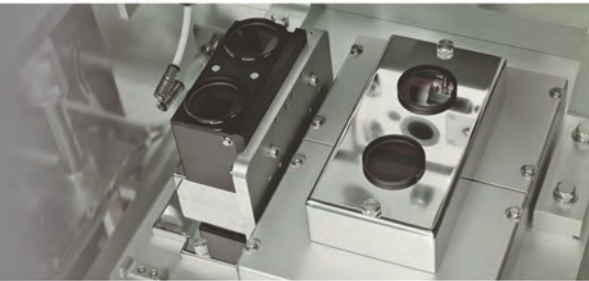


# Ikegami

Color Visual Tablet Inspection Equipment

# TIE-9000 SERIES

High Accuracy



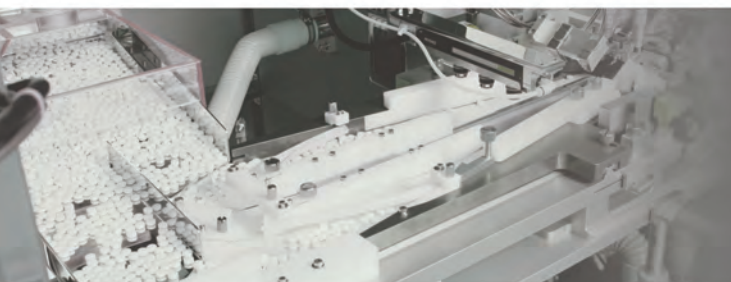
Quick Set-Up



Multi Type Tablets



High Speed Process



Low Power Consumption

**Less than 1/2 (TIE-9000)**

Compared with previous model

## Color Visual Tablet Inspection Equipment

# TIE-9000 SERIES

CSV (ER/ES [Electronic Records/Electronic Signatures]) capable

Improved quality for handling pharmaceutical tablets and increased efficiency of the total inspection process.



## Major features of TIE-9000 series

### 1. High Accuracy

TIE-9000 SERIES

Ikegami's newly designed high precision optical system. The 3D inspection system is able to detect microscopic contamination such as hair or woolen cloth.

### 2. Quick Set-Up

TIE-9000 SERIES

Preset data of good samples can be retrieved quickly. This feature is able to shorten operation time when multiple types of tablets need to be inspected.

### 3. Multi Type Tablets

TIE-9000

The simple mechanism allows easy switching of tablet type for multi tablets inspection. Touch-panel control provides improved operability.

### 4. High Speed Process

TIE-9500

Up to 300,000 tablets per hour (TIE-9000). Up to 600,000 tablets per hour (TIE-9500 dual-conveyer). 6 mm diameter, round FC type tablets.

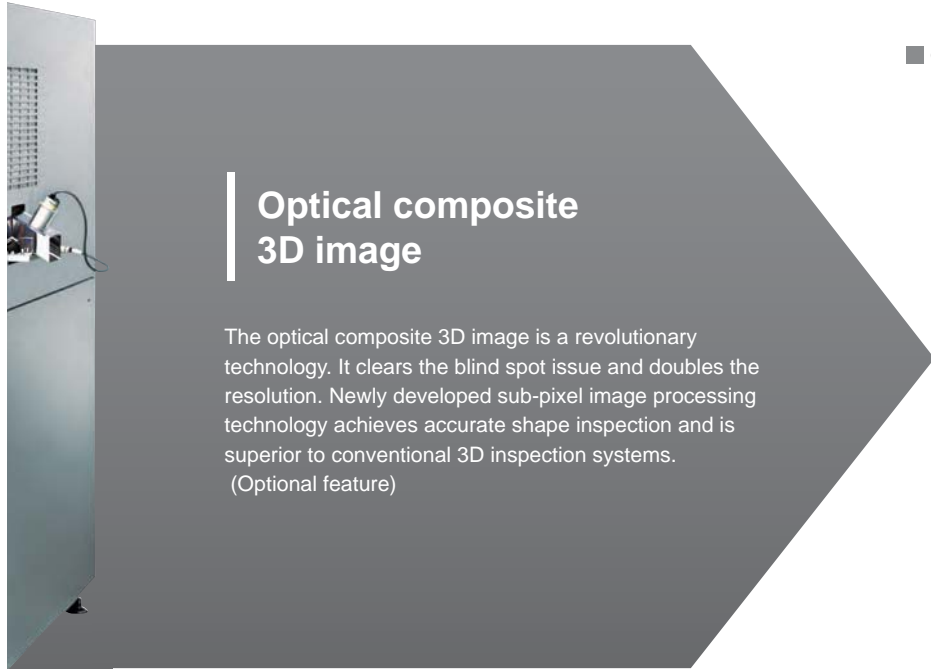
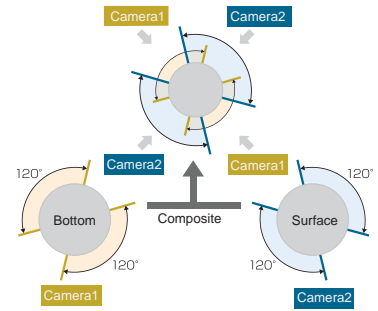
# High Accuracy

