



# Standard Specification for Faucets, Single and Double, Compression and Self-Closing Type, Shipboard<sup>1</sup>

This standard is issued under the fixed designation F1245; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers single- and double-compression and self-closing faucets for shipboard plumbing installations.

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

1.3 The following precautionary caveat pertains only to the test methods portion, Section 10, of this standard. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

[B62 Specification for Composition Bronze or Ounce Metal Castings](#)

[B584 Specification for Copper Alloy Sand Castings for General Applications](#)

### 2.2 American National Standards Institute Standard:<sup>3</sup>

[B1.1 Unified Inch Screw Threads \(UN and UNR Thread Form\)](#)

### 2.3 Federal Specifications:<sup>4</sup>

[PPP-B-566 Boxes, Folding, Paperboard](#)

[PPP-B-585 Boxes, Wood, Wirebound](#)

[PPP-B-591 Boxes, Shipping, Fiberboard, Wood-Cleated](#)

[PPP-B-601 Boxes, Wood, Cleated-Plywood](#)

[PPP-B-621 Boxes, Wood, Nailed and Lock-Corner](#)

[PPP-B-636 Box, Shipping, Fiberboard](#)

[PPP-B-676 Boxes, Setup](#)

[QQ-N-290 Nickel Plating \(Electrodeposited\)](#)

[QQ-C-320 Chromium Plating \(Electrodeposited\)](#)

### 2.4 Military Specification:<sup>4</sup>

[MIL-P-116 Preservation, Methods of](#)

### 2.5 Military Standards:<sup>4</sup>

[MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes](#)

[MIL-STD-129 Marking for Shipment and Storage](#)

### 2.6 Naval Sea Systems Command (NAVSEA):<sup>4</sup>

[NAVSEA Drawing 803-5959206 Faucet, Metering](#)

[NAVSEA Drawing 805-1623970 Unit, Lavatory for Officers Station](#)

## 3. Classification

3.1 Faucets shall be of the following types and classes as specified (see 4.1):

### 3.1.1 Type I—Standard (bibb):

3.1.1.1 *Class A*—Compression, plain end.

3.1.1.2 *Class B*—Compression, hose end.

3.1.1.3 *Class C*—Self-closing.

### 3.1.2 Type II—Lavatory, self-closing, low spout.

3.1.2.1 *Class A*—Fast-closing.

3.1.2.2 *Class B*—Slow-closing, depression type.

3.1.3 *Type III*—Folding lavatory, self-closing.

3.1.4 *Type IV*—Elbow operated.

3.1.5 *Type V*—Lavatory, combination water supply and drain fixture.

3.1.6 *Type VI*—Combination supply fixture swing spout for use on galley sinks.

3.1.7 *Type VII*—Single supply fixture swing spout for use with steam kettles and urns.

3.1.7.1 *Class A*—Spout for overhead supply.

3.1.7.2 *Class B*—Spout for riser supply.

3.1.8 *Type VIII*—Supply fixture for pressed metal and shock mounted china lavatories.

3.1.9 *Type IX*—Lavatory, combination water supply and drain fixtures, depression type.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.11 on Machinery and Piping Systems.

Current edition approved May 1, 2012. Published May 2012. Originally approved in 1989. Last previous edition approved in 2006 as F1245 – 89 (2006). DOI: 10.1520/F1245-89R12.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

<sup>4</sup> Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://dodssp.daps.dla.mil>.

**4. Ordering Information**

4.1 Orders for equipment under this specification shall include the following information, as required, to describe the equipment adequately:

- 4.1.1 ASTM designation and year of issue,
- 4.1.2 Type and class of faucet required (see 3.1),
- 4.1.3 Type of handle required (see 6.11),
- 4.1.4 Marking required for handles (see 13.1),
- 4.1.5 Size and weight of Type I faucet required (see 7.1),
- 4.1.6 Overall dimensions for Type II faucets (see 7.2),
- 4.1.7 Shank design for Type II, Class B faucets (see 6.2.3.2),
- 4.1.8 Overall dimensions and position of inlet (side or bottom) for Type III faucets (see 7.3),
- 4.1.9 Overall dimensions and whether spray is required for Type IV faucets (see 6.4.1.3 and 7.4),
- 4.1.10 Length of spout for Type VI fixtures (see 7.6.1),
- 4.1.11 Whether escutcheon plates are provided for Type VI faucets (see 6.6.3),
- 4.1.12 Whether connections are other than 1/4-in. nominal pipe size (NPS) (see 6.8.2.1),
- 4.1.13 Sample size for examination and testing (see 10.1, 10.2, and 11.1), and
- 4.1.14 Optional requirements, if any (see Supplementary Requirements S1 through S3).

