

TOMBO™ BRAND

NICHIAS OMEGA FLOOR™





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.

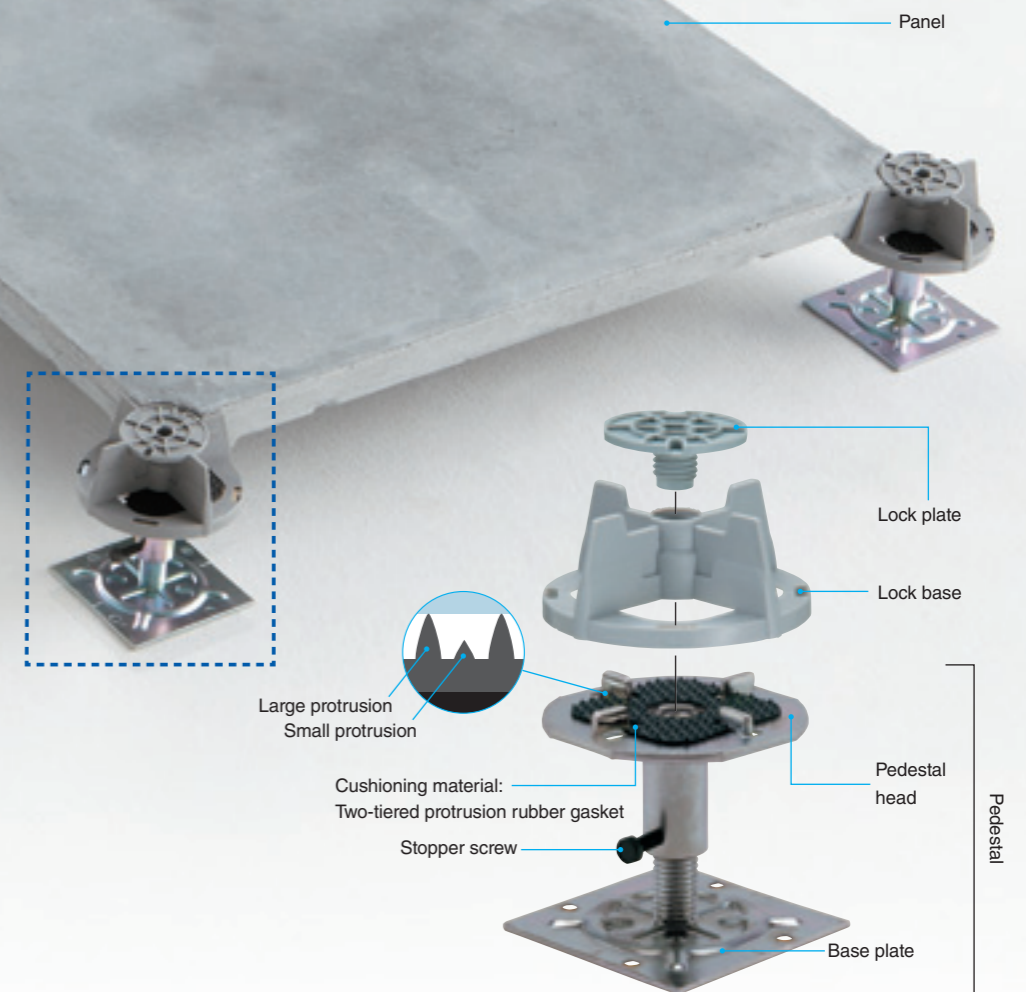
3. Solid walking feel without rattling

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.



**"TOMBO" is a registered trademark or trademark of NICHIAS Corporation.
**"OMEGA FLOOR" and "NICHIAS SIGMA FLOOR" are trademarks of NICHIAS Corporation.

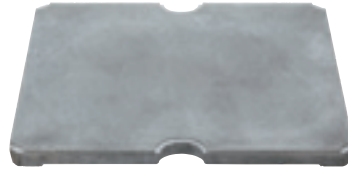
Panels

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

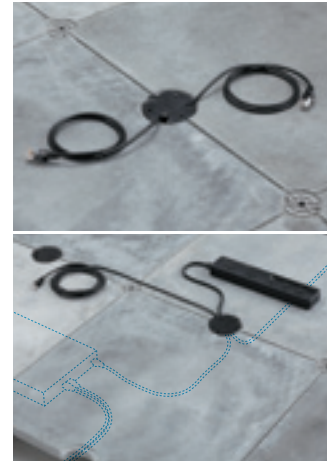
■ **Standard panel** Type 0 (zero)



