GROWRILLA® HYDROPONICS



2.0PRO

MANUAL INSTRUCTION





WELCOME

ABOUT US

Growrilla is a 100% Italian brand of hydroponic farming systems, designed and made in Italy by growers for growers.

The project stems from a passion for indoor gardening and a common need for all growers: getting the most out of their plants.

The constant search for information and the desire to experiment with new techniques has led us to hydroponics, an alternative cultivation method to the land. Fascinated by the results obtained from the great potential offered, we decided to propose our own system, the result of direct experience gained over the years, with the aim of offering the grower a functional, easy to use and high performance product.

Growrilla is not simply a system, first of all it wants to be a resource capable of providing the grower with the tools necessary to get the most, because we know that a fast car is not enough to win a race, it is the pilot that makes the difference!

Growing with a Growrilla system also means relying on technical and educational support which, through video tutorials, articles and texts that are constantly updated, will give you all the information you need to achieve the results you are looking for!

INSTRUCTION MANUAL STEPS

This instruction manual is divided into 5 step, in order to help you for a right assembly of the system. By closely following these instructions you will ensure your system is properly installed and ready to grow!

STEP 1. SYSTEM SET UP

STEP 2. CONTROLLER POT FITTING KIT

STEP 3. AIR DISTRIBUTION SYSTEM

STEP 4. TESTING

STEP 5. SYSTEM UPGRADE

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"Hello and congratulations for choosing a Grorilla RDWc system. I'm your guide who will help you to assembly and set up your RDWc system. Please read carefully this manual instruction, take your time and try to work in a neat and clean mode, this will ensure to avoid any issues and make a good job!"



SIMBOLS

	The presence of this symbol indicates to pay the attention to the subject matter.
9	Rotate and screw.
	Lubricate.
•	Risk of leakage , pay attention to this step.
Ø	Ceck that everything has been done right.



Scan this QRcode to download the manual directly on your electronic device.



AVVERTENZE DI SICUREZZA

Questo manuale contiene informazioni molto importanti. Leggere attentamente queste istruzioni prima di iniziare e conservarle per ogni eventualità futura.

- GROWRILLA declina qualsiasi responsabilità per utilizzo improprio del prodotto, o per un uso non descritto in questo manuale.
- Prima di utilizzare il prodotto per la prima volta, rimuovere tutto l'imballaggio e assicurarsi che il prodotto sia in perfette condizioni. Se così non è, non <mark>utilizzare</mark> il prodotto e contattare GROWRILLA dal momento che la garanzia copre qualsiasi danno di origine o difetto di fabbrica.
- Prima di collegare l'apparecchio alla rete elettrica, assicurarsi che il cavo e la spina siano in perfette condizioni.
- Questo apparecchio è inteso esclusivamente per uso domestico. Non esporre il prodotto a condizioni climatiche avverse come pioggia, neve, sole, ecc.
- Non tirare mai dal cavo per scollegore l'apparecchio, tirare sempre dalla spina dopo essersi assicurati che l'apparecchio sia spento.
- -Per la sicurezza dell'utente e per un corretto funzionamento del dispositivo, usare sempre ricambi e accessori GROWRILLA.

RICICLAGGIO / SMALTIMENTO



IMBALLAGGIO

I materiali di imballaggio dell'apparecchio sono integrati in un sistema di raccolta, classificazione e riciclaggio dei rifiuti. Si prega di smaltirli negli appositi contenitori pubblici.



PRODOTTO ELETTRICO/ELETTRONICO

Questo simbolo indica che, una volta teminato il ciclo di vita del prodotto, se si desidera smaltirlo, non deve essere trattato come rifiuto domestico ma deve essere consegnato presso l'idoneo punto di raccolta per il riciclaggio di apparecchiature elettriche e elettroniche (RAEE). Questo prodotto non contiente concentrazioni di sostanze che potrebbero causare effetti negativi per l'ambiente.

SYSTEM COMPONENT

AREA 1 - SYETEM COMPONENTS



CONTROLLER

POT PRO 2.0



IN LINE POT

PRO 2.0



CONTROLLER LID



DWC POT LIDS

SI-GRC50VDC19





SI-GRCCOP191F



NET POT 14CM

WATER PROOF 50mm **RUBBER GASKETS**



ELBOW 90 PP **PUSH FIT D50**



TEE PP PUSH FIT D50

ID-NETHD014

RC-GSKGGDN50

RC-PPBG90502B

RC-PPBT90502B



PVC PIPE DN50 L 10 15 30 40

TU-PVC50010 TU-PVC50015 TU-PVC50030 TU-PVC50040



RETURN TEE D50 L 40 X 1"

SI-GRC50TR40D



VALVE 1" MALE FEMALE

RC-VALPVCDMF



O RING 1" 1/4

RC-GSKORDM



COMPACT VALVE 1" MALE FEMALE

RC-VALDMF



IN LINE FILTER 1"

IR-FLTD50B



RETURN HOSE 20MM

TU-PVCGFP25



BARBED FITTING 1" 20X1" F

RC-PG20DGM



BARBED FITTING 20X3/4" F

RC-PG20CGM



BARBED FITTING 20X3/4" M

RC-PG20CM



THREADED TEE 3/4" FFF

RC-FILTECCFFFGM

AREA 2 - CONTROLLER POT COMPONENTS



EXT. TRHEADED FITTING 3/4" MALE

RC-FILPRLCMM



THREADED ELBOW 90 3/4" FF

RC-FIL90CCFFGM



BULKHEAD 3/4"

RC-ATSPC



WATER PUMP EDEN 135TB

ID-PAC135TB



VENTURI ELBOW

SI-GRC90CGMV

RACCORDI INGRESSO / USCITA SISTEMA - CHILLER IN/OUT



ELBOW BARBED FITTING 16X3/4" FEM RC-PG90CGM



BARBED FITTING MALE 16 X 3/4"

