

BS 1387 ERW steel tube

BS 1387 ERW steel tube from TPMC is produced by high-frequency welding of steel strip, featuring a longitudinal weld seam, precise dimensions, and lightweight construction.

Conforming to this established British Standard, our TPMC tube is ideal for welding or threading and suitable for conveying water, gas, air, as well as for general structural applications.



- Certificate: ISO
- Standard: BS 1387
- Length: 6m / 5.8m / 11.8m / 12m / 20ft, etc.
- End: Plain: square cut
Beveled: 30° angle (+5°/-0°)
Roll-grooved: per ISO 6182-12
Threaded (NPT): per ASME B1.20.1
Threaded (BSPT): per ISO 7-1 / BS 21
- Surface: FBE / polyester resin powder
Water-based red or black paint
Hot-dip galvanized / duplex coating
Plastic lining (PE, UPVC, etc.)

Available sizes for Light tube

Outside diameter			Wall thickness		Weight	Test pressure	Ref. No.
NPS	DN	OD (mm)	Series	T (mm)	kg/m	MPa	
1/2"	15	21.3	Light	2.0	0.95	5.0	P0701-L (ISO)
3/4"	20	26.9	Light	2.3	1.38	5.0	P0702-L (ISO)
1"	25	33.7	Light	2.6	1.98	5.0	P0703-L (ISO)
1-1/4"	32	42.4	Light	2.6	2.54	5.0	P0704-L (ISO)
1-1/2"	40	48.3	Light	2.9	3.23	5.0	P0705-L (ISO)
2"	50	60.3	Light	2.9	4.08	5.0	P0706-L (ISO)
2-1/2"	65	76.1	Light	3.2	5.71	5.0	P0707-L (ISO)
3"	80	88.9	Light	3.2	6.72	5.0	P0708-L (ISO)
4"	100	114.3	Light	3.6	9.75	5.0	P0709-L (ISO)

Note: BS 1387 specifies an outside diameter range. TPMC references the current EN 10255 standard for these specific OD values.

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Available sizes for Medium tube

Outside diameter			Wall thickness		Weight	Test pressure	Ref. No.
NPS	DN	OD (mm)	Series	T (mm)	kg/m	MPa	
1/2"	15	21.3	Medium	2.6	1.21	5.0	P0701-M (ISO)
3/4"	20	26.9	Medium	2.6	1.56	5.0	P0702-M (ISO)
1"	25	33.7	Medium	3.2	2.41	5.0	P0703-M (ISO)
1-1/4"	32	42.4	Medium	3.2	3.10	5.0	P0704-M (ISO)
1-1/2"	40	48.3	Medium	3.2	3.57	5.0	P0705-M (ISO)
2"	50	60.3	Medium	3.6	5.03	5.0	P0706-M (ISO)
2-1/2"	65	76.1	Medium	3.6	6.43	5.0	P0707-M (ISO)
3"	80	88.9	Medium	4.0	8.37	5.0	P0708-M (ISO)
4"	100	114.3	Medium	4.5	12.20	5.0	P0709-M (ISO)
5"	125	139.7	Medium	5.0	16.60	5.0	P0710-M (ISO)
6"	150	165.1	Medium	5.0	19.70	5.0	P0711-M (ISO)

Note: BS 1387 specifies an outside diameter range. TPMC references the current EN 10255 standard for these specific OD values.

Available sizes for Heavy tube

Outside diameter			Wall thickness		Weight	Test pressure	Ref. No.
NPS	DN	OD (mm)	Series	T (mm)	kg/m	MPa	
1/2"	15	21.3	Heavy	3.2	1.44	5.0	P0701-H (ISO)
3/4"	20	26.9	Heavy	3.2	1.87	5.0	P0702-H (ISO)
1"	25	33.7	Heavy	4.0	2.94	5.0	P0703-H (ISO)
1-1/4"	32	42.4	Heavy	4.0	3.80	5.0	P0704-H (ISO)
1-1/2"	40	48.3	Heavy	4.0	4.38	5.0	P0705-H (ISO)
2"	50	60.3	Heavy	4.5	6.19	5.0	P0706-H (ISO)
2-1/2"	65	76.1	Heavy	4.5	7.93	5.0	P0707-H (ISO)
3"	80	88.9	Heavy	5.0	10.30	5.0	P0708-H (ISO)
4"	100	114.3	Heavy	5.4	14.50	5.0	P0709-H (ISO)
5"	125	139.7	Heavy	5.4	17.90	5.0	P0710-H (ISO)
6"	150	165.1	Heavy	5.4	21.30	5.0	P0711-H (ISO)

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Chemical composition (%) per BS 1387

C	Mn	P	S
≤ 0.20	≤ 1.20	≤ 0.045	≤ 0.045

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Mechanical properties (at room temperature) per BS 1387

Tensile strength Rm (MPa)	Yield strength Re (MPa)	Elongation A (%)
320 ~ 460	≥ 195	≥ 20



Standard requirements

- Heat treatment: Commonly supplied in the normalized or annealed condition, or as-welded with the weld zone heat treated.
- Tensile test: Tensile, yield, and elongation tested per standard.
- Bend test: Black tube ≤ DN 50, cold bent 180° around a 6 x OD former, no cracks; hot-dip galvanized tube ≤ DN 50, cold bent 90° around an 8 x OD former, no cracks of the steel.
- Flattening test: Tubes > DN 50, cold flattened to 75% OD (no cracks in weld) and 60% OD (no cracks in base metal).
- Bore test: Hot-dip galvanized tube ≤ DN 25, a specified rod passes through with free bore.

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Leak tightness test

- Each tube shall be hydrostatically tested at a pressure of 50 bar, maintained for a sufficient time for proof and inspection.
- Eddy current testing is an acceptable alternative to the hydrostatic leak tightness test.



Dimensional tolerances

- Outside diameter: As given in Table 3 (Light), Table 4 (Medium), and Table 5 (Heavy).
- Wall thickness: -8% for Light tube; -10% for Medium and Heavy tube (no upper limit).
- Cut length: +6 mm / -0 mm.
- Weight: $\pm 4\%$ for mean consignment mass (quantity ≥ 150 m of one size); no single tube shall deviate by more than +10% or -8%.



Other quality assurance

- Straightness: Tubes shall be straight to within 1 in 500.
- Coating inspection: DFT and adhesion (see TPMC PA11-PA51).
- Marking: Legibly marked per standard (see TPMC PA71).
- Packaging: End protection, bundling, and shipping marks (see TPMC PA81).
- Test certificate: Issued by TPMC with full traceability to MTC/MTR.