■ **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)
M300A	0 (zero)	3,000	(500 mm finish size module) 497.5×497.5	(Side center)	48	11.5
	PKC			29		
HG ^{Note 2}	0 (zero)	5,000	(500 mm finish size module) 497.5×497.5	(Side center)	58	12.5
	PKC			31.5		

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

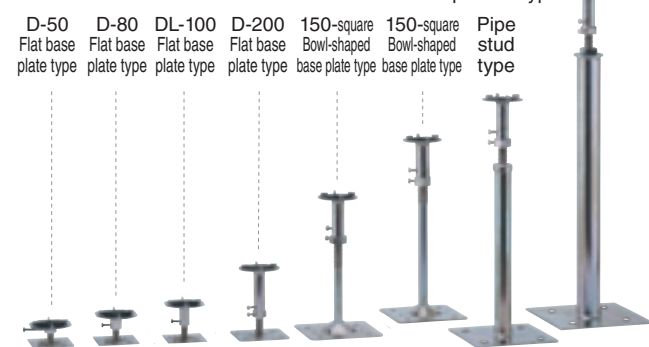
Note 2: OMEGA FLOOR™ HG is a made-to-order product.

Pedestals

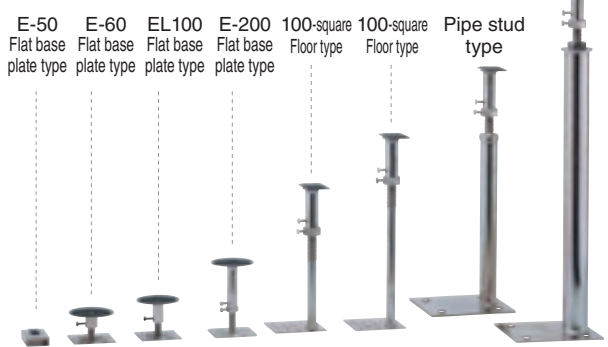
A full lineup of finish floor height from 60 to 1,000 mm

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

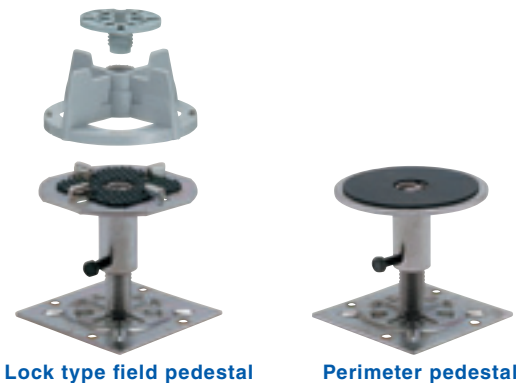
[Field pedestal]



[Perimeter pedestal]



[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

Optional panel



Installation of outlet box

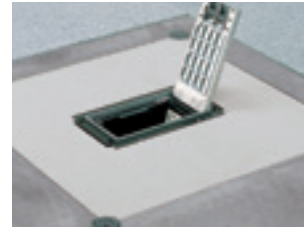
If an outlet box is installed:

Install the outlet box on a custom panel (option).

Custom panels are made of calcium silicate boards (NICHIAS product: NICHIAS SIGMA FLOOR™).

* Install a special attachment on a pedestal. (See page 7.)

* Reinforcing pedestals may be required depending on the panel shape.



* The photo shows an optional panel example.

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.



Up outlet

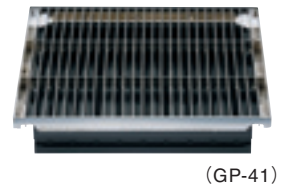
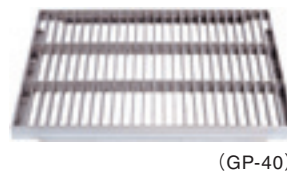


Manufacturer : TERADA ELECTRIC WORKS Co.,Ltd. (NAS70000)