Newly developed 3D inspection system is superior to conventional inspection devices.

## TIE-9000 SERIES

### 360 degree inspection with no blind spot

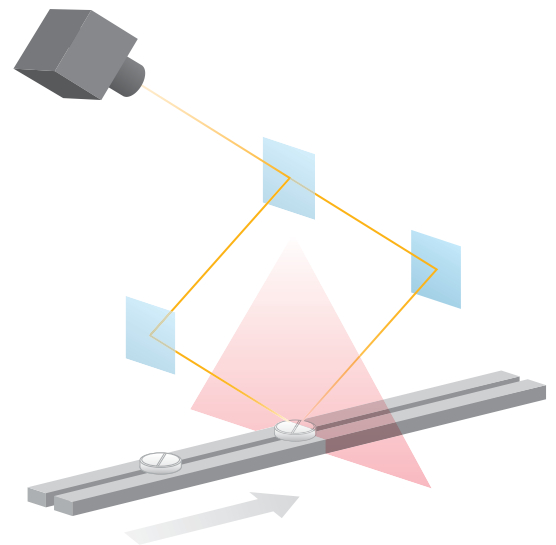
3D images can be captured simultaneously using Ikegami's high-precision optical system. All-surface (front, back, left, right) inspection with appropriate and individual lighting system is available.



### Optical composite 3D image

The optical composite 3D image is a revolutionary technology. It clears the blind spot issue and doubles the resolution. Newly developed sub-pixel image processing technology achieves accurate shape inspection and is superior to conventional 3D inspection systems. (Optional feature)

### Optical composite 3D image (Patent pending)



### Custom designed high resolution camera

3-CCD color line sensor camera was newly designed for the TIE-9000 series. Contaminants down to 50 micrometers diameter can be detected.



Front/Back captured image

Side surface captured image

### Long-life LED lighting

High luminance level LED light ensures temporal stability and spacial uniformity. The lighting level is adjustable to suit the tablet shape and provides stable conditions for various types of tablet.

