

HANDLING | TREATMENT | SORTING | PACKING | ROBOTICS





Company Profile

TAREND designs and manufactures complete fruit and vegetable sorting and packing lines, built on over 40 years of industry experience and more than 500 successfully delivered projects. We combine robust engineering with high-quality production and advanced automation to create systems that run faster, more efficiently, and with minimal downtime—while maintaining gentle handling and precise grading performance. From project planning to installation and commissioning, Tarend supports customers with end-to-end delivery—focused on measurable performance, long-term durability, and fast return on investment.

Tarend supports projects from concept to production:

- * Needs analysis & capacity planning
- * Line layout and process design
- * Manufacturing and factory validation
- * Installation, commissioning & training
- * After-sales support, spare parts, and optimization

Complete Fruit Sorting and Packing Lines



Products

Tarend designs and manufactures machines for the fruit and vegetable sorting and packing industry—from stand-alone machines to complete lines.

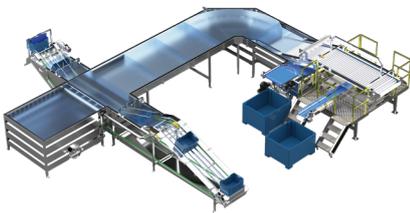
6-Axis De-Palletizing Robots



Bin Unloading Robots



Dumping Pools



Inspection Conveyors



Drying Tunnels



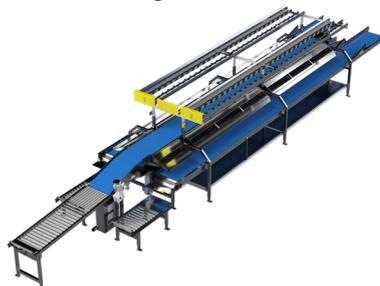
Brushing Units



Electronic Sorters



Manual Packing Stations



Automatic Crate Fillers



Rotary Crate Dumpers



DE-PALLETIZING

- 6-Axis Robots
- Rotary De-Palletizers
- Cartesian De-Palletizers

INFEED

- Bin Unloading Robots
- Bin Submerging Units
- Crate Submerging Conveyors
- Dumping Pools
- Rotary Crate Dumpers
- Inspection Conveyors

TREATMENT

- Brushing Units
- Washing Units
- Waxing Units
- Hot Chemical Units
- Drying Tunnels
- Drenchers
- Crate Washing Machines