Grill

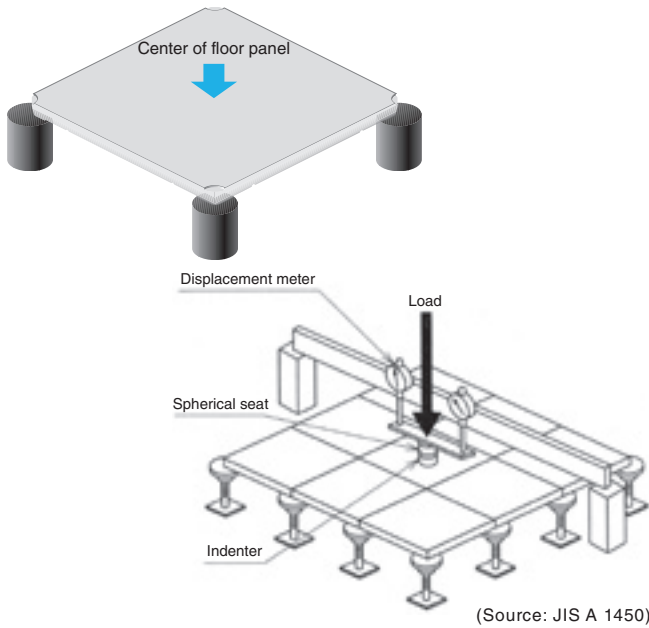
Grills are made to order. Consult NICHIAS for details.

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	500×500mm	75%	Steel	
GP-41	500×500mm	0 to 62%	Steel	With damper
GP-64	500×250mm	39%	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.

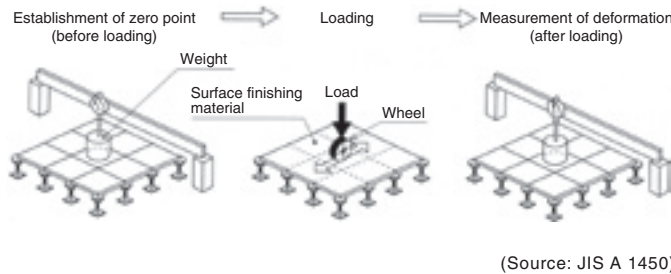
Static load test (Test method: JIS A 1450)

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.

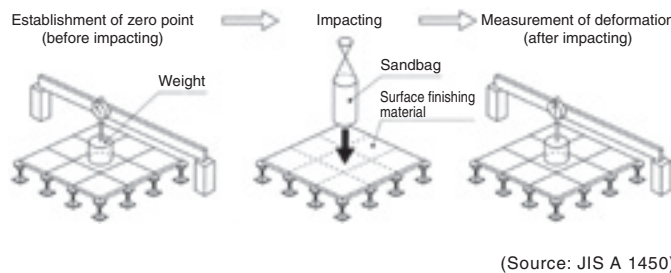
Rolling load test (Test method: JIS A 1450)

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)

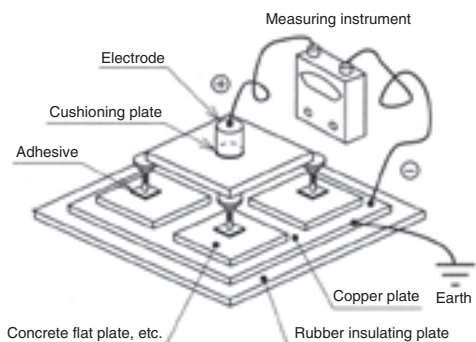
Model	Impactor	Impactor height	Impact point	Visual damage	Residual deflection
M300A	Sandbag with a mass of 30kg	250mm	Weakest point	None	3 mm or less
HG					

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)

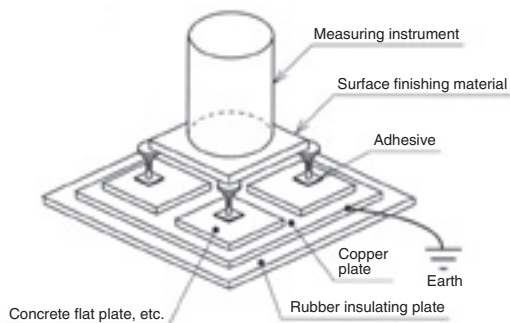
Resistance between the panel top and ground is measured. (Measurement conditions: applied voltage: 500 V; temperature: 20±5°C; humidity: 30±10% RH)

Leakage resistance test (Test method: JIS A 1450)		
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.



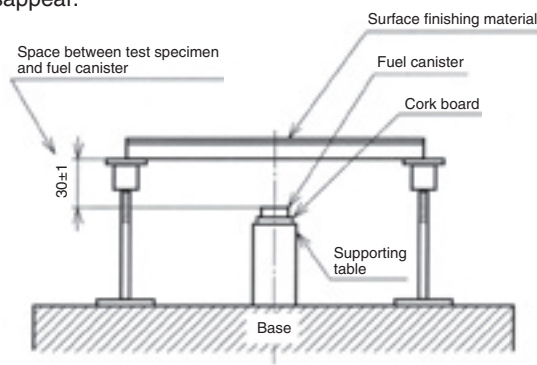
(Source: JIS A 1450)

Electrostatic propensity test (Test method: JIS A 1450)		
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.



