

BLACK & GALVANIZED Welded Steel Pipes

MS 863 : 2010 / MANUFACTURER'S STANDARD

| CLASS | Nominal | | Outside Diameter | | Wall | Calculated Weight | | | | | | Number of Threads | Socket | | Test Pressure | |
|------------|---------|-------|------------------|---------|-----------|-------------------|-------|-------|----------------------|-------|-------|-------------------|----------------|------------|---------------|-----|
| | Size | | Maximum | Minimum | Thickness | Plain Ends | | | Threads And Coupling | | | | Outer Diameter | Min Length | | |
| | mm | in | mm | mm | mm | kg/m | kg/ft | lb/ft | kg/m | kg/ft | lb/ft | per inch | mm | mm | Bar | Psi |
| LIGHT (L2) | 15 | 1/2 | 21.4 | 21.0 | 2.0 | 0.947 | 0.289 | 0.636 | 0.956 | 0.291 | 0.642 | 14 | 27.8 | 38.1 | 50 | 725 |
| | 20 | 3/4 | 26.9 | 26.4 | 2.3 | 1.38 | 0.421 | 0.928 | 1.39 | 0.424 | 0.935 | 14 | 34.1 | 41.3 | 50 | 725 |
| | 25 | 1 | 33.8 | 33.2 | 2.6 | 1.98 | 0.604 | 1.33 | 2 | 0.61 | 1.34 | 11 | 42.1 | 47.6 | 50 | 725 |
| | 32 | 1 1/4 | 42.5 | 41.9 | 2.6 | 2.54 | 0.774 | 1.71 | 2.57 | 0.78 | 1.73 | 11 | 51.6 | 54.0 | 50 | 725 |
| | 40 | 1 1/2 | 48.4 | 47.8 | 2.9 | 3.23 | 0.985 | 2.17 | 3.27 | 1 | 2.2 | 11 | 57.9 | 57.2 | 50 | 725 |
| | 50 | 2 | 60.2 | 59.6 | 2.9 | 4.08 | 1.24 | 2.73 | 4.15 | 1.26 | 2.78 | 11 | 70.6 | 63.5 | 50 | 725 |
| | 65 | 2 1/2 | 76.0 | 75.2 | 3.2 | 5.71 | 1.74 | 3.83 | 5.83 | 1.78 | 3.92 | 11 | 87.3 | 69.9 | 50 | 725 |
| | 80 | 3 | 88.7 | 87.9 | 3.2 | 6.72 | 2.05 | 4.52 | 6.89 | 2.1 | 4.63 | 11 | 101.6 | 76.2 | 50 | 725 |
| | 100 | 4 | 113.9 | 113.0 | 3.6 | 9.75 | 2.97 | 6.55 | 10 | 3.05 | 6.72 | 11 | 128.6 | 88.9 | 50 | 725 |
| MEDIUM (M) | 15 | 1/2 | 21.8 | 21.1 | 2.6 | 1.21 | 0.369 | 0.814 | 1.22 | 0.372 | 0.82 | 14 | 27.8 | 38.1 | 50 | 725 |
| | 20 | 3/4 | 27.3 | 26.5 | 2.6 | 1.56 | 0.475 | 1.05 | 1.57 | 0.479 | 1.06 | 14 | 34.1 | 41.3 | 50 | 725 |
