



TRAEGER®
WOOD PELLET GRILLS

Handcrafted Wood Pellet Grills

(BAC331)

**Digital Thermostat Kit With Meat
Probes Installation Manual**



**Step-By-Step Instructions
for
Installing Digital Thermostat Kits
in
Traeger Wood Pellet Grills**

Models

BBQ020, BBQ055, BBQ070, BBQ07E, BBQ075' BBQ400, BBQ150

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INTRODUCTION

Congratulations on your purchase of this Traeger Digital Thermostat Kit, BAC331. Once installed, the Digital Thermostat Kit will add a new level of control to your Grill and provide you with delicious food and years of cooking enjoyment.

When you un-box the Digital Thermostat Kit, make sure you have, and can identify all of the following parts:

- (1) Digital Thermostat Control (P/N BAC288)
- (1) 7" RTD - Temperature Sensor Rod (P/N BAC194)
- (1) Screw (1/2" long)
- (1) Lock Nut
- (1) Meat probe 1 for controller BAC288 (P/N BAC289)
- (1) Meat probe 2 for controller BAC288 (P/N BAC329)
- (1) Silicone Grommet (Meat Probe) (P/N BRN249)
- (4) Wire ties (P/N HDW128)

The easy installation process includes:

- 1) Removing the existing 3-Speed Smoker Control.
- 2) Installing the RTD.
- 3) Wiring and Mounting the Digital Thermostat Control.
- 4) Drilling a hole and mounting silicone grommet. (Optional)

Follow these step by step instructions and you'll be cooking in no time!



DANGER



Before attempting to remove or install the control for any reason disconnect the power cord from source. Failure to disconnect from power source could result in electrical shock, burn or cause death.

INSTALLATION INSTRUCTIONS

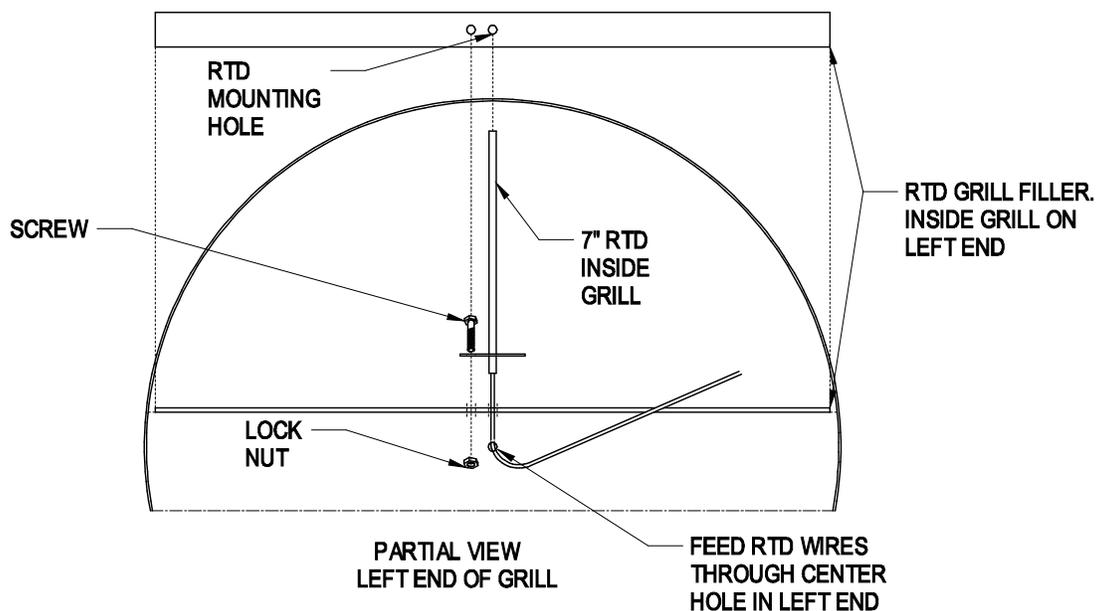
REMOVING THE EXISTING SMOKER CONTROL:

