K4000 LX Linear Blade Depanelizers

K4000 LX Linear Blade Depanelizers

Singulate Panels up to 48” Long.

The K4000 motorized linear blade depanelizer is designed for flexible high volume singulation of scored and skip scored PCBs. Simply place the scored section of the PCB onto the linear blade and step on the foot switch to bring the circular blade carriage across the top of the scoreline to split the panels. The top circular blade can be adjusted up and down to provide a cutting gap most suitable for the panel being singulated. Standard setting is to close the gap to the point where a piece of paper placed on the linear blade will cause the circular blade to rotate when traveling across the linear blade.

Adjustable right and left blade guards assure operator safety and can be set to only allow the blade to pass over the scoreline. The front support table can be set at a convenient height for optimal operator comfort. Operating mode is switch selectable for speed (6 ips or 12 ips) and for continuous or intermittent blade travel. In intermittent mode the blade will move as long as the operator holds down the foot switch.

**Order Information**

- 97-4000K L18 18” Linear Blade
- 97-4000K L24 24” Linear Blade
- 97-4000K L36 Two 18” Linear Blades
- 97-4000K L48 Two 24” Linear Blades
- 97-1001K Circular Blade (W Bearing)
- 97-3001K 18” Linear Blade.
- 97-3001KL 24” Linear Blade.
- 97-4025B Output Conveyor
- 97-4100V Dust Vacuum

**Specifications**

- Size: HWD 17”x28”x15” - 18”x57”x14”.
- Weight: 90 - 150 lbs
- Power Supply: Universal 115V-220V.

**Placement of components to edge.**

- > .04” (1mm) for standard components
- > .08” (2mm) for sensitive components (ie. ceramic chip capacitors.)

**Blade Profiles**

<table>
<thead>
<tr>
<th>Circular blades</th>
<th>Linear blades</th>
<th>Thin linear blades</th>
</tr>
</thead>
<tbody>
<tr>
<td>.174” (.4.46mm)</td>
<td>1.30” (.33.3mm)</td>
<td>.240” (.6.15mm)</td>
</tr>
<tr>
<td>.998” (25.58mm)</td>
<td>.03” (.76mm)</td>
<td>.31” (7.9mm)</td>
</tr>
</tbody>
</table>

**Recommended Scoring Depth**

- > .012” < .027” 25
- > .3 mm < .7mm

---

FKN Systek Inc. 115 Pleasant Street, Millis MA 02054 Tel. 508 376 2500 Fax 508 376 2505 - e mail fkn@fknsystek.com  http://fknsystek.com
Circular/Linear Blade PCB Singulation

To singulate a pre-scored panel on the K4000, the operator places the scoreline of the panel onto the linear blade and steps on a foot actuator, automatically bringing the circular blade across the scoreline for clean and safe separation of the panel. The adjustable blade guards can be set so that the circular blade can pass only across the score-line. The cutting depth of the blade is set by turning the circular blade shaft and tightening the set knob.

The K4000 is available in 4 standard variations

For longer board sizes such as those used to make LED lights, the K4000 is available in a double 18" or double 24" blade version. Replacing the front support table with adjustable support rails helps hold and guide board placement during operation.

K4000 with safety light beam

For additional safety, a laser protective beam is available across the front of the linear blade. The level of the beam can be set to clear any components close to the edge. Interruption of the beam path by inadvertent operator contact will instantly stop forward movement of the blade carriage. The blade guards on each side of the circular blade have an up sweep curve to lift objects off the linear blade, in case of unintentional interruption.

Output Conveyor

For high volume production, a conveyor belt is available to bring the singulated panels to the right of the machine for unloading by the operator. A light barrier across the end of the conveyor belt will stop the belt for any panels with components on them. Scrap strips will pass underneath the light to be discarded into a waste bin. Upon removal of loaded panels, the conveyor will automatically start again.

Dust Extraction Provision.

A built on dust extraction plenum can be added to the circular blade carriage to remove any particles which may be created by the singulation process. The attached vacuum hose is free to travel the length of the cutting process. A clean room dust extraction vacuum is available separately from FKN Systek.