

# Aeration & Irrigation

## Application:

- Effective irrigation for trees in the urban environment
- Ensures oxygen into the planting hole



# AirMax & AquaMax

## Aeration & Irrigation

### Material

- Polyethylene (PE)
- Polypropylene (PP)
- 100% recyclable
- Polyethylene hose with filtering cloth to protect against clogging up
- Extra perforation for better aeration (AirMax) and for better distribution of water (AquaMax)



Many (young) trees, shrubs and hedges in urban environments suffer from drought or lack of oxygen to the roots. This is usually caused by a compacted soil structure and / or the fact that rainwater hardly penetrates the soil. The AirMax Aeration system and the AquaMax Irrigation system is a highly effective and easy to install system for the convenient irrigation of trees.

All AirMax and AquaMax hoses and tubes are as standard provided with a polyester filtering cloth that allows an even infiltration of water (when used as irrigation) and a minimum of 45% diffusion (when used as aeration).

### Example of installation AirMax Aeration

Tree Diameter	Tree height	Tube length horizontal	Tube length vertical
8 - 16 cm	< 3 m	2 m <sup>1</sup>	1 m <sup>1</sup>
16 - 25 cm	3 - 5 m	2,5 m <sup>1</sup>	1 m <sup>1</sup>
25 - 45 cm	5 - 7 m	4,5 m <sup>1</sup>	1 m <sup>1</sup>
> 45 cm	> 7 m	7,5 m <sup>1</sup>	1 m <sup>1</sup>

Ø Tube horizontal: 80 mm

Ø Tube vertical: 80 mm

### Example of installation AquaMax Irrigation

Tree Diameter	Tree height	Tube length horizontal	Tube length vertical
8 - 16 cm	< 3 m	2 m <sup>1</sup>	0,5 m <sup>1</sup>
16 - 25 cm	3 - 5 m	2,5 m <sup>1</sup>	0,5 m <sup>1</sup>
25 - 45 cm	5 - 7 m	4,5 m <sup>1</sup>	0,5 m <sup>1</sup>
> 45 cm	> 7 m	7,5 m <sup>1</sup>	0,5 m <sup>1</sup>

Ø Tube horizontal: 80 mm

Ø Tube vertical: 80 mm





## Components



Flexible Irrigation / Aeration hose  
PE Ø 80 mm Type: AMS80  
PE Ø 100 mm Type: AMS100  
PE Ø 160 mm Type: AMS160  
50 m<sup>1</sup> per roll



Flexible Irrigation / Aeration hose including woven filtering cloth  
PE Ø 80 mm Type: AMS80K  
50 m<sup>1</sup> per roll  
PE Ø 100 mm Type: AMS100K  
50 m<sup>1</sup> per roll  
PE Ø 160 mm Type: AMS160K  
25 m<sup>1</sup> per roll



Flexible Irrigation / Aeration hose including coconut filtering cloth  
PE Ø 80 mm Type: AMS80C  
PE Ø 100 mm Type: AMS100C  
50 m<sup>1</sup> per roll

