

How to install extra-thick cable trays

Article Overview

Installing extra-thick cable trays requires careful planning, proper support spacing, and secure mounting to safely handle heavy cable loads.

Planning and Preparation

Before installation, review the Bill of Materials (BOM) to ensure all tray components meet the weight and size requirements for your project. Calculate the total cable weight per meter to select the correct tray thickness and support brackets, as extra-thick trays carry heavier loads and require more robust support. Ensure the installation area is clear of obstructions like pipes or HVAC ducts.

Selecting Supports and Spacing

Extra-thick trays need strong supports to prevent sagging. Supports can be mounted on walls using cantilever arms or from ceilings using trapeze hangers. The spacing between supports is critical:

- o Short spacing (1.5 meters): Provides maximum rigidity and prevents bending.
- o Long spacing (3 meters): Reduces material costs but requires a stronger tray to avoid sagging. Always follow manufacturer specifications for support intervals based on tray thickness and cable load.

Mounting and Alignment

- o Mark the route using a chalk line or laser level to ensure a straight path for the tray.
- o Install supports at the marked points, using appropriate anchors for the building material (metal anchors for concrete, steel-grade fasteners for steel structures).
- o Place the tray sections onto the supports and connect them using splice plates to form a continuous, stable run.
- o Check alignment before tightening bolts to prevent misalignment or a "snake-like" appearance.

Cable Management and Safety

- o Maintain proper cable fill ratios (typically max 50%) to avoid overheating and ensure compliance with NEC Article 392.
- o Use rungs or ventilated troughs to support cables and maintain minimum bend radius, especially for instrumentation or control cables.
- o Ensure bonding and grounding of the tray system to prevent electrical hazards.

Tools and Materials

How to install extra-thick cable trays

Essential tools include a power drill, wrench set, measuring tape, level, hacksaw or angle grinder, and a file for deburring . Materials include extra-thick cable trays, couplers, mounting brackets, threaded rods, anchor bolts, and grounding straps .

Final Checks

After installation, verify that all trays are secure, level, and properly supported, and that cables are neatly arranged without sharp bends or contact with sharp edges. Regular maintenance checks will ensure long-term stability and safety . By following these steps, extra-thick cable trays can be installed safely, efficiently, and in compliance with industry standards.

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

Cable ladder systems and cable tray systems are designed for use as supports for cables and not as enclosures giving full

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

To ensure that the complete ladder tray wiring system performs as designed, it is important that it is properly installed. Personal

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been

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

The Engineering Galaxy - Engalaxy Full guide of cable tray installation and sizing - Part 1

Learn how to install cable trays correctly. Get the ultimate step-by-step guide on setting up a seamless and reliable

Installing a cable tray system requires careful planning to ensure it can support the weight of the cables and adheres

Cable tray / raceway is integral part of any cable management system. Selection of cable tray is very critical because

How to install extra-thick cable trays

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

Welcome to our step-by-step guide on installing cable trays! In this video, we'll explore the different types of cable trays

Newlink Cabling Systems, Inc. is a global leader in the manufacturing of high quality

These documents: ANSI/NEMA VE-1, Metal Cable Tray Systems; NEMA VE-2, Cable Tray Installation Guidelines; and NEMA FG-1,

Avoid common cable tray installation mistakes to ensure safe, compliant, and efficient electrical infrastructure.

If you're setting up or tidying up your building wiring, cable trays will be an important

Web: <https://morwarreconst.co.za>

