

MIL-T-43641
6 May 1969

MILITARY SPECIFICATION

TABLES, EMBALMING, MORTUARY

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope.- This specification covers two types of mortuary embalming tables (see 6.1).

1.2 Classification.- Tables shall be of the following types, as specified (see 6.2).

- Type I - Nonhydraulic operated
- Type II - Hydraulic operated

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:

SPECIFICATIONS

FEDERAL

- MMM-A-260 - Adhesive, Water-Resistant, (For Sealing Water-proofed Paper)
- PPP-B-601 - Box, Wood, Cleated-Flywood
- PPP-B-621 - Box, Wood, Nailed and Lock-Corner
- PPP-B-636 - Box, Fiberboard
- PPP-B-1055 - Barrier Material, Waterproofed, Flexible
- PPP-C-843 - Cushioning Material, Cellulosic
- PPP-F-320 - Fiberboard, Corrugated and Solid Sheet Stock (Container Grade) and Cut Shapes
- PPP-T-97 - Tape, Pressure-Sensitive Adhesive, Filament Reinforced

FSC 9930

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STANDARDS

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.

(Copies of specifications, standards, and drawings 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 otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 167-63 - Corrosion-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
- B 210-65 - Aluminum Alloy, Drawn Seamless Tubes.

(Applications for copies of the American Society for Testing and Materials, standard specifications should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa., 19103.)

NATIONAL CLASSIFICATION BOARD

National Motor Freight Classification

(Application for copies should be addressed to the National Classification Board, 1616 P Street, N.W., Washington, D. C. 20036.)

UNIFORM CLASSIFICATION COMMITTEE

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, 202 Union Station, Chicago, Ill. 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.)

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3. REQUIREMENTS

3.1 First article.- When specified (see 6.2), before production is commenced, the supplier shall submit a preproduction sample to the contracting officer or his authorized representative for approval in accordance with 4.2. The approval of the preproduction sample authorizes the commencement of production, but does not relieve the supplier of responsibility for compliance with all applicable provisions of this specification. The preproduction sample shall be manufactured in the same facilities to be used for the manufacture of the production item.

3.2 Standard product.- The tables delivered under this specification shall be the manufacturer's current commercial product, except for any changes necessary to comply with specification requirements.

3.3 Materials.- Materials not definitely specified shall be of the quality normally used by the manufacturer for embalming tables, provided the completed item complies with all provisions of this specification.

3.3.1 Corrosion-resisting steel sheet.- Corrosion-resisting steel sheet shall conform to type 302 of ASTM A 167-63 and shall be a minimum 0.0355 inch thick.

3.3.2 Aluminum Tube.- Aluminum tube shall conform to 6063-T622 of ASTM B 210. The diameter of the tube shall be in accordance with the manufacturer's current commercial practice.

3.4 Design.- The embalming tables shall conform to the requirements specified herein and in table I. Type I table shall consist of a reinforced top mounted on a tubular frame and equipped with casters. The type I table shall be similar to figure 1. The type II table shall consist of a tilting and swiveling table top, mounted on a single pier base, containing a hydraulic mechanism, equipped with casters. The type I table, when tested as specified in 4.4.1, and the type II table, when tested as specified in 4.4.2, shall show no evidence of warping, cracking or deformation.

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TABLE I.- Physical characteristics

Characteristic	Minimum Requirement (inches)	
	Type I	Type II
Length, overall	79	79
Width	27	28
Height, unextended	31	27-1/2
Total adjustment, each end (type I)	7-3/4	
Total extension (type II)		10

3.5 Construction.-

3.5.1 Type I.-

3.5.1.1 Table top.- The table top of the type I table shall be fabricated of corrosion-resisting steel sheet specified in 3.3.1. Table top reinforcing members shall be fabricated of corrosion-resisting steel. The table top shall have a concave drain channel around the outer perimeter, connected to a drain hole at the center of the foot end. A bucket hook shall be permanently attached adjacent to the drain hole, and shall not become deformed when tested as specified in 4.4.3. Means shall be provided on both ends of the table to raise and lower the table top within the limitations specified in table I. The method used shall assure positive locking action and shall not malfunction or become deformed when tested as specified in 4.4.1.

