

MODEL: BA684V4 SMT PICK & PLACE MACHINE



SUMMARY

- Dual Gantry 4 Heads
- Placement rate: up to 13'000 CP/H
- Conveyor System with SMEMA Interface and Automatic-Width-Control
- Non-contact Linear Encoder System for high Repeatability and Stability
- High Accuracy and high Flexibility for 01005, 0201, SOIC, PLCC, BGA, μ BGA, CSP, QFP, up to fine-pitch 0.3mm
- Smart Feeder System provides Automatic feeder Position Checking, Automatic Component Counting, Production Data Traceability
- Perfect for medium and high volume Production
- COGNEX® Alignment System "Vision on the Fly"
- Bottom Vision Alignment System for fine pitch QFP & BGA
- Built in Camera System with Auto Smart Fiducial Mark Learning
- Vision Inspection before and after Production
- Windows XP Software
- Universal CAD Conversion
- Ball Screw Systems in X- and Y-Axes
- Suitable for 96 intelligent Auto Tape Feeder
- Quick change Feeder Trolley
- Strong and rigid mechanical Design

The SMT Pick & Place Machines of BA684-series were especially designed for medium and high volume batch sizes. With the two rows of dual-heads (4 multi-heads in total), both rows of heads can pick up the components, and place the components steadily in alternation.

Non-contact Linear Encoders together with Servo motors provide an extremely high Repeatability and Stability.

Additionally, the BA684-series feature COGNEX vision processing and head-mounted for non-contact "Vision on the Fly" alignment.

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SMT PICK & PLACE MACHINE



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DETAILS

Strong and rigid mechanical design

BA684 using welded steel frame which guaranteed a strong and rigid mechanical design. Preloaded Ball Screws with Servo Motor system provides high Speed, Repeatability and Stability.



Dual Gantry 4 Heads

With the two rows of dual-heads (4 multi-heads in total), both rows of heads can pick up the components, and place the components steadily in alternation. The alternating Pick & Place action eliminates idle time and allows maintain the high-speed mounting.



Non-contact Linear Encoder System (Option)

By using „Closed Loop“ Servo Motors with non-contact Linear Encoder System, provide extremely high Repeatability and Stability.

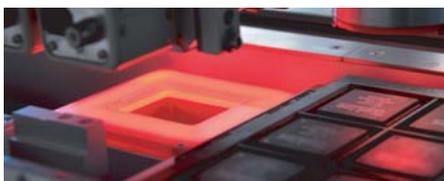
COGNEX® Alignment System "Vision on the Fly"

The BA684-series feature COGNEX® vision processing and head-mounted for non-contact „Vision on the Fly“ alignment. The machine BA684 assures high-precision placement of the full range of SMDs, from the smallest 0201 devices through CSPs, µBGAs, flip-chips, ultra-fine pitch 0.3mm for QFPs, even odd-form components.



Bottom Vision Alignment System (Option)

A Bottom Vision Camera is used for large components up to 150 x 100 mm and devices with alignment features on their bottom side. Due to additional Bottom Vision Camera, the alignment of 01005 components is guaranteed.



Smart Fiducial System

Beside the standard fiducial mark, either square SMD PCB pad or plate-through hole also can be trained as fiducial mark. For more precise placement of fine pitch components, additional Local fiducial recognition is provided.

Auto Tape Feeder (KFTA)

The innovative design of KFTA feeder bases and mounting hardware allows almost limitless flexibility in feeder combinations and arrangement schemes, as almost every feeder can be ordered, loaded, programmed and mounted independently. KFTAs are available from 8 mm up to 72 mm tape width.

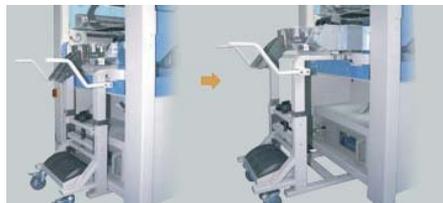


Feeder Rack (FR-48K)

FR-48K is suitable for 48 x 8 mm KFTA Feeders or for 40 x 8 mm IC-Sticks (2x KFTB-4).

Feeder Rack Trolley (FR-CR-48K)

During production the user is able to change all 48 x 8 mm Feeders by rapidly changeable Feeder Trolley at the same time.



Conveyor System

The already included conveyor system with SMEMA Interface and motor-driven-width-control speeds up the handling of PCB and in-line production.



Inline-Modus with 39'000 CP/H

Universal IC Tube Feeder

KFTB universal tube feeder combines vibration driven technique. It is able to handle IC-Sticks with max. 50 mm width.

KFTB-2 (10 pcs of 8 mm IC-Sticks)

KFTB-4 (20 pcs of 8 mm IC-Sticks)

Universal CAD Conversion

Beside the direct input of data by teach-in camera, an optional CAD conversion program is available for directly transfer of CAD generated pick and place data.

Buffering Nozzle

The spring buffering design of Nozzle adjust the placement pressure for different heights of components automatically.

Vision Inspection

With the built-in software, the camera can automatically move and display the image in the computer screen. User can manually check the printing accuracy of solder paste, quality of the soldering, accuracy of component placement, etc...

Remote Service Kit

Optional Remote Service Kit allows a remote access to machine by Internet, so that programming, calibration and service can be done by our worldwide remote service center.

SPECIFICATION

- Number of Heads (Vision on the Fly):
BA684V4: 4
- Placement rate (under the optimum condition):
BA684V4: 13'000 CP/H, 10'500 CP/H (IPC 9850)
- Feeder capacity (8 mm) with conveyer:
up to 96 Tape Feeders
- Feeder capacity (8 mm) with conveyer & optional Feeder Rack Trolley: over 96 Tape Feeders
- IC Tray capacity: up to 4 Waffle Trays
- Component Sense: Vision detection
- Component Sizes
Handled by head camera:
- Smallest: 0.6 x 0.3mm
- Largest: 16 x 14 mm
Handled by fixed Bottom Vision Camera:
- Smallest: 0.4 x 0.2 mm (option)
- Largest: 150 x 100 mm (option)
- Resolution:
X / Y axis 0.005 mm Servo Motor
Z axis 0.02 mm Servo Motor
- Rotation:
0 to 360° (0.045°/step) Servo Motor
- Placement Accuracy: +/- 0.04 mm
+/- 0.03 mm (by optional linear encoder)
- X-Y Repeatability: +/- 0.01 mm
- Placement Area:
With included 3-stage-conveyor,
2x 32 port Feeder Rack
Max. 650 x 420 mm (w/o IC-Tray)
Max. 650 x 350 mm (with 1x to 2x IC-Tray)
Max. 650 x 280 mm (with 3x to 4x IC-Tray)
- Programming:
- Direct input
- Vision teach-in
- CAD Access (Option)
- Main Control: Industrial PC
- Power: 240 V / AC - 3810 W
- Pressure: 75 psi (5.5 bar)
- Machine Size: 1550 x 1210 x 1430 mm (L x W x H)
- Weight: 1340 kg

We reserve the right to make changes without notice.



AUTOTRONIK

Fertigungssysteme für die Elektronikindustrie