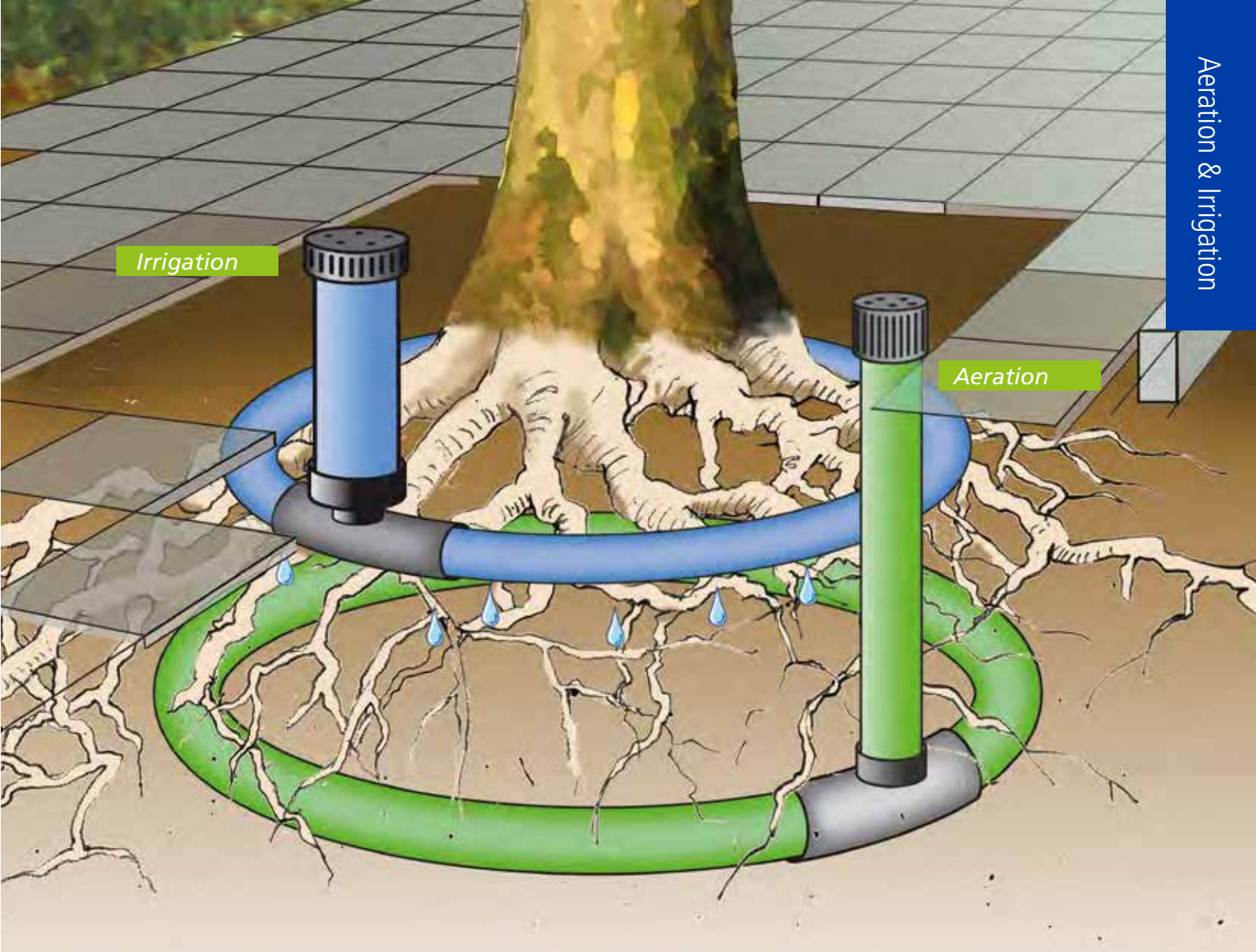


Flexible Irrigation / Aeration hose encased in polypropylene 450  
PE Ø 80 mm Type: AMS80PP  
PE Ø 100 mm Type: AMS100PP  
50 m<sup>1</sup> per roll



AirMax 45 Aeration hose 45% perforated including woven filtering cloth  
PE Ø 80mm Type: AMB80K  
PE Ø 100 mm Type: AMB100K  
Standard dimensions 1.05 m and 2.10 m  
Other dimensions available on request

Read more on page 46



## Components



Bend pipe 90 degrees  
PP Ø 80 mm  
Type: AM80 Bend pipe  
PP Ø 100 mm  
Type: AM100 Bend pipe



T-piece  
PP Ø 80 x 160 x 80 mm  
Type: AMT80 x 160 x 80  
PP Ø 100 x 160 x 100 mm  
Type: AMT100 x 160 x 100



T-piece  
PP Ø 80 x 80 x 80 mm  
Type: AMT80  
PP Ø 100 x 100 x 100 mm  
Type: AMT100  
PP Ø 160 x 160 x 160 mm  
Type: AMT160



Connector  
PP Ø 80 mm  
Type: AMK80  
PP Ø 100 mm  
Type: AMK100



## Endcover components



Circular Endcover  
Grid: plastics or steel  
(stainless steel)  
100 x 100 mm  
Type: AME100KC (grid plastic)  
Type: AME100K-RVS (grid  
stainless steel)

Circularly produced from our  
own recycling process



End cover with screw lid  
PP Ø 80 mm  
Type: AME80 Screw



Click-fit end cover  
with 5 air holes  
PP Ø 80 mm Type: AME80L  
PP Ø 100 mm Type: AME100L  
PP Ø 160 mm Type: AME160L



End cover hot-dip  
galvanised steel  
RAL 9005, powder coated  
Ø 80 mm, steel thickness 1 mm  
Type: AMROND80



