $cm^4$ | $cm^3$ | $cm^3$ | cm | $cm^2$ | $cm^3$ |
| 168.30 | 8.00 | 31.63 | 40.29 | 18218 | 1297.27 | 154.16 | 205.74 | 5.67 | 32.20 | 308.32 |
| 193.70 | 2.60 | 12.26 | 15.61 | 27907 | 712.68 | 73.59 | 94.96 | 6.76 | 45.66 | 147.17 |
| 193.70 | 2.90 | 13.65 | 17.38 | 27730 | 791.21 | 81.69 | 105.58 | 6.75 | 45.52 | 163.39 |
| 193.70 | 3.20 | 15.04 | 19.15 | 27553 | 869.00 | 89.73 | 116.14 | 6.74 | 45.38 | 179.45 |
| 193.70 | 3.60 | 16.88 | 21.50 | 27318 | 971.55 | 100.31 | 130.11 | 6.72 | 45.19 | 200.63 |
| 193.70 | 4.00 | 18.72 | 23.84 | 27084 | 1072.79 | 110.77 | 143.97 | 6.71 | 45.00 | 221.54 |
| 193.70 | 4.50 | 21.00 | 26.75 | 26793 | 1197.52 | 123.65 | 161.12 | 6.69 | 44.77 | 247.29 |
| 193.70 | 5.00 | 23.27 | 29.64 | 26504 | 1320.23 | 136.32 | 178.08 | 6.67 | 44.54 | 272.63 |
| 193.70 | 6.00 | 27.78 | 35.38 | 25930 | 1559.72 | 161.05 | 211.46 | 6.64 | 44.08 | 322.09 |
| 193.70 | 8.00 | 36.64 | 46.67 | 24801 | 2015.54 | 208.11 | 276.05 | 6.57 | 43.19 | 416.22 |
| 219.10 | 2.60 | 13.88 | 17.68 | 35934 | 1036.26 | 94.59 | 121.87 | 7.65 | 58.60 | 189.19 |
| 219.10 | 2.90 | 15.47 | 19.70 | 35733 | 1151.07 | 105.07 | 135.56 | 7.64 | 58.44 | 210.15 |
| 219.10 | 3.20 | 17.04 | 21.70 | 35532 | 1264.92 | 115.47 | 149.17 | 7.63 | 58.28 | 230.93 |
| 219.10 | 3.60 | 19.14 | 24.37 | 35266 | 1415.22 | 129.19 | 167.20 | 7.62 | 58.07 | 258.37 |
| 219.10 | 4.00 | 21.22 | 27.03 | 35000 | 1563.84 | 142.75 | 185.09 | 7.61 | 57.86 | 285.50 |
| 219.10 | 5.00 | 26.41 | 33.63 | 34340 | 1928.04 | 176.00 | 229.24 | 7.57 | 57.33 | 351.99 |
| 219.10 | 6.00 | 31.54 | 40.17 | 33686 | 2281.95 | 208.30 | 272.54 | 7.54 | 56.81 | 416.60 |
| 219.10 | 8.00 | 41.66 | 53.06 | 32397 | 2959.63 | 270.16 | 356.68 | 7.47 | 55.78 | 540.33 |
| 219.10 | 10.00 | 51.58 | 65.69 | 31134 | 3598.44 | 328.47 | 437.56 | 7.40 | 54.78 | 656.95 |
| 244.50 | 4.00 | 23.73 | 30.22 | 43929 | 2185.67 | 178.79 | 231.38 | 8.50 | 72.32 | 357.57 |
| 244.50 | 5.00 | 29.54 | 37.62 | 43189 | 2698.58 | 220.74 | 286.84 | 8.47 | 71.73 | 441.49 |
| 244.50 | 6.00 | 35.30 | 44.96 | 42456 | 3198.53 | 261.64 | 341.37 | 8.43 | 71.15 | 523.28 |
| 244.50 | 8.00 | 46.67 | 59.44 | 41007 | 4160.45 | 340.32 | 447.63 | 8.37 | 70.00 | 680.65 |
| 244.50 | 10.00 | 57.84 | 73.67 | 39584 | 5073.15 | 414.98 | 550.24 | 8.30 | 68.86 | 829.96 |
| 273.00 | 5.00 | 33.05 | 42.10 | 54325 | 3780.81 | 276.98 | 359.16 | 9.48 | 89.81 | 553.97 |
| 273.00 | 6.00 | 39.52 | 50.33 | 53502 | 4487.08 | 328.72 | 427.81 | 9.44 | 89.16 | 657.45 |
| 273.00 | 8.00 | 52.29 | 66.60 | 51875 | 5851.71 | 428.70 | 561.97 | 9.37 | 87.86 | 857.39 |
| 273.00 | 10.00 | 64.87 | 82.62 | 50273 | 7154.09 | 524.11 | 692.02 | 9.31 | 86.59 | 1048.22 |
| 273.00 | 12.00 | 77.25 | 98.39 | 48695 | 8396.14 | 615.10 | 818.03 | 9.24 | 85.33 | 1230.20 |
| 323.90 | 5.00 | 39.33 | 50.09 | 77388 | 6369.42 | 393.30 | 508.53 | 11.28 | 127.15 | 786.59 |
| 323.90 | 6.00 | 47.05 | 59.92 | 76405 | 7572.47 | 467.58 | 606.43 | 11.24 | 126.37 | 935.16 |
| 323.90 | 8.00 | 62.34 | 79.39 | 74458 | 9910.08 | 611.92 | 798.51 | 11.17 | 124.82 | 1223.84 |
| 323.90 | 10.00 | 77.43 | 98.61 | 72536 | 12158.34 | 750.75 | 985.67 | 11.10 | 123.29 | 1501.49 |
| 323.90 | 12.00 | 92.32 | 117.58 | 70639 | 14319.56 | 884.20 | 1167.96 | 11.04 | 121.78 | 1768.39 |
| 355.60 | 6.00 | 51.74 | 65.90 | 92725 | 10070.55 | 566.40 | 733.39 | 12.36 | 152.82 | 1132.80 |
| 355.60 | 8.00 | 68.59 | 87.36 | 90579 | 13201.37 | 742.48 | 966.78 | 12.29 | 151.11 | 1484.97 |
| 355.60 | 10.00 | 85.25 | 108.57 | 88457 | 16223.50 | 912.46 | 1194.73 | 12.22 | 149.42 | 1824.92 |
| 355.60 | 12.00 | 101.70 | 129.53 | 86361 | 19139.47 | 1076.46 | 1417.31 | 12.16 | 147.76 | 2152.92 |
| 377.00 | 6.00 | 54.91 | 69.93 | 104635 | 12035.01 | 638.46 | 825.92 | 13.12 | 172.10 | 1276.92 |
| 377.00 | 8.00 | 72.81 | 92.74 | 102354 | 15791.85 | 837.76 | 1089.46 | 13.05 | 170.28 | 1675.53 |
| 377.00 | 10.00 | 90.52 | 115.30 | 100098 | 19425.87 | 1030.55 | 1347.22 | 12.98 | 168.49 | 2061.10 |
| 377.00 | 12.00 | 108.04 | 137.60 | 97868 | 22939.76 | 1216.96 | 1599.28 | 12.91 | 166.71 | 2433.93 |

## CHS (Circular Hollow Section) Sizes