

HYDROPONICS

# Deep water cultivation



# State-of-the-art deep water cultivation



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VISCON HYDROPONICS

## About

The cultivation of leafy greens enables a radically different approach than most other vegetables. The short growth cycle of the crops, in combination with their light weight, is perfectly suited for deep water cultivation. Our state-of-the-art cultivation systems provide the best solutions for the safe production of fresh produce.

Viscon Hydroponics specializes in a fully automatic deep water culture system. The company expertise in young plant technology adds to the effectiveness and success of the hydroponic system.

### Turn-key

All the knowledge and equipment

Viscon offers solutions for all steps of leafy greens production. From seed to retail-ready packed product.



### Crop diversity

From babyleaf to whole head

Our hydroponics system is perfectly suitable for diverse types of short cycle crops, such as whole head lettuce, babyleaf, teenleaf and cut herbs.



### Future scalability

From small to large production

From entry-model to large scaled production, our system can easily be extended to meet your future demands.





# Turn-key solution

Viscon offers solutions for all steps of the production and cultivation process. From plant propagation to delivery of packaged products, including traceability in every step of the process. Our ongoing R&D and our consultancy services help you to achieve excellence.

Viscon Hydroponics enables you to leave the open field and produce in a safe and controlled environment. Growing in the greenhouse gives you advantages regarding food safety, considering no faeces can be dropped on the product. In the hydroponics system the use of pesticides can be limited, because the environment can be controlled much better. Different disease hazards can be excluded from the closed system, which helps you to bring back your use of chemicals.



