Iso Floor®

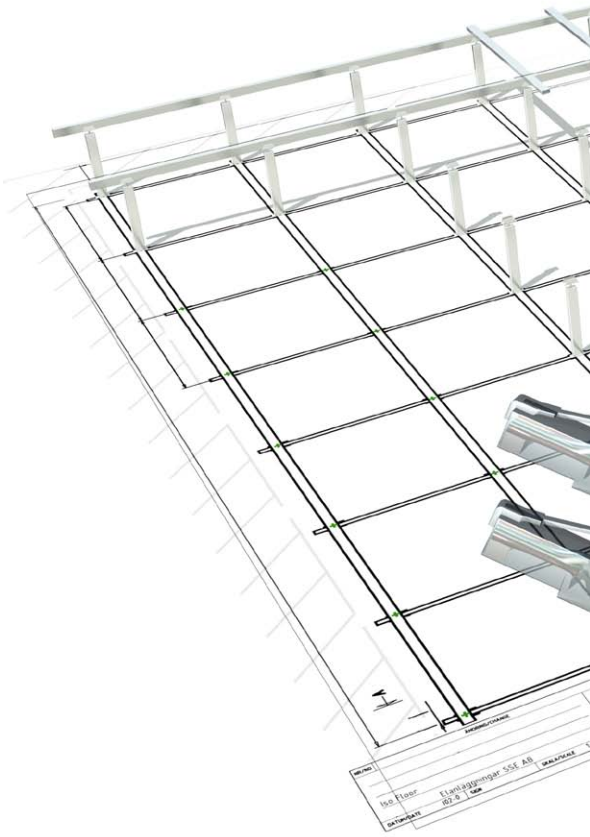
The dynamic raised floor offering full flexibility and stability in Data Centers and Telecom Network Operation Centers.

BERGVIK®

floors on a higher level

Iso Floor® – the only dynamic raised floor on the market

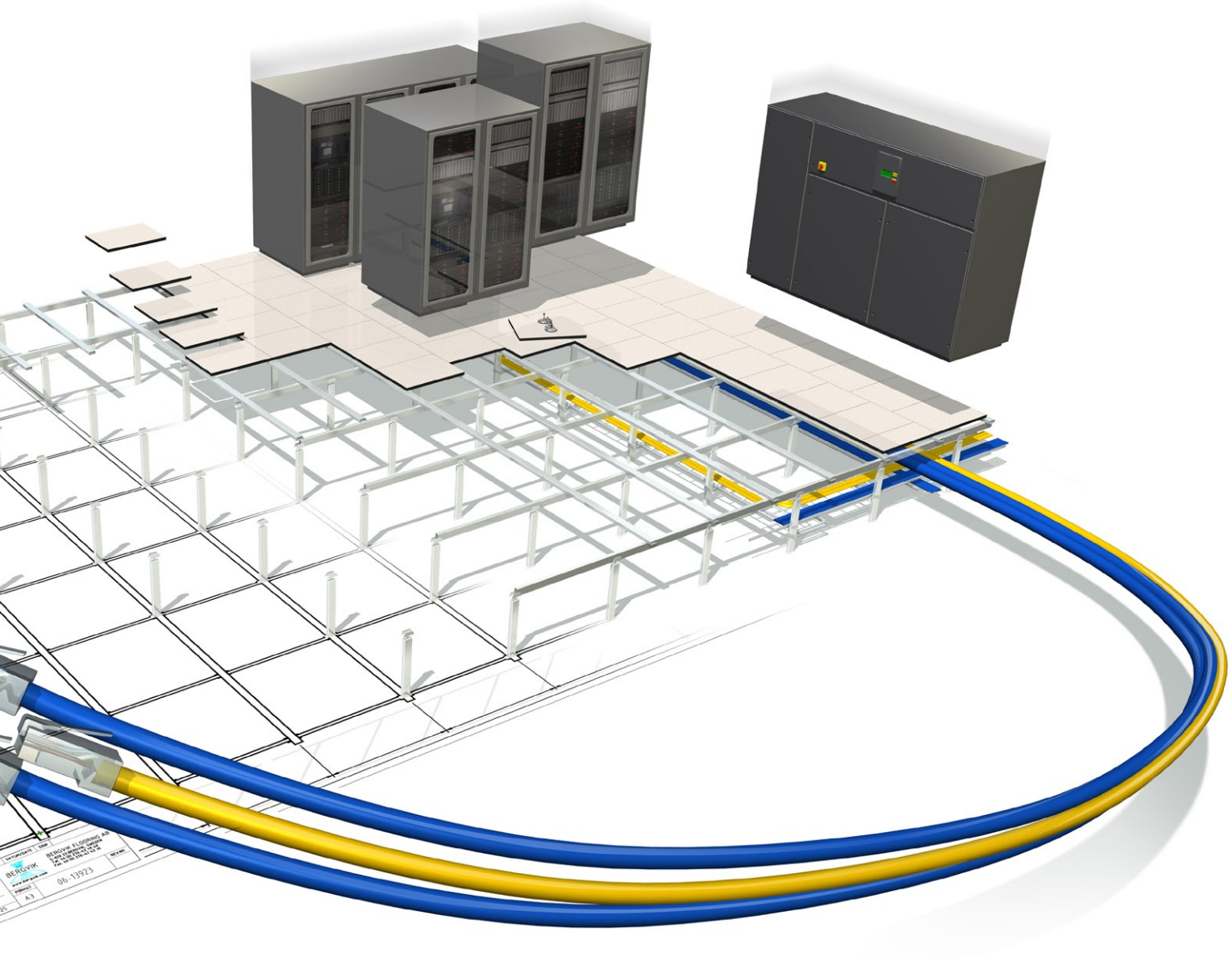
Bergvik is a Global Leader and trusted supplier of Raised Access Flooring Systems and Seismic Bracing solutions for World Class, Mission Critical Data Center and Telecom Operators in more than 100 countries around the world.
Bergvik's Dynamic Iso Floor System's unique design allows it to easily adjust to ever-changing technologies; equipment densities; and increased cooling demands.