**5. Materials**

- 5.1 Faucet bodies shall be made of bronze conforming to Specification B62 or Specification B584.
- 5.2 Handles shall be of commercial grade cast or forged brass or bronze.
- 5.3 Bonnets, handwheels, and nuts shall be of commercial quality brass or bronze; machine screws shall be made of commercial brass.
- 5.4 Seat washers shall be of a rubber or fiber material capable of withstanding the hydrostatic test of 10.1 and suitable for water temperature from 30 to 190°F (–1 to 88°C) without deterioration of material.
- 5.5 Springs for self-closing faucets shall be of corrosion-resisting steel, phosphor bronze, or nickel copper.

**6. Requirements**

- 6.1 Type I, standard.
  - 6.1.1 Type I faucets shall be in accordance with Fig. 1.
    - 6.1.1.1 Faucets shall have hexagon shoulders and a male threaded inlet.

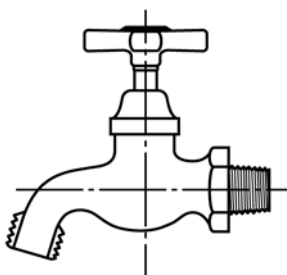


FIG. 1 Type I Standard Faucet, Classes A, B, and C

6.1.2 Class A faucets shall be plain; Class B shall have 3/4-in. (19-mm) hose thread. Class C shall be the same as Class A except they shall be self-closing.

6.2 Type II, lavatory, self-closing, low spout.

6.2.1 Faucets shall be provided with a shank, fitted with a metal washer and locknut and with a 1/4-in. NPS tailpiece.

6.2.1.1 The shank of the faucet and one end of the tailpiece shall be arranged as a ground joint union; the other end of the tailpiece shall be provided with outside threads 1/4-in. NPS.

6.2.2 Class A lavatory faucets shall be in accordance with Fig. 2.

6.2.2.1 They shall operate on a cam, ball, or roller bearings.

6.2.2.2 Faucets with renewable operating units may be used.

6.2.3 Class B lavatory faucets shall be in accordance with Fig. 3.

6.2.3.1 They shall be fitted with an adjusting device, which cannot be tampered with, for regulating the closing from 3 to 20 s in accordance with NAVSEA Drawing 803-5959206.

6.2.3.2 Shank design shall be as specified (see 4.1.7).

6.3 Type III, folding lavatory self-closing.

6.3.1 Faucets shall be in accordance with Fig. 4.

6.3.1.1 They shall be of the cam, ball or roller bearing self-closing type.

6.3.1.2 The body shall be designed for back mounting.

6.4 Type IV, elbow operated.

6.4.1 Faucets shall be in accordance with Fig. 5 except that a gooseneck spout is acceptable.

6.4.1.1 They shall have a double faucet with a rigid spout with or without buttons, renewable seats, and sleeves or renewable units and integral stops in shanks with union inlets.

6.4.1.2 Escutcheon plates shall be provided for the fixtures.

6.4.1.3 Spray shall be provided when specified (see 4.1.9).

6.5 Type V, lavatory, combination water supply and drain fixtures.

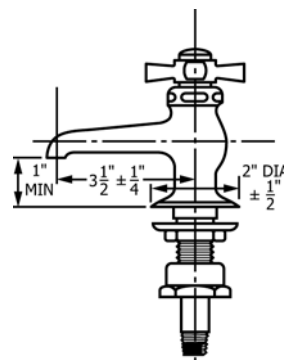
6.5.1 Fixtures shall be in accordance with Fig. 6.

6.5.1.1 The trunion lugs shall be designed so that the trunions will be held in place by spring clips or other device.

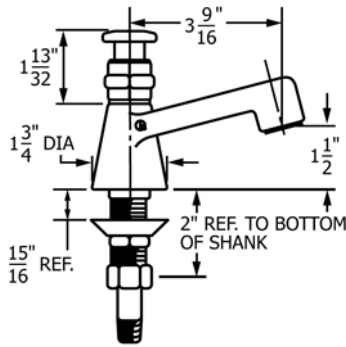
6.6 Type VI, combination supply fixture swing spout for use on galley sinks.