3.5.1.2 Frame.- The frame of the type I table shall be fabricated of the aluminum tube specified in 3.3.2. The bottom of the frame shall be provided with means to receive casters.

3.5.1.3 Casters.- Casters for the type I table shall be not less than 7 inches in diameter by 1-1/2 inches wide, semi-pneumatic, ball bearing type. Each caster shall have a load rating of not less than 125 pounds. Casters shall be provided with caster locks to immobilize the table when tested as specified in 4.4.1.

3.5.2 Type II.-

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3.5.2.1 Table Top.- The table top of the type II table shall be made of reinforced pressed steel. The edges of the top shall form an apron not less than 3 inches deep around the top to form a drain channel. A drain hole shall be located at the center of the foot of the table. A bucket hook shall be permanently attached adjacent to the drain hole and shall not fracture or become deformed when tested as specified in 4.4.3. When tested as specified in 4.4.2, the table top shall tilt down approximately 6 inches at the head end and near vertical at the foot end. When tilted, the table top shall swivel 360 degrees. A positive means of locking shall be provided for the tilt and swivel mechanism.

3.5.2.2 Base.- The single pier base shall be made of cast iron and shall contain a hydraulic mechanism. When tested as specified in 4.4.2, the base shall not tip and the hydraulic mechanism shall raise and lower the table top within the limitations specified in table I without slipping. The hydraulic mechanism shall be furnished with a foot or hand release and pump valve or lever. The base shall be mounted on concealed casters. The casters shall be moisture and acid resistant, non-marking and of the ball bearing type. Means shall be provided to lock the casters in position when tested as specified in 4.4.2. The base shall not extend beyond the edge of the table. The base shall be equipped with chromium plated foot rests attached in accordance with industry practice.

3.5.2.3 Water attachment.- A water attachment shall be furnished with the type II table to provide a constant flow of water to the table. The attachment shall be made of corrosion-resisting material and furnished with a clamping device or other means of attachment to the table.

3.6 Finish.-

3.6.1 Finish for type I table.- Corrosion-resisting steel components shall have a smooth, natural finish, equivalent to a No. 3 sheet finish or better. Aluminum components shall be highly polished. Steel hardware shall be cadmium or chromium plated in accordance with the manufacturer's commercial practice.

3.6.2 Finish for type II table.- The type II table exposed surfaces shall be finished with a smooth, acid-resisting porcelain enamel. The color shall be white. Under surfaces of the top and base may be finished with either white acid-resistant gloss paint or porcelain enamel.

3.7 Assembly instruction.- Each table shall be furnished with one detailed assembly instruction sheet.

3.8 Marking.- The table shall be marked with the manufacturer's trade mark or identification in accordance with the manufacturer's normal practice.

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3.9 Workmanship.- The table shall be clean and properly assembled. All surfaces shall be free of rough or sharp edges, fractures, splits, punctures, dents, creases, bows, or malformation. Adjustable components shall not bind. Enameled surfaces of the type II table shall be free of voids, crazing, blistering, chipping or imbedded foreign matter.

3.9.1 Welding.- When applicable, the surface of parts to be welded shall be free from oxide, scale, paint, grease, and other foreign matter. Welds shall be continuous, sound, smooth, and free from porosity, cracks, incomplete fusion, and deformation of material. All scale and flux (when flux is used) shall be removed from the finished welds.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.- Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 First article inspection.- When a preproduction sample is required, it shall be examined for defects in table II, dimensions specified, and tested as specified in 4.4.1 for type I tables, or 4.4.2 for type II tables, as applicable, and 4.4.3. The presence of any visual defect, any dimension not within the specified requirements, or failure to pass the applicable tests shall be cause for rejection of the preproduction sample.

4.3 Inspection.- Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated hereinafter.

4.3.1 Component and material inspection.- In accordance with 4.1 above, 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.

4.3.2 Process inspection.-

4.3.2.1 In-process inspection.- When applicable, inspection shall be made during the manufacturing process to establish that no deviation is made from requirements of surface preparation for welding specified in 3.9.1. Whenever nonconformance is noted, correction shall be made to affected items and process.

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4.3.3 End item inspection.— The lot shall be all the embalming tables of one type submitted for inspection at one time. The sample unit for examination shall be one completely assembled embalming table.

