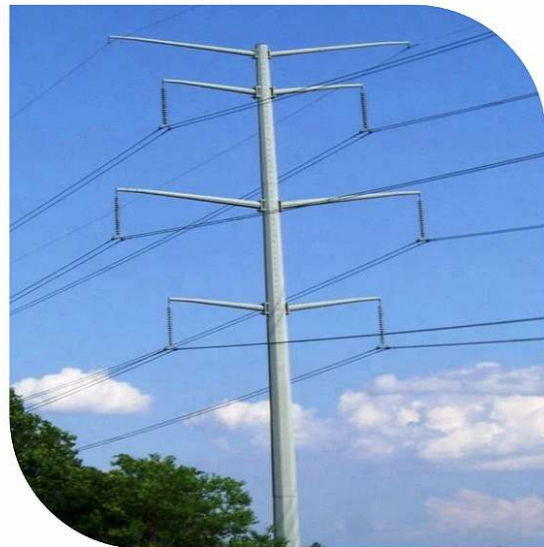




GRP ROUND TAPERED E-TRANS & LIGHTING POLES

Lined with Trust and Reinforced with
Perfection

Introduction

Extraco, India established in the year of **2009** is a leading Manufacturer of,

- » GRP/GRV/GRE pipes and Fittings.
- » GRP Horizontal and Vertical tanks.
(Chemical tanks and Fuel storage tanks).
- » FRP Water storage tanks, Rainwater harvesting tanks and Septic tanks.
- » GRP Sewerage and Drainage System.
- » GRP Moulded and Pultrusion products.
- » Abrasion resistant Pipes.
- » Transmission Poles and Lighting Poles.

Serving customers and industries throughout the world with a "state-of-the-art factory" located at Tada, Andhra Pradesh, with an advanced plant and machinery encompassing a covered shed area of **75,000 sq. ft** in a total extent of **7.15 Acres**.

Extraco has set a bench-mark in the composites field, producing excellent quality and maintenance free products.

Accreditations

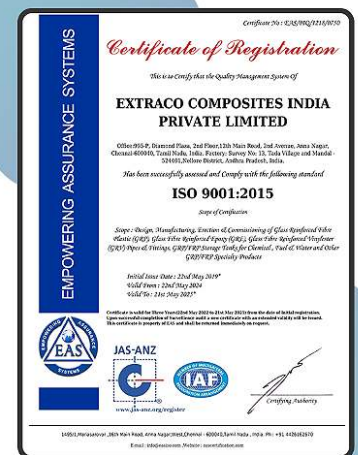
Extraco India has been accredited with the following certificates:

ISO 9001:2015 for Design, Manufacturing, Erection and Commissioning of Glass Reinforced Fibre Plastic (GRP), Glass Fibre Reinforced Epoxy (GRE), Glass Fibre Reinforced Vinylester (GRV) Pipes and Fittings, GRP/-FRP Storage Tanks for Chemical, Fuel and Water and other GRP/FRP Specialty Products.

Our Quality Policy

We are committed to delivering high-quality composite products and services that exceed customer expectations. We achieve this through:

- » **Continuous Improvement:** Constantly striving to enhance our processes and products.
- » **Customer Focus:** Understanding and meeting the specific needs of our clients.
- » **Defect-Free Products:** Delivering products without defects, on time, every time.
- » **Employee Empowerment:** Involving our employees in quality initiatives.
- » **Technological Advancement:** Investing in advanced technologies to improve efficiency and quality.
- » **Regulatory Compliance:** Adhering to all applicable legal and regulatory requirements.



Overview

E-Trans poles are specially made with fibers and resins suitable for transmission lines 11 kV, 22kV, 33kV, sub transmission utility as per REC requirement.

