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5 April 1985

SUPERSEDING

(See section 6)

FEDERAL SPECIFICATION**COFFEE MAKER, ELECTRIC, AUTOMATIC**

This specification was approved by the Assistant Administrator, Office of Federal Supply and Services, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers coffee makers comprising bowl units (metal or glass) with 12 cup (60 ounce) minimum brewing capacity. The coffee maker shall have a thermostatically controlled heat exchanger or electrically heated tank to make available hot water for continuous operation.

1.2 Classification. The coffee maker shall be of the following types, classes, styles, and model, as specified (see 6.2):

Type I - Tank type

Type II - Tankless, heat exchanger type

Class 1 - Fixed unit, automatic, water hook-up

Class 2 - Movable unit, pour-over, no water hook-up

Style A - Glass decanter

Style B - Metal decanter

Model S - Single brewing head

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications

RR-C-1039 - Coffee-Maker, Vacuum

PPP-B-636 - Boxes, Shipping, Fiberboard

Federal Standard

FED-STD-123 - Marking for Shipment (Civil Agencies)

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(Activities outside the Federal Government may obtain copies of Federal specifications, standards, and commercial item descriptions as outlined under General Information in the Index of Federal Specifications, Standards, and Commercial Item Descriptions. The Index, which includes cumulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal specifications and commercial item descriptions required by activities outside the Federal Government for bidding purposes are available without charge from General Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Houston, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specification documents, and the Index of Federal Specifications, Standards, and Commercial Item Descriptions from established distribution points in their agencies.)

Military Specification

MIL-P-116 - Preservation, Methods of

Military Standards

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
 MIL-STD-129 - Marking for Shipment and Storage
 MIL-STD-461 - Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference
 MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of

(Copies of military specifications and standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM):

A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
 A240 - Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Fusion-Welded Unfired Pressure Vessels
 D3951 - Standard Practice for Commercial Packaging

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

American Society of Mechanical Engineers (ASME):

Boiler and Pressure Vessel Code, Section VIII
Pressure Vessels, Division I

(Application for copies should be addressed to the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.)

National Sanitation Foundation (NSF):

No. 4 - Commercial Cooking and Hot Food Storage Equipment
Listing of Food Service Equipment

(Application for copies should be addressed to the National Sanitation Foundation, NSF Building, 3475 Plymouth, Ann Arbor, MI 48106.)

Underwriters Laboratories Inc. (UL):

UL 197 - Commercial Electric Cooking Appliances
UL 1030 - Sheathed Heating Elements

(Application for copies should be addressed to the Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.)

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

3. REQUIREMENTS

3.1 Description. The coffee maker shall consist essentially of an enclosed counter-top stand with an electric heat exchanger or a tank containing an immersion electric heating element thermostatically controlled to maintain the water temperature. The coffee maker shall also include, but not be limited to, the following:

- a. A method for regulating water flow through a brewing cartridge holding a measured amount of ground coffee
- b. A decanter for receiving liquid coffee
- c. An electric hot plate or plates to maintain the desired temperature of the brewed coffee

3.2 First article. When specified (see 6.2), the contractor shall furnish one complete coffee maker of the classification specified for first article inspection and approval (see 4.2.1 and 6.4).

3.3 Standard commercial product. The coffee maker shall, as a minimum, be in accordance with the requirements of this specification and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this specification but which are a

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part of the manufacturer's standard commercial product, shall be included in the coffee maker being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

3.4 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this specification unless otherwise specified.

3.5 Interchangeability. All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to insure interchangeability of component parts, assemblies, and accessories.

3.6 Standard Compliance. The coffee maker shall meet the applicable requirements of UL 197, UL 1030, and NSF No. 4.

3.6.1 Certification. Prior to approval of the first article, if one is required, or prior to approval of the first shipment, the contractor shall submit for the approval of the contracting officer, or his authorized representative, satisfactory evidence that the coffee maker he proposes to furnish under this specification meets the requirements of the UL's in 3.6 and NSF No. 4.

3.6.1.1 UL certification. Acceptable evidence of meeting the requirements of UL 197 and UL 1030 shall be the UL label, UL listing marking, or a certified test report (see 6.3) from a recognized independent testing laboratory, indicating the coffee maker has been tested and conforms to these UL's. Such evidence must be acceptable to the contracting officer.

