



NETFLOR®

Camass®

CA1000

Low Profile Cable Management
Access Floor System



User Friendly
Environment Friendly
LEED Compliance

100% reusable
100% recyclable



Camass[®] CA1000

Specialist & Leader of
Low-Profile Access Floor



office upgrading in France

Saudi British Bank
branches' renovation



Just a few to list:

N.Y. -- Time Warner CNN sales offices

Chicago – MUDD library

Doha – Commercial Center Building

Sydney – Opera House maintenance

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

Brazil – CCM Company

Lille–Carlson Wagon Lite, Grand Thronton

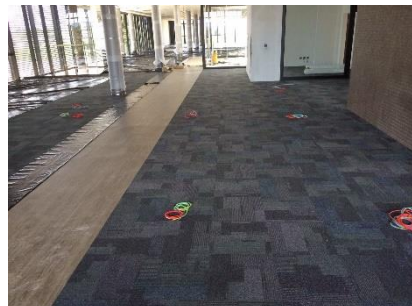
Taipei –Sony Taiwan / Yang Ming Line

Shanghai – Shanghai Stock Exchange

H.K. – Telecom Bureau offices

Singapore – HDB Houguang /

Serbia – Vital group



CCM new office in Rio Grande



New commercial building in Doha

NETFLOR[®] Camass (Cable Management Access Floor System)

Camass is one of the most advanced access floor systems in the world market. Most contemporary low-profile access floors have to be fixed height. The Camass system can be installed at finish floor height 40 mm (1.57”), and height-adjustable by using of special “socket-set-screw” device. Overall system is light weighted and space-saving, which is especially designed and developed for office and school renovation and upgrading.

Environment Friendly ---- Green Building Materials

- **100 % recyclable:** no cement infilled in the main access panel, all components of the system are 100% recyclable.
- **100 % re-usable:** in case of re-location, all components are re-useable
- **LEED compliance:** non-glue installation. No pollution, no damage to subfloor.



Safety:

- **Light weighted:** 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 or unusual lateral impact, no domino effect collapse will be occurred.
- **Non-combustible:** full steel, suitable for using in metropolitan cities and high-rise buildings where non-combustibility is necessity.



Grid-pattern cable trenches:

- Fully accessible cable trenches: 110 mm inside width, within every 600 mm.
- Cables are distributed and managed inside the Cable Trenches. Installing and re-routing of cables are easy, just by removing the cable trench caps.

High changeability:

Installation can be proceeded at least interference to normal office operation. Reshaping or relocation is easy, fast, and at low cost than all other traditional access floors.

Ideal for renovation and upgrading

Camass is ideal for office buildings' upgrading, especially for early developed cities such as New York, Chicago, London, Paris, Madrid, and so on. The system has also been chosen and installed for renovation projects in many prestigious educational institutions such as university libraries, museums, classrooms, and etc.

one of Time Warner sales office upgrading projects



before



installed



after

The System

Camass system has complete pedestal systems, which supporting finish floor height of access floor from super low 40 mm (1.57") to 150 mm (6.0"). The system has effectively retained maximum clearance in-between access floor and ceiling, and in the meantime, provides large capacity for cable routing inside cable trenches.



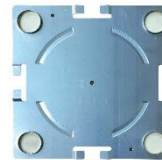
self-stand UniPanel with 4 pedestals

I Super Low-Profile (with Set-Screw Locking device)

CA1000-40	40 mm (1.57")
CA1000-60	60 mm (2.36")

II. Low-Profile

CA1000-75	75 mm (3.0")
CA1000-100	100 mm (4.0")
CA1000-135	135 mm (5.3")
CA1000-175	175 mm (7.0")



Base Connector



Central Cap



Flank Cap

Description of components

The system consists of four main components: UniPanel (main panel), Base Connector, Central Cap and Flank Cap.

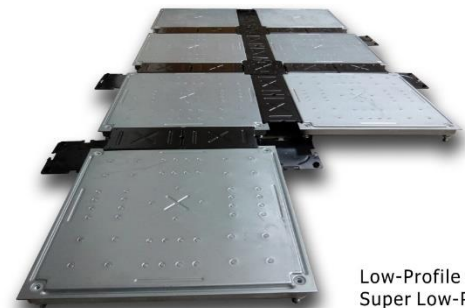
UniPanel (main panel): fully galvanized steel access panel. The panels are formed by special rivet process. There is no cement infilled. So, the panels are 100% recyclable.

