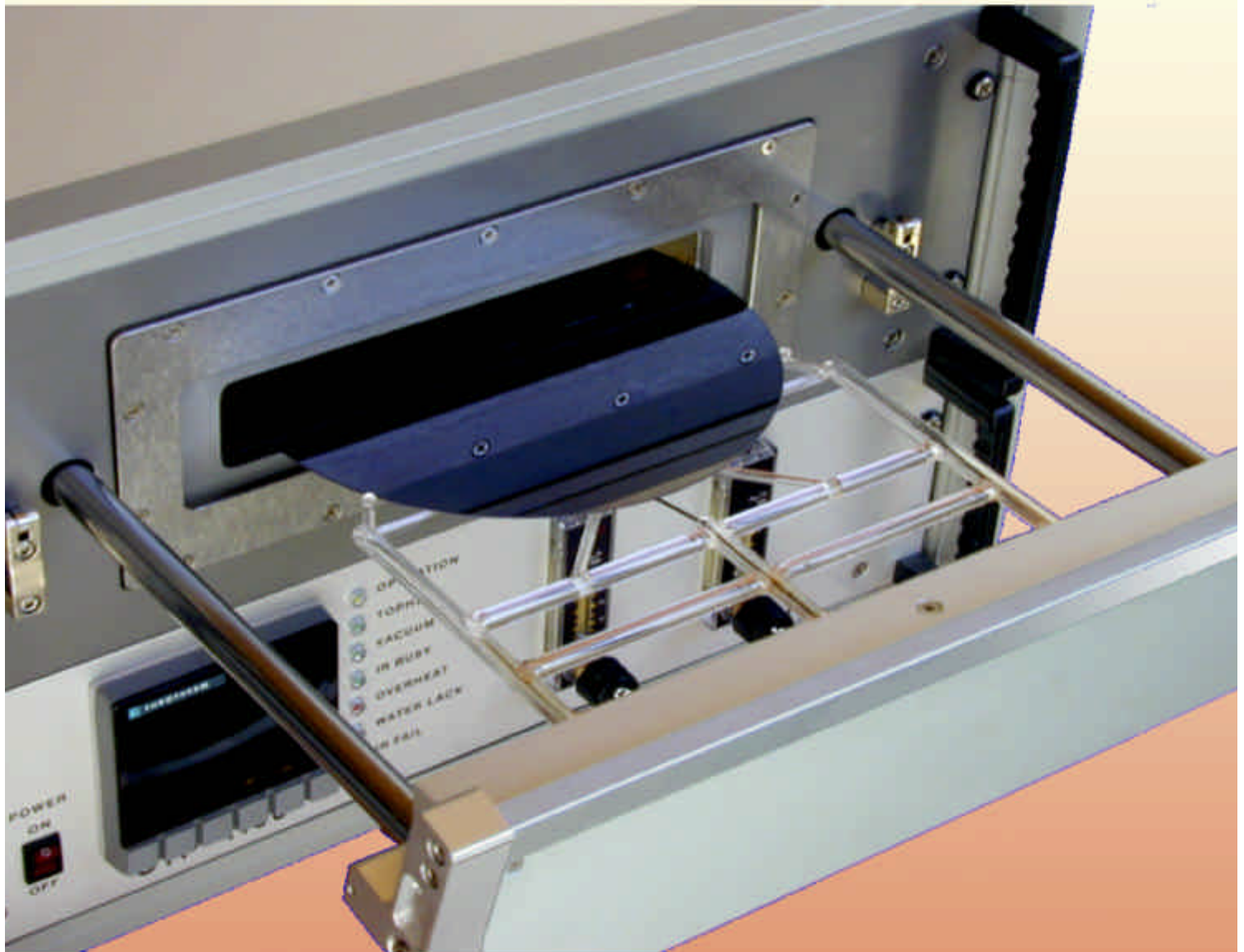


Rapid Thermal Process Oven Modell UTP 1100



- Fast ramp rates up to 75°C/second
- Vacuum or inert gas atmosphere
- for up to 6" wafer size

