

NICHIAS OMEGA FLOOR™





TOMBO™ No. 6473

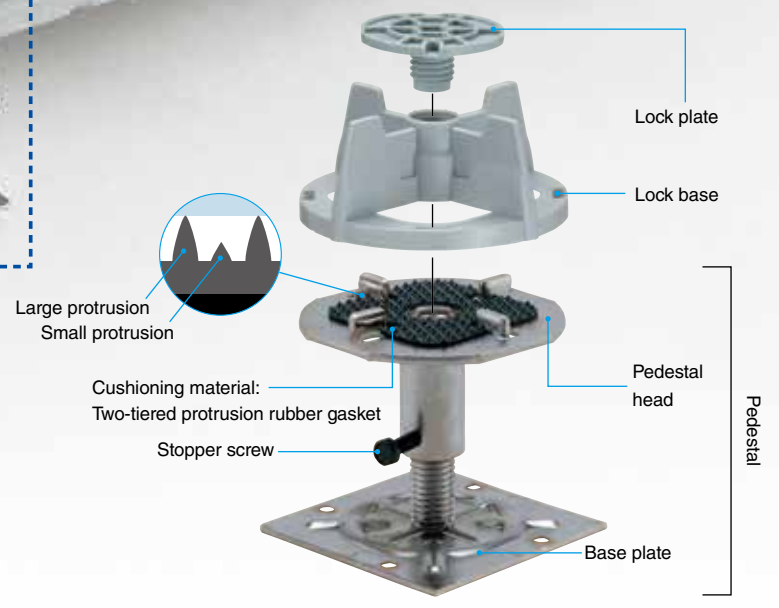
NICHIAS OMEGA FLOOR™ is a safe and secure raised access floor system that provides excellent performance and has a proven track record of installation in many buildings.

1. Proven track record of installation in many buildings

Since its release in 1990, NICHIAS OMEGA FLOOR™ has been installed in many buildings and built a solid track record. Renowned for its ease of installation, excellent performance and economy, the raised access floor system boasts a proven record of installations on many sites including buildings in large-scale re-development areas.

2. High-strength panel using reinforcing bars and laths

A unique reinforcing bar structure and laths are used in concrete to prevent crack, thus realizing a tough and high-strength concrete panel while providing solid walking feel that is comparable to walking on a concrete slab floor.



3. Solid walking feel without rattling

The panel lock system incorporates a two-tiered protrusion rubber gasket which absorbs rattles that have plagued conventional raised access floor systems and reduces squeaking noise and hollow sound. This structure also ensures a natural, comfortable walking feel and reduces foot fatigue for office workers.



4. Raised access floor system with excellent cost performance

Offers various excellent properties at low cost, creating a comfortable office environment at reasonable cost.

Panels

The base material is reinforced with steel bars and laths. Type "0 (zero)" and type "PKC" with cutouts for wiring can be freely combined.

■ **Standard panel** Type 0 (zero)



■ **Standard panel** Type PKC



Standard grommet cover lid for type PKC



Examples of wiring outlet

Panel specifications

| Model No. | Type | Design concentrated load (N) | Size (mm) | Thickness (mm) | System weight (kg/m ²) ^{Note 1} | Panel weight (kg/panel) ^{Note 2} |
|----------------------------|----------|------------------------------|--|----------------|--|---|
| M300A | 0 (zero) | 3,000 | (500 mm finish size module) 497.5×497.5 | corner: 31.5 | 48 | 11.5 |
| | PKC | | | | | |
| HG^{Note 3} | 0 (zero) | 5,000 | (500 mm finish size module) 497.5×497.5 | corner: 33 | 54 | 13.0 |
| | PKC | | | | | |

Note 1: For pedestal height of 100 mm. Not including floor coverings.

Note 2: These values is for reference only.

Note 3: OMEGA FLOOR™ HG is a made-to-order product.

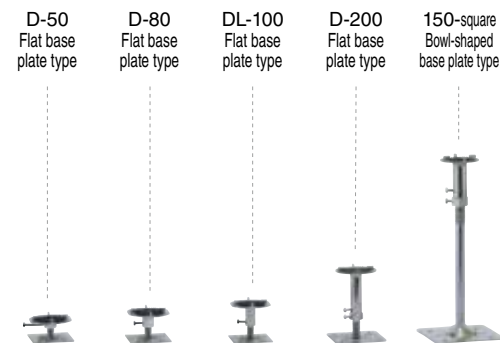
Note 4: Color unevenness, Small bubbles may occur on the surface without causing problem in terms of performance.