| | 25 | 1 | 34.2 | 33.3 | 3.2 | 2.41 | 0.735 | 1.62 | 2.43 | 0.741 | 1.63 | 11 | 42.1 | 47.6 | 50 | 725 |
| | 32 | 1 1/4 | 42.9 | 42.1 | 3.2 | 3.1 | 0.945 | 2.08 | 3.13 | 0.954 | 2.1 | 11 | 51.6 | 54.0 | 50 | 725 |
| | 40 | 1 1/2 | 48.8 | 47.9 | 3.2 | 3.56 | 1.09 | 2.4 | 3.6 | 1.1 | 2.42 | 11 | 57.9 | 57.2 | 50 | 725 |
| | 50 | 2 | 60.8 | 59.7 | 3.6 | 5.03 | 1.53 | 3.37 | 5.1 | 1.55 | 3.42 | 11 | 70.6 | 63.5 | 50 | 725 |
| | 65 | 2 1/2 | 76.6 | 75.3 | 3.6 | 6.42 | 1.96 | 4.32 | 6.54 | 1.99 | 4.39 | 11 | 87.3 | 69.9 | 50 | 725 |
| | 80 | 3 | 89.5 | 88.0 | 4.0 | 8.36 | 2.55 | 5.62 | 8.53 | 2.6 | 5.73 | 11 | 101.6 | 76.2 | 50 | 725 |
| | 100 | 4 | 115.0 | 113.1 | 4.5 | 12.2 | 3.72 | 8.2 | 12.5 | 3.81 | 8.4 | 11 | 128.6 | 88.9 | 50 | 725 |
| HEAVY (H) | 15 | 1/2 | 21.8 | 21.0 | 3.2 | 1.44 | 0.439 | 0.968 | 1.45 | 0.442 | 0.974 | 14 | 27.8 | 38.1 | 50 | 725 |
| | 20 | 3/4 | 27.3 | 26.5 | 3.2 | 1.87 | 0.57 | 1.257 | 1.88 | 0.573 | 1.263 | 14 | 34.1 | 41.3 | 50 | 725 |
| | 25 | 1 | 34.2 | 33.3 | 4.0 | 2.93 | 0.896 | 1.98 | 2.95 | 0.899 | 1.98 | 11 | 42.1 | 47.6 | 50 | 725 |
| | 32 | 1 1/4 | 42.9 | 42.0 | 4.0 | 3.79 | 1.16 | 2.56 | 3.82 | 1.16 | 2.57 | 11 | 51.6 | 54.0 | 50 | 725 |
| | 40 | 1 1/2 | 48.8 | 47.9 | 4.0 | 4.37 | 1.33 | 2.95 | 4.41 | 1.34 | 2.96 | 11 | 57.9 | 57.2 | 50 | 725 |
| | 50 | 2 | 60.8 | 59.7 | 4.5 | 6.19 | 1.89 | 4.17 | 6.26 | 1.91 | 4.21 | 11 | 70.6 | 63.5 | 50 | 725 |
| | 65 | 2 1/2 | 76.6 | 75.3 | 4.5 | 7.93 | 2.42 | 5.34 | 8.05 | 2.45 | 5.41 | 11 | 87.3 | 69.9 | 50 | 725 |
| | 80 | 3 | 89.5 | 88.0 | 5.0 | 10.3 | 3.14 | 6.92 | 10.5 | 3.2 | 7.06 | 11 | 101.6 | 76.2 | 50 | 725 |
| | 100 | 4 | 115.0 | 113.1 | 5.4 | 14.5 | 4.42 | 9.71 | 14.8 | 4.51 | 9.95 | 11 | 128.6 | 88.9 | 50 | 725 |
| 125 | 5 | 140.8 | 138.5 | 5.4 | 17.9 | 5.46 | 12 | 18.4 | 5.61 | 12.4 | 11 | 155.6 | 95.3 | 50 | 725 | |
| 150 | 6 | 166.5 | 163.9 | 5.4 | 21.3 | 6.49 | 14.3 | 21.9 | 6.68 | 14.7 | 11 | 184.2 | 95.3 | 50 | 725 | |

