

## Value Packaged Basic Functionality

The Thermolator® TW-B 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. Process line purge is available as an option.



## Value Priced; Simple Operation; Compounded Energy Savings

Conair's TW-B 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. Only small electrical service ampacity required. Process temperatures to 250°F {121°C} are standard.

The TW-B Series Thermolators were designed for processors seeking the basics in temperature control units – at a good value, and don't require the additional features and options available in the TW-E or TW-T Series.

For indirect cooling, additional features, and/or multi-zone models, consider Conair's TW-E or TW-T Series, each with their own specification sheets. See page 3 for a comparison.

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. This value control still offers pump running hours count, temperature deviation alarm and warnings, and adjustable alarm delay time.

### ▶ **Be in the know**

The DC-B control diagnostics monitor heater contactor life, alarms, vent bypass at startup, and other few performance indicators.

### ▶ **Incoloy heaters**

Standard on all models, long-life incoloy heaters resist damage from high temperature and chemicals.

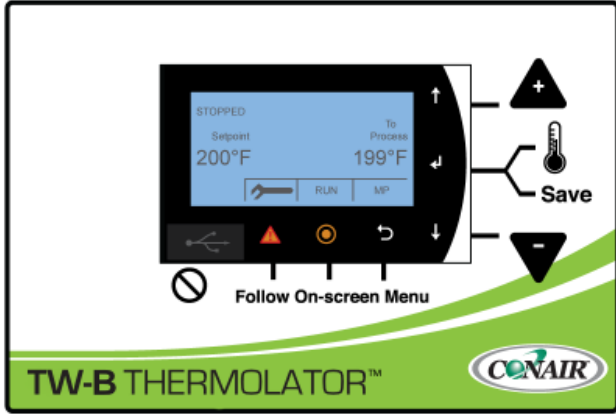
### ▶ **"Casters up" warranty**

Three full years on all Thermolator TW Series models.



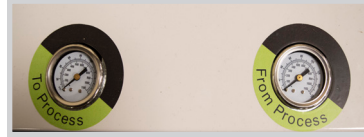
# Control, TW-B

## WATER TEMPERATURE CONTROLLER



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

## Features



**Built-in pressure gauges** are standard for all Conair Thermolators with the TW-B Control.

### High efficiency pumps

3/4 Hp {0.56 kW} or 2 Hp {1.49 kW} pumps available. Industry standard cast iron pump impellers and silicon carbide pump seals on all models.

### Built-in sediment trap

settles contaminants away from the pump seals.

### Incoloy heaters

minimize chemical and high temperature damage.

## Options

### Compressed Air Purge Valve

Quickly evacuates fluid from the process circuit, allowing for faster, cleaner disconnection of the TCU from molds and hoses.

### Stacking Rack

Save floor space by stacking single-zone Thermolator units two-high.

Use the charts below to compare Thermolator control options and chose the one perfect for your application.

### Control features on the TW-B Series Thermolators

Model	TW-B
Direct Injection	●
Closed Circuit - Common Source	
Closed Circuit - Separate Source	
<b>Construction</b>	
Standard Pump Range	3/4 or 2 Hp
Standard Heater Range	12 kW
Cast Heater / Pump	●
Incoloy Heaters	●
Silicon Carbide Seals	●
Pressure Gauges	●
Pressure Transducer	
Solid State Heater Relays (SSRS)	
<b>Controls</b>	
PID Control	●
Setpoint / Actual Display	●
Password Protection	
Modbus-RTU via RS-485	
Modbus-TCP via Ethernet	
SPI RS-485 Interface	
OPC-UA via Ethernet	
Retransmit Process Temp	
Auto Restart Capability	
Mold Purge (Factory Installed)	○
Phase Detection Circuit	
Choice of Control Points	●
Auto Cool Stop	
<b>Status / Alarm Lights</b>	
Audible Alarm	
Strobe Light	
Alarm Dry Contacts	
Remote RTD Support	
Trending	

● Standard  
○ Optional

Purge On/Off button included on control.

Phase detection indicates incorrect pump rotation or an open electrical leg.

Control temperature based on temperature at process supply or return points, or an average of the two points.

### Control features on the TW-E and TW-T Series Thermolators

Model	TW-E	TW-T
Direct Injection	●	●
Closed Circuit - Common Source	○	○
Closed Circuit - Separate Source		○
<b>Construction</b>		
Standard Pump Range	3/4 to 10 Hp	3/4 to 10 Hp
Standard Heater Range	0 to 48 kW	0 to 48 kW
Cast Heater / Pump	●	●
Incoloy Heaters	●	●
Silicon Carbide Seals	●	●
Pressure Gauges		
Pressure Transducer	●	●
Solid State Heater Relays (SSRS)	○	●
<b>Controls</b>		
PID Control	●	●
Setpoint / Actual Display	●	●
Password Protection		●
Modbus-RTU via RS-485	●	
Modbus-TCP via Ethernet	○	
SPI RS-485 Interface		○
OPC-UA		●
Retransmit Process Temp	● (0-10 VDC)	●
Auto Restart Capability	●	●
Mold Purge (Factory Installed)	○	○
Phase Detection Circuit	○	●
Choice of Control Points	●	●
Auto Cool Stop	●	●
<b>Status / Alarm Lights</b>		
Audible Alarm	●	●
Strobe Light	○	○
Alarm Dry Contacts	○	○
Remote RTD Support	●	●
Trending		●



## Specifications

Models	TW-B
<b>Performance characteristics</b>	
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} Cv	solenoid valve-3/8 {9.5} (Cv=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/cm <sup>2</sup> }	20 {1.4}	30 {2.1}

### Dimensions inches {mm}

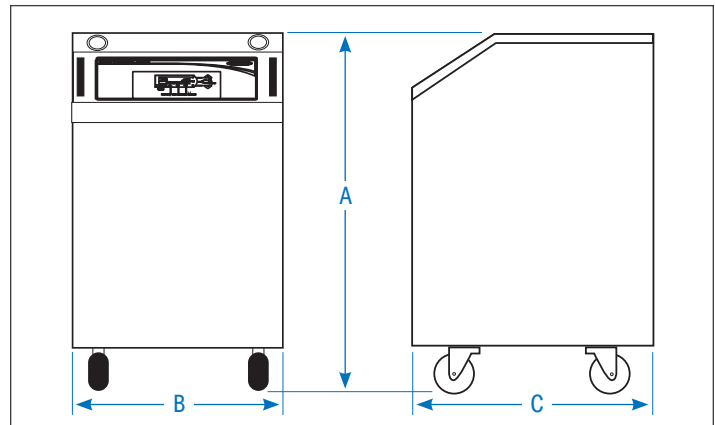
#### Standard cabinet, not including any connections

A - Height	24.98 {634}
B - Width	14.09 {358}
C - Depth	24.09 {612}

### 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 selected options, voltage and pump HP

#### Single Zone

Pump	Minimum	Maximum
0.75 Hp {0.56 kW}	estimated 240 {109}	estimated 325 {147}
2 Hp {1.49 kW}	estimated 250 {113}	estimated 338 {153}

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

Heater	208-230/3/60		400/3/50	460/3/60	575/3/60
Voltage	208	230			
<b>Pump size</b>					
0.75 Hp {0.56 kW}	30.3	33.2	19.2	16.6	13.4
2.0 Hp {1.49 kW}	33.3	35.9	21.4	18.1	14.5

### Specification Notes

\* 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.

Consult with Conair about your application prior to using a check valve on the Cooling Water Inlet of your TW-B controlled Thermolator

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