SORTING

- Electronic Sorters
- Mechanical Pre-graders

PACKING

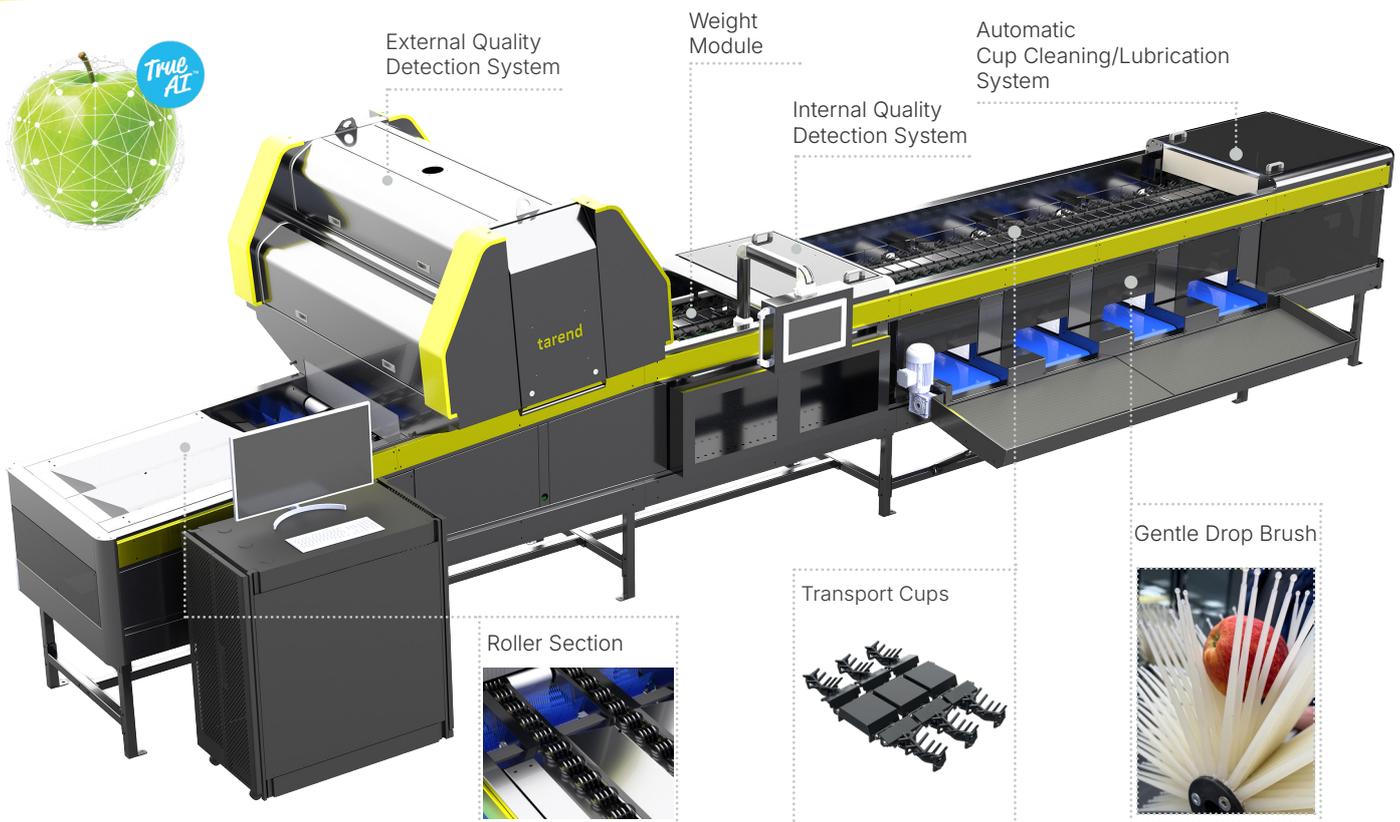
- Manual Packing Stations
- Automatic Crate Fillers
- Automatic Bin Fillers
- Automatic Packers
- Hydro-Fillers

PALLETIZING

- 4-Axis Palletizers
- Plate-Type Palletizers
- Handling Conveyors



Sorters



Weight



Size



Color



External Quality



Internal Quality

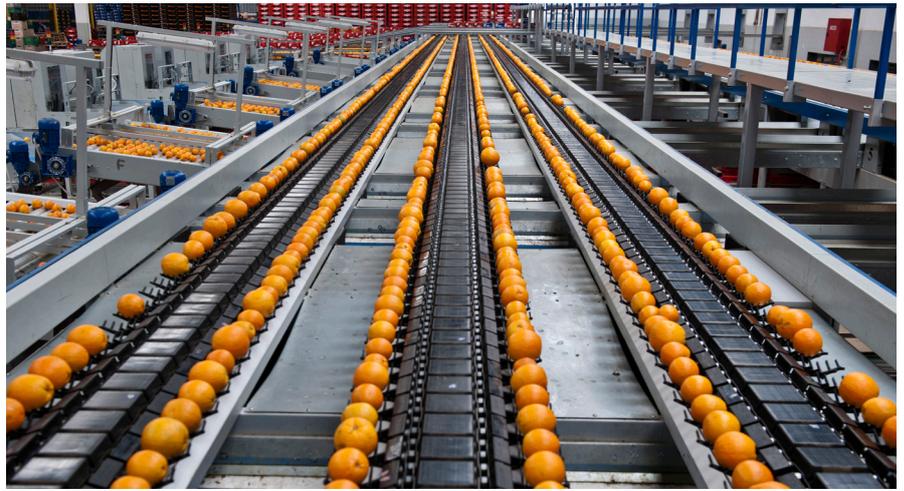
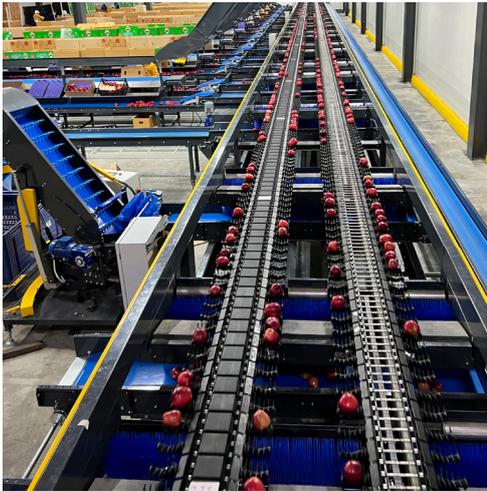
Designed to grade fruit with high accuracy, speed, and gentle handling. Its modular, customizable structure is tailored to your needs and manufactured to high-quality standards. Advanced AI integration enables both external and internal quality inspection. The patented drop-brush system protects every single fruit—because every fruit matters.

