

Article Overview

Cable tray support arms must be designed to safely carry the weight of the tray and cables, comply with relevant standards, and be installed at proper intervals using suitable materials and mounting methods.

Key Requirements

1. **Compliance with Standards** Cable tray support arms should conform to standards such as DIN EN 61537 for cable support systems or BS EN 61537 for ladder and tray systems in the UK . These standards define the mechanical and environmental requirements, ensuring the system can safely support cables without risk of deformation or failure. 2. **Load Capacity and Spacing** Support arms must be capable of carrying the weight of the cable tray plus the installed cables, including any additional loads from environmental factors like wind, snow, or ice . Typical support spacing depends on the tray type: ladder trays often require supports every 1.5 to 3 meters, while solid or ventilated troughs may need closer spacing to prevent sagging . The exact span should be calculated based on tray material, width, and cable load. 3. **Material and Corrosion Resistance** Support arms are usually made from steel, stainless steel, or aluminum, with appropriate galvanization or coatings to resist corrosion in industrial or outdoor environments . For highly corrosive or wet environments, fiberglass-reinforced plastic (FRP) may be used for non-conductive, corrosion-resistant support. 4. **Mounting and Attachment** Support arms must be securely attached to structural elements such as ceilings, walls, floors, or steel beams. Mounting methods include wall brackets, suspended supports, or center suspensions, depending on the installation layout . All fasteners should be compatible with the tray material and rated for the expected load. 5. **Safety and Electrical Considerations** Cable tray support arms should not compromise the bonding and grounding of the tray system. Steel or aluminum trays can serve as equipment grounding conductors if properly bonded with listed connectors or jumpers . Supports must also avoid sharp edges or points that could damage cable insulation. 6. **Environmental and Mechanical Factors** Support arms must withstand ambient conditions such as temperature variations, moisture, oil, or dust, as well as mechanical forces like vibration or accidental impact . Proper design ensures long-term stability and prevents deformation or failure under load.

Practical Tips

- o Use non-metallic banding when securing trays to prevent rust stains on galvanized or stainless steel products .
- o Ensure even load distribution by centering cable bundles on the tray and using multiple supports for long runs.
- o Verify support arm alignment and level during installation to maintain tray integrity and prevent cable sagging.
- o Always follow manufacturer-specific guidelines for tray and support compatibility, as not all trays and supports are interchangeable . By adhering to these requirements, cable tray support arms will provide a safe,

Cable tray support arm standards

durable, and code-compliant foundation for electrical and communication cable installations.

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

IEC 61537:2023 specifies requirements and tests for cable tray systems and cable ladder systems intended for the support and

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

B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [trough type] [solid bottom type]

The following recommendations are intended to be a practical guide to ensure the safe and proper installation of cable ladder and

NEMA Standards Publication VE 2-2006 Cable Tray Installation Guidelines Published by: National Electrical Manufacturers

Cable Tray Cable trays are mechanical support systems that provide a rigid structural system for electrical cables, raceways, and

Cable Support Systems are well designed to provide necessary support for cable trays, cable ladders and trunkings. Cable supports

This document provides guidance on best practices for installing cable ladder and cable tray systems, including channel support

With the RS 60 cable tray installation system, Niedax offers a standard support structure installation type that allows integrated circuit

Cable trays of less than 12 feet (ft.) in length should be supported in a minimum of one location, and trays over 12 ft. in length should

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and

ation of cable management products. Because of its expertise, Legrand is part of the working group for IEC

Cable tray support arm standards

61537 edition 3 and is de

Cable Trays and Accessories are designed to meet most requirements of cable and electrical wire installations and comply to local

In addition to the cantilever arms listed, there are many other specialist support brackets for use with cable tray or cable ladder.

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