

## RTAP-handy tube



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## PRODUCT INFORMATION

The Rapid Thermal Annealing or Processing System is particularly designed to heat samples at various linear and very high heating rates under vacuum and under low-pressure controlled atmosphere. RTAP process is done in a quartz tube coaxially placed in a heater assembly. The heating assembly utilizes "special-halogen-lamp-heating technique" in order to ramp up and cool down wafers.

Wafers can be heated in order to activate dopants, change film-to-film or film-to-wafer substrate interfaces, densify deposited films, change states of grown films, repair damage from ion implantation, move dopants or drive dopants from one film into another or from a film into the wafer substrate.

The same system can also be used in brazing applications to join different materials to each other without exposing them to deleterious oxygen atmosphere at high temperatures.

## TECHNICAL SPECIFICATIONS

|   |  |
|---|--|
| Ultimate Vacuum Pressure .....                | $\approx 10^{-6}$ Torr                       |
| Quartz Tube Diameter .....                    | max. 130 mm                                  |
| Max. Temperature .....                        | 1050°C                                       |
| Linear Heating Rate Range .....               | 0.5-30°C/s up to 950°C                       |
| Temperature Measurement .....                 | Thermocouple                                 |
| Cooling .....                                 | Rapid cooling with removed furnace           |
| Loading .....                                 | From one end of the quartz tube              |
| Control .....                                 | Fully Automatic (Semi-Automatic is Optional) |
| Number of MFC's for different Gas Types ..... | Max 12                                       |
| Additional Gas Safety .....                   | Available Upon Request                       |

## SOFTWARE

System operation is done by user-friendly software. It is not only the automation and control software but also coating management software which allows the user design his/her specific coating experiments, examine the process parameters used in the past, and use the recipes/coatings developed in the past without hustle. Human and machine safeties are prime importance in the operations performed by the software.

A graphical user interface will allow the user to see the status of the system during operation.