

Businesses are changing.  
So should business foundations.



Raised access flooring for evolving workspaces

# Work has changed. Most offices haven't.

Need to accommodate the dynamic needs of your business in an incredibly easy and efficient way? Aspire for a profitable workspace? Looking for flexible flooring solutions?

Unitile can help—with raised flooring solutions that bring your people and places together in ways that reduce costs and improve performance.

A raised access floor is a platform built several inches above the structural floor, creating a cavity/void between the existing structural floor and the upper surface of the raised floor. The cavity is utilized for distribution of building services such as power, voice, data, heating and cooling services, etc and is easily accessible anytime for upgrading and reconfiguration of your work space.

Raised access floor systems consist of bolt-together metal pedestals and floor panels of steel with cementitious infill. The system is completely modular; any panel can be uncovered to access the wires beneath, enabling changes to be made easily without the need for skilled manpower or specialized equipment in minimal downtime. The finished floor surface can be carpet tile, vinyl tile, laminate or stone

finished.

Raised access floor systems are designed keeping in mind the constantly evolving needs of the new age workspace. They can efficiently respond to organizational and technological changes quickly and easily, attenuate noise, improve personal comfort control and enhance the aesthetics of the building. Also, access flooring is a long term cost-effective investment, providing a tremendous amount of flexibility and capacity in minimal time.

A perfect platform for business, this system reduces life cycle costs and is designed to meet the most demanding needs of new or refurbished buildings, offering you a flexible and high performance solution. With the integrated raised access flooring system, you can transform any facility into a strategic asset—one you can rely on to deliver measurable benefits.



# Unitile Raised Access Floors & Sustainability



## Environment

We understand the importance of environmentally focused operations in the manufacturing of access floor systems and are committed to playing our part in protecting our surroundings. We strive to be a sustainable operation that balances our company's green objectives and budget without creating a significant impact on the environment.

Over the years we have taken many initiatives to reduce the environmental impact of our manufacturing process. We use renewable resources whenever possible and are constantly finding creative ways to implement eco-friendly changes in our manufacturing processes. Through the achievement of the **ISO 9001: 2008** , **14001:2004** and **OHSAS 18001:2007** certification the firm has come again one step closer to a constant pursuit of a sustainable, environmentally friendly and resource-saving production.

In cognizance of the need to protect our environment, United Office Systems Pvt. Ltd. is an active member of the Indian Green Building Council (IGBC) and Singapore Green Building Council (SGBC). An extension of our vision lies in building not only innovative, but essentially recyclable products.



CISCO Systems India Pvt. Ltd., Bengaluru - 26,500 sq. mtr.



HCL Technologies Ltd., Chennai - 41,806 sq. mtr.



## Customers

We strive to continually create inno-vative and technology products that transform the way people work. By championing the importance of closely aligning our company culture of product innovation and sustainable production with the needs of our customers, we are constantly enhancing our ability to listen and respond to them.

Having the opportunity to serve the world's largest companies, we are working alongside clients at every level of their organization. Our management consultants bring innovation and differentiated capabilities that help our clients create value, deliver business outcomes and improve performance.



## Community

We adopt the sustainability strategy of "Keeping it lean, clean and green" for work practices across its business units. Unitile is the first access floor brand in India to develop units of competency that target sustainability skills to measure, analyze, improve and develop resources and work practices to reduce negative environmental impacts.

We play a role in contributing to a sustainable social sector in building strong community connections by focusing on specific areas, encouraging employee volunteer programs and promoting organizational mentoring.

In order to maintain viability into the future, we believe that manufacturing enterprises must link sustainability with commitment and innovative thinking. Managing for sustainability requires leadership, commitment and planning to a sustainability strategy that is nested within the core values of our business.



## Company

We sight the need for our stakeholders to have the necessary skills to produce and service products used to support and promote sustainability. As the skills and creativity of our workforce will play an important role in the changing of behaviors and practices, it is imperative for us to view a sustainable operation in a broad sense and look to empower and skill workers at all levels.

# Unitile Raised Access Flooring Systems

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## Built For Businesses That Don't Stand Still

Unitile Raised Access Floors present the perfect solution to the rapidly increasing demands of modern interior fit-out projects in today's fast paced environment.

The advancement of technology and frequent changes in customer requirements calls for a flexible and high performance solution to eliminate costly relocation of services within the workplace.

A perfect platform for business, Unitile's Raised Access Floor solutions provides ease of access to power, voice,

data and other services when required and permits easy re-configuration of interiors. The system is designed to meet the most demanding needs of new or refurbished buildings, providing a cost effective and flexible solution. Whether used for commercial offices, library, casinos, datacenter's etc, there is a Unitile's Raised Access Flooring System to satisfy the need of a project.

# Manufacturing & Quality Assurance

For over 20 years, the entities that comprise United Office Systems Pvt. Ltd. have been industry pacesetters in the design, development and manufacturing of the most sophisticated raised access flooring systems.

With over a 100,000 sq. ft. of covered area, this factory has been designed utilizing the world- leading manufacturing processes and technology.

Delivering products for various raised floor applications, the firm is renowned in the industry for a manufacturing reputation centered on innovation and reliability. We have earned that reputation by rapidly assessing the critical needs of a project, and then executing a timely production plan in order to successfully meet the project timelines.

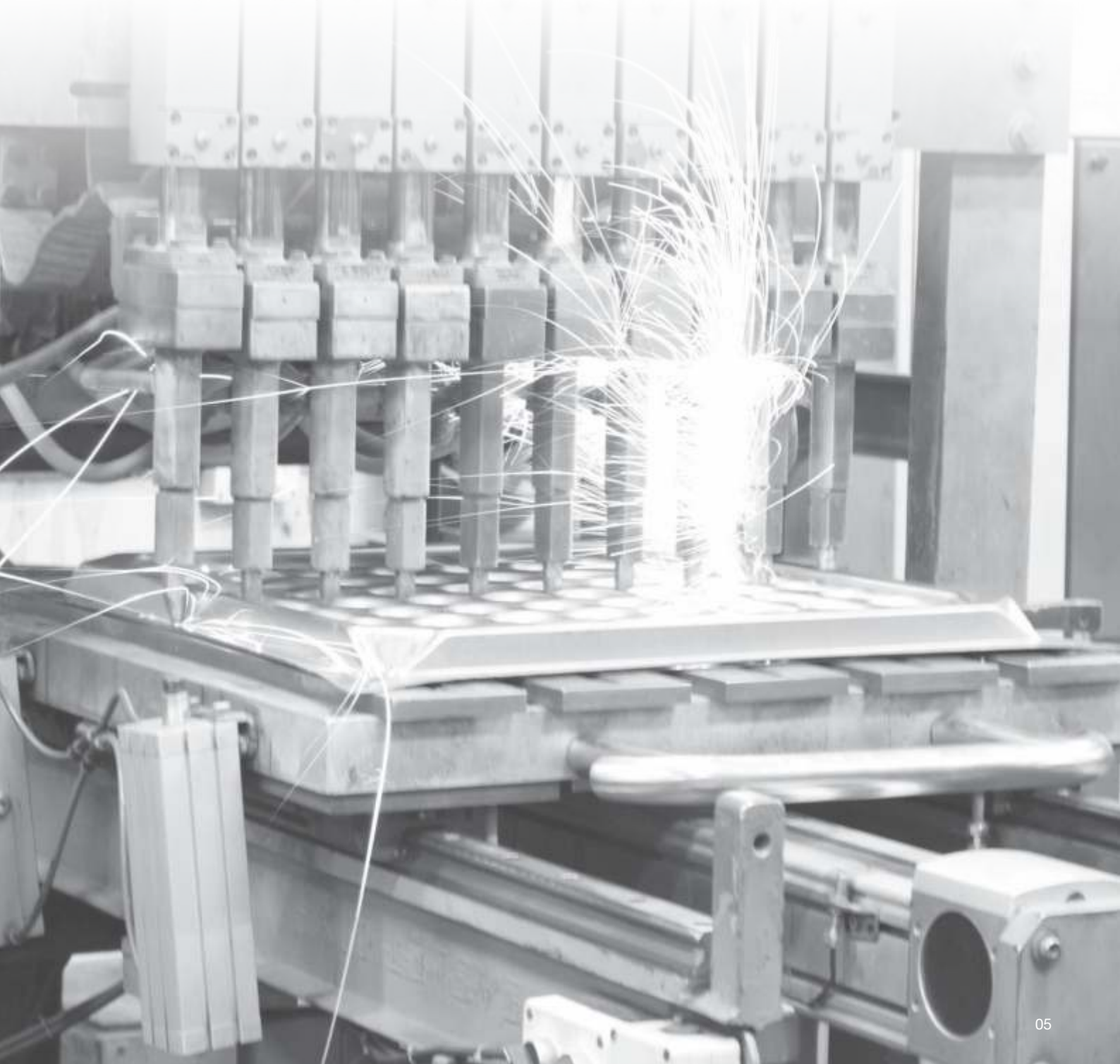
Broadly defined, our capabilities include design, quick turn-around times, manufacturing, assembly, testing, inspection

and more.

