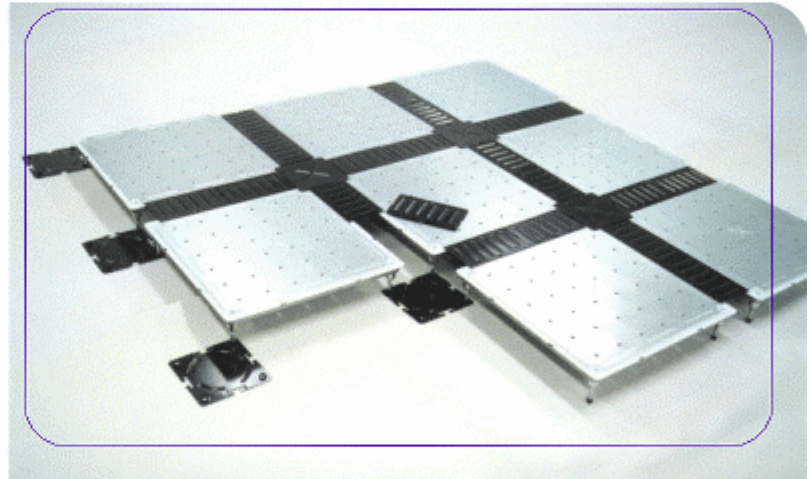


NETFLOR®

www.net-floor.com

Camass®
CA1000



User Friendly &
Environment Friendly

Low-Profile 60 mm ~ 100 mm H
Super Low-Profile 40 mm / 50 mm H

Low Profile Cable Management

Access Floor Systems

Camass®

CA1000

Product of World-Wide Complimentary

Green
Building Materials



Saudi British Banks

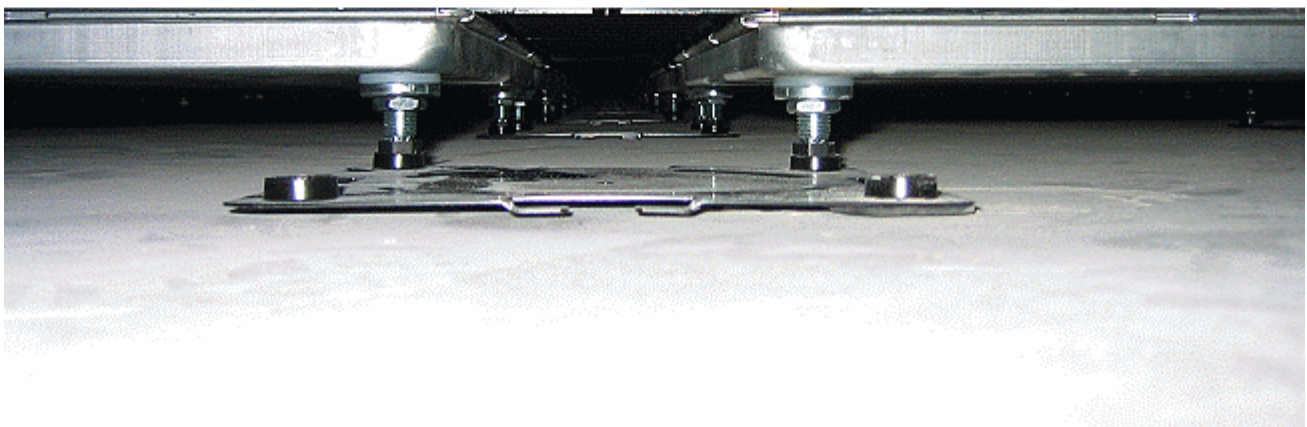


Shanghai Stock Exchange



Just a few to list

- N.Y. - Time Warner CNN sales offices
- Sydney - Sydney Opera House maintenance
- Riyadh & K.S.A. - Saudi British Banks
- Amsterdam - Holland Casino renovation
- Aachen, Germany - Philips Research
- Tessenderio, Belgium - Johnson Controls
- Lille - Carlson Wagon Lit, Grand Thronton
- Shanghai - Shanghai Stock Exchange
- Hong Kong - Telecom Bureau offices
- Taipei - Sony Taiwan Ltd.
- Pusan - U.S. Forces Korea
- Singapore - HDB Houguang



100 % ReUsable.....

