

Fruit Grading System

Fruit Sizing, Grading and Sorting Systems

Azitech Pty Ltd in Sydney, Australia, are specialists in designing and developing new sorting and sizing systems for use in fruit and vegetable processing.

The FruitSorter systems use high-technology digital cameras to scan the fruit or vegetables as they move along a series of conveyors. The pieces are then graded according to a particular program and then allocated to a series of sort bins or diversion conveyors.

The systems are individually designed to meet each customer's specific requirements. This ensures optimum on-site installation with minimum plant shut-down. The product handling conveyors are also custom designed to ensure easy integration with existing infrastructure and minimal fruit handling damage.



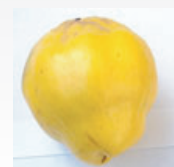
General System Features:

System features depend on the particular product being sorted or graded but generally the systems have the following features.

- Shape and size grading
- Surface blemish and defect detection
- Colour sorting or grading
- Grading > 9000 pieces per minute
- System can easily be scaled up or down to handle different production requirements
- Automatic monitoring of sort bin status
- Warning and alarm notification for operators
- Reliable and easy to use

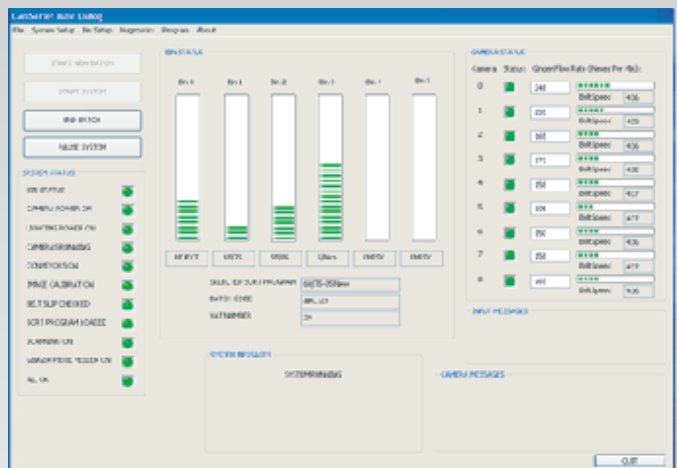
Benefits

- Increase in yield of particular grades
- Production process improvement
- Consistent piece grading
- Multiple product selection and configuration
- Reduced manual labour



Operator Display Interface

The grading system uses a personal computer to control the operation of the system. On startup, the system performs an automatic calibration startup procedure during which the appropriate grading program is selected and uploaded to the cameras. The cameras then run independently to grade the pieces and sort them into the relevant storage bins.



Grading and Sorting System

All our inspection systems are based on robust machine vision cameras coupled with sophisticated analysis algorithms. Each camera captures images of every piece of fruit as it passes through the inspection station. The pieces are then graded into a particular category.

A range of additional information logging, database or reporting software is available.

Diced Ginger Grading System



Azitech in conjunction with a technology partner developed the Ginger sorting system for a large ginger processor in Queensland. The existing conveyors and sort bins were reused with the new scanning and bin management system. The system sorts the ginger based on different programs of size and shape criteria.

FruitSorter - Possible Applications



- Carrots - shape and length grading. Split and surface blemish detection



- Corn cob - size, length and shape grading.



- Citrus fruit - size and colour grading. Surface blemish detection



- Cucumber - size, length and shape grading.



- Apples - size and colour grading. Surface blemish detection



- Jalapeno - size, length, shape and colour grading.



- Avocado - size and colour grading. Surface marks and sunburn detection



- Pineapple - size, length and shape grading.



- Potato - size and shape grading.

This sorting and grading technology could be applied to a variety of other fruit and vegetables. If you have a possible application, give us a call.