

Cable tray support bolt specifications



Overview

Guide to cable support systems The load capacity of the cable trays according to the support width can be read off in the diagram using load curves – here.

Key Takeaways

Cable tray fittings typically use standard bolts such as M6, M8, or 1/4"-5/16" UNC, made from steel or stainless steel, selected based on load, environment, and tray material.

Bolt Types and Sizes

Metric bolts: Commonly M6, M8, or M10 depending on the tray size and load requirements. M6 is often used for light-duty trays, while M8 or M10 is used for medium to heavy-duty trays. Imperial bolts: 1/4"-5/16" UNC bolts are frequently used in North American installations, especially for ladder and channel trays.

Length: Bolt length should accommodate the fitting thickness plus the tray flange, typically 20–50 mm for metric bolts or 3/4"-2" for imperial bolts, ensuring proper engagement with nuts and washers.

Material and Coating

Steel bolts: Standard carbon steel bolts are used for indoor, dry environments. Stainless steel bolts (304 or 316): Recommended for corrosive or outdoor environments, such as chemical plants or coastal areas. Galvanized bolts: Hot-dip galvanized or zinc-plated bolts are used with galvanized trays to prevent galvanic corrosion.



Nuts and Washers

Lock nuts or hex nuts: Used to prevent loosening due to vibration. Flat washers: Distribute load and protect tray surfaces. Spring washers: Optional for high-vibration environments.

Torque and Installation Considerations

Bolts should be tightened to the manufacturer's recommended torque to avoid deformation of the tray or fittings. For example, M6 bolts are typically torqued to 8–10 Nm, and M8 bolts to 20–25 Nm, depending on material and coating. Ensure that bolts are compatible with the tray material to prevent corrosion or mechanical failure.

Aluminum trays require stainless steel or compatible coated bolts.

Standards and Compliance

Cable tray fittings and their fasteners should comply with NEMA VE 2, UL 568, or equivalent local standards.

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E marking or UL listing indicates that the bolts and fittings meet safety and mechanical performance requirements.

Summary

When selecting bolts for cable tray fittings, consider: Bolt size (M6, M8, M10 or 1/4"–5/16" UNC) based on tray load. Material (steel, stainless steel, or galvanized) for environmental compatibility. Nuts and washers to ensure secure fastening.

Torque specifications to prevent damage or loosening. Compliance with NEMA, UL, or manufacturer guidelines for safety and warranty purposes. Following these specifications ensures a safe, durable, and code-compliant cable tray installation suitable for industrial, commercial, or data center applications.

Article Content

Guide to cable support systems

The load capacity of the cable trays according to the support width can be read off in the diagram using load curves – here, shown as an example for a cable tray with the tray widths 100 to 600 mm.

Tray Support for assembly Technical Data Sheet

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied.

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

A. General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units.

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

Cable tray length is selected based on the load to be supported, the distance between the supports (also referred to as the span), and handling and installation constraints.

CABLE TRAY SYSTEMS GUIDE

Some applications may require the cable tray to support the weight of a single, dead object in addition to the cable loads. Specifications typically require this to be applied at the midpoint of the span between

Resources for Cable tray and ladder systems

Browse or download the cable tray catalog for more information on our full line of cable tray and ladder systems. Eaton's submittal builder tool for B-Line series cable ladder and tray allows you to easily

Document DICOS

Cable trays of less than 12 feet (ft.) in length should be supported in a minimum of one location, and trays over 12 ft. in length should be supported at a minimum of two locations.

Cable Tray Support Bracket Specifications

This document provides specifications for various brackets used to support struts, including: - Dimensions, load ratings, safety factors, finishes, and weights for 14 different bracket models ranging

Cable Tray Bolts - Electrical Fixings with Flange Nuts

Made from carbon steel with a zinc finish, these bolts are best suited for dry, low-humidity environments like data centres, commercial buildings, and indoor industrial spaces. Fully threaded for maximum

Connecting Wire Mesh Baskets & Cable Trays | CMW

The answer: use the right connection accessories for a secure, aligned and continuous cable support system. In most cases, sections of wire mesh baskets or electrical cable trays are

Cable Tray Selection for Cement Plants and Bulk Material Handling

Hongfeng Electric / HF Cable Tray can support cement plant and bulk material handling projects with cable ladder, perforated cable tray, cable trunking, wire mesh cable tray, strut channel,

Cost Of Tuvalu Style Cable Trays Buyers & Importers

Sell Cost Of Tuvalu Style Cable Trays in bulk to verified buyers and importers. Connect with businesses actively looking to buy wholesale Cost Of Tuvalu Style Cable Trays at best prices.

Cable Tray Technical Specifications | PDF | Galvanization ...

Cable Tray Technical Specifications The document provides a technical data sheet for cable trays including ladder and perforated types. It lists specifications for material, thickness, dimensions,

Cable Tray Systems for Oil and Gas Utility Areas: Corrosion, Covers ...

Work With Hongfeng Electric Oil and gas utility areas need cable tray systems that are corrosion-aware, complete, and practical for site installation. A quotation that omits covers, supports,

Dominic Grid Cable Tray Manufacturing Company Buyers & Importers ...

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CABLE TRAY INSTALLATION PROCEDURE

The cable tray system shall be installed in accordance with the project specification, manufacturer's instruction and the referenced standard installations details.

Mesh cable tray systems

1 4 Correct use The mesh cable tray systems support and route all types of cables. Depending on the type and version of mesh cable tray, as well as the corrosion protection used, the mesh cable tray

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This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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