

**G O L S E E N**  
**GREEN WALL**



### **About us:**

Golseen group with 5 years' experience in manufacturing all sort of decorative plastic vases, is the sole producer of exclusive Green Wall trays in Iran. Furthermore, the company is a professional constructor of Green Wall, Roof Garden and Land Scape which employing elite Persian experts in this field.





## What is Green Wall?

Green Wall is a collection of variety of plants mounting vertically on top of each other. Green wall implementation is a complex task requiring specific trays and equipment besides assessing the location, light and atmosphere in order to selecting appropriate plants.

Green Wall is playing the role of a biological filter and boosting the air purification capacity. Greenery are originally air purifiers and cleansing motors which are capable of adjusting environmental temperature.



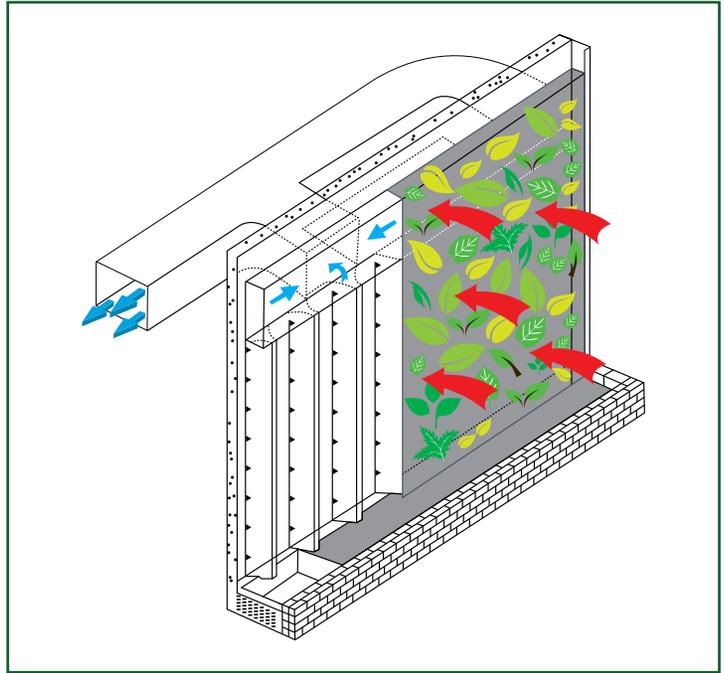
Green wall



### **Active Green Walls:**

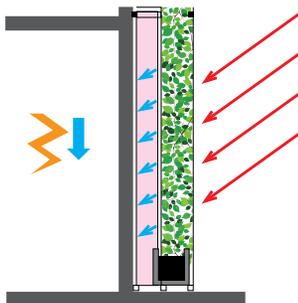
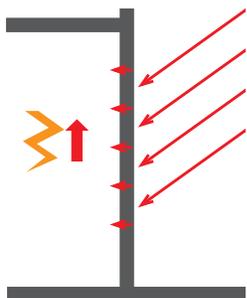
This type of the wall implementation is in a way that increasing the air purification capacity and by utilizing a kind of air ventilation system, through especial fans, the trapped air between the Green Wall and the associated wall, with the highest oxygen level, is being injected into the environment.

The figure below depicts the application of Active Green Wall.



## Active Green Walls





### Inactive Green Walls:

In this type, there is no mechanism for air circulation. Therefore, they are being kept in open areas in order to relatively improve the air circulation.





## Deactive Green Walls





Let's  
Save  
Nature



## Evaluation:

this is comprised of a technical evaluation for assessing the location and placement position of the Green Wall and its associated accessories. In addition, plants selection based on the effective factors is part of this evaluation. Below, some of the key factors are briefly being described.



## 1- Factors for plants selection

Such as, variety in terms of aesthetics, color variation, aroma richness, shape, deciduous level, purifying characteristics, sanitizing and healing features, oxygen production, carbon dioxide absorption, air toxic depletion, maintaining environmental moisture and temperature, etc.



## 2- Green Wall Plants position

The climatic and ecological characteristics of the place, such as, the level of light, temperature, moisture, irrigation water quality, wind intensity, location, altitude and kind of soil are effective in choice of the appropriate plants. In terms of choosing plants incompatible with the environment, preservation costs are rising dramatically due to reasons; including, water usage, pests, etc. Indigenous plants because of their resistance towards temperature fluctuations, soil conditions and other local issues are recommended comparing their equivalents.



