

NICHIAS PAT FLOOR™ M300A





TOMBO No. 6470

"NICHIAS PAT FLOOR™ M300A"

**promotes a comfortable office environment,
superior in walking comfort.**

**1. A high-strength panel made of GRC
(Glass fiber Reinforced Cement)
reinforced with a steel plate**

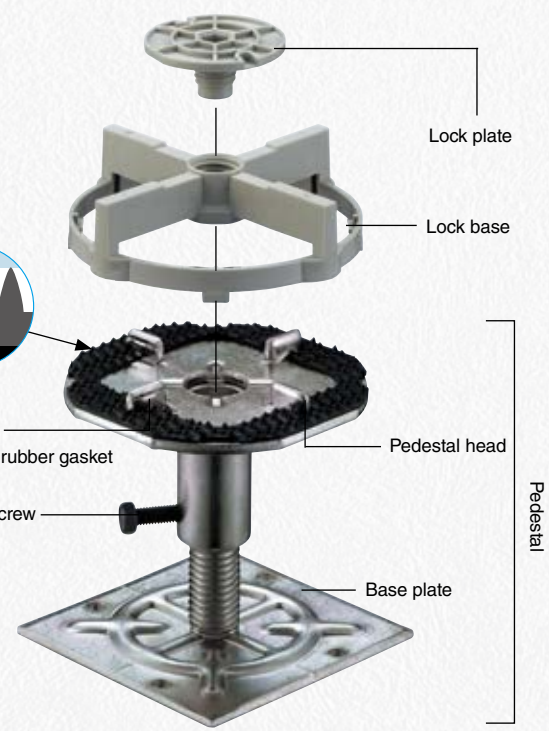
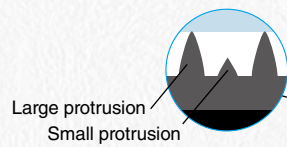
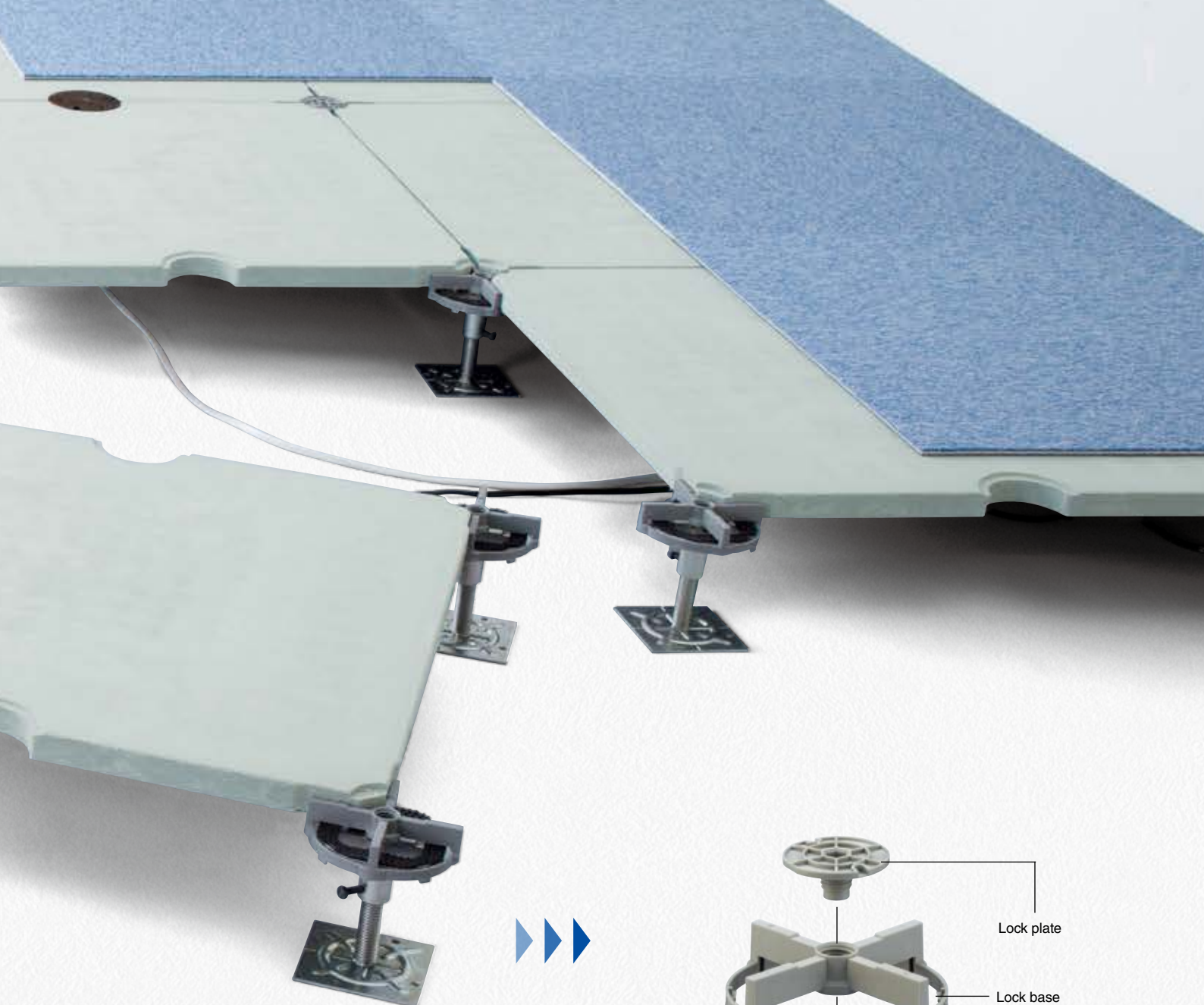
While concrete on its own has a characteristic of being easily cracked, by combining GRC with specially processed steel plates, a sturdy, high-strength concrete panel is made. This allows for stable walking equivalent to that of floor slabs.

