

Should the vertical cable trays be supported

Article Overview

Yes, vertical cable trays require supports to ensure structural integrity, prevent mechanical stress on cables, and comply with installation standards.

Support Requirements for Vertical Cable Trays

Vertical cable trays must be supported to safely carry the weight of the cables and withstand environmental or mechanical loads. Unlike horizontal trays, where cable weight may help keep cables in place, vertical runs rely entirely on supports to prevent sagging, bending, or undue stress on conductors . Supports also help maintain proper alignment and spacing, which is critical for heat dissipation and long-term cable performance .

Recommended Support Spacing

The spacing of supports depends on the tray type, load, and manufacturer specifications:

- o Short-span trays: typically supported every 6 to 8 feet .
- o Intermediate-span trays: supported every 10 to 12 feet .
- o Long-span trays: supported every 14 to 20 feet, with 20 feet being common .
- o Extra-long spans: may exceed 20 feet, but require careful planning and splice plate placement . For vertical transitions, cables should be fastened to the tray's transverse members to prevent movement and mechanical stress . Unsupported spans exceeding 6 feet at transition points require additional supports to protect cable terminations .

Types of Supports

Common support methods for vertical cable trays include:

- o Wall-mounted brackets: attach trays directly to walls for vertical runs .
 - o Cantilever supports: extend from a structural wall or column to hold the tray .
 - o Trapeze hangers: used for suspended vertical or angled runs, providing stability and load distribution .
- Supports should be selected based on the total anticipated cable weight, environmental conditions, and compliance with standards such as BS EN 61537 and NEC Article 392 .

Additional Considerations

- o Secure cables to the tray using approved ties to prevent slippage or damage .
- o For outdoor installations, use UV-resistant ties and consider thermal expansion with splice plates .



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o Avoid overfilling trays to maintain proper heat dissipation and prevent code violations . In summary, vertical cable trays always require supports, and proper spacing, fastening, and support type are essential for safety, code compliance, and long-term reliability of the cable system.

Cable Tray System FAQs National Electrical Code Question: We have a customer who would like to install the majority of cable tray

Vertical Runs: For vertical cable runs within trays, cables should be secured at the top and

Cable tray is considered to be a system. It must provide continuous support for cables, and the electrical continuity of the cable tray

In vertical or angled tray runs, cables should be fastened to the tray's transverse members to keep them secure. In

The NEC requires that cable trays must be supported by members at an interval specified by

Complete vertical cable tray installation guide: materials, grounding, firestop, and GB standards compliance for

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

The cable should not be allowed to have a straight vertical run without the addition of a tension relieving section. This normally

In vertical installations, the weight of the suspended cable creates a tensile load on itself and is the factor, from a cable perspective,

Consideration should be given to the loads associated with future cable additions (see section 6.3) or any other additional loads

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

NEC Table 300.19(A) proposes spacings for conductor supports. How can we design and install the cable supports in

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NEC Article 392 explains cable trays, their components, appropriate wiring methods for

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

This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate

I informed the person that running the trays vertically sideways is not logical on our application and it will require

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