The PCAM series of Probe Card Assembly Machines provide a convenient and economical capability to assemble a wide range of fixed pattern probe cards. Accuprobe has applied a clean functional design approach that provides maximum utility and uncompromising precision. Both probe card assembly machines provide a wide range of motion for the precise manipulation of the probes allowing probe placement not only for perimeter contact pads but also on the more difficult devices with complex internal contact pad locations.

A selection of one probe gripper is supplied with each machine. The Z-Grip-1 is intended for use with Z adjustable probes. The B-Grip-1 is intended for use with blade probes (either Metal or Ceramic blades) and is typically used with smaller blade profiles for wafer probing. Another blade gripper B-Grip-2 (not shown) is intended for use with larger blade probes that are typically used in Hybrid circuit applications. Please specify which probe gripper is desired when ordering the PCAM.
The PCAM-100 is a general-purpose machine intended for all standard probe cards up to 6.5 inches in width including standard rectangular and round probe cards. For rectangular probe cards, the PCAM-100 will accommodate both standard (S, M, L, XL, XXL) and non-standard centers of rotation.

The PCAM-200 is a large format Probe Card Assembly Machine and is intended to be used with larger probe cards up to 12 inches in size. In addition to all of the features of the PCAM-100, the model 200 offers a large vacuum chuck for larger devices and a greater range of motion for the probe manipulator mechanism. THE PCAM-200 also has a probe exerciser the provides predetermined probe deflection to relieve any mechanical stresses that might affect probe position and planarization. In addition, the exerciser can be used in conjunction with ResistoX™ to abrasively clean the probe tips.

Both probe card assembly machines offer coarse and fine micrometer motion of all controls associated with the probe manipulator stage. The microscope mound and slide mechanism is unique and incorporates a recirculating ball bushing to provide complete movement over the surface of the probe card. This range of motion permits visual inspection not only of the probe contact array but also the entire surface of the card.

Each Probe Card Assembly Machine is supplied with an Alignment card that is used when setting up for a new card assembly. Please specify AC-4.5 or AC-6.5 when ordering.

**SPECIFICATIONS**

**Optics & Illumination**

- **Microscope**: Stereo Zoom Nikon SMZ-1B or equivalent.
- **Microscope Mount**: Full motion to sweep over the complete surface of the Probe card.
- **Illumination**: Fluorescent ring light

**Power**

- 110-120 VAC 50 Hz
- or 220-240 VAC 50 Hz

**Device Manipulation Stage**

- **PCAM-100**
  - Vacuum Chuck Size: 3 inches
  - Chuck Motion: X=.5 inches, Y=.5 inches, Z=.5 inches, Theta=360°
  - Vacuum Required: .5 CFM @ 10 inch Hg

- **PCAM-200**
  - Vacuum Chuck Size: 4 inches
  - Same as 100
  - Same as 100
  - Same as 100
  - Same as 100

**Probe Manipulation Stage**

- **Manipulation Arm Swing**: 45 Degrees
- **Manipulator Travel**: X=4.5 inches, Y=6.5 inches, Z=.5 inches
- **Probe Angle Swing**: 30 Degrees
- **Probe Fine Z**: .5 inches

- **AC-4.5**
  - Same as 100
  - Same as 100
  - Same as 100
  - Fine Adjustments

- **AC-6.5**
  - Same as 100
  - Same as 100
  - Same as 100
  - Fine Adjustments

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