**2. Superior walking comfort
without rattling sounds.**

A two-tiered protrusion rubber gasket is adopted to reduce creaking and hollow sounds, and absorb the rattling sounds, which was a drawback of the raised-access floor system. A characteristic of this is that walking becomes natural and gentle, which reduces the burden on the feet of office workers.

* Product names with TM are trademarks of NICHIAS Corporation.

* "TOMBO" is a registered trademark or trademark of NICHIAS Corporation.



3. A raised-access floor system which boasts excellent cost performance.

Offers various superior properties at low cost. Contributing to office environment creation with economic efficiency in mind.

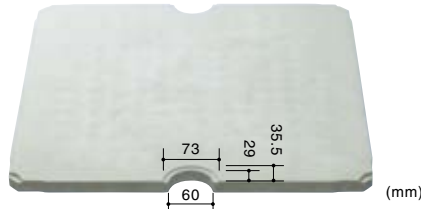
Panels

The base material is GRC reinforced with specially processed steel plates. A combination of "O Type" panels and "PK Type" panels with grommets for wiring can be chosen according to request.

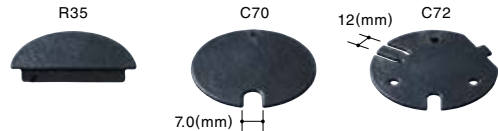
■ **Standard panel** O Type



■ **Standard panel** PK Type



Standard cover lid for PK Type



Panel specifications

Model No.	Type	Design concentrated load	Size (mm)	Thickness (mm) ^{Note 1}	System weight (kg/m ²) ^{Note 1}
M 300 A	O	3,000N	(500 mm finished module) 498×498	21	about 49
	PK				

Note 1: When pedestal height is 100 mm. The thickness and system weight does not include the surface materials.

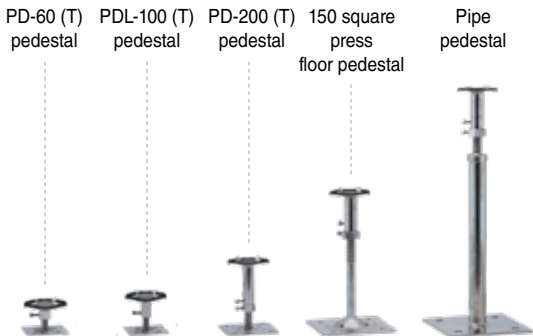
Note 2: Color unevenness, small bubbles, etc. may occur on the surface, but this is not a problem in terms of product performance.

Pedestal

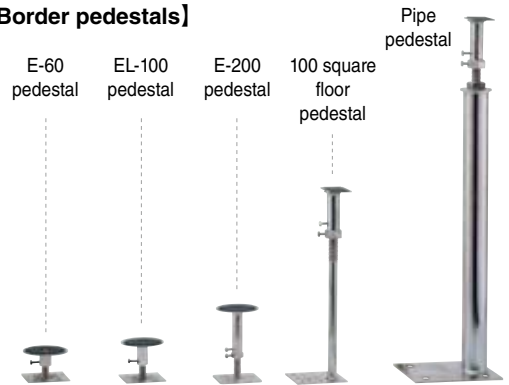
A full lineup of pedestals with finished floor heights from 60 to 1000 mm.