Careful screening of suppliers, inspection of incoming materials, state-of-the- art production equipment and conscientious employees all contribute towards firm's quality advantage.

We have developed a world class technically advanced in-house testing facility to ensure that the manufactured products are meeting the desired quality standards and for our customers to witness the live testing process. Our products are further third party tested at the facilities of TUV PSB – Singapore, which validates our products, to conform to the International Standards like Master Specs & CISCA (USA), BSEN (Europe) and MOBPF2PS(UK).

Our goal is to build high quality long-term supplier relationships with our customers by delivering the highest value and best service.



# Applications of Raised Access Flooring System

## General Office



## Data Center



## Other Applications

- Research labs
- Industrial trench covers
- Server / hub rooms
- Communication rooms
- Industrial control rooms
- Hotels and hospitals on unplanned floors
- Salon and spa's
- Training rooms
- Switch rooms

### Mezzanines

- Industrial
- Commercial office

## Library



## Education



### Low height platforms

- ▣ Exhibition
- ▣ Showrooms – eg. display of automobiles
- ▣ Bars or lounges

### Residential Decks in household

A step up application in:

- ▣ Modular and retractable staircase
- ▣ Sitting areas
- ▣ Dining areas
- ▣ Elevated beds platform

# Unifold Raised Access Flooring System

“Now footsteps will not disturb your work.”

Unitile's Unifold Access Floor Panels are non-combustible in nature and are coated with electrostatic epoxy paint. These panels consist of flat steel top sheet resistance welded to a formed steel bottom sheet, which is in filled with a lightweight proprietary cementitious mixture. Uniquely designed hemispherical reinforcing pockets on the underside enhance structural strength and deliver ultimate durability and acoustic performance.

The uniqueness of this panel design is it engineered folded edges along the perimeter of the panel, which eliminates damage to the panel edges. Its wider beam width not only enhances the load carrying performance of the system but also provides a squeak free floor.



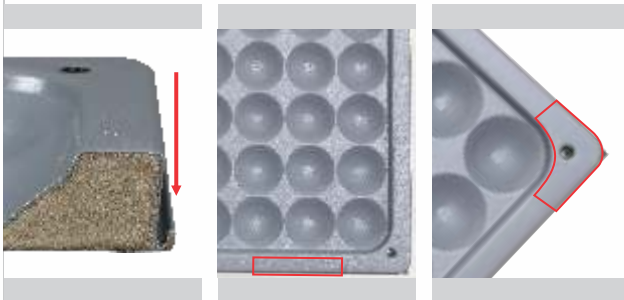
Reliance Corporate IT Park Ltd. Navi Mumbai - 36,000 sq. mtr.



Samsung India Electronics Pvt. Ltd. Gurgaon 10,000 sq. mtr.

## Design Features

- Unique folded flange design increases the edge strength
- Reduces the probability of cuts and accidents at site
- Lower onsite material damage
- Wider beam width enhances the uniformly distributed load carrying capacity
- Higher foot print area provides lateral stability, enabling the panels to be without screws during and post installation
- Engineered countersunk feature enhances the panel support & eliminates the lateral movement of the panels



## System Selection Guide

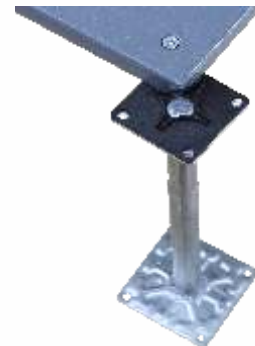
Grade	Concentrated Load Kgs (lbf)	Ultimate concentrated Load Kgs (lbf)	Uniform Distributed Load Kgs / Sq mt (lbf / sq ft)	Rolling Load* Kgs (lbf)
UFP 1650	360 (800)	1080 (2400)	1650 (340)	180 (400)
UFP 2250	450 (1000)	1350 (3000)	2250 (464)	225 (500)

\* Contact us for detailed specifications of the product design.

## Understructure Support Systems

### Corner Lock

Each floor panel is mechanically secured to the pedestal head at all four corners ensuring maximum rigidity and lateral stability. Access to the sub-floor is very simply achieved by releasing the fasteners and lifting the panel.



Finish Floor Range  
**Minimum**  
 65mm  
**Maximum**  
 600mm



# Unilock Raised Access Flooring System

“Now you can imagine a lock without a key”

Unitile's Unilock Access Floor Panels are non-combustible in nature and are coated with electrostatic epoxy paint. These panels consist of flat steel top sheet resistance welded to a formed steel bottom sheet, which is in filled with a lightweight proprietary cementitious mixture. Uniquely designed hemispherical reinforcing pockets on the underside enhance structural strength and deliver ultimate durability and acoustic performance.

The Unilock design enables easy access to the cavity and enhances the flexibility for a user to have a combination of fastened & unfastened panels within the same installation.



Dubai Metro, Dubai - 11,500 sq. mtr.



The Buddh International Circuit , Noida (Uttar Pradesh) - 7,000 sq. mtr.

## Design Features

- Integral shaped panel corners enable positive lateral retention & positioning of the panel.
- Integral shaped pedestal head designed with locating tabs to interface with the panel for positive vertical locking & positioning.
- Specially designed screws with unthreaded shank for achieving the self capturing feature.

This prevents loss of panel fastening screws & enables the panels to be stacked on top of each other without removing the fasteners.



## System Selection Guide

Grade	Concentrated Load Kgs (lbf)	Ultimate concentrated Load Kgs (lbf)	Uniform Distributed Load Kgs / Sq mt (lbf / sq ft)	Rolling Load* Kgs (lbf)
ULP 800	360 (800)	900 (2000)	1650 (223)	180 (400)
ULP 1000	450 (1000)	1125 (2500)	2250 (279)	225 (500)

\* Contact us for detailed specifications of the product design.

## Understructure Support Systems

### Corner Lock

Each floor panel is mechanically secured to the pedestal head at all four corners ensuring maximum rigidity and lateral stability. Access to the sub-floor is very simply achieved by releasing the fasteners and lifting the panel.



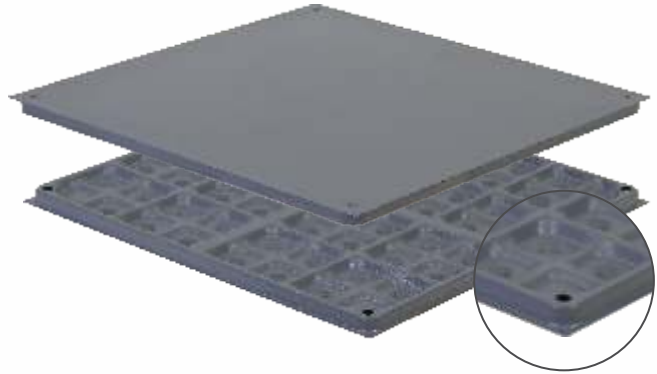
Finish Floor Range
Minimum
65mm
Maximum
600mm

# Ultra Thin Raised Access Flooring System

“Thin & light. Yet rock solid”

Unitile’s Ultra thin Access Floor Panels (600x600mm) are non-combustible in nature and are coated with electrostatic epoxy paint. These panels consist of a flat steel top sheet resistance welded to a formed steel bottom sheet made up engineered square pockets with special reinforced beams. This forms a panel of an overall thickness of 22 mm in filled with a lightweight proprietary cementitious mixture.

The unique engineering & design ensures structural integrity of the panel and its understructure system for a general office application, tested as per international standards.



TCS, Hyderabad - 2,629 sq. mtr.



Google, Hyderabad - 4,580 sq. mtr.