# AS THE NATURE





Component



**1- Body**

A mixture of beauty and resistance which is equipped with 6 discrete hooks at the back enabling easy and safe installation. This is based on the state-of-the-art method for designing Green Wall trays and all the imperative criteria for installation, maintenance and irrigation of vertical plants have been taken into consideration.

## 2- Water filter

Optimally dividing the input water.



## 3- Base Plate

Draining water and exploiting residual water at the tray's bottom which is gradually being used by the plant.



## 4- Fixtures / Anti-lift arms

Being applied for mounting the tray over the panel. This leads to high safety at high altitude installations.

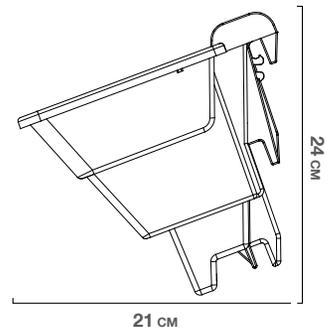
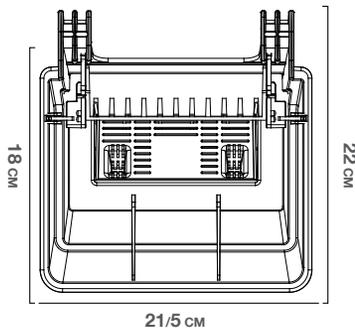


## 5- Drainage

Beneath each tray a pipe has been implemented to lead the excess water into the tray below which in turns minimizing the waste water. At the very end tray, waste water surplus is being drained through a piping system and again being used for irrigation.

