NETFLOOR®

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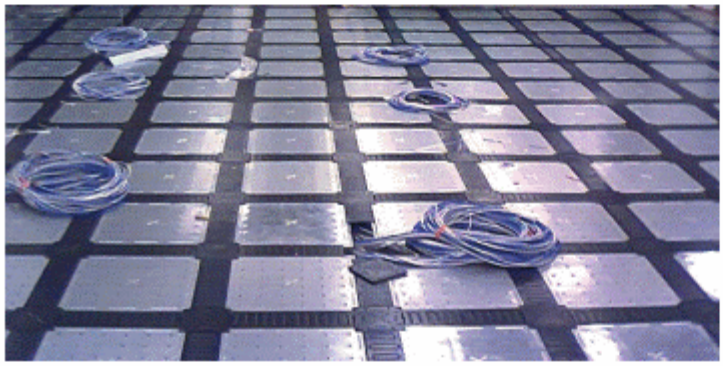
Camass®

CA1000



Low-Profile 60 ~ 100 mm H

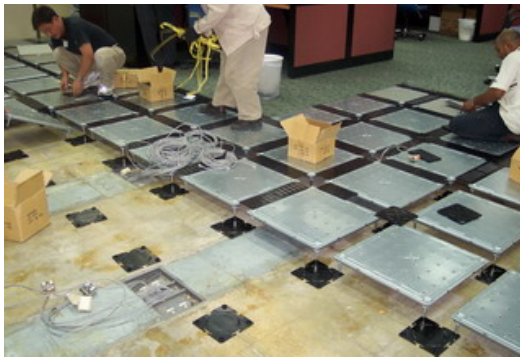
Super Low-Profile 40 mm / 50 mm H

FRIENDLY TO THE EARTH

Low Profile Cable Management Access Floor System

Camass®
CA1000

product of
world-wide complementary



Saudi British Bank all branches

Green
Building materials

Shanghai Stock Exchange

Just a few to list ----------

N.Y, -- Time Warner CNN sales offices

Doha -- Commercial Center Building

Sydney -- Opera House maintenance

K.S.A. -- Saudi British Banks / French Banks

Amsterdam -- Casino renovation

Lille -- Carlson Wagon Lite, Grand Thronton

Taipei -- Sony Taiwan Ltd. / Yang Ming Line

Shanghai -- Shanghai Stock Exchange

Beijing -- Nortel Beijing

H.K. -- Telecom Bureau offices

Singapore -- HDB Houguang

Serbia -- Vital groups

new commercial
buildings in Doha

NETFLOR® Camass (Cable Management Access Floor System)

Netfloor Camass is an environment-friendly and user-friendly low-profile cable management access floor system. The system has been well accepting and using by world multi-nation firms, banks and government institutes because it's unmatched features and benefits.

Features and Benefits:

Grid-pattern Cable Trenches:

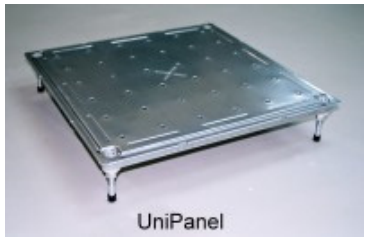
- Full accessible: capacity 110 mm inside width, within every 600 mm.
- Cable running freely, and well managed inside the Cable Trenches. Installing or re-outing of cables are easy, just by removing the cable trench caps.

Environment Friendly ---- Green Building Materials

- 100 % recyclable: main components made of full galvanized steel
- 100 % re-usable: re-location, all components are useable
- non-pollution, no damage to sub-floors: non-glue installation

Safety:

- **Light weight:** 1/2 weight to conventional access floors
- **Self-Stand:** Each UniPanel (main panel) is supported by four built-in pedestals at four corners of the panel body, self-stand and independent. In the event of earthquake, no domino effect collapse will be happened.
- **Non-combustible:** full steel.


