Irrigation

You will need:-

Standard 13mm LDPE irrigation pipe.

Low Density Polyethylene Pipe (LDPE) Supply pipe delivers water around an irrigation system from the water source to the 4mm pipe for delivery to the funnels. Suitable for above ground installation, supply pipe is not usually very flexible and therefore connectors can be used to direct supply pipe around corners. Use barbed connectors for supply pipe as they provide a tight and leak-free seal which means water pressure is not compromised. LDPE pipe is quoted as internal diameter (ID) as the fittings push inside of the pipe.

Standard 4mm LDPE (Micro Pipe)

Micro pipe (also known as feeder pipe) is used for delivering water from the supply pipe to the funnels. It is generally very flexible and therefore can be easily manipulated to suit. We don't recommend running lengths of micro pipe longer than 1 metre at a time as the system is likely to lose too much pressure to be able to operate effectively.
LDPE pipe is quoted as internal diameter (ID) as the fittings push inside of the pipe.

PIPE CUTTERS

This is a safe way of cutting LDPE pipe quickly and easily. Producing a neat and square accurate cut.

WALL CLIPS

The 13/14mm Wall Clip is a handy clip with a nail supplied for securing 13mm and 14mm internal diameter irrigation pipe to fences, walls, posts and other fixtures.
To keep irrigation pipe secure, simply line the wall clip in position around the irrigation pipe and use a hammer to drive the nail into the batten, wall or other fixture to keep it secure.

13mm to 4mm T Connectors

You will require 2 per planter along the top row of the Green Wall

For larger systems where there are more than 13 columns of Vertical Planters the 2 Pressure compensating drippers are required per Planter instead of these T’s

13mm Barbed End Plug

You will require these to plug the open end of the main 13mm irrigation supply pipe. On the supply and drain pipes.

Various straight and angled barbed connectors

Quantities of each are dependant on the design and contours of each Green wall. So a careful design and count up of the various

Pressure Regulator

The pressure reducer dependant on model and make will regulate the water pressure to 20-25PSI (1.4-1.8 bar) which is the optimum water pressure for excellent Green Wall irrigation system performance. Without a pressure reducer there is a danger that the 4mm micro pipe will pop out of the supply hose and therefore compromise the effectiveness of the irrigation system. This can be fitted onto the water supply tap or onto the optional Water Timer

Water Timer (Optional)

Watering Timers are numerous. They vary in price and design, from mains supply to battery. Battery is a great value timer for watering Green Walls. Simply turn your water on and set the timer to begin watering at any time to suit your watering requirements using the dial operation. The timer is easy to program with watering times from 1 to 120 minute periods. The frequency dial allows you to repeat your program at a range of intervals from every 1 hour up to 1 week.

Pressure Compensating Barbed Dripper - 2 -8L/h

An end-of-line pressure compensating dripper with an output of 2 -8litres per hour and barbed outlets for securing directly into 13mm supply pipe or to 4mm micro pipe. The size of dripper is determined by the number of Vertical Planters in a column.

This is used on larger systems where there are more than 13 Vertical Planter columns. Instead of the 13-4mm T's these drippers are inserted into the 13mm supply pipe with a 4mm tube attached which feeds the water into the funnel

Irrigation

A 13mm LDPE supply pipe will come from the water source, garden tap is the most common. If a timer is to be used that should be attached to the tap and then the pressure regulator. From the pressure regulator the 13mm supply pipe should then be connected, to then create the irrigation installation up to and then run along the tops of the first row of the Vertical Planters.

1. Cut the pipe with pipe cutters, lengths of 135mm and join a 13mm- 4mm T piece connectors at each end. Make sure the pipe is pushed all the way up past the last barb on the connector to the physical stop.

TIP:- ***This can be done much more easily if the pipe end is dipped in a cup of hot water to soften, before pushing onto the barb.***

2. Cut two pieces of 4mm pipe 150mm long and attach to the bottom of the two T's. These will flow water into the funnels. You will need one set of these for each Planter along the top row.

3. **If** the horizontal spacing of the Planters is 10cm then cut 38.5cm of pipe to join each irrigation set to each other. Then fit and tie the pipe along the top as per picture below.

<u>Accuracy is essential when cutting and joining these as the 4mm down pipes need to align with the funnels.</u>

IMPORTANT NOTE

If there are more than 13 columns of Vertical Planters in the installation and depending on the pressure and volume of water. The furthest column might not get any water flowing from the pipe. This is because it is all going to the Planters before it. To remedy this and for the bigger installations pressure compensating drippers are attached to the 13mm pipe instead of the 13mm T's and then the 4mm tube is fed from these into the funnels. For larger installations seek professional irrigation advice. (See Picture left).

Testing

Once the irrigation system is installed it should be tested before installing the drainage pipework. Turn the main tap on and see how the water drips into each of the top funnels. Make sure that each 4mm drip tube is feeding water into the planters and the overflow from each planter down to the next is working until there is water emerging from the bottom planters spouts.

Testing & Drainage

When the installation is all finished and planted up test the irrigation system again. Time how long it takes the the water to start dribbling from the overflow spouts at the bottom Planter. Repeat this a few times over a few days to guage how long to have the water on and to make sure no blockages occur.

If the overflow of water at the bottom of the Vertical Planters needs to be directed elsewhere rather than drip onto the ground then:-

Using two 13mm T's cut a length of 13mm pipe 135mm long and join the T's together. Cut another two lengths of 13mm tube 60mm long and attach to the T's and then attach to the spouts on the bottom of the Vertical Planters. (See pictures below.)

Join these sections together with 13mm pipe and lead the overflow water away to a drain or Back to a feed tank. (Depending on size and design of system)