

RTP

AS-Master RTP - SYSTEM

200 mm RTP system from R&D to Production
From room temperature up to 1450°C
Standard vacuum capability
Manual or cassette to cassette loading



Applications

RTA (Rapid Thermal Annealing)

RTO (Rapid Thermal Oxidation)

Ohmic contact annealing

Implant annealing

RTCVD of graphene and hBN

Silicon carbonization

RTCVD of poly silicon, SiO₂, SiN_x, ...

Specifications

The AS-Master system can process wafers up to 200 mm diameter at temperature up to 1450°C for the high temperature version.

The cold wall chamber technology provides significant advantages:

- Low memory effect
- Higher cooling rates
- Ultra clean environment

The cross lamp furnace with multi zone control insures enhanced temperature uniformity. Different furnace configurations are available depending on the application.

Pyrometer and thermocouple temperature measurements are standard features. The fast digital PID temperature controller provides accurate thermal control across the temperature range.

The AS-Master can receive a temperature controlled double quartz window and sample rotation to perform RTCVD processes.

Loadlock and cassette to cassette loading are optional features.

Basic features

Substrate size	Up to 200 mm diameter – capability for 3x100 mm wafers Small substrates using susceptors
Process chamber	Stainless steel cold wall chamber technology
Temperature range	Up to 1150°C, 1250°C or 1450°C depending upon version
Temperature control	Thermocouple and pyrometer temperature control Fast digital PID / RTP temperature controller
Vacuum and gas	Up to 8 process gas lines with digital mass flow controllers One purge gas line Vacuum valve and vacuum gauge
Control	Full PC control, up to 100 steps per recipe Human interface designed in respect of SEMI E95-0200 Full data logging and process historicals

Optional features

Graphite and silicon carbide coated susceptors
Rough vacuum pump and turbo pump, automatic pressure control with throttle valve
Fast cooling system, Selenization kits

Customer support

Outstanding customer support for hardware, software and process
Efficient remote support using software diagnostic capabilities
High expertise in RTP processes of our process engineers
Capability to support customer for process optimization

Physical specifications

Facilities	Voltage : 3x400V+N+Gr Power : 75 kW, 90 kW or 105 kW Water : 2 to 4 bars, pressure drop 1 bar, 30 to 50 l/mn Compressed air : 6 bars (valve actuation) Process gas fittings : double ferrule ¼ or VCR ¼ (option)
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Dimensions and weight	Width	1,104 mm	43.5"
	Depth	1,550 mm	61.0"
	Height	2,500 mm	98.5"
	Mass	850 kg	1,874 lbs



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