

High Purity Quartz In-Line Heaters

A New Standard for Performance

IMTEC has once again taken heating of high purity liquids to a new level of performance and reliability.

Heating liquids using high purity materials in a harsh environment requires special skills and knowledge that can only be gained from experience.

For the last 25 years, IMTEC's Engineers have been refining and improving the heated quartz bath and understand the critical needs of Semiconductor and related processes.

The sum of that knowledge has been incorporated into the ACCUHEAT® In-line heater to create products that not only perform, but simplify installation and maintenance as well.

Exemplified by our long-standing ISO 9001:2000 registration, our dedication to manufacturing process control assures that our customers receive uniformly high-quality products in a timely manner.

All ACCUHEAT® models are UL Recognized, CE marked and certified to meet Semi S2 and S3 requirements.

IMTEC offers a wide range of standard models to allow for easy integration into almost any application.

Key Product-Line Features

Uniform Conductive Heating

Unlike Infrared lamps, IMTEC's low mass Inconel heater provides even conductive heat over the entire quartz tube.

Since many common chemistries do not readily absorb IR heat, conductive heaters allow for more uniform heating regardless of the application.

IMTEC's conductive heaters also do not require any type of purge or cooling, making them easier to install and less expensive to operate.

High Efficiency

IMTEC's proprietary Power Modulator assures that the maximum amount of heat that can be absorbed by the liquid is applied. This allows for minimal heat-up times in varying conditions without wasting energy.

Designed and Built with Equipment Companies in Mind

For over 25 years, IMTEC has been the choice of many equipment manufacturers to supply solutions for their high purity heating requirements.

We know that the industry is demanding better up time, longer warranties, and reduced cost of ownership. All of these were carefully considered in the development of the ACCUHEAT®.

IMTEC has supplied chemical heating solutions for many different types of equipment and can help you develop a system that is optimal for your needs.

Where a standard in-line heater is not appropriate, IMTEC can design custom products specific to your heating requirements.

In today's highly competitive market, IMTEC's technology can be your advantage.

Zero Maintenance

- ◆ No Lamp replacement
- ◆ No Calibration
- ◆ No reflectors to clean
- ◆ Hot Grip Nuts stay tight – No Leaks!
- ◆ Self Draining

Key Safety Features

Operating heaters in a harsh environment requires special safeguards.

All ACCUHEAT® models include these standard safety features:

- ◆ UL Recognized, CE Marked, and certified to meet Semi S2 and S3 requirements
- ◆ Power modulator monitors element temp to reduce excess heat inside housing
- ◆ Overtemp Thermocouple attached to heater element provided for redundant protection
- ◆ Overtemperature snap switch trips if heater is run dry
- ◆ Internal leak detect strip (requires external monitor)
- ◆ PTFE Teflon® housing for chemical resistance and low surface temperature
- ◆ HOTGRIP™ Nuts (Pat. Pend.) and Buttress thread stems prevent chemical leaks
- ◆ RTD provided for monitoring fluid temperature

Unsurpassed Reliability

It's not easy making heating systems that operate in harsh environments, but that has been IMTEC's business for over 25 years. Here are just a few design features that make the ACCUHEAT® so reliable.

- ◆ Heavy gauge pre-formed Inconel element can stand up to high stress conditions without breaking down
- ◆ Power modulator monitors heater element temp and prevents heat buildup inside the housing
- ◆ Sealed PTFE Teflon® housing prevents chemical fumes from attacking internal components
- ◆ Internal leak detect strip (requires external monitor) gives early detection of chemical leaks
- ◆ All wiring is run in PFA Teflon® conduit to prevent chemical attack

ACCUHEAT® Sizes and Styles

Since not all applications are the same, IMTEC offers heaters in several configurations to simplify integration for you. All models are available with 208 or 240VAC heaters and some accommodate 3 phase wiring.

All come standard with a power modulator and either HOTGRIP™ (standard) or FIRMLOK™ (optional) nuts on flare type connections.



12000 Watt Dual Tube



6000 Watt Single Tube



18000 Watt Dual Tube

Single Tube Models are compact and ideal for Vertical or Horizontal mounting. They are available in the following wattages:

- ◆ 3000
- ◆ 4500
- ◆ 6000
- ◆ 7500
- ◆ 9000
- ◆ 13000



Dual Tube Models allow for higher wattages and fit into a more rectangular space. All models are available with parallel or series flow paths. Parallel models have connections on opposite ends and can be mounted horizontally or vertically. Series models have connections on the same end and are mounted Horizontally. They are available in the following wattages:



- ◆ 6000
- ◆ 9000
- ◆ 12000
- ◆ 15000
- ◆ 18000

Applications

ACCUHEAT® In-line heaters can be used in many applications requiring heating of high purity process fluids.

The traditional application uses the In-line heater as part of the recirculation loop, either as the sole heat source or in combination

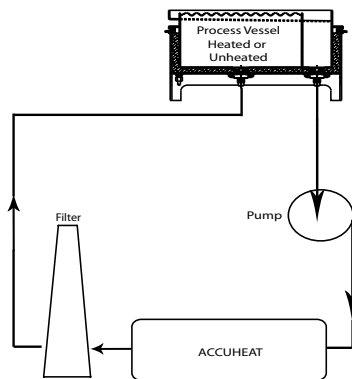
with a heated quartz tank for faster heat up times and better control.

ACCUHEAT® models can also be used in some single pass applications. Even some DI water heating requirements can be met with a compact In-line heater instead of a large remote mounted DI water heater.

