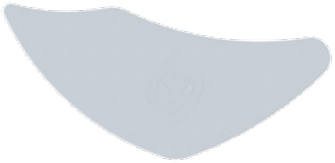
Designed, manufactured and distributed by

ALIEN®
THE EVOLUTION OF HYDROPONICS

SET UP INSTRUCTIONS

PART DESCRIPTIONS

Net Pot

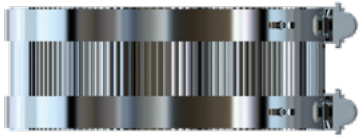


Lid cover

Lid

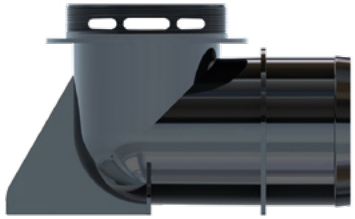
V-POT

Base



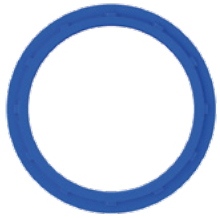
5 Inch Clamp

Dual-Flow Tee

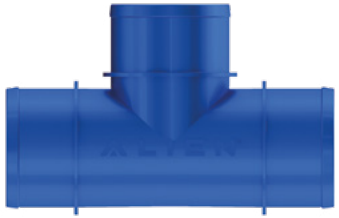


Dual-Flow Elbow

5” Silicone Washer

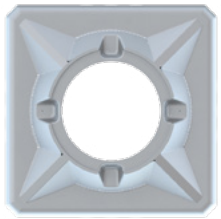


5” Nut

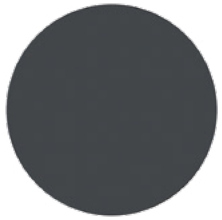


5” Tee

5” Elbow



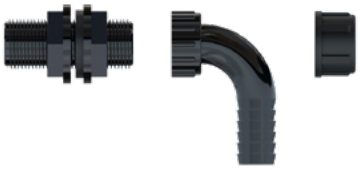
Header Lid



Header Blank

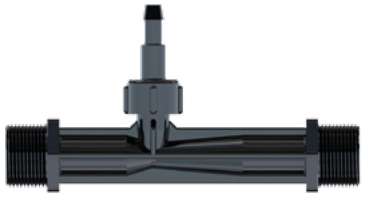
Header Pot

32mm, 40mm Tank connectors.



Chiller Fittings

Float Valve



Venturi

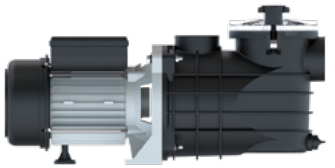
Venturi Washer 3/4”

Inlet Tube, Wing Nut, Washer

Air Filter

Silencer

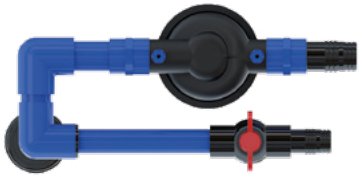
Push-Fit Connectors, Elbow, Reducing Elbow, Tee



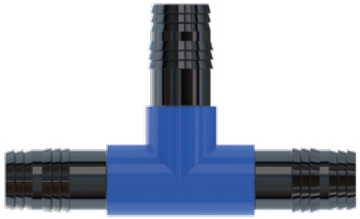
Vortex Pump

Drain Tap & Cap

Inlet Manifold



Filter Manifold



Distribution Tee

Jubilee Clip

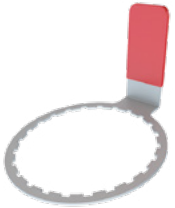
5” Tube 80cm

40mm Tube 1m

32mm Tube

22mm Barrier Pipe

6mm Blue Pipe



5” Spanner

Insert

Pot Clip

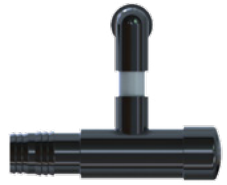
8mm socket

8mm Screwdriver

Spanner

Left Terminal

Centre Terminal



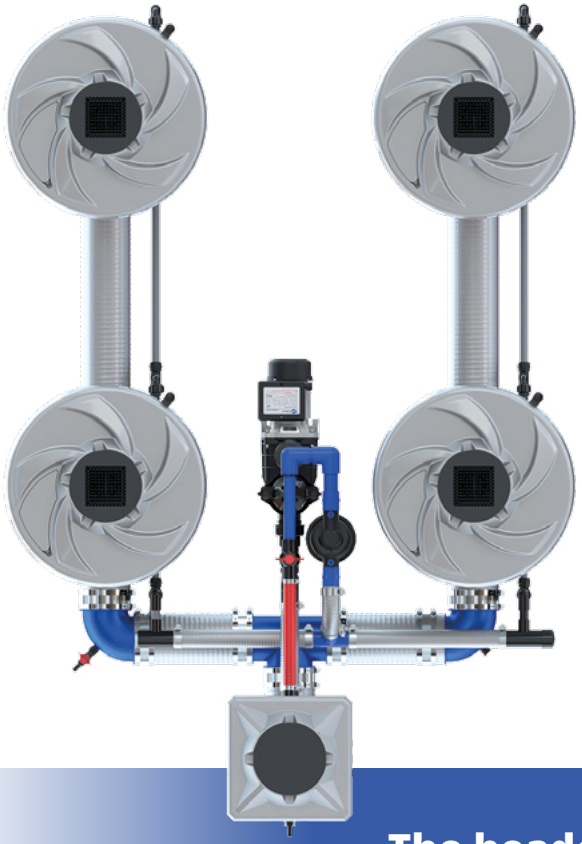
Right Terminal

INSTRUCTION MANUAL

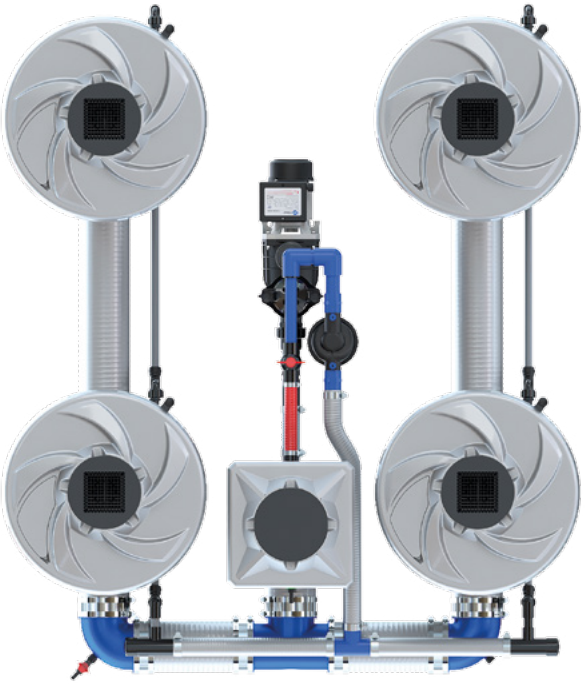
Before you begin the installation of the ALIEN® V-SYSTEM, consider the plant spacings which best suit your grow room layout.

The V-SYSTEM uses spiral tubing which gives the grower some versatility on the layout and header pot position. The standard configuration is shown in **Fg 1** with the header outside of the footprint. **Fg 2** is with the header inside and requires 100cm centres to allow the header pot to fit between the pots. 65cm plant centres require **Fg 3** configuration. The maximum centres with the supplied pipe are 100cm and a full length of 80cm pipe is used to achieve this. Larger plant centres are possible with special order lengths of 5" pipe.