* Finished height of 300mm or more is an order made item.

[Standard pedestals]



[Border pedestals]



[Type of Pedestals]



Standard lock type pedestals

Border pedestal

Finished height	pedestal type	
	Standard pedestal	Border pedestal
60 mm	PD-60 (T) pedestal	E-60 pedestal
80 mm	PD-80 (T) pedestal	E-80 pedestal
100 mm	PDL-100 (T) pedestal	EL-100 pedestal
125 mm	PDL-125 (T) pedestal	EL-120 pedestal
150 mm	PDL-150 (T) pedestal	E-150 pedestal
200 mm	PD-200 (T) pedestal	E-200 pedestal
300 mm	150 square press floor pedestal	100 square floor pedestal

* Whisker countermeasure products are also available. Please contact us for specifications and details.

Cover Lids

Attach to the grommets of the PK Type.



LAN cable



LAN cable + multi-tap outlet

For thick cables, bend the claws inward with pliers before use.

Dedicated Information Outlet Modified Panels

When installing an information outlet

Attach an information outlet to a dedicated modified panel (optional).

* A reinforcement pedestals leg is required for the grommets.



* This is an order made product.
Please contact us for specifications and details.

Security System

A system where a special screw is used to lock the panels. As the panel cannot be opened / closed with a normal screwdriver or hex wrench, security is increased.



* This is an order made product.
Please contact us for specifications and details.

Ramps and Frames



Rising frame (wooden base)



Rising frame (stainless steel)

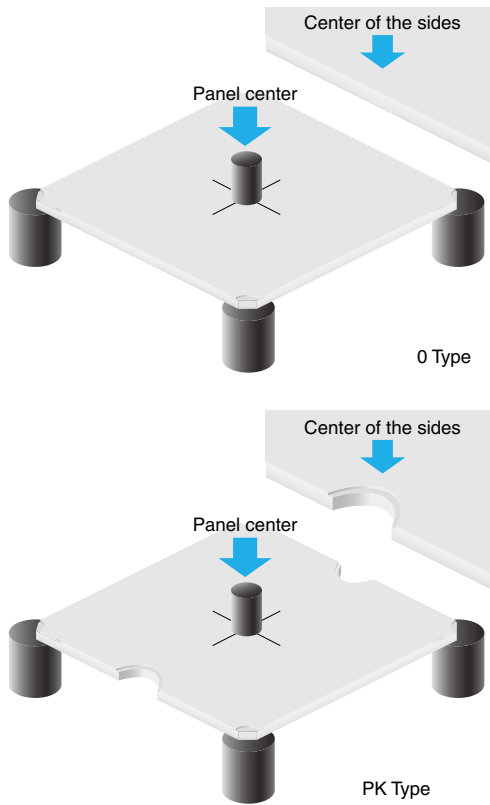


Ramp (wooden base, steel base)



Ramp (wooden base, steel base)

Concentrated Load Test

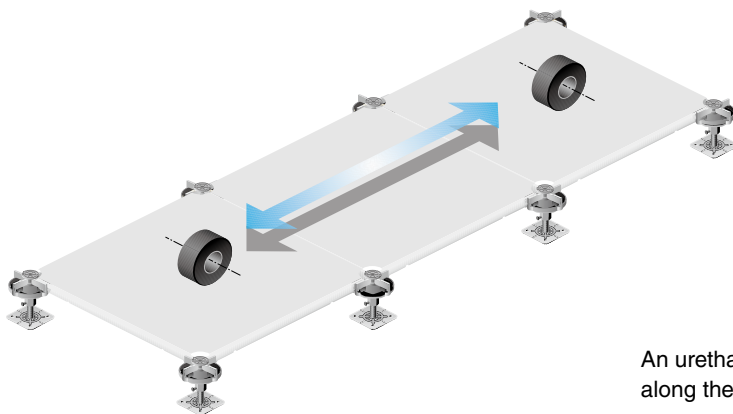


Support the panel on 4 $\phi 80$ steel pedestals, and apply a $\phi 50$ load using a load tester.