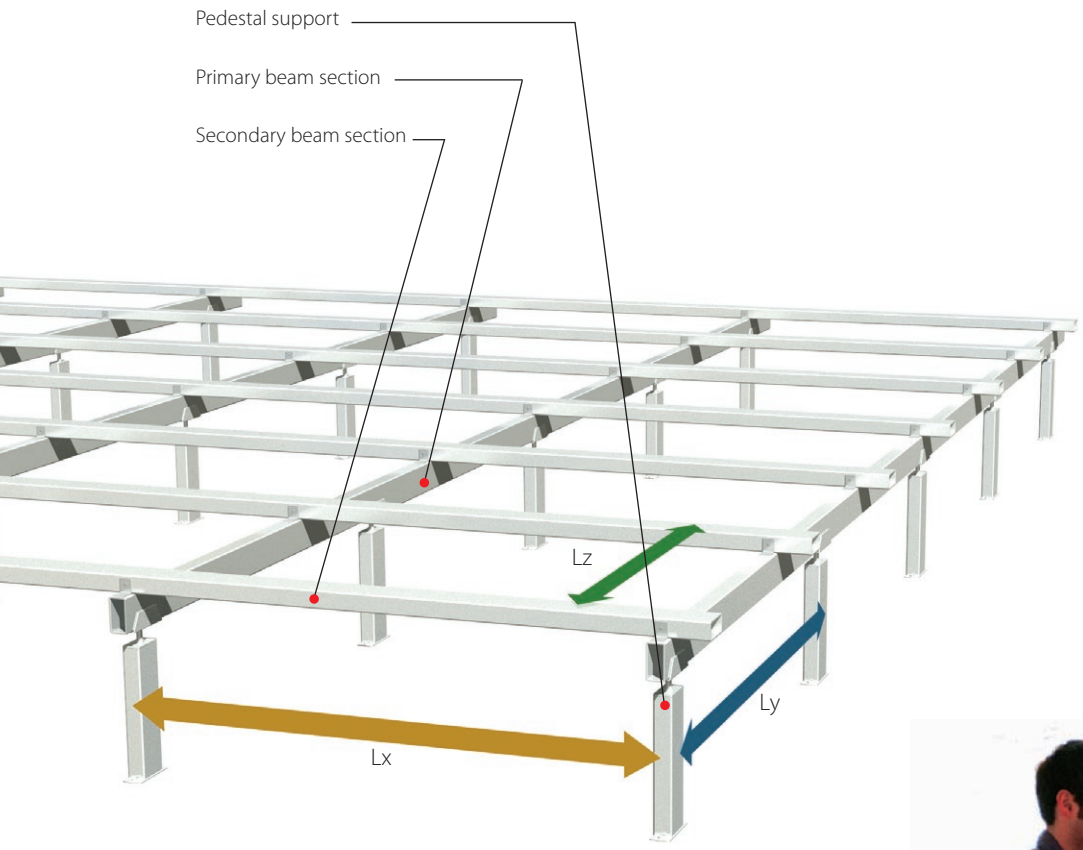
Benefits with Iso Floor:

- **The high lateral stability means that all panels can be removed without the risk of the floor shifting. Floor heights available from 12 to 94 inches (300–2400 mm) in non seismic zones.**
- **Up to 25% more equipment on the same footprint compared to traditional pedestal floors.**
- **Up to 70% fewer pedestal supports than with conventional static floors.**
- **Custom size floor panels will optimize the data center or telecom room with any cabinet depths.**
  Panels are therefore fully removable in the aisles, which makes it easy for service and supplementation of the equipment.
- **Unique system flexibility means future equipment expansion (life cycle) can be built into the floor design.**
- **All equipment mounted on the floor can be bolted directly to the Iso Floor structure.**
- **The all-bolted steel floor structure is sufficiently grounded with only two (2) grounding wires attached in opposite corners of the floor mechanics.**
- **Highly wear resistant floor panels are direct-laminated to prevent delamination.**
- **The Bergvik Laminate is highly resistant to harsh solvents and chemicals.**
- **Standard design solutions available for all seismic zones.**
- **NEBS tested seismic bracing frames for zone 3–4 will integrate with the floor mechanics.**
- **Installations in more than 100 countries since 1970.**
- **A standard 5 year warranty to back up the Bergvik quality.**

Download Bergvik Iso Floor Specification, section 10270 at http://www.bergvik.com/isofloor



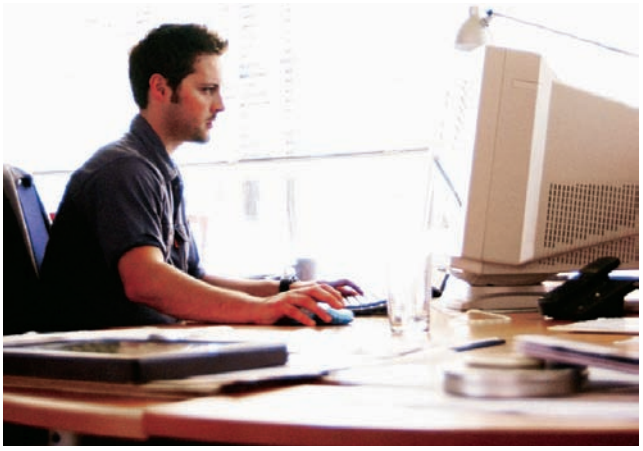
Bergvik's Iso Floor system can be adapted to uniform load ratings of 400 lbs/sf (20 kN/m²) having a center-to-center distance between pedestal support of 31.5" (800 mm) and 47.3" (1200 mm) respectively. No other raised floor can match this!