Pedestals

A full lineup of finish floor height from 60 to 1,000 mm

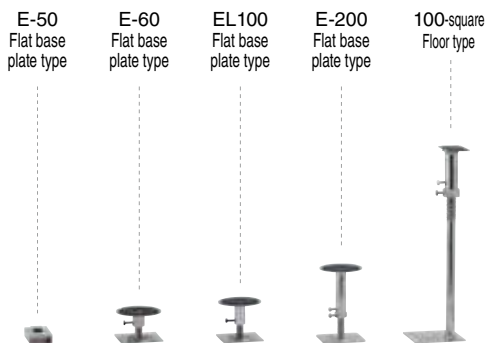
Finish floor height from 300mm to 1,000mm are made to order. Consult NICHIAS for details.

[Field pedestal]



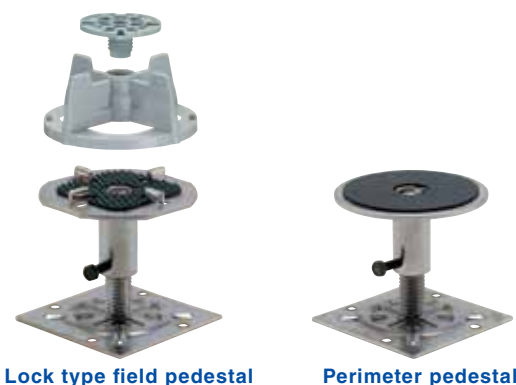
Pipe stud type

[Perimeter pedestal]



Pipe stud type

[Types of pedestals]



Lock type field pedestal

Perimeter pedestal

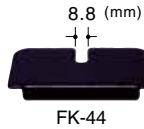
| Finish height | Pedestal type | |
|---------------|---|------------------------------|
| | Field pedestal | Perimeter pedestal |
| 60mm | D-50 flat base type | E-50 flat base type |
| 80mm | D-80 flat base type | E-80 flat base type |
| 100mm | DL-100 flat base type | EL-100 flat base type |
| 125mm | DL-125 flat base type | EL-120 flat base type |
| 150mm | DL-150 flat base type | E-150 flat base type |
| 200mm | D-200 flat base type | E-200 flat base type |
| 300mm | 150-square bowl-shaped base plate type | 100-square floor type |
| ~1000mm | Pipe stud type | Pipe stud type |

Optional panel

Optional panel Type PKR



Cover lid for optional panel



Up outlet



Manufacturer : TERADA ELECTRIC WORKS Co.,Ltd. (NAS70000)

Pedestal types

Pedestals are made to order. Consult NICHIAS for details.

[Security system]

Panels are locked using special screws. This system enhances security since the panels cannot be opened or closed with an ordinary screwdriver or Allen wrench.



[Whisker prevention]

To prevent the formation of zinc whiskers (Note 1), the pedestal has standard nickel plating.

Note 1: Zinc whiskers are hair-like conductive crystals that are formed on zinc-plated electrical parts. These whiskers adversely affect computers and electronic devices.



Grill

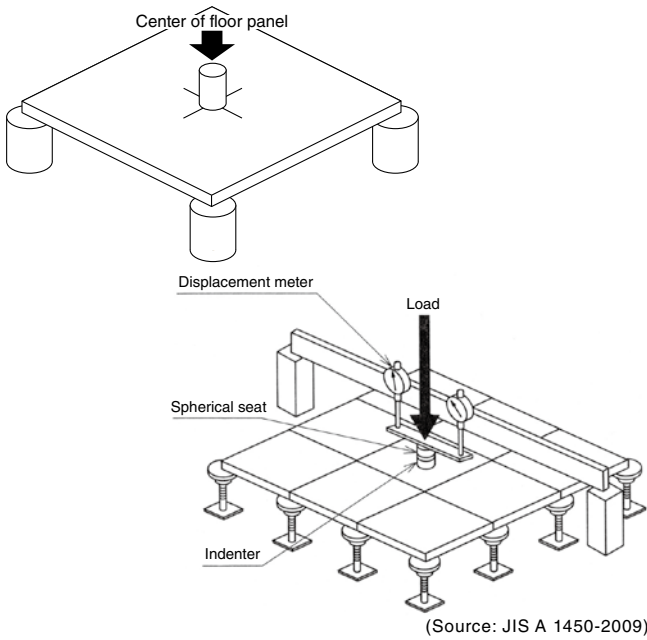
Grills are made to order. Consult NICHIAS for details.

