



# URBAN GREENERY PRODUCT SELECTIONS

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Jewel Changi Airport, Singapore

## VersiJack® Paver & Deck Screwjack Pedestal

**VersiJack®** has top and bottom slope correction options to compensate for gradients to create levelled surfaces. Using a Bottom Slope Corrector allows the pedestal to remain firmly upright on an incline.

VersiJack® has a large flat base with rounded edges to prevent the waterproofing membrane from being compromised. The perforated base prevents the breeding of insects resulting from ponding. Grooves allow the base to be cut to fit wall corners and edges.



Fire-Resistant EN13501-1  
Class B available



*VersiJack® is part of our Paver & Deck Support range of adjustable Elmich pedestals (4–1022 mm)*





Reichstag Building, Germany

### Features & Benefits

- Creates usable space
- Progressive height increments
- Easy access to waterproofing membranes
- Improves insulation and conceals services
- Lightweight and reusable

### Applicable Areas

- Plaza decks
- Balconies
- Swimming pool surrounds
- Verandahs
- Courtyards
- Water features

## TECHNICAL SPECIFICATION

Material	PP
Height range	13 to 1014 mm
Design compressive strength	10 kN
Slope correction	up to 5% (Top) and 5% (Bottom)

# Accessories



**Bearer Holder**



**Concealed Paver Retainer**



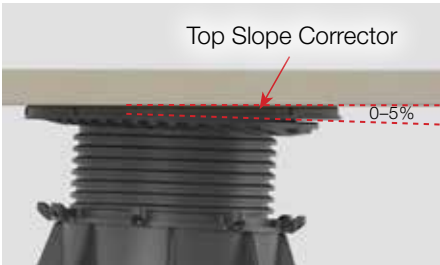
**Exposed Paver Retainer**



**Vertical Edge Clips**



**Wall Spacer**



**Top Slope Corrector**



**Pedestal Shim**



**Variable Angle Spacer Tab**



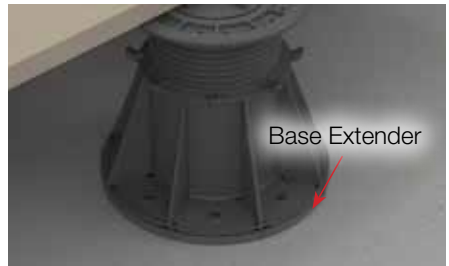
**Base Slope Corrector**



**Bracing**



**Top Extender**



**Base Extender**



Sentosa Boardwalk, Singapore





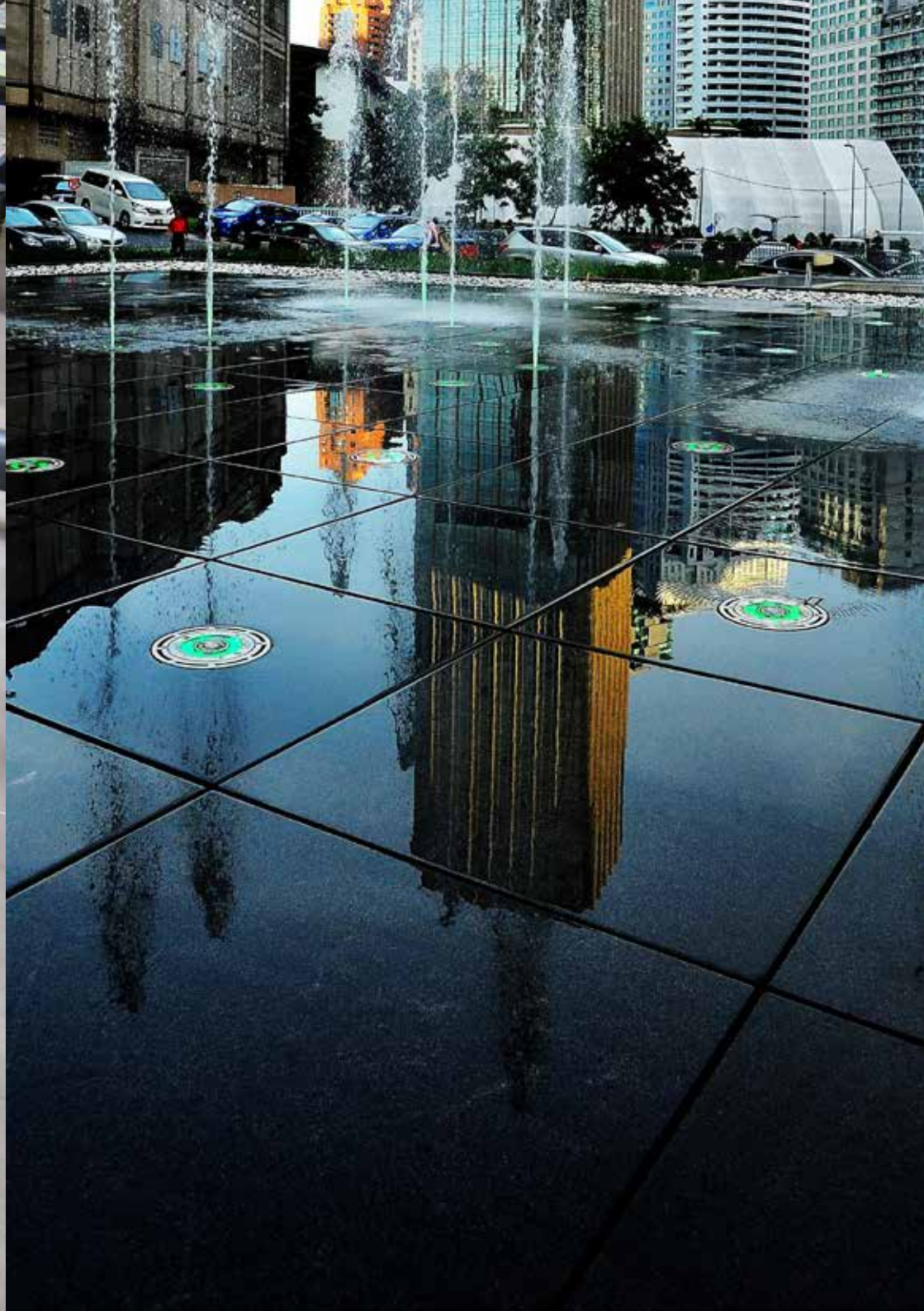
## Mandarin Oriental Hotel

### Malaysia

Visitors to the Kuala Lumpur City Centre at dusk are treated to a dazzling synchronised display of water, lights, and colours in front of the Mandarin Oriental Hotel. The large granite pavers of the prominent water fountain feature are supported by **VersiJack®** height and slope adjustable pedestals, each with a compressive strength of 1.5 tonnes.

The raised pavers hide the required cabling and pump system for the fountain and also provide the gaps between pavers that allow water issuing from the fountain to seemingly disappear upon coming in contact with the paver surface.







1 Bligh Street, Australia

## SpiraPave®

### Paver & Deck Stepjack Pedestal

**SpiraPave®** is a height and slope-adjustable pedestal with a unique 'step' design for supporting raised pavers and timber decking. It provides a cavity to conceal services, improves heat and sound insulation, and facilitates rapid surface drainage whilst allowing waterproofing membranes and services to remain accessible.



The height range of SpiraPave® is 12–74 mm, at 1 mm increments. The additional height of 45 mm is obtained with the use of a SP-45E extender.