6.6.1 Fixtures shall be in accordance with Fig. 7.

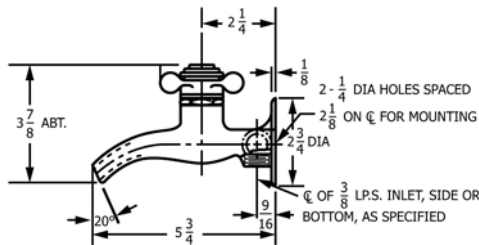
6.6.2 Fixtures shall have manifolded hot and cold compression type faucets, discharging through a common swing spout.



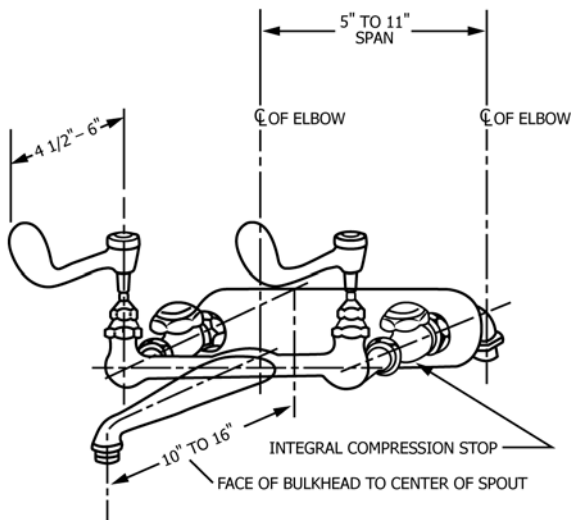
NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.  
FIG. 2 Type II Class A Lavatory, Self-Closing, Low Spout Faucet



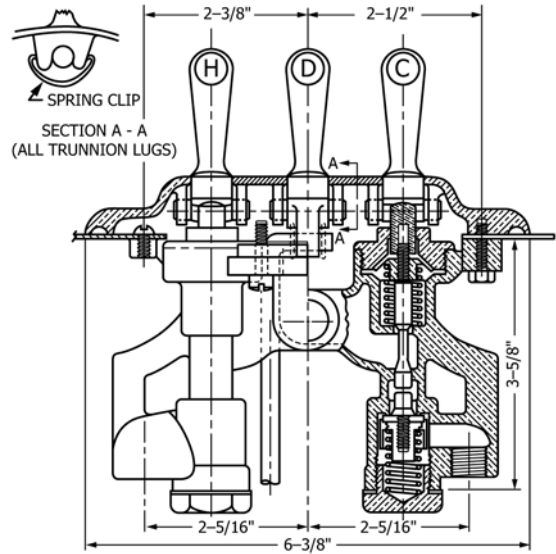
NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.  
**FIG. 3 Type II Class B Faucet**



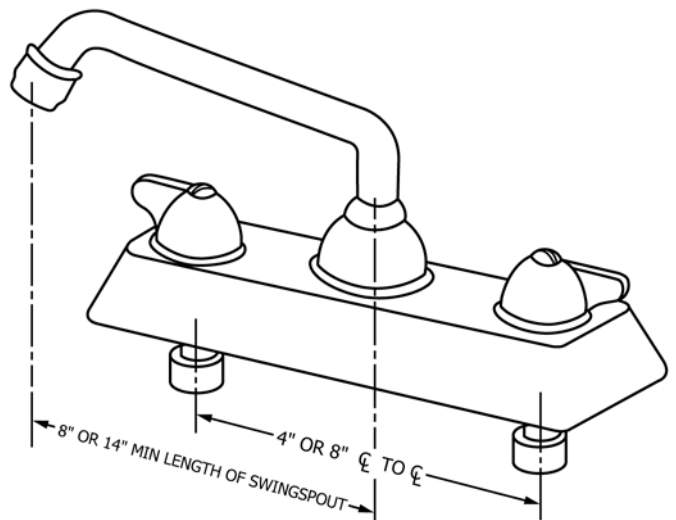
NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.  
**FIG. 4 Type III Folding Lavatory, Self-Closing Faucet**



NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.  
**FIG. 5 Type IV Elbow-Operated Faucet**



NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.  
**FIG. 6 Type V Faucet, Lavatory Combination Water Supply and Drain Fixture (Not for Use on New Construction)**



NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.  
**FIG. 7 Type VI Faucet, Combination Supply Fixture Swing Spout for Use on Galley Sinks**

6.6.2.1 The swing joint shall be of rugged design and packed with material resistant to water and leakage at temperatures of 30 to 200°F (–1 to 93°C).