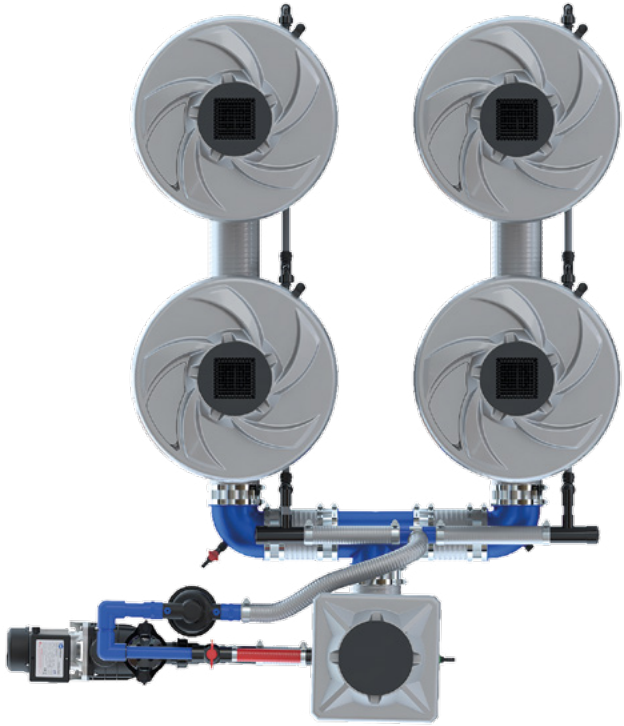
Fg 1



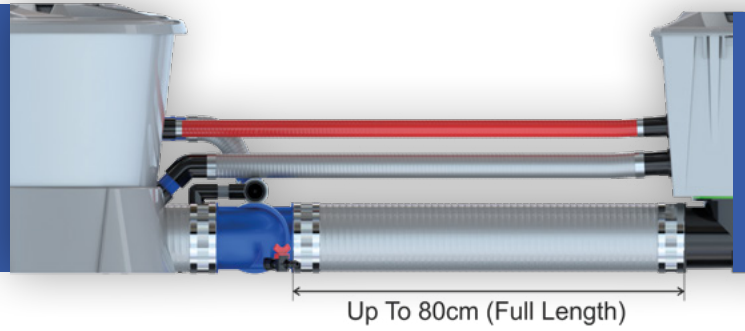
Fg 2



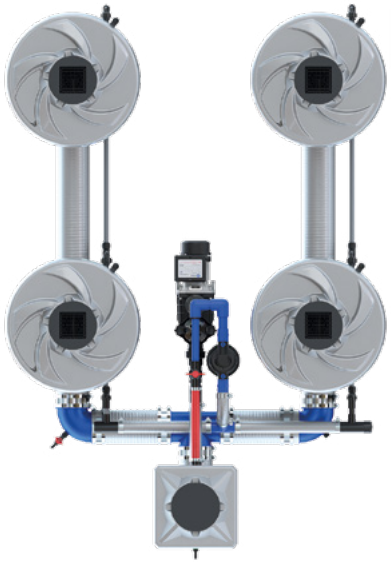
Fg 3



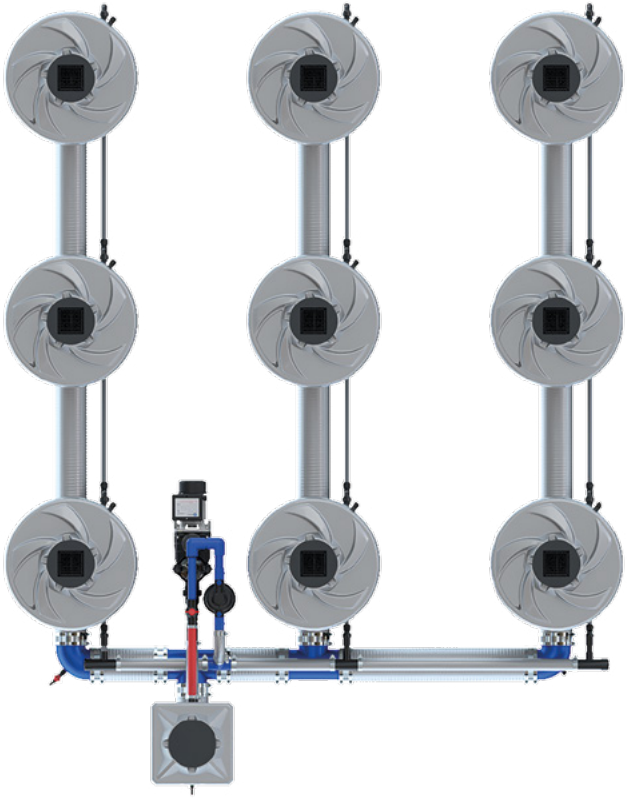
The header pot can be extended away from the system. For example to locate the header outside of a grow tent



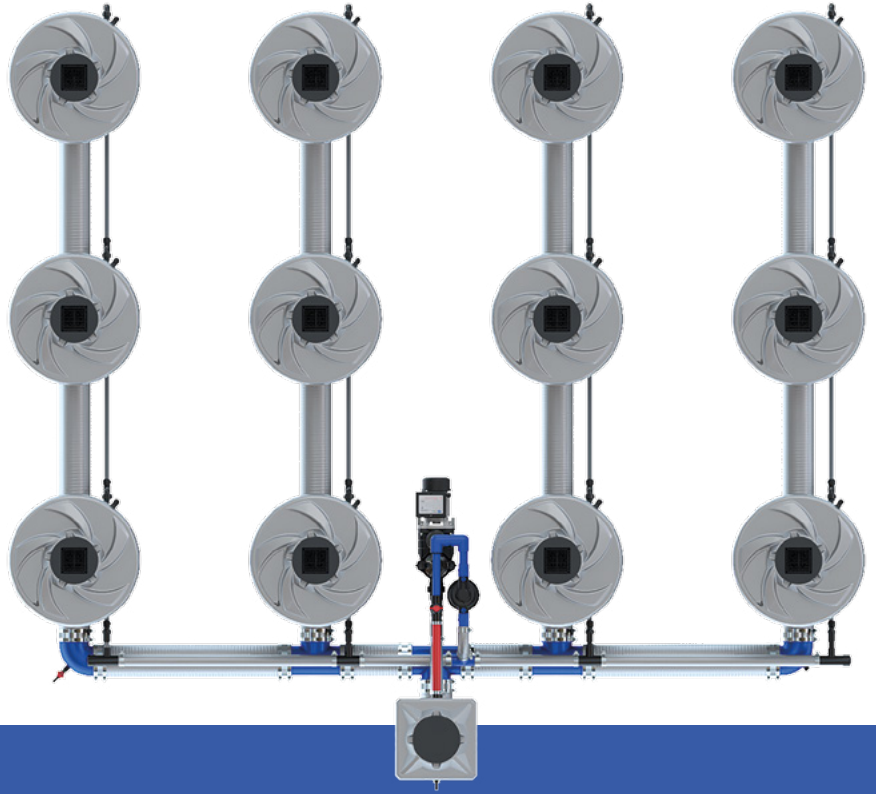
2 row



3 row



4 row

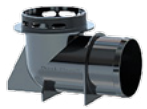


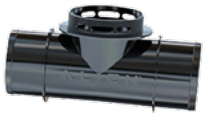
CONFIGURATIONS

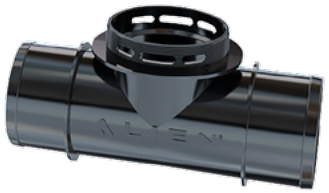
5 rows + set ups are possible. Contact our tech team for advice.
tech@alienhydroponics.co.uk

SYSTEM SET-UP

1 **Position the black Dual-Flow tee's & elbows where you would like the plants to be.**

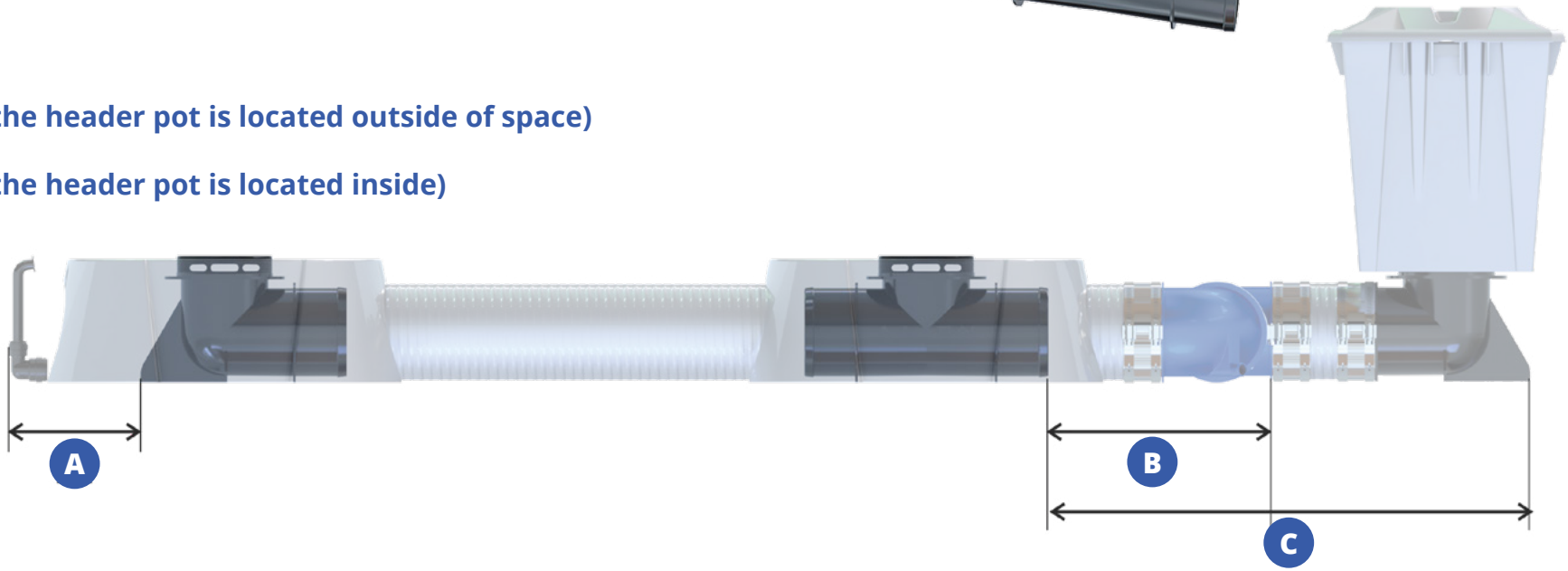




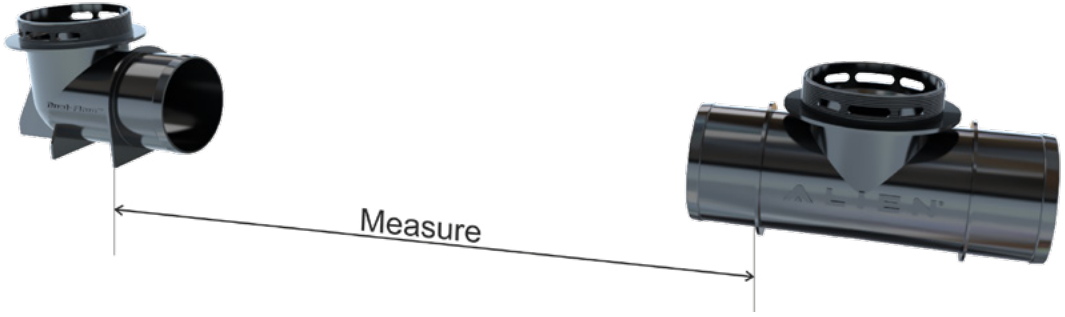


2 **Minimum distance from obstacles:**

- **A** **190mm**
- **B** **315mm** (If the header pot is located outside of space)
- **C** **700mm** (If the header pot is located inside)