Concentrated Load Performance	O Type / PK Type	
	Panel center	Center of the sides
Maximum load (N)	9000 or more	4500 or more
Deflection at 3000 N (mm)	2.0 or less	3.0 or less

Standard value set by NICHIAS

Rolling Load Test

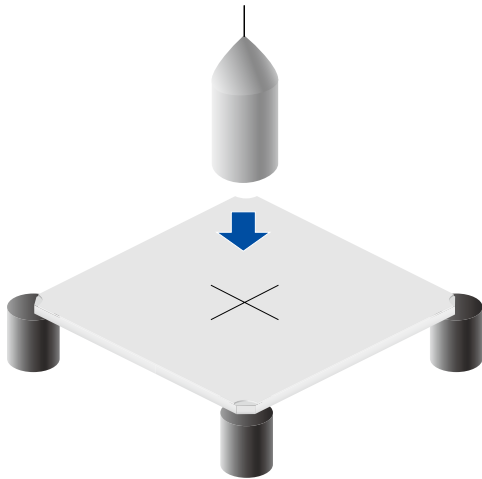


An urethane-covered caster loaded with a realistic load is rolled along the center of the panel.

Rolling load performance	Load (N)	Times rolled (count)	Damage
	1000	10000	None

Standard value set by NICHIAS

Impact Test

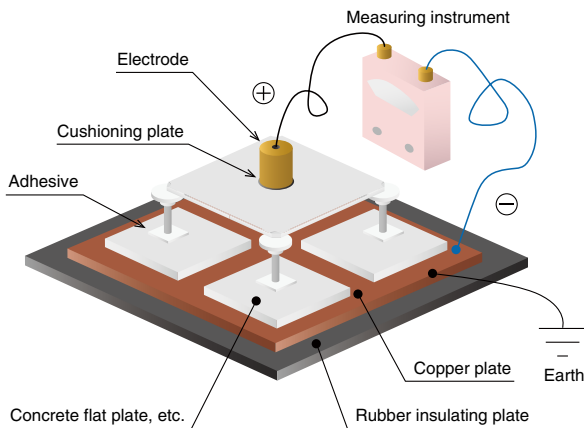


A center concentrated load test is conducted on a panel supported by four $\phi 80$ pedestals after a 30 kg sandbag (base $\phi 220$) is dropped by free fall to the center of the panel.

Drop height (cm)	Damage	Max. load (N)
50	None	9000 or more

Measurement organization: NICHIAS

Leakage Resistance Test



Measures the leakage resistance.

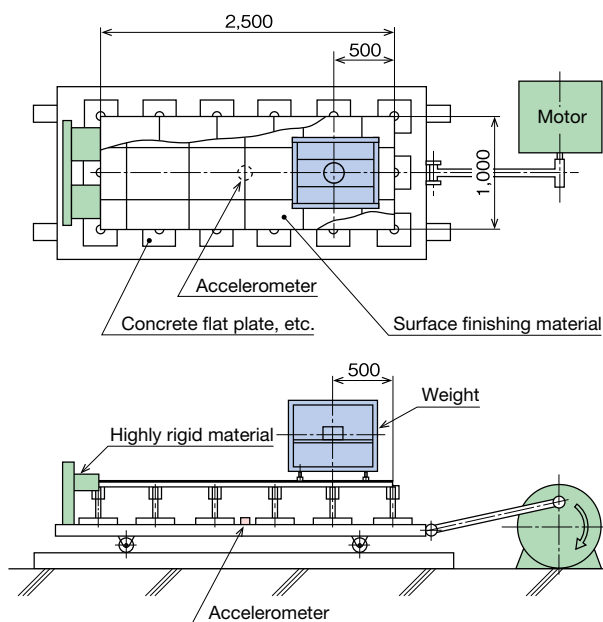
<Measurement condition>
 applied voltage : 500V
 Temperature : $20 \pm 5^\circ\text{C}$,
 Humidity : $30 \pm 10\% \text{RH}$

Leakage resistance value	Panel surface	Leakage resistance value (Ω)
	No surface finishing materials	1.0×10^6 or more

*These are measured values and not guaranteed values.

Measurement organization: NICHIAS

Seismic Performance Test



Set the specimen onto the test machine, place the designated weight* on the machine and apply a sinusoidal vibration at 2 Hz 3 waves 1.0 G maximum. Observe the state of the specimen and check for deformation in the specimen. One side of the specimen shall be fixed to the wall.

