

ATLANTIS®
GRO-WALL® 3 - GRO-WALL® PRO - GRO-WALL® FACADE



Gro-Wall®
VERTICAL GARDEN SYSTEM

Green Walls Made Easy!

Atlantis®
GREEN CITIES FOR LIFE

The image shows a lush vertical garden wall with various green plants, including ferns and broad-leafed species. In the foreground, there is a brown wicker sofa and a white coffee table with a small blue pot on it. The background is a dark, textured wall, likely the Gro-Wall system.

Create Lush, Beautiful Vertical Gardens

Designed specifically for vertical garden enthusiasts, Gro-Wall® 3 includes many new intuitive and constructive features that benefit both users and designers. New features include a revolutionary watering system, improved wall anchoring and improved planting capabilities.

The Gro-Wall® 3 enables designers and users to install vertical gardens in adverse outdoor environmental conditions and in regulated indoor environments with complete access and control. The new enhancements provide targeted watering control of individual plants, maximum water efficiency, last minute design changes and easy access to irrigation components.

Gro-Wall® 3 is the perfect tool for designers creating vertical landscapes and the perfect companion for its' caretakers.



Gro-Wall® 3 at a glance.



New IPI™ System

Gro-Wall® 3 features Individual Plant Irrigation concealed within the structure.



I.F.S. System

Integrated frame work system. Gro-Wall® 3 is fixed directly onto the wall. No additional frame work is required.



Modular

Gro-Wall® 3 is a modular system allowing easy vertical and horizontal expansion.



Thermal Insulator

Gro-Wall® 3 performs as a thermal insulator for buildings, cooling in summer and retaining heat in winter.



Versatile Planting

Plant stems are planted at angles ranging from 90°, 62.5° and 45°. Individual planting cells accommodate multiple plants & grasses.



Accessible

Gro-Wall® 3 features easy accessible planting cells allowing easy maintenance and even plant and design changes.

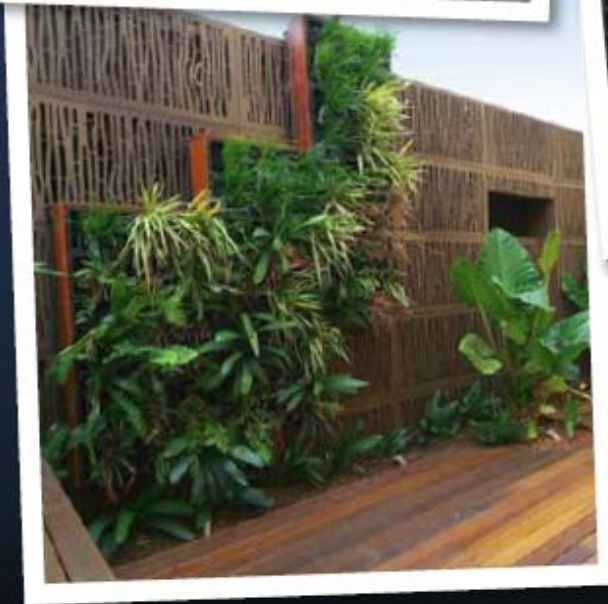


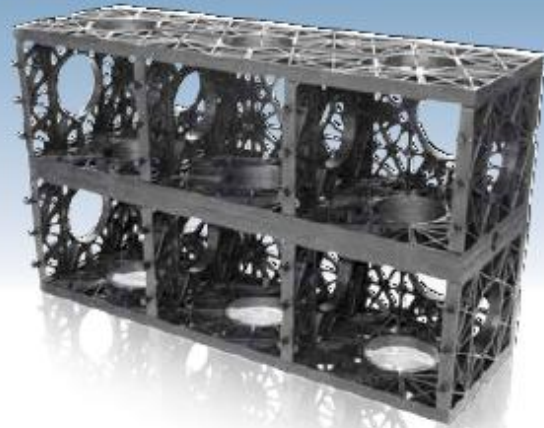
Made From Recycled Materials

Gro-Wall® 3 is made from high grade recycled materials.

