




*“Everything you need for a
successful, stylish planted
aquarium”*


aquaGroTM
BY TMC
FOR PLANTED AQUARIA

- 
- LED Lighting • CO₂ Equipment • Glassware
 - Tanks • Substrates • Fertilisers and more...

Since 1970, Tropical Marine Centre has been Europe's leading supplier of quality marine fish and invertebrates to the ornamental trade and operates four large, fully re-circulated aquarium-based facilities - in London, Manchester, Bristol and Lisbon.

The Company is also the UK's leading manufacturer and distributor of innovative commercial filtration equipment and quality branded aquatic products.

AquaGro is one of TMC's newest product ranges, and includes a collection of quality but affordable equipment for the plant tank enthusiast. New and innovative products are constantly being designed and produced by our development team and we work together with some of the UK's leading planted tank experts to ensure that every product is relevant and effective and perfectly suited to your requirements.

This brochure is a broad introduction to our AquaGro range and as we are still developing even more exciting products, please check our website regularly at:-

www.tropicalmarinecentre.co.uk

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Successful planted aquariums

Planted aquariums can be some of the most stunning displays of art available. Given the right amount of time, some good research and the right equipment, this type of art is easily achievable in our homes.

Time

Planted aquariums require slightly more time than your average freshwater aquarium and this time is generally consumed by the trimming of your plants. Weekly water changes are highly recommended but we would recommend this as good fish husbandry anyway, regardless of the plants. Plants will benefit from the fresh water just like your fish will. Healthy plant growth will actually remove the nitrates, phosphates, ammonia and other contaminants that can be harmful to your fish so good husbandry will benefit the entire aquarium.

Just like your fish, your plants need food. Feeding your plants daily at the same time as you feed your fish takes up little extra time and will create a more stable environment for your plants.

Research

Taking the time to research the basics of how plants grow is invaluable to the enthusiast. Many failings and algae attacks are simply due to a lack of basic understanding of what a planted aquarium needs. All of the basics can be found in this booklet and there is a wealth of other information out there. Dozens of books have been specifically written for the green-fingered aquarist whilst the internet is full of advice from some of the most respected names in the aquarium hobby. There is also a small number of printed, monthly publications that have some great information inside.

There is no hard and fast way to keep plants but there are plenty of different methods and guidelines, so you just need to find the right one to fit your lifestyle.

Equipment

When equipment fails, the knock-on effects can be disastrous, but many problems are avoidable.

Although tank maintenance is generally part of the average aquarist's routine, equipment maintenance is rarely carried out. A broken filter impeller can quickly cause major issues and can go undetected for quite some time without regular maintenance. We would recommend checking and cleaning your filter and its components every month.

A leaky seal on a CO₂ regulator can quickly cause algae and waste a lot of money and CO₂ so we recommend checking these seals as often as possible.

Lighting for our tank can be expensive so we should ensure we get our money's worth. The main waste of light (and ultimately energy) is a dirty reflector or lens cover. A wipe over every week whilst the light is off will ensure the longest life for your lighting.

Reliable lighting, good filtration and consistent CO₂ should pave the way to an extremely successful planted aquarium.



What do plants need?

Light • CO₂ • Nutrients



2

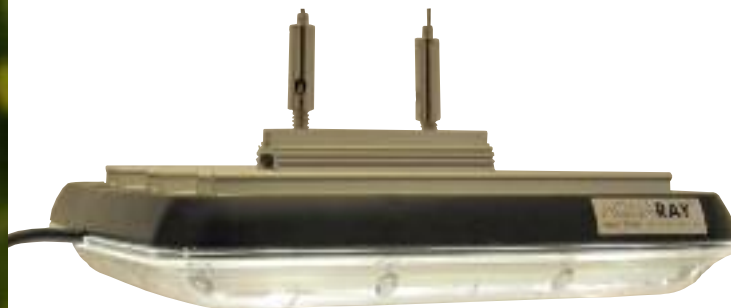
This is the single most important element in plant growth. For a plant to grow it needs to photosynthesise and to photosynthesise it needs light.

Photosynthesis in the aquatic environment is the transformation of CO_2 and water into a usable energy called glucose with oxygen as a by-product. Without enough light, plants will simply not photosynthesise and therefore will not grow.

The colour temperature of a light is measure in degrees Kelvin (K). A typical tungsten light bulb is around 2700K to 3000K. A white light designed for a marine aquarium is around 9000K to 14000K. Plants will adapt to most colour temperatures but they generally respond well to 6500K with its good balance of red and blue light. The green peaks in the spectrum make the plants appear greener to the human eye, making the aquarium look more lush and natural.



Lighting in the Aquarium



3

6500K is the
perfect color
temperature for
aquatic plants

GROWING TIP

AQUARAY® Lighting

All AquaRay light units create a beautiful and natural **SHIMMER** effect in your tank and offer up to 50,000 hours lamp life as well as very low running costs, a very low carbon footprint and NO mercury.

They are suitable for use with AquaRay Digital Controllers and are compatible with the MMS Modular Mounting System allowing you to mount and combine different AquaRay lighting units and arrange them in any way you require, ensuring your tank is always shown at its best.



GroBeam500

Solid State Lighting Strip

- Compact, 12w lighting strip.
- Uses Natural Daylight Cree® XP-E Compact PowerLEDs* specified at 6500K, making this light perfect for planted tanks and tropical aquariums.
- Incorporates a wide-angle beam which allows the light unit to be mounted close to the aquarium surface for optimum and even light distribution.
- 5 year guarantee.



