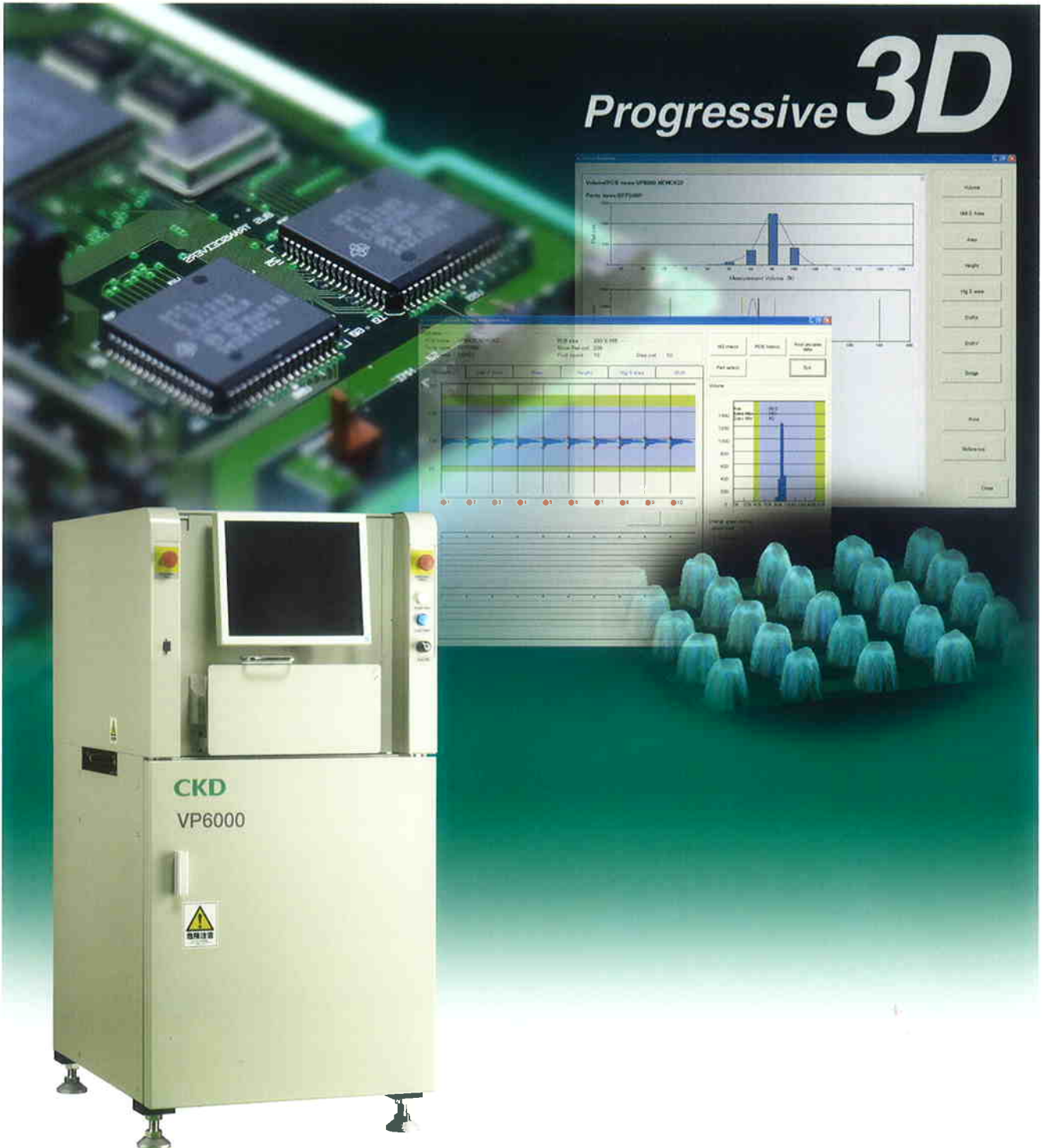


CKD

Quality revolution achieved with full 3D

New Product

Solder Printing Inspection Machine VP6000 Series



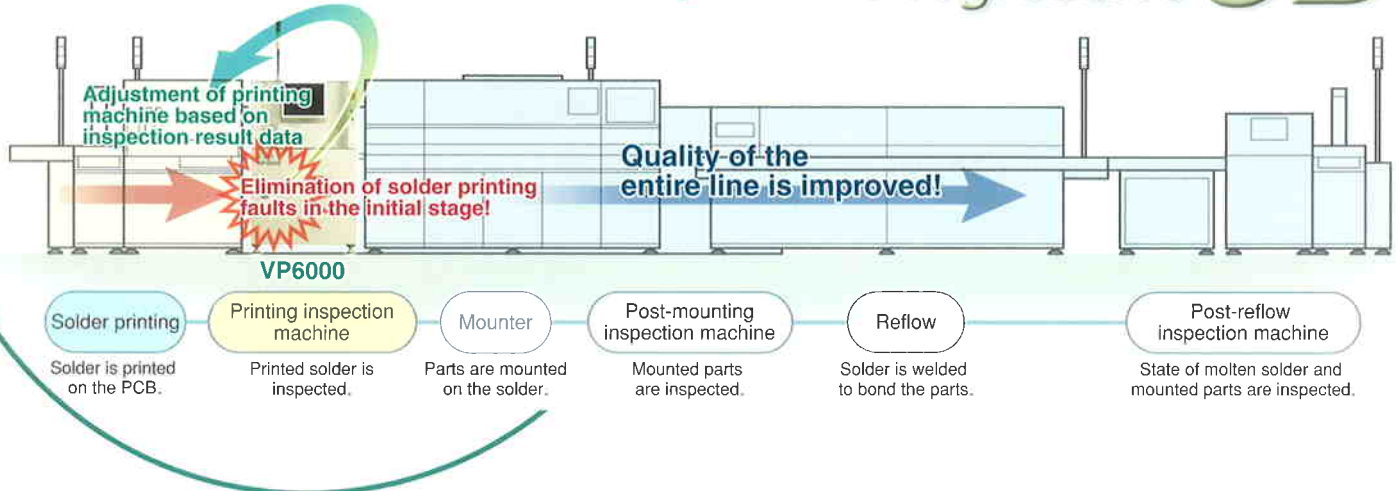
Pursue the speed and accuracy to go to the new stage.

CKD Corporation

CC-957A

Inline detection of mounting faults in the initial stage, where 70% of faults are developed.

Progressive **3D**



70% of parts mounting faults are caused in the solder printing process. Detection of faults just after printing can prevent outflow of printing faults, to reduce the ratio of mounting faults in the entire process and the man-hours in the post-process needed for repairs.

Speed & Precision

The inspection speed is much faster to meet requirements of high speed of production lines.

With a wider inspection area, 2,350mm²/sec (standard) is achieved. The speed is twice as fast as that of conventional models, contributing to speeding up in production lines.

2,350mm²/sec (Standard)

2,700mm²/sec (High speed)

VP6000 Series

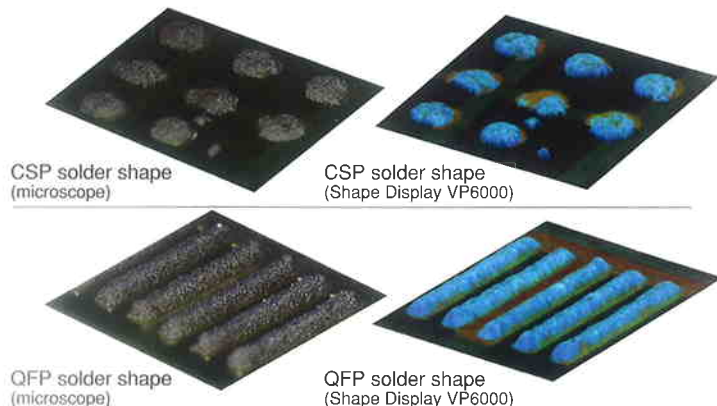
Substantially reduced inspection time