Self-standing: Each UniPanel has four built-in pedestals at four corners of the panel. Panels are self-stand. Size of UniPanel: 510 x 510 mm (20.07" x 20.07")

Base Connector: to connect four UniPanels' pedestals.

Central Cap: capping Cable Trench at intersection.

Flank Cap: capping Cable Trench at flanks of UniPanels.



Low-Profile
Super Low-Prof

Reticulated Cable Trenches

The grid-pattern cable trench system provides systematic, easy routing and extension of cables. At time of installation, apply Base Connectors to connect UniPanels at pedestals. At same time of connecting UniPanels, standard-distance Cable Trenches formed automatically. Central Caps and Flank Caps are covering the Cable Trenches either before, or after routing of cables.

Efficient: As UniPanels are self-standing, lifting or replacing of Central caps or Flank Caps are easy and convenient. There is no need of resorting to special tools.



Camass installed on old floor trunks where buildings built 20~30 years or earlier

Cable Management & Accommodation

Easy routing and extension of cables / Accommodate all type of floor boxes ----

Once installed, the grid-pattern cable trenches spread overall the access flooring which consists of 90 mm wide (3.54") opening within every 600 mm (23.62"). Cables are distributed inside the Cable Trenches in order systematically. All exit of power and data wires are extended through the cable trenches directly, or by connected at the power sockets or data jacks in the service floor boxes installed at the cable trenches or the Outlet-Panels.

Efficient for cable extension and connection

- 1. Extension from the Cable Trench to workstation or partition:** Power, voice and data cables are extended directly through the Exit-Cap, which is a Flank Cap consisted of 60 mm diameter pre-punched opening at one side. Grommet installed at the punched opening to protect the cables. The Exit-Cap option is efficient and cost-effective solutions for cable routing and extension.



Cables extending through Exit-Cap to workstations or partition

- 2. Trench-type floor boxes to install at Cable Trenches**
Netfloor Service Boxes SE403/SE603 (steel lid) and SS403/SS603 (stainless steel lid) serve to install at the cable trenches. Standard trench-type SE/SS403 floor box accommodates one 110V twin socket and 3 x Cat. 5 or Cat. 6 data jacks. And standard trench-type SE/SS603 floor boxes accommodates one 220V twin socket, and most other sockets in EC.

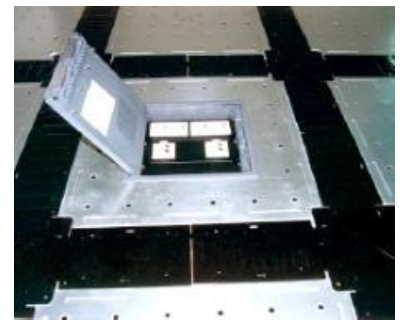
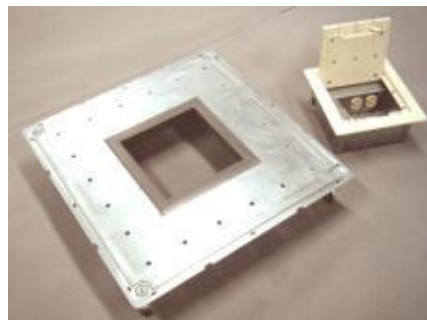


Trench-type floor box installed on Cable Trench

- 3. Outlet-Panel to accommodate more compartments**

To accommodate 3 or more compartments, [Outlet-Panel](#) by custom-made, cutting opening to required size at middle of the UniPanel to accommodate

- Netfloor SB76 / SB60
Three compartments
4X220 volts sockets,
4 voice/data jacks. .
- all international brands floor box such as MK, Britmac Spider, and etc.



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

I. Super Low-Profile: system height 40 mm / 60 mm (1.57" / 2.36")

CA1000-40 / CA1000-60 series

Internet and intranet are far beyond imagination of architects and developers who designed and/or built buildings in 1980s and before. Most office buildings built in 1980s and earlier, did not reserve height for raised access floor. In order to modernize those offices and school buildings, low-profile access floor is an effective solution for routing by large quantity of power and data cables above the sub-floors. In this regard, Camass super low-profile series is an ideal solution because of low-height and light weighted.

