

The logo for ETTA, featuring the letters 'ETTA' in a bold, white, sans-serif font. The letters are flanked by stylized horizontal lines that suggest motion or speed. The logo is set against a green background that is part of a larger graphic element in the top left corner of the image.

ETTA

A photograph showing a row of young plants in brown peat pots. The plants are being held by a mechanical device with blue and silver components. The device appears to be part of a conveyor system for handling and selecting plants. The background is a blurred industrial setting with blue lighting.

**Equipment for handling
& selecting plants**

“
We are ready to
serve you

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About TTA

TTA is a Dutch enterprise, founded in 1996. Since the start of the company, TTA has been focusing on the production of equipment for handling and selecting young living plants. TTA developed and expanded merely thanks to client requests for more or new machinery. TTA offers its clients a wide range of equipment, suiting the needs of professional growers.

TTA strongly believes that quality and control are of the utmost importance. Therefore, the entire development, software, production, installation, sales and service are available in-house. Our experienced sales team is dedicated to fulfilling our clients' wishes. The main goal of this partnership is to find the most suitable equipment. Reducing production costs and increasing efficiency are key.

'Handle with care' is TTA's slogan when it comes down to young plants. We are proud to say that the majority of globally produced plants is handled by TTA equipment.

The TTA team is ready to serve you!

Simon den Hartigh
Owner

Anne den Hartigh
Founder



Family-owned business

TTA is founded by Anne den Hartigh with the goal to deliver the fastest transplanter in the world. Thanks to his knowledge and vision, he succeeded by introducing the Revolva. From the beginning, his oldest son, Simon den Hartigh joined the company at the milling department. Ten years later, in 2007, Simon took over TTA when Anne retired.

As a family-owned business, TTA values a personal and long-term relationship with clients and employees greatly. To make a difference for our clients, we continuously develop new ideas, apply innovative techniques and products and organize processes more efficiently. We constantly strive to keep ourselves updated and inspired, improve the quality of our products and services and / or reduce costs for the client so that we continue to serve them optimally.



Active in 30 countries over 6 continents

Member of Eurogroep

Eurogroep is an international industrial corporation devoted to the development, production and sales of high-tech industrial equipment for companies that are active in logistics, solar and horticulture.

As Eurogroep, we would like to contribute to a better environment. That is why we continuously invest in R&D and forge ahead to develop innovative equipment that fulfills a vital role in a sustainable world. With our solar equipment, our clients produce 3GWp per year which is the equivalent of 9 million back-contact PV modules. TTA equipment is worldwide widely used for various reforestation projects. By implementing the Lowpad, our clients can automate their logistics and distribution processes and avoid using polluting vehicles within their warehouses.

