

How to use steel straps in cable trays



Overview

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

Key Takeaways

Steel straps are used to securely fasten cable trays to support structures, ensuring stability and compliance with electrical installation standards.

Materials and Tools Needed

Steel straps (banding) suitable for the tray size and load
Strap tensioning tool or banding tool
Seal or buckle for securing the strap
Cable tray system (ladder, perforated, or mesh type)
Support structure (ceiling, wall, or steel beam)
Protective equipment: gloves, safety glasses, and hard hat
Step-by-Step Procedure
Plan the Installation
Determine the cable tray route, support points, and spacing. Standard support intervals are typically 1.5 to 2 meters, but always follow the manufacturer's specifications.

Identify locations for bends, tees, or risers. Position the Cable Tray
Place the tray on the support structure. Ensure it is level using a laser or spirit level.

Align the tray sections and couplers properly to maintain continuity. Wrap the Steel Strap
Loop the steel strap around the tray and the support element (e.g., threaded rod, ceiling strut, or wall bracket). Ensure the strap is flat against the tray to avoid damaging cables or the tray surface.

Insert the Seal or Buckle
Thread the strap through a buckle or seal designed for steel banding. This will hold the strap in place while tensioning. Tension the Strap
Use a strap tensioning tool to tighten the steel strap securely.

The strap should be tight enough to hold the tray firmly without deforming it. Avoid over-tightening, which can damage the tray or cables. Secure the Strap Crimp the seal or buckle using the appropriate tool to lock the strap in place.

Cut off any excess strap and file sharp edges to prevent injury or cable damage. Inspect the Installation Check that the tray is level, stable, and properly supported. Ensure that all straps are secure and that there is no interference with cables or other equipment.

Additional Considerations

Corrosion Protection: Use galvanized or stainless steel straps in environments prone to moisture or chemicals. **Load Capacity:** Ensure the strap and support system can handle the weight of the tray and cables, including any dynamic loads. **Safety Compliance:** Follow local electrical codes and standards such as BS EN 61537 or NEC for cable tray installations.

By following these steps, steel straps can be effectively used to secure cable trays, providing a safe and durable installation that meets industry standards.

Article Content

5 Steps to Learn How to Install Cable Trays

Here is a step-by-step guide on how to install a standard metal cable tray system (e.g., ladder or perforated type). Before starting, ensure you have the correct personal protective

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INSTALLATION GUIDE

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A desirable installation would be to install the MI cable in steel cable trays and to use stainless steel ties to secure the MI cable to the cable tray every three feet.

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These guidelines will be particularly useful for the design, specification, procurement, installation and maintenance of these systems. Cable ladder systems and cable tray systems are designed for use

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In designing supports for a cable tray system, consideration should be given to the loads associated with future cable additions and any additional loading that may be applied to the cable tray system (e.g.,

General Installation Guidelines:

Cable tray systems are to be installed so that they are accessible. If possible, leave 12" of space minimum free above and to the side of the tray to allow for cable installation and maintenance.

GUIDE CABLE TRAYS TECHNICAL

If it has excellent electrical continuity and is integrated in the installation's equipotential bonding system, a metal cable tray reduces the coupling's impact and thus contributes to good EMC of the electrical

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Best Practice Guide to Cable Ladder and Cable Tray Systems

Cable ladder systems and cable tray systems are designed for use as supports for cables and not as enclosures giving full mechanical protection. They are not intended to be used as ladders, walk ways

5 Steps to Learn How to Install Cable Trays

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

Cable Trays

Cable trays distribute bundles of electrical cables from power supplies to electrical equipment and components throughout the plant. Cable tray systems consist of insulated electrical cables layered

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