



Standard Specification for Food Processors, Electric¹

This standard is issued under the fixed designation F 1568; 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 specification covers commercial food processors intended for bench, table, or floor mounting.

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

1.3 The following safety hazards caveat pertains only to the test methods portion, Section 9, of this specification: *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 3951 Practice for Commercial Packaging²
- F 760 Specification for Food Service Equipment Manuals³
- F 1166 Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities⁴

2.2 ANSI Standards:⁵

- ANSI Z1.4 Sampling Procedures and Tables for Inspection by Attributes
- ANSI S1.13 Methods for Measurement of Sound Pressure Levels

2.3 NSF International Standard:⁶

- NSF 8 Commercial Powered Food Preparation Equipment

2.4 UL Standards:⁷

- UL 763 Motor-Operated Commercial Food Preparing Machines
- UL 969 Marking and Labeling Systems

¹ This specification is under the jurisdiction of ASTM Committee F-26 on Food Service Equipment and is the direct responsibility of Subcommittee F26.04 on Mechanical Preparation Equipment.

Current edition approved Oct. 10, 1999. Published January 2000. Originally published as F 1568 – 94. Last previous edition F 1568 – 94.

² *Annual Book of ASTM Standards*, Vol 15.09.

³ *Annual Book of ASTM Standards*, Vol 15.07.

⁴ *Annual Book of ASTM Standards*, Vol 01.07.

⁵ Available from American National Standards Institute, 11 W. 42nd St., 13 Floor, New York, NY 10036.

⁶ Available from NSF International, P.O. Box 130140, Ann Arbor, MI 48113-0140.

⁷ Available from Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112.

2.5 Military Standards:⁸

- MIL-STD-167/1 Mechanical Vibration of Shipboard Equipment (Type I-Environmental and Type II-Internally Excited)
- MIL-STD-461 Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
- MIL-STD-1399/300 Interface Standard for Shipboard Systems, Section 300A, Electric Power, Alternating Current

3. Terminology

3.1 Definitions:

3.1.1 *bowl*—the container, with interlocked cover, used to hold a fixed quantity of food product.

3.1.2 *discharge chute*—the part of the housing, generally located at the front of the unit, that directs the cut product downward for collection into a pan and also helps prevent operator contact with the backside of the slicer or shredder plate.

3.1.3 *feed head*—the device for holding food product and directing it into the slicer or shredder plate. The feed head incorporates a food pusher that is interlocked to prevent motor operation whenever the pusher is not in the closed position over the slicer or shredder plate.

3.1.4 *food processor*—machine that reduces food product to a small particle size and uniform geometric shape. Reduction of food product is accomplished by the continuous, manual feeding of uncut food product into contact with a rotating plate or slicing/shredding a quantity of food product in a closed bowl. The food processor shall consist of the following principal parts: motor with housing, product hopper or bowl, hopper/bowl cover with interlock, plates and grids, and controls.

3.1.5 *food pusher*—the hand-operated device used to maintain the uncut food product in contact with the slicer or shredder plate.

3.1.6 *shredder and slicer plates*—these devices attach to the food processor drive shaft and convert the rotary motion of the plate into the desired action on the foodstuffs within the feed head.

4. Classification

4.1 Food processors covered in this specification are of the

⁸ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

following types, sizes, and classes:

4.2 *Types:*

4.2.1 *Type I*—This machine shall have a hopper of the continuous, manual-feed type.

4.2.1.1 *Size 1*—Slicer/shredder plates less than 8 in. in diameter.

4.2.1.2 *Size 2*—Slicer/shredder plates 8 in. or greater in diameter.

(1) *Class 1*—Table- or bench-mounted food processor.

(2) *Class 2*—Floor-mounted food processor.

4.2.2 *Type II*—This machine shall have a closed-bowl type of hopper.

4.2.2.1 *Size 1*—Bowl volume less than 4 qt (3.8 L). The machine shall be table- or bench-mounted.

4.2.2.2 *Size 2*—Bowl volume between 4 and 8 qt (3.8 and 7.6 L). The machine shall be table- or bench-mounted.

