

Grand Square®

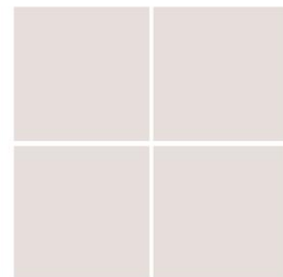
Low Profile Access Flooring System

GS400 / GS600



Managing Cables/Pipes For:

- Stores, Showrooms,
- Offices, Classrooms, Call Centers
- Recreational Facilities, Studios
- Home Improvement Projects,



----- Environment-Friendly & User-Friendly -----

Grand Square System

Since the advent of the Internet and intranet, the raised access floor industry has experienced rapid growth. In addition to traditional markets such as data centers and factories, access floors are now extensively used in nearly all new construction and retrofit projects for class-A office buildings, that support the government, commercial and educational sectors. The raised floor systems of choice include both traditional access floors and newer low profile cable management access floors.

There are also newly emerging markets for special application access floor systems in retail stores, showrooms, and temporary booths for shopping malls and trade shows. Netfloor's Grand Square low profile access floor system has been designed especially for these new market segments. The system is very easy to assemble. Netfloor is also introducing the system for home improvement applications, to support creating a new room or living space in the basement or the garage of a house, where the sub-floors' condition is often below-grade.

I The System – *Simple... Efficient ...Easy to Install*

Two main components compose the simple and effective Grand Square system.

1. Top-Panel

Galvanized steel, size 22.8 cm square (9.0 square inch), with right-angle downward formed edges on all four sides, and cross-shape re-enforced ribs at center of the panel. The special designed Top-Panels are supported by Base Connectors at the corners while maintaining electrical continuity between the panels.

2. Base Connector

The uniquely designed Base Connector consists of 4 pedestals in one. The Base Connectors position and support the corners of 4 steel top-panels. There are channels molded into the top of the connectors to accommodate the edges of the Top-Panels..

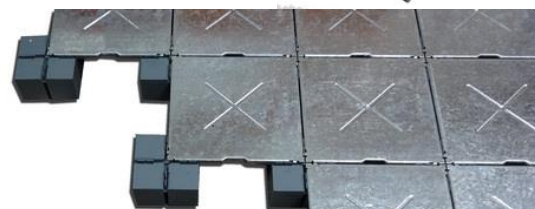
Easy configuration

The Base Connectors and Top-Panels interlock by inserting the downward bent edges of the Top-Panels, into the channels in the base connectors to automatically form 12 cm (4.72") wide cable trenches. These trenches form a grid to support the distribution and management of data, voice, and power cables to any point exit or connection.

Absorbs floor deviation:

Floor deviation is a problem for most of the fix-height low profile access floor systems on the market today. The

unique Grand Square Base Connectors absorb floor deviations such as bridging small cracks in the sub-floor. In the case of renovation projects, there is less requirements to patch old sub-floors. The Grand Square system is suitable for renovation job sites with generally level sub-floor conditions.



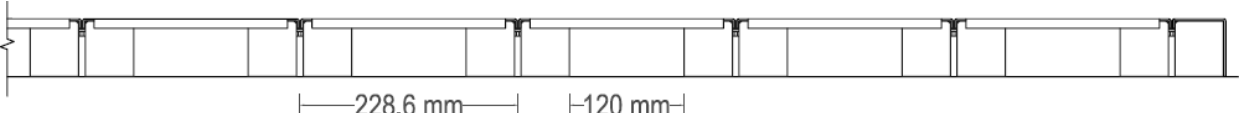
The 6 mm wide slots molded in the top of the Base Connector's 4 pedestals, position and support the corners of 4 each top-panels, and provides good capability to absorb sub-floor deviations and cracks.

II Performance

1. Large capacity --

A large quantity of cables can be distributed through 120 mm (4.72") wide grid-pattern cable trenches within every 228.6 mm (9.0") square, on center.