*SpiraPave® is part of our Paver & Deck Support range of adjustable Elmich pedestals (4–1022 mm)*





Private Residence, Switzerland

### Features & Benefits

- Low minimum height of 12 mm
- Precise 1 mm height adjustment
- Easy access to waterproofing membranes
- Improves insulation and conceals services
- Lightweight and reusable

### Applicable Areas

- Balconies, terraces & decks
- Swimming pool surrounds
- Verandahs
- Courtyards

## TECHNICAL SPECIFICATION

Material	PP
Height range	12 to 119 mm
Design compressive strength	15 kN
Slope correction	up to 5% (Top) and 5% (Bottom)
Fixed extender height	45 mm



UOB Plaza, Singapore

## VersiPave®

### Independent Paver Correction

**VersiPave®** is a height-adjustable pedestal for paver support, engineered to provide a cost-effective solution to support raised pavers with inconsistent or uneven thickness.

The height range of VersiPave® starts from 12 mm and can be adjusted in 1 mm increments. Additional height can be obtained using 10, 20, 30, 40, and 60 mm Extenders. VersiPave® is cost-effective and can be quartered or halved for placement along wall edges and corners.



*VersiPave® is part of our Paver & Deck Support range of adjustable Elmich pedestals (4–1022 mm)*





Cornwall Gardens, Singapore

### Features & Benefits

- Low minimum height of 12 mm
- Precise 1 mm height adjustment
- Easy access to waterproofing membranes
- Improves insulation and conceals services
- Lightweight and reusable

### Applicable Areas

- Balconies, terraces & decks
- Swimming pool surrounds
- Verandahs
- Courtyards

## TECHNICAL SPECIFICATION

Material	PP
Height range	12 to 45 mm
Design compressive strength	10 kN
Fixed extender height	10 / 20 / 30 / 40 / 60 mm



## VersiFrame®

### Aluminium Joist Substructure System

**VersiFrame®** is an aluminium joist system using VersiJack® pedestals to efficiently and easily establish a rigid and stable raised paving or decking installation. The robust stability of the VersiFrame® system prevents displacement of its components when flooring is removed during maintenance of hidden mechanical and electrical services.



**PAVING**

### Features & Benefits

- High strength, durable and reliable substructure
- Efficient and uncomplicated installation process
- Versatile with an array of accessories to accommodate various designs
- Locked to VersiJack® pedestals with a Joist Adaptor for increased stability to prevent unintended movement

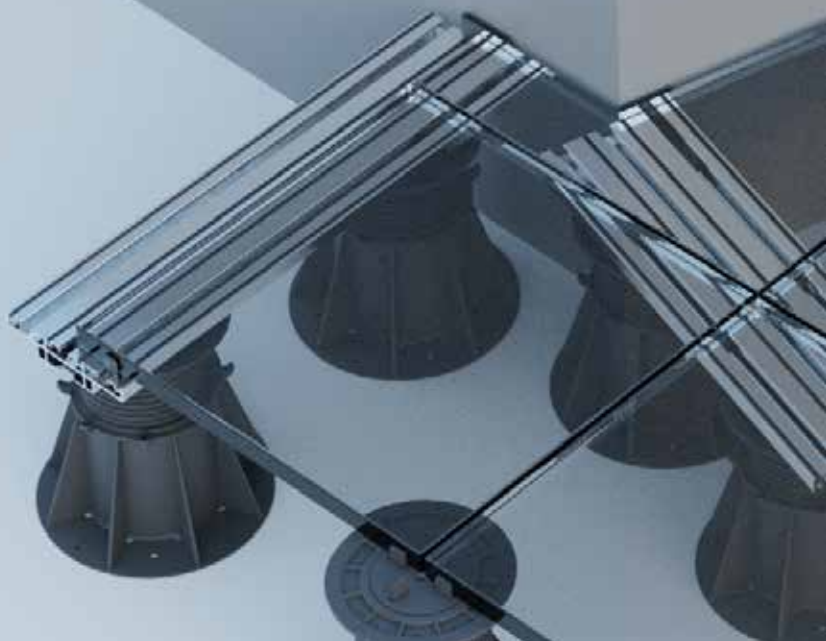


**DECKING**



# TECHNICAL SPECIFICATION

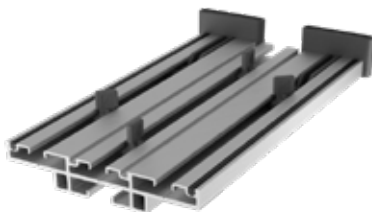
Material	Aluminium	
Height range	25 mm	35 mm
Supply length	2.4 m	
Pedestal span along joist		
- Live load @ 3.0 kN/m <sup>2</sup>	600 mm	900 mm
- Live load @ 5.0 kN/m <sup>2</sup>	400 mm	600 mm



## VF E-Support

### Edge Support For Non-Right Angled Pavers

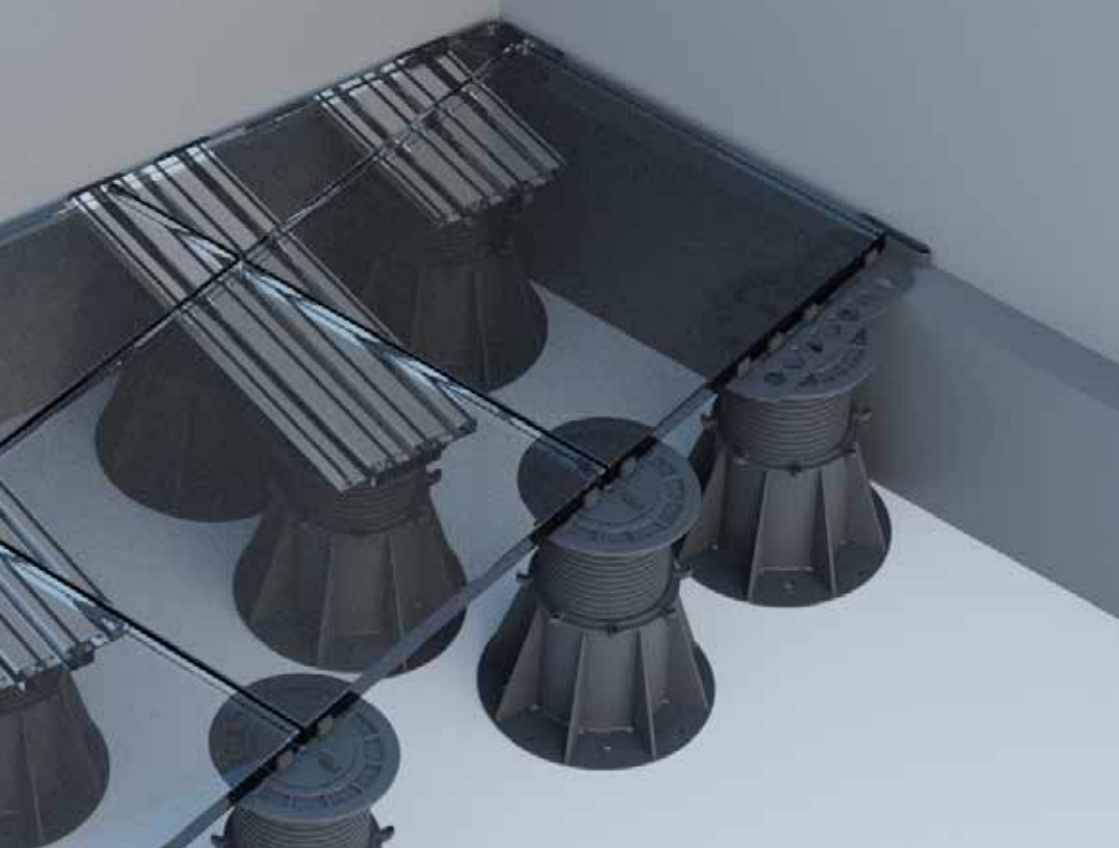
**VF E-Support** enables flexible paving layouts without the need for support brackets fastened to the perimeter wall. The VF E-Support is installed on VersiJack® Pedestals and uses E-Support Spacer Tabs to support odd-shaped or narrow pavers along the edge of a paver layout.



