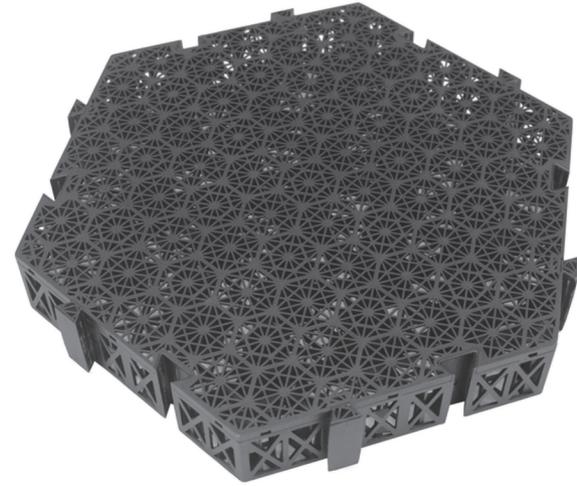


Honeycomb Drainage Cells

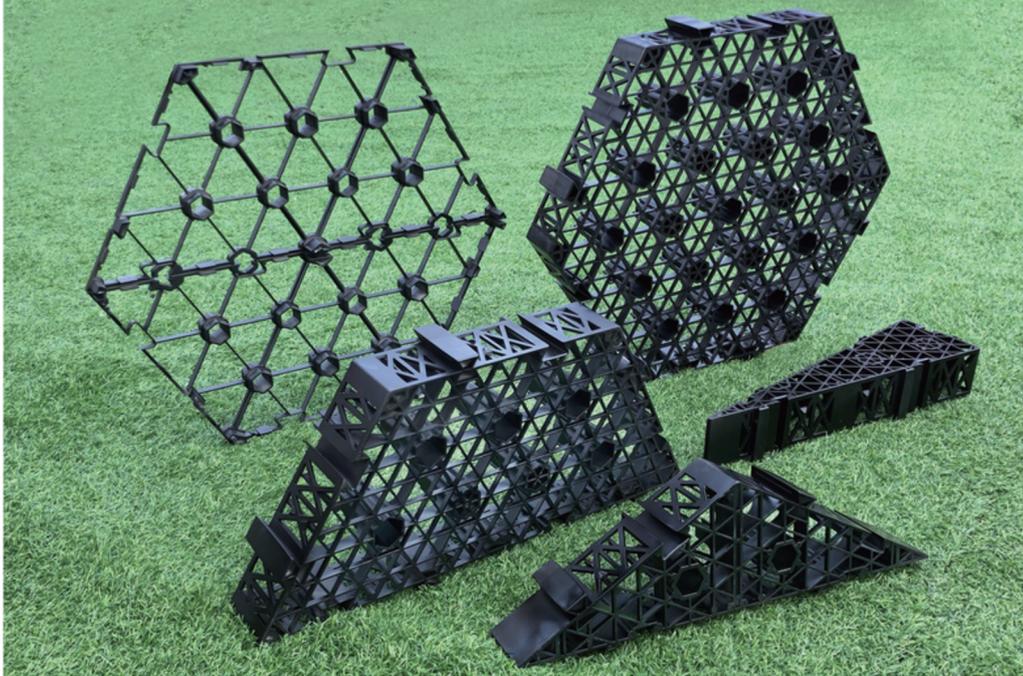
PRODUCT PROFILE

Honeycomb Drainage Cells are high-strength PP geocellular modules for shallow subsurface stormwater storage, drainage and root protection. Each unit (approx. 577 × 500 × 82 mm, void ratio around 95%) forms a hollow structural layer that can replace conventional gravel sub-base. The system provides very high vertical and lateral load capacity while allowing rapid capture, detention and conveyance of rainwater beneath pavements, podium decks, green roofs and landscaped areas.