	<u>system height</u>	<u>cable Trench width</u>	<u>cable trench clearance</u>
GS400	40 mm (1.57")	120 mm (4.72")	30 mm (1.18")
GS600	60 mm (2.36")	120 mm (4.72")	50 mm (2.0")



2. User Friendly

Accessibility and flexibility: When re-routing cables, use a flat screw driver to pry up the Top-Panels, re-route the cables and replace the Top-Panels. Suction cup panel lifters are not required.

3. Environment Friendly

In the event of re-location, all components are 100% **re-usable**.

Low re-location costs: Grand Square systems are reusable; lighter in weight, easier to remove and transport. Re-installation costs are lower than traditional raised floor systems.

No pollutants: Pedestal adhesives are not required at time of installation. In the event of re-location, there should not be any adhesive to remove.

100 % recyclable: Top-panels and accessories are made of galvanized steel which is 100% recyclable.

Base Connectors are made of recycled poly-propylene, which is also



100% recyclable.

Add to LEED credit point: The Base Connector constitutes more than 25% to the value of the system, which may contribute credit points towards LEED certification.

Low maintenance costs: Maintenance costs are negligible.



lift Top-Panel by screw driver



Discarding traditional wood-structure platforms after the end of exhibitions (usually 3-5 days) is both costly and unfriendly to the environment. The 100% re-usable Grand Square system is an ideal solution for the issues.

III Applications

1. Display Platform for Stores and Showrooms

Normally display platforms for stores and showrooms are expected to stay in place for 2 to 4 years before re-modeling or re-location. Display platforms have been traditionally built by carpenters from lumber and plywood. However platforms in modern stores must be designed to facilitate more frequent changes. To meet this goal, store facility managers, architects and designers are beginning to specify the use of flexible low-profile access floor systems when designing platforms for their retail stores and showrooms. Grand Square is quickly becoming the best low-profile access floor system for all of these applications.

Quiet and comfortable to walk on: The system achieves a strong inter-lock connection by pressing the edges of the Top-Panels into slots in the top of the Base Connectors. This simple, yet rigid composition provides comfortable, solid footing for customers while they walk through the stores.

Free cable routing to display cases and shelves:

Distribution of power and data cables can be easily managed through the use of the channels created by Top Panels and Base Connectors. Cables can then be extended to reach any display cases, stands and shelves.

Neat and quick installation: overnight installation for most of the store projects is very common.

High changeability: Store personnel can easily implement small to medium changes. Larger changes may require a contractor and /or an electrician.

100% re-usable:

This is a major advantage. Unlike having to discard wooden platforms when of re-locating or renovating, all components of Grand Square are 100% re-usable.



Grand Square in electronic & multi-media chain stores



In tradeshow booths at Domotex, Hanover

2. Display Platforms for live event tradeshows -----

Trade show exhibits typically stay in position for only 3 to 5 days. Exhibit platforms must be light weight and strong, easy to assemble and disassemble and easy to transport. Exhibition services contractors may decide to rent Grand Square platforms to exhibitors who do not have their own exhibit structures.



Grand Square's rigid configuration sustains a variety of products including passenger cars, and many others.



Top-Panel can be used as the finished floor for some exhibitors without using of carpet or PVC



Grand Square has 40, 60, 90 mm height option for all store platforms

3. Offices / Classrooms

Renovation of old offices and school classrooms: The light-weight low-profile Netfloor Grand Square system is especially suitable for renovation projects in old office buildings, emergency operation centers, classrooms, courtrooms, call centers, and even for residential buildings and warehouses that are being converted into commercial offices.

Light-weight:

The “dead weight” loading of the Grand Square system is 20~22 kg / per sq. meter (avg. 4.10~4.50 LB per SF), which is less than half the weight of comparable traditional access floor systems. Light-weight is an important factor when considering using any access floor for high-rise buildings or for upgrading old buildings.

Less interference: installation of the raised floor system can be scheduled for room by room or floor by floor, to insure the least interference with normal office operations. Power and data cables can be easily re-routed as areas of the new floor installation are completed.

Easy extension of power, voice, data cables to reach desk tops, partitions, and workstations are made possible through a notch in one side of each Top-Panel, or through a 60 mm opening in the center of the available Exit-Panel.

