

How to make a cable tray using cable tray cover plates

Article Overview

Cable tray cover plates can be fabricated from sheet metal, cut to size, drilled for fasteners, and installed to protect and secure cables.

Materials and Tools

- o Material: Use sheet metal such as galvanized steel, aluminum, or PVC depending on environmental conditions and load requirements .
- o Tools: Metal shears or saw, drill with appropriate bits, deburring tool, measuring tape, marker, bending brake (for flanged edges), and fasteners (bolts, nuts, or self-tapping screws), .

Fabrication Steps

- o Measure the Tray: Determine the width and length of the cable tray to ensure the cover plate fits flush over the tray edges .
- o Cut the Sheet: Cut the sheet metal to the measured dimensions, allowing for flanges on the sides to secure the cover to the tray.
- o Bend Flanges: Use a bending brake to create flanges along the edges of the cover plate. Flanges typically range from 0.5 to 1 inch to provide a secure attachment point .
- o Mark and Drill Holes: Align the cover plate over the tray and mark the locations for fasteners. Drill clearance holes through the flanges to match the tray's side rails. Standard hole sizes are often 3/8" or 1/4" depending on the fasteners used .
- o Deburr Edges: Smooth all cut and drilled edges to prevent injury and avoid damaging cable insulation.

Installation

- o Align the Cover: Center the cover plate over the tray, ensuring it is flush with the tray edges .
- o Secure Fasteners: Attach the cover using bolts and nuts, or self-tapping screws through the drilled holes. Torque fasteners according to the tray manufacturer's specifications (e.g., 3/8" bolts to 19 ft-lbs), .
- o Check Stability: Ensure the cover is firmly attached and does not move under light pressure. Proper installation prevents cable damage, maintains system stability, and allows for easy maintenance .

Additional Considerations

- o Ventilation: For ventilated trays, consider perforating the cover to allow airflow while still protecting cables .
- o EMI/RFI Shielding: Solid covers can provide electromagnetic interference protection for sensitive circuits .
- o Outdoor Use: Drill weep holes in solid covers to prevent water accumulation if installed outdoors or in

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humid environments .

o Compliance: Follow local electrical codes and NEMA standards for cable tray systems to ensure safety and reliability . By following these steps, you can fabricate and install cable tray cover plates that are durable, safe, and compliant with industry standards.

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

Learn the best practices for installing cables in trays. This guide covers essential steps,

Durable and reliable cable tray systems providing premium performance in commercial and industrial applications, available in a

Learn common methods for connecting cable trays safely and efficiently. Our guide covers

Step-by-step on-site guide: learn how to plan, mark, support, and install cable trays correctly, from shop

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

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

Cable tray is a structure for supporting and organizing cables. Usually, it has another section that encloses the cables

Explore cable tray accessories, from brackets and hangers to supports and fittings. Learn about their applications and benefits for

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

Splice to create a Straight Join Always use 2 splice plates per length of tray and SBH and CNH splice nuts and bolts to fasten them

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

Learn the essential process of making cable trays--those metal channels that organize

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

Cable tray is alternatives to wire ways and electrical conduits, which completely enclose cables. Study types of cable

Learn how to install cable trays for large-scale projects with our professional, step-by-step guide covering industry

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