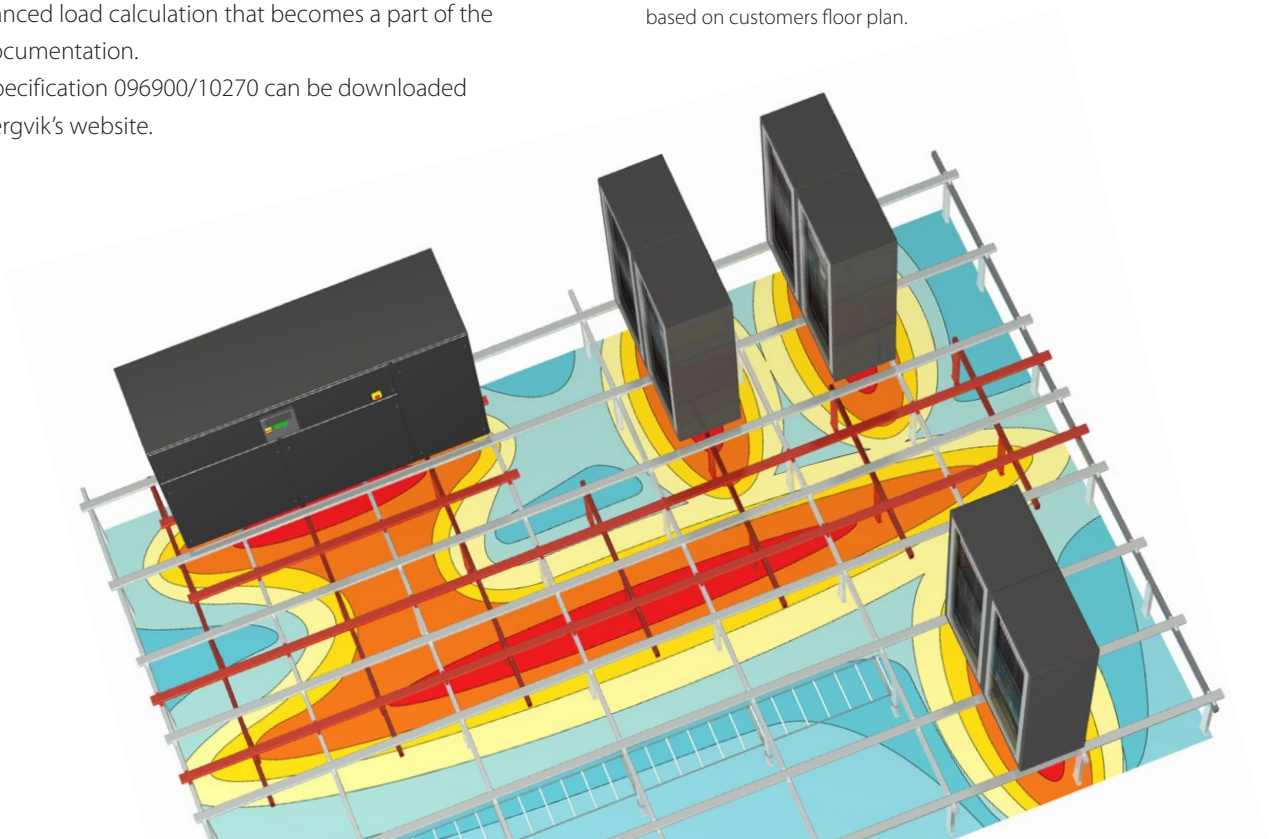
LOAD CALCULATION

The flexible and adaptable floor construction allows designing for loads of up to 800 lbs/sf (40 kN/m^2.) Distances between support members (Lx,Ly,Lz) are the factors guiding the design load. It is important to always specify the load requirements during project planning. During CAD design of the floor, each floor design goes through an advanced load calculation that becomes a part of the floor documentation.

A CSI specification 096900/10270 can be downloaded from Bergvik's website.



Our design department generates Auto CAD floor layout drawings quickly, based on customers floor plan.

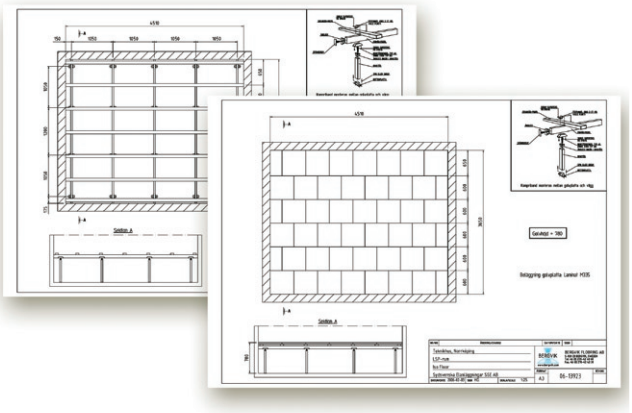


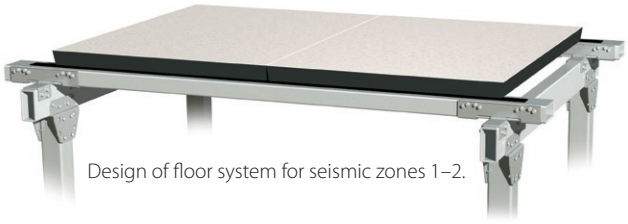
TECHNICAL DESIGN

The floor is built up around a prefabricated steel substructure that is firmly bolted together. It consists of tubular beam sections measuring 3.15"x1.57" (80 mm × 40 mm).
The pedestal supports, manufactured from the same beam section, are adjustable ± 1" (25 mm) from the nominal floor height.
Beam sections and assembly parts are hot dip galvanized (Z275), thereby complying with general requirements for buildings.