There are a variety of grills that have various materials, sizes and open rates. Appropriate grills can be selected according to office applications.



| Product | Size | Open rate | Material | Remarks |
|---------|-----------|-----------|----------|---------------|
| GP-40 | 500x500mm | 75% | Steel | |
| GP-41 | 500x500mm | 0 to 62% | Steel | With damper |
| GP-64 | 500x250mm | 37% | Steel | Bolt pedestal |

Concentrated load test



A floor panel is supported with four supports for static load testing. A load is applied using a load tester and a loader of 50 mm diameter.

Static load test

| Model | Loading point | Maximum load | Deformation volume |
|--------------|-----------------|----------------|------------------------|
| M300A | Center of panel | 9,000 or more | 2 mm or less at 3000 N |
| HG | | 10,000 or more | 2 mm or less at 5000 N |

In-house standard

Each of four corners of a floor panel is supported with a pedestal, and load is applied using a load tester and a loader of 50 mm diameter.

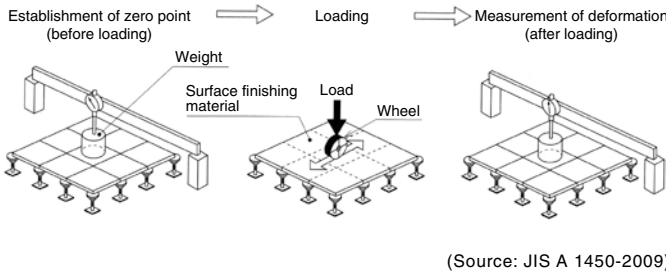
Static load test (Test method: JIS A 1450-2009)

| Model | Specified load | Loading point | Deformation volume accompanied with specific load | Residual deformation volume |
|--------------|----------------|-----------------|---|-----------------------------|
| M300A | 3000 N | Weakest points* | 5 mm or less | 3 mm or less |
| HG | 5000 N | | | |

In-house standard

*The weakest points are the point where the largest deformation is caused when the specific load is applied and the point where the largest residual deformation is caused. (The two points may coincide.)

Rolling load test



A urethane-covered caster (diameter of 150 mm, width of 40 mm, hardness of 85 HS or higher) with a specified load is rolled.

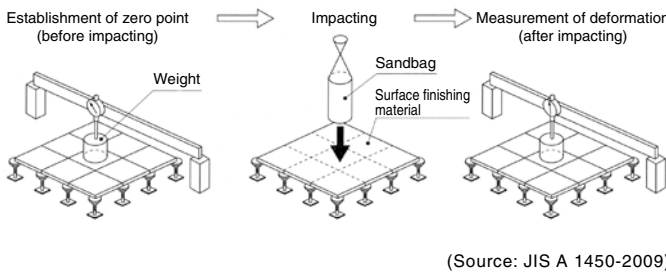
Rolling load test (Test method: JIS A 1450-2009)

| Model | Specified load | Loading point | Visual damage | Residual deformation volume |
|--------------|----------------|---------------|---------------|-----------------------------|
| M300A | 1000 N | Weakest point | None | 3 mm or less |
| HG | | | | |

In-house standard

*The weakest point is the point where the largest deformation is caused by the rolling load.

Impact test



A sand bag of 30 kg (with a bottom diameter of 220 mm) is dropped from a height of 250 mm.

Impact test (Test method: JIS A 1450-2009)

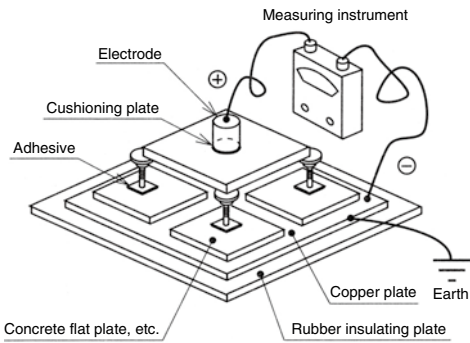
| Model | Impactor | Impactor height | Impact point | Visual damage | Residual deflection |
|--------------|-----------------------------|-----------------|---------------|---------------|---------------------|
| M300A | Sandbag with a mass of 30kg | 250mm | Weakest point | None | 3 mm or less |
| HG | | | | | |

In-house standard

*The weakest point is the point with the largest deformation caused by impact.

