Cencorp 1300 BR provides best flexibility and efficiency in the PCB separating process

Cencorp’s first depaneling product was a manually fed shearing machine that was introduced in the early 1980’s. Now with more than 30 years’ experience in manufacturing depaneling equipment, with pride we launch a new generation in-line depaneling cell, the Cencorp 1300 bottom router. Cencorp 1300 BR has extremely high accuracy and speed to cut PCB panels. It utilizes the most advanced linear motor technology for the PCB separating process; thus, providing high speed and high accuracy, but keeping the maintenance costs low.

Low cost of the product exchange

The fully automated Cencorp 1300 BR is designed for high volume mass-production. The fast product change over increases flexibility while guaranteeing a high through-put and, thus, minimizing production loss. Moreover, we recognize a growing need for ESD protection and a clean cutting process (less dust), which have been very carefully incorporated to our depaneling solutions. Also, the known Cencorp user- and service-friendliness has been taken into account when designing the 1300 BR, allowing easy access inside to cell on both sides front and rear. The Cencorp depaneling machines are equipped with software interface that will allocate required information pertaining to daily production. In addition, we have very useful software options available like, PCB quality verification, bit height and diameter verification, CAD file download, off-line programming and others, which also increase productivity.

Modular platform

Our standard solution is based on modular product construction, which includes a wide variety of PCB handling solutions needed after the depaneling process, such as, tray conveyors, flat belt conveyors, PCB shuttle and palette conveyors.
## Technical Data

### Pick & Place Work Envelope

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-travel</td>
<td>850 mm</td>
</tr>
<tr>
<td>Y-travel</td>
<td>1275 mm</td>
</tr>
<tr>
<td>Z-travel</td>
<td>160 mm</td>
</tr>
<tr>
<td>W-travel (deg)</td>
<td>360 deg</td>
</tr>
</tbody>
</table>

### Router Work Envelope

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-travel</td>
<td>480 mm</td>
</tr>
<tr>
<td>Y-travel</td>
<td>490 mm</td>
</tr>
<tr>
<td>Z-travel</td>
<td>50 mm</td>
</tr>
</tbody>
</table>

### Accuracy

<table>
<thead>
<tr>
<th>Repeatability</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X,Y)</td>
<td>±0.02 mm</td>
</tr>
<tr>
<td>(W)</td>
<td>±0.05°</td>
</tr>
</tbody>
</table>

### Board Handling (panel)

- Min. PCB size: L x W: 50 x 50 mm
- Max. PCB size: L x W: 500 x 400 mm
- Oversized PCB dimensions can be handled upon request
- PCB transfer time: 1 s (depending on run mode)
- Transfer protocol: SMEMA
- Transfer height: 900 ± 30 mm
- 2nd locating pin: Programmable

### Basic features

- Product teaching (CAT5): Camera-Assisted Teaching System
- Broken bit detection
- Routing bit storage: 10 pieces

### Gripper System

- PCB pick & place: Servo gripper
- Gripper finger width: Programmable 0-100 mm
- Gripper finger change: Automatic
- Gripper type identification
- Tool rack for product specific fingers: 8 positions
- Multi gripper: Optional

### Graphical User Interface

- Operating system: Windows 7
- Touch screen: Standard
- Network connection: Optional
- Dual Monitors: Optional

### Machine Vision

- Correction of PCB position: Optional
- Downward looking camera: Optional
- 2D-code reading: Optional
- Routing verification: Optional

### External Vacuum System

- Nilfisk: Optional
- Ruwac: Optional
- Others: Optional
- Dust Flow Control: Optional

### Electrical Service Requirements

- Voltage EU (USA): 400 (208) VAC 10%
- Frequency EU (USA): 50 (60) Hz
- Branch circuit size: 16 A
- Average Power cons.: 2 kW / phase

### Software Options

- CMS (cell monitoring system): Optional
- Automatic Program Change Over: Optional
- Finger validation system: Optional
- Good/bad board separation: Optional
- Router bit high verification: Optional
- Router bit diameter verification: Optional
- Offline Editor: Optional

### Machine Dimensions

- Width: 1300 mm
- Depth: 1900 mm
- Height: 1850 mm
- Weight: 1800 kg

### Pneumatics Service Requirements

- Pressure: 5–7 bar ±10%, dry clean air
- Approx. air consumption: 100 l/min

### Environmental Requirements

- Operating temperature: 10 ... 40°C
- Operating humidity (RH): 30% ... 85%

### Output conveyor and other solutions

- Flat belt conveyor: 1500 mm x 250 mm
- Tray conveyor: tray width from 100 mm to 400 mm
- Shuttle: maximum product width 400 mm

### Other

- Centering unit on rear conveyor rail: Optional
- Ionizer: Optional
- Waste conveyor: Optional

**Patented:** US6222629, FI105315, Pending EP