

Cee® Bake Plate Features and Benefits



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Cost Effective Equipment

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573-466-4300

Serving the Semiconductor Industry Since 1987

Wafer Baking

What are bake plates for?

- Soft bake to remove solvent (80-200°C)
- Hard bake to polymerize and/or crosslink polymer resins (140-400°C)
- Post Exposure Bake to enhance photolithography (100-150°C)
- Dehydration bake to remove water molecules from wafer surface (120-140°C)

What is important in a Bake Plate?

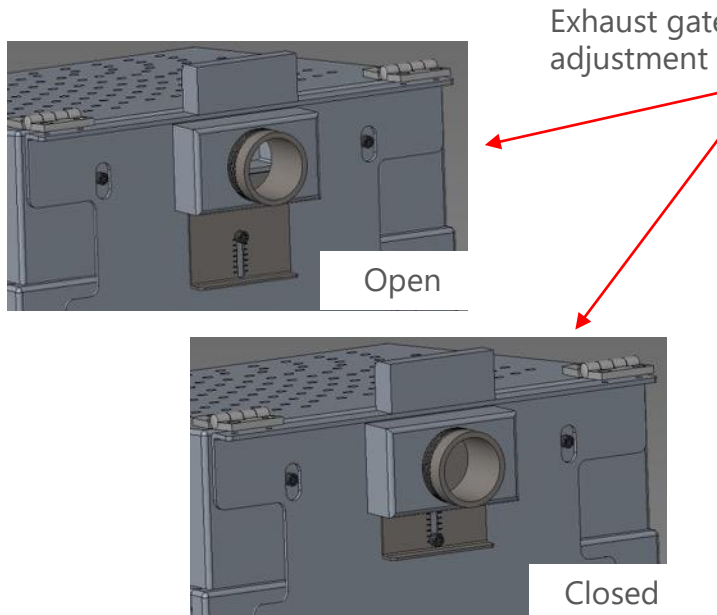
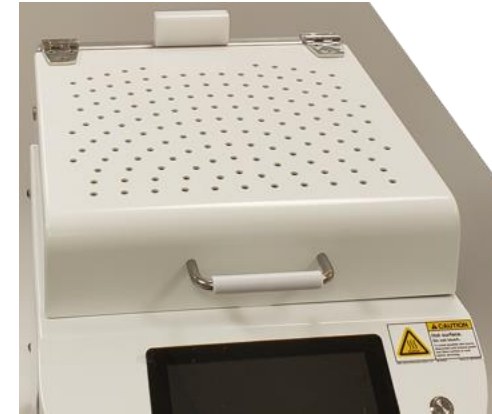
- Safety
- Uniformity
- Repeatability
- Flexibility
- Programmability



The Cee Advantages

Integrated Double Shell Exhaust cover

- Protects operators and manages chemical fumes
- Infrared reflector panel increases uniformity and repeatability
- Eliminates stray air currents that can cool the wafer