# Quick Set-Up

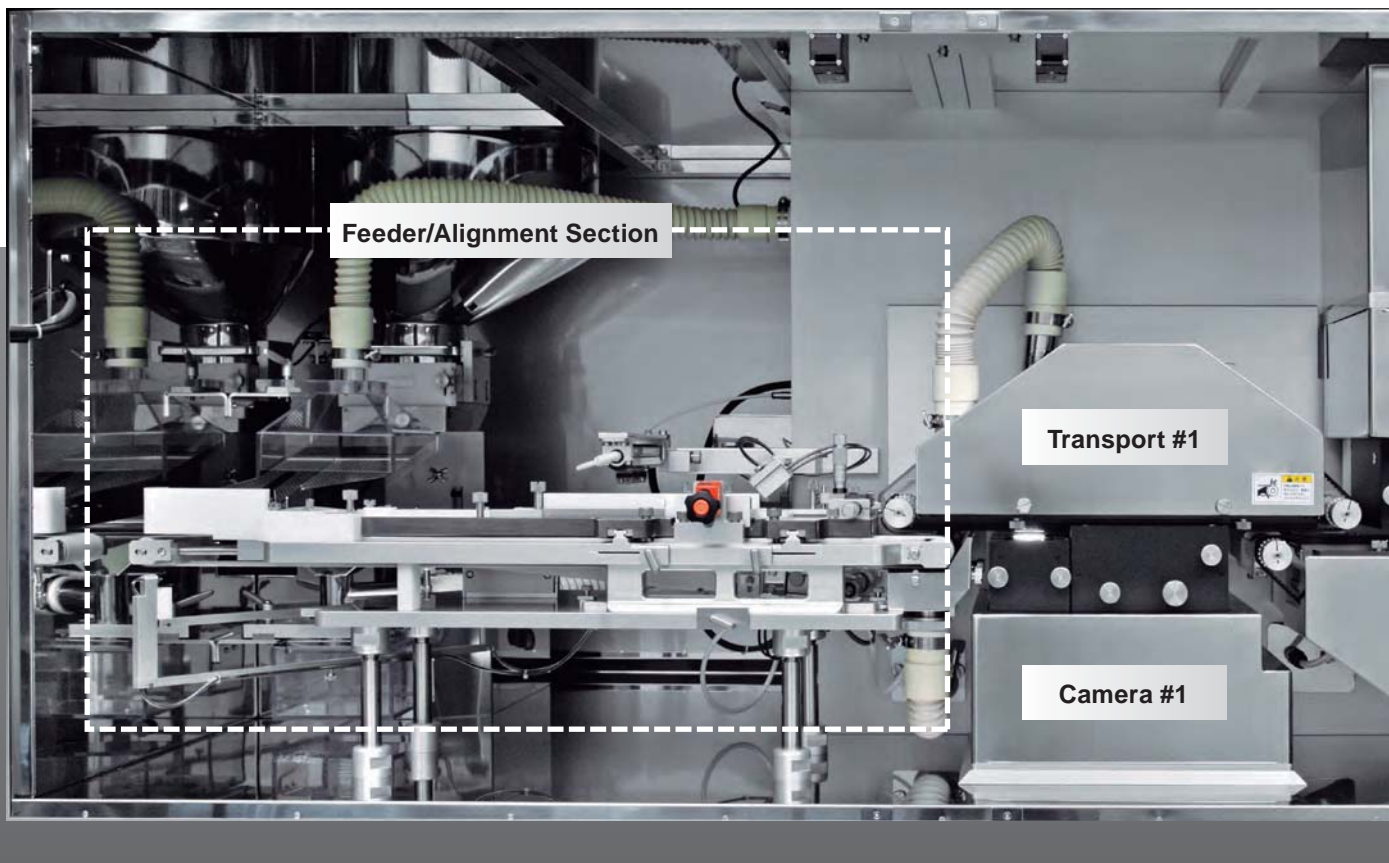
## TIE-9000 SERIES

### Shorten switching time

High luminance level LED light ensures temporal stability and spacial uniformity. The lighting level is adjustable to suit the tablet shape and provides stable conditions for various types of tablet.



# Ikegami's original optical system provides efficient production of pharmaceutical tablets



## Multi Type Tablets

## Superior operability and maintainability

**TIE-9000**

### Easy cleaning and multi type tablets

Reduced number of components allows easy cleaning and reduces cross-contamination issues. Easy switching for different type of tablets.

