



Standard Test Method for Performance of a Pasta Cooker¹

This standard is issued under the fixed designation F 1784; 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.

1. Scope

1.1 This test method covers the energy consumption and cooking performance of floor-model and countertop pasta cookers. The food service operator can use this evaluation to select a pasta cooker and understand its energy consumption and production capacity.

1.2 This test method is applicable to floor and countertop model gas and electric units with 1000 to 4000-in.³ cooking capacity. Cooking capacity is a measurement of available cooking volume. The depth of the cooking capacity is measured from the heating elements or heat transfer surface, or both, to the water fill line. The width is measured from the inside edge of the cooking vat across to the other inside edge of the cooking vat. The length is measured from the front inside edge of the cooking vat to the rear inside edge of the cooking vat.

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

- 1.3.1 Energy input rate (11.2),
- 1.3.2 Water-boil efficiency (11.3),
- 1.3.3 Preheat energy consumption, time, and rate (11.4),
- 1.3.4 Idle/simmer (11.5),
- 1.3.5 Pilot energy rate (11.6), and
- 1.3.6 Pasta cooking preparation (11.7).

1.4 This test method is not intended to answer all performance criteria in the evaluation and selection of a pasta cooker.

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

1.6 *This test method 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 ASHRAE Documents:

1989 ASHRAE *Handbook of Fundamentals*, Chapter 6,

Table 2—Thermodynamic, Chapter 6, Table 2—Thermodynamic Properties of Water at Saturation² ASHRAE Guideline 2—1986 (RA90), Engineering Analysis of Experimental Data, American Society of Heating, Refrigeration, and Air Conditioning Engineers, Inc.²

2.2 AOAC Documents:

AOAC 984.25 Moisture (Loss of Mass on Drying) in Frozen French Fried Potatoes³

AOAC 983.23 Fat in Foods: Chloroform-Methanol Extraction Method³

2.3 ANSI Standard:

ANSI Z83.13 Gas Food Service Equipment

3. Terminology

3.1 Definitions:

3.1.1 *auto-fill, n*—a water height sensor device that activates a fresh water fill solenoid if the water level in the cooking vessel drops below predetermined height.

3.1.2 *overflow drain, n*—a drain for eliminating the excess foam and starch created during the cooking process.

3.1.3 *pasta cooker, n*—an appliance, including a cooking vessel, in which water is placed to such a depth that the cooking food is essentially supported by displacement of the water rather than by the bottom of the vessel. Heat is delivered to the water by means of an immersed electric element or band wrapped vessel (electric pasta cooker), or by heat transfer from gas burners through either the walls of the pasta cooker or through tubes passing through the water (gas pasta cooker).

3.1.4 *test method, n*—a definitive procedure for the identification, measurement, and evaluation of one or more qualities, characteristics, or properties of a material, product, system, or service that produces a test result.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *cold water bath, n*—a container filled with 60 to 80°F (15.6 to 26.7°C) water, that is used to cool the cooked pasta to stop the cooking process. The water bath needs enough water capacity to be able to completely cover the cooked pasta when a pasta basket is submerged into the cold water bath.

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 1997. Last previous edition approved in 1997 as F 1784 – 97.

² Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329.

³ Official Methods of Analysis of the Association of Official Analytical Chemists. Available from the Association of Official Analytical Chemists, 1111 N. 19th St., Arlington, VA 22209.