UniPanel

Changeability:
Pedestals are no-glue to sub-floors. Relocation or re-layout cost is minimum.
Office re-layout can be proceeded at fastest move, least interference.

Ideal for modernizing old buildings:
Light weight, low-profile / high cable routing capacities,
Camass is the most ideal access floor system for old building modernization in earlier developed metropolitan cities such as New York, Tokyo, London, Paris, Amsterdam, Singapore, and so on.

One of Time Warner sales office renovation projects

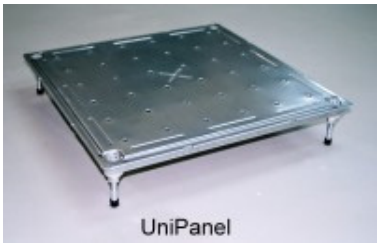

before


Camass installed


after

The System

Camass is designed especially for height below 100 mm (4.0”). The system has two height groups because of different fasten systems.



I. Low-Profile

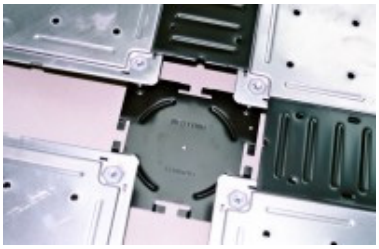
CA1000-60	60 mm (2.36”)
CA1000-76	76 mm (3.0”)
CA1000-100	100 mm (4.0”)

II. Super Low-Profile

CA1000-40	40 mm (1.57”)
CA1000-50	50 mm (2.0”)

Description of components

The system is composed of four main components: UniPanel (main pane), Base Connector, Central Cap and Flank Cap.



UniPanel (main panel): made of galvanized steel, riveted structure that is high strength and light weight. Each UniPanel has four built-in pedestals at four corners of the panel body.
Size of UniPanel: 510 x 510 mm (20.07" x 20.07")
Edges: 4 mm recession, 15 mm width at panel borders.

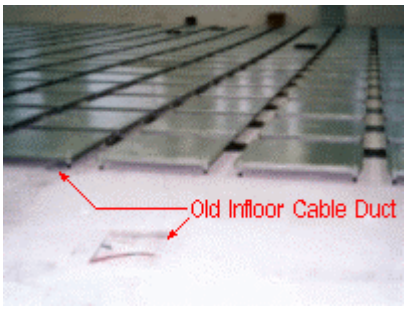
Base Connector: to connect UniPanel’s at pedestals.
Central Cap: capping Cable Trench at intersection.
Flank Cap: capping Cable Trench at flanks of UniPanel.

Reticulated Cable Trenches

The grid-form cable trench system provides systematic, easy routing and extension of cables. During installation, the Base Connectors connect UniPanels at pedestals, standard distance Cable Trenches formed automatically. Trench caps cover the Cable Trenches installed either before, or after routing of cables.

Safety: As UniPanels are self-standing, lifting or replacing of trench caps are safe, convenient and without resorting to special tools.

For new buildings



Renovation & upgrading: Camass are often installing above old floor trunks

Cable Extension & Accommodation

---- easy extension, accommodate all types of floor box ----

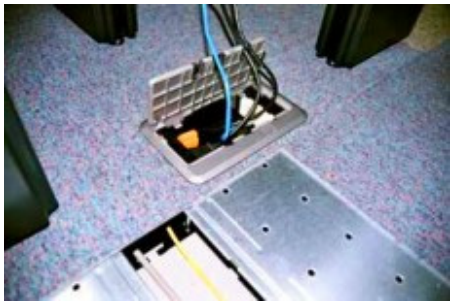
Camass systems provide the most convenient options to cable distribution, extension and connection. The connection may be made by extension through the cable trenches directly, or by the utility floor box installed at the cable trenches or the Outlet-Panel.

Cable extension and connection can be made by :

1. **Extension from the Cable Trench to workstation or partition:** Power, voice and data cables are extended directly through the Exit-Cap, a Flank Cap of 60 mm diameter pre-punched opening at center. Grommet installed at the punched opening to protect the cables.

