Designation: F 1275 – 03

An American National Standard

Standard Test Method for Performance of Griddles[1]

This standard is issued under the fixed designation F 1275; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This test method evaluates the energy consumption and cooking performance of griddles. The food service operator can use this evaluation to select a griddle and understand its energy efficiency and production capacity.

1.2 This test method is applicable to thermostatically controlled, single-source (bottom) gas and electric griddles.

1.3 The griddle can be evaluated with respect to the following (where applicable):

1.3.1 Energy input rate (10.2),

1.3.2 Temperature uniformity across the cooking surface and accuracy of the thermostats (10.3),

1.3.3 Preheat energy and time (10.4),

1.3.4 Idle energy rate (10.5),

1.3.5 Pilot energy rate (10.6),

1.3.6 Cooking energy rate and efficiency (10.7), and

1.3.7 Production capacity and cooking surface temperature recovery time (10.7).

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 3588 Practice for Calculating Heat Value, Compressibility, and Relative Density of Gaseous Fuels[2]

2.2 *ANSI Standard:*

ANSI Z83.14 Gas Food Service Equipment—Counter Appliances[3]

2.3 *AOAC Documents:*[4]

AOAC Official Action 950.46B Air Drying to Determine Moisture Content of Meat and Meat Products

AOAC Official Action 960.39 Fat (Crude) or Ether Extract in Meat

2.4 *ASHRAE Document:*

ASHRAE Guideline 2-1986 (RA90) Engineering Analysis of Experimental Data[5]

3. Terminology

3.1 *Definitions:*

3.1.1 *cook time*, *n*—the time required to cook frozen hamburgers, as specified in 7.1, to a 35 ± 2 % weight loss during a cooking energy efficiency test.

3.1.2 *cooking energy*, *n*—energy consumed (Btu (kJ) or kWh) by the griddle as it is used to cook hamburgers under heavy- and light-load conditions.

3.1.3 *cooking energy efficiency*, *n*—the quantity of energy imparted to the specified food product, expressed as a percentage of energy consumed by the griddle during the cooking event.

3.1.4 *cooking energy rate*, *n*—the average rate of energy consumption (Btu/h (kJ/h) or kW) during the cooking energy efficiency tests. It refers to all loading scenarios (heavy and light).

3.1.5 *energy input rate*, *n*—the peak rate (Btu/h (kJ/h) or kW) at which an appliance will consume energy, typically reflected during preheating.

3.1.6 *griddle*, *n*—a device for cooking food in oil or its own juices by direct contact with a hot surface.

3.1.7 *idle energy rate*, *n*—the average rate of energy consumed (Btu/h (kJ/h) or kW) by the griddle while "holding" or maintaining the cooking surface at the thermostat set point.

3.1.8 *pilot energy rate*, *n*—the average rate of energy consumption (Btu/h (kJ/h)) by a griddle's continuous pilot (if applicable).

[1] This test method is under the jurisdiction of ASTM Committee F26 on Food Service Equipment and is the direct responsibility of Subcommittee F26.06 on Productivity and Energy Protocol.

Current edition approved Sept. 10, 2003. Published September 2003. Originally approved in 1990. Last previous edition approved in 1999 as F 1275 – 99.

[2] *Annual Book of ASTM Standards*, Vol 05.06.

[3] Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

[4] Available from Association of Official Analytical Chemists, 1111 N. 19th Street, Arlington, VA 22209.

[5] Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329.

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