# A. I. FOR EXTERNAL QUALITY SELECTION

OUR MOST ADVANCED GRADING SYSTEM USES THE POWER OF A.I. TO ANALYSE THE EXTERNAL QUALITY OF THE PRODUCT, IDENTIFYING IMPERFECTIONS AND DEFECTS QUICKLY AND ACCURATELY.

HOW DOES IT WORK?

Our A.I. technology is designed to adapt to the specific needs of each customer learning directly from the examples they provide.

AI-POWERED TECHNOLOGY FOR PRECISION FRUIT GRADING - KEY FEATURES & BENEFITS

1. **High-resolution cameras with LED and infrared scan up to 12 products per second.**

2. **Analyses shape, volume, surface texture, and colour with advanced precision.**

3. **Detects visible defects such as spots, cracks, and discoloration.**

4. **Grades products into up to 5 quality levels, from unmarketable to premium.**

5. **Integrated digital weighing system ensures synchronized, accurate grading.**
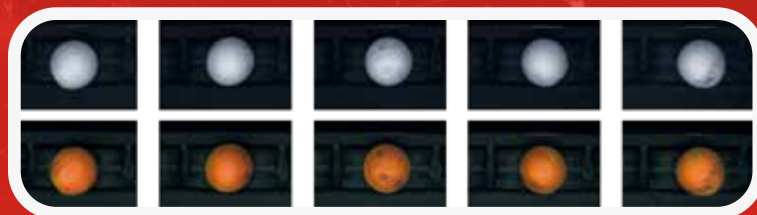

CUSTOMER BENEFITS

Thanks to this advanced AI technology, the customer can achieve.

- ✔ Fully customizable based on customer-defined grading parameters.
- ✔ AI system learns and improves continuously through adaptive algorithms.
- ✔ Remote updates allow integration of new product samples and sorting rules.
- ✔ Designed for flexibility, modularity, and easy scaling of operations.
- ✔ Enhances accuracy while reducing manual inspection efforts.
- ✔ Saves up to 60% in labour costs through automation.
- ✔ Delivers higher consistency, better product value, and market readiness.
- ✔ Simplifies workflows while raising quality standards.
- ✔ A smart, future-ready solution that adds efficiency and profitability.