Cables extending from cable trenches to workstations or partitions

2. **Floor box to install at the Cable Trenches** Netfloor Service Box SB603 serves to install at the cable trenches (for floor height 60 mm plus). Standard SB603 accommodates 2 x 110 power sockets and 3 x Cat. 5 or Cat. 6 data jacks.

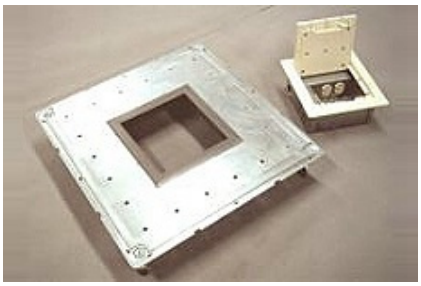


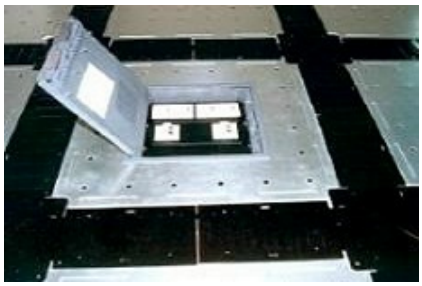
Extension and connection from cable trenches through service box SB-603

3. **Outlet-Panel to accommodate 220V floor box** To accommodate 200 volts floor box, Outlet-Panel is custom-made, cutting opening of required size at middle or side of the UniPanel to accommodate

   a. Netfloor SB76 / SB60 Three compartments 4 x 220V sockets, 4 voice / data jacks.

   b. All international brands floor box such as Britmac, VanGeel, AMP, Spider, and etc.





Outlet-Panel (opening in central or side of UniPanel) accommodates all types of floor boxes of 3 to 4 compartments

I. Camass Low-Profile

60 mm / 76 mm / 100 mm H

CA1000-60 / CA1000-76 / CA1000-100 series

---- for new premise & renovation in office, school, public building ----

New premise: The architects and owners decide to use Camass Low-Profile because of,

- Light weight
- Cable Trenches
- 100 % recyclable
- Easy expansion
- Easy routing cables
- Flexibility
- Easy re-outing
- User Friendly

New office building in Lille, France

New office building - Sony, Taiwan

Renovation:
The bank's and corporate management decide to use Camass Low-Profile because of:

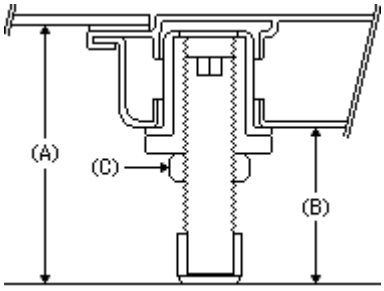
- Green building materials: Recyclable
- Light Weight: 1/2 weight to traditional access floor
- Quick and quiet renovation: without interference
- Directly install on old floor trunking, etc.
- Minimum maintenance costs

Camass installed on top of old embed floor trunkings renovation proceeding, and office in normal operation

Cable Trench Clearance

System	System height	Cable Trench clearance (A)	Height adjustment
CA1000-60	60 mm	55 mm	+ 10 / - 8 mm
CA1000-76	76 mm	71 mm	+ 10 / - 8 mm
CA1000-100	100 mm	95 mm	+ 10 / - 8 mm

** Special run for CA1000-120 (120 mm high)
(B) Clearance under UniPanel: system height - 25 mm
(C) Lock-nut: To loose and fasten for height adjustment



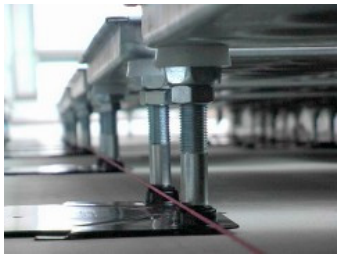
adjust height from top, fasten at (c)

Riveted UniPanel and Built-in Pedestal Set

UniPanel is made of riveted galvanized steel, which contributes strength without welding. This enables the system features as 100 percent recyclable. The pedestal sets are fixed at hexagon-shape openings at four corners of the panel body. On top of the pedestal, there is a 4 mm hexagon punched hole, which provides height adjustment from top by using of 4 mm hex key wrench.