4.3.3.1 Visual examination.— The end item shall be examined for defects listed in table II. The inspection level shall be II with an acceptable quality level (AQL) of 4.0 for major defects and 10.0 for total defects, expressed in terms of defects per hundred units.

TABLE II.— Visual examination

Examine	Defect	Classification	
		Major	Minor
Finish Type I	Aluminum and steel not finished as specified.	X	
	Hardware not chromium or cadmium plated.	X	
Type II	Exposed surfaces not porcelain enameled.	X	
	Under surfaces not porcelain enameled or gloss painted, void, craze, blister, chip, or imbedded foreign matter.	X	
	Color not as specified.		X
Design and construction	Drain hole or hook missing.	X	
	Caster missing or not type specified.	X	
	Adjustable component binds.		X
Type I	Not provided with concave drain channel.	X	
	Supporting device missing.	X	
Type II	Base not single pier design.	X	
	Foot rest missing.	X	
	Drain channel missing.	X	
	Base extends beyond edge of table.	X	
Workmanship	Not clean, not free of rough or sharp edges, fractures, splits, punctures, dents or creases, bowed or malformed.	X	
	Solder, and flux not removed from works (as applicable).		X
Assembly instruction	Missing or not as specified.		X

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TABLE II.- Visual examination (cont'd)

Examine	Defect	Classification	
		Major	Minor
Marking	Not marked as specified, marking illegible.		X

4.3.3.2 Dimensional examination.- Examination shall be made of the embalming table for defects in dimensions. Any dimension not within specified tolerance shall be classified as a defect. The inspection level shall be S-2 with an AQL of 6.5, expressed in terms of defects per hundred units.

4.3.3.3 Testing of the end item.- The end item shall be tested as specified in 4.4.1 for type I tables, or 4.4.2 for type II tables, as applicable, and 4.4.3. The inspection level shall be S-2 and the AQL shall be 4.0, expressed in terms of defects per hundred units.

4.3.4 Examination of preparation for delivery.- An examination shall be made to determine that packaging, packing and marking as required by section 5 of this specification are complied with. Defects shall be as indicated in table III. The sample unit shall be one shipping container fully prepared for delivery. The lot shall be all of the containers offered for inspection at one time. The inspection level shall be S-2 with an AQL of 4.0, expressed in terms of defects per hundred units.

TABLE III.- Examination of preparation for delivery defects

Examination	Defect
Markings, exterior	Omitted; incorrect; illegible; or improper size, location, sequence, or method of application.
Materials	Component missing or damaged.
Workmanship	Inadequate application of components, such as cushioning or blocking and bracing inadequate.

4.3.4.1 Examination of shipping containers.- Examination for defects in closure and strapping of shipping containers shall be in accordance with the appendix of the applicable container specification.

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4.4 Tests.-

4.4.1 Performance test, type I.- The caster locks of the type I table shall be engaged, and an evenly distributed load of 300 pounds shall be placed on the assembled table. One end of the table top shall be raised to each of its locking positions and allowed to remain in each of its locking positions for a period of 5 minutes and then lowered to the lower limit of adjustment. The test shall be repeated at the other end of the table. The table shall be observed to determine compliance as follows:

- (a) Warping, deformation or cracking (see 3.4).
- (b) Failure of supporting devices (see 3.5.1).
- (c) Adjustability (see 3.5.1).
- (d) Failure of caster locks (see 3.5.1.1).

4.4.2 Performance test, type II.- The casters of the type II table shall be locked. The table top raised to its highest point of extension and an evenly distributed load of 300 pounds shall be placed on the table top and secured. The head of the table top shall be tilted to the lower limits of adjustment. The table top shall be lowered to two intermediate positions for 5 minutes and then lowered to its lower limit. At each position the table shall be rotated 360 degrees. At the lower limit the tilting mechanism shall be returned to its original position. The table shall then be raised to its upper limit. The test shall be repeated, except the foot of the table shall be lowered to its lower limit. The table shall be observed to determine compliance as follows:

- (a) Warping, deformation or cracking (see 3.4).
- (b) Locking action for tilting and swiveling (see 3.5.2.1).
- (c) Tilting of the head and foot end (see 3.5.2.1).
- (d) Tipping of the base (see 3.5.2.2).
- (e) Operation of the hydraulic mechanism without slipping (see 3.5.2.2).
- (f) Failure of caster locks (see 3.5.2.2).

