



Broadband Pole Design Properties

140 Ft. AGL Standard Tapered Steel Poles

Physical Properties for 140 Ft. Tapered Steel Poles			
	Light	Medium	Heavy
Design Number	T140LA	T140MA	T140HA
Tip OD, in.	6.50	9.00	12.00
OD @ grade, in.	30.00	32.50	35.50
Butt OD, in.	34.30	37.00	40.18
Number Sides	12	16	18
Δ Dia, in/ft	0.1793	0.1803	0.1802
Side Taper, in/ft	0.0897	0.0902	0.0901
Embedment, ft.	24	25	26
Auger Dia, ft.	4.0	4.5	4.5
Backfill Type	Aggregate	Aggregate	Aggregate
Total Length, ft.	164	165	166
Bare Pole Wt, lbs.	8,534	10,469	11,941
No. of Sections	4	4	4

EPA (ft ²) for 140 Ft. Tapered Steel Poles										
Wind Speed, MPH		Light			Medium			Heavy		
Fastest Mile	3-sec Gust	Sway Limit			Sway Limit			Sway Limit		
		4°	3°	2°	4°	3°	2°	4°	3°	2°
70	85	16	5	—	42	26	6	86	62	31
80	100	16	5	—	42	26	6	86	62	31
90	110	8	5	—	36	26	6	66	62	31
100	120	—	—	—	16	16	6	45	45	31
110	130	—	—	—	—	—	—	28	28	28
120	140	—	—	—	—	—	—	13	13	13

Notes

1. The tabulated EPA values represent the total EPA capacity of the pole. The capacity is based on the assumption that 80% of the total EPA is located at the top of the pole and the remaining 20% is located 20 ft. below the top. When all loading is located at the top of the pole, the tabulated EPA capacity must be reduced by 20%. Refer to *Antenna Index* for the EPA values and sway limitations for specific antenna types.
2. The dash (—) in the table indicates that the pole is not adequate to support antennas for the indicated wind speed.
3. Bare pole weight represents the weight of the pole without accessories.
4. Designs are based on a maximum of (6) ½" internally routed coax per elevation, 90 lbs per elevation for mounts, and antenna weights in pounds equal to 6 times the tabulated EPA values.
5. Pole embedment is based on ANSI/TIA/EIA-222-F normal soil conditions.

Designed By: Mar
Date: 7/31/07

Checked By: HA
Date: 7/31/07

Approved By: HA
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Section Data

Section No.	Design Number	Light	Medium	Heavy
		T140LA	T140MA	T140HA
1 (top)	Length, ft.	27.42	26.42	31.67
	Galv. Wt., lbs	523	726	997
	Min. Splice, in.	15.0	22.0	23.0
	Max. Splice, in.	19.5	24.0	29.5
2	Length, ft.	48.00	48.00	48.00
	Galv. Wt., lbs	1,537	1,816	2,154
	Min. Splice, in.	26.0	34.0	39.0
	Max. Splice, in.	32.5	37.0	42.5
3	Length, ft.	48.00	48.00	48.00
	Galv. Wt., lbs	2,333	3,460	3,898
	Min. Splice, in.	35.5	45.0	50.0
	Max. Splice, in.	44.5	49.0	54.5
4 (bottom)	Length, ft.	48.00	48.00	48.00
	Galv. Wt., lbs	4,140	4,467	4,892
	Min. Splice, in.	—	—	—
	Max. Splice, in.	—	—	—

	Maximum Reactions		
	Light	Medium	Heavy
Download, kips	11.1	13.6	15.4
OTM, ft-kips	614.7	887.8	1,046.5
Shear, kips	9.6	13.1	14.9

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