TIH Inline Chemical Heater

The most reliable Inline Chemical Heater for unmatched semiconductor process fluid heating!

Now heat semiconductor process fluids up to 210°C!

Faster heatup: Single heater chamber sizes up to 18kW.

PROCESS TECHNOLOG

PROCESS

Rapid installation: Customized plumbing connections available to match existing plumbing and case installation.

Long heater life for reduced cost of ownership (COO): Patented heater gas purge system continuously removes any chemical permeation and ensures long element life.

Long heater life and clean operating: Patented heater gas purge system continuously removes chemical permeation and ensures exceptionally long element life. This system also protects against any potential ionic contamination of the chemistry.

Rugged construction: Thick-walled chamber provides long service life in the harshest high temperature applications.

Exceptionally clean performance: Thick fluoropolymer sheath minimizes permeation. Element purge monitoring minimizes ionic contamination potential. Cleanroom assembly and testing ensures the highest manufacturing standards.

Outstanding chemical compatibility: All fluoropolymerwetted parts compatible with virtually any chemistry.

Excellent temperature stability: Low watt density design enables accurate control of process temperature.

TIH Series Applications Include:

- SC1: ammonium hydroxide and hydrogen peroxide
- SC2: hydrochloric acid (HCl) and hydrogen peroxide
- Buffered oxide etch (BOE) process: hydrofluoric acid (HF) and ammonim fluoride
- Nitride etch/strip: phosphoric acid
- Various acids such as: Hydrochloric (HCI)
 - Hydrofluoric (HF) Acetic Nitric
 - Sulfuric
- Sulfuric acid and hydrogen peroxide
- Sulfuric acid and ozone
- Hydrofluoric acid and glycol
- Potassium hydroxide (KOH)
- Sodium hydroxide (NaOH)
- Electroless nickel
- Electroless copper
- Electroless gold
- Deionized water
- Some solvents (consult factory)

TIH Benefits and Specifications

Benefits:

- Unmatched heating of semiconductor process fluids up to 210°C.
- Patented heater gas purge system ensures long element life and reduced cost of ownership.
- Thick-walled chamber provides long service life in the harshest high temperature applications.
- Element purge monitoring minimizes ionic contamination potential. Cleanroom assembly and testing ensures the highest manufacturing standards.
- Low watt density design enables precise and stable control of process temperature.
- PVDF high temperature mounting brackets (High temperature model)

Options:

- Horizontally mounted configuration
- Integral cooling coils
- 100 ohm RTDs or "J", "K", or "E" type process and element thermocouples
- · Lower watt density heaters for special applications

Specifications:

Temperature Range: Up to 210°C.

Maximum Working Pressure:

- 100 PSIG (7 Bar) at 25°C
- 29 PSIG (2 Bar) at 210°C

Heater Sizes: 1,000 watts up to 18,000 watts

Heater Voltages Available:

 200 to 600 volts, single or three phase (12kW and larger requires three phase).

Watt Density: 10 watts per square inch (1.5w/cm²)

Fluid Connections Available:

- ¹⁄₄" (6mm) to 1" (25mm)
- Flared, Super 300 Type Pillar® and other connections available.

Sensor:

1000 ohm RTD process and element sensors

Third Party Certificatons: CE, UL, Semi S2 and S3

Element Purge:

 Small amount of clean dry air (CDA) or N₂ gas flows between the metal grounded element and the PTFE sheath.

Dimensions



Your Distributor:

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