



more than automation

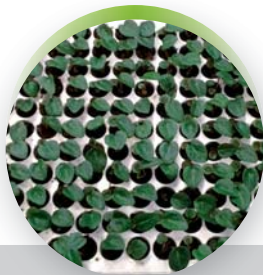


I-GRADE:
The best Grading plant for Grafting solution!

Automatic grading machine for all kind of young plants



Tomato and Rootstock



Cyclamen



Begonia



Orchid





Example of 2 grading machines at our customer

High tech industrial grading machine for all kind of young plants with the highest standard in flexibility, durability and grading quality.

The heart of the machine are 2 industrial robots type "Delta 3" and the patented conveyor belts with fixed cups. The flex picker robot is widely used in the industry and chosen for their flexibility, precision of the movements, reliability and very low maintenance.

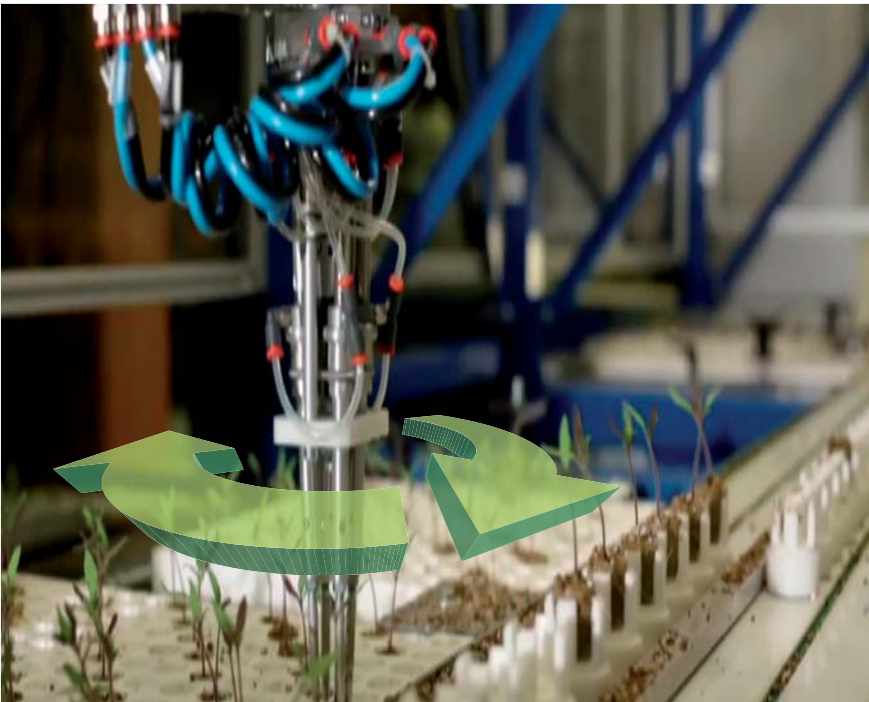
Techmek is the first company who use this type of robot for a grading machine and with the state of the art camera system it gives you possibilities that are not possible with conventional grading machines.

Techmek has its roots in the industry so these technics are very familiar for us.

Techmek automatic grading machine allows to satisfy followings logical requirements:

- * Flexibility: every type of plants, boxes, trays, filling in destination, etc. without losing capacity;
- * Productivity: the maximum productivity is guaranteed;
- * Quality of selection: the system with camera is really precise;