BENEFITS & FEATURES

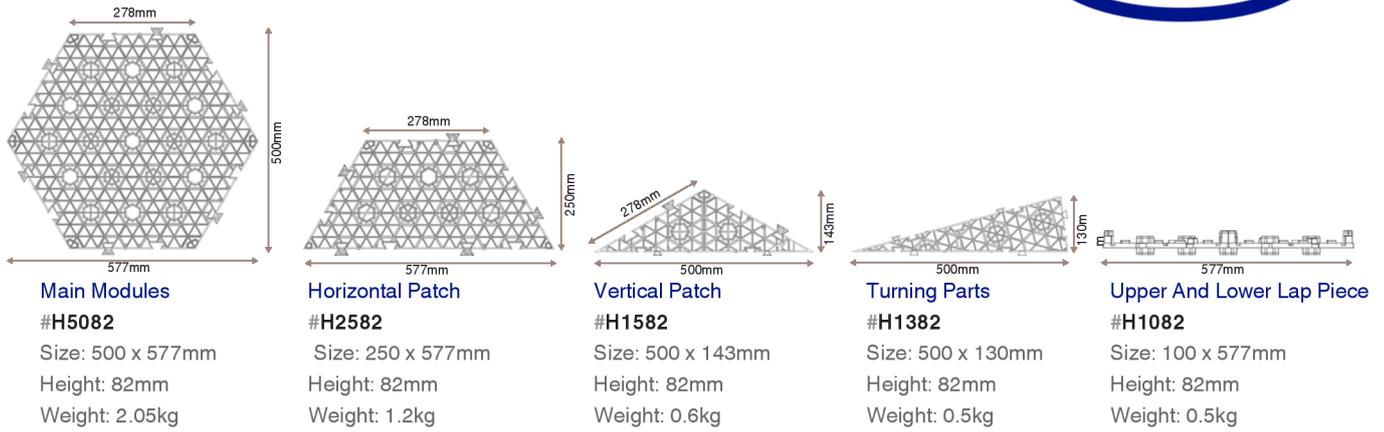
- **Ultra-high compressive strength**
Honeycomb cell geometry and integrated connectors provide vertical capacity tested up to about 130 t/m², suitable for trafficable surfaces when correctly designed.
- **High void ratio for storage**
Approx. 95% internal voids offer large water storage volume in a shallow profile, ideal for detention, retention and conveyance beneath paved or landscaped areas.
- **Efficient drainage & flow**
Perforated walls and large internal cavities give high flow rates (over 50 L/s·m² at 0% gradient, ~94 L/s·m² at 2% gradient) to move stormwater quickly.
- **Lateral load resistance**
Cell structure resists lateral soil and traffic loads, maintaining shape and performance under fills, pavements and embankments.
- **Lightweight modular units**
Each module weighs only about 2.05 kg, making handling, transport and installation fast and economical without heavy lifting equipment.
- **Durable polypropylene material**
Manufactured from high-strength PP with excellent resistance to chemicals, root intrusion and long-term creep; service life can extend to several decades in buried conditions.



TECHNICAL DATE SHEET

Element	Value (typical)
Unit weight	~2.05 kg per module
Nominal size (L × W × H)	57.7 × 50 × 8.2 cm (≈ 577 × 500 × 82 mm)
Material	High-strength polypropylene (PP)
Void ratio	≈ 95%
Perforated percentage	> 52% open area
Vertical loading (design)	> 800 kN/m ² (≈ 80 t/m ²)
Vertical loading (max test value)	≈ 1,330 kN/m ² (≈ 130 t/m ²)
Lateral loading (design)	> 200 kN/m ²
Lateral loading (max test value)	≈ 400 kN/m ²
Liquid flow (0.0% gradient)	≈ 50.2 L/s·m ²
Liquid flow (2.0% gradient)	≈ 94.2 L/s·m ²
Typical functions / use	Shallow stormwater storage & drainage, sub-base replacement, green roofs, tree root zones, bio-swales, rain gardens

Items and Sizes



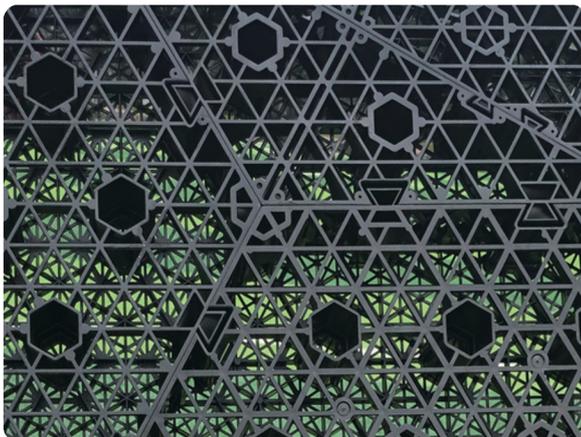
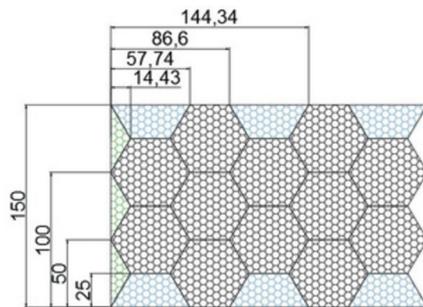
Combinable sizes

Length: multiples of 25cm, i.e. 25cm, 50cm, 75cm, 100cm, and so on;

Width: multiples of 14.45cm, i.e. 14.43cm, 28.9cm, 43.3cm, and so on;

Height: multiples of 8.2cm, i.e. 8.2cm, 16.4cm, 24.6cm, etc.;

