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# RTP (Rapid Thermal Processor)



Ecopia's Heat-Treatment System is new concept of PG/PBN electrostatic heater system that combining small-sized ceramic heater, electricity conduction ceramics PG (Pyrolytic Graphite) and electricity insulation ceramics PBN(Pyrolytic Boron Nitride).

It is a convenient and useful system that can perform high efficiency, compact design and high speed responsiveness of small RTP (Rapid Thermal Processor) by quickly increasing temperature (1000°C / 40sec) and providing uniform temp on surface.

Model No : RTP-1000

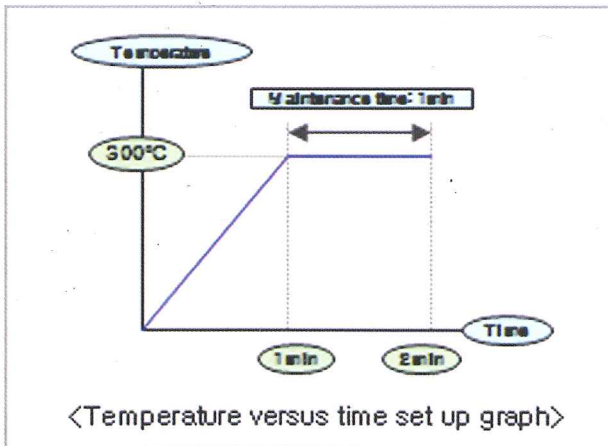


Model : RTP-1000's front view

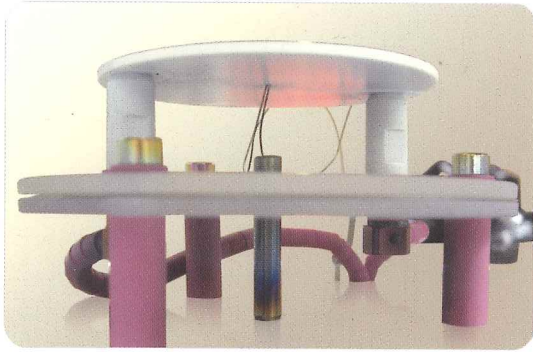


## Technical specs

- 1) Stable adsorption over 400°C(at the air)
- 2) Keeping the flatness of wafer.
- 3) Compact desk-top design, competitive price and convenient temp control
- 4) Heater size : Max 3inch.
- 5) Minimizing the pollution of sample surface.
- 6) Temperature : Max. 1100°C in vacuum chamber
- 7) Max 400°C at the air.
- 8) Pressure : 10exp-3 torr  
: (Ultimate Pressure within 5minutes by small chamber)
- 9) PG / PBN heating chuck Spec : 1300~4000 watt, : 110~220V, 8~25 Ohm, 15 ~30A(max.)



- 1) Rising temp speed  
: 1000dC/ 40seconds. (10exp-3 torr vacuum status)
- 2) Cooling Speed (Option)  
: 1000dC ~ 500dC /30seconds.  
: 1000dC ~ Room Temp/ 90seconds.
- 3) Maximum test at ambient: 400dC.
- 4) Heating chuck size : 3inch
- 5) Heater materials : PG/PBN heater.
- 6) Electrical specs : 24A, 125V, 3kw. 220VAC, 50hz. Single phase.
- 7) Weight: Approximately 80kg



Circle type heating chuck



Temperature set-up part

## Structure

- 1) Vacuum chamber.
- 2) PG / PBN Heating Chuck : (1 inch, 2 inch, 3 inch Circle type)
- 3) Graphite
  - It should be put on heating chuck to maintain uniform temperature.
- 4) Temperature sensor
  - Temperature sensor end should be put into hole which was made in the heating chuck's center.
- 5) Temperature set up part
  - It is in the front of RTP.
  - Various pattern of temp increasing model can be set up by pushing button.
- 6) Gas injection part
  - Various inert gas, such as N<sub>2</sub>, Argon can be flowed in and out.



Gas valve to flow in and out chamber



Glass window to see through in top of chamber

## Model No: RTP-2000

Same with RTP-1000 in characteristics, structure and technical specs, only except for s/w control in PC.

We expect to launch RTP-2000 in 2010 year, which can be controlled by s/w program on PC.