Installation:

1. Assembly of UniPanel in job site: For 76 mm and 100 mm height installation, Pedestal-Sets are recommended to ship to and fix to panel body at the job site. For 60 mm height installation, pedestals may be fixed either at factory or at the job site depending on the job site plan.
2. Decide the starting line, Connection of Base Connector to UniPanel is easy. Reticulated Cable Trenches formed automatically.
3. Height 60 mm and 76 mm installation: Follow the floor contour, to maintain steady cable trench clearance for cable routing.
4. Install steel caps on cable trenches.
5. Height adjustment at deviation point
   Step 1: loose lock-nut from below by 17 mm wrench
   Step 2: Adjust height from top by 4 mm hex key wrench
   Step 3: Fasten lock-nut from below by 17 mm wrench



Confidence - installation for both new and renovation projects

All Netfloor world-wide Distributors have experienced and well trained installation tem, specially for the low-profile installation. Netfloor product lines are installed non-glue to the sub-floors. The unique design contributes non damage, non pollute to sub-floors

II. Super Low-Profile

40 mm / 50 mm H

CA1000-40 / CA1000-50 series

---- The best choice for renovation projects where ceiling height is limited ----

Reasons why architects and corporate managements choose Camass Super Low-Profile

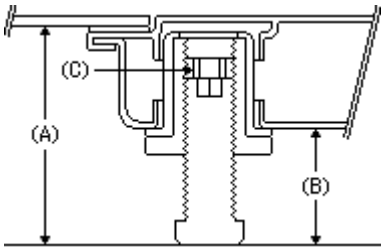
- Low profile 40 ~ 50 mm
- Height adjustable
- Light-weight
- 100 % recyclable
- 100 % reusable
- Maximum cable routing
- Non-combustible
- Least maintenance cost

Installation of 40 mm and 50 mm height for office or school, renovation or new, where ceiling height is limited, and still provide large capacity for cable routing

Cable Trench Clearance

System	System height	Cable Trench clearance (A)	Height adjustment
CA1000-40	40 mm	35 mm	+ 15 mm
CA1000-50	50 mm	45 mm	+ 5 / - 10 mm

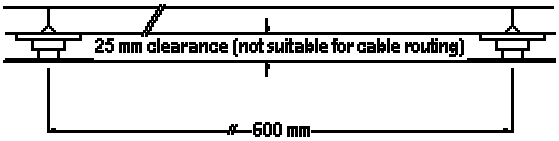
** (B) Clearance under UniPanel: system height - 25 mm
(C) Socket-Set-screw



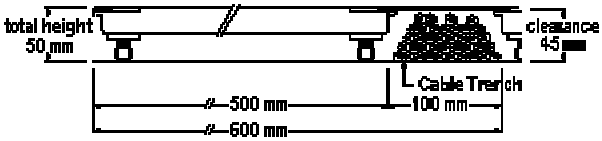
Set-Screw Locking System

Installation:

Camass CA1000-40 and CA1000-50 are installed by following the floor contours. Cable trenches have effectively absorbed the sub-floor deviation. Cable trenches' clearance is maintained at steady height. The drawings below show Camass CA1000-50 system provides 45 mm clearance in cable trench for cable routing, while the traditional access floors are not suitable to install at floor height below 76 mm.



Traditional access floor is not suitable at height below 76 mm.



The Camass Super Low-Profile provide excellent stability and cable routing capacity within the reticulated cable trenches.

Set-Screw Locking System --- innovation for Super Low-Profile installation

The Set-Screw Locking System is a unique innovation by Netfloor, specially designed for 40 mm ~ 50 mm super low-profile installation.