3.6.1.2 NSF certification. Acceptable evidence of meeting the requirements of NSF No. 4 shall be the NSF seal on the finished coffee maker and a listing in the NSF Seal of Approval Listing of Food Service Equipment, or a certified test report (see 6.3) from a recognized testing laboratory, acceptable to the contracting officer with the advise of the Army Surgeon General, indicating that the coffee maker has been tested and conformed to the applicable requirements of NSF No. 4.

3.7 Design. The coffee maker shall be so designed that normal adjustments and repair can be readily accomplished by means of general purpose tools with a minimum removal or disturbance of other elements of the unit.

3.7.1 Tank. The hot water tank of type I coffee maker shall be up to 2-gallon capacity, shall be formed of copper or austenitic stainless material conforming to ASTM A240, and shall have a readily removable immersion heater. The fresh water intake of the tank shall be so located as to minimize incoming cold water from mixing with hot water at the top of the tank or shall be provided with baffle plates to accomplish this purpose. When a pressurized tank is provided, the tank shall conform to the ASME Code for "Unfired Steam Boilers".

3.7.2 Immersion heater. The electric immersion heater shall be of sufficient wattage to raise the temperature of the tank water to brewing temperature (see 3.8.1). The heater shall be thermostatically controlled and shall be easily removable with use of simple tools for cleaning or replacement. Sheathed heating elements shall comply with UL 1030.

3.7.3 Heat exchanger. The heat exchanger of type II coffee maker shall have a water flow rate of at least 25 ounces per minute, and shall heat the water to brewing temperature (see 3.8.1). The heat exchanger shall be thermostatically controlled and shall be easily removable with simple tools for cleaning or replacement.

3.7.4 Flow control.

3.7.4.1 Flow control for class I. Unless otherwise specified (see 6.2), an automatic flow control for a line water pressure of 20 pound-force per square inch (psi) to 120 psi shall be provided for fixed units to control the brewing time between the limits of 2 and 4 minutes. A means of regulating the liquid coffee level shall be provided (see 3.7.13).

3.7.4.2 Flow control for class II. A measured amount of water shall be poured into the opening provided. The amount shall be sufficient to yield a minimum 12 cups of brewed coffee of the strength desired (see 3.7.14).

3.7.5 Warming stove. The coffee maker shall include an electric warmer on which the decanter rests when it is placed underneath the brewing cartridge. Recessed heating elements or other guides shall be furnished for automatic positioning of the decanter beneath the brewing cartridge. When specified (see 6.2), additional warming stoves shall be incorporated in the unit or attached to the unit. The attachable warming stoves shall be of the same manufacture and compatible with the main unit. When specified (see 6.2), one or more three-heat warming stations shall be furnished to boil water. Individual colored pilot lights shall indicate when each warmer switch is energized. When specified for railroad or shipboard use (see 6.2), guardrails shall be furnished to prevent decanters from sliding off the warmer.

3.7.6 Casing. Unless otherwise specified (see 6.2), the entire coffee maker, hot water tank or heat exchanger, warmer, thermostat, and switches shall be enclosed in a minimum 0.024-inch thick casing and constructed of austenitic stainless material conforming to ASTM A167.

3.7.7 Water strainer. A water strainer shall be incorporated in the incoming water line as close as possible to the tank or heat exchanger. Proper flow direction shall be indicated by arrows and wording on the strainer.

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3.7.8 Water treatment device. When specified (see 6.2) for hard-water areas, an ion exchanger water treatment device or other water softening device shall be furnished.

3.7.9 Safety devices. Unvented water tanks shall incorporate a high limit heater safety device, or a combination high temperature-and-pressure relief valve, fusible plug or link, or burn-out heating elements.

3.7.10 Decanter. Unless otherwise specified (see 6.2), the style B decanter receiving the freshly brewed coffee shall conform to the requirements specified for lower stainless steel bowls of RR-C-1039. Each model S coffee maker shall be furnished with one decanter. Unless otherwise specified (see 6.2), each warming stove and each three-heat warming station (see 3.7.5) shall be furnished with one stainless material decanter. Unless otherwise specified (see 6.2), the style A decanter shall be the manufacturer's standard 12 cup capacity glass decanter. The glass shall be annealed heat resistance, thermo shock-proof that is capable of withstanding the thermal resistance (see 4.5.4) without damage.