- 1) Make sure the Switch/Dial is in the **OFF** position. Disconnect the Power Cord from the electrical outlet.
- 2) Review the Digital Control Wiring Diagram to familiarize yourself with the color coding of the wiring connections. Disconnect the wiring from the Smoker Control by separating the 4 Molex Connectors found on the underside of the Pellet hopper.
- 3) Remove the two screws securing the Smoker Control to the Pellet Hopper. Save these screws as they will be used to mount the Digital Control later.
- 4) Carefully remove the Smoker Control through the opening in the front of the Pellet Hopper. You may need to adjust the angle of the Smoker Control to allow the circuit board to pass through the opening. Save the Smoker Control in case you should have a problem with your Digital Control. It can be reinstalled until the problem with the Digital Control is resolved.

INSTALLING THE RTD:

- 1) Open the Door and remove the Porcelain Grill and Grease Drain Pan to provide access to the left side of the Grill.
- 2) Carefully cut the cable tie securing the RTD Wires to the RTD. Remove the Screw and Lock Nut from the RTD mounting bracket if they are attached.
- 3) Thread the RTD Wires through the center hole of the RTD Grill Filler and then through the small hole in the left end of the Grill. Continue to feed the RTD wires through the Grill until the lower end of the RTD can be inserted into RTD Grill Filler. On new Grills there will be a "Digital Thermostat RTD Mounting Hole" label pointing to the holes in the RTD Grill Filler. Refer to the RTD Installation Diagram for additional information.
- 4) Mount the RTD to the RTD Grill Filler using the 1/2" long Screw and the Lock Nut as shown in the RTD installation Diagram. Tighten to secure the RTD.
- 5) Run the RTD Wires down through the space between the end of the Grill and the Pellet Hopper. Then feed the Wires up through the opening for the Control.