More info: eurogroep.com

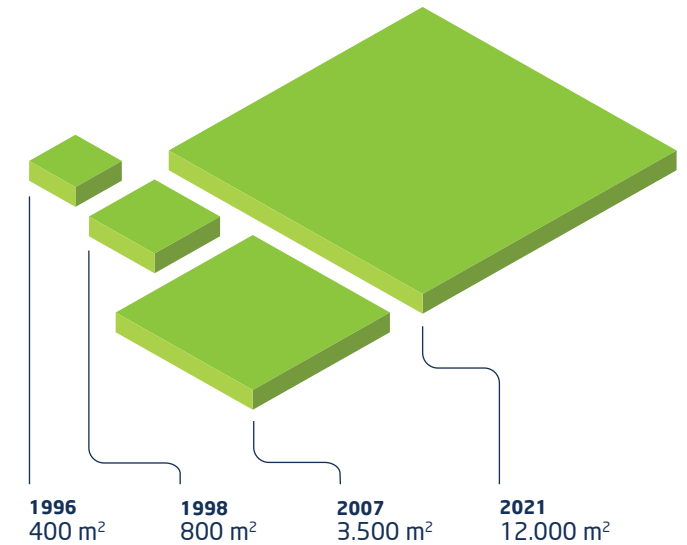
 Member of **Eurogroep**



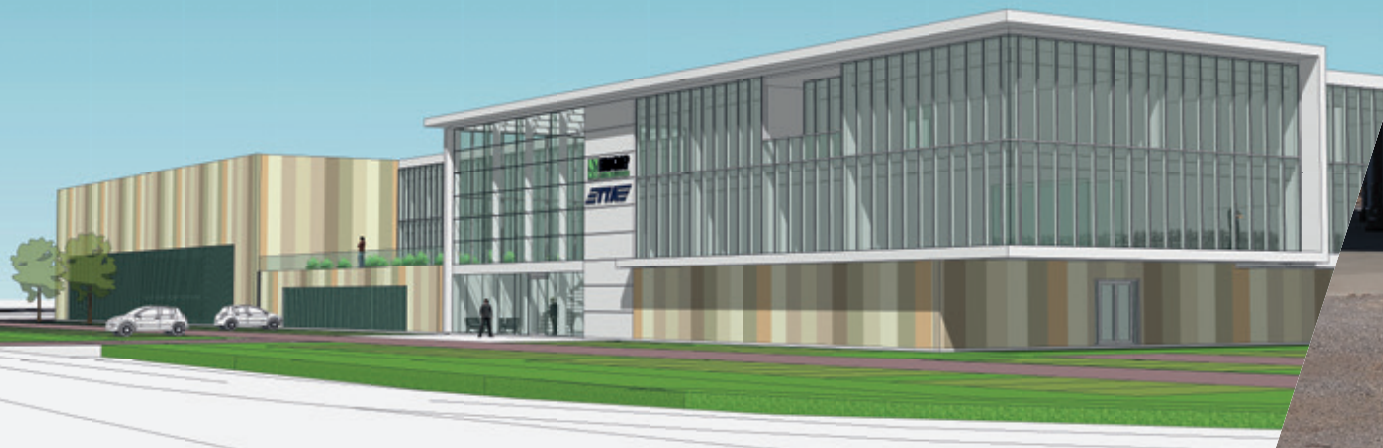
Jan Bakker, CEO

Jan started his career at TTA as a part-time employee during his study in mechanical engineering. He fulfilled his internship at TTA USA, where he installed machinery. After completing his study, he joined TTA in 2000. Jan is a great example of the growth opportunities that exist in our family-owned business. After various positions, he became CEO in 2018. Thanks to his technical knowledge, wide experience in the sector and vision, Jan is ideally qualified to lead TTA. He is proud that, after all these years, innovation still plays a central role within the organization and that our complete team contributes to this. In particular, Jan is looking forward to increasing more synergy between the companies' participation of Eurogroep by moving into our new headquarters in 2021.

Transformation of our headquarters in m²



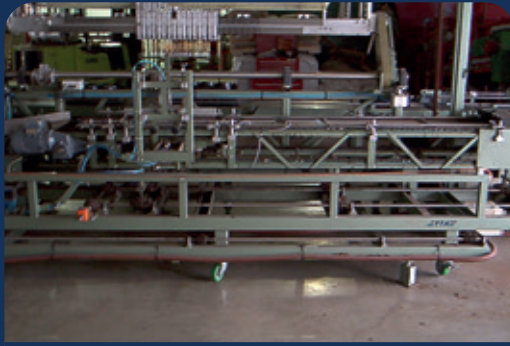
2021 - New headquarter The Netherlands



TTA USA LLC



Transplanter evolution



Revolta
1996



RPE
1999



PackPlanter
2003



PackPlanter wireless
2010

Gapping 100% evolution



Blow-out and fixer
1999



CombiFix I
2006



CombiFix II
2015

Clients

TTA strongly dedicates to equipment innovation, flexibility and commitment to service. Because of this, TTA has built a solid reputation among our clients worldwide.

By understanding our clients and their needs, we can design and produce equipment for handling and selecting young plants that meet our clients' wishes and exceed their demands.

Our commitment to our clients never changes; they are the driving force behind our equipment design, improvements and our ever-increasing product portfolio.



Gijsbert de Graaff
Manager Engineering

Innovation

At TTA, we understand that when our clients are faced with a heavy workload, having the best equipment is vital. Since the start of TTA, our equipment has been at the forefront of the market and we are known for our game-changing innovations.

Nonetheless, we do not take anything for granted. We continuously invest in R&D and innovation, and forge ahead to deliver the smartest equipment and services for the horticulture industry.

Our drive is to improve our equipment constantly, look for better solutions and customize where needed to ensure we deliver the best option for any project.

Employees

TTA operates with a team of motivated and enthusiastic employees who do not accept anything less than perfection.