4.2.2.3 *Size 3*—Bowl volume shall be 30 qt (28.4 L). The machine shall be floor-mounted.

4.2.2.4 *Size 4*—Bowl volume shall be 45 qt (42.6 L). The machine shall be floor-mounted.

5. Ordering Information

5.1 Purchasers should select the food processor and any preferred options and include the following information in the purchasing document:

5.1.1 Title, number, and date of this specification,

5.1.2 Type, size, and class of the food processor required (see Section 4),

5.1.3 Electrical power supply characteristics (current, voltage, phase, frequency),

5.1.4 Accessory equipment, options (slicer, dicer, grater, julienne, and shredder plates), spare parts, and maintenance parts required,

5.1.5 Labeling requirements (if different from Section 15),

5.1.6 Quantity of food processors to be furnished,

5.1.7 Certification, if required, and

5.1.8 Any special requirements or deviations from this specification.

6. Physical Requirements

6.1 *Design and Manufacture*—The food processor shall be complete so that when connected to the specified source of power, the unit can be used for its intended function. The food processor shall be simple to disassemble and reassemble without special tools or equipment. The food processor shall meet the then current applicable requirements of NSF 8 and UL 763.

6.1.1 *Compliance with NSF 8*—Acceptable evidence of meeting the requirements of NSF 8 shall be the NSF certification mark on the food processor and listing in the current edition of the NSF Official Listing of Food Service Equipment, a certified test report from a recognized independent testing laboratory acceptable to the user, or a certificate issued by NSF under its special one-time contract evaluation/certification service.

6.1.2 *Compliance with UL 763*—Acceptable evidence of meeting the requirements of UL 763 shall be a UL listing mark on the food processor, or a certified test report from a

recognized independent testing laboratory acceptable to the user.

6.1.3 *Materials*—Materials used in the construction of food processors shall comply with the applicable requirements of NSF 8.

6.1.4 *Human Factors Criteria*—Human factors engineering criteria, principles, and practices, as defined in Practice F 1166, shall be used in the design of all food processors.

6.2 *Electrical Devices:*

6.2.1 *Power Supply*—The food processor shall be furnished with a 6-ft (1.83-m) minimum length cord and plug with ground or shall be double-insulated. The cord and plug shall be sized for and be the appropriate configuration for the specified electrical characteristics.

6.2.2 *Motor*—The food processor motor shall be of the continuous duty type.

6.3 *Discharge Chute (Type I Machines)*—The discharge chute shall be designed to direct sliced or shredded food product into a tray or pan at the front of the unit. When tested in accordance with Section 9, processed food shall be directed from the discharge chute in a manner to permit collection in a container placed below the chute, and the processed food shall not be expelled out of the area of the pan or tray used for collection of the processed food.

6.4 *Interchangeability of Items*—All food processors of the same model number and bill of material furnished with similar options under a specific purchase order shall be identical to the extent necessary to ensure interchangeability of component parts, assemblies, and spare parts.

6.5 *Plates*—Manual feed food processors meeting the requirements of this specification must be available with a variety of sizes of slicer plates and shredder and grater plates. These plates may be offered as options to the basic food processor and shall be included with the ordering information detailed in 5.1.4.

6.6 *Lubrication*—All wearing parts of the food processor shall be provided with a means for lubrication or be permanently lubricated or sealed. Oil seals shall contain the lubricant. Lubricants used in the construction of the food processor shall comply with the applicable requirements of NSF 8.

7. Hazard Protection

7.1 The food processor shall meet the requirements of UL 763.

7.2 *Switch Guard*—The on/off control shall be guarded or fabricated in such a manner as to prevent unplanned activation.

7.3 *Controls Location*—The controls for the food processor shall be located such that they are visible and easily manipulated by the operator when standing in a comfortable position.

7.4 *Plate Brake*—The food processor shall be provided with a brake or other reliable means to stop the moving parts within 4 s after the unit has been turned off.

8. Performance Requirements

8.1 *Food Processing Quality and Uniformity:*

8.1.1 Type I food processors, with the various plates offered, shall cleanly and uniformly slice, dice, and grate the product without mashing.

8.1.2 Type II food processors shall chop meat, cheese, and