100 % ReCyclable.....

NETFLOOR® Camass (Cable Management Access Floor System)

Netfloor Camass system is a breakthrough in access floor technologies. The system is designed and developed especially for using in the modern office, school and public buildings. The system features as **User Friendly**, **Environment Friendly** and Low-Profile which are not able providing by the traditional access floors.

We name the new solution as "**Camass**", i.e. **Cable Management Access Floor**.

Feature & Benefits

Users Friendly:

Reticulated Cable Trenches: capacity 100 mm width within every 600 mm.

- Fully accessible, easy re-routing and easy re-location.
- Basic maintenance can be done by office users, without calls for professionals. Maintenance costs can be neglected.

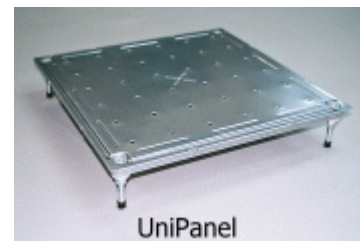
Environment Friendly ---- Green Building Materials

- 100 % recyclable
- 100 % re-usable



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.
- High Uniform Loading property: Each **UniPanel** is supported by 4 built-in pedestals, uniform loading of Camass system is 3 times stronger than the traditional access floors.
- **Non-combustible:** Full steel structure.
- Fully accessible Cable Trench caps, no hazard might be happened when lifting by the office users or installers during installation or maintenance.



self-stand UniPanel

High Flexibility:

Quick installation and not labor intensive.

Save up to 20 ~ 30 percent of labor cost compared to traditional access floor.

Ideal for modernizing old buildings:

Light weight, low-profile / high cable routing capacities, 100 % recyclable, non-combustible, Camass is the most ideal access floor system for old building modernization in early developed metropolitan cities such as New York, Tokyo, London, Paris, Singapore, Shanghai, and so on.



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 (with Set Screw Locking System)

| | |
|-----------|---------------|
| 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 panel), 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 UniPanels at pedestals.
- Central Cap:** Capping Cable Trench at intersection.
- Flank Cap:** Capping Cable Trench at flanks of UniPanel.

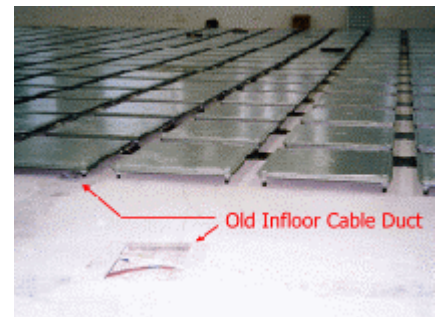
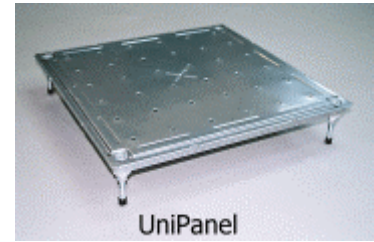
Reticulated Cable Trench

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. Cable Trench caps to cover the trenches shall be installed before or after routing of cables.

Safety: As all 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 utility service 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 service 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 partition

2. Utility 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.

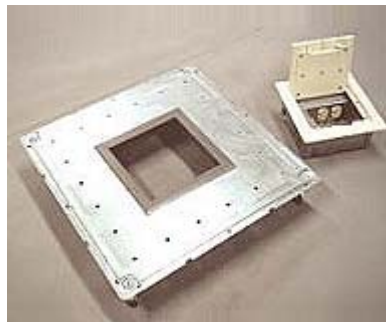


Extension and connection from Cable Trenches through service box SB-603

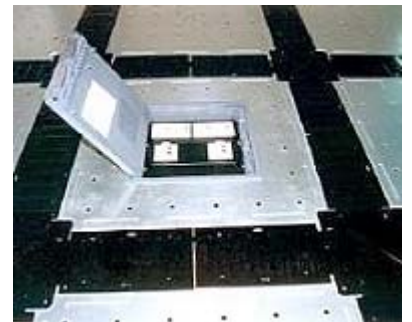
3. Outlet-Panel to accommodate large Outlet Box:

To accommodate large size outlet box,

Outlet-Panel is custom-made, cutting opening of required size at middle or flank of the UniPanel to accommodate all internationally recognized brands utility boxes such as Britmac, VanGeel, AMP, Spider, and etc.



