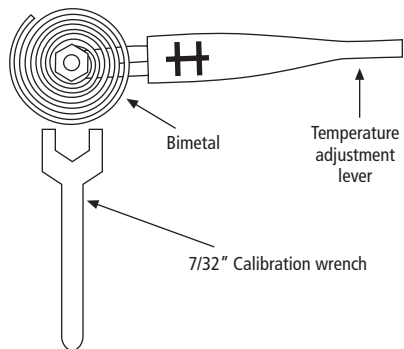


## SERVICE INSTRUCTIONS

### CALIBRATION

FIGURE 4 CALIBRATING THERMOSTAT



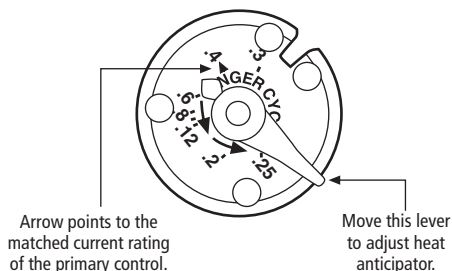
The thermostat is accurately calibrated before leaving the factory and no further calibration should be necessary. If the thermostat appears to be out of calibration or for any reason fails to function properly, a qualified serviceperson should proceed as follows:

1. The anticipator's heat may adversely affect thermostat recalibration. To prevent this, disconnect electrical power, power to the thermostat at the furnace, main fuse, or breaker box.
2. Move temperature adjustment lever to a setting about 5° above room temperature.

3. Remove thermostat cover. Slip 7/32" wrench onto hex nut beneath bimetal. While holding temperature adjustment lever stationary, turn hex nut clockwise until mercury shifts to the right end of the tube for Heating models. Left end of tube for Cooling models.
4. Move temperature adjustment lever to lowest setting.
5. Replace thermostat cover. Wait 10 minutes for bimetal temperature to stabilize. Do not stand near the thermostat during this period, as your breath and body heat will affect bimetal temperature.
6. Move temperature adjustment lever to correspond to actual room temperature. Then remove thermostat cover.
7. Slip 7/32" wrench onto hex nut. While holding temperature adjustment lever stationary, turn hex nut counter-clockwise until mercury just barely shifts to the left end of the tube for Heating models. Right end of tube for Cooling models.
8. Replace thermostat cover and set temperature adjustment lever to desired temperature. Turn on electrical power to system.

### HEAT ANTICIPATION ADJUSTMENT

FIGURE 5 ANTICIPATOR ADJUSTMENT



Some heating installations require longer or shorter "ON", "OFF" periods to maintain even temperatures. For average conditions, set the heat anticipator indicator to match the current rating of the primary heating control. Move indicator approximately 1/2 division in direction indicated by the arrows on the thermostat for longer "ON" cycles, or move lever in opposite direction for shorter "ON" cycles. Allow at least 24 hours to determine if setting provides satisfactory operation before making any further adjustments.

**NOTE:** Cooling anticipation is fixed, and cannot be adjusted.



# MERCURY BULB MECHANICAL THERMOSTAT

CTC thermostats regulate 24 to 30 VAC single-stage heating-cooling systems. See the chart below for specific models and applications.

### THERMOSTAT MODELS AND APPLICATIONS

PART NUMBER	APPLICATION	ORIENTATION
43309	Use in standard 2-wire heating systems	Horizontal
43320	Use in standard 2-wire cooling systems	Vertical

### TOOLS NEEDED FOR INSTALLATION

- Slotted Screwdriver
- Electric Drill and 3/16" Bit
- Hammer
- Level

### SPECIFICATIONS

#### ELECTRICAL DATA

**Switch Rating:** 24 VAC (30 VAC max.)  
 Heating Models – 0.2 to 1.2 amps  
 Cooling Models – 0-1.5 amps

**Switch Action:** Sealed mercury switch

#### Anticipator Rating:

Heating Models – Adjustable from 0.2 to 1.2 amps  
 Cooling Models – Fixed 24 VAC

#### THERMAL DATA

Temperature Range: 50°F – 90°F (10°C – 32°C)

#### APPLICATIONS

This thermostat is designed for use with:

- Standard heating or cooling systems
- Electric heating systems
- Millivolt systems

This thermostat cannot be used with:

- Two-transformer systems
- Multi-stage applications



### WARNING!

To avoid electrical shock or equipment damage, make sure power is disconnected before installation.

### DISPOSAL INFORMATION



This product contains mercury in a sealed tube. **DO NOT** place this control in the trash at the end of its useful life.

If this product is replacing a control that contains mercury, **DO NOT** place the old product in the trash.

Contact your local waste management authority for instructions regarding recycling and the proper disposal of this product, or of and for any old control containing mercury in a sealed tube.

### INSTALLATION

When installing this product:

- Read these instructions thoroughly. Failure to follow them could damage the product or produce an unsafe condition.
- Check the ratings in these instructions and on the product to make sure the product is compatible with your application.
- Installation must be performed by a trained, experienced service technician.
- Upon completion of the installation, verify the correct operation of the product as detailed in these instructions.



Climate Technology Corp.  
 2500 Frisco Avenue  
 Memphis, TN 38114  
 A Hunter Fan Company

## LOCATION

The thermostat should be located in an area with good air circulation at average temperature. It should be on an inside wall.