The user-friendly interface ensures easy operation, while automatic chain tensioning, automatic lubrication, and automatic cup washing minimize maintenance and downtime.

Features

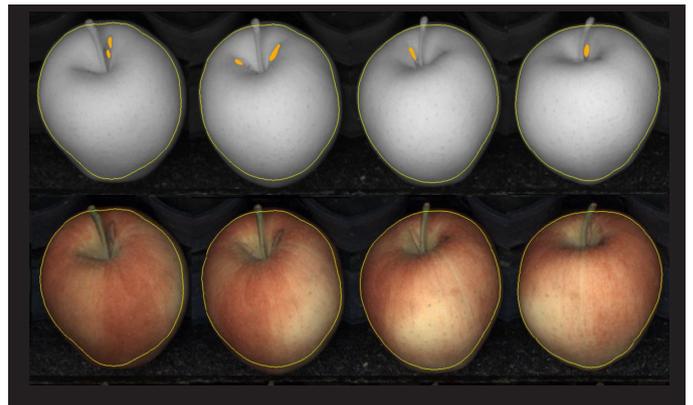
- **Sorting Range:** Diameter range of 40 - 130 mm.
- **Average Lane Capacity:** 25.000 pieces / hour
- **Speed:** Up to 12 cups/sec.
- **Fill cup ration:** Min. 70%
- **Number of Exits:** Up to 48
- **Feedback conveyor:** Returns unsorted fruit back to the start of the grading line for re-feeding
- **Automatic Lubrication System**
- **Automatic Chain Tensioning System**
- **Automatic Cup Washing System**

Models	Number of Lanes	Feeding Width (mm.)	Capacity (fruit/hour)	Capacity (tons/hour)
TES2	2 LANES	1.000	50.000	5 - 7,5
TES4	4 LANES	1.500	100.000	10 - 15
TES6	6 LANES	2.000	150.000	15 - 22,5
TES8	8 LANES	2.500	200.000	20 - 30
TES12	12 LANES	2 × 2.000	300.000	30 - 45
TES16	16 LANES	2 × 2.500	400.000	40 - 60



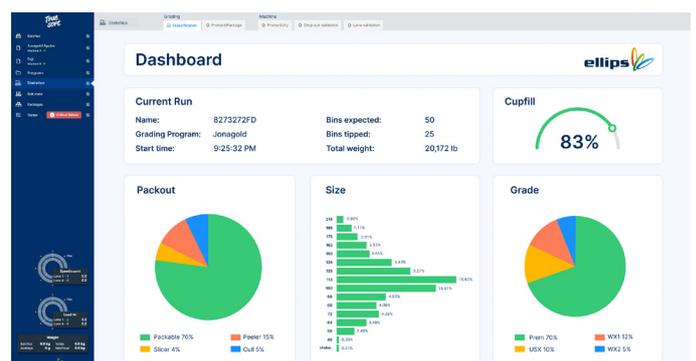
Tarend combines a robust machine structure and specially engineered, gentle-handling components with AI grading power that is continuously progressing toward near-100% performance

AI-powered sorters are trained on a large, continuously growing global dataset, and it consistently outperforms traditional rule-based algorithms by learning from real production conditions. Because the data is collected from customers worldwide, every installation benefits from **collective intelligence**—improvements made in one region can strengthen performance everywhere. Highly reliable external quality detection of challenging defects such as stem-end cracks, sunburn, and russeting, helps reduce false rejects and minimizes waste.



