



**ROOF GARDEN PANEL**

The Roof Garden Panel is light weight interlocking panel designed for the establishment of roof gardens.

Roof gardens have been proven to provide a range of benefits in assisting in the reduction of climate change impacts and provide a more general well-being to our cities environments.

Benefits include:

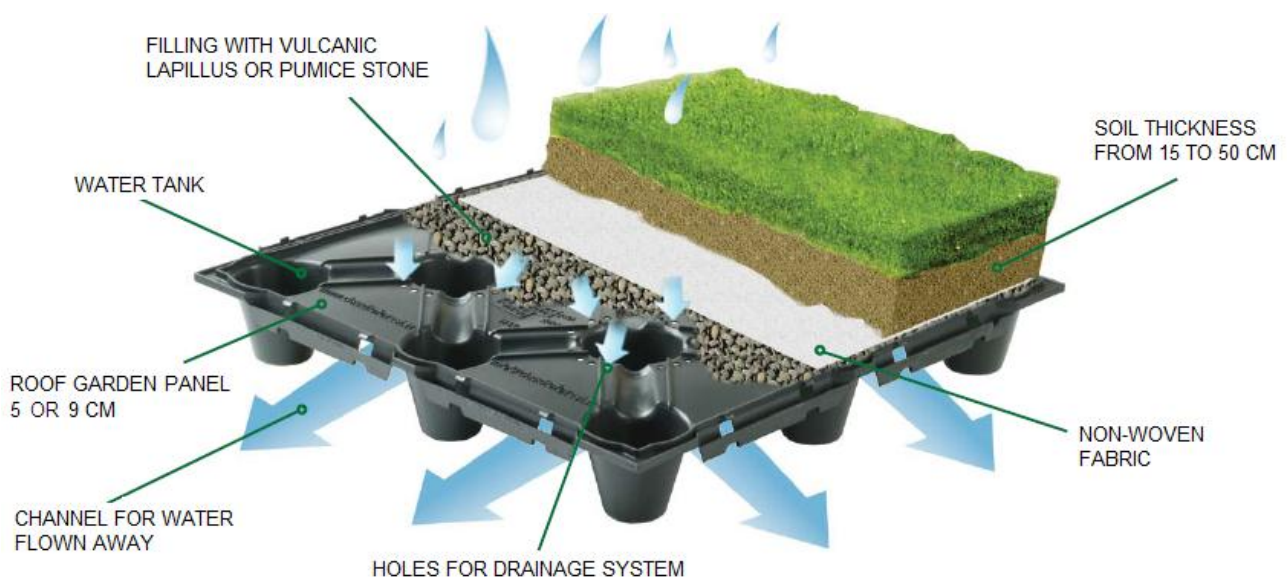
- Reduce the impacts of urban heat island effects;
- Regulate urban rainfall runoff, through accumulation and retention, and returning a small percentage of this water, to the environment;
- Reduces outside noise pollution;
- Improve visual amenities of the urban landscape.
- Reduces roof top maintenance costs, since the entire area is covered and protected from the sun's direct rays, inclement weather and seasonal temperature variations.

The Roof Garden Panel comes in either 5 or 9 cm high and are made from recycled and recyclable plastic. The panels are used not only to drain water but also provide for water storage for the plants reuse when developing roof top gardens. The system can provide a green roof solution for residential, industrial and commercial buildings.

The Roof Garden Panel is easy to lay and move. The empty space that is created between the waterproofing and the panel, allows the passage of pipes and cables required to install irrigation systems, lighting or any other requirements.

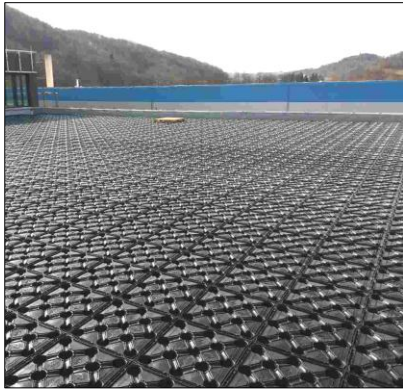
The staggered layout of the panel feet, which have large, circular, support surfaces, makes the Roof Garden Panel able to resist a compressive load of more than 10,000 kg/m<sup>2</sup>, allowing it, when dry, to stand up to heavy loads, such as small rubber-tyred loaders, mini-excavators. The panel feet distribute the load over the ground. The feet positioning, allows the panel to be cut to size using a disc grinder / cutter, in any direction and shape, without compromising its mechanical strength. The panel feet create a water reservoir allowing the water stored to be a supply of the root system, allowing it to grow without problems.