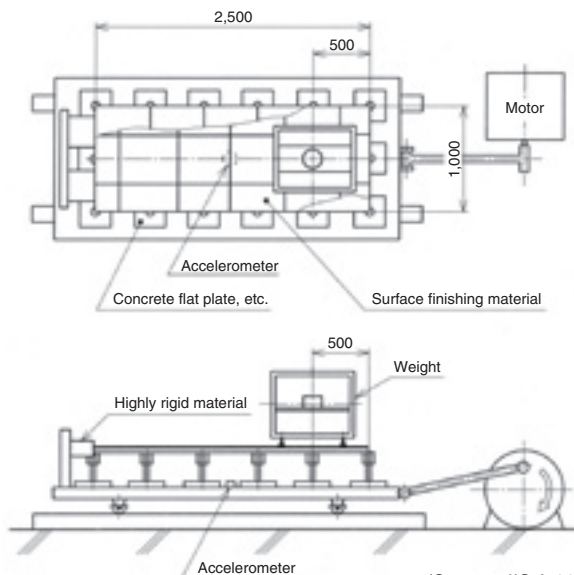
(Source: JIS A 1450)

Combustion test (Test method: JIS A 1450)	
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)

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

Vibration test (Test method: JIS A 1450)		
Model	Load mass	Result
M300A	200kg/350kg	Floor panels should not come off.
HG		

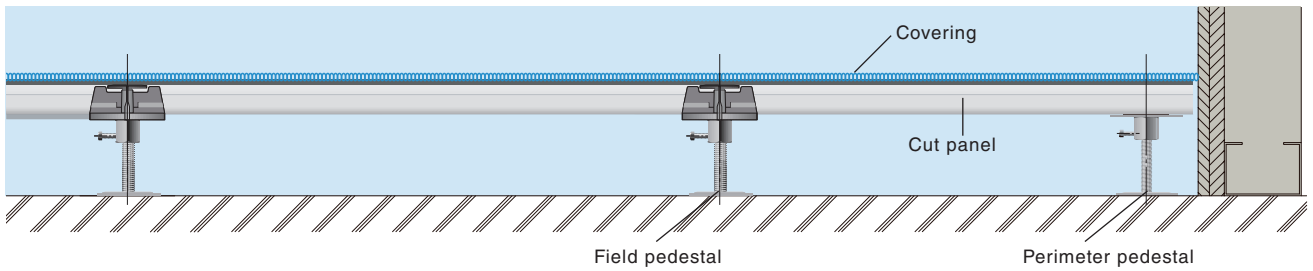
Testing organization: Floor Materials and Construction Research Institute

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

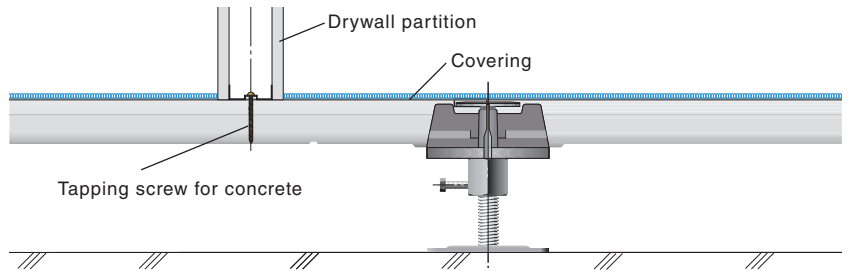
- Specified load is not related to underfloor strength. These data items are given here for reference considering the current usage.
- Data source: "Performance Assessment of Raised Access Floor System" by Japan Access Floor Association

Cross section



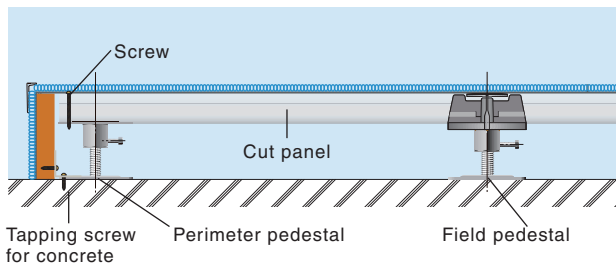
Drywall partition (separate work)

