

Fiberglass cable tray I-beam type



Overview

The I-beam design is the most common cable tray construction. Our aluminum, I-beam ladder cable trays feature 3-inch tangents and are using connectable with our fittings and accessories.

Key Takeaways

Fiberglass I-beam cable trays combine corrosion-resistant FRP construction with high structural strength, suitable for heavy-duty and harsh environment applications.

Overview

Fiberglass cable trays, also known as FRP (Fiber Reinforced Plastic) trays, are made from fiber-reinforced polyester or vinyl ester resin, offering high corrosion resistance, long service life, and low maintenance compared with traditional steel trays. The I-beam design is a side rail style that provides enhanced load-bearing capacity and allows for flexible placement of hold-down clips and expansion guides either inside or outside the tray. This design is particularly effective for heavy-duty applications, supporting over 100 pounds per foot on spans up to 30 feet in some aluminum I-beam trays, and similar structural principles apply to fiberglass variants.

Structural Characteristics

Fiberglass I-beam trays function as beams under uniformly distributed loads, with the side rails acting as the main structural members. Key beam configurations include: Simple Beam: Supported at both ends but free to deflect under load. Fixed Beam: Ends rigidly attached to supports, increasing load capacity.



Cantilever Beam: One end fixed, the other unsupported, often used for wall-mounted brackets. The I-beam shape enhances rigidity and resistance to bending, making it suitable for industrial, marine, and corrosive environments.

Applications

Fiberglass I-beam cable trays are ideal for: Marine and offshore installations, meeting ABS standards for harsh environments. Industrial plants and substations, where heavy power cables require strong support. Vertical installations and areas with chemical exposure, due to FRP's corrosion resistance.

The open I-beam design allows for easy cable positioning, ventilation, and heat dissipation, while still providing structural strength comparable to metal trays.

Advantages

Corrosion resistance: FRP resists chemicals, moisture, and saltwater exposure. **High strength-to-weight ratio:** Supports heavy cable loads without excessive weight. **Low maintenance:** No need for painting or anti-corrosion treatments.

Flexible installation: Hold-down clips and expansion guides can be positioned inside or outside the I-beam. **Compatibility with accessories:** Fittings, bends, tees, reducers, and covers are available for complete system assembly.

Summary

Fiberglass I-beam cable trays are a robust, corrosion-resistant solution for routing and supporting electrical and instrumentation cables in demanding environments. Their beam-like structural behavior, combined with FRP material advantages, makes them suitable for heavy-duty, marine, and industrial applications, offering both strength and long-term durability.

Article Content

Cable Tray Systems

The I-beam design is the most common cable tray construction. Our aluminum, I-beam ladder cable trays feature 3-inch tangents and are using connectable with our fittings and accessories.

Fiberglass channel tray | Polyester cable ladder

Tested for ABS, NEMA and IEC, B-Line series fiberglass cable tray is ideal for harsh, marine and caustic environments. [Learn about its corrosion resistant](#)

Cable Tray Systems Catalog

Please click the appropriate link below to view the catalog section as a PDF.

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Cope's I-BEAM™ tray provides a heavy duty welded cable tray for clients requiring I-BEAM side rails. It is perfect for long span locations, heavy loads, and

Fiberglass Cable Tray Structural Characteristics & Loads

Technical data on fiberglass cable tray systems: beam types, load calculations (wind, snow, seismic), and splice plate design.

Cable trays

We offer a wide range of cable tray systems to support tubing, electrical cables and instrumentation. Our cable trays are produced in fit for purpose materials like

Fiberglass Cable Tray Types & Guide | Unicomposite

Learn fiberglass cable tray types and specs. Compare trough, tray, ladder and epoxy composite systems to choose the right cable support for industrial projects.

FIBERGLASS CABLE LADDER TRAY

Lightweight yet robust and resistant to corrosion, fiberglass ladder tray often outperforms galvanized or stainless steel over the life cycle.

B-Line series Cable Tray Design Considerations

Our wind certification report provides you with list of acceptable B-Line series cable tray supports, fittings and covers based off of the environmental conditions, cable loading, and type of cable tray in your

Load Capacity and Weight: Fiberglass vs Steel Cable Tray Side by Side

The choice between fiberglass and steel cable trays can significantly impact your project. Understanding load capacity and weight is essential for selecting the right type. Many engineers and

Cable tray, Wireway

Cable trays are made of different materials, including stainless steel, galvanized steel, tempered glass, plastic and polyester fiberglass. Cable trays can be

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Polymer Cable Trays

Polymer cable trays are a broad category with varied properties, often chosen for their cost-effectiveness and resistance to a wide array of chemicals. Fiberglass

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