Exhaust gate provides adjustment and control

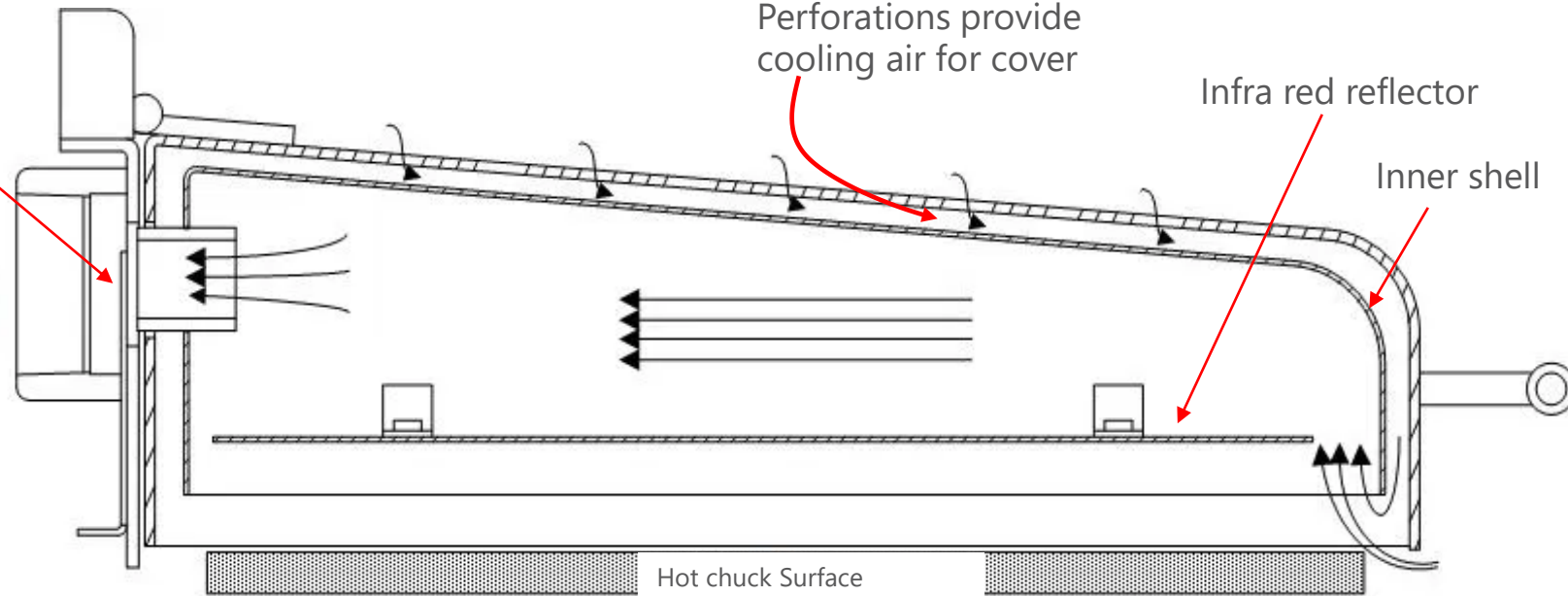
To Exhaust System

Perforations provide cooling air for cover

Infra red reflector

Inner shell

Hot chuck Surface



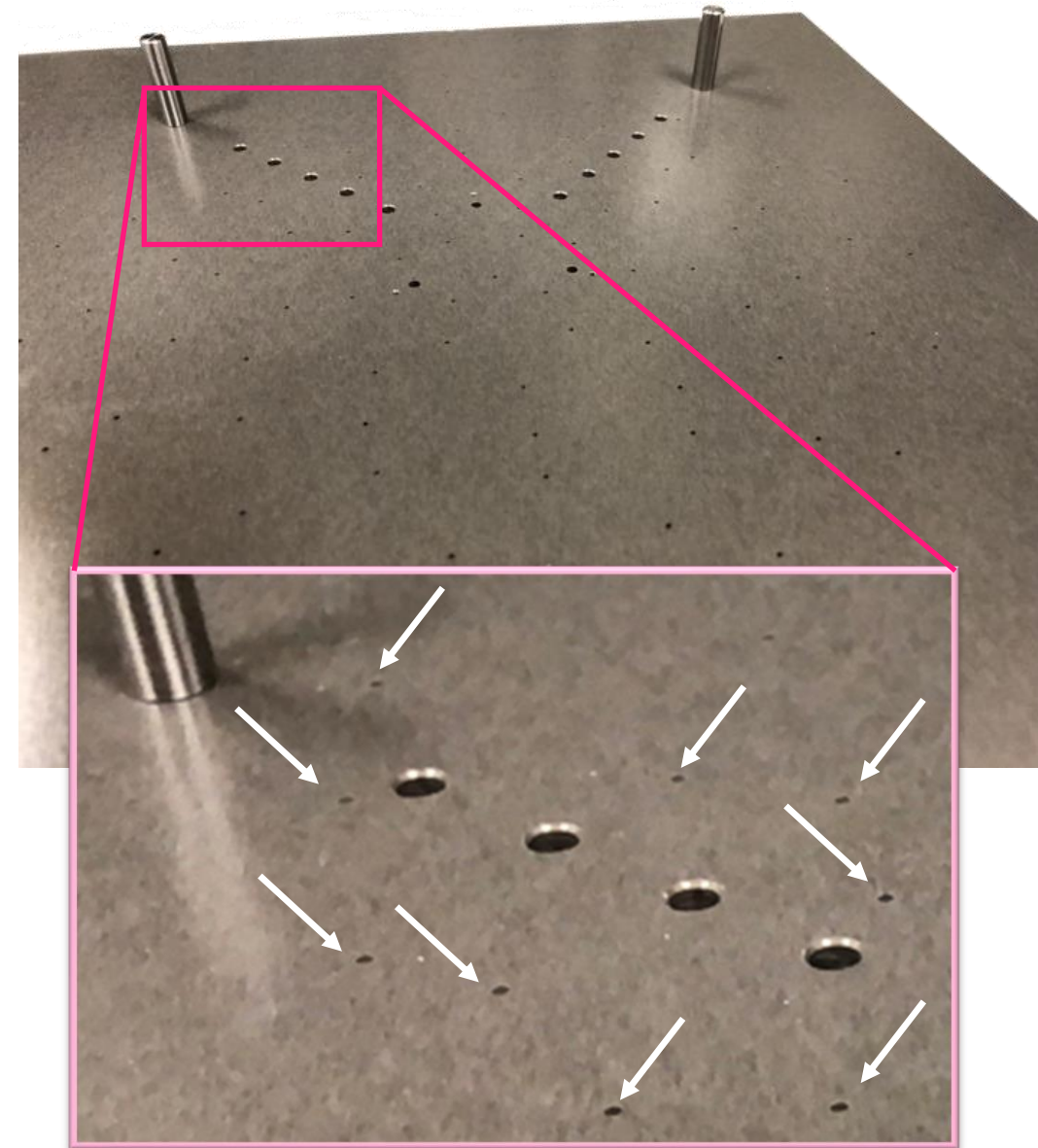
The Cee Advantages

Uniformity

- Complex platen design with proprietary metal alloys and heat element provide maximum uniformity $\pm 0.3\%$ at 200.0°C
- $\pm 0.6^{\circ}\text{C}$ at 200.0°C
- Ultra-flat surface (no grooves)

Superior repeatability wafer to wafer, hour to hour, day to day, machine to machine

- Sophisticated controls
- Manufacturing quality systems
- Airflow management inside and outside the machine