Young plant production



Deep water cultivation



Post harvest & packing



Water quality control



Plant science & support



Traceability software

**VISCON**  
hydroponics

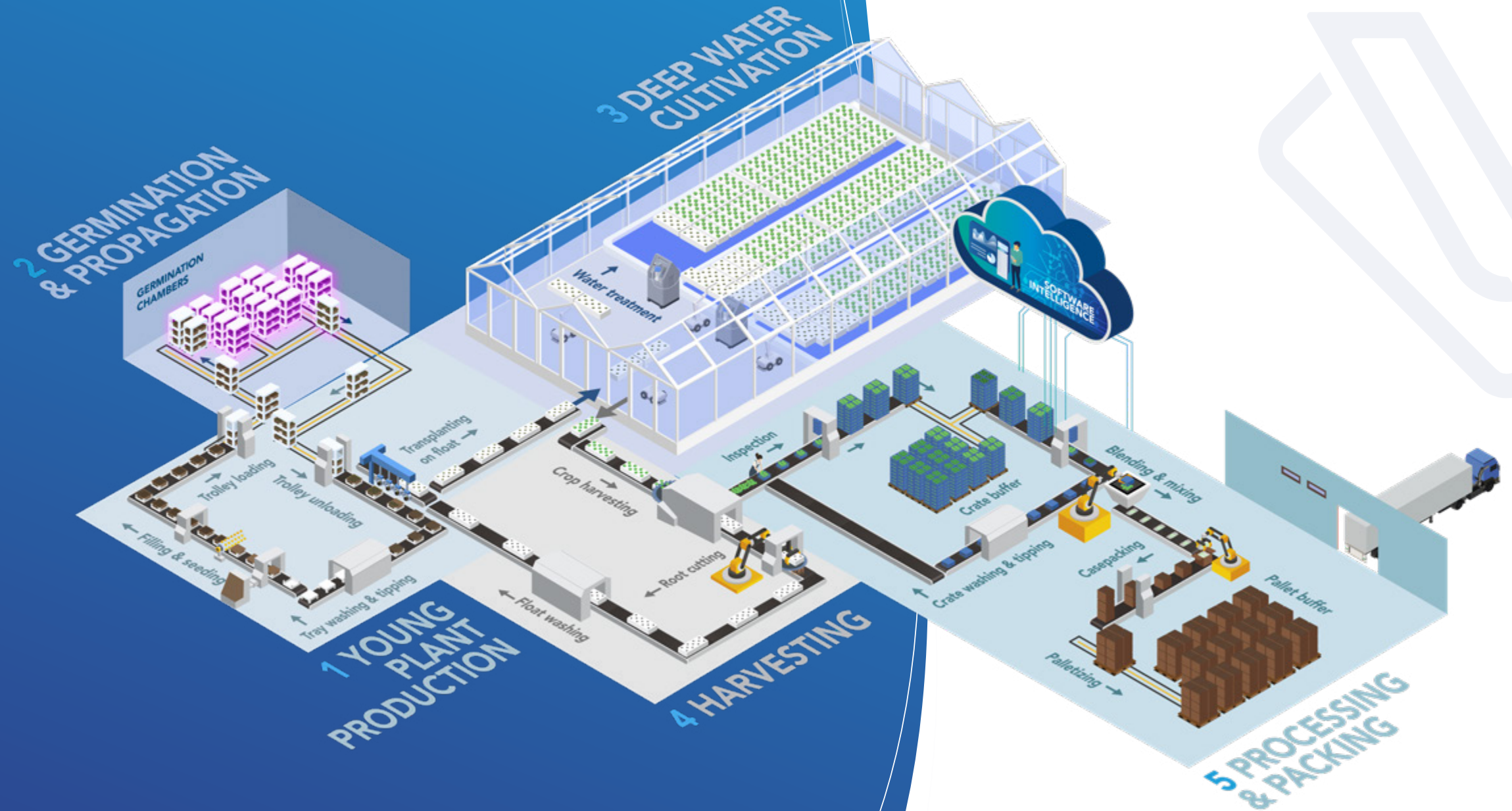


DEEP WATER CULTIVATION

# Hydroponics

Viscon Hydroponics specializes in turnkey deep water culture systems. The company's expertise in plant cultivation and automation technology adds to the effectiveness and success of the hydroponic system.

The Viscon Hydroponics system is a closed deep water culture growing system for the clean production of fresh produce. Viscon Hydroponics achieves high yields for short-cycle crops, like whole head, baby leaf, cut lettuce, and herbs.





DEEP WATER CULTIVATION

# Young plant production

Young plant production is one of the most vital parts of a solid hydroponic system. Visser Horti Systems, part of the Viscon Group, has been specializing in the automation of young plant production since 1967. Therefore this expertise is available to Viscon Hydroponics. Due to the lengthy experience in young plant production, a unique system has been designed to grow the ideal young plant, that can be finished in the production area.

Several growing aspects have been factored in, like optimal soil content and optimal root growth stimulation. Another important factor is the fact that the young plants can be handled by all Viscon & Visser automation. This creates substantial cost savings in larger operations or labour scarcity situations.

Our multi-layer solutions and Ebb&Flow tables provides you with options for germination and propagation of the young plants. The young plants can be transplanted from tray to the floats directly by our automatic transplanting systems. Ready for the next growing phase: deep water cultivation.