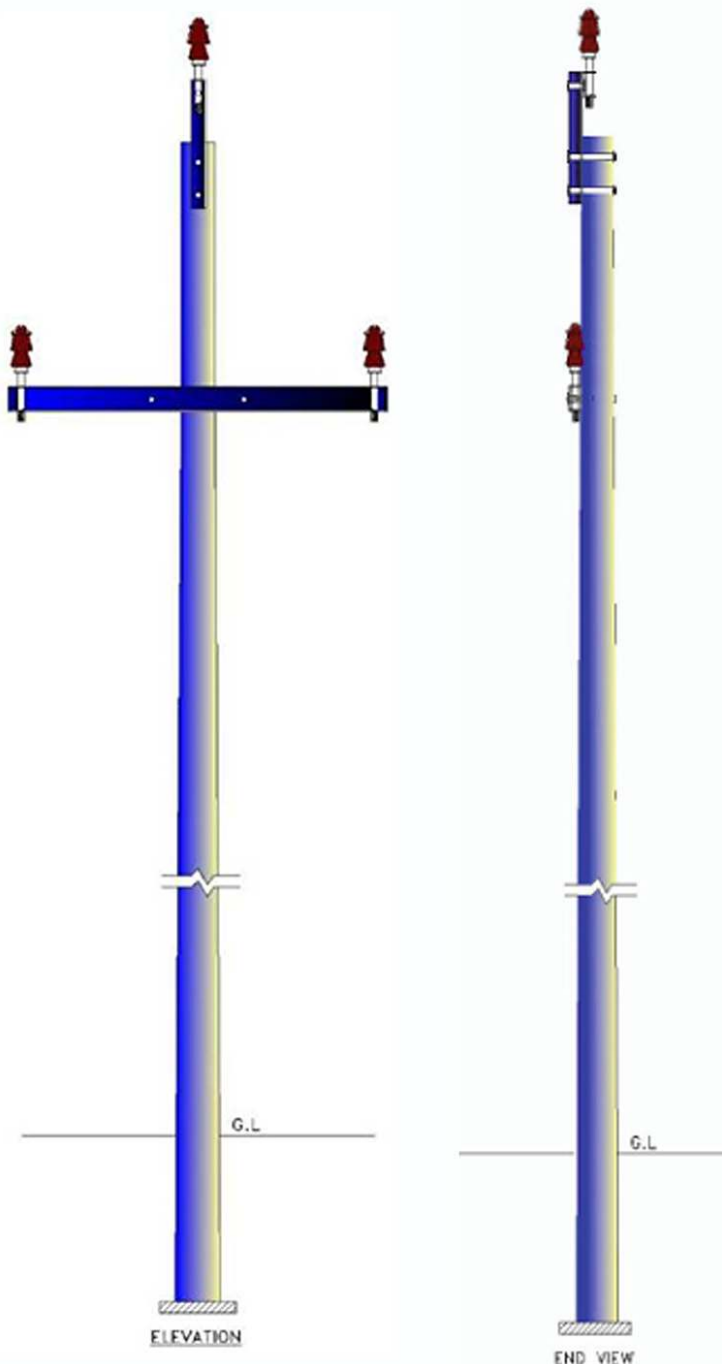
E-light poles are specially made with fibers and resins suitable for street lights, garden lights and general industrial lights.

E-Trans Poles

Technical Data & Specifications	
Pole mounting height	7.5m - 13m for L.T /11 kV/33kV.
Pole manufacturing process	High quality glass roving wound in double helical method.
Wind load	Designed for maximum 50kg/cm ² /75kg/cm ² /100kg/cm ² wind load.
Colours	Any color on request standard colours are Black, Grey, Brown, Blue.
Cross arm	As per system voltage.
Fixing clamps	As per requirement.
Pole mounting	Buried.
Dia of poles	Tip dia - 125mm /150mm /200mm / 250mm.
	Bottom dia - Depends on height of Pole.
Finish of pole	Natural pigmented UV color.
	Smooth pigmented color finishing with putty and UV painted.
Standards followed signs	REC Standard.
	ASCE-104- Recommended practice for Fiber Reinforced Polymer Products for O/H utility line structures.
	ASCE-111- Reliability based Design of utility pole structures.
	ANSI C 136.201990 FRP Poles.
Wind load on poles	Is875 - 1987 - Code of practice for design loads for buildings and structures loads.
	ASTM - D 4923 Standard specifications for reinforced thermosetting plastic.
Deflection allowable	As per AASHTO LTS-4 15% deflection and 1 % strain at maximum wind load.
	E Trans Poles deflection limited to < 5 %.

Properties

Mechanical Properties	Electrical Properties	Chemical Properties
Tensile strength - 250 N/mm ²	Surface resistivity - 10 ¹³ ohm cm	Corrosion resistant
Flexural Elongation - 7.5 %	Resistivity - 10 ¹⁵ ohm cm	Temperature non conductive
Flexural Strength - 170 N/mm ²	Creep resistance - KA 3c	Ageing and weather resistant
Flexural Modulus - 7000 N/mm ²	Dielectrical strength - 30kV/mm	Scratch resistant optional
Impact strength	Melting temperature - 220°C	Flame retardant optional



