



Equipment for handling & selection of plants

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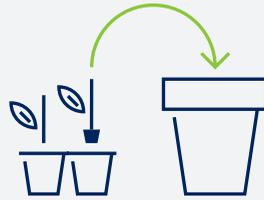


About us

TTA is a Dutch enterprise, founded in 1996. Since the first start of the company, TTA focused on production of equipment for handling & selection of young living plants. TTA developed and expanded merely because of requests from customers for more or new machinery. TTA and its affiliate TTA-USA offer their clients a broad range of equipment, suiting the needs of professional growers.

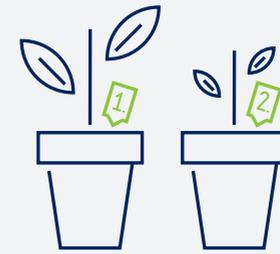
Since TTA strongly believes that it is hard to control what you do not make, the entire development, software, production, installation, after sales and service are available in-house. An experienced sales team is dedicated to discuss with clients and looks together with them how equipment can contribute to reduce production costs. 'Handle with care' is TTA's slogan when it comes down to equipment. Today, the majority of globally produced plants has been seen by TTA equipment. The TTA team is ready to serve you!

EQUIPMENT



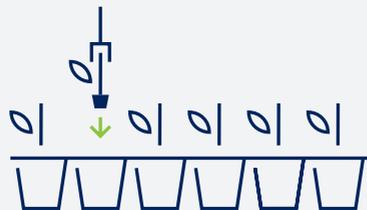
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SELECTION

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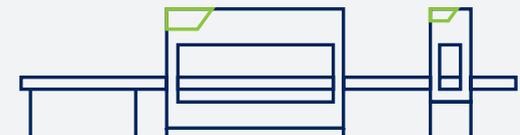
GAPPING 100%

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VARIOUS

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PROJECTS

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TRANSPLANTING





FlexPlanter

The FlexPlanter extracts plants from the donor tray with the well-known TTA plantgrippers, assisted by a pusherpin system from below. The plantgrippers space and allow for digital imaging on the plant quality. After selection, the FlexPlanter only uses plants, which have been approved by the inbuilt selection system. Discarded plants & empty plugs are collected on a waste belt. The destination tray comes out at choice 100% filled (no correction needed) or for capacity increase with some voids, allowing the operator to correct the result. Both the machine and the vision offer an easy-to-understand user interface with inbuilt self-diagnosis. The FlexPlanter is the transplanter of choice for growers who propagate their own young plants and would like to reduce labour and at the same time increase evenness and quality.

More info:

www.tta.eu/equipment/transplanting/flexplanter

Specs

-  **Operators**
1
-  **Capacity ph**
3.000 - 30.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
60 ltr. / min
-  **Energy consumption**
5 kW
-  **Machine weight**
2000 kg



PackPlanter 2230 wireless

The PackPlanter-wireless was developed as a continuation on the success story of the PackPlanter, yet offering even more flexibility because of individual driven plantgrippers. It can transplant into trays, packs or pots in shuttle trays. Speed, simplicity and quality, have been leading key words during the entire design as there are currently more than 45 units on the market. The PackPlanter-wireless offers an easy-to-understand user interface with teachable plantgrippers and an inbuilt self-diagnosis. The simplicity in design allows for a complete tray change-over in less than 5 minutes. Plant grippers can be changed in seconds. An optional infeed belt buffers donor trays prior to transplanting. The PackPlanter-wireless is a high-tech transplanter for nurseries looking for the maximum speed and flexibility.

More info:

www.tta.eu/equipment/transplanting/packplanter-2230-wireless

Specs

-  **Operators**
1
-  **Capacity ph**
10.000 - 60.000 plugs
-  **Plug diameter**
9 - 30 mm
-  **Air consumption**
20 ltr. / min
-  **Energy consumption**
2,5 kW
-  **Machine weight**
800 kg



PackPlanter 2230

The PackPlanter was developed for high speed transplanting in a small frame. It can transplant into trays, packs or pots in shuttle trays. Speed, simplicity and quality, have been leading key words during the entire design as there are currently more than 100 units on the market. The PackPlanter offers an easy-to-understand user interface with inbuilt self-diagnosis. The simplicity in design allows for a complete tray change-over in less than 15 minutes. Plant grippers can be changed in seconds. The PackPlanter is a straight forward low priced transplanter for nurseries where a mix between flexibility and speed is needed.