Camass super low-profile series consists of special “**set-screw**” pedestal system which supports access floor at low-height of 40 mm (1.57”). Although at low-height, the system can be adjustable, to ease deviation of the sub-floor which often occurred in old buildings.



Camass super low-profile (2" H) installed in mezzanine of a factory office

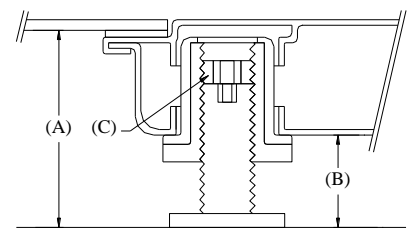
System height and Cable Trench Clearance

Systems	System Height	Cable Trench Clearance (A)	height adjustment
CA1000-40	40 mm	30 mm (1.18")	38~55mm (1.5"~2.16")
CA1000-60	60 mm	50 mm (2")	55~76mm (2.16"~3")

(A) Clearance under cable trench: system height minus 10 mm

(B) Clearance under UniPanel: system height minus 28 mm

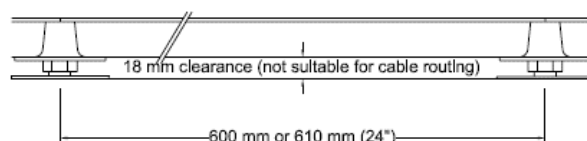
(C) **Set-Screw**: to lock pedestal from inside the socket set



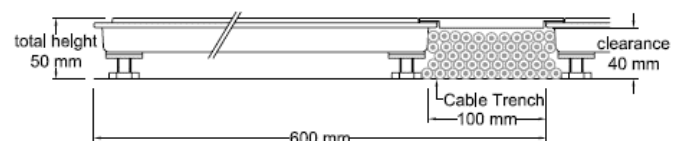
Set-Screw Locking System

Camass is only system applicable to install at 40~60 mm (1.57"~2.36") height

CA1000-40 and CA1000-60 are installed by following the floor contour. The Cable trenches have effectively absorbed sub-floor deviation. Minor adjustment at pedestals from top, to set pedestals touch at ground to eliminate impact noise. Clearance for cables routing under Cable trenches is maintained at steady height. The below drawing (right) show Camass CA1000-40 system installed at finish floor height 50 mm (2"), which provides 40 mm (1.57") clearance in cable trenches. The below drawing (left) showed that traditional access floors are not suitable to install at FFH lower than 100 mm (4").



Traditional access floor is not suitable for installed at FFH below 100 mm (4").



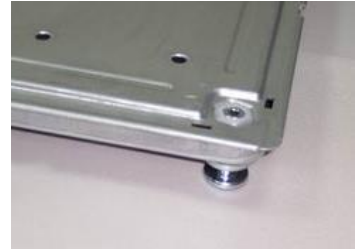
Camass Super Low-Profile provides continuous capacity for cable routing inside the reticulated cable trenches.

Set-Screw Locking System – special design for super low-profile

The **Set-Screw** Locking System is a unique innovation by Netfloor, which is specially designed to enable installation at 40~60 mm (1.57”~2.36”) height.

Set-Screw – factory assembled, inside pedestal's socket set

- Pedestal sets fixed at four corners of UniPanel
- **Set Screws** are pre-embedded on top of the pedestals.
- Height adjustment:
 - 5 mm hex key wrench to loose and fasten the **Set Screws**.
 - 4 mm hex key wrench to adjust the pedestals' height.



Super Low-Profile
Set Screw locking at pedestal's top,
inside the socket set

Height adjustment – After finishing installation, floor deviation in certain areas may cause impact noise by the pedestals. Check by footstep. Minor adjustment of the pedestals shall be made to descend the pedestals at low points, or to ascend the pedestal to higher point, to touch the ground.

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



5 mm
hex key-wrench

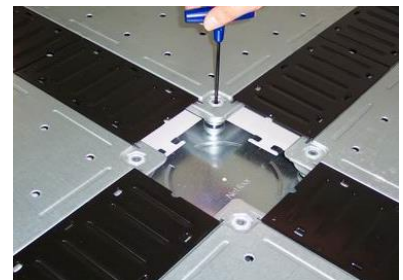


Step 3: Apply 5 mm hex-key wrench to **fasten**
Socket Set Screw from top after adjustment
For large job site installation, use mechanic tools
for fastening.