Utility Poles

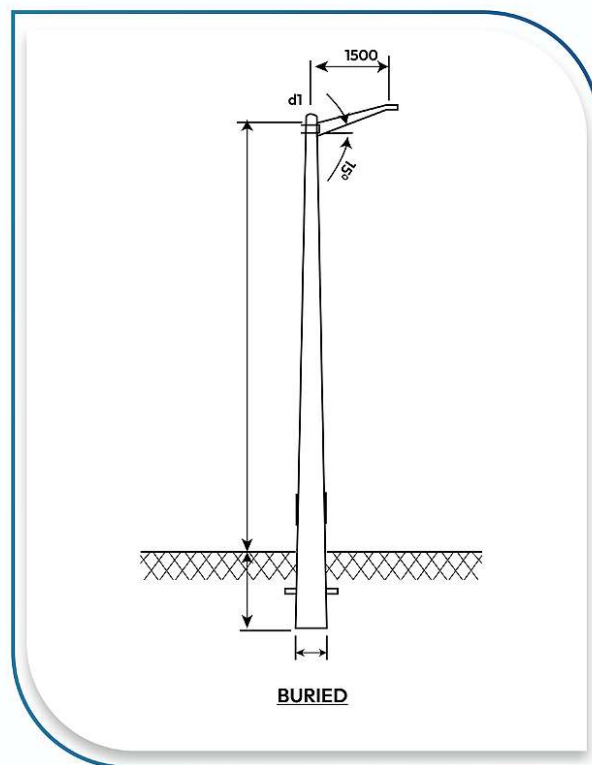
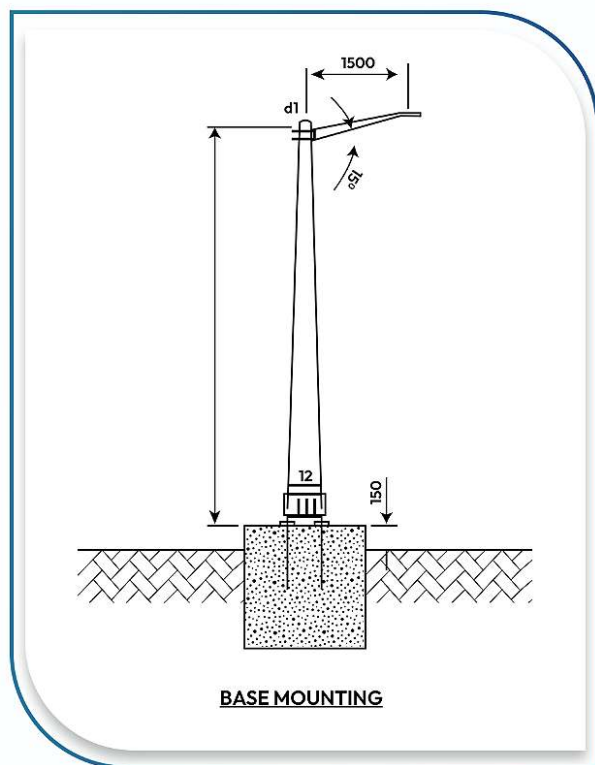
Bill of Material

S.NO.	Description	Qty
01	7.5 mtr Support	1
02	Cross Arm	2
03	Clamp	2
04	Nut Bold 16	6
05	11KV Pins	3
06	11KV Insulators	3
07	Earthing Set Complete	1

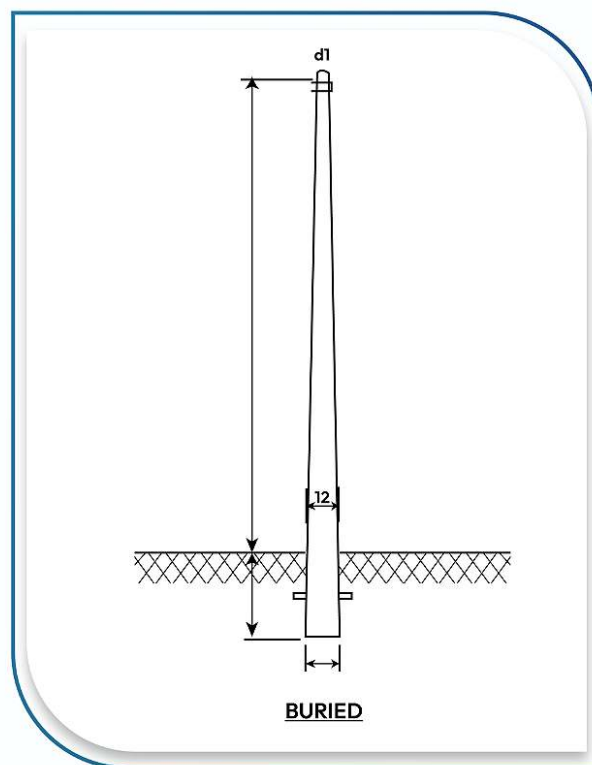
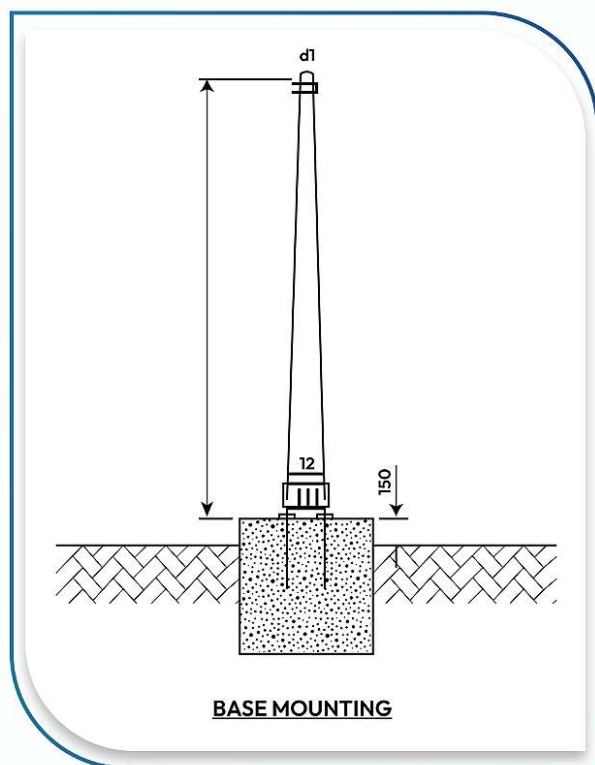
All Dimensions in mm