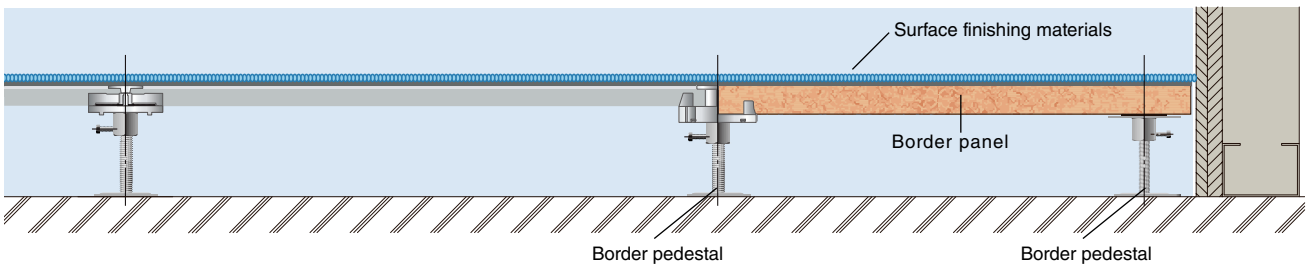
*The specifications of the pedestal vary with the movable load.

Seismic performance	Movable load	Result
	200kg / 350kg	No change

Measurement organization: Flooring Materials and Construction Research Institute

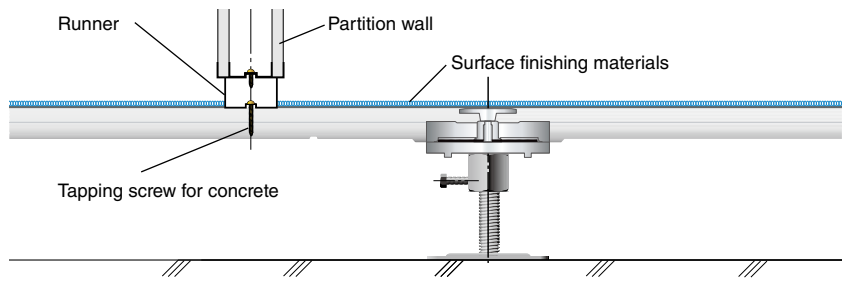
* These are measured values and not guaranteed values.

Cross Section



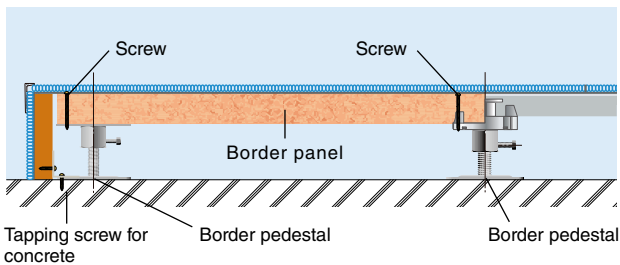
Partition Wall (separately constructed)

A pilot hole can be made to the "NICHIAS PAT FLOOR™" and the partition wall fastened with a screw.

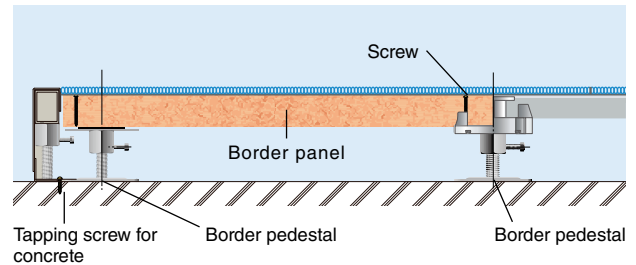


*Do not construct fire resistant partition walls on top of "NICHIAS PAT FLOOR™".

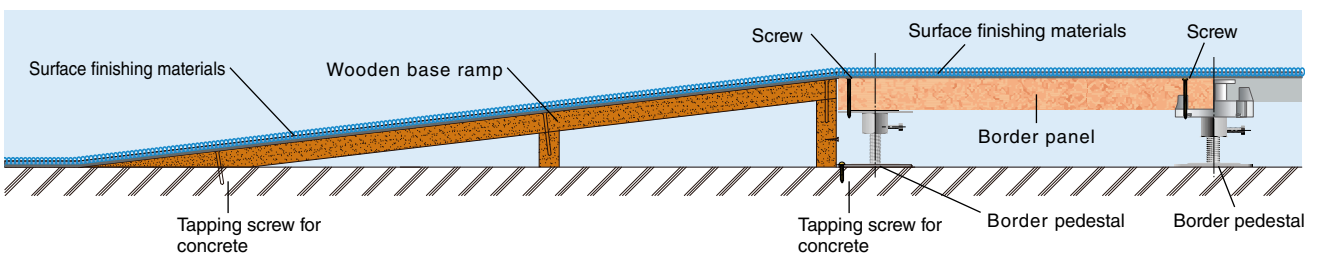
Rising frame (wooden base)



