



Standard Specification for Commercial Food Waste Disposers¹

This standard is issued under the fixed designation F917; 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 U.S. Department of Defense.

1. Scope

1.1 This specification covers commercial food waste disposers intended for the grinding of food waste.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 The following safety hazards caveat pertains only to the test method 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

A29/A29M Specification for General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought

A53/A53M Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

A240 Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

A276 Specification for Stainless Steel Bars and Shapes

A436 Specification for Austenitic Gray Iron Castings

A532/A532M Specification for Abrasion-Resistant Cast Irons

A554 Specification for Welded Stainless Steel Mechanical Tubing

A582/A582M Specification for Free-Machining Stainless Steel Bars

A681 Specification for Tool Steels Alloy

B26/B26M Specification for Aluminum-Alloy Sand Castings

B43 Specification for Seamless Red Brass Pipe, Standard Sizes

B75 Specification for Seamless Copper Tube (Metric) B0075_B0075M

B108 Specification for Aluminum-Alloy Permanent Mold Castings

D2000 Classification System for Rubber Products in Automotive Applications

D2287 Specification for Nonrigid Vinyl Chloride Polymer and Copolymer Molding and Extrusion Compounds

D3951 Practice for Commercial Packaging

F104 Classification System for Nonmetallic Gasket Materials

F760 Specification for Food Service Equipment Manuals

¹ This specification is under the jurisdiction of ASTM Committee F26 on Food Service Equipment and is the direct responsibility of Subcommittee F26.01 on Cleaning and Sanitation Equipment.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

2.2 *Other Publications:*

- ASSE No. 1009 Commercial Food Waste Disposer Units³
- UL 430 Waste Disposers⁴

3. Terminology

3.1 *Definitions:*

3.1.1 *commercial food waste disposer*—intended for grinding food waste into small particles which are then flushed by water into a sanitary sewer system. Food wastes can be cooked or noncooked soils from the preparation or serving of foods. Disposers are not intended to be used for grinding glass, china, metals, clam or oyster shells, large bones, wood, paper, cardboard, or plastic. A disposer shall consist of the following principal parts: Motor, grind chamber, flywheel, shredder ring, hopper, leg(s) (see 7.12).

4. Classification

4.1 Commercial disposers shall be of the following types:

- 4.1.1 *Type I*—Cone.
- 4.1.2 *Type II*—Sink.
- 4.1.3 *Type III*—Trough mounted.
- 4.1.4 *Type IV*—Free standing.
- 4.1.5 *Type V*—Special.

4.2 Horsepower and drain sizes shall be as specified in Table 1.

5. Ordering Information

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

- 5.1.1 Title, number, and date of this standard.
- 5.1.2 Type, horsepower, and drain size required (see Section 4).
- 5.1.3 Electrical power supply characteristics (HP, voltage, phase, frequency).
- 5.1.4 Spare and maintenance parts required.
- 5.1.5 Control panel, manual, magnetic, special, or motor-reversing control, manual or automatic.
- 5.1.6 Accessory equipment as required, such as: water inlet(s), solenoid valve, vacuum breaker, flow control(s), silverware trap, and splash guard.

5.2 *Interchangeability of Items*—All disposers of the same model and material list designation furnished with similar options under a specific purchase order shall be identical to the extent necessary to ensure interchangeability of component parts, assemblies, accessories, and spare parts.

6. Materials and Design

6.1 All materials shall be as specified as follows:

- 6.1.1 Materials used shall be free from defects that would adversely affect the performance or maintenance ability of individual components of the overall assembly.
- 6.1.2 *Corrosion Resistant Steel*—Corrosion-resistant steel and heat resisting steel shall conform to the requirements of any 300 or 400 series steel specified in Specifications A240, A554, A276, and A582/A582M.
- 6.1.3 *Aluminum Alloy*—Aluminum alloy shall conform to the requirements specified in Specification B108 or Specification B26/B26M.
- 6.1.4 *Abrasion-Resistant Cast Iron*—Abrasion-resistant cast iron shall conform to the requirements specified in Specification A532/A532M.
- 6.1.5 *Austenitic Gray Iron*—Austenitic gray iron shall conform to the requirements specified in Specification A436.
- 6.1.6 *Copper Tube*—Copper tube used for water supply shall conform to the requirements specified in Specification B75.
- 6.1.7 *Brass Pipe*—Brass pipe used for water supply shall conform to the requirements specified in Specification B43.

TABLE 1 Recommended Horsepower and Drain Size^A

Drain Size	Light Duty					Medium Duty			Heavy Duty		Flow Rate GPM
	½	¾	1	1¼	1½	2	3	5	7	10	
1½ in. (3.81 cm)	X	X	X	X	X						5 (18.9 l/m)
2 in. (5.08 cm)				X	X	X	X	X			8 (30.3 l/m)
3 in. (7.62 cm)						X	X	X	X	X	10 (37.8 l/m)

^A More or less water may be used, depending on waste load, drain size, and configuration.

³ Available from ASSE International, 18927 Hickory Creek Drive, Suite 220 Mokena, Illinois 60448.

⁴ Available from Underwriters Laboratories (UL), 333 Pfingsten Rd., Northbrook, IL 60062.