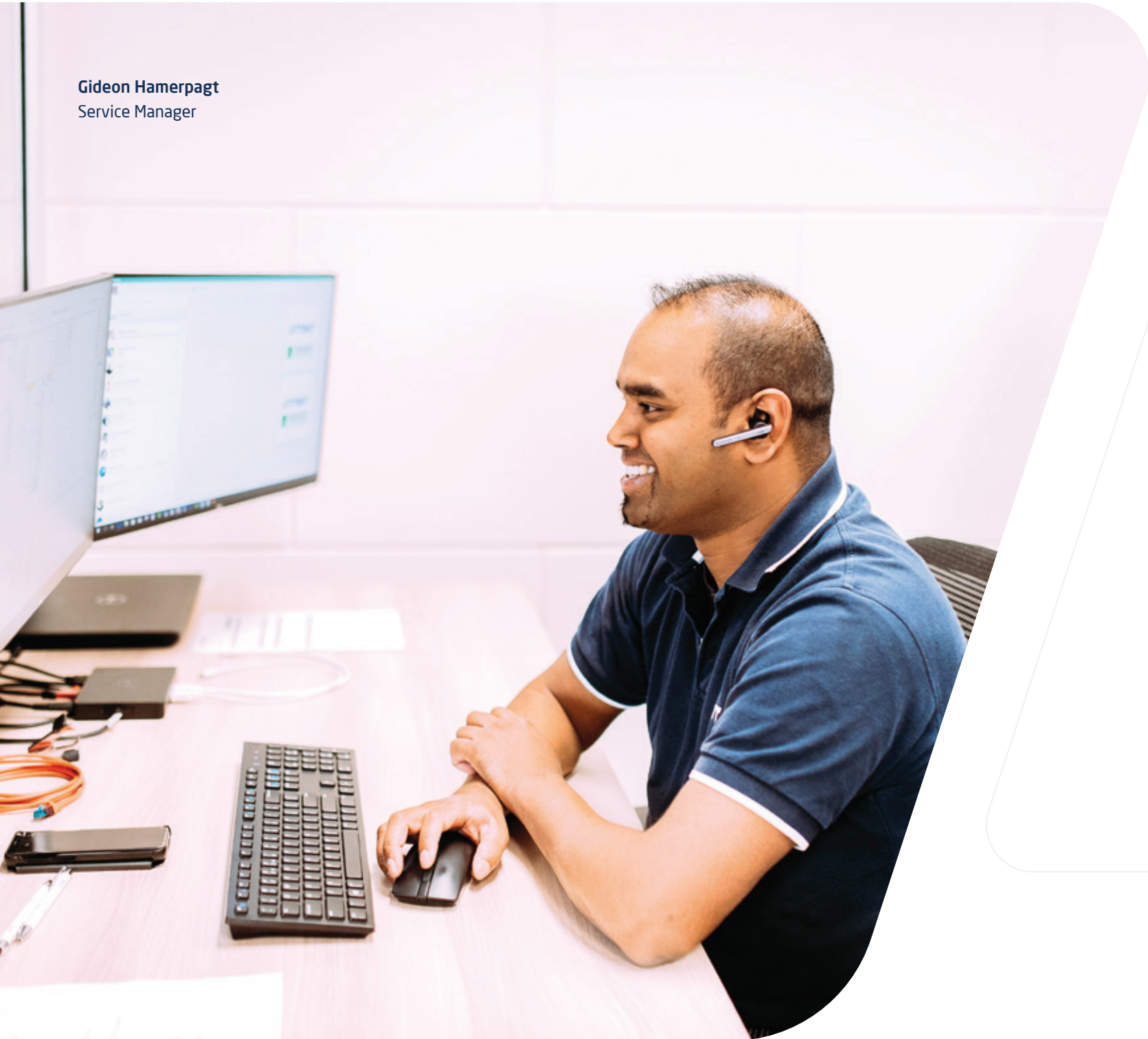
At TTA, we have an open atmosphere where we encourage our employees to cooperate with each other and take responsibility.

As our employees are most value to us, we offer possibilities for education and career development. Besides that, we invite our employees for a good workout in our in-house gym.

It makes us proud that we can count on many employees who have been with us for years.



Gideon Hamerpagt
Service Manager



Service

A proper machine needs proper service to reduce maintenance costs and safeguard optimal equipment availability through the season, year after year. TTA is well-known for its excellent service and support.

TTA can assist you on multiple service levels. It starts with on-time and efficient installations. During ramp-up, you will be assisted by a TTA process specialist. After installation, you can count on our support team, that you can reach by phone, online, WhatsApp or WeChat. Our engineers are available on request for on-site services like support, maintenance and training.

We are ready to serve you!



Headquarters

TTA headquarters is located in Bleskensgraaf, the Netherlands. From here, all equipment is developed and produced and sold worldwide.

Our headquarters has all the facilities in-house to develop high-tech equipment and offers an inspiring working environment for our employees.

The clean factory environment is provided with a welding department, paint shop, fully automated machining department, electrical department, assembly department and a modern vertical warehouse. All disciplines together under one roof!

Our dedicated, highly-skilled and experienced professionals apply the latest engineering technology to provide you with solutions that allow you to face the future with confidence. Everything we do reflects our enthusiasm, passion and dedication for our clients and their products.



Marko Looren de Jong
CNC operator

Jurian Hoffland
Mechanical engineer



TTA USA, LLC

Driven by worldwide market forces and with the aim to serve the wishes and requirements of local clients better, TTA opened a branch in 2006 in McMinnville (USA).