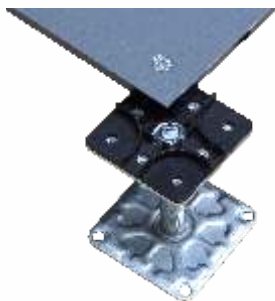
## Design Features:

- Unique thin design:
  - Eliminates height constraints.
  - Provides additional plenum in existing finished floor heights.
  - Enables routing and access of the PVD services with ease.
- Lightweight construction:
  - Drastically reduces the dead load on the mother slab (80% lighter as compared to 3 inches of IPS)
  - Enables handling and opening of the panels with ease
- Unique low flange width design
  - Prevents edge damage
  - Ensures safety of workers
  - Increases the product life

## Understructure Support Systems

### Corner Lock

Each floor panel is mechanically secured to the pedestal head at all four corners ensuring maximum rigidity and lateral stability. Access to the sub-floor is very simply achieved by releasing the fasteners and lifting the panel.



Finish Floor Range

Minimum

65mm

Maximum

150mm

## System Selection Guide

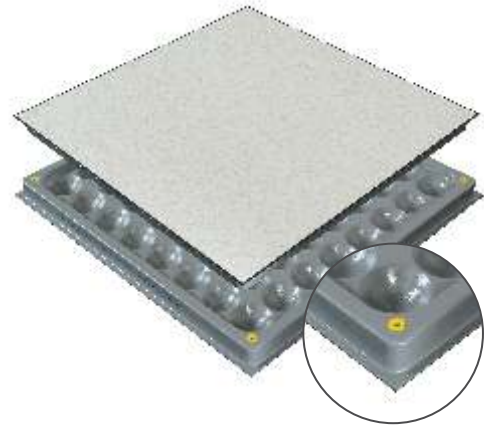
Grade BSEN 12825	Point Load Kgs (lbf)	Ultimate Point Load Kgs (lbf)	Uniform Distributed Load Kgs / Sq mtr (lbf / sq ft)	Ultimate UDL Kgs (lbf)
Ultra Thin	412 (912)	825 (1800)	1237 (254)	2475 (5500)
Rolling Load* Kgs (lbf)	Pedestal Axial load Kgs (kN)			
180 (400)	1648 (16.16)			

\* Contact us for detailed specifications of the product design.

# Standard Flange Raised Access Flooring System

Unitile's Standard Access floor panels (600mm X 600mm) are non-combustible in nature and are coated with electrostatic epoxy paint. These panels consist of flat steel top sheet resistance welded to a formed steel bottom sheet, which is in filled with a lightweight proprietary cementitious mixture. Uniquely designed hemispherical reinforcing pockets on the underside enhance structural strength and deliver ultimate durability and acoustic performance.

The cantilever edges of the panel are reduced and this unique product design enhances the technical performance of the system, reduces the risk of damage at site and aims to provide tremendous advantages to the user with respect to handling of panels and ease of installation during the construction program.



Eicher - Volvo Corporate Office building, Gurgaon - 6,500 sq. mtr.



Bharti Airtel Limited, Manesar - 4,351 sq. mtr.

## Standard Flange Width Panel design

### Corner Lock

Each floor panel is mechanically secured to the pedestal head at all four corners ensuring maximum rigidity and lateral stability. Access to the sub-floor is very simply achieved by releasing the fasteners and lifting the panel.



Finish Floor Range

Minimum

150mm

Maximum

1200mm

### Edge Support Rigid Grid System (ESRG)

Edge support under-structure provides maximum floor stability. It reduces all lateral movements and also ensures integrity of the floor on removal of panels for access to services in the sub-floor. Stringers are mechanically fastened to the pedestal head and panels are then placed on the grid formed. This system is ideal for high finished floor heights.



Finish Floor Range

Minimum

150mm

Maximum

1200mm

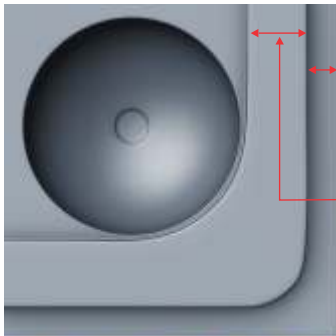
## System Selection Guide

Grade	Concentrated Load Kgs (lbf)	Ultimate concentrated Load Kgs (lbf)	Uniform Distributed Load Kgs / Sq mt (lbf / sq ft)	Rolling Load* Kgs (lbf)
USF 800	363 (800)	907 (2000)	1650 (338)	180 (397)
USF 1000	454 (1000)	1134 (2500)	2025 (415)	225 (496)
USF 1250	567 (1250)	1418 (3125)	2450 (502)	281 (619)
USF 1500	680 (1500)	1701 (3750)	3100 (636)	315 (694)
USF 2000	907 (2000)	1814 (4000)	3600 (738)	425 (937)
USF 2500	1134 (2500)	2268 (5000)	4000 (820)	525 (1157)

\* Contact us for detailed specifications of the product design.

Unitile's all new Standard Flange Width Access Floor Panel design & reengineered Understructure System aims to provide a solution to its users in order to address common complaints associated with conventional raised access floor systems.

## Design Features



Standard Flange Width

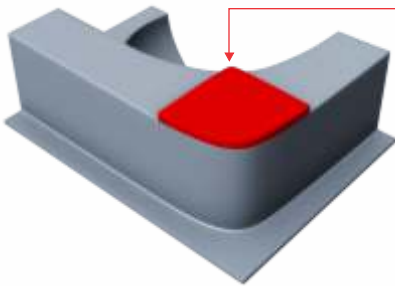
Reduced and low cantilever edges of the panel provides higher strength to the unsupported edge hence reduces risks of damage during installation at site.

Wider Beam width

A wider beam width increases the overall stability of the system and enhances its technical performance.

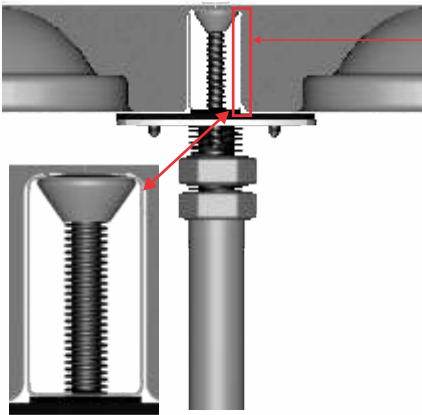
Did you know?

“A low flange width panel of the same grade will perform better on all technical parameters as compared to a standard flange panel of the same grade”



Increased Footprint Area

Higher footprint on the pedestal head leads to enhanced stability and improves load carrying performance of the system.

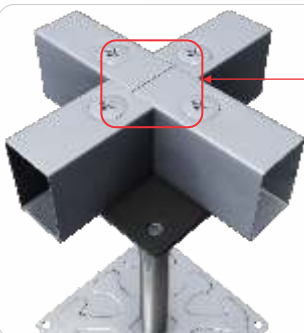


Tightly fitted Panels : The panels are snug fit to the under structure grid system.

No Misalignment : Since the system is perfectly fitted in a right angle the panel will not fit in place incase of a misaligned grid. This provides an early warning sign to the installer's to take corrective action before the whole floor is installed.

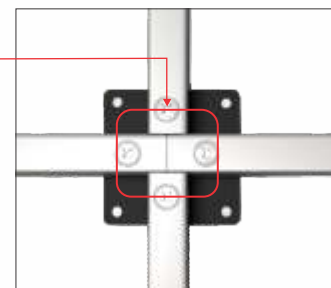
No Overlapping of Panels : The system design prevents the lateral movement of the panels, hence the chances of panels overlapping are almost negligible.

Integral Trim Design - Beeding free system



Box Stringer Design & Corner Edge Support

The system supports the corner edges of the panel and improves lateral rigidity of the grid. The design does not allow the system to lose its squareness and reduces the risk of damage to the panel edges during exposures to rolling and impact loads at site.



# Chipboard Encapsulated Raised Access Flooring System

Unitile Wood Core Access Floor consists of engineered 600mm square modular panels constructed around a high density E1 grade chipboard core. The core is fully encapsulated with GI on all six sides in a special mechanical interlocking of the top & bottom GI tray. This double folded lock constructs into a panel that has a unique in-built stringer at the underside of each panel edge. This unique engineering exhibits fine dimensional tolerances for modular control, accurate alignment of grids & interchangeability of panels that complies with the Euro Class requirement of EN 12825.



Stryker, Gurgaon - 4,850 sq. mtr.



Axis Bank , Mumbai - 24,483 sq. mtr.