Step 2: Apply 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.



4 mm
hex key-wrench to
adjust height



Cable highway at super low-profile:

under Cable Trench of FFH 40~60 mm

Inside width: 110 mm width / Clearance: 30~50 mm (1.18”~2”)



II. **Low-Profile** system height 75mm~200mm (3"~8")

CA1000-75/CA1000-100 series for finish floor height 65~115 mm (2.56"~4.52")

CA1000-135/CA1000-175 series for finish floor height 110~200 mm (4.33"~8.0")

The low-profile series are suitable for offices where ceiling height is sufficient after installation of access floors. Camass low-profile series have been installing in many of new and old office buildings.

New buildings: Sony Taiwan for example. the new building was originally designed and installed floor trunking. At time of completion, the owner aware that not applicable. So, decided to install Camass on top of the new floor trunkings.



New office building in Lille, France



New office building – Sony, Taiwan

replace old buildings' floor trunking:

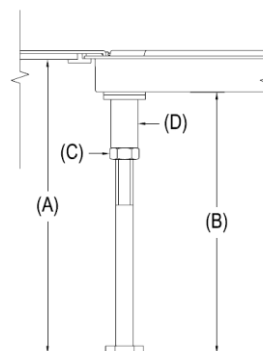
Camass had been installed on top of old floor trunkings in many office projects in a number of countries. Those floor trunkings had been embedded in subfloor years ago, but not applicable to accommodate large quantity of power and data cables any more. Camass were installed directly on top of old floor trunkings without remove anything embeded in the subfloor.



Saudi British bank: Camass installed on top of old embed floor trunkings. Renovation are proceeding room by room, while offices in normal operation

Cable Trench Clearance

System	system height	cable trench clearance	height adjustment
CA1000-75	75 mm	65 mm	65~90 mm
CA1000-100	100 mm	90 mm	85~115 mm
CA1000-135	135 mm	125 mm	110~170 mm
CA1000-175	175 mm	165 mm	150~200 mm



- (A) cable trench clearance: system height minus 10 mm (0.4")
- (B) clearance under UniPanel: system height minus 28 mm (1.10")
- (C) **Lock-nut:** To loose and fasten for height adjustment.
- (D) socket set T36 (36 mm (1.41") L for CA1000-75 / CA1000-100)
socket set T60 (60 mm (2.36") L for CA1000-135 / CA1000-175)

Installation

1. Assemble pedestal sets onto UniPanel

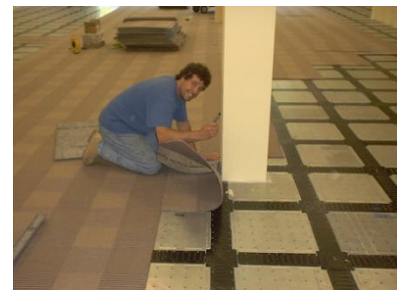
Fix pedestal sets: For FFH 60 mm and higher height installation, pedestal-sets are assembled onto UniPanel at the job site. By using of rubber hammer, each UniPanel is fixed by 4 pedestal sets at four corners.

In case of super low-profile, another option is to fix pedestal sets onto UniPanels at the factory or warehouse, stack, and ship to job sites for immediate installation.



pedestal sets fixed at job site in each floor, deployed in ration at the floor for installation.

2. Decide the starting line, apply Base Connectors to connect UniPanels. After connections, reticulated cable trenches formed automatically.
3. FFH greater than 100 mm (4"): laser alignment is recommended for height adjustment.
4. Install Central and Flank Caps on cable trenches every 3 or 4 rows. UniPanels connected and installed.
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



Non-pollution: The UniPanels are self-stand. Pedestals are connected by Base Connectors. No adhesives shall be glued onto the sub-floor. So, there is no pollution, no damage to subfloors at time of installation or re-location.

Why Camass® system is ideal solution for office and school modernization?