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

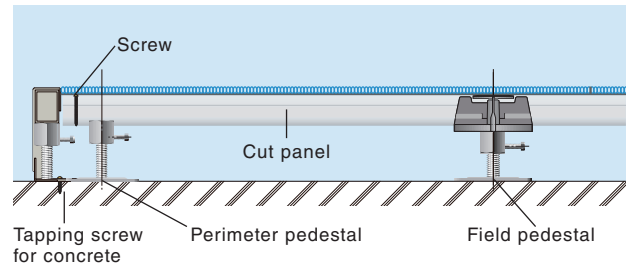


* Fire-resistant drywall partitions cannot be installed on NICHIAS OMEGA FLOOR™ panels.

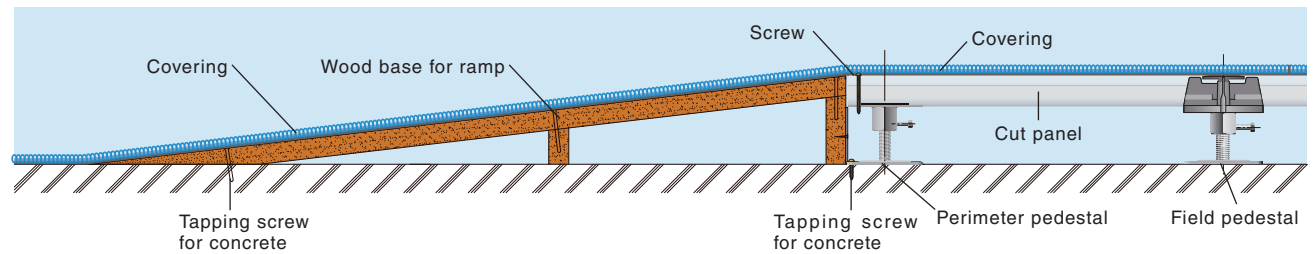
Fascia (wood base)



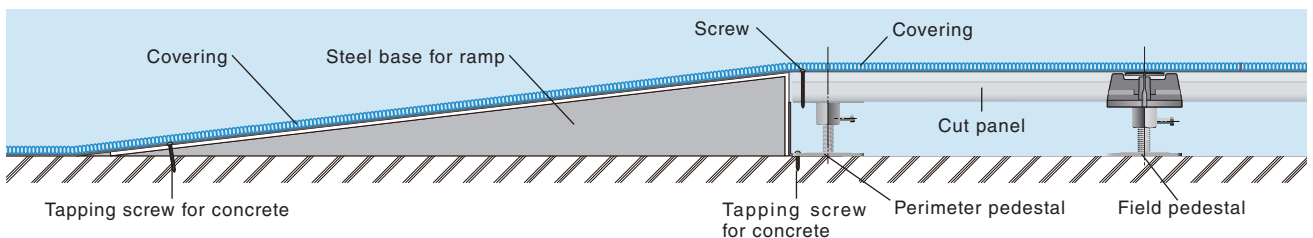
Fascia (stainless steel)



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.



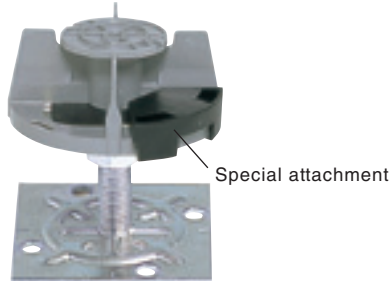
Lock type field pedestal

Perimeter pedestal

When using calcium silicate boards

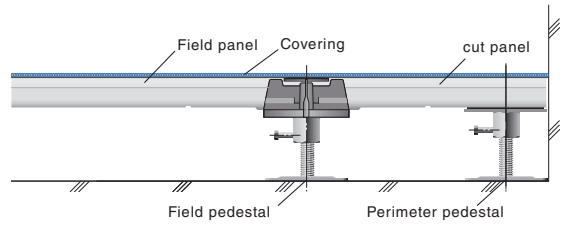
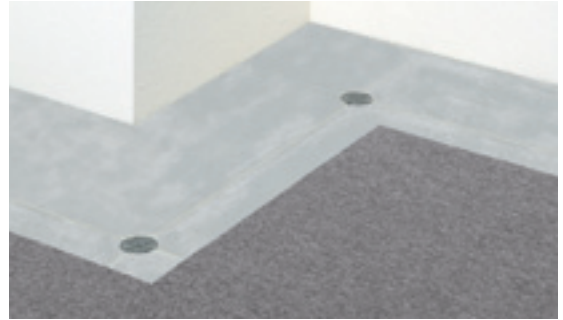
Cut special panel(Calcium silicate board) to the appropriate size for installation.

