

RTP

AS-One RTP - SYSTEM

100 mm (4") and 150 mm (6") systems

Cold wall chamber technology

Standard vacuum capability

Floor standing machine for reduced footprint



Applications

RTA (Rapid Thermal Annealing)

RTO (Rapid Thermal Oxidation)

Ohmic contact annealing

Implant annealing

RTCVD of graphene and hBN

Selenization, sulfurization

Crystallization and densification

Specifications

The AS-One systems are available with two sizes of reactors to process substrates up to 100 mm (4") or 150 mm (6") diameter. The machine has been specially developed to meet the requirements of universities, research laboratories and small-scale production up to 10,000 wafers per year. The high reliability guarantees low cost of ownership.

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

The clam shell style design of the process chamber gives full access to the bedplate and provides easy access for loading and unloading the substrates and allows practical cleaning of the chamber.

Basic features

Substrate size	Up to 100 mm diameter (4-inch) for AS-One 100 Up to 150 mm diameter (6-inch) for AS-One 150 Small substrates using susceptors
Process chamber	Stainless steel cold wall chamber technology
Temperature range AS-One 100 (AS-One 150)	Standard version : up to 1250°C (1200°C) High temperature version: up to 1450°C (1300°C)
Temperature control	Thermocouple and pyrometer temperature control Fast digital PID / RTP temperature controller
Vacuum and gas	Up to 5 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 / 3x220V+Gr				
	Power : 30 kW (34 kW)				
	Water : 2 to 4 bars, pressure drop 1 bar, 10 l/mn (12 l/mn)				
	Compressed air : 6 bars (valve actuation)				
	Process gas fittings : double ferrule ¼ or VCR ¼ (option)				

Dimensions and weight		AS-One 100		AS-One 150	
	Width	530 mm	21,0"	530 mm	21,0"
	Depth	800 mm	31,5"	800 mm	31,5"
	Height	1,425 mm	56,1"	1,425 mm	56,1"
	Mass	194 kg	428 lbs	206 kg	455 lbs



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