GroBeam 500 single

Code: 1803

GroBeam 500 twin

Code: 1810

ukaps

George Farmer says ...

“I have had success growing any chosen species of aquatic plant under AquaRay LED lighting. My favourite unit is the AquaBeam 1000ND which has grown the most demanding carpeting plants. The controllers are perfect for ramping up and down the intensity and ensure the fish in my open-topped aquariums aren't startled. The glitter lines look great and enhance any aquascape.”

*Cree and the Cree logo are registered trademarks of Cree, inc.

** 5 year guarantee on lamp unit. 1 year guarantee on power supply.



GroBeam 1000 ND

Solid State Lighting Tile



- Uses 6500K Natural Daylight Cree® XP-E Compact PowerLEDs.*
- Emits over 800 lumens making it especially suitable for planted aquariums and for enhancing the colours of your tropical fish.
- Wide-angle beam.
- 5 year guarantee.

GroBeam 1000ND
Code: 1901

**GroBeam 1000ND plus
PowerControl**
Code: 1901P

Also suitable for planted tanks ...

COLOURPLUS LED1000

Solid State Lighting Tile

- Coloured LEDs highlight and enhance the colours in your aquarium.
- Uses 4 x white CREE® XP-G PowerLEDs and 2 x green, 2 x red and 2 x blue CREE® XP-E PowerLEDs**
- Wide-angle beam.
- 5 year guarantee.



ColourPlus LED1000
Code: 1906

MiniLED 400

Solid State Lighting Tile

- Perfect for nano aquariums of less than 50 litres, but also suitable for use in larger set ups.
- Uses OSRAM OSOLON SSL high power LEDs with a colour temperature of 6500K to replicate natural daylight conditions.
- Wide-angle beam.
- 5 year guarantee.

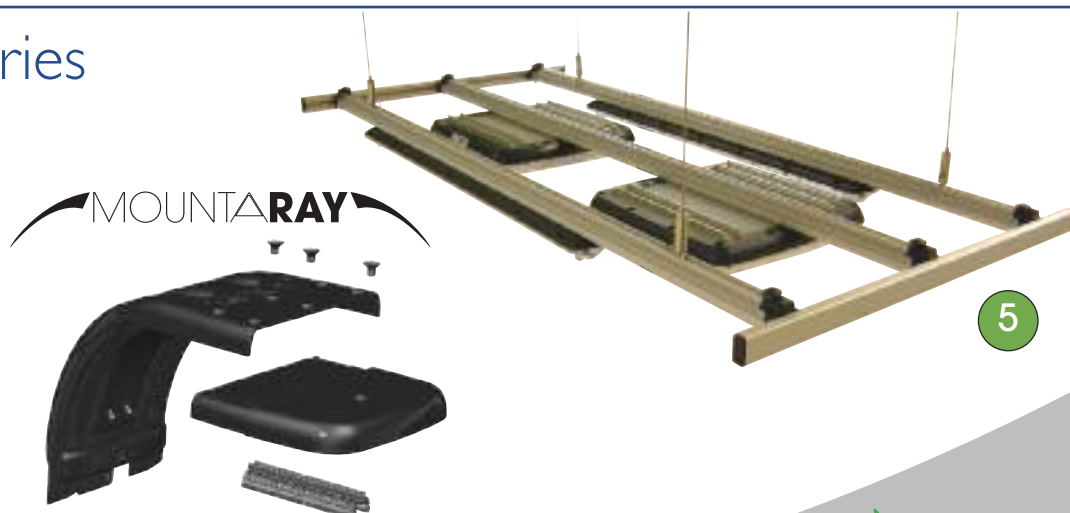


MiniLED400
Code: 1860

Lighting Accessories

The AquaRay Modular Mounting System (MMS) consists of a range of components (sold separately) that can be used to mount your AquaRay lighting units in a number of different ways.

This MMS System also allows you to use AquaRay lighting units in combination, to create a lighting rig which is unique to your tank's set up. This means you can tailor your lighting to fit your aquascape.



MountaRay Mounting Bracket
Single = code: 1831
Pair = code: 1832



What do plants need?

Light • CO₂ • Nutrients



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CO₂ in the Aquarium

CO₂ is our saving grace in the fight against algae. For many years people have attributed their algae breakouts in a planted tank to excess nitrogen and phosphorous in the water column. This is often not the case and quantities of ammonia/ammonium, often very small, are actually to blame. In CO₂-injected aquariums the most common cause of an algae outbreak is a lack of CO₂ or unstable CO₂.

Flow and circulation in the aquarium are extremely important. Plants feed through the cells on their leaves. Constant nutrient and CO₂-rich water passing over them allows the plant to draw the necessary food from the water. In the absence of nutrients from their roots, when the plant has no nutrients passing over their leaves, they start to die off and in turn, release ammonia.

The most effective method of dosing CO₂ is via a pressurised bottle and a regulator. These systems are more expensive than other systems but are a worthy long term investment for anyone serious about growing plants. Pressurised CO₂ gives constant, reliable CO₂ levels and cylinders are often refillable.

Why do I need CO₂?