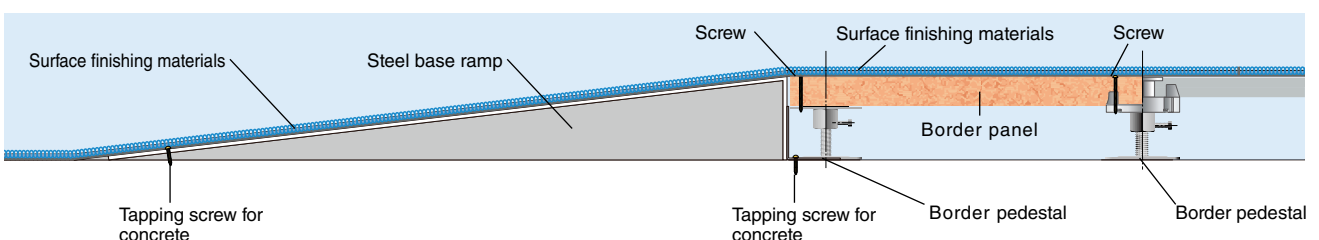
Rising frame (stainless steel)



Ramp (wooden base)



Ramp (steel base)



Construction of Border Section

Border section is installed by cutting chipboard.

- * Attach border lock sets to the pedestal.
- * Construct with about 2 to 4 mm interface gap with the wall.
- * For the sections around the entrance and corridors where people and trolleys pass through, fix the four corners of the panel with screws or locking materials.

Border lock set



Pat BJ 1/2



Pat BJ 3/4



Pat BJ 1/4

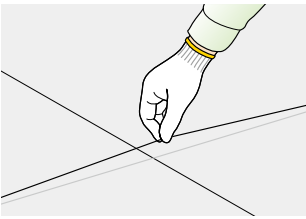
Construction example 1



Settling of border lock sets of external and internal corners



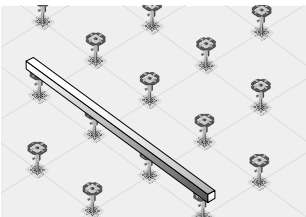
Construction Procedure



STEP1
Based on the building standard marks and construction drawings, put layout marks on the floor.



STEP2
Adjust the height of the pedestals to be used as the reference using tools such as a leveler.

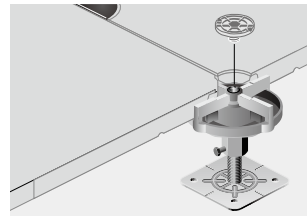


STEP3
Adjust the height of the other pedestals to the reference pedestal using tools such as a long bar, and fix with stopper screws.

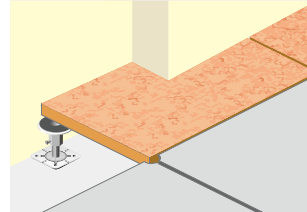


STEP4
Apply adhesive to the bottom of the base plate of the pedestal with a lock base attached, and set the pedestals based on the layout marks.

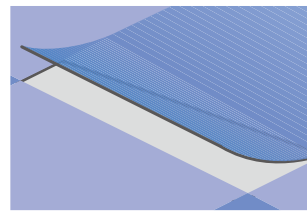
*When painting a base coat to the concrete slab, check with the base coat manufacturer regarding conditions such as the slab conditions when applying the base coat and covering period until the pedestals have become stuck.



STEP5
Immediately after the pedestals adhere, layout 0 Type or PK Type panels according to the layout, and fasten with lock plates.



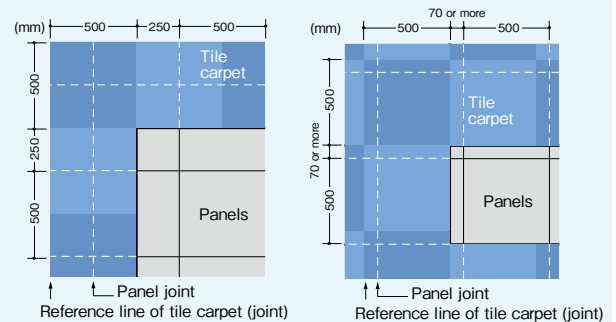
STEP6
Construct the interfacing parts such as the borders.



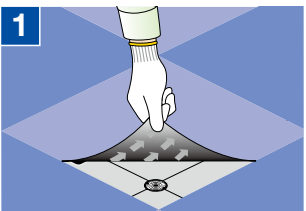
STEP7
Construct parts such as the tile carpet. (After panel construction, promptly lay down surface finishing materials.)

