

KG6633

Dual Head network Final Plating System (Simultaneous plating)



- Increase Throughput by 50 %
- Cost effective, high efficiency

The KG6633 utilizes the latest Proportional-Integral-Differential (PID) plating control algorithm enhanced with shutter forecasting control. Intelligent solid-state plating power control module gives better plating accuracy and higher speed compared to the other conventional shutter-only or PID-only control system. Typical plate time per crystal is less than 2 seconds⁽¹⁾ (totally 2 plating cycles), with typical frequency spread of less than ± 5 ppm.

The built-in high quality KH1120D / KH1240D Dual channels Pi-network Crystal Measurement System provides the final accuracy of the crystal being plated. Measurement accuracy of less than ± 2 ppm could be achieved (Fs or Fr). And for full frequency range, both Fs and FL can be plated with high accuracy.

Vacuum system design utilize traditional style. Therefore providing simple maintenance, easy repairing, and low cost spare parts.

The system operation software is user friendly and menu driven. Touch panel is designed for production workers to operate easily, so that they do not need to work with the computer.



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Specifications

- Frequency range : 1-120MHz (with KH1120D dual channel network analyzer card), or
1-240MHz (with KH1240D dual channel network analyzer card)
- Plating control algorithm : Real time digital PID control, with shutter forecast.
- Filament control : Computer controlled real time high speed solid-state SSR.
- Pump down time⁽⁴⁾ : Approx. 3 minute to 1×10^{-4} Torr.
- Plating capacity⁽²⁾ : Computer programmable to 144 or 72 positions.
- Throughput⁽²⁾ : Around 8 minutes⁽³⁾ per cycle at 144 positions (monthly capacity of 600K approx.).
- Power requirement⁽²⁾ : 380Vac 3-phase 50Hz. Approx. 4 KVA.
- Cooling water required⁽²⁾ : 2 Kgf/cm² below 25°C. Approx. 6 litre/min.
- Compressed air required⁽²⁾ : 5 Kgf/cm²
- Pumping System⁽²⁾ : Rotary pump and diffusion pump.
- Vacuum gauge⁽²⁾ : Analogue penning gauge.

Standard System Configuration

Vacuum Chamber	1 set
KH1120D or KH1240D Dual channels network analyzer card	1 set
Computer with 1.44M floppy drive, hard disk and color monitor	1 set
Filament controller (plating power control)	2 sets
Panel controller	1 set
Operation system	1 set
Standard spare parts	1 set

Notes:

- (1) Plating speed for each crystal is less than 3 seconds, simultaneous plating results in 2 seconds per crystal in average.
- (2) Depends on vacuum system, given data are based on Korea vacuum system.
- (3) By estimation: 3 minutes in vacuum pumping + 2 seconds x 144 positions
- (4) When the chamber is clean, empty, at room temperature, and with sufficient water cooling.

Specifications are subject to change without prior notice.



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