6.6.3 The faucets shall have renewable seats, sleeves, or renewable units and steps in the body and shanks with union inlet connection, with or without escutcheon plates as specified (see 4.1.11).

6.7 *Type VII*, single-supply fixture swing spouts for use with steam kettles and urns.

6.7.1 Fixtures shall be in accordance with Fig. 8.

6.7.1.1 They shall consist of a single-globe-type valve with NPS threaded inlet and outlet and an adaptor designed to receive a swing spout.

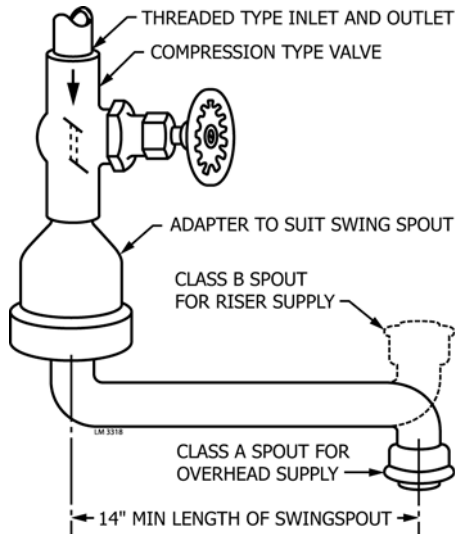
6.7.1.2 The swing joint shall be ruggedly constructed and fitted with packing material resistant to leakage and water at temperatures of 30 to 200°F (–1 to 93°C).

6.7.2 Class A or B spouts may be of cast or extruded construction.

6.7.3 Class A or B spouts shall be designed for installation on the valve.

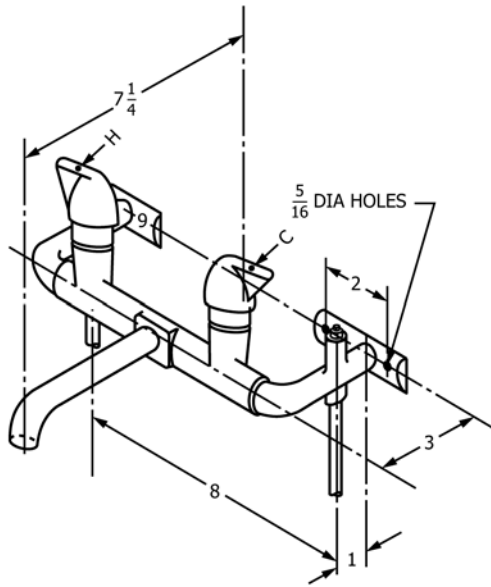
6.8 *Type VIII*, supply fixture for pressed metal and shock mounted china, lavatories.

6.8.1 Fixtures shall be in accordance with Fig. 9.



NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.

FIG. 8 Type VII Faucet, Single-Supply Fixture Swing Spout for Use with Steam Kettles and Urns



NOTE 1—All dimensions are in inches. 1 in. = 25.4 mm.

FIG. 9 Type VIII Faucet, Supply Fixture for Pressed Metal and Shock-Mounted China Lavatories

6.8.2 Fixtures shall consist of a manifold incorporating hot and cold water NPS female threaded inlet connections to permit connection from top or bottom of the manifold and common outlet (through direct compression type or inverted compression type) faucets.

6.8.2.1 Unless otherwise specified (see 4.1.12), the connections shall be 1/4-in. NPS.

6.8.3 Faucets shall be of the self-closing type operating on a cam, ball, or roller bearing.

6.8.4 The faucet may seat with or against the water supply pressure.

6.8.5 Faucets with renewable operating units will be acceptable.

6.9 Type IX, lavatory, combination water supply and drain fixtures, depression type.

6.9.1 In addition to the requirements specified herein, Type IX fixtures shall also be in accordance with NAVSEA Drawing 803-5959206.

6.10 Threads for threaded parts shall conform to the applicable requirements of ANSI B1.1.

6.11 Handles shall be four-ball, four-arm, star, T, loose-key T, or lever type, as specified (see 4.1.3), with the exception noted in 6.11.1.

6.11.1 Handles for Type II, Class B and Type IX faucets shall be in accordance with NAVSEA Drawing 803-5959206.

6.11.2 Handwheels may be provided for Type VII faucets.

## 7. Dimensions, Mass, and Permissible Variations

7.1 Type I faucets shall be of the sizes and weights specified in Table 1.

7.2 Type II faucets shall be of the dimensions specified in 4.1.6.

7.2.1 Dimensions shown on Fig. 3 are approximate.

7.2.2 Faucets shall have a minimum weight, including the tailpiece, of 1.5 lb (0.7 kg) ± 5%.

7.3 For Type III faucets, overall dimensions and position of the inlet (side or bottom) shall be as specified (see 4.1.8). The dimensions shown on Fig. 4 are approximate.

