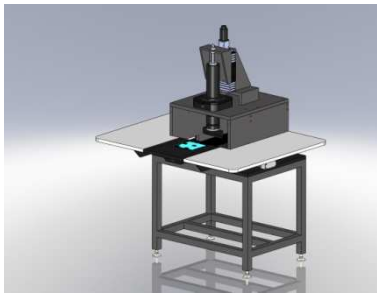
Credence Engineering Inc
Advanced LTCC Process Equipment

Block Cutter

Credence model C8 Block Cutter System

Model C8



The Model C8 Block Cutting System from Credence Engineering is the most advanced laminated Block cutting system for HTCC/LTCC Substrates. It incorporates an XY Lower Stage with an upper Θ / Z axis Blade Ram. Both the tool plate and blade are independently temperature controlled to insure proper cutting parameters.

As opposed to a Capacitor cutter where cuts per second are important, the C8 incorporates a single vertical Camera System with Fiducial Recognition Software to provide positional correction for each and every cut. The laminated Block will exhibit some (up to .003"/.075mm) lateral movement during lamination which will be neither consistent nor predictable. This requires a special correction system that averages the position of each cut to equalize the error for each row or column of parts within the Block. Throughput is never an issue with this cutting system since it only has to keep pace with the Lamination System.

In a typical example, The laminated block from 8"X8" tape 20 layers, the parts might be 1"X1". Since the active area of 8X8 tape is 7 3/4, there would be 7 parts wide by 7 parts long or 7X7 or 49 parts per block. This would require 8 cuts in each axis or 16 cuts total. Each cut is preceded by the system reading two fiducials on the block at the extreme location of each cut. The system calculates the average offset and makes the cut based upon the shift during lamination. Each cut takes approximately 3 to 4 seconds. In this example the total block would take 1.06 cutting time plus load/unload time or approximately 2 minutes to complete. This would allow you to cut over 300 blocks in a 10 hour shift and 75,000 blocks per year.

Specifications and Components

- Single Blade Ram (Heated)
- XY travel: 12 inches with
  - 0.0001" resolution
  - 0.0001" repeatability
  - 0.0001" linearity over 12 inches
  - 0.0001" axis orthogonality
- 12" Top Rotation Axis
- Tooling Plate for Laminated Block with your specific Registration Pattern (Heated).
- 4-Axis Servo Controller
- PC based Controller with Windows XP.
- Motion Axis resolution is .0001"
- Motion Axis Repeatability is .0001"
- Heated Blade adjustable to 200°C Max
- Heated Stage adjustable to 200°C Max
- Maximum Cut Thickness 10mm
- Single Camera Pattern Float compensation (Fiducial Recognition)

Included	Options (Consult Factory)
• None	

237 W. La Vieve Ln. Tempe, AZ 85284, Phone: 480-752-9776, Cell: 480-993-8446, E-Fax: 602-798-8277
E-Mail: je@credenceeinc.com, Web Site: credenceeinc.com