More info:

www.tta.eu/equipment/transplanting/packplanter-2230

Specs

-  **Operators**
1
-  **Capacity ph**
10.000 - 50.000 plugs
-  **Plug diameter**
9 - 30 mm
-  **Air consumption**
20 ltr. / min
-  **Energy consumption**
2 kW
-  **Machine weight**
550 kg





PackPlanter S

The PackPlanter S can transplant into trays, packs or pots in shuttle trays. Speed, simplicity and quality, have been leading key words during the entire design as there are currently many PackPlanter transplanters on the market. The PackPlanter S offers an easy-to-use user interface with inbuilt self-diagnosis. The simplicity in design allows for a complete tray change-over in less than 15 minutes. The PackPlanter is a straight forward low price transplanter for nurseries where a mix between flexibility and speed is needed.

More info:

www.tta.eu/equipment/transplanting/packplanter-s

Specs

-  **Operators**
1
-  **Capacity ph**
10.000 - 20.000 plugs
-  **Plug diameter**
9 - 30 mm
-  **Air consumption**
20 ltr. / min
-  **Energy consumption**
2 kW
-  **Machine weight**
450 kg



MidiFlat

For 10 years, the MIDI has been known as TTA's most popular transplanter. With field experience of over 170 MIDI transplanters, TTA has incorporated all possible demands in the area of transplanting, into one unique transplanter.

The MIDI transplanter is available in capacities ranging from 3.000 up to 40.000 plants per hour. It can be utilized for transplanting into trays, packs, shuttle trays and even loose pots. The MIDI offers an easy-to-use user interface with in-built self-diagnosis. The MIDI transplanter incorporates all the versatility TTA has become known for.

More info:

www.tta.eu/equipment/transplanting/midiflat

Specs

-  **Operators**
1
-  **Capacity ph**
4.000 - 40.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
17 ltr. / min
-  **Energy consumption**
3 kW
-  **Machine weight**
700 kg





MidiPot

Transplanting over a potfiller offers a lot of advantages such as a nice drilled hole (transplanting straight after drilling), flexibility in potsize, multiple plants per pot, etc. Again, TTA managed to incorporate all possible demands in the area of transplanting, into one unique transplanter. The MidiPot is available in capacities ranging from 3.000 up to 16.000 plants per hour, depending on the potfiller and number of plants per pot.

With an additional conveyor system, it can also be utilized for transplanting into trays, packs and shuttle trays. The MidiPot offers an easy-to-understand user interface with inbuilt self-diagnosis. The MidiPot transplanter incorporates all the versatility TTA has become known for.

More info:

www.tta.eu/equipment/transplanting/midipot

Specs

-  **Operators**
1
-  **Capacity ph**
3.000 - 16.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
17 ltr. / min
-  **Energy consumption**
3kw
-  **Machine weight**
700 kg



MidiCurve

Transplanting over a circular potfiller offers a lot of advantages such as a nice drilled hole (transplanting straight after drilling), flexibility in potsize, multiple plants per pot, etc. The MidiCurve perfectly follows the circle of any round potfiller. Again, TTA managed to incorporate all possible demands in the area of transplanting, into one unique transplanter. The MidiCurve is available in capacities ranging from 3.000 up to 8.000 plants per hour, depending on the potfiller and number of plants per pot. The curve functionality can be disabled, so the MidiCurve can also be utilized for transplanting into trays, packs and shuttle trays. The MidiCurve offers an easy-to-use user interface with inbuilt self-diagnosis. The MidiCurve transplanter incorporates all the versatility TTA has become known for.

More info:

www.tta.eu/equipment/transplanting/midicurve

Specs

-  **Operators**
1
-  **Capacity ph**
3.000 - 8.000 pots
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
25 ltr. / min
-  **Energy consumption**
3 kw
-  **Machine weight**
750 kg



MidiVision

The MidiVision allows for a combination of selection and trans-planting. During infeed into the Midi, a vision system checks the trays from above. In order to be effective, plants should not be too large and not cover the cells of the neighbor plants. According to the selection result, plant grippers will only pick up plants which have been classified. Empty plugs will remain in the tray. Due to use of the selection system, the number of transplanted plants per step is now dynamic. As a result of that, the destination conveyor belt is adapted and also steps dynamic, according to the transplanted number of plants.

More info:

www.tta.eu/equipment/transplanting/midivision

Specs

-  **Operators**
1
-  **Capacity ph**
5.000 - 40.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
17 ltr. / min
-  **Energy consumption**
3,5 kW
-  **Machine weight**
800 kg



SELECTION





FlexPlanter

The FlexPlanter extracts plants from the donor tray with the well-known TTA plantgrippers, assisted by a pusherpin system from below. The plantgrippers space and allow for digital imaging on the plant quality. After selection, the FlexPlanter only uses plants, which have been approved by the inbuilt selection system. Discarded plants & empty plugs are collected on a waste belt. The destination tray comes out at choice 100% filled (no correction needed) or for capacity increase with some voids, allowing the operator to correct the result. Both the machine and the vision offer an easy-to-understand user interface with inbuilt self-diagnosis. The FlexPlanter is the transplanter of choice for growers who propagate their own young plants and would like to reduce labour and at the same time increase evenness and quality.

