

GENERAL BROCHURE

# Plant technology automation

Viscon is leading force in  
**the horticultural sector**



VISCON PLANT TECHNOLOGY

## About

Since 1967, Viscon Plant Technology B.V. has designed and manufactured machines and complete production lines for both large and small horticultural nurseries. By maintaining a continuous dialogue with growers, Viscon is able to supply a range of products that is perfectly geared to the needs of the market and effectively meet the most stringent customer requirements. Consequently, as an innovative organization with global operations, Viscon is a leading force in the horticultural sector.

Viscon Plant Technology is part of the Viscon Group. The Viscon organisation consists of a number of companies that has successfully completed automation projects worldwide. The basis for its success is an organisation build up of different divisions, each with its own specialist knowledge.

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## PLANT TECHNOLOGY

# Filling

Prior to all cultivation, pots, trays and other sorts of carriers are filled with a substrate. To achieve a successful growth of the root system of the plant, a tray must be filled with the correct density level. A dibbled tray ensures perfect positioning of the seed. In designing our machines, we have taken these aspects into careful consideration to ensure optimal growth for your plants.

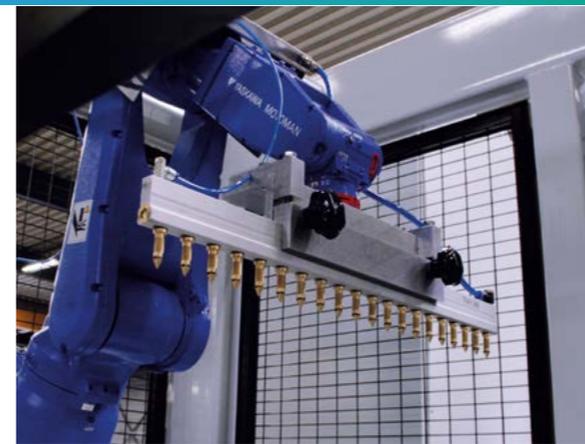
The composition of the substrate can either be composed out of several components or one single component, for instance peat. The process starts with delivery in bulk, large bags, small bags etc. Viscon has developed a range of modular filling units. These machines are available as stand/alone units as well as units to be installed in a complete production line. In the latter, the machine is part of a seeding and or cutting planting line.



Ensure optimal growth  
for your plants



Seeders for every  
**type of seed**



PLANT TECHNOLOGY  
**Seeding**

Seed is valuable and accurate seeding is a substantial saving for every grower. Viscon designed seeders for every type of seed. In the design we have focused on accuracy, continuity and uniformity. No double seeds, no empty cells and a precise sowing result. Due to the diversity of small and large nursery operations, there are many different seeders available. Both the great variety of plants and the wide variety of carriers, require different seeders.

Over the past 40 years, Viscon has developed a seeding range that is suitable for all capacity needs and types of seeds. This has resulted in a wide range of models, such as nozzle seeders, drum seeders, volume adjustable seeders and overhead seeders. These systems have been designed for modular construction. A complete production line can be realized, in which all operations related to the seeding process are automated, i.e.: destacking, filling, dibbling/drilling, seeding, watering, covering and stacking.