. The holes that exist in the upper part of the panel, which is in contact with the geotextile, provide a high drainage of excess water to prevent flooding. .They can also be used on a sloped roof up to an angle of a maximum of 35%.

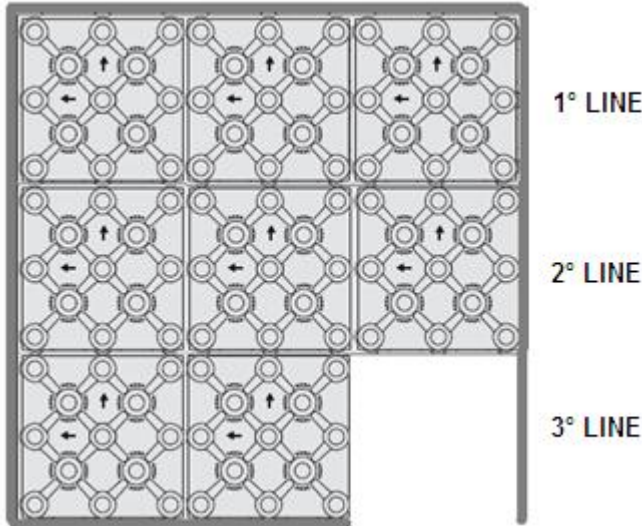


## INSTALLATION

- 1) Waterproof the floor and the perimeters of the structure.
- 2) Lay the pipes if there are water systems, lighting systems or other.
- 3) Lay the Roof Garden panels (see the assembly diagram below).
- 4) Fill the Roof Garden panels with suitable hygroscopic material (volcanic lapillus or pumice stone).
- 5) Lay the geotextile (non-woven fabric) on the whole surface, weighing not less than 200 gr / m<sup>2</sup>. Overlap the strips of geotextile of 10 cm and twist the same in the perimeters of the structure for a height equal to that of the finished package.
- 6) Lay the thickness soil according to the installation desired (intensive or extensive).



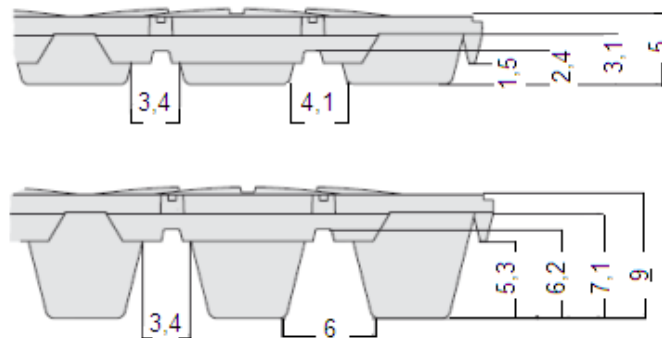
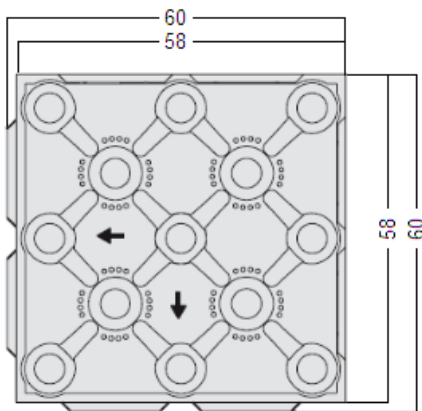
## ASSEMBLY DIAGRAM



## HOOKING SYSTEM



## TECHNICAL CHARACTERISTICS



		5 cm	9 cm
Pieces per m <sup>2</sup>	/	3	3
Dimension panel	cm	58 x 58 x 5	58 x 58 x 9
Weight of panel	kg/m <sup>2</sup>	3,10	3,40
Covered area for packaging	m <sup>2</sup>	320	330
Pieces for packaging	/	960	990
Dimension of packaging	P x L x H cm	120 x 120 x 260	
Total surface of feet	cm <sup>2</sup> /m <sup>2</sup>	1240	609
Resistance to compression	kg/m <sup>2</sup>	OLTRE 10.000	
Water reservoir (calculated in horizontal plane, for inclinations calculate maximum loss 10%)	lt/m <sup>2</sup>	14	18
Filling the panel with volcanic lapilli or pumice	lt/m <sup>2</sup>	14	18
	m <sup>3</sup> /m <sup>2</sup>	0,014	0,018
Drainage capacity (with fabric non fabric + 20 cm of soil)	lt/m <sup>2</sup> h	1.300	1.300

**Note** : the drainage capacity of system, with a Roof Garden panel 5 and 9 cm, has been calculated taking the drainage holes only into account. The Roof Garden panel conforms to the UNI 11235.