More info:

www.tta.eu/equipment/selection/flexplanter

Specs

-  **Operators**
1
-  **Capacity ph**
3.000 - 30.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
60 ltr. / min
-  **Energy consumption**
5 kW
-  **Machine weight**
2000 kg



FlexSorter

The FlexSorter is unique since it selects plants yet handles the plugs only one time (!) Plants are extracted from the donor tray with the well-known TTA plantgrippers, assisted by a pusherpin system from below. The plantgrippers space and allow for digital imaging on the plant quality. After selection, the FlexSorter transfers approved plants to the selected destination belts, grade by grade. The number of classifications depends on the number of destination belts and is maximized on four. Discarded plants & empty plugs are collected on a waste belt. The selected trays come out all combined class by class. Both the machine and the vision offer an easy-to-understand user interface with inbuilt self-diagnosis. The FlexSorter is the new generation of selection equipment, avoiding the plant damage due to double handling of the plants.

More info:

www.tta.eu/equipment/selection/flexsorter

Specs

-  **Operators**
1
-  **Capacity ph**
3.000 - 12.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
60 ltr. / min
-  **Energy consumption**
5 kW
-  **Machine weight**
2000 kg



MidiVision

The MidiVision allows for a combination of selection and transplanting. During infeed into the Midi, a vision system checks the trays from above. In order to be effective, plants should not be too large and not cover the cells of the neighbor plants. According to the selection result, plant grippers will only pick up plants which have been classified. Empty plugs will remain in the tray. Due to use of the selection system, the number of transplanted plants per step is now dynamic. As a result of that, the destination conveyor belt is adapted and also steps dynamic, according to the transplanted number of plants.

More info:

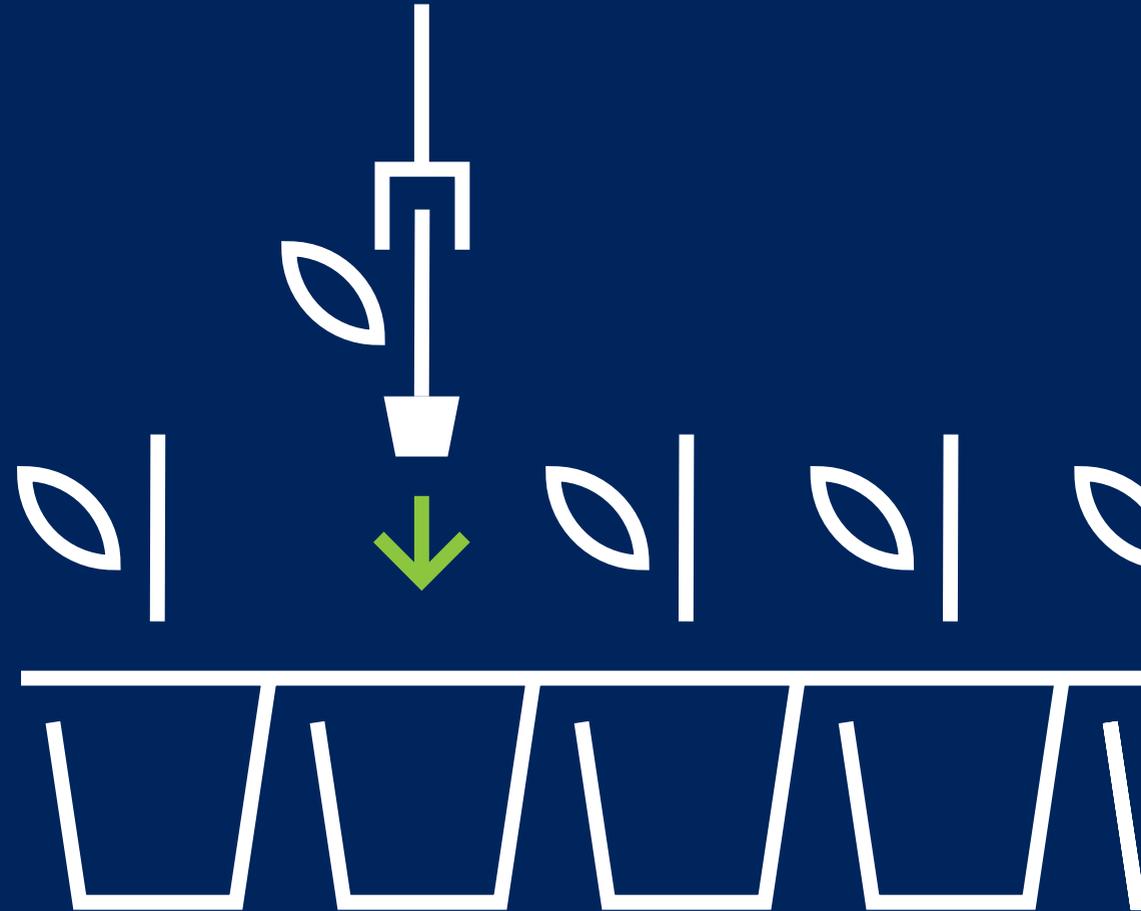
www.tta.eu/equipment/selection/midivision