Benefits

- Rapid Construction & Planting
- Vertical & Horizontal Expansion
- Optimum Moisture Retention for Plants
- Easy Individual Plant Access & Maintenance
- Easy Creative Planting Design
- Self Supporting Structure
- No Framework Required
- Structurally Strong
- Modular Planting System
- Easy To Maintain





Gro-Wall® 3

Plant Cell Contents

Soil mixes can be customised for specific green wall applications and geographic locations. Soil mixes can include washed sand, premium organic mix, light weight volcanic rock, fertiliser pellets and other components. Inorganic material such as sand and light weight volcanic rock are used for water retention, drainage and structural packing. Soil mixes need to be designed to suit the pH requirements of the plants selected and the environment the Gro-Wall® vertical garden will be installed into.



Versatile Planting

Gro-Wall® 3 plant cells can accommodate single or multiple plants including small plants and grasses. Plants stems can be planted at angles ranging from 45°, 62.5° and 90°.



Accessible Plant Cells

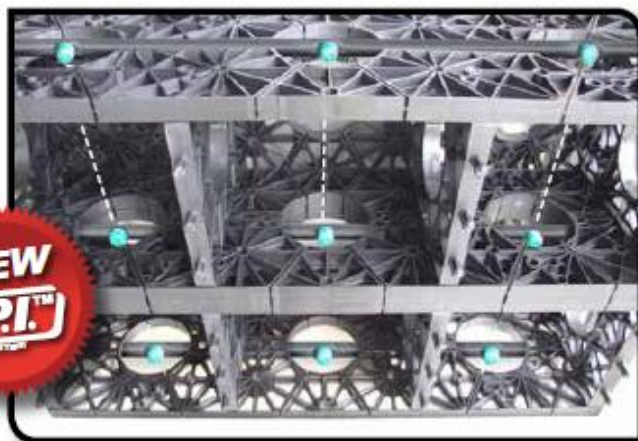
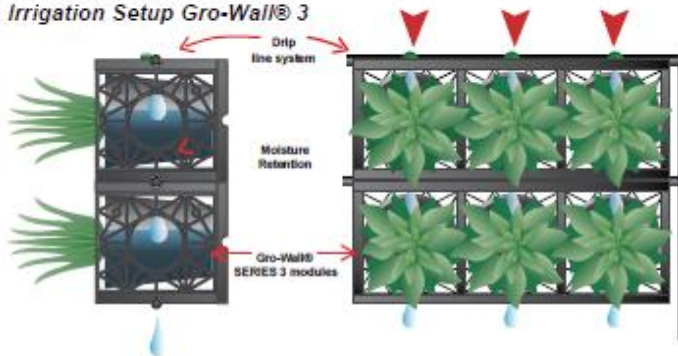
Plant cells within the Gro-Wall® 3 are completely accessible. This feature enables easy design changes and maintenance.



