

HYDROCULTURE – SYSTEM DESCRIPTION

Origin:

In the natural recolonisation of lava fields (terra nova), plants have proven since time immemorial that lush vegetation can exist without soil. A prerequisite for this is of course the availability of water and mineral nutrients.

Hydroculture follows this principle and, in what is known as expanded clay, provides a plant substrate that has characteristics very much like lava gravel. With its open-pored, light, long-lasting structure, hard-baked, granulated expanded clay also provides a good basis for root formation and the establishment and growth of plants.

Function:

Hydroculture plants are now grown in nurseries in standardised culture pots with expanded clay with fine to medium-sized grains. As a general rule, the basis for plant cultivation is usually seedlings and cuttings. Thanks to the natural ability of plants to form roots on their shoots, independent plants can be created from the branches of a "mother plant" that are up to two metres long. Special evergreen, subtropical plant species are used in interior landscaping.

Planted in closed pots filled with coarse expanded clay, they can be supplied with water that is monitored by a fixed water level indicator. Hydroculture therefore enables considerably simplified plant care and long watering intervals.

Specially developed hydroculture slow-release fertilisers based on ion exchange such as LEWATIT® HD 50 are added to the system and release fertiliser over a long period of time and in a plant-compatible concentration.

Because of the simplicity of the plant care, hydroculture has become widespread. Hydroculture plants can be cultivated in long-lasting expanded-clay substrate for years without needing to be repotted.

Requirements placed on hydroculture:

Improving the air quality in a room or its acoustics can also be among the aims of planned interior landscaping.

There are also "hit lists" and NASA studies specifically on the subject of the reduction of harmful substances in ambient air. In the context of planned interior landscaping, these should be applied in such a way that criteria like local temperatures, light and practical feasibility are also taken into account. The humidity of the air in a room can also be improved by plants, so it makes sense to use hydroculture here too.

In combination with stainless steel or ceramic pots, hydroculture including a plant substrate also fulfils the tightened European standard DIN EN-13501-1 fire classification A1 (non-combustible), which corresponds with the old DIN 4102 fire classification A (non-combustible).

As hydroculture plants grow in a long-lasting, neutral substrate and do not use nutrients from the decomposition of organic substances, they fulfil the requirements for the design of corridors and waiting rooms in clinics and other hygienically challenging areas.

Design:

Hydroculture has not limited itself to the development of components such as substrates, water level indicators, culture pots and fertilisers. The now well-developed system offers numerous planters in modern shapes and materials, which are used in the manufacture of vases, columns and plantable room dividers and are constantly being developed further. Thanks to flexible plant inserts, virtually any planter can be equipped for hydroculture use nowadays.

If you have any questions, please contact us at: www.hydro-klein@email.de