Set-Screw Locking System - factory assembled at UniPanel

- Pedestal sets fixed at four corners of panel body.
- Socket Set Screws & fastened on top of the pedestals.
- For height adjustment: 5 mm hex key wrench to loose and fasten the Socket Set Screw. 4 mm hex key wrench to adjust the pedestal.

Super Low-Profile UniPanel, Socket Set Screw fixed at top

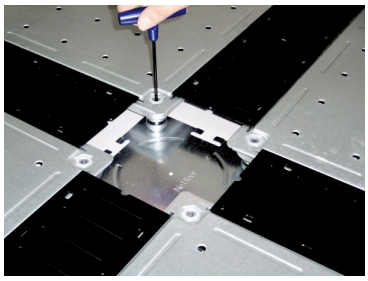
Height adjustment - After finishing installation, floor deviation in certain areas may cause impact noise by the pedestals. Check by foot-step. Minor adjustment of the pedestals shall be made to descend the pedestals at high point, or to ascend the pedestal to ground at the floor at lower point.

Step 1: Use 5 mm hex-key wrench to **Loose** Socket-Set-Screw from top.

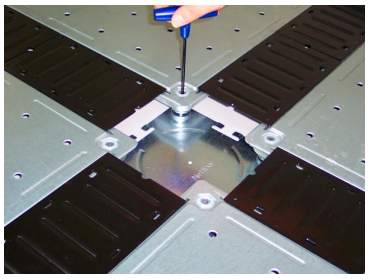
Step 2: Use 4 mm hex-key wrench to **adjust** height by stretch through hollow hole of Socket-Set-Screw, insert at top of pedestal to adjust upward maximum 55 mm high.

Step 3: Use 5 mm hex-key wrench to **fasten** Socket Set Screw from top after adjustment.

4 mm hex-key wrench to adjust height



5 mm hex-key wrench



Supper cable highway at super low-profile: under Cable Trench
Capacity: 110 mm width, 35 ~ 45 mm high

Why Camass® is the right choice in office environment

Internet and intranet have been developing at an exponential speed. Access floors using in the office for cable management purposes becomes a necessity. The conventional raised access floors (CRF) that are used mainly for factory purposes have been lightly modified to be used in offices lately. Fundamentally, is not suitable for office environment. The chart below is a comparison made between the **Camass** system and the **CRF**. The chart also serves to address some of the common issues.

" Camass" vs. "CRF "

	Camass CA1000		Conventional raised access floor	
Panels	All steel		All steel or steel filled with cement	
Flammability	Non-combustible		Non-combustible	
Module set size	600 mm × 600 mm		600 mm × 600 mm	
Weight	Avg. 24 kg / m^2		24 kg / m^2 (full steel) or 36 kg ~ 40 kg / m^2	
Cable Trenches	Total Height	Clearance	Adaptability	
	40 mm	35 mm	Not suitable	Not suitable
	76 mm	71 mm	Not suitable	Not suitable
	100 mm	95 mm	100 mm & above	65 mm & above
Concentration load	300 kg < 2.5 mm (1" square plate), full steel, recovery at < 1mm		300 kg < 2mm (1" square plate) steel/cement, crack when > 2mm dep.	
Cable management	Reticulated cable trenches 110 mm inside capacity every 600 mm		No cable trenches, floor cable trunks are needed	
Cable exit	Free extension from cable trenches		Difficult, panels need to be cut	
Changeability	Pedestals non-glue to sub-floors, re-layout or relocation cause minor costs, least interference to normal office operation		Pedestals glued to sub-floors, re-layout or relocation more costly	
Environment protection	100% recyclable 100% re-usable Non-pollution to sub-floors		Avg. 20% recyclable Avg. 80% re-usable Pollution to sub-floors	
User friendly	Trench caps can be easily lifted. UniPanel is self-standing, won't cause hazard.		Need special tools. Time consuming. Heavy and loose panel are accident-prone.	
Cost of Relocation	"Low" easy relocation. Pedestals not glued. More than 90 % re-usable		"Costly" < 80 % re-usable. Pedestals glued and will damage sub-floor	
Comfort on feet	"Acceptable" When installing carpet tile, tacky adhesives shall be applied to coverall surface of Camass.		"Good" Walking on top of the steel/cement panel, will produce less noise than hollow welded panel.	
Floor Condition for installation	Required better floor leveling condition. Need better floor condition, generally leveling needed		Generally leveling isn't necessary	
Retrofit installation	Suitable to be installed at 76~40 mm (3" ~1.57") height.		Not suitable installing under 100 mm (4") height	