We do not only evaluate what is visible on the surface; we also detect what cannot be seen by the naked eye. Through internal quality inspection, we help prevent non-conforming fruit from reaching your target market and protect your brand reputation. Our **AI-integrated internal quality system** can accurately identify a wide range of internal defects, including browning, watercore, and black heart.

With an easy-to-use **interface**, operators can quickly access exactly the information they need. The dashboard presents both real-time and selected time-range insights—such as throughput/capacity, full cup rate, and size distribution per batch—on a single screen with clear graphical charts



6-Axis De-Palletizing Robots



All in one system: Picks crates from the pallet, gently empties fruit into the line, and stacks empty crates back onto the pallet.

Eliminates auxiliary conveyors and tipping dumpers, reducing investment costs, maintenance, and downtime. Flexible setup for different pallet/crate sizes and various pick-and-place positions.

Features

- Capacity : Up to 240 cycles/hour
- Rated Payload : 120 kg
- Holding Dimensions : 1200 × 1200 mm
- Reach Radius : 3400 mm
- Installed Power : 10 kW
- Air Consumption : 113 litres/minute @ 6 bar
- Touchscreen HMI (Operator Panel)

Options

- Pallet Infeed and Outfeed Conveyors
- Pallet Height Detection System
- Product Distribution Conveyor
- Crate Washing Machine Integration



Rotary Crate Dumpers



The **Rotary Crate Dumper** ensures gentle and continuous crate discharge into the line. It is a flexible system that automatically adjusts to the incoming crate dimensions (length, width, and height), making it suitable for all crate types and sizes.



Features

- **Capacity:** Up to 60 crates / minute (Capacity may vary depending on crate dimensions.)
- **Max. Crate Dimensions (L x W x H):** 600 × 400 x 325 mm.
- **Max. Crate Weight:** 20 kg.
- **Automatic Crate Size Adjustment:** The system self-adjusts to different crate lengths, widths, and heights.
- **Easy-Access Side Covers:** Enclosed, easy-access design maximizes operator safety, while magnetic door switches provide a reliable safety stop.
- **Anti-Misalignment Side Rollers:** Keep the belt centered and ensure stable tracking.
- **Crate Jam Detection:** Automatically detects crate jams and stops the system for safe operation.
- **Touchscreen HMI (Operator Panel)**

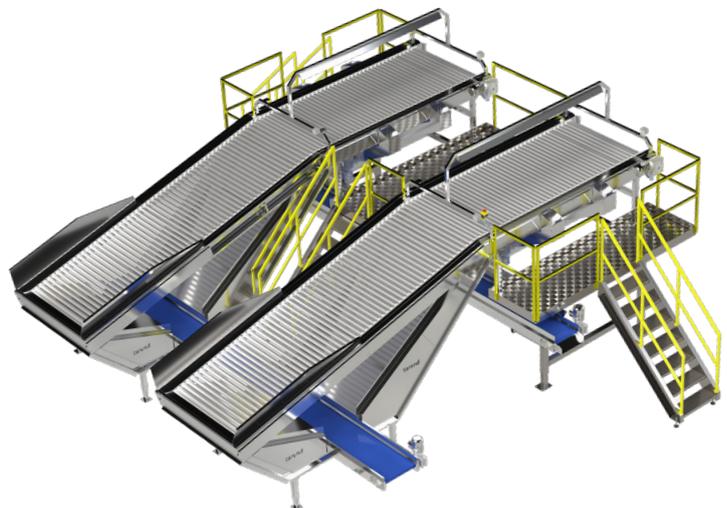
Options

- **Crate Shaking System:** Ensures crates are fully emptied during dumping.
- **MES Integration:** Real-time production data exchange and traceability.
- **Dust Extraction System:** Reduces airborne dust and improves workplace cleanliness.

Inspection Conveyors

Inspection roller conveyors are engineered to facilitate efficient manual inspection and removal of defective fruit and foreign materials from the incoming product flow. To improve ergonomics and productivity, the system can be equipped with a leaf-removal conveyor, reject conveyor, worker platforms, and integrated LED lighting for enhanced visibility.