End cap hot-dip  
galvanised steel grid\*  
100 x 100 mm  
Type: AMTHERM10 Small



End cap hot-dip  
galvanised steel grid\*  
170 x 170 mm  
Type: AMTHERM17 Large



End cap stainless steel grid\*  
100 x 100 mm  
Type: AMRVS10 Small



End cap stainless steel grid\*  
170 x 170 mm  
Type: AMRVS17 Large



End cap sherardized grid\*  
100 x 100 mm  
Type: AMSTEEL10 Small



End cap sherardized grid\*  
170 x 170 mm  
Type: AMSTEEL17 Large



End cap Corten steel grid\*  
100 x 100 mm  
Type: AMCORTEN10 Small



End cap Corten steel grid\*  
170 x 170 mm  
Type: AMCORTEN17 Large

*Can all be supplied with a leaf grille*

*\*All steel end covers: galvanized with different material grid*

# AirMax Bio & AquaMax Bio

## Advantages

- Natural resources!
- Sustainable and environmentally friendly
- 40% Reduction of CO<sub>2</sub> gasses during the production process
- In the right circumstances the system is completely compostable (EN13432, ASTM D6400, Vincotte OK Compost)



**AirMax / AquaMax BIO is a compostable aeration / irrigation system produced from corn and the bio synthetic granulate Cradonyl®**

All parts are biodegradable and will start breaking down within 3 to 5 years. It is therefore a much more durable solution than the standard plastic systems. Underground Aeration and Irrigation desperately needs the tree for the first few years after planting, after which the system is superfluous and the plastics remain useless in the ground.

## Components



Irrigation / Aeration hose Bio  
Ø 80 mm  
50 m<sup>1</sup> per roll  
100% biodegradable  
Type: CNBS80  
Type: CNBSK80 (incl. coconut filtering cloth)



End cover with screw lid Bio  
Ø 80 mm  
100% biodegradable  
Type: CNE580



T-piece Bio  
80 x 80 x 80 mm  
100% biodegradable  
Type: CNT80



Click-fit end cover Bio  
Ø 80 mm  
100% biodegradable  
Type: CNEK80



Connector Bio  
Ø 80 mm  
100% biodegradable  
Type: CNMK80



Click-fit end cover Bio with aeration holes  
Ø 80 mm  
100% biodegradable  
Type: CNEG





## AirMax 45

Aeration; ideal for in tree granulate

### Material

- HDPE, pressure resistant and UV-stable
- Ø 80 mm and Ø 100 mm tube
- 100% recyclable
- 45% perforation
- All lengths possible on request
- Inclusive polyester filtering cloth
- Produced from recycled products

The AirMax 45 Aeration system is placed deeper in the tree pit to provide much needed air allowing the deeper roots to establish and thrive.

The AirMax 45 tubes have 45% perforation and are, due to the high pressure resistance, ideal for use in structural soil. The system is covered with a polyester filtering fabric with a very long life span, exceeding the lifespan of coconut fibre.

### Components



AirMax 45 Aeration tube  
PE, 45% perforated incl. woven filtering cloth  
Type: AMB80K (80 mm, 1.05 m of 2.1 m)  
Type: AMB100K (100 mm, 1.05 m of 2.1 m)

Other dimensions on request

Expandable  
with end caps  
and accessories  
from page  
42 to 44



Bend pipe 90 degrees  
PP Ø 80 mm  
Type: AM80 Bend pipe  
PP Ø 100 mm  
Type: AM100 Bend pipe



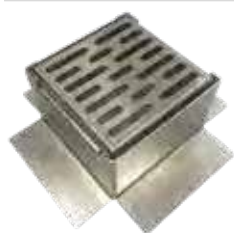
T-piece  
PP Ø 80 x 80 x 80 mm  
Type: AMT80  
PP Ø 100 x 100 x 100 mm  
Type: AMT100



### Extension optional



Steel end cap, galvanized bottom part  
100 x 100 mm  
With 4 types of grid:  
Galvanised steel, Stainless steel, Corten steel and Sherardized steel (see page 44)



Steel end cap, galvanized bottom part  
170 x 170 mm  
With 4 types of grid:  
Galvanised steel, Stainless steel, Corten steel and Sherardized steel (see page 44)



Circular Endcover  
100 x 100 mm  
Grid: plastics or steel (Stainless steel)  
Type: AME100KC (grid plastic)  
Type: AME100K-RVS (grid Stainless steel)

This new end cap is produced from recycled plastic from our circular collaboration with the plastic recycling industry.  
The grid is a replacement for the iron end caps, cheaper, strong, drive-over and available in different colors. 100% recyclable, so very durable.



Delivered as  
a bundled set

## Aeration sets

### Set B1



#### \* Alternatives:



End cover  
with screw lid



Circular Endcover  
(plastic grid)  
■ 100 x 100 mm



Steel end cap:  
■ 100 x 100 mm  
■ 170 x 170 mm



Circular Endcover  
(stainless steel grid)  
■ 100 x 100 mm

### Set B1-F



#### \* Alternatives:



Endcover  
with screw lid



Steel end cap:  
■ 100 x 100 mm  
■ 170 x 170 mm



Circular Endcover (plastic grid)  
■ 100 x 100 mm



Circular Endcover (Stainless steel)  
■ 100 x 100 mm

### Contents B1

Dimensions: approx. 1.05 x 1.05 x 1.05 m. (L x W x H)



4 pcs AirMax45 with cloth  
Ø 80 mm, 1.05 m<sup>1</sup>  
Type: AMB80K



4 pcs AirMax45 with cloth  
Ø 80 mm, 0.5 m<sup>1</sup>  
Type: AMB80K - customization



2 pcs Click-fit end cover\*  
Ø 80 mm  
Type: AME80 Long



2 pcs T-piece  
Ø 80 mm  
Type: AMT80



4 pcs Bend pipe 90 degrees  
Ø 80 mm  
Type: AM80 Bend pipe

### Contents B1-F

Dimensions: ca. 1.05 x 1.05 x 1.05 m. (L x W x H)



2 pcs AirMax45 with cloth  
Ø 80 mm, 1.05 m<sup>1</sup>  
Type: AMB80K



4 pcs AirMax45 with cloth  
Ø 80 mm, 0.5 m<sup>1</sup>  
Type: AMB80K - customization



2 pcs Flexible Irrigation / aeration hose  
including woven filtering cloth  
1m<sup>1</sup>  
Type: AMS80K – customization



2 pcs Click-fit end cover\*  
Ø 80 mm  
Type: AME80 Long

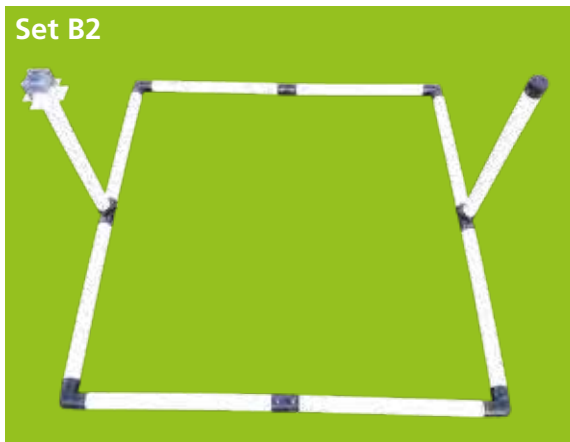


2 pcs T-piece  
Ø 80 mm  
Type: AMT80



4 pcs Bend pipe 90 degrees  
Ø 80 mm  
Type: AM80 Bend pipe

## Set B2



## \* Alternatives:



End cover  
with screw lid



Circular Endcover  
(plastic grid)  
■ 100 x 100 mm



Steel end cap:  
■ 100 x 100 mm  
■ 170 x 170 mm



Circular Endcover  
(stainless steel grid)  
■ 100 x 100 mm

## Set B2-F



## \* Alternatives:



Endcover  
with screw lid



Steel end cap:  
■ 100 x 100 mm  
■ 170 x 170 mm



Circular Endcover (plastic grid)  
■ 100 x 100 mm



Circular Endcover (Stainless steel)  
■ 100 x 100 mm

## Aeration sets

## Contents B2

Dimensions: approx. 2.10 x 2.10 x 1.05 m. (L x W x H)



10 pcs AirMax45 with cloth  
Ø 80 mm, 1.05 m<sup>1</sup>  
Type: AMB80K



2 pcs connector  
Ø 80 mm  
Type: AMK80



2 pcs Click-fit end cover\*  
Ø 80 mm  
Type: AME80 Long



2 pcs T-piece  
Ø 80 mm  
Type: AMT80



4 pcs Bend pipe 90 degrees  
Ø 80 mm  
Type: AM80 Bend pipe

## Contents B2-F

Dimensions: approx. 2.10 x 2.10 x 1.05 m. (L x W x H)



8 pcs AirMax45 with cloth  
Ø 80 mm, 1.05 m<sup>1</sup>  
Type: AMB80K



2 pcs Irrigation / aeration hose including  
woven filtering cloth  
1m<sup>1</sup>  
Type: AMS80K – customization



2 pcs connector  
Ø 80 mm  
Type: AMK80



2 pcs Click-fit end cover\*  
Ø 80 mm  
Type: AME80 Long



2 pcs T-piece  
Ø 80 mm  
Type: AMT80



4 pcs Bend pipe 90 degrees  
Ø 80 mm  
Type: AM80 Bend pipe



# LUWA

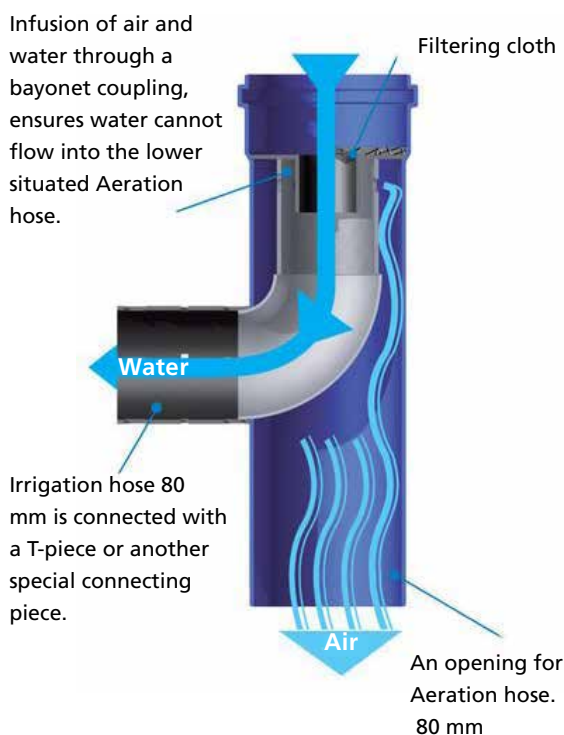
## Aeration & Irrigation

Many newly planted trees suffer from lack of water or oxygen caused by highly compacted soil, particularly in urban environments. It is imperative that an effective Aeration and Irrigation system be installed to support the newly planted trees in urban environments.

Existing systems have the risk of Aeration tubes being used for Irrigation, and vice-versa. Therefore this is the primary reason prompting the development of the LUWA system.

Two systems: one input!

Aeration and Irrigation systems are combined in the LUWA-system, ensuring that water cannot flow into the Aeration system which is installed deeper in the tree pit. By installing a two-in-one system, there are significant cost savings in both time and materials.



### Set includes:



LUWA splitter



Reducer Ø 80 - Ø 110



Connector  
PP Ø 80 mm  
Type: AMK80



Specie cover 110



2 pcs T-pieces  
PP 80 x 80 x 80 mm  
Type: AMT80



Filter

Can be expanded with plastic end cap Ø 110 mm or steel end cap 170 x 170 mm





## AquaMax

### Water Reservoir

#### Material

- Produced from high quality recycled HDPE
- Produced from high quality recycled LDPE
- Polyethylene based on residual sugar cane waste
- 100% recyclable
- Color: green, black and brown

#### Installation tool

Cutting the water reservoir in a straight line with the AquaMax / AMGR CUTTING BOARD. The stainless steel cutting board is 10 cm wide and 36.5 cm high.



Dry soil in the urban environment will reduce the growth of young trees. The AquaMax water reservoir is a functional solution to keep the trees healthy. During the summer period it has an added benefit of protecting the trunk against mower or strimmer damage whilst in the winter it will protect against gritting operations.

The inside of the water reservoir can be filled with a coconut fibre mat or wood scraps to prevent weeds.

The water reservoir can easily be filled with water and has a large water storage capacity. A small part of the AquaMax should be placed in the ground (+ / - 10cm). This will make sure that the water reservoir stays stable and that the water will remain in the area around the tree trunk.








The water reservoir can be closed with double-sided tape or, upon request, with a coupling.










All our water reservoirs are re-usable. By using our water reservoir coupling re-using became much easier, because the water reservoir stay without nail holes.