1,050mm²/sec (Resolution 12μm)

VP3000 Series

High accuracy and repeatability support inspection of fine pads.

Repeatability of height inspection: within 1μm at 3σ (height standard jig)
 Repeatability of volume inspection: within 4% at 3σ (CKD's sample PCB)

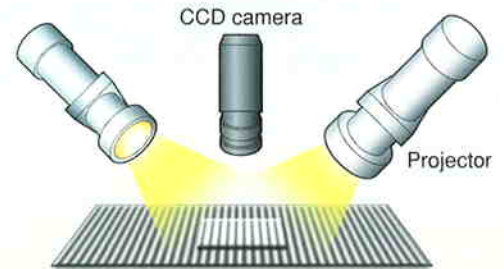


We provide PCB production job sites with best solutions.

Inspection principles of VP Series

The principles achieved high speed inspection

A CCD camera faces the object of inspection (solder) at right angles and projectors emit a stripe pattern of light at a cross angle from the above on the object face. Heights in the object surface create the stripe pattern to shift in relation to the base surface, and the amount of the shift is converted into the height value according to the triangulation principle. This method measures the solder print of the PCB in the "face," achieving quick inspection when compared with other methods.



Twin projectors

Conventional models have compensated the shape area virtually. This model achieves the real image inspection to make the inspection result more reliable.