Rotation angle: multiples of 15°, i.e. 15°, 30°, 45°, 60°, 75°, 90°, 180°



Installation Features

Secure Connections

6 sets of horizontal and vertical buckles make sure each module secure connected



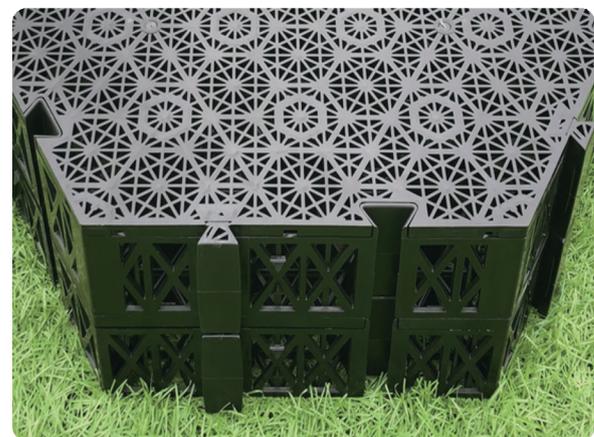
Fast Installation

Unrestricted by direction, the modules can be installed in 8 directions; without additional tools



Pre-assembled Service

9 square meter or larger size can be pre-assembled in the factory for faster on-site installation

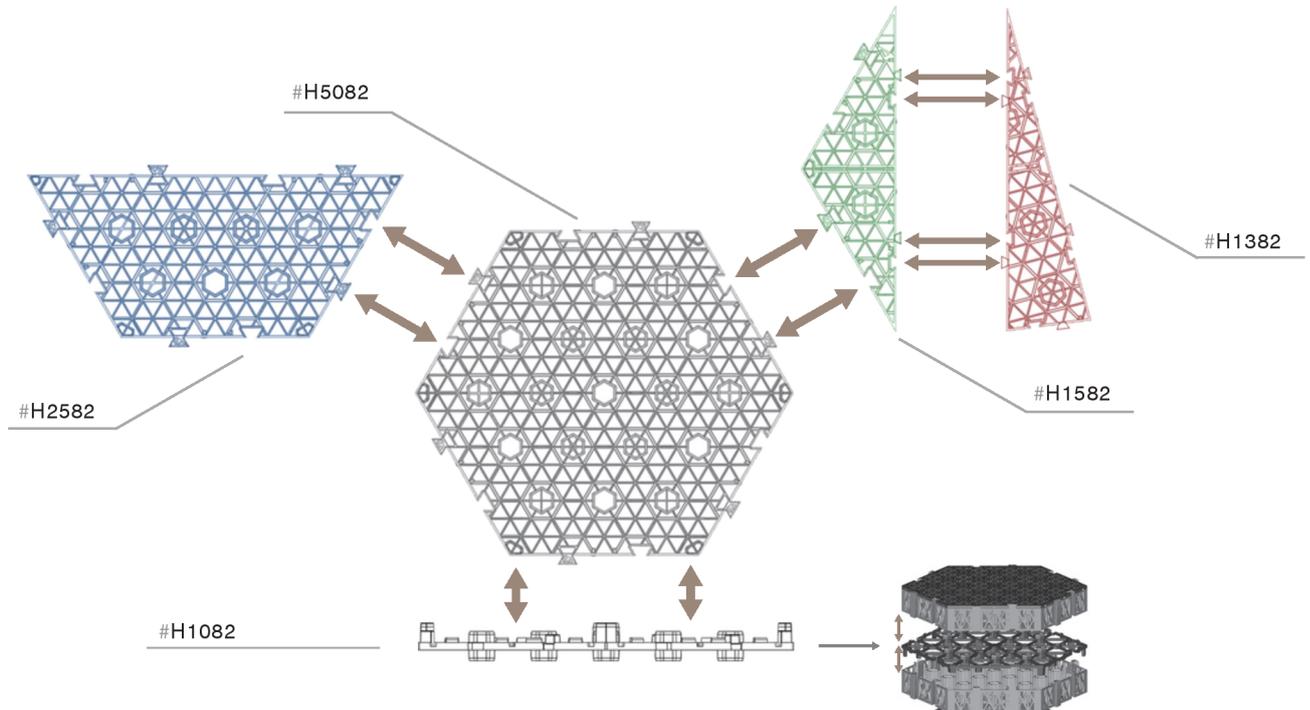


Multi-Layer Stackable

Equipped with vertically oriented overlapping plates, up to 20 layers can be stacked

Items and Sizes

It can be assembled without cutting, and the five parts can be flexibly combined with different shapes and heights to adapt to different ground scenarios.



The following combination patterns are for reference only, and combination suggestions and designs can be made according to the actual application.

