

ROOTBOX® structural soil cell system

RootBox

Most sustainable and strongest Soil Cell system

Dimensions RootBox unit :

(L x W) 96 x 56 cm
(H) variable 40 -160 cm

Dimensions RootBox connected system:

(L x B) multiple of 40cm +16cm
(H) variabel 40 -160 cm

RootBox system* consists of:

RootBox Lid
RootBox Frame (Base)
RootBox Spacer (Bridge / connector)
RootBox Post** (Uprights)

* Depending on the system dimensions/layout, the exact number of components should be calculated.

** The Posts (uprights) are available in various strength ratings.

Storage : protect against long-term UV exposure.

Design lifetime : 50 years

Products tested according to the fingering European standard, dd 2019. Tested at an accredited independent civil technical institute.



Load capacity (point load capacity*); **700 kN/m²**

NEN-EN 17150:2019-B**

* This test represents the strength of the lid (the span between the uprights).

** Tested with a point load (steel ring round 200mm) directly on the lid, at the centre of the maximum span line.

Axle load* (incl. brake factor and safety factor); **15 tonnes**

NEN-EN 17150:2019-A**

* Calculated with uniformly distributed load. Installation according to RootBox manual.

** Test based on evenly distributed pressure test. At constant load speed. Tested without soil filling in the system.

Tree root growth*; **smallest opening >30cm Ø**

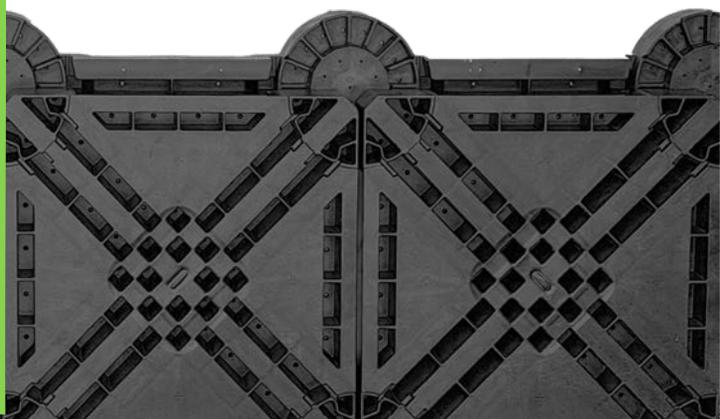
* Roots grow bigger and bigger. To avoid restricting thickness growth, all openings in the soil cell system should be large enough for the future roots.

Soil volume*; **ca 90%**

* percentage of soil in the soil cell system, with penetration resistance between 1-1.5 MPa. Soil mass acting as 1 continuous soil mass, for good water and air retention.

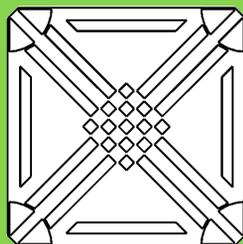
Sustainability

- **Manufacturer reclaim warranty after end of life**
- **No use of Composite materials**

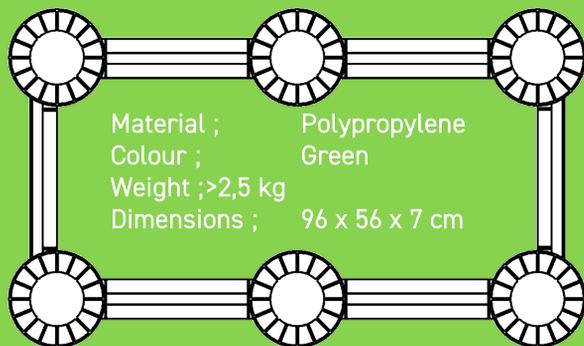


RootBox Lid G

Material ; Polypropylene
Colour ; Green
Weight ; >2,0 kg
Dimensions ; 40 x 40 x 5 cm



RootBox Frame G



Material ; Polypropylene
Colour ; Green
Weight ; >2,5 kg
Dimensions ; 96 x 56 x 7 cm

RootBox Spacer G

Material ; Polypropylene
Colour ; Green
Weight ; >0,2 kg
Dimensions ; 30 x 6 x 3 cm



RootBox Uprights

Material ; PVC-U
Colour ; grey
Dimensions ; Ø 9 cm
Weight ; >1,2 kg/m1



Manufacturing in ISO-certified company. ISO 9001 certification demonstrates that your organization is customer-focused and committed to providing consistent quality products.



Integration of utilities (existing and new)

- ❖ **Maximum utility diameter**
 - inside a cell 30 cm
 - between the cells 30 cm
 - diagonal 19 cm

Underground obstacles (e.g. unforeseen utilities)

- ❖ **Adaptable on site in all variable heights**
- ❖ **Units can be used freestanding without loss of load capacity**
- ❖ **System consisting of loose uprights, allowing easy integration of existing utilities.**

Maintenance and repair.

- ❖ **In case of emergency or maintenance, the system can be opened at any location without damaging the systems integrity. (circular de- and re-assembly)**

Applicable soil mixtures

- ❖ **The construction imposes no restrictions on the soil mixture. Even if loamy or moist soil mixtures are used.**
- ❖ **The soil must be filled and compacted homogeneously throughout the system. (lightly compacted at 1- 1,5 MPa penetration resistance)**

Water management

- ❖ **Water-permeable lids**
- ❖ **No open connection in the system at the level of the soil in the system, where water flows away freely. ***

** To ensure that irrigation water is not wasted, and stormwater is filtered by the soil(-biology), water should not drain directly through the uprights or through the vertical walls around the system. For optimal conditions for tree growth and pollutant decomposition, water should only infiltrate and drain through the soil.*