- Install a special attachment on the pedestal to adjust the panel thickness.

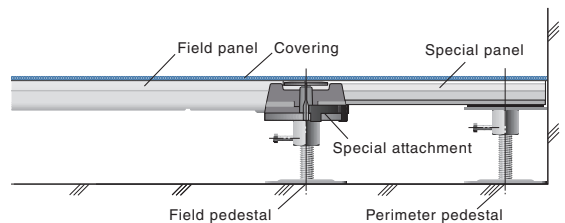
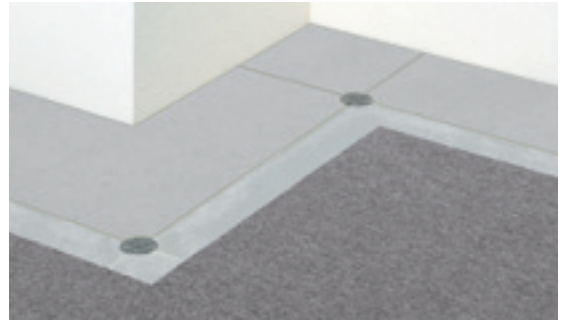


Special attachment

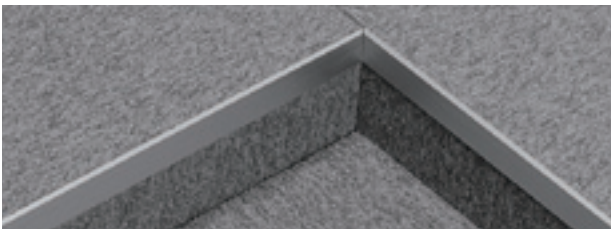
Installation example 1



Installation example 2



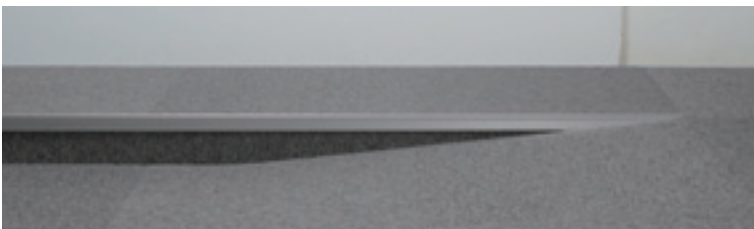
Ramps and fascias



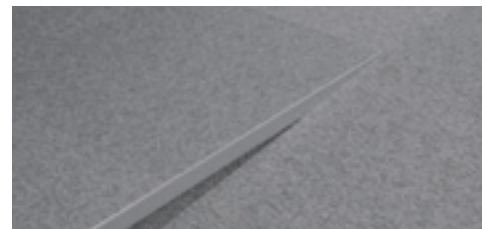
Fascia (wood base)



Fascia (stainless steel)

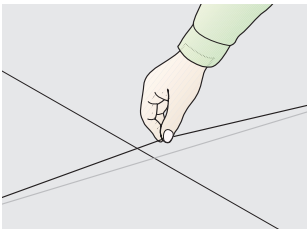


Ramp (wood base, steel base)

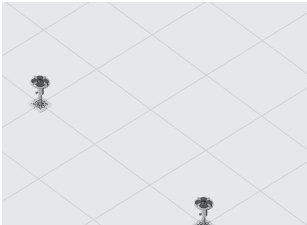


Ramp (wood base, steel base)

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.

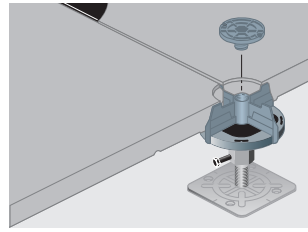


STEP3
Adjust the height of other pedestals to the reference pedestals with a long bar, etc., then fix the height with the stoppers.

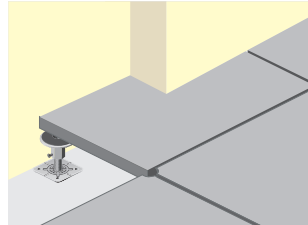


STEP4
Apply adhesive to the bottom of the base plate of each pedestal with a lock base, then install the pedestals according to the reference lines.