E-Light Poles

Top / Side Mounting



Top Mounting



E-Light Poles

Technical Data & Specifications	
Pole mounting height	2.5m-12m for top mounting.
	4m-12m for side mounting.
Pole manufacturing process	High quality glass roving wound in double helical method.
Wind load	Designed for maximum 150 kmph wind load.
Colours	Any colour on request standard colours are white, blue, black, green and grey.
Lamp mounting	Top or side or both.
Side mounting arm	Upto 1.5m single or double or four.
Fixing clamps	As per requirement.
Pole mounting	Base mounting
	Precast concrete foundation
	Buried
Dia of poles	Top mounting
	Top dia - 100 mm
	Bottom dia - ~ 300 m varies depends upon height of pole
	Side mounting
	Top dia - 125 mm
	Bottom dia - ~ 300 m
Finish of pole	Natural pole pigmented UV color.
	Smooth pigmented color finishing with putty and UV painted.
Standards followed signs	AASHTO LTS - 4 - Standard specifications for structural support for highway luminaries and traffic signals.
	ANSI C 136.201990 FRP Poles.
Wind load on poles	IS875 - 1987 - Code of practice for design loads for buildings and structures loads.
	ASTM -D 4923 Standard specifications for reinforced thermosetting plastic
Deflection allowable	As per AASHTO LTS-4 15% and 1 % strain at maximum wind load.
	E Light Poles deflection limited to < 5 %.

Properties

Mechanical Properties	Electrical Properties	Chemical Properties
Tensile strength - 250 N/mm ²	Surface resistivity - 10 ¹³ ohm cm	Corrosion resistant
Flexural Elongation - 7.5 %	Resistivity - 10 ¹⁵ ohm cm	Temperature non conductive
Flexural Strength - 170 N/mm ²	Creep resistance - KA 3c	Ageing and weather resistant
Flexural Modulus - 7000 N/mm ²	Di electrical strength - 30kV/mm	Scratch resistant optional
Impact strength	Melting temperature - 220°C	Flame retardant optional

The Advantages of E-Trans Poles and E-Light Poles

- » Non corrosive and life expectancy is 50 years.
- » Non conductive and act as insulator even in rainy season.
- » Very light (1/4 of steel density) can be handled by few personnel.
- » Maintenance free with UV coats and pigmented for required colour.
- » Flexible so that it can absorb vibration, tremors.
- » Motor accidents can be minimized being light.
- » Can be buried direct irrespective of acidic / alkalic soils or in concrete and cathodic protection is not required.

Application

- » **Electric Power Transmission:** FRP transmission poles are used in the electric power industry for overhead transmission lines. They offer advantages such as lightweight construction, corrosion resistance, and non-conductivity, making them suitable for use in areas with high corrosion or conductivity risks.
- » **Lighting and Street Poles:** FRP poles are increasingly being used for street lighting and outdoor area lighting due to their durability, corrosion resistance, and aesthetic appeal. They provide a cost-effective alternative to traditional metal or concrete poles.
- » Overall, FRP transmission poles offer numerous benefits, including corrosion resistance, lightweight construction, non-conductivity, and durability, making them suitable for a wide range of applications across various industries.

GET IN TOUCH



 www.extracocomposites.com



Email:

sales@extracocomposites.com
projects@extracocomposites.com



Address:

Office: #995-P, Diamond Plaza,
12th Main Road, 2nd Avenue, Anna
Nagar, Chennai - 600 040.

Works: Survey No.13, Tada
Village & Mandal, Tirupathi Dist,
Andhra Pradesh - 524 401, India.



Call Us:

+91 44 4269 3754
+91 94440 91834