INVENTED IN SWEDEN

OFF-THE-SHELF SOLUTION FOR SECURE EQUIPMENT SUPPORT

SEISMIC BRACING

DESIGNED TO WITHSTAND DAMAGE FROM SEISMIC ACTIVITY

MADE IN USA

BERGVIK

Seismic Frame 3.0 for IBM's Mainframe Rack.

THE BERGVIK COMMITMENT

At Bergvik, we offer a full-service approach – from modular design, engineering and manufacturing to supporting installation. We are there with you every step of the way to ensure a secure and successful project!

- Minimizes (or prevent) lateral and vertical ground motion amplification.
- No dependency of static support from a raised access floor.
- The all-bolted steel bracing frames can easily be sufficiently grounded.
- Tested for UBC seismic zone 4 in accordance with AC156, NEBS GR 63 Core and GR-2930 core. IEEE Hight Qualification ASCE 7-10 Ch. 13 top of building.
- Site specific design of Seismic Bracing Frames to meet ASCE 7, which also covers the UBC seismic zones 1 through 4.
- Will integrate with any raised floor mechanics in legacy installations.
- Prequalified in order to reduce costly and lengthy custom design bythird parties.
- Modular components allow for rapid installation that does not requirewelding in the field.
- Reference installations in all major seismic zones since 1997.
- Manufactured in USA by American workers (also manufactured in Sweden for specific markets).
- A standard 5-year warranty to back up the Bergvik quality.

BERGVIK DESIGN

The big difference between seismic arch bracing frames versus e.g. lateral base isolation platform systems is that Bergvik's design restrains both the lateral and vertical ground motion during a major seismic event.

The design does not depend on any support from a raised access floor but is instead securely anchored directly from the equipment Rack or Cabinet down to the concrete sub floor with seismic anchors.

The frames are made from modular components, they can be easily installed in the field and will minimize the design time and the installation time compared with traditional equipment stands.

APPLICATIONS

Mission-critical facilities | Power Distribution Stations | Low & Medium Voltage Switchgear rooms | R&D Facilities | Hospitals | Labs | Government | Server rooms | And many more.

CUSTOMER TESTIMONIALS

ERICSSON

June 17th, 2011

To whom it may concern:

We have been using Bergvik's Seismic Bracing Frames for the Ericsson BYB 501 cabinet since the BYB 501 cabinet was introduced more than 10 years ago.

On the 11th of March 2011, we experienced the Tohoku Region Pacific Coast Earthquake. The Tohoku region was devastated by a magnitude 9.0 earthquake. It was and still remains, the fourth biggest earthquake in the world since 1900.

The Bergvik Seismic bracing frames were installed in the customer network center located in the Sendai city of Miyagi Prefecture. The city had horrific damage by this earthquake and subsequent Tsunami. In the switch room some of the ceiling fell and another vendor's rack inclined. However, our equipment on the Bergvik Bracing Frame remained stationary and survived.

Therefore, I can highly recommend Bergvik as a vendor of seismic bracing frame solutions.

Yours sincerely,

Yoshihiro Furusato

General Manager

Nippon Ericsson KK

HW Service, Local Delivery, SDO

Japan

SEISMIC ZONES

Bergvik's seismic bracing solutions comes in the following variations;

- An Iso Floor seismic design raised floor sub-structure for UBC zone 1-2. Model 1.0 is for floor heights up to 36 inches (915 mm) having pre-torqued cross braces to achieve required stiffness at high floor heights.

- 2 types of seismic frames for UBC zone 3-4, depending on the floor height. Model 2.0 for floor heights 14-24 inches (355-610 mm) are lighter and provide additional space for trays and cables run to and from cabinets.

The seismic bracing frames can be shipped pre-assembled if a shorter installation time is called for.

The seismic bracing frames have been dynamic full scale tested and approved. Analytical analysis has been performed on racks to meet the IEEE 693 High Qualification requirements.