PLANT TECHNOLOGY

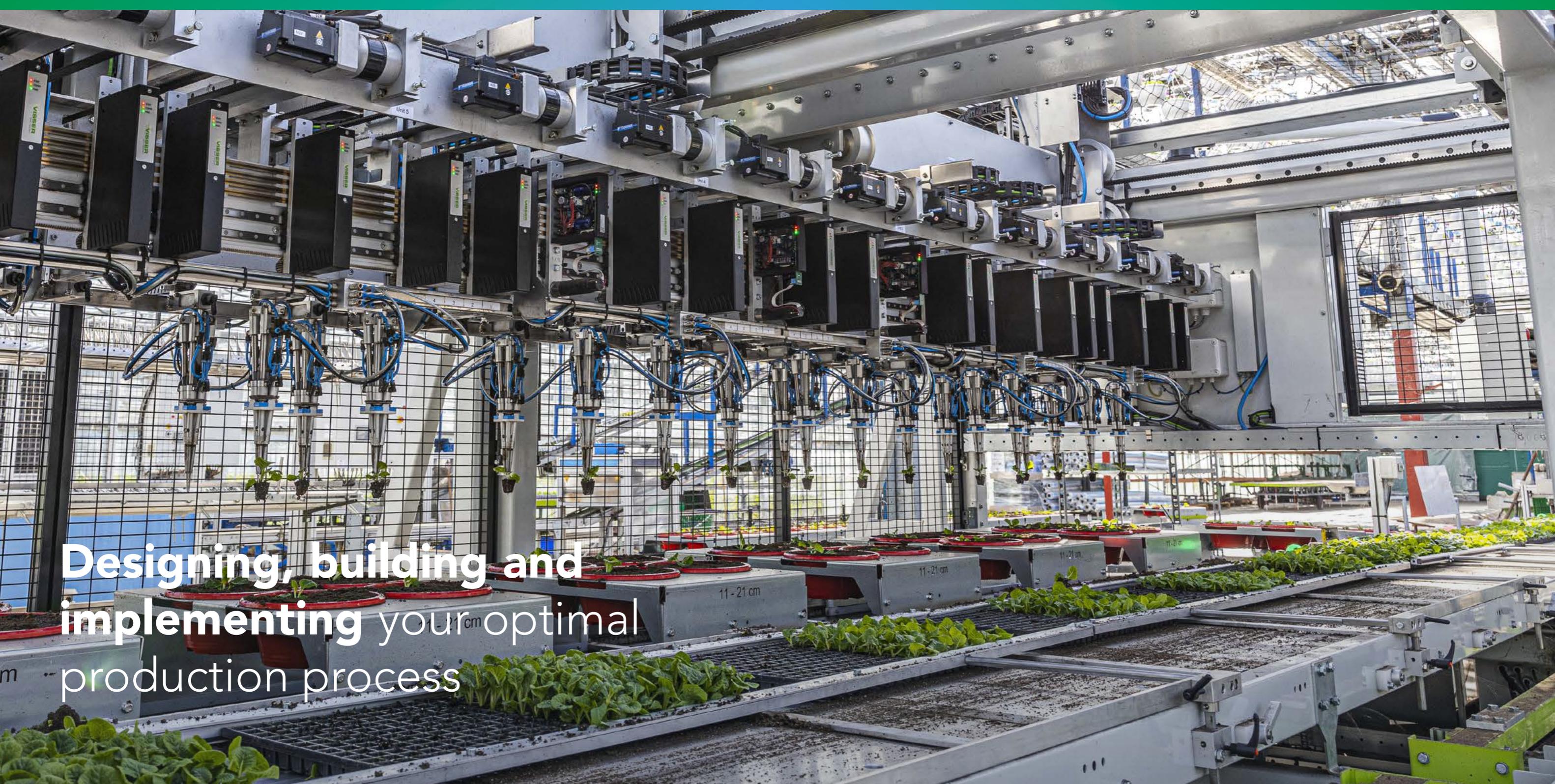
# Transplanting

Great flexibility, sufficient capacity, ease of operation and a perfect planting result are probably the most important characteristics an automatic planting machine should have. Viscon has more than 25 years of expertise in automatic planting operations and has developed a very wide range of models for both small and large nurseries, for planting into both trays and pots. Low change-over times, visual control and programming, a high degree of reliability, excellent planting results and capacities up to as high as 45,000 plants an hour characterize the high quality of our planting machines.

Due to the advanced operation of our patented plant grippers, damage, even to vulnerable plants such as Begonia and St. Paulia, is reduced to a minimum, while obviating the need of expensive plant-lifting mechanisms for the trays. Programming a completely new source and/or destination tray or pot has been smartly simplified to the highest degree imaginable, making it possible for several models to create any conceivable plant combination.