Simple inspection program creation procedure

Data about the printed circuit board (PCB) in various formats can be used for the inspection program. Even if no PCB data is available, the printed PCB is scanned to create inspection data automatically. The reference face setting and light amount adjustment are automated, so that program creation is made offline in a short time. Because libraries created with earlier models can be used, accumulated assets do not become waste.



Simple operation – complete touch panel operation method

- ◆ All operation switches are displayed in a full touch panel. Normal operation can be done by one-touch operation.
- ◆ Each menu opens with tag selection. Menu switching is simple.

Multi-data station VPDS <option>

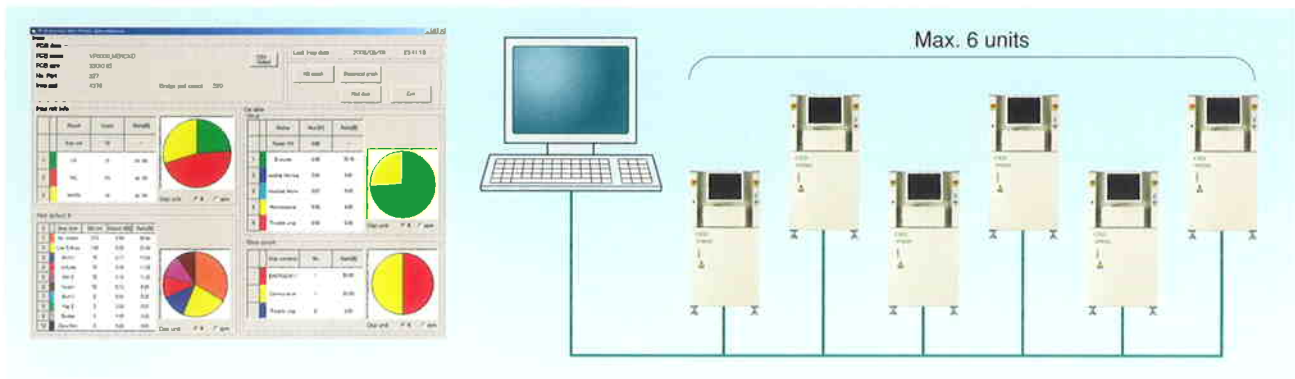
Offline central control

External PC system/multi-data station "VPDS" allows offline program creation and data collection from inspection machines. With a single system on a PC, up to six units of VP6000 Series can be connected, so that you can conduct central control of multiple units.

Improve productivity with statistic processing function

Solid statistic processes are achieved with 3D shape history view, time-line transition view, process capability view, X-Y scatter diagram, histogram view and so on.

They are helpful for comprehension of the solder printing trends, contributing to improvement of productivity.



2D code reading <option>

The inspection camera of VP6000 Series reads 2D codes printed on the PCB. The read data is added to the inspection result data.

- ◆ Individual serial control of each production process
- ◆ Traceability to inspection results of shipped PCB (product)

☆Applicable 2D codes
Data Matrix (ECC200)
QR CODE (model 2)



Additional loading / unloading conveyor <option>

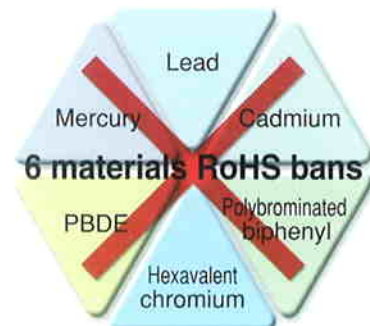
Faulty PCBs can be unloaded or conveyors can be utilized as intermediate buffers.

Due to the automatic width variation function, the width can be adjusted in interlock with the inspection program.

Support for RoHS directive and CE <option>

RoHS directive is supported. The product is friendly to global environment.