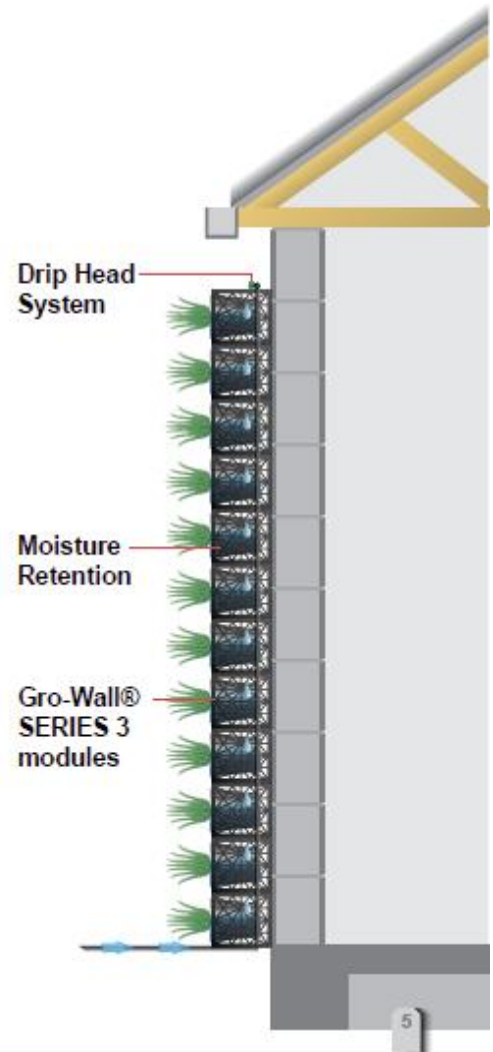
Versatile Irrigation

Gro-Wall® 3 features IPI™ individual plant irrigation system that allows conventional drip heads and irrigation conduits to be installed within the Gro-Wall® framework. Each plant cell is irrigated directly via a drip head nozzle.

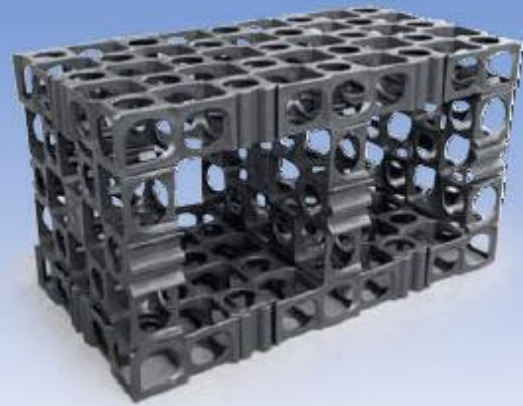
Irrigation Setup Gro-Wall® 3



Each nozzle is installed on top of a plant



Gro-Wall® PRO



Versatile Living Wall

Gro-Wall® PRO is a versatile living wall system designed to construct robust living walls such as double sided landscaped walls, cascading living walls and living walls requiring intensive soil depth.

Gro-Wall® PRO Features

Gro-Wall® PRO features channel conduits for steel reinforcement and the housing of irrigation systems. The channels can be used for multiple drip line or drip head irrigation systems for intensive watering applications. Gro-Wall® PRO also features a rigid wall mount clip for fixing to wall surface.



An installation of Gro-Wall® PRO for double sided living wall application.



Create cascading living walls



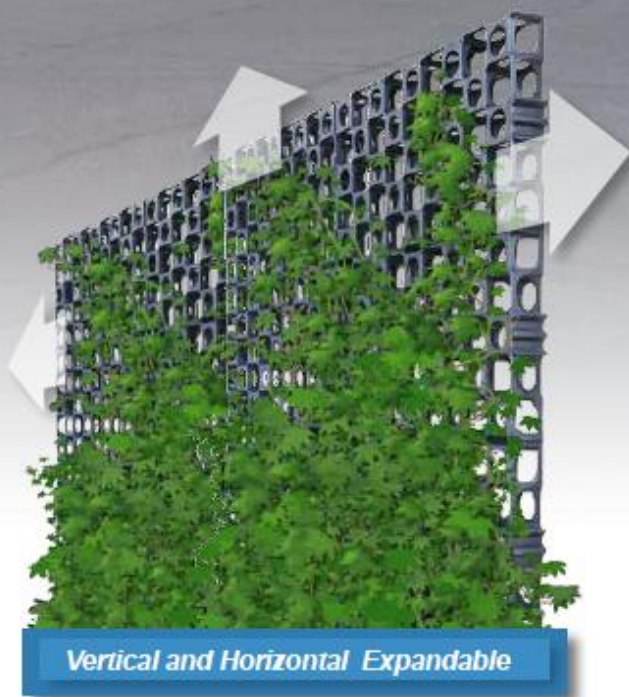
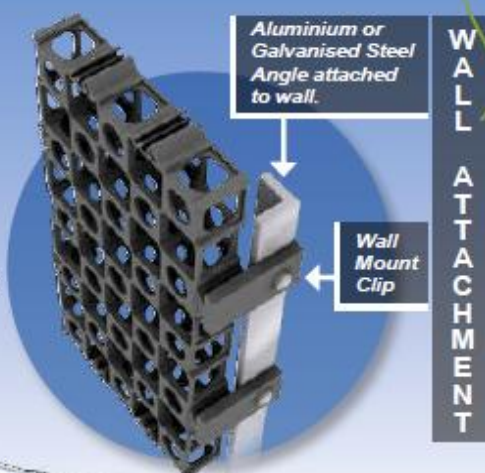
Create double sided living walls

Gro-Wall® Façade

Create beautiful dense vegetated façades.

