

CONTROLLER SPECIFICATIONS

HC-6000 SERIES

CONTROLLER FEATURES

True Proportional Linear DC Heater Output
Dual PID Autotune with Setting Override
Programmable Ramp-to Setpoint
Dual 4-digit, LED Indication (PV and SV)
Proportional Output Status Indication
Fault Indication
Menu Driven Format
Sensor Break Protection
Range Limiting
Selectable °F/°C
Programmable Lock Feature
Non-Volatile Memory
Optional - High/Low Alarm Output
2 Year Warranty

CONTROLLER SPECIFICATIONS

Calibration Accuracy	± 0.1% of span, ± 1 LSD, 25°C ± 3°C
Accuracy Span	540°C minimum
Temperature Stability	± 0.1°C/°C change in ambient
Sampling Rate	10 Hz
Indication Independent:	(PV): Red, 4-digit, 7-segment LEDs (SV): Green, 4-digit, 7-segment LEDs
Status Indicators	Control Output Alarm Output (Optional) Heating, Purge, Cooling
Setting	5 Push Buttons on Front Panel 4 temp presets via 10 turn pot/rotary select
Computer Interface	RS-232C communications (control/monitor) IEEE-488 GPIB (optional)
Heater Output:	
Output Type	Patented proportional linear DC
Current	5 to 35 amps (3" to 8" chuck)
Voltage	0 to 60 volts DC
Sub-Control (Alarms)	(Optional)
Alarm Type	Process alarm Deviation alarm Rate alarm Test - ready
Enclosure	Black anodized aluminum-rack mount 17.3" x 16.7" x 8.8" (w,d,h) controller
Front Panel	Lexan bezel/black anodized aluminum

FOOTNOTES:

- 1 Dimensions do not include connector/umbilical cables
- 2 Height is typical with standard mounting
- 3 Use of chuck for prolonged periods may require HCC-BCM-8
- 4 For applications requiring sub-ambient temperatures N2 or dry air is required to prevent moisture formation.

WAFER CHUCK FEATURES

Stable vertical growth during temp cycling
Low profile design for easy retrofit
Integrated heat shield/thermal isolation mount
Low noise DC heater assembly
1 Year Warranty

WAFER CHUCK SPECIFICATIONS

Temperature Stability	± 0.1°C/°C change in ambient
	10 Hz
Temperature Range:	Ambient to 200°C (-20°C to 400°C with options)
Temperature uniformity:	± 0.5°C
Heater type:	
With cooling:	Cast aluminum tubular heater/cooling port
Heat only:	Mica foil heater
Maximum voltage:	60 volts DC
Current (in watts):	600 to 1800 (4"-12")
Chuck Flatness:	within 0.001"
Chuck Parallelism:	within 0.0015"
Electrical Isolation:	Better than 10 ⁹ ohms @ 500VDC
Dimensions¹:	
	HC-6004 4.15" x 1.45" ²
	HC-6005 5.15" x 1.45" ²
	HC-6006 6.15" x 1.65" ²
	HC-6008 4.15" x 1.75" ²

WAFER CHUCK OPTIONS

-RC1	Cooling module for HC-6000 series – radiator cooling
-HT300	High temperature chuck to 300°C ³
-HT400	High temperature chuck to 400°C ³
HC-RCM8C-10	For cooling to -10°C or applications that require repetitive cooling cycles
HC-RCM8E-55	For cooling to -55°C Dual stage chiller
HCI-I488	IEEE-488 GPIB Interface module
HCC-IHK2-8	Extended Isolation Option (10 ¹² @ 500 VDC)(8")
HCC-IHK5-8	Extended Isolation Option (10 ¹⁵ @ 500 VDC)(8")
HCC-IIC2-8	Coaxial Extended Isolation Option (10 ¹² @ 500 VDC)(8")
HCC-IIC5-8	Coaxial Extended Isolation Option (10 ¹⁵ @ 500 VDC)(8")
HCC-LNT5-8	Low Noise Triax shielding option (includes HCC-IHK5)(8")
HCC-BCM-8	Base cooling module for high temperature operation
Also available:	Custom chuck shapes and configurations High accuracy fluid heat/cooling (most stable temperature) Custom finishes of chuck Custom mounting configurations for prober mounting Custom through chuck holes for wafer lift pins Cabling interface kit – for dark/dry box installation