

EN10255 ERW steel tube

ERW steel tube is formed by rolling strip and welding the seam, with tighter dimensional tolerances and less weight. The weld seam is heat treated after welding that no untempered martensite remains, and the weld flash can be removed from both inner and outer surfaces.

EN10255 is a non-alloy steel tubes specification covering ERW tube suitable for welding and threading. It is used for the conveyance of fluid for fire protection pipeline, water pipeline (Cold & hot), HVAC pipeline, etc.



- Certificate: FM Approved
- Standard: EN10255, welded (W), S195T
- Length: 6m / 5.8m / 11.8m / 12m / 20ft, etc.
- End: Plain (square cut) / beveled to 30° / roll groove as ISO 6182-12 / BSPT thread as ISO 7-1 / NPT thread as ANSI B1.20.1
- Surface: Fusion bonded epoxy (FBE) / polyester resin / hot dip galvanized / red paint / black paint, etc.

Available size for Heavy series

Size			Thickness	Mass for plain end	Mass for threaded & socketed	Test pressure	Ref. No.
Inch	DN	OD (mm)	T (mm)	kg/m	kg/m	MPa	
1/2"	15	21.3	3.2	1.44	1.45	5.0	P0501 (ISO)
3/4"	20	26.9	3.2	1.87	1.88	5.0	P0502 (ISO)
1"	25	33.7	4.0	2.93	2.95	5.0	P0503 (ISO)
1-1/4"	32	42.4	4.0	3.79	3.82	5.0	P0504 (ISO)
1-1/2"	40	48.3	4.0	4.37	4.41	5.0	P0505 (ISO)
2"	50	60.3	4.5	6.19	6.26	5.0	P0506 (ISO)
2-1/2"	65	76.1	4.5	7.93	8.05	5.0	P0507 (ISO)
3"	80	88.9	5.0	10.30	10.50	5.0	P0508 (ISO)
4"	100	114.3	5.4	14.50	14.80	5.0	P0509 (ISO)
5"	125	139.7	5.4	17.90	18.40	5.0	P0510 (ISO)
6"	150	165.1	5.4	21.30	21.90	5.0	P0511 (ISO)

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Available size for Medium series

Size			Thickness T (mm)	Mass for plain end kg/m	Mass for threaded & socketed kg/m	Test pressure MPa	Ref. No.
Inch	DN	OD (mm)					
1/2"	15	21.3	2.6	1.21	1.22	5.0	P0521 (FM)
3/4"	20	26.9	2.6	1.56	1.57	5.0	P0522 (FM)
1"	25	33.7	3.2	2.41	2.43	5.0	P0523 (FM)
1-1/4"	32	42.4	3.2	3.10	3.13	5.0	P0524 (FM)
1-1/2"	40	48.3	3.2	3.56	3.60	5.0	P0525 (FM)
2"	50	60.3	3.6	5.03	5.10	5.0	P0526 (FM)
2-1/2"	65	76.1	3.6	6.42	6.54	5.0	P0527 (FM)
3"	80	88.9	4.0	8.36	8.53	5.0	P0528 (FM)
4"	100	114.3	4.5	12.20	12.50	5.0	P0529 (FM)
5"	125	139.7	5.0	16.60	17.10	5.0	P0530 (FM)
6"	150	165.1	5.0	19.80	20.40	5.0	P0531 (FM)

Available size for Type L2

Size			Thickness T (mm)	Mass for plain end kg / m	Mass for threaded & socketed kg / m	Test pressure MPa	Ref. No.
Inch	DN	OD (mm)					
1/2"	15	21.3	2.0	0.95	0.96	5.0	P0541 (ISO)
3/4"	20	26.9	2.3	1.38	1.39	5.0	P0542 (ISO)
1"	25	33.7	2.6	1.98	2.00	5.0	P0543 (ISO)
1-1/4"	32	42.4	2.6	2.54	2.57	5.0	P0544 (ISO)
1-1/2"	40	48.3	2.9	3.23	3.27	5.0	P0545 (ISO)
2"	50	60.3	2.9	4.08	4.15	5.0	P0546 (ISO)
2-1/2"	65	76.1	3.2	5.71	5.83	5.0	P0547 (ISO)
3"	80	88.9	3.2	6.72	6.89	5.0	P0548 (ISO)
4"	100	114.3	3.6	9.75	10.00	5.0	P0549 (ISO)

Note: Dimension and mass meet ISO 65 Light series 2 and BS 1387.

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Chemical compositions (%) and Mechanical properties

C	Mn	P	S	Cu	Ni	Cr	Mo	V
≤ 0.20	≤ 1.40	≤ 0.035	≤ 0.030	-	-	-	-	-
Tensile strength (MPa)			Upper Yield strength (MPa)			Elongation (%)		
320-520			≥ 195			≥ 20		



Leak tightness test

- Each tube (before threading, if applicable) shall be tested for leak-tightness.
- The test can be a hydrostatic test at a minimum of 50 bar for at least 5 s.
- An electro-magnetic test is alternative in accordance with EN 10246-1, including eddy current method, or flux leakage method.



Other tests

- Tensile test, bending test and flattening test.
- Dimensional inspection: outer diameter, thickness, length.
- Ovality (out of roundness): The tolerance on out of roundness is included in the OD tolerance.
- Visual examination / coating test.
- Quantity and weight measurement.