### Features & Benefits

- Installation of raised pavers along an irregular perimeter wall
- 360° rotating spacer tabs for flexibility of paver installation
- Dynamic 3 rail joist system for ease of positioning





# TECHNICAL SPECIFICATION

VF E-Support	
Material	Aluminium
Joist size	1000 (L) x 140 (W) x 25 (H) mm
E-Support Spacer Tab	
Material	PP
Spacer Tab thickness	3 / 4 / 5 / 6 / 8 mm



Pavers laid directly on pedestals



## Creating **everlasting** substructures for raised paving systems

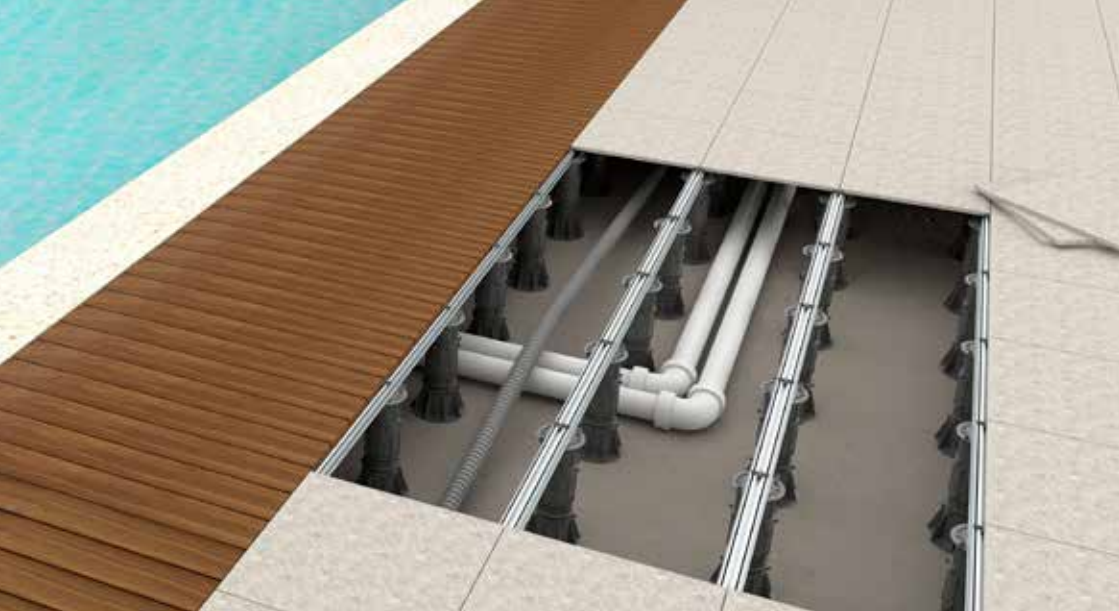
An aluminium joist raised paving system provides a precise frame for paver replacement, preventing any potential floor misalignments due to improper handling during routine maintenance.

The top surface of the **VersiFrame®** Aluminium Joist has thermoplastic rubber strips that provide sound and vibration dampening as well as paver movement minimisation.

Rather than setting the pavers directly on pedestals, a cost-effective solution is to use an aluminium substructure, which

reduces the number of pedestals required to support the load of the raised floor while also speeding up the installation process.

Building owners can relax, knowing that their outdoor patio or roof terrace will look as good as it did when it was first built, while also benefiting from concealed services and easy access to waterproofing membranes.



VersiFrame® substructure for paving and decking

## Selecting the **right joist material** for your deck

Choosing the right joist material can go a long way in ensuring the longevity of your deck. Traditional joist materials, whilst cheaper at getting the job done, do not hold up well to the test of time. Timber, for example, is a popular option for conventional joists, being a natural, non-toxic, and fully sustainable material.

However, timber is susceptible to rot and mould, requiring frequent maintenance to ensure the health and integrity of the material. In addition, timber is sensitive to moisture and heat, and is susceptible to distortions and cracks when subjected to unfavourable weather conditions.

As a rule of thumb, porous materials such as wood or concrete run the risk of structural failure after long-term usage. As such, a better alternative to conventional joists is **VersiFrame® Aluminium Joist**.

Aluminium joists have multiple advantages when compared to timber ones, including lower maintenance requirements and better structural strength.



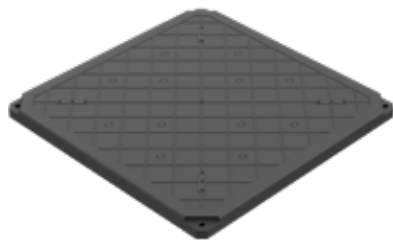
## VersiScape™

### Support Panel for Landscape Finishes

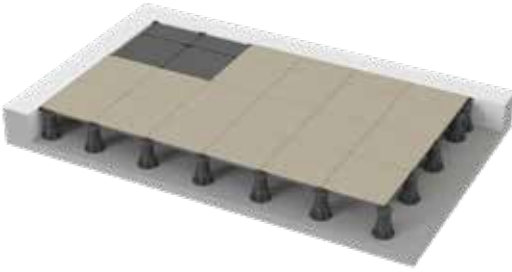
**VersiScape™** is engineered to provide a raised substructure with the strength and stability to create a customisable and safe landscape.

The system constructs a levelled surface that accommodates virtually any landscape finish, from pavers to porcelain tiles of varying sizes with minimum thickness of 20 mm.

In the event of accidental tile breakage, VersiScape™ is able to withstand the weight of broken shards and human loads. This prevents injury to pedestrians and simplifies the maintenance of the broken finishes.

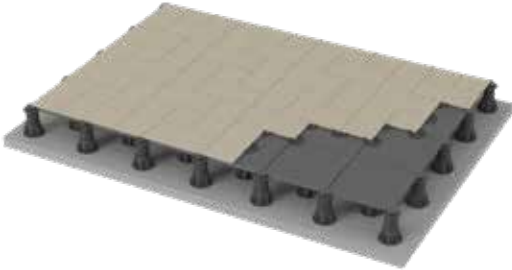






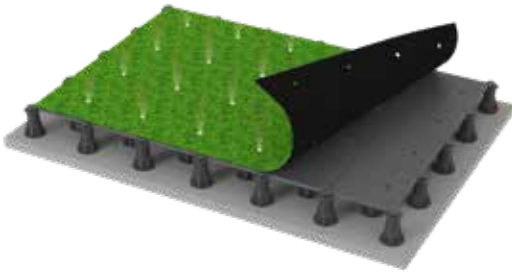
### Conventional Paver Assembly

VersiScape™ supports nominal 600x600 mm pavers and porcelain tiles.



### Variable Paver Assembly

VersiScape™ supports tiles of varying sizes, thicknesses and materials allowing for design flexibility.



### Artificial Landscape Assembly

VersiScape™ creates a levelled surface for non-paver finishes.

## TECHNICAL SPECIFICATION

Material	PP
Dimension	600 (L) x 600 (B) x 32 (H) mm
Weight	2.65 kg
Coverage	~2.8 pcs/m <sup>2</sup>



Geylang @ Saigon, Vietnam

## VersiWall® GP 2060

### Wind-Resistant Green Wall Tray

**VersiWall® GP 2060 (VGP 2060)** is an easy-to-install and low-maintenance modular vertical greening system with a choice of mounting, planting density and growth media options to suit different wall conditions.

