

green

Vertical gardens

Green from another dimension

Living walls. Gardens at places we thought to be unreachable. It is possible.

What are vertical gardens?

A wall covered with climbers? We take it a step further with our system. A vertical garden has to be taken in the literal sense: a garden projected against a wall. With numerous plants as the lines and content of a design on canvas. Plant roots grow no longer in earth, but in geotextile on a wall.

Each vertical garden is unique and custom made. To make sure plants do grow on a vertical surface there are certain requirements: a construction supporting everything combined with a good irrigation system, supplying water and nutrients. A straightforward concept put into an ingenious system.

External factors play a major role in the plant selection. Decisive is the orientation of the wall. A northly orientated surface requires different plants from a wall orientated to the south. Sun and shadow, rain and wind, inside or outside situated, these are some of the principal factors in the selection of plants for a vertical garden.

There are 2 types:

- the indoor vertical garden
- the outdoor vertical garden

The indoor vertical garden makes use of mainly tropical and subtropical plants. For outdoor vertical garden only plants surviving frost temperatures are used. In both cases the selection of plants is crucial for a beautiful effect throughout the seasons.

Why a vertical garden?

The most important aspect of a vertical garden? A list of ecological and economical advantages:

- natural surplus value
- temperature insulation
- sound insulation
- reduction of rainwater run-off
- improvement of water quality
- improvement of air quality
- upgrading the lifespan of walls
- upgrading the fire safety

Cities expand, nature gives way to new houses, industry, shopping centres, etc. Green is a scarce item.

Keeping natural biotopes is more important than ever. Where this is not possible, new ones should be created.

In plants we read the succession of the seasons. Colours come and go. Flowers attract with their nectar bees and butterflies. The (re)introduction of green structures provides new nesting places for birds, but is also a home to insects and small animals.

Where a bare wall provides the same sight all year round, it can be a source of pleasure and change when it is covered in



Other advantages are the calming effect and aesthetic value of vertical gardens. Providing peace and quiet, green also has a positive influence on the human soul.

Vertical gardens contribute to a pure environment by taking up CO₂, dust particles and airborne pollutants. With the evaporation of water, especially indoor vertical gardens have a cooling effect, particularly stabilising temperature fluctuations and humidity in a closed space.

So far only advantages, but what are the disadvantages?

The success of a vertical garden is related to a reliable strong structure and a good working irrigation system. Therefore we only use high-quality materials and systems.

Working with a custom made, highly technical product and only using quality materials, leads to a higher cost. Higher than for example letting a climber grow up the same wall.

Construction

Vertical gardens can almost everywhere be installed. A bare wall, or in case of a freestanding vertical garden, available space, is enough. Essential though is the presence of preferably a rainwater reservoir, or the possibility to connect to the mains. Water is together with the nutrients the key element to a good functioning vertical garden.

Several layers make the vertical garden:

1. the metal frame or supporting structure. A durable, non-rotting construction capable of supporting all the weight.
2. boards made of recycled materials form a water-repellent surface.
3. the irrigation system.
4. two layers of a geotextile are tightened on the surface. The textile is partially composed of recycled materials.
5. Plants are according to the design planted into the geotextile. The planting distances are respected, allowing them to grow to their full size.
6. With the construction of an indoor vertical garden, but also with certain outdoor vertical gardens, the installation of a small gutter is necessary. This gutter will take away excess water not absorbed by the plants.