JIS: Japanese Industrial Standards

Leakage resistance test



(Source: JIS A 1450-2009)

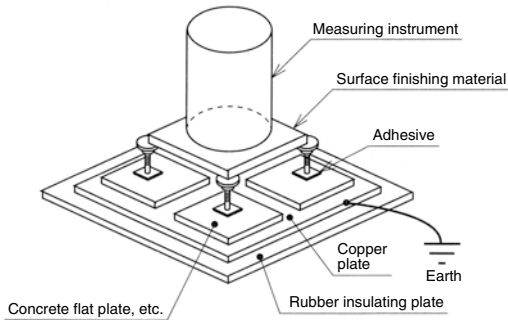
Resistance between the panel top and ground is measured. (Measurement conditions: applied voltage: 500 V; temperature: 20±5°C; humidity: 30±10% RH)

| Leakage resistance test (Test method: JIS A 1450-2009) | | |
|--|--------------------------------|---------------------------|
| Model | Floor panel surface | Leakage resistance (Ω) |
| M300A | Bare finish (without covering) | 1×10 ⁶ or more |
| HG | | |

In-house standard

Electrostatic propensity test

The maximum charge potential between the panel top and ground, and the time for reduction by half are measured using a measuring instrument specified in JIS A 1455. The U value is determined using the formula specified in JIS A 1455.



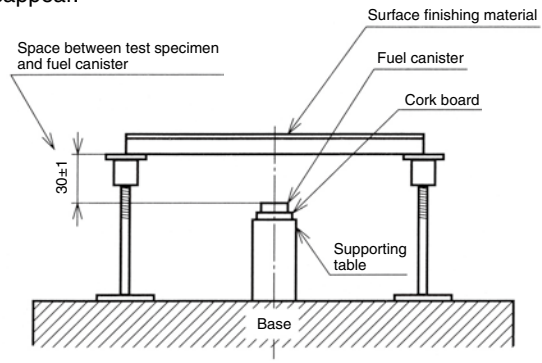
(Source: JIS A 1450-2009)

| Electrostatic propensity test (Test method: JIS A 1450-2009) | | |
|--|--------------------------------|-------------|
| Model | Floor panel surface | U value |
| M300A | Bare finish (without covering) | 0.6 or more |
| HG | | |

In-house standard

Combustion test

Fuel is burnt below a panel, and the time is measured from when the fuel is burnt out until when flames on the panel disappear.



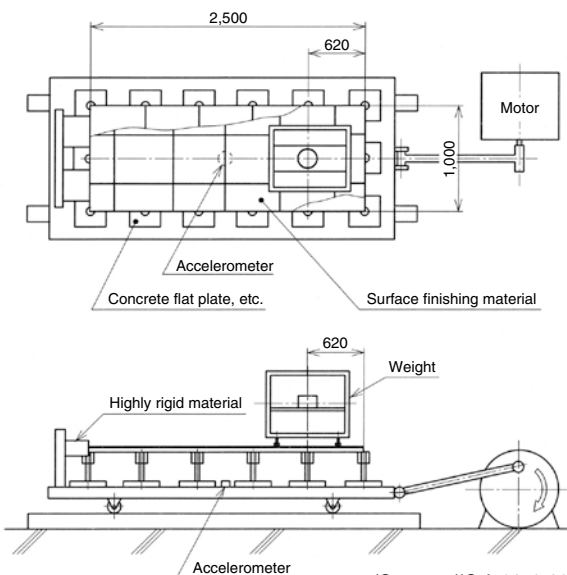
(Source: JIS A 1450-2009)

| Combustion test (Test method: JIS A 1450-2009) | |
|--|-----------------|
| Model | Afterflame time |
| M300A | 0 seconds |
| HG | |

In-house standard

Vibration test

A weight of 350 kg is placed on a test piece, and a sine-wave vibration of 2 Hz is applied 3 times.



