DESCRIPTION
VC4350 Commercial Thermostats Kits are designed specifically for heavy-duty commercial oven and griddle applications. The newest Hi-TEMP thermostats with metal bulb and capillary are supplied in these kits.
Thermostats can be mounted in any of the manifold positions. Rear housing may be rotated as required. Plugs are included with models having four-position outlet tapping.
Four-position dial, stem length adapter, and chrome bezel are included.
These kits will replace Model BJ and BWA commercial thermostats. Separate kits are available for oven and griddle applications.
Kits will also replace Superior Uni-Line modules.

INSTALLATION INSTRUCTIONS

CAUTION
THIS DEVICE SHOULD BE INSTALLED BY A QUALIFIED PERSON WITH DUE REGARD FOR SAFETY AS IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION.

ROTATION OF REAR HOUSING
In many applications, rotation or repositioning of the rear housing is not required. If the rear housing on the replacement control is in the desired position proceed to fittings and plugs.
For applications requiring a change in the housing position, proceed as follows:
1. Remove pilot fitting if installed in control.
2. Remove four hex head bolts on rear of control while applying pressure to hold rear housing against main control body housing. (See illustration at right)
3. Reorient rear housing to desired position.
4. Replace and tighten the four hex head bolts.
NOTE: ROTATION OF THE REAR HOUSING WILL ALSO CHANGE CALIBRATION.

Calibration of the control after changing rear housing position is easily done at room temperature. View the control from the front. Using a screwdriver, push in the calibration screw in the center of the gas cock plug. Turn the screw 1/8 turn in the same direction as the housing was rotated (viewed from the front). See illustration at right. If the control was rotated 1/4 turn to the side position, the calibration screw must also be turned 1/8 turn in the same direction as the housing was rotated.

FITTINGS AND PLUGS
Install plugs into outlets not required and assemble pilot fitting or plug into pilot outlet.
Use a small amount of thread compound on each plug and fitting.

UNCIELED DIASSTAT
NOTE: DIASSTAT IS LIQUID FILLED AND SHARP BENDS ARE TO BE AVOIDED
The recommended method to uncouple the diastat is as follows:
Insert a round screwdriver shaft through the center of the diastat coil. Push outward or away from pointed body to uncouple the diastat smoothly. This method will prevent twisting or crimping.

MOUNTING
Mount control on manifold using new flange nipple gasket and mounting bolts.
Connect outlet and pilot lines as required for the application.
Attach the sensing bulb into its proper location. Again use caution not to twist or crimp the capillary tube.
DIAL ASSEMBLY

Insert "D" stem dial sleeve into front of control and snap in place.

The dial bushing adapts the dial to any of the four control mounting positions. Assembly bushing into dial as follows:

Note stem flat position of dial sleeve. Hold dial with "off" position at the top and press dial bushing into back of dial so that "D" opening in bushing will match position of stem flat on dial sleeve. See illustration. Tighten dial bushing to fit.

If it is necessary to reposition bushing after it is pressed into dial, pull out metal insert on front of dial with small screwdriver.

When additional stem length is required, use the stem length adapter as follows:

1. Place adapter on "D" stem and place dial on adapter.
2. To determine correct adapter length measure distance from back of bushing to front of panel. Cut this amount from small end of adapter.
3. If a tighter dial fit is desired, spread the end of the "D" stem and stem length adapter slightly.

BEZEL INSTALLATION

Bezel and sleeves are installed by sliding center sleeve over dial guide on the front of the control.

If standard sleeve is too short, remove from bezel. Use pliers to apply light pressure and squeeze the adapter slightly to damage locking tabs. Install correct length sleeve in bezel. Bezel index position is changed to match manifold mounting position of control. Snap sleeve out of bezel as described above. Return to required position, and snap into bezel.

OPERATING INSTRUCTIONS

ADJUSTMENTS

To adjust dial, the manufacturer recommends the following:

1. Push dial inward, turn to 300F mark and light the burner.
2. Remove dial. Dial is keyed into place - do not twist or turn it.
3. Grasp the dial at outer edge and pull straight out.
4. With a screwdriver, turn Pilot Adjusting knob clockwise to increase the flame, counterclockwise to decrease it, until the flame is approximately 3/4" long.
5. Replace dial, turning clockwise until it locks in the "OFF" position.

To Adjust By-Pass Flame (Minimum burner flame)

When the unit reaches the temperature at which the dial is set, the control cuts down the flow of gas to the amount required to keep the unit at that temperature. Always, however, the control must be by-pass enough gas to get the entire burner ignited. To maintain this minimum flame, the by-pass must be set carefully and accurately as follows:

1. Light the burner, then turn dial to "HIGH".
2. After 5 minutes, turn dial clockwise to point slightly beyond first mark on dial.
3. Turn dial counterclockwise to point slightly beyond second mark on dial.
4. With a screwdriver, turn by-pas adjusting knob counterclockwise to increase the flame, clockwise to decrease it, until there is a flame approximately 1/8" high over the entire burner.
5. Replace dial, turning clockwise until it locks in the "OFF" position.

SERVICE INSTRUCTIONS

To Recalibrate Control

This control is a precision instrument. It is carefully calibrated at the factory. Again, it is to be assumed that dial settings match actual temperature. Field recalibration is seldom necessary and should not be attempted unless considerable experience with recalculation or tests definitely proves that the control is not maintaining the temperatures to which the dial is set.

Recalibration should not be undertaken, however, until the by-pass flame has been adjusted.

To check temperatures when recalibrating, use a test instrument or a reliable mercury thermometer. Place the thermometer lead of test instrument in the middle of the oven. Use surface type thermometer lead for griddle.

If Recalibration is required, use the following procedure:

1. Set dial to 400F mark and light oven burner. (300F for griddle).
2. After burner has been on about 15 minutes, check temperature.
3. Oven door should be open for as short a time as possible. Use a flashlight, if necessary, to see the thermometer reading clearly.
4. Continue to check temperature, at 5-minute intervals, until two successive readings are within 5 degrees of each other.

If recalibration is required, the additional steps to be taken are these:

4. Remove dial assembly with "D" type stem.
5. Push calibration stem (in center of gas cock stem) inward with screwdriver, while holding calibration stem firmly in, turn stem clockwise to obtain a lower temperature or counterclockwise for a higher temperature. Each mark on retainer represents 25 degrees. Replace "D" type stem with dial.
6. Check temperature again, as instructed in (2) and (3).