

**SPECIFICATION FOR STANDARD SIZES ASTM
A135 GR-A & Gr-B SCHEDULE- 10 FOR
BLACK AND HOT DIPPED GALVANIZED STEEL PIPES.**

SIZE		OD (Minimum)		OD (Maximum)		WALL THICKNESS		Weight of Tube. (Plain End)		PRESSURE GR-A	PRESSURE GR-B	Pieces Per bundle
INCH	NB(mm)	INCH	MM	INCH	MM	INCH	MM	lb./Ft.	kg./Mtr.	PSI	PSI	
3/4"	20	1.040	26.43	1.061	26.97	0.083	2.11	0.860	1.28	2500	2500	120
1"	25	1.300	33.07	1.33	33.73	0.109	2.77	1.410	2.09	2500	2500	84
1 1/4"	32	1.645	41.78	1.68	42.62	0.109	2.77	1.810	2.69	2400	2500	61
1 1/2"	40	1.883	47.82	1.92	48.70	0.109	2.77	2.090	3.11	2100	2400	42
2"	50	2.350	59.70	2.40	60.90	0.109	2.77	2.640	3.93	1700	1900	37
2 1/2"	65	2.850	72.30	2.90	73.70	0.120	3.05	3.530	5.26	1500	1700	29
3"	80	3.460	88.00	3.53	89.80	0.120	3.05	4.340	6.46	1200	1400	19
3 1/2"	90	3.960	100.60	4.04	102.60	0.120	3.05	4.980	7.41	1000	1200	19
4"	100	4.450	113.20	4.54	115.40	0.120	3.05	5.620	8.37	900	1100	14
5"	125	5.507	139.90	5.62	142.70	0.134	3.40	7.780	11.58	850	1000	7
6"	150	6.560	166.60	6.69	169.98	0.134	3.40	9.300	13.83	728	848	7

1) TOLLERENCE:-

(a) On thickness:- The minimum wall thickness at any point shall be not more than 12.5% under the specified wall thickness.

(b) On Diameter:- The outside diameter shall not vary more than $\pm 1\%$ from the nominal size specified.

(c) On Weight:- The weight of the pipe shall not more than $\pm 10\%$ of the specified weight.

2) ENDS

a) End finish shall be at the option of manufacturer which is nominally square cut with the axis of tube and free from excessive burrs.

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b) If specified degree. measured from a line perpendicular to the axis of the pipe with a root face of 1.6 mm ± 0.8 mm.

- 3)INTERNAL DEBEADING : 2" and above - Internal beads to be removed completely.
- 4) HEAT TRETMENT : Weld Seam of the ERW Pipe in Grade B shall be heat treated after welding to a minimum temperature of 540° C, so that no untempered martensite remains
- 5) CHEMICAL COMPOSITION
- | | |
|------|--|
| GR.A | % MAX -C - 0.25%, Mn - 0.95%, S - 0.035%, P - 0.035% |
| GR.B | % MAX -C - 0.30%, Mn - 1.20%, S - 0.035%, P - 0.035% |
- 6) MECHANICAL (MIN.)
- | | |
|------|---|
| GR.A | Yield Strength-205 N/mm2,Tensile Strength-330 N/mm2,Elongation-35%Min. |
| GR.B | Yield Strength-240 N/mm2,Tensile Strength-415 N/mm2,Elongation-30% Min. |
- 7) FLATTENIG TEST :Weld located 0/90 degree from line of direction of force.
- Stage-1 :For weld ductility until 2/3 of outside dia of specimen tube.
 Stage-2 :For ductility of steel until 1/3 of outside dia of specimen tube.
 Stage-3 :Full flattening for testing of laminated and unsound material.
- 8) LEAK TIGHTNESS TEST
- a) :On line NDT(Eddy Current)
 b) :Hydro testing at pressure as per above Table and holding time.
 Min. 5 Second
- 9) BLACK VARNISH :Tubes are uniformly varnished externally over their full length.
10. ZINC COATING : The Average 460 Gm/mm2 but one side should not be less than 400Gm/mm2 Or Specified by customer
 :Free from bare Spot,Black spot,rough,overcoating, Peel off or anyother surface defect.
11. THREADING : For 1/2" & 3/4" - 14 TPI, 1" to 2" - 11.5 TPI and 2 1/2" to 6" - 8TPI.
 Check with standard ASTM ring and plug gauges
- 12.MARKING : We can do on line stenciling as per this stanadrd & as per customer needs at one meter interval
- 13.PACKING :Hexagonal Type
14. MILL TEST CERTIFICATE : We can issue a MTC,certifying that the tubes supplied comply with this ASTM A 135 Standard