3 **Once you are confident that the system will fit in the space measure the distance between the flanges and cut the 5" pipe using the pipe cutters. (Take care as the blade is very sharp)**



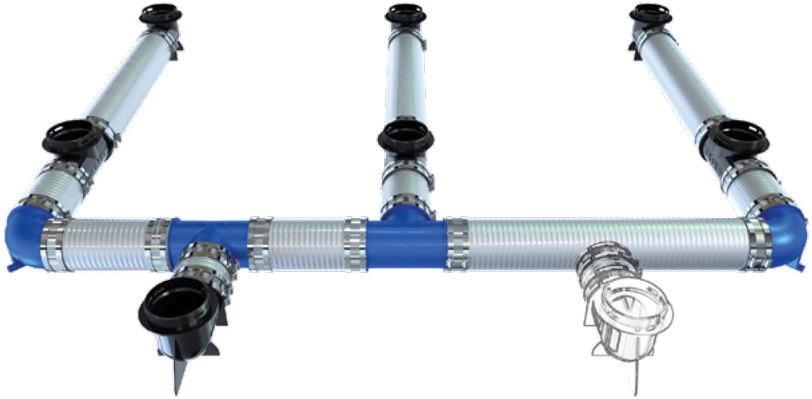
4 **Slide a 5” clamp over the pipe. Use hot soapy water to warm the pipe then push on to the fitting all the way to the flange. Use the 8mm socket screwdriver or electric drill attachment to tighten the clamp. (ensure the nuts are located to the side as shown)**

2 row

8mm socket

8mm Screwdriver

3 row



4 row

PIPE LENGTH GUIDE

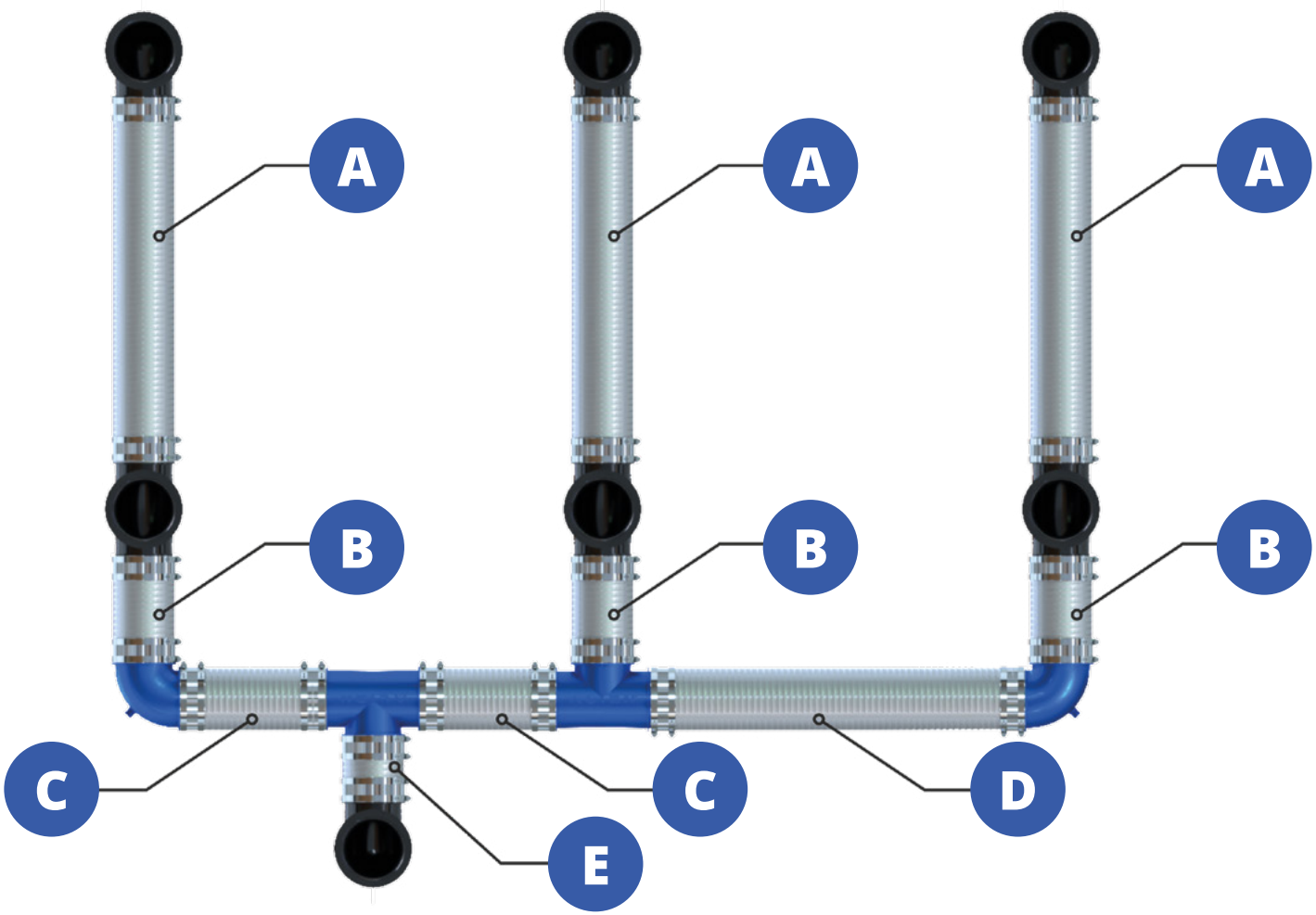
This table shows the tube lengths for the most common plant centres.

Tube	75cm	100cm
A	55cm	80cm
B	23cm	23cm
C	20cm	32cm
D	55cm	80cm

Header tube	E
Minimum	15cm
Maximum	80cm

5 **Position the blue 5” fittings to make the manifold. The drain outlets on the elbows should be at the bottom. Once you’re sure the system spacings are correct, cut and fit the 5” tube.**

If you are using either a 4 pot system in a 1.5x1.5m tent or a 16 pot system in a 3x3m tent reduce the plant center’s marked ‘A’ from 75cm to 70cm to allow space for the manifold.

