Hydroponics in Action™

Setup Guide for the flat recirculating nutrient flow techinque system

Included :

Parts List, (Page 2)

Setup for a single tray system, (pg 3 - 5)

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Recirculating Nutrient Flow Technique System (RNFT System)

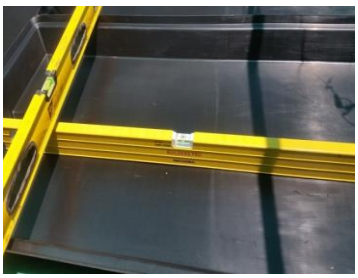
Hydroponics is the method of growing plants in a soilless medium whereby they get their nutrition through nutrients dissolved in water

Single tray parts

1. 1 x nutrient tray
2. 2 x pot holder trays
3. 1 x ajustable flow control outlet
4. 1 x pump
5. 1 x 2m of 15mm polyprop pipe
6. 1 x 1kg of coir (coconut hair)
7. 1 x 1kg each of nutrient (1kg hydroflow and 1 kg of calcium nitrate)
8. 5 x worm clamps
9. 2 x 15mm elbows
10. 1 x 600 gram block of coco peat
11. 75 x 5cm pots and 25 of 7.5cm pots
12. 2 x 50mm PVC 90° elbows
13. 2 x 50mm PVC 45° elbows
14. 1 x 1m 50mm PVC pipe
15. 3 x 50mm PVC insert joiners
16. 1 x PVC glue
17. 1 x small electronic scale (optional)
18. 1 x 100 litre plastic sump (optional)
19. 2 x mixing buckets (optional)

1. Setup Instructions for a single tray

1. Place the nutrient tray on a flat level surface ensuring that the lip extends over the edge of the stand or table

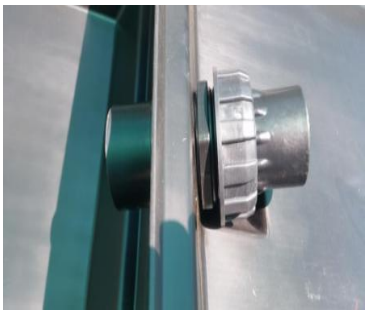


Checking tray levels

Close up of level

Closeup of level

2. Attach the flow control outlet through the hole whilst making sure the O ring, seals against the nutrient tray



Inside view of outlet

Inside and outside
view of outlet

3. Attach the return pipe to the flow control outlet making sure it has a downward angle, which allows the nutrient to flow into the sump

Return pipe attached to flow control outlet
(2 x 45° elbows and 1 x 90° elbow)

Downward angle of return pipe to the sump

4. Attach the pipe provided to the pump outlet using the clamp to ensure a good seal
   (no 6 Spanner or flat screwdriver)

Pipe attached to pump outlet with

5. Place your sump in such a way that the pipe from the pump lets water flow into the nutrient tray at the opposite end of the outlet

Both pictures showing inflow

6. Your sump should not be more than 1.2m below the Nutrient tray (This is to make sure the is water flowing well)

Sump is less than 1.2m below the nutrient trays

7. Fill the sump with water

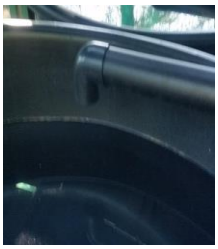
8. Place the pump into the sump whilst making sure it is fully submersed.

9. Plug the pump into the power socket and Switch on

10. Getting your sump levels right - once the water is circulating, ie. Nutrient tray is full and water is returning to the sump, switch the pump off. Water will flow into the sump from the outlet of the nutrient tray until it drops below the level of the flow control outlet. You sump is now full. Mark the level in the sump because when refilling this is the level you will refill to. This will give an accurate volume of water when calculating the nutrient amount.
When flowing the nutrient tray holds approx 30 litres of water, with the pump off approx 15 litres remain in the nutrient tray.

11. Check for leaks and that the water is flowing into and out of the nutrient tray back to the sump for complete recirculation.

12. Please make sure that the outlet allows the water to flow into the sump.



Sump filled with water (Point 7)
Outlet flowing into the sump (Point 11)

Fully submerged pump (point 8)

13. Once this is done place the pot holder trays into the nutrient tray.

Pot holder trays fitted into the nutrient tray