### Centralized and smooth operation

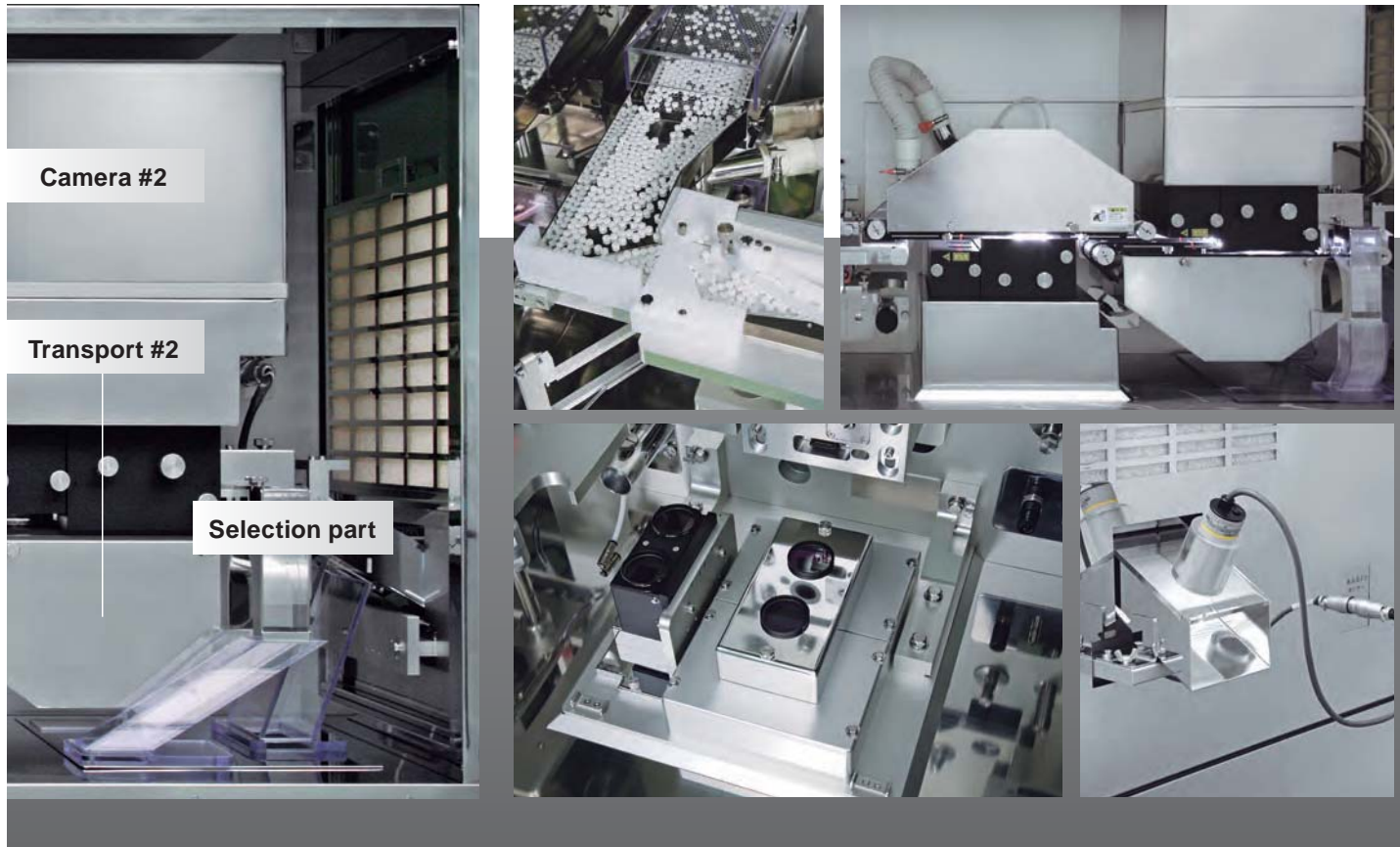
Each setting can be controlled via a touch panel PC. Image data and numeric data can be displayed on the same screen.



Control panel screen



s high reliability and allows  
ets.