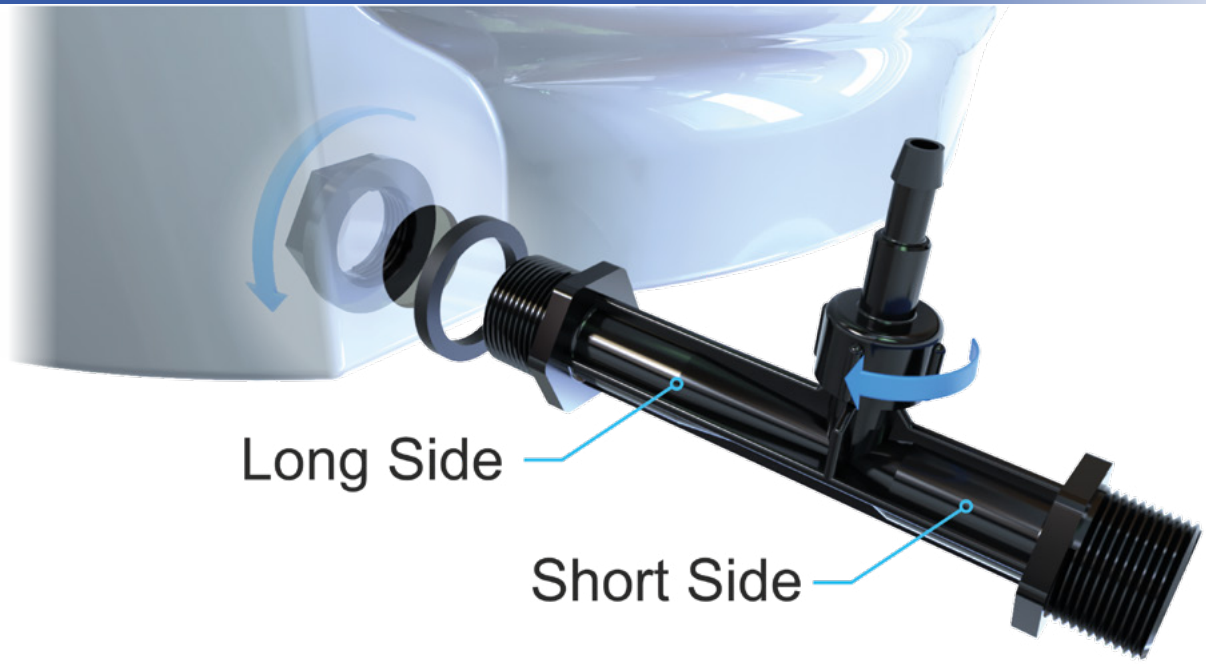


6 **Position the stands as shown and place a green washer on each fitting.**

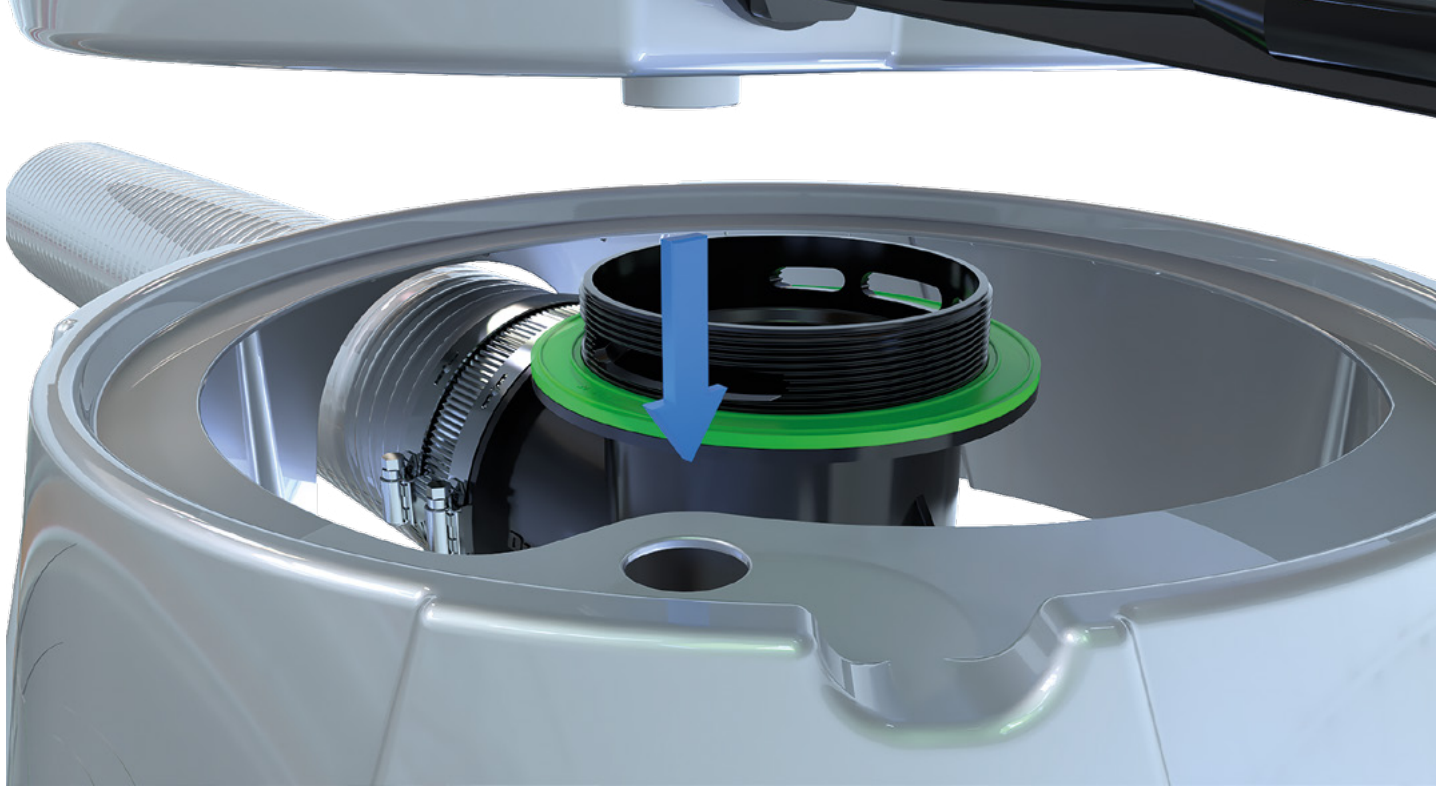
VENTURI INSTALLATION

7 **Ensure the air inlet on each Venturi is tightened. The rubber washer goes on the outside of the pot. The long side points towards the pot. There is an arrow on the side of the Venturi to show the direction of flow. The system will not work with the Venturi's installed the wrong way around. Use the spanner provided to tighten the nut on the inside.**