Specifications

General Description
An environment-friendly low-profile cable management access floor system. The system, when assembled, shall be automatically formed grid-pattern cable trenches. Cable trenches' opening shall be width 90 mm within every 600 mm. The system shall be installed non-glued to the sub-floors.

Module set: 600 x 600 mm (23.62" x 23.62")
One module set = 1 UniPanel (main panel)+1 Base Connector+1 Central Cap+4 Flank Cap
Cable Trench opening width: 90 mm (3.54")
Cable Trench inside width: 100 mm (4.33")

System	Total Height	Cable Trench Clearance	Cable Trench Inside Width
CA1000-100	100 mm (4.0")	95 mm (3.74")	110 mm (4.33")
CA1000-76	76 mm (3.0")	71 mm (2.79")	110 mm (4.33")
CA1000-60	60 mm (2.36")	55 mm (2.16")	110 mm (4.33")
CA1000-50	50 mm (2.0")	45 mm (1.77")	110 mm (4.33")
CA1000-40	40 mm (1.57")	35 mm (1.37")	110 mm (4.33")

Main Components:
UniPanel (main panel): self-standing, with 4 built-in pedestals at four corners.
Size: 510 x 510 mm (20.07" x 20.07")
Top plate of panel: 1.2 mm thickness, galvanized steel
Bottom plate of panel: 1.2 mm thickness, galvanized steel.
Pedestals: galvanized steel, built-in at four corners of the panel.
Base Connector: Steel, galvanized or electro deposition, rigid foam-pad at bottom of the receptacle holes at four corners.
Cable Trench Caps: Steel, corrosion resistance by electro-deposition
Central Cap: 2.3 mm thickness, reinforced ribs.
Flank Cap: 2.3 mm thickness, reinforced ribs.

Flammability: All steel system, non-combustible. Meet B S476 part 4.