The Gro-Wall® Façade system facilitates easy installation and integration with existing buildings and new architectural designs.

The strong design and ease of installation makes Gro-Wall® Façade an ideal choice for architects, landscape designers and landscape contractors.



Vertical Garden Solutions

Gro-Wall® 3 Vertical Garden System



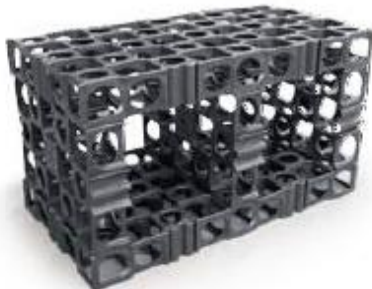
Part Number: 80050
Height: 200mm
Width: 680mm
Depth: 220mm
U.V Stabilised: YES
Material Properties: High Quality Recycled Polypropylene
Colour: Black

Gro-Wall® 3 KIT



Part Number: 80040
Modules: 6 x Gro-Wall® 3 Modules
Planter Bag: 18 x Gro-Wall® 3 Planter Bags
Connector: 48 x Module Connectors
Plant Retainer: 72 x Pot Retainers
Locking Clip: 24 Locking Clips
Installation Manual: 1 x Manual

Gro-Wall® PRO



Part Number: 80043
Height: 274mm (225mm when stacking modules)
Width: 480mm
Depth: 265mm
U.V Stabilised: YES
Material Properties: High Quality Recycled Polypropylene
Colour: Black

Gro-Wall® Façade



Part Number: 80052
Height: 480mm
Width: 260mm
Depth: 52mm
U.V Stabilised: YES
Material Properties: High Quality Recycled Polypropylene
Colour: Black

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ATLANTIS® GRO-WALL® PRO
DOUBLE SIDED VERTICAL GARDEN / SCREEN WALL



ATLANTIS® GRO-WALL® 3
VERTICAL GARDEN / WALL



Gro-Wall® SERIES 3 Assembly, Installation & Watering Guide

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Additional Materials Required (Not Included)

Irrigation Components

Typical 13mm and 19mm irrigation fittings and connectors are compatible with Gro-Wall®.

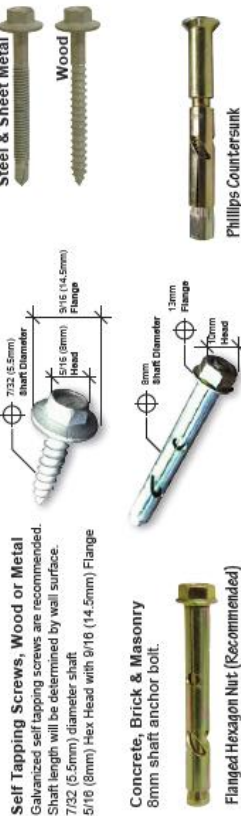


Various irrigation drip heads are available for use within the Gro-Wall® adjustable or fixed flow rates. For most installations online drippers of fixed flow rates ranging from 2 L/h, 4 L/h and 8 L/h are sufficient.



Fixtures for attaching Gro-Wall® to wall structures

Gro-Wall® can be easily fixed to concrete, brick, masonry, sheet metal, timber and other surfaces using appropriate fasteners. Note: Allow for 23mm depth when fixing the fastener through the Gro-Wall® Long Plate and Locking Clip.