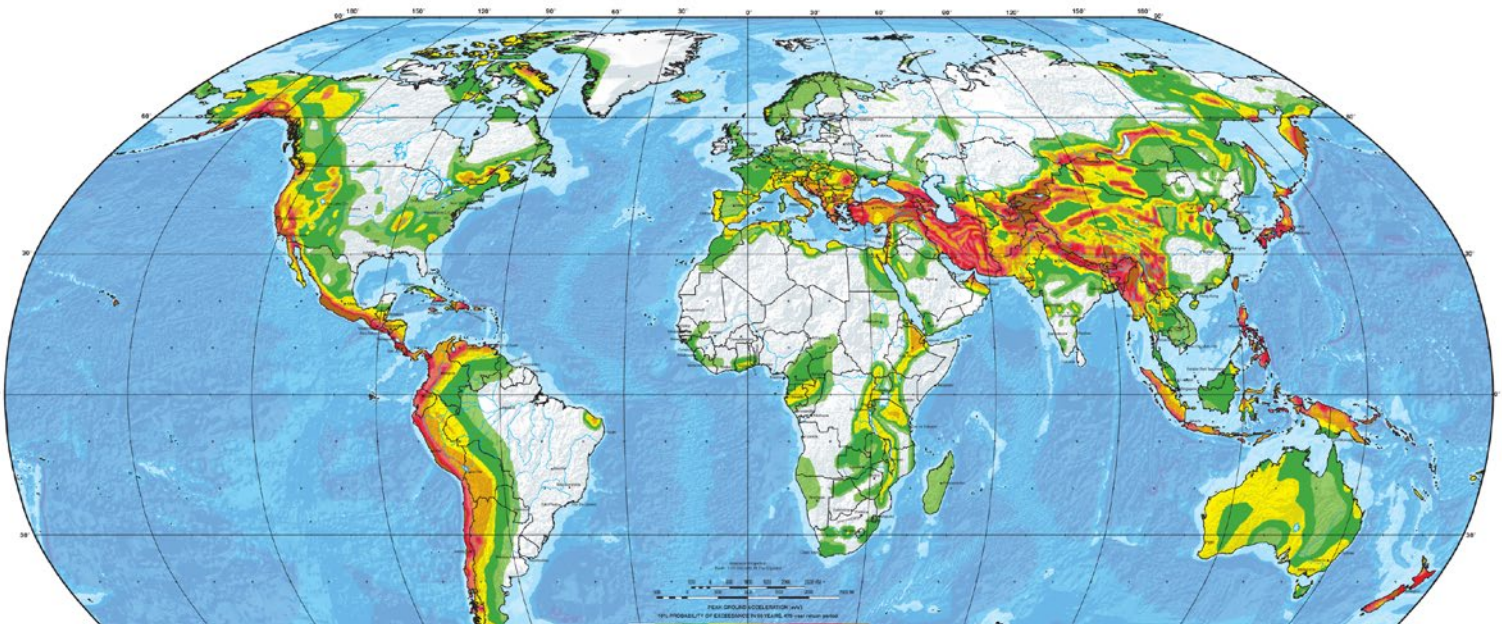
Design of floor system for seismic zones 1–2

Model 1.0 is for floor heights up to 919 mm (36 inches) having pre-torque cross braces to achieve required stifness at high floor heights

The 2.0 model for floor heights 350-610 mm (14-24 inches) are lighter and provide additional space for trays and cables run to and from cabinets

GLOBAL SEISMIC HAZARD MAP

Produced by the Global Seismic Hazard Assessment Program (GSHAP)



DESIGN AND INSTALLATION

The flexible design of the base frame and adapter using Solid Works or Auto CAD allows for each bracing frame to be adapted to fit any type of Rack or Cabinet. After the design, each model can upon request from the customer be subjected to an advanced FEM analysis before production that becomes a part of the floor documentation.

Our design department generates Solid Works or Auto CAD design drawings within a few weeks, based on the customer's Cabinet drawing.

The base frame and adapter kit assembly are shipped to site, it being a legacy or new installation. Assembly and installation time per platform for each Rack or Cabinet is fast. The arch design of the Model 2.0 simplifies tray and cable management.

Seismic Bracing Frame installation at U-Cel Uzbekistan legacy switch center. Customer was Nokia Siemens Network.

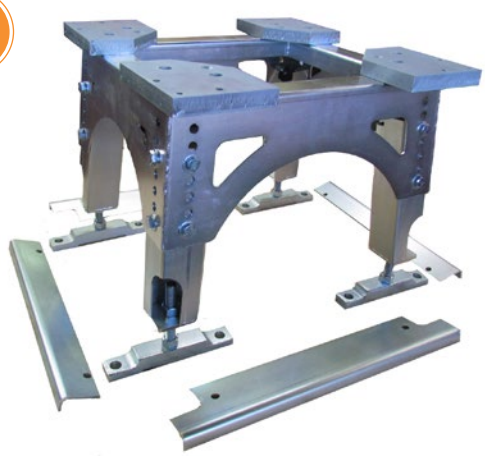
STEP-BY-STEP ASSEMBLY

Assembly of a Seismic frame for a 24 x 24 inch Cabinet

1

Mount the frame legs to the basic frame.

2



Mount the 4 adapter blocks to the basic frame.

3

Mount the adapter cover plate over the blocks.

4

Mount the 4-floor panel supports to frame.
Bracing Frame for Cabinet is ready for installation.

