

SATYAM COMPOSITES PVT. LTD.

Survey No.38, Nr, G.I.D.C Estate, Por - Ramangamdi Road,

Vadodara - 391243, Gujarat, India.

Manufacturers of: FRP/GRP Cable Trays, Gratings, Trefoil Clamps, GRP poles
& Other FRP Pultruded Sections

INTRODUCTION:

The first composite pole used as transmission structure was a fiber-reinforced polymer (FRP) design. Installed on the Hawaiian island of Maui in the early 1960s, the poles were made of fiberglass and replaced wood and steel poles, which suffered degradation (wood) and corrosion (steel) problems caused by warm, moist, salty air. These fiber-reinforced poles lasted about 45 years. Since then, fiberglass, and spun poles have gained worldwide acceptance. Composite materials are rapidly being considered for the fabrication of poles and cross arms throughout the utility industry in all over world.

ADVANTAGES:

At $\frac{3}{4}$ the density of wood, $\frac{1}{10}$ of steel and $\frac{1}{3}$ of concrete, the FRP pole offers utilities an attractive choice. Compared to GI Pole, they are same in diameter. A fiberglass pole is lightweight, strong and has low conductivity properties; it also resists corrosion, rot, UV rays, water absorption, insects, and woodpeckers. Unlike wood poles, composite poles do not lose strength as they age so maintenance is minimal. Engineers also like the electrical properties of the FRP poles and their ability to withstand heavy wind loads and impacts.

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WEIGHT COMPARISON - FRP POLES Vs METAL POLES

Sl. No.	Pole Height	Weight Comparison		
		FRP Poles (KG)	Metal Poles (KG)	% Weight Difference
1	4 MTR	16.60	43.19	61.56% LESS THAN METAL POLES
2	5 MTR	25.00	58.17	57.02% LESS THAN METAL POLES
3	6 MTR	33.50	74.54	55.06% LESS THAN METAL POLES
4	7 MTR	40.68	92.83	56.18% LESS THAN METAL POLES
5	8 MTR	46.50	112.79	58.77% LESS THAN METAL POLES
6	9 MTR	52.20	134.44	61.17% LESS THAN METAL POLES
7	10 MTR	60.50	157.26	61.53% LESS THAN METAL POLES
8	11 MTR	82.50	182.21	54.72% LESS THAN METAL POLES
9	12 MTR	90.00	208.83	56.90% LESS THAN METAL POLES