4.4.3 Hook test.- A static load of not less than 30 pounds shall be attached to the drain hole hook for a period of 30 minutes to determine compliance with 3.5.1.

5. PREPARATION FOR DELIVERY

5.1 Packaging.- Packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A.-

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5.1.1.1 Disassembly.-- Each table shall be disassembled by removing the top and casters from the base. The base of type I table shall be disassembled into its component parts. The water attachment of type II table shall be disassembled from the table.

5.1.1.2 Lubrication.-- All bearings shall be lubricated to capacity with the manufacturer's recommended lubricant containing a rust inhibitor.

5.1.1.3 Packaging.--

5.1.1.3.1 Table top.-- The top, sides and ends of each table top shall be covered with minimum 30-pound basis weight (24 by 36-500) highly-calendered or machine-glazed kraft paper. All surfaces of the table top shall then be covered with fiberboard conforming to type CF or SF, class domestic, grade 275, or class weather resistant, grade V3c or V3s of PPP-F-320, or cellulosic cushioning material conforming to type I or II, class B of PPP-C-843 (see 5.2.1.1). The fiberboard or cushioning material shall be secured with jute, sisal, manila or cotton twine having a minimum breaking strength of 80 pounds, or tape conforming to PPP-T-97, in a manner as to prevent shifting or detachment during shipment.

5.1.1.3.2 Table base.-- Tubing similar in size and shape, for type I tables, shall be nested and secured together with tape conforming to PPP-T-97. The base of type II tables shall have all surfaces, except the bottom, covered with kraft paper and fiberboard or cellulosic cushioning material as specified in 5.1.1.3.1.

5.1.1.3.3 Components, hardware and assembly instruction.-- Hardware removed during disassembly of the table shall be placed in a cotton cloth drawstring bag and, together with water attachment for type II table, casters and assembly instructions, shall be packaged in a fiberboard box conforming to type CF or SF, class domestic or weather-resistant, variety SW, style optional of PPP-B-636 (see 5.2.1.1). The components shall be separated and immobilized by fiberboard inserts, individually wrapped in cushioning material conforming to type I or II, class A or B of PPP-C-843, or other equivalent means. Each box shall be securely closed in accordance with Method II of the appendix of PPP-B-636.

5.1.2 Level C.-- Tables shall be packaged to afford adequate protection against physical damage during shipment from the supply source to the first receiving activity. The supplier may use his standard practice when it meets this requirement.

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

5.2.1 Level A.--

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5.2.1.1 Type I.-- Components comprising one complete table, packaged as specified in 5.1, shall be packed in a shipping container conforming to class 2, style 2 or 4, type 3 load of PPP-B-621; or overseas type, type 3 load of PPP-B-601. Class domestic fiberboard boxes containing components and hardware (see 5.1.1.3.3) shall be wrapped in barrier-material conforming to class C, E-1, or E-2 of PPP-B-1055. All seams and closures of the wrap shall be completely sealed with a 3/4 inch minimum width continuous seam of water resistant adhesive conforming to MMM-A-260. Class weather-resistant fiberboard boxes shall be water-proofed by taping all joints in accordance with the appendix of the box specification. Material used to cover the table top (see 5.1.1.3.1) shall be class weather-resistant fiberboard or type II cellulosic cushioning material. The components shall be arranged in the shipping container with the table top placed on the bottom, with wood blocking and bracing provided to secure and immobilize the table top. The remaining components shall be arranged on top of the table top in a compact manner and secured with wood blocking and bracing. Wood blocking and bracing shall not depend on end-grain nailing alone. Supplemental supporting cleats shall be provided to reinforce and prevent splitting of the blocking and bracing. Closure and strapping shall be in accordance with the appendix of the applicable container specification.

5.2.1.2 Type II.-- Components comprising one complete table, packaged as specified in 5.1, shall be packed as specified in 5.2.1.1, except that components shall be arranged in the shipping container with the table top alongside the base of the table and the packaged components secured in an unused portion of the container, and each shipping container shall be provided with skids in accordance with the applicable container specification.