## Physical characteristics of the panel

	Test Standard	Value
Nominal Dimensions		600 X 600 mm
Thickness		26 mm, 30 mm
Density		650 - 720 kg/m <sup>3</sup> (± 5%)
Dimensional Tolerance	EN 12825	
Length of Panel Side		± 0.20 mm
Squareness of Panel		± 0.30 mm
Thickness of Bare Panel		± 0.30 mm
Panel Twist		max 0.5 mm
Transverse Electrical Resistance	EN 1081	≤ 1 X 10 <sup>10</sup> Ω
Fire Resistance	BSEN 13501 - 2	REI 30
Fire Reaction	BS 476 Part 7	Class 1
	BS 476 Part 6	Class 0

## Features

- High strength to weight performance
- Unique inbuilt stringer design
- Recyclable & Environment friendly system
- Excellent fire resistance properties tested as per Class O and Class 1
- Good Acoustical Properties
- Enhanced lateral stability, flexural stiffness & mechanical resistance.
- Precision in floor levels and positive alignment with the understructure system
- Equipotential reinforcement for electrical continuity

# Unitile's

chipboard products **conserves**  
**natural resources**  
 & **prevents**  
**felling of trees**

Unitile's Wood core product range are made from chipboard particles which are extracted from well managed forests, controlled sources or recycled wood of fibre.

This post consumer recycled chipboard particles not only prevent the cutting of trees required for manufacturing of such wood related products but also prevents them from going to near capacity landfill sites.

## Understructure Support Systems

### Corner - Lock System

This system is suitable for the widest variety of office applications. Each floor panel is mechanically secured to the pedestal head at all four corners ensuring maximum rigidity and lateral stability. Access to the sub-floor is simply achieved by releasing the fasteners and lifting the panel.



### Gravity Lay System

Identical performance features as the Unitile Corner Lock System, used for finished floor height as low as 65mm. With this systems the range of vertical adjustment is therefore limited.



## System Selection Guide

Structural Performance as per BSEN 12825		System Selection Guide - 27 mm	System Selection Guide - 31 mm
Classification	Deflection	Concentrated Load Kgs/ KN	Concentrated Load Kgs/ KN
Class A	2.5 mm	544 / 5.34	578 / 5.67
Class B	3.0 mm	608 / 5.96	600 / 5.88
Class C	4.0 mm	726 / 7.12	728 / 7.14
Ultimate Concentrated Load		1678 Kgs / 16.45 KN	1728 Kgs / 16.94 KN
Uniformly Distributed Load/ Sq mtr		1400 Kgs/ 13.72 KN	1600 Kgs/ 15.68 KN
Pedestal Axial Load Test		22 KN (2200 kgs) Axial Load per pedestal	22 KN (2200 kgs) Axial Load per pedestal

# Chipboard Non-Encapsulated Raised Access Flooring System

Unitile Chip Board Access Floor consists of engineered 600mm square modular panels constructed around a high density E1 grade chipboard core. The system fully complies with the Euro Class requirement of EN 12825.

The base and the top surface of the core is factory bonded using an appropriate combination of surface finishes such as Aluminum, Galvanized sheet steel, High Pressure Laminate etc. The surface coverings are trimmed to ensure fine dimensional control, accurate alignment of grids and inter-changeability of panels. A full depth ABS edge band provides total encapsulation of the chipboard core and also protects the edge of the surface covering to prevent ingress of moisture. Electrical continuity is maintained through the top and bottom surface of the panel on to the pedestal head through conductive gasket. This ensures positive positioning and location of the floor panel on to the understructure system.



TV Today Network Limited, Noida (Uttar Pradesh) - 10,250 sq. mtr. Renault Nissan, Chennai - 12,000 sq. mtr.

## Physical characteristics of the panel

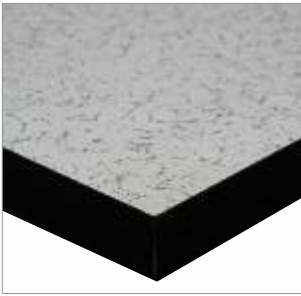
	Test Standard	Value
Nominal Dimensions		600 X 600 mm
Thickness		30 mm, 38 mm
Density		650 - 720 kg/m <sup>3</sup> (± 5%)
Dimensional Tolerance	EN 12825	
Length of Panel Side		± 0.20 mm
Squareness of Panel		± 0.30 mm
Thickness of Bare Panel		± 0.30 mm
Panel Twist		max 0.5 mm
Transverse Electrical Resistance	EN 1081	≤ 1 X 10 <sup>10</sup> Ω
Fire Resistance	UL 94	V0
Fire Reaction	BSEN 13501-2	REI 30
	BS 476 Part 7	Class 1

## Features

- High strength to weight performance
- Unique inbuilt stringer design
- Recyclable & Environment friendly system
- Excellent fire resistance properties tested as per Class O and Class 1
- Good Acoustical Properties
- Enhanced lateral stability, flexural stiffness & mechanical resistance.
- Precision in floor levels and positive alignment with the understructure system
- Equipotential reinforcement for electrical continuity

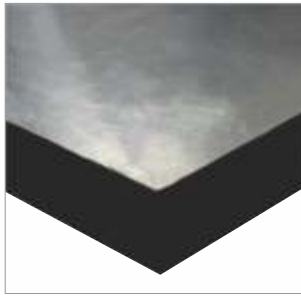
Unitile Chip Board LA

Top Panel



HPL / PVC (L)

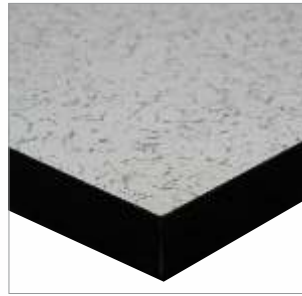
Bottom Panel



Aluminum Foil (A)

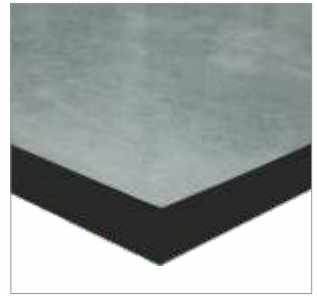
Unitile Chip Board LG

Top Panel



HPL / PVC (L)

Bottom Panel



Galvanized Steel (G)

System Selection Guide

System Selection Guide - 35 mm

Classification	Deflection	Concentrated Load Kgs/ KN
Class A	2.5 mm	525 / 5.15
Class B	3.0 mm	600 / 5.88
Class C	4.0 mm	720 / 7.05
Ultimate Concentrated Load		1650 Kgs / 16.18 KN
Uniformly Distributed Load/ Sq mtr		2300 Kgs/ 22.55 KN
Pedestal Axial Load Test		22 KN (2200 kgs) Axial Load per pedestal

System Selection Guide - 38 mm

Classification	Deflection	Concentrated Load Kgs/ KN
Class A	2.5 mm	650 / 6.37
Class B	3.0 mm	675 / 6.62
Class C	4.0 mm	820 / 8.04
Ultimate Concentrated Load		1680 Kgs / 16.47 KN
Uniformly Distributed Load/ Sq mtr		2350 Kgs/ 23.04 KN
Pedestal Axial Load Test		22 KN (2200 kgs)

Structural Performance as per BSEN 12825

Understructure Support Systems

Edge Support Rigid Grid System (ESRG)

Edge support under-structure provides maximum floor stability. It reduces all lateral movements and also ensures integrity of the floor on removal of panels for access to services in the sub-floor. Stringers are mechanically fastened to the pedestal head and panels are then placed on the grid formed. This system is ideal for high finished floor heights.





# Calcium Sulphate Raised Access Flooring System

Unitile Calcium Sulphate access flooring system is manufactured from 1600 Kg fibre reinforced Calcium Sulphate which forms the core of the panel. Non-combustible high quality alpha-hemihydrate single pressed gypsum and non-toxic unbleached cellulose fibers are used as reinforcing material. The base & top surface of the core is factory bonded using an appropriate combination of surface finishes such as Aluminum, Galvanized sheet steel, High Pressure Laminate etc. The edges of the panel are protected with a PVC edge band. The system offer an excellent acoustical sound deadening value.



Citi Bank, Mumbai - 6,206 sq. mtr.



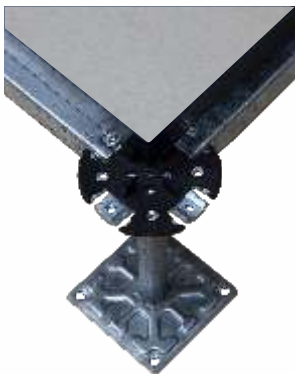
Cognizant, Hyderabad - 5,000 sq. mtr.

