ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Anti-sway support for cable trays



Overview

Seismic Cable Bracing Systems | Lighting | HVACSeismic Cable Bracing Systems for Lighting or HVAC designed & engineered to limit sway during a Seismic Brac.

Key Takeaways

Yes, cable trays require anti-sway supports to maintain stability, prevent lateral movement, and ensure safe cable management, especially for long or elevated spans.Importance of Anti-Sway Supports

Cable trays are designed to support electrical cables in commercial, industrial, and utility installations. While vertical and horizontal support prevents sagging, anti-sway supports are essential to resist lateral forces caused by wind, seismic activity, or mechanical vibrations. Without these supports, trays can shift, leading to cable damage, misalignment, or even structural failure, which can compromise electrical system reliability and safety .

Support Span Guidelines

The spacing of supports depends on the tray type and span length:

• Short-span trays (typically indoor, non-industrial) are supported every 6 to 8 feet.

• Intermediate-span trays are supported every 10 to 12 feet.

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• Long-span trays may require supports every 14 to 20 feet, with extra-long spans exceeding 20 feet, especially for outdoor installations . Anti-sway supports are particularly critical for long and extra-long spans, where lateral movement is more likely due to the increased leverage and weight of the cables.
Standards and Best Practices
• IEC 61537 specifies mechanical performance requirements for cable trays, including deflection and yield strength under load. Anti-sway supports help meet these standards by stabilizing trays against lateral forces .

• NEMA BI 50015 and BI 50016 define support locations and recommend the “1/4 span” method to minimize stress and deflection at splice points .

• Anti-sway supports can include lateral bracing, cross members, or rigid hangers attached to the building structure to prevent tray movement.
Practical Considerations
• Ensure that the tray length matches the support span to control splice locations and reduce stress.

• Use heavy-duty expansion splice plates and adjustable fittings in combination with anti-sway supports for long runs.

• Outdoor or elevated installations may require additional bracing to withstand wind or seismic loads . In summary, anti-sway supports are a critical component of cable tray systems, ensuring mechanical stability, compliance with standards, and long-term reliability of electrical installations. Proper design and placement of these supports prevent lateral movement, protect cables, and reduce maintenance costs.

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Anti-Sway Brackets

PLP Anti-Sway Brackets secure the bottom of cable spacers at tangent poles to prevent sway/swinging movement of the bundle.

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These special heavy duty tray hold down cable tray clamps and expansion guides are ideal for fastening tray to C-Channels and

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If braces are spaced too far apart, the tray or other cable support system between the braces can deflect and sway.

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Easy installation – the trapeze sway brace and pipe can be lifted at the same time to lock

Anti-Sway Brackets

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V.C. Summer Nuclear Station, Units 2 and 3, Rev. 3 to Updated

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The major factors which affect the damping ratio of the cable tray systems are the input acceleration level, cable fill ratio, and the

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Where necessary, cable tray systems and cable ladder systems can be used for the arrangement of cables into groups. This

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The innovative line of nVent CADDY Bracing Systems was developed to help keep fire sprinkler systems

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Cable Suspension for cable trays let you adjust the height of each suspension point in seconds without

Cable Tray Types and Sizes

What is Cable Tray Systems? An electrical cable tray is a type of containment system used to support insulated electrical cables for

Cable Tray

Cable Tray Cable trays are mechanical support systems that provide a rigid structural system for electrical cables, raceways, and

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Eaton''s B-Line series support systems effectively support, protect, and connect engineered facility subsystems, while providing a

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

Cable Tray Support Spacing: Key Guidelines Explained

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We get this question a lot. The safety of your people and the reliability of your electrical system depend on proper

FactSheet

Electrical Safety Hazards of Overloading Cable Trays According to the 2005 National Electrical Code® (NEC), a cable tray system is

A Guide To Cable Support Systems

The UniPath cable support system offers a hybrid of the center rail, wire mesh, and bridle ring support systems. This allows for a

Cable Tray | EAE Electric | Medium & heavy duty cable trays

Explore EAE Electric''s medium and heavy-duty cable tray systems designed for optimal cable management and durability in

Seismic analysis and design of electrical cable trays and support ...

The design aspects of electrical cable trays and support systems are discussed from the seismic and structural

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Reliable support systems for cable tray and busbars, designed for electrical and mechanical installations. Available in corrosion

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Cable Trays Seismic Design: Protecting Power in Quake Zones

Learn how I approach Cable Trays Seismic Design to protect power and

Cable Tray Supports | McMaster-Carr

Cable Trays and Fittings For ease of installation and accessibility, lay cable and hose in trays instead of pulling it through conduit or

nVent

We would like to show you a description here but the site won''t allow us.

Mechanical Guide Focus Group

Figure 59: Braced raceways/conduit/cable trays supported from strut. Raceways/Conduits/Cable Trays Figure 60: Attachment to a

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The innovative line of nVent CADDY Bracing Systems was developed to help keep fire sprinkler systems intact after a seismic event

Cable Tray Systems | Cable Hanging Suspension | Griplock Systems

Cable Suspension for cable trays let you adjust the height of each suspension point in seconds without tools, cutting hours out of

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