



# HEAT & COOL

## TCU SERIES WATER TEMPERATURE CONTROL UNITS



**Precise Temperature Control In A Rugged, Reliable Design**

**Innovative Design Promotes Turbulent Water Flow To Maximize Heat Transfer Performance**

**High Flow Pumps With 32°–250°F (0°–121°C) Operating Range**

**Immersion-Style, Stainless Steel Incoloy®-Sheathed Heaters**

- Rugged all-cast design minimizes connection points to increase water circuit integrity
- An off-the-shelf, DIN-style, auto-tuning PID fuzzy logic controller accurate to within  $\pm 1^\circ\text{F}$  ( $1^\circ\text{C}$ )
- High-flow pumps with 30gpm to 120 gpm (114 lpm to 454 lpm) capacities
- Easy-access cabinet design
- Compact—13" W x 27" D x 28 3/4" H (330mm x 686mm x 730mm)
- Upright—13" W x 27" D x 48" H (330mm x 686mm x 1219mm)

TrueTemp TCU Series Water Temperature Control Units from AEC provide highly accurate control for production applications requiring a continuous supply of temperature-controlled water.

A DIN-style, auto-tuning PID controller monitors process water temperature to cycle the heating/cooling process. Accurate to within  $\pm 1.8^\circ\text{F}$  ( $1^\circ\text{C}$ ), it ensures precise adherence to programmed temperature setpoints. This off-the-shelf controller carries a five-year warranty.

Compact units are available in 9kW, 12kW, 18kW or 24kW configurations. Upright units are available in 9kW, 12kW, 18kW, 24kW, 36kW or 48kW configurations. These units provide consistent and reliable heating where city, tower or chilled water is too cold for direct process use. To minimize energy consumption, half heat/full heat selection is incorporated into the control circuit.

TrueTemp TCU Series Water Temperature Control Units are available in either direct injection or closed circuit configurations for controlled cooling. For direct injection cooling, solenoid valves regulate the flow of heated water to the process water stream. Closed circuit configurations cycle heated water through a closed-loop heat exchanger assembly.



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MATERIAL  
HANDLING



HEAT & COOL



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DOWNSTREAM  
EXTRUSION



AUTOMATE



SYSTEMS  
CONTRACTING



SERVICE



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## TCU SERIES WATER TEMPERATURE CONTROL UNITS



### TRUETEMP TCU SERIES

- Rugged all-cast design minimizes connection points to increase water circuit integrity
- Vertically mounted pump available in 3/4, 1, 2, 3, 5, 7 1/2, and 10 HP (0.56, 0.75, 1.5, 2.2, 3.7, 5.6, 7.5 kW). Available in upright unit only.
- Immersion-style, stainless steel Incoloy<sup>®</sup>-sheathed heaters
- Half heat or full heat capability for tighter temperature control
- Two-piece cabinet design allows easy access to internal components
- Non-fused, lockable through door disconnect
- NI resistant pump seal with integral seal flush line
- Easy-to-read graphic status display control panel
- Premium-efficiency, extended-cycle cooling valves
- NEMA 12 electrical cabinet with branch overcurrent protection
- Liquid-filled gauges indicate To- and From-process water pressure
- Process water bypass line for heater protection
- Water supply pressure switch indicates low system water pressure
- High pressure relief valve
- Independent safety thermostat
- IEC contactors and motor starter
- Controls meet NFPA 70/79, IEC EN60204-1/EN954-1, -2 standards
- Pump overload and phase loss detection
- Auto system venting
- 50/60 cycle operation



Optional advanced controller

### AVAILABLE OPTIONS

- Digital flow meter
- Advanced controller
- Quick-cool capability
- NEMA 4/4x enclosure
- All brass, non ferrous construction
- 300°F (149°C) operation
- Communications: RS485, RS232, Ethernet
- System water purge capability
- Hammer arrestor
- Remote control/start/stop capability
- Closed loop circuit
- Modulating valve
- SCR controlled heaters



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