

FF-H-001687B(GSA-FSS)  
 March 16, 1976  
INTERIM REVISION OF  
 Fed. Spec. FF-H-1687A  
 March 1, 1974

## INTERIM FEDERAL SPECIFICATION

### LOCKS, OFFICE MACHINE

This Interim Federal Specification was developed by the General Services Administration, Federal Supply Service, Washington, DC 20406, based upon currently available technical information. It is recommended that Federal agencies use it in procurement and forward recommendations for changes to the preparing activity at the address shown above.

The General Services Administration has authorized the use of this Interim Federal Specification as a valid exception to Federal Specification FF-H-1687A, dated March 1, 1974.

#### 1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers four types of locking devices used for securing office machines to desk or counter tops.

1.2 Classification. Locking devices covered by this specification shall be of the following types and sizes, as specified (see 6.2):

- Type I - Single attachment to desk, single attachment to machine.
- Type II - Single attachment to desk, multi attachment to machine.
- Type III - Multi attachment to desk, multi attachment to machine.
- Type IV - Adhesive attachment to desk, multi attachment to machine.

Size A - 14 inches x 16 inches nominal (dimensions  $\pm$  1/2 inch)  
 Size B - 10 inches x 12 inches nominal (dimensions  $\pm$  1/2 inch)

#### 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:

- PPP-B-566 - Boxes, Folding, Paperboard.
- PPP-B-636 - Boxes, Shipping, Fiberboard.
- PPP-B-665 - Boxes, Paperboard, Metal Edged and Components.
- PPP-B-676 - Boxes, Setup.

##### Federal Standard:

- Fed. Std. No. 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, U.S. 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, Denver, San Francisco, Los Angeles, and Seattle, WA.

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(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards 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.

(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., Tariff Order Section, 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.)

3. REQUIREMENTS

3.1 Materials. The materials used shall be suitable to directly protect the fasteners and other sections of the locking device so that it cannot be defeated by attack with normal hand, cutting tools such as 12 inch hacksaws, 8 inch diagonal cutters, etc. in less than one minute for types I, II, and II and 90 seconds for Type IV, and subject to meeting the other requirements of this specifications.

3.2 Finish.

3.2.1 Lacquer or enamel. Natural color and plated lock surfaces shall have a coating of transparent lacquer or enamel, except that chromium-plated, cadmium-plated, zinc-plated, anodized aluminum, and stainless steel may be furnished without lacquer or enamel.

3.2.2 Surface condition. All exposed surfaces shall be smooth and free from burrs, sharp edges, and rough areas which might cause injury to persons or damage to clothing in normal employee contacts.

3.3 Installed condition. When properly installed, the locking device shall shield the fasteners being used so as to prevent their being removed, broken off, or sheared. The device shall not protrude either above or below the mounting surface to such a degree that it interferes with the normal working motions of the machine operator.

3.4 Accessories.

3.4.1 Keys. Two keys shall be supplied with each lock. Each lock in any one contract shall be operated by its individual key and no other, up to the limit of the number of possible different key combinations specified herein (see 3.5). Keys shall be of steel, brass, or aluminum and shall be so cut and finished as to provide for smooth, reliable operation. Locks shall be keyed alike, or master-keyed, when so specified (see 6.2).

3.4.2 Tools. Any tools, other than common hand tools, which are required to install, engage, or disengage particular locking devices shall be included with those devices.

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**3.4.3 Installation instructions.** Complete instructions for installation and removal of the lock shall be included with each unit. Instructions shall include the dimensions of bolts or screws which are acceptable for use with the particular lock.

**3.5 Lock mechanisms.** Lock mechanisms shall be so designed that a minimum of 1000 different key combinations are possible, and shall pass the lock mechanism test detailed in 4.5.

**3.6 Type I.** Type I locks shall be secured to the machine at a single point and shall be attached through the desk surface at a single point. This type of lock may be installed singly, or in pairs for added security. Installation instructions for this type of lock shall include a recommendation that screws or bolts used with the lock should either be of the locking type or should be reinforced with lock washers to prevent loosening through vibration. Both collar and lock shall rotate freely, when properly installed, to provide a degree of wrench resistance. The lock shall be of such design that it cannot be readily broken off with a length of pipe or a pry bar.

**3.7 Type II.** Type II locks shall attach through the desk surface at one point and to the machine at two or more points. Provision shall be made for the device to pivot at the point of attachment to the desk, so the machine can be rotated for convenient access. The device shall be so designed that rotation of the machine does not result in the loosening or removal of the lock. These locks shall meet the other requirements for Type I above.