Outlet-Panel (opening in central or flank of UniPanel) accommodates all types of outlet service 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

- **Lightweight**
- **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
- Minimum maintenance costs



Camass installed on top of old embed floor trunks-
Renovation in one room, other rooms working

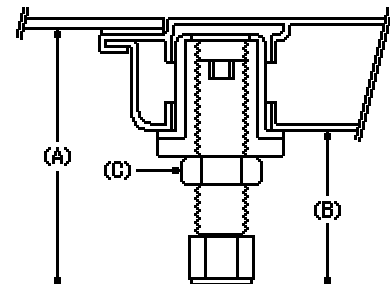
Cable Trench Clearance

| 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)

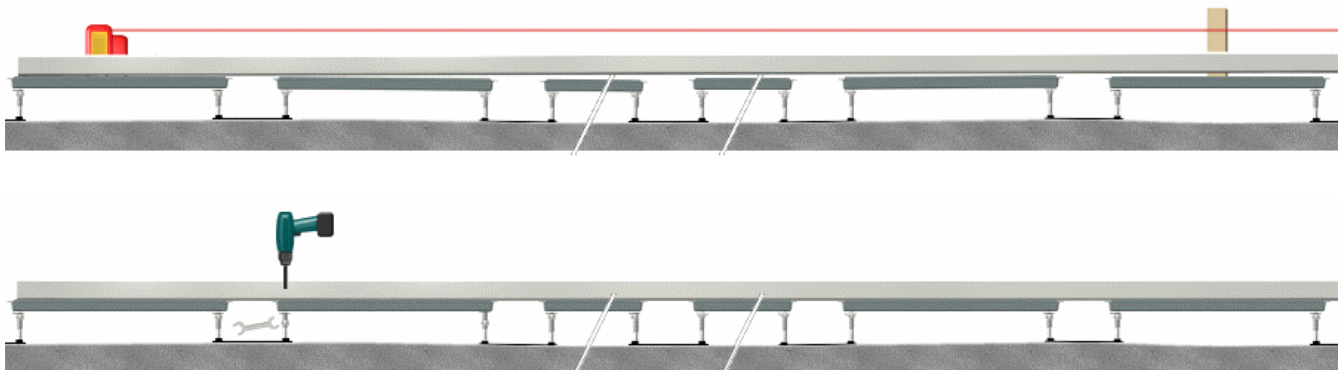
Riveted UniPanel and Built-in Pedestal Set

UniPanel is made of riveted galvanized steel, which contributes strength without welding. This enables the system features as 100 % 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.
6. **Leveling installation:** for height 100 mm ~ 120 mm.



1. Laser alignment to locate deviation.
2. Square aluminum tub (4 meter plus) for measurement.
3. Adjust by 4 mm hexagon key wrench.
4. Fasten the lock-nut at below by 17 mm wrench.

