Cable tray thickness 2018



Overview

For Cable Tray Installers: NEMA VE 2-2018 (hereinafter referred to as NEMA VE 2) is intended as a practical guide for the proper installation of cable tray systems.

Key Takeaways

The NEMA VE 2-2018 standard specifies minimum thicknesses for metal and nonmetallic cable trays based on material type, tray width, and load/span class.

NEMA V

E 2-2018 OverviewNEMA VE 2-2018 provides guidelines for metal and nonmetallic cable tray systems, including ladder, ventilated, solid bottom, and channel types. The standard defines minimum material thicknesses to ensure structural integrity under expected loads and spans, while also addressing mechanical strength, corrosion resistance, and electrical continuity for metallic trays. Metal Cable Trays (NEMA VE 1/VE 2)Steel trays: Typically manufactured from hot-dip galvanized, pre-galvanized, or stainless steel.

Minimum thickness depends on tray width and span class, with common thicknesses ranging from 1. 5 mm to 3 mm for standard ladder or ventilated trays. Aluminum trays: Thickness is generally lower due to higher strength-to-weight ratio, often 1.

2 mm to 2. 5 mm, depending on width and load class. Load/span classes: VE 2-2018 specifies designations such as light, medium, and heavy duty, which influence the required thickness and support spacing.

Nonmetallic Cable Trays (Fiberglass/FRP)Fiberglass trays: Thickness is determined by resin type, reinforcement, and tray width, typically ranging from 6 mm to 12 mm for ladder or solid-bottom trays.

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved

U

L 568 compliance: Nonmetallic trays must meet UL 568 performance requirements for mechanical strength, fire resistance, and environmental durability. International Standards (IEC 61537)IEC 61537 aligns with NEMA standards for metallic trays, specifying mechanical strength, corrosion resistance, and electrical continuity. Minimum thickness is calculated based on tray width, span, and load, ensuring compatibility with global installations.

Practical Considerations

Tray width and span: Wider trays or longer unsupported spans require thicker material to prevent deflection. Environmental factors: Corrosive or outdoor environments may require stainless steel or thicker coatings. Installation: Proper support spacing, fasteners, and grounding are critical to maintain structural and electrical performance.

In summary, NEMA VE 2-2018 provides a framework for selecting cable tray thickness based on material, width, span, and load class, ensuring safe and durable cable support systems. For precise thickness values, engineers should consult the VE 2-2018 tables or manufacturer specifications, as these account for specific tray types and environmental conditions.

Article Content

NEMA Standards Publication VE 2-2018

For Cable Tray Installers: NEMA VE 2-2018 (hereinafter referred to as NEMA VE 2) is intended as a practical guide for the proper installation of cable tray systems.

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 Tray Dimensions Guide: Standard Sizes, Tray

In practice, cable tray dimensions are a system of interrelated measurements —width, depth, length, and material thickness—that directly

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 cable tray thickness standards, load capacities, and selection

B-Line series Cable Tray Design Considerations

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved

For ladder or ventilated trough trays, the total sum of the cross-sectional areas of all the cables to be installed in the cable tray must be equal to or less than the allowable cable area for the tray width, as

Cable Tray Installation Guide | NEMA VE 2-2018

NEMA VE 2-2018 Cable Tray Installation Guidelines. Learn best practices for cable tray installation, support, and accessories.

Document DICOS

The information in this publication was considered technically sound by a consensus among persons engaged in its development at the time it was approved. Consensus does not

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®

B-Line series pan tray catalog

Cable Tray Fittings are designed to support cables as they transition directions. Note: Perforated slot dimensions and patterns may vary depending on tray size and type. Solid and perforated bottoms

National Standard Thickness of Cable Tray

Industrial Power Plant: Requires heavy-duty trays, 2. 5–3 mm thick with widths up to 1000 mm, capable of holding multiple layers of power cables., is a welded wire-mesh cable management system made

Codes and Standards | Cable Tray Institute

The Cable Tray Institute is making available the current edition of this practical guide for the proper installation of aluminum or steel cable tray systems. These guidelines will be useful to engineers,

Cable Trays and Accesories

SFSP manufactures a wide range of products capable of providing the characteristics which respond to the proposed application, along with quality of assembly, speed of installation, and cost-saving cable

Steel Cable Tray | Strong And Reliable Cable Management | CEF

Steel Cable Tray Steel cable trays offer a practical and durable solution for cable management in industrial and commercial applications. Built from high-quality materials, these trays provide excellent

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved

Cable Tray Joint / Cable Ladder Joint

Cable Tray Joint / Cable Ladder Joint / L-Angle Side Joint Connector / Adjustable Joint Connector The adjustable joint connector is one of the important and widely used components in wire and cable

FRP Perforated Cable Tray Specifications

This document provides technical specifications for fiber reinforced plastic (FRP) perforated cable trays manufactured by Fibertech Composite Pvt Ltd. The trays are made through a pultrusion process

Typical Design Philosophy of Cable Trays for Power Plant

The highest voltage grade cables will be laid in the top-most tray and other voltage grade cables in the lower trays in descending order. The minimum thickness of galvanization coating may

Cooper B-Line

Our customers have access to the most complete support systems offered in the industry, including metal framing, cable tray, pipe hangers, slotted angle, and fasteners. Many of Cooper B-Line''s

Cable Tray Size Calculation for Project Engineers

Cable tray size calculation is important for ensuring safe cable installation, proper heat dissipation, and enough spare capacity for future

Related Video Reference

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

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved

Contact Us

Continue your research online:

Website: https://dolphinspreschool.co.za
Technical inquiry: https://dolphinspreschool.co.za/project-desk.html
African project coordination: Waterfall City, Midrand, Gauteng, South Africa

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved