Vertical Hydroponic Tower

Assembly & User Guide

Large-garden tower for balcony, terrace & garden

Thank you for your purchase!

With this tower you create a productive vertical garden in the smallest of spaces. The system has been tested outdoors over several months, is wind-resistant and suitable even for demanding plants such as tomatoes, cucumbers, peppers, kohlrabi, broccoli, cauliflower, lettuces, herbs and aubergines.

ALREADY PRE-ASSEMBLED – WE'VE DONE THE HARD PART FOR YOU

Your tower arrives largely pre-assembled: the base, lid, filter and main structure are already mounted. You only need to complete it in a few simple steps – with no special tools required.

Ready to grow in just a few steps

ASSEMBLY VIDEO

We show you the complete assembly step by step in our video: video.faga.bio

PLEASE READ CAREFULLY

Do **not use a power screwdriver**. Tighten all screws by hand only and with care. Over-tightening can damage or deform the plastic parts.

Step 1 – Insert the pump

Place the supplied submersible pump in the centre of the planter. Route the pump cable out to the side through the square opening.

Step 2 – Fit the lid

Place the lid onto the planter.

Step 3 – Insert the pipe and connect it to the pump

Guide the supplied pipe down through the hole in the lid and firmly connect the lower end to the pump outlet.

Step 4 – Attach the planting modules

Slide the individual planting modules onto the tower one after another. Fasten each module with **4 screws and 4 nuts**. Remember: hand-tighten only.

Step 5 – Fit the sprinkler

Push the black sprinkler onto the top of the pipe until it sits firmly. It distributes the water evenly and at the same time holds the pipe securely to the structure.

Step 6 – Add water & nutrients – done!

Fill the planter with water, add your hydroponic nutrients and switch on the pump. The water is pumped up and trickles through all planting modules via the sprinkler – your tower is running! It is best to control the pump with a timer (see 'Controlling the pump with a timer' on the next page).

Operation & Care

Quick function test

Fill the planter halfway with water and switch on the pump. If water comes out of the sprinkler at the top, everything is connected correctly. If not, check the connection between pump and pipe – an additional sealing ring on the connector fixes small leaks.

Controlling the pump with a timer

The pump does **not need to run continuously**. Control it with a simple timer in intervals – this keeps the roots evenly moist and gives them enough oxygen between cycles. The following settings have proven effective (during the day, approx. 14–18 hours; the pump can rest at night):

Situation	Pump ON	Pump OFF
Normal operation	15 min	45 min
Very hot days (from approx. 28–30 °C)	30 min	30 min

On very hot days, **15 min on / 15 min off** also works – what matters is more frequent watering in the heat so nothing dries out. Observe your plants and adjust the times as needed: the roots should be moist, but not permanently submerged.

Topping up water & nutrients

Your plants use water constantly – the level in the planter drops. Check it 2 to 3 times a week (more often in heat and with large plants) and top it up in good time. The pump must always remain fully submerged.

Important: add some nutrients every time you top up – otherwise the nutrient solution becomes weaker and weaker over time. Follow the dosage on your nutrient bottle. On very hot days, half the nutrient dose is enough, as the plants mainly drink water then.

For the most accurate dosing, use an EC meter, which measures the nutrient concentration:

- Lettuce, herbs & leafy greens: EC approx. 0.8–1.4 (about 400–700 ppm).
- Tomatoes, peppers & cucumbers: EC approx. 1.8–2.5.
- Strawberries: much lighter – see the box 'Special case: strawberries'.
- pH ideally between 5.5 and 6.5.

On hot days

In addition to more frequent watering (see above), in great heat we recommend a small air pump (oxygen pump) in the water reservoir – it supplies the roots with extra oxygen. Also place the white protective cap on top so the water does not heat up too much.

Changing the water & maintenance

Replace the entire nutrient solution completely about every 2 to 3 weeks – this prevents salt build-up and nutrient imbalance. Simple rule of thumb: once you have topped up roughly as much water as the planter holds, it is time for a fresh batch.

How to access the water reservoir:

- Remove the top covers and make sure the sprinkler sits firmly on the pipe.
- Pull out the two threaded rods at the sides.
- Carefully lift the tower structure straight up and set it aside – the pipe slides up along with it.
- Now you can clean the planter or change the water without disturbing the plants.

SPECIAL CASE: STRAWBERRIES

Strawberries thrive in the tower – but they have their own rules. Most problems are caused by too much moisture and over-fertilising:

• **Dedicated tower:** ideally plant the tower with strawberries only – vegetables need different watering intervals and stronger nutrients.

• **Keep the crown dry:** plant upright so that the crown (the thick base the leaves grow from) sits just above the growing medium – otherwise crown rot may develop.

• **Water less often:** set the timer to approx. 15 min on / 75–90 min off (off at night) – strawberry roots need air phases and cannot stand permanent wetness.

• **Feed more lightly:** EC only approx. 1.0–1.4, pH 5.8–6.2 – a solution that is too strong produces small, hard fruit.

• **Remove runners regularly** – they cost you fruit yield.

• **Use cold-stored (frigo) or potted plants** instead of seeds – they already fruit in the first year.

Guide values per plant (EC & pH)

For orientation, the proven guide values for the most popular tower crops – measured with an EC and pH meter:

Plant	EC	pH
Lettuce & leafy greens	0.8–1.2	5.8–6.2
Herbs (basil, parsley, chives)	1.0–1.4	5.5–6.5
Tomatoes	2.0–2.5	5.8–6.3
Peppers	1.8–2.2	5.8–6.3
Cucumbers	1.8–2.2	5.8–6.2
Aubergines	2.0–2.5	5.8–6.3
Broccoli, cauliflower & kohlrabi	1.8–2.4	6.0–6.5
Strawberries (see box above)	1.0–1.4	5.8–6.2

Tips: the values apply to the main growth phase – start young plants at about half the concentration and increase slowly. For mixed planting, choose a middle value (EC approx. 1.4–1.8, pH approx. 6.0) – most crops cope well with it.

About your tower

Your tower is made of high-quality, UV-resistant PETG plastic – a robust material specially chosen for permanent outdoor use. It is weather- and temperature-resistant and completely safe in contact with nutrient solution and plants.

Why different colours?

- **White parts (main body):** reflect sunlight and prevent the water inside from heating up too quickly.
- **Black parts (upper section):** reduce algae growth exactly where it is most likely to occur.
- **White protective cap:** put it on in summer to keep out extra heat. Remove it on cooler days so the water can warm up slightly.

Hydroponics for beginners

New to the world of hydroponics? Then this tower is an ideal start. Keep the setup simple at first and work your way in step by step.

Our recommendation for the basic equipment:

- **Nutrient solution:** Terra Aquatica TriPart or a comparable three-part hydroponic fertiliser.
- **pH meter** for regular monitoring of the water.
- **EC meter** to determine the nutrient concentration.
- **Good water:** filtered tap water or rainwater work best.

Raising your seedlings

Raise your seeds in rockwool cubes. As soon as roots appear, place the cubes into the tower's net pots. A proven method: put the seeds into the rockwool, cover with a little vermiculite, and after transplanting place a few clay pebbles at the bottom of the net pot.

ENJOY YOUR GROWING!

The system is low-maintenance and reliably delivers good yields – ideal for balcony, terrace and garden. If you have any questions, suggestions or problems, we are always happy to help. We'd love to see photos of your first harvest!