

# How to install steel straps in cable trays

## Article Overview

Steel straps are used to secure and support cable trays by wrapping around the tray and fastening it to structural supports, ensuring stability, load distribution, and compliance with electrical codes.

## Selecting and Preparing Steel Straps

Choose galvanized or stainless steel straps compatible with the cable tray material to prevent corrosion and ensure durability . The strap width and thickness should match the tray load and size. Inspect the tray and support structure to ensure it can handle the combined weight of the tray, cables, and straps .

## Installation Steps

- o Determine Support Points: Mark the locations where the cable tray will be supported. Standard intervals are typically 1.5 to 2 meters, but check manufacturer specifications for your tray type .
- o Position the Tray: Lift the cable tray onto the supports, ensuring it is level using a laser or chalk line . Maintain a minimum clearance of 300 mm above or between systems for cable installation and maintenance .
- o Wrap the Steel Strap: Place the steel strap around the cable tray at the support point. Ensure the strap is positioned evenly and does not pinch or damage the tray edges .
- o Secure to Structural Support: Fasten the strap to the support element (wall bracket, ceiling hanger, or strut channel) using bolts, nuts, or approved fasteners. For ceiling suspension, threaded rods and Unistrut channels can be used to create a stable mounting point .
- o Tension the Strap: Tighten the strap to hold the tray firmly without deforming it. Avoid over-tightening, which can damage the tray or cables .
- o Check Electrical Continuity: If the cable tray serves as an equipment grounding conductor, ensure electrical continuity is maintained at intervals (typically every 18 meters) and that all metal connections are bonded .

## Additional Considerations

- o Bends and Splices: When securing trays near bends or splice plates, place straps within 600 mm of the bend or support to maintain stability .
- o Future Load: Consider potential future cable additions when spacing straps to avoid overloading the tray .
- o Environmental Protection: Use corrosion-resistant straps in humid or industrial environments to prevent rust and maintain structural integrity .
- o Safety: Always wear gloves and safety equipment when handling steel straps to prevent injury . Using steel straps correctly ensures that cable trays remain secure, level, and code-compliant, providing safe and organized routing for electrical cables in commercial or industrial installations.

# How to install steel straps in cable trays

Cable ladder and cable tray systems The following recommendations are intended to be a practical guide to ensure

When properly installed, cable trays prevent damage to cabling and the area's structural integrity. When

Cable trays distribute bundles of electrical cables from power supplies to electrical equipment and components throughout the plant.

Here is a step-by-step guide on how to install a standard metal cable tray system (e.g., ladder or perforated type).

Learn everything about cable tray installation with our complete guide. Discover types, steps, and safety tips for

General Installation Guidelines: latest NEMA standards and local building codes. Trough tray field support and frequency depends on

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

Metal cable trays must be grounded and electrically continuous system. Cable tray installation will be completed and will be

Tray and Trunking joints are to be positioned as close to the supports as possible. Install 12.5mmx1.5mm copper earth bonding

The ladder tray system must be complete before the cable/conductors are installed. The ladder tray system must be free of any

Mastering cable tray installation is crucial for creating a safe, organised, and efficient cable management system. By

Looking to improve your cable organization and create a clean, safe workspace? In this

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

Metallic Cable Trays Cable tray may be used as the Equipment Grounding Conductor (EGC)

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 systems are to be installed so they are accessible. If possible 300mm minimum should be left above

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or between installed

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