

Ikegami



TIE-7000A

Color Visual Tablet Inspection Equipment



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By adopting the RGB color line sensor technology, the TIE 7000A has the capability of inspecting tablet for diffuse stains, printing defects, and many other defects with a high degree of accuracy. The 50 micron resolution allows detection of minute particulate and even allows detection of fibers both on and protruding from the tablet. With an output capacity of up to 250,000 tablets per hour, the TIE 7000A can contribute greatly to improving product quality, consistency and safety, as well as helping to improve overall production efficiency.



High Speed Inspection up to 250,000 tablets per hour

The combination of the high speed, high volume tablet feeding and transportation system and the advanced high speed visual processing software allow the TIE 7000A to have a real world output of up to 250,000* tablets per hour. Additionally, the primary and secondary belt transport systems provide for a fast, stable and reproducible transportation of the tablets to the visual inspection station.



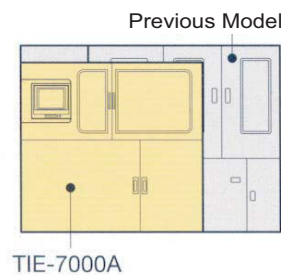
*Based on 8mm diameter tablets.

Simple and Reliable Tablet Alignment

The tablet alignment system is simple to adjust and accepts a wide variety of tablet shapes and sizes. It provides for a stable, uniform and high speed introduction of the tablet into the imaging section.

Space Saving Compact Design

The modular design of the TIE 7000A gives it a small, space saving footprint. It keeps the processing and mechanical areas close, but isolated from each other.

