

Standards for Vertical Supports of Cable Trays

Article Overview

Vertical supports for cable trays must comply with IEC 61537 and BS EN 61537, ensuring proper load-bearing, spacing, and fire-resistant installation.

Key Standards and Guidelines

IEC 61537 is the internationally recognized standard for metal cable tray systems, covering construction, testing, and performance requirements for cable trays and their supports, including vertical supports . Similarly, BS EN 61537 provides European guidance for cable ladder and tray systems, ensuring mechanical strength, durability, and safety . These standards specify that vertical supports must be designed to withstand the weight of cables, imposed loads, and environmental factors such as wind, ice, or vibration .

Material and Corrosion Protection

Vertical supports are typically made from steel, stainless steel, or aluminum, with galvanization or other corrosion-resistant coatings applied to enhance durability in industrial or outdoor environments . Fire-resistant materials are required for supports in critical installations to prevent premature failure during a fire .

Support Spacing and Load Considerations

The spacing of vertical supports depends on the type of cable tray, cable weight, and span length. IEC 61537 provides formulas to calculate working loads and safety margins, with common test spans at 1 m, 1.5 m, and 2 m . BS 7671 and IET guidance recommend that cables are supported at intervals that prevent undue mechanical strain and sagging, ensuring no stress on terminations . Vertical supports must also account for short-circuit forces and other imposed loads beyond the weight of the cables .

Installation Best Practices

- o Supports should be installed plumb and securely anchored to walls, floors, or ceilings.
- o Use system components designed and tested together to ensure compatibility and safety .
- o Avoid using cable trays or supports as walkways or ladders to prevent personal injury and system damage .
- o Fire-resistant and non-combustible materials should be used in areas where fire safety is critical .
- o Bundled or long-length trays should be supported at multiple points to prevent bending or deformation during handling and installation .

Compliance and Certification

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Manufacturers must provide test certificates demonstrating compliance with IEC 61537 or equivalent national standards. CE marking or third-party certification (e.g., UL, NEMA) may be required depending on the region. Adhering to these standards ensures long-term safety, mechanical integrity, and regulatory compliance. In summary, vertical supports for cable trays must be engineered to handle mechanical loads, environmental conditions, and fire safety requirements, following IEC 61537 and BS EN 61537 standards, with proper material selection, spacing, and installation practices to ensure reliable and safe cable management.

revised classification for corrosion, revised SWL test types and procedures, new tests for lengths mounted vertical running horizontal

A professional guide to installing electrical cable tray systems per NEC Article 392. Covers support,

It is felt that this standard will help the users, contractors and design engineers who are presently involved in the extensive use of

This document specifies requirements and tests for cable tray systems and cable ladder systems intended for the support and

Mark the location of supports for vertical and horizontal cable containment installations. Install the threaded rod and

accordance with the appropriate article for each (1) Vertical Support for Fire-Resistive Cables. Vertical installations of circuit integrity

The flexibility and scalability of cable trays make them an ideal choice for environments where cable density and

Cable tray length is selected based on the load to be supported, the distance between the supports (also referred to as the span),

Cable tray supports shall have a maximum of 6 m spacing on horizontal run and 2.4 m spacing on the vertical runs. However, when

To install the cable tray supports, first find the required elevation from the floor to the bottom of the cable tray and establish a level

Explore the essential cable tray support spacing requirements for safe and efficient

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NEMA VE 1-2017 standard for metal cable tray systems. Covers construction, materials, dimensions, load capacity, and testing.

Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian

This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the

We partnered with the Eaton B-Line series experts for this article detailing the NEMA

The standard support construction of vertical cable ladders STL, STM and STIC in accordance with DIN 4102 Part 12 for vertical

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