(Source: JIS A 1450-2009)

Note: The pedestal type varies depending on the applied load.

| Vibration test (Test method: JIS A 1450-2009) | | |
|---|-----------|-----------------------------------|
| Model | Load mass | Result |
| M300A | 350kg | Floor panels should not come off. |
| HG | | |

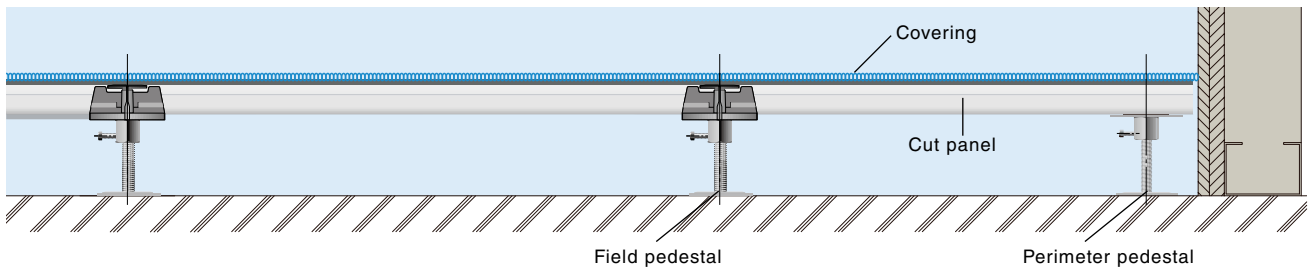
Testing organization: Floor Materials and Construction Research Institute

| Mass of specified weight | Applications | Underfloor strength |
|--------------------------|--|----------------------|
| 150kg | The case where setting of a lightweight fixture and furniture is assumed (e.g. ordinary offices) | 3000N/m ² |
| 200kg | The case where setting of a common book shelf and fixture and furniture is assumed (e.g. ordinary offices) | |
| 350kg | The case where setting of heavy load such as a large book shelf and equipment including a pint-sized server is assumed (Heavy-duty zone) | 5000N/m ² |

Notes

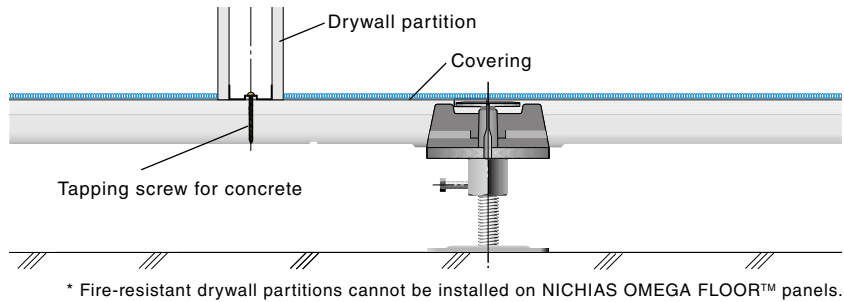
- Specified load is not related to underfloor strength. These data items are given here for reference considering the current usage.
- Data source: "Performance Assessment of Raised Access Floor System" by Japan Access Floor Association

Cross section

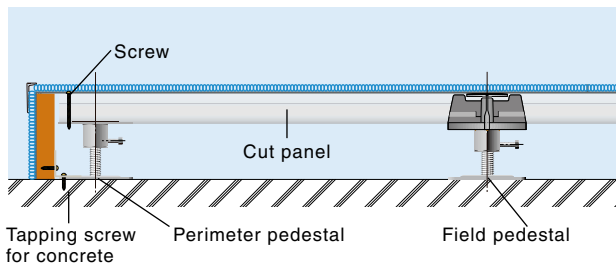


Drywall partition (separate work)

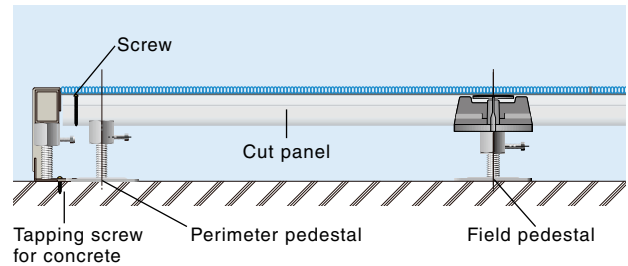
A drywall partition can be secured with screws by drilling screw holes in NICHIAS OMEGA FLOOR™ panels.