5.2.2 Level B.--

5.2.2.1 Type I.-- Components comprising one complete table, packaged as specified in 5.1, shall be packed in a shipping container conforming to class 1, style 2 or 4, type 3 load of PPP-B-621; or domestic type, style A or B of PPP-B-601. The components shall be arranged in the shipping container with the table top placed on the bottom with wood blocking and bracing provided to secure and immobilize the table top. The remaining components shall be arranged on top of the table top in a compact manner and secured with wood blocking and bracing. Wood blocking and bracing shall not depend on end-grain nailing alone. Supplemental supporting cleats shall be provided to reinforce and prevent splitting of the blocking and bracing.

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5.2.2.2 Type II.-- Components comprising one complete table, packaged as specified in 5.1, shall be packed as specified in 5.2.2.1, except that components shall be arranged in the shipping container with the table top alongside the base of the table and the packaged components secured in an unused portion of the container. Each shipping container shall be provided with skids and closed and strapped in accordance with the applicable container specification, or appendix thereto.

5.2.3 Level C.-- Tables, packaged as specified in 5.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination. Containers shall be in accordance with Uniform Freight Classification Rules or National Motor Freight Rules, as applicable.

5.3 Marking.-- In addition to any special marking required by the contract or order, shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use.-- The embalming tables covered by this specification are intended to be used in mortuary preparing rooms. The type I table is intended for use where there is a requirement for a portable table. The type II table is intended for use where there is a requirement for a heavy duty table.

6.2 Ordering data.-- Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Type required (see 1.2).
- (c) First article.-- When preproduction sample is required (see 3.1).
- (d) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).

Custodians:

Army - GL
Navy - MS
Air Force - 34

Preparing activity:

Army - GL
Project No. 9930-0082

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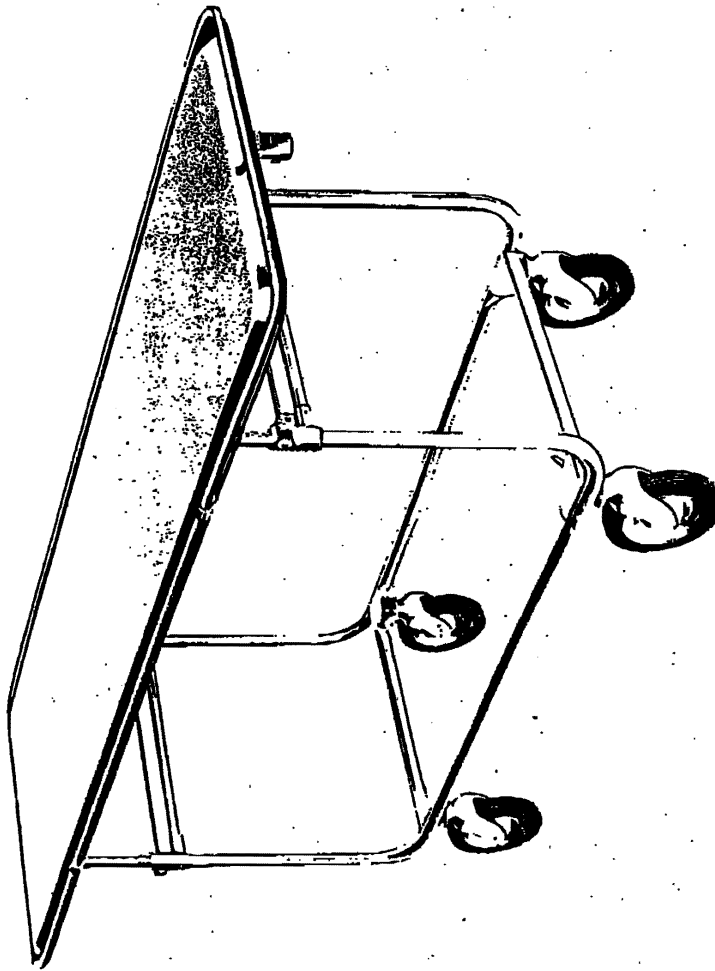


Figure 1 - Table Operating Mortuary