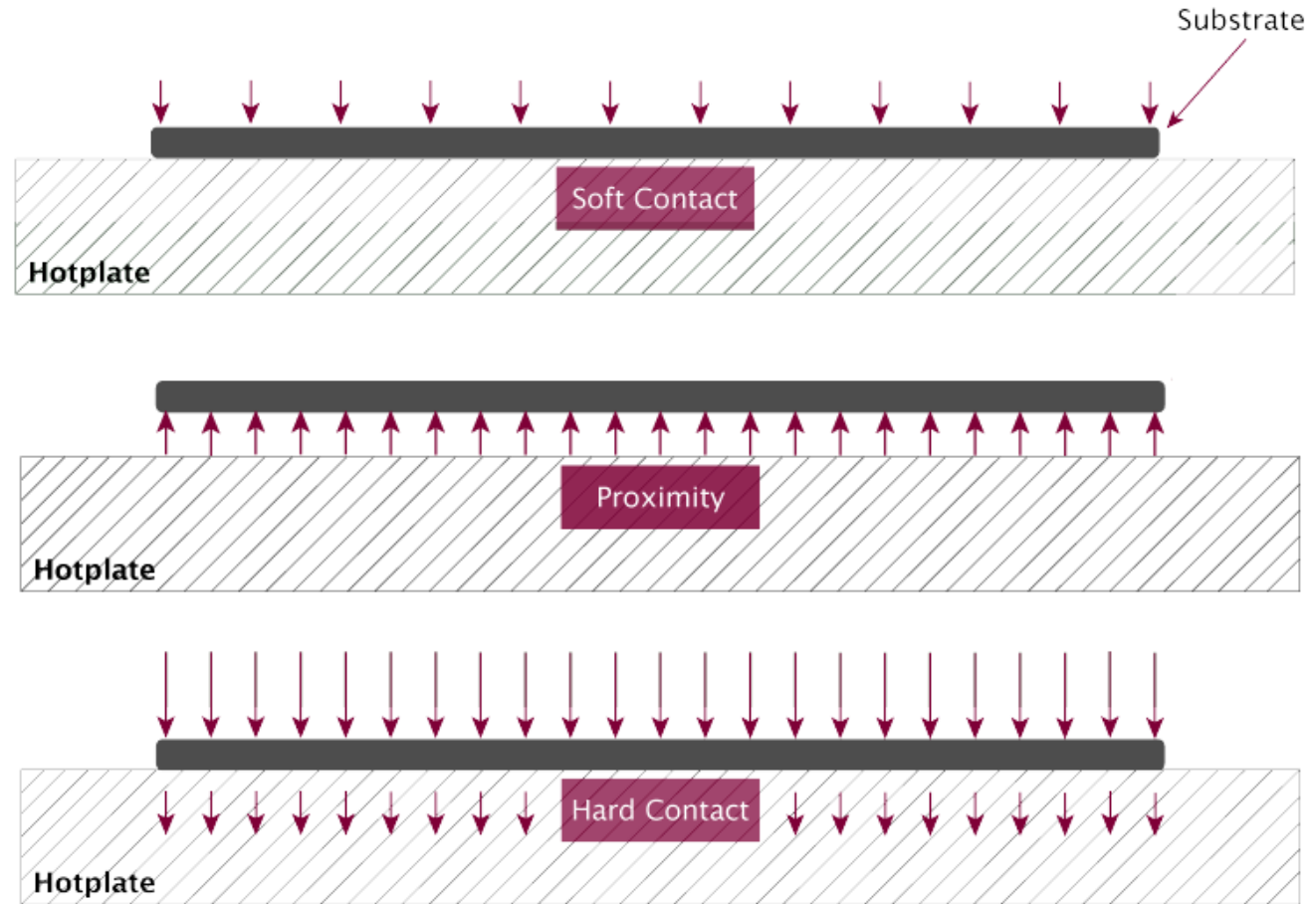


The Cee Advantages

Flexibility

3 bake methods

- Soft contact
Wafer held to platen by gravity only
- Proximity
Wafer floats on a layer of heated gas (25µm)
- Hard Contact
Wafer held firmly to platen by vacuum

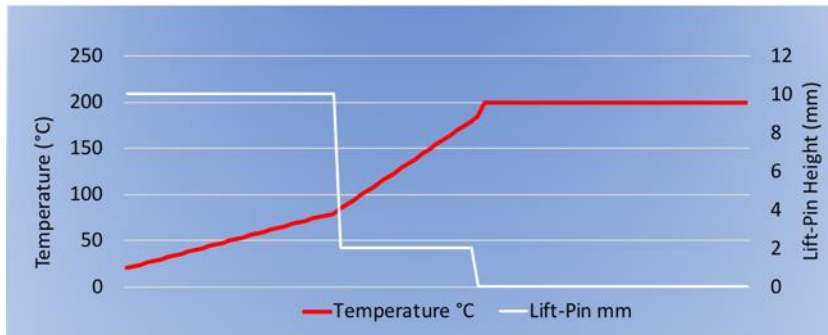


The Cee Advantages

Flexibility

Smart-Pins

- Programmable
- 0 – 19mm lift height
- 0.1mm precision
- Allows controlled heat up for delicate substrates
- Minimizes thermal shock for GaAs, GaN and glass wafers
- Can replace multi-stage, multi-tool bake processes