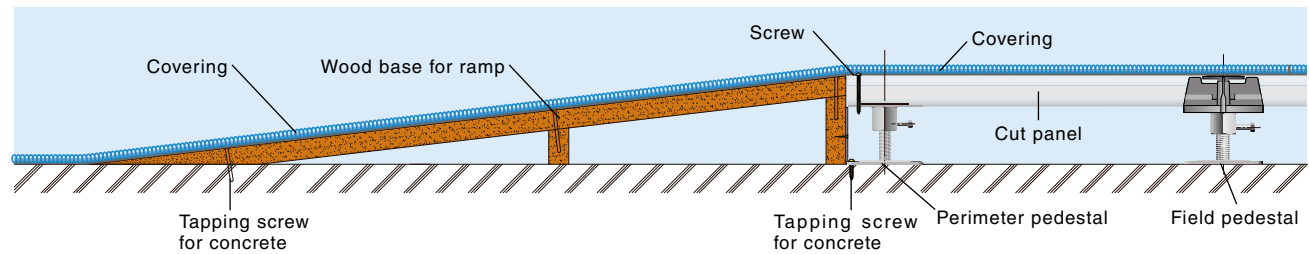
Fascia (wood base)



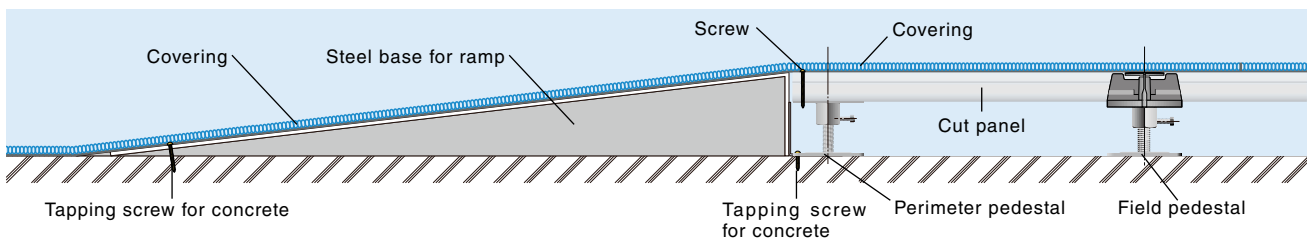
Fascia (stainless steel)



Ramp (wood base)



Ramp (steel base)



Working on perimeters

When panels of the same material are used

Cut and install NICHIAS OMEGA FLOOR™ (Type 0) panels.

- Use perimeter pedestals in places close to a wall.
- Install the panels, leaving a clearance of 2 to 4 mm from the wall.
- Panels are cut while pouring water on them. Water supply is required in the work place and appropriate measures are required to prevent the surrounding area from becoming dirty.



Lock type field pedestal

Perimeter pedestal

Ramps and fascias



Fascia (wood base)



Fascia (stainless steel)

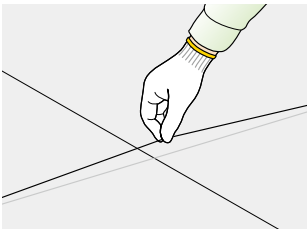


Ramp (wood base, steel base)

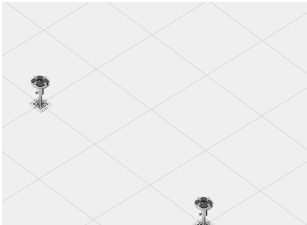


Ramp (wood base, steel base)

Installation Procedure



STEP1
Mark the reference lines on the concrete floor in accordance with the building standard marks and the working drawings.



STEP2
Adjust the height of the reference pedestals with a leveler, etc.

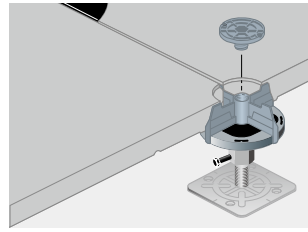


STEP3
Adjust the height of other pedestals to the reference pedestals with a long bar, etc., then fix the height with the stoppers.

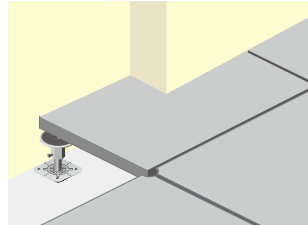


STEP4
Apply adhesive to the bottom of the base plate of each pedestal with a lock base, then install the pedestals according to the reference lines.