Specs

-  **Operators**
1
-  **Capacity ph**
5.000 - 40.000 plugs
-  **Plug diameter**
9 - 60 mm
-  **Air consumption**
17 ltr. / min
-  **Energy consumption**
3,5 kW
-  **Machine weight**
800 kg



GAPPING 100%





CombiFix-II

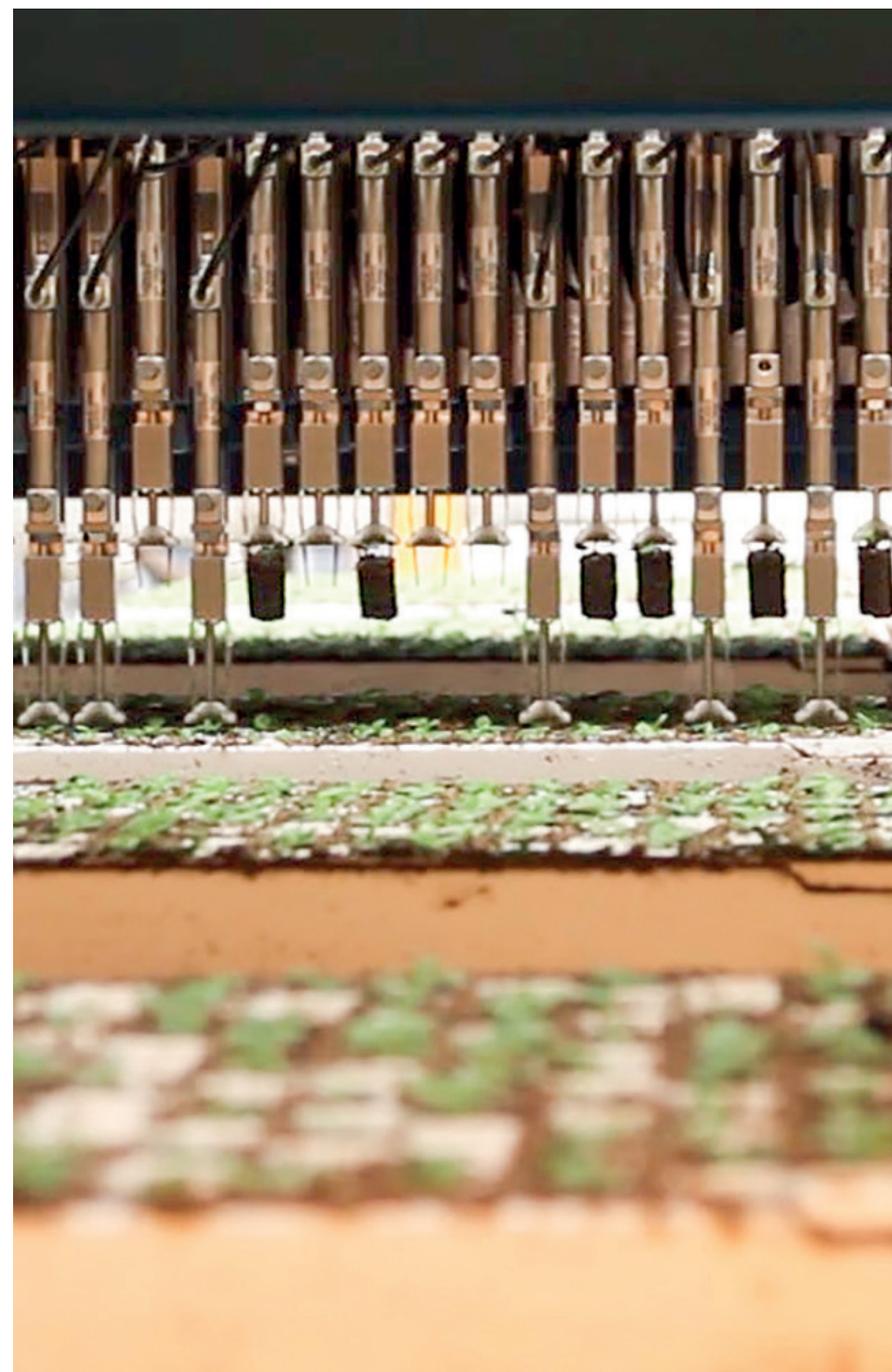
The CombiFix-II is the successor of the most successful gapping and correction machine for young plant trays ever. The CombiFix-II is still based on a one-frame machine. The accuracy and speed dramatically improved and the CombiFix-II is with distance the best and fastest gapping machine worldwide. It selects the incoming trays on the optical appearance of each individual plant. Empty plugs, or bad and too small plants are removed at the a blow-out section. Empty plugs are collected and discarded from the CombiFix-II through a waste conveyor belt. Now, the CombiFix-II will allocate one tray as a donor tray which provides the plants. Other trays will receive plants, thus being corrected to 100% full trays with qualified plants.