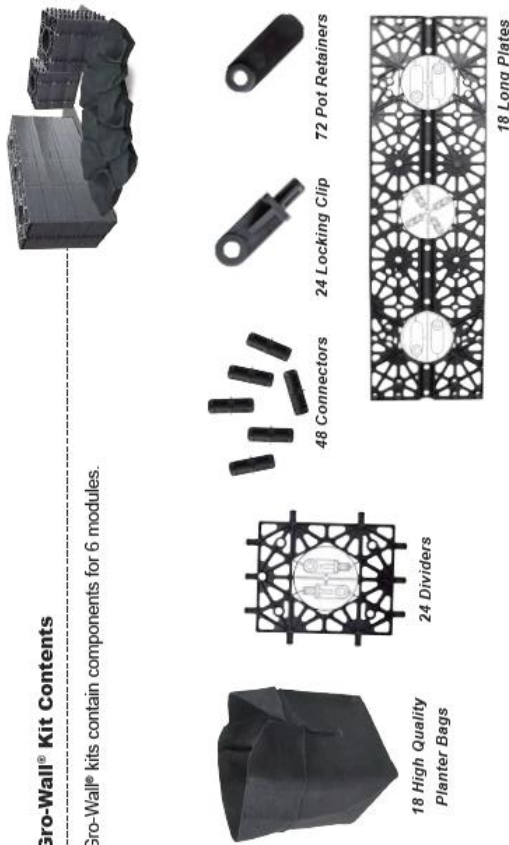
Soil Components

Various soil components will be required for planting within the Gro-Wall® bags. The components will vary depending what soil mix design is chosen. Typically soil mixes consist of organic matter (potting mix), fertilizers and inorganic materials such as volcanic rock (Pearlite, Vermiculite) and washed sand.

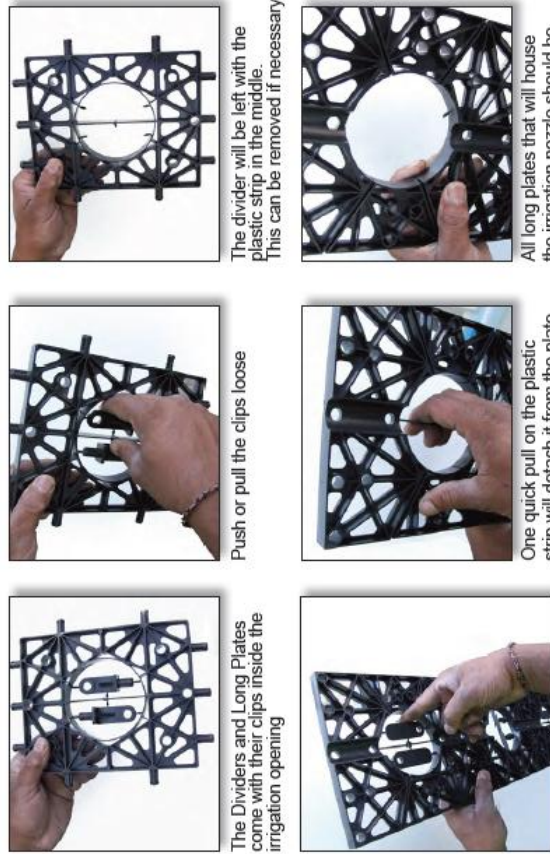


Gro-Wall® Kit Contents

Gro-Wall® kits contain components for 6 modules.



Removing clips from the Long Plates and Dividers



The Dividers and Long Plates come with their clips inside the irrigation opening

Push or pull the clips loose

The clips in the long plates has to be removed too.

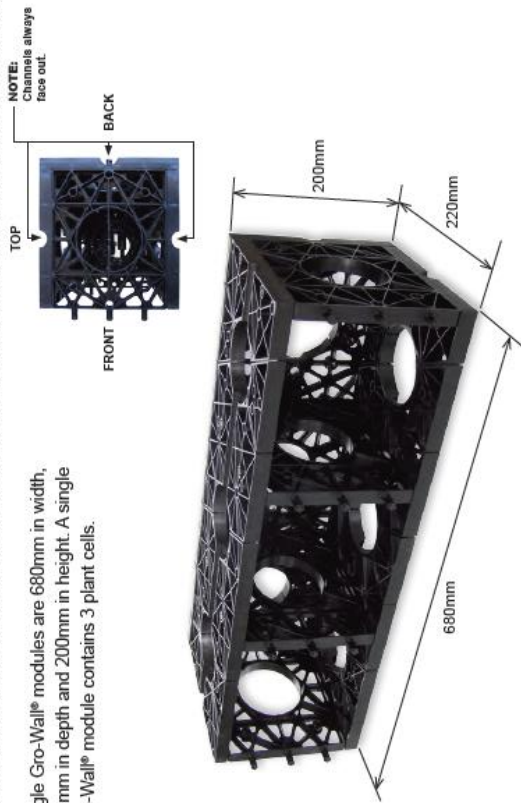
The divider will be left with the plastic strip in the middle. This can be removed if necessary

