

An aerial photograph of a courtyard with several large, leafy green trees. The ground is paved with a herringbone pattern. A large, semi-transparent green circle is overlaid on the center of the image, containing text.

Tree Anchoring

Application:

- Anchoring trees above and below ground

Please see
page 34 and 35
for a biodegradable
root anchoring
system



Root Ball Anchoring

Tree Anchoring

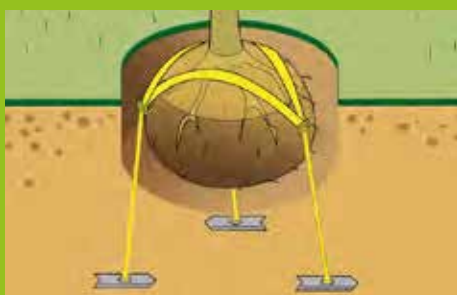
The demand to anchor trees without unsightly stakes or guy wires is increasing.

The GreenMax Root Ball Anchoring is an efficient and reliable method to anchor the trees underground and greatly improve the visual impact of the landscape. The trees will receive extra support without visible timber or stakes. Straps with attached steel anchors are installed underground. The steel anchors will ensure a strong underground root ball anchoring. The tree will keep its natural movement and still get the necessary support.

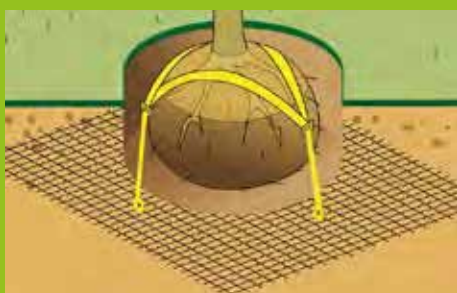
One person can install the entire Root Ball Anchoring in a few minutes. Time and costs are saved.

Material

- Fast and easy installation (± 10 minutes)
- User friendly
- No unsightly anchors or wooden tree stakes above the surface (nice final image)
- Possibility to adjust anchor straps in length
- Suitable for circumferences from 90 cm and higher even possible
- The root ball anchoring system eventually detaches itself



With anchors



With wire mesh or anchors

Deadman anchoring

With eyebolt



Application with anchors

Circumference	Type	The Root Ball Anchor set consists of
< 20 cm	GGB 120120	<ul style="list-style-type: none"> ■ 3 straps with steel anchors ■ 1 Root Ball protection mat ■ 1 tensioning strap with ratchet
< 25 cm	GGB 120225	
< 50 cm	GGB 120350	
< 90 cm	GGB 120460*	
> 90 cm	GGB 120970*	

Installation tools required: drive rod
drive rod (available in the length of 1 m or 1.5 m) and strap tensioner; see images on page 34

* Straps adjustable in length

Application with wire mesh or eyebolts

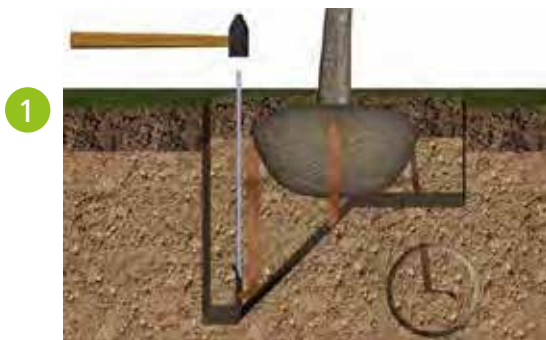
Circumference	Type	The Root Ball Anchor set consists of
< 50 cm	GGB 120550 GGB 120650*	<ul style="list-style-type: none"> ■ 3 straps without steel anchors ■ 1 Root Ball protection mat ■ 1 tensioning strap with ratchet
< 90 cm	GGB 120760*	
> 90 cm	GGB 121070*	

Installation tools required: strap tensioner and wire mesh; see images on page 34.