## Understructure Support Systems



### Gravity Lay System

Substructure in Galvanized Steel
Model
Free Standing
Nominal Height mm
100 / 300
Adjustment mm
±25



### Edge Support Rigid Grid System (ESRG)

Substructure in Galvanized Steel with support & stringers for substructure height of over 300mm
Model
ESRG
Nominal Height mm
300 / 1000
Adjustment mm
±25

## Features

### • Acoustic Characteristics

The material structure, design features, and high precision production of the access floor panels provide excellent acoustic values. The great walking properties offer a high degree of comfort and create the perfect working environment.

### • Electrostatic Characteristics

Electrostatic charges are dissipated, regardless of panel material, by the inherent design features. The ohmic resistance defined in this way allows grounding compliance in accordance with VDE 0100 using suitable floor coverings.

### • Ecology

Due to the environmentally-friendly production process, and the use of ecologically safe materials, 90 to 97% of the calcium sulphate panels can be recycled at the end of their life – a very important ecological consideration today.

## System Selection Guide

Structural Performance as per BSEN 12825		System Selection Guide - 30 mm	System Selection Guide - 34 mm
Classification	Deflection	Concentrated Load Kgs/ KN	Concentrated Load Kgs/ KN
Class A	2.5 mm	900 / 8.8	1000 / 9.8
Class B	3.0 mm	1000 / 9.8	1200 / 11.76
Class C	4.0 mm	1200 / 11.76	1400 / 13.72
Ultimate Concentrated Load		1500 Kgs / 14.7 KN	1900 Kgs / 18.62 KN
Uniformly Distributed Load/ Sq mtr		2900 Kgs/ 28.43 KN	3000 Kgs/ 29.42 KN
Pedestal Axial Load Test		22 KN (2200 kgs) Axial Load per pedestal	22 KN (2200 kgs) Axial Load per pedestal

\* Contact us for detailed specifications of the product design.

# Top Performance Finishes

## Available Finishes

### High Pressure Laminate (HPL)



HPL- 8194



HPL- 8192



HPL- F84

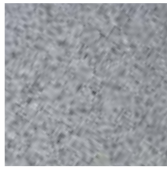
### PVC / Vinyl Conductive



PJD - 9022

## \*Other Finishes

### Vitrified



### Ceramic



### Carpets



\*The following non-stock bonded finishes are available to order on longer lead times.

Please note: Every effort has been made to give a true representation of the finishes shown, however Unitle™ cannot guarantee 100% accuracy due to the constraints of the printing process.

## Data Sheet

### Product Compatibility Chart

Panel Type	Carpet	Bare	HPL	PVC / Vinyl Antistatic	PVC / Vinyl Conductive	Forbo-Marmolium	Vertified / Ceramic Tiles	Marble	Granite
Unifold	✓	✓	✗	✗	✗	✗	✗	✗	✗
Unilock	✓	✓	✓ EBEED	✓ EBEED	✓ EBEED	✓ EBEED	✓	✓	✓
Ultra Thin	✓	✓	✗	✗	✗	✗	✗	✗	✗
Standard	✓	✓	✓ EBEED	✓ EBEED	✓ EBEED	✓ EBEED	✓ EBAND	✓	✓
Chipboard Encapsulated 25/30	✓	✓	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓	✓	✓
Chipboard Non-Encapsulated 38	✗	✗	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓	✓	✓
Chipboard Non-Encapsulated 30	✗	✗	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND
Unitle Calcium Sulphate	✗	✗	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND	✓ EBAND
	Edge Beeding			EBEED	✓ EBEED	Integral Trim		IT	✓ IT
	Edge Band			EBAND	✓ EBAND	Beveled Edge		BE	✓ BE

# Data Center Airflow Solutions

## Contents

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22	Directional Airflow Grills
23-24	MultiYair
25	Accessories
26	Floors for the Environment
27-28	The Unitile Experience



## Instantly Improve Data Center Efficiency and Reduce Costs

Rapid evolution of the data center is creating boundless new opportunities, but along with those come urgent monitoring and management challenges. Energy consumption is one of the growing concerns for data centers.

Advances in server equipment technologies and increased demand for computing power have increased load densities in the computer room, which in turn has caused

corresponding increases in data center power consumption. Energy efficiency measures are thus of high importance for data center designers, operators, and owners.

U-FLEX offers your data center best-in-class solutions to efficiently manage maintain a healthy, secure, and cost-efficient data center.

# U-flex™ Air Plugs

## Solutions for the Data Centers





Data Center servers generate high heat output and hence keeping them cool and operating it efficiently is very important. Data centers that are not well managed often suffer from hotspots leading to equipment failure. These servers are often fitted into smaller footprints that require higher cooling capacity. Additional cooling capacity demands more cooling units, which is expensive. A better solution is to plug the loss of cold airflow before adding more cooling capacity and ensures its direction to where it is

needed the most.

Air Plugs offer a series of engineered raised-floor grommets to plug cut-outs within the raised-floor and stop cold air from escaping, while still allowing cables to pass through.

Air Plugs raised floor grommets are static dissipative and prevent static discharges being carried up to the cables. Air Plugs thus drastically improves data center environment by plugging cut-outs within the raised-floor.

	Model No. UFAP-101	Integrated Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Usable Cable Area	8 x 4	203 x 102
		To install Grommet in interior of the tile	9 <sup>1/4</sup> x 6 <sup>3/4</sup>	235 x 172
		To install long side of the Grommet on the tile edge	9 <sup>1/4</sup> x 7 <sup>1/2</sup>	235 x 191
		To install short side of the Grommet on the tile edge	10 <sup>1/4</sup> x 6 <sup>3/4</sup>	275 x 172
	Model No. UFAP-202	Surface - Mount Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	10 x 7 <sup>1/4</sup>	254 x 184
		Usable cable area	8 <sup>1/4</sup> x 4	210 x 102
	Model No. UFAP-203	Large Surface - Mount Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	10 x 9 <sup>1/4</sup>	254 x 248
		Usable cable area	8 <sup>1/4</sup> x 4	210 x 102
	Model No. UFAP-204	Extra-Large Surface - Mount Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	10 x 13	254 x 330
		Usable cable area	8 <sup>1/4</sup> x 4	210 x 102
	Model No. UFAP-303	Split Integrated Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	9 <sup>1/4</sup> x 6 <sup>3/4</sup>	235 x 172
		Usable cable area	8 x 4	203 x 102

	Model No. UFAP-012	Extended Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	23 <sup>1/4</sup> x 4	600 x 102
		Usable cable area	23 <sup>1/2</sup> x 2 <sup>1/2</sup>	590 x 64
	Model No. UFAP-013	Extended Brush Raised Floor Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	24 x 4	610 x 102
		Usable cable area	23 <sup>1/4</sup> x 2 <sup>1/2</sup>	600 x 64
	Model No. UFAP-G50	Circular Brush Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	3 <sup>1/2</sup> x 0.8	82 x 20
		Usable cable area	3 x 0.8	75 x 20
	Model No. UFAP-G100	Split Circular Brush Grommets	US unit of Measure (Inches)	Metric (mm)
		Maximum cutout size sealed	4 <sup>1/2</sup> x 2	105 x 50
		Usable cable area	4 x 2	95 x 50



Model No. UFAP-101

### Features

- Plugs the openings in the raised floor and prevents cold air from escaping at unwarranted areas.
- The grommets integrate with the raised floor static dissipation system, providing 1 Giga Ohm of resistance.
- Allows easy pass-through of power plug connectors and large cable bundles of up to 4" x 8".
- Constructed with >25,000 filaments of resistant & durable flame retardant ABS polycarbonate material.
- Realize upto 92-100% seal per grommet.
- Contains no loose or partially fastened parts.

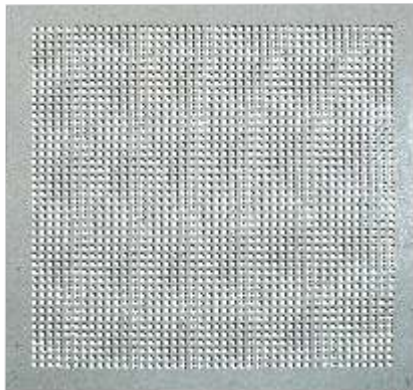
### Benefits

- Reduces air loss in under floor cooling systems.
- Increases under-floor static pressure.
- Enhances the performance of cooling equipment.
- Allows flexibility and simplicity in cable routing.
- Easy installation and cost effective.
- Reduces the need to purchase additional cooling units.
- Improves cool air delivery through perforated tiles and floor grates.
- Decreases humidity control expense.

