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SUPERSEDING
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FEDERAL SPECIFICATION

DISPENSER, DRINKING WATER, NONMECHANICALLY COOLED

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers two types of ice cooled, inverted bottle drinking water dispensers furnished with two 5-gallon (18.9 Liters) capacity water bottles.

1.2 Classification.

1.2.1 Types. Water dispensers shall be of the following types as specified (see 6.2):

Type I - Stand mounted
Type II - Cabinet mounted

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue 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:

UU-C-806	-	Cups and Lids, Paper, Cold Drink
PPP-B-601	-	Boxes, Wood, Cleated-Plywood
PPP-B-636	-	Boxes, Shipping, Fiberboard
PPP-P-291	-	Paperboard, Wrapping, Cushioning

FSC 4110

Federal Standard:

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

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications Standards, and Handbooks and the Index of the Federal Specifications and Standards from established distribution points in their agencies.)

Military Specification:

MIL-L-10547 - Liners, Case and Sheet, Overwrap; Water-Vaporproof or Waterproof. Flexible

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-1188 - Commercial Packaging of Supplies and Equipment

(Copies of Military specifications and standards required by suppliers 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:

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Traffic Department, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

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

3. REQUIREMENTS

3.1 Standard commercial product. The dispenser shall, as a minimum, be in accordance with the requirements of this specification and shall be the manufacturer's standard commercial product with any added features needed to comply with the requirements. Additional or better features which are not specifically prohibited by this specification, but which are a part of the manufacturer's standard commercial product may be included in the dispenser being furnished. Standard commercial product is a product which has been, or will be, sold on the commercial market through advertisements or manufacturer's catalogs or brochures, and represents the latest production model(s).

3.2 First article. When specified (see 6.2), the contractor shall furnish a complete dispenser for first article inspection and approval (see 4.2.2 and 6.3).

3.3 Materials (see 6.4). Materials not definitely specified shall be of the quality normally used by the manufacturer for water dispensers provided the completed item complies with all provisions of this specification.

3.4 Design. The drinking water dispenser shall consist of an insulated ice container, drinking water chamber, provisions for accommodating a 5-gallon (18.9 liters) water bottle, and a floor mounted cabinet or stand. The type I drinking water dispenser shall be stand mounted. The type II drinking water dispenser shall be cabinet mounted. The 5-gallon (18.9 liters) water bottle shall be inverted to dispense water to the water chamber. The water chamber shall be within the ice container, but separate from it, and connected to the faucet. The water chamber shall be so constructed as to preclude leakage of melted ice into the drinking water. A waste bucket shall be located on a rack beneath the drain. The shell of the insulated ice container shall be sealed to prevent penetration by water or water vapor into the insulation. The drinking water dispensers shall not leak when tested as specified in 4.3.1.

3.4.1 Cooling capacity. The dispensers shall be capable of lowering the temperature of the dispensed drinking water from a minimum 80° to 47°F (27°C to 8°C) or lower, within 30 minutes after filling the ice container with a full charge of crushed ice. The dispenser shall be capable of maintaining the temperature of the dispensed drinking water at 47°F (8°C) or colder while the entire water capacity is being withdrawn at a rate of 1/2 pint (0.24 liters) of water per minute (see 4.3.2).

3.5 Construction.

3.5.1 Welding. All welds of seams or joints shall be treated to resist corrosion. The welds shall be flush, and shall not contain pits and slag.

3.5.2 Ice container. The ice container shall be made from steel galvanized on both sides, corrosion-resisting steel, or aluminum. The ice container shall be of insulated, double wall construction. Unless otherwise specified (see 6.2), the ice container shall have a minimum capacity of 25 pounds (11.34 kg) of crushed ice (see 4.3.2). Unless otherwise specified (see 6.2), a drainage outlet and a removable standpipe shall be provided to drain the ice container. When the stand-pipe is installed, it shall be designed to maintain a 3-inch (76 mm) water level and when the stand-pipe is removed, water in the ice container shall be completely drained into the waste bucket. The stand-pipe shall be fabricated of corrosion-resistant metal.

3.5.2.1 Ice container lid. A metal lid of the same material as the ice container shall be provided to cover the ice container opening. The lid shall be designed so that ice may be added without removing the water bottle. The lid shall be form fitted to prevent foreign substances from falling or leaking into the ice container.