More info:

www.tta.eu/equipment/gapping-100/combifixii

Specs

-  **Operators**
1
-  **Capacity ph**
12.000 - 20.000 plugs
-  **Plug diameter**
9 - 30 mm
-  **Air consumption**
535 ltr. / min
-  **Energy consumption**
5 kW
-  **Machine weight**
2250 kg





CombiFix-I

The CombiFix-I is the most successful gapping and correction machine for youngplant trays ever. Its success is based on a one-frame machine which selects the incoming trays on the optical appearance of each individual plant. Empty plugs, or bad and too small plants are removed at the a blow-out section. Empty plugs are collected and discarded from the CombiFix-I through a waste conveyor belt. Now, the Combi-Fix-I will allocate one tray as a donor tray which provides the plants. Other trays will receive plants, thus being corrected to 100% full trays with qualified plants.

More info:

www.tta.eu/equipment/gapping-100/combifixi

Specs

-  **Operators**
1
-  **Capacity ph**
8.000 - 12.000 plugs
-  **Plug diameter**
9 - 20 mm
-  **Air consumption**
400 ltr. / min
-  **Energy consumption**
3,5 kW
-  **Machine weight**
1800 kg



MBO

Trays with young plants will manually be placed into the machine. They will be scanned by means of the TTA-Vision-Plus system by use of a digital camera unit. This system has been developed entirely in our company. The selection on the plant material can individually be adapted. For instance values like plant size; plant color; position of the plant on the plug, etc. can be altered depending on the plants or current growing circumstances. Depending on the settings, single plugs will be removed out of the tray. The VisionPlus system runs under Windows and is very user-friendly. After the selection part, the trays come into the blow-out part, where the NOK plugs will be removed out of the tray. Removing works by means of air nozzles which blow the plugs out of the tray from below.

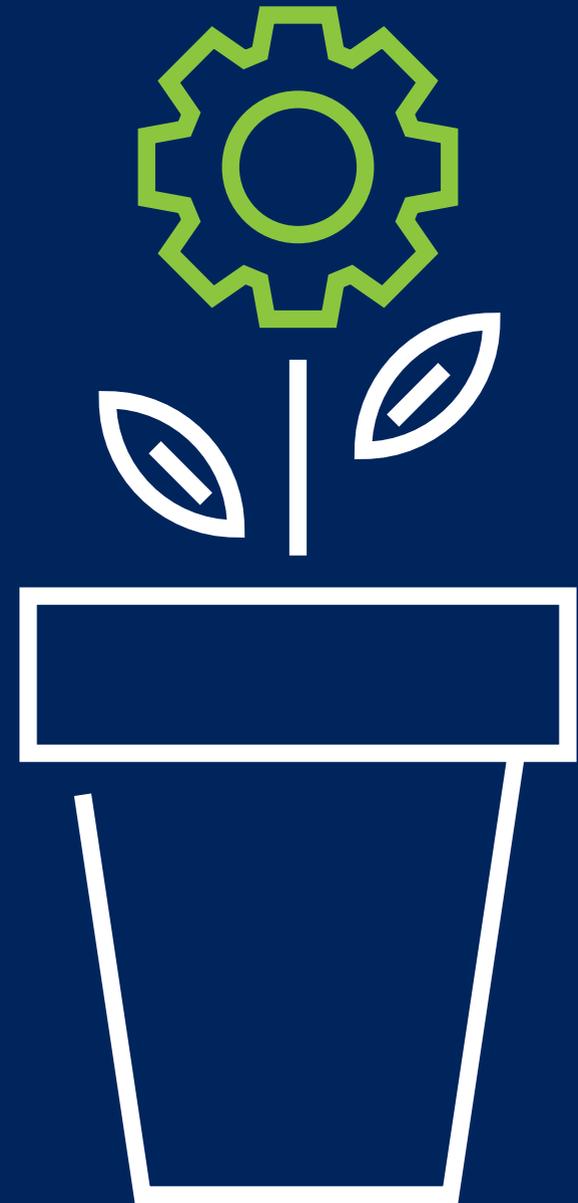
More info:

www.tta.eu/equipment/gapping-100/mbo

Specs

-  **Operators**
1
-  **Capacity ph**
600 trays
-  **Plug diameter**
9 - 20 mm
-  **Air consumption**
252 ltr. / min
-  **Energy consumption**
0,8 kW
-  **Machine weight**
650 kg

VARIOUS





HS4

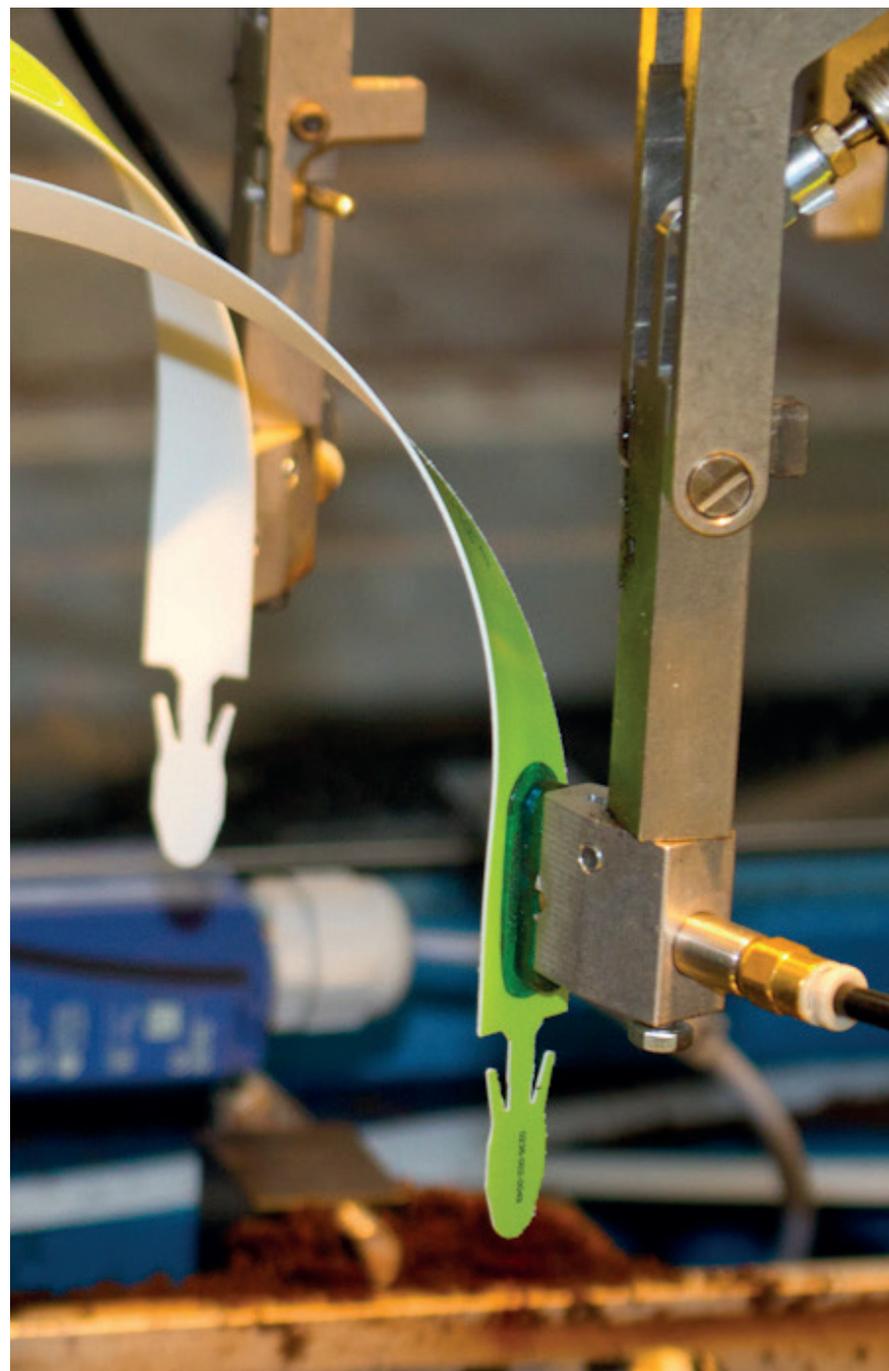
The HS4 is a result of input from professional growers and their demand for an easy to operate and reliable applicator for handles. The HS4 is an automatic application machine for handles on bedding plant packs. It is provided with a sliding table where storage boxes with handles can be staged. When the boxes with handles are empty, the table will automatically slide to the other side with filled boxes to continue, to insure minimal downtime. The HS4 takes the handles out of the storage boxes and sticks them right into the packs which are at the same time positioned at the destination conveyor. The HS4 provides a reliable and high-speed capacity up to 4,000 handles per hour in a small frame.