A plant is made of 40% carbon and the easiest way for plants to replenish this carbon for optimum growth is by extracting it via carbon dioxide (CO₂). In their natural habitat, the vast majority of aquatic plants actually grow above the water line where they have an unlimited supply of CO₂ from the air. When plants are submerged (as in planted tanks), they have to obtain CO₂ from the water column, which is much harder for the plant. The AquaGro range of products ensures you can supply your plants with this essential source of carbon, whatever your budget.

How do I measure CO₂?

Besides expensive electronic equipment, a drop checker is the most accurate method of measuring the amount of dissolved CO₂ in your aquarium water. The drop checker is filled with 4dKH water and three drops of CO₂ reference solution are added, before placing the drop checker inside the tank. The drop checker solution changes colour according to the level of diffused CO₂ within the tank:-

A **blue** solution indicates the level is too low and your plants are not receiving enough CO₂.

A **green** solution indicates that you have the optimum level of CO₂ (around 30 ppm).

A **yellow** solution indicates that the level of CO₂ is too high for any fish or inverts in the aquarium (although in a plant-only tank this level could help you achieve some fantastic plant growth).

CO₂ Starter Kit

The lowest cost CO₂ system on the market, offering a simple, effective and compact solution for supplying CO₂ to your planted aquarium. Ideal for both beginners and more experienced plant keepers.



Starter kit includes:-

- A disposable 450ml CO₂ canister which provides a convenient and hassle-free supply of CO₂ allowing the immediate installation and use of the CO₂ diffuser kit.
- A highly effective and compact CO₂ diffuser with a triangular design which makes it ideal for conveniently fitting in the corner of even the smallest aquariums or nano tanks, whilst ensuring the efficient diffusion of CO₂ within the aquarium. As the diffuser is transparent, it can be easily hidden,
- High quality non-return valve which prevents water siphoning back from the diffuser to the CO₂ canister.
- 2m of highly flexible 6mm (1/4") CO₂ tubing for versatile and easy connection of all components.

Starter Kit
Code: 2925



Components also available separately:-

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CO₂ Diffuser
Code: 2926

CO₂ Canister
450ml

Non Return Valve
Code: 2929

Flexible Tubing 2m
Code 2921:

ukaps

George Farmer says ...

“CO₂ gas injection is a guaranteed way to improve plant growth. It is important to keep it at a safe level to avoid livestock intoxication and a stable level to minimise algae. Plants consume a lot more nutrients when fed with CO₂. Gamma NutraFeed is an ideal comprehensive liquid fertiliser to help prevent nutrient deficiencies.”

CO₂ Power Diffusers

Diffusing CO₂ into the aquarium can be tricky. This discreet range of Power Diffusers uses the flow from your external filter combined with the spinning diffuser blades for perfect diffusion.

- Unique, patented two-layer impellers ensure the highly efficient diffusion of CO₂.
- Innovative and compact design allows the diffuser to be easily installed inside or outside the aquarium and incorporated into any aquarium set-up.
- Robust construction, manufactured from durable, acid and alkali resistant and non-toxic plastics.
- Easy to maintain and clean.
- Includes non return valve and spray bar. (We highly recommend that an AquaGro CO₂ Bubble Counter - NOT supplied - is used with this diffuser).
- Just connect to pump or power filter and CO₂ supply (NOT supplied) and watch your plants flourish!
- Three sizes available for tanks from 500 to 1500 litres.



Power Diffuser 500
Code: 5641

Power Diffuser 1000
Code: 5642

Power Diffuser 1500
Code: 5643



Replacement Spray Bar Kits



47cm
Code: 5647



61cm
Code: 5648

Flow

Flow is key to nutrient and CO₂ distribution. Often the flow from an internal or external filter is not enough. Looking to reach a flow rate of 10 times the tank's volume per hour is a good start. If you have a 100L tank, aim for a flow rate of 1000L per hour. Sometimes this will mean adding an additional filter or powerhead, but it is worth it to help avoid nuisance algae and promote good plant growth.



GROWING TIP

Pressurised systems are the ultimate in CO₂ diffusion regardless of aquarium size or volume. AquaGro CO₂ Kits are perfect for smaller tanks and in situations where a large CO₂ bottle is not viable.

CO₂ Hobby Set

Set includes:

- **TMC CO₂ 'One Use' CO₂ Cylinder 95g**
Disposable cylinder which provides a convenient installation and use of the CO₂ kit.
- **TMC CO₂ 'One Use' Cylinder Stand**
Moulded stand designed specifically to ensure that the 'One Use' disposable CO₂ cylinder is kept vertically upright and secure whilst in use.
- **TMC CO₂ Pressure Regulator Nano**
High precision nano CO₂ pressure regulator designed specifically for aquarium use.
- **AquaGro CO₂ Diffuser**
High quality plastic diffuser which ensures the efficient and effective diffusion of CO₂ within the aquarium.
- **AquaGro CO₂ Bubble counter**
Good quality plastic bubble counter which provides a simple and reliable visual indication of the amount of CO₂ being dosed to the CO₂ diffuser and allows for accurate CO₂ dosing.
- **Non Return Valve**
Effective plastic valve which is used to prevent water flowing back from the aquarium to the CO₂ supply.
- **Dosing Pipette**
Compact pipette which allows the bubble counter to be easily filled with water.
- **AquaGro CO₂ Flexible Tubing**
4/6mm in diameter and 2m long.



Code: 2960





CO₂ Expert Set

Set includes:

- Same as the Hobby Set but with a **GLASS** AquaGro CO₂ Diffuser, Bubble Counter and Non Return Valve.



