



Wall-Mounted Planting Kit

1
year
guarantee

GreenWall

Watering Kit included



Put it up



Pot Your Plants



Connect Your Hose
or Poly Pipe



Watch them Grow

Features

- Complete watering kit & pots included.
- Varying pot sizes for different plant types.
- Durable metal construction for long life.
- Easy to install.
- Corrosion resistant PVC coated.
- Interchangeable pots.
- Expandable.

www.holmanindustries.com.au

Installation Instructions

HOLMAN GreenWall
Wall-Mounted Planting Kit
With Watering System (not fitted)
Product Code: GW0002



For more information regarding this product and to watch the video of how it works please scan the QR code with your mobile device

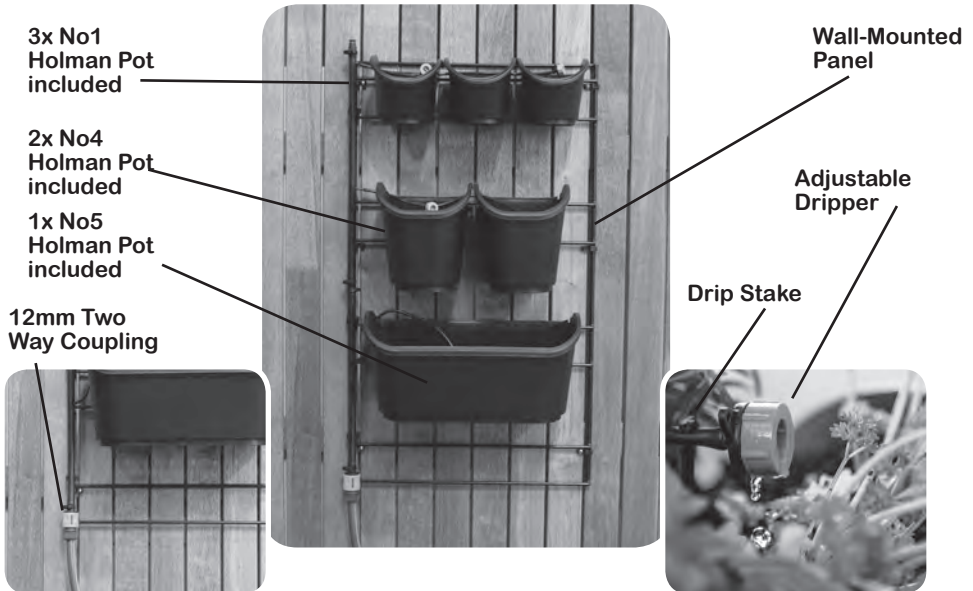


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HOLMAN GreenWall GLOSSARY



GreenWall Contents List:

1 x GreenWall Panel	2 x 13mm Poly Pipe	4 x 4mm Joiner
6 x Clip-on Planters (Pots)	1 x Click-on Coupling	4 x 4mm Tee
7 x Adjustable Drippers	3 x Clamps	3 x 4mm Elbow
7 x Drip Stakes	6 x Wall Plugs	1 x 4mm Punch
6 x Saddle Clips	6 x Screws	1 x 13mm End Plug
4 x Ratchet Clamps	1 x 5M 4mm Tube	7 x Cable Ties
1 x 13mm Joiner		

INTRODUCTION

GreenWalls or living walls have been known since the Hanging Gardens of Babylon before the birth of Christ. The gardens of today tend to have small footprints but lots of walls. These offer many possibilities for home gardeners to bring living greenery back into our lives. The Holman GreenWall is an engineered platform that is designed to make hanging or vertical gardens easy to set up and maintain in an Australian yard. Even if that is now an apartment balcony.

GreenWall will allow you to transform a wall into a lovely growing space. The system is simple to set up and most importantly incorporates an irrigation system. This vertical garden unit enables you to grow a herb or vegetable garden near your kitchen, to beautify indoor spaces and patio areas make a colourful and welcoming entry statement for your home.

Australia's harsh summers mean that watering is the key to successfully growing vertical gardens. Holman have designed the GreenWall garden panel that makes a stable platform from which you can hang pots but it also has a professional watering system that delivers controlled amounts of water into each individual pot.