Steve Biles (General Sales Manager) and his dedicated team provide the American and Canadian market with high-tech equipment that meets their specific needs.

All of the equipment is produced in TTA's factory in the Netherlands. After production, the equipment is transported to the client abroad and TTA USA, LLC takes care of the commissioning of the equipment.

TTA USA, LLC is well-known for its excellent service and the fast delivery of spare parts from their own warehouse.



From left to right:

Steve Biles Sales Manager USA

Dwayne Browne Support Technician

Simon den Hartigh Owner

Allen Buckner Service and Installation Manager

Frank Bell Service and Installation Technician



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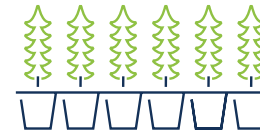
**Custom engineered
to meet your needs**

Sectors

TTA equipment is suitable for handling and selecting pot plants, bedding plants, forestry, vegetables, soft fruits and herbs.

Each sector requires a separate approach. Our experienced and motivated team can provide you with the best plant handling and selecting solutions for your specific situation.

Based on a careful investigation of your needs, TTA can also develop and produce customized or special made equipment.



Forestry



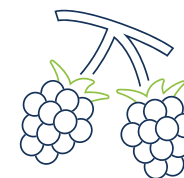
Pot plants



Bedding plants



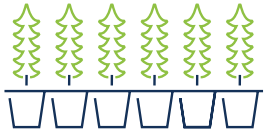
Vegetables



Soft fruits



Herbs



Forestry

We offer custom automation solutions for the production of trees in forestry nurseries.

TTA's primary focus within forestry is to transplant young trees from a mini-plug tray into the final size plug tray. Transplanting offers forestry nurseries several advantages, such as production efficiency (more production on less greenhouse space), less heating costs and 100% deliverable plants.

TTA develops and produces complete transplanting lines, customized to our clients' needs, with or without our vision selection systems.

The TTA FlexSorter Heavy Duty offers the possibility to grade the plants into a maximum of four sizes. In some cases this is used to fill the trays 100% before the treatment process.

Besides our transplanting and grading solutions, we offer several packing solutions depending on the shipping methods. For instance, shipment in plug trays, shipment in plastic or cardboard boxes, or wrapped in a wooden box.

Forestry services:

Transplanting

Grading

Packing



Pot plants services:

Transplanting

Potting

Pot handling and selecting



Pot plants

Optimization of the greenhouse space and the logistic processes are essential to pot plant nurseries.

At TTA, we understand its importance. Therefore, we consider this continuously when developing new equipment.

TTA offers pot plant nurseries transplanting lines for transplanting plugs into pots, with or without our imaging systems. We can also provide clients with the TTA MultiColor line, which is dedicated to producing pots with mixed plants.

With the LINR, TTA's high-speed linear-moving picking and placing robot, we offer a complete shipping solution into containers, trays and trolleys. The LINR is driven by servo drives which results in versatility and speed.



Bedding plants services:

Complete transplanting lines
Selective transplanting



Bedding plants

TTA is highly experienced in the development and production of equipment for bedding plants.

We offer bedding plant nurseries complete transplanting lines for pots and packs. Our equipment is well-known when it comes to:

Flexibility, a complete tray change takes less than 10 minutes.

Speed, with a capacity of up to 50.000 plants per hour.

Quality, minimize plant and plug damage to get optimal planting results.

We can provide small nurseries with the Pack-Planter S, our low priced transplanter with a high capacity in the smallest possible frame.



Vegetables

TTA develops and produces equipment for selecting several young vegetable plants.

Vegetable nurseries use TTA equipment to select fruit crops, especially tomatoes, prior to the grafting process. The selection criteria are color, negative color, plant volume, height, stem thickness, root development or a combination of these.

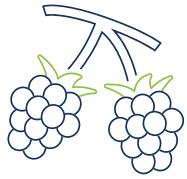
By using our imaging systems, we provide our clients with 100% full trays with qualified plants.

Vegetables services:

Grading prior to grafting

Gapping up





Soft fruits

TTA has many references worldwide in the soft fruit sector from all over the world. Most of the soft fruit nurseries use TTA equipment for transplanting small cells into bigger cells.

Soft fruits, for example, blueberries are fragile plants, so it is important to handle these plants very carefully. Our equipment is well-developed to guarantee the best plant results.

Our selecting equipment, which uses our imaging systems, makes it possible to select young soft fruit plants, for example raspberries based on color, negative color, plant volume, height, stem thickness, root development or a combination of these.

Nurseries can fill trays up to 100% by using our sticking line with double conveyor system. The sticking line is based as goods to men principe.