Code: 2961

Limnophila aromatica

Limnophila aromatica is a stunning plant that derives from Southeast Asia and is also found in other regions around the world, especially North America.

L. aromatica is a stem plant that is happy in many aquariums with varying amounts of light and nutrients but its number one requirement is good CO₂. This plant will not grow to its full potential without a great deal of carbon. If supplied with CO₂ you will be rewarded with a beautifully textured and colourful plant that will quickly become the centerpiece of your aquarium.



PLANT PROFILE

Acrylic Inlet & Outlet Set

- Unique, high quality acrylic water inlet/outlet set providing all the components required for an advanced aquarium set-up.
- Manufactured in high clarity, transparent acrylic to ensure minimal visual impact on the aquarium, and supplied in a hard plastic carry case.



Set for 12-16mm flexible hosing
Code: 2899

Set for 16-22mm flexible hosing
Code: 2900

Set includes

- Curved acrylic inlet pipe including removable inlet strainer, adjustable surface strainer fitting and strainer sponges.
- Curved acrylic outlet pipe.
- Connection fittings and suction cups for simple installation on the aquarium and easy connection to flexible hosing.
- Soft, flexible cleaning brush (0.5m long) and maintenance kit to allow the set to be kept in premium condition.



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Glasware

Glassware is very popular with today's aquascapers. The focal point of any planted tank should be the fish, plants and decor; not the equipment. Glasware helps to minimise the visual impact of equipment in the aquarium.

It needs to be cleaned regularly and should be handled with care to avoid breakages. Filter inlets, outlets, CO₂ diffusers and bubble counters are items that are commonly made from glass.



GROWING TIP

Glassware ...Clear Simplicity

Glassware is the ultimate in discreet hardware, simply blending into its surroundings.

- High quality, professional grade glass products.
- Compact, aesthetic design makes the products ideal for incorporating in all sizes of planted aquariums including the smallest nano tanks.
- Suitable for use with all CO₂ systems.

Diffusers



Glass CO₂ Diffuser
Code: 2901



Glass CO₂ Diffuser
Code: 2902



Glass CO₂ Diffuser
Code: 2906



Glass CO₂ Diffuser
Code: 2907



Glass CO₂ Diffuser
Code: 2909



Glass CO₂ Diffuser
Code: 2911



Glass CO₂ Diffuser
Code: 2919



Other Glassware



Glass CO₂ Bubble
Counter
Code: 2915



Glass Non Return
Valve
Code: 2916



Glass CO₂ Level Indicator
Code: 2910

ukaps
George Farmer says ...

“Glass/ceramic diffusers are a great blend of form and function. Keep them clean to maintain a constant stream of tiny microbubbles. Consider purchasing two identical units and keep one constantly soaking in a weak bleach/water solution whilst the other is in use. Swap the diffusers every week after rinsing off the solution in plenty of water and de-chlorinator.”

Hang On Thermometer

- 6mm = code: 2956
- 8mm = code: 2957
- 10mm = code: 2958
- 12mm = code: 2959



- Available in 4 sizes to suit various thicknesses of glass.
- Temperature measuring range: 0-40°C (measurement deviation: within $\pm 1^\circ\text{C}$).

Scissors are an aquascaper's best weapon. Keeping plants trimmed and in shape is integral to keeping your planted tank looking good.

When trimming stem plants, make the cut at the leaf's node, where the leaves grow from the stem. By doing so, the plant should grow two more plantlets from where the cut was made and in turn, this will give your stems a nice, bushy appearance.



GROWING TIP

Water Softeners

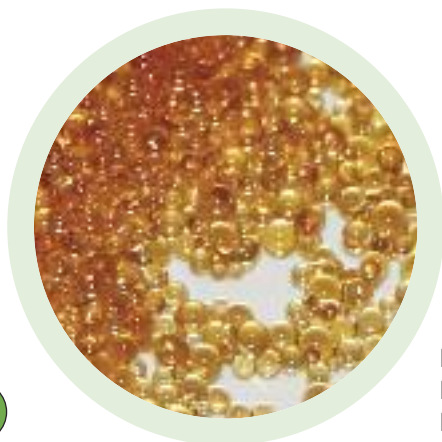
Aquatic plants prefer soft water. This simple, effective and discreet unit softens your water without the need for expensive water treatments.

The softer the aquarium water the easier it is for plants to absorb vital nutrients and carbon from the water and this, in turn, results in faster growth and healthier plants.

Our recommended method of water softening is to allow water from your external filter to pass through the glass water softener (which contains de-ionising resin) before returning to the aquarium.

The amount that water is softened is dependent upon the starting "hardness" of your tap water. The de-ionising resin is "rechargeable" by simply placing it in some salt water overnight.