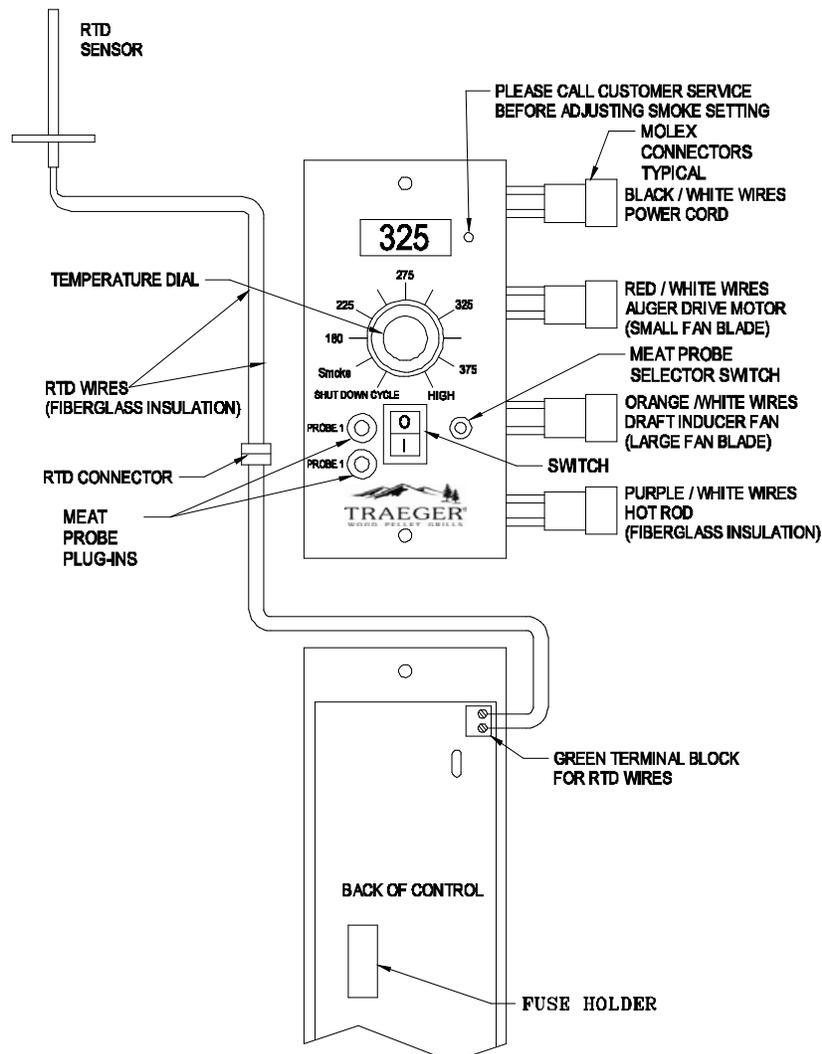
RTD INSTALLATION
DIAGRAM



WIRING AND MOUNTING THE DIGITAL CONTROL:

- 1) Locate the Green Terminal Block on the back of the Digital Control in the upper right corner. Using a small screwdriver, loosen the two screws to open the clamping jaws enough to insert the RTD Wire ends.
- 2) Insert a **bare** wire end on one of the RTD Wires into the clamping jaws on one post of the Terminal Block. Tighten the screw to securely attach the wire. Do not over tighten. Repeat this process on the remaining wire. **The RTD Wires may be connected to the Terminal Block in any combination.**
- 3) Along with the RTD Wires, feed the wiring from the Digital Control into the opening in the Pellet Hopper.
- 4) Carefully insert the Digital Control into the opening in the Pellet Hopper. Again, you may need to adjust the angle of the Digital Control to allow the circuit board to pass through the opening.
- 5) Using the two screws that mounted the Smoker Control, attach the Digital Control to the Pellet Hopper. Do not over tighten the screws.
- 6) Connect the Molex Connectors according to the color coding shown on the Digital Control Wiring Diagram. You may have some excess length for the RTD Wires. This additional wiring can be coiled and secured to the Digital Control Wiring with a cable tie or a twist tie. Make sure that none of the wires interfere with the fan blades on the Draft Inducer Fan or the Auger Drive Motor.

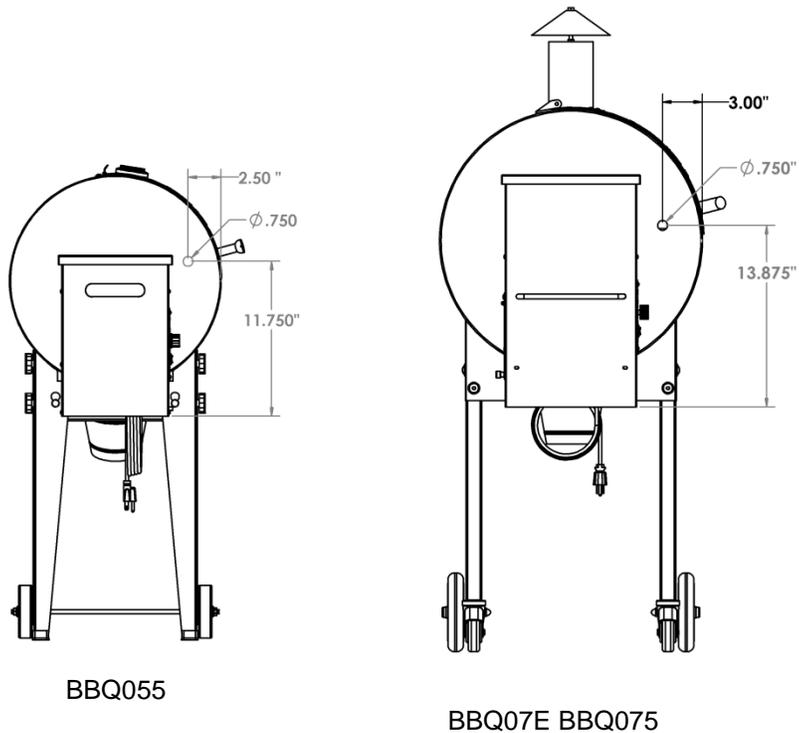
DIGITAL THERMOSTAT CONTROL WIRING DIAGRAM