For delicate produce, rubber-coated rollers are used to minimize surface damage, while the discharge section features a specially developed gentle-drop brush system to ensure smooth, low-impact transfer to the next unit.

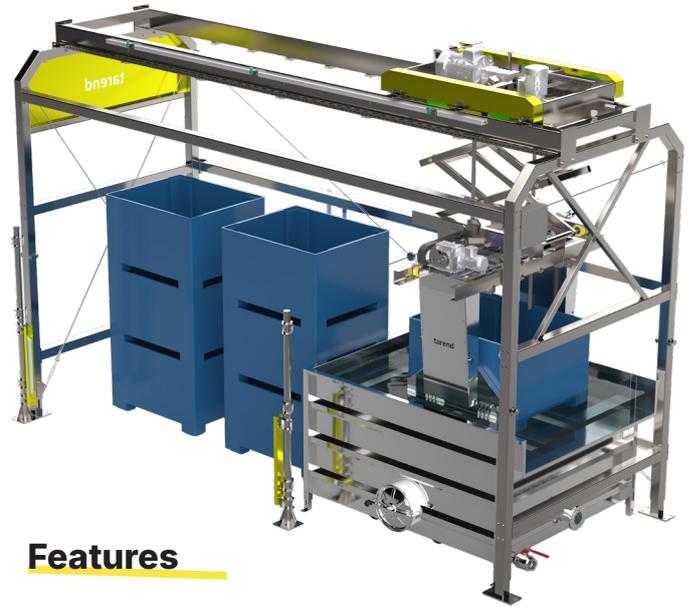


Bin Unloading Robots



Bin unloading robots ensure gentle and fast discharge of fruits from bins into the sorting lines. The robot sequentially picks up the bins, immerses them into the water, and after unloading the fruit, releases the empty bin. To enable quicker and more delicate discharge into the water, the bin is rotated after entering the water, allowing the fruit to flow out smoothly.

Optionally, full-bin and empty-bin transfer conveyors can be added; by enabling infeed of up to three bin pallets, they increase the robot's throughput.



Features

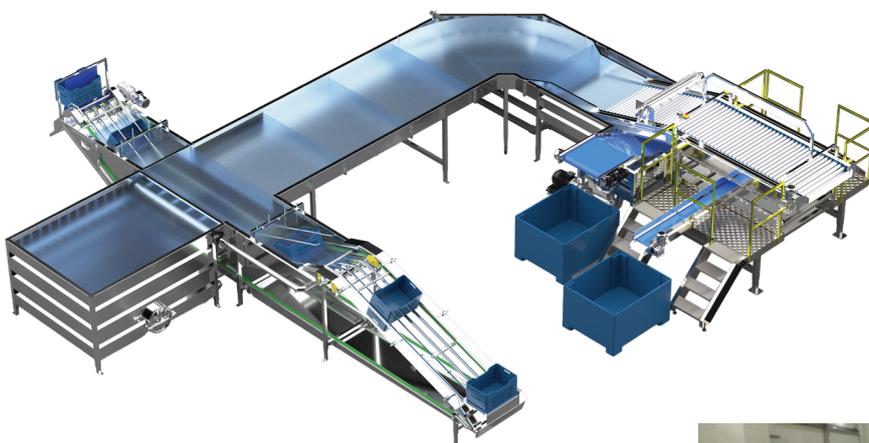
- Capacity: Up to 50 bins / hour
- Rated Payload: 350 kg
- Holding Dimensions: 1300 × 1300 mm
- Installed Power: 10 kW
- Safety Fences / Light Curtains / Gates
- Touchscreen HMI (Operator Panel)