Code	Tank Size	Approx. Size (height x width)	Approx. Resin Volume
2922	up to approx. 100L	200mm x 55mm	20ml
2923	up to approx. 200L	260mm x 60mm	50ml
2924	up to approx. 400L	265mm x 135mm	250ml



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Glass T-Piece

12 x 12 x 4mm = code: 2896
16 x 16 x 4mm = code: 2897
19 x 19 x 4mm = code: 2898



Water Softener Large
Code: 2924



Water Softener Medium
Code: 2923



Water Softener Small
Code: 2922

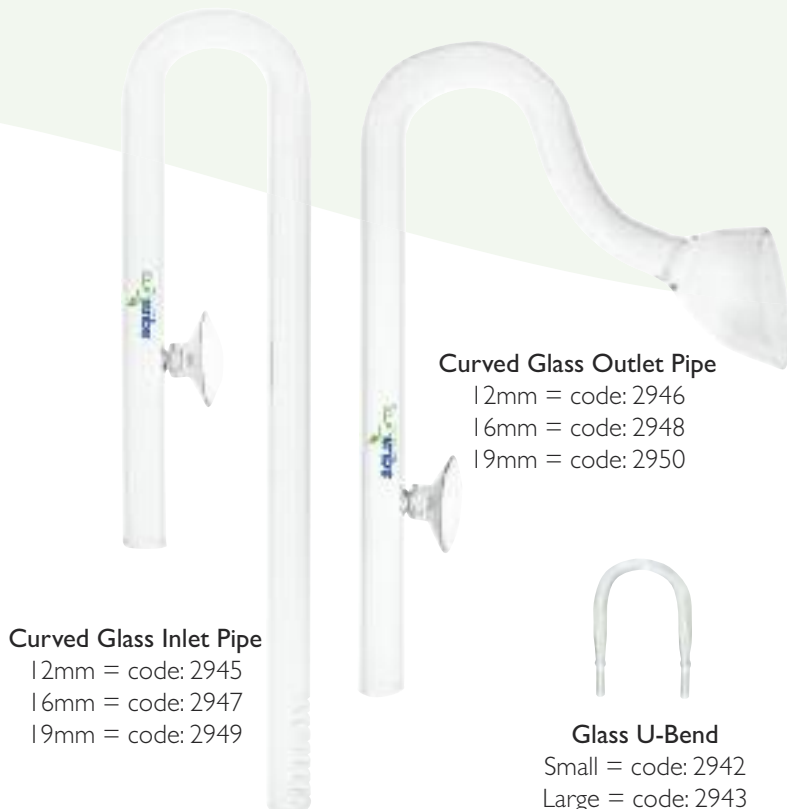
Staurogyne sp

Staurogyne sp. is a relative newcomer to the hobby and has taken the aquascaping scene by storm. This plant is slow growing and compact but can also prove to be a sturdy, tall stem plant if allowed.

A good nutritious substrate is suggested for this plant to flourish but besides that, it has very few demands. It makes an ideal feature plant in smaller aquariums, or an effective foreground plant in larger tanks.

Inlets, Outlets and Pipework

Why spoil your aquascape with bulky filterware?
Glass inlets and outlets look almost invisible within your aquarium.



PLANT PROFILE

CO₂ Tubing Glass
Connecting Pipe
Code: 2941



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Setting up a Planted Tank



1 The empty tank is placed in a suitable position. Due to the size and low weight of this nano tank it can be positioned in a wider variety of places than most conventional aquariums. Place away from direct sunlight and out of the reach of small children.



2 Add a thick layer of AquaGro NutraSoil substrate, sloped slightly towards the back. This substrate releases nitrogen in the initial weeks after set-up, so test for ammonia and nitrite prior to adding livestock. NutraSoil does not need to be rinsed before use.



3 Next add wood. The wood is pre-soaked to prevent it from floating or staining the water. The selected piece protrudes from the water line and adds an extra dimension to the aquascape. If your wood is smaller, and fits inside the tank, you can use the clear cover supplied.



6 *Staurogyne repens* is added to the midground. This new plant is ideal for small aquaria as it remains compact. Regular pruning will encourage bushy growth and regular feeding with AquaGro NutraFeed will ensure nutrient deficiencies are prevented.



7 *Pogostemon helferi* is planted in the foreground. You'll definitely need tweezers for this as it's fiddly work! Regular pruning ensures it remains low to the substrate. If it turns yellow, add some Nutrafeed to provide nutrients.



8 A few more stems of *Staurogyne repens* are added between the *Pogostemon* and wood to create a better transition. Such transitions and space between elements are important in aquascaping to help attain a more pleasant and natural appearance.

Cryptocoryne wendtii

Cryptocorynes are fantastic low-maintenance plants which grow slowly and do well in low light or shaded areas.

When grown in an open space the leaves of *Cryptocoryne wendtii* 'green' will virtually lie on the bottom. Like most other Sri Lankan *Cryptocoryne*, it also grows well in hard water. It is an ideal background plant for small tanks.

Pruning off the leaves at the rhizome near the substrate will generate new leaf growth.



- 4 Water is slowly added via an air line to minimise clouding. The water should just cover the substrate as this allows easy planting using tweezers. The substrate grain size is ideal for all plants, even those with delicate root structures.



- 5 *Cryptocoryne wendtii* 'green' is added to the background with tweezers. This easy plant makes an ideal background in a small aquarium, usually growing no more than 15cm/6". A nutrient-rich substrate will ensure healthy growth, even in low light.



- 9 The aquarium is topped up with water using an air line until half full. The remainder is filled slowly via a bucket into the rear filter chamber. Take care when filling to help prevent cloudy water and avoid plants being dislodged.



- 10 The light unit is installed via the clamp on the outer aquarium wall. The filter is switched on, ensuring the outlet nozzle is directed to ensure all-over circulation. Use a timer to turn the lights on for around eight hours a day.



PLANT PROFILE

NutraSoil

AquaGro NutraSoil should not be vacuumed like regular gravel in non-planted aquariums. Dense planting in combination with good mechanical filtration and sensible livestock levels will ensure waste matter does not build to excess. Gently wave your hand just above the substrate to stir up any loose detritus which can be siphoned away as part of your regular water change regime.

