How to install horizontal elbows on cable trays



Overview

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

Key Takeaways

Finished horizontal elbows in cable tray systems must be properly supported, aligned, and bonded to ensure mechanical stability and electrical continuity.

Support and Positioning

Horizontal elbows should be installed in accordance with NEMA VE 2 and manufacturer instructions, ensuring that the elbow is supported at both ends and at intermediate points if the span is long. Supports should be positioned so that connectors between straight sections and elbows fall between the support point and the quarter-point of the span, avoiding placement directly at the center or on the support itself. This prevents undue stress on the elbow and maintains structural integrity.

Alignment and Connection

Ensure the elbow aligns smoothly with the adjoining straight sections to maintain a gradual bend, minimizing stress on cables. Use the manufacturer-provided connectors and fasteners to join elbows to straight sections, allowing for longitudinal movement to accommodate thermal expansion. Verify that the elbow orientation matches the intended cable routing plan to avoid sharp bends or interference with other services.

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Bonding and Grounding

Install a bonding jumper at each elbow connection if it coincides with an expansion joint or long run, ensuring electrical continuity. Ground the cable tray system at intervals of 15 m (50 ft) and at both ends, including at elbows, using compression lugs or grounding bushings. All metallic components, including elbows, should be bonded together to prevent potential differences and maintain safety.

Material Considerations

Select elbow material compatible with the environment: aluminum for corrosion resistance, stainless steel for harsh or chemical environments, or galvanized steel for general use. Ensure the finish and mechanical properties of the elbow match the straight tray sections to maintain uniform load capacity and durability.

Installation Best Practices

Follow a pre-determined layout plan to avoid field modifications that can compromise alignment or support. Use center-hung or side-mounted supports as recommended to facilitate cable installation and maintain the maximum load capacity. Inspect all connections and supports after installation to ensure the elbow is secure, level, and free from mechanical stress points.

By adhering to these guidelines, finished horizontal elbows can be installed safely and efficiently, ensuring both mechanical stability and electrical safety throughout the cable tray system.

Article Content

INSTALLATION GUIDE

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cable tray system

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A cable tray system is an assembly of metallic cable tray sections and accessories, that forms a rigid structural system to support cables.

Ecuadorian Standard for Cable Trays

Different cable tray designs are distinguished by factors such as differences in width, height of the side, stair design, maximum space between steps, and connection of the side to the base . These factors

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Read more The post Cable Tray Installation Man Hoursappeared first on TheProjectEstimate . Below are the list for cable tray installation man hour which include cable tray, cable tray cover; cable

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The cable diameter method focuses entirely on the mechanical bending limits of the specific wire being installed. The tray width method is a purely structural approach, sizing the physical tray elbow radius

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