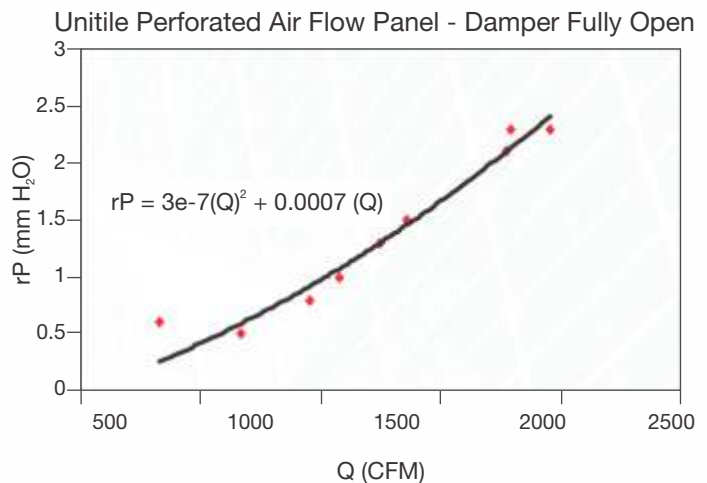
# U-flex™ Standard Airflow Grills

U-flex Standard Air Flow Grills are manufactured from Mild Steel with a perforated top having an over all dimension of 600 mm x 600 mm. The panels consist of a specially designed side channel section which houses a pre-punched top perforated sheet and is available with optional volume control damper (VCD). The central core of the panel is fitted with a grid of vertical steel blades to avoid airflow turbulence and to minimize pressure drop.

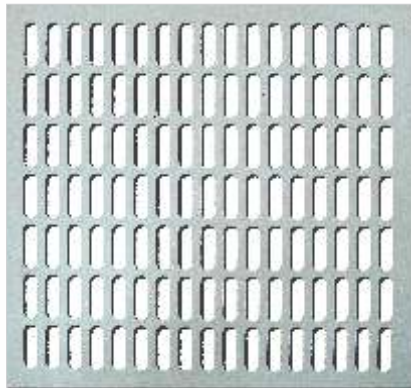
A vertical mesh is provided to support the airflow grill at regular intervals to ensure flatness and high load carrying capacity. The panel can be compatible with the adjacent raised access floor system. The top performance finishes is powder coated and can be available with high pressure laminate finish as per the users requirement.



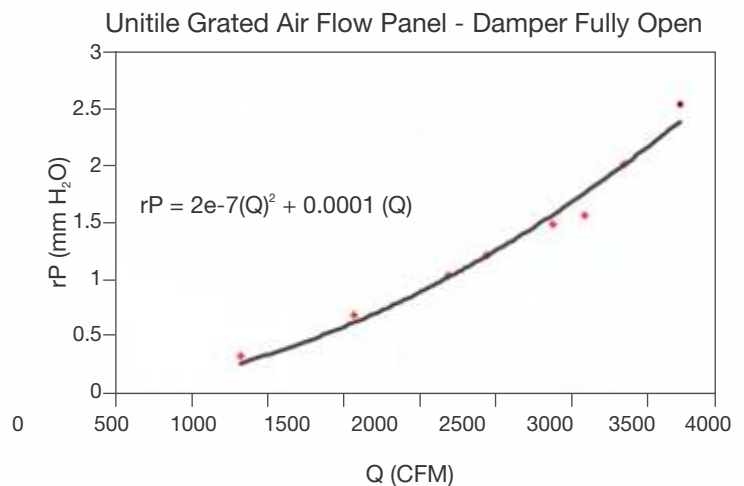
27% opening



Pressure drop variation with flow rate for floor grille When the damper is fully open



46% opening



Pressure drop variation with flow rate for floor grille When the damper is fully open

## Features

- High load carrying capacity.
- Equal airflow performance in both finishes – powder coated & laminated.
- Available with an option of adjustable dampers to manage airflow volume.
- Enables uniform balancing of air throughout the critical space.
- Available with height adjustment feature to complement the adjacent raised access floor system.
- Cost effective solution

## Technical Specification

Uflex Standard Air Flow Grills	27%	46%
Size of the Active Grill	600 x 600 mm	600 x 600 mm
CFM	350-500	600-700
Concentrated load	450 Kgs	450 Kgs
Uniformly Distributed load	1350 kgs / Sq. mtr.	1350 kgs / Sq. mtr.
Air Flow Direction	STD	STD /SD / DD

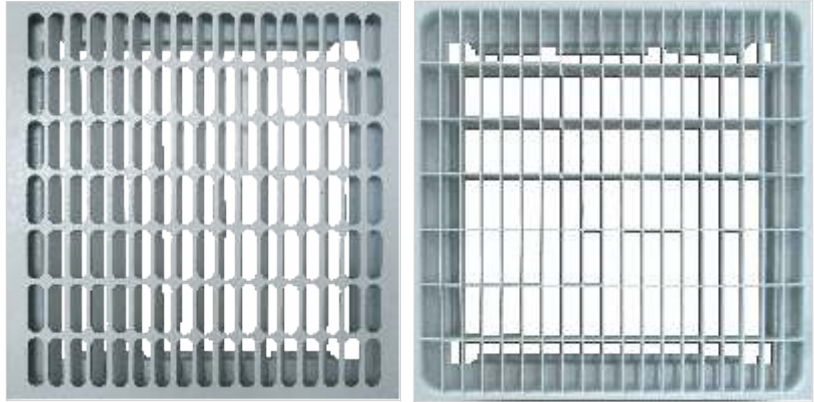
\* Contact us for detailed specifications of the product design.

# U-flex™ Directional Airflow Grills

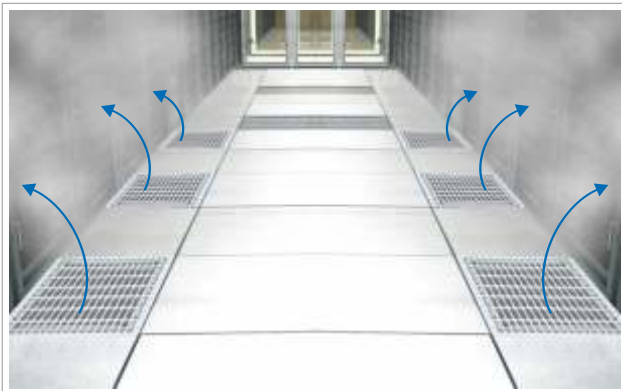
## Cooling Solutions

In today's rapidly changing technology in data centers it is important to ensure that every component of support infrastructure is operating with maximum efficiency and reliability. The continued adoption of high-density racks and cloud computing strategies require the cooling infrastructure to accommodate to high end changing loads.

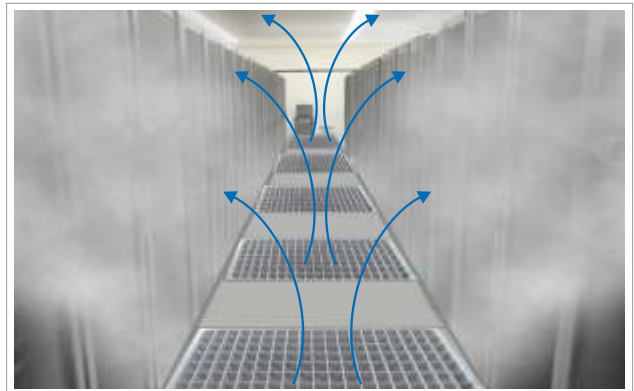
Understanding the challenge of cooling the high density server racks, U-flex directional air flow grills provide high energy savings and a cost effective solution for new as well as retrofit data centers. High performance directional airflow grills ensure faster cooling of racks thus leading to high return on investments (ROI) and lower operational costs.



Standard }  
 Single Direct } 55 % ,65% ,80%  
 Dual Direct }



Single Direct Airflow grills are used in a data centers where in the cold aisle can accommodate two air flow grills and each grill will direct the air to the adjacent server racks. Single direct delivers cold air directly to the rack ensuring maximum air capture unlike the conventional airflow grills.