## Dimensions and material

	Type	Material / color	Length	Height	Thickness	Structure	Lifecycle
	Budget water reservoir AMGR125Z	High-quality recycled HDPE Black/ anthracite* partly UV-stable	25 m <sup>1</sup>	30 cm	1,5 mm	Smooth	Approx. 5 years
	AquaMax water reservoir AMGR225Z	High-quality recycled HDPE Black UV-stable	25 m <sup>1</sup>	30 cm	2 mm	Smooth	Approx. 10 years
	AquaMax water reservoir AMGR325Z	High-quality recycled LDPE Black UV-stable	25 m <sup>1</sup>	30 cm	3 mm	With structure	Approx. 10 years
	Budget water reservoir AMGR320G	High-quality recycled LDPE Green* partly UV-stable	20 m <sup>1</sup>	30 cm	3 mm	Smooth	Approx. 5 years
	AquaMax water reservoir AMGR225G	High-quality recycled HDPE Dark green UV-stable	25 m <sup>1</sup>	30 cm	2 mm	With structure	Approx. 10 years
	AquaMax water reservoir AM-GR225GZ	High-quality recycled HDPE Bicolour: Dark green/ black UV-stable	25 m <sup>1</sup>	30 cm	2 mm	With structure	Approx. 10 years
	AquaMax water reservoir AMGR325G	High-quality recycled LDPE Dark green UV-stable	25 m <sup>1</sup>	30 cm	3 mm	With structure	Approx. 10 years

## Dimensions and material

	Type	Material / color	Length	Height	Thickness	Structure	Lifecycle
	AquaMax water reservoir AMGR335G25	High-quality recycled LDPE Dark green UV-stable	25 m <sup>1</sup>	35 cm	3 mm	With structure	Approx. 10 years
	AMGR Biobased water reservoir	Made of sugar cane waste Brown* UV-stable	25 m <sup>1</sup>	30 cm	2 mm	Smooth	Approx. 10 years
	Circular water reservoir	Based on waste plastic Anthracite Not UV-stable	20 m <sup>1</sup>	30 cm	3 mm	Smooth	Approx. 10 years
	AMGR bumper 38	Rubber Black* Not UV-stable	Ø 38 cm	26 cm	30 mm	mat	Approx. 10 years
	AMGR bumper 48	Rubber Black* Not UV-stable	Ø 48 cm	26 cm	30 mm	mat	Approx. 10 years

\* Not color-resistant














## Water reservoir accessories

All the accessories are available separately.

	AquaMax water reservoir coupling 30-2	Coupling for the water reservoir of 1 – 2 mm, to attach together by sliding into each other
	AquaMax water reservoir coupling 30-3	Coupling to close the 3 mm thick water reservoir. Coupling for the water reservoir of 3 mm, to attach together by sliding into each other
	AquaMax Water Reservoir click coupling	Coupling for attaching the water reservoirs of all thicknesses with a click coupling. With a pin for easy insertion of the click coupling into the ground
	Coco Disk > 57 cm Coco Disk > 73 cm Coco Disk > 100 cm Coco Disk > 133 cm	
	Steel anchor	Steel anchor to attach coco fiber mat in the ground
	BIO anchor	Biodegradable anchor to attach cocofiber mat in the ground
	Wooden anchor	Biodegradable anchor to attach coco fiber mat in the ground
	AMGR Cutting board	AquaMax cutting board to cutting the water reservoir in a straight line The stainless steel cutting board is 10 cm wide and 36.5 cm high







## Slow release watering bags

When planting young saplings, it is extremely important that they root well.

Use the AquaBag to prevent your newly planted trees from drying out or from being over-watered.

The AquaBag is a kind of drip bag that slowly releases drops of water around the trunk of the tree over a period of 6 to 10 hours, which prevents the water from draining away, and gives the tree ample time to absorb the water.

The bag is easy to attach around the tree by means of a zip.

Fill the AquaBag with clean water once or twice a week for optimal growth (to prevent the holes of the AquaBag from becoming blocked).

The bag can also be placed around the tree post if there is a risk of fungi or a lack of oxygen at the stem/trunk. This allows the water to drip at the root ball, while leaving the trunk unrestricted.

### Material

- Capacity 75 liters
- Easy to install
- Reusable
- 1 or more AquaBags per tree
- Can be used with trees and shrubs