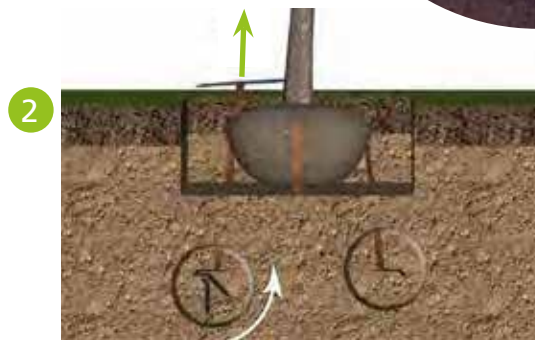
* Straps adjustable in length

*Advice: concrete mesh at least 20 cm wider on all sides of the Root Ball

* To ensure that the concrete mesh remains in place, we advise to install a fleece (geotextile) between the root ball and concrete mesh (this also applies to the BIO Root Ball Anchoring)



Drive the 3 anchors into the ground and remove the driving rod



Loadlock the 3 anchors with firm pull on the strap



Push the tensioning strap through the 3 loops



Tighten the strap by winding the ratchet. Repeat after 2 days, after tightening unhook the ratchet tensioner



Bio Root Ball Anchoring

Bio Tree Anchoring

The GreenMax Root Ball Anchoring system is also available in a biodegradable form. The straps in this system are made of Bio Based polymers which breaks down after its intended use, to result in natural by-products.

No need for maintenance or remembering to cut the straps 5 years after planting the tree, when using our Bio Root Ball Anchoring system. Our system will loosen after several years due to the biological break down of the straps, prevented strangling or damaging tree roots.

The GreenMax Bio Root Ball Anchoring is certified by the European Bioplastic Quality Mark and provides a tested sustainable solution for anchoring trees underground.

Test results

Testing (standards: DIN EN 12225 / DIN EN 13432 / DIN 18916) has shown that the organic straps remain sufficiently strong to vouch for stability during the first four years.

Material

- Fast and easy installation (± 10 minutes)
- User friendly
- No unsightly anchors or wooden tree stakes above the surface (nice final image)
- Completely biodegradable bio straps after 5 year
- This underground anchoring system stimulates a natural growth

Installation tools

Standard equipment:



Separate strap tension lever



Drive rod only necessary for ground anchors

Additional supplies (optional):



Ramrod



Drive rod remover

Application with anchors

Circumference	Type	The Root Ball Anchor set consists of
< 25 cm	GGB 1202025 BIO	<ul style="list-style-type: none"> ■ 3 Bio-straps with steel anchors ■ 1 Root Ball protection mat (diameter: 60 cm) ■ 1 Bio tensioning strap with ratchet
< 35 cm	GGB 1202035 BIO	<ul style="list-style-type: none"> ■ 3 Bio-straps with steel anchors ■ 1 Root Ball protection mat (diameter: 80 cm) ■ 1 Bio tensioning strap with ratchet

Installation tools required: drive rod (available in the length of 1 m or 1.5 m) and strap tensioner