Rapid Thermal Process Oven

Model UTP 1100

- fast ramp-up rates up to 75°C/second
- process in gas or vacuum
- programmable temperature profiles
- record of the process data
- Windows based Software
- 20 programs saveable
- heating with IR lamps
- water cooled chamber
- small place requirements

The Rapid Thermal Process Oven allows the heat treatment for a single Wafer up to 6" size. The UTP-1100 is an excellent tool for various semiconductor processes and other applications. Some applications are: as laboratory furnace for all kind of developers implementing and researching new semiconductor processes, prototype research, quality control, environmental research purposes and for small pre-series or series production.

The quartz chamber is hermetically sealed and can be loaded manual by using metal or quartz trays which can carry wafers from 3" size up to 6". The UTP-1100 sets the industry standard for ease of operation and maintenance.

Two program controlled gas lines with flow meters allow the usage of two different gases, either Nitrogen or forming gas. By connecting an external pump the furnace is made vacuum capable.

Key features are precise controlled fast ramp-up and ramp-down rates which are 75°C/second for ramp-up (115V: 15°C/second) and a programmable ramp down rate (e.g. T=600°C down to 400°C with up to 200K/minute). These steps are programmable from room temperature up to maximum 1000°C (max. 1 minute).

The oven will be programmed with controller software by using the RS-232 interface connected with a standard PC. This allows the storing of unlimited programs where all temperature profiles with segments can be saved. A further feature is precise programming the ramp-rate or the ramp-to-target.

Options and accessories like water cooler, additional flow meters, additional gas lines, additional thermocouple etc. are available on request.

This tool is a low cost solution for various applications and customers. The small size (520mm x 400mm x 550mm) allows comfortable loading and unloading of the chamber. The oven can be easily placed on a standard laboratory table.

UTP 1100 Technical Data

| | |
|------------------|---|
| Process chamber: | 214mmx325mmx40mm (LxBxH) Quartz glass chamber with integrated gas in- and outlet with infrared lamps Total power: 18 kW (115V: 9kW) |
| Heating: | Upper and lower heating area |
| Loading system: | manual, metal or quartz glass tray (as option) in the process chamber, plug carrier integrated |
| Loading area: | max. ø 200mm or 200mm x 200mm |
| Controller: | fast PID temperature process controller, 100 steps programmable (temperature steps), free programmable process gas feed through with 2 adjustable gas flow meter, 20 programs storable with external pump |
| Vacuum: | from room temperature up to 700°C (long lasting) |
| Temperature: | max. Temperature: 1000°C |
| Ramp up rate: | free programmable max. 75°C/sec (115V : max. 15°C/sec) (empty furnace, real ramp-up rate depends on loading) |
| Ramp down rate: | T=600°C up to 400°C max. 200K/min T=400°C up to 100°C max. 30K/min |
| Electricity: | CEE 3 x 32A, 230V, 3 Phases (115V: 3x32A, 115V, 3 Phases) |
| Cooling: | Water cooling required Inlet pressure 2 to 6 bar Minimum DP 2 bar |
| Interface: | RS-232 |
| Dimensions: | 520x400x550 (LxBxH) |
| Weight : | » 54 kg |

Options and Accessories :

| | |
|--------------|--|
| UTP-1100-FM | Additional gas line with flow meter |
| UTP-1100-MFC | Additional gas line with Mass Flow controller |
| UTP-1100-QM | Quartz glass carrier (customer specific) |
| UTP-1100-QP | Quartz glass plate |
| UTP-1100-QX | Quartz tray for 3", 4", 5" and 6" wafers |
| UTP-1100-MP | Membrane (Diaphragm) Pump |
| UTP-1100-HV | Vacuum pump system for vacuum up to 5x10 ⁻⁵ mbar (torr) |
| UTP-1100-VM | Vacuum measurement |
| UTP-1100-WC | Closed loop water cooling system |