

Article Overview

A horizontal cable tray right-angle bend allows a 90° directional change in cable routing while maintaining cable integrity and system stability.

Overview

A horizontal cable tray right-angle (90° bend) is used to change the direction of a cable tray at the same elevation, enabling cables to navigate around obstacles such as structural columns, machinery, or other installations without altering the vertical height of the tray. These bends are essential in industrial and commercial electrical installations to maintain organized and safe cable management.

Materials and Construction

Horizontal bends are typically made from aluminum, galvanized steel, or stainless steel, providing durability and resistance to corrosion. Protective coatings may be applied to enhance longevity, especially in abrasive or outdoor environments. The bends are designed to preserve the structural integrity of the tray system while allowing smooth cable transitions.

Specifications

- o Angles: Standard horizontal bends are available in 30°, 45°, 60°, and 90°, with 90° being the right-angle option.
- o Radius: The bend radius is critical to prevent cable damage; for example, Eaton's B-Line series 90° horizontal bend has a 12-inch radius for a 4-inch high tray.
- o Dimensions: Typical dimensions vary by manufacturer and tray size; for instance, a 4" H x 19.5625" W x 9" L aluminum bend is common.

Installation Considerations

- o Smooth Directional Change: Right-angle bends reduce tension and potential damage to cables, ensuring easier cable pulling and minimizing stress on conductors.
- o Space Planning: Ensure sufficient horizontal run before and after the bend to accommodate the bend radius and maintain proper cable bending limits.
- o Pre-Cut Bends: Using pre-fabricated bends simplifies installation and ensures precise fit within the cable tray system.
- o Safety Margins: Add at least 50 mm (2 inches) of clearance to account for tray depth, splice plates, and worker access during installation.

Right-angle horizontal cable tray

Practical Tips

- o Choose the bend angle based on available space and cable type; 90° bends are ideal for tight corners but may require careful planning for thick or high-voltage cables .
- o Consider left or right versions of the bend depending on the routing path.
- o Verify compatibility with the tray system and ensure the bend maintains the minimum bend radius for the cables being installed. Using a horizontal right-angle cable tray bend ensures efficient cable routing, reduces installation complexity, and maintains the safety and longevity of the cable management system .

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

The Cable Tray is a simple cable management solution to help organize your desk's wires and cables.

Horizontal cross A cable tray fitting that is suitable for joining cable trays in four directions at 90° intervals in the same plane.

The Flextray™ system is a flexible, field-adaptable way to manage cables throughout your project. The tray can be cut and bent to

Fittings are used to change the size or direction of the channel tray. The most important decision to be made in fitting design

Eaton's B-Line Business reserves the right to make changes to the specifications, materials, equipment, prices, or the availability of

Vertical vs Horizontal vs Compound Offset Depending on the layout of your facility, your cable tray will need to maneuver in different

Explore Aparna Rollform's range of horizontal bends for cable trays, which includes left and right versions.

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

The 45° Horizontal Elbow boasts a horizontal bend that grants the flexibility for a 45° cable tray to navigate left or right. Moreover,

use the 90° brackets shown on page C25. To form the horizontal tee, position one length of tray perpendicular to the other and attach

Right-angle horizontal cable tray

With the new Swiftclip, lengths and fittings of Swifts cable tray can be fitted without the use of specialist tools - making it even

Cable tray systems are engineered support structures designed to route, support, and protect insulated electrical

Fitting and accessories. Fittings are accessories that connect this cable tray to another cable tray to changing direction with the

Organize network infrastructure with CommScope Horizontal and Vertical Cable Management Kits. Sturdy aluminum structures,

Fitting and accessories. with the same or different width of the cable run. All fittings are available in sizes and types corresponding to

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