Bake Plate Process Recipes About Tools - admin

Recipe Controls

Viewing Recipe- liftpin

Name liftpin w

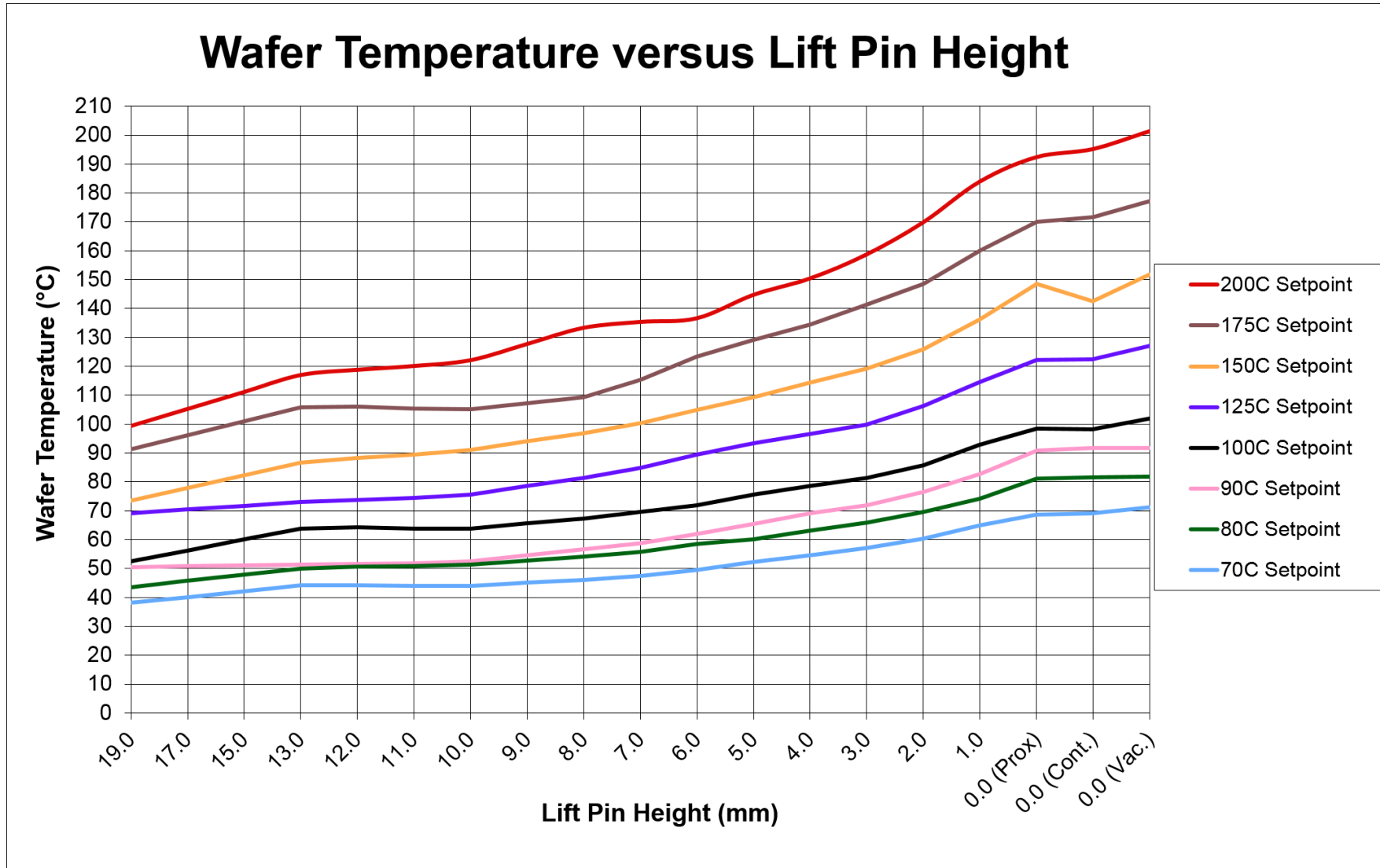
Plate Temperature 180 °C

Step	Time (seconds)	Bake Method	Pin Height (mm)
1	5	Lift Pins	13
2	5	Lift Pins	7
3	5	Lift Pins	1

