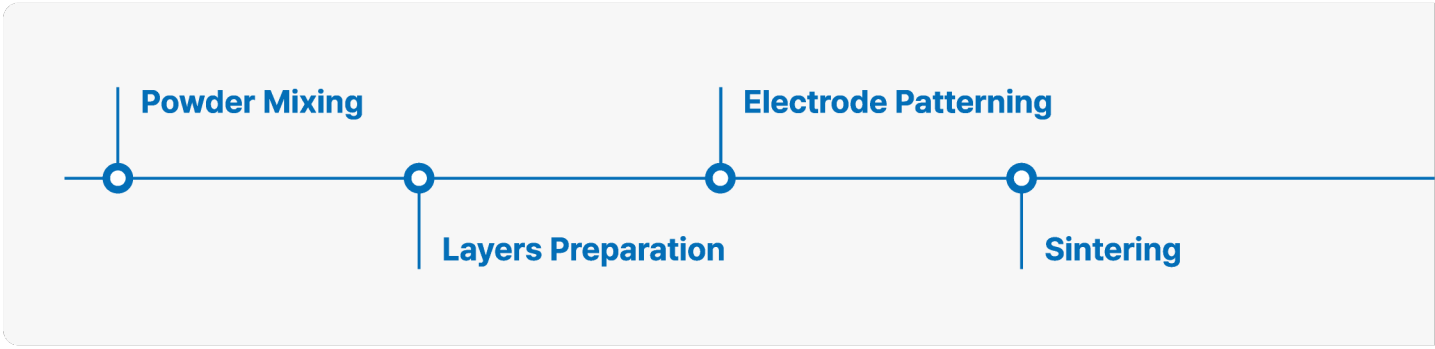
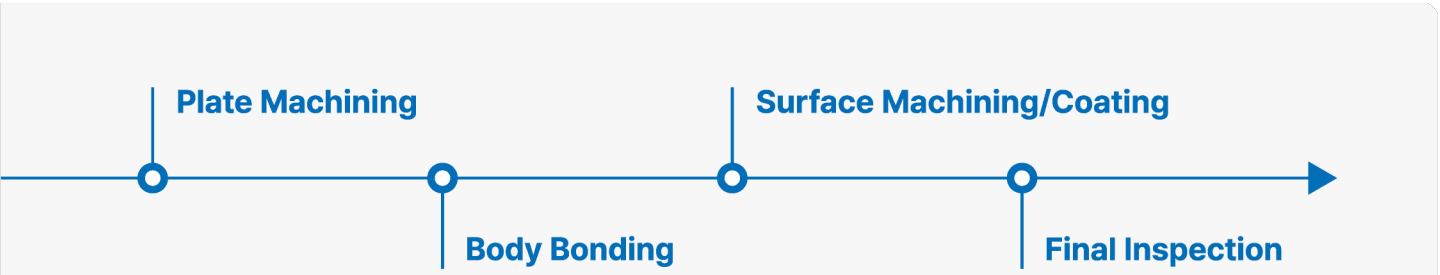
Electrostatic Chuck

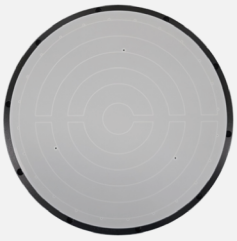
Electrostatic Chucks are key components that use electrostatic force to secure the wafer in place and built-in heat circuits to control process temperature and provide temperature uniformity. These units provide high precision in electrostatic fixation and excellent plasma resistance.

Manufacturing Process Flow

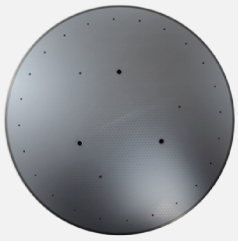




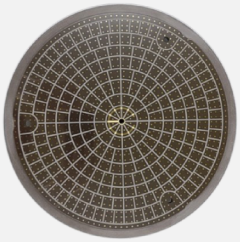
Applications	Dry Etch	Oxide Process	Poly Process	Ion Implantation	PVD