Soft Fruits services:

Transplanting

Grading

Herbs services: Transplanting



Herbs

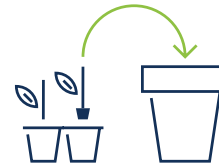
Herbs have many uses and cover a wide range of different types of plants. TTA offers herbs nurseries high-tech transplanting lines for transplanting from trays into pots.

Our transplanting equipment, suitable for herbs, is available with or without our imaging systems. The selection criteria are color, negative color, plant volume, height, stem thickness, root development or a combination of these.

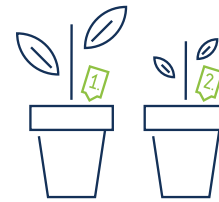
We can also provide our clients with the TTA MultiColor line which is dedicated to produce pots with mixed herbs. One of the unique features of the TTA MultiColor line is that all individual herbs receive individual treatment during the majority of the growing time.

Bram Verschoor CCO

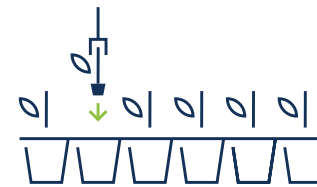
As the son of a grower, Bram grew up between plants. No wonder that he is so passionate about his work. Thanks to his almost 30 years of experience, he understands what an excellent nursery requires and what is essential to automation. In 2002, he joined TTA and currently in Commercial Director. Bram's mission is to provide nurseries worldwide with high-tech equipment for handling and selecting plants. For years, TTA has been well-known within the sector as a company where quality, R&D and innovation are of the highest standards. It makes Bram proud that he can contribute to the success of TTA and, together with all his colleagues, provide outstanding equipment that fulfills the needs of our clients.



Transplanting



Selecting



Gapping 100%



Various



Projects

Geert Maris General Sales Manager

After studying information technology, Geert started his career in the automotive sector. As a sales representative, he gained experience in client consultation and building long-term relationships. He continued his career in 2007 at TTA as International Sales Engineer in a sector unknown to him. Thanks to his enthusiasm and loyalty, Geert has earned his place in horticulture in Europe and far beyond. Geert is especially proud that many relations have been TTA clients for years. It proves the excellent relationship with our clients, the high-quality of the machines and our excellent service.



Transplanting



FlexPlanter

A unique transplanter that combines transplanting and selecting in one single step.

🕒 **Capacity** 3.000 - 30.000 plugs



FlexPlanter XF

Ultra high-speed transplanting line which transplant young plants into different grades.

🕒 **Capacity** 10.000 - 30.000 plugs



PackPlanter wireless

A high-tech transplanter, suitable for nurseries aiming for maximum speed and flexibility.

🕒 **Capacity** 10.000 - 60.000 plugs



Packplanter

A straight-forward low-priced transplanter for nurseries requiring a mix of flexibility and speed.

🕒 **Capacity** 10.000 - 50.000 plugs



Packplanter S

High-capacity transplanter in the smallest possible frame. Ideal for small nurseries to optimize their manual transplanting process.

🕒 **Capacity** 10.000 - 20.000 plugs



MidiFlat

TTA's most popular transplanter. It can be utilized for transplanting into trays, packs, shuttle trays and even loose pots.

🕒 **Capacity** 4.000 - 40.000 plugs



MidiPot

The MidiPot offers the possibility to operate via both a conveyorbelt for packs and different brands of linear pot fillers.

🕒 **Capacity** 3.000 - 16.000 pots



MidiCurve

The MidiCurve transplants over a circular pot filler. It perfectly follows the circle of any round pot filler.

🕒 **Capacity** 3.000 - 8.000 pots



MidiVision

Selecting system for 100% transplanting on Midi. The MidiVision allows for a combination of selecting and transplanting.

🕒 **Capacity** 5.000 - 40.000 plugs

Adrie Kelders Sales Manager

Adrie has worked as sales representative within the horticultural sector for many years. He joined TTA as a Sales Manager for Germany, Austria and Switzerland in 2014. Based on his experience, he can provide clients with excellent advice on how to automate their processes in such a way that they can achieve a lower operating pressure. The Midi is Adrie's showpiece. Thanks to the great flexibility of the Midi, almost any plant delivered as a plug in a tray can be processed. TTA's team consists of young, technically skilled people who strive to deliver the highest quality to our client, which makes Adrie proud to be part of this dynamic team.



Steve Biles Sales Manager USA

Steve started working with TTA in 1999 as the product representative for TTA BV in his position as an employee of Bouldin & Lawson. He left this company in 2006 to establish TTA USA, LLC. He truly enjoys the connections and friendships he has made over the past 20 years working with TTA and his 30 years in the industry. TTA is leading the industry in plug consolidation and has led the way in the development of selecting/grading and consolidation systems. It makes him proud that TTA has established itself as a preferred supplier for North American growers, and that our service and support is second to none. Overall, it's gratifying to see how TTA USA, LLC has started and where we are headed now.