One quick pull on the plastic strip will detach it from the plate

All long plates that house the irrigation nozzle should be removed

Gro-Wall® Dimensions & Orientation

Single Gro-Wall® modules are 680mm in width, 220mm in depth and 200mm in height. A single Gro-Wall® module contains 3 plant cells.



STEP 1 - Insert Locking Pins into Gro-Wall® dividers

Each Gro-Wall® module requires 4 locking clips to ensure correct attachment to wall surface. Pins are located within the divider.



Locking pins are connected the female clip located next to central pin.



Insert locking clips into each divider & press firmly into place.

6

STEP 2 - Assemble Gro-Wall® modules



Clip first divider into long plate. Ensure the channel on the long plate is facing the ground.



Clip in 2nd divider.



Clip in 3rd divider.



Clip in fourth divider.



Attach top plate. Ensure the channel on the long plate faces up.



Turn module over and attach back plate. Ensure channels face out at all times.



Completed Gro-Wall® Module

STEP 3 - Attach connectors to Gro-Wall® modules.

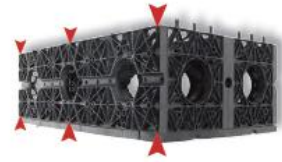
Connect 6 pins to the top of each Gro-Wall® module in the locations indicated by the arrows.



Connect pin into correct position.



Complete set of 6 pins attached.



7

STEP 4 - Connect Gro-Wall® modules together.

Gro-Wall® modules are easily connected together



Place Gro-Wall® module directly over module prepared with pins, utilising a rubber mallet.



Place pressure downwards utilising a rubber mallet.

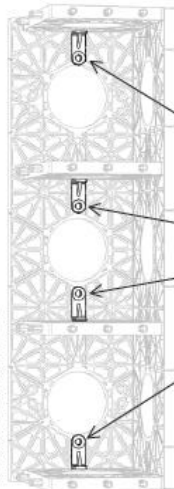


Repeat steps until desired height has been reached.

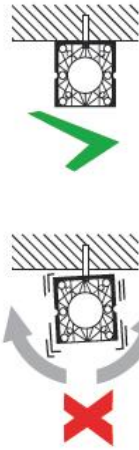
STEP 5 - Fasten Gro-Wall® modules to wall.

Each Gro-Wall® module requires 4 locking pins and 4 bolts or screws to securely fix Gro-Wall® to the wall.

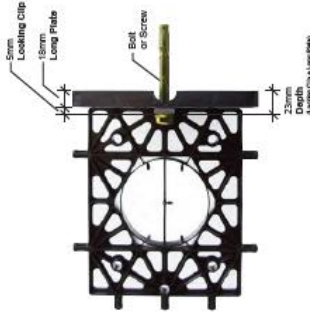
Fixture Locations



Use these holes for attaching fixtures to wall.



Ensure the Gro-Wall® module is firmly secured to the wall.



Drill holes for Concrete, Brick or Masonry fasteners.



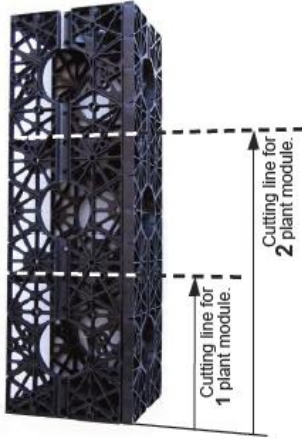
Ensure locking pin is in place before attaching fastener.