FAST ON-SITE ASSEMBLY

The substructure is quickly and easily bolted together on-site. The pedestal supports are pre-assembled and shipped in a kit together with all profiles and assembly parts. Each floor comes with a detailed mounting instruction in the form of a floor installation CAD-drawing with all dimensions indicated. The floor panels, which are gravity mounted on top of the secondary beam sections, can easily be removed by using the lifting tool supplied.
The shipment also includes maintenance and cleaning instructions.

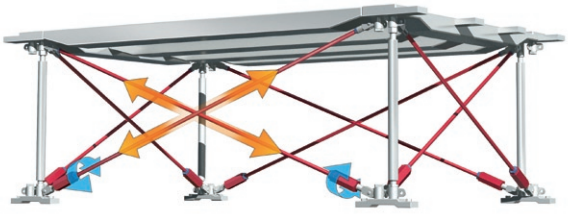




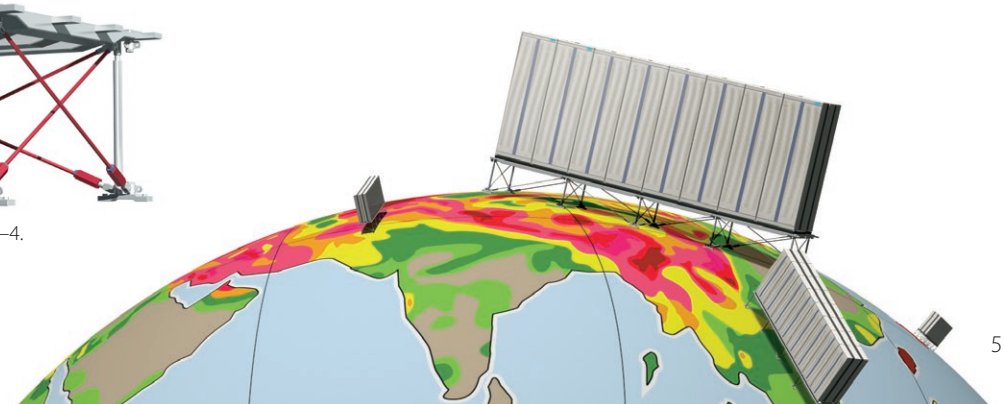
Design of floor system for seismic zones 1–2.

SEISMIC ZONES

Bergvik seismic bracing design solution comes in two variations, a reinforced standard substructure for zone 1-2, as well as seismic frames for zone 3-4. The seismic bracing frames are shipped preassembled in order to provide a short installation time. Our seismic frames have been dynamic full scale tested and approved for seismic zone 4 in accordance with NEBS GR-2930 Core.



Design of floor system for seismic zones 3–4.



M335 Granite, standard

One size floor panel does not fit IT all

FLOOR PANEL

As a standard, the woodcore panel is made from a 1.5" (38 mm) high-density and moisture resistant particleboard with a superior e-module.
Bergvik's standard floor panel is manufactured in 24x24 inch or 600 mm × 600 mm size, but various project-adapted sizes can also be supplied if specified.

SURFACE FINISHES

As a standard, the panel is delivered with the Bergvik laminate surface finish, which is antistatic, extremely wear-resistant, and easy to clean. Severe stains, such as paint or ink, are easily removed with rubbing alcohol. The laminate is also resistant to battery acid. The laminate surface is direct-laminated, and has therefore no glue that may cause delamination.

Decor M335, Granite having a non-directional color pattern, is the standard finish. This panel, with a laminated metal backing, is classified as class 1 in accordance with ASTM E84 and NFPA 266.
Bergvik Laminate floor panels are environmentally safe and fully recyclable.
Type-approval certificates are provided upon request.
All panel types can be delivered as ventilated panels, alternately having inserted ventilation air grilles and cable grommets.

