



# AMERICAN PROBE & TECHNOLOGIES, INC.

## HC-6000 Thermal Wafer Chuck

### High Performance Chuck for your needs

Introducing American Probe & Technologies' HC-6000 series of thermal chucks, designed to provide accurate thermal control and surface uniformity. With a wide variety of configurations to choose from, the HC-6000 can accommodate not only the basic heated applications but also those requiring advanced electrical considerations for low noise DC Parametric or high voltage testing to 5KV. For a quotation on your custom needs, please contact American Probe & Technologies' technical support.



**HC-6008-RC1**  
**Heated 8" Wafer Chuck System**

#### Controller Highlights

The HC-6000 system controller is a microprocessor-based unit with a continuous dual LED display of set and monitored stage temperatures. The front panel provides manual operation of process temperature and applied power to chuck. The controller can be preset to 4 unique temperatures and selected via a rotary switch. The exceptional performance of this controller is achieved through an exclusive patented proportional DC power supply, designed to operate under conditions requiring the lowest possible transient noise. This design also increases heater life by decreasing power surges. The system is complete with a RS-232C serial port for control or monitoring of process.



**Triaxial design for Electroglas 2080 with wafer  
transport and lift pin provisions**

*Facts for the user:  
Although very low  
profile chucks offer  
faster ramp rates,  
undesirable thermal  
variations are created.  
To avoid these  
variances, a minimum  
of 1" thickness is  
advised. APT will  
provide solutions to  
balance your ramping  
& uniformity needs*

#### Wafer Chuck Highlights

Each custom built HC-6000 Thermal Wafer Chuck incorporates high-density aluminum, ceramic, and quartz materials, and a cast heater/cooling port cartridge. The layout of the tubular heater within the cast assembly offers exceptional uniformity for years of trouble free operation. With adjustable vacuum ports to accommodate different wafer sizes, this chuck's surface has a guaranteed flatness to within 50 microns and is available with gold or nickel plating. APT utilized RTd or thermocouple sensors (configuration dependant) within the wafer chuck to interface to the HC-6000 controller. The unique configuration of the chuck assembly provides minimum "Z" expansion through all temperatures.

### Designs for OEM replacement on Electroglas, KLA, TEL & all Analytical Probers



**HC-RCM8C-10 Microprocessor based  
refrigerated chiller (optional)**

This industrial grade chiller is rated 1.5-2.5kW (load dependant), with a >28,000 hours MTBF. The addition of this optional unit will provide rapid cooling to ambient or down to -20°C for production environments. Optional rack mount kit available.

- Patented Linear Proportional DC Heater Output
- Wide Temperature Range options (-20°C to 400°C)
- Excellent Temperature Uniformity ( $\pm 0.5^\circ\text{C}$ )
- Low Profile Designs for Easy Retrofit
- Coaxial, triaxial, & high voltage models available
- Models for 4", 6", 8" and now 300mm (12")