



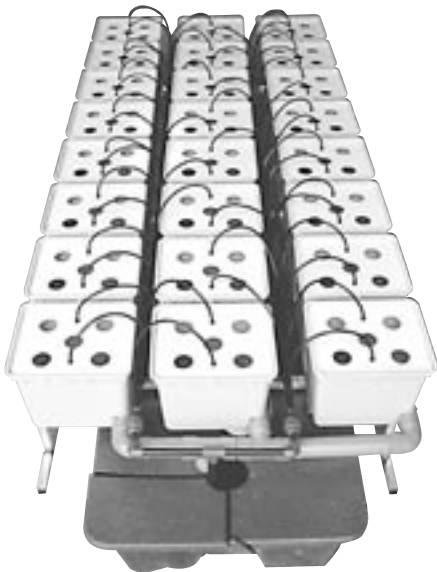
GHE

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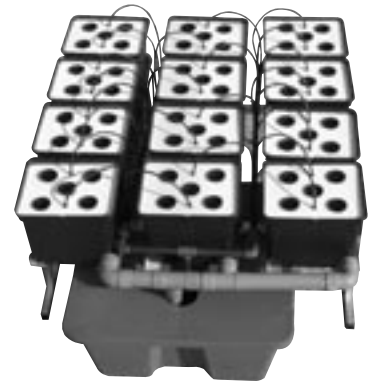
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Dutch Pot «Aero» 1 & 2 m²

Thank you for purchasing a Dutch Pot™ system. We look forward to your growing success and the opportunity to serve you during the coming years. The Dutch Pot is a great machine, combining the unique performances of the AeroFlo™ with the simplicity of the WaterFarm™. You will soon find that setting up and operating a Dutch Pot is easy and fun.



2 m² : 24 - 120 plants
L = 220 cm, l = 100 cm, H = 67 cm
Volume : +/- 72L



1 m² : 12 - 60 plants
Dimensions :
L = 120 cm, l = 100 cm, H = 67 cm.
Volume : +/- 60 L

To operate your system successfully:

- Get a water analysis from your local water company: to use the fertilizer best adapted to your water (hard or soft), it is important to know its content.
- Keep the water temperature under 24° C. Ideally between 16 & 20° C and humidity between 65 & 75%.
Notice: for cuttings, keep your temperature between 24 & 25° C and your humidity level between 80 & 95%.
- Give your plants good lighting, excellent ventilation and adequate humidity.
- Always clean your system thoroughly between crops. See "maintenance and cleaning":
- Adapt your growing space to the plants you grow, as different plants have different needs.
- If you have questions about your water or about the development of your crop, please don't hesitate to contact us. We guarantee free technical support and advice to all our customers.

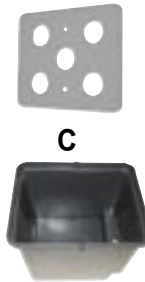
Bringing Nature and Technology Together

PACKING LIST

QUANTITY	DESCRIPTION
<u>1 m² / 2 m²</u>	
1	A - Reservoir and cover (2 parts)
12 / 24	B - Pots
12 / 24	C - Covers with 2" holes
1	D - Manifold
1	E - Submersible pump
bundle of 2 / 3	F - Aluminium support system (2/3 long - 4/6 medium)
2	G - Distribution lines
6	H - Metallic cross bars
3	L - Return lines (long grey PVC)



A



C



B



E



D



F



G

LARGE PLASTIC BAG CONTAINING:

FOR 1M²:

- a - 1 straight return line
- 1 return line with tee
- 1 return line with bevelled beak
- b - 6 plastic straps
- f - 1 pump to manifold connection
- g - 24 4.6mm tubing with connectors
- h - 4 tees for aluminium feet
- i - 4 elbows for aluminium feet
- j - 24 siphon elbows
- k - 8 aluminium bars with caps

Plus : 1st small plastic bag with:

- c - 24 sprayers 180°
- d - 8 black caps

Plus : 2nd small plastic bag with:

- e - 12 velcro stickers

Plus : 1 large plastic bag with:

- 60 M - 2" net cups
- 1 CocoTek 2" pot
- 1 CocoTek 2" lining
- 1 CocoTek 2" disk

FOR 2M²

- 1 straight return line
- 1 return line with tee
- 1 return line with bevelled beak
- b - 8 plastic straps
- f - 1 pump to manifold connection
- g - 48 4.6mm tubing w/ conn

Plus : 1st small plastic bag with:

- c - 48 sprayers 180°
- d - 12 black caps

Plus : 2nd small plastic bag with:

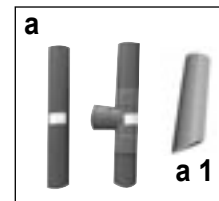
- e - 18 velcro stickers

Plus : 1st large plastic bag with:

- h - 6 tees for aluminium feet
- i - 6 elbows for aluminium feet
- k - 12 aluminium bars with caps
- j - 48 siphon elbows

Plus : 2nd large plastic bag with:

- 120 M - 2" net cups
- 1 CocoTek 2" pot
- 1 CocoTek 2" lining
- 1 CocoTek 2" disk



a



b



c



g



h



f



i



j



k



H



L



M

UNPACKING:

Check the packing list and familiarize yourself with the parts.
The Dutch Pot comes with 3 x 1 L Flora-series nutrients. Plus detailed instructions.

LOCATION:

Plants can be grown almost anywhere using a Dutch Pot System. Greenhouses, patios and indoors under lights are wonderful locations. It can be installed anywhere there's warmth, light and fresh air. Choose a clean and level place to set up your system. Before assembling your system, choose the right space as leaks may always happen !!!

Fig. 2



ASSEMBLY:

Step 1: The support system * : (designed to carry 300 kg / m², with maximum stability)

- The stands are easy to assemble (F+k+h+i). You only need to assemble the aluminium tubing with the connectors. (fig. 1).

Step 2: Position the stands with the reservoir in between, then position the reservoir so that the access hole is easily accessible. (fig. 2)

- Among your parts you will find 12/18 auto-adhesive, velcros (e). They allow you to fix the metallic cross-bars (H) to the stands. (fig. 2). Stick 1/2 the velcros on the marks on the stands. The other 1/2 must be stuck on the cross bars, on the holes drilled for directions.



Fig. 1

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Step 3: the cross-bars



Fig.3

At this stage, if the reservoir is in your way, you can remove it and place it back at the very end of your setting.

Place the metallic cross bars starting at the very edge of the support system. Then align the bars.

Notice:

- 1 - Bars must be facing each other, by pairs, starting from the edge.
- 2 - Make sure your bars are aligned on the sides, from edge to edge. (fig. 3)



Fig.4

Step 4: the return line

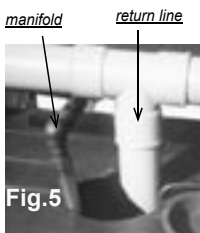


Fig.5

1 - Place the 3 grey PVC pipes (l) on the support system and connect them together with the connecting parts (a) you will find in the large plastic bag. (fig. 4) Place them with the holes facing up, and secure with the plastic straps (b) at the extremities. You will notice there is a right and a left side. You don't need to glue, just make sure the connections are tight. You may too, if you prefer, use some bathroom "silicone mastic" to better secure the return line.

Introduce the bevelled beak (a1) and direct it towards the reservoir's access hole. (fig. 5)

Step 5: the manifold

1 - Introduce the 4.6 mm spaghettis (fig. 6) in the distribution lines, then assemble the 3 parts of your manifold (1D+2G) together (fig. 7). Your manifold is ready.

Place it along the return line (fig. 8). Make sure the connector (f) to the pump is directed into the access hole on the cover of the reservoir (fig. 5)

This rigid manifold is leak-free and extremely practical: easy to put together and easy to clean.

Simply disconnect the parts, wash them and put them back together. Clean thoroughly the inside of the spaghettis and the sprayers with a metallic or plastic wire.

Step 6: The pump (fig. 9):

Your pump may be different from the photo on the instructions. But all the pumps are connected the same way.

Connect to the manifold with the pre-assembled black tubing (f). Place the pump on the bottom of the reservoir and make sure to keep the plug out of the water!!!



Fig.7



Fig.9



Fig.6



Fig.8

Step 7: The pots

1 - There are 2 elbows (j) to each pot (B). Their role is to act as siphons. This is a very important part of your system as it helps evacuate the waters out of the bottom of the pot, keeping your solution cleaner and livelier.

Take 2 elbows and hook them together forming a U shape (fig. 10). Place them in the bottom of the pot (fig. 11), one side on the edge of the pot, and the other on the circular mark on the bottom.

2 - Place the pots along the return line (fig. 12), 4 in a row (or 8 for the 2m²). Make sure they nest correctly on the return lines to avoid leaking (fig. 13).

3 - Place the covers on the pots (fig. 14).

4 - Introduce the 4.6mm lines into the small holes in the covers, in a staggered way (fig. 14): the left line will feed the left row plus one hole on the center row. The right line will feed the right row, plus one hole on the center row. Then introduce the sprayers into the holes on the cover, and attach the red sprayer under the cover (fig. 15). At this stage you can tie the manifolds to the return line, with the plastic straps (b).