Options

- Pallet Infeed and Outfeed Conveyors



Dumping Pools

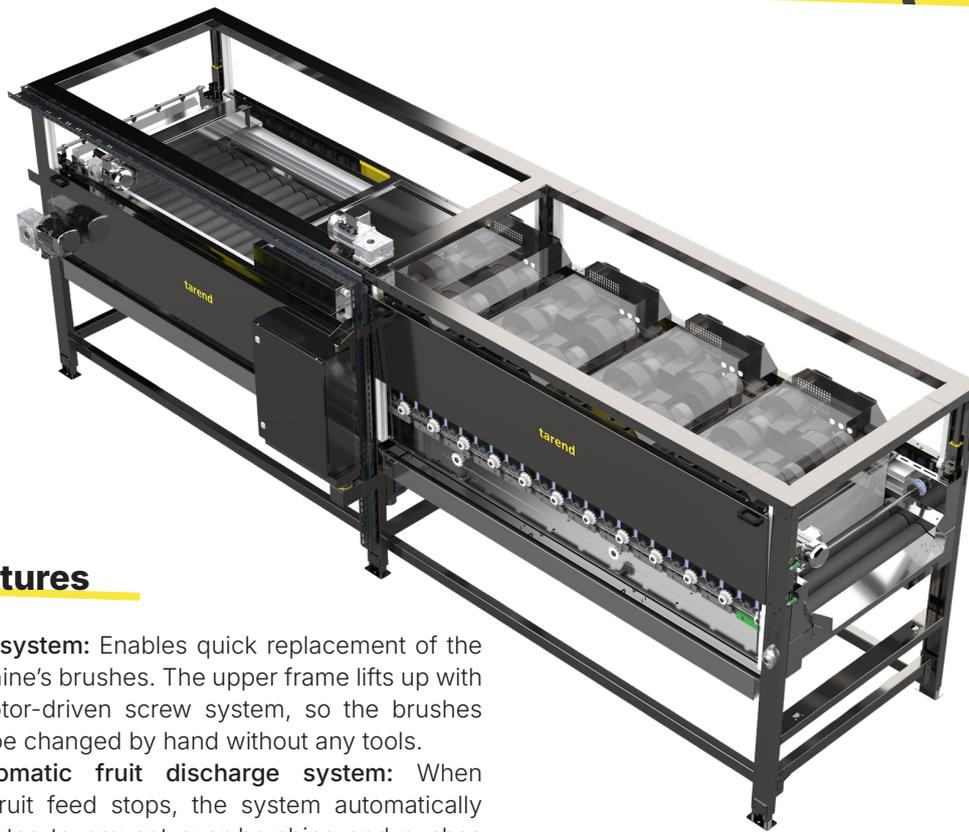


Dumping pools provide gentle infeed of both bins and crates into the sorting line. Bins can be fed via bin unloading robots or simpler dipping systems, while crates are continuously fed into the water by crate submerging conveyors.

Additional components that enhance the functionality of the dumping tanks include a leaf-separation filter conveyor, a clean-water waterfall system, cleaning access covers, and roller inspection conveyors that transfer the product from the pool to the next unit.



Brushing Units



Brushing units can be configured in various ways for washing, polishing, drying, waxing and dry brushing applications.

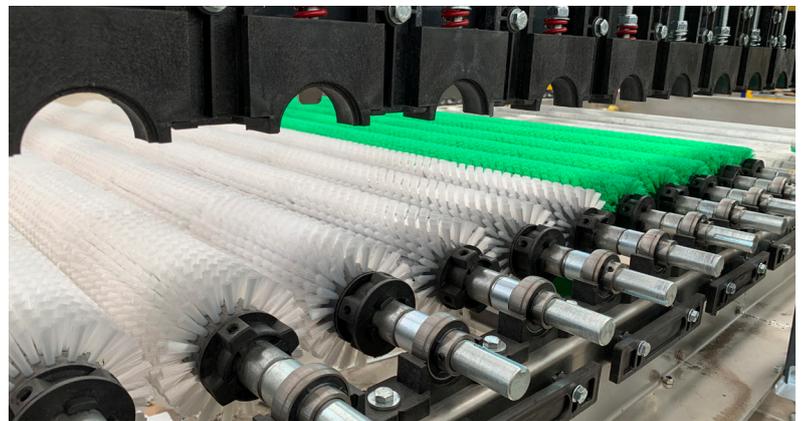
Depending on the process requirements, accessories such as foam generator, shower cabin, chlorination unit, waxing and chemical application atomizers, high-pressure fans, and dust extraction system can be integrated into the brushing units.