### Applicable Areas

- Interior walls
- Exterior walls
- Free standing walls
- Building facades



Wind-Resistant

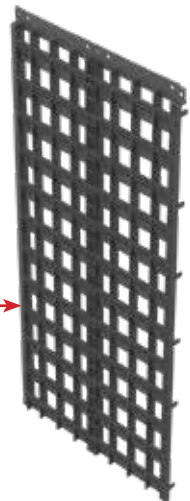


Fire-Resistant  
EN13501-1  
Class B available

VersiWall® GP 2060



Mounting Panel





Oncidium Heights, Malaysia

## Features & Benefits

- Allows different spacing for varied plant densities on the wall
- Universal mounting
- Anti-lift arms prevent dislodging of trays
- Proprietary mounting panel reduces number of bolts required
- Certified by independent international test authority to withstand wind uplift from various directions up to 108 km/h

## TECHNICAL SPECIFICATION

Material	PP
Dimension	Tray: 200 (L) x 150 (H) x 195 (D) mm Mounting Panel: 400* (L) x 900* (H) x 22 (D) mm
Tray pitch	150–225 mm
Planting media volume	~1.8 L
Weight	~75 kg/m <sup>2</sup>

\*Mounting Panel may be cut to size as required





Retail Showroom, Singapore

## VersiWall® GP 250

### Slim Profile Green Wall Tray

**VersiWall® GP 250 (VGP 250)** is designed with both ease of installation and safety in mind. Trays can be mounted on a flat bar or wire mesh, which includes security clips and a security screw system to prevent the trays from being accidentally dislodged.



### Applicable Areas

- Interior walls
- Exterior walls
- Free standing walls
- Building facades







Private Residence, Singapore

## Features & Benefits

- Easily secured directly to the wall or mesh
- Standard \*pots (90 mm base diameter) can fit snugly into the engineered rib design of the tray for temporary green wall display

## TECHNICAL SPECIFICATION

Material	PP
Dimension	Tray: 250 (L) x 143 (H) x 140 (D) mm Rail: 1000* (L) x 50 (H) x 16 (D) mm
Tray pitch	150–220 mm
Planting media volume	~2.1 L
Weight	~50 kg/m <sup>2</sup>

*\*not included*



15 Joan Road, Singapore

## VersiWall® GT

### Aluminium Green Wall Tray



**VersiWall® GT (VGT)** is a modular green wall system which gives architects and builders flexible and cost-effective solutions to create living walls for both indoor and outdoor greenery. Manufactured from aluminium, VGT consists of rows of pilasters attached to a wall, onto which the trays and irrigation system hook on.

### Applicable Areas

- Interior walls
- Exterior walls
- Free standing walls
- Building facades







### Features & Benefits

- Fire-proof
- Durable
- Fast & simple modular installation
- Anti-lift screws prevent tray dislodgement

### TECHNICAL SPECIFICATION

Material	Aluminium
Dimension	Tray: 1000* (L) x 125 (H) x 95 (D) mm Pilaster: 38 (L) x 1200* (H) x 108 (D) mm
Tray pitch	200 mm
Planting media volume	~6.3 L
Weight	~70 kg/m <sup>2</sup>

*\*Tray and pilaster may be cut to length as required*





Private Residence, Singapore

## VersiWall® FR

### Fire-Resistant Green Wall Panel

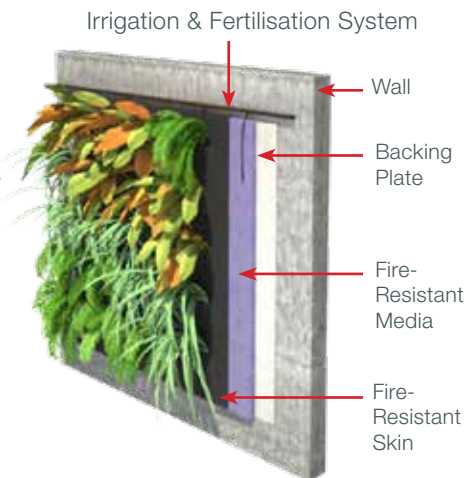


Fire-Resistant  
BS 476 Class 0

**VersiWall® FR** is a fire-resistant modular composite green wall system which gives architects and builders a cost-effective solution for urban greenery. It uses a combination of materials that mitigates the issue of fire safety and allows the elegant articulation of attractive living walls anywhere.

### Applicable Areas

- Interior walls
- Exterior walls
- Free standing walls
- Building facades





Infocomm Media Development Authority Office, Singapore

**Features & Benefits**

- Fire-resistant
- Cost-effective, flexible for on-site modification
- Fast installation times with modular pre-fab system
- Concealed irrigation

TECHNICAL SPECIFICATION	
Material	Fire-resistant media
Dimension	1200 (L) x 1200 (H) x 30 (W) mm
Weight	~40 kg/m <sup>2</sup>
Fire rating	BS 476 Class 0





ITE College Central, Singapore

## VersiWall® GM

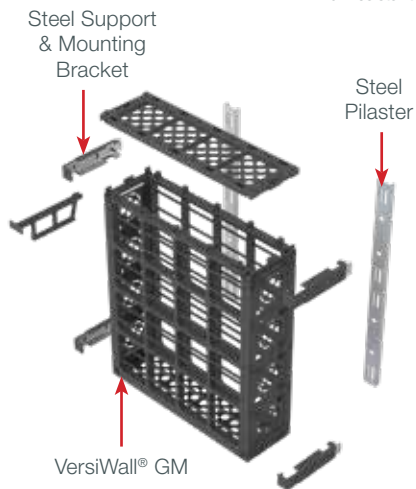
### Wind-Resistant Green Wall Cassette

**VersiWall® GM (VGM)** is an engineered architectural living wall system comprising VGM® planting modules each with a geotextile media bag, support brackets with covers, anti-lift arms and anchoring pilaster systems. This is paired with our proprietary planting media and an automated drip irrigation-cum-fertilization (fertigation) system to ensure optimum results.

VersiWall® GM uses UV-stabilised plastic modules and stainless steel support brackets and pilasters.



Wind-Resistant







Starbucks, USA

### Features & Benefits

- Ample media room to support robust root growth
- Modules are established in nursery before installation
- Certified by independent international test authority to withstand wind uplift from various directions up to 110 km/h

### Applicable Areas

- Interior walls
- Exterior walls
- Free standing walls
- Building facades

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 600 (H) x 150 (D) mm
Internal volume	~24 L
Weight	~170 kg/m <sup>2</sup>





# Elmich Green Wall Braved Strongest Typhoon of 2016



At Zhongshan Road Pedestrian Street, bolted on the front of JI Hotel Xiamen is Elmich's **VersiWall® GM** (VGM) green wall that measures about 220 sq m. The green wall is a significant aesthetic feature for the hotel to welcome its visitors and can be easily recognised from afar by tourists who are unfamiliar with the new environment.

In September 2016, super typhoon 'Meranti' made landfall in Xiamen City, Fujian with a wind gust speed of around 170 km/h bringing heavy downpours and causing major disruptions to the electricity and water supplies affecting more than 3.2 million homes located in the region. Elmich's VGM green wall at JI Hotel Xiamen stood firm and intact despite the super typhoon.

Elmich's VGM mounting system is equipped with anti-lift arms and is a proprietary anchoring pilaster system that is certified by an independent international test authority to withstand wind uplift from various directions up to 110 km/h.

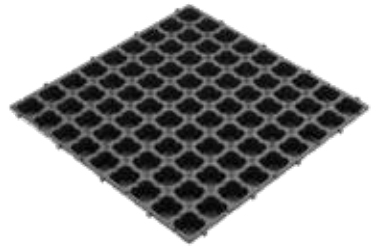




## VersiDrain® 30

### Planting Tray

**VersiDrain® 30** is a lightweight interlocking modular green roof tray designed for versatility. Its flexibility allows it to be easily cut to fit different shapes and conforms with ease to curved surfaces. Its easy-to-interlock feature facilitates connecting adjacent trays together for stability.



VersiDrain® 30 comprises a network of reservoirs that stores over 13.2 litres of rainwater per square metre for irrigating the plants, thus reducing watering requirements and costs, and promoting plant growth in a sustainable manner.