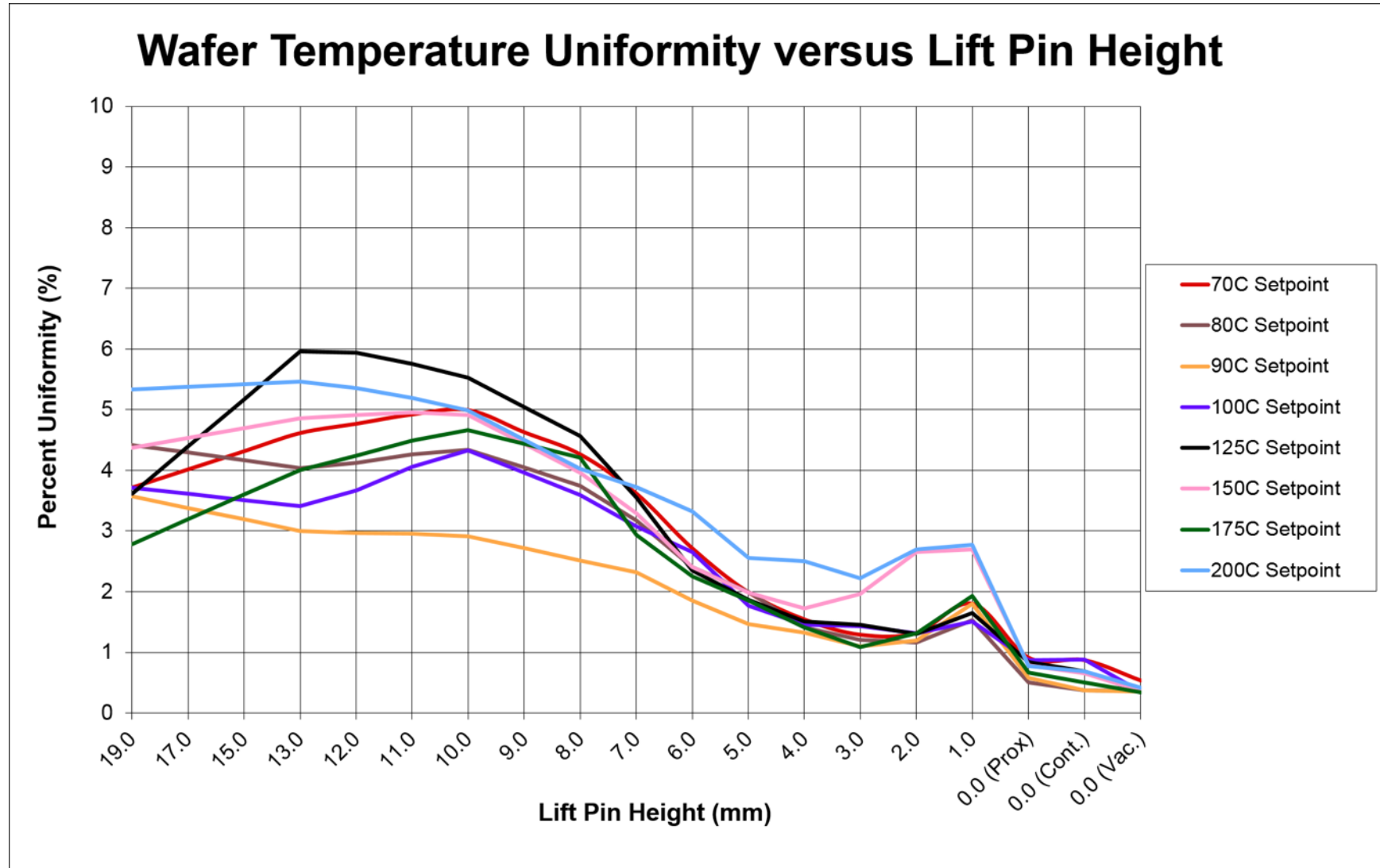
Buttons: Load, New, Edit, Delete, Upload, Download