RC-PG16CM

SYSTEM COMPONENT

AREA 3 - AIR DISTRIBUTION SYSTEM



AIR HOSE 6X4MM

TU-SIL0604100



AIR HOSE 12X8MM

TU-PVCTH0812



PVC AIR HOSE 6X4MM L30CM

PVC64030



AIR GASKETS 6MM

RC-GSKPT1006



AIR ELBOW FITTING AIRMANIFOLD 12X6 AIRMANIFOLD 12X6 AIRMANIFOLD 12X6 3X5MM

RC-PG900305



1 WAY OUT

RC-PGMU1206U1



2 WAY OUT

RC-PGMU1206U2



4 WAY OUT

RC-PGSMU1206U4



END CAP 12MM

RC-PGSTAP012



AIR STONE

ID-POR1002020B



AIR DISTRIBUTION PIPE 12 X9MM

TU-PEN12050B TU-PEN12060B TU-PEN1205100B





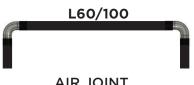
AIR PUMP HAILEA **V SERIES**

ID-PARV30 ID-PARV60



AIR PUMP ET SERIES

ID-PARET30 ID-PARET40 ID-PARET80 ID-PARET100



AIR JOINT 3/4 ROWS

SI-GRC50GCA3F SI-GRC50GCA4F

AREA 4 - ADDITIONAL COMPONENTS



FLEXIBLE STORAGE TANK

ID-CONTF098 ID-CONTF157 ID-CONTF225 ID-CONTF500 ID-CONTF700



CONNECTION QUICK FITTING

SI-GRCTF16MT2



FLOAT VALVE

ID-VALG12178



TUBO FLESSIBILE PVC DN16

TU-PVCGFP16



EXTENSION FOR DELIVERY MANIFOLD A

SI-GRC50MMAPR



EXTENSION FOR DELIVERY MANIFOLD B

SI-GRC50MMBPR



CHILLER KIT WATER PUMP

ID-PACCHJ600 ID-PACCHJ800 ID-PACCHJ1500



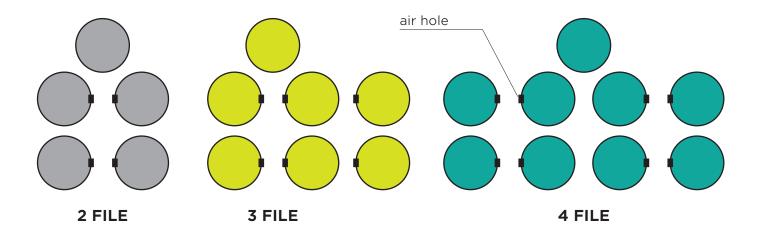
STEP 1 SYSTEM INSTALLATION

- **a) Unbox.** Place all parts adjacent to the grow area and keep all the components separately. All the components are divided by type, this will make it easy to recognize them and will help you to understand where they have to be used.
- **b) Gaskets.** Insert the water proof gaskets 50mm inside the hole at the bottom of the buckets, making sure to put them with the FRONT writing on the outside of the pots.



c) put all the pots on the floor of your grow area, looking at the shape of your system (2, 3 or 4 rows) and with the air hole in the same position as shown in the picture below.





d) now you are able to start to insert the connection pipes inside the gaskets.



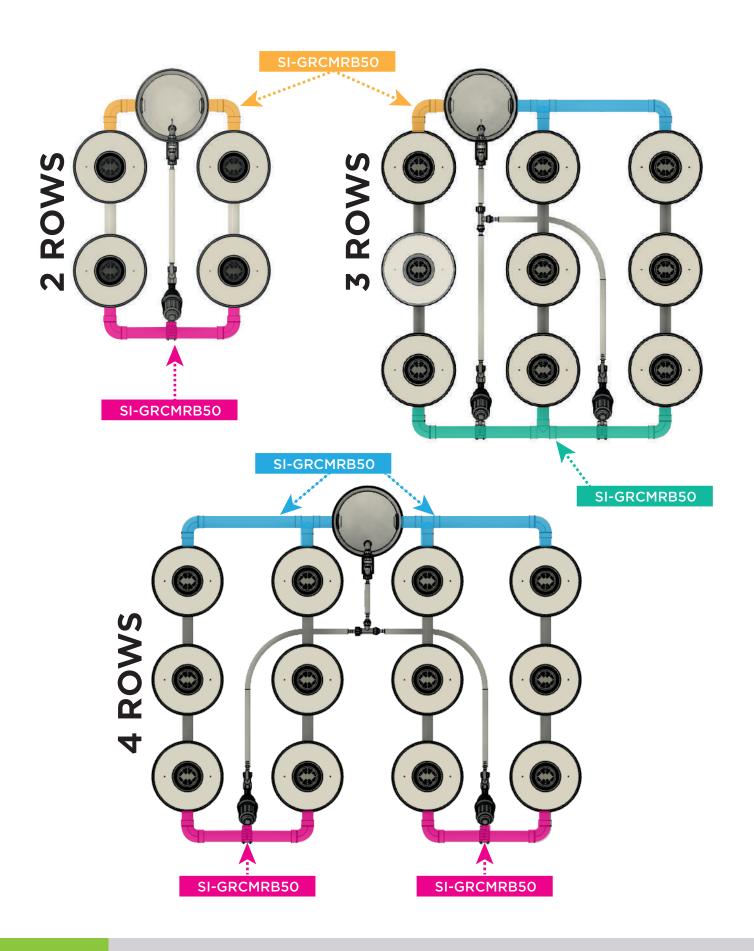
Gasket. Iubricate the internal side of the gaskets and the PVC pipe before insert them

How to fit the pipe. insert the pipe inside the gasket simply sliding it inside them.

e) Delivery and return manifold. The return and delivery manifolds are made with PVC pipe and PUSH FIT FITTING, they are easy to assemble and disassemble. Refer to the shape of your system to assemble the manifolds, as shown below.

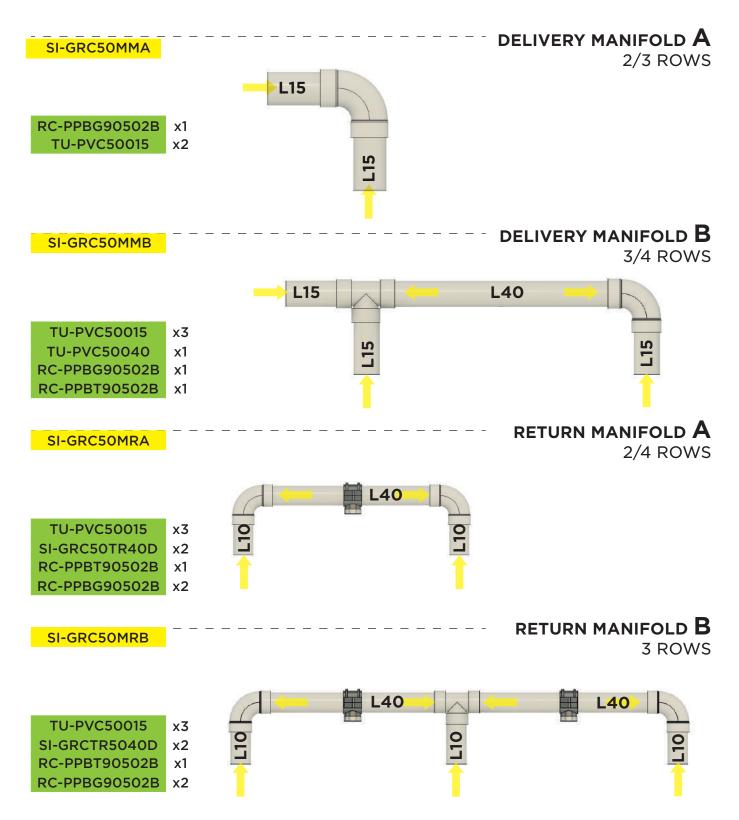
Fat Fitting. they are easy to assemble and disassemble. Refer to the shape of your system to assemble the manifolds, as shown below.

DELIVERYMANIFOLD ASSEMBLY



•

f) Assembly diagrams DELIVERY MANIFOLD.



2ROWS RDWC SYSTEM

g) DELIVERY MANIFOLD FOR 2/ ROWS SYSTEM. connect the controller pot to the first two growing pot.



h) Growing Pot Connection .



i) RETURN MANIFOLD FOR 2 ROWS SYSTEM. connect the last two pots at the back of the system with the relative RETURN MANIFOLD



3 ROWS RDWC SYSTEM

I) DELIVERY MANIFOLD FOR 3/ ROWS SYSTEM: connect the controller pot to the first 3 growing pots. Use the component SI-GRC50MMB to connect the growing pot 1 and 2. Use the component SI-GRC50MMA to connect the growing pot 3.

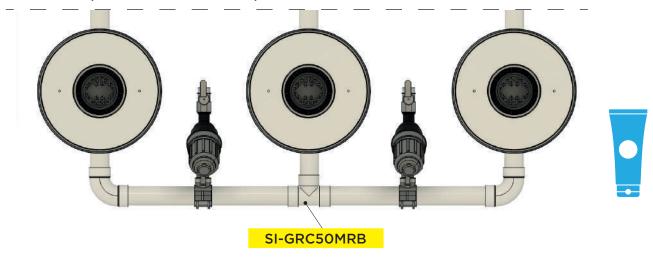




DISTANCE BETWEEN POTS:

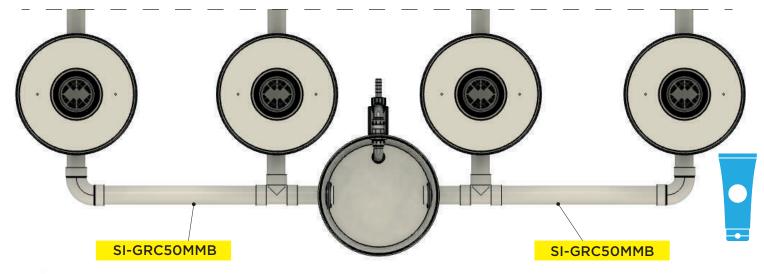
the distance between pots can be adjusted simply sliding the pipes inside the pots (please keep minimum 3 cm of pipe inside the the pot)

n) RETURN MANIFOLD FOR 3 ROWS SYSTEM. connect the last three pots at the back of the system with the relative RETURN MANIFOLD (SI-GRC50MRB)

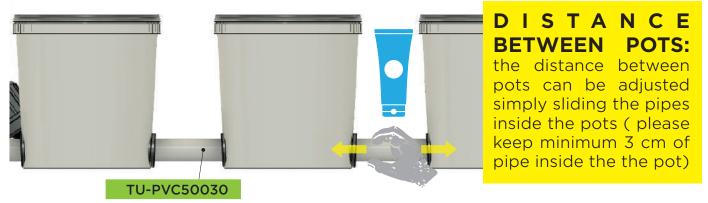


4 ROWS RDWC 4 SYSTEM

o) DELIVERY MANIFOLD FOR 4/ ROWS SYSTEM. connect the controller pot to the first 4 growing pots. Use the two components SI-GRC50MMB to connect the growing pot 1 and 2, then connect the pots 3 and 4



p) Growing Pot Connection .



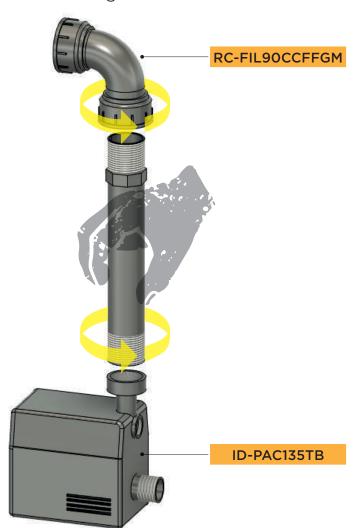
q) RETURN MANIFOLD FOR 4 ROWS SYSTEM. connect the last four pots at the back of the system with the two relative RETURN MANIFOLD (SI-GRC50MRa)

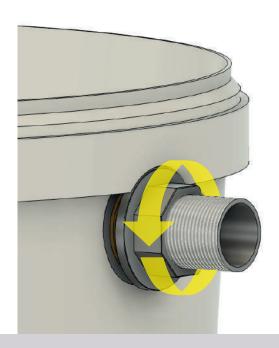


CONTROLLER POT FITTING KIT

STEP 3 CONTROLLER POT FITTING KIT

- a) Unbox. Keep the controller pot fitting bag and start the assembly.
- **b) Water Pump.** Screw the extension tube and the elbow threaded fitting as shown in the figure.





c) BULKHEAD. Put the bulkhead inside the hole of the controller pot, keeping the gasket inside it.

CONTROLLER POT FITTING KIT

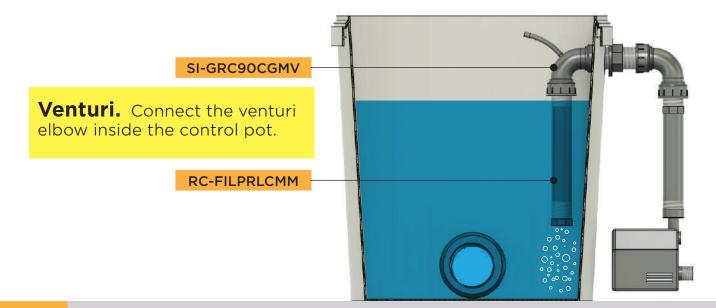
d) Screw the VENTURI ELBOW and the other EXTENSION TUBE to the internal side of the controller pot.



Note. Make it sure that all the fitting are well screwed.

Water Pump. Make sure the water pump is perfectly set on the ground.

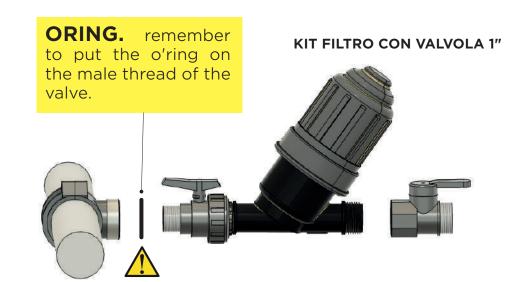
e) Venturi Elbow. this component is designed for mixing the water from the pump with the air in order to keep the water inside the controller pot well oxygenated. Once the system is filled with water, operate the pump and adjust the VENTURI air tube until the Venturi effect is triggered. If everything is done correctly you will see bubbles appear in the control pot



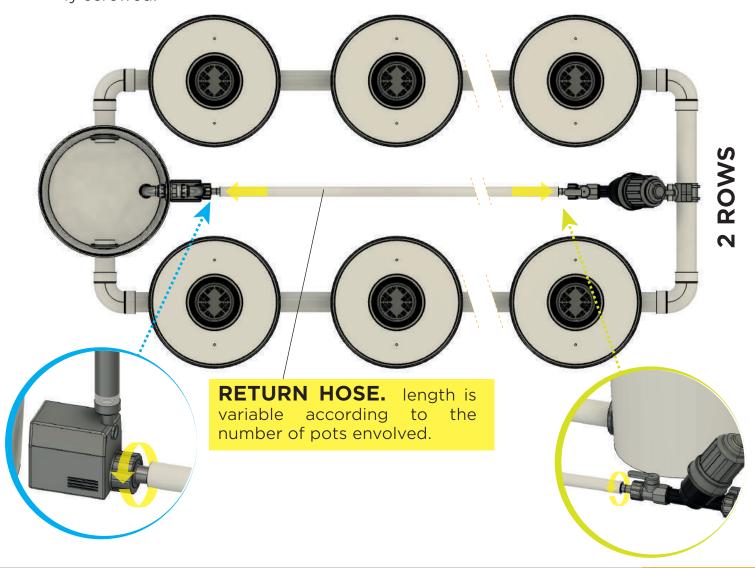
RETURN HOSE KIT

SI-GRC50FVDK

RC-GSKORDM x1 RC-VALPVCDMF x1 IR-FLTD50B x1 RC-VALDMF x1

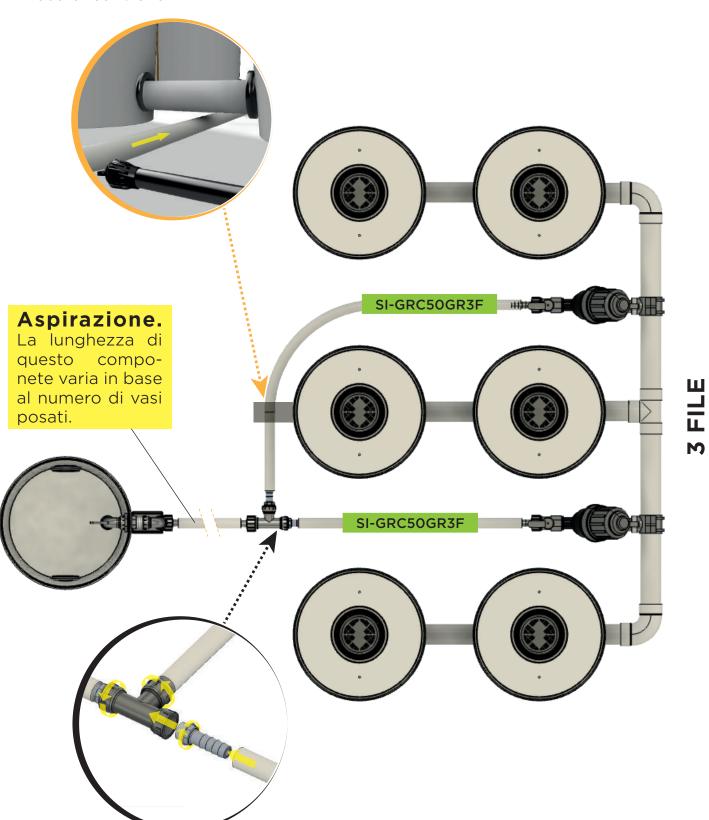


f) Screw the FILTER + VALVE KIT inside the RETURN TEE then connect the water sucking hose to the second valve. Make sure that the two valves are tightly screwed.

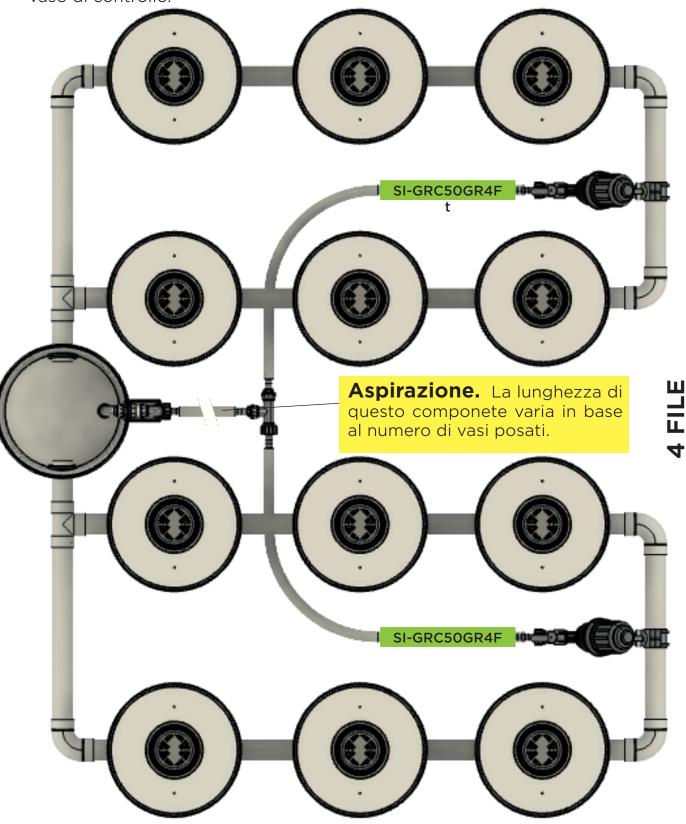


RETURN HOSE KIT

g) Nel sistema a 3 FILE i due tubi di aspirazione dei moduli di Ritorno rimangono i medesimi, a variare di lunghezza sarà la dorsale principale che va dal Tee al vaso di controllo.



h) Nel sistema a 4 FILE i due tubi di aspirazione dei moduli di Ritorno rimangono i medesimi, a variare di lunghezza sarà la dorsale principale che va dal Tee al vaso di controllo.

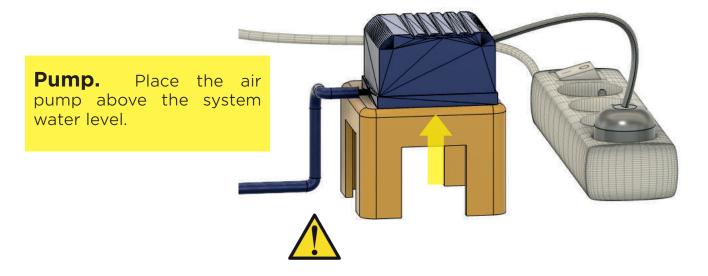


STEP 3 AIR DISTRIBUTION

a) Unbox. Take all the components of your AIR DISTRIBUTION KIT and put them together, you will be able to recognise all the pieces are shown below



b) Air Pump. Place the air pump.





c) AIR JOINT. For 3/4 Row systems we have pre-assembled the tail joints to facilitate your work, here below the two versions.



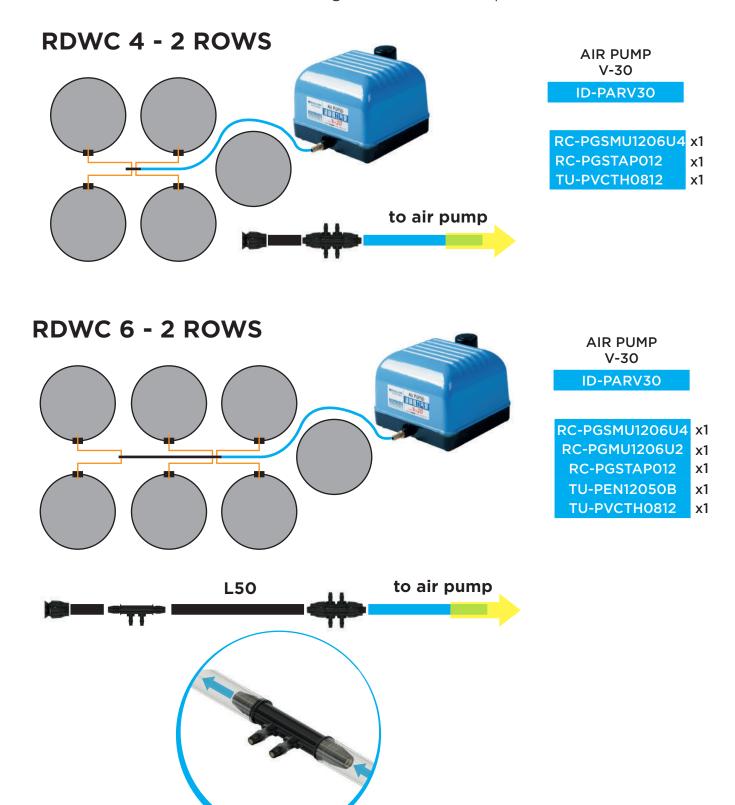
AIR PUMP BRASS FIT-TING. screw the air pump barbed fitting inside the air pump outlet.

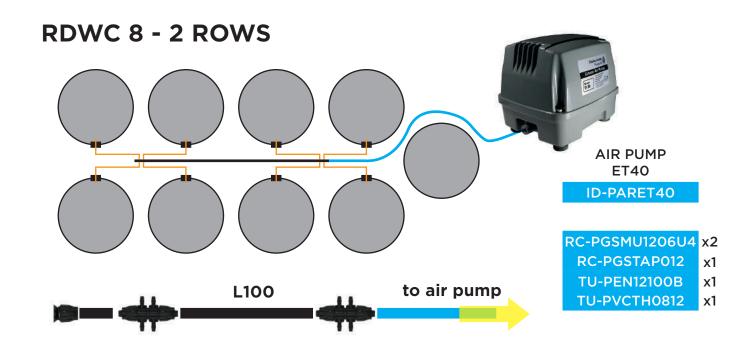
e) AIR MANIFOLD (4 WAY OUT). Air manifolds are used to bring air from the main distribution line to every growing pot. End cap and the air manifold 4 way out it come with the swivel lock system, and have to be assembled as shown in the picture below. Unscrew the swivel lock from the fitting Pass the AIR DISTRIBU-TION PIPE 1through the swivel C. Connect the AIR PIPE to the AIR MANIFOLD **D.** Screw the swivel lock

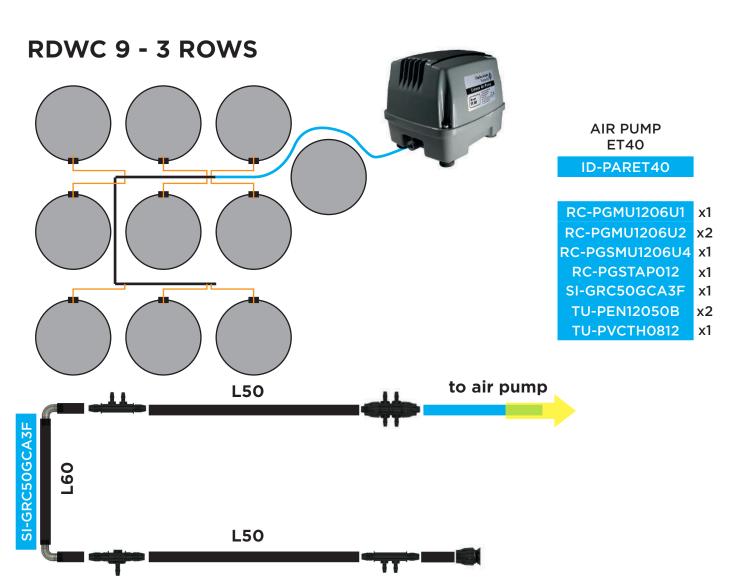
END CUP. End cap. Repeat

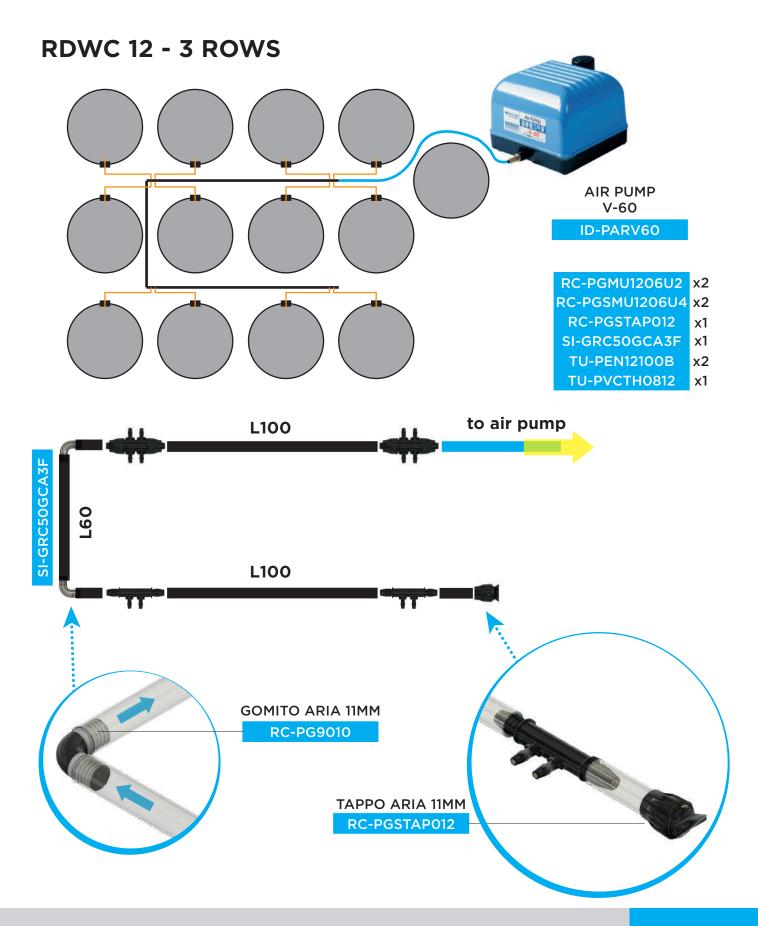
the steps above

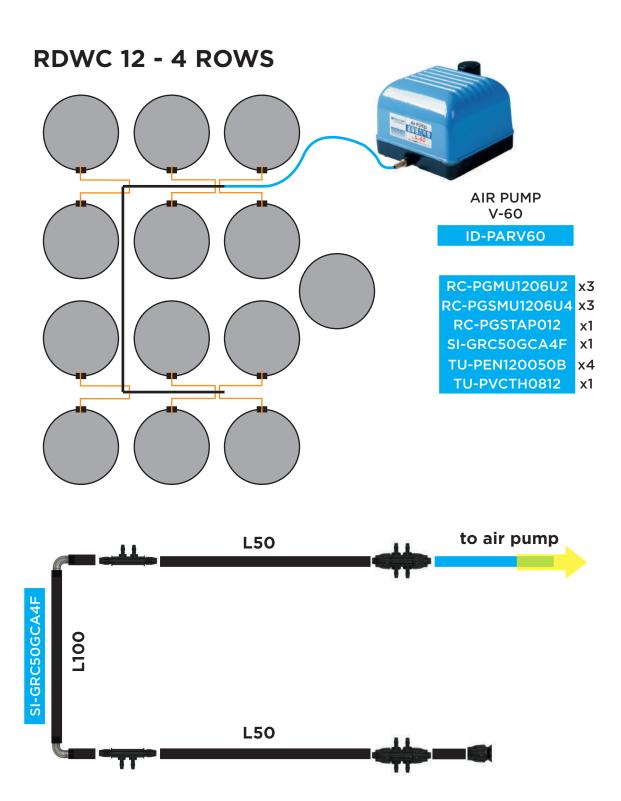
f) AIR DISTRIBUTION LINE. Complete the air distribution line following the diagrams shown below. Search for your system diagram, every system has a different distribution line according to the number of pots involved.

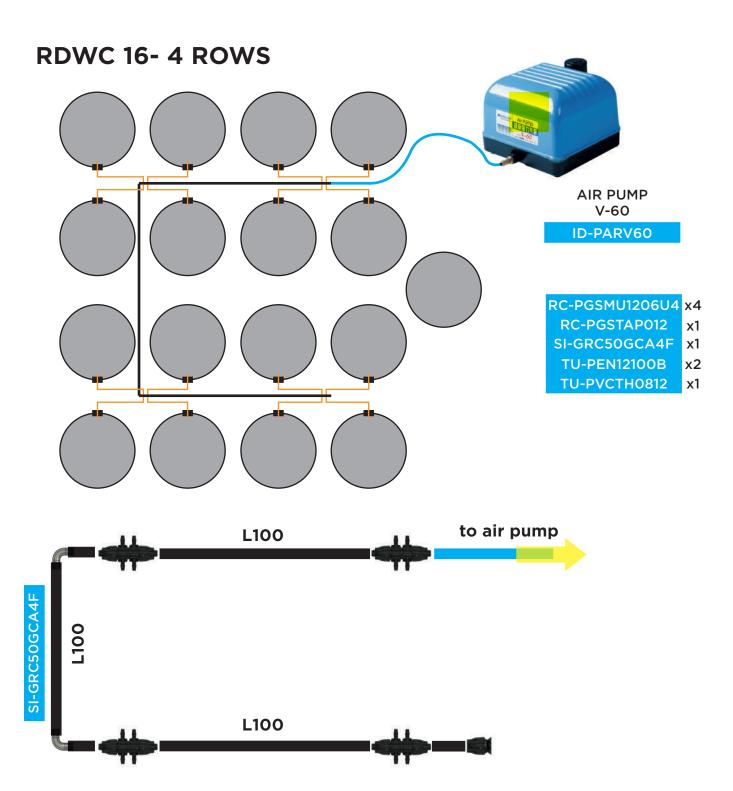


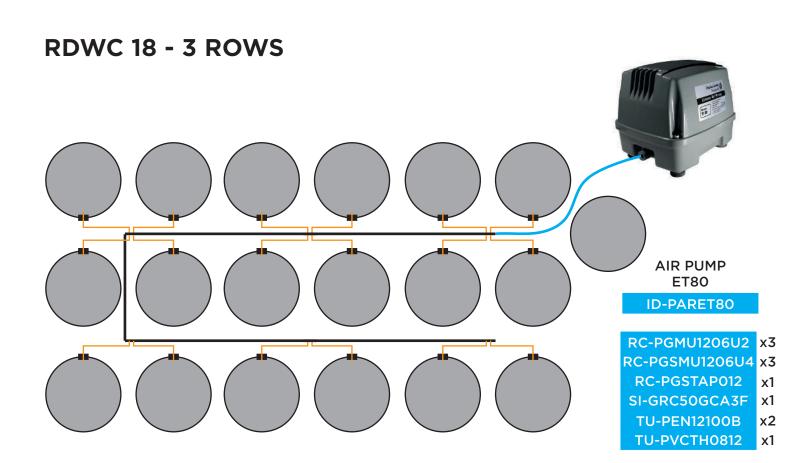


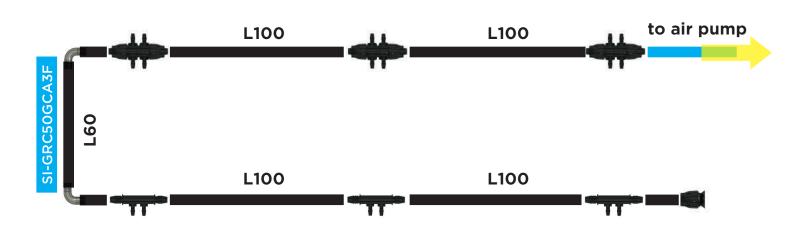


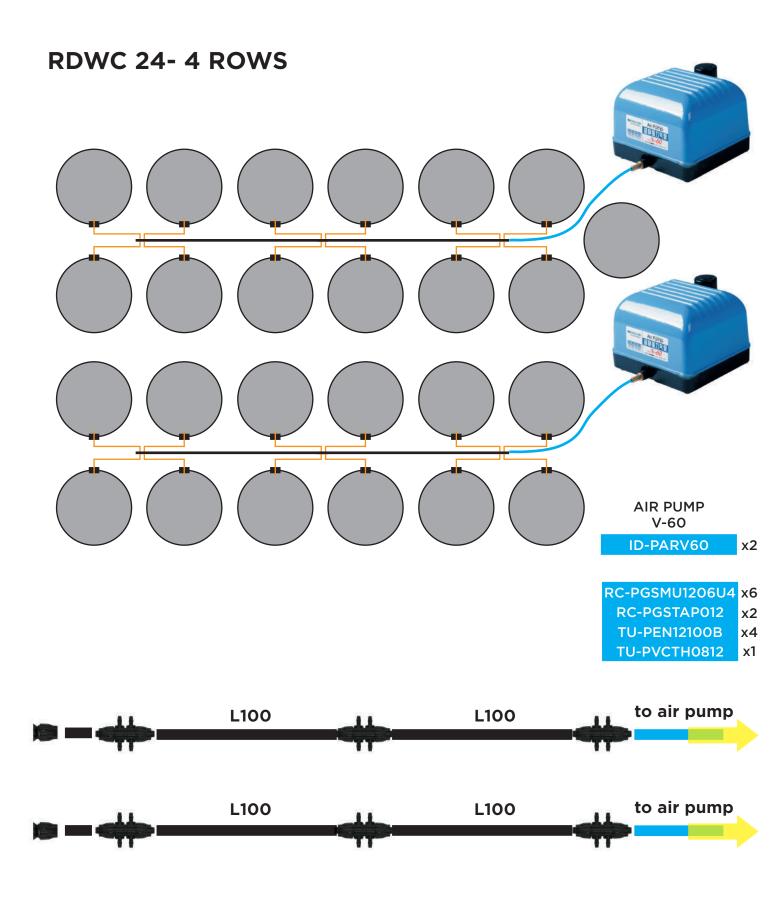




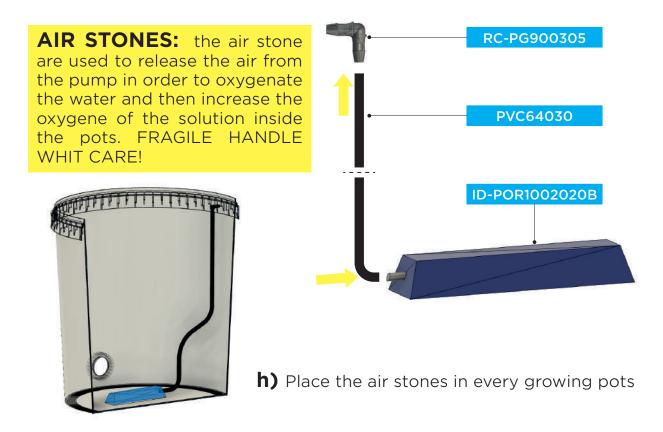








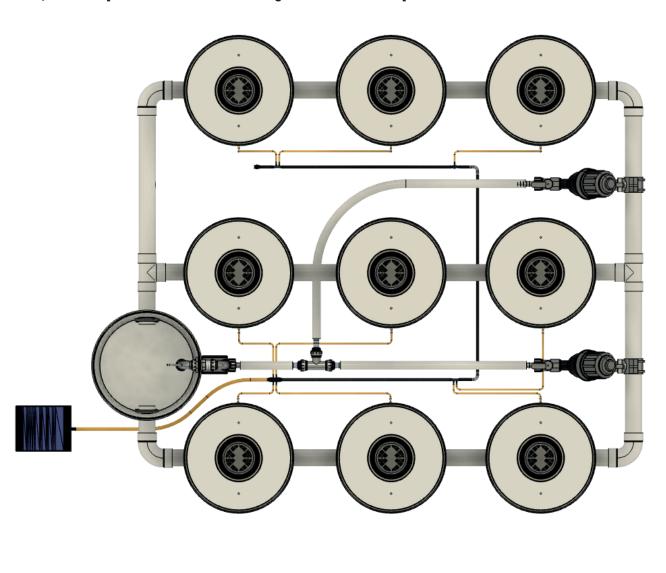
g) Air Stones. Connect the air stone as shown in the picture below



i) END LINE. connect the air manifold to the air stone



I) Complete installed system example.



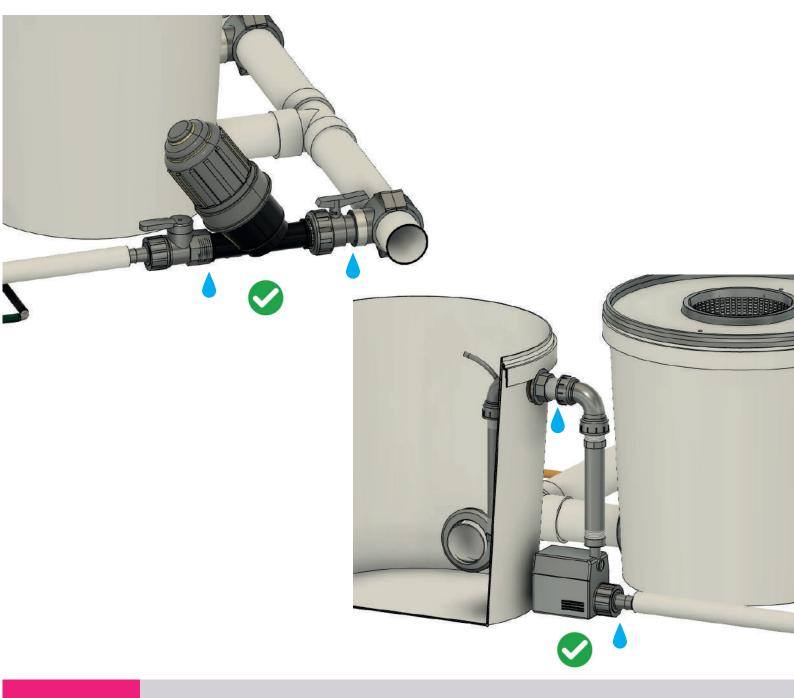


SYESTEM TESTING

STEP 3 SYSTEM TESTING

Now that your system has been assembled let's proceed with the testing of the system before starting with to load the solution and start growing. Follow the step below:

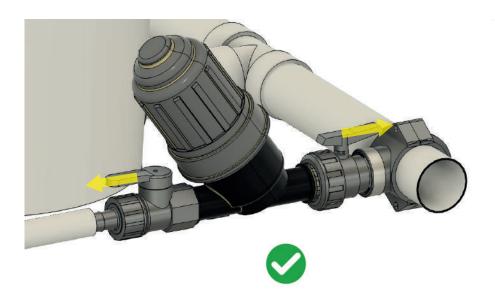
1) FITTING. Make sure you have tightened all the threaded fittings across the RETURN HOSE 20MM from the IN LINE FILTER KIT to the WATER PUMP.



2) GASKETS. Fill the system with water until the connecting pipe will be covered 1 cm. Switch on the water pump and wait for about 15 min, let the water circulate throughout the system and look for any water leak. If you recognize a leak go to the TROUBLESHOOTING CHART and find the right way for fixing it.

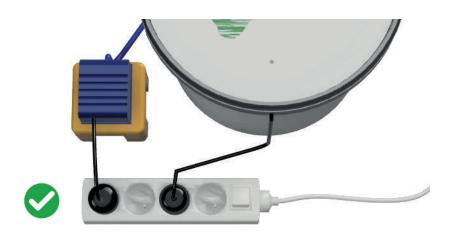


3) SYSTEM VALVE. Before switching on the water pump make sure that the two valves (before and after the in line filter) are open. Switch on the water pump and let the water run, it may happen that some air bubble inside the RETURN HOSE could hinder the water flow. if it happens just turn the pump off and on again until the water starts to come out in the control pot.



SYESTEM TESTING

4) AIR DISTRIBUTION. connect the air pump to the power supply and check that all the air stone works fine.



5) LOADING THE SYSTEM. Fill the system with water up to the level of the bottom of the net pots.



6) TEST. Let the system running for a while checking that everything is working properly before starting to grow



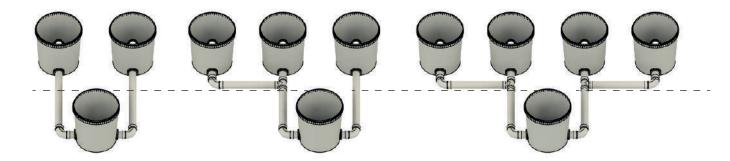
7) NUTRIENT SOLUTION. now you are ready to make your nutrient solution. Use the control pot for ceck your EC and pH level. Calibrate the solution as needed by placing fertilizers or pH regulators in the control pot. Let the solution circulate inside the system and let the EC and pH values stabilize, then double check and correct if needed

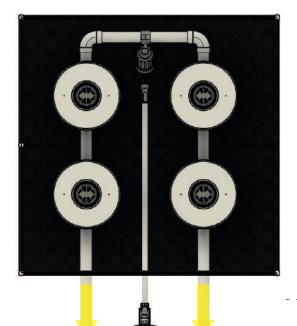


NB: choose your cultivation range well, on our website you can find a wide choice of fertilizers, additives and tools, as well as tutorials for correct use. www.growrillahydroponics.com



STEP 5 MODIFY AND CUSTOMIZE YOUR SYSTEM





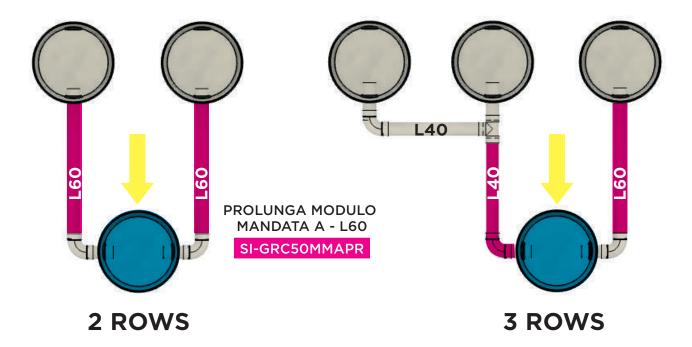
The new GROWRILLA RDWC PRO systems can be easily modified and customized according to the grower's needs.

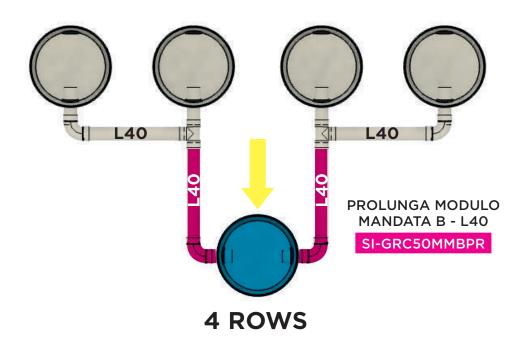
Everything is made particularly simple thanks to the use of push fit fittings that allow them to be disassembled and reassembled as needed.



EXTENDED PIPES

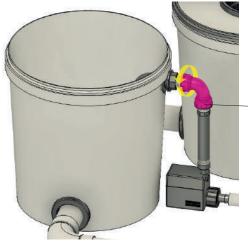
a) **EXTENDED PIPES.** For example, you can extend the distance of the control pot from the growing pots to place it outside the grow tent.





INTEGRATION CHILLER

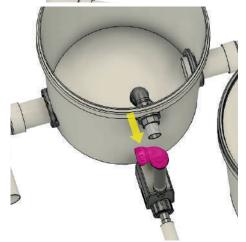
b) Run the chiller with RECIRCULATION PUMP. you can connect a chiller or a refrigeration unit to the system in order to keep the water temperature under control. You can doing that in two different way.



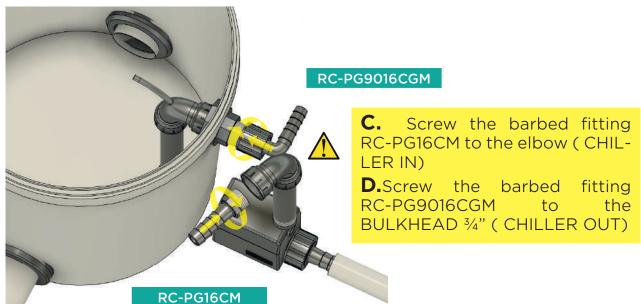
Switch off the recirculating water pump.

RC-FIL90CCFFGM

A. Unscrew the elbow fitting from the bulkhead as shown in the picture



B. Turn it 90°



INTEGRAZIONE CHILLER

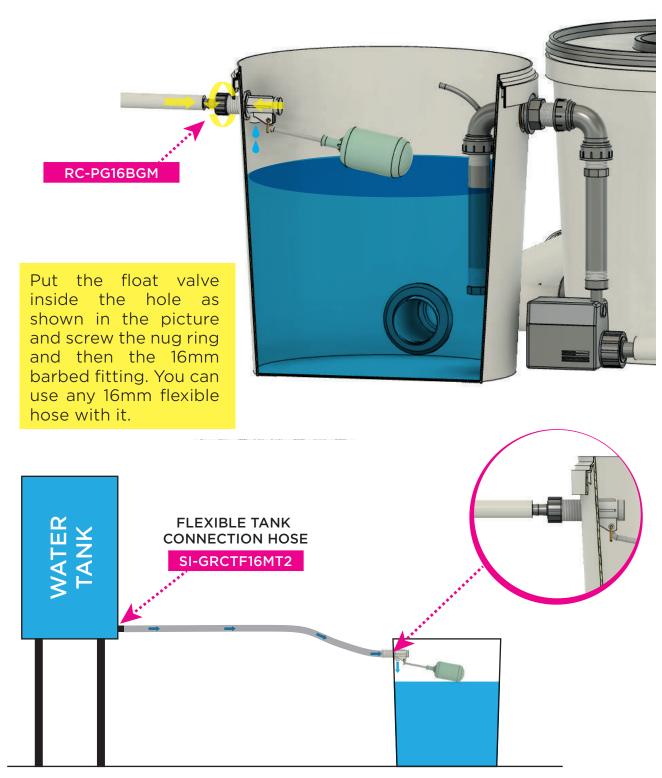


b) Run the chiller with an INDEPENDENT PUMP. The chiller can be connected by another water pump as shown in the picture below. The use of an independent pump is highly recommended to keep the flow rate of the solution in the system separated from the water flow to the chiller. In this way you can run the chiller with a flow rate calibrated to his technical specifications.



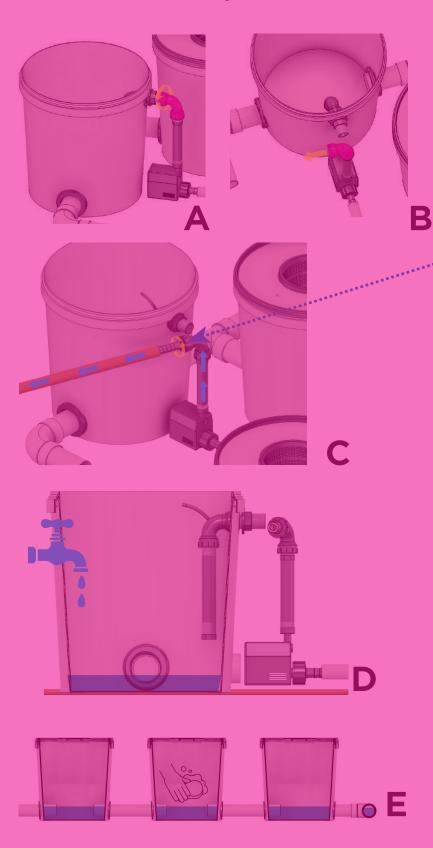
FLOATING VALVE

d) FLOATING VALVE. Floating valves allow you to connect the system with a separated water storage tank in order to always keep the right water level. When the water level in the system drops, the valve opens allowing new water to enter until the set level is reached.



SYSTEM DOWNLOAD CLEANING

For system unloading operations, refer to the methods listed below. You can download the system in two different way:



- **A.** Svita la ghiera mobile del gomito a 90°.
- **B.** Posiziona il gomito come in figura.



- **C.** Posiziona il portagomma maschio sul gomito e colega un tubo flessibile su di esso, indirizzalo successivamente verso uno scarico.
- **D.** Per elinimare il fondo della soluzione.
- aggiungi a questo punto acqua pura con la pompa in funzione ed effettua un risciacquo della soluzione per eliminare i residui.
- **E.** Rimuovi eventuali residui all'interno dei vasi prima di ultimare il risciacquo.

RIPRISTINARE nuovamente il sistema scollegando il chiller, e portare a livello con la nuova soluzione e rizionare la pompa.

RDWC HOW DOES IT WORK?



DWC, aka Deep Water Culture is one of the best performing methods for growing hydroponic plants.

The plant grows with the roots immersed in a nutrient solution constantly oxygenated by an air pump. The high value of dissolved oxygen available directly to the plant's roots increases growth processes, accelerating development and increasing the weight of the crop.

RDWC means Recirculating Deep Water Culture, the solution is constantly mixed within the system by a recirculation pump, standardizing the values of EC and pH.

By the controller pot you can check and regulate your nutrient solution circulating throughout the system

This way more growing pots can be connected together making your system fully expandable and able to cover any growing area, from small grow boxes to large cultivation rooms.



COLTIVARE IN UN SISTEMA DWC

La chiave della coltivazione con i sistemi deep water culture sta nell'ossigenazione della soluzione nutritiva e nello specifico nel contenuto di ossigeno disciolto all'interno della soluzione nutritiva

In ogni vaso di coltivazione è presente una pietra porosa collegata ad un aeratore mediante una linea di distribuzione dell'aria.

Attraverso la pietra porosa l'aria sprigionata all'interno del vaso muove la soluzione dal basso verso l'alto inducendo uno scambio gassoso tra aria e acqua e caricando quest'ultima di ossigeno.

L'alto valore di ossigeno disciolto disponibile direttamente alle radici della pianta aumenta i processi di crescita, accelerando lo sviluppo ed aumentando il peso del raccolto.



Per maggiori informazioni sulla coltivazione DWC ti consigliamo di visionare la nostra guida.

growrillahydroponics.com/coltivazione-dwc/

