HCQ
Quartz Inline Chemical Heater

PRODUCT DATA SHEET

Ultra Pure Quartz Wetted Parts!

- **Exceptionally easy maintenance & several plumbing configurations**
- **Ultra-clean performance with 100% high purity quartz construction**
- **Longer heater life with patented cooling system using minimal purge gas**
- **Virtually eliminates process contamination with isolated heating element**
- **Minimal footprint with space-conscious design**

- Up to 185°C
- 0.75 to 12kW
- 208 to 480 Volts, Single or three phase
- 345 kPa
- CE, UL499, SEMI S2

PROCESS TECHNOLOGY

ISO 9001:2015 WITH DESIGN CERTIFIED

HCQ DATA SHEET

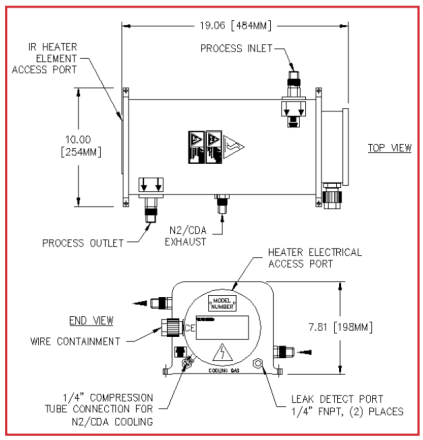
Features & Values

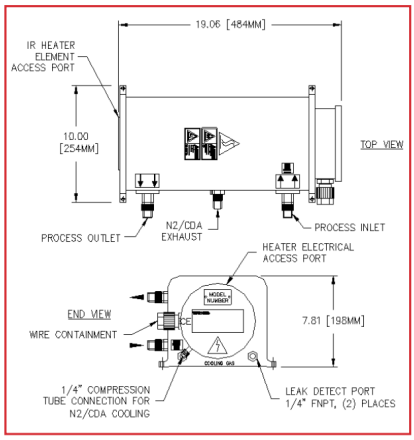
- **Outstanding Cleanliness:** No ionic or bacterial contamination with 100% high purity quartz construction
- **Easy Maintenance with Minimal Downtime:** Plug-in heater element is easily replaced in minutes. Fluid connections remain intact, eliminating the need for system re-qualification.
- **Reliable:** Patented purge cooling system significantly extends heater element life versus conventional designs.
- **Low Cost of Ownership:** Heating element can be field replaced without disturbing the plumbing connections or affecting the integrity of the chemistry.
- **Secondary Containment:** PTFE housing acts as a maintenance-free secondary containment vessel to help protect the environment from chemical spills. Leak detection available as an option.
- **Excellent Responsiveness:** Halogen lamps provide instantaneous start-up & rapid response with excellent temperature stability under varying flow rates.
- **Compact Size:** Minimized footprint requirements
- **No O-Rings:** Eliminates process contamination associated with o-rings. Leak-free operation assured.
- **No Dead Zones:** Tangential flow pattern eliminates stagnant zones in the heater. The heater is self-draining & self-venting (upon proper installation).
- **Low Pressure Drop:** Minimal pressure drop for high-circulation applications.

Specifications

Wattages	750 to 18,000 watts
Voltages	208 to 480 volts, single or 3-phase. Consult factory for specific wattage/voltage combinations available
Temperature Limit	185ºC, depending on operating conditions
Pressure Rating	345 kPa working
Inlet/Outlet	19mm (3/4") MNPT flare quartz connections
Purge Gas	Patented system using 3.5 SCFM (min) clean dry air (CDA) or nitrogen (N_2) 6.35mm (1/4") O.D. tube connector
Flow Rate	Up to 100 lpm
Safety Features (requires controller interface)	▫ Heater housing over-temperature shutoff & alarm ("J" type thermocouple and redundant bi-metallic snap switch) ▫ Purge gas verification & interlock
MTTR	10 minutes (with adequate access)
MTBF	In excess of 20,000 hours
Temperature Accuracy	1°C, depending on operating conditions
Heating Element	IR halogen lamps
Housing	100% PTFE with viton o-ring seals (non-wetted). Conforms to FM material standards.
Certifications	▫ ETL certified to UL499 standards ▫ CE compliant ▫ Conforms to SEMI S2 standards

Dimensions





Model Number Breakdown

HCQ	1.5	-	208	1	1
HCQ Series	Wattage (kW)	-	Voltage	Phase	Configuration
	1.5 = 1,500		208	1 = Single Phase	001 = Standard
	2 = 2,000		240	3 = Three Phase	
	2.25 = 2,500		380		
	3 = 3,000		400		
	4 = 4,000		415		
	4.5 = 4,500		480		
	5 = 5,000		440		
	5.5 = 5,500		220		
	6 = 6000		200		
	6.75 = 6,750				
	7.5 = 7,500				
	8 = 8,000				
	8.3 = 8,300				
	9 = 9,000				
	10 = 10,000				
	11.2 = 11,200				
	12 = 12,000				

PROCESS TECHNOLOGY