ROLLVY AI
Electronic Roller Grader

FRUITS HAVE NO MORE SECRETS
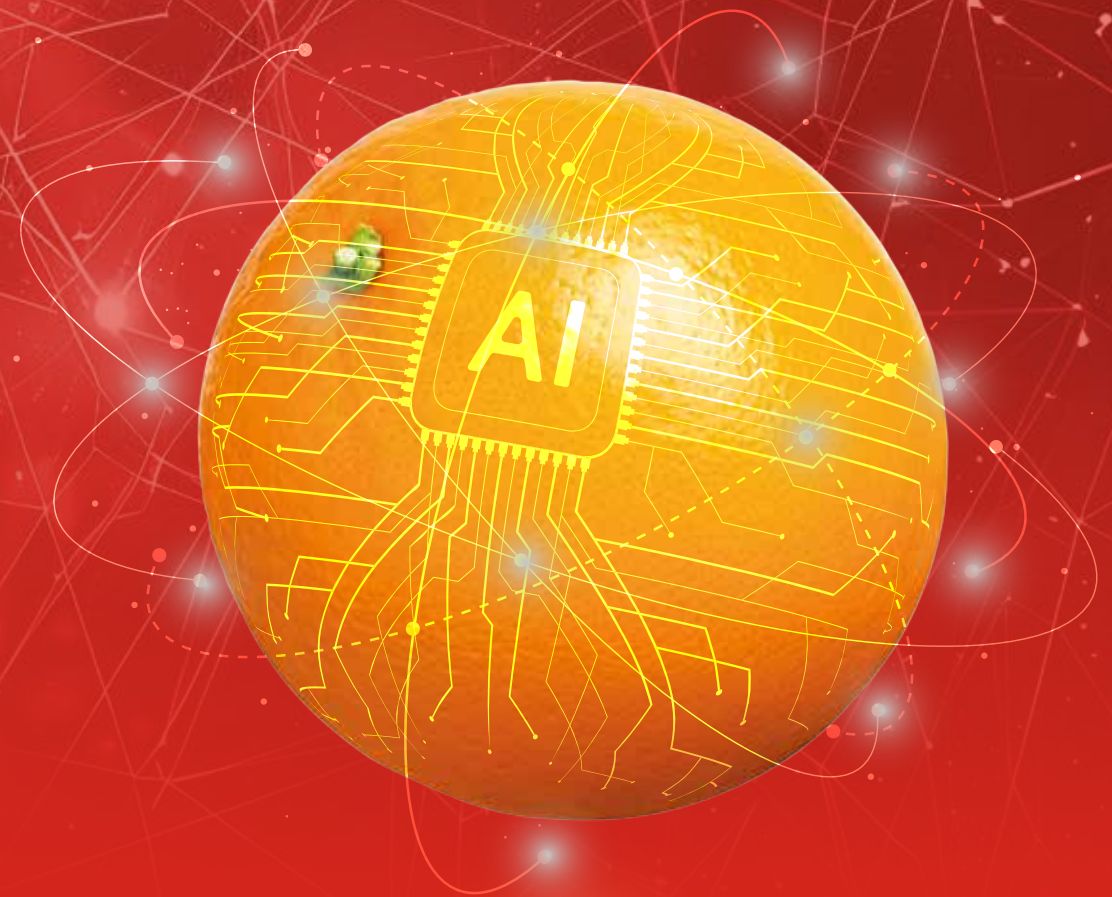
OUR AI LOOKS WHERE THE HUMAN EYE STOPS

futura
fruit technology equipment

ROLLVY
LATERAL DISCHARGE

ROLLVY with Lateral Discharge is a compact and efficient electronic grader, specifically designed for small-scale production. Available in single or dual-channel configurations, it offers flexible discharge options to accommodate various operational layouts.
• In the single-channel version, the lateral discharge can be configured on either the left or right side, based on facility requirements.
• In the dual-channel version, discharge is available on both sides and can be directed either to collection tanks or packing benches, ensuring streamlined post-grading handling. This modular design makes ROLLVY an optimal solution for operations seeking space-efficient, customizable grading systems.

ROLLVY
CENTRAL DISCHARGE

ROLLVY with Central Discharge is a flexible, modular solution designed for high production capacities, capable of achieving up to 90% roller feeding efficiency. Additionally, the system allows for future scalability an additional grader can be installed in parallel to the existing unit to support expanded grading line requirements.

TECHNICAL FEATURES

GRADING PARAMETERS
Weight, diameter, colour and external quality.

COMPATIBLE PRODUCT TYPES
Apples, pears, peaches, apricots, flat peaches, plums, avocados, citrus fruits, persimmons, pomegranates, tomatoes, garlic, onions and potatoes.

ROLLERS PITCHES
95 mm, 114 mm

NUMBER OF LANES
1,2

WORKING SPEED
5 to 12 products / sec. / each lane, depends on shape and type of product.

STRUCTURE
Extruded aluminium, galvanised iron and/or AISI 304 stainless steel.

DISCHARGE METHOD
Lateral discharge:
- For the one-channel version it is possible to insert the discharge on the left or right on tanks or packing benches.
- For the two-line version the discharge is on both sides, exclusively on tanks.

ACCESSORIES INCLUDED
Possibility of connection via internet for remote technical support, Receiving lots of statistical data and report from system, advanced operation diagnostic system.

OPTIONAL ACCESSORIES
Automated roller washing system, labelling unit, and optional conveyor belts for handling both empty and full packaging. The outlet spacing is fully modular and can be customized according to the specific type of packaging system in use.

PRE-ALIGNING SYSTEM
Our system uses variable-speed V-shaped conveyor belts to efficiently align the products before it enters the grader.

SINGULATION SYSTEM
Underneath the singulation zone a rotation process takes place that allows the product to settle properly, finding its space inside the rollers. This first rotation is a crucial step, as it determines the correct filling of the rollers.

LATERAL DISCHARGE:
The product is discharged from the roller via computer-controlled solenoids. They tilt the roller and release the fruit directly into the collection tanks.

WEIGHT DETECTION
Our sorting machines are specifically designed to accurately measure the weight of a wide range of products. They detect the weight of each individual item using two high-quality load cells per line, made of stainless steel and housed in chromed casings.

DIAMETER, COLOR, AND EXTERNAL QUALITY DETECTION
Our sorting machine is equipped with an advanced system consisting of a box with LED lighting and two high-resolution cameras for each channel. This configuration allows for highly precise detection of the diameter, shape, and color of each product. Dedicated cameras for diameter measurement and color analysis are installed on every working lane, ensuring accurate and detailed data collection. For external quality assessment, a combined vision system is used, integrating an infrared camera with a high-resolution camera.

CENTRAL DISCHARGE
The product is unloaded from the roller via computer-controlled solenoids by computers that tilt the rollers and release each product onto an accompanying curtain and onto the exit belt.

TECHNICAL FEATURES

GRADING PARAMETERS
Weight, diameter, colour and external quality.

COMPATIBLE PRODUCT TYPES
Apples, pears, peaches, apricots, flat peaches, plums, avocados, citrus fruits, persimmons, pomegranates, tomatoes, garlic, onions and potatoes.

ROLLERS PITCHES
95 mm, 114 mm

NUMBER OF LANES
2, 4 & 6 Lanes. Additionally, the system allows for future scalability—an additional grader can be installed in parallel to the existing unit to support expanded grading line requirements.

WORKING SPEED
5 to 12 products / sec. / each lane, depends on shape and type of product.

STRUCTURE
Extruded aluminium, galvanised iron and/or AISI 304 stainless steel.

DISCHARGE METHOD
Central discharge via products collection belt on each outlet. For delicate fruit, via motorised brush.

ACCESSORIES INCLUDED
Possibility of connection via internet for remote technical support, Receiving lots of statistical data and report from system, advanced operation diagnostic system.

OPTIONAL ACCESSORIES
Automated roller washing system, labelling unit, and optional conveyor belts for handling both empty and full packaging. The outlet spacing is fully modular and can be customized according to the specific type of packaging system in use.