Selecting



FlexSorter

A unique selecting tool that combines transplanting and multiple-class selecting into one simple step.

Capacity 3.000 - 12.000 plugs



FlexSorter XF

Ultra high-speed automatic selecting line which can sort and transplant young plants into different grades.

Capacity 10.000 - 30.000 plugs



MidiVision

Selecting system for 100% transplanting on Midi. The MidiVision allows for a combination of selecting and transplanting.

Capacity 5.000 - 40.000 plugs



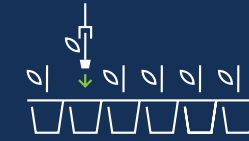
MaxSorter

Fully automatic selecting machine that transplants young plants into a maximum of four grades.

Capacity 6.000 - 12.000 plugs

Peter Rietveld Sales Manager

In Asia Peter is a striking appearance thanks to his length. Since 2018, the year he started as Sales Manager at TTA, he has visited many nurseries in Asia. Peter loves to discover new cultures and get to know new people. Within TTA, Peter is responsible for increasing TTA's market share in Asia by setting up a network with clients and partners. He is grateful for the relationships that have already been established. Together with partners, TTA has already been able to realise significant projects in, for example, China.



Gapping 100%



MBO

The Mobile Blow Out identifies and extracts the missing plants to prepare the trays for manual fixing.

🕒 **Capacity** 600 trays



CombiFix I

A one-frame machine that selects the incoming trays on the optical appearance of each individual plant and corrects trays up to 100%.

🕒 **Capacity** 8.000 - 12.000 plugs



CombiFix II

The CombiFix II is by far the best and the fastest gapping machine worldwide. It corrects trays up to 100% with qualified plants.

🕒 **Capacity** 12.000 - 20.000 plugs

David den Hartigh Production Manager

Just like his brothers, David joined their father in the factory quite often. Machining raw material into parts had his interest in particular. No wonder he started at TTA as CNC operator in 2005. David turned out to be a natural talent! He participates in competitions, including the WorldSkills in Canada. Over the years, the milling department has undergone a tremendous metamorphosis. Recently, it was further automated and expanded with several new machines. It is one of the things David is really proud of. Nowadays, David fulfils the position of Production Manager. He is truly passionate about TTA's high-tech equipment and together with his colleagues, he strives to realize equipment that meets our clients' needs.



Various



Drill unit

A comprehensive solution for drilling and dibbling.

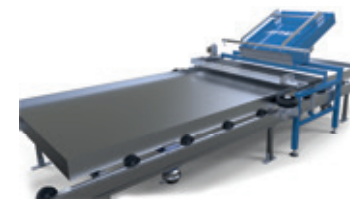
🕒 **Capacity** 700 trays



LINR

A high-speed linear-moving picking and placing robot.

🕒 **Capacity** 1.000 - 10.000 pots



TLF

TLF table and trolley loading system for flats/trays.

🕒 **Capacity** 800 trays



HS4

An automatic application machine for handles on bedding plant packs.

🕒 **Capacity** 4.000 handles



Sticking line

The sticking line comprises a double conveyor system with stop positions for individual trays and corresponding work positions.



PackDestacker

A high-speed destacker for bedding packs.

🕒 **Capacity** 4.000 packs



Watering line

A high-quality conveyor system in a stainless-steel drip bin.



PotSorter

A high-quality fully automatic grading line for pots.

🕒 **Capacity** 3.000 pots



Flexfiller

A high-speed template filler with a minimum of recirculation substrate.