Commercial Building, Australia

### Features & Benefits

- Provides efficient drainage
- Protects waterproofing membrane
- Enable on-site rainwater retention
- Recyclable
- Suitable for retrofitting and/or new projects
- Mitigate urban runoff
- Can be cut to fit any shaped green roof

### Applicable Areas

- Extensive green roofs
- Planter boxes
- Roadside turfing

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 30 (H) mm
Planting media height	variable*
Reservoir capacity	13.2 L/m <sup>2</sup>

*\*Varies according to design parameters*

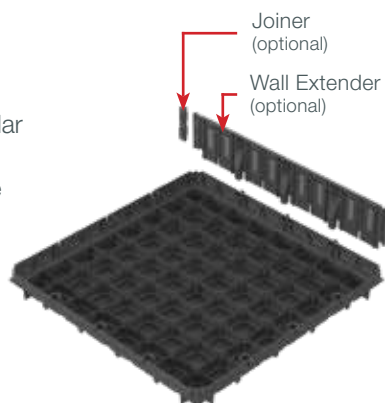


## VersiDrain® 60

### Extendable Wall Planting Tray

**VersiDrain® 60** is a lightweight interlocking modular green roof tray designed for versatility. It allows the addition of optional Wall Extenders to increase the planting depth up to 100 mm and for off-site planting to achieve instant greening of rooftops.

VersiDrain® 60 comprises a network of reservoirs that stores 18 litres of rainwater per square metre for irrigating the plants, thus reducing watering requirement and costs, promoting plant growth in a sustainable manner. The Wall Extenders between trays can be easily removed where desired to form a monolithic planting surface.







Kaohsiung Station, Taiwan

### Features & Benefits

- Provides efficient drainage
- Reduces irrigation requirement
- Protects waterproofing membrane
- Enable on-site rainwater retention
- Recyclable
- Suitable for retrofitting and/or new projects
- Mitigate urban runoff
- High water storage capacity

### Applicable Areas

- Extensive green roofs
- Planter boxes

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 60 / 130 (H)* mm
Planting media height	variable** / 100* mm
Reservoir capacity	18 L/m <sup>2</sup>

\*With Wall Extenders    \*\*Varies according to design parameters

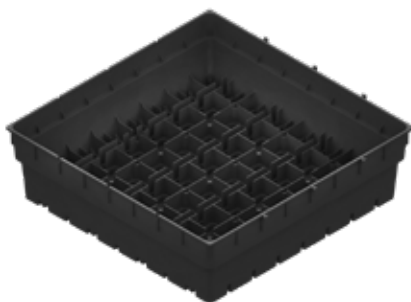


## VersiDrain® 150

### Pre-Planted Modular Planting Tray

**VersiDrain® 150** is a lightweight interlocking modular green roof tray with high walls, suitable for pre-planting off-site.

It comprises a network of reservoirs that stores 32 litres of rainwater per square metre for irrigating the plants, thus reducing watering requirement and costs, promoting plant growth in a sustainable manner.







Private Residence, Singapore

### Features & Benefits

- Provides efficient drainage
- Reduces irrigation requirement
- Protects waterproofing membrane
- Enable on-site rainwater retention
- Lightweight and durable
- Recyclable
- Suitable for retrofitting and/or new projects
- Mitigate urban runoff
- High water storage capacity

### Applicable Areas

- Extensive green roofs
- Planter boxes

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 150 (H) mm
Planting media height	100 mm
Reservoir capacity	32 L/m <sup>2</sup>





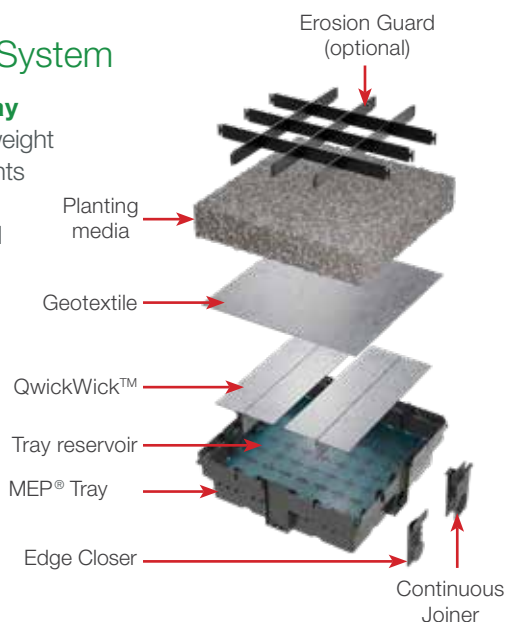
## MEP® Tray

### Pre-Planted Modular Planting System

#### Modular Extensive Planting (MEP®) Tray

adopts a modular tray design, which is lightweight and robust. It has water storage compartments that passively assist irrigation requirements and is made from high-strength UV-stabilised polypropylene.

Each MEP® Tray, including accessories, saturated planting media, plants and stored water, weighs approximately 38 kg. The self-contained MEP® Tray may be pre-planted in a nursery prior to installation.





Private Residence, Australia

### Features & Benefits

- Established green roof upon installation
- Modular, lightweight and portable
- Closed drainage system
- Watertight connectors
- Spill-proof planting media containment

### Applicable Areas

- Rooftops
- Metal decks
- Concrete decks
- Patios
- Walkways

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 150 (H) mm
Planting media height	75 mm
Reservoir capacity	40 L/m <sup>2</sup>



## VersiDrain® BG®

### BlueGreen™ Roof Tray System

**VersiDrain® BG®** is an extensive green roof planting tray with the added functionality of creating a bluegreen roof. It is a lightweight and robust planting tray made from high-strength UV-stabilised recyclable plastics. The tray comprises of three layers: a planting layer, an irrigation reservoir layer, and a stormwater attenuation layer.

Its internal irrigation reservoir promotes plant sustainability with minimised maintenance.







### Features & Benefits

- Integral component to at-source stormwater management
- Reduce peak runoff flow rates
- Does not compromise the roof's waterproofing warranty
- Adaptability to various storm events

TECHNICAL SPECIFICATION	
Material	PP
Dimension	500 (L) x 500 (W) x 150 (H) mm
Planting media height	75 mm
Irrigation reservoir capacity	~10 L/m <sup>2</sup>
Stormwater attenuation capacity (includes irrigation reservoir capacity)	~40 L/m <sup>2</sup>



## EnviroMix® PB

### Nutrient-Infused Lightweight Media Board

**EnviroMix® PB** is a lightweight organic planting board manufactured from environmentally sustainable materials enhanced with additives, including nutrients beneficial for healthy plant growth. It is made up of primarily recycled organic products that has undergone microwave sterilisation. It is an ideal planting medium for green roofs where weight is a major consideration.



It has the ability to absorb and retain water 3 times its weight and yet remain lighter than conventional media which holds much lesser water when saturated.





Gardens By The Bay Children's Garden, Singapore

### Features & Benefits

- Stackable for on-site storage
- Easily cut for flexible design and layout
- Minimal backfill of soil required
- Retains water for plant growth during short drought periods

### Applicable Areas

- Rooftops
- Extensive green roofs

## TECHNICAL SPECIFICATION

Dimension	500 (L) x 333 (W) x 50 (H) mm
Weight	Dry: ~14.4 kg/m <sup>2</sup> Saturated: ~45 kg/m <sup>2</sup>





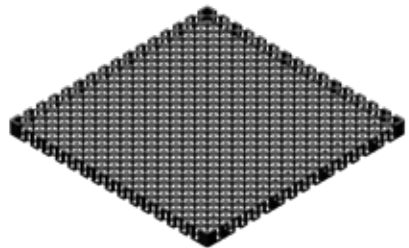
Gardens by The Bay, Singapore

## VersiCell®

### Sub-Surface Drainage Cell

**VersiCell®** is designed and engineered for sub-surface drainage, heat and sound insulation, as well as providing waterproofing membrane protection.