The Cee Advantages



The Cee Advantages

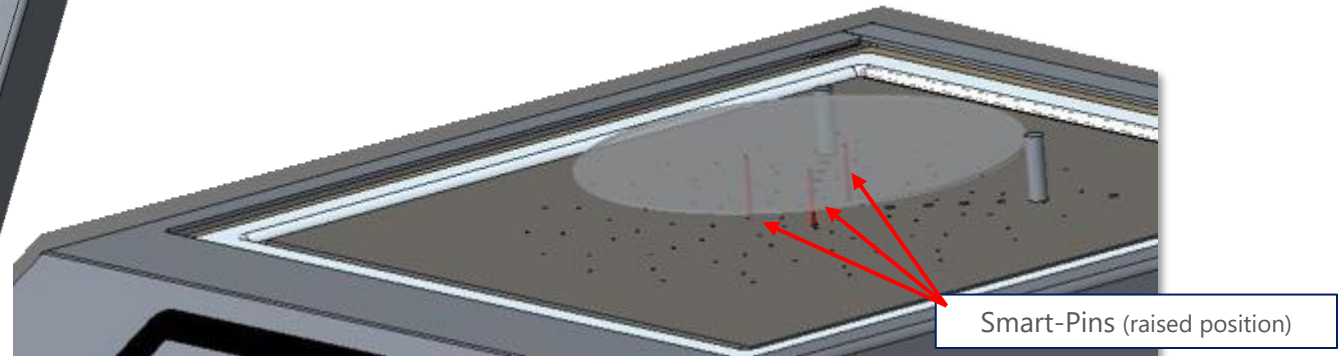
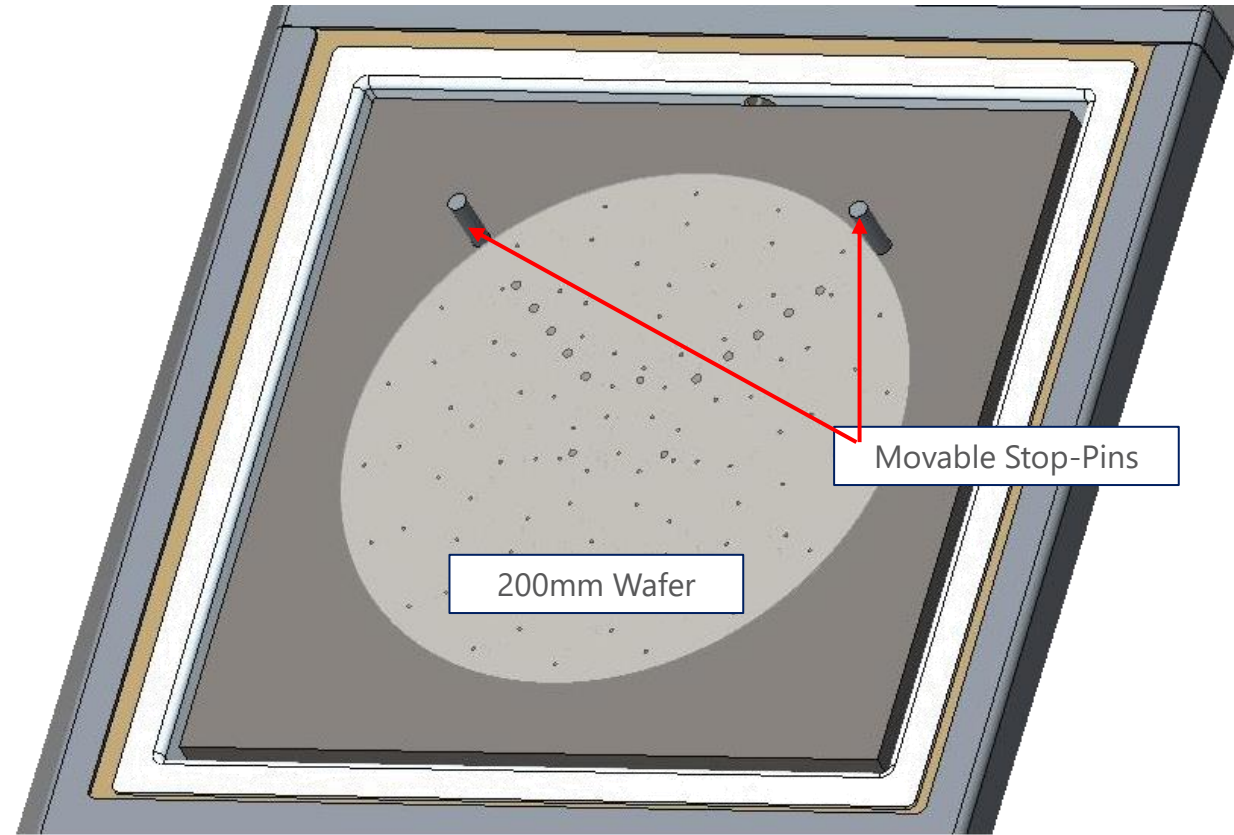
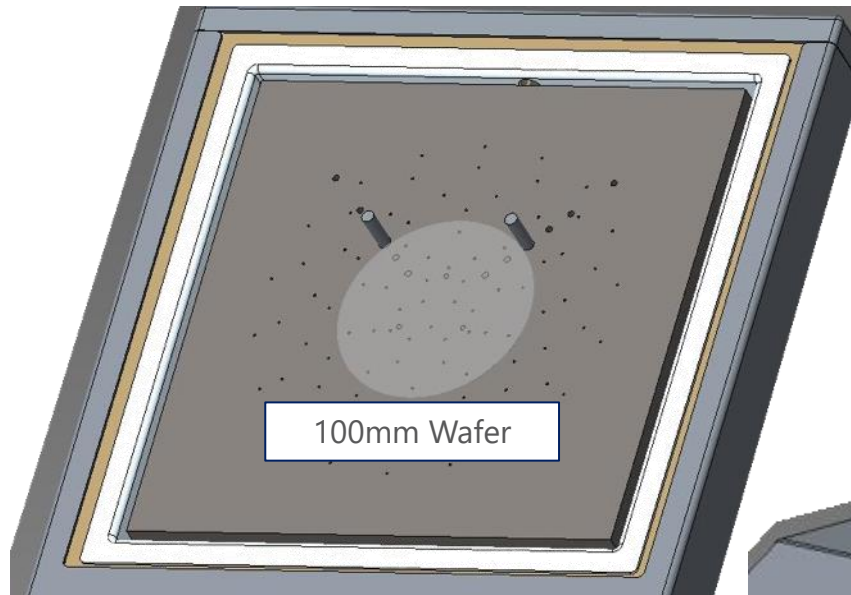