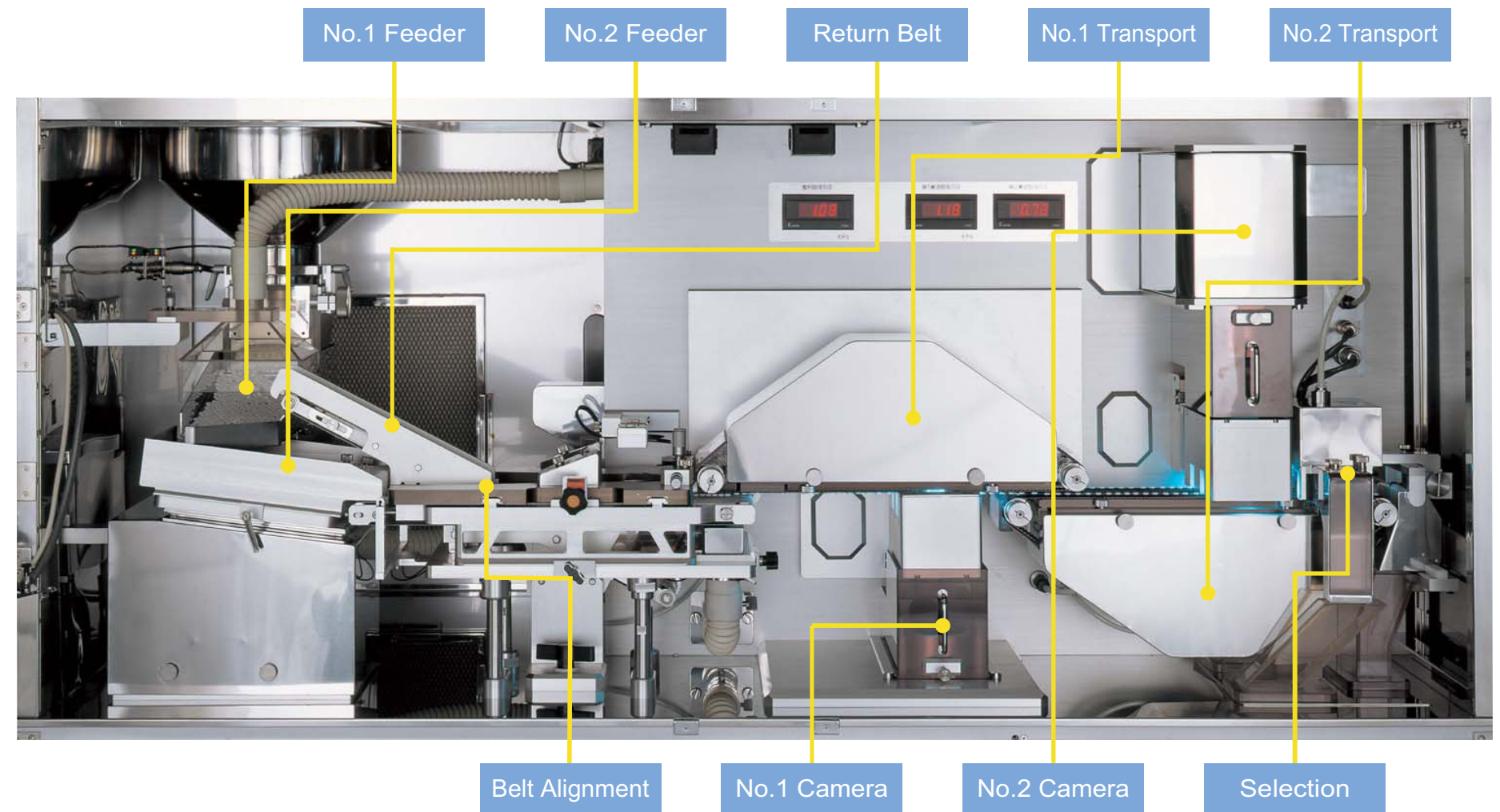


Fast and Easy Cleaning and Change Over

There are a minimal number of parts that must be removed for cleaning or product change over. Once the parts are removed, the remaining compartment can be easily and quickly cleaned.



Easily Removable Transport Section ▲▼



Operator control uses Color Touch Panel

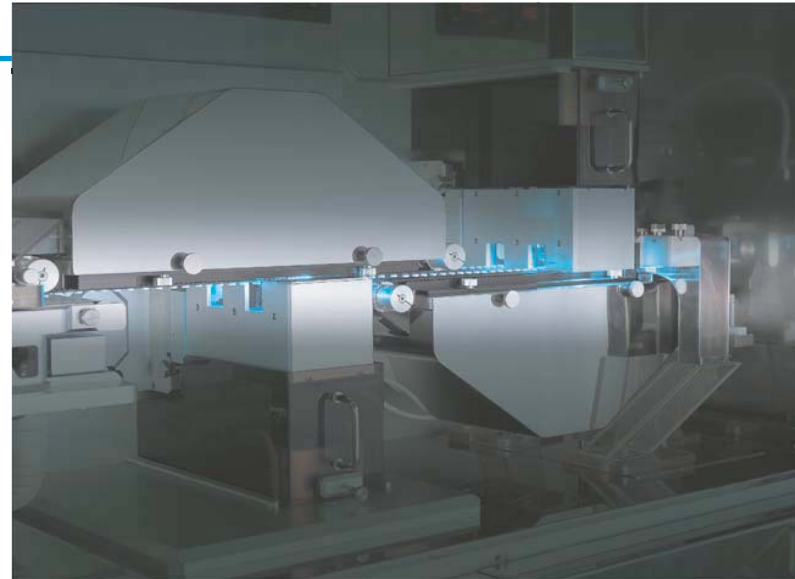
The TIE 7000A utilizes a color touch screen user interface. On this panel, the operator can easily pull up batch recipes, set defaults, adjust sensitivities and adjust parameters to fine tune the machine.

The touch screen rotates 180 degrees which simplifies initial set up or fine tuning of the machine. In addition to accessing all of the functions of the machine and operating screens, the color touch screen can also be used to display inspection summaries, error reports, etc.