3.7.11 Spray head. The spray head or water outlet shall be located in the upper portion of the casing, above the warming stove, and shall be designed to distribute water uniformly over the ground coffee in the brewing cartridge. The model S coffee maker shall have a single brewing head.

3.7.12 Brewing cartridge. Unless otherwise specified (see 6.2), a brewing cartridge of austenitic stainless material equipped with perforated or wire grid shall be firmly positioned at spray head or water outlet to receive the hot water. Shaped outer walls shall direct the freshly brewed coffee into the bowl neck. The cartridge shall be designed for quick attachment and detachment. A disposable paper filter or filter bag holding coffee shall fit snugly against the grid walls of the cartridge and shall be large enough to contain at least 2 3/4 ounces of ground coffee without overflowing at the maximum flow rate.

3.7.13 Automatic volume regulator. An automatically controlled mechanical or electrical means shall regulate the volume of hot water flowing through the spray head. The device shall be adjustable to give the predetermined volume of coffee in the receiving decanter. A heat resistant plastic handle or switch shall be at a location convenient to the operator and provide means for emergency shut-off of water in the event of overflow or other malfunction.

3.7.14 Gravity volume regulator. For class II coffee makers, the amount of cold water poured into the tank opening shall yield the desired volume and strength of coffee in the receiving bowl.

3.8 Performance.

3.8.1 Temperature control. The type I electric immersion heater shall be controlled by a thermostat designed to maintain the tank water operating temperature at 200 degrees Fahrenheit (°F) \pm 5°F at sea level pressure. For high-altitude operation the thermostat shall be adjustable down to 175°F. Operating temperature shall be reached in less than 21 minutes for 115 volt (V) heaters and less than 11 minutes for 230V heaters. Temperature recovery time after brewing a full bowl of coffee shall be less than 5 minutes for 115V heaters and less than 3 minutes for 230V heaters (see 4.5.2). The type

II coffee maker water temperature shall be controlled by a thermostat adjustable over a range for delivery of water at 200°F \pm 5°F at sea level to 175°F at high altitude (see 4.5.2).

3.8.2 Temperature maintenance. The electric warming stoves shall maintain a full decanter of liquid coffee at a temperature of 185°F to 190°F without variation (see 4.5.2).

3.8.3 Coffee brewing. Unless otherwise specified (see 6.2), when 2 1/2 to 2 3/4 ounces of finely ground coffee are placed in the brewing cartridge, the hot water shall mix with the ground coffee at a rate sufficient to yield a minimum of 12 cups (60 ounces) of liquid coffee in 4 minutes or less (see 4.5.2).

3.9 Construction.

3.9.1 Controls. All buttons, switches, and indicators shall be located on the front or top of the casing. The coffee level indicator adjustment and temperature adjustment shall be located where adjustment can be readily accessible.

3.9.2 Filter. The filter shall be held on a cartridge designed to direct the hot water towards the center of the ground coffee. The cartridge shall be positioned on guides directly beneath the hot water outlet. The cartridge shall direct the flow of freshly brewed coffee directly into the decanter beneath it. The filter shall be made of disposable paper or fabric.

3.9.3 Legs. Unless otherwise specified (see 6.2), the entire unit shall be on 1 1/2- or 4-inch high adjustable legs, unless the construction involved in the manufacturer's standard practice requires a solid casing enclosure support. The legs or support shall have holes drilled in the base so that the unit can be bolted to a counter.

3.9.4 Water dispensing system. Unless otherwise specified (see 6.2), the water dispensing system shall include the following:

- a. Type I, class 1, coffee makers shall be constructed to be converted from automatic to a pour-over unit. The pour-in opening shall be located on top of the coffee maker in accordance with the manufacturer's standard practice.
- b. Type I, class 1 and type II, if applicable, coffee makers shall include a self-closing, nondrip draw-off faucet for dispensing hot water. The faucet shall be located on the unit as recommended by the manufacturer.

