

**MIL-L-3091**

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SUPERSEDING

Watervliet Arsenal WVXS-149  
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## MILITARY SPECIFICATION

**LINKER, POWERED 20 MM., M16 (T27)**

*This specification was approved by the Departments of the Army, the Navy, and the Air Force for use of procurement services of the respective Departments*

**1. SCOPE**

1.1 This specification covers one type of powered linker.

**2. APPLICABLE SPECIFICATIONS AND DRAWINGS**

2.1 **Specifications.**—Specifications referenced on drawings in 2.2, of the issue in effect on date of invitation for bids, form a part of this specification.

(*Army.*—Copies of specifications should be obtained from the procuring agency or as directed by that agency. Both the title and identifying number or symbol should be stipulated when requesting copies.)

(*Navy.*—Copies of Military specifications may be obtained upon application to the Bureau of Supplies and Accounts, Navy Department, Washington 25, D. C., except that activities of the Armed Forces should make application to the Supply Officer in Command, Naval Supply Center, Norfolk 11, Va. Both the title and identifying number or symbol should be stipulated when requesting copies.)

(*Air Force.*—Copies of Military specifications may be obtained upon application to the Commanding General, Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio. Both the title and identifying number or symbol should be stipulated when requesting copies.)

2.2 **Drawings.**—The following drawing and drawings referenced thereon, of the issue in effect on date of invitation for bids, form a part of this specification:

U. S. ARMY ORDNANCE DEPARTMENT DRAWING  
D7237601—Linker, Powered 20 mm., M16

(Copies of drawings should be obtained from the procuring agency or as directed by that agency. Both the title and identifying number or symbol should be stipulated when requesting copies.)

**3. REQUIREMENTS**

3.1 **Material.**—Material shall be in accordance with the detail drawings, material specifications, and Specification 51-10-2.

3.2 **Finish.**—Protective finishes for metal parts specified on the drawings shall be of a quality capable of withstanding the applicable tests specified in Specification 57-0-2.

3.3 **Commercial quality.**—Materials and/or equipment designated on the applicable drawings as "Commercial" and for which no requirements are specified, shall be in accordance with Specification 51-10-2.

3.4 **Functioning.**—The powered linker shall operate smoothly for the purposes intended and shall be capable of linking, under normal operating conditions, 85 to 150 rounds per minute of 20 mm. ammunition into a metallic belt link. The delinking operation shall be positive and capable of delinking, under normal operating conditions, 85 to 250 rounds per minute.

3.5 **Motor drive.**—The electric motor shall be of a commercial type having the following characteristics; ¼ hp., 1,725 rpm, 115 volts, 60-cycle, single phase, capacitor start, and be provided with a starting switch and portable cord and plug. The motor shaft shall be provided with variable speed pulley and special belt conforming to the applicable drawings.

3.6 Incorporated in the machine drive shall be an overload release mechanism, the torque of which shall not be adjustable and shall provide positive disengagement of the machine clutch.

3.7 **Assembly.**—The complete powered linker shall be capable of being assembled without fitting or shimming other than permitted by the drawings.

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**3.8 Lubrication.**—The powered linker shall be properly lubricated in accordance with instructions provided and/or recommended by the manufacturer.

**3.9 Painting.**—Painting shall be in accordance with Specification 51-10-2 and/or instructions from the contracting officer.

**3.10 Temperature requirement.**—The powered linker shall be capable of satisfactory performance at any air temperature from  $-65^{\circ}$  to  $125^{\circ}$  F.

**3.11 Workmanship.**—Workmanship shall be in accordance with the applicable requirements of Specification 51-10-2.

#### **4. SAMPLING, INSPECTION, AND TEST PROCEDURES**

**4.1** Unless otherwise specified, inspection and tests shall be made at the place of manufacture.

**4.2 Inspection.**—Inspection shall be made in accordance with Specification 51-10-2.

**4.3 Lots.**—A lot shall consist of not more than 100 linkers or components of one type or kind.

**4.4 Visual inspection.**—Each lot of linkers shall be given a 100 percent visual and manual inspection to insure compliance with this specification.

**4.5 Inspection of dimensions.**—At least 2 percent of the linkers and 5 percent of the components of one type and kind, in each lot, shall be gaged for compliance with dimensions shown on the drawing. Unless otherwise specified, inspection gages shall be furnished by the Government.

**4.6 Functioning.**—Not less than 2 percent of each lot of finished linkers shall be tested for proper functioning linking and delinking, as specified in 3.4.

**4.7 Retests.**—Failure in any test requirement shall be cause for a retest of twice the number of the original samples from the lot.

Failure of any sample in the retest shall render the lot subject to rejection.

#### **5. PREPARATION FOR DELIVERY**

##### **5.1 Domestic and overseas shipment.**—

**5.1.1 Packing.**—Unless otherwise specified, powered linkers shall be cleaned, preserved, unit packaged and packed in accordance with the applicable drawings, except that for domestic shipment, the exterior containers may be of a standard commercial type so constructed as to insure acceptance by common or other carrier for safe transportation at the lowest rate to the place of delivery. Containers shall be able to withstand storage, rehandling and reshipment without the necessity of repacking.

**5.1.2 Marking.**—Shipping containers shall be marked in accordance with Specification 100-2.

#### **6. NOTES**

**6.1 Use.**—The 20 mm. Powered Linker, M16, is a unit designed for mechanically assembling ammunition rounds into metallic links to form a continuous belt of ammunition.

**6.2 Ordering data.**—Requests, requisitions, schedules, and contract or orders should specify the following:

a. Title, number, and date of this specification.

**Notice.**—This specification, together with specifications and drawings pertaining to it and bearing a "NOTICE" of similar restrictions, is intended for use only in connection with procurement by the United States Government; and shall not be reproduced either wholly or in part except when authorized in connection with Government procurement, nor be used for any other purpose except when specifically authorized by the Chief of Ordnance.

**Custodian:**

Army—Ordnance Department.

**Other interest:**

Navy—OS.

Air Force.