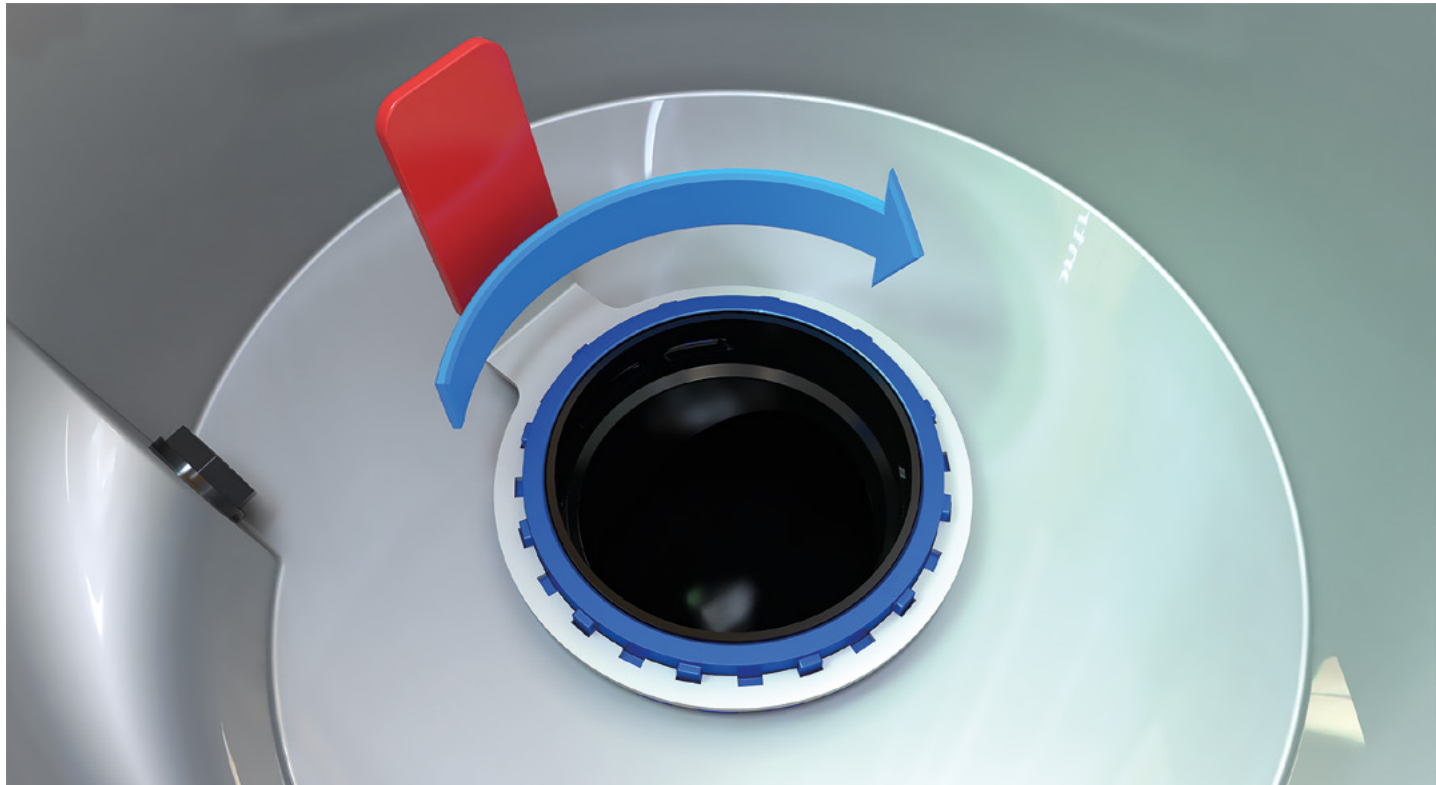
Spanner

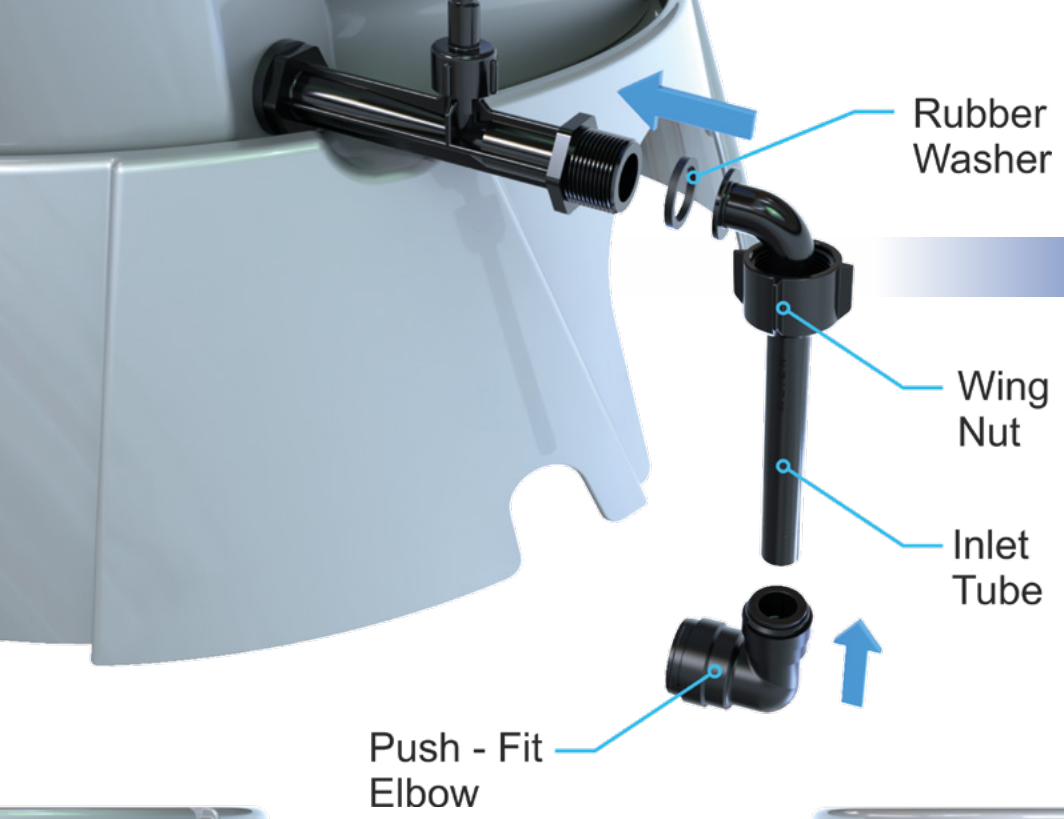


8 **Put the pots on the stands using the locating hole in the base.**



9 **Screw the blue 5” nuts on and tighten with the spanner Provided.**

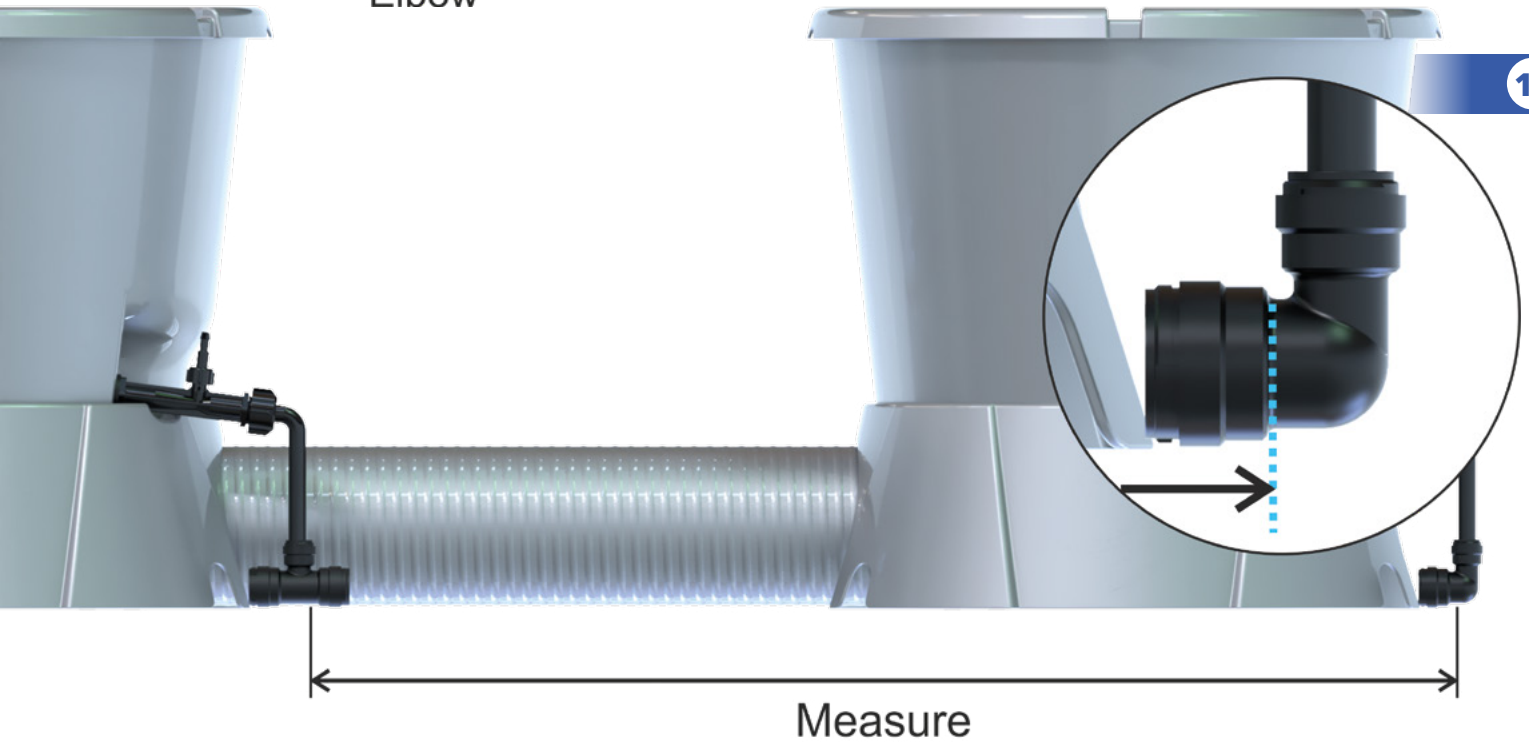




10 **Slide the wing nut onto the inlet tube. Place a washer inside the wing nut and screw onto the Venturi.**

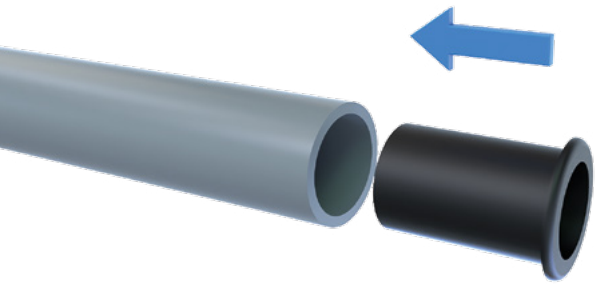
Push the stem of the inlet tube into the push-fit connector.

Reducing elbows on the end of lines and tee's on the Others/rest.

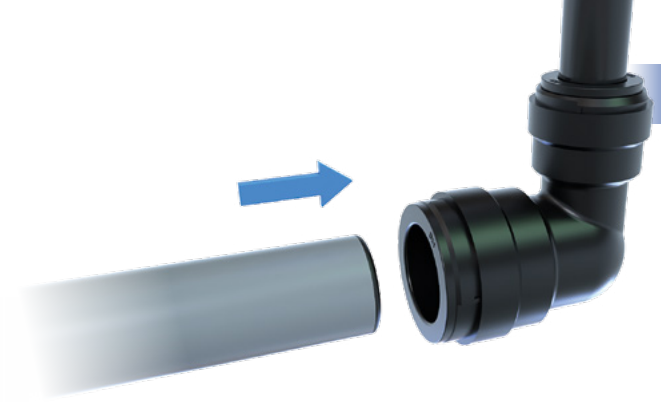


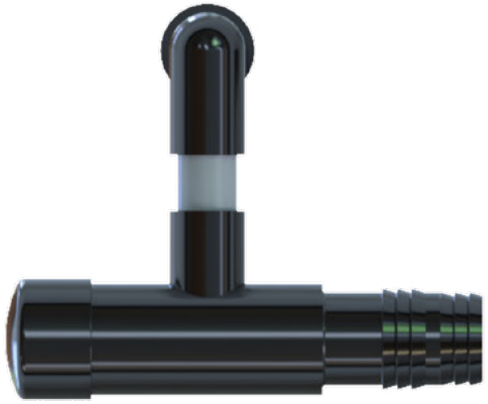
11 **The push-fit connectors are joined with 22mm grey pipe. Take the measurement as shown.**

