

Features

- Precision Temperature Control from -100 °C to 310 °C
- Low Surface Temperature Gradients
- Independent Vacuum Channels for Small or Large Wafer Sizes
- Thin Design for Easy Probe Station Integration
- Lift Pin Access Holes Available
- Triaxial Option Available for Very Low Leakage/Noise Measurements
- Electrically Floating Chuck Surface with Grounding Points
- Controlled Fast Heating and Cooling Rate
- Options for On Chuck and Off Chuck Independent Vacuum Channel Control Available
- Wafer Size from 12 mm to 304 mm



Technical Specifications

Temperature Resolution	0.01 °C with mK1000
Temperature Stability	±0.01 °C at 100 °C with mK1000
Temperature Uniformity	±0.1 °C per cm (better temperature uniformity available)
Minimum Heating and Cooling Rate	±0.1 °C per hour
Temperature Control Method	Switching PID (PID with Linear Variable DC optional)
Temperature Control Sensor	100 Ω Platinum RTD
Surface Flatness	10 μm at ambient temperature

Model Information

Size	Model ^{1, 2, 3}	Sample Diameter		Temperature Range ⁴	Maximum Heating Rate
		Minimum	Maximum		
150 mm	HCC206R, HCC206RT	12 mm	152 mm	-100 °C to 200 °C	+60 °C per minute at 100 °C
150 mm	HCC306R, HCC306RT	12 mm	152 mm	-100 °C to 310 °C	+60 °C per minute at 100 °C
200 mm	HCC208R, HCC208RT	40 mm	203 mm	-80 °C to 200 °C	+50 °C per minute at 100 °C
200 mm	HCC308R, HCC308RT	40 mm	203 mm	-80 °C to 310 °C	+50 °C per minute at 100 °C
300 mm	HCC20CR, HCC20CRT	95 mm	304 mm	-60 °C to 200 °C	+30 °C per minute at 100 °C
300 mm	HCC30CR, HCC30CRT	95 mm	304 mm	-60 °C to 310 °C	+30 °C per minute at 100 °C

- ¹ Options for On Chuck and Off Chuck Independent Vacuum Channel Control available
- ² Options for Swagelok Compression Fittings available
- ³ Options for Lift Pin Access Holes available
- ⁴ Below ambient operation requires optional cooling accessory.

Accessory Ordering Information

Accessories	Description
mK1000 Options	Please refer to the mK1000 Temperature Controller section for mK1000 controller options (e.g. IEEE-mK1000: IEEE 488 communication port)
LN2-SYS	Liquid nitrogen cooling accessory. Please refer to the LN2-SYS section for selections of liquid nitrogen cooling accessories
WPC3A/WPC3U	115V or 230V circulation water pump system for rapid sample chamber cooling to as low as 5 °C
WP115F/WP230F	115V or 230V circulation water pump for frame cooling

Ordering Information – 150 mm Chucks

Part Number	Description
HCC206R-mK1000A	HCC206R, round hot and cold chuck with mK1000, 115V, software included
HCC206R-mK1000U	HCC206R, round hot and cold chuck with mK1000, 230V, software included
HCC206RT-mK1000A	HCC206RT, round hot and cold triaxial chuck with mK1000, 115V, software included
HCC206RT-mK1000U	HCC206RT, round hot and cold triaxial chuck with mK1000, 230V, software included
HCC306R-mK1000A	HCC306R, round hot and cold chuck with mK1000, 115V, software included
HCC306R-mK1000U	HCC306R, round hot and cold chuck with mK1000, 230V, software included
HCC306RT-mK1000A	HCC306RT, round hot and cold triaxial chuck with mK1000, 115V, software included
HCC306RT-mK1000U	HCC306RT, round hot and cold triaxial chuck with mK1000, 230V, software included

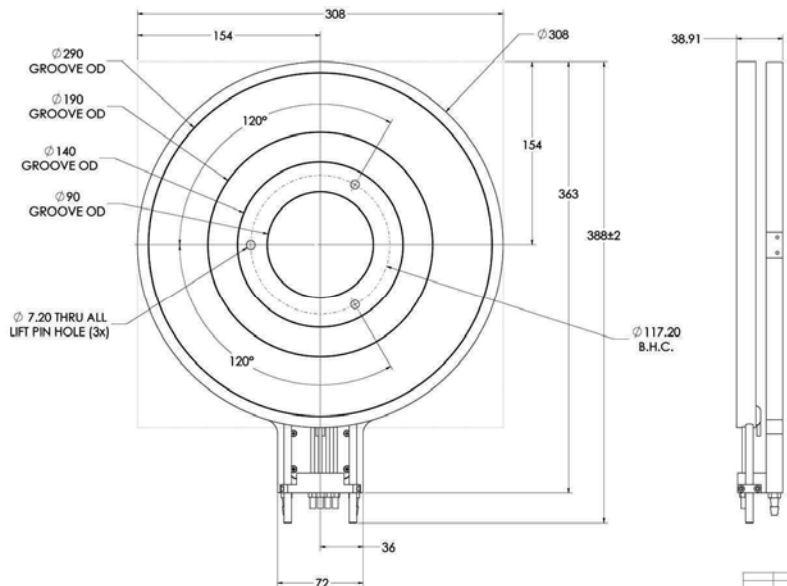
Ordering Information – 200 mm Chucks

Part Number	Description
HCC208R-mK1000A	HCC208R, round hot and cold chuck with mK1000, 115V, software included
HCC208R-mK1000U	HCC208R, round hot and cold chuck with mK1000, 230V, software included
HCC208RT-mK1000A	HCC208RT, round hot and cold triaxial chuck with mK1000, 115V, software included
HCC208RT-mK1000U	HCC208RT, round hot and cold triaxial chuck with mK1000, 230V, software included
HCC308R-mK1000A	HCC308R, round hot and cold chuck with mK1000, 115V, software included
HCC308R-mK1000U	HCC308R, round hot and cold chuck with mK1000, 230V, software included
HCC308RT-mK1000A	HCC308RT, round hot and cold triaxial chuck with mK1000, 115V, software included
HCC308RT-mK1000U	HCC308RT, round hot and cold triaxial chuck with mK1000, 230V, software included

Ordering Information – 300 mm Chucks

Part Number	Description
HCC20CR-mK1000A	HCC20CR, round hot and cold chuck with mK1000, 115V, software included
HCC20CR-mK1000U	HCC20CR, round hot and cold chuck with mK1000, 230V, software included
HCC20CRT-mK1000A	HCC20CRT, round hot and cold triaxial chuck with mK1000, 115V, software included
HCC20CRT-mK1000U	HCC20CRT, round hot and cold triaxial chuck with mK1000, 230V, software included
HCC30CR-mK1000A	HCC30CR, round hot and cold chuck with mK1000, 115V, software included
HCC30CR-mK1000U	HCC30CR, round hot and cold chuck with mK1000, 230V, software included
HCC30CRT-mK1000A	HCC30CRT, round hot and cold triaxial chuck with mK1000, 115V, software included
HCC30CRT-mK1000U	HCC30CRT, round hot and cold triaxial chuck with mK1000, 230V, software included

Physical Dimensions – 300 mm Round Chuck



Contact Instec for dimensions of 150 mm and 200 mm round chucks.