H817 Alder

A287 Oak

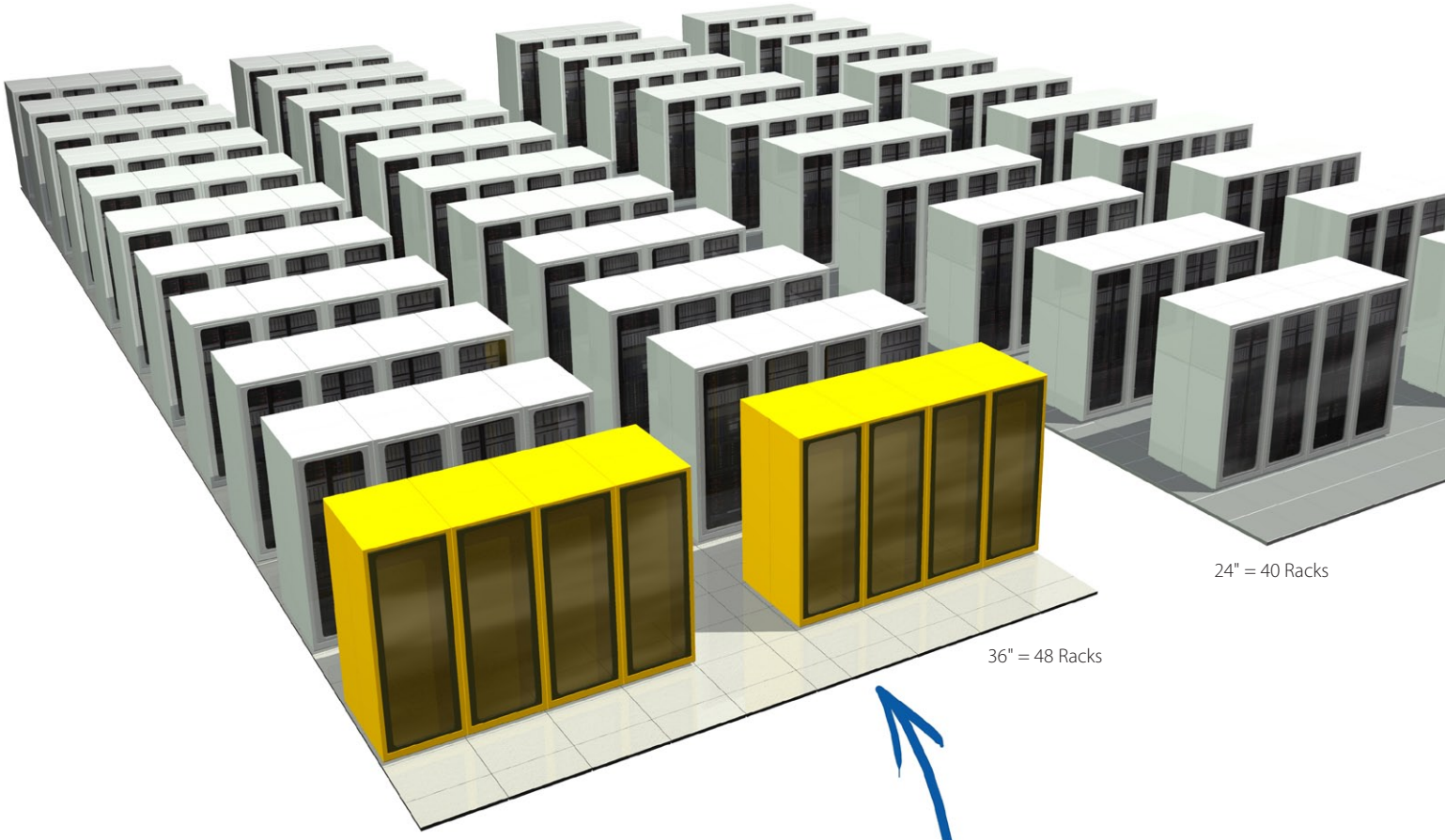
Standard size floor panels in M335 Granite:

We also deliver project-adapted sizes.

23.6"x 15.7"
(600 mm × 400 mm)

23.6"x 23.6"
(600 mm × 600 mm)

23.6"x31.5"
(600 mm × 800 mm)



Up to 25% more equipment

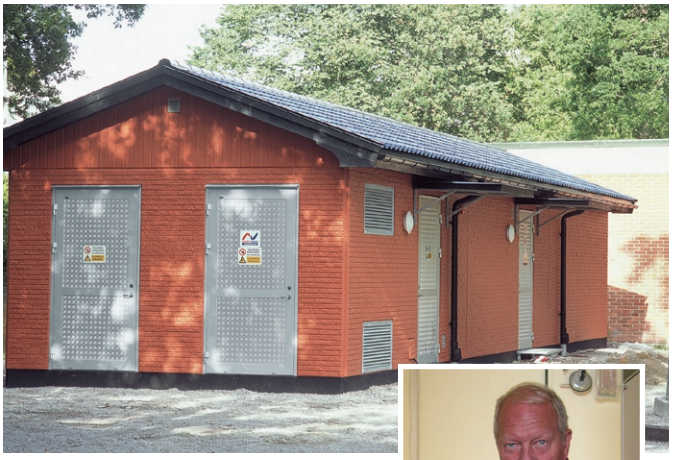
on the same footprint compared to traditional pedestal floors. This can be achieved by using one (1) 36" custom panel in the cold aisles vs. using two (2) standard 24" panels.

Good references

Since 1970, customers all around the world have selected Bergvik as the supplier of raised floors. Below are some examples of satisfied customers using Iso Floor – the dynamic raised floor.

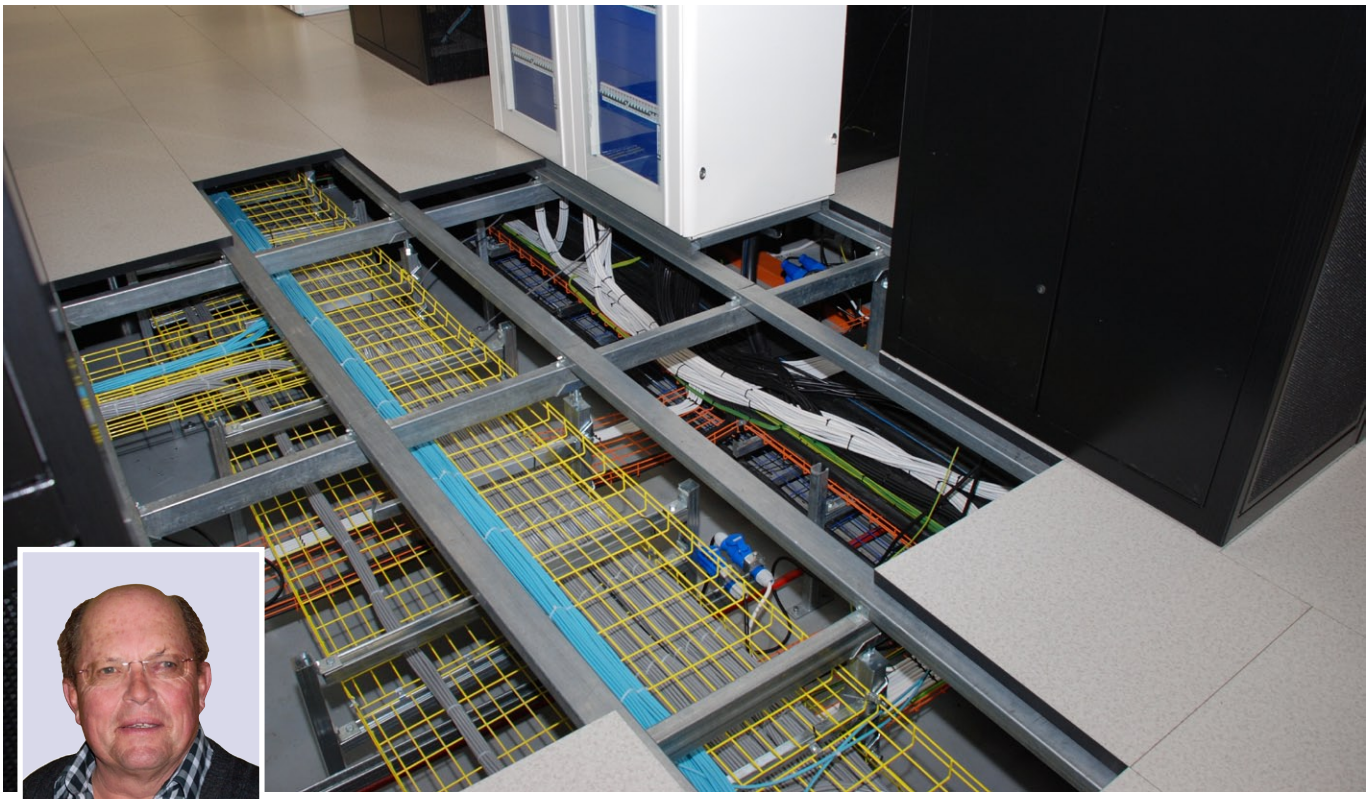
CAJ LUNDQVIST, TECHNICAL MANAGER, SOUTHWATER UTILITY
"We are very impressed with Bergvik as a suplier of raised flooring. Everything from CAD drawings, delivery time, installation speed and quality, as well as final documentation is up to par."