●NICHIAS recommends applying 30 to 60 g/m² of carpet bond (peel-up type adhesive). Follow the construction specifications of each manufacturer. Also, take care not to apply too much carpet bond when laying out the tile carpet as it may result in tile carpet damage due to excessive viscosity.

[Example of Tile Carpet Layout]

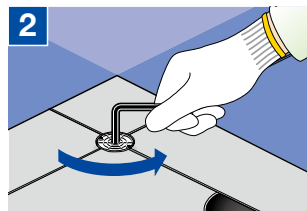


Maintenance

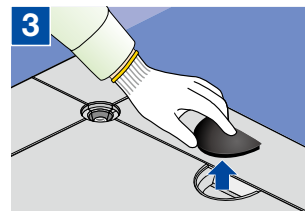


1
Peel back a corner of the surface finishing materials (such as tile carpet) with your fingertips, and remove the 4 pieces of surface finishing materials that cover the panel you want to open or close.

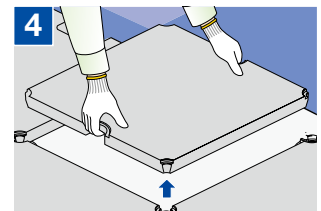
*Surface finishing materials have a direction in which they are applied, so record the positions and directions for when putting them back.



2
Remove the lock plate using a hex wrench.



3
Remove the cover lid.



4
Lift the panel straight up with both hands.

*Record the positions and directions of the panel for when putting the panels back.

*When holding panels, be sure to wear gloves, do not handle with your bare hands.

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

- Panels, pedestals, and auxiliary materials should be classified as general industrial waste and should be treated appropriately in accordance with the Waste Disposal and Public Cleansing Law.



Head Office

6-1, Hatchobori 1-chome, Chuo-ku, Tokyo 104-8555, Japan
International Marketing and Sales Group
 Phone: 81-3-4413-1132 Fax: 81-3-3552-6108
 Web Site: <https://www.nichias.co.jp/>

Overseas Sales Companies

Indonesia

PT. NICHIAS SUNIJAYA

Panin Life Center, 2nd Floor, Room 205, Jl. Letnan Jenderal S. Parman
 Kav. 91, Jakarta 11420, Indonesia
 Phone: +62-21-56956207 Fax: +62-21-56956208/56956209

Malaysia

NICHIAS SOUTHEAST ASIA SDN. BHD.

Suite A1102, 11th Floor, West Wing, Wisma Consplant 2,
 No. 7, Jalan SS 16/1, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia.
 Phone: +60-3-5636-4067 Fax: +60-3-5636-4078

Singapore

NICHIAS SINGAPORE PTE. LTD.

25 International Business Park, #01-15/17 German Centre,
 Singapore 609916
 Phone: +65-6571-0830/0838 Fax: +65-6265-7681

Vietnam

NICHIAS VIETNAM CO., LTD

Room 12-K, 12Floor, Center Building,
 Hapulico Complex No1 Nguyen Huy Tuong,
 Thanh Xuan Trung, Thanh Xuan, Hanoi, Vietnam
 Phone: + 84-4-3791-7194 Fax: + 84-4-3791-6203

Thailand

NICHIAS (THAILAND) CO., LTD.

85 Moo 1, Wellgrow Industrial Estate T. Homsin, A. Bangpakong
 Chachoengsao 24180, Thailand
 Phone: +66-38-570-600 Fax: +66-38-570-601

THAI NICHIAS INTERNATIONAL CO., LTD.

Unit 1107, 11th Floor, AIA Capital Center
 89 Ratchadaphisek Road, Dindaeng, Dindaeng, Bangkok 10400 Thailand
 Phone: +66-2-001-2060 Fax: +66-2-001-2062

China

NICHIAS (SHANGHAI) TRADING CO., LTD.

霓佳斯（上海）贸易有限公司
 Room 1701, THE PLACE, Tower A, No. 100 Zun Yi Road,
 Changning District, Shanghai, P.R.China Postcode 200051
 中国上海市长宁区遵义路100号虹桥南丰城A栋1701室 邮编200051
 Phone: +86-21-6236-1783 Fax: +86-21-6236-1781

NICHIAS (SHANGHAI) TRADING CO., LTD. Guangzhou Branch

霓佳斯（上海）贸易有限公司 广州分公司
 17F-G, Gold Sun Building, No.109 Tiyu West Road, Guangzhou,
 Guang Dong Province, 510620, P.R.China
 中国广东省广州市天河区体育西路109号高盛大厦17楼G室 邮编 510620
 Phone: +86-20-3879-1640 Fax: +86-20-3879-1647

NICHIAS (SHANGHAI) AUTOPARTS TRADING CO., LTD.

