Traditional Reliability
Packaged for Increased Value

The Thermolator® TW-V Series temperature controller is designed to maintain the process temperatures by circulating cooling tower or chiller water. Internal heaters provide rapid pre-heating of molds and dies.

All models offer incoloy heaters; silicon carbide pump seals; pressure gauges; easy-to-use microprocessor controls and tool-free access panels for fast removal. Process line purge is available as an option.

TW-V Thermolator®

Value Priced; Compounded Energy Savings

Conair's TW-V Series liquid temperature controllers are single-zone, direct cooling models. Pump sizes of 3/4 Hp {0.56 kW}, or 2.0 Hp {1.49 kW} are standard. Energy-efficient 12 kW heaters are used on all units. Process temperatures to 250°F {121°C} are standard.

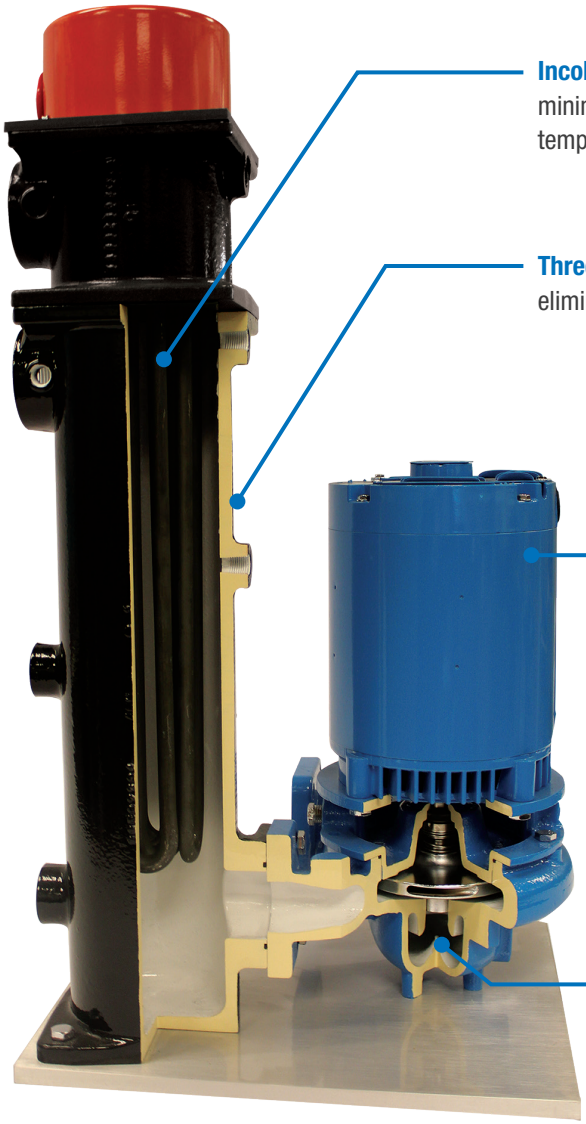
The TW-V Series Thermolators® were designed for processors seeking the traditional reliability that Conair Thermolators are known for, but don't require the additional features and options available in the TW-S or TW-P Series.

For indirect cooling and/or multi-zone models, consider Conair's TW-S or TW-P Series, each with their own specification sheets. No matter what your application, Conair has a Thermolator model that fits perfectly.

- **Clear, accurate, easy to use**
  Microprocessor controls with adjustable tuning parameters offer uniform temperature control, regardless of external loading.
- **Energy savings**
  This new generation of Thermolators is much more efficient. Offering as much as 50% increase in the pump operating envelope, an application that may have previously required a 5 Hp {3.73 kW} pump may now only require a 2 Hp {1.49 kW} pump. PLUS, today's pumps use less energy than their predecessors. Average yearly operating cost savings of the new Thermolators is $740 per unit. Conair Sales can help determine which Thermolator suits your needs.
- **Higher-efficiency pumps**
  More efficient pumps— 36% wire to water to be exact. 3/4 Hp {0.56 kW} or 2 Hp {1.49 kW} pumps are available and feature silicon carbide seals and sediment traps for extended seal life. Cast iron impellers are standard.
- **Incoloy heaters**
  Standard on all models, long-life incoloy heaters resist damage from high temperature and chemicals.
- **"Casters up" warranty**
  Three full years on all Thermolator TW Series models.

Features

Built-in pressure gauges
are standard for all Conair TW Series Thermolators.



Incoloy heaters
minimize chemical and high temperature damage.

Three-piece cast construction
eliminates potential leak points.

High efficiency pumps
3/4 Hp {0.56 kW} or 2 Hp {1.49 kW} pumps available. Industry standard cast iron pump impellers on all models.

Silicon carbide pump seals are standard on all models.

Built-in sediment trap
settles contaminants away from the pump seals.

Options

Compressed Air Purge Valve
Quickly evacuates fluid from the process circuit, allowing for faster, cleaner disconnection of the temperature controller from molds and hoses.

Stacking Rack
Save floor space by stacking TCUs two-high. The stacking rack can be used only with single-zone models.

Control

The TW-V Control

Created specifically for the value-minded, the TW-V Thermolator Control provides simple operation, without many of the options and features available in the TW-S and TW-P models. An easy-to-use LCD control with multiple illuminating indicator lights, the TW-V Control may be all that is required for applications requiring basic everyday "turn it on, turn it off" Thermolator operation.

Using the charts below, verify that the TW-V control suits your needs. If not, perhaps the TW-S or TW-P Series Thermolators are more appropriate for your application. Refer to the individual specifications sheets for those products.

Control features on the TW-V Series Thermolators

Model	TW-V
Direct Injection	●
Closed Circuit - Common Source	
Closed Circuit - Separate Source	
Construction	
Standard Pump Range	3/4 or 2 Hp {0.56 or 1.49 kW}
Standard Heater Range	12 kW
Cast Heater / Pump	●
Incoloy Heaters	●
Silicon Carbide Seals	●
Pressure Gauges	●
250°F Setpoint Range	●
300°F Setpoint Range	
Controls	
PID Control	●
Setpoint / Actual Display	●
Password Protection	
Modbus RTU via RS-485	
SPI via RS-485	
Retransmit Process Temp (4-20mA)	
Hand Held Remote	
Auto Restart Capability	
High Temperature Safety	
Mold Purge	○
Phase Detection Circuit	
Heat Error for Heater Malfunction	
Remote Start/Stop	
120°F Air Purge Cancel	●
Quick Access Cool Down Mode	
Status / Alarm Lights	
Panel Mounted Status Lights	1 LED
Panel Mounted Alarm Lights	1 LED
Audible Alarm	
Strobe Light	

● Standard
○ Optional

PID Control

Purge On/ Off button included on control.

Control features on the TW-S and TW-P Series Thermolators

Model	TW-S	TW-P
Direct Injection	●	●
Closed Circuit - Common Source		○
Closed Circuit - Separate Source		○
Construction		
Standard Pump Range	3/4 to 10 Hp {0.56 to 7.45 kW}	3/4 to 10 Hp {0.56 to 7.45 kW}
Standard Heater Range	0 to 48 kW	0 to 48 kW
Cast Heater / Pump	●	●
Incoloy Heaters	●	●
Silicon Carbide Seals	●	●
Pressure Gauges	●	●
250°F Setpoint Range	●	●
300°F Setpoint Range	○	○
Controls		
PID Control	●	●
Setpoint / Actual Display	●	●
Password Protection	●	●
Modbus RTU via RS-485		○
SPI via RS-485		○
Retransmit Process Temp (4-20mA)		○
Hand Held Remote		○
Auto Restart Capability	●	●
High Temperature Safety	○	○
Mold Purge		○
Phase Detection Circuit		●
Heat Error for Heater Malfunction		●
Remote Start/Stop	●	●
120°F Air Purge Cancel	●	●
Quick Access Cool Down Mode	●	●
Status / Alarm Lights		
Panel Mounted Status Lights	7 LEDs	12 LEDs
Panel Mounted Alarm Lights	3 LEDs	5 LEDs
Audible Alarm	●	●
Strobe Light	○	○

Specifications

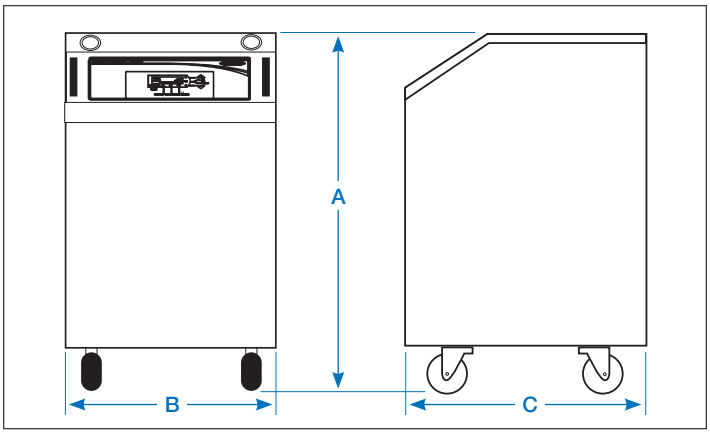
Models	TW-V
Performance characteristics	
Minimum setpoint temperature °F {°C}	40 {4}
Maximum setpoint temperature °F {°C}	250 {121}
Minimum operating temperature °F {°C}	Approximately 20° {11°} above the cooling water inlet temperature*
Standard cooling valve size inches {mm} C_v	3/8 {9.5} C_v 2.5
Available pump sizes	0.75, 2 {0.56, 1.49 kW}
Available heater sizes	12 kW

Pump performance - Consult your Conair representative for pump performance characteristics at other operating points.

Pump	3/4 Hp {0.56 kW}	2 Hp {1.49 kW}
Nominal flow gpm {lpm}	50 {189}	75 {284}
Pressure @ nominal flow psi {kg/cm²}	20 {1.4}	30 {2.1}

Dimensions inches {mm}

Standard cabinet, not including any connections	
A - Height	28.31 {719}
B - Width	14.00 {356}
C - Depth	25.75 {654}



Water connections

All models **NPT** inches (female)	
To/From process	1.50
Cooling water in/out	1.00

Shipping weight ranges lb {kg} Weights vary depending on cabinet size, options, and cooling type (DI or CC). operating points.

Single Zone		
Pump	**Minimum**	**Maximum**
0.75 Hp {0.56 kW}	240 {109}	325 {147}
2 Hp {1.49 kW}	248 {113}	338 {153}

Total full load amps per zone † Standard voltage is 460 volts, 3 phase, 60 Hz.

Heater	12 kW					
Voltage	208/3/60	230/3/60	380/3/60	400/3/50	460/3/60	575/3/60
Pump size						
0.75 Hp {0.56 kW}	33.4		19.3	19.6	16.7	13.5
2.0 Hp {0.75 kW}	36.4		20.9	22.3	18.1	14.6

Specification Notes

* Lower operating temperatures can be obtained with larger cooling valves.

† FLA data for reference purposes only. Does not include any options or accessories on equipment. For full FLA detail for power circuit design of specific machines and systems, refer to the electrical diagrams of the equipment order and the nameplate applied to the machine.

Specifications may change without notice. Consult with a Conair representative for the most current information.