Nowadays, low-profile access floors have become a necessity in most of commercial and institutional interiors such as in offices, schools, libraries, museums, and so on. The conventional raised access floors (CRF), which are using in factories or data centers, have been slightly modified and to use in offices lately. Fundamentally, they are not suitable applications. The chart below is comparison made between **Camass, other fixed height low-profile access floor**, and the **CRF**. The chart has addressed many of the common issues.

comparison: Camass / other fixed height low-profile / conventional access floor

	Camass	other low-profile	Conventional access floor
Access panels	full galvanized steel panel	full galvanized steel panel (mostly)	steel cementitious, woodcore or calcium sulphate
Flammability	non-combustible	non-combustible	non-combustible or class A
Modular size	600 mm X 600 mm (23.62"X23.62")	500X500 mm or other size (19.68"X19.68")	600 mm X 600 mm or 610X610mm (24"X24")
System Weight	avg. 24kg per M2 4.90 LB per sq. ft.	avg. 24kg per M2 4.90 LB per sq. ft.	avg. 45~ 55 kg per M2 9.2~11.24 LB per sq. ft.
clearance in low-profile installation	system height clearance 40 mm 30 mm 60 mm 50 mm 75 mm 65 mm 100 mm 90 mm	system height clearance 40 mm 35 mm 60 mm 55 mm 70 mm 60 mm N.A.	system height clearance not suitable not suitable not suitable not suitable 75 mm not suitable 100 mm avg. 68 mm
loading property	light to medium traffic	light traffic	light to heavy traffic
cable management	reticulated cable trench 110 mm every 600 mm	reticulated cable trench similar capacity	no cable trench floor trunks required
cable exit	free extension from cable Trench	free extension from cable Trench	difficult panels shall to be cut
height adjustable	yes	no	yes
user-friendly	yes	yes	not user-friendly
environmental- friendly	yes , components 100 % reusable & recyclable	yes , components 100 % reusable & recyclable	no , < 25 % recyclable < 70% reusable
re-location cost	"low" , easy re-location	"low" , easy re-location	"costly"
LEED compliance	yes pedestal non-glued onto sub-floor	some yes, some not	"doubt" pedestal shall be glued onto sub-floor
suitable for retrofit projects	yes light weight & low-profile	yes light weight & low-profile	not suitable heavy weight

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 Caps

System weight: avg. 24 kg / per sq. meter (4.90 LB per sq. ft.)

Capability for cable routing:

Cable Trench opening width: 90 mm (3.54")

Cable Trench inside width: 110 mm (4.33")

Cable Trench clearance: system height minus 10 mm (0.4")

Clearance under UniPanel (main panel): system height minus 28 mm (1.10")

Main Components

UniPanel (main panel): A self-standing access panel supported by 4 built-in pedestals at four corners.

size: 510 x 510 mm (20.07" x 20.07")

thickness: 28 mm (1.10")

structure: galvanized steel, special firm riveted process, top plate and bottom plate fully riveted, without punch out at the riveted point, to support panel body strength.

pedestal set: galvanized steel pedestal topped with socket-set to firmly insert onto main panel's four corners. Top of pedestals shall be hex-notched, for height adjustment by hex-key wrench.

Base Connector:

size: 180 X 180 mm (7.08" x 7.08")

square base connector with 4 upward round receptacles at corner to connect UniPanels' pedestals.

Rigid foam-pads adhered at bottom of the receptacle holes. Made of galvanized steel or steel with electro deposition.

Cable Trench Caps: steel, protection from corrosion by electro-deposition

Central Cap: 170 X 170 mm (6.69" X 6.69"), X-shape reinforced ribs at center of cap

Flank Cap: 210 X 124 mm (8.26" x 4.88"), reinforced ribs, strengthening bend at four sides.

The 210 mm longer sides bend protected by rigid vinyl stripe.

Flammability:

All steel system, non-combustible. Meet B S476 part 4, ASTM E-84

Loading Property --- in accordance with CISCA

Concentration Load: UniPanel

600 LB < 2.5 mm depression (1" square indenter)

Concentration ultimate load: safety factor greater than 2.75.