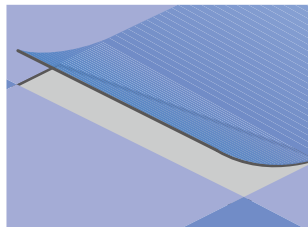
*When applying paint to the concrete slab, consult the paint manufacturer regarding the slab conditions for applying the paint, the curing time before bonding pedestals, etc.



STEP5
When the installation of the pedestals is complete, immediately put the floor panels (type O or type PK) on the pedestals according to the layout plan, then tighten with lock plates.



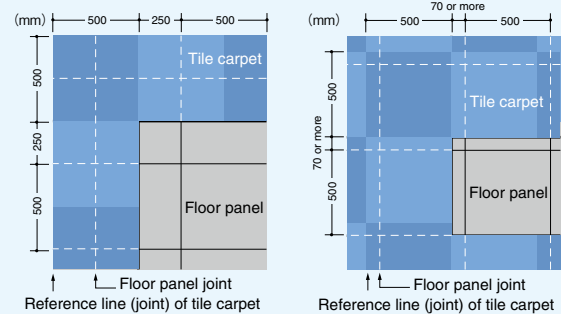
STEP6
Install the floor panels at the perimeters.



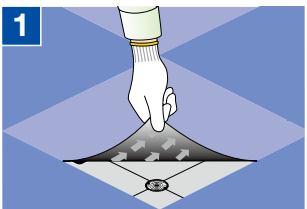
STEP7
Install carpet tiles or other coverings. (Be sure to install floor coverings immediately after installing the floor panels.)

*The recommended quantity of carpet bond (peel-up type adhesive) to be applied is 30 to 60 g/m². Refer to the installation specifications of the manufacturer for detailed instructions. Applying too much carpet bond may damage the carpet due to excessive viscosity.

[Layout example of tile carpet]

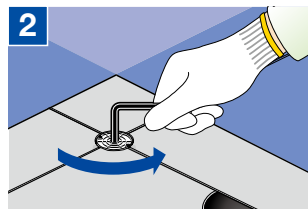


Maintenance

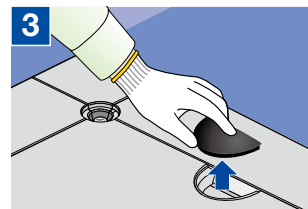


1
Pull up a corner of the floor covering (such as tile carpet) and remove the four sheets of covering that cover the floor panel to be opened and closed.

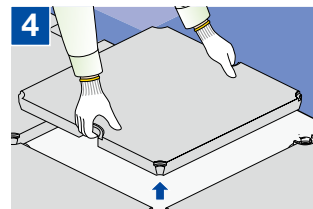
* Since the floor covering has a specific direction, record its position and direction for reinstalling it later.



2
Remove the lock plate with a hexagonal wrench.



3
Remove the grommet cover lid.



4
Hold the panel with both hands and lift it straight up.

* Record the position and direction of the panel for reinstalling it later.

Precautions

- Warning**
 - ⚠ Do not drop heavy objects or apply excessive impact. Doing so could damage the panels or cause them to break off.
 - ⚠ Do not machine the panels or pedestals without permission. Doing so will weaken them and could damage the panels or cause them to break off.
 - ⚠ When carrying in, moving, or installing equipment, cover the stipulated areas and carry out the work at a calm pace. The panels may become damaged by subjecting them to an excessive load or impact.
 - ⚠ When installing the equipment, make sure that the installation area is larger than $\varnothing 50$ mm and the load applied to one panel is less than the permissible concentrated load.
 - ⚠ Do not leave the panels removed for wiring work, etc. unattended. Doing so could cause a visiting third party to be unexpectedly injured. Take safety measures such as sectioning off the removed panels, etc.

- Caution**
 - ⚠ Do not use the floor panels without a cover lid. Doing so could cause an unexpected injury such as one's foot entering the uncovered hole.
 - ⚠ When handling panels and pedestals, wear gloves to prevent being cut.
 - ⚠ When laying panels, be careful not to get your hands caught between the panels.
 - ⚠ Do not carry panels while holding them with the panel lifter used when attaching/detaching the panels. The panels may fall and cause an unexpected injury.
 - ⚠ Wear protective gloves and a dust mask when machining the panels or cutting the clipboard after checking with NICHIAS that it is okay to do so.