Dual Direct Airflow grills are used in data Centre where in the cold aisle can accommodate only one air flow grill and the single grill can direct the air to the adjacent server racks. Dual direct delivers cold air directly to the rack ensuring maximum air capture unlike the conventional airflow grills.

### Technical Specification

Size of the Active Grill	600 x 600 mm
CFM	700 - 1300
Concentrated load	450 kgs
Uniformly Distributed load	1350 kgs / Sq. mtr.
Air Flow Direction	Standard / Single Direct / Dual Direct

\* Contact us for detailed specifications of the product design.

### Features

- Mild steel construction enhances the load bearing capacities.
- Made from non-combustible material
- Available with an option of adjustable dampers to manage airflow volume.
- Unique design provides seamless compatibility with all types of raised access flooring system.

### Benefits

- Achieves close to 94% of air capture
- Prevents mixing of air
- Ensure proper air distribution at rack level
- Increases the efficiency of air conditioning equipment in critical spaces
- Over 40% annual fan energy savings.
- Directional airflow ensures proper air distribution at various rack levels.
- Enhances overall energy efficiency of the data centre.
- Unmatched ability to handle high density server racks of the most mission critical facilities.

# U-flex™ MultiYair

U-flex – MultiYair cooling system is used in high and medium density data centre which always faces unique cooling challenges. There is a considerable increase in the consumption of energy while attempting to cool a few selective racks which often leads to excessive cooling of the other racks. This common phenomenon deteriorates the overall energy efficiency of a data center.

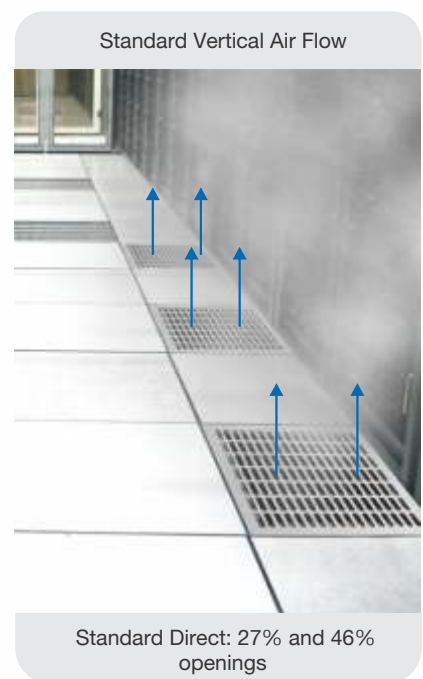
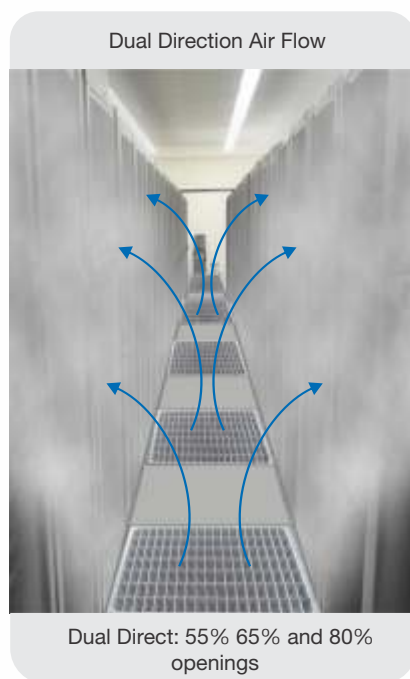
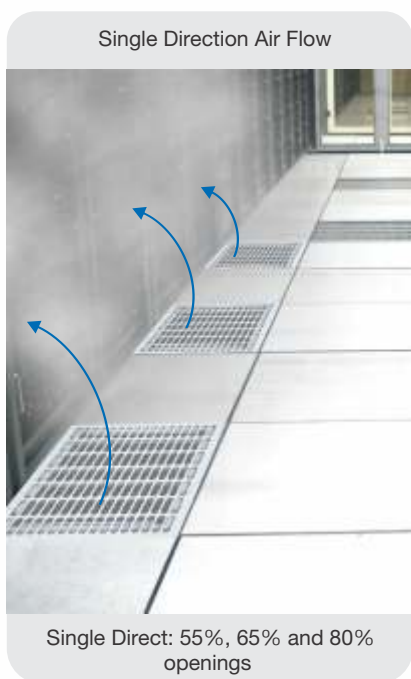
MultiYair fan assist module is designed to provide multi-fold cooling through an individual airflow grill that balances and ensures proper airflow to the individual racks. The system is equipped with a unique control feature, which automatically turns on when additional cooling is required. This prevents additional energy consumption caused due to the excessive cooling of server racks.

The MultiYair cooling system consists of an energy saving electronically commutated fan which is designed to take care of adaptive load based on the temperature of the server rack. The EC fans are mechanically mounted in the MultiYair mild steel construction to ensure smooth function without any vibrations.

The EC fans speed modulation is varied from 0 to 100 % depending on the load condition and temperature at the rack level with temperature ranges from 19 Deg C to a maximum of 30 Deg C.

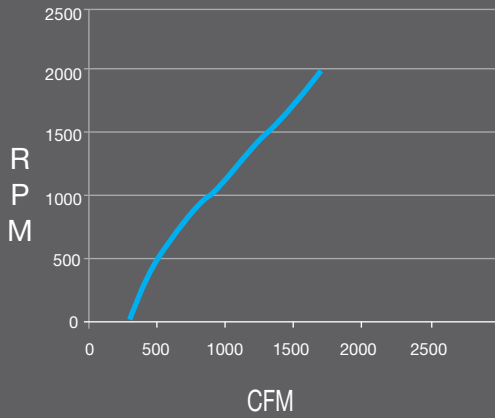
This speed modulation enhanced the energy saving of the total system. The inbuilt temperature sensor and controllers monitor this operation. The controller is further equipped with a LCD temperature display interface that can be viewed from the top of the grill.

MultiYair is available with 55%, 65% and 80% opening depends of required quantum of airflow.



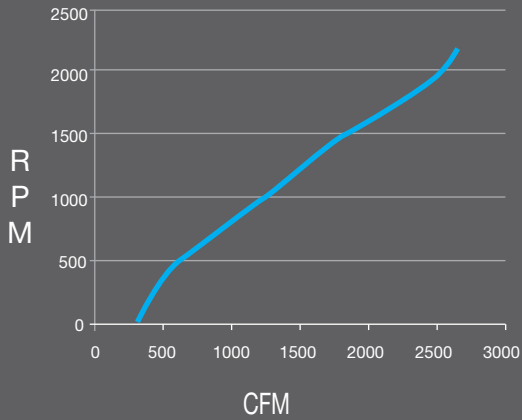
### MULTIPLYAIR 1300

MultiYair 1300 used for cooling a server rack of approximately 10kw



### MULTIPLYAIR 2500

MultiYair 2500 used for cooling a server rack of approximately 15kw



### Technical Specification

Size of the Active Grill	600 x 600 mm
Minimum Permissible false Floor Height	450 mm
CFM	1300 or 2500 CFM at 0.1 of H2O (Static Pressure)
Concentrated load	450 kgs
Uniformly Distributed load	1350 kgs / Sq. mtr.
Air Flow Direction	Standard / Single Direct / Dual Direct

\* Contact us for detailed specifications of the product design.

### Features

- Available with identical load bearing capacities as the adjacent raised access floor panel.
- Integrates and reconfigures with existing raised access flooring understructure.
- Mild steel construction.
- Made up of non combustible material.
- High quality temperature sensors used for sensing the thermal load variation.
- Gives a clean, smooth and obstruction free finish to the floor after installation.

### Benefits

- EC backward curve fan ensures low energy consumption.
- It allows automatic modulation of air flow based on actual thermal load of single rack.
- Avoids creation of hot spots in critical area.
- Simple but effective solution for High density racks
- Guarantees an intrinsic level of safety, avoids issue of water or refrigerant being near the electronic equipment.
- It provides high degree of modularity and flexibility without occupying large amount of space in IT room.
- MultiYair can be easily installed even after the site has been opened if the loads are higher than those which can be met by traditional CRAC solution.



# Accessories

## Vision Panel

Vision Panel is constructed with an overall dimension of 600x600mm. The viewing area is made of toughened glass available in sizes of 300x300mm, 450x450mm and 500x500mm. The Vision Panel can be used for viewing critical points that need frequent monitoring and is designed for normal walking load only.