Replace the Grease Drain Pan and the Porcelain Grill, connect the Power Cord to an appropriate, grounded electrical outlet and you are ready to go.

Meat Probe Grommet Installation (OPTIONAL)

The controller kit has a silicone grommet that can be installed to run the meat probes through the left side of the barrel. Installation of this will require drilling a $\frac{3}{4}$ inch hole into the left side of the barrel. If you do not feel you can drill the hole into the grill you can run the probes under the door opening as an alternative way to get them inside the grill. Here are the placements for the holes in various grills:



After the holes have been drilled install the Grommet into the hole. The probes can pass through the grommet into the cooking area of the grill.

The following BBQ you will need to insert the probes under the door:
BBQ150, BBQ400, BBQ020.

INITIAL FIRING INSTRUCTIONS

(To be used on initial firing or anytime the Grill runs out of Pellets)

In order to ensure proper operation of the Grill, you must first allow the Auger Tube to be “charged” with Pellets.

- 1) Open the Door and remove the Porcelain Grill, Grease Drain Pan and Heat Baffle from inside the Grill.
- 2) Make sure the Switch is OFF and the Dial Knob is in the OFF/ SHUT DOWN CYCLE position. Plug the Power Cord into an appropriate, grounded electrical outlet.
- 3) Open the Pellet Hopper Lid and locate the Auger. Make sure there are no foreign objects in the Auger. Turn the Switch to ON and the Dial Knob to the Smoke setting look into the Pellet Hopper to confirm the Auger is turning. At the same time, place your fingers over the Firepot and feel the air movement from the Draft Inducer Fan. Look to see if the Hot Rod is getting hot. **DO NOT TOUCH IT!** Turn the Switch to off and the Dial Knob to OFF/SHUT DOWN CYCLE.
- 4) Fill the Pellet Hopper with **TRAEGER BBQ PELLETS. WARNING! USE ONLY TRAEGER BRAND BBQ PELLETS, which are specifically made to work in our Grills. NEVER use heating fuel pellets in the Grill.** Turn the Switch to ON, set the Dial Knob to HIGH. Note: During the initial charging of the Auger, it will take time for the Pellets to travel from the Pellet Hopper to the Firepot. When the Pellets begin to fall into the Firepot, turn the Switch to OFF and the Dial Knob to OFF/SHUT DOWN CYCLE.
- 5) Turn the Switch to ON, set the Dial Knob to SMOKE. Let the Pellets come to full flame. Once you see flames come out of the Firepot, turn the Switch to OFF and the Dial Knob to OFF/SHUT DOWN CYCLE, and let the Grill cool down.
RECOMMENDATION for ease of clean-up: Line the Grease Drain Pan with heavy-duty aluminum foil. Be sure the edges and ends of the foil are tight against the bottom of the Grease Drain Pan. Position the Heat Baffle, the foil lined Grease Drain Pan and Porcelain Grill in their proper locations.
- 6) With the Door open, turn the Switch to On and the Dial Knob to SMOKE. In approximately 2 minutes you will notice whitish-gray smoke coming out of the Grill as the Pellets ignite. After assuring the Pellets have ignited, close the Door and set the Temperature Dial to any cooking setting desired.
- 7) **Note: Before cooking the first batch of food in your new Grill, you will need to season the Grill. Turn the Temperature Dial to HIGH and run for 45 minutes at this setting with the Door closed. This must be done before cooking any food on the Grill.**
- 8) The Grill should be allowed to pre-heat for approximately 10 minutes with the Door closed before placing food in the Grill.

