

Installation Spacing of Vertical Shaft Cable Tray Supports

Article Overview

For vertical cable tray runs, supports should generally be fixed to the building structure at intervals of less than 2 meters, with cables secured at the top and every 1.5 meters.

Recommended Support Spacing

For vertical cable tray installations, the following guidelines are commonly recommended:

- o Support Interval: Vertical cable trays should be attached to walls, columns, or other structural elements at intervals preferably less than 2 meters to ensure stability and prevent sagging or excessive stress on the tray and cables (Apex Tray) .
- o Cable Securing: Cables within the tray should be secured at the top and at intervals of approximately 1.5 meters along the vertical run to maintain organization and prevent movement (Apex Tray) .
- o Manufacturer Guidance: Always consult the cable tray and support manufacturer for specific recommendations, especially for armored, shielded, or coaxial cables, as mechanical properties may vary (Eng-Tips) .

Structural Considerations

- o Tray Material and Depth: For steel trays (e.g., 6-inch deep, 14-gauge hot-dip galvanized), a vertical section up to 20 feet may be self-supporting, but horizontal forces require fastening to walls or columns (Eng-Tips) .
- o Load Calculations: In complex risers, consider static and dynamic loads, including cable weight, thermal expansion, and seismic forces. A mechanical calculation may be necessary to ensure safety and compliance (Eng-Tips) .
- o Support Types: Wall brackets, suspended supports, and center suspensions are commonly used to secure vertical trays (OBO CMS) .

Additional Best Practices

- o Cable Organization: Lay cables straight and orderly, avoiding overlaps or protrusions. Secure all bends and turns to prevent stress on the cables (Apex Tray) .
- o Fire Safety: Use fire-resistant supports for all cable types to prevent premature failure in case of fire (Prysmian) .
- o Clearances: Maintain adequate clearance from ceilings and other obstructions, typically at least 0.3 meters from the top of the tray, and ensure trays are installed at a safe height above the floor (Apex Tray) . By following these guidelines, vertical cable tray installations can achieve structural stability, cable safety, and compliance with industry standards such as BS EN 61537, NEMA VE 2-2001, and IEEE Std 525-1992.



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This method statement covers the site installation of the cable tray & ladders and the requirements of checks to be

Cable Tray Support System Cable tray supports shall be fabricated from standard MS angles/channels/flats and

This publication is intended as a practical guide for the proper and safe* installation of cable ladder systems, cable tray systems,

Explore the essential cable tray support spacing requirements for safe and efficient installations. Learn NEC guidelines

If it has excellent electrical continuity and is integrated in the installation's equipotential bonding system, a metal cable tray reduces

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

The drawing shows proper installation methods for LV cable trays and SAS (Security Access System) cable routing with vertical

Spacing: straight sections ≤ 2 m; on each side of a bend, a support set shall be provided with spacing ≤ 1.5 m. Fixing

All cable trays and their associated supports are rated for a specific maximum weight, based partly on the allowable fill area and the

Foreword 267 For cable tray installers: NEMA BI-50016-2024 (hereinafter referred to as NEMA BI-50016) is intended 268 as a

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations

Cable Tray Installation Method Statement 1. Cable Tray Installation Cable trays should be installed in accordance with the latest

Center hung tray supports allow for quicker and easier cable installation by allowing cables to be deposited

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into tray systems from

The 2026 NEC introduced an important update: cable trays must have at least 12 inches of clear vertical space above

In vertical trays, cables shall also be secured at intermediate locations as necessary to keep all cables completely

Cable support systems are generally designed with at least 50 % reserve space available for each tray. Cable tray types, supports

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