## Electroflex

Electroflex is a concealed electrical monument box which has a depth of 70mm to accommodate plug-in facility and 35mm depth to accommodate power, voice and data (PVD) accessories. The hinge lid is constructed with pre-coated galvanized steel and has recessed grey ABS trim to accommodate carpet tiles or any other factory bonded finish to match the adjacent floor finish.



## Grommets

Desk grommets are a simple and inexpensive way to keep wires from cluttering your work surface. They are perfect for if you want to run your cables through your desk or through a wall. Simply use a hole saw to make a hole in the desk / wall, then insert the grommet. Remove the cap so you can insert your cables, then put the cap back in place.



## Panel Lifter

Unitile's double cup suction panel lifter(s) allows panels to be lifted quickly, easily and safely without damaging any of the adjoining access floor panels.

Not only are they more efficient and safer than using improper tools (screwdrivers, knives), using them will also extend the life of your raised floor. Unitile's panel lifters are designed for use on all access floor panels which includes 'bare' and 'high pressure laminate' panel surfaces.

Application: Push the suction cup(s) onto the panel to apply vacuum seal, lift and move, pull or push trigger (depending on model) to release. When using lifters, make sure floor panels are free of dirt and panel surfaces are unmarred for optimal safe lifting.





## Floors for the Environment

The Unitile advanced technology platform has a host of benefits for your business in its growing responsibility to both the staff as well as the environment. This system brings you cost-effective solutions that can help your business achieve the 'green' status with optimum air, sound and light to promote a healthy and productive work environment. Further, its elegance is sure to add aesthetic appeal to your building, giving your business an upper hand with creating the right image and attracting prospective clients and staff.

### -Materials and resources

The Unitile advanced technology platform is specifically created from recycled components and materials that meet Singapore Green Building Standards (SGBC) for safety and low emission. It is exclusively built for the environment and for high performance. The panel infill is made up of recyclable contents such as non combustible cement.

### -Drastically reduces the dead load on the base building

The dead load of 3" of raised flooring system is only 35 to 42 Kg/ Sq. m. on the mother slab as against that of 3" of IPS (concrete) is 150 - 170 Kg/ Sq. m. Access floors eliminate the need for inflexible embedded wiring and cabling in concealed rigid structures such as walls and columns. This gives you the freedom of accessing wires and cables quickly and easily. Reconfiguration in spaces with conventional flooring involves breaking the concrete structure to access wires and cables concealed in the floor. Due to this reason, repeated reconfiguration results in the weakening of the base building.

### -Lifespan exceeding 25 years

Owning a raised flooring system is a permanent asset for the tenant. On the completion of the lease period in a facility, the complete system can be dismantled and relocated to the customer's new facility. With water leveled floors and fixed finished floor heights, all the modular partitions can be reused in the new facility. The same is valid for cable trays functioning beneath the floor, which would have been impossible in case of the conventional flooring where cables are embedded in concrete.

### A green status update for your business!

Need your business to reach Green Building Status? Our raised access floors provide numerous ways of attaining LEED points for your business! Our floors enable you to enhance the green building performance of your facility, thanks to their supportive functioning in the demanding areas of materials and resources. Created keeping the environment in mind, our floors made with recycled materials and components meet the Singapore Green Building standards for low emission and safety.



# The Unitile Experience

## Brand

- Leading brand for raised flooring solutions in India
- Over 25 million sq.ft of execution experience
- Over 8,000+ globally satisfied customers
- Global sales and service support

## Production

- 21 years of manufacturing expertise
- Annual production capacity of 3.00 million panels
- Green certified and LEED compliant products

## Data Center Applications

 40,000 Sq. Mtr.	 3,200 Sq. Mtr.	 48,638 Sq. Mtr.	 41,806 Sq. Mtr.	 60,390 Sq. Mtr.	 34,000 Sq. Mtr.	 33,445 Sq. Mtr.
 25,548 Sq. Mtr.	 17,000 Sq. Mtr.	 11,500 Sq. Mtr.	 13,833 Sq. Mtr.	 6,039 Sq. Mtr.	 5,000 Sq. Mtr.	 6,000 Sq. Mtr.
 1,235 Sq. Mtr.	 1,800 Sq. Mtr.	 5,000 Sq. Mtr.	 4,500 Sq. Mtr.	 4,500 Sq. Mtr.	 32,000 Sq. Mtr.	 930 Sq. Mtr.
 3,500 Sq. Mtr.	 2,700 Sq. Mtr.	 2,560 Sq. Mtr.	 37,000 Sq. Mtr.	 4,300 Sq. Mtr.	 2,200 Sq. Mtr.	 916 Sq. Mtr.
 20,000 Sq. Mtr.	 2,200 Sq. Mtr.	 3,251 Sq. Mtr.	 1,159 Sq. Mtr.	 5,210 Sq. Mtr.	 2,240 Sq. Mtr.	 8,000 Sq. Mtr.
 35,000 Sq. Mtr.	 25,000 Sq. Mtr.	 2,000 Sq. Mtr.	 2,852 Sq. Mtr.	 1,200 Sq. Mtr.	 1,500 Sq. Mtr.	 6,039 Sq. Mtr.

## Quality

- An ISO 9001: 2000, ISO 14001:2004 & OHSAS 18001:2007 certified facility
- Products 3rd party tested at TUV PSB- Singapore and Bureau Veritas –France
- In house fully equipped testing facility complying to CISCA, MOB, BSEN standards.

## Market Share

- 85% market share in general office projects across India.
- 65% market share in Data Centers projects across India.

## General Office Applications

						
2,78,707 Sq. Mtr.	1,85,805 Sq. Mtr.	1,69,353 Sq. Mtr.	350 Sq. Mtr.	90,580 Sq. Mtr.	63,638 Sq. Mtr.	50,281 Sq. Mtr.
						
42,326 Sq. Mtr.	3,283 Sq. Mtr.	32,000 Sq. Mtr.	30,193 Sq. Mtr.	30,193 Sq. Mtr.	4,580 Sq. Mtr.	24,991 Sq. Mtr.
						
18,500 Sq. Mtr.	21,368 Sq. Mtr.	20,903 Sq. Mtr.	32,903 Sq. Mtr.	16,994 Sq. Mtr.	16,258 Sq. Mtr.	16,258 Sq. Mtr.
						
13,995 Sq. Mtr.	13,995 Sq. Mtr.	16,542 Sq. Mtr.	11,148 Sq. Mtr.	10,219 Sq. Mtr.	2,219 Sq. Mtr.	12,996 Sq. Mtr.
						
6,997 Sq. Mtr.	4,500 Sq. Mtr.	27,000 Sq. Mtr.	9,360 Sq. Mtr.	6,504 Sq. Mtr.	6,500 Sq. Mtr.	10,539 Sq. Mtr.
						
5,511 Sq. Mtr.	1,393 Sq. Mtr.	62,000 Sq. Mtr.	23,226 Sq. Mtr.	1,41,483 Sq. Mtr.	3,000 Sq. Mtr.	6,039 Sq. Mtr.

## HELP AND ADVICE

For help with flooring materials, costs, & specifications.  
Contact Unitile Sales.

**+91 99020 10917**

### Our presence

#### India

- 📍 Mumbai
- 📍 **Pune**
- 📍 Bengaluru
- 📍 Hyderabad
- 📍 Chennai
- 📍 Vadodara
- 📍 New Delhi
- 📍 Kolkata
- 📍 Gurgaon
- 📍 Noida

#### International

- 📍 Dubai
- 📍 Qatar
- 📍 Saudi Arabia
- 📍 Oman
- 📍 Bahrain
- 📍 Turkey
- 📍 Srilanka
- 📍 Bangladesh
- 📍 Kenya
- 📍 South Africa
- 📍 Philippines
- 📍 Hongkong
- 📍 Singapore
- 📍 Nepal
- 📍 Tanzania
- 📍 Egypt



[www.unitileindia.com](http://www.unitileindia.com)

Head Office: Unit No. 2-G, Laxmi Industrial Estate, New Link Road, Andheri (West), Mumbai - 400053  
T: +91-22-2630 5270/72/73, E: sales@unitile-group.in

International Marketing Office: Gala No. 58, Sy. No. 35/2, 6th Main, Singasandra, Hosur Main Road, Bengaluru - 560068  
M: +91-97412 44144, T: +91 80 2573 0562/3359, F : +91-80-4110 0518, E: sales@unitile-group.in