Fig.12



Fig.13



Fig.16



Fig.11



Fig.10



Fig.14



Fig.15

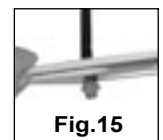


Fig.15

START UP

Your Dutch Pot is now complete. The next step will be to fill it with water, add Flora-series (included with your system), adjust your pH and turn your pump on. You're ready to plant!

Before leaving, check the system to make sure that the connections are tight and there is no water leaking.

THE NUTRITIVE SOLUTION

The Dutch Pots reservoir contains 60 L .

In hydroponics it is important to know your water content. Water analysis are available at your water company. If you need help interpreting the data, please call your supplier or contact us directly, we will be happy to help you.

If your water is too hard use our hard water formulas. For your cuttings and in small units like the AquaFarm or the Water-Farm you can mix 50% tap water and 50% distilled or rain water.

Flora-series (FloraGro, FloraMicro, FloraBloom) and One Part (Total Gro, Total Bloom) are available for best growth. They are both exhaustive formulas, needing no booster nor additive to give you the most amazing crops. You will find detailed application charts on the labels, for easy use. Other products are available to help you maximize your results, if you wish: Diamond Nectar, Ripen, Mineral Magic, the BioBoosters, the Biiofiltre, and the pH regulators in liquid or powder form.

Flora-series™ was especially designed to allow you to closely monitor your plant's growth. This is the original 3 components fertilizer, often imitated but not yet equalled. The following formula is one favored by many growers, in BC (Canada), in the US, and in Australia. It is used for fast flowering annuals with amazing results on crop quantity and quality:

	FloraGro	FloraMicro	FloraBloom
Cuttings and seedlings	2	2	2
Vegetative growth	3	2	1
Flowering and fruiting	1	2	3

Last days before harvest: add plain water with adjusted pH, without nutrients, or use Ripen.

This range is a starting solution in hydroponics. Use an approximate 1/4 strength dilution for topping off".

In soil, use only 1/2 strength and apply every other watering.

Before mixing, adjust your water to a pH of 5.5 to 6.5. After mixing, readjust if needed. Verify your pH levels regularly.

For measuring, use a ml graduated syringe , or use the cap of your 1-liter bottles:

Example: 1 cap = 10 ml.

For 20 Liters of pure water :

1 cap Gro + 2 caps Micro + 3 caps Bloom = 1.00 to 1.50 EC, depending on water quality.

Our nutrients are extremely concentrated. Very little is needed for your crop.

To avoid any precipitation when you mix your solution, make sure to rinse your measure after pouring each component and never mix the components together.

Note: City water being often rather hard, it is recommended to replace your solution every 10 to 15 days for best results. Between watering don't hesitate to irrigate with plain tap water with adjusted pH.

GROROX (CLAY PEBBLES)

Grorox is a clean, recyclable substrate. Well chosen, it is one of the conditions of your success. It comes in various qualities: the best is already stabilised (in order not to interfere with your solution's pH).

Before use:

- Rinse your rocks well to remove all residues.
- It is recommended to regularly check your pH level: put a few pebbles in a glass of water with pH adjusted to 6.0. Let it rest for an hour then measure. If the pH is higher then 7.0, soak it in a solution of phosphoric or nitric acid (or in our pH Down, liquid or powder) for a night. Then rinse profusely and use.

After the harvest:

- It is generally sufficient to wash off all organic debris and rinse well.
- If needed, in case of insect or fungi infestation, it is recommended to disinfect the pebbles. To do so, soak in strong acid (or pH Down). Let them soak overnight. Rinse very thoroughly to wash the acid off completely.



Fig. 16

To guarantee the best contact between the substrate and the roots, GHE offers a special «Hydro» mix made with 4/8 and 8/16 mm (fig. 16). It is perfectly stable, of course.

A great advantage to using Grorox is that, unlike rockwool, it is harmless to humans, reusable, and non-polluting. It is totally ecological and can be used several times, from crop to crop. To discard, you can recycle it in the garden to lighten the soil.

A - COCOTEK

New: We selected for you a new line of products made with 100% natural coconut fiber and latex. You will find a sample with your systems. For more info, please call your dealer or contact us directly.

The coconut pots exist in Ø 5 & 7 cm (fig. 11). You can use them with your choice of substrate (fig. 11 bis) (clay pebbles, lava rocks, perlite, vermiculite, coconut substrate, etc... or with your own mix of substrate. You can choose no substrate at all, and use a coconut cover alone (fig. 11 ter).