ZIBBER MOHIUDDIN, PRESIDENT, ERICSSON, PAKISTAN:
"It is important for Ericsson to look at the added value from the end users point of view. They expect that our GSM network will operate smoothly, but if the floor does not look good, it will take away from the overall quality. Also, the cost for the Bergvik raised floor is quite marginal in our total overall cost."



VIA ABETONG, HALLSBERGS CONCRETE WORKS & PRECON,
"Bergvik has, all over Sweden, delivered Iso Floor to approximately 8000 sub-stations pre-assembled in our factory. The numerous deliveries are a result of high product quality, value added flexibility as well as easy and quick installation."

KURT ANDERSSON, ABETONG
Happy customer since 1970.



The Vodacom Data Center in Gauteng, South Africa uses about 14,000 sf (1300 m²) of Iso Floor. Loading range from 200–400 psf (10–20 kN/m²)

"The Bergvik Iso Floor system safeguards our equipment and provides great flexibility"

FRED WEBER, SR. PROJECT MANAGER,
VODACOM PTY LTD. REPUBLIC OF SOUTH AFRICA:
"In 2007 the first contract in South Africa was awarded to Bergvik. The transfer of essential technical information to Vodacom's appointed consulting engineers and architects, the commercial and technical support received from Bergvik principals in the USA and Sweden were all executed in an exemplary manner. All installations completed to date by Bergvik have always remained ahead of project schedules.

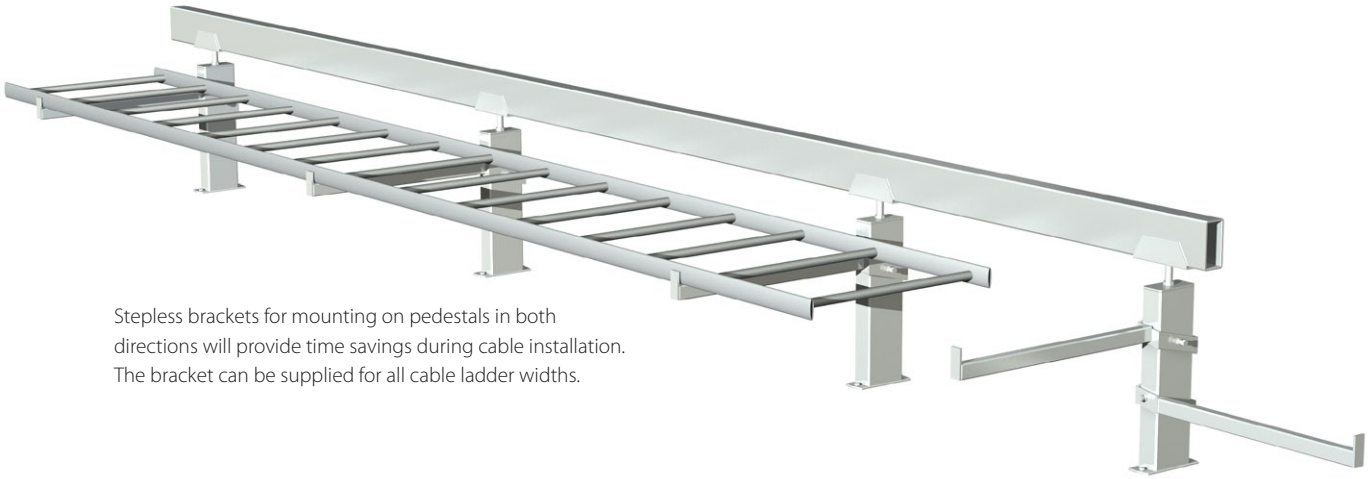
Vodacom (Pty) LTD is extremely happy with the Bergvik Iso Floor raised floor system as it fully compliments the Vodacom modularity and standardization design strategies and objectives. Of particular advantage to Vodacom are the following positive aspects of the Bergvik floor system:

- The structural stability and strength of the floor system eliminating the need to install independent structures for electrical distribution boards, battery racks, HVAC plant, gas cylinder manifolds, etc.
- The modularity and adaptability of the floor systems design.
- Installation speed and accuracy and the ease at which cable and service pipe penetrations can be made through the panels.
- The flexibility of the floor panels layout and the relative ease with which layout changes to existing installations can be made as our needs change over time.

