



Applications

- Roads
- Streetscaping
- Car Parks
- Plaza Paving

mastaVAULT MegaTree

mastaVAULT MegaTree are modular units that assemble to form a skeletal matrix that supports relevant pavement loads while providing large volumes of un-compacted soil within the structure for free root growth.

The open, skeletal matrix provides a maximum growth zone for tree roots. More than 95% of the Internal Void volume is available for un-compacted soil and root growth.

Traditionally rock and soil mix use to provide support for pavement, while permitting some root growth within the pavement. mastaVAULT MegaTree System have moved this principle forwarded by entirely replacing the rock (80% of the total volume), the engineered modules provide the structural strength for pavement loads whilst providing free un-compacted soil for root zone to grow and trees to flourish in an urban environment.

mastaVAULT MegaTree Specifications			
Properties	Unit	Single Module [^]	Double Module [^]
Length	mm (in)	600 (23.62)	600 (23.62)
Width	mm (in)	600 (23.62)	600 (23.62)
Height	mm (in)	360 (14.72)	690 (27.16)
Module Volume	L	129.60	248.40
Soil Storage Volume	L	123.12	235.98
Void Area	%	95	95
Surface Void Area	%	95	95
Rib Thickness	mm (in)	4.3-4.4 (0.16 -0.17) (Minimum thickness of the load bearing members to full depth of the plate)	
Service Temperature	°C (°F)	-10 to 75°C (-14 to 167°F)	-10 to 75°C (-14 to 167°F)
Recycled Content	%	85% Selected Recycled Polypropylene + 15% proprietary mix	
Biological & Chemical Resistance	-	Unaffected by moulds, algae, Soil borne Chemical, bacteria and bitumen, polypropylene is very inert	
Ultimate Unconfined Vertical Crush Strength	ton/sqm (PSI)	65 (92.45) (Using a full -size plate that completely covers the top of the unit determines the pressure required to crush the entire unit)	
Ultimate Unconfined Lateral Load Crush Strength on side	ton/sqm (PSI)	7.5 (10.66) (Using a full -size plate that completely covers the top of the unit determines the pressure required to crush the entire unit)	
Short Term Deflection	per mm	Vertical Deflection 42.00kN/ m ² Lateral Deflection 2.8kN/ m ²	
Long Term Deflection	95kN/m ²	1.08% 3.88mm (Estimated long term deflection (vertical creep) projected 50 yrs **applied test load of 95 kN / m ²)	
Projected Creep	15kN/m ²	1.41% 8.46mm (Estimated long term deflection (lateral creep) projected 50 yrs ** applied test load of 15 kN/m ²)	

*All compressive strength at yield, maximum recommended safe design value, safety factors to be incorporated.

**Derived from long term Extrapolated Creep testing data, 516 day minimum

[^]Other sizes available