Uniform Distribution Load: UniPanel:

uniform ultimate load > 1500 psf

Environment Protection

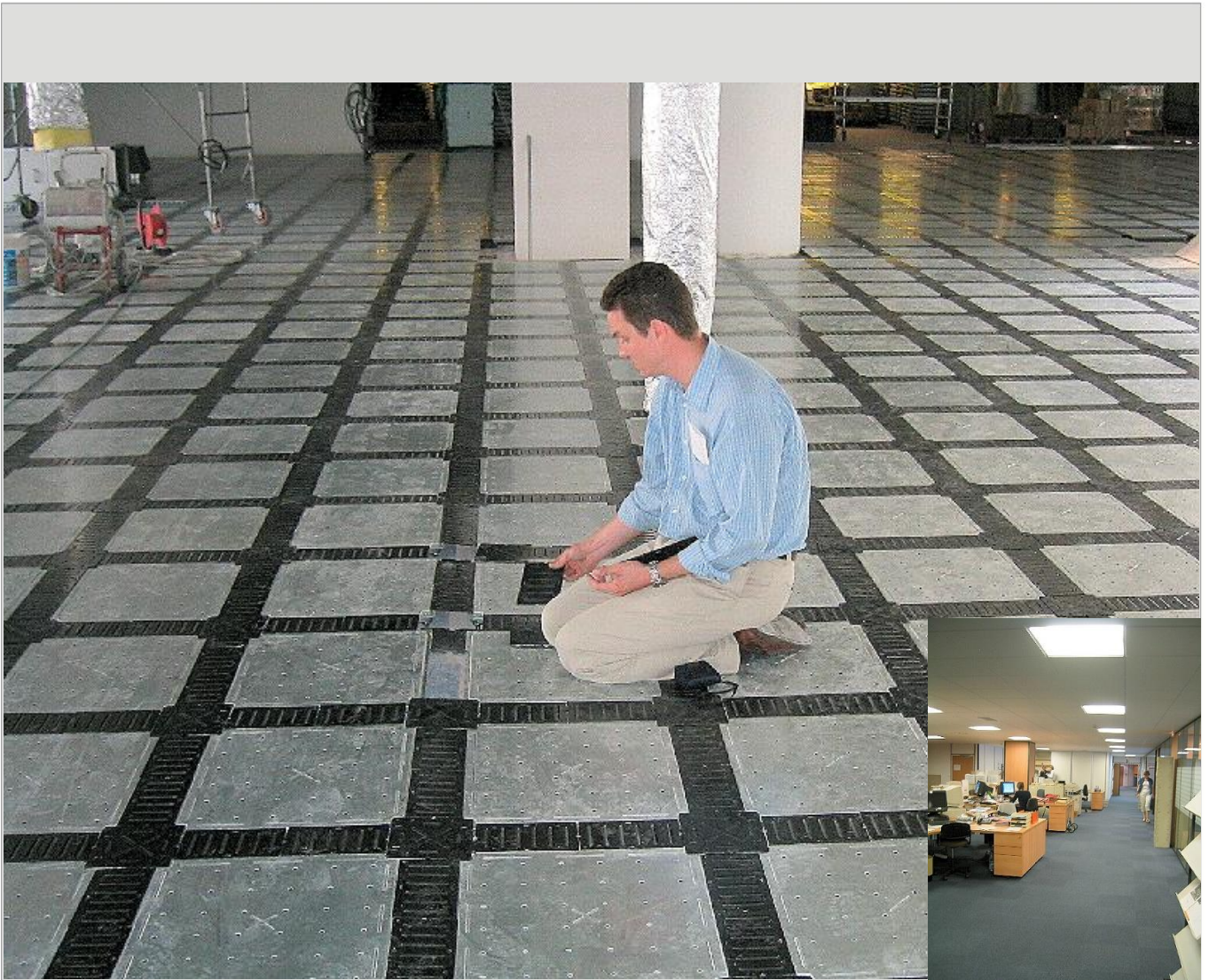
Re-usable: In the event of re-location, 100% components are re-usable

Recyclable: Components are 100% recyclable

LEED, BREEAM Compliance: The main panel (Unipanel) is self-stand. No adhesives are applied at installation. There is no glued onto the subfloor, and no damage to subfloor while removing.

Warranty: 5 years limited warranty

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



www.netfloor.com / www.net-floor.com

Patent 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
 China: Utility Model No. ZL01.2.08101.9
 Japan: Utility Model No. 3082164
 Taiwan: Invention Patent No. 125767
 South Africa: Patent No. 2001/5974

Patent Granted
set-screw-locking system

China: Utility Model No. ZL03260894.2
 Taiwan: Invention Patent No. M241460

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



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