Fully automated seeding



Multi-layer propagation



Designed to grow  
the **ideal young plant**



# Next generation **hydroponics floats**

**Flexible**  
with many  
substrate  
options

The next  
big step in  
**sustainable  
growing!**

Designed for  
**optimal  
root growth**

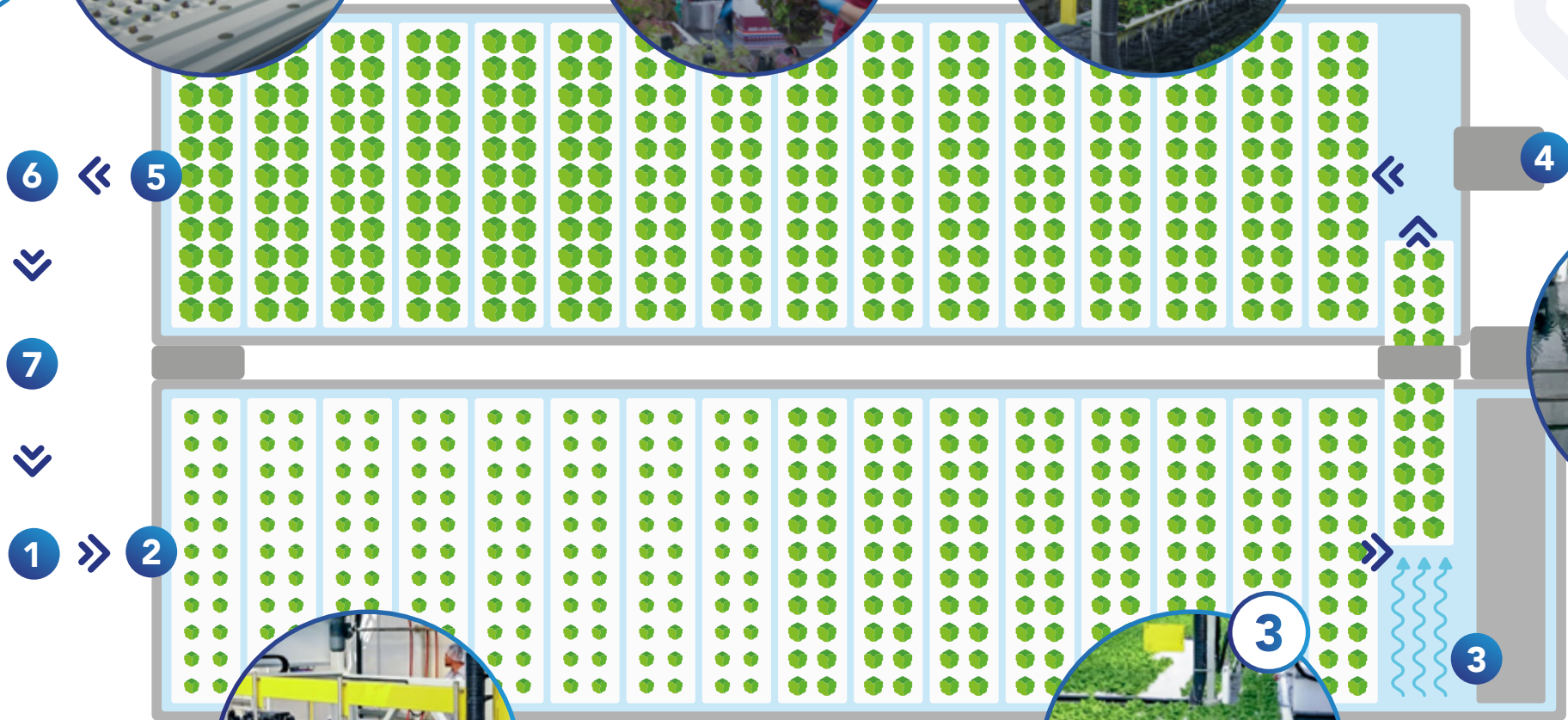
Perfectly  
suitable for  
**automation**

**Plant plug  
perfection**



# Production Phase

Young plants are automatically transplanted onto floats, which are then placed in the basin using an automatic crane. The tall float design minimizes handling and movement. The floats effortlessly float on the water, facilitating easy transportation. New product is consistently placed in the ponds after each harvest, as the ponds are constantly covered with floats to prevent algae growth. When the product is ready for harvesting, it is automatically transported to the central packing line.





DEEP WATER CULTIVATION

# Harvesting & Packing

Viscon specializes in offering logistic solutions for post-harvest & packing of leafy greens. Viscon can process leafy greens carefully and with optimal precision. Viscon can provide automated packing lines for whole head lettuce, as well as packing lines for babyleaf & cut herbs. Every time product is harvested, the floats will be cleaned automatically and new product will be placed in the ponds.

