

MIL-STD-637A
Notice 1
10 December 1962

MILITARY