

RIVO MULTITRADE OPTICAL SYSTEMS

Thickened cable trays



Overview

Choose from our selection of cable trays, including over 850 products in a wide range of styles and sizes. Same and Next Day Delivery.

Key Takeaways

Thickened cable trays are reinforced cable management systems designed to support heavier loads, resist environmental stress, and provide flexible, safe routing for electrical and communication cables. Overview of Thickened Cable Trays

Thickened cable trays are an enhanced version of standard cable trays, featuring increased material thickness or reinforced structures to handle higher cable loads and longer spans without sagging. They are widely used in industrial, commercial, and offshore applications where mechanical strength, durability, and corrosion resistance are critical ().

Materials and Corrosion Resistance

Thickened cable trays are manufactured from a variety of materials depending on environmental conditions:

- Steel: Often pre-galvanized or hot-dip galvanized for corrosion protection. Suitable for indoor and outdoor industrial environments ().
- Stainless Steel (AISI 316L): Offers superior corrosion resistance, especially in chlorinated or marine environments, due to chromium and molybdenum content ().



- Aluminum: Lightweight with excellent corrosion resistance due to a natural oxide layer. Ideal for areas exposed to atmospheric agents ().
- Fiberglass Reinforced Plastic (FRP): Pultruded trays using polyester or vinyl ester resin provide high strength-to-weight ratio and chemical resistance ().

Design Considerations

When designing thickened cable trays, several factors must be considered:

- Load Capacity: Determine the total weight of cables and any additional equipment. Thickened trays allow for higher load ratings and longer unsupported spans ().
- Tray Width and Depth: Adjusting width can accommodate more cables, while depth ensures proper cable separation and airflow ().
- Thermal Expansion: Materials expand and contract with temperature changes; allowances must be made to prevent structural stress ().
- Environmental Factors: Corrosive atmospheres, high humidity, or chemical exposure require selecting appropriate materials and finishes ().

Installation Best Practices

- Support Spacing: Reinforced trays can span longer distances, but supports should be placed according to load and material specifications ().
- Splice Plates and Joints: Use proper splice plates to maintain structural integrity at tray connections ().
- Cable Fill Management: Avoid overfilling; calculate allowable fill area to prevent overheating and maintain safety ().
- Compliance with Standards: Install trays according to BS EN 61537, BS 6946, NEC, or IEC standards depending on location ().

Advantages of Thickened Cable Trays

- Higher Load Capacity: Supports heavier cables and equipment without deformation.
- Durability: Resistant to mechanical stress, corrosion, and environmental factors.
- Flexibility: Easier to modify or expand compared to conduit systems.
- Cost Efficiency: Reduced number of supports and simplified installation can lower overall project costs ().

Applications

Thickened cable trays are ideal for:

- Industrial plants with heavy power and control cables.
- Offshore and marine installations requiring corrosion-resistant materials.
- Data centers and commercial buildings with high-density cabling.

- Environments with extreme temperatures or chemical exposure ().

Summary

Thickened cable trays provide a robust, flexible, and safe solution for managing electrical and communication cables in demanding environments. Proper selection of material, design, and installation practices ensures long-term reliability, compliance with standards, and cost-effective cable management.

Article Content

Cable Trays | McMaster-Carr

Choose from our selection of cable trays, including over 850 products in a wide range of styles and sizes. Same and Next Day Delivery.

B-Line series pan tray catalog

Solid flanged covers should be used when maximum enclosure of the cable is desired and no accumulation of heat is expected.

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

Cablofil Cable Management | Legrand

Build a cable management system with Cablofil wire mesh cable tray, ladder cable tray, prefab assemblies for branch circuit wiring,

Cable trays Heavy duty | SILTEC

SILTEC cable trays, heavy duty type, has been developed for optimal cabling of many cables at once. SILTEC cable trays, heavy

Cable Tray Systems

Durable and reliable cable tray systems providing premium performance in commercial and industrial applications, available in a

Cable Trays, Cable Management Trays

Cable trays are a type of cable management system used to support and organize electrical cables and wires in commercial,

Cablofil Cable Management | Legrand

Cablofil® Products Cablofil is the global gold standard for total cable management. Explore the one-stop shop for innovative, fast,

STANDARD PERFORATED CABLE TRAY

STANDARD PERFORATED CABLE TRAY Suitable for power and data cable routing in industrial, commercial, and infrastructure

CABLE TRAY SYSTEMS GUIDE

Cable Tray Systems Guide HUBBELL Hubbell Wiring Device-Kellems and Hubbell Premise Wiring are divisions of Hubbell

Imperial cable tray system | NEMA cable tray

Imperial cable tray and ladder Eaton's B-Line series imperial cable tray system is designed to significantly reduce support costs in

CABLE TRAY

SFSP produces a variety of products ranging from cable management systems; cable trays, cable ladders, basket trays, trunkings

Perforated Type Cable Trays, Cable Trays, Manufacturer, India

These cable trays also available as Welded Type with high grade galvanized sheet and other materials such as painted and powder

Cable Tray Raceway Fill and Load Calculations

The Wire Mesh / Cable Tray Fill table in below section shows the number of cables and the load in lbf/lineal foot

Cable Tray Manufacturer in India | Industrial Cable Trays

Get Industrial cable trays manufactured in perforated and ladder types with galvanized finish, custom sizes, accessories and easy

Cable Tray | Wire Mesh, Ladder Tray and More Wire Management

Cable trays and baskets are designed to help support and route cable bundles in an organized manner along ceilings or walls. Shop

Ladder Type Cable Trays, Ladder Cable Trays, Manufacturer, India

Cable trays provide a support system for managing cables in a Building or other places. Cable tray installation provide instant

Steel Cable Tray

Steel Cable Tray systems are Certified CSA Cable Tray, UL listed, and NEMA certified and are available in the following material

Related Video Reference

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

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

