Connection between trough-type cable trays and trapezoidal cable trays



Overview

Selecting the correct cable tray type is not arbitrary—it depends on a combination of cable characteristics, environmental conditions, and installation requirements.

Key Takeaways

Trough-type cable trays can be connected to trapezoidal cable trays using transition fittings or custom adapters while ensuring proper support, alignment, and cable protection.

Overview of Trough-

Type Cable Trays

Trough cable trays are designed with moderate ventilation and frequent cable support, typically providing support every 4 inches along the bottom. They are suitable for moderate heat-generating electrical or telecommunication applications and are available in metallic and nonmetallic materials. Support spans generally range from 5 to 12 feet, and trays are mounted using trapeze, wall, floor, or channel methods.

Trough trays are available in heavy, medium, and light-duty load capacities, and their open design allows easy cable access and maintenance.



© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Considerations for Connecting to Trapezoidal Cable Trays

Transition Fittings: To connect a trough tray to a trapezoidal tray, use adapter plates or custom transition fittings that match the width and sidewall profiles of both trays. This ensures a secure mechanical connection and maintains cable alignment. Support and Span: Both tray types must be supported according to their maximum load and span specifications.

Typically, trough trays require supports every 2. 5 meters (≈8 feet), and trapezoidal trays may have similar or slightly different span requirements. Ensure that the transition section is adequately supported to prevent sagging or stress on cables.

Cable Protection: Maintain rounded edges and smooth transitions to prevent cable damage, especially for fiber optic or sensitive copper cables. Trough trays often have rolled top edges and ventilated designs to reduce heat buildup and protect cables. Alignment and Leveling: Ensure that the bottom of the trough tray aligns with the trapezoidal tray to avoid sharp bends or pinch points.

Use adjustable brackets or shims if necessary to maintain a smooth cable pathway. Grounding and Bonding: When connecting different tray types, ensure electrical continuity by bonding the trays together using grounding lugs or bonding jumpers, particularly if the trays are metallic. Covers and Security: If either tray has a cover, ensure that the transition section accommodates the cover or provides a compatible solution to maintain cable protection and security.

Installation Tips

Minimize jobsite fabrication by using pre-fabricated bends, splices, and transition pieces. Verify load ratings for the combined tray system to prevent overloading. Maintain ventilation in the trough section to prevent heat accumulation in cable bundles.

Ensure easy access for future cable additions or maintenance by using tool-less or removable covers where possible. By following these guidelines, a trough-type cable tray can be effectively integrated with a trapezoidal cable tray, providing a continuous, safe, and structurally sound cable management system.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Article Content

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.,

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®

Cable Tray Systems: A Complete Guide to Types

Discover the essential guide to cable tray systems. Learn about ladder, trough, and wire mesh types, key components, and expert installation tips

7 Types of Cable Trays: How to Choose the Right One

Selecting the correct cable tray type is not arbitrary—it depends on a combination of cable characteristics, environmental conditions, and installation requirements.

A Guide to Installing and Supporting Electrical Cable Trays

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

INSTALLATION GUIDE

Where metal supports for metal cable trays are bolted to the tray and are in good electrical contact with the grounded structural metal frame of a building, the tray shall be deemed to be bonded to ground.

CABLE TRAYS CONNECTION INSTRUCTIONS

Introduction The purpose of this document is to describe the correct process to install the connectors in our cable trays.

Trough Type Cable Tray Guide: Load, Installation & Benefits

A professional guide to trough type cable trays. Explore load capacity charts, installation guidelines, advantages over ladder type, and key selection criteria for your project.

Product Catalogue Cable Management Solutions

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

With over 20 years of experience T&B Cable Tray provides a complete solution in cable management systems including design, manufacturing and technical support by offering a complete solution for

Practices for grounding and bonding of cable trays

In addition to providing an electrical connection between the cable tray sections and the EGC, the grounding clamp mechanically anchors the EGC to the cable tray so that under fault current

Cable Tray, Cable Bus, Wire Mesh Cable Trays | MP

MP Husky manufacturers Cable Tray Systems, Cable Bus System, Wire Mesh/Wire,Cable Tray, & Cable Management Systems. Our cable support

Difference between cable trunking and bridge, trough and tray type ...

Tray cable trunking has a strong load-bearing capacity, can carry more cables, but the connection between the trays is not smooth, will have a certain impact on the maintenance and

Types of Cable Trays – Purpose, Advantages,

Cable tray is alternatives to wire ways and electrical conduits, which completely enclose cables. Study types of cable trays, purpose, advantages.

Cable Tray Type Selection

The only reason to select a ventilated trough cable tray over a ladder type cable tray is aesthetics. No drooping of small cables is visible. The ventilated trough cable tray does provide more support to the

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

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a practical reference regarding cable tray

Cable Tray Ladder Trunking Wire Basket Installation Guidelines

Make expansion connections wherever cable tray and trunking are crossing building expansion joints. Cable trays are to be made good at all joints or holes, first treat the surfaces with a suitable rust

What are the main types of cable tray?

Introduce the main types of cable tray including ladder cable tray, perforated cable tray, solid bottom cable tray and wire mesh cable tray.

Wireways Selection Guide: Types, Features, Applications | GlobalSpec

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

The high cost of manufacturing and installing wireways limits their use to small sections of cable management systems, while most systems primarily consist of cable trays, conduit, and other types

Related Video Reference

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

Contact Us

Continue your research online:

Website: https://cjcconsultants.co.za
Technical inquiry: https://cjcconsultants.co.za/contact.html

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

© 2026 CJC FIBRE CONSULTANTS - All rights reserved