KEY FEATURES OF THE "HOLMAN GreenWall" ARE :-

- A convenient wall panel that allows pots to be hung and removed from the wall very easily.
- The panel has a watering system included so that water can be accurately delivered to each pot.
- The panels are easily hung to the wall.
- GreenWall panels can easily hang side by side and then connected together to connect a continuous water supply pipeline that runs on the side of the wall panels.
- A water supply from a household garden tap is easily connected to the wall panel at the most convenient point.
- Each panel has six water connection points. This facilitates panels being connected in a wide range of patterns. A "full" GreenWall can be created or a "hit and miss" pattern or long runs of vertical or horizontal panels or indeed almost any pattern desired.
- The GreenWall system includes a generous amount of extra fittings that allows the user to do most connections they may need to do!
- All connections are "industry standard" and are available at your local hardware store or garden centre.

HOLMAN GreenWall Installation

INSTALLATION

The installation of your GreenWall is easy to do.

1) "Location" is as important in growing a GreenWall as it is in real estate. Growing on a vertical surface means that the amount of full sunlight is going to be restricted. North and west facing walls get the most light and heat. South and east facing walls get less than half a days direct exposure. This has a big bearing on what will grow successfully. Many homes have narrow alleys down the side where the eaves may be less than a metre away. This can turn even a north facing wall into a growing spot that gets as little as 1 hour of direct sun. Also think about where your water source will be and how easily you can run a hose from that tap.

2) You can install a single panel or multiple panels. If you plan to install 2 panels you can use just one 13mm supply line in between the panels.

3) Once you have determined where your first panel will be located you hold it against the wall and get it level (use a spirit level). It is most important that you get it level if you are going to add more panels because a small level error will magnify as the line of panels grows longer.

4) Included in the kit are 4 saddle clamps to fix the frame to a wall or fence. A 6.5mm masonry drill is required to use the wall plugs supplied.

5) Once your single panel or group of panels are fitted to the wall. Hang the empty pots onto the frame and install the watering system.

a) Install the end plug in one end of the poly pipe and the click connector on the other.

b) Fit 13mm ratchet clamps on each fitting.

c) Insert a 4mm joiner in the end of the 4mm flex tube.



a



b



c

HOLMAN GreenWall Installation



d) Use the 2 frame clamps to connect the poly pipe to a vertical wire of the frame.



e) Use the 4mm punch to punch a hole in the poly pipe. Insert the joiner connected to the tube.



f) Run the 4mm tube across the horizontal wire at the top of the pots. Use a cable tie fix to the horizontal wire if required.



g) Use a 4mm tee piece to insert a take off for the first 2 pots and a 4mm elbow for the last pot. (Heating up the 4mm tube in the sun or hot water makes it easier)



h) Cut the 4mm tube to the length to position the take off in the centre of the pot.



i) Cut a convenient length of 4mm tube to go from the 4mm tee or elbow and insert an adjustable dripper in the pipe and then push onto a tee or elbow.

HOLMAN GreenWall Installation

j) Connect the water supply by means of a garden hose or poly pipe and adjust the drippers.

k) Check that the watering mainline is properly connected (no leaks) and all the drippers are working at a similar output rate. They should have a steady drip rate.

6) Adjusting drippers:

The drippers are designed to regulate watering from a healthy stream to a complete off position. The adjustment is easily done by rotating the green top. Have the water turned on and then adjust the flow to a steady drip.

7) Plant the hanging pots before you attach these to the panel. One of the real breakthroughs in the Holman GreenWall system is that pots can be removed from the frame. This means that you can do your potting at a bench at a good working height. You can even establish the plants on the ground before positioning on the frame. Once growing on the module if something goes wrong, its easy to remove a single pot and sort the problem and even replant and then pop it back into its original position.

8) Hang the pots on the panel. Each pot has a flat hook at the rear. This slides over a wire on the panel. Once the pot is in position the most critical step is to position the dripper in the centre of the pot.

9) Water the plants as regularly as required. As a general rule the surface of the soil should dry out between drinks.

Watering requirements will vary as determined by weather, plant and soil type. It is strongly recommended that an automatic electronic tap timer is used to regulate how much water is applied to the plants.



SELECTION OF PLANTS

Apart from your imagination and knowledge of plants the only other restriction to what can be grown is the size of the pots. Trees by definition are not going to work.

So what's possible? First up many gardeners look to growing food. Most herbs can be cultivated, even some of the woody shrubs such as rosemary and lavender. Both of these plants need long hours of direct sunlight to succeed so an exposed west or north facing wall will be needed. Soft stemmed herbs such as parsley, mint, basil and coriander are very happy in small pots as long as their water needs are supplied.