## High Speed Process

Up to 600,000 tablets per hour

(6 mm diameter round FC tablet type with dual-conveyer)

**TIE-9500**

### Stable supply unit and alignment device

### High-speed, Dual conveyer TIE-9500

The supply unit and alignment device can be used even for orally disintegrating tablets. Inspection volume and alignment accuracy are both increased.

Up to 600,000 tablets per hour can be inspected using the TIE-9500 with its dual conveyer.



Tablet feeder section (TIE-9500)



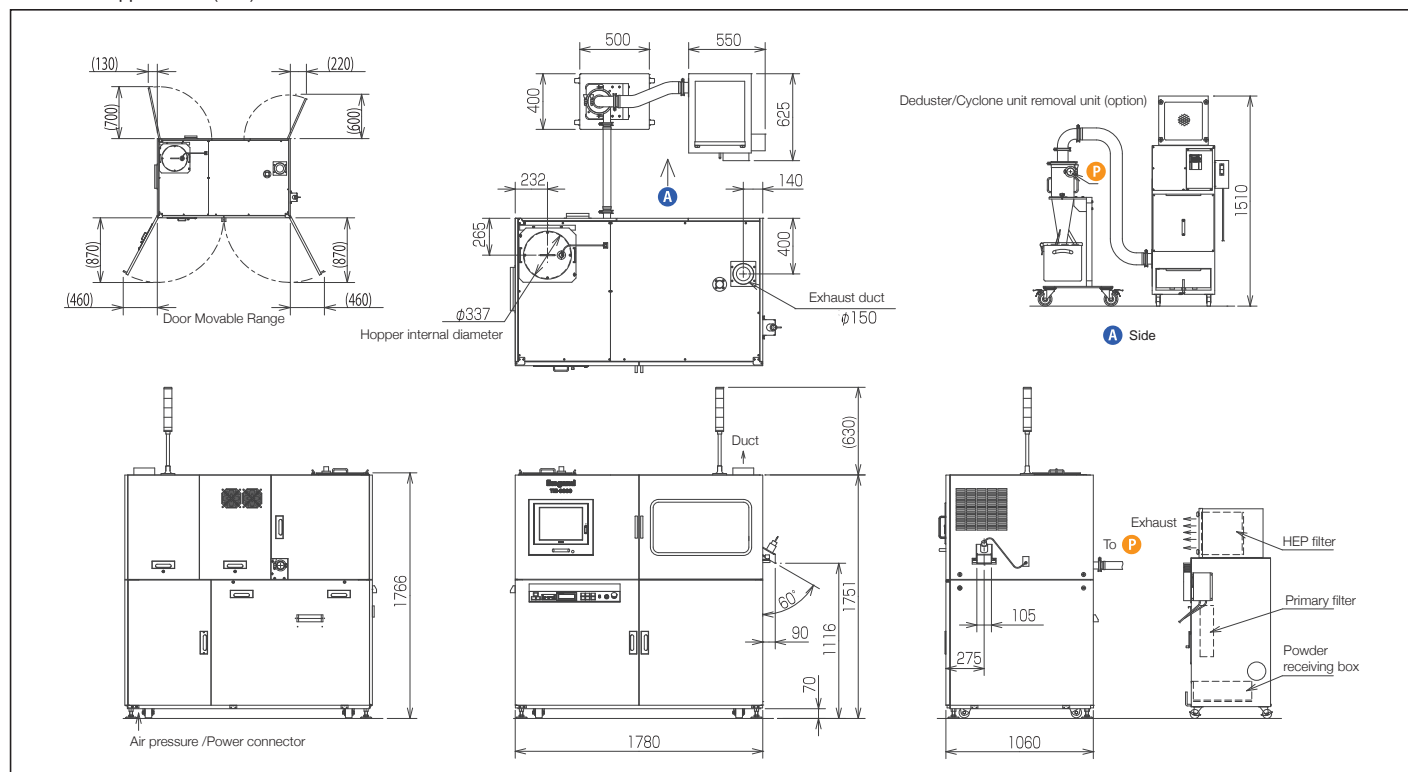
Transport section (TIE-9500)