SECTION THREE: SUBSEQUENT START-UP

Open the door then turn the Switch to ON and Temperature Dial to SMOKE. In approximately 2 minutes you will notice whitish-gray smoke coming out of the Grill as the Pellets ignite. After assuring the Pellets have ignited, close the Door and set the Temperature Dial to any cooking setting desired.

Control Shutdown cycle

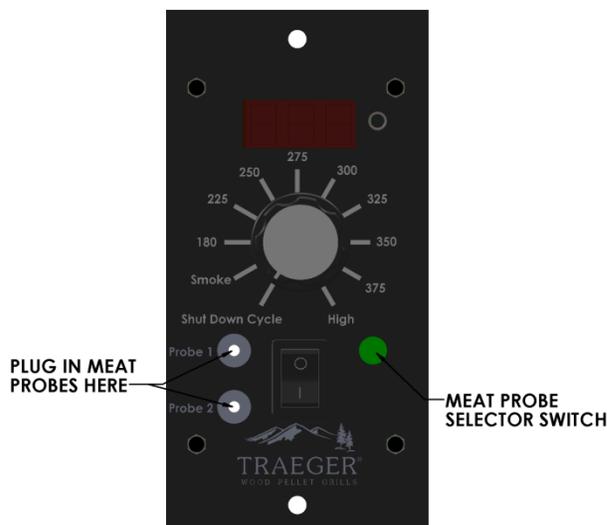
The digital control comes with an automatic shut down cycle. When finished cooking on your BBQ set the Dial Knob to the off position, this will leave the Draft Induction Fan running for ten minutes to burn any excess pellets in the fire pot. After the fan runs for ten minutes the controller will power off and the fan and it will stop running. **CAUTION!** The main power switch will shut the power off to the controller and the Dial Knob switch will cut off power to the grill components only. When servicing the controller or any parts ensure that the power supply is disconnected to avoid a shock hazard.

THERMOSTAT CONTROL FUNCTIONS

CONTROL WITH MEAT PROBES

Meat Probes setup:

- 1) Insert either one or two meat probes into the plug-in receptacles located on the lower left corner of the controller as shown in Figure 4-1.
- 2) Then insert probes into the grill through the access hole grommet located on the left side of the grill barrel or under the door.
- 3) Insert the probes tips into the meat halfway into the thickest part of the meat. Make sure the probe is not inserted into the fatty portion of the meat and not touching the bone. Ensure that the probe is at least half the thickness of the meat.
- 4) To read the temperature of the meat probe press the meat probe selector switch locate in the lower right corner of the control as shown in Figure 4-1. The control will revert back to the barbeque temperature after 5 seconds.



NOTE TO GRILL OWNERS

Now that your Traeger Pellet Grill is equipped with a Digital Thermostat Control, this handy conversion chart will help you determine where to set the Thermostat when the recipes call for “Smoke”, “Medium” or “High” settings with the 3-Speed Smoker Control. **Remember:** Grill temperature is affected by conditions such as outside temperature, precipitation and wind as well as altitude. Please keep this in mind when determining how long it will take food to cook on your Grill.

3-Speed Smoker Control Settings	Digital Thermostat Suggested Settings
Smoke	Smoke (160-180 F.)
Medium	225-275 Degrees F.
High	350-400 Degrees F.

If your Grill has a Dome Thermometer, you will probably notice a difference in the temperature displayed on the Readout of the Digital Control and the reading on the Dome Thermometer. This difference is a result of the separate locations on the Grill at which each device takes its reading. To order parts or accessories: Call, E-mail or write to your Traeger Dealer or Traeger Pellet Grills. Please provide your name, phone number, address, Model and Serial Number of the Grill (located on a label inside the Hopper Lid), along with the part identification.

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