Features

- **Lift system:** Enables quick replacement of the machine's brushes. The upper frame lifts up with a motor-driven screw system, so the brushes can be changed by hand without any tools.
- **Automatic fruit discharge system:** When the fruit feed stops, the system automatically activates to prevent over-brushing and pushes the fruit forward to the next unit.
- **PLC-Controlled Start/Stop:** Brushing activates automatically when fruit enters and stops when fruit flow ends. Water, detergent, wax, and chemical dosing shut off simultaneously to prevent waste and reduce operating costs.
- **PLC-Controlled Wax and Chemical Dosing System**
- **Easy-access side covers with pressurized gas springs for effortless opening**

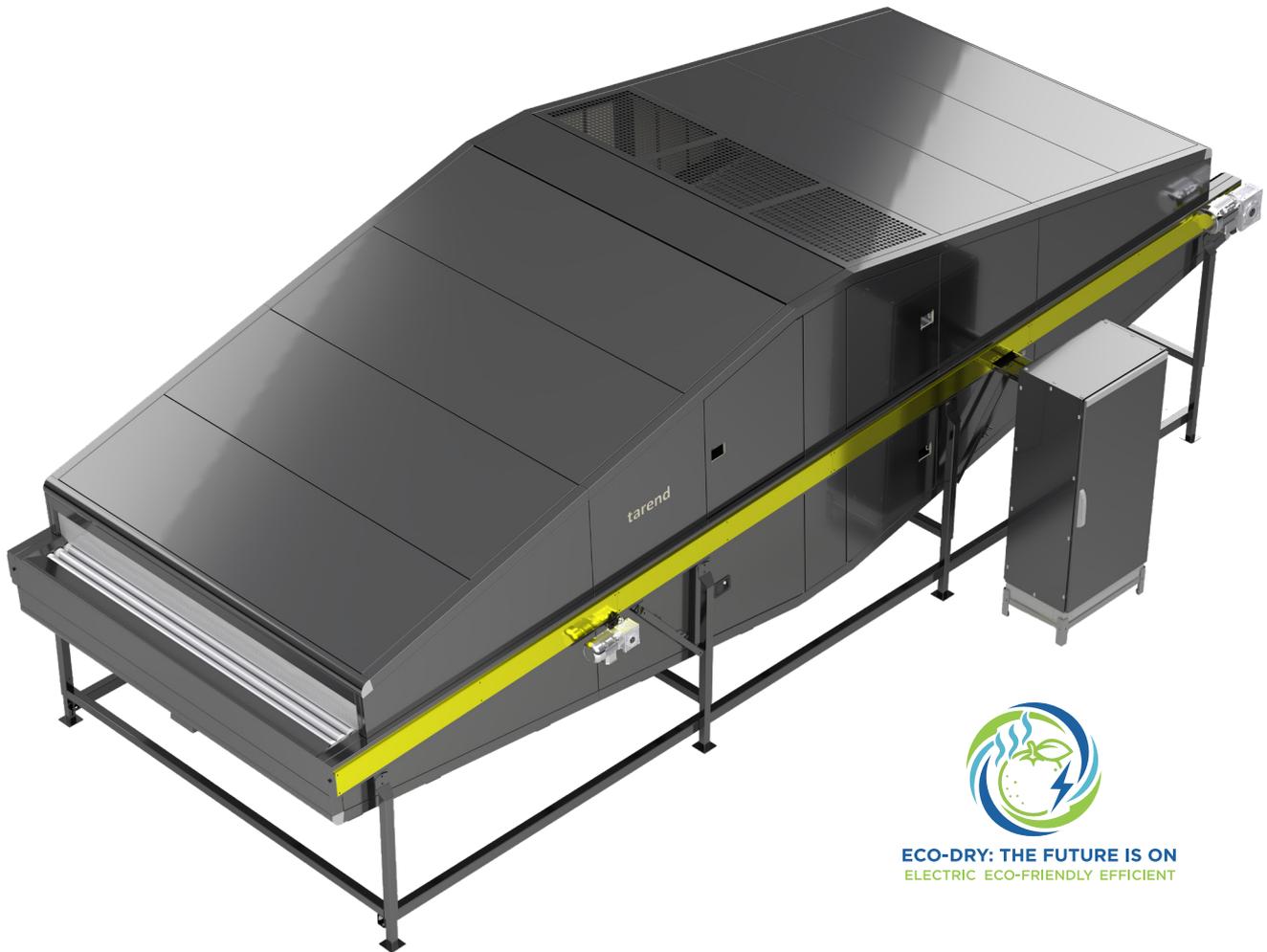
Options

- **By-pass conveyor:** Transfers products that do not require brushing directly to the next section-with single-button control for quick position adjustment.



Application	Models	Width (mm.)	Lenght (Rows of Brushes)	Capacity (tons/hour)	Sorter
WASHING	BWU-240/BWU-250/BWU-260	1.000	40 / 50 / 60	5 - 7,5	2 LANES
WASHING	BWU-440/BWU-450/BWU-460	1.500	40 / 50 / 60	10 - 15	4 LANES
WASHING	BWU-640/BWU-650/BWU-660	2.000	40 / 50 / 60	15 - 22,5	6 LANES
WASHING	BWU-840/BWU-850/BWU-860	2.500	40 / 50 / 60	20-30	8 LANES
WAXING / DRYING / DRY BRUSHING	BWX-220/BDU-220 / BDB-220	1.000	20	5 - 7,5	2 LANES
WAXING / DRYING / DRY BRUSHING	BWX-420/BDU-420 / BDB-420	1.500	20	10-15	4 LANES
WAXING / DRYING / DRY BRUSHING	BWX-620/BDU-620 / BDB-620	2.000	20	15- 22,5	6 LANES
WAXING / DRYING / DRY BRUSHING	BWX-820/BDU-820 / BDB-820	2.500	20	20-30	8 LANES

Drying Tunnels



ECO-DRY: THE FUTURE IS ON
ELECTRIC ECO-FRIENDLY EFFICIENT

Features

Designed for maximum efficiency, the **Drying Tunnel** dries residual moisture or wax after washing and waxing.