3.10 Electrical requirements. Unless otherwise specified (see 6.2), the coffee maker shall be designed for operation on 120/240V, single phase alternating current (ac). The pilot lamp, warming stove, liquid level regulator (when furnished), and accessory stoves shall operate on a nominal 115V ac. The terminal block, power cord, and plug, as applicable, shall conform to UL 197. Each warmer station shall be controlled with a separate on-off switch. The coffee maker shall not present a risk of electric shock when tested as specified in 4.5.1.

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3.11 Electromagnetic interference. When specified (see 6.2), the coffee maker shall conform to the electrical interference requirements of MIL-STD-461 for Class C3 equipment, and shall be tested as specified in 4.5.5.

3.12 Identification markings. Identification shall be permanently and legibly marked directly on the coffee maker and components, or on a corrosion-resisting metal plate securely attached to the unit at the source of manufacture. Identification marking shall be in accordance with UL 197 and shall include, but not be limited to, the manufacturer's model, serial number, name, electrical rating, date of manufacture, and plumbing requirements, if applicable.

3.12.1 Military identification. When specified (see 6.2), military markings for each coffee maker shall be furnished. The markings shall be as permanent as the normal life expectancy of the coffee maker and shall include the applicable military part number and other information as specified by the procuring activity. The information shall be legible.

3.13 Instruction plates. The coffee maker shall be equipped with instruction plates suitably located, describing any special or important procedures to be followed in operating and servicing the equipment. Plates shall be of a material which will last and remain legible for the life of the equipment. Plates shall be securely affixed to the equipment with nonferrous screws or bolts of not less than 1/8-inch diameter.

3.14 Commercial publications. Manufacturer's standard commercial publications shall be furnished (see 6.3).

3.15 Finish. The exterior surfaces of the unit shall be in accordance with the manufacturer's standard practice except that austenitic stainless material surfaces shall be No. 3 finish or better.

3.16 Workmanship. There shall be no defects for the requirements specified herein that will affect the serviceability or appearance of the coffee maker.

3.16.1 Steel fabrication. The steel used in fabrication shall be free from kinks, sharp bends, and other conditions which would be deleterious to the finished product. Manufacturing processes shall not reduce the strength of the steel to a value less than intended by the design. Manufacturing processes shall be done neatly and accurately. All bends shall be made by controlled means to insure uniformity of size and shape.

3.16.2 Bolted connections. Boltholes shall be accurately punched or drilled and shall have the burrs removed. Washers or lockwashers shall be provided in accordance with good commercial practice, and all bolts, nuts, and screws shall be tight. The washers, nuts, bolts and screws shall be corrosion resistant.

3.16.3 Riveted connections. Rivet holes shall be accurately punched or drilled and shall have the burrs removed. Rivets shall be driven with pressure tools and shall completely fill the holes. Rivet heads, when not, countersunk or flattened, shall be of approved shape and of uniform size for

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the same diameter of rivet. Rivet heads shall be full, neatly made, concentric with the rivet holes, and in full contact with the surface of the member.

3.16.4 Welding. Welding procedures shall be in accordance with a nationally recognized welding code. The surface of parts to be welded shall be free from rust, scale, paint, grease, or other foreign matter. Welds shall be of sufficient size and shape to develop the full strength of the parts connected by the welds. Welds shall transmit stress without permanent deformation or failure when the parts connected by the weld are subjected to proof and service loadings.

3.16.5 Castings. All castings shall be sound and free from patching, misplaced coring, warping, or any other defect which reduces the castings ability to perform its intended function.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.2.2).

4.2.1 First article inspection. The first article inspection shall be performed on one coffee maker when a first article is required (see 3.2 and 6.2). This inspection shall include the examination of 4.4 and the tests of 4.5. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.4, the tests of 4.5, and the preparation for delivery inspection of 4.6. This inspection shall be performed on the samples selected in accordance with 4.3.

4.3 Sampling. Sampling and inspection procedures shall be in accordance with MIL-STD-105. The unit of product shall be one coffee maker. All coffee makers offered for delivery at one time shall be considered as a lot for the

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4.5.1 Electric shock test. Unless otherwise specified (see 6.2), an electric shock test shall be performed on the coffee maker in accordance with UL 197.