| | | | |
|-------------|----------------|--|-------|
| Tolerance : | Wall thickness | : Light (L2) | - 8% |
| | | Medium (M) and Heavy (H) | - 10% |
| | Length | : Plus 50mm or minus 0mm (Manufacturer Standard) | |
| | Mass | : Plus 10% or minus 8% on individual tubes for type L2 | |

BLACK Welded Steel Pipes (For General Structure Purposes)

ESP S1 MANUFACTURER'S STANDARD

| CLASS | Nominal Size | | Outside Diameter | | | | Wall Thickness | | Calculated Weight Plain Ends | | |
|-------------------------|--------------|-------|------------------|-------|---------|------|----------------|--------|------------------------------|--------|-------|
| | | | Maximum | | Minimum | | | | | | |
| | mm | in | mm | in | mm | in | mm | in | kg/m | kg/ft | lb/ft |
| LIGHT (A) | 90 | 3 1/2 | 102.0 | 3.98 | 101.1 | 3.95 | 3.2 | 0.126 | 7.761 | 2.366 | 5.220 |
| EXTRA LIGHT (AA) | 15 | 1/2 | 21.4 | 0.84 | 21.0 | 0.83 | 1.6 | 0.063 | 0.773 | 0.236 | 0.520 |
| | 20 | 3/4 | 26.9 | 1.06 | 26.4 | 1.04 | 1.6 | 0.063 | 0.990 | 0.302 | 0.666 |
| | 25 | 1 | 33.8 | 1.33 | 33.2 | 1.31 | 1.9 | 0.075 | 1.480 | 0.451 | 0.994 |
| | 32 | 1 1/4 | 42.5 | 1.67 | 41.9 | 1.65 | 1.9 | 0.075 | 1.890 | 0.576 | 1.270 |
| | 40 | 1 1/2 | 48.4 | 1.90 | 47.8 | 1.88 | 1.9 | 0.075 | 2.160 | 0.658 | 1.450 |
| | 50 | 2 | 60.2 | 2.30 | 59.6 | 2.35 | 1.9 | 0.075 | 2.720 | 0.829 | 1.830 |
| | 65 | 2 1/2 | 76.0 | 2.99 | 75.2 | 2.96 | 1.9 | 0.075 | 3.450 | 1.050 | 2.310 |
| | 80 | 3 | 88.7 | 3.49 | 87.9 | 3.46 | 2.1 | 0.083 | 4.460 | 1.360 | 3.000 |
| | 90 | 3 1/2 | 102.0 | 3.98 | 101.1 | 3.95 | 2.1 | 0.083 | 5.150 | 1.570 | 3.460 |
| | 100 | 4 | 113.9 | 4.48 | 113.0 | 4.45 | 2.3 | 0.091 | 6.310 | 1.920 | 4.230 |
| | 125 | 5 | 140.6 | 5.53 | 138.7 | 5.46 | 4.0 | 0.157 | 13.400 | 4.080 | 8.990 |
| 150 | 6 | 166.1 | 6.54 | 164.1 | 6.46 | 4.0 | 0.157 | 15.900 | 4.850 | 10.700 | |
| (AAA) | 25 | 1 | 33.8 | 1.33 | 33.2 | 1.31 | 1.6 | 0.063 | 1.259 | 0.384 | 0.847 |
| | 32 | 1 1/4 | 42.5 | 1.67 | 41.9 | 1.65 | 1.6 | 0.063 | 1.602 | 0.488 | 1.076 |
| | 40 | 1 1/2 | 48.4 | 1.90 | 47.8 | 1.88 | 1.6 | 0.063 | 1.835 | 0.559 | 1.233 |
| | 50 | 2 | 60.2 | 2.30 | 59.6 | 2.35 | 1.6 | 0.063 | 2.300 | 0.701 | 1.546 |
| | 65 | 2 1/2 | 76.0 | 2.99 | 75.2 | 2.96 | 1.6 | 0.063 | 2.920 | 0.890 | 1.962 |
| | 80 | 3 | 88.7 | 3.49 | 87.9 | 3.46 | 1.6 | 0.063 | 3.421 | 1.043 | 2.300 |
| | 100 | 4 | 113.9 | 4.48 | 113.0 | 4.45 | 1.9 | 0.075 | 5.226 | 1.593 | 3.513 |
| | 125 | 5 | 140.6 | 5.53 | 138.7 | 5.46 | 3.0 | 0.118 | 10.110 | 3.082 | 6.796 |
| | 150 | 6 | 166.1 | 6.54 | 164.1 | 6.46 | 3.0 | 0.118 | 11.990 | 3.655 | 8.059 |

Thickness Tolerances : $\pm 10\%$