霓佳斯（上海）汽车零部件 贸易有限公司
 Room 1702, THE PLACE, Tower A, No. 100 Zun Yi Road,
 Changning District, Shanghai, P.R.China Postcode 200051
 中国上海市长宁区遵义路100号虹桥南丰城A栋1702室 邮编200051
 Phone: +86-21-6236-2668 Fax: +86-21-6236-2667

Germany

NICHIAS AUTOPARTS EUROPE GmbH

Prinzenallee 7, 40549 Düsseldorf, Germany
 Phone: +49 (0)211-52391-058 Fax: +49 (0)211-52391-200

Overseas Construction Companies

Malaysia

NICHIAS SOUTHEAST ASIA SDN. BHD.

Suite A1102, 11th Floor, West Wing, Wisma Consplant 2,
 No. 7, Jalan SS 16/1, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia.
 Phone: +60-3-5636-4067 Fax: +60-3-5636-4078

Thailand

THAI-NICHIAS ENGINEERING CO., LTD.

45 Huaypong-Nongbon Road, Huaypong, Muang Rayong,
 Rayong Province 21150, Thailand
 Phone: +66-38-682-242 Fax: +66-38-691-156

Overseas Factories

Indonesia

PT. NICHIAS ROCKWOOL INDONESIA

PT. NICHIAS METALWORKS INDONESIA

Malaysia

NICHIAS FGS SDN. BHD.

NT RUBBER-SEALS SDN. BHD.

Vietnam

NICHIAS HAIPHONG CO., LTD.

China

SUZHOU NICHIAS INDUSTRIAL PRODUCTS CO., LTD.

(苏州霓佳斯工业制品有限公司)

SUZHOU NICHIAS SEAL MATERIAL CO., LTD.

(苏州霓佳斯密封材料有限公司)

SHANGHAI XINGSHENG GASKET CO., LTD.

(上海兴盛密封垫有限公司)

SUZHOU SHUANGYOU AUTOPARTS CO., LTD.

(苏州双友汽车零部件有限公司)

India

NICHIAS INDUSTRIAL PRODUCTS PRIVATE LTD.

Czech

NICHIAS AUTOPARTS EUROPE a.s.

Mexico

NAX MFG, S.A.DE C.V.

⚠ Cautions

- The products included in this catalog are intended for common use, including those presented in the catalog. If you intend to use any of the products in a way that requires extremely high quality and reliability such that any possible defect may directly affect the safety of human lives, please make sure to consult with our company in advance and take necessary measures at your responsibility.
- Because the stated material values may vary according to actual usage environments or circumstances, please consider such figures as indications for reference.
- The content of the catalog explains the features of the products when they are used alone. When actually using the products, please start using them after testing them under the actual usage environment.
- The content of the explanation of the products may be modified without any advance notice, and the production of the product may also be discontinued without advance notice. Please obtain the latest version of the catalog, and confirm the content thereof. The date of issuance of this catalog is printed on this page.
- The standards, accreditation and provisions of laws included in the catalog may not conform with the latest version thereof.
- We strictly prohibit any acts of infringement upon our rights that are protected by the Copyright Act with regard to information included in the catalog, through the production of copies or imitations, misappropriation or unauthorized reprinting.
- Please be informed that, in the case where any problem involving a third party's industrial property right arises due to the use of any product included in the catalog, our company shall not be responsible for any problems other than the problems arising strictly due to reasons related to only such products.
- Please be aware that our company will not bear any responsibility for the following damage related to our products:
 - Damage arising due to natural disasters or accidents occurring for reasons that are not attributable to our company;
 - Damage arising due to remodeling, repairing or other acts by a third party;
 - Damage arising due to the willful intent or negligence of the customer or the user, or due to the improper use or use under abnormal conditions of the products;
 - Damage arising due to the failure to carry out regular checkups and appropriate repairs, maintenance and part replacements, considering various conditions, such as the usage conditions, usage environment and usage period, etc., of the product;
 - Indirect damage (including any operational damage, lost profits, opportunity losses, etc.) arising due to the use of or inability to use our company's product;
 - Damage arising due to a situation which was unforeseeable under the technical standards at the time of the shipment of our company's product; or
 - Damage arising due to reasons that are not attributable to our company.