Attach Fastener. Wood or sheet metal fastener can be drilled directly into wall surface.

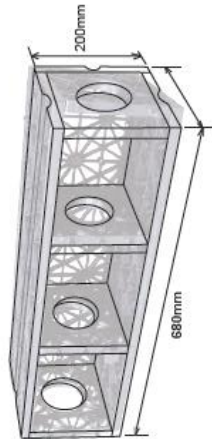
Shortening Gro-Wall® modules.

Gro-Wall® modules can be cut into smaller units for fitting into particular wall widths.

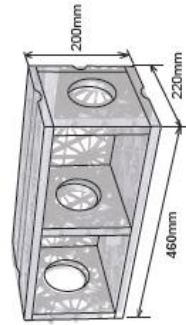


Cutting the module with a circular saw

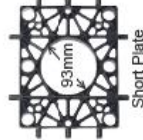
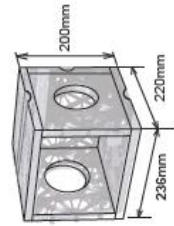
Single Module - 3 Plant Cells



Modified Module - 2 Plant Cells



Modified Module - 1 Plant Cell



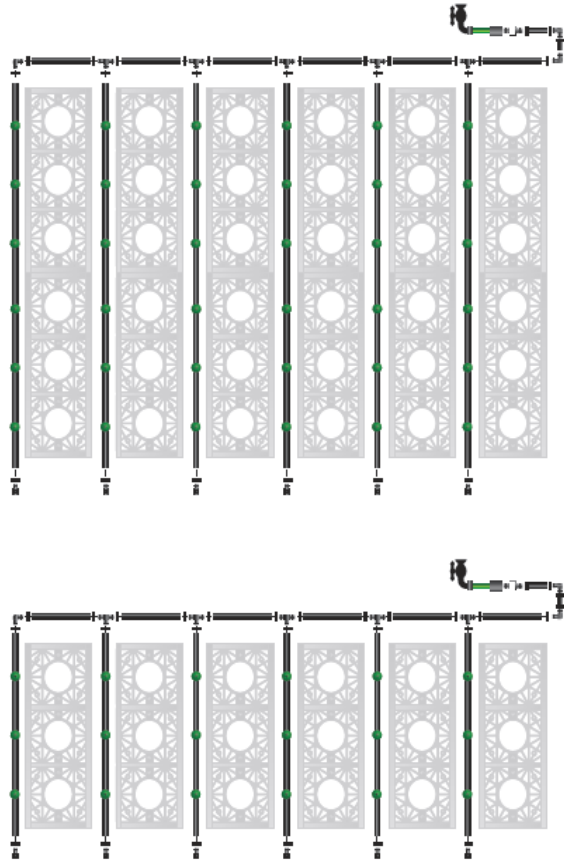
Short Plate



Irrigation System Overview

Gro-Wall® features I.P.I.™ Individual Plant Irrigation. This system enables the caretaker to tailor the watering requirements to suit various environmental conditions, seasonal changes and plant species.

Typical Irrigation Setup



1 Gro-Wall® kit irrigation requirements:

- 6m length of poly irrigation hose (13mm or 19mm)
- 18 x Online Drippers
- 6 x Poly end cap connectors
- 5 x Poly T (3 way) connectors
- 3 x Poly 90° angle connectors
- 1 x Poly water tap connector
- 26 x Hose Clamps (poly or stainless steel)

2 Gro-Wall® kit irrigation requirements:

- 12m length of poly irrigation hose (13mm or 19mm)
- 36 x Online Drippers
- 12 x Poly end cap connectors
- 10 x Poly T (3 way) connectors
- 3 x Poly 90° angle connectors
- 1 x Poly water tap connector
- 52 x Hose Clamps (poly or stainless steel)

Irrigation Installation



Insert the irrigation tube and cut to size at the ends



Puncture the tube from the top first



Punctured tube



Insert nozzle tightly



When all nozzles are connected



Insert the end plug of that row



..and turn 90° forwards



Insert the Tee-Connector at the other end



An end angle plug has to be inserted at the top module.