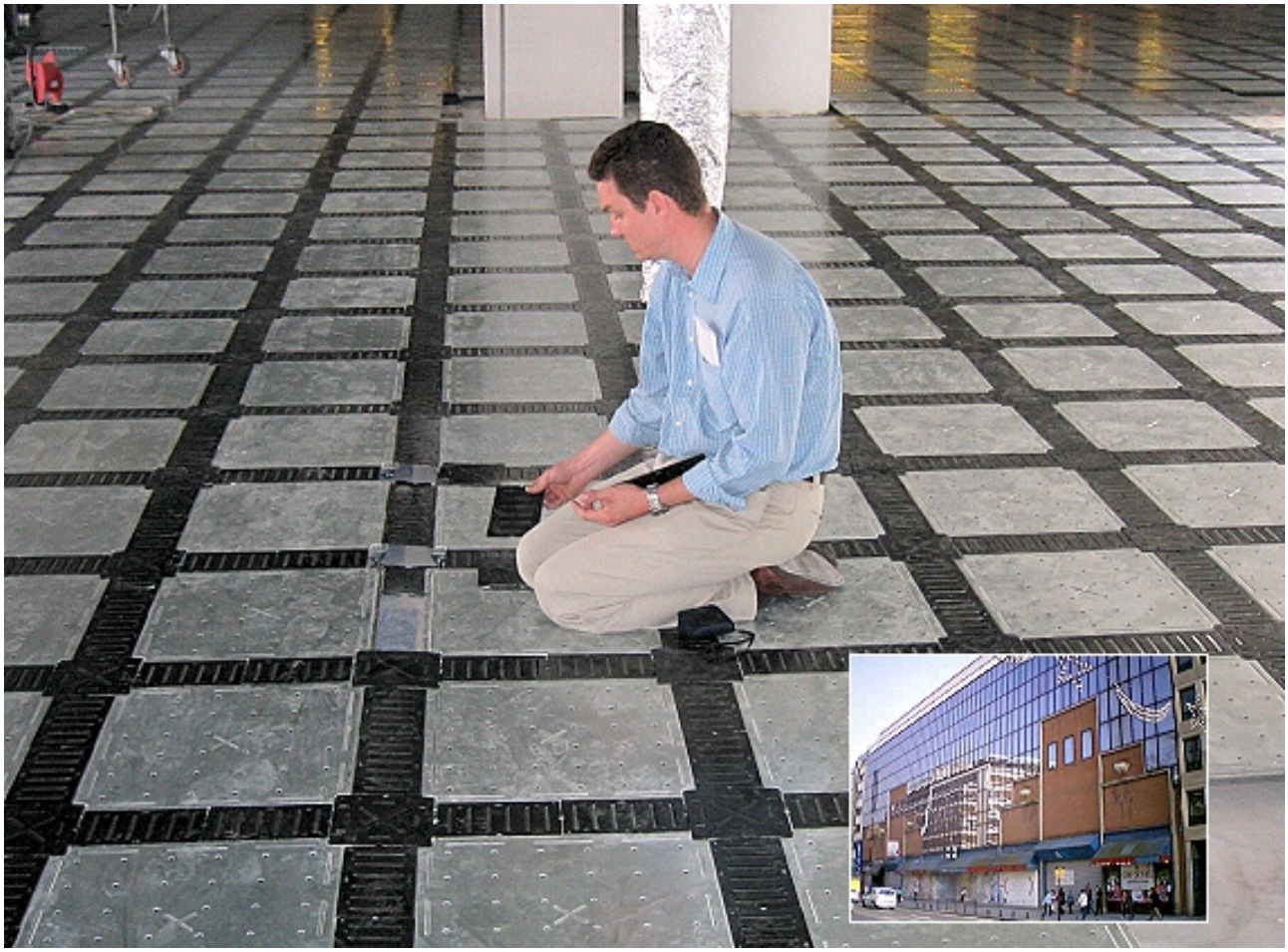
Loading Property --- in accordance with ASTM E-196
Concentration Load of UniPanel and Steel Cap:
250 kg < 2.5 mm depression (1" square plate)
500 kg < 2.5 mm depression (2" square plate)
Concentration ultimate load: average 4390 lb (19.5 kN / 1" square)
Uniform Distribution Load of UniPanel**:**
Ultimate uniform load > 40 psi (274 kN)

Environment Protection
Re-usable: In the event of re-location, all components shall be re-usable
Recyclable: Components are 100 percent recyclable

Quality assurance: All Camass systems are made of first grade materials. Use of refurbished materials are prohibited

Warranty: 5 years limited warranty

In pursuing quality improvement, the manufacturer reserves the right to vary specifications without prior notice



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Patented Granted
Camass System

USA: Invention Patent No. 5,626,157
Germany: Utility Model No. 201 06 806.0
Netherlands: Patent No. 1017802
Russia: Invention Patent No. 22168
U.K.: GB2373796 96
China: Utility Model No. ZL01.2 08101.9
Japan: Utility Model No. 3082164
Taiwan: Invention Patent No. 125767
South Africa: Patent No. 2001/5947

Patented Granted
Set-Screw Locking system

China: Utility Model No. ZL03260849.2
Taiwan: Invention Patent No. M241460

USA patent apply No: 101653.881
--- world-wide patent pending –

MEMBER CISCA Ceilings & Interior Systems Construction Association