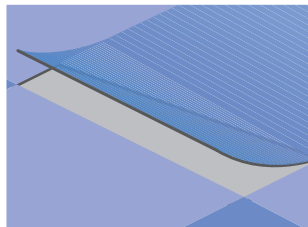
*When applying paint to the concrete slab, consult the paint manufacturer regarding the slab conditions for applying the paint, the curing time before bonding pedestals, etc.



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.



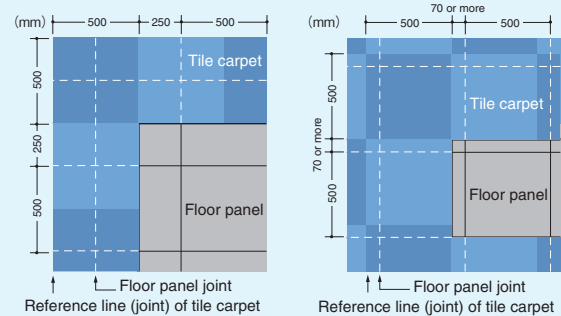
STEP6
Install the floor panels at the perimeters.



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]



⊘ Prohibitions

- Do not use NICHIAS OMEGA FLOOR™ for applications other than raised access floors.
- Do not install floor panels upside down because this reduces their strength.
- Do not cut or modify panels or pedestals based on your own judgment because cutting or modifying panels or pedestals may reduce their strength and cause the panels to break or fall. (Please be sure to contact us.)
- Do not install or move equipment exceeding the design concentrated load on panels.
- Do not leave or use installed floor panels without laying a floor covering for more than six months.
- Do not use it with a panel lifter.

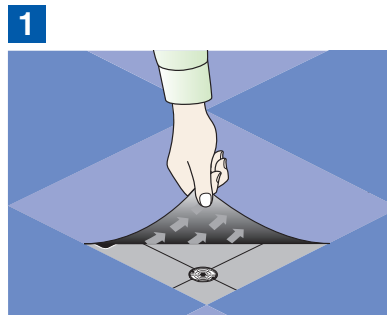
Please contact us if you have any questions.

Maintenance

⚠ Installation precautions

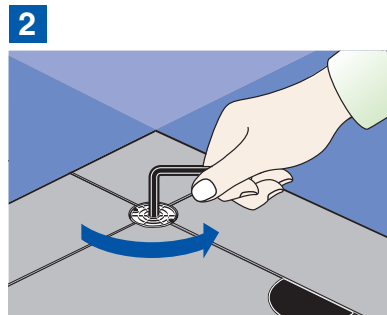
● Reinforcement is required when a custom panel is installed or moved. Be sure to contact us. ● Be sure to cover openings in floor panels with the grommet cover lids. ● The raised access floor system has grommets for power outlets. The joint line of the carpet needs to be shifted at least 70 mm from the joint line of the floor panels. ● An unusual smell might be generated in case of reaction between the plasticizer of the backing rubber of the carpet tiles and alkaline water contained in the floor panels. Ventilate the room sufficiently after installing carpet tiles. 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 carpet manufacturer for detailed instructions. Applying too much carpet bond may damage the carpet due to excessive viscosity. ● Store panels and accessories in a place where they will not come in contact with water. ● Comply with your local regulations concerning industrial waste when disposing of floor panels.

⚠ Precautions on handling panels after installation

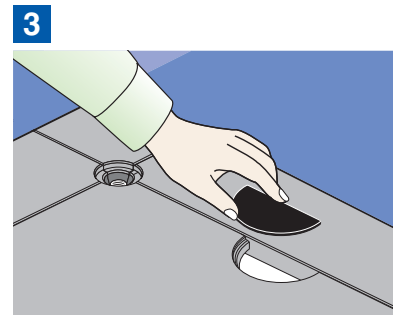


1 Pull up a corner of the floor covering (such as tile carpet) and remove the four sheets of covering that cover the floor panel to be opened and closed.

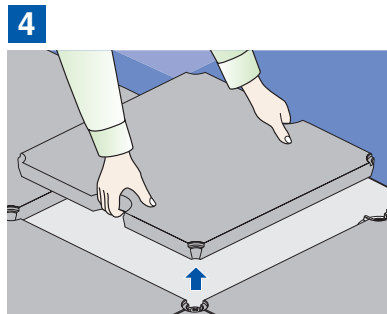
* Since the floor covering has a specific direction, record its position and direction for reinstalling it later.