If you use plastic net pots, you can use them as usual with clay pebbles, or line them with the coconut lining pots to diversify your substrate, or, of course empty, with the coconut cover (fig. 12, 12 bis et 12 ter).

In the RainForest, CuttingBoard, AeroFlo, and Dutch Pot Aero, use the disks and the cubes:

MAINTENANCE: There is nothing special to do before harvest. But after the harvest, and as always, you have to clean the pots thoroughly (see § Grorox).

After removing the pots or the cubes from your system, get rid of as much of the roots as possible, rinse well, then let them dry well, and shake the debris off.

The CocoTek line is adapted to several growing methods. It can be used in aero-hydroponics, drip irrigation and soil. Pots and cubes can be used to germinate seeds and grow seedlings and young plants. They can then be planted directly in soil or in a soilless gardening unit, without removing the substrate and stressing the plant. CocoTek is biodegradable: in 3 years in soil it will completely compost and feed the garden.

CLEANING BETWEEN CROPS

To avoid disease and get the best out of your system, keep your growing area clean at all times.

Between crops, clean well and you will avoid clogs and infestations.

Choose a day when your nutritive solution is very low in the reservoir. Stop the pump and let as much of the solution as possible drain down in the reservoir.

Empty your pots, shake the rocks away from the roots and place them in a container, as you will wash them and use them again. Wash each pot and siphon thoroughly. Undo the pump, rinse it well and clean the filter.

Flush debris out of the manifold and return line with a hose or under a strong flow of water.

If needed (in case of disease or pest infestation), fill your system with water and an acidic solution (pH Down) and let it run for an hour to disinfect. Then rinse parts thoroughly.

If you use Chlorine, rinse everything thoroughly to remove all traces of bleach. To be sure that the system is free of Chlorine and after you rinse it, let it rest empty overnight to let the Chlorine evaporate completely before you start a new crop.

TROUBLESHOOTING

1 - In summer, when using lights in an enclosed space, and in order to avoid extreme temperatures, you could turn your lights on at night and take advantage of the cooler air.

Your nutrient solution should be kept as cool as possible, ideally around 18 ° C. As much as possible, do not let it exceed 24 ° C. The hottest days are a good time to turn off your room, clean it thoroughly and wait for a cooler season ...

2 - The grow room should be well ventilated. Outside weather allowing, continuous ventilation will eliminate excess humidity and bring in the much-needed CO₂ to your plants. Always keep your humidity level around 65 - 70%. Circulation fans will homogenate the air in the room, eliminating pockets of hot, humid air.

3 - If plants are not growing well and you suspect "hard water":

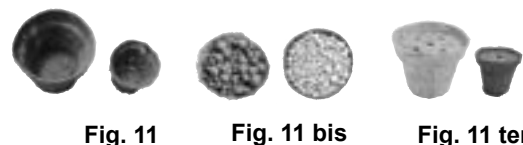


Fig. 11

Fig. 11 bis

Fig. 11 ter

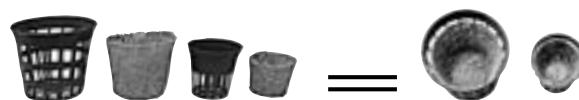


Fig. 12



Fig. 12 bis Fig. 12 ter



1. IT IS IMPORTANT TO HAVE A WATER ANALYSIS FROM YOUR WATER COMPANY. If you need help, please contact our supplier, or us, we will be glad to advice you.
2. Collect rainwater or try distilled or purified water. You should see a significant improvement in plant health and growth within one week.
3. Inquire about our Hard Water formulas.

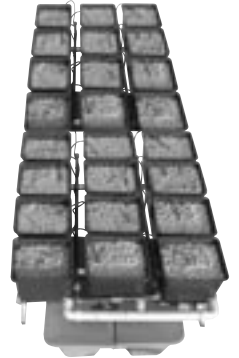


Our Dutch Pot Systems are designed for maximum flexibility.

- * You can extend a 1 m² to 2 m² and much more.
- * Pots can be served individually, so each plant may be watered as it needs.
- * Each pot is removable, so plants can be moved around easily.
- * You can transform a «Hydro» DP into an «Aero» DP in no time, and vice versa.

This flexibility gives it the enormous advantage to be adaptable to seasonal conditions.

During the hot days you can work with a Hydro DP and Grorox to protect the roots. And switch into faster gear with the Aero DP as soon as temperatures start to cool off.



General Hydroponics guarantees technical support and advice. If you have questions on your plant's growth or on the way our systems and nutrients work, please call, fax, or send us an E-mail.

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