

MODEL: BS683V4 / BS683V4-C SMT PICK & PLACE MACHINE



SUMMARY

- Dual Gantry 4 Heads
- High Accuracy and high Flexibility for 0201 (0.6 mm x 0.3 mm), SOIC, PLCC, BGA, μ BGA, CSP, QFP (0.3 mm pitch)
- 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 2000 Software
- Universal CAD Conversion
- Placement rate: up to 10.500 CPH
- Ball Screw Systems in X- and Y-Axes
- Conveyor System with SMEMA Interface and automatic width control
- Suitable for 64 intelligent Auto Tape Feeder
- Non-Contact Linear Encoder System
- Rapidly changeable Feeder Trolley
- Strong and rigid mechanical design

The SMT Pick & Place Machines of **BS683-series** were especially designed for medium and high volume batch sizes. With the two row of dual-head (4 multi-head in total), both row of heads can pick up the components, and place the components steadily in alternation.

Non-contact Linear Encoders together with DC-servo motors provide an extremely high repeatability and stability.

Additionally, the BS683-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

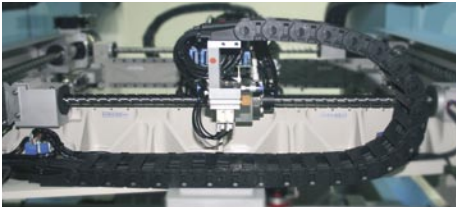
Strong and rigid mechanical design

BS683 using welded steel frame which guaranteed a strong and rigid mechanical design. Preloaded Ball Screws with closed loop DC-Servo motor system provides high repeatability and stability.



Dual Gantry 4 Heads

With the two row of dual-head (4 multi-head in total), both row 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.

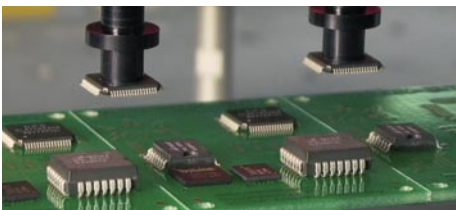


Non-contact Linear Encoder System

By using „Closed Loop“ DC-Servo motors with non-contact Linear Encoder System, provide extremely high repeatability and stability.

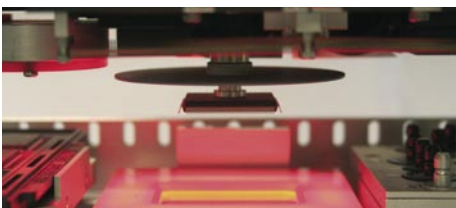
COGNEX Alignment System “Vision on the Fly”

The BS683-series feature COGNEX vision processing and head-mounted for non-contact “Vision on the Fly” alignment. The 4 multi-head machine BS683 assures high-precision placement of the full range of SMDs, from the smallest 0201 devices through CSPs, µBGAs, flip-chips, ultra-fine-pitch (0,3 mm lead pitch) QFPs, even odd-form components.



Bottom Vision Alignment System

A Bottom Vision Camera is used for large components up to 38 x 38 mm and devices with alignment features on their bottom side.



Smart Fiducial System

Besides the standard fiducial mark, either square SMD PCB pad or plate-through hole also can be trained as fiducial mark.

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-32K)

FR-32K is suitable for 32 x 8 mm KFTA Feeders or 30 x 8 mm IC-Sticks. The position of rear side Feeder Rack is according the size of PCB, which provides high efficient pick up and fast production time.

Feeder Rack Trolley (FR-CR-32K)

During production the user is able to change all 32 x 8 mm Feeders by rapidly changeable Feeder Trolley at the same time.



Conveyor System

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



Inline-Modus with 31.500 CPH

Universal IC Tube Feeder

KFTB universal tube feeder combines vibration and belt 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 for directly transfer of CAD generated pick and place data is available.

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):
BS683V4: 4 / BS683V4-C: 4
- Max. Speed (under the optimum condition):
10.500 CPH
- Feeder capacity (8 mm) with conveyer:
up to 64 Tape Feeders
Feeder capacity (8 mm) with conveyer & optional Feeder Rack Trolley: over 64 Tape Feeders
- IC Tray capacity: up to 2 Waffle Trays
- Component Size (mm):
 - Smallest: 0.6 x 0.3 mm
 - Largest: 16 x 14 mm
38 x 38 mm
(by optional bottom vision BV38)
50 x 50 mm
(by optional bottom vision BV50)
- Resolution:
 - X / Y axis 0,005 mm DC Servo Motor
(Linear Encoder)
 - Z axis 0,02 mm DC Servo Motor
- Rotation:
0 to 360° (0,045°/step) DC Servo Motor
- Placement Accuracy: +/- 0.03 mm
- X-Y Repeatability: +/- 0.01 mm
- Placement Area:
 - Min. 50 x 50 mm
 - Max. 460 x 380 mm without Waffle Trays
 - Max. 460 x 280 mm with 2 Waffle Trays
- Programming:
 - Direct input
 - Vision teach-in
 - CAD Access (Option)
- Component Sense: Vision detection
- Main Control: Industrial PC
- Machine Size: 1500 x 1000 x 1300 mm (L x B x H)
- Weight: 550 kg
- Power: 230 V / AC , 3100 W
- Pressure: 75 psi (5.5 bar)

We reserve the right to make changes without notice.