4.5.2 Operation test. The coffee maker shall be tested to determine its capability of brewing coffee. The coffee maker and components shall be examined during the test to ensure proper operation of the heating element, temperature control, signal light, pilot lamp, and other accessories. During this test the following checks shall be made:

- a. The initial heat-up time and recovery time shall be checked for conformance to 3.8.1.
- b. The temperature of the sprayover water and the thermostat setting shall be checked to determine conformance to 3.8.1.
- c. The time required to spray over the required amount of water shall be checked for conformance to 3.8.3.
- d. The safety device shall be tested to determine conformance to 3.7.9.
- e. After the coffee has been brewed, the filled coffee decanter shall be on the warming stove for 2 hours. The brewed coffee temperature shall then be checked to determine conformance to 3.8.2.
- f. The amount of brewed coffee in the decanter shall be checked to determine conformance to the capacity requirement of 3.8.3.

4.5.3 Leakage test. The coffee maker shall be checked for water leaks around the tank and fittings, as applicable. This test may be performed during the operational test in 4.5.2.

4.5.4 Thermal resistance (glass decanter). The glass decanter, when furnished, shall be heated in an oven to 300°F and then plunged into water at 32°F to 40°F. There shall be no breakage or other visible damage.

4.5.5 Electromagnetic interference suppression tests. When electromagnetic interference suppression is required, the coffee maker shall be tested to determine conformance to 3.11. Upon approval by the contracting officer, the contractor may, in lieu of the test, submit a certification as evidence of compliance with the standard in 3.11. The Government reserves the right to examine and test all units to determine validity of the certification.

4.6 Preparation for delivery inspection. An examination shall be made to determine compliance with the requirements of section 5. The sample unit shall be one unit prepared for shipment. Sampling shall be in accordance with MIL-STD-105. The inspection level shall be S-2 with an AQL of 4.0 percent defective.

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A. The complete coffee maker with components and accessories shall be packaged method III in accordance with MIL-P-116 in a close-fitting fiberboard box conforming to PPP-B-636, class weather resistant. Interior blocking, bracing, and cushioning shall be provided to fill voids and to prevent movement and damage to the contents. The fiberboard box shall be

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TABLE I. Classification of defects. (Cont'd)

Classification	Defects	Requirement paragraph
108	Regulator not as specified; not adjustable. Handle or switch for emergency shutoff of water missing or broken.	3.7.13 and 3.7.14
109	Controls not located as required.	3.9.1
110	Filter and cartridge not as specified. Filter not made of paper.	3.9.2
111	Legs not of height specified. Holes not drilled in base.	3.9.3
112	Water dispensing system not as specified.	3.9.4
113	Warmer station not controlled by separate on-off switch.	3.10
114	Identification markings missing, incorrect or illegible. Military identification when required not as specified.	3.12 and 3.12.1
115	If furnished, instruction plates missing or instructions incomplete.	3.15
116	Commercial publications missing, illegible, or incorrect.	3.14
117	Finish not as specified; discolored, blistered, peeled, or areas with no plating; scratches down to bare metal.	3.15
118	Steel has sharp edges, sharp corners, burrs, dents, or deformities.	3.16.1
119	Missing screws, bolts, and nuts. Bolt holes not as specified; missing, stripped, or crossed threads.	3.16.2
120	Rivet holes with burrs. Rivet heads not counter sunk or flattened.	3.16.3
121	Welding incomplete, burn holes, cracked, or fractured.	3.16.4
122	Castings not free from patching, misplaced coring, or warping.	3.16.5
Minor:		
201	Military identification, when required, not as specified.	3.12.1
202	Loose nuts or screws.	3.16.2

4.4.1 Standards compliance. The contractor shall make available to the contracting officer or his authorized representative evidence of compliance with the applicable standard(s) cited in 3.6 (see 6.3). The government reserves the right to examine and test all coffee makers to determine the validity of the certification.

4.5 Tests. The first article shall receive the tests of 4.5.1 through 4.5.5. Each production unit selected shall receive the test of 4.5.1, 4.5.2 (omit e.), 4.5.3, and 4.5.5. Failure to pass any test shall constitute one defect.

