



Grotop Rose's high flexibility offers growers a simple means of increasing the water content to the required level when needed, for example in the spring and during sunny weather. Grotop Rose's capillarity ensures for an excellent distribution of the water throughout the depth of the slab. The slab's drainage properties ensure the optimum replacement of spent nutrient solution, in turn providing an efficient refreshment of the EC and excellent control of the pH. These properties enable growers to achieve the maximum from the crop throughout the entire cultivation period.

**Maximum yield and quality**

Growers who use Grotop Rose and are actively engaged in water management can achieve increased yields and quality improvements, as has been revealed by a number of field trials carried out with Grotop Rose during the past few years. These trials revealed that professional water management, carried out with assistance from the advanced WCM-continuous water-content meter, is essential to the achievement of the best results.

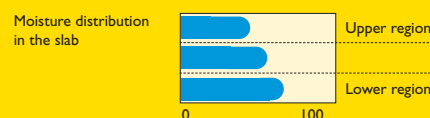
**Grotop Rose constitutes an ideal substrate for growers wishing for a rapid root growth and initiation of vegetative growth.**

**What Grodan can offer you**

- A clean and hygienic substrate that neither results in the emission of nutrients or other substances during cultivation, nor their retention in the slab subsequent to harvesting
- Responsible recycling of Grodan slabs, inclusive of blocks
- Substrate slab with Ecolabel
- Water-content meters – WCM-control and WCM-continuous – for the control of the water content, EC, and temperature of the slab

**Product specifications**

- Sturdy multi-season slab
- Available in a variety of lengths and breadths, on request
- Fibrous structure:
  - Horizontal
  - Hydrophilic; Grotop fibres readily attract water
- Large control range for the water content and the EC
- Extremely good distribution of water across the depth of the slab



**Grotop Rose and the WCM-continuous water content meter**

**An inseparable duo in the achievement of the best results**

Grotop Rose, in combination with the advanced WCM-continuous measurement system, constitutes a highly successful cultivation solution; a duo which ensures for the achievement of the best results.

**WCM-continuous: 24-hour-a-day monitoring and control**

Grodan's WCM-continuous water content meter provides you an insight into the slab's water content, nutrient solution and temperature – 24 hours a day. The system can be linked to most customary climate-control computers, thereby offering growers instant and continual displays of the data in graphs and providing them the insight required for an assessment as to whether an adjustment of the irrigation is required. The WCM-continuous constitutes an excellent instrument for the achievement of the best results from the control range offered by Grotop Rose.



**Grotop® Rose**

*Controllable, rapid rooting and extra vigour*

**More information**

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# Controllable, rapid rooting and extra vigour

Grodan supplies cultivation solutions that are comprised of a combination of a clean and controllable substrate, advice, and support. This approach enables us to offer the best basis for the cultivation of safe, healthy and high-quality vegetables and plants.

The Grotop Rose is a new substrate for rose growers who opt for a rapid rooting and initiation of vegetative growth, and who wish for more vigour during the entire cultivation period.



**Grotop is the name of Grodan's top range of substrates – a range which constitutes a revolution in the world of substrates. The unique fibre Grodan employs in this product range exhibits an improved water-absorbent capacity, whilst simultaneously retaining a porous rockwool substrate. The result is a substrate offering improved control of the water content and the nutrient solution (EC) – together with improved resaturation properties, and the provision of extra vigour to the plants.**

Grotop Rose has been developed especially for the cultivation of roses. Grotop Rose offers rose growers the same horizontal fibre structure employed in the well-known FL slab, in combination with the new fibre from the Grotop range. Striking benefits offered by the new slab are the rapid rooting and initiation of the vegetative growth of the crop, together with perfect rooting throughout the slab.

### Benefits for the grower

- Rapid rooting and sturdy root system throughout the entire slab
- Sturdy multi-season slab, with increased vigour
- Readily resaturated
- Optimum control range of the water content and EC
- Maximum yield and quality



### Rapid rooting and strong root system throughout the entire slab

The newly-developed fibre in the Grotop Rose is characterized by its increased ability to absorb water in combination with the retention of a sufficiently porous slab. These properties ensure a more homogenous distribution of the water content and the nutrient solution (EC) throughout the slab, in turn providing easier and more rapid growth of roots in the slab. Consequently the roots readily develop throughout the total depth and breadth of the slab, thereby making optimum use of the entire volume. The slab exhibits a clearly-visible increased volume of root growth. This perfect root system constitutes a guarantee for an improved quality, and a higher yield – and also ensures a stronger and vigorous plant with increased resistance to disease.

### Sturdy multi-season slab, increased vigour

By virtue of the excellent structure of the Grotop Rose, the slab is able to retain its sturdiness – and consequently its ideal properties – throughout a long five-year cultivation period. As a result, growers are able to achieve a continual effective air-water equilibrium throughout the entire cultivation period, thereby ensuring an optimum root environment. The rapid growth of the roots allows for the speedy initiation of vegetative growth at the beginning of the cultivation period. The growth of the roots throughout the entire slab also enables the plants to absorb water and nutrients more readily from the substrate. This imparts the plants with an additional vigour from the beginning to the end of the cultivation period – a vigour that is indispensable for a top performance.

### Readily resaturated

The new fibre employed in the Grotop Rose imparts the slab with a special property – the ready resaturation of the slab. Consequently, the risk that the upper regions of the slab become dry is very small. Moreover the slab



also exhibits an unprecedented speed and ease of resaturation subsequent to a fall in the water content. This offers growers additional security during the cultivation, for example in the event of a malfunction in the irrigation system – additional security that is not detrimental to the control of the water content.

### Optimum control range of WC + EC

Grotop Rose offers growers an optimum control range of the water content and the EC, which consequently can be brought rapidly to the required level. An ability to implement a rapid response to changes and make speedy adjustments to the water content is of great importance during periods of fluctuating weather conditions. The retention of the activity of the crop and the roots throughout the cultivation period is of great importance, in particular during periods in which there is little light and consequently little evaporation from the foliage. When Grotop Rose is used, this activity can readily be retained by ensuring a substantial decrease in the WC during the night. This approach, in particular during the winter, greatly reduces the risk of errors as compared to the supply of (excessive) water.