The Cee Advantages

Flexibility

Multi-substrate

- Apogee™ Bake Plate standard sizes
2 inch, 3inch, 100mm, 150mm, 200mm
- Apogee™ 300 standard sizes
100mm, 150mm, 200mm, 300mm
- Can customize for special needs



The Cee Advantages

Programmability

DataStream™ <https://www.costeffectiveequipment.com/technology/>

Network connection by web browser outside the lab/cleanroom (Tablet, PC, Phone)

Start/stop heating

Create/edit, upload/download process recipes

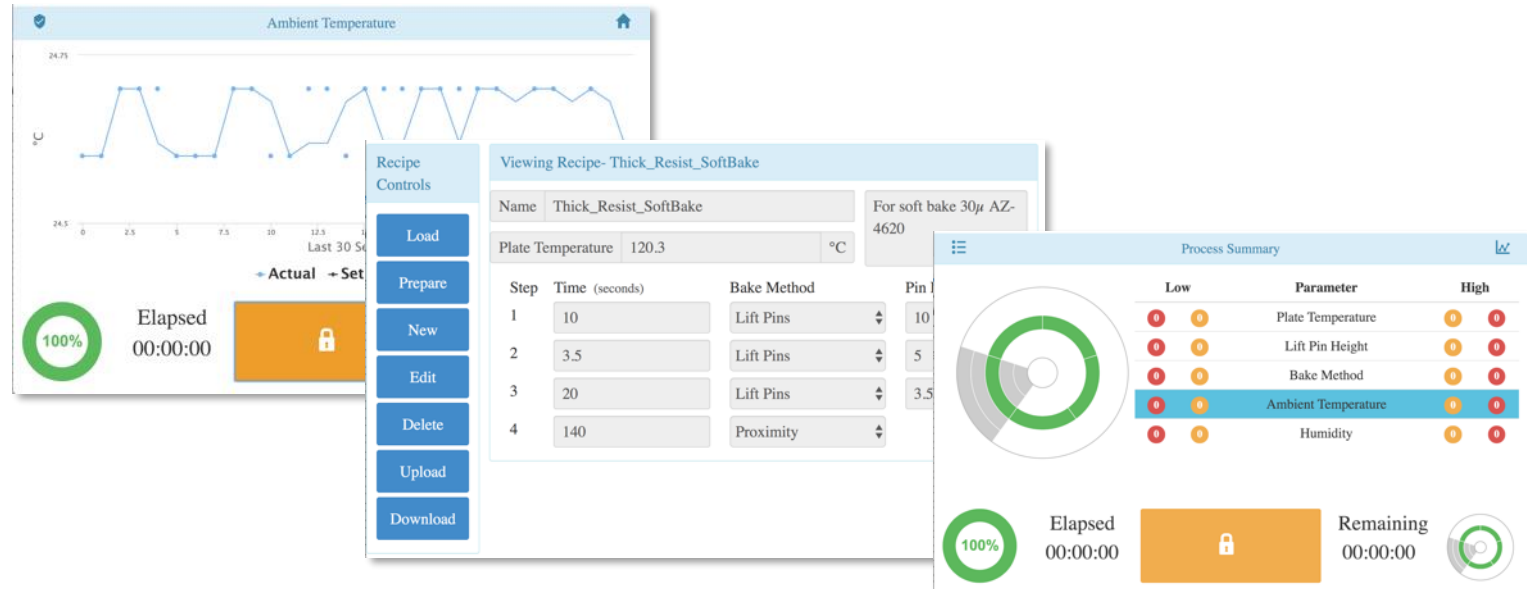
Monitor processes in real-time

Download detailed process logs in Excel® format (including ambient temperature and humidity)

Unlimited recipes

Unlimited steps

Ramping temperature control



Cee Apogee™ Chill Plate

Used for controlled end to bake process

- Active cooling Ambient to 15.0°C
- Water chiller included
- Same features as Apogee™ Bake Plate
(does not include exhaust cover)