7.4 For Type IV faucets, overall dimensions shall be as specified (see 4.1.9). The dimensions shown on Fig. 5 are approximate.

7.5 Type V fixtures shall conform to the dimensions shown on Fig. 6.

7.6 Type VI fixtures shall conform to the dimensions shown on Fig. 7.

7.6.1 The swing spout shall be 8- or 14-in. (203- to 356-mm) minimum length, as specified (see 4.1.10).

7.7 Type VII fixtures shall conform to the dimensions shown on Fig. 8.

7.8 Type VIII fixtures shall conform to the dimensions shown on Fig. 9.

7.9 Type IX fixtures shall conform to the dimensions shown on NAVSEA Drawing 803-5959206.

## 8. Workmanship, Finish, and Appearance

8.1 Faucets shall be true to form and free from all defects or blemishes affecting the appearance or serviceability.

TABLE 1 Size and Weight of Type I Faucets<sup>A</sup>

Nominal Pipe Size, in.	Minimum Weight, lb
1/2	3/4
3/4	7/8
1	1
1 1/4	1 1/8

<sup>A</sup> 1 in. = 25.4 mm; 1 lb = 0.45 kg.



8.2 Before plating, faucets shall be thoroughly cleaned of sand and scale by the acid-bath process (or a process satisfactory to the purchaser) and shall have all fins and roughness removed and polished.

8.3 Nickel chromium plating shall be applied to surfaces normally visible after installation including exposed bolts, nuts, screws, or other fastenings.

8.3.1 Nickel plating on copper-base alloys shall be Class 1, Type VII (QC) in accordance with QQ-N-290.

8.3.2 Chromium plating, over nickel, shall be Class 1, Type I in accordance with QQ-C-320.

## 9. Sampling

9.1 All faucets of the same type, class, and size offered for delivery at one time shall be considered a lot for purposes of examination and hydrostatic test.

## 10. Test Methods

10.1 Samples, as specified (see 4.1.13), shall be tested under a hydrostatic pressure of 100 psi (690 kPa).

10.1.1 Faucets that do not operate satisfactorily or that show leakage shall not be offered for delivery.

10.2 For Type IX fixtures, samples, as specified (see 4.1.13), shall be tested for metering requirements specified on NAVSEA Drawing 803-5959206 by timing the open to close cycle time at 20-psi (140-kPa) inlet pressure and at 100-psi (690-kPa) inlet pressure.

10.2.1 Cycle time at 20 psi (140 kPa) shall not exceed 20 s, and cycle time at 100 psi (690 kPa) shall not be less than 3 s.

10.2.2 Each sample faucet shall be cycled a minimum of ten times under the pressures noted.

10.2.3 Failure to operate within the specified times or to be tight after each cycle shall be cause for rejection.

## 11. Inspection

11.1 Sample valves, as specified (see 4.1.13), shall be visually and dimensionally examined to determine conformance with the specified design, inclusion of all required parts, proper assembly, and the existence of proper marking and dimension.

11.2 Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein.

11.2.1 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 purchaser.

11.2.2 The purchaser reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure that supplies and services conform to prescribed requirements.

11.2.3 The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the purchaser for acceptance comply with all requirements of the contract.

## 12. Rejection and Rehearing

12.1 Material that fails to conform to the requirements of this specification may be rejected. Rejection should be reported to the producer or supplier promptly and in writing. In case of dissatisfaction with the results of the test, the producer or supplier may make claim for a rehearing.

## 13. Product Marking

13.1 All handles shall be marked “hot” or “cold” as specified (see 4.1.4). Substitution of “H” or “C” is permissible for “hot” or “cold,” respectively. Type II, Class B and Type IX faucets shall be marked in accordance with NAVSEA Drawing 803-5959206.

13.1.1 Type V faucets shall also have a handle marked with “D” (see Fig. 6).

13.2 Each faucet shall be legibly stamped before, or etched after, plating, with the name or identification mark of the manufacturer.

## 14. Packaging

14.1 Unless otherwise specified (see 4.1.14), packaging shall conform to the manufacturer’s normal commercial practice, and in such a manner that will ensure acceptance by common carrier and afford protection against physical and mechanical damage during shipment.