Access floor boxes: Holes can be cut in the middle of Top-Panels, to accommodate all type of floor boxes.



office renovation project, top-finish by vinyl tiles



School classroom renovation projects, with carpet tiles as the top finish.

4. Recreational facilities – broadcast studios and casinos

Cable management:

The 120 mm (4.72") wide cable trenches promote efficient separation and management of power, voice, data and video security cables for recreational facilities such as casinos, and broadcast studios.

Easy renovation in limited spaces and limited time: Studios and casinos frequently have to re-route cables when they upgrade their facilities. Netfloor's Grand Square system has been successfully installed in a number of broadcast studios and casinos.



Management of old power and data cables



Grand Square installed for upgrading projects in casinos

5. Home Improvements —

Adding a new room in your basement or garage: We are introducing the use of the Grand Square system for Home Improvement Projects. There is always a need for one more room, or to create additional living space in a house. Installing Grand Square in basements or garages to create new room/rooms is better because the system is suitable to install on the below-grade sub-floors.

Moisture resistance: Base Connectors and Top-Panels are both moisture resistant.

Moisture will damage wood but will not affect the Grand Square system.

Leaking water or surface moisture on the slab-floor won't cause problem with the Base Connectors. So, unlike lumber and plywood, Grand Square will not rot when used in a basement, garage or other moisture-prone locations in the house.



Fully accessible and re-locatable by home users

Homeowners can usually install the Grand Square system.

The Grand Square system is 100% reusable.

For Do It Yourselfers: The regional distributor may assist in calculating components, floor plan, and material cost estimation.



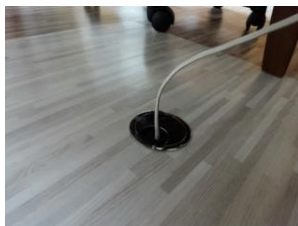
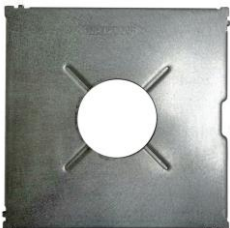
IV Installation



1. floor preparation – the floor condition should generally be level. No need to patch small cracks. However, you should use a sealer on any below grade bare concrete before installing the system



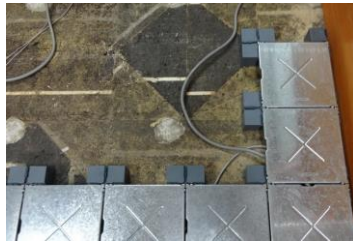
3. Continue the installation by connecting the Base Connectors and Top-Panels: Place edges of Top-Panels onto Base Connectors slots and press down by hands, or tap lightly with a rubber mallet to firmly seat the Top Panels on the Base Connectors. It is important to make sure the first 8 to 10 rows Base Connector / Top Panel combinations are laid squarely (90°) so the finished floor will properly fit the room



6. exits to extend cables to booths, shelves, workstations:

6-1 cables exit from panel side notches

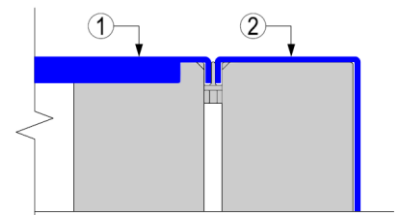
6-2: cables through exit panels with opening and grommets



2. starting from a longest wall, with an average of 3 mm spacing from the wall. Use a half-Connector (Just saw a Base Connector into halves to connect to sides of any two adjacent Top-Panels.

4-a: Complete the installation by combined using Half-Connectors and Edge Rails to fill all gaps, without having to cut Top-Panel.

Or
4-b: using a band saw, cut the Top-Panels to fill in gaps, and support from underneath by using Half- Connectors.



