Galvanized flat iron connection for cable trays



Overview

Hardware shall be zinc plated in accordance with ASTM B633 SC1 for pre-galvanized cable trays, or Chromium Zinc in accordance with ASTM F-1136-88 for hot dip galvanized cable trays.

Key Takeaways

Galvanized cable trays typically require flat iron (angle iron) or C-channel supports for proper installation and structural stability.

Support Requirements

Galvanized cable trays, whether perforated or solid, are usually mounted on MS (mild steel) support structures fabricated from angle iron (flat iron) or C-channels. These supports provide the necessary mechanical strength to hold the trays and cables, especially for long runs or elevated installations. For example, wall-mounted supports often use MS angles of 50 x 50 mm with 6 mm thickness, spaced at regular intervals, while bridge supports may use C-channels of 150 x 75 mm welded to the angle iron for additional stability.

Fastening and Connections

The trays are fastened to the support structure using high-tensile bolts, washers, and nuts, typically M8 galvanized or stainless steel hardware. Coupler plates are used to join two tray sections, ensuring alignment and load distribution. Welding may be applied where bridge supports are fabricated, and the welded areas are usually coated with primer and enamel paint to maintain corrosion protection.

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Corrosion Protection

Since galvanized trays are prone to scratches or exposed steel at cut edges, flat iron supports should also be galvanized or painted to prevent galvanic corrosion. In outdoor or corrosive environments, hot-dip galvanization or compatible corrosion-inhibiting compounds are recommended at junctions between dissimilar metals.

Standards and Best Practices

Installation should comply with relevant standards such as BS EN 61537 for cable trays and BS 6946 for channel supports. Properly designed flat iron supports ensure that the trays can withstand imposed loads, including the weight of cables, wind, and other environmental factors, without deformation or failure.

Summary

In practice, flat iron (angle iron) or C-channel connections are essential for supporting galvanized cable trays, providing mechanical stability, proper alignment, and corrosion protection. Fastening with high-tensile bolts and ensuring compatible coatings at welded or joined areas are critical for long-term durability and compliance with installation standards.

Article Content

GUIDE CABLE TRAYS TECHNICAL

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

Full cable tray systems specification document

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Cable Trays

Heavy Duty Cable Tray Systems Heavy duty cable trays and cable ladders are manufactured from pre-galvanized or hot-dipped galvanized sheet metal, designed to meet ideal environmental working

Cable Trays | EAE USA

Heavy duty cable trays and cable ladders are manufactured from pre-galvanized, electro-galvanized, or hot-dipped galvanized sheet metal, designed to meet ideal environmental working conditions for

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Cable Tray Connectors | McMaster-Carr

Cut, bend, and connect these wire mesh tray systems to route cable and hose in configurations such as curves, slopes, and tees. They are a lightweight option for organizing bundles of cable and hose

Cable tray

So, whether specifying a major new project, or simply refurbishing existing facilities, choose ABB cable tray to deliver the most effective, reliable and long lasting support for your cabling needs.

CABLE TRAY SYSTEMS GUIDE

The Ladder Tray features light, rugged, tubular steel construction. It is designed for mechanical support and strain relief in long runs of cable and creates a smooth gradual bend for cable. Rail and stringer

Cable Tray Technical Guide A practical guide to product selection and ...

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.,

Cable Trays and Accesories

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CABLE TRAY

SFSP''s Basket Tray systems make connections fast and simple with limited need for tools. Its design allows for continuous airflow, and prevents heating up of cables.

Types of Cable Trays: Ladder, Perforated, Basket, Solid

Cable trays support insulated electrical cables in industrial and commercial settings. There are several types of cable trays, including ladder,

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A GI (Galvanized Iron) Earthing Strip is a flat, conductive metal tape made of mild steel coated with a layer of zinc. It is used in electrical systems as a reliable, low-resistance path to safely divert fault

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Wire Mesh Cable Tray HSN Code used for Export Import

Find accurate Wire Mesh Cable Tray HSN Code from 1 option. HS Code 73089090 is most popular, used in 7.2M+ export import shipments.

GI Sheet Weight Chart and Jindal GI Strip Weight in kg

GI Sheet Weight Chart Galvanized Iron or GI Sheet are mainly known as rust free material, as these sheets come with Zinc coating. Following GI Sheet Weight Chart Table will guide you to choose the

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What are the main types of galvanized cable tray?

Learn the main types of galvanized cable trays, including HDG cable tray, GI cable tray and Pre-galvanized cable tray with JLH Electric.

Cable Trays and Accesories

Cable Trays and Accessories are designed to meet most requeriments of cable and electrical wire installations and comply to local international standards of ...

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