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4.5.1 Electric shock test. Unless otherwise specified (see 6.2), an electric shock test shall be performed on the coffee maker in accordance with UL 197.

4.5.2 Operation test. The coffee maker shall be tested to determine its capability of brewing coffee. The coffee maker and components shall be examined during the test to ensure proper operation of the heating element, temperature control, signal light, pilot lamp, and other accessories. During this test the following checks shall be made:

- a. The initial heat-up time and recovery time shall be checked for conformance to 3.8.1.
- b. The temperature of the sprayover water and the thermostat setting shall be checked to determine conformance to 3.8.1.
- c. The time required to spray over the required amount of water shall be checked for conformance to 3.8.3.
- d. The safety device shall be tested to determine conformance to 3.7.9.
- e. After the coffee has been brewed, the filled coffee decanter shall be on the warming stove for 2 hours. The brewed coffee temperature shall then be checked to determine conformance to 3.8.2.
- f. The amount of brewed coffee in the decanter shall be checked to determine conformance to the capacity requirement of 3.8.3.

4.5.3 Leakage test. The coffee maker shall be checked for water leaks around the tank and fittings, as applicable. This test may be performed during the operational test in 4.5.2.

4.5.4 Thermal resistance (glass decanter). The glass decanter, when furnished, shall be heated in an oven to 300°F and then plunged into water at 32°F to 40°F. There shall be no breakage or other visible damage.

4.5.5 Electromagnetic interference suppression tests. When electromagnetic interference suppression is required, the coffee maker shall be tested to determine conformance to 3.11. Upon approval by the contracting officer, the contractor may, in lieu of the test, submit a certification as evidence of compliance with the standard in 3.11. The Government reserves the right to examine and test all units to determine validity of the certification.

4.6 Preparation for delivery inspection. An examination shall be made to determine compliance with the requirements of section 5. The sample unit shall be one unit prepared for shipment. Sampling shall be in accordance with MIL-STD-105. The inspection level shall be S-2 with an AQL of 4.0 percent defective.

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A. The complete coffee maker with components and accessories shall be packaged method III in accordance with MIL-P-116 in a close-fitting fiberboard box conforming to PPP-B-636, class weather resistant. Interior blocking, bracing, and cushioning shall be provided to fill voids and to prevent movement and damage to the contents. The fiberboard box shall be

closed in accordance with method V as specified in the appendix of the box specification. Publications for each coffee maker shall be preserved method IC-3 and packaged inside the unit container with the coffee maker.

5.1.2 Level C. The coffee maker shall be preserved and packaged in accordance with ASTM D3951.

5.2 Packing. Packing shall be level A, B, or C as specified (see 6.2).

5.2.1 Levels A, B, and C. Packing shall be in accordance with MIL-STD-794 for the applicable level specified. Containers shall be selected from table I of MIL-STD-794 for the appropriate level. Open containers shall not be used for Level A or B packing.

5.3 Marking.

5.3.1 Military agencies. Shipments to military agencies shall be marked in accordance with MIL-STD-129.

5.3.2 Civil agencies. Shipments to civil agencies shall be marked in accordance with FED-STD-123.

6. NOTES

6.1 Intended use. The automatic coffee makers covered herein are intended for dispensing limited quantities of coffee in mess halls and cafeterias.

6.2 Ordering data. Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. Type, class, style, and model of coffee maker required (see 1.2).
- c. When a first article is required for inspection and approval (see 3.2, 4.2.1, and 6.4).
- d. When a line water pressure for an automatic flow control is other than as specified (see 3.7.4.1).
- e. When additional warming stoves are required and the quantity to be furnished (see 3.7.5).
- f. When three-heat warming station(s) is required and the quantity to be furnished (see 3.7.5).
- g. When guardrails shall be furnished for railroad or shipboard use (see 3.7.5).
- h. When materials for the casing are other than as specified (see 3.7.6).
- i. When a water treatment device is required (see 3.7.8).
- j. When style B decanters are other than as specified (see 3.7.10).
- k. When quantity of stainless steel decanters are other than one per stove or station, specify quantity desired (see 3.7.10).
- l. When glass decanters shall be other than as specified (see 3.7.10).
- m. When materials for brewing cartridges are other than as specified (see 3.7.12).
- n. When coffee brewing is other than as specified (see 3.8.3).
- o. When the height of legs are other than as specified (see 3.9.3).