5. Starting Channel as free standing at perimeters of open booth before top-finish floor coverings (1) Top-Panel (2) Starting Channel

7. Accommodate all types of access floor boxes in each country



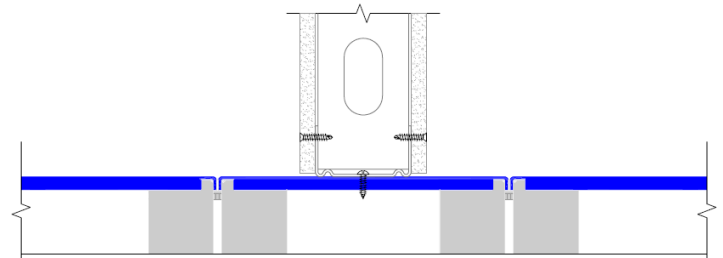
Box with steel lid
2 power sockets
4 data jacks



stainless steel lid
2 power sockets
4 data jacks



plastics/s. steel lid
4 power sockets
4 data jacks



8. Accommodates all type dry wall systems: (1) Floor-to-ceiling partitions can be firmly installed directly on top of the system. Fasten drywall's floor tracks onto Top-Panels in every 457 mm (18") on center. (2) Partial height partitions that are not fastened to the ceiling grid, before fasten floor tracks onto Top-Panels, the Top-Panels are fastened onto furring channels which are fastened onto sub-floors.

V Specifications

Module set: 228.6 mm X 228.6 mm (9" X 9"). One module set = 1 Top-Panel + 1 Base Connector

System descriptions:	height	Cable Trench width	clearance	system weight
GS400 system:	40 mm (1.57")	120 mm (4.72")	30 mm (1.18")	20 kg / per sq. meter (4.1 Lbs. / per sq. Ft)
GS600 system:	60 mm (2.36")	120 mm (4.72")	50 mm (2.0")	21 kg / per sq. meter (4.3 Lbs. / per sq. Ft)

Main Components:

Top-Panel: made of 2 mm (0.078") thick galvanized steel, cross-shape re-enforcing ribs at center.
size: 227 mm X 227 mm X 10 mm (8.93" X 8.93" X 0.39")

Base Connector: made of recycled poly-propylene.

size: 108.6 mm X 108.6 mm (4.27" X 4.27") height: 38 mm (1.49") / 58 mm (2.28") / 88 mm (3.46")

Accessories:

Starting Channel: made of 2.0 mm (0.78") thick galvanized steel

size: 456 mm (17.95") L X 55.8 mm (2.20") W, 40 mm (1.57") / 60 mm (2.36") / 90 mm (3.54") H

Half-Connector: half-size Base Connector by cutting Base Connector into halves.

Earthing-Panel: Factory assembled Earth-Panel to be installed one panel within 10 meters.

Earthing shall be installed by licensed electrician.

Ramp for GS600 and GS400, 1.6 mm (0.63") thickness galvanized steel

GS600: Size 720 mm (L) X 100 mm (W) X 60 mm (H)

GS400: Size 480 mm (L) X 100 mm (W) X 40 mm (H)

Loading property: tested in accordance with CISC

	<u>GS400</u>	<u>GS600</u>
Concentration Load midpoint of edge < 2.5 mm depression:	450 lb (220 kg)	450 lb (220 kg)
Concentration Ultimate load: safety factor greater than	2.2	2.0
Uniform Distribution Load (1.5 mm depression):	> 1300 psf	> 750 psf

Fire retard:

Top-panel: full-steel, non-combustible

Base Connector: meet NFPA253 class A (in accordance with ASTM E-648), BS476 part 7 class 2.

Environment Friendly:

100% re-usable: In the event of re-location, all components are 100% re-usable.

100% recyclable: All components of the systems are 100 % recyclable.

Base Connector: made of recycled poly-propylene, add to LEED credit points.

Floor covering: suitable for top-finished by carpet tiles, or vinyl tiles at least 4.5 mm thick.

Engineered wood plank with foam-back, or broadloom carpet are also good as top-finish.

Warranty: 5 years limited warranty.

*** In pursuing continuous quality improvement, the manufacturer reserves the rights to vary specifications without prior notice

patent pending – USA: 29/509055 / China: 201430442519.6 / Taiwan: 103306565

world-wide patent pending –

www.net-floor.com

a product division of NETFLOOR, Inc.



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