

Overview

The CAJ-50 is designed to align and mount IC chips to printed circuit boards for use in flipchip applications. An image processor recognizes alignment marks on both the IC chip and the substrate, providing machine vision assisted alignment to the operator



Subsystems

Image Processor

This unit searches and displays the position of the alignment marks from the IC, overlaying them on a live image of the substrate.

Heat Head

Moves between the IC pickup stage and the mounting stage via a servo-drive.

Stage

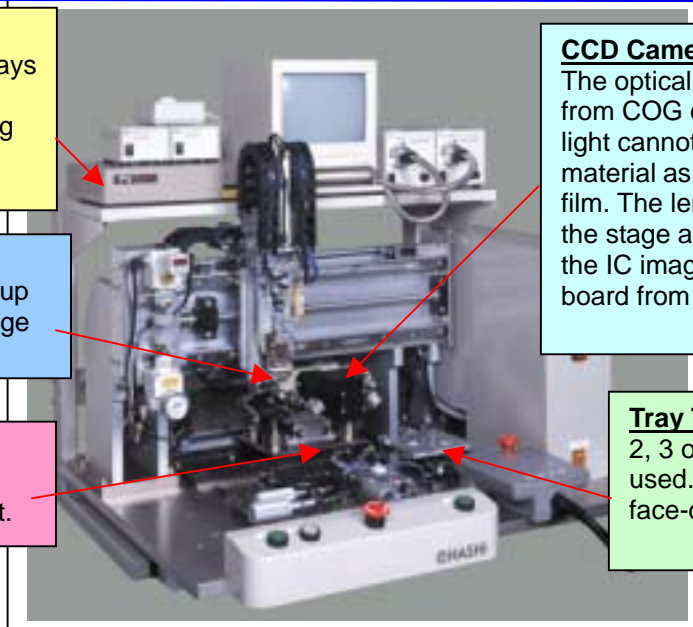
XYθ-axis micrometer are used for manual alignment.

CCD Camera Unit

The optical construction differs from COG or COF units because light cannot pass through board material as it does through glass or film. The lens is located between the stage and the head, viewing the IC image from below, and the board from above.

Tray Table

2, 3 or 4" IC trays can be used. ICs are provided in face-down orientation.



Highlights

- 30 sets of alignment marks can be registered for 30 different product designs. Changing products can be as simple as changing the alignment mark loaded into memory, but may also require a simple stage or collet change.
- The alignment position can be revised easily by setting an offset value. This allows compensation for different board lots without re-teaching the machine.
- The inherently robust and simple optical system requires no complex alignment or calibration

General Specifications

Work type	Substrate Size Max. (mm)	IC size (mm)	Position accuracy	Tact time
Packaging of BGA, CSP etc. COB mounting	100 x 100	Min 3 x 1.5 Max. 20 x 20	± 5μm (After final bonding)	15 sec.
Outer dimensions		Input power source		
Main unit:	825(W) x 660(D) x 825(H)	Single phase		
Box Control box:	430(W) x 280(D) x 140(H)	AC200 - 220V : 50/60Hz : 15A		

*Note: These specifications may be revised at any time.