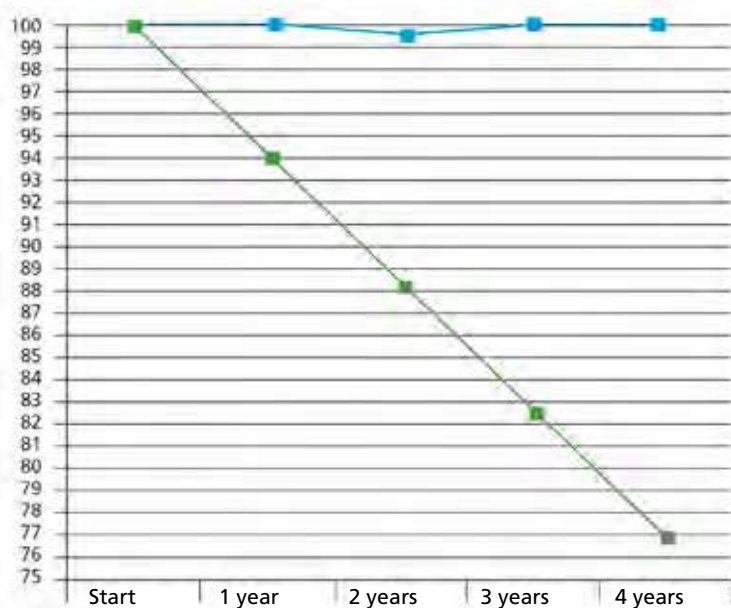
Application with wire mesh or anchors

Circumference	Type	The Root Ball Anchor set consists of
< 35 cm	GGB 1202035 BIO 2	<ul style="list-style-type: none"> ■ 3 Bio-straps without steel anchor ■ 1 Root Ball protection mat (diameter: 80 cm) ■ 1 Bio tensioning strap with ratchet (length: 250 cm)

Installation tools required: strap tensioner and wire mesh



Degradation in % throughout a (simulated) four-year period, in accordance with the DIN EN 12225 standard



Standard polymer

Biodegradable polymer

Microbiological resistance in accordance with DIN EN 12225

The DIN EN 12225 standard describes a method for determining the microbiological resistance of geotextiles by means of a soil burial test.

Both the DIN EN ISO 846 and DIN EN 12225 standards prescribe specific temperature and humidity requirements. Furthermore, DIN EN ISO 846 calls for the presence of particular bacteria and fungi microbes. DIN EN 12225 prescribes the use of active soil, such as compost, in which natural forms of these micro-organisms are present. The micro-organisms multiply by consuming the bioplastic.



Tree Tie

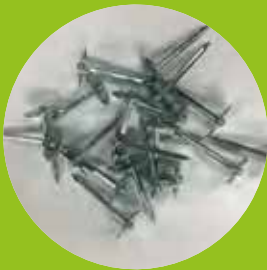
Nylon Tree Tie

The GreenMax Nylon Tree Ties are used to easily bind up and fix trees.

By using a broad belt the trees are being kept in the right position.

Material

- Nylon
- Color: grey / black
- Roll Length: 50 m¹
- Width: 5 cm



Nail



Dimensions

Type	Length	Width
Nylon Tree Tie	50 m ¹	5 cm
Nail 400 PCS (2,5 kg) per box	40 mm	3,1 mm





Tree Tie

Jute Tree Tie

The Jute Tree Tie is made of strong, 100% recycled woven jute. The added advantage of using jute is that it does not cut into the bark of the tree. The tie is secured to the tree stake using tacks.

It has a tensile strength largely comparable to that of the Nylon Tree Tie. The Tree Tie remains in place for two growing seasons. The decomposition process commences after three years, so that if one forgets to remove the tie, it will simply decompose naturally.

Material

- Jute
- Color: beige
- Roll Length: 25 m¹
- Width: 7 cm
- Biodegradable

Dimensions

Type	Length	Width
Jute Tree Tie	25 m ¹	7 cm
Nail 400 PCS (2,5 kg) per box	40 mm	3,1 mm





Tree Tie

Canvas reinforced rubber tree ties

Material

- Rubber, canvas reinforced
- Color: anthracite / black
- Roll length: 25 m¹
- Width: 4 cm



Tree tie buckle



GreenMax's rubber Tree Ties are canvas reinforced and are used for easy tree tying and anchoring.

By using wide tree ties, trees are kept in the correct position. By means of (Tree Tie) nails, the tie can be attached to the tree stake.

The tightening loop can be used as a spacer between the Tree Stake and the tree trunk.

Dimensions

Type	Length	Width
Canvas reinforced rubber tree ties	25 m ¹	4 cm
Nails 400 pieces (2,5 kg) per box	40 mm	3,1 mm
Tree tie buckle	n / a	5 cm Innersize