GROWING TIP



PowerPads



1 x Water Clarity Pad
1 x Filtration Start Up Pad
Code: 5974

1 x Nitrate/Nitrite Reduction Pad
1 x Ammonia Reduction Pad
Code: 5975

1 x Phosphate Reduction Pad
1 x Activated Carbon Pad
Code: 5976

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MicroHabitat 8

- 8 litre (1.75 UK Gal/2 US Gal) micro habitat.
- Perfect for small planted aquascapes and miniature ornamental freshwater shrimps such as bee shrimps and crystal shrimps.
- High quality acrylic design - lighter, stronger and clearer than a glass equivalent.
- Built-in filtration system and integral pump with multi-directional outlet ensures optimum water quality and minimal maintenance.
- Supplied complete with an LED light with high quality, **LG TopLEDs**, a condensation lid and a micro thermometer.
- Compact, self-contained design makes the AquaGro MicroHabitat ideal for bedrooms, kitchens, living rooms and offices.
- For a more advanced set up an AquaGro PowerPad can be placed in the filtration system chamber of your MicroHabitat 8 (supplied in packs of two).



MicroHabitat 8
Code: 2980

ukaps

George Farmer says ...

“The MicroHabitat 8 is a delightful little aquarium suitable for any living space. To ensure suitability, use small, low-light tolerant plants such as Cryptocorynes, mosses and Anubias. Although the in-built filtration has a relatively huge capacity, it is important to change plenty of water frequently to maintain water quality with such a small volume of water.”

MicroHabitat 8 Advanced

- As the standard version but also supplied with 1kg Nutrasoil, 2g Hikari Shrimp Cuisine and an AquaGro Starter Kit (containing 25ml plant food and 10ml water conditioner/dechlorinator).



MicroHabitat 8
ADVANCED
Code: 2991


ADVANCED version

including

- 1kg nutraSoil
- 2g Hikari Shrimp Cuisine
- aquaGro Starter Kit

containing 25ml plant food and 10ml water conditioner/dechlorinator

MicroHabitat LED Light

- Natural Daylight LED light with high quality,  LG TopLEDs for long lasting light output and a “low light mode” for night viewing.
- Perfect for planted tanks, tropical aquariums and specialist indoor plants.
- Low energy consumption.



MicroHabitat LED Light
Code: 2981



Day Mode 



Night Mode 

with
High Quality
 LG
TopLEDs

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Carpeting Plants

When growing carpeting/lawn plants such as *Glossostigma* or *Hemianthus 'Cuba'* ensure the water is being circulated effectively, especially in the lower parts of the water column.

This helps to distribute CO₂ and nutrients appropriately helping to prevent algae.



GROWING TIP



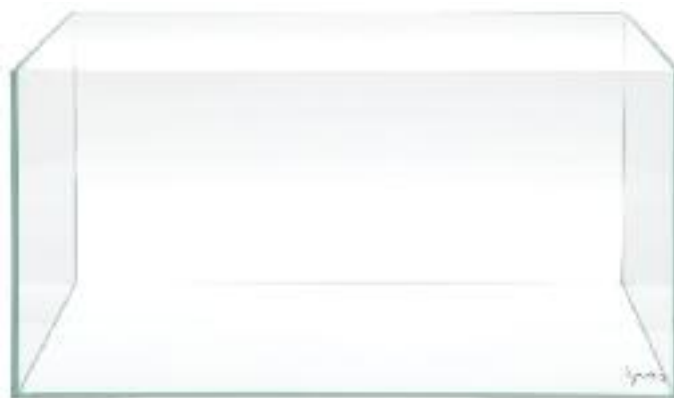
Signature
by TMC

Optiwhite Glass Tanks

- Stylish, high clarity aquariums manufactured from Optiwhite (low iron) premium quality glass for super clear, true to nature viewing.
- Rimless and braceless design ensures unobstructed view from all angles and a minimalist look.
- Discreet silicone joints.
- Available in the following sizes:-
 - 450 (l) x 450 (w) x 300mm (h) - 6mm glass.
 - 600 (l) x 450 (w) x 300mm (h) - 6mm glass.
- Other sizes available on request.



Signature Glass Tank 450 x 450 x 300mm
Code: 3020



Signature Glass Tank 600 x 450 x 300mm
Code: 3021

Pogostemon helferi

Pogostemon helferi, or Downoi as it is affectionately known, is a relative newcomer to the hobby.

Unlike most aquatic plants, this species was actually discovered by aquarists in Thailand. The Thai name "dao noi" simply means "little star" and is so-named due to its shape.

This species is a great foreground plant that does not require as much effort as many other foreground species. As with all aquarium plants, the addition of CO₂, light and fertilisers is beneficial but this particular plant will do well in tanks which has lower levels of these three components. It will however, benefit greatly from a nutrient-rich substrate.