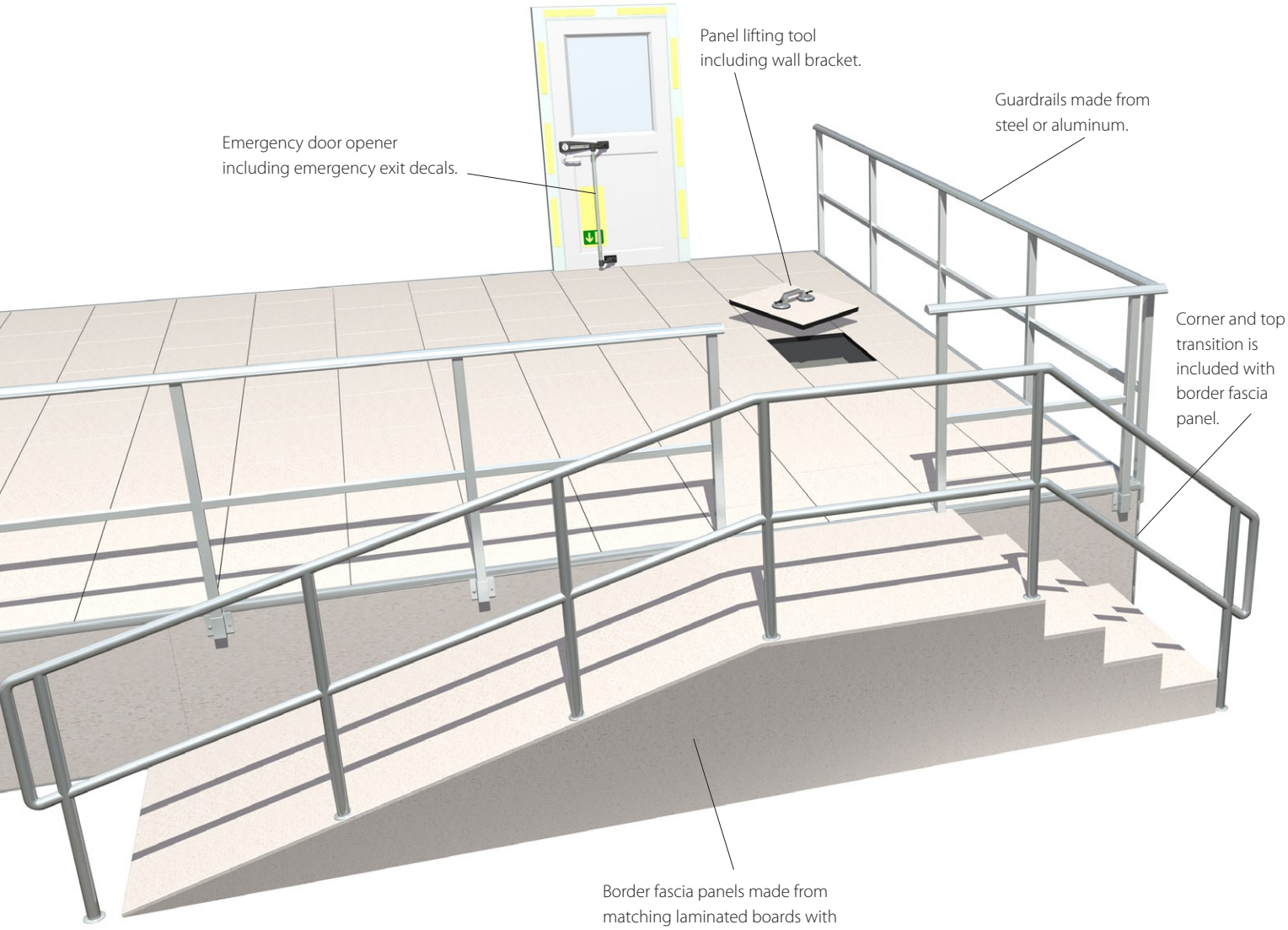
- The pleasing aesthetic appearance and superior final finish of the floor.
- The limited number of support structures below floor level making data & power cable installation far easier, quicker and safer. The conditioned air flow to the equipment racks is less restricted and cooling efficiency is enhanced.
- The speed of installation.

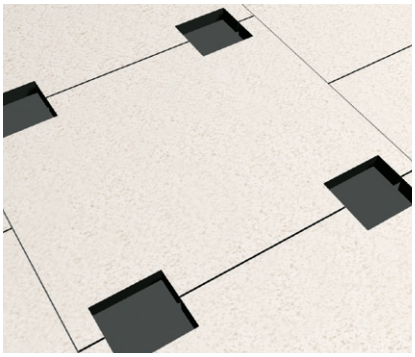
In consideration of the above mentioned, we do not hesitate recommending the Bergvik Iso Floor system and thank Bergvik for the excellent support rendered to Vodacom on our development projects."

Accessories

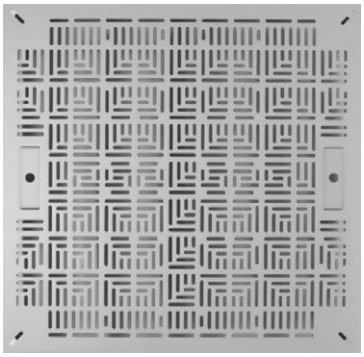


Stepless brackets for mounting on pedestals in both directions will provide time savings during cable installation. The bracket can be supplied for all cable ladder widths.