611

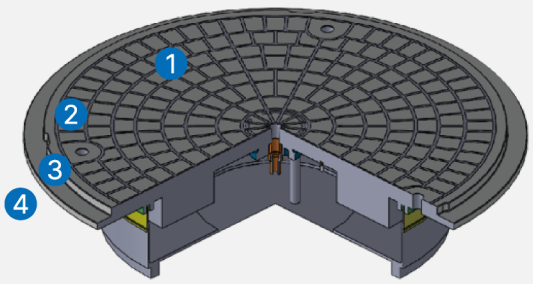


VIISTA



MCA

Manufacturing Specifications



1 Embossing 2 Ceramic Plate 3 Bonding Layer 4 Body

Sizes
200mm, 300mm

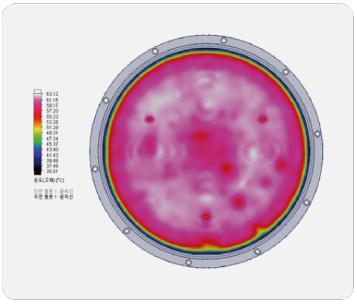
Chucking Types
Coulomb, Johnsen-Rahbek

Plate Sintering
Hot Press, Multi-Layer Ceramic

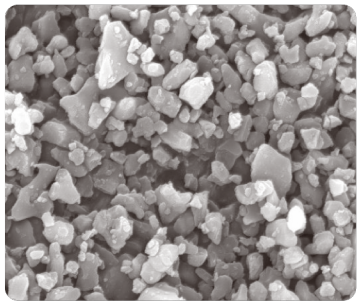
Materials
AIN, Al_2O_3

Heater Types
Normal Zone, Multi Zone

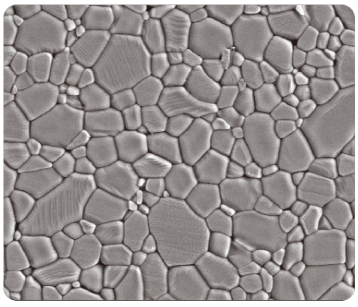
Design/Simulation



Materials

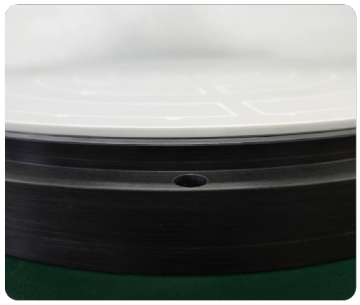


Sintering

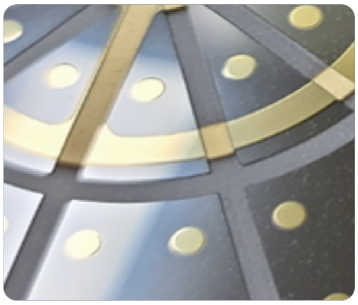


Machining

Bonding



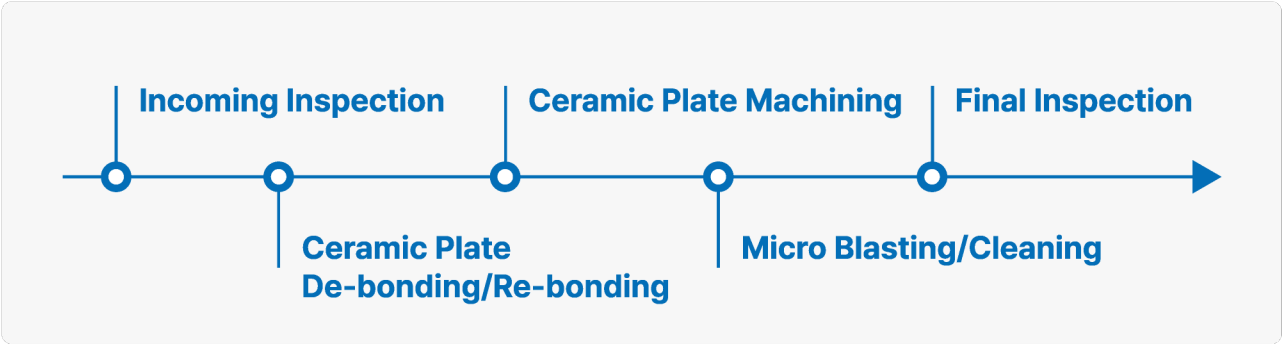
Emboss Machining



Refurbishment Services

With technology to de-bond and re-bond the electrode plate and heater, we provide cleaning, repairing, and manufacturing services to meet the needs of our clients.

Manufacturing Process Flow



Inspection Criteria

- ☑ Ultrasonic inspection of ceramic plate and heater
- ☑ Dimensional inspection of surface flatness, step height, thickness
- ☑ Roughness inspection of ceramic plate
- ☑ Electrical inspection of current leakage, chucking, withstanding voltage
- ☑ Leakage inspection of bonding layer
- ☑ Thermal inspection of temperature profile

Repair Service Outline

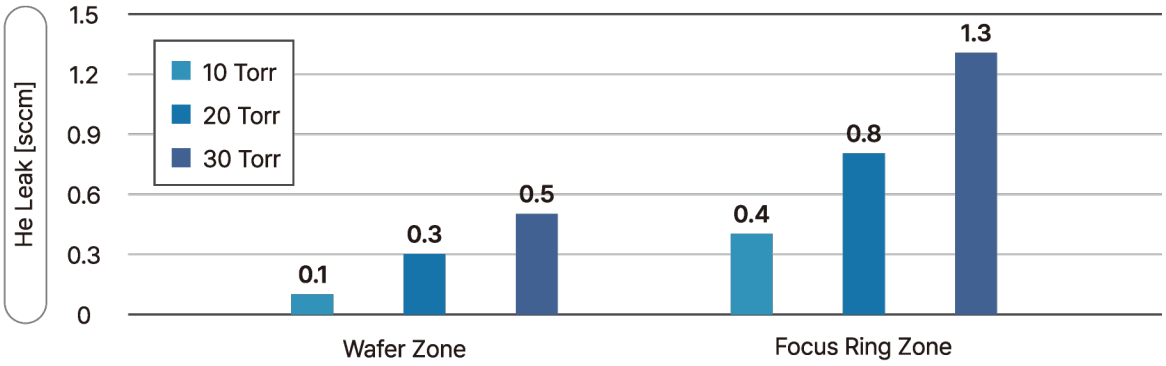
Repair Level	Description
Level 1	Surface Reconditioning
Level 2	Bonding Layer Reconditioning
Level 3	Ceramic Plate Replacement
Level 4	Heater Replacement

New Product Development

VIGUS(RK4, RK5) ESC 300mm

VIGUS RK4/RK5

He Leakage by He Pressure



Chucking/Dechucking Force @ Vacuum Chamber