Datasheet

Online fruit sorting system | NY2380

Features

• Fully automated, customized design based on the client's workshop and fruit requirements;

• Comprehensive service including needs analysis, solution quotation, production implementation, commissioning and acceptance, model building, training and acceptance;

• Analyzes and sorts fruits based on appearance, color, sweetness, weight, and other indicators;

• Single-channel sorting speed: 2-3 t/h;

• Optional systems include water-based sterilization, air-drying, and dry-to-feed switching.

Suitable fruits

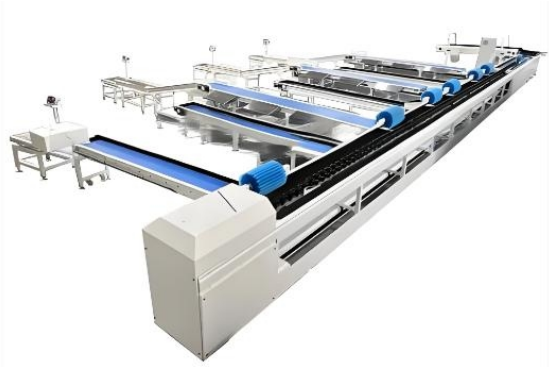
For spherical fruits with a diameter between 50mm and 110mm, customized modeling is required for different fruit varieties.

- Oranges,
- tangerines,
- lemons,
- grapefruits,
- apples,
- persimmons, etc.

Description

The NY2380 online fruit sorting system is the latest fully automated online fruit inspection system developed by Optoelectronics.

This equipment analyzes and sorts fruits based on their appearance, color, sweetness, and weight. Using near-infrared spectroscopy, it measures fruit sweetness. Leveraging machine vision and AI algorithms, it can identify defects such as spots, bruises, cracks, and deformities on the fruit surface in real time and quickly measure sweetness. The equipped weighing module sorts fruits by weight. The instrument boasts fast detection speed and high accuracy, automatically completing grading and sorting without manual intervention, significantly improving production efficiency, reducing labor costs, and ensuring consistent fruit quality. It is suitable for large-scale processing of various fruits and vegetables, including citrus, apples, and pears.



NY2380 online fruit sorting system

1 NY2380 Detection Principle

The NY2380 online fruit sorting system uses near-infrared light to penetrate the fruit, detecting the spectral signals of transmitted/reflected light. Combined with a calibration model, it can quickly calculate the soluble sugar content, achieving non-destructive and rapid detection. Utilizing high-definition digital cameras, holographic data acquisition technology, and proprietary 3D vision imaging technology, it accurately sorts fruits based on their shape, surface color, size, and current condition. Simultaneously, it employs patented Gaussian mixture modeling and adaptive update technology to achieve ultra-high-speed, high-precision sorting and comprehensive color grading and value-based grouping.

2 Optional Accessories

Water-based	Flexible feeding,cleaning and sterilization
Sterilization system Air drying system	Surface air drying,without damaging the fruit characteristics
Dry switching feeding	Dry direct feeding
Export packaging line	For manual packing

3 Physical pictures

4 Technical parameters

Product model	Model	NY2380
	Sortable Varieties	Fruits with a fruit diameter of 50-110mm such as citrus oranges,apples,pears,peaches,etc. (modeled according to fruits)
	Fruit Shape and Color Sorting	Using high-definition digital cameras,data holographic acquisition technology,and exclusive three-dimensional vision imaging technology to accurately sort the surface color,size, and shape of fruits

	Fruit Diameter Sorting	By calculating parameters such as the external dimensions and projected area of fruits,users can freely set parameters such as the maximum fruit diameter,minimum fruit diameter,and transverse diameter ratio
	Defect Sorting	Using a patented algorithm to accurately sort the fruit stalk, calyx,navel of navel oranges,spots,etc.,and can also accurately identify smaller fruit navels
	Wrinkle Sorting	Screen out fruits with citrus and water loss phenomena
	Sugar Content	Measurement of fruit sweetness,with an accuracy of±1% (depending on modeling)
	Weight (Optional)	Electronic sensing technology is used to collect the quality information of fruits and vegetables.
Product parameters	Detection speed	Single-channel sorting speedis 2-3t/h
	Color sorting	Effectively sort fruits with different coloring rates,effectively sort strip red and patch red,sorting qualification rate is greater than 95%
	Fruit shape sorting	Effectively sort abnormal-shaped fruits,sorting qualification rate is greater than 95%
	Defect sorting	Effectively sort various defective fruits,sorting qualification rate is greater than 95%
	Material	Sheet metal +aluminum alloy
IO function	Communication method	Network port
	Trigger method	Supports two methods:soft trigger and hard trigger