Specifications of square tubes for cable tray supports



Overview

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.

Key Takeaways

Square tubes for cable tray supports are typically made of steel or stainless steel, with dimensions and wall thickness selected based on load requirements, span, and environmental conditions.

Material and Corrosion Protection

Square tubes used for cable tray supports are generally steel or stainless steel, often with galvanized or powder-coated finishes to enhance corrosion resistance in industrial environments. Stainless steel (AISI 316) is preferred for high-corrosion areas, while pre-galvanized steel is common for indoor installations.

Dimensions and Load Capacity

Common sizes: Square tubes range from 25x25 mm to 100x100 mm, with wall thicknesses from 1. 5 mm to 4 mm, depending on the load and span. Load class: The tube size is selected based on the span between supports and the weight of the cable tray and cables.

Larger spans or heavier loads require thicker or larger square tubes. Structural strength: Tubes must support the cable tray without excessive deflection, ensuring mechanical stability and safety.

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Mounting and Support

Square tubes can be used as vertical posts, horizontal beams, or cross members in cable tray support structures. They are typically mounted using: Base plates bolted to floors or wallsSuspension brackets from ceilingsCross braces for lateral stability Standards and ComplianceCable tray support systems, including square tubes, should comply with: DIN EN 61537 for cable support systemsNEMA VE 1 for metal cable tray systemsUL or CE certifications for structural and electrical safety Practical ConsiderationsSpan and deflection: Ensure the tube size limits deflection under full load. Environmental conditions: Choose corrosion-resistant finishes for outdoor or humid environments.

Integration with fittings: Square tubes must accommodate brackets, clamps, and other mounting accessories for cable trays. In summary, selecting square tubes for cable tray supports involves balancing material, size, wall thickness, and mounting method to meet mechanical load requirements and environmental conditions while complying with relevant 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®

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.

Specifications of square tubes for cable tray supports

Specifications of square tubes for cable tray supports SFS Enclosure Systems (SFS) supplies premium optical distribution frames, ODF racks, wall-mount boxes, cross-connect cabinets, splice enclosures,

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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

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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

Product Catalogue Cable Management Solutions

Load ratings 1.5 Safety factor. All tray sections will support an additional 200 lb. concentrated load on any portion of tray (siderail, rung, etc.) above and beyond published load class.

Resources for Cable tray and ladder systems

Our cable tray design considerations guide details key factors to consider when designing cable tray systems for industrial and commercial applications. Browse or download the cable tray catalog for

Full cable tray systems specification document

The drawings which constitute a part of these specifications indicate the general route of the cable tray systems. Data presented on these drawings is as accurate as preliminary surveys and planning can

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Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management, recommendations mentioned in this technical guide only apply to our

Full cable tray systems specification document

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B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [trough type] [solid bottom type] [channel type] cable trays, bends, tees, elbows, drop-outs, supports

QCS 2010: Cable Tray Specifications | PDF

Tray components must be accurately formed to tolerances with rounded edges. Cable trays installed in hazardous environments shall be constructed from heavy duty GRP or stainless steel. The document

GUIDE CABLE TRAYS TECHNICAL

In accordance with its continuous impro-vement policy, Legrand reserves the right to change the specifications and illus-trations without notice. All illustrations, descriptions and technical information

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