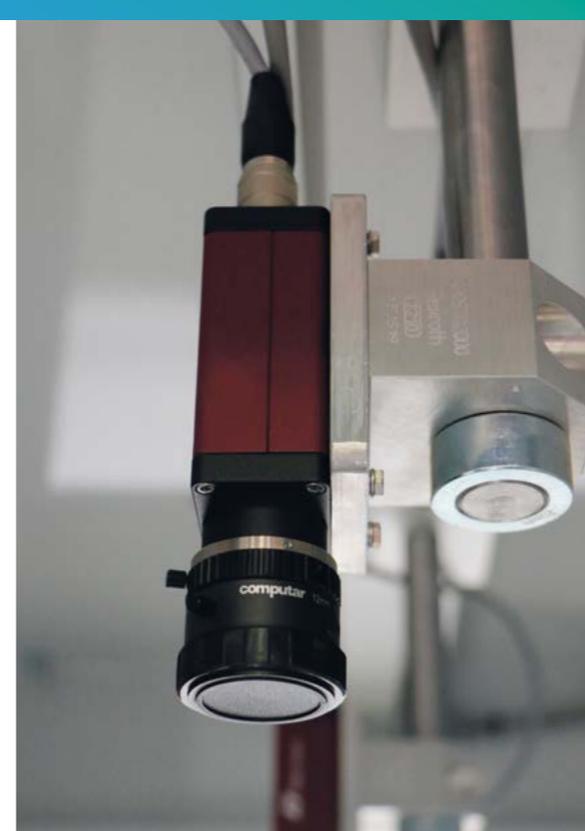
25 years of experience  
in transplanting



**Designing, building and implementing** your optimal production process



**The most versatile line** of image recognition systems



VISCON PLANT TECHNOLOGY

## Vision grading

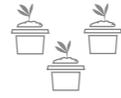
Over the last decade, the use of image recognition techniques has also found its way to the greenhouse industry. Viscon's many years of experience in terms of image recognition systems in greenhouse horticulture in virtually all cultivations has resulted in the most versatile line of image recognition systems for the greenhouse industry.

From inspecting trays and making them uniform, grading young plants in trays to grading pot plants. Image recognition systems are equipped with digital video cameras. Grading can be based on many criteria such as volume, height, colour, number of flowers etc., while ensuring that the capacity matches your needs.



## PLANT TECHNOLOGY

# Pot handling



Logistics carried out as efficiently as possible and optimum utilization of space available in your nursery are of paramount importance in pot handling operations. At Viscon, thinking in these terms has become a second nature, always applied to the situation of your specific operations. For some 20 years now, the continuously innovating Space-O-Mat system has become a common concept in potplant nurseries but also increasingly in tree nurseries with container cultivation ranging from small to large scale.

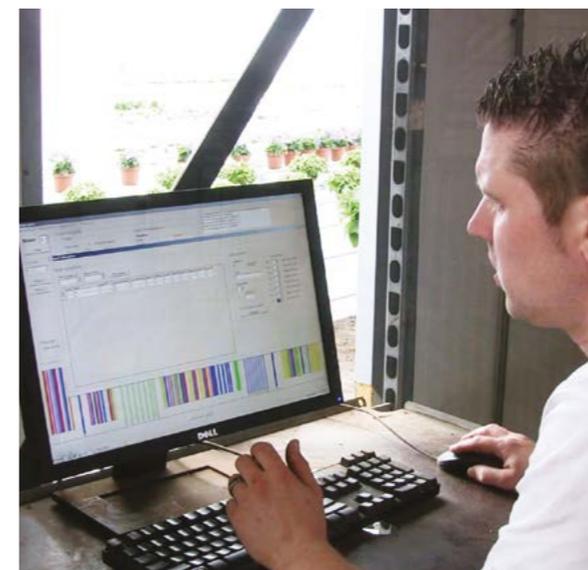
The system is suitable for both concrete and container floors (root barrier and gravel), both indoors and outdoors, and can be extended to any capacity due to its modular set-up. The patented pot-spacing system is flexible and designed for all pot sizes. The comprehensive product line for pot and container handling includes: pot transport forks and spacing legs, electric and diesel fork-lift trucks, set-down and transfer robots, collecting stations, grading and buffer systems, trailer and table loading systems, conveyor belts, trailers and aluminum cultivation table systems.



Logistics carried out as  
**efficiently as possible**



**Fast & accurate** deliveries



PLANT TECHNOLOGY



## Buffering & shipping

### Tray delivery system

Shipping your product is the final step before it reaches the customer. Inaccuracies with order picking, labor costs, and getting orders out the door on time are only a few challenges growers face daily. We have the experience and know-how to design a shipping system catered to each grower's needs.

