ACTIVEVISTA

OVERHEAD
IRRIGATION KIT

FOR ACTIVEVISTA CATERPILLAR TUNNELS

ASSEMBLY AND INSTRUCTION MANUAL

ACTIVEVISTA

Diversified Cropping Solutions

www.activevista.com.au

ActiveVista SpinNet™ **Overhead Irrigation Kit**

Adding an Active Vista SpinNet™ Overhead Irrigation Kit to your Caterpillar tunnel.

Our overhead irrigation modules suit the entire Caterpillar Tunnel range and can easily be retrofitted to any 5m width polytunnel, greenhouse or nursery area.

The SpinNet™ SD micro-sprinkler is designed for upside-down irrigation, particularly in greenhouses, tunnels, and other structures. It's known for its high uniformity of water distribution and prevention of drips that could damage plants.

The SpinNet™ SD uses a Shoulder Distributor (SD) to achieve this, allowing for a consistent flow through the sprinkler despite pressure variations from the water source.

If you have any concerns during the setup, build or functioning of your ActiveVista SpinNet™ Overhead Irrigation Kit, please contact:

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Component List

ActiveVista SpinNet™ Basic Overhead Irrigation Kits Include:

Label / Kit Detail	TUNNEL LENGTH 7.5m	10m	15m	20m	30m	40m	Description
A	5m	5m	5m	5m	5m	5m	1" Black Polyethylene Tubing
B	8m	10.5m	15.5m	20.5m	30.5m	40.5m	1" Netafim White Polyethylene Tubing
C	1	1	1	1	1	1	3mm Innox Drill Bit
D	7	9	16	23	32	43	Netafim Hanging Assemblies
E *E,F,G = SpinNet™ Assembly*	7	9	16	23	32	43	SpinNet™ Sprinkler Heads
F	7	9	16	23	32	43	SpinNet™ SD Shoulder Distributors
G	7	9	16	23	32	43	Netafim Anti-Drain Valves
H	30	30	40	54	80	100	Black UV Stabilized Nylon Cable Ties
I	8	8	8	8	8	8	Stainless Steel Hose Clamps
J	1	1	1	1	1	1	¾" Automatic Flush Valve
K	3	3	3	3	3	3	25mm Poly Directors x ¾"
L	1	1	1	1	1	1	25mm Poly Directors x 1"
M	2	2	2	2	2	2	25mm Poly Elbows
N	1	1	1	1	1	1	Goof Plugs, 10-Pack
O *Used in Q1, Q2 & Q3 Kits*	1	1	1	1	1	1	Poly Shut-Off Valve F-F x ¾"
P *Used in Q1, Q2 & Q3 Kits*	1	1	1	1	1	1	35PSI (2.5 Bar) Pressure Regulator F-F x ¾"
R *Used in Q1 Kit Only*	1	1	1	1	1	1	Poly Nipple x ¾"
S *Used in Q2 Kit Only*	1	1	1	1	1	1	Netafim Screen Filter M-M x ¾"
T *Used in Q3 Kit Only*	1	1	1	1	1	1	Rivulis Disc Filter M-M x ¾"

Complete Kits Also Include One of the following valve/filter/pressure regulator assemblies:

Assembly Details	7.5m	10m	15m	20m	30m	40m	Assembly Description
Q1 Components: **O, P, R**	1	1	1	1	1	1	Shut-Off Valve / Poly Nipple / Pressure Regulator Assembly
Q2 Components: **O, P, S**	1	1	1	1	1	1	Shut-Off Valve / Screen Filter / Pressure Regulator Assembly
Q3 Components: **O, P, T**	1	1	1	1	1	1	Shut-Off Valve / Disc Filter / Pressure Regulator Assembly

Component Reference Guide

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

R

S

T

Assembly Guide

Full SpinNet™ Assembly

Netafim Anti-Drain Valves **G**

F SpinNet™ SD Shoulder Distributors

E SpinNet™ Sprinkler Heads

Q1 Assembly

O Poly Shut-Off Valve F-F x ¾"

35PSI (2.5 Bar) Pressure Regulator F-F x ¾" **P**

R Poly Nipple x ¾"

Q2 Assembly

O Poly Shut-Off Valve F-F x ¾"

P 35PSI (2.5 Bar) Pressure Regulator F-F x ¾"

K 25mm Poly Directors x ¾" BSP Thread

S Netafim Screen Filter M-M x ¾"

K 25mm Poly Directors x ¾" BSP Thread

Q3 Assembly

T Rivulus Disc Filter x ¾" M-M

O Poly Shut-Off Valve F-F x ¾"

25mm Poly Directors x ¾" BSP Thread **K**

25mm Poly Directors x ¾" BSP Thread **K**

P 35PSI (2.5 Bar) Pressure Regulator F-F x ¾"

Assembly Requirements

A smooth setup starts with the right prep. Make sure you've got the tools, tape, and water supply sorted before you move onto the system assembly.

Tools Needed:

- Knife or polypipe tube cutter
- Tape measure
- Marker pen
- Drill and ⅜" driver
- Flat head screw driver
- Ladder
- Threaded tape

Water Supply Requirements:

- **If supplying your own filter and or pressure regulator;**
  - **Water Pressure:** at least 30psi and no more than 35psi
  - **Filtration:** at least 130 microns or 120 mesh
- **Flow per Sprinkler Line (LPM) 15 metre:**
  - **15 metre:** 18.6 lpm
  - **30 metre:** 37.1 lpm
- **Pressure Regulator at 35 psi Flow Range:** Approx. 50 to 100 lpm Unit Size: 1"
- **Supply Line Requirement**
  - **7.5-15 metre:** ¾" diameter or greater supply line works best
  - **20-40 metre:** 1" diameter or greater supply line works best
- **Minimum Water Pressure Requirement:** 2 bar - 30 psi

Threaded Tape Note

Apply supplied thread tape to **ALL POLY THREADS** before attaching the next fitting.

Assembly Instructions

Assemble with confidence, simply follow the steps below to get everything set up and working as it should, you'll be irrigating in no time.

Step 1 - White Polyethylene Tubing

Lay out the **25mm White Polyethylene Tubing (B)** onto a flat surface, using several U pins or weights such as sand bags to assist in laying flat.

Step 2 - Mark out the 900mm dropper intervals

A. Leave a 60cm space at the front end of the line;

B. Lay a long tape measure out along the full length of the white tube and after the start gap mark a small cross every 90cm on the top edge of the white tube.

C. Using the **3mm Innox Drill Bit (C)** provided drill holes into the white tube, avoiding damage to the opposing interior side.

Step 3 - Flush the Line

A. Attach the **Netafim Hanging Assemblies (D)** to the white tube by pushing the end of the hanging assembly through the drilled holes using a pair of pliers ***(See Step 3A image).***

B. Flush out any loose swarf and check flow to each dropper prior to adding the SpinNet™ Assemblies and Flush Valve.

Step 4 - Now add your Flush Valve

A. First place the **Stainless Steel Clamp (I)** over the far end of the **White Poly Tube (B)**.

B. Insert the **¾" Poly Director (K)** by pushing the threaded end. If required, you can soften the tube to make it easier by placing it in a cup of hot water. Fasten the clamp.

C. Securely attach the **Flush Valve (J)**.

Step 5 - SpinNet™ Assembly

A. Join the SpinNet™ **Sprinkler Head (E)** to the red SD piece **Shoulder Distributor (F)**, next attach the **Anti-Drain Valve (G).**

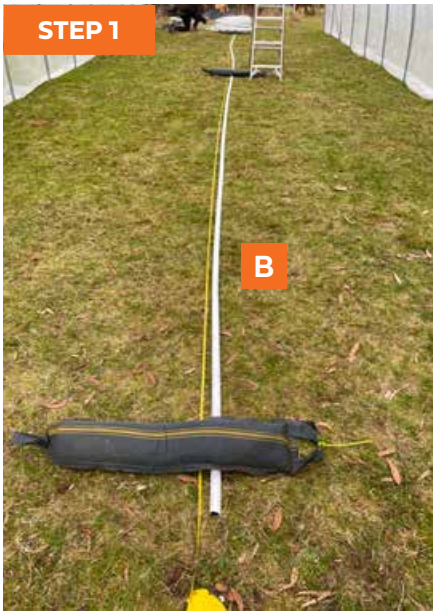
B. Attach SpinNet™ assemblies to the **Dropper Assemblies (D)**.

Step 6 - Add the 25mm Poly Elbow to the front end of the white tube

A. Add a **Stainless Steel Clamp (I)** onto the **White Poly Tube (B)**, making sure that the driver head is facing downwards and away from the end hoop ***(See step 6 image).***

B. Attach the **Poly Elbow (M)** and tighten the clamp so that the elbow will be facing toward the Shut-Off valve assembly side of the tunnel hoop when lifted into place ***(See step 6 image)***.

STEP 1



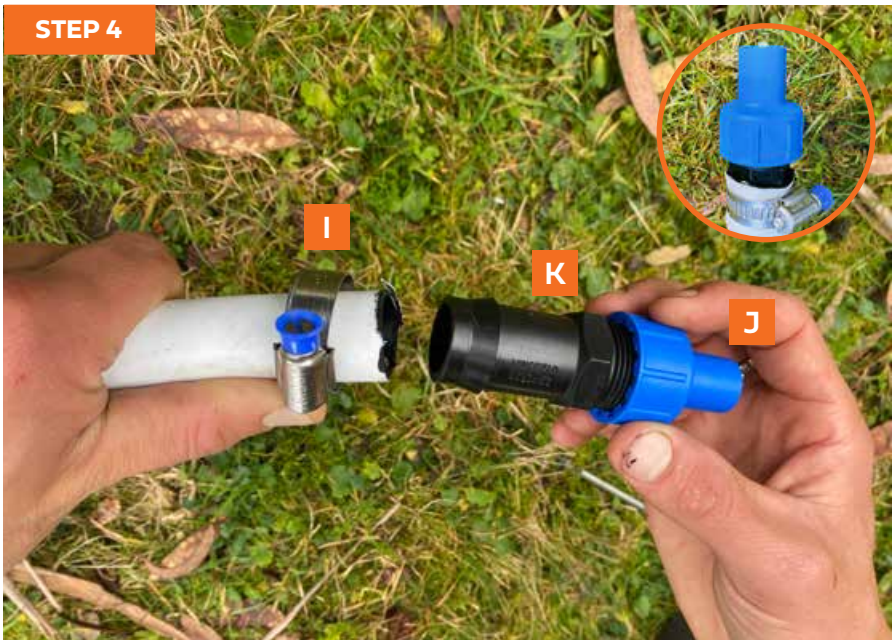
STEP 2B

STEP 3A

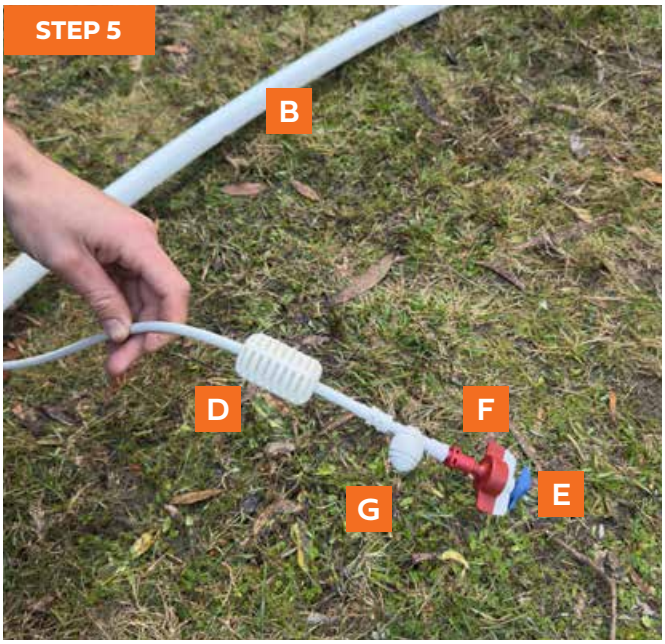
STEP 3B

STEP 3B

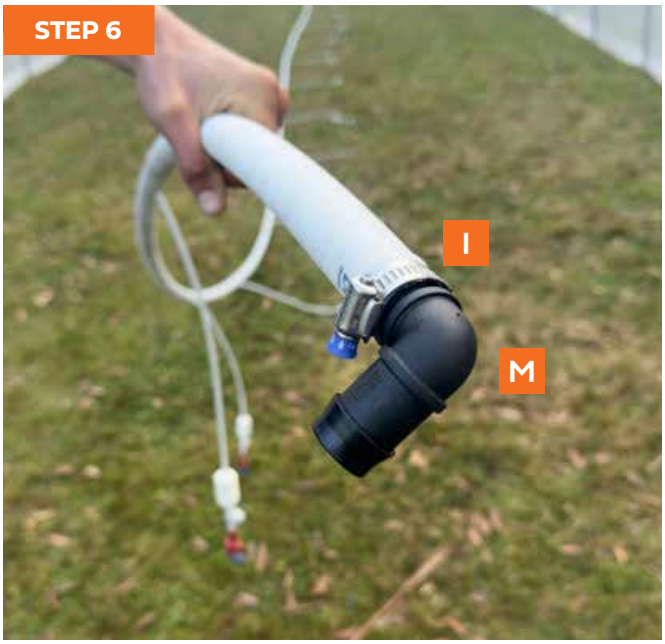
STEP 4



STEP 5



STEP 6

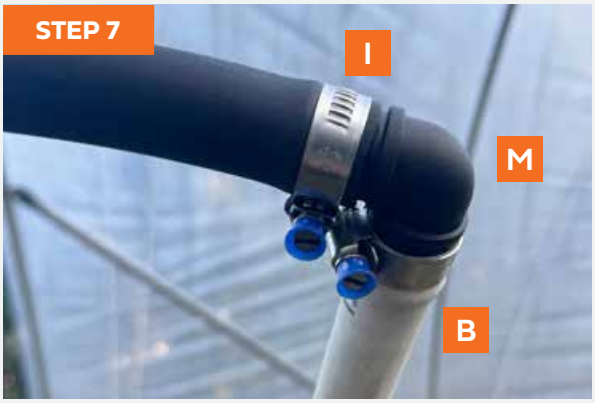


Step 7 - Attach the 5m x 1" Black Polyethylene Tubing to the other end of the Poly Elbow

A. Add the **Stainless Steel Clamp (I)** to the **Black Poly Tube (A)**, ensuring the correct clamp position *(See Step 7 image).*

B. Attach **Black Poly Tube (A)** to **White Poly Tube (B)** with the **Poly Elbow (M)**.

C. Fasten the clamp.



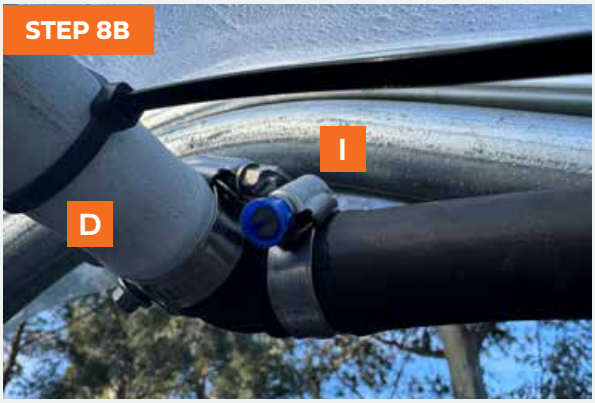
Step 8 - Lift the overhead irrigation array into position

A. **For tunnels with cross bracing poles:** With the help of a friend, lift the far end of the white tubing (with the **Flush Valve (J)**) over the first cross bracing and work it down to the far end of the tunnel.

B. **For all tunnel applications:** Starting from the centre purlin at the inside of the front hoop using the supplied **Cable Ties (H)**, attach the end of the white tubing to the end of the purlin ***(See Step 8B image).***

C. Now attach the **White Poly Tube (B)** to the purlin roughly every 450mm making sure to attach near the **Hanging Assemblies (D)** and if you have a strap style purlin, also near the hoop and purlin intersections.

Note: While it is important that the front of the white tubing meets the front hoop it is not necessary for the end of the white tubing to reach the end hoop. The Flush Valve will drip on some occasions however as it does it's job. Please ensure the end point accordingly.



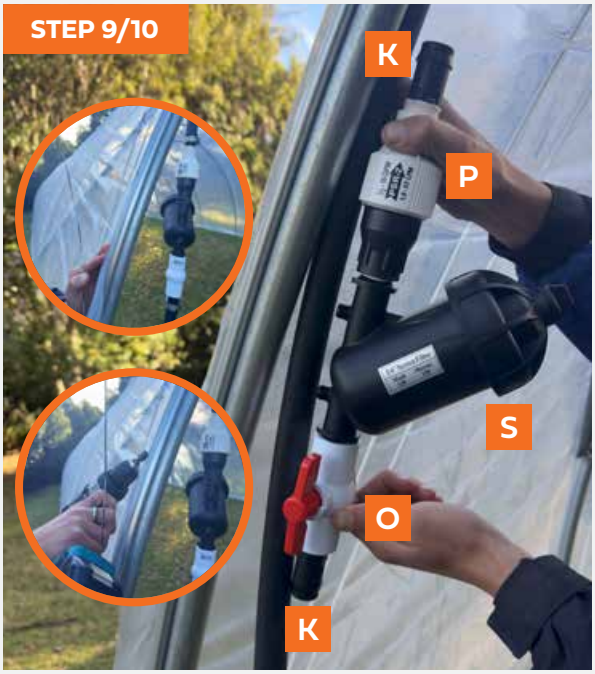
Step 9 - Positioning the Shut-off Assembly

A. Secure the **Black Poly Tubing (A)** along the inner edge of the end hoop every 350-450mm using the **Cable Ties (H)** to your chosen height for the shut-off assembly ***(See Step 9 image).***

If you have locking channel attached (most will) you will need to slide the cable tie under the channel. Using a flat screwdriver to lift may help. If more space is required you may need to partially loosen the locking channel by first removing a section of wiggle wire and film to access the hex head screw ***(See Step 9 Inset Images).***

Once the cable tie is added you can re-tighten the screw and reapply the section of wiggle wire.

B. Cut the black tubing at your required height



Step 10 - Build the Shut-Off Assembly.

Shut-off Assemblies (Q1,2,3) are available in various iterations. Ensure your shut-off valve is at the base of the assembly.

A. Attach **3/4" Poly Director (K)** to the **Shut-Off Valve (O)**.

B. Add the filter option **(S/T)** above the shut-off valve, ensuring the correct flow direction for either disc or mesh options.

C. Attach the **Pressure Regulator (P)**, ensuring the correct flow direction, either to the **Filter (S/T)** or the supplied **3/4" Poly Nipple (R),** above the shut-off valve.

D. Attach the top Poly Director to the pressure regulator.

See page 5 for detailed Shut-Off assembly images

Step 11 - Attach the Shut-off Assembly to the black tubing.

A. Add a **Clamp (I)** to the **Black Poly Tubing (A)** ensuring that the clamp driver is on the hoop side, not the film side and facing inwards *(See Step 11/12 image).* Insert the **3/4" Poly Director (K)** at the top of the shut-off assembly into the black tubing and tighten the clamp.

2. Secure the shut-off assembly to the inner face of the tunnel hoop using a **Cable Tie (H)**.

Step 12 - Finalise Black Tubing from Shut-Off

Attach the remaining black tubing to the bottom of the shut-off assembly, again using the clamp to tighten over the lower poly director, attaching the black tubing to the inside hoop edge, taking it down to ground level and cutting off any remaining tube.

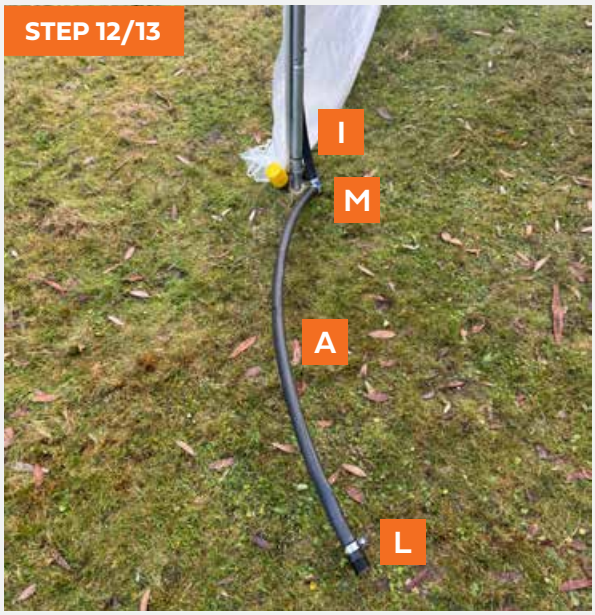
Note: If adding an end wall, leave enough black tubing to go 25mm below ground level, or lower if required.

Step 13 - Setup Ground Poly for Water Source

Attach the remaining **Poly Elbow (M)** at ground level using a **Clamp (I)** and run the remaining tubing flat on the ground towards your water source. We have supplied a **Poly Director with a 25mm/1" BSP thread (L)** as your option to attach to your water source.

Step 14 - Water Source

Attach to your water source and test your system.



OVERHEAD IRRIGATION KIT

Maintenance

A bit of regular care goes a long way. Here's how to protect your system from frost, keep it clean, and maintain clear filters for trouble-free operation.

1. Regular Filter Cleaning

- **To inspect;** Unscrew the cap on the screen or disk filter. If any residue is present, remove the screen or disk assembly and rinse thoroughly in clean water. Replace.

2. Freezing Event Harm Management

Note: freezing temperatures will expand and damage any irrigation that is holding water. If your shut-off assembly or Anti-Drain valves are full of water they can be comprimised, leading to expensive splitting of equipment

- Disconnect from your supply line and open all valves. Allow gravity to drain the system.
- Remove the filter casing and Ant-drip assemblies. This will allow the hanging assemblies to drain fully.
- Store parts in a sheltered container away from temperature extremes.

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