More info:

www.tta.eu/equipment/various/hs4

Specs

-  **Operators**
-
-  **Capacity ph**
4.000 handles
-  **Plug diameter**
N/A
-  **Air consumption**
20 ltr. / min
-  **Energy consumption**
2 kW
-  **Machine weight**
500 kg





PackDestacker

The Pack destacker is a high speed destacker for bedding packs. Any modern, high speed transplanting line requires a quick pack de-stacker with a big stock of packs. The Pack-Destacker provides this requirement very well. The capacity is around 4.000 packs per hour and the buffer for empty packs is longer than 1.5 meters! An acoustic signal warns when the stock of packs is low. The Pack destacker can easily be changed to another size of packs.

More info:

www.tta.eu/equipment/various/packdestacker

Specs

-  **Operators**
-
-  **Capacity ph**
4.000 packs
-  **Plug diameter**
N/A
-  **Air consumption**
10 ltr. / min
-  **Energy consumption**
0,37 kW
-  **Machine weight**
150 kg



Drill unit

Depending on the requirements with respect to peat structure, humidity, plug size, etc., TTA can offer solutions like: a rotating drill unit with quick interchangeable drill plate an excentric dibbling unit where the whole plate make an excentric movement, enforcing the side of the hole a dibbling unit where the peat in the receiving tray is pushed down. TTA's vast experience guarantees a well balanced advice, tailored to your need.

More info:

www.tta.eu/equipment/various/drill-unit

Specs

-  **Operators**
-
-  **Capacity ph**
700 trays
-  **Plug diameter**
various
-  **Air consumption**
20 ltr. / min
-  **Energy consumption**
2 kW
-  **Machine weight**
300 kg



LINR

The LINR is driven by servo drives which results in versatility and speed. The LINR can be supplied in several width sizes from 2000 mm upto a whopping 6000 mm. Several options can be supplied such as an advancing system for mobile containers or trolleys, a shift movement in the pot fork, a wide belt to place pots in (shuttle)trays, a full automatic change over system for the pot forks and even individual driven moving pot forks for full flexibility in picking & placing.

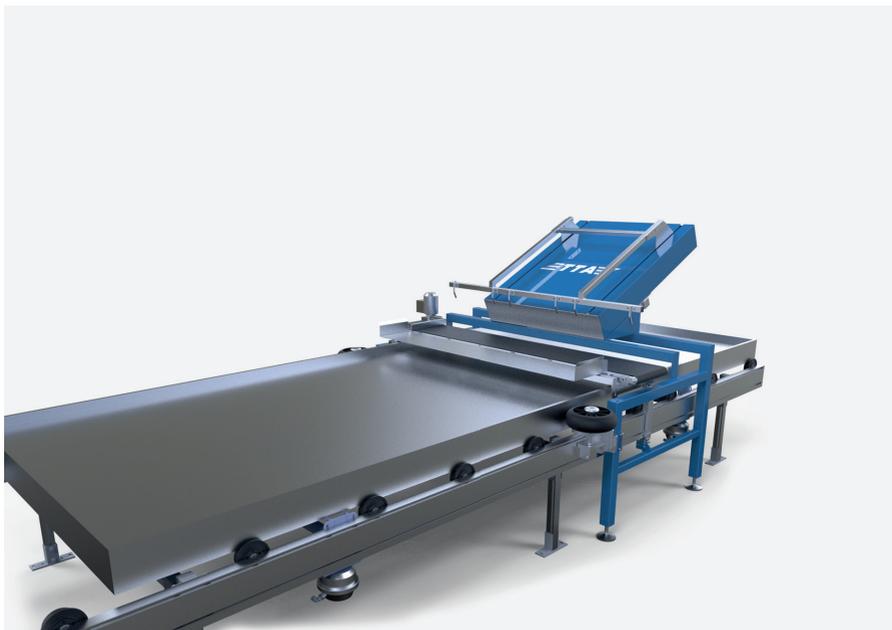
More info:

www.tta.eu/equipment/various/linr

Specs

-  **Operators**
-
-  **Capacity ph**
1.000 - 10.000 pots
-  **Plug diameter**
6 - 35 cm
-  **Air consumption**
4 ltr. / min
-  **Energy consumption**
3 kW
-  **Machine weight**
600 kg