Electric heating combined with precise temperature control, optimized airflow, and superior insulation ensures uniform drying while reducing energy use—economical and eco-friendly.

- **PLC-Controlled Temperature Management System**
- **Heater Overheat Protection**
- **Uniform Airflow Distribution System**
- **Controlled Fruit Rotation for Efficient Drying**
- **Easy Access Maintenance Doors:** The drying tunnel has 8 lockable access doors for easy reach to the circulation fans and heating elements.
- **Automatic roller washing system:** Rollers are automatically cleaned using a brush system activated by pneumatic pressure and a pump that doses detergent.
- **All-Stainless Steel Water Collection Pans**

Models	Heating Capacity	Width (mm.)	Lenght (mm.)	Capacity (tons/hour)	Sorter
DTE-026/DTE-028	48 kW	1.000	6.000 / 8.000	5 - 7,5	2 LANES
DTE-046/DTE-048	72 kW	1.500	6.000 / 8.000	10 - 15	4 LANES
DTE-066/DTE-068	96 kW	2.000	6.000 / 8.000	15 - 22,5	6 LANES
DTE-086/DTE-088	120 kW	2.500	6.000 / 8.000	20 - 30	8 LANES

Automatic Crate Fillers



The **Automatic Crate Filler** enables fast and accurate filling of graded products into crates based on preset weight or volume values significantly reducing labor requirements.

Features

- **Capacity:** Up to 4 fills / minute
- **Max. Crate Dimensions (L x W x H):** 600 × 400 × 325 mm. (Long-side leading)
- **Max. Filling Weight:** 20 kg.
- **Weight-or Volume-Based Operation**
- **Accurate Filling with Gentle Handling**
- **Touchscreen HMI (Operator Panel)**

Options

- **Empty Crate Infeed Conveyors:** Automatically supply empty crates to the crate filler for continuous operation.
- **Crate Shaking/Vibration System:** Enhances in-crate distribution.
- **Integration with sorter software:** Enables group-based filling of graded fruit.





TAREND AI

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