The Tray Delivery System is a complete solution that can be adjusted to your needs with automatic loading, unloading, watering, scanning, labeling, sorting, palletizing, and rack loading. Complex shipping situations are made simple with our high-speed and space-saving shipping lines. Our in-house programming allows for customized software for each system depending on sorting by variety, color, height, etc. Each shipping system can be designed to be modular for future expansion. This buffering and shipping system comes with many benefits.

PLANT TECHNOLOGY

# Packing

A neatly efficiently packed plant requires a well designed automated process. Viscon provides options for labeling, sleeving and automatic loading.



Labeling, sleeving  
& **automatic** loading



Find out the  
**definition of clean**



PLANT TECHNOLOGY

## Washing

The industrial washing machines supplied by Viscon are suitable for cleaning trays, buckets, pallets, etc. They are available in a variety of models that can, if required, be integrated with blow off and drying units and automated loading and unloading systems.

Because of the modular cleaning sections, the use of chemicals or high temperatures, solutions for any cleaning problem can be found. The filtration systems increase the life of the tank water contents and ensure a cost-effective and reduction in use of energy.



PLANT TECHNOLOGY

# Internal transport



Every product has to be brought into and out of the greenhouse one or several times a year. Many types of transport systems have already been developed for your products, which means that there is a fitting solution for any greenhouse-and product combination.

Viscon can supply any type of internal transport system, from semi automatic such as transport by forklift truck or overhead cranes to fully automatic such as X-Y internal transport or mobile bench systems.



**A fitting solution  
for any greenhouse**



## Soil handling

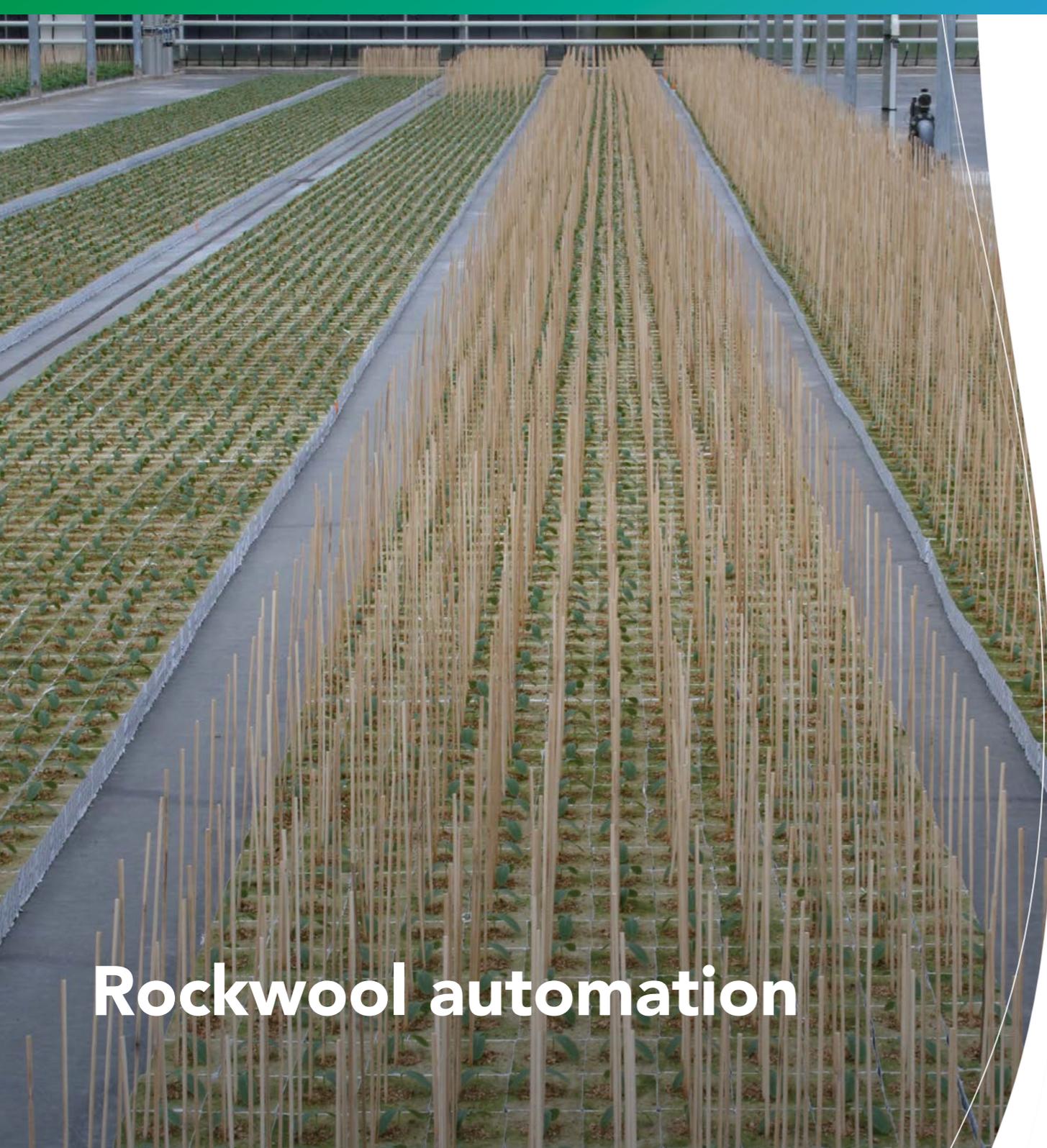
The storage and preparation of soil substrates form the basis of the cultivation of plants. The most suitable system can be chosen according to volume, the number of different substrates and the application required.