It eliminates the use of heavy gravel aggregates for sub-surface drainage and screeds for waterproofing membrane protection in planter boxes and roof gardens. VersiCell® is also applied on retaining walls to prevent build up of hydrostatic pressure.





City of Dreams, Philippines



Raffles Dubai Hotel, Middle East

### Features & Benefits

- High internal void
- High compressive strength
- Lightweight
- Modules interlock for stability and easy installation
- Protects waterproofing membranes

### Applicable Areas

- Intensive green roofs
- Landscaped decks
- Planter boxes
- Basement walls
- Retaining walls
- Paved areas & roadways
- Sports fields

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 20 / 30 (H) mm
Compressive strength	>800 kN/m <sup>2</sup>
Discharge rate @ 1% gradient	>16.5 L/m.s







# Marina Barrage

Singapore

The Marina Barrage is Singapore's multi-purpose attraction. Its green roof commands a stunning panoramic view of Singapore's cityscape. The lush green lawn and recreational space on the green roof are made possible by the application of a bonded waterproofing membrane over the roof skin protected by cement and sand screed followed by the installation of 14,000 sq m of **VersiCell®** drainage modules.

VersiCell®'s lightweight structure, high compressive strength, rapid water capture, and highly efficient drainage capability as well as its ability to be easily joined into large panels on-site made it the ideal drainage module for the extensively large sloping roof of the Marina Barrage.





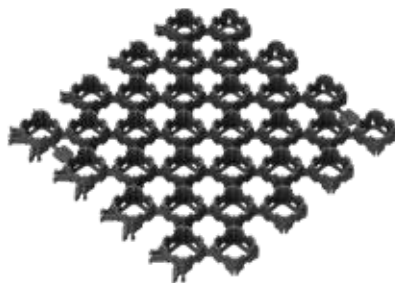
F1 Pit Building, Singapore

## TurfPave® XD

### Grass & Gravel Paver

**TurfPave® XD** is a high strength stabilisation module designed to contain grass or decorative gravel for emergency vehicular access ways and occasional vehicular traffic.

It replaces asphalt and concrete to create permeable surfaces thereby enabling these areas to blend into the aesthetics of their surroundings.







Private Residence, New Zealand



Homebush Olympic Village, Australia

### Features & Benefits

- Distributes vehicle weight on turf surfaces
- Able to support heavy vehicles
- Allows water infiltration
- Does not hinder root and runner growth

### Applicable Areas

- Fire engine access lanes
- Overflow & street shoulder parking areas
- Private house driveways
- Pedestrian pathways

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 40 (H) mm
Compressive strength	Unfilled: >1,350 kN/m <sup>2</sup> Filled: >66,500 kN/m <sup>2</sup>





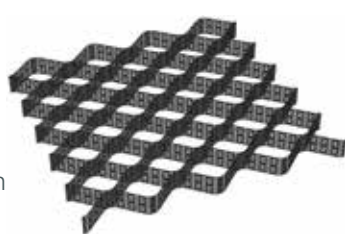
Capella Hotel, Singapore

## VersiWeb®

### Soil Confinement Cell

**VersiWeb®** is a cellular confinement system incorporating ultrasonically bonded flexible thermoplastic strips that form a strong and dimensionally stable honeycombed structure which controls erosion by limiting movement of infill within its individual cells.

It offers architects and developers a comprehensive solution to long term slope protection and channel protection and stabilisation.



VersiWeb®  
Anchor Cap





Downtown Line II Depot, Singapore

### Features & Benefits

- Long-term slope/channel stabilisation and protection
- Conforms to most terrain profiles
- Easily transported and handled on-site

### Applicable Areas

- Slope stabilisation & protection
- Earth retention
- Load support
- Channel & shoreline protection
- Planting media containment

## TECHNICAL SPECIFICATION

Material	HDPE
Dimension	6100 (L) x 2440 (W) x 100–200 (H) mm
Tensile strength	Longitudinal: 18,400 kN/m <sup>2</sup> Transverse: 19,500 kN/m <sup>2</sup>





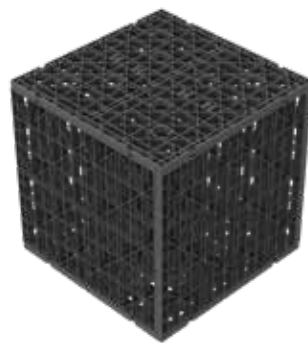
Greenwood Sanctuary, Singapore

## VersiTank®

### On-Site Soak Away Module

**VersiTank®** sub-surface water infiltration storage tank provides an efficient, cost-effective, and ecologically sustainable solution for stormwater control and management. It restores on-site natural water filtration, controls the release of surface run-off, and harvests water for on-site reuse.

It can be conveniently installed and is available in several sizes to suit specific installation requirements. When required, tanks can be joined horizontally and vertically, sharing a common panel resulting in cost savings and efficiency.







IKEA Doha Festival City, Qatar

### Features & Benefits

- Reduces stormwater run-off
- High compressive strength
- Less costly than concrete and metal systems
- Low storage and transport costs
- Easy assembly and installation
- Improves ground infiltration

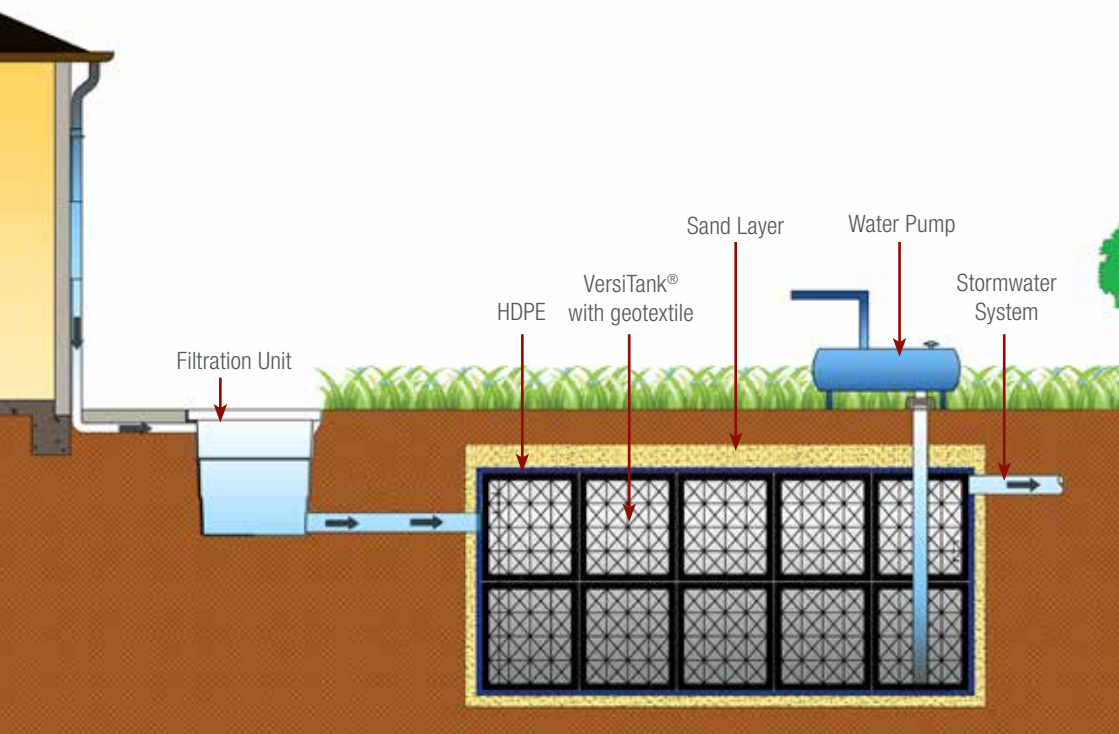
### Applicable Areas

- Green parks
- Home gardens
- Sports fields
- Green open spaces
- Swales
- Rain gardens

