Consumer Reports conducted several different evaluations for its published ratings of outdoor cooking appliances marketed as Gas Grills, Charcoal grills, Kamado grills or Pellet grills.

Purpose

- The purpose of this test method is to quantify product performance differences for heating evenness, temperature range, convenience factors, sturdiness and safety.
- Gas grills - Evenness, Preheat, Temperature range, Indirect cooking, flame up, Convenience and Sturdiness.
- Portable grills - Evenness, Preheat, Temperature range, Indirect cooking (if more than 1 burner), flame up, and Convenience.
- Charcoal and Kamado grills - Convenience, Cleaning, Evenness, Indirect cooking.
- Pellet grills - evenness, temperature range, indirect cooking, convenience and cleaning.

Temperature Measurement
An array of thermocouples are installed on the cooking grates as follows. Three thermocouples are evenly spaced from the front to the back of the cooking surface. Depending on the width of the grill and allowing about 2” from the edges of the cooking surface, the number of rows from left to the right is 4, 5, or 6 for a total of 12, 15, or 18 thermocouples respectively.

Procedure

- Evenness performance: Evenness of heating over the grill's surface at the highest and lowest setting using all main burners is assessed when at approximately a steady state condition and after a 10 minute preheat, based upon recorded temperatures at the thermocouples.
- Preheat performance: Evaluates the temperature after a 10 minute preheat based upon the recorded temperatures. This evaluation also includes the rate at which the grill heats up and includes time to its maximum observed temperature.
- Temperature range: Reflects how wide a temperature span the grill’s controls offer by comparing temperatures at the highest setting and lowest setting possible.
- Indirect cooking: This indicates grill temperature when only one or two of the burners are on, to represent a cooking task where the food is placed between or alongside the direct flame rather than above it.
- Cooking performance verification: Burgers are placed on the cooking surface in key locations determined from observed temperatures to confirm cooking doneness.
- Flare up test (gas grills): a measured amount of fat is allowed to drip upon the central main burner and the amount of flames and flame height are observed.
- Convenience: Factors include grate material, propensity to flare up while cooking (gas), wheels or casters for moving the grill, cooking area, types of ignition systems (when
applicable), utensil hooks, fuel gauge, side burners, propane tank size needed (portables),
adjusting air vents (charcoal), coal tray height, cleaning ashtray, and addition of charcoal.

- **Sturdiness**: An indication of the sturdiness of the grill's structure, based on our rigidity
test and judgments of our expert testers. We look for the deflection in the support
structure when a horizontal load is applied.

- **Lid drop**: The gas grill lid drop test is patterned after the American National Standard for