Packing whole head lettuce



Packing babyleaf & cut herbs



Retail-ready product



**Faster growth  
& higher yields**



# The advantages

## Why growing hydroponically?

### Controlled Environment

Viscon Hydroponics offers safer controlled growing, leaving the open field. Greenhouse advantages include improved food safety without feces contamination.

### Food Safety

In the hydroponics system the use of pesticides can be limited, because the environment can be controlled much better. Different disease hazards can be excluded from the closed system, which helps you to bring back your use of chemicals.



## Advantages regarding sustainability

### Savings in fertilizer

Fertilizer stays in the system and isn't being drained out in the field as occurs with the traditional growing method.

### Water efficiency

The system is very water efficient. The water doesn't flush out. The water will be consumed by the crop and needs to be added daily.

### Uniformity

Each product has the same water intake, which creates uniform result.

### Sustainable

The soil doesn't need to be processed after every cycle.

### Efficiency

During winter you can still grow product because the water can be heated and artificial lighting can be added. The floats have an isolating effect on the water, which enables you to grow in cold periods as well.

### Automation

This system is a transportation system in itself, because the product is floating: the product can be transported automatically.



## Why choose Viscon Hydroponics?

- ✓ Viscon fully organises & automates the growing of the young plants.
- ✓ Viscon supplies a vital young plant, which will give good results through the entire process.
- ✓ Viscon has designed the system with as little parts as possible, so cleaning will be an efficient operation.
- ✓ Viscon uses plastic floats, which can be cleaned easily.
- ✓ Viscon designed floats which keeps the product in the correct staggered pattern, no matter how you place the floats in your basin. This gives you a better use of your available surface.
- ✓ Viscon moves away from the traditional soil blocks.
- ✓ The soil block was once intended for planting in the field.
- ✓ New production methods require matching, well thought out and cleaner growing methods.





# Project approach

After awarding the customer order, both parties establish an extended customer contact through a project team. Viscon Logistics emphasizes clear communication and detailed functional specifications to ensure that both parties meet their expectations and measure project progress.

The sales engineer initially contacts the client and remains the point of contact throughout the project. An experienced project manager joins the team to ensure timely and high-quality engineering of all processes. Viscon Logistics offers references and arranges appointments upon request.”



# Service

With our worldwide network of Viscon offices and distributors, we provide a fully comprehensive service in almost any country in the world, enabling us to respond quickly and efficiently where necessary. In many markets, sales and services are available through the local Viscon distributor for on-site maintenance and spare parts. A remote, online connection between the Viscon service department and your machine creates a highly efficient service. This provides peace of mind: our technician is always at your disposal.



SUPPORT & MAINTANANCE



SPARE PARTS



LOCAL PRESENCE

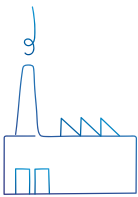


# Viscon Group

We are passionate about Agro and Food processes and the limitless possibilities technology has to offer. Our software, machinery, and solutions enable the world to produce, distribute and enjoy healthy fresh food, flowers and plants. Since its establishment in 1927, the family-owned company has grown into an international organization, active in various Agro & Food sectors.

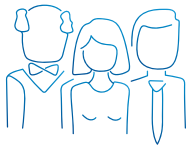
Our extensive experience in each market we operate in enables us to understand the operations, opportunities and challenges of our customers. This enables us to make the best production layouts for your company.

We design and build the entire process, combining Viscon automation with specific equipment sourced from carefully selected partners. This means you will always find the best solution. With Viscon you have access to a one-stop-shop. We design, we build and we fully integrate. We even add intelligent software to give you optimal control and management of your business.



2

Factories



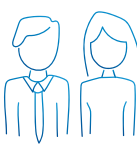
3

Generations of experience



77+

Countries with Viscon equipment



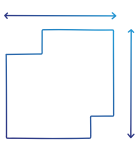
300

Colleagues



6,000

Cups of coffee a week



23,000

Square meters manufacturing facility



# Fully designing your process in deep water culture



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