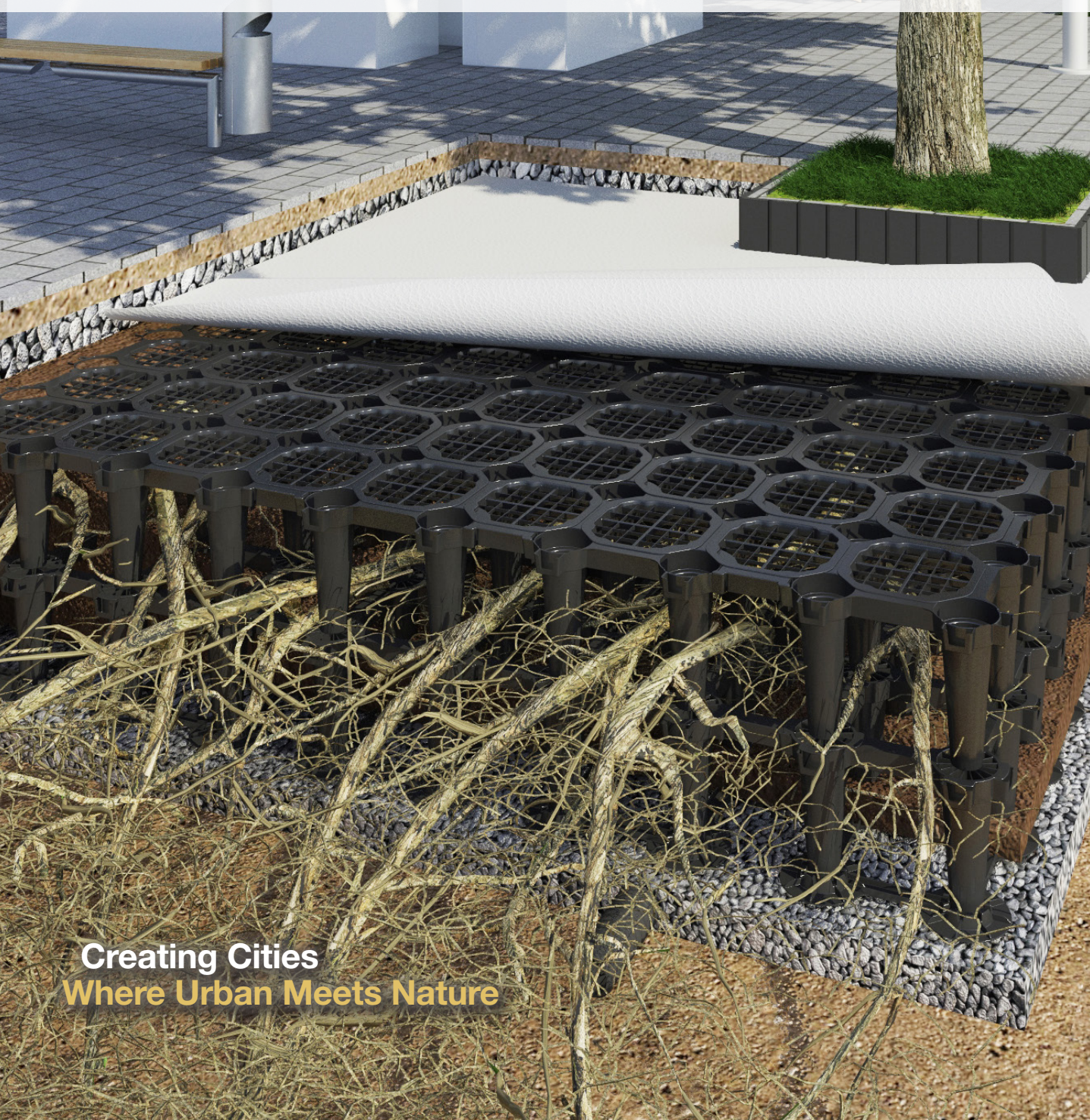


# StrataVault® Structural RootCell®



**Creating Cities  
Where Urban Meets Nature**

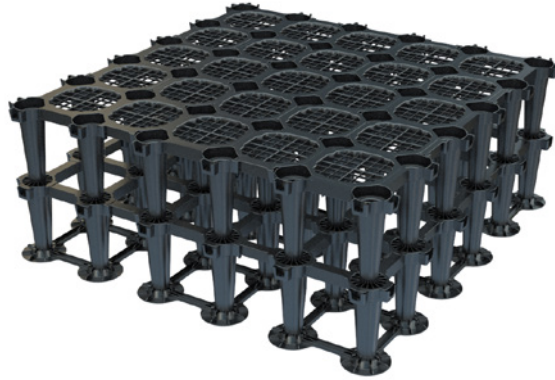
## Our Innovation Your Solution

StrataVault® advanced structural RootCell® modules are engineered to keep trees healthy and ensure the long term success of urban trees. StrataVault® tree pits allow root systems to overlap and share space, reducing installation times and costs while promoting healthy root growth. The strong compressive strength of 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. StrataVault® boasts fast set-up times and is a long-lasting cost effective solution to enhance urban landscapes.



# StrataVault®

StrataVault® is an extremely high strength module for support of pavements and traffic loads while providing large volumes of uncompacted soil for healthy tree root systems and water harvesting.



