

Applications of seismic bracing for cable trays in New Zealand



Overview

Gripple Wire Seismic Bracing Here are projects Gripple Seismic Bracing Systems have been installed. For more information or details regarding completed Seis.

Key Takeaways

Seismic bracing for cable trays in New Zealand involves using compliant wire or rigid support systems to secure non-structural electrical services, ensuring stability during earthquakes in accordance with NZS 4219:2009. Overview

Seismic bracing is essential for protecting cable trays and other non-structural building services during seismic events. In New Zealand, all bracing systems must comply with NZS 4219:2009 – Seismic performance of engineering systems in buildings, which sets the standards for design, installation, and performance of seismic restraints. Proper bracing ensures that cable trays remain secure, preventing damage to electrical systems and reducing risk to personnel and infrastructure.

Types of Seismic Bracing

- Wire or Cable Bracing
- Flexible, lightweight, and cost-effective alternative to rigid supports.
- Easy to transport and install, reducing labor and installation time.
- Suitable for overhead cable trays, electrical services, and suspended systems.



- Can accommodate building movement and vibration without compromising system integrity.
- Rigid or Rigid-Locking Braces
- Provide a more traditional, solid support for cable trays.
- Often used in high-load or critical installations where maximum stability is required .
- Can be supplied in ready-to-use kits to minimize on-site cutting and installation time.
- Hybrid Systems
- Some solutions combine wire suspension with rigid components to optimize both flexibility and load capacity .
- Products like Gripple Lockable Plus or V-Lock systems allow fast installation and adjustable configurations.

Design and Installation Considerations

- Load Calculations: Accurate seismic load calculations are critical to ensure cable trays can withstand earthquake forces .
- Compliance: All systems must meet NZS 4219 requirements, including PS1 design certification and PS4 completion certification for project sign-off .
- Installation: Wire bracing systems are often preferred for ease of installation at height, reducing health and safety risks .
- Integration: Bracing should be coordinated with other building services, including HVAC, pipework, and lighting, to avoid interference and maintain operational continuity .
- Retrofit Applications: Existing cable trays can be upgraded with seismic bracing to meet current standards, ensuring older installations remain compliant .

Benefits

- Safety: Protects personnel and critical infrastructure during seismic events.
- Cost Efficiency: Wire bracing systems reduce material and labor costs compared to traditional rigid supports .
- Time Savings: Pre-engineered kits and modular systems allow rapid installation, often reducing installation time by up to 85% .
- Flexibility: Systems can accommodate building drift, vibration, and floor movement without damaging cable trays .

Key Providers in New Zealand

- FDG NZ: Offers technical specifications for wire and cable bracing compliant with NZS 4219 .

- Gripple New Zealand: Provides engineered wire and rigid seismic bracing systems for cable trays and other non-structural services .
 - Level Electrical & Air Conditioning: Designs, supplies, and installs complete seismic restraint solutions for electrical and HVAC systems .
 - Vent Supply: Distributes V-Lock and other wire bracing systems for flexible, cost-effective seismic support .
 - Mechanical Support Systems (MSS): Specialist seismic engineering services for cable containment, including load calculations, design, and installation guidance .
- Seismic bracing for cable trays in New Zealand is therefore a combination of engineering design, compliant products, and professional installation, ensuring that electrical systems remain secure, functional, and safe during seismic events.

Article Content

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Seismic Bracing | Vent Supply

Vent Supply is a reliable distributor of V.Lock Global's seismic bracing and suspension systems. These cutting-edge wire bracing and

Seismic bracing | Level Electrical Gore

Our team designs, supplies, and installs compliant seismic bracing systems to help protect critical infrastructure during seismic

Seismic Engineering | Mechanical Support Systems

Our experts design supports and restraints that meet NZS 4219 requirements, improving safety, reducing risk and ensuring systems

Vaico | Seismic and suspension

We've been crucial in supporting our distributors, their contractors and engineers in over 1,500 projects across New Zealand,

Seismic & Structural Services

We design, supply, and install seismic bracing, isolation systems, and anchoring solutions for racks, containment, cable trays, and all

SEISMIC CABLE BRACING

Cable or wire bracing and suspension offers an alternative to solid bracing and supports - so you can select the solution that best

FDG Seismic Cable Bracing

These innovative wire bracing and support systems offer a reliable alternative to traditional rigid bracing and supports. Get in touch

Seismic bracing compliance made easy with BLITZCLIP

If you're installing cable tray, basket, or pipework in a seismic zone, the pre-engineered BLITZCLIP Seismic Wire

Home

We supply products that are trusted across the country in major infrastructure, industrial, and commercial

Seismic restraint of non-structural elements in buildings

For seismic design of non-structural elements such as a pipe or cable tray, a seismic

Earthquake performance - non-structural elements

Ensure proprietary non-structural/building services components, whether manufactured in New Zealand or overseas,

Seismic Engineering | Mechanical Support Systems

Why choose MSS? Few providers in the cable containment sector offer in house seismic engineering expertise. MSS brings

SEISMIC CABLE BRACING

Features and Benefit Alternative to solid bracing. Easy to transport and install. Complies with New Zealand Building Standard NZS

Seismic Bracing | Piping Systems & Ductwork | FDG NZ

Understanding Seismic Bracing when it comes to your Designs FDG are more than just suppliers of HVAC, Plumbing

BR_Seismic-Design-Installation-Guide_EN_AU

Seismic Design coordination of mechanical services and other plenum located elements, including lights, air conditioning, cable

About

Polyplas International is the exclusive licensee of Gripple wire suspension and bracing systems in New Zealand. Dedicated to

Seismic Bracing Ensures Stability and Safety of Cable Trays

Seismic Bracing – Enhancing System Stability and Seismic Resistance Seismic bracing, typically made of high-strength metal, is key

Seismic Bracing Kits

Gripple Seismic Wire Bracing Systems offer unparalleled advantages for securing non-structural elements, including VAV boxes fans

Seismic Cable Tray Bracing: Code & Site Load Design

A better question is whether the bracing logic matches the real seismic demand, tray load, and installation conditions

Seismic Design & Installation Guide

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Seismic Bracing

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Vaico | Seismic and suspension

New Zealand manufacturer of seismic braces and suspension hangers. Tested to destruction in-house and at independent labs

Seismic Restraints (Full)

All linear runs must have minimum two transverse seismic restraints and one longitudinal seismic restraint. A run is defined as a

Products - Gripple .nz

Engineered with precision, they provide a sleek and aesthetic finish, ensuring a clean and professional appearance in any

Seismic Bracing Kit | Seismic Bracing | Wire and Cable Hangers | Wire ...

Features Kit contains items needed for seismic bracing long cable tray runs. Each kit contains: (4) 11" cables with mounting eyelets

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

Installing Seismic Restraints for Electrical Equipment

INSTALLING SEISMIC RESTRAINTS FOR ELECTRICAL EQUIPMENT Notice: This guide was prepared by the Vibration Isolation

How Cable Trays and Seismic Bracing Systems Mitigate Earthquake

Modern seismic cable trays and bracing systems address this through three key mechanisms: Energy Dissipation: High

Cable Trays Seismic Design: Protecting Power in Quake Zones

Learn how I approach Cable Trays Seismic Design to protect power and data in earthquake-prone areas. Understand

Services Must be Seismically Restrained to Comply with Clause B1

Whilst the seismic restraining of building services is nothing new to the industry, the recent earthquakes in Canterbury

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