The idea of a wall of vegetables is very appealing. This dream can be easily achieved with fast crops such as lettuce and the small Oriental cabbages such as Pak Choi and Gai Lan. Not all lettuces produce heads such as the well known Iceberg. Non-heading lettuces can be harvested 'leaf by leaf' and there are plenty of varieties from which to choose. Vegetables do best in high light situations.

Flowering annuals can make a dramatic and welcoming splash of colour. Many of these are well suited to vertical gardens. Examples are petunia, portulaca, pansy, viola, sweet alyssum and lobelia. For shaded east or south facing walls look at plants like bedding begonia and impatiens.

For a more permanent show where regular watering might be a problem, look to succulents. There are many families of succulent plants where form and foliage colour creates long term features. This is not to say that these plants don't flower, they do and in many cases with great flair. 'Flaming Katy' or 'florists kalanchoe' is a terrific example putting up a dazzling flower show for three or four months at a time.

Succulents are accustomed to getting by on little water and as a result have a tendency to rot if their roots are constantly wet. Use a cactus potting mix to fill the pots. In full sun you only need to water perhaps once every couple of weeks during summer so the plants experience dry soil in between drinks. Most succulents demand hot sunny locations to give their best show.

Some of the most spectacular vertical gardens are located indoors where there is more control over the environment, particularly when it comes to watering. Choosing a range of different foliage feature plants makes it possible to paint living pictures.

As a general rule soft stem plants are amongst the most successful, so trailing pothos, philodendron and peperomia are good choices for vertical indoor gardens.

In a similar vein patios and outdoor living areas can be decorated with living plants using the vertical format to create drama and effect. Tree growing orchids and bromeliads (air plants) are two groups of shade loving plants that are well suited to life in the air.

it is possible to grow plants in both hydroponic and aquaponic systems using the Holman GreenWall. Fill the pots with expanded clay as the soil-less medium.

It is a good practice to drain the water into a reservoir or pond. With hydroponics you would add nutrient to the pond. In the case of aquaponics, fish would supply the nutrient through their excreta. In both systems use a small pond pump to lift the water up into the GreenWall units for recirculation.

Potting Plants / Re-Potting Plants

POTTING PLANTS

One of the real breakthroughs in the Holman GreenWall system is that pots can be removed from the frame. This means that you can do your potting at a bench at a good working height.

You can even establish the plants on the ground before positioning on the frame.

Once growing on the module if something goes wrong, its easy to remove a single pot and sort the problem and even replant and then pop it back into its original position.

Choose top quality potting mixes as these will not only drain well but also have good water holding characteristics.

Also these mixes wet easily and moisture readily spreads through the whole of the root zone.

Red tick Australian Standards compliant potting mixes come with sufficient nutrients to keep plants growing for months after initial potting.

The black tick standard mixes are stable but will require fertiliser at planting time for continued growth.



RE-POTTING PLANTS

Most herbaceous or soft stemmed plants have a life span of one to two years and will need to be replaced when they start to look crook. These can be removed pot by pot from the panels.

Don't attempt to save the potting mix as it will have been exhausted by the growth of the previous plant. Empty the pot and use fresh potting mix.

When planting up the pots fill the potting mix to the top of the lip as settling will bring it down as much as a centimetre once it is in the system.

Additional pots will be available to buy separately and having a few spares can be a great idea.

You could for an example have a back up crop growing off the wall so that the changeover is instantaneous with the display always looking good.

FEEDING REQUIREMENTS

By choosing the Red tick potting mixes you will ensure that anything that you plant will have sufficient food to get them through a couple of months of growth.

Following on from this there are two ways to go. One is to use a controlled release fertiliser and the main advantage is that most of the nutrients will be taken up by the plants. Examples are Osmocote and Acticote. The other alternative is to use a liquid fertiliser. These by their nature are highly soluble and are taken up quickly.

The trick is to apply a small amount so that you don't find yourself staring at a stream of waste water coming out of the bottom of your GreenWall which contains most of the nutrients you applied at the top. Recommended liquid fertilisers include Powerfeed and Yates Uplift Organic Plant Starter and Root Booster.

PEST CONTROL

Being suspended up off the ground your plants are out of reach of most pests. Snails may be able to get to them.

There are low toxic pellets available that can be sprinkled over the soil to combat snails and their shell-less relative - slugs. Look for MultiGuard snail and slug pellets.