PLANT PROFILE

- Available sizes:-

450 (l) x 450 (w) x 750mm (h)

Carbon Grey = code: 3030

Charcoal Black = code: 3032

Glacier White = code: 3034

600 (l) x 450 (w) x 750mm (h)

Carbon Grey = code: 3031

Charcoal Black = code: 3033

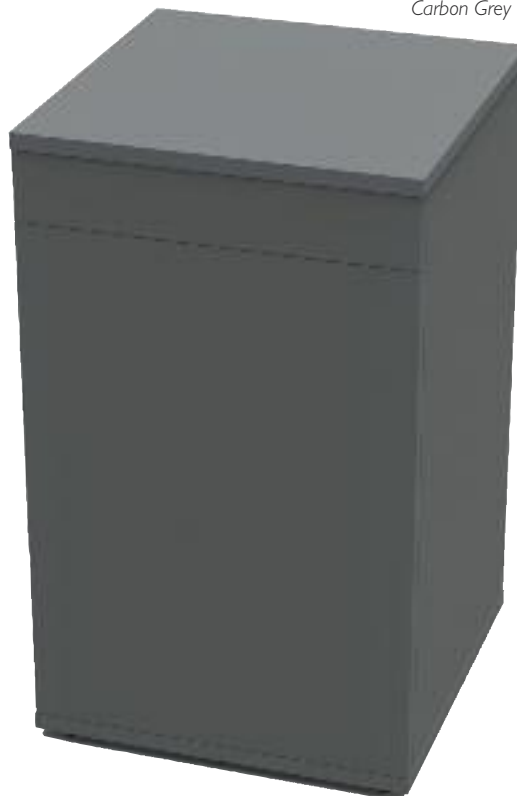
Glacier White = code: 3035

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Aquarium Cabinets

- High quality cabinets designed to complement the latest sleek lifestyle aquariums.
- Stylish yet simple design, manufactured from high quality materials which offer strength as well as resilience to water and condensation.
- Sleek single door design allows for storage of all accessories or even installation of a sump.
- No handles and a soft close door ensure a sleek, minimalist finish to the cabinet.

Carbon Grey



Glacier White

- Available in carbon grey, charcoal black and glacier white. Other colours and sizes available on request.

What do plants need?

Light • CO₂ • Nutrients





Nutrients in the Aquarium

The main purpose of a substrate in the planted aquarium is to provide an anchor and food source for plant roots but it is also very important from an aesthetic perspective. The advantage of a complete substrate like AquaGro NutraSoil is that it looks great as well as providing optimum nutrients to the plant roots.

Nutrients are the food that a plant needs to survive and grow healthily. Nutrients can be gathered via the plant roots or leaves. Complete substrates like NutraSoil slowly provide vital nutrients that the plant uses via their growing root structure.

The soft, small grain allows the roots to penetrate easily and all the plants' energy can therefore go into stem and leaf growth. Conversely, inert sand or gravels do not have these capabilities and, whilst doing a great job of anchoring your plants to the bottom of the aquarium, they will offer very little benefit in terms of plant growth.



Nutrients

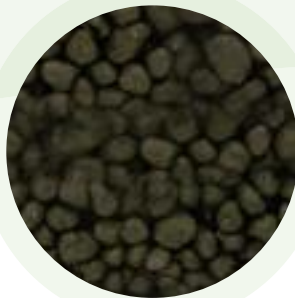
Nutrients are key to a plant's healthy growth. Plant fertilisers and foods are measured according to their NPK rating - the amount of Nitrogen (N), Phosphorous (P) and Potassium (K) they contain. In addition to other properties, Nitrogen helps plant foliage to grow strong, Phosphorous helps roots and flowers grow and develop and Potassium is important for overall plant health. Important micronutrients include iron (Fe) and manganese (Mn). The more light and CO₂ your planted aquarium has, the more nutrients it will require.



GROWING TIP

NutraSoil

NutraSoil is an attractive, complete substrate which means that it not only provides an anchor for the plants but also slowly provides vital nutrients to the plants' growing root structure.



- Soft, small granules allow plant roots to penetrate easily ensuring all the plants' energy goes into maximum stem and leaf growth.
- All-natural product with a porous structure which provides a perfect area for beneficial bacteria to colonise, helping to maintain optimum water quality and clarity.
- Lowers the pH level of the aquarium making it perfect for aquatic plants and most fish.
- Provides a comfortable home for bottom dwelling fish and shrimps.
- Made in Japan for TMC.



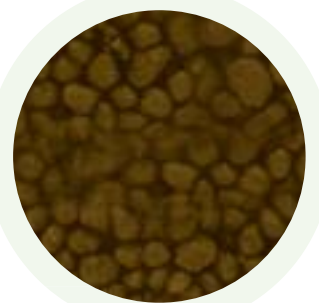
10 litre bucket
Code: 2972 (black)
Code: 2975 (brown)



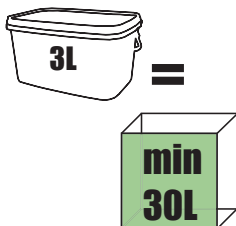
5 litre bucket
Code: 2971 (black)
Code: 2974 (brown)



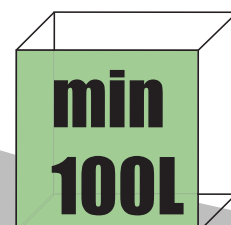
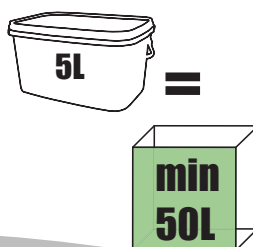
3 litre bucket
Code: 2970 (black)
Code: 2973 (brown)



How much do I need?