3.5.3 Water chamber. The water chamber shall be porcelain or corrosion-resisting steel. A service faucet shall be positive action, self-closing, push type. Piping and piping connections between water chamber and service faucet shall be composed of substances generally recognized as safe for such use and sealed.

3.5.4 Metal stand or cabinet. The metal stand for type I, and the metal cabinet for type II, shall be fabricated of steel, corrosion-resisting steel, or aluminum. The legs shall be braced for rigid support. The ends of the legs shall be rounded and capped with rubber or plastic feet. When legs are

provided, clearance between the floor and bottom of cabinet shall be not less than 6 inches (152 mm). If a base is provided, the clearance between the floor level and the lower extension of the base shall not exceed 3/8 inch (10 mm) at any point. The stand or cabinet shall not rock when placed on a flat level surface in the position of normal use. The stand and cabinet shall have a rack or similar means of supporting a waste bucket.

3.5.5 Drip tray. A detachable drip tray, fabricated from the same material as the cabinet and stand, positioned under the service faucet and arranged to drain into the waste bucket without splashing on the floor shall be furnished. The drip tray shall be securely held in place but shall be removable for cleaning.

3.5.6 Waste bucket. A 12-quart (11.4 liters) capacity, watertight, waste bucket fabricated from galvanized steel, corrosion-resisting steel, or aluminum shall be furnished (see 4.3.2). The waste bucket shall have a bail for ease of handling.

3.5.7 Support ring. A rubber or plastic support ring with necessary air vents shall be provided to align and support the water bottle and to securely seal the opening against leakage of foreign matter and infiltration of dust. The material used for the support ring shall be of a substance generally recognized as safe for such use.

3.5.8 Water bottles. Unless otherwise specified (see 6.2), two 5-gallon (18.9 liters) capacity water bottles shall be furnished with each dispenser. The bottles shall be made of clear glass, cylindrical in shape with a flat bottom.

3.6 Finish. Unless otherwise specified herein, the finish shall be the manufacturer's standard finish.

3.7 Marking.

3.7.1 Identification. Each dispenser shall have the manufacturer's standard identification marking.

3.7.2 Service warning. In addition to the identification marking required herein, a service warning plate of plastic shall be permanently attached above the faucet on the front outside of the dispenser cabinet or rack. It shall be printed in upper case letters 1/4-inch (6 mm) high and shall read as follows:

PERSONS SERVICING THIS DISPENSER SHALL BE EXTREMELY CAREFUL. WHEN FILLING THE BOTTLE USE ONLY POTABLE WATER FROM A SAFE SOURCE, AND WHEN FILLING AND INSERTING THE BOTTLE, DO NOT CONTAMINATE THE WATER BY TOUCHING THE BOTTLE NECK NOR PERMITTING ANY FOREIGN MATTER TO ENTER THE BOTTLE OR THE WATER CHAMBER OF THE DISPENSER. THE WATER CONTAINERS MUST BE STERILIZED BY AN APPROVED METHOD WITH CHLORINE OR CAUSTIC PRIOR TO EACH REFILLING. WHEN FILLING THE BOTTLE, AN UNUSED, CLEAN, NEW PAPER CUP CONFORMING TO UU-C-806, STYLE E, SHALL BE PLACED OVER THE END OF THE BOTTLE NECK IMMEDIATELY AFTER THE BOTTLE IS RESTED ON ITS SHOULDER ON THE EDGE OF THE DISPENSER PRIOR TO COMPLETION OF THE INSERTION.

3.8 Workmanship. The finished dispenser shall conform to the quality of product established by this specification. The occurrence of defects shall not exceed the applicable acceptable quality levels.

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 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.

4.2 Quality conformance inspection. Sampling for inspection and acceptance shall be in accordance with the provisions set forth in MIL-STD-105, except where otherwise indicated hereinafter.

4.2.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected and tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.2.2 First article inspection. First article inspection shall be performed on one dispenser when a first article sample is required (see 3.4). This inspection shall include the examination of 4.2.2.1 and the tests of 4.3. The first article should consist of one dispenser.

4.2.2.1 Visual examination. Examination of the dispenser shall be in accordance with defects listed in table I. The inspection level shall be II with an acceptable quality level (AQL) of 2.5 for major defects and 6.5 for total defects, expressed in terms of defects per hundred units.

TABLE I. Classification of defects

Examine	Defect	Classification Major	Minor
Construction, design, and workmanship (applicable to all components and assemblies)	Part missing	X	
	Any component fractured, loose, or malformed	X	
	Operation omitted or not properly performed	X	
Faucet	Faucet that is inoperative, or will not function as intended	X	
Stand-pipe drain	Drain does not hold ice water at design level	X	
	Not removable	X	
Bolts, nuts, screws, and other types of threaded components	Missing, broken, stripped, or fractured		X
Welding	Not flush or contains pits or slag	X	
Finish	Not manufacturer's standard finish		X
Marking for identification	Not manufacturer's standard marking		X
Warning service plate	Missing	X	

4.2.2.2 End product testing. The drinking water dispenser shall be tested as specified in 4.3.1. The inspection level shall be S-2 with an AQL of 2.5, expressed in terms of defects per hundred units. The test specified in 4.3.2 shall be made on the initial unit of production.

4.2.3 Packaging inspection. An examination shall be made to determine that preservation, packing, and marking comply with the section 5 requirements. Defects shall be as indicated in table II. The sample unit shall be one shipping container fully packaged with the exception that it need not be closed. Examination for the container closure defects listed below shall be made on shipping containers fully packaged. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per 100 units.

TABLE II. Examination of packaging

Examine	Defect
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application.
Materials	Any component missing, damaged, or not as specified.
Contents	Number per container is more or less than required.

4.3 Tests.

4.3.1 Leak test. The dispenser shall be assembled for use with the water bottle and ice container filled to capacity with water. The dispenser shall be examined to determine compliance with leakage requirement of 3.4. After 5 minutes, the water bottle and ice container shall be drained by using the service faucet and waste drain, respectively, to observe operation of components. Any leakage or failure of any component to operate shall constitute failure of this test.

4.3.2 Cooling capacity test. At an ambient temperature of 80°F (27°C) or higher, 5 gallons (18.9 liters) of water having a minimum temperature of 80°F (27°C) shall be placed in the water bottle and the dispenser shall be assembled for use. The ice container shall then be filled with a full charge of crushed ice and the time recorded. Observation shall be made of ice capacity for conformance with 3.5.2. After 30 minutes, the temperature of the drinking water in the water cooling container shall be measured. The entire capacity of the water bottle shall then be dispensed through the service faucet at a rate of not less than 1/2 pint (0.24 liter) per minute. The temperature of the dispensed water shall be recorded at 5-minute intervals. The recorded temperatures shall be evaluated to determine compliance with the water temperature requirements of 3.4.1. During the test, observation shall be made of the waste bucket capacity (see 3.5.6) and that the ice container lid conforms to 3.5.2.1. Inability of the container to hold the amount of ice specified in 3.5.2, or inability of the water to reach temperature requirements of 3.4.1 or components to operate or meet specified requirements shall constitue failure of this test.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or Commercial as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Disassembly. The waste bucket shall be removed from the dispenser. When practical, the service faucet and drip tray shall be disassembled from the dispenser.

5.1.1.2 Unit packing.

5.1.1.2.1 Drip tray and service faucet. Detached drip tray and service faucet shall be individually wrapped in paperboard conforming to type III, style 2 of PPP-P-291 and the wrap secured with minimum 1-inch (25 mm) tape. The drip tray and service faucet shall then be placed in the waste bucket.

5.1.1.2.2 Water bottle. Each water bottle shall be unit packed in a snug-fitting, corrugated, fiberboard box conforming to style RSC, type CF, class domestic of PPP-B-636. The bottle shall be cushioned within the box with die-cut scored sheets and corner pads of the same material as specified for the box; a minimum clearance of 1/2-inch (13 mm) shall be maintained between the inner surfaces of the box and the exterior of the water bottle. The box shall be closed in accordance with PPP-B-636.

5.1.1.2.2.1 Civil agencies. When civil agencies procure dispensers under this specification, the water bottle shall be omitted.

5.1.1.2.3 Waste bucket. Each waste bucket, with drip tray and service faucet, unit packed as specified in 5.1.1.2.1, shall be unit packed in a snug-fitting, fiberboard box conforming to style RSC, type CF, variety SW, or type SF, class domestic of PPP-B-636. The box shall be securely closed and secured to the shelf of the dispenser.

5.1.1.2.4 Dispenser. The water chamber shall be blocked and cushioned within the ice container with scored or die-cut fiberboard sheets fitted securely within the void space in a manner as to prevent movement or damage while in transit. The dispenser shall then be unit packed in a snug-fitting, fiberboard box and the box securely closed.

5.1.2 Commercial. The dispensers shall be preserved in accordance with MIL-STD-1188.

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

5.2.1 Level A packing. Each dispenser, complete with water bottles, preserved as specified in 5.1, shall be packed in a snug-fitting shipping container conforming to overseas type, grade B of PPP-B-601. The interior boxes shall be blocked and braced to prevent movement within the shipping container by the use of scored fiberboard sheets or wood blocking. The fiberboard sheets shall be of doublewalled construction and have a minimum bursting strength of 275 pounds per square inch (p.s.i.) (1900 kPa). Each shipping container shall be provided with a type I or II, grade C case liner conforming to MIL-L-10547. Closure and strapping shall be in accordance with PPP-B-601.

5.2.2 Level B packing. Each dispenser, complete with water bottles, preserved as specified in 5.1, shall be packed in a snug-fitting shipping container conforming to style RSC, type CF, variety DW, or type SF, class domestic of PPP-B-636. The interior boxes shall be blocked and braced to prevent movement within the shipping container by the use of scored fiberboard sheets shall be of double-walled construction and have a minimum bursting strength of 275 p.s.i. (1900 kPa). Each shipping container shall be closed in accordance with method II of PPP-B-636.

5.2.2.1 Weather-resistant containers. When specified (see 6.2), the shipping container shall be V3c, V3s, or V4s fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix thereto.

5.2.3 Commercial packing. Dispensers, complete with water bottles, preserved as specified in 5.1, shall be packed in accordance with MIL-STD-1188.

5.3 Marking. Marking shall be in accordance with 5.3.1 or 5.3.2 as specified (see 6.2).

5.3.1 Civil agencies. In addition to any special marking required by the contract or order, unit packs and shipping containers shall be marked in accordance with FED-STD-123 or MIL-STD-1188, as applicable.

5.3.2 Military requirements. In addition to any special marking required by the contract or order, unit packs and shipping containers shall be marked in accordance with MIL-STD-129 or MIL-STD-1188, as applicable. Special handling marking requirements applicable to fragile items shall apply.

6. NOTES

6.1 Intended use. The dispensers covered by this specification are used to cool and dispense drinking water. They are to be used only when pressure-type, mechanically cooled dispensers are impracticable (see 6.6).

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

(a) Title, number, and date of this specification.
(b) Type required (see 1.2.1).
(c) When a first article is required for inspection and approval (see 3.2, 4.2.2, and 6.3).
(d) When ice container capacity is other than for 25 lbs (11.3 kg) of crushed ice (see 3.5.2).
(e) Whether drain pipe is required (see 3.5.2).
(f) When other than 2 bottles are required (see 3.5.8).
(g) Selection of the applicable levels of preservation and packing (see 5.1 and 5.2).
(h) When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
(i) Type marking required (see 5.3).

6.3 First article. The item covered by this specification requires first article inspection and approval under the appropriate provisions of paragraph 7-104.55 of the Armed Services Procurement Regulations. The first article should be a preproduction sample. The first article may be a standard production item from the contractor's current inventory, provided the dispenser meets the requirements of this specification and is representative of the design, construction, and manufacturing technique applicable to the remaining dispensers to be furnished under the contract. The contracting officer should include specific instructions in all procurement instruments, regarding arrangements for examination, test and approval of first article.

6.4 Recycled materials. It is encouraged that recycled material be used when practical as long as it meets the requirements of the specification (see 3.3).

6.5 Metric equivalents. Metric equivalents, indicated in parantheses throughout this document, are based on practices, conversion factors, and symbols specified in ASTM E 380 Standard for Metric Practice, and are for information only. In each instance, the value stated in US customary units shall be controlling.

6.6 Note. The improper handling and replacement of water bottles in inverted bottle type drinking water dispensers are considered by the U.S. Public Health Service of the Department of Health, Education, and Welfare to be unsanitary and conducive to contamination of potable water. However, where there are no substitute devices available, it is recommended that these dispensers be used only when it is impracticable to use a pressure type dispenser, and then only as directed on the plate attached to the front of the dispenser. Water for filling the bottle must come only from a safe source of potable water. None of the above is to be interpreted as a condemnation of the proper handling of safe bottled water by bottled water companies regularly inspected and approved by State Health Departments.

Custodians:

Army - GL
Navy - YD
Air Force - 99

Review activities:

Army - MD
Navy - MS

User activities:

Army - CE

Preparing activity:

Army - GL

Civil Agency Coordinating Activities:

GSA
HEW

Project No. 4110-0268

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein.