



## WaterMate

### Polytunnel installation

This is a guide to installing the WaterMate irrigation system into your polytunnel. Every polytunnel is different, so you will need to adapt the guide for your own situation.

#### Tools needed

- Secateurs for cutting pipe
- Pozidrive screwdriver and a selection of screws
- Pliers to cut 2mm galvanised wire
- Small adjustable spanner
- Kettle to warm water for softening pipe ends

If you have any difficulty or questions while setting up, please call us on **0333 090 5440** (Mon-Fri 9am - 5pm) or email **hello@harvst.co.uk**

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See more online at **[www.harvst.co.uk/setup](http://www.harvst.co.uk/setup)**

#### **WARNING**

The ends of the galvanised wire are sharp, and the wire will be under tension. When working with straining wire, wear safety goggles and gloves, do not over tension the wire and take care not to pierce the plastic of your polytunnel.

## Concept

WaterMate supports two separate irrigation zones. This allows a versatile setup which can adapt to your polytunnel crops throughout the seasons. An auxiliary output can also run an extra pump if you want to add a third zone, or transfer water from a separate tank to your main polytunnel tank.

### **Different plant types**

Some plants will want more water than others. WaterMate lets you run different schedules for the two different zones.

### **Different emitter types**

Soak hose and misters require high pressure, yet drippers and sprayers will be lower pressure. Two zones allows you to run both from the same irrigation system without needing to manually change connectors or taps.

### **Double your capacity**

You can also use the two separate zones to double the number of emitters you can power with the same pump. One zone will pump first, and then the second.

## Changing your setup through the seasons

When plants develop, their watering needs can change. You may also be rotating crops, and doing multiple sowings of different crops in a season. Consider how you might want to change the setup as time goes by. This can be done by fitting taps to the main 13mm irrigation line, or to the 4mm take-off lines. Or, you can remove 4mm take-off lines and replace them with sprayers, or vice versa. Plastic “goof plugs” can be used to plug redundant holes in LDPE pipe. Adjustable drippers can be shut down completely and left inline.

## Sprayers

Spray nozzles (90, 180 or 360 degree) can be pushed directly into the LDPE pipe, after a hole is made with a punch. The sprayer reach is around 1 metre from the pipe at 1 metre above the ground. We recommend sprayers at around 35cm intervals.

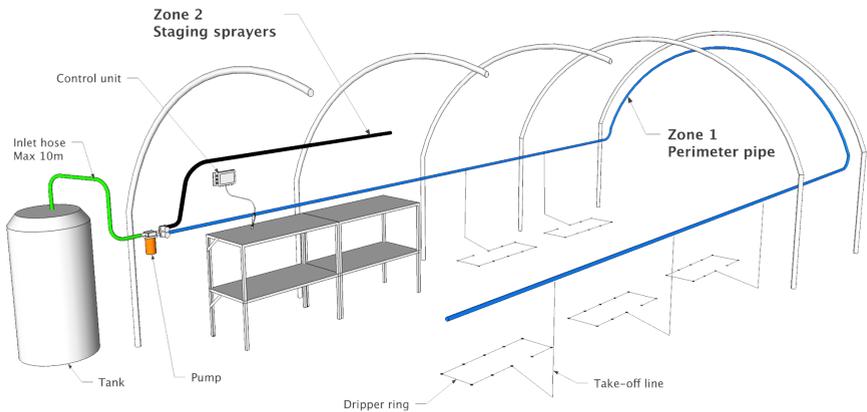
## Drippers, “shrubblers” and other ground level emitters

Adjustable emitters are fitted to 4mm micro irrigation hose, in a daisy chain format. For even water distribution, we suggest a ring of emitters which are then connected to the main perimeter pipe using a take-off line. A maximum of 8 emitters per take-off line is recommended.

Water is distributed around the perimeter of the polytunnel using a 13mm LDPE (semi rigid) pipe which is fixed to the frame around 1m above the ground. Into this pipe, you can connect sprayers directly, or 4mm take-off hoses for drippers or other 4mm emitters.

### Example 1 One perimeter pipe & one staging sprayer

Seedlings, small pots and trays need more regular watering than plants in deep soil. Run zone 1 as a perimeter pipe around the polytunnel with drippers or sprayers for a once-a-day (or less) soaking of the larger plants, and have zone 2 spraying or misting your seed trays and pots on the staging / shelves on a more regular basis, perhaps controlled by a soil moisture sensor.



### Example 2 Two perimeter pipes

Having two perimeter pipes lets you use water from either irrigation zone anywhere in the polytunnel.

### Example 3 One perimeter & one ground level

Use zone 1 with a perimeter pipe to provide water for general sprayers and drippers around the polytunnel, where the plants need it. Use zone 2 with a ground level soaker hose for watering efficiently in rows without wasting water.

## Installation

**TIP**

To prevent the support wire causing heat damage where it comes into contact with your polytunnel skin, thread the wire through 4mm micro irrigation pipe first.

Using pliers or wire cutters, cut a short (30cm) section of wire and thread it through the small hole in the flat end of the wire tensioner. Using the wire, fix the tensioner to something strong at one end of the polytunnel, at least 1m above the ground.

Uncoil the wire, and secure one end at the same height at the other end of the polytunnel. A loop around a hoop with a good twist will do.

Straighten out the wire so that it reaches the tensioner, and cut it a little longer than needed. Don't let the wire spring away and cut your polytunnel.

Thread the free end of the wire through the hole in the wire tensioner frame, and then through the hole in the tensioner barrel. See how the barrel spins just one way (against the ratchet mechanism), and feed the wire through appropriately.

Turn the tensioner barrel to tighten the wire. Not too tight.

Fix your LDPE perimeter pipe to the wire using cable ties every 30cm, making a full loop around the polytunnel.

Close the loop with a tee joint, and from the centre of the tee joint, take a length of flexible braided hose to one of the outlets on the water valves. The one with the yellow wire is zone 1, and the one with the black wire is zone 2. Secure it with a jubilee clip over the raised part of the barb.