12 **Cut the pipe and push an insert into each end of the pipe.**

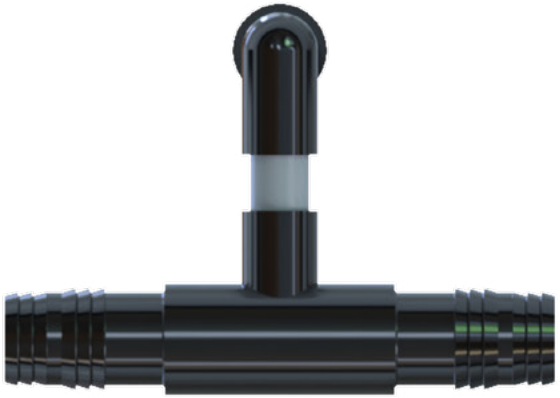


13 **Fit the pipe to the push-fit connections ensuring to push all the way in.**

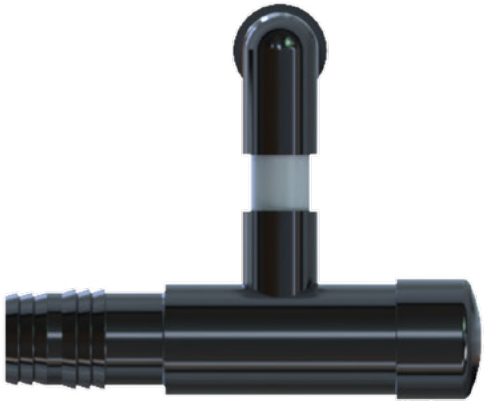




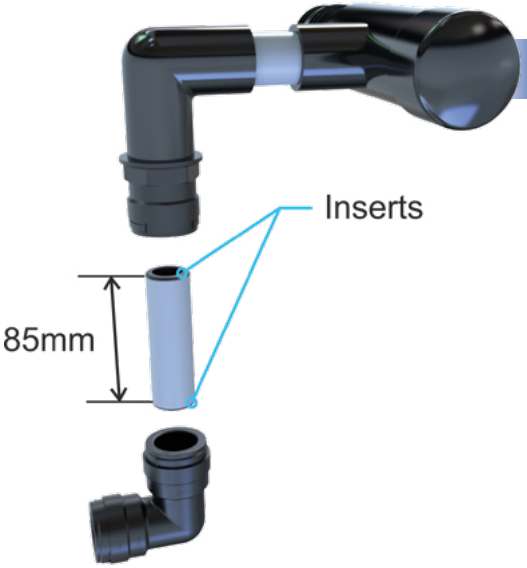
Left Terminal



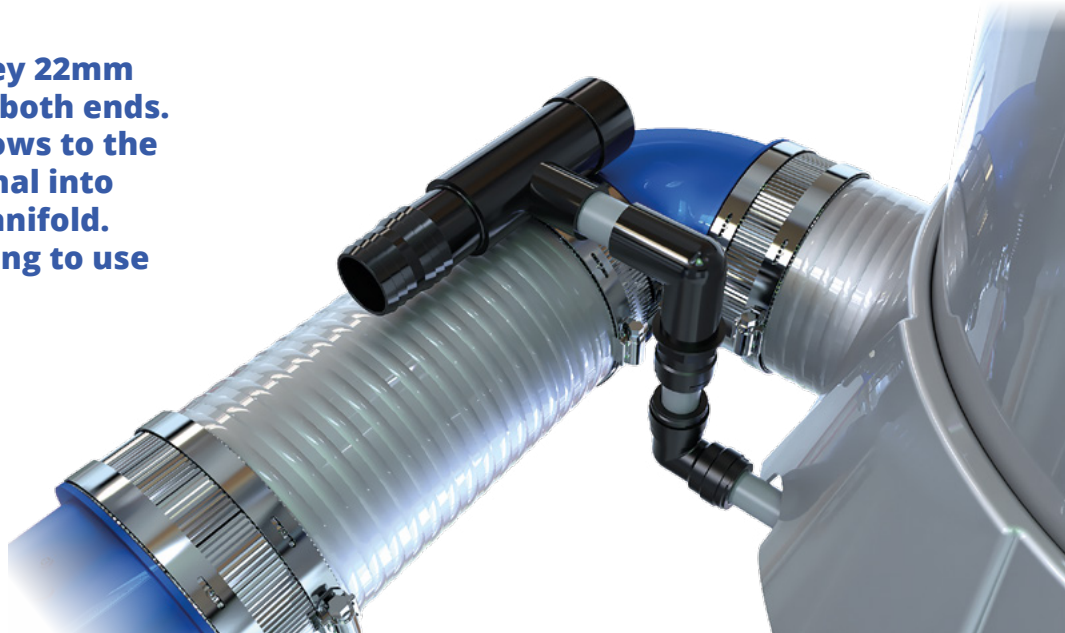
Centre Terminal



Right Terminal



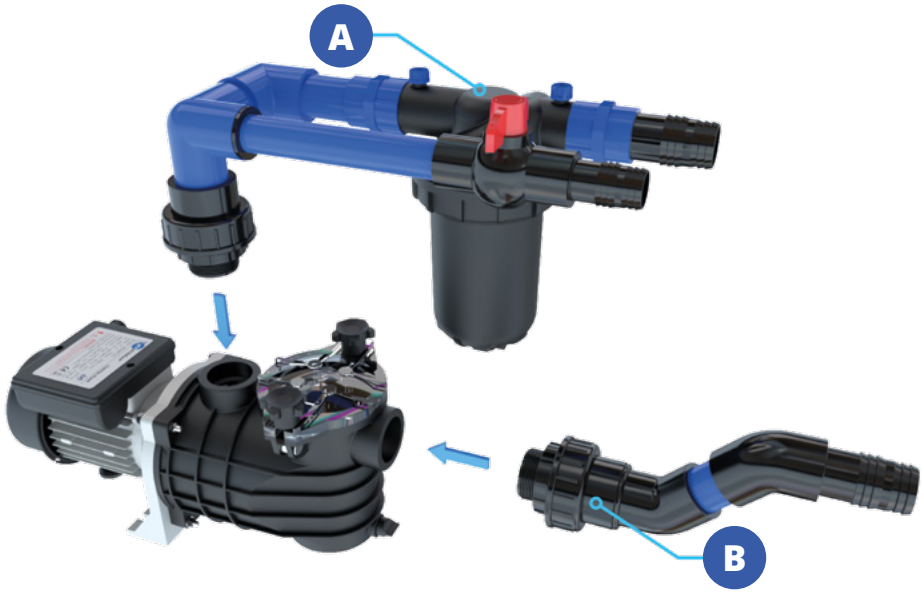
14 **Cut an 85mm piece of grey 22mm pipe. Push an insert into both ends. Connect the push-fit elbows to the terminals. Put the terminal into position on top of the manifold. Fit all 22mm pipes ensuring to use inserts in both ends.**



15 Fit the filter manifold and inlet to the pump.

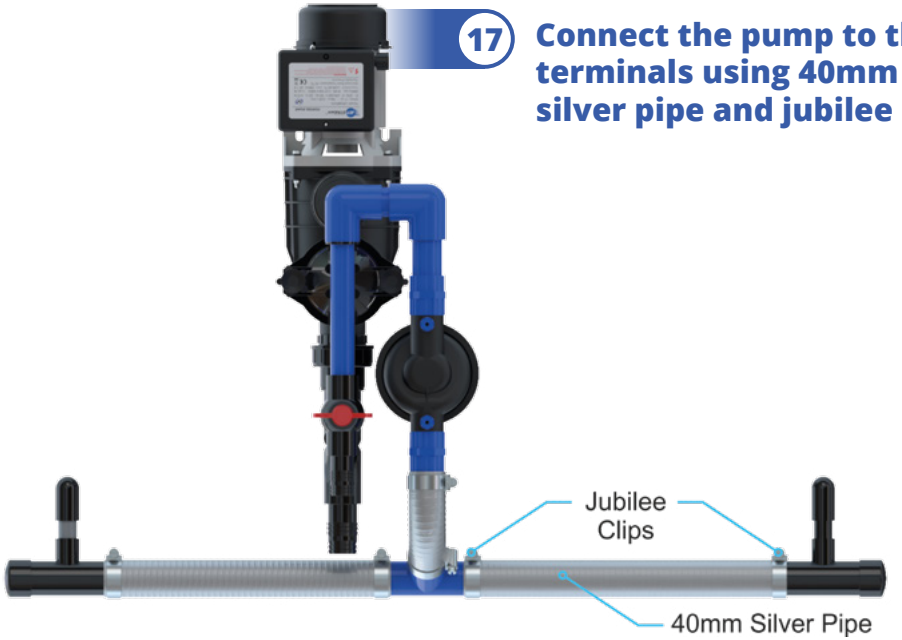
A Filter manifold

B Inlet manifold

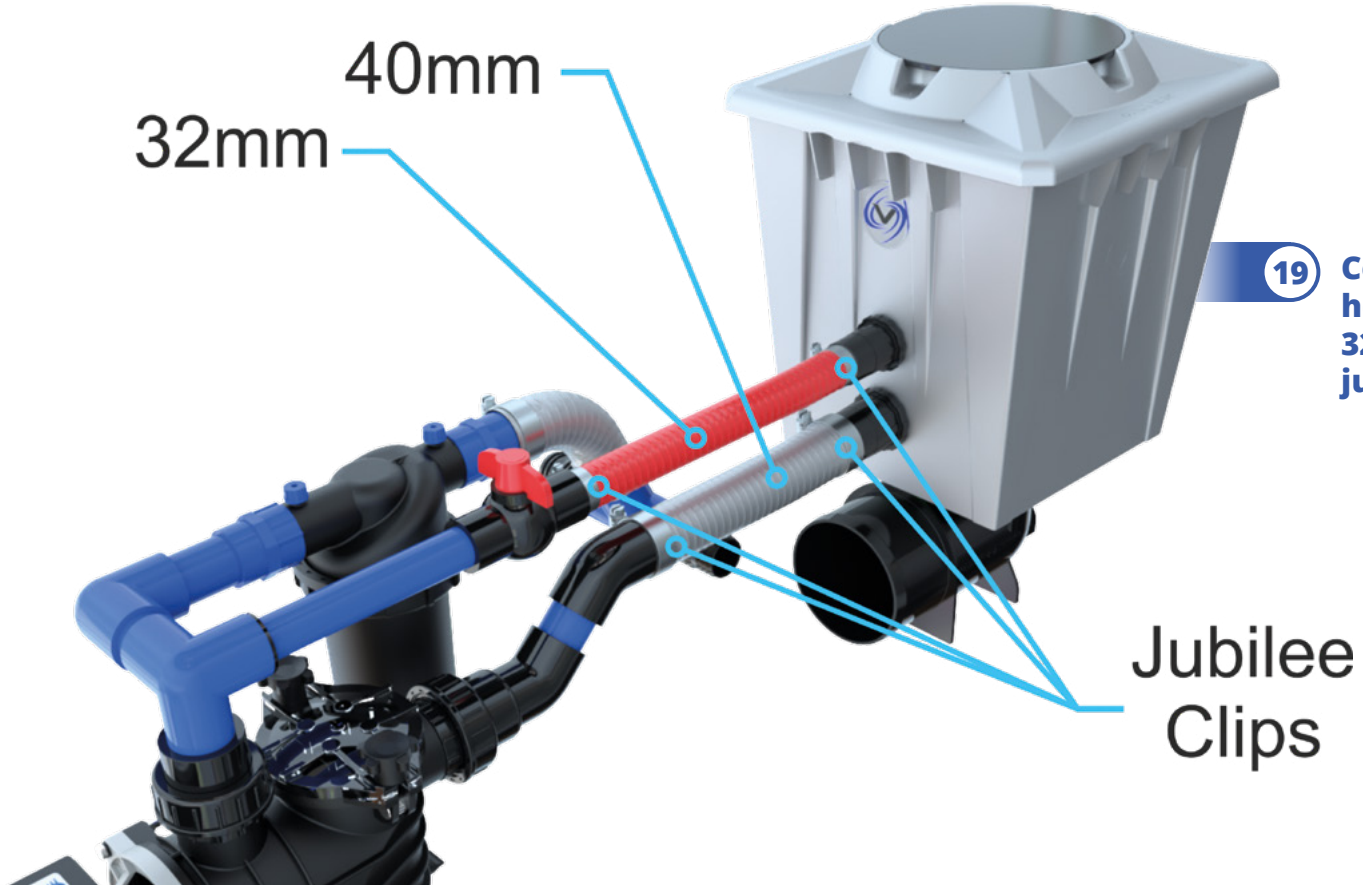


16 Fit the distribution tee with 40mm silver pipe as shown. Warm the ends of the pipe to allow easy fitment.

17 Connect the pump to the terminals using 40mm silver pipe and jubilee clips.



18 **Fit the tank connectors to the header. The smaller 32mm goes above the 40mm. One washer inside and one outside. Hold the threaded fitting on the inside and tighten the outside by hand. Fit a 5” Dual-Flow elbow, washer & nut to the bottom of the pot.**



19 **Connect the pump to the header using 40mm silver and 32mm red pipe. Secure with jubilee clips.**

OXYGEN SOURCE OPTIONS

Standard set-up (parts included)

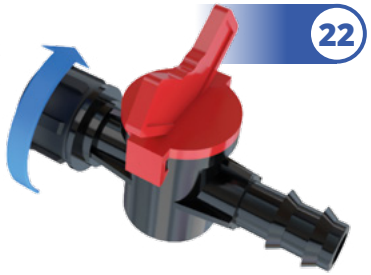
20 **Fit a pot clip to the slot above the Venturi.**

21 **Install the air filter and silencer as shown using 6mm blue pipe.**

External source set-up (extra parts required)

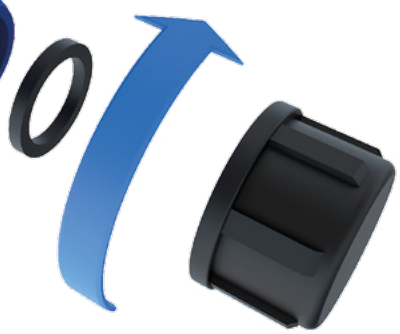
The Venturi air inlets can be connected together with 6mm blue tee's and 16mm silver pipe. This will allow can air in from an external source. This could be simply from outside of the grow room or the pipes can be run directly to an air conditioning unit which would mix cool air with the nutrient solution which could potentially mean that a water chiller is not required. Example on next page.