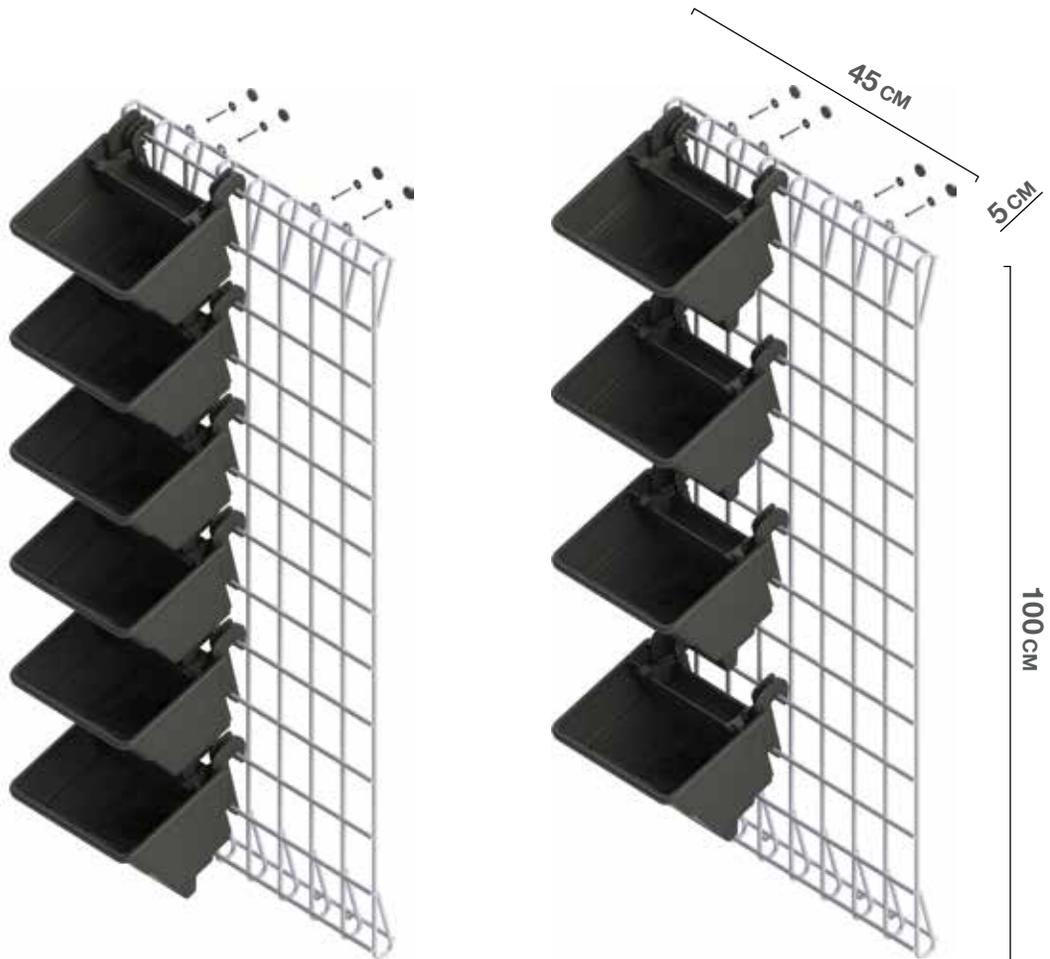


Panel dimension	50 Cm (W) * 100 Cm (H)
Tray weight (Net)	400 g
Approximate weight of the pot with plant and soil	2.5 Kg
0.5 m <sup>2</sup> Green Wall with plant weight (high density)	35 Kg
0.5 m <sup>2</sup> Green Wall with plant weight (medium density)	26 Kg
1.0 m <sup>2</sup> Green Wall with plant weight (high density)	70 Kg
1.0 m <sup>2</sup> Green Wall with plant weight (medium density)	52 Kg
Quantity of tray in 1.0 m <sup>2</sup> (high density)	24 pcs
Quantity of tray in 1.0 m <sup>2</sup> (medium density)	16 pcs
Material	PP+ UV stabilized
Volume	2.2 Liter
Tray dimension	Figure ...
Installed Tray dimension	Figure ...



## 1- Panel description

Generally the designed panels for Golseen Green Wall trays are made of welded mesh which are capable of installing trays in three modes of high, medium and low density. Mesh spacing is merely designed for proper installation of trays.



## 2- Installation methods and density level

### High density / Medium density

16 and 24 trays per m<sup>2</sup> could be mounted respectively in medium and high density modes. Obviously, higher planting density brings about more appealing façade and optimum utilization of the available area.

## 3- Irrigation system description

The best solution for Green wall irrigation is the automatic irrigating system. In this system a solenoid valve is responsible of timing and also controlling the amount of irrigating water. This provides a drip irrigation system in which plants are being irrigated automatically at the arranged times.

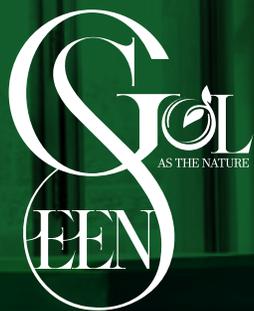
Vertical irrigation system:



Horizontal irrigation system:







Think  
Green,  
Live  
Green



### **Introducing some Green Wall plants:**

This is noteworthy that some plants possess health benefits that others are lacking of. As an instance, Anti-allergic, Refinement, Anti-nausea, lowering blood pressure, Soothing breathing problems properties could be enumerated. Below, a number of these plants with the aforementioned properties are briefly being introduced:

### **Introducing some green wall plants**

### 1- Golden Pothos (*Epipremnum aureum*):

Purifying and cleansing the atmosphere and getting rid of Benzene and formaldehyde molecules in the air.



### 2- Spider plant (*Chlorophytum comosum*):

Causing the elimination of Benzene and formaldehyde molecules in the air.



### 3- Ivy (*Hedera Helix*):

The best purifier which absorbs air pollutants and toxic gases. It also soothes breathing and allergic issues.



### 4- Desert privet (*Peperomia magnoliaefolia*):

Purifying the air and absorbing toxic gases.



### 5- Peace lily (*Spathiphyllum*):

A massive purifier which is filtering poisons, such as, Benzene, Trichloroethylene and harmful formaldehyde.



**6- Lavender (Lavandula):**

Relieving anger, anxiety, depression, insomnia and also reducing the blood pressure.



**7- Ferns (Nephrolepis sp):**

Absorbing extra moisture and cleansing the air from harmful toxics, such as, formaldehyde and xylan.



**8- Cape jasmine (Gardenia Jasminoides):**

Soothing, hypnotic and oxygenator.



**9- Syngonium (Syngonium vellozianum):**

Purifying and decreasing air pollutants; such as, formaldehydes, xylan, toluene and also moisture multiplier.



**10- Virginia spiderwort (Tradescantia virginiana):**

Oxygenator and environmental purifier.





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