For substrate storage, there are digging systems, conveyor equipped bunkers and big bale breakers. For substrate preparation, there are soil mixing, watering and glue systems that have already proved themselves in practice for many years.



**Storage and preparation  
of soil substrate**





# Rockwool automation



PLANT TECHNOLOGY

# Rockwool

Rockwool blocks are used for the cultivation of various vegetable plants. Placing the blocks on the planting line, watering, seeding, planting, covering, and transport are operations that can all be carried out automatically using the universal planting line.

To deliver the plants, a system has been developed in which in combination with a pick up trolley the plants are picked up and placed into the boxes at the working height in a central place, which results in a restful atmosphere in the company.

PLANT TECHNOLOGY

# Irrigation

Irrigation and crop care are the basic needs of all plants. Through the years, Viscon has accumulated a lot of expertise in this area and has developed a wide range of spraying and watering booms. For every kind of crop, a spraying or watering boom has been designed for the specific application. Solutions include: a fixed boom for each bay for maximum capacity, mobile systems for efficient use and a fully-automatically operating system that moves the spraying or watering boom from bay to bay according to a preprogrammed schedule.

Each system is individually assembled to accommodate your wishes and adjusted to specifications such as greenhouse layout, type of crop and operating requirements. All this results in a spraying or watering boom system that will operate to your full satisfaction.



Fixed to mobile manual,  
to **fully automatic**

# Project approach

Directly after the order award the existing customer contact is being extended with a project team on both sides. To ensure both parties, that each party lives up to the expectations, Viscon insists on a clear, agreed upon communication structure and clear recorded requirements in the form of a detailed functional specification. This creates the opportunity to measure the progress in the project as well.

The initial contact with a client will take place with a sales engineer. This person will remain responsible for the project throughout the entire process and will be the point of contact for the client. This will ensure made agreements will remain clear. On a more detailed level, an experienced project manager will join the team. This project manager will take care of the timely engineering of all (parts of) processes and guard the vast high quality which is the standard at Viscon. We can provide you with many references where our reliable solutions are operating. Our sales engineers can arrange an appointment at your request.

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

# 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.

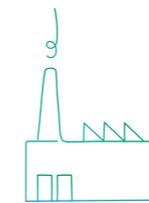


# Viscon Group

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



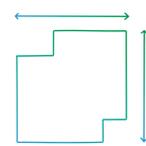
300

Colleagues



6,000

Cups of coffee a week



23,000

Square meters manufacturing facility

# Excellence in sustainable plant production



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