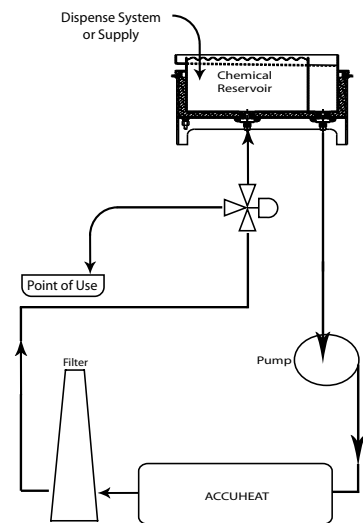
Tools that process single substrates can often use an ACCUHEAT® In-line instead of other more costly solutions.

Your IMTEC representative can help you decide whether an In-line heater can work for you and help find the right size and configuration.

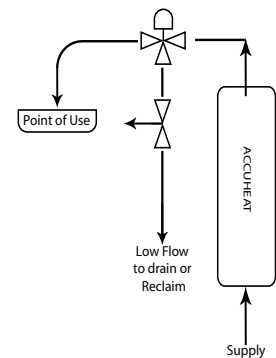
Recirculation Bath



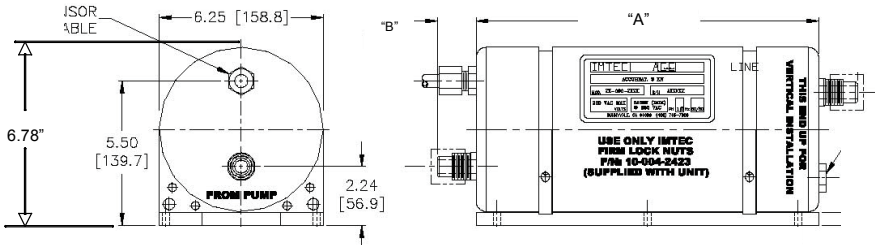
Heated Recirculation Loop with Dispense Replenish



Single Pass Dispense with Intermittent Demand



ACCUHEAT Single Tube Heater Dimensions



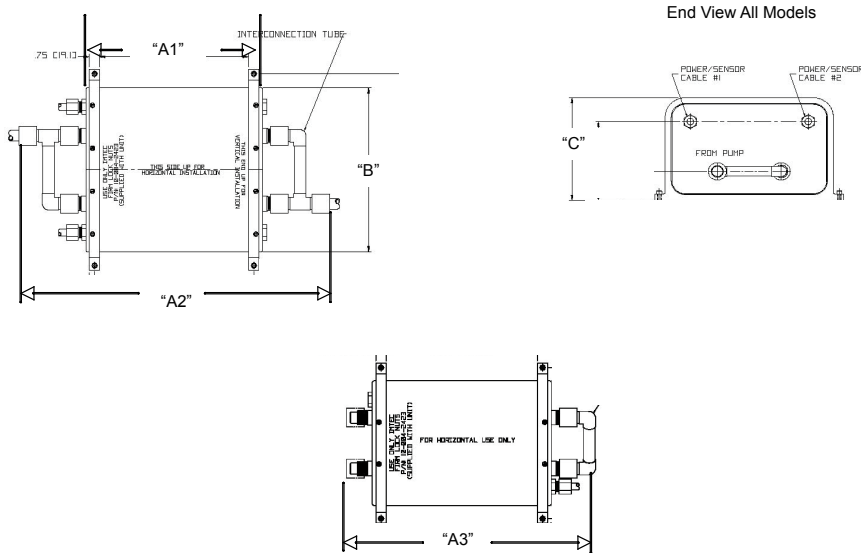
All Single Tube Heaters use the same diameter housing and base plate width. The length varies for higher wattage models.

Model	Length "A"
3000	13.08"
4500	13.08"
6000	13.08"
7500	15.75"
9000	18.97"
13000	26.50"

Connector dimensions from heater body to end of fitting

Type	Dimension "B" (approx.)
HOTGRIP (standard)	2.25"
FIRMLOK (optional)	2.00"

ACCUHEAT Dual Tube Heater Dimensions



ACCUHEAT Dual Tube Heater dimensions (Dimensions that include fittings or plumbing are approximate)

Model	Length "A1" All	Length "A2" Parellel	Length "A3" Series	Width "B" All	Height "C" All
6000	12.81"	22.50"	17.85"	8.94"	7.27"
9000	12.81"	22.50"	17.85"	11.50"	8.02"
12000	12.81"	22.50"	17.85"	11.50"	8.02"
15000	15.50"	25.20"	20.54"	11.50"	8.02"
18000	18.20"	26.38"	23.25"	11.50"	8.02"



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Wet Process Modules And Systems

ACCUBATH
 Constant Temperature Process Vessels

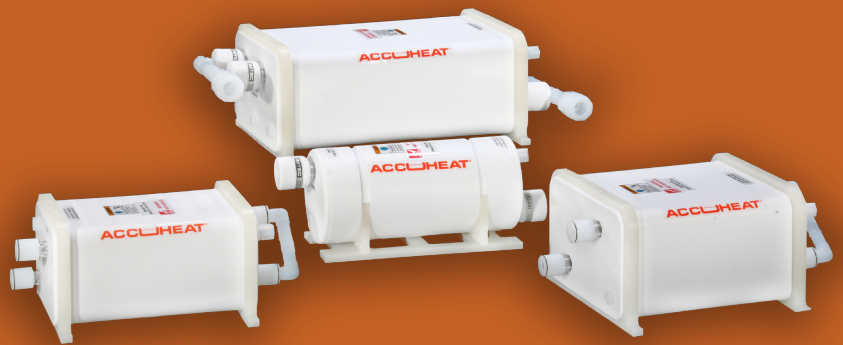
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