General Precautions

Design Precautions

- Do not use for applications other than raised-access floor systems.
- Do not use the panels in an uncovered state, as doing so may cause the panels to chip or scrape away, wear or stains due to aging, or an accident in which someone trips or sprains their ankle.
- If the panel joints are separated by gaps, finishing with a long sheet may cause the joints to stand out. Do not use long sheets.
- If the panel joints are separated by gaps, finishing with loose-laying PVC tiles may cause the joints to stand out. Do not use loose-laying PVC tiles.
- If the room is not used for a long time after the panels are installed, condensation may occur under the panels. Ventilate the room and under the floor regularly.
- If the room is not used for a long time after the particle board is installed, dew condensation may occur and the board may swell or mold may form. Regularly ventilate the room or under the floor to prevent this from happening.
- As the surface may become dry and shrink, do not leave the panels for more than 6 months without applying the surface finishing materials.
- For equipment that is repeatedly subject to loads or vibrations such as heavy-duty mobile racks and rotary presses, mount it on a frame or the like directly on a concrete slab, and isolate it from the panels.
- When installing a door on panels, make sure to reinforce the panels with the reinforcement pedestals because the panels may suffer deflection, affecting the ability to lift them up and/or place them back.
- If you install partitions on the panels, the panels may suffer deflection and cause problems. If you require reinforcement for the panels, etc., please contact NICHIAS.

Installation Precautions

- Follow the instructions in the catalog when installing.
- Consider attaching and detaching the panels when wiring, and lay the carpet in a block-like pattern with each piece deviating by 70 mm or more.
- When laying a tile carpet, an unpleasant smell may be generated by the reaction between the rubber plasticizing agent on the back of the carpet and the alkaline water contained in the panel. Ventilate the area sufficiently after laying down the carpet.
- Use approximately 30 to 60 g/m² of carpet bond when installing the tiled carpet. If you apply too much bond, it may get into the joints of the panels, making them difficult to lift up and/or put back, or cause a creaking sound to occur from the panels. Also, the carpet may get damaged when attaching or detaching the panels.
- When storing panels, pedestals, and auxiliary materials, store them somewhere where they will not be exposed to water. Exposure to water may cause rust to develop.
- When transporting heavy objects or construction materials by trolley, to avoid applying excessive local loads, lay down wooden board coverings along the route that the trolley will pass according to the criteria shown in the table below.

| Heavy items | Covering method |
|--------------------------------|---|
| 300 kg or less | Around 2 mm of plywood board or plastic sheet coverings |
| Over 300 kg and under 500 kg | 9 mm wooden material covering |
| Over 500 kg and under 1,000 kg | 21 mm wooden material covering |

- Do not drag the panels together as doing so could leave marks.
- Border panels for flow lines such as passages and entrances/exits should be fixed in place with screws.
- Make sure to fix the stopper screws on the pedestals to prevent the panels from rattling.
- Secure a gap of about 2 mm so that the order-made panels near the wall do not rub against the wall. In corridors and other walkways, take measures to prevent displacement such as screwing and installing backup materials.

Precautions for Carrying In and Installing Heavy Equipment

- When moving or transporting heavy objects, to avoid applying excessive local loads, lay down wooden board coverings, such as the ones indicated in the table above, along the route.
- Equipment which may fall over should be fixed to the concrete slab or a durable wall and not fixed to the panel or pedestals.
- If a load is concentrated on one panel, lay an iron plate or frame on the panel to spread the load.

Precautions when Opening and Closing the Panels Such as When Doing Wiring Work

- When removing a panel, install the lock parts (plate and base) and cover lid back as they were beforehand.
- When removing a panel, return the panel to its original orientation to prevent rattling.
- Please contact one of our sales representatives when a modification or replacement of floor materials is required due to a layout change or wiring work.

Cleaning Precautions

- As part of daily maintenance for the tile carpet, clean with a large industrial vacuum cleaner or household vacuum cleaner.
- As part of periodic maintenance, conduct powder cleaning.
- Make sure that water or chemicals are not spilled on the panels.
- Ask a cleaning company or the surface finishing material manufacturer for methods on powder cleaning and stain removal.

Disposal Precautions

- Comply with all federal, state and local regulations.



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