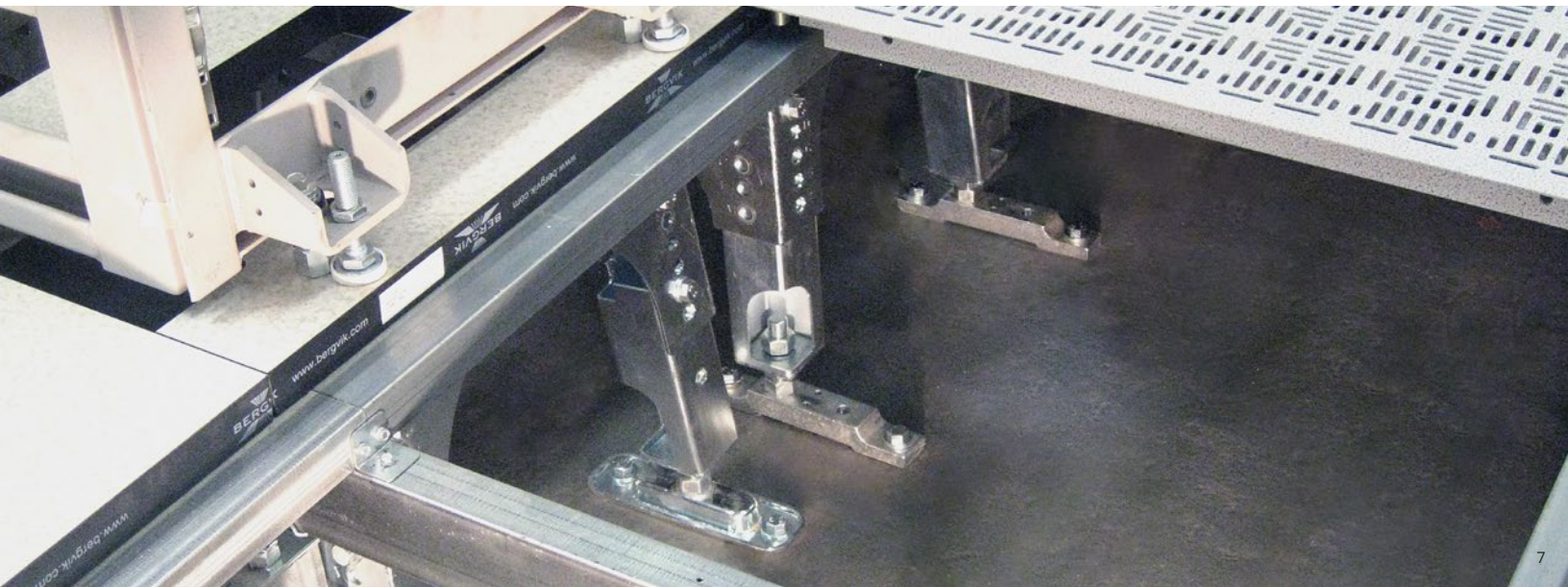
ADAPTERS FOR RACKS & CABINETS

Seismic Bracing Frame Model 2.0 adapters are designed for various types of seismic rated Racks or Cabinets, it being by; ABB, AT&T, Chatsworth, Dell/EMR, Ericsson, Hitachi, HP, IBM, Nokia, Vertiv, Optima, Schneider, Siemens, Sisco, Square D, Verizon, or the equipment supplier of your choice.

We celebrate 50-years of experience in 2020, Bergvik is a trusted leader in new, innovative design solutions with focus towards the end user clients.

With happy customers in over 100 countries, Bergvik is the only access floor manufacturer which produces independent seismic bracing frames for highly critical UBC seismic zones used in Data Centers, Electrical equipment rooms and Telecom core sites.

Basic seismic frame incl adapter for Ericsson Cabinet BYB 501



SEISMIC BRACING FRAMES

TECHNICAL DATA

THE BRACING FRAME KITS IN GENERAL

Total gross weight:	Approx. 40 lbs/sf (194 kg/m^2)
Uniform Distributed load UDL:	Up to 900 lbs/sf
Finished floor height FFH:	14"–36" (350-915 mm)

SPECIFICATION, BASIC SUB FRAME INCL LEGS

Pedestals:	2 3/4 x 2 3/4 x1/8 inch (70x70x3 mm). Adjustable ± 1" (± 25 mm).
Sub frame weight:	23 lbs/sf (111 kg/m^2)
Fire-resistance grade:	Non-combustible material of steel.
Sub frame finish:	E-coating or Electro plated.

SPECIFICATION, RACK/CABINET ADAPTERS

Material:	Non-combustible material of high-grade steel.
Adapter weight:	17 lbs/sf (83 kg/m^2)
Fire-resistance grade:	Non-combustible material of steel.
Adapter finish:	E-coating or Electro plated.

Reseller:

Our products

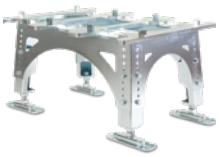
ISO FLOOR

Raised floor for data centers and power distribution rooms with unique flexibility.

HIFLEX FLOOR

High-built power distribution floor as an alternative to concrete beams.

SEISMIC BRACING



Bergvik's seismically secure raised floor that protects critical electrical equipment.

ISO FLEX-GRID

A load-bearing ceiling system that is both a dropped ceiling and a support grid in one cost effective solution.

TECH FLOOR

An economical standard grid floor system for installation in offices and communication centers.

BERGVIK
CREATING NEW DIMENSIONS

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