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- p. When water dispensing system is other than as specified (see 3.9.4).
- q. When electrical requirements are other than as specified (see 3.10).
- r. When electromagnetic interference is required (see 3.11).
- s. When military identification is required and the information is to be included (see 3.12.1).
- t. When an electric shock test shall not be performed on the coffee maker (see 4.5.1).
- u. Level of preservation, packaging, and level of packing required (see 5.1 and 5.2).

6.3 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL), the data requirements identified below shall be developed as specified by an approved DD Form 1664, Data Item Description (DID), and delivered in accordance with the approved CDRL incorporated into the contract. When the provisions of paragraph 52.227-7031 of the Federal Acquisition Regulations are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification is cited in the following paragraphs:

<u>Paragraph No.</u>	<u>Data requirements title</u>	<u>Applicable DID No.</u>	<u>Option</u>
3.6.1.1 and 3.6.1.2	Report, Test	DI-T-2072	
3.14	Publications, Commercial	DI-M-4022C	
4.4.1 and 4.5.5	Certificate of Compliance	DI-E-2121	

(DIDs related to this specification, and identified in section 6 will be approved and listed as such in DoD 5000.19L, Vol. II, Acquisition Management Systems and Data Requirements Control List. Copies of DIDs required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.)

6.4 First article. When a first article inspection is required, the item will be tested and should be a first production item or it may be a standard production item from the contractor's current inventory as specified in 4.2.1. The first article should consist of one coffee maker. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examination, test, and approval of the first article.

6.5 Cross reference.

W-C-500A

Type I
Type II
Class I

W-C-500B

Type I
Type II
Class I

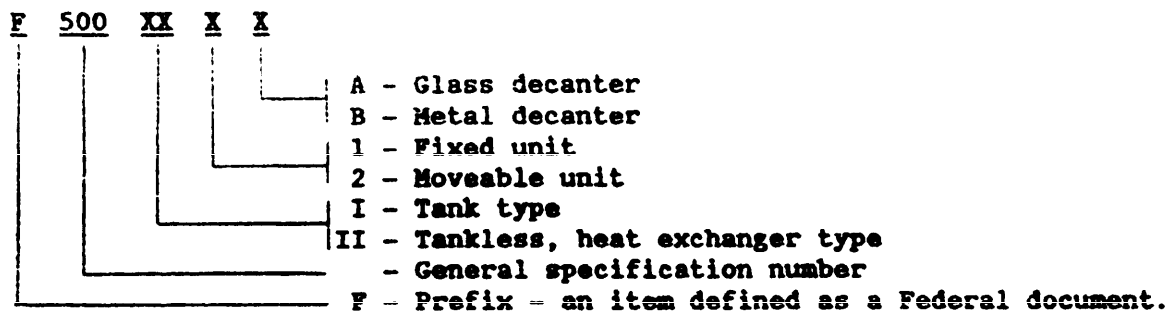
W-C-500B

Class II
 Style A
 Style B
 Model S
 Model D

Class 2
 Style A
 Style B
 Model S
 None

6.6 Definitive military specification part number. The military specification part number which corresponds to the type, style, and other specific classification data applicable to units covered by this specification, and defines the requirements of the options presented under this specification. The military specification part number, the type and style code number, and the units other applicable code numbers are combined to form the definitive military specification part number.

6.6.1 Cataloging data. The military part number system shall provide for a definitive number indicating a specific item of supply. Example: F500I2B is a tank type, moveable unit, metal decanter. The format system is:



6.7 Supersession data. This document supersedes W-C-500A, dated February 8, 1978 and style III, size G of CG-C-531b, dated August 16, 1962.

MILITARY INTERESTS

Custodians:

Army - GL
 Navy - YD
 Air Force - 99

Review Activities:

Army - MD
 Navy - MS, CG
 Air Force - 84
 DLA - GS

User Activities:

Navy - MC, SA

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Navy - YD

DoD Project 7310-0683