Display Samples



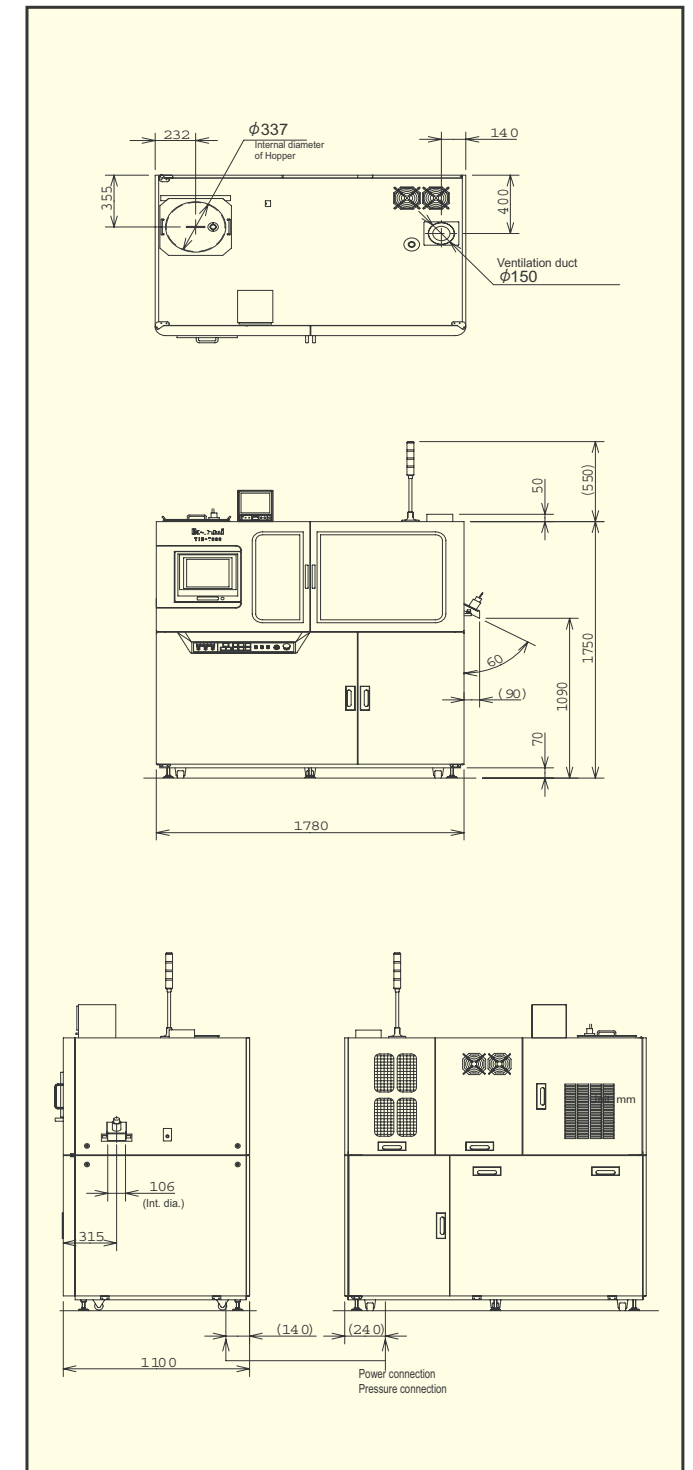


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Rating / Performance

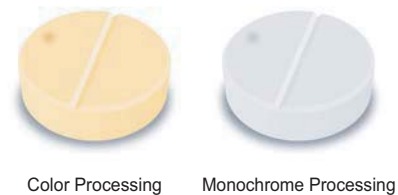
Applicable tablets	Plain tablet, Film-coated tablet, Sugar-coated tablet, Irregular-shaped tablet (division-lined tablet, Engraved tablet, printed tablet)
Applicable sizes	Shape: [Round tablet] 5mm ~ 12mm [Irregular-shaped] length max 21mm Thickness: 2mm ~ 8mm *Other sizes may be applicable with customer's requirement.
Color	Whitewcolor ~ Dark Brown color
Inspection items	Front/Back/Sides: Stain, Printing smudge, Printing blur, Chipping, Cracking, Deformation, Color stain, Discoloration, Color difference, Printing color difference, Hair, Fiber
Inspection accuracy	Stain: [front/Back] 50µm or larger corresponding to black spot [Sides] 50µm or larger corresponding to black spot Chipping: 2mm x 2mm
Processing capacity	Plain tablet, film-coated tablet (8mm): 250,000 tablets/hour Sugar-coated tablet (8mm): Approx. 200,000 tablets/hour
Lighting	Lighting method: Optical fiber Life estimated: 1,500H ~ 2,000H Lamp: Special high brightness lamp x4 (User replaceable)
Camera	Pickup device: RGB CCD Color line sensor Lens: F2.0 f=50mm Scanning method: one axis self-scanning method
Judging process	Real-time parallel processing method
Power requirement	Three phase AC200V/210V/220V (Selectable at Transformer tap) +/-10%
Power consumption	Less than 4KW
Air	Pressure: more than 0.5Mpa Consumption: less than approx 300 litre per minute Connection caliber: High coupler socket (400SH)
External dimensions	W1780 x H1750 x D1100 mm (excluding projection)
Weight	Less than 1500 kg
Option	Chipping detect function (special camera and lighting) Powder removal system Monitoring function Printing software LAN communication function (Ethernet) Color monitor External device interface Remote monitoring function

External Appearance



Color processing technology allows diffuse stains, scorching, foreign tablets and printing defects to be easily detected

The color camera system provides a much more flexible and powerful detection system than a comparable black and white system. Small or diffuse defects that are undetectable with black and white systems can be easily detected by the Ikegami color system.



High accuracy detection of small defects, foreign matter and fiber in or attached to the tablet

The newly developed control algorithms of the visual processing section and the ultra high quality optical system give the TIE-7000A the ability to accurately and reproducibly detect defects or foreign matter as small as 50 microns. The new algorithms also allows the unit to detect small diameter fibers on or protruding from the tablets and chipping of tablet edge.



Hair outside the Tablet

Full 360 degree tablet inspection

The newly designed high end optical technology assures complete inspection of top, bottom and sides of the tablet. 100% of the tablet surface is inspected reliably and reproducibly giving the TIE 7000A the highest efficiency of inspection.



Foreign Matters

Optional debossed tablet inspection

An additional camera and special lighting system can be added to the unit for the inspection of the debossing of the tablet for presence and quality of debossing.



Chipping

Optional LAN Interface

Production data (inspection conditions, batch results, error messages, etc.) can be sent to a network system for EBR or remote monitoring of the unit.

Design and specifications are subject to change without notice.

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