24



NutraFeed

Complete Aquarium Plant food

Contains
Fulvic Acid

- Formulated based on the very latest knowledge of aquatic plant cultivation and has been taken a step further with the addition of organic acids not used in other brands of plant food.
- The elements in NutraFeed are chelated with organic fulvic acid, which is the key component of humic matter found in soil.
- Fulvic acid is also responsible for the transport of essential minerals and other nutrients into the plant via the root system.
- Available in 250ml and 500ml packs.
- Dosing: Min. 10ml per 80 litres of water per week.



Nutrafeed 250ml
Code: 2977



Nutrafeed 500ml
Code: 2978

Marsoom perpis

More commonly known as Java Ferns, these hardy plants ask for very little from the aquarist. They are often used in aquariums containing goldfish as the fish seem less inclined to destroy them. Java Ferns are also a firm favorite with Nature Aquarium Style aquascapers and are always grown on aquarium decor. Unlike most other plants, Java Ferns will quickly suffer and die if the plant's roots are pushed into the substrate. Tying the roots of the plant to some decor with fishing line will allow this plant to flourish.



PLANT PROFILE

NPK values

5.86-1.16-27 (sulphur 6.7)

Contains: potassium, sulphur, nitrogen, magnesium, phosphorus, manganese, boron, iron, zinc, copper, cobalt and molybdenum.

25

Decor





Decor in the Aquarium

Aquarium décor, also known as hardscape, will often form the backbone of an effective aquascape.

It is vital to choose the right type and quantity to suit the size and style of the aquarium you wish to set up. Use lessons from nature to guide you in your selection and positioning of hardscape.

Avoid using too many different materials. Sticking to one type of wood and rock is usually the best idea. Take plenty time to position the hardscape prior to planting and filling with aquarium water. Do not be afraid to experiment but equally feel free to use other people's hardscape designs as inspiration.

Attaching plants, such as Java fern, Anubias and mosses, to your hardscape is a popular way of creating a mature appearance from the outset.

Consider how the hardscape may alter your water chemistry. For example some rocks will contain limestone that will increase pH and hardness.

Wood Décor

Soak any wood décor before installing to ensure it will sink after adding water.

Some wood may require weeks of soaking to also remove excess tannins that can stain the water.

Activated carbon filtration will also remove any staining.

GROWING TIP



40cm wide

Borneo Driftwood

- High quality decorative wood.
- Suitable for aquariums and terrariums.
- Wide range of sizes available for nano and larger tanks.
- Each piece is unique!



61cm high



68cm wide



68cm high



46cm wide

ukaps

George Farmer says ...

“Position all of your wood carefully prior to planting and adding aquarium water. Take time to ensure it looks balanced and natural. Think about the height of the aquarium and how the wood fills the empty spaces. Consider focal points such as plants that attach to wood i.e. Java fern (*Microsorium*).”



43cm high



23cm wide

Other types of decor coming soon!

Tweezers also rank highly in an plant enthusiast's tool kit. Planting into substrate can be tricky, and sometimes virtually impossible without tweezers.

Large rosette plants such as Echinodorus species can be planted by hand but for stem plants like Rotala sp. and carpeting plants like Hemianthus callitrichoides, fine tweezers are essential.

Using tweezers not only helps to hold and position the plant but also allows the roots of the plant to be pushed deep into the substrate, helping the plant to quickly find nutrients.



GROWING TIP

Spares and Accessories



**Straight Tip
Tweezers**
Code: 2952



**Curved Tip
Tweezers**
Code: 2953



**Straight Tip
Scissors**
Code: 2954



**Curved Tip
Scissors**
Code: 2955



**Refillable
CO₂ Bottle (567g)**
Code: 5617



V²Pressure Regulator Pro
Code: 5385 (DIN477)
Code: 5388 (CGA320)



V²Pressure Regulator
Code: 5386 (DIN477)
Code: 5387 (CGA320)



**CO₂ Pressure
Regulator Nano Pro**
Code: 2966



**CO₂ Pressure
Regulator Nano**
Code: 2962



**"One-Use"
CO₂ Bottle (95g)**
Code: 2963



CO₂ Flexible Tubing
Code: 2921

- Soft and flexible
- Non-toxic and durable
- 4/6mm diameter
- 2m length



Compact CO₂ Diffuser
20mm = code: 2933
25mm = code: 2934



CO₂ Level Indicator
Code: 5645



**CO₂ Level Indicator
Replacement Reagent Bottle**
Code: 5649



**Compact CO₂ Diffuser
Replacement Ceramic Plate 20mm**
Code: 2935



**Compact CO₂ Diffuser
Replacement Ceramic Plate 25mm**
Code: 2936



CO₂ Bubble Counter
Code: 5646



Dosing Pipette
Code: 2939



Suction Cup Clips (2pk)
Code: 2937



Suction Cups (2pk)
Code: 2940



**90° White Elbow
Connector**
Code: 2938



Be inspired ...





Dream ... create



All tank photos courtesy of George Farmer



London

Solesbridge Lane
Chorleywood
Hertfordshire
WD3 5SX
England

t: +44 1923 284151

f: +44 1923 285840

london@tropicalmarinecentre.co.uk



Manchester

Unit 3, Beta Court
Sharston Industrial Estate
Wythenshawe
Manchester, M224QE
England

t: +44 161 946 1538

f: +44 161 998 9599

manchester@tropicalmarinecentre.co.uk



Bristol

Unit 2
Cribbs Causeway Centre
The Laurels
Cribbs Causeway, Bristol
BS10 7TT, England

t: +44 117 958 1150

f: +44 117 958 1152

bristol@tropicalmarinecentre.co.uk

