

How to calculate the vertical cable tray support frame

Overview

Cable tray support quantity can be calculated using a simple formula: Support Quantity = Total Length ÷ Support Spacing + 1 $20 \div 2 + 1 = 11$ supports In a typical project, a 20-meter cable tray with 2-meter spacing requires 11 supports. This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate cable fill calculations to managing a safe cable pull through and ensuring all bonding and grounding requirements are met. Follow these simple steps: Define Tray Dimensions: Enter the width and depth of your planned cable tray (in mm or inches). IEC 61537 covers cable tray and cable ladder systems for the support and accommodation of cables, while NEC Article 392 governs cable. Using 3/4" conduit for each cable at .34/ft using 20 ft sections in tray and 10 ft sections for the drop. Select your tray type (ladder, ventilated trough, solid bottom, or channel), enter the tray width.



Article Content

Jan 21, 2026

Cable Tray Fill Calculator (NEC 392)

Free cable tray fill calculator for electrical designers, plant electricians, and industrial maintenance teams who need to verify that cable installations comply with NEC Article 392 fill requirements.

Feb 27, 2026

Free Cable Tray Fill Calculator | NEC & IEC Compliant Sizing | Shilden

Properly sizing your cable tray is critical for safety and compliance. Our free calculator helps you determine the correct tray size based on NEC and IEC standards.

Sep 05, 2025

Cable Tray Sizing Calculator | IEC 61537 & NEC 392 Guide

Use this cable tray sizing calculator to check fill %, select tray size, and comply with IEC 61537 & NEC 392 with formulas, example and checklist.

Jun 20, 2026

A Guide to Installing and Supporting Electrical Cable Trays

This includes selecting the correct tray type for the environment and cable load, accurately calculating the cable tray support span, and strictly adhering to the guidelines within NEC Article 392 from start ...

Apr 18, 2026

Chapter 14 Cable Support systems

To assist this selection process a useful approach can be to choose a likely size of tray or ladder and then to estimate the maximum cable weight which is capable of being contained within it.

Jul 29, 2025

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.

Mar 25, 2026

IEC 61537 Cable Support Systems Guide

The document discusses cable support systems used internationally. It provides information on calculating cable loads using cable weight tables to determine the maximum load a cable tray can ...

Oct 31, 2025

B-Line series Cable Tray Design Considerations

Our wind certification report provides you with list of acceptable B-Line series cable tray supports, fittings and covers based off of the environmental conditions, cable loading, and type of cable tray in your ...

Dec 22, 2025

How to Calculate the Cable Tray Support Quantity

Learn how to accurately calculate cable tray support quantities in electrical installation projects. Our guide covers methods, tools, and practical examples for effective cable tray support ...

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