

Thickness Standards for Long-Span Cable Trays



Article Overview

Long-span cable trays require increased material thickness and structural strength to safely support cables over extended intervals, typically guided by NEMA, NEC, and IEC 61537 standards.

Material Thickness and Duty Class

The thickness of cable trays is determined by the tray type, span length, and load requirements. Ladder-type or perforated trays designed for long spans (14–20 feet) generally require heavier gauge steel or aluminum to prevent excessive deflection and maintain structural integrity under full cable load and environmental factors such as wind or snow. Manufacturers provide thickness specifications based on duty class:

- Light-duty trays: Suitable for short spans and small cable loads; thinner material is acceptable.
- Intermediate-duty trays: Support moderate cable loads over medium spans.
- Heavy-duty trays: Required for long spans, high cable density, or industrial environments; thicker material ensures minimal sag and compliance with safety margins.

Span Considerations

Long-span cable trays are typically supported at 14 to 20-foot intervals, with 20 feet being common for industrial installations. As span length increases, tray thickness...

Article Content

Feb 07, 2026

26 05 36 Cable Trays for Electrical Systems

Eaton B-Line series Engineer-approved equal METAL CABLE TRAYS Description: This product category covers metal cable trays

Nov 04, 2025

Full cable tray systems specification document

B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [trough type] [solid bottom type]

Mar 30, 2026

NEMA Standards Publication VE 2-2018

Attaching a channel cable tray by using the method illustrated in Figure 3-88 maintains the electrical requirements, and the bolted

Sep 29, 2025

Metal Cable Tray Systems Standard NEMA VE 1-2017

NEMA VE 1-2017 standard for metal cable tray systems. Covers construction, materials, dimensions, load capacity, and testing.

Sep 26, 2025

PRODUCT BROCHURE T& B® Cable Tray Specialty aluminum solutions

40-foot spans reduce support requirements For cable tray applications lacking sufficient space for the number of supports required

Jul 17, 2026

Cable Tray Specifications and Accessories

This document provides specifications for perforated and solid cable tray systems including: - Straight sections that come in various

Nov 28, 2025

Cable Tray Design and Standards Guide

1. The document outlines codes and standards that must be followed for design and construction of cable trays and their

Jan 10, 2026

Large Span Cable Trays Lay Heavy Cables in Industries

Large span cable trays can be divided into ladder style, channel style, perforated style with galvanized, powder coated surface to

Sep 27, 2025

QCS 2010: Cable Tray Specifications | PDF | Cable | Screw

It specifies that cable trays shall be constructed from hot-dipped galvanized mild steel with a minimum thickness of 1.5mm. Tray

Apr 29, 2026

B-Line series Cable Tray Design Considerations

Is your cable tray system optimized for safety, dependability, space and cost savings? Cable tray (or cable ladder) systems are a

Dec 05, 2025

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

A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a

Feb 01, 2026

Cable Tray Thickness Guide: Which Thickness Should You Choose?

Explore engineering insights on managing structural loads, material standards, and choosing the right sheet metal

Jul 20, 2026

Cable Tray Guide: Picking the Best Thickness and Width Options

For longer spans (2.5 to 3 meters), thicker trays are required to prevent sagging. A tray of 2.5 mm or above is

Jan 15, 2026

B-Line series Cable Tray Design Considerations

Cable tray support locations are defined by the NEMA VE-1 and VE-2 Manufacturing & Installation Standards, which specify the

Apr 25, 2026

An In-depth Analysis for Optimal Cable Tray Support Span

The constructability for the longer span obtained from finite element analysis has been validated in view of manual

Nov 16, 2025

GUIDE CABLE TRAYS TECHNICAL

This standard specifies the requirements and test methods for cable trays, cable ladders, supports and their accessories to ensure

Feb 17, 2026

STANDARD PERFORATED CABLE TRAY

SINGLE PRINT C2C STANDARD PERFORATED CABLE TRAY Suitable for power and data cable routing in indu. trial, commercial,

Jun 07, 2026

Cable Tray Dimensions Guide: Standard Sizes, Tray Types & Sizing

Explore standard sizes by tray type, understand width and depth limits, and see how to calculate and choose compliant

Dec 13, 2025

Best Practice Guide to Cable Ladder and Cable Tray Systems

This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the

Jun 22, 2026

Cable tray manual

One industry standard that is strongly recommended is that only one cable tray splice be placed between support spans and, for long

Dec 01, 2025

Cable Tray Dimensions Guide: Standard Sizes, Tray

In practice, cable tray dimensions are a system of interrelated measurements —width, depth,

Oct 23, 2025

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

This guide for engineers and installers has been developed by ABB as a practical reference regarding cable tray characteristics,

Apr 04, 2026

NEMA vs IEC vs BS: Global Cable Tray Standards Comparison

Note: NEMA does not specify minimum thickness —the philosophy is that if the tray passes the load test at the

Sep 19, 2025

LEGRAND CABLE TRAYS TECHNICAL GUIDE

Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian

Nov 18, 2025

LEGRAND CABLE TRAYS TECHNICAL GUIDE

Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management,

Jan 04, 2026

Cable Tray Thickness Guide: Which Thickness Should You Choose?

Learn how to choose the right cable tray thickness for industrial, commercial, and infrastructure projects. Explore GI

Contact Us

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