Assembled StrataVault® matrix

## About StrataVault®

Modular StrataVault® system employs advanced design geometry and reinforced copolymers to produce an incredibly robust, skeletal matrix. This matrix has been tested using Finite Element Analysis, as well as physical Ultimate Load tests at research university. These test results have been verified by consulting engineers to provide adequate support for pavement loads. This patented design integrates an array of essential features, making it the most advanced structural RootCell® module of its type globally.

Immense compressive load bearing capacity is achieved by combining columnar design geometry with recycled, reinforced co-polymer materials.

Due to the positive lateral and vertical connectors, an assembled StrataVault® matrix also has excellent lateral strength. The octagonal modules are placed and connected rapidly and simply, with minimum skilled labour required.

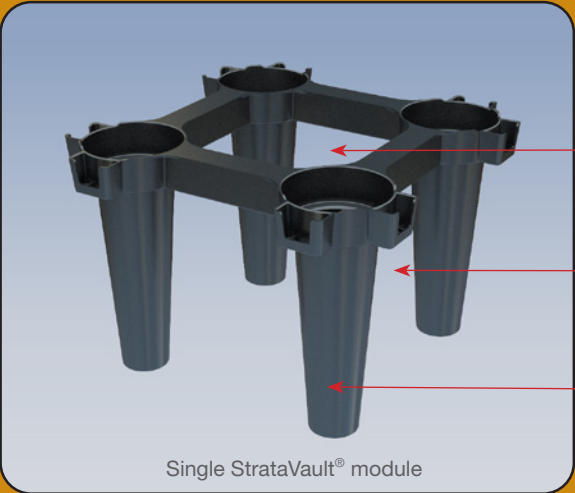
Large spaces between the columns provide generous avenues for root growth in all directions, and volume within the columns is open and readily accessible for feeder and structural tree roots.

The environmentally-critical design parameters have resulted in an extremely strong module made from recycled material, which leaves over 90% of its total volume for root growth and stormwater harvesting.



Pedestrian Pathway @Asian Civilisation Museum, Singapore

# Distinctive Features



Single StrataVault® module

Large, open structure for soil and filter media loading

Generous openings for larger services and pipe systems

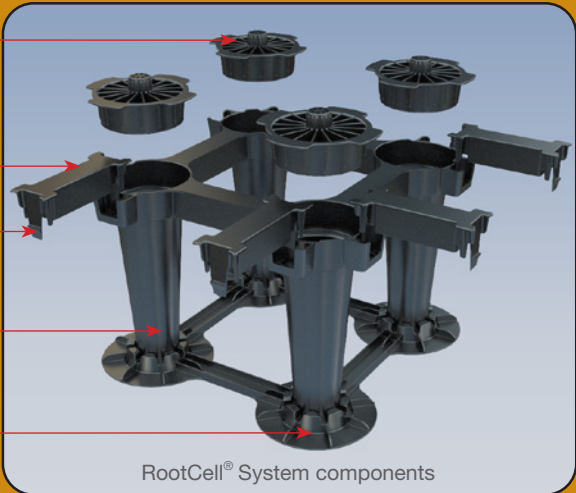
Highly engineered columnar structure for compressive strength and rigidity

Vertical connectors, for interlocking layers of **StrataVault®** Modules

Removable bridging connectors  
Lateral connectors, for connecting individual modules

Advanced columnar design geometry

Foot plate, for minimised pressure at base



RootCell® System components



Queen Elizabeth Walk, Singapore



# Technical Specifications

Material	100% recycled polypropylene
Dimensions	600 mm (L) x 600 mm (W) x 404 mm (H)
Capacity	
Free Volume	Above 90%
Ultimate load strength (FEA & lab tested)	300 kPa

*Important Note:*  
Request StrataVault® Construction Details for matrix dimensions in plan and elevation

## Applicable Areas

- Carparks
- Roadways
- Footpaths
- Plazas
- Medians

## Advantages

### Lower Cost Installation

StrataVault® has been designed to achieve major reductions in installation costs. Units snap together quickly and easily, reducing labour times drastically.

### Economical Shipping

Innovative nesting design features significantly reduce the volume for freight.

### High Compressive Load

Designed to support enormous vertical loads, so that tree root systems can be brought closer to the pavement surface.

### Strong Structure

Units lock together to form a monolithic structure with excellent modular strength, both vertically and laterally.

### Secured Interlocking Feature

Positive and secure connectors are a feature of the StrataVault® patented design both vertically and laterally. StrataVault® modules are simple and fast to click together, producing an integrated matrix.

### Environmentally Friendly

StrataVault® structural RootCell® modules are made from 100% post industrial waste, thereby utilising material that would have been consigned to landfill.

*Elmich is the authorized distributor of StrataVault®  
StrataVault® is a trademark of Citygreen Systems*

## Distributed by:

**Note:** The information provided in this brochure is based on current knowledge and experience and does not infer any legally binding assurance or warranty, expressed or implied. Intending purchasers should verify whether any changes to specifications or applications or otherwise have been made since the issue of this literature. Environmentally-friendly recycled materials are used in product manufacture wherever possible. Physical product properties including colour may differ due to source of raw materials used. Colour may also fade due to UV exposure. All components of the product are designed for specific application, design calculations and any variation and/or deviation therefrom shall be the responsibility of the specifier and/or user.



**ELMICH PTE LTD** [www.elmich.com](http://www.elmich.com)

Singapore: (+65) 6356 2800

info@elmich.com

Singapore | Australia | Germany | Malaysia | Switzerland | USA

