

BBQ Lid Thermometers

Most BBQ's and smokers come with a dial thermometer installed in the "dome" or hood of the grill. Unfortunately, virtually all of these are relatively inexpensive gauges (made overseas) and are not very accurate – even on some of the most expensive BBQ's. Sometimes it's the thermometer, sometimes it's the calibration of it, sometimes is the positioning, and sometimes its all three factors. And besides, even if the thermometer was 100% accurate – is the reading its giving you really that useful?



How do they work?

When looking inside the lid at the dial thermometer, there's a 1" to 2" of stem positioned right near the top of the dome or hood. Temperature is being averaged over the length of that stem and read on the dial. In other words, a dome or lid thermometer measures the average ambient air around the stem - not the temperature where your food is located.

In other words, even if the thermometer is accurate, it will be giving you the temperature in the air space well above the food you are cooking. Heat is rising from the burners or coals beneath and dissipating through the metal or ceramic of your cooker's top. Its been our experience, that temperatures can vary by at least 50°F (typically cooler) at the dome thermometer's location. And sometimes, even more. Other variables affecting the reading include:



Number of times the lid is open: Each time the lid is opened, the ambient air temperature is dramatically affected – even if the grill temperature is not.

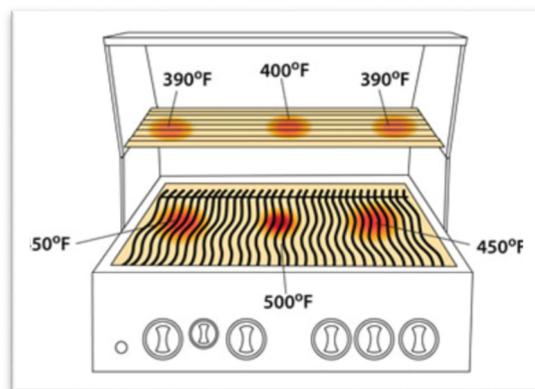
Heat deflectors: If you are using a heat deflector or pan, or even how your food is positioned on the grill, heat will disperse around the food affecting how much hot air the dial is reading.

Top air control (charcoal kamados): If the top air control is open, more heat (or air) is rushing through the cooker. Variables such as air coming into the smoker (or speed at which the heat is escaping the smoker) will affect the temperature being read.

But, the most important factor to consider while cooking is grate versus lid temperature.

Grate vs lid temperature

Lid and grate temperatures vary greatly in BBQs. Whether its due to radiant heat from the charcoal (or sear plates / flavourizer bars), hot spots, or even design of the grill – your gourmet grill has different temperatures inside it. Because of this, most BBQers don't worry too much about lid temperatures but will keep their measuring method consistent. In addition, most recipes can be cooked in a ~50F degree window and still produce amazing results.



How to re calibrate an existing thermometer

If you have an existing dome thermometer and you feel its not accurate, most can be calibrated manually. All you will need is a set of pliers and a pot of boiling water (or consult your owners manual, as your dial thermometer may be different).

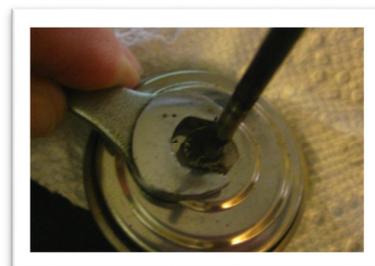
Step 1: Bring a pot of water to boil on the stove.

Step 2: Fill a glass or small bowl with ice and cover with water

Step 3: Test thermometer in the boiling water; If it doesn't read 212 degrees Fahrenheit or 100 degrees Celsius, adjust the small nut on the backside of the thermometer, located where the face meets the probe. It won't be a large turn, so easy does it!



Step 4: Test thermometer in bowl of ice water. If it doesn't read 32 degrees Fahrenheit or 0 degrees Celsius, make another slight adjustment. It should now be calibrated to read correctly in either temperature of water.



Digital thermometers aren't as easily adjusted and either have to be done by a pro (if at all). If you know your thermometer reads 15 degrees hotter than it really is, just make sure to do the math when you cook.

Other Options

In virtually all recipes, the recommended cooking temperature is the temperature at which your food should be cooked. If you're using the dome temperature, you're likely to have your heat setting anywhere from 50°F to 100°F off, leading to the danger of overcooking or drying out your food.

The best alternative to the dome's dial thermometer is to read the temperature from a probe positioned where the food is located. Most professionals recommend using a thermometer probe as close to the food on the grill as practical and about 1" above the grill surface. Some probes even have clips to grasp a grate rod or pan.

For more sophisticated BBQ chefs, some thermometers will monitor the inside temperature of the food, grill temperature, as well as help regulate the charcoal with help of a blower.



Digital Remote Thermometers

Although a wide variety of digital thermometers (and remote digital thermometers) are available from Friendly Fires and other great retailers, because these are electronic, we do experience failure rates on the probes themselves.

Should I remove my dome thermometer?

We recommend leaving the dome thermometer in place as it plugs the hole and gives your grill a 'complete' look. However, only use its indication as a general guideline as the real (or useful) temperature inside your grill is at the grate level not at the dome.