## TECHNICAL SPECIFICATION

Material	PP
Dimension	500 (L) x 500 (W) x 500 (H) mm
Compressive strength	~150–1,000* kN/m <sup>2</sup>
Internal void volume	~95%

*\*Tanks have different variations to achieve required strength*

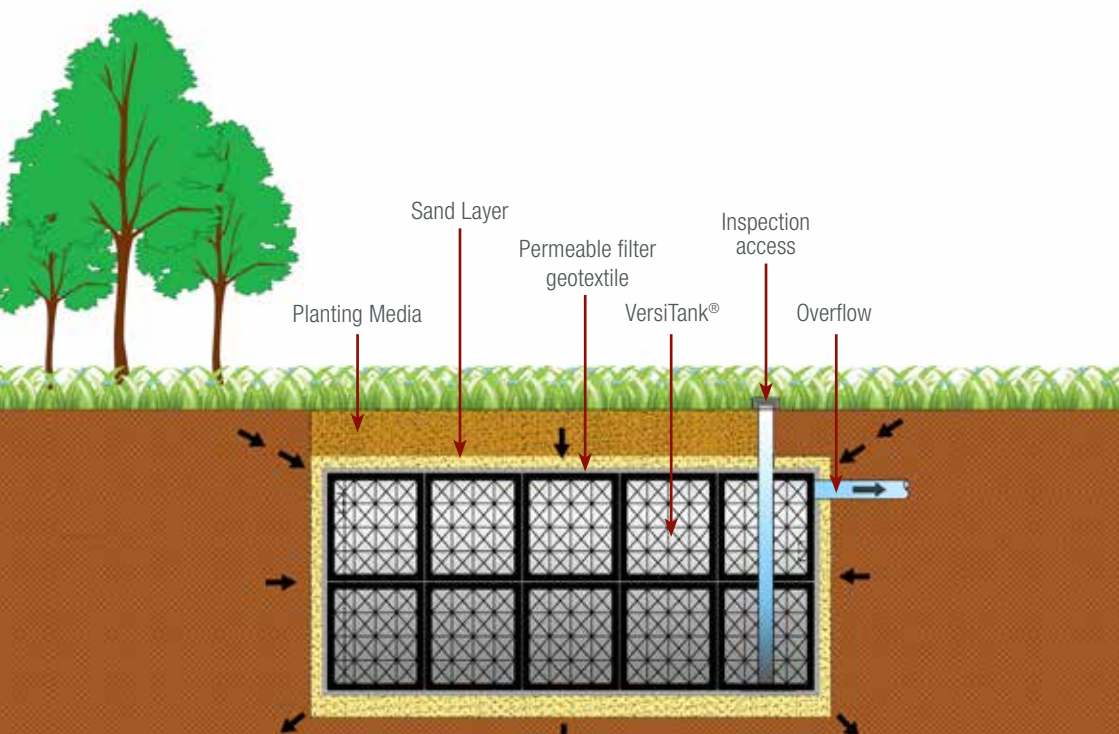


## VersiTank® Infiltration System



Punggol Field, Singapore





## VersiTank® Retention System



Private Residence, Singapore







# Bioswale vs Concrete Drain

## Concrete Drains - Singular Function

The conventional concrete drain serves only as a conduit for stormwater to be conveyed away from the source expeditiously. However, efficiency at performing this singular role is undermined when high peak flow causes flash floods downstream due to the build-up of drainage bottlenecks. Concrete drains do not contribute to aesthetic enhancement or serve to minimise the urban heat island effect or offer any form of filtration. Mosquito breeding may also be an issue when exposed concrete drains become clogged.



## Bioswales In Comparison

In comparison, the bioswale or vegetated swale, such as those at the Firefly Park @ Clementi, integrate features that improve water quality, reduce runoff volume, and pollutant loading, both on and off-site, through its infiltration and detention capabilities, in addition to providing the conveyance function of the conventional drain.

The bioswale is an eco-friendly and cost-effective means to manage stormwater runoff at the source, with the potential to improve water quality, enhance landscape aesthetics and provide flood containment without the need for costly stormwater detention construction. It requires little more than normal landscaping to maintain.



High Line Park, USA

## TreeGrip™

### Rootball Anchoring System

**TreeGrip™** is an underground root ball anchoring system designed to anchor newly planted trees, keeping them upright and supporting them against strong winds.

TreeGrip™ provides flexibility for root growth, making terrace garden appear natural and beautiful. This system of securing trees has many advantages over staking and is suitable for large root-balled trees.

#### Benefits

- Out of sight anchoring
- Low profile anchor eliminates further excavation





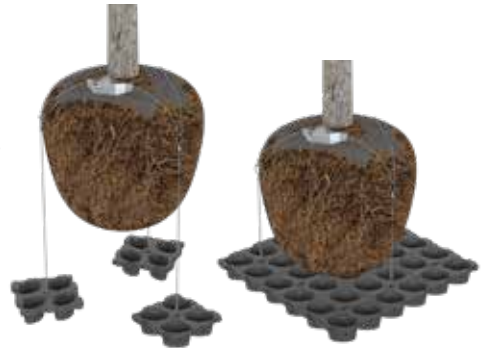
## Steel Plate Anchor

Designed as the lowest profile 'deadman' anchor system available and provides a complete package - no further parts required. It consists of three high strength steel anchor wires and single piece anchor strap for fast installation.



## D-Man® Anchor

D-Man® Rootball Anchor is a Platipus® tree anchoring system designed to anchor trees in challenging urban environments and roof gardens where planting pits or planters are too shallow to provide sufficient anchoring efficacy or have services buried underneath which hinder tree anchoring.



## E-Bolt Anchor

E-Bolt Rootball Anchor is a Platipus® tree anchoring system that uses expanding eyebolts to stabilise trees without earth anchors in very shallow concrete podiums, on roof gardens or unusual urban sites.





## StrataVault® Structural RootCell®

**StrataVault®** advanced structural RootCell® is engineered to keep trees healthy, ensuring the long term success of urban trees. StrataVault® tree pits allow building elements and root systems to share space, reducing installation times and costs while promoting healthy root growth.

The system provides quality soil for healthy tree roots in built-up areas by preventing soil compaction caused by building structures, vehicular traffic, and heavy pedestrian footfall.







Pedestrian Pathway @ Asian Civilisation Museum, Singapore

### Features & Benefits

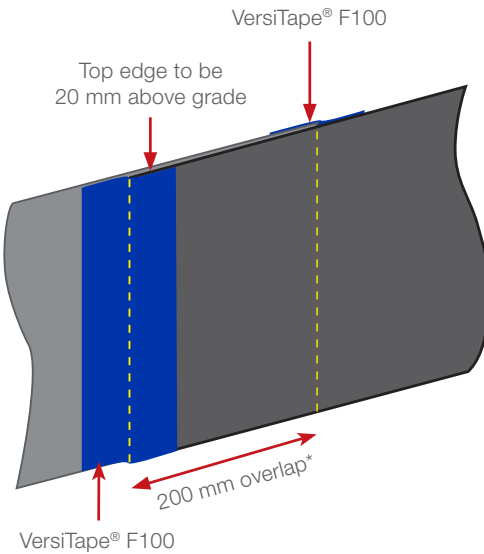
- High compressive load
- Strong structure
- Fully recyclable

### Applicable Areas

- Carparks
- Roadways
- Footpaths
- Plazas
- Median

## TECHNICAL SPECIFICATION

Material	PP
Dimension	600 (L) x 600 (W) x 400 (H) mm
Compressive strength	>300 kN/m <sup>2</sup>
Internal void volume	~95%



## RootGard™

### Root Barriers

**RootGard™** root barriers are versatile and made of extremely tough polyethylene to protect hardscapes and landscapes from damage by tree roots. When used around building foundations, RootGard™ also prevents root intrusion.