**3.8 Type III.** Type III locks shall attach to the machine at two or more points and through the desk surface at two or more points. Heads and stems of all fasteners used shall be completely protected from removal or cutting when the lock is properly installed. Paired, or multiple, locking mechanisms may be used. The device shall be so designed that it is not readily removable by prying.

**3.9 Type IV.** The type IV locking device shall be composed of an adhesive mat which adheres to the desired surface, a base which attaches to the machine and suitable means for locking the base to the mat.

**3.9.1 Mat.** The mat shall be formed from one or more metal plates firmly bonded to a self-adhesive pad. The metal plate(s) shall have a minimum of four fastening points suitable for attachment of the base. The adhesive pad shall be formed from a unicellular substance which prevents the flow of a solvent liquid.

**3.9.2 Base.** The base shall be formed of suitable material and shall have adequate means for attachment to the fastening points of the mat. The base shall have a protruding lip which fits over the mat. The lip shall be fitted with a moulding of rubber or suitable synthetic, which shall rest on the attachment surface and serve to reduce the noise and vibration resulting from use of the machine. The mat or the base shall be equipped with stops as necessary so that when it is properly installed, the pad is protected from removal with cutting and prying tools, including wire, for a minimum period of 90 seconds.

**3.9.3 Fastenings.** The device shall be supplied with rods or other suitable fastenings for attaching the base to the mat.

**3.9.4 Locks.** The device shall have a minimum of two locks which, when in place, prevent the fastenings that secure the base to the mat from being removed.

**3.9.5 Hardware.**

**3.9.5.1 Size A.** Unless otherwise specified (see 6.2), Size A locking devices shall be provided predrilled in the IBM universal pattern for typewriters. Threaded fasteners of the proper number, size, and thread dimensions for securing IBM typewriters shall be provided. Directions shall be included on how a user who wishes to secure a different type or brand of machine can obtain needed drilling templates, threaded fasteners, and adaptation instructions.

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3.9.5.2 Size B. Unless otherwise specified (see 6.2), Size B locking devices shall be provided with four mounting disks. The disks shall have threaded center holes, corresponding 1/2 inch-attachment bolts, and shall be suitable for attachment to plastic cased machines by the use of high strength glues. Directions shall be included on how a user who wishes to utilize a different mounting technique can obtain required hardware and instructions.

3.9.6 Performance. When tested in accordance with 4.6 the device shall withstand the test load without separation of the mat from the test surface and without significant damage to the device.

3.9.7 Damage to mounting surface. When the device is installed, used, and removed in accordance with the instructions of the supplier, there shall be no appreciable damage to mounting surfaces of glass, metal, hard wood, or plastics of the types normally used for desk and counter tops (see 4.7).

#### 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 that supplies and services conform to prescribed requirements.

4.2 Lot. Unless otherwise specified (see 6.2), all locking devices of the same type, and size when applicable, which are offered for delivery at one time shall be considered a lot for purposes of inspection and acceptance.

4.3 Sampling. Samples for visual and dimensional examination shall be selected in accordance with level S-2 of MIL-STD-105.

4.4 Visual and dimensional examination. Samples selected in accordance with 4.3 shall be examined for applicable defects as follows:

- (a) Locking devices not of the type or size specified (see 1.2).
- (b) Material not as specified (see 3.1).
- (c) Finish not as specified (see 3.2.1).
- (d) Surface not smooth as detailed in 3.2.2.
- (e) Locking device failing to protect fasteners or protruding to such extent as to impair its use (see 3.3).
- (f) Keys not as specified (see 3.4.1).
- (g) Special tools not furnished as specified in 3.4.2.
- (h) Installation instructions not included (see 3.4.3).
- (i) Lock mechanism not capable of providing 1000 different key combinations (see 3.5).
- (j) Collar or lock failing to rotate freely (see 3.6).
- (k) Device does not pivot properly or pivoting causes loosening of the lock (see 3.7).
- (l) Neither the mat nor the base has stops necessary to protect the pad from cutting tools (see 3.9.2).
- (m) Fastenings not included (see 3.9.3).
- (n) Necessary hardware not included (see 3.9.5).

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**4.5 Lock mechanism test.** One completely fabricated device shall be selected at random. The lock mechanism(s) shall be subjected to attack with a variety of tools such as picks, shims, wire, etc., which are commonly available in the retail market. Any mechanism which fails to withstand a minimum of one minute of such attack before defeat shall have failed the test and shall cause the lot represented thereby to be rejected. NOTE: In devices which have more than one locking mechanism, each mechanism must meet the one minute requirement.