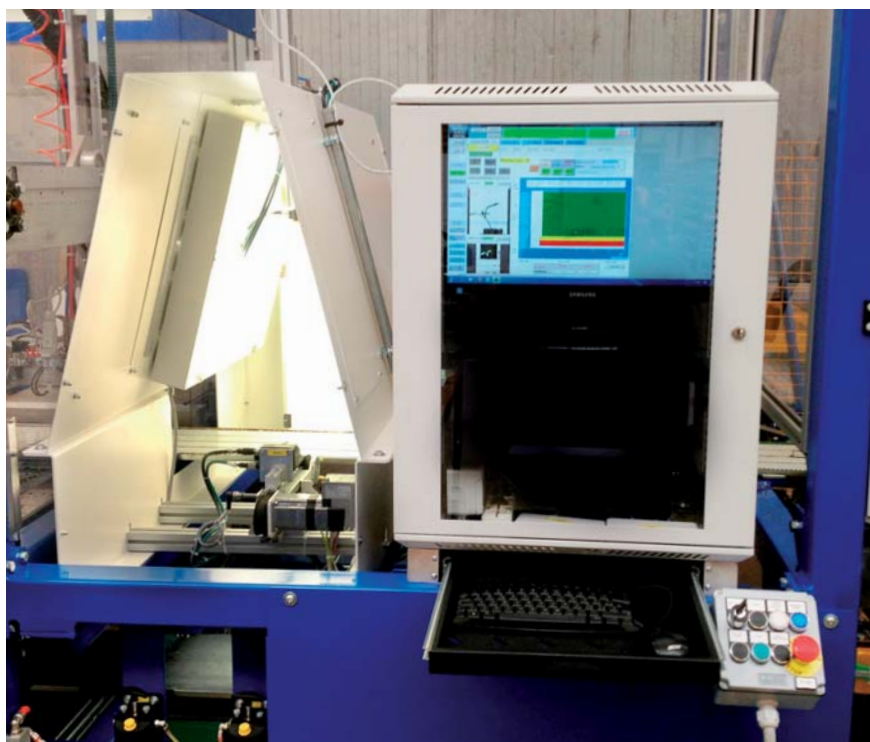
- * Uniformity of the plants;
- * Leaves position in destination tray;
- * Achievable selections: it can select 4 classes plus waste, maintaining always maximum productivity;
- * No plant damages;
- * Transplanting: the depth of transplanting is guaranteed;
- * Low cost format/model change;
- * Low cost maintenance: the machine works 24 hours no stop, with low power consumption and no machine wear;
- * Flexible pick up angle;
- * No roots damages.

WHAT YOU CAN DO WITH THIS MACHINE

- * Many different products in both trays and plants combinations and change from one to another product is about half an hour, no other grading machine can do this.
- * State of the art camera system for height, leaf area, stem diameter (grafting), growth of plants, direction of the leaves etc.
- * The combination of the camera that measures the biggest leaves and the possibility of rotation of the gripper in the robot, the machine is able to put these leaves all in the same direction in the tray. The benefit of this is a later moment of grading, so better grading result and no damages.
- * Each class has its own exit belt and each of these can have its own settings for type of tray, filling, pattern and rotation of the plants.
- * The machine handles the plants with great care. All motors have frequency controls, soft start and stop.
- * The plants are transported in the machine cups fixed on a conveyor belt, the machine has 4 of these all separate, the plugs fit very precise in the cups, and the cups have 4 openings on the side. Therefore we do not get into the cups with the needles from the gripper but from the outside in, this make a huge different in handling off the plants, reducing damages.
- * Capacity between 6000 and 9500 plants per hour, in maximum 4 classes and depending on size of the plants (the waste is put automatic in a waste bin).

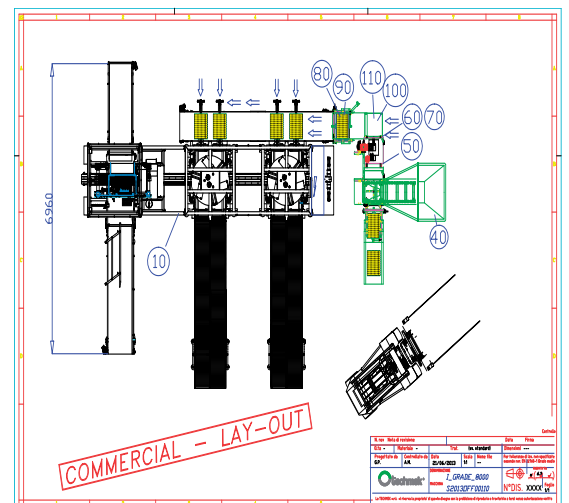


Cyclamen one week later grading operation with automatic rotation of leaves



* Disinfection both with dipping of the grippers in disinfection liquid and UV lamps.

* Dimensions 8350 x 7800 mm included roller conveyor belt of 4 meters.



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