

PCT Process Tanks

Whatever your application, PCT can provide one of over 40 standard tank designs or customize a unit specifically to meet your needs. From the most complex heated, temperature controlled quartz baths, quick dump systems or even simple static tanks, PCT's process expertise and manufacturing experience make us an easy choice for top tier manufacturers, R&D facilities and start-ups.

Tiger Tanks™ • Constant Temperature Baths

Designed for today's advanced deep-submicron wafer processing, PCT's Tiger Tank Constant Temperature Bath construction exceeds the most stringent demands of today's wafer fabrication facilities. Tiger Tanks deliver unequalled performance, stability, reliability, longer life, and incorporate improved safety features.

- A time-proven, rugged, high efficiency heater features low watt densities for extended life. The Tiger Tank heater is intimately contacted to the vessel and covers a larger area of the vessels external surface for greater heat transfer efficiency and temperature uniformity.
- The superior insulation used in Tiger Tanks further enhances the overall thermal efficiencies of the unit, reducing external heat generated in operation and reducing electricity consumption.
- Standard fire-retardant polypropylene housing construction, FM 4910 enclosures available
- An improved and proprietary flange / seal design further extends bath life and protects against capillary action induced leakage that would normally cause corrosive heater failure
- Tiger Tanks include dual redundant over temperature sensor protection; a thermocouple and thermal switch bonded to the outer wall of the vessel for optimal safety
- Proprietary Solid-State Power Supply & Control System delivers high reliability and precision

Custom Tanks

PCT specializes in designing and fabricating Custom Process Tanks and Megasonic Baths configured to meet unique requirements and processes:

- Materials:
 - Plastic: PP, PVDF, PFA, NPP, and FRPP
 - Stainless Steel: 304, 316
 - Quartz
- Frequency Range Options
- For Single Wafers, Standard Cassettes, or Custom Substrate Holders
- Control Adjustability
- Special Processes: QDR, Nitride Etch
- Options: recirculating, overflow weirs, drains, saw tooth or flat top overflow, cooling collars



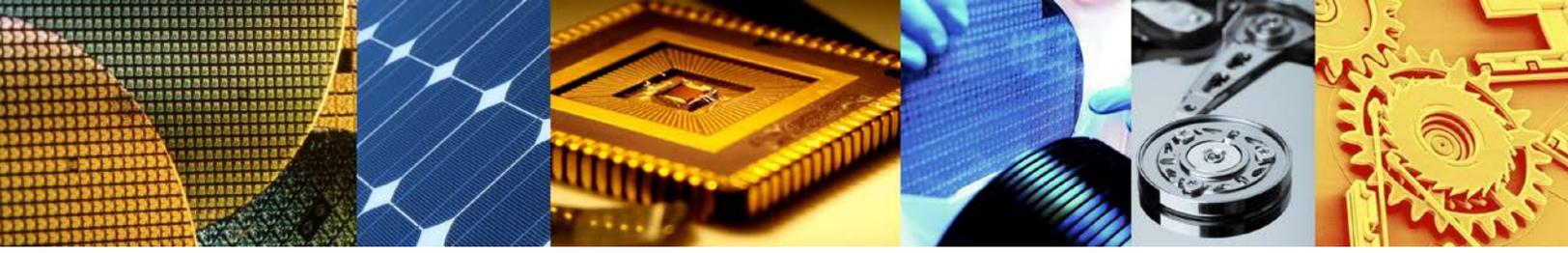
Compact Temperature Controllers & Timers

Model 90 MPU-Based Temperature Controller / Timer Advantages

- Three-mode (PID) control with anti-rest windup using J-type in-bath thermocouple sensor
- Down-count/up-count programmable timer with cumulative over timer and settable pre-warm
- Discrete LED visual and sonalert audible annunciator and status
- Integrated 20-amp photo-isolated solid-state power controller with zero-cross firing
- Independent high-limit thermal cut-off for "hard" shutdown
- Two digital information displays allow simultaneous time and temperature display
- Level sensor input
- External dimensions: 7" (178mm) H x 6" (152mm) W x 5.25" (133mm) D

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Tiger Tanks™ • Constant Temperature Baths



Quartz Tiger Tanks Constant Temperature Baths (TT)

Quartz Tanks feature a high purity, virgin quartz liner (molded or GE124) that will not devitrify at maximum bath operating temperatures. Greater control of dimensional accuracies in the quartz vessel fabrication and assembly significantly reduce mortality of the liner system.

Flexible Drain (Quartz Baths)

Tiger Tank's unique flexible drain offers the ultimate in low-stress, leak-free drain operation. Its all-Teflon construction is compatible with all process chemistries. An optional drain valve is also available.



Filtered Recirculating Bath (TTF)

Tiger Tank Filtered Recirculating Baths, featuring a 360° weir design, are the most advanced heated baths available, offering unique advantages over other solutions used today.

- Single-vessel design with direct chemistry heating
- No swamping of the Weir area during boat placement
- Most rugged and durable unit of its kind



Nitride Etch (TTN)

The TTN Series bath system contains all the time proven features and benefits of the TT Series bath with the addition of a control and cooling system to accommodate Nitride Etch/Strip applications with high temperature Phosphoric Acid. Automatic DI water replenishment to maintain consistent acid/water ratio, efficient reflux cooling, and precision heat control allow for improved etch uniformity and selectivity.

- High reliable quartz tank design
- Hydroseal washer standard on all TTN baths for longer RTV seal life
- Manual or Auto-lid configurations (side and end configurations)
- 190°C temperature operation; higher temperatures available on custom baths
- Liquid Level Sensors
- Dual Panel flow meter for DI water drip and cooling water control
- RTD Temperature Sensors
- TC and Snap Switch overtemperature devices



Stainless Steel Tiger Tanks

Stainless Steel (SS and SST)

Stainless Tanks feature a stainless steel liner of either 304 or 316L with #4 or optional Electro-polish finish. PCT stainless tanks are fabricated from a single sheet of material providing for the smoothest and purest material surface available. Options include:

- Coved corners or square corners
- FM4910 or stainless steel housings
- 316 or 304 Stainless steel construction
- Electro-polished, PFA or Halar coated surfaces
- Variable drain sizing
- Recirculated / filtered or static tank configuration
- Heated tanks up to 150°C
- Manual or automated lids
- Easy integration for replacement and maintenance for virtually any wet bench system

WARRANTY: PCT Systems warrants its products to be free from manufacturing defects in materials and workmanship when used in normal operating conditions for a period of twelve months from the date of original shipment for PCT Systems factory. Damage from misoperation or mishandling is specifically excluded from the warranty. Such mishandling includes, but is not limited to, impact or physically induced breakage, corrosion due to misoperation, negligent use of product, or improper installation or installation techniques.