🕒 **Capacity** upto 30.000 pots

Daniël den Hartigh Production Manager

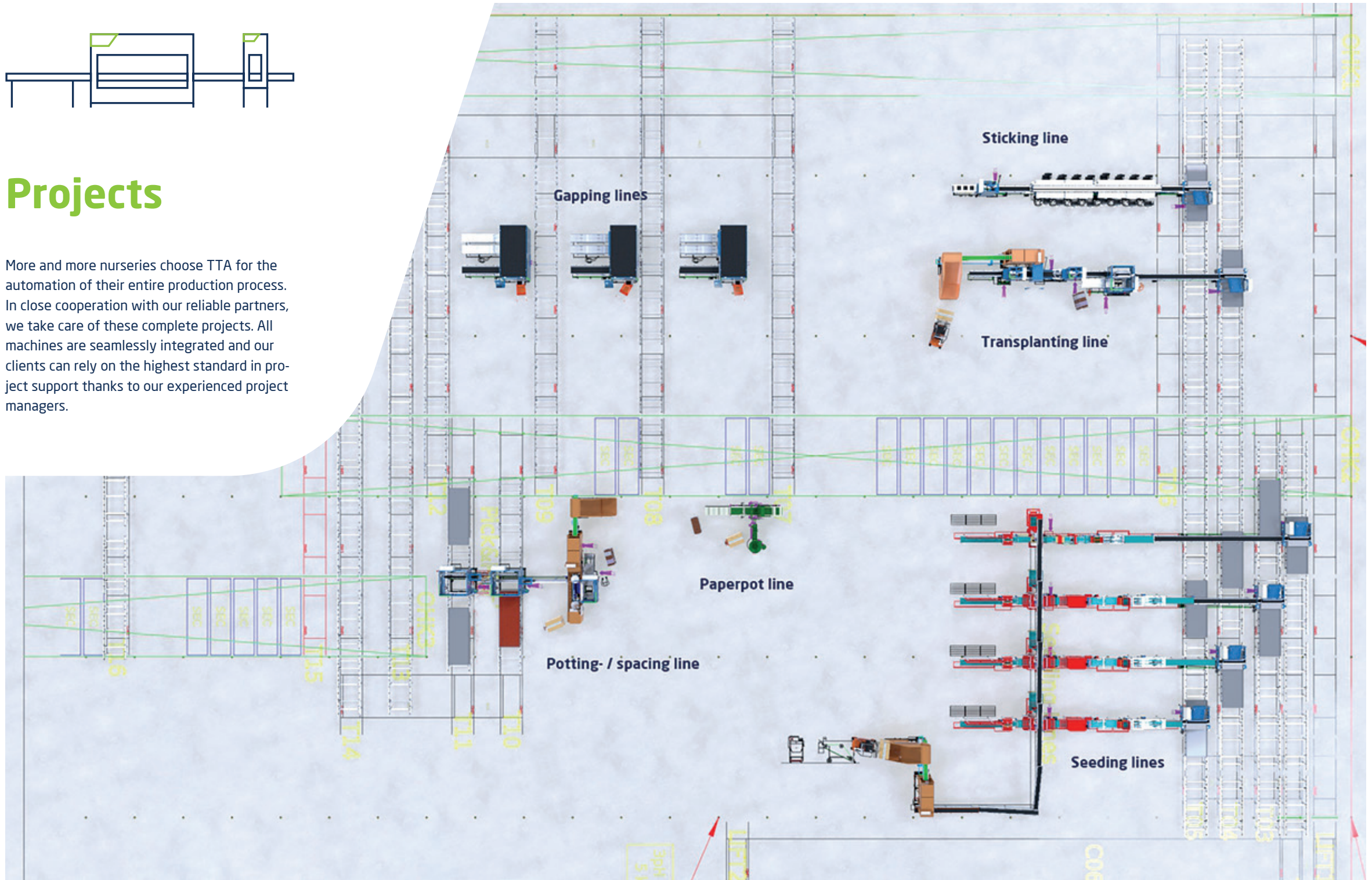
Officially, Daniel started his career at TTA in 2000. Before that time, he and his brothers joined their father quite often to help out in the company. They even assembled parts at the dining table at home. After several positions, Daniël is now the Production Manager and, together with his brother David, responsible for the production of all equipment. Daniël gets excited about the diversity of machines and new developments within the electrical department. It is rewarding to see that TTA has grown so much and that we are still at the forefront of technology.





Projects

More and more nurseries choose TTA for the automation of their entire production process. In close cooperation with our reliable partners, we take care of these complete projects. All machines are seamlessly integrated and our clients can rely on the highest standard in project support thanks to our experienced project managers.



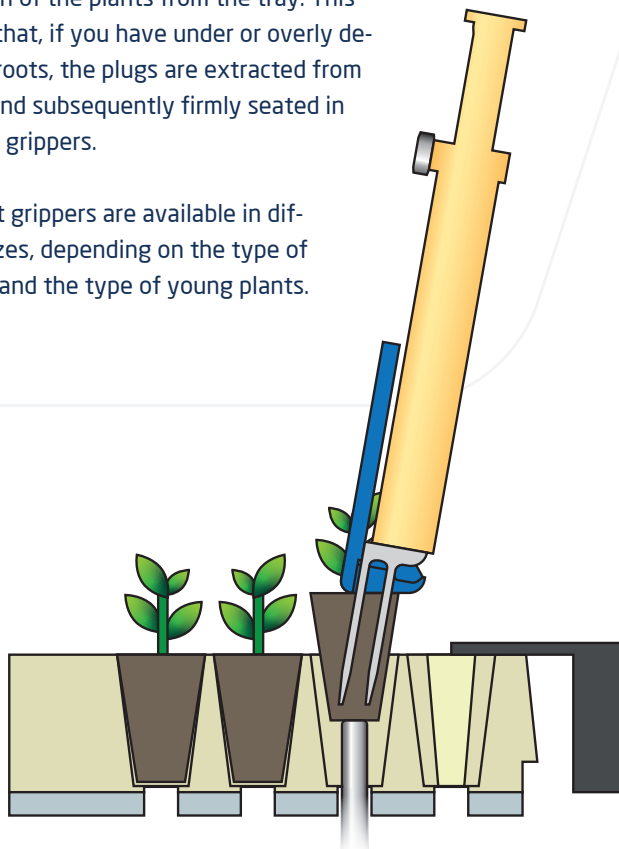
Plant grippers

Our unique and proven plant grippers are designed and developed in-house to minimize plant and plug damage and to get optimal planting results.