TLF

The TFL is a loader for trays and/or flats on trolleys. Function: a mobile table or a trolley is positioned below the TLF. At the same time, flats/trays are positioned by means of a buffer belt and a stepper belt combination. As soon as there are sufficient flats/trays positioned, the conveyorbelt will tilt and a slider bar pushes the flats/flats on the mobile table or trolley. Since a tilted plate guides the trays/flats, the declining movement is very smooth. During loading, the mobile table or trolley is automatically advanced with a distance matching the size of the flat/tray.

More info:

www.tta.eu/equipment/various/tlf

Specs

-  **Operators**
-
-  **Capacity ph**
800 trays
-  **Plug diameter**
-
-  **Air consumption**
-
-  **Energy consumption**
-
-  **Machine weight**
-



Watering line

The watering line is a high quality conveyor system in a stainless steel drip bin. Over the conveyorbelt, a set of watering nozzles is placed.

More info:

www.tta.eu/equipment/various/watering-line

Specs

-  **Operators**
-
-  **Capacity ph**
-
-  **Plug diameter**
-
-  **Air consumption**
-
-  **Energy consumption**
-
-  **Machine weight**
-



Sticking line

The sticking line works with a double conveyor system. Trays enter onto the line at the upper level of the sticking line. The sticking line is provided with two levels: one top level, where trays enter the sticking line. The bottom level has a conveyor belt with working tables mounted at both sides. These working tables can tilt, allowing the people to find their ideal working position. The employees now just take the trays from the top level. As soon as a tray is finished, it can be manually pushed from the table, right on the bottom conveyor belt. The employee can take a new tray which in the meantime will be positioned on the upper level, assuming sufficient external infeed. Processed trays leave the sticking line. The sticking line can be provided with registration software which makes it possible to monitor individual productivity.

More info:

www.tta.eu/equipment/various/sticking-line

Specs

-  **Operators**
varies
-  **Capacity ph**
varies
-  **Plug diameter**
varies
-  **Air consumption**
varies
-  **Energy consumption**
varies
-  **Machine weight**
varies



PotSorter

The PotSorter will grade pots into 4 classifications. It works with a double camera system. It takes one picture from above and one image from the side. The VisionPlus software runs under Windows, which is user friendly. Working with the VisionPlus software is an easy job. The camera system can sort on plant color, plant size, plant height and plant wide. Function: The pots will be fed into the machine by a conveyor belt. When the pots are in the right position the camera takes a picture and makes a decision about the dimensions or colors of the plants. To take a good picture it's important that the pots have enough distance between each other. So leafs will not overlap each other. Depending at the classicification the pots will be pushed on the right conveyor belt.

More info:

www.tta.eu/equipment/various/potsorter

Specs

-  **Operators**
1
-  **Capacity ph**
3.000 pots
-  **Plug diameter**
-
-  **Air consumption**
-
-  **Energy consumption**
-
-  **Machine weight**
-

PROJECTS



Packing line for trees

A selection and packing line for tree young plants.



More info:

www.tta.eu/equipment/projects/packing-line-for-trees

Pot transplanting, placing & spacing line

A complete automation for transplanting, placing and spacing of individual pots.



More info:

www.tta.eu/equipment/projects/pot-transplanting-placing-and-spacing-line

Template transplanting line

A high speed template transplanting line for various dimensions of packs and pots. Complete with automatic loading on table trolleys.



More info:

www.tta.eu/equipment/projects/template-transplanting-line

Transplanting line for grow-blocks

A complete processing line for depiling and transplanting of grow blocks.



More info:

www.tta.eu/equipment/projects/transplanting-line-for-growblocks

Transplanting line for packs

Automatic depiling, filling and selective transplanting.



More info:

www.tta.eu/equipment/projects/transplanting-line-for-packs



Service

A proper machine needs a proper service, in order to reduce maintenance costs and to safeguard an optimum equipment availability though the season, year upon year. TTA can assist you at multiple service levels:



Installation and ramp-up



Online support



On-site service



Spare parts

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