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.

5 If heavy objects exceeding 300 kg or construction materials are carried on carts, avoid excessive localized load on floor panels by reinforcing the panels along the route with wooden board according to the following standards.

Heavy object	Reinforcing method
300 kg or less	Plywood panel or vinyl sheet about 2 mm thick
300 to 500 kg	Wooden board 9 mm thick
500 to 1000 kg	Wooden board 20 mm thick

* Make sure the joints of the floor panels and reinforcing materials do not overlap. (The joints would be dislocated.)

* Slowly carry carts by human power. Be careful not to cause an impact load when hydraulically operating equipment such as a hand fork-lift.

6 ① If load is concentrated on a single floor panel, put a steel plate or frame on the panel.

② When equipment that generates repetitive loading or vibration such as a mobile rack or large rotary press is used, install it on a mount secured to the concrete floor to isolate the floor panels from the equipment.

③ If there is equipment that could topple over, secure it to the concrete floor or load-bearing walls. Do not secure the equipment to the floor panel or pedestals.

7 **[Maintenance of panel surface]**
■ Tile carpet

- ① For daily maintenance, clean the carpet with a large vacuum cleaner for business use or a home vacuum cleaner.
- ② For periodical maintenance, clean the carpet using cleaning powder.

* Be careful not to spill water or chemicals on floor panels.

* Consult a cleaning company or surface finish material manufacturer for details on how to clean powder or remove stains.

8 **[Precautions on changing the layout]**
Please contact us when modification of panels or replacement of floor materials is required due to a layout change or wiring work.

9 **[Other precautions]**

- A heavy object falling on the floor or excessive impact could damage the panels or cause them to fall off. If the panels are used in such a situation, check that the panels are not damaged after each incident, and replace them if necessary.
- Do not open the floor panels unless unavoidable. If panels are removed, be careful not to stumble or fall.
- Be careful not to allow water to splash onto wiring equipment during cleaning.

Please contact us if you have any questions.



NICHIAS Corporation

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: <http://www.nichias.co.jp/>

Overseas Representative Offices

Qatar
NICHIAS CORPORATION, QATAR REPRESENTATIVE OFFICE
P.O. Box 200138, 7th Floor Pearl Tower, Al Matar Street, Doha, Qatar
Phone: +974-4498-7221 Fax: +974-4443-5495

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 FGS SDN. BHD. Kuala Lumpur Sales Office
Suite A1102, 11th Floor, West Wing, Wisma Consplant 2, No.7, Jalan SS 16/1, 47500 Subang Jaya, Selangor, 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
2109 Building A, City Center of Shanghai, No.100 Zun Yi Road, Changning District, Shanghai, 200051, P.R.China
中国上海市长宁区遵义路100号虹桥上海城A栋2109室 邮编200051
Phone: +86-21-62361783 Fax: +86-21-62361781

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
2108 Building A, City Center of Shanghai, No.100 Zun Yi Road, Changning District, Shanghai, 200051, P.R.China
中国上海市长宁区遵义路100号虹桥上海城A栋2108室 邮编200051
Phone: +86-21-6236-2668 Fax: +86-21-6236-2667

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)
SHANGHAI GOYU AUTO PARTS CO., LTD.
(上海五友汽车零部件有限公司)

India
NICHIAS INDUSTRIAL PRODUCTS PRIVATE LTD.
Czech
NICHIAS AUTOPARTS EUROPE a.s.

Cautions

- 1) The information and recommendation in this catalog are based on our present state of knowledge and given in good faith for customer guidance purpose, and no liability will be accepted in relation to the same.
- 2) Properties/applications shown in this catalog are typical. The products shown in this catalog shall not be used for any purpose other than prescribed application.
- 3) Performance data shown in this catalog are developed from in-house testing and/or field reports from customers. Failure to select the proper products could result in property damage and/or serious personal injury.
- 4) Performance verification under actual operating conditions is recommended even for the application shown in this catalog.
- 5) While the utmost care has been used in compiling this catalog, we assume no responsibility for errors. This edition cancels previous issues and contents of this catalog are subject to change without prior notice.
- 6) For safe handling recommendations and health related effects, refer to the safety data sheet (SDS) of each product, available on request.
- 7) All or any part of the content on this catalog may not be copied, duplicated, imitated, reused and reproduced without prior permission of NICHIAS Corporation.