# Tablet Inspection Equipment TIE-9000 SERIES

## Rating/Performance

Applicable tablet	Plain tablet, Film-coated tablet, Sugar-coated tablet, Irregular-shaped tablet	
Applicable size	Shape	[Round tablet] 5mm - 12mm [Irregular-shaped] length max 21mm
	Thickness	2mm - 8mm (Other sizes may be capable with custom settings: option)
Color	White color - Dark Brown, Colored type	
Inspection items	Front/Back/Sides	Stain, Printing smudge, Chipping, Cracking, Deformation, Discoloration, Color difference, Hair, Fiber, etc.
Inspection accuracy	Front/Back/Sides	50 micro meter in diameter or larger corresponding to black spot
Processing capacity	TIE-9000	250,000 - 300,000 tablets/hour (depends on table type and size)
	TIE-9500	500,000 - 600,000 tablets/hour (depends on table type and size)
Lighting	Standard inspection	High & stable luminance LED, Diffused illumination, Adjustable intensity, Expected life span 30,000H or longer
	Surface/Bottom	High & stable luminance LED, Diffused illumination, Adjustable intensity, Expected life span 30,000H or longer
Camera	Standard inspection	High sensitivity color line sensor camera, Lens: F2.8 f=52mm, Scanning method: one axis self-scanning
	Surface/Bottom	High sensitivity color line sensor camera, Lens: F2.8 f=52mm
Judgement process	High speed, real-time parallel processing method	
Power requirement	Supply power	TIE-9000: Three phase AC200V +/- 10%, 50/60hz, 5kW or higher (Selectable AC200V/210V/220V)
	Power consumption	TIE-9000: Less than 3kW (exclude optional units)
	Connection caliber	Terminal tables: M6 screws R/S/T/FG 4 terminals
Air supply	Pressure	0.5Mpa or more
	Consumption	Approx. 400 liter per minute
	Connection caliber	High coupler socket (400SH - 400PM)
Operating temperature	+20°C~+30°C	
Relative humidity	30% to 70% (no condense)	
External dimensions	W1780 x H1751 x D1060 mm (excluding protrusions)	
Weight	Approx. 1,400kg	
Optional features	3D inspection system, Congestion removal feature, CSV function, Deduster/Cyclone unit, Printing software, Surveillance system, Additional sensitivity setting feature, Simulator feature	

## External Appearance (mm)



Design and specifications are subject to change without notice.

U329A169-OM2

## Ikegami Tsushinki Co.,Ltd.

URL : <http://www.ikegami.co.jp/en/>

Head Office : 5-6-16 Ikegami, Ohta-ku, Tokyo 146-8567, Japan ..... TEL.03-5700-1111 / FAX.03-5700-1137  
 Overseas Sales Division : 5-6-16 Ikegami, Ohta-ku, Tokyo 146-8567, Japan ..... TEL.03-5700-4117 / FAX.03-5748-2200

## Ikegami Electronics Asia Pacific Pte.Ltd. URL : <http://sg.ikegami.co.jp>

Headquarters : 1 Tampines Central 5, #3-3 CPF Tampines Building, Singapore 529508 ..... TEL.6260-8820 / FAX.6260-8896



Other subsidiaries :

### Ikegami Electronics (U.S.A.), Inc.

37 Brook Avenue, Maywood, NJ 07607  
 U.S.A.

### Ikegami Electronics (Europe) GmbH

Ikegami Strasse 1, D-41460 Neuss, Germany  
 U.K. Branch: 1 Windmill Business Village,  
 Brooklands Close, Sunbury on Thames,  
 TW16 7DY England

### Ikegami Tsushinki Beijing Office

Room No.307 Tower B, Jia Tai International Mansion  
 No.41 East Fourth Ring Road, Chaoyang District,  
 Beijing China