The design of the plant gripper enables every plant in a row to be extracted. This eliminates any issues with overgrown plugs that may be picked up when you extract every other plug.

A pusher pin system from below assists during extraction of the plants from the tray. This ensures that, if you have under or overly developed roots, the plugs are extracted from the cell and subsequently firmly seated in the plant grippers.

The plant grippers are available in different sizes, depending on the type of machine and the type of young plants.





Imaging systems

Our in-house developed imaging systems is one of the key functions in our equipment. It ensures a fully automated grading process with lower labor costs and an improved quality.

Our imaging systems are suitable for various cameras and positions. It selects the incoming trays on the optical appearance of each individual plant. The selection criteria are color, negative color, plant volume, height, stem thickness, root development or a combination of these.

By using our imaging systems, we provide our clients with 100% full trays with qualified plants.

A deep learning system with the ability to learn from data without being explicitly programmed is the foundation for our imaging systems. Data can also be used as input for research purposes or phenotyping.

Why TTA?



Partnership

TTA maintains good relationships with clients and suppliers. Consider TTA as a reliable company. We believe it is essential to stick to agreements and have an open partnership based on mutual trust. The rewarding result is that many clients consider TTA as a valuable partner for improving their horticultural processes.



In-house

TTA's goal is to deliver equipment that meets the highest quality standards. Therefore, TTA has made the controversial choice to bring all the disciplines together under one roof. The entire development, software, production, installation, sales and service are available in-house



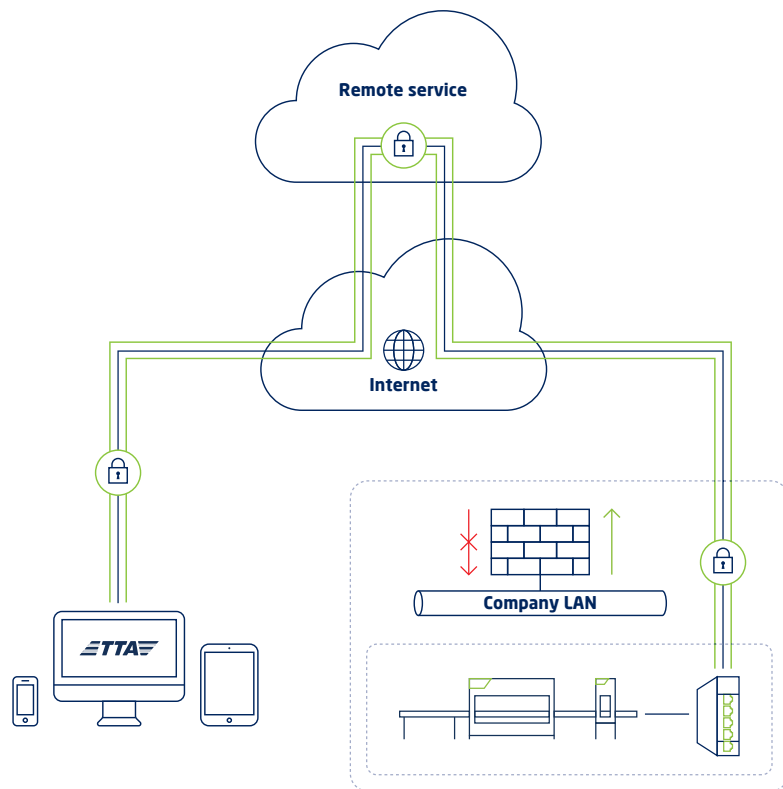
Most experienced

You can count on our vast experience in the automation of processes and machine building. In addition, TTA is well-known in the sectors in which we operate. This ensures you a reliable partner who understands your processes and can provide you with the best possible solutions.



Excellent service

A proper machine needs an appropriate service to reduce maintenance costs and safeguard an optimal equipment availability through the season, year after year. TTA is well-known for her excellent service and support. In case spare parts are needed, TTA can provide short lead times thanks to our flexibility and fully automated vertical warehouse.



Headquarters

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**Conveniently located
in Europe and the USA**