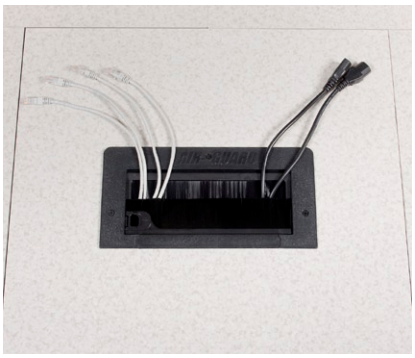


Pre-cut floor panel
Floor panel with customized hole pattern can be supplied.



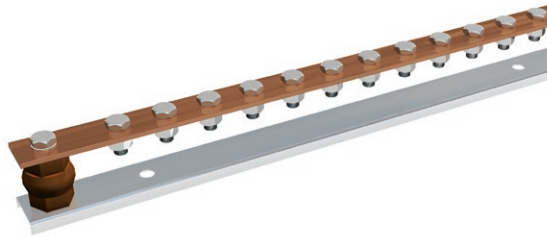
Bergvik's 56% Airflow panel
with Hi-Plume Stratification Fins offer passive cooling. At 56%, Panel without damper: 2845 cfm at 0.1-inch of H2O (80 m^3/min at 25 Pascal) static pressure. For other values, see separate product sheet or the Bergvik website.

Ventilated air-grille panel
Aluminium Air-Grille Panel with directional louvers and OB damper for Server racks.



Air Guard
Air Guard® Cable Seal helps prevent air loss in plenum cooled floors when access holes are required for cable routing through the floor. An immediate energy saver.

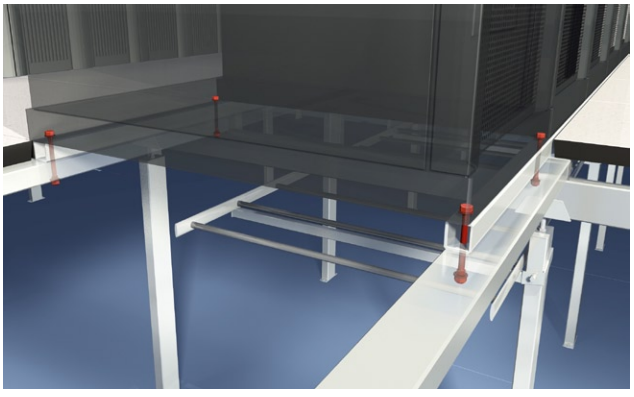
Grounding
The all-bolted steel floor structure is sufficiently grounded with only two (2) grounding wires attached in opposite corners of the floor mechanics.

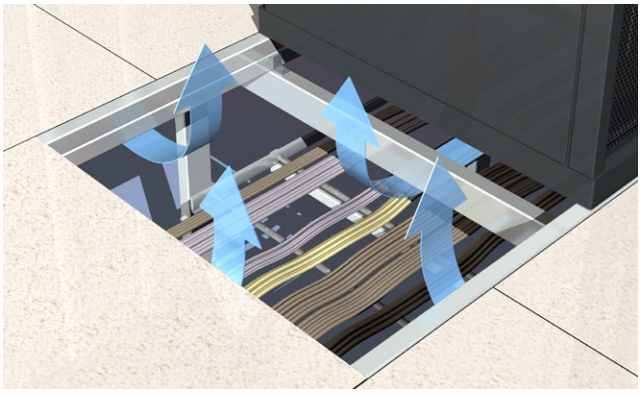


Grounding block with 12 connections.

Pedestal support & beam section joint bracket for seismic zones 1–2
Reinforced design having +/- 1" (25 mm) level adjustment at the base plate, designed and tested for seismic zones 1–2.

Bergvik seismic bracing frames
With the pre torqued design, Bergvik's seismic frame for power and telecom cabinets, etc., in zones 3–4 is the safest construction on the market. Used by leading telecom operators around the world.





1.5"x1.5" (38 x 38 mm) steel tube replaces panel under rack to provide an "open bottom" access, offering direct cooling.

ISO FLOOR® Technical Data

The floor system in general

Gross weight: approx. 9.3 lbs/sf (45 kg/m²)
Uniform Distributed load UDL: up to 800 lbs/sf (40 kN/m²)
Finished floor height FFH: 12"–94" (300 to 2400 mm)

Specification, Steel Understructure

Pedestal: 3"x 1.5" (80 x 40 mm). Adjustable ± 1" (25 mm).
Primary beam section: 3"x 1.5" (80 x 40 mm)
Secondary beam section: 3"x 1.5" (80 x 40 mm)
Fire-resistance grade: Non-combustible material of steel.

Specification, Floor Panel

BERGVIK DIRECT LAMINATED FLOOR PANEL
Material: 1.5" (38 mm) high density particleboard, V313 moisture resistant quality is standard.
Panel sizes: 23.6"x 23.6" (600 x 600 mm) as standard.
Custom sizes available.
Surface finish: Bergvik direct laminate as standard.
Color pattern: M335 Granite laminate as standard. H817 Alder and A287 Oak are optional.
Wear resistance: 4000–6000 cycles according to EN 438-2:6 1991.
Color fastness: >6 according to EN 438-2:16 1991.
Weight: 5.8 lbs/sf (28 kg/m²) or 22 lbs (10 kg) per standard panel.
Flame spread: 20 in accordance with ASTM E84 or NFPA 266.

Bergvik is an innovative knowledge company specializing in Raised floor systems and Seismic Bracing solutions tailored to our customer's applications.

Bergvik's product line:

Iso Floor
Optional brochure for power distribution rooms and process lines.

HiFlex Floor
High-built power distribution floor as an alternative to concrete beams, where incorrectly positioned cable cut-outs may delay and raise the price of the project.

Tech Floor
An economical standard pedestal floor for installations in offices, and 911 communication centers with low static loads.

Seismic Bracing Frames
Bergvik designs, full-scale tests and manufactures seismic mechanical devices for the protection of critical equipment.

For further information, go to:
www.bergvik.com

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