The impermeable geomembrane is also ideal for golf course construction to separate the greens from invasive grass and clay soils.



\*For root barriers encircling tree roots. Contact our technical consultants for other uses.



## Features & Benefits

- Flexible and suitable for use in irregular or difficult locations
- Manufactured from high quality lightweight polyethylene material
- Available in a range of depth and length configurations to fit all planning applications
- Cut edges can be easily joined using adhesive
- Simple and easy installation
- Resistant to biological attack and a wide range of soil borne chemicals

TECHNICAL SPECIFICATION	
Material	HDPE
Depth	300, 600, 1000, 1500 mm
Thickness	1.25 ± 0.05 mm
Break strength: Machine direction Transverse direction	2600 t/m <sup>2</sup> (ASTM D638) 2700 t/m <sup>2</sup> (ASTM D638)
Break elongation: Machine direction Transverse direction	600% (ASTM D638) 700% (ASTM D638)
Tear strength: Machine direction Transverse direction	14 kgf (ASTM D1004) 15 kgf (ASTM D1004)
Puncture strength	36.5 kgf (ASTM D4833)
Hydrostatic resistance	200 t/m <sup>2</sup> (ASTM D751-A)
Multi-Axial tensile strength	1600 t/m <sup>2</sup> (ASTM D5617-A)
Elongation @rupture	20.8% (ASTM D5617-A)



## LawnGard™

### Professional Garden Edge

**LawnGard™** is a versatile and durable solution to create clean and defined borders for outdoor spaces. While enhancing the aesthetic appeal of lawns and garden beds, LawnGard™ separates different soft and hardscapes, retain mulch and stones, and prevent grass or weeds from encroaching onto flower beds. Effectively, serving as pavement edging and a root barrier.



## Durability

LawnGard™ is highly resistant to UV rays, weathering, and wear and tear.

## Easy Installation

LawnGard™ is easy to install. Simply position the edging halfway into dug trench as desired and backfill with soil or planting media to hold in place.

LawnGard™ Pegs may be used to secure it into the ground.

## Versatility

LawnGard™ is flexible, allowing the creation of smooth curves and angles that fit the landscape design.

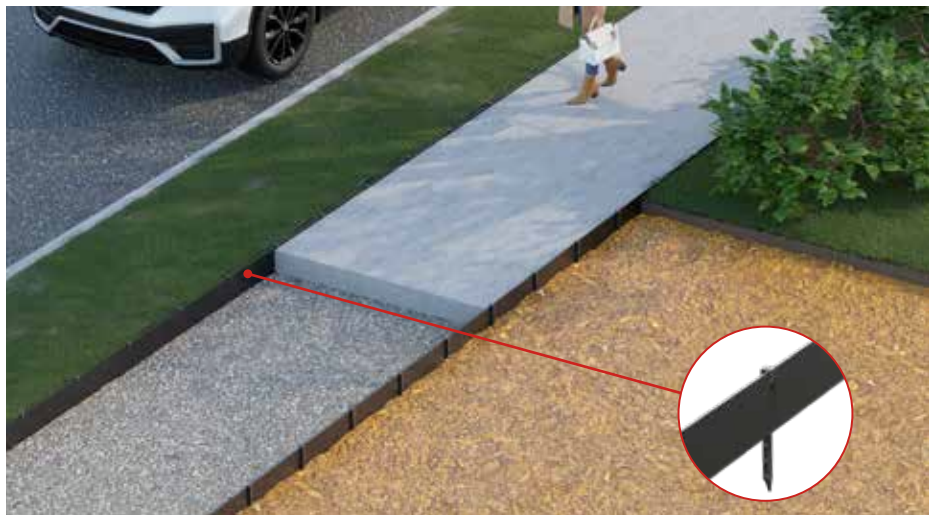
## Maintenance Free

LawnGard™ requires minimal maintenance. It is resistant against rust, rot, and fading, which eliminates the need for constant upkeep, and can be used in a variety of soil condition.



## Included Pegs

LawnGard™ comes with a set of durable pegs that securely anchor the edging into the ground. These pegs are specially designed to complement and support the LawnGard™ in withstanding various soil conditions, providing maximum stability. With a simple yet effective design, it ensures secured positioning of the LawnGard™, even in high-traffic areas.



LawnGard™ Pegs for anchoring





## TrackGard®

### Modular Roadway System

**TrackGard®** has excellent slip-resistance surface and its contiguous installation ensures a safe walkable path for pedestrians and a stable platform for vehicles.

Each UV-stabilised module is lightweight allowing for fast installation and dismantle times, requires minimal maintenance and is easy to clean using a high pressure washer.





**Features & Benefits**

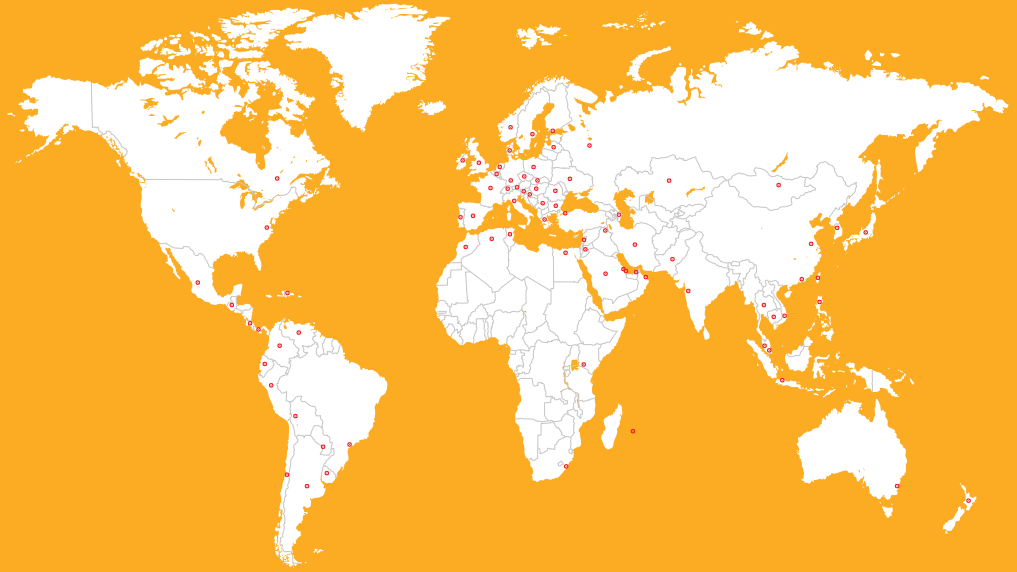
- Modules interlock securely without any tools or fasteners
- Modules are interchangeable and expandable
- Easily installed and removed

**Applicable Areas**

- Access roads
- Construction sites
- Sports fields
- Event flooring
- Beach access
- Race courses

TECHNICAL SPECIFICATION	
Material	PP/HDPE
Coverage	~3.7 modules/m <sup>2</sup>
Compressive strength	>2,000 kN/m <sup>2</sup>
Slip resistance (SS 485)	Wet pendulum testing: Class X Dry friction testing: Class F

# GLOBAL BUT LOCAL PARTNERSHIP



## WHO WE ARE

Sika is a specialty chemicals company with a globally leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protection in the building sector and industry. Sika has subsidiaries in 102 countries around the world, produces in over 400 factories, and develops innovative technologies for customers worldwide. In doing so, it plays a crucial role in enabling the transformation of the construction and transportation industries toward greater environmental compatibility. In 2024, Sika's more than 34,000 employees generated annual sales of CHF 11.76 billion.

Our most current General Sales Conditions shall apply.  
Please consult the Data Sheet prior to any use and processing.

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