RoHS **CE**

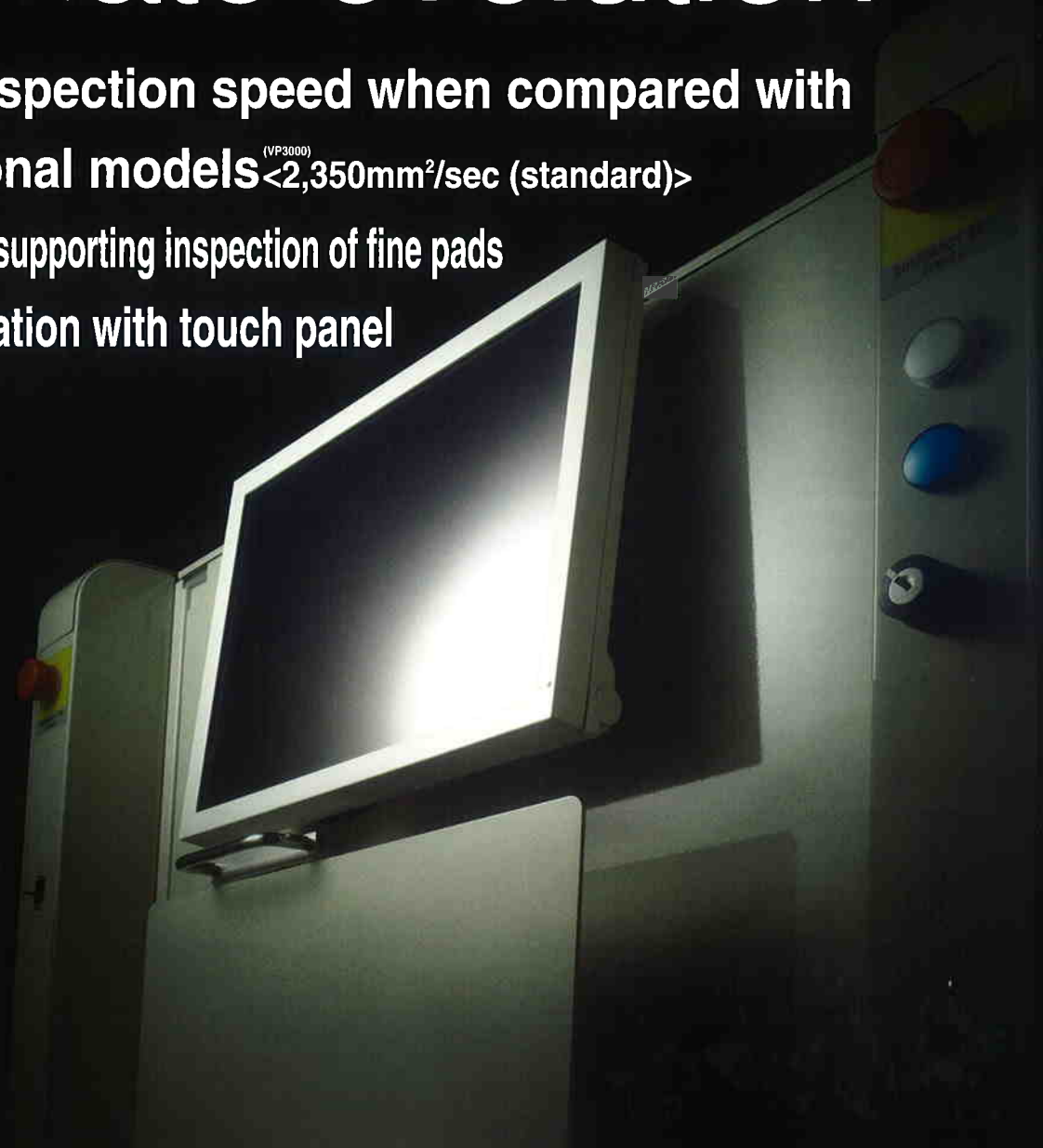


Ultimate evolution

Double inspection speed when compared with
conventional models ^(VP3000) <2,350mm²/sec (standard)>

High accuracy supporting inspection of fine pads

Simple operation with touch panel



VP6000 Series
Solder Printing Inspection Machine

■ Standard specifications

	VP6000M	VP6000L
	Phase shift method	
PCB size	50mm×50mm to 330mm×250mm	50mm×50mm to 510mm×460mm
PCB thickness	0.3 to 5.0mm	
Resolution	15μm	
Accuracy (volume 3σ)*1	Within 4%	
Speed(mm ² /sec)	2350(Standard) 2700 (High speed)'	
Warp in PCB	±3mm	
Inspection items	Average Height, Volume, Projection, Dimness, Area, No Solder, Position Deviation and Bridge	
Dimensions	724×900×1500mm	904×1110×1500mm
PCB flow direction	From left to right (selected during determination of specifications)	
PCB positioning datum	Front or Rear side of machine (selected during determination of specifications)	
Fluid	Clean compressed air 0.3MPa to 0.4MPa	
Power supply and capacity	Single-phase 200 to 230VAC 50/60Hz, max. 1KVA	
Weight	450Kg	600Kg
Environmental consideration	RoHS	

*1 Result with CKD sample PCB

Options

- Data station VPDS (max. 6 units can be connected)
- Additional loading conveyor
- Additional unloading conveyor
- Transformer
- 2D code reading function
- Mount data converter software

■ Appearance



If the goods and their replicas, or the technology and software in this catalog are to be exported, laws require the exporter to make sure they will never be used for the development or the manufacture of weapons for mass destruction.

CKD Corporation

<Website>
<http://www.ckd.co.jp/>

Overseas Business Dept.

2-250 Uji Komaki, Aichi 485-8551, JAPAN
TEL:+81-568-74-1336
FAX:+81-568-77-3412