Connect all tee-connectors on the side with a piece of 13mm tube and clamp

Watering Setup

Watering Process within Gro-Wall®

During watering of the Gro-Wall® system each plant cell will absorb water via the online dripper, if the plant cell reaches saturation point the excess water will drain out the bottom of the plant cell. Any excess water drained from one plant cell will also irrigate the plant cell beneath. When the irrigation system is switched off the excess water will drain out of the system during the course of the day.

The moisture levels in the soil mix will change over time due to the following:

- Seasonal Changes
- Hot & Cold Weather
- Wind Conditions
- Water Consumption by Plant
- Air Humidity



Watering Procedure for Gro-Wall®

The setup of the irrigation cycle will vary for each installation. Factors that will affect the irrigation cycle and moisture retention within each plant cell are; Seasonal Changes, Hot or Cold Weather, Wind, Air Humidity and Water Consumption by Plants.

To Set Up Irrigation Cycle Timing

- Step 1** - Turn on the irrigation system.
- Step 3** - Monitor the moisture level within the system. (A moisture meter is recommended)
- Step 4** - When the moisture level within the plant cell reaches optimal moisture conditions switch the irrigation system off.
- Step 5** - Continue monitoring the moisture level in the soil mix during the course of the first day and every day afterwards until moisture levels are below optimal.
- Step 6** - When the moisture level drops below optimal growing conditions turn on the irrigation system.
- Step 7** - Set irrigation timing to this cycle.
- Step 8** - Check cycle period. To adjust cycle, repeat process.



Soil Mix

When designing a soil mix for the planter bags it is important to take into consideration the selected plant species and environmental conditions the Gro-Wall® will be installed into. Ideal soil mixes will ensure optimum growing conditions for selected plant species during seasonal changes. Other considerations include reducing weight for structural considerations, providing additional moisture retention, drainage and inorganic material for long term stability.

Typical Soil Mix's Configurations for Gro-Wall® (Ratio's between components are configured for the specific application)

- Small Domestic Applications - Premium Potting Mix, Washed Sand, Fertiliser
- Long Term Applications - Premium Organic Mix, Washed Sand, Lightweight Volcanic Rock, Fertiliser

Planting

Gro-Wall® kits contain square planter bags made from a thick grade high quality geotextile. The Gro-Wall® planter bags provide excellent drainage and moisture retention for optimal plant growth. Plants can be planted at various angles ranging from 45° to 90°. The planter bag design allows easy access, maintenance and permits watering directly into the soil mix.



1. Remove plant from pot and place it in the bag.



3. Fold the top of the bag.



2. Add additional soil and other components.



5. Open the flaps of the bag before inserting into module to allow irrigation to water into soil directly.

Using Gro-Wall® Plant Retainer Clips

A maximum of 4 Gro-Wall® Plant Retainer Clips are used to secure planter bags within the modules.



Click the Plant Retainers in place.



4 Plant Retainer clips can be used for each plant cell.

Additional Plant Securing for High Wind Areas (Option 1)

Use plastic coated galvanized wire 1mm or 2mm for high wind areas or installations over 3 metres.



Feed wire through the Gro-Wall® plate.



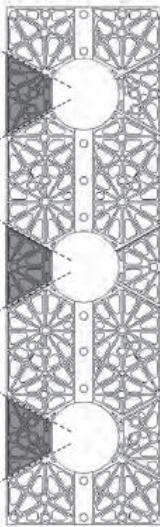
Create a loop around the center of the plant.



Twist and tension the wire.

Additional Plant Securing for High Wind Areas & Vandalism Prevention (Option 2)

Note: Additional Gro-Wall® Long Plates will be required. When used as an anti vandalism measure, cable ties (Zip Ties) or 1mm wire can be used to additionally secure the face plate to the Gro-Wall® module.



Cut along the double grooves as indicated in the illustration to convert a Long Plate into a Face Plate.



Cutting the opening.



Position the Face Plate under the plants.



Attach the Face Plate at the front of the module.



Use a rubber mallet to click Face Plate into place.



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