Closed
Position

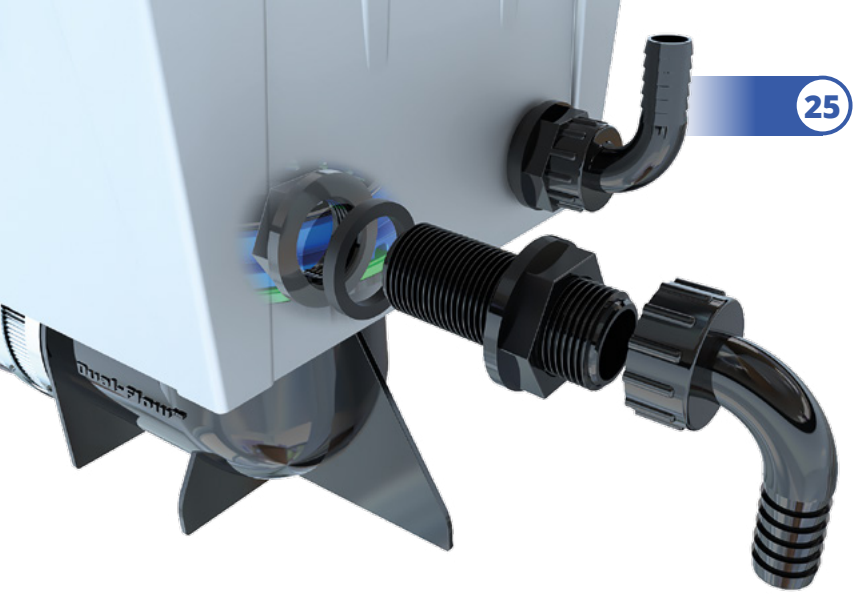


22 Screw the drain tap to one of the blue elbows. Ensure there is a washer inside.

23 Fit the cap and washer to the other blue elbow.



24 Place the lids, net pots and inspection covers on the pots.

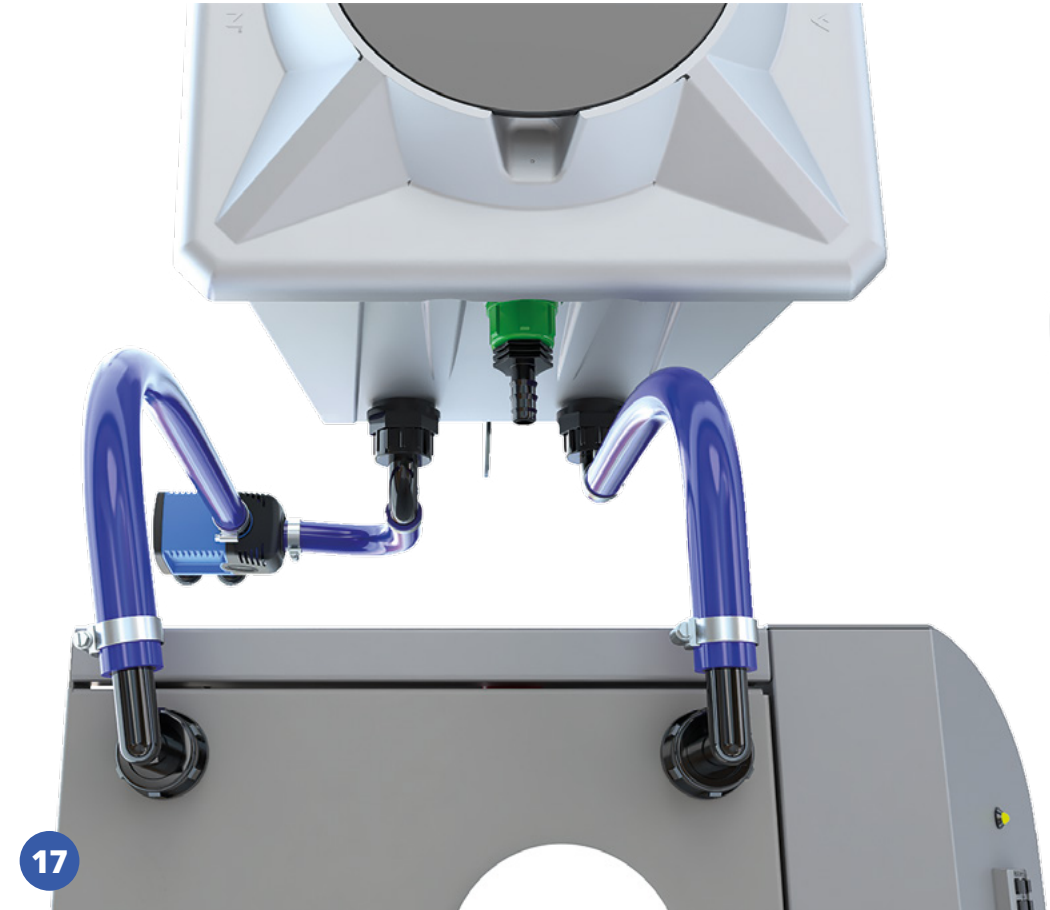


25 **Install the threaded chiller fittings & washers from the outside.**

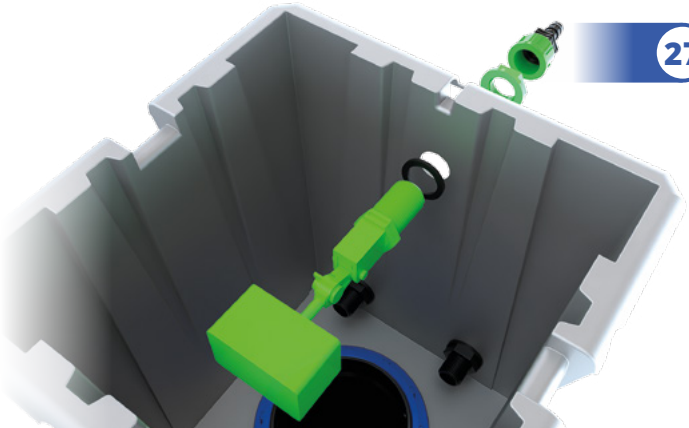
Tighten the nut on the inside with the spanner provided.

If a water chiller is being used, screw the elbows on to the thread with a white washer on the inside.

If a water chiller is not being installed simply fit the caps provided. They can be fitted to the inside or outside.

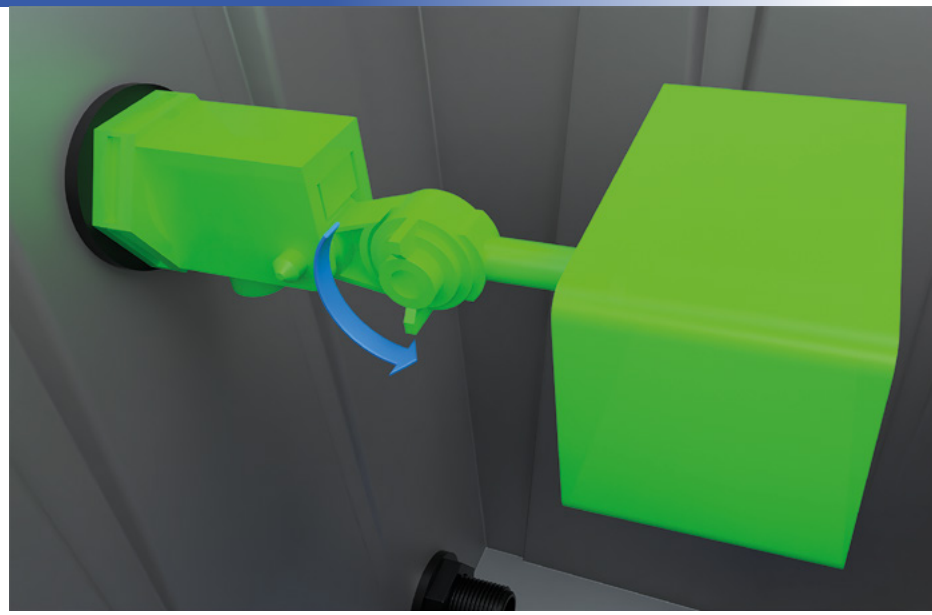


26 **Install the water chiller and pump as shown.**
(not included)