**4.6 Adhesion test, Type IV devices.** The same sample used to test Type IV lock mechanisms in 4.5 shall be used for this test. The adhesive mat shall be applied to a thoroughly cleaned, smooth metal test surface in accordance with the manufacturer's instructions. The mat shall be allowed to set for a period of at least twelve hours. Then, holes shall be drilled in the four corners of the base, at distances of approximately one inch from each of the two edges which form the corner. Suitable means shall be used to attach the base to a pulling device, using the four holes. The base shall be secured to the mat in accordance with the manufacturer's instructions. A pull load of 2,000 pounds shall be applied to Size A devices and a load of 1,200 pounds shall be applied to Size B devices. The loads shall be maintained for a period of ten seconds. Any separation of the mat from the mounting surface, or evidence of significant damage to the device shall constitute failure of the test. Failure of this test shall cause rejection of the lot represented by this sample.

**4.7 Test for mounting surface damage type IV.** One locking device shall be selected at random from the lot being considered. The mat shall be removed and installed on a clean, smooth hardwood surface, in accordance with the manufacturer's instructions. The mat shall be allowed to set for a period of twenty-four hours. Then, the mat shall be removed in accordance with the manufacturer's directions. The wood surface shall be examined for pitting, chipping, surface removal, etc. Evidence of such damage shall cause rejection of the lot. The manufacturer may replace the mat in the sample device used for this test, and the device may then be supplied as a part of the regular lot shipment.

**4.8 Examination of preparation for delivery requirements.** An examination shall be made to determine whether the packaging, packing and marking comply with the requirements of section 5 of this specification. Defects shall be scored in accordance with table I. For examination of interior packaging, the sample unit shall be one shipping container identical to each item being packed, fully prepared for delivery, selected at random just prior to the closing operations. Sampling shall be in accordance with MIL-STD-105. Defects of closure shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 with an AQL of 4.0 defects per hundred units.

TABLE I. Classification of defects

Examine	Defects
Markings	Omitted; incorrect; illegible; improper size, location, sequence, or method of application.
Material	Any component missing or damaged.
Workmanship	Inadequate application of components such as incomplete closure of container flaps, loose strapping, inadequate stapling, or distortion of container.
Contents	Gross weight exceeds the requirements of the box specification.

## 5. PREPARATION FOR DELIVERY

**5.1 Packaging.** Packaging shall be level A, B, or C as specified (see 6.2).

**5.1.1 Level A.** Each lock, with keys, shall be wrapped in accordance with method IC-3 of MIL-P-116, and packaged in a close-fitting box conforming to PPP-B-566, PPP-B-636, PPP-B-665 or to PPP-B-676. Closure of boxes shall be in accordance with the applicable box specification or appendix thereto.

**5.1.2 Level B.** Each lock, with keys, shall be packaged in a close-fitting box conforming to PPP-B-566, PPP-B-636, PPP-B-665 or to PPP-B-676. Closure of boxes shall be in accordance with the applicable box specification or appendix thereto.

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5.1.3 Level C. The locks, with keys, shall be packaged to insure protection against damage during shipment and safe delivery at destination while complying with the common carrier rules as a minimum.

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

5.2.1 Level A. Twelve type I or six type II, III or IV locks, with keys, packaged as specified in 5.1 shall be packed in a close-fitting box conforming to PPP-B-636, class weather resistant. Close, water-proof seal, and strap the box in accordance with the appendix to PPP-B-636.

5.2.2 Level B. Twelve type I or six type II, II, or IV locks, with keys, packaged as specified in 5.1 shall be packed in a close-fitting box conforming to PPP-B-636, class domestic. Closure of boxes shall be in accordance with method II of the appendix to PPP-B-636.

5.2.3 Level C. Locks, with keys, packaged as specified in 5.1, shall be packed in containers in compliance with the National Motor Freight Classification rules or the Uniform Freight Classification rules.

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. All interior packages and shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.3.2 Military agencies. All interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

#### 6. NOTES

6.1 Intended use. Locking devices covered by this specification are intended for securing typewriters, calculators, and other equipment to desks or counter tops to prevent unauthorized removal.

6.2 Ordering data. Purchases 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, and if applicable, size of lock desired (see 1.2).
- (c) If like-keying or master-keying is required (see 3.4.1).
- (d) If other than IBM attachment hardware for Size A is required (see 3.9.5).
- (e) If other than mounting disk attachment for Size B is required (see 3.9.5.2).
- (f) Size of lot if different from 4.2.
- (g) Level of packaging, packing, and marking required (see 5.1, 5.2, and 5.3).

No DOD Interest

Preparing activity  
GSA-PSS