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 ----

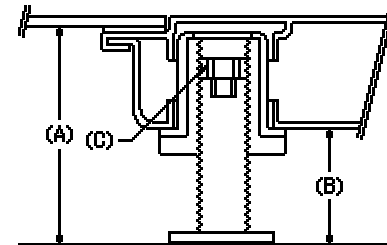
Reasons why architects and corporate managements choose Camass Super Low-Profile ----

- 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

| 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 |

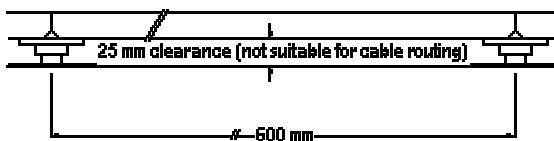


Set-Screw Locking System

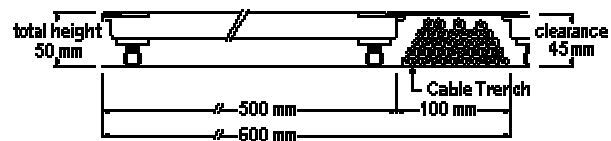
(B) Clearance under UniPanel: system height - 25 mm
(C) [Socket-Set-Screw](#)

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 an unique innovation by Netfloor, specially designed for the CA1000-40 and CA1000-50 series [Super Low-Profile](#) installation.

[Set-Screw Locking System](#) - factory assembled 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.



5 mm
hex-key wrench



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.



4 mm
hex-key wrench to
adjust height



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

Supper cable highway under Cable Trench
Capacity: 100 mm width, 35 ~ 45 mm high



Why **Camass** is the right choice in office environment

Internet and intranet have been developed at an exponential speed. Raised access floors using in the office for cable management purposes becomes a necessity. The conventional raised access floors (CRF) which are used mainly for factory purposes have been lightly modified to be used in offices lately. Fundamentally, the CRF are 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 x 600 mm | 600 mm x 600 mm | | |
| Weight | Avg. 24 kg / m ² | 24 kg / m ² (full steel) or 32 kg ~ 40 kg / m ² | | |
| Cable Trenches Clearance | Total height | Clearance | Total height | Cable Clearance |
| | 40 mm | 35 mm | not suitable | not suitable |
| | 50 mm | 45 mm | not suitable | not suitable |
| | 60 mm | 55 mm | not suitable | not suitable |
| | 76 mm | 71 mm | 76 mm | not suitable |
| | 100 mm | 95 mm | 100 mm | Avg. 75 mm |
| 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. | | |
| Installation speed | 40 ~ 50 m ² / man day | 30 ~ 40 m ² / man day | | |
| Cable management | Reticulated Cable Trenches 100 mm every 600 mm | No Cable Trenches, floor cable trunks are needed | | |
| Cable exit | Free extension from Cable Trenches | Difficult, panels need to be cut | | |
| User friendly | Trench caps can be easily lifted. System facilitates minor changes. Self-standing, UniPanel 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" < 70 % re-usable. Pedestals glued to floor, panels may be warp | | |
| Comfort on feet | "Acceptable" When installing carpet tile, tacky adhesives shall be applied to cover all surface of Camass. | "Acceptable" Walking on top of the steel/cement panels, will produce less noise than hollow steel welded panels | | |
| Floor Condition for installation | Each panel allows max. 8 mm ascent and 5 mm descent adjustment. Need better floor condition, generally leveling needed | Generally leveling isn't necessary | | |
| Retrofit installation | Suitable to be installed at 100 mm ~ 40 mm (4" ~ 1.57") height | Not suitable installing under 100 mm (4") | | |



Specifications

Module set: 600 x 600 mm (23.62" x 23.62")

System Height and Cable Trench capacity

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

Main Components:

UniPanel (main panel)

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, fixed at four corner. Assembled to system height.

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, re-enforced ribs.

Flank Cap: 2.3 mm thickness, re-enforced ribs.

Flammability: All steel system, non-combustible. Meet BS476 part 4, ASTM E-84 class 1.

Loading Property --- in accordance with ASTM E-196

Concentration Load of **UniPanel and Steel Cap:**

200 kg < 2.0 mm depression (1" square plate)

500 kg < 2.0 mm depression (2" square plate)

Concentration ultimate load: average 4390 lb (19.5 kN) (1" square plate)

Uniform Distribution Load of UniPanel: Ultimate uniform load > 40 psi (>274 kN)

Environment Protection

Re-usable: In case of re-location, all components shall be re-usable.

Recyclable: Components are 100 % 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.





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 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

Patent 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 ---

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Camass CA1000