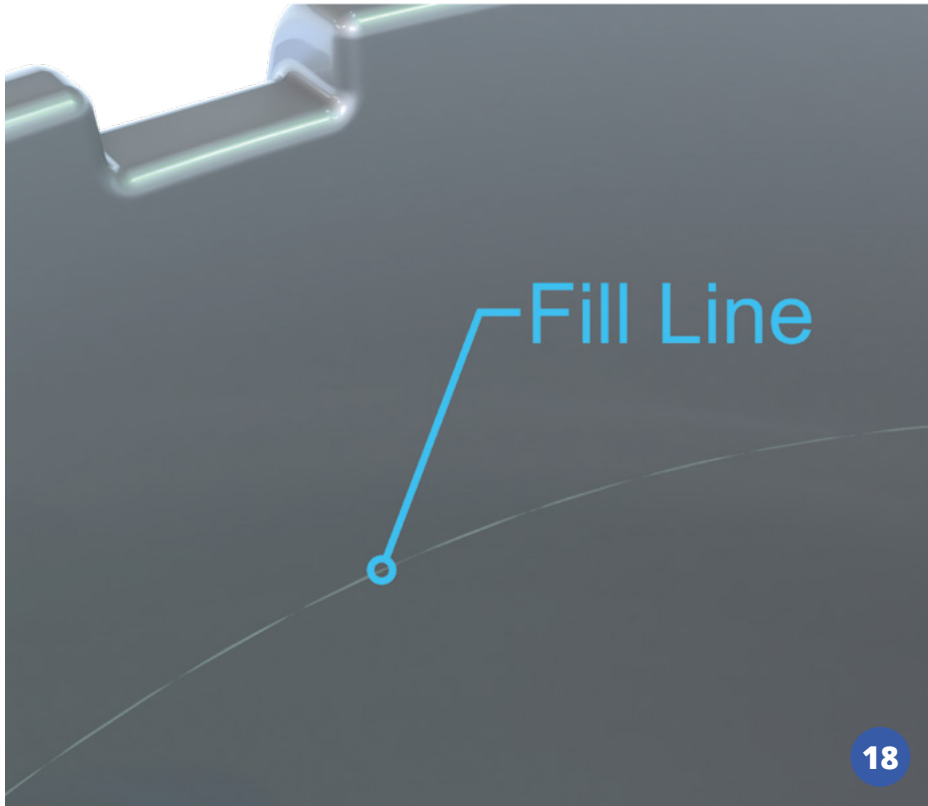
27 **Install the float valve. The washer goes on the inside of the pot. Tighten the nut on the outside of the pot.**

FILLING THE SYSTEM



The system is ready to fill with water. Double check that the nuts on all pots, Venturi's and jubilee clips are tight.

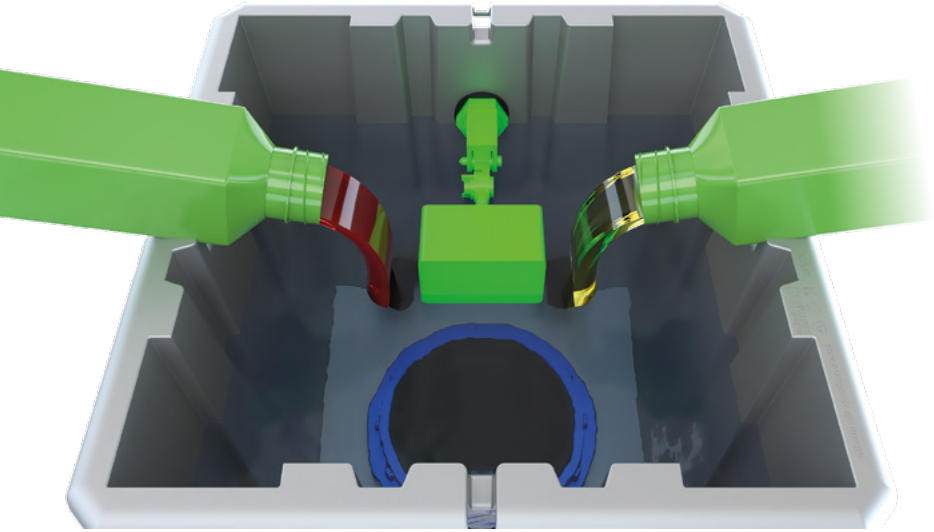
1. **Loosen the pump filter lid. This will let the air escape as the system fills.**
2. **When the water reaches the top and begins to over-flow, tighten the lid.**
3. **Fill the system until the water reaches the fill line marked on the inside of the pots.**



If the plants you are transplanting into the system have zero roots protruding the net pot, fill 2cm <u>above</u> the 'fill line' to avoid the plant roots from dehydrating.

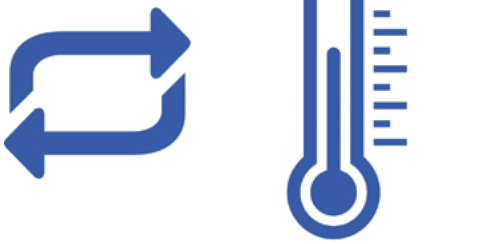
The float valve is adjustable to allow the set fill level to be maintained.

ADDING NUTRIENTS



This can be done by pouring equal amounts of A&B into the header. This will immediately mix in the water pump and be distributed to each pot simultaneously. If plants are present in the system add the concentrated nutrients slowly to avoid shock.

Let the system recirculate for some time before taking a reading. Adjust accordingly. Do the same for PH down. Ideally let the system recirculate overnight to allow the water to reach a habitable temperature for the plants. Cold water can shock plants.



PLANTING INTO THE SYSTEM

1 Put a layer of substrate into the bottom of the net pot level with the raised grid.

2 Water the cutting before transplanting. Place the rooted cutting into the pot.

3 Fill the remaining void with substrate.

NUTRIENT CHANGE-OUTS

The nutrient solution should be drained and replaced Every 7-10 days. The drain tap can be opened to allow gravity to drain down or a water pump can be connected.

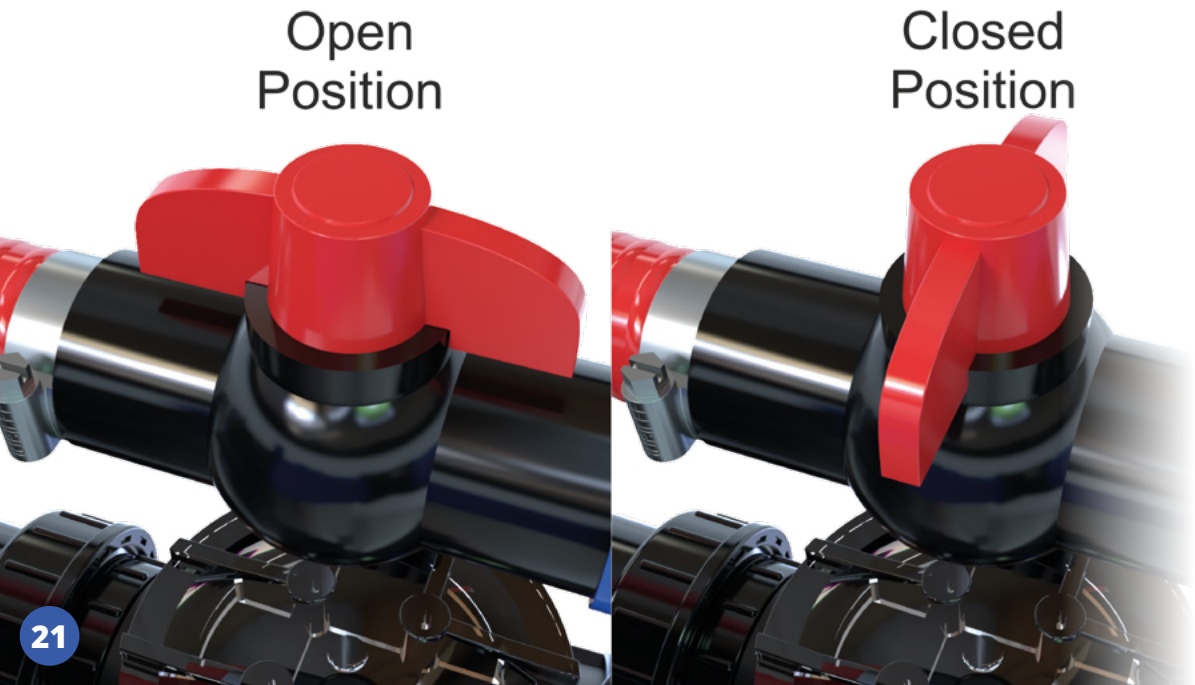
ROOT ROT X™

Fill the system with Ph'd water only and dose with Root Rot X. Allow the system to recirculate for 3-12hrs. This process can be done at the end of a light cycle to allow the system to recirculate overnight with Root Rot X. This will dissolve any biofilm present on the inside of pots, pipes, fittings and filters and also sterilise the roots to help prevent disease. This process is important to keep the system and Venturi's performing at their best.

FILTER CLEANING

The water pump has a basket filter which catches larger debris. The secondary in-line filter has a fine mesh filter to remove smaller debris and organic matter. Both filters should be checked and cleaned when the system is empty, ideally when performing a nutrient change.

PRESSURE RELEASE VALVE



The fully closed position will provide maximum pressure to the Venturi's. Slightly or fully opening the valve will reduce pressure and also decrease the sound of the aeration inside the pots.

TOP UP TANKS

The system can be used without a tank but will require regular top ups in the flowering stage. The float valve in the header pot can be connected to any tank or water butt to maintain fluid levels. The tank should be raised to allow gravity to delivery the nutrient solution to the header pot. A CAMO® Tank can be used however there is no stand available for it (illustration only). **The water butt and conical tank shown are examples and are not supplied by ALIEN®. The system itself holds a lot of water so a tank probably won't be necessary for small plants in the vegetative stage.**

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