14.2 Packing shall be accomplished in a manner that shall ensure acceptance by common carrier at the lowest rate and shall afford protection against physical or mechanical damage during direct shipment from the supply source to the using activity for early installation.

## 15. Keywords

15.1 compression faucets; faucets; marine; plumbing; self-closing faucets; ship; shipboard

**SUPPLEMENTARY REQUIREMENTS**

The following supplementary requirements shall apply only when specified by the purchaser in the contract or order (see 4.1.14).

**S1. Referenced Documents**

S1.1 The following documents are applicable only when one or more of the requirements of S2 or S3 are specified in the contract or order (see 4.1.14): Federal Specifications PPP-B-566, PPP-B-585, PPP-B-591, PPP-B-601, PPP-B-621, PPP-B-636, and PPP-B-676; Military Specification MIL-P-116; Military Standards MIL-STD-105 and MIL-STD-129; and NAVSEA Drawing 805-1623970.

**S2. Preparation for Delivery**

S2.1 The requirements for packaging, packing, and marking for shipment shall be as specified by the contractor for domestic shipment and storage or overseas shipment.

S2.2 *Packaging*—The faucets shall be packaged in accordance with Method III of MIL-P-116. Unit and intermediate containers shall conform to PPP-B-566, PPP-B-676, or PPP-B-636. Quantity per unit and intermediate container shall be as specified by the purchaser.

S2.3 Packing shall be Level A or B, as specified (see 4.1.14).

S2.3.1 *Level A*—The faucets, packaged as specified (see 14.1 or S2.2.1), shall be packed in containers conforming to any one of the following specifications at the option of the supplier: PPP-B-591, Class II; PPP-B-601, overseas type; PPP-B-621, Class 2; PPP-B-585, Class 3; or PPP-B-636, Type SF, weather-resistant class.

S2.3.1.1 The gross weight of wood-type boxes shall not exceed 200 lb (90 kg); fiberboard boxes shall not exceed the weight limitations of the box specification. Closures shall be in accordance with the applicable box specification and appendix thereto.

S2.3.2 *Level B*—The faucets, packaged as specified (see 14.2 or S2.2.1), shall be packed in containers conforming to any one of the following specifications at the option of the supplier: PPP-B-591, Class I; PPP-B-601, Domestic; PPP-B-621, Class 1; PPP-B-585, Class 1; or PPP-B-636, Type SF, domestic class.

S2.3.2.1 The gross weight of wood-type boxes shall not exceed 200 lb (90 kg); fiberboard boxes shall not exceed the weight limitations of the applicable box specification. Closures shall be in accordance with the applicable box specification and appendix thereto.

S2.4 In addition to any special marking required in the contract or order (see 4.1.14), marking of the packages and shipping containers shall be in accordance with MIL-STD-129.

S2.5 *Inspection of Packaging*—Sample packages and packs, and the inspection of the preservation packaging, packing, and marking for shipment and storage, shall be in accordance with the requirements of Supplementary Requirement S2 and the documents specified therein.

**S3. Special Government Requirements**

*S3.1 Provisioning:*

S3.1.1 Provisioning technical documentation (PTD), spare parts, and repair parts shall be furnished as specified in the contract (see 4.1.14).

S3.1.2 When ordering spare parts or repair parts for the equipment covered by this specification, the contract shall state that such spare parts and repair parts shall meet the same requirements and quality assurance provisions as the parts used in the manufacture of the equipment. Packaging for such parts should also be specified.


S3.1.3 On-board repair parts shall be furnished for ship-board installations in accordance with Table S3.1 for each type valve installed, with the exception of Type IX valves, which shall be in accordance with NAVSEA Drawing 803-5959206.

S3.1.4 Type V faucets and repair parts for Type V faucets are for replacement or repair of existing lavatories only. For lavatories in accordance with NAVSEA Drawing 805-1623970, Type IX, combination water supply and drain fixture shall be supplied.

S3.2 *Sampling*—Faucets from each lot (see 9.1) shall be selected in accordance with Inspection Level I of MIL-STD-105 for examination (see 11.1) and hydrostatic pressure test (see 10.1). The acceptable quality level (AQL) shall be 1.5 % defective.

**TABLE S3.1 On-Board Repair Parts**

Item	Quantity
Complete faucet	1 for each 10 faucets installed
Rubber discs, packing, and seals	100 % for each faucet
Handles or handwheels	1 for each 10 faucets installed

 **F1245 – 89 (2012)**

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