Caterpillars are reasonably well adapted to attack a GreenWall vegetable or flower display as their eggs may have been deposited directly on the host plants by the flying adult butterfly.

At the first sign of damage I would suggest spraying with Yates Success. This is a non toxic control for these big eaters.

WATERING

After you have the frame hung, the watering installed and the pots planted run the system to work out how long it takes to get water to flow through the pots. Try and judge your watering time to finish before water flows out the bottom of the pots.

You will need to monitor how quickly the pot dries out. The time will vary because:

- Each plant type will use a different amount of water
- The weather conditions - particularly ambient temperature and rainfall.
- The potting mix type & the size of the pot
- The location of the GreenWall & the time of day

Adjust watering OFF & ON times for the best growing conditions. Try and keep the soil moist, however not too wet or dry. We recommend a Holman Misting Timer to get the best results for your GreenWall as this timer can water frequently and for only seconds if required.

Hints

HGH PRESSURE

High Pressure: If you have high pressure water supply and the 4mm tube can blow off the fittings. To prevent this, install a pressure reducer onto your tap before the tap timer.

TAP TIMER

It is strongly recommended that the Green-Wall be watered automatically using a Holman electronic tap timer.

The Holman “Misting System” tap timer is particularly well suited to watering the Green-Wall because it can be programmed down to minutes and even seconds. This will allow you to work out the ideal maximum watering time that minimises the amount of “waste” water from the system. With a little patience you will be able to program the precise amount of time required to just moisten the mix in the pots. Also it is possible to water at very regular intervals. Say every 4 or 6 hours for a duration of perhaps of 30 seconds or 1 minute each time. Regular watering will prevent the soil from drying and will help to maintain vigorous plant growth.



*Misting Timer
Product Code: CO3009*

MULTIPLE PANELS

If you are installing multiple panels you should connect the watering system to one click on port.

The 13mm poly pipe is a standard size and your hardware store will carry all the fittings you need to connect all your 13mm feeder lines to a 13mm horizontal pipe. You will require tees, elbows and ratchet clamps.

You can also run the 4mm tube horizontal across 2 panels at least.



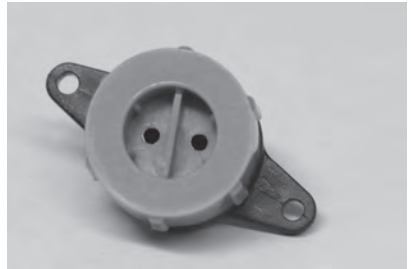
Dripper Flows / Blocked Drippers

DRIPPER FLOWS

You will note that the dripper flows can be quite accurately adjusted from OFF to a full flow. If you have pots of similar type (water usage) you should try and set up all the drippers to drip at a similar rate. This way all pots get a similar amount of water.

If you have different pot sizes and different plant types you may need to increase or decrease the dripper rate to enable the particular pot to maintain a similar moisture level to other pots.

Another technique is to use 2 drippers or even 3 drippers in a pot. This is particularly useful when you have an automatic watering timer set up. Here you want the right amount of water to go to all pots in your greenwall.



BLOCKED DRIPPERS

The adjustable drippers can be pulled apart and cleaned if you get dirt into the system. If you are cleaning the drippers ensure to give the pipes a good flush out when you have the dripper tops removed.



Warranty

HOLMANTM
GreenWall

Wall-Mounted Planting Kit

1 year guarantee

Watering Kit included

HANG & GROW
GreenWall
IN 15 MINUTES

Put it up

Pot Your Plants

Connect Your Hose or Poly Pipe

Watch them Grow

HANG & GROW
GreenWall
IN 15 MINUTES

Features

- Complete watering kit & pots included.
- Varying pot sizes for different plant types.
- Durable metal construction for long life.
- Easy to install.
- Corrosion resistant PVC coated.
- Interchangeable pots.
- Expandable.

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Should you have any questions about this product or its operation please telephone our customer service helpline on 1300 716 188.

HOLMAN offer a 1 year replacement warranty from the original date of purchase.

HOLMAN offer no guarantee or compensation for subsequent damage or waste of water.

It is the responsibility of the user to check that the product is always operating satisfactorily.

To claim warranty the product **MUST** be returned with a copy of the original receipt.

We will honour all statutory guarantees that this product is of acceptable quality (including that it is fit for purpose). Product images may change without notice.



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