**DO NOT** place the thermostat where it can be affected by:

- Drafts or dead spots behind doors or in corners.
- Hot or cold air from ducts.
- Radiant heat from the sun, fireplaces, or appliances.
- Unheated (uncooled) areas behind the thermostat, such as outside walls.

This thermostat is a precision instrument and was carefully adjusted at the factory. Handle it carefully.

## ATTACH THERMOSTAT TO WALL

Disconnect the power supply before beginning installation to prevent electric shock or equipment damage.

All wiring must comply with local codes and ordinances.

This thermostat includes a wallplate and can be mounted with or without it.

### Mount Wallplate and Thermostat

- Pull wires through large opening in the wallplate
- Connect wires as shown in Figure 1, R and W for Heating models  
R and Y for Cooling models
- Push excess wiring into wall and plug hole with fire-resistant material (such as fiberglass insulation) to prevent drafts from affecting thermostat operation.
- Position wallplate over hole in wall and mark mounting locations. Use any existing mounting holes if possible.
- If the mounting screws will be going into drywall only, then drill 3/16" mounting holes for use with the included plastic anchors.
- Fasten wallplate loosely to wall with two mounting screws. Place a level on the top wallplate, adjust until level, then tighten the mounting screws.



*An incorrectly leveled thermostat will cause the temperature control to deviate from the setpoint.*

- Remove cover from thermostat base by gripping the base in one hand. Use the other hand to pull gently at the top or bottom of the cover.
- Carefully remove the protective packing.
- Attach thermostat base to wallplate, being sure that 3 captive screws are tightened snugly, since they serve as electrical connections between thermostat and wallplate (refer to Figure 3).
- Snap cover on thermostat and set temperature lever to desired setpoint.
- Turn on power to the system.

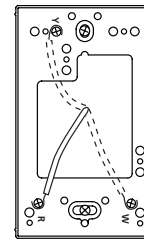
### Mount Thermostat Only

- Remove cover from thermostat base by gripping the base in one hand. Use the other hand to pull gently at the top or bottom of the cover.
- Carefully remove the protective packing.
- Push excess wiring into wall and plug hole with fire-resistant material (such as fiberglass insulation) to prevent drafts from affecting thermostat operation.
- Position thermostat over hole in wall and mark mounting locations. Use any existing mounting holes if possible.
- If the mounting screws will be going into drywall only, then drill 3/16" mounting holes for use with the included plastic anchors.
- Pull wires through the holes next to each terminal on the thermostat base.
- Connect wires as shown in Figure 2, R and W for Heating models  
R and Y for Cooling models
- Fasten thermostat loosely to wall with two mounting screws. Place a level on the top of the thermostat, adjust until level, then tighten the mounting screws.
- Snap cover on thermostat and set temperature lever to desired setpoint.
- Turn on power to the system.

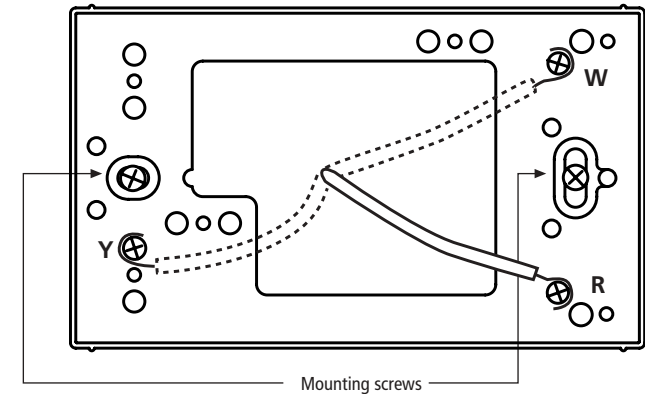


*An incorrectly leveled thermostat will cause the temperature control to deviate from the setpoint.*

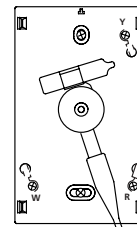
**FIGURE 1 WALLPLATE MOUNTING**



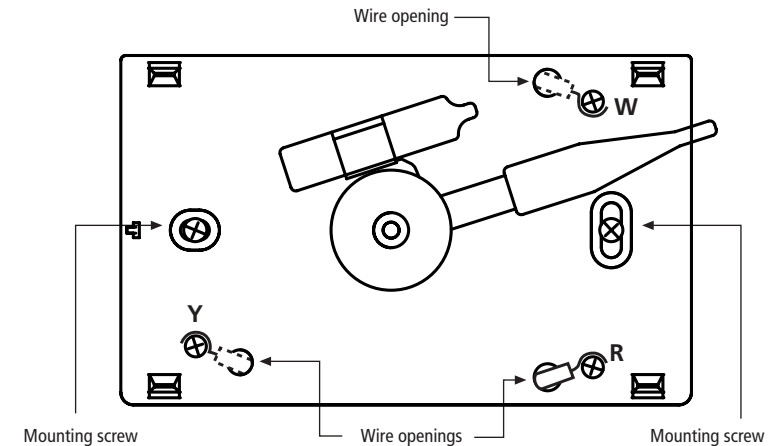
Rotate 90 degrees for vertical models



**FIGURE 2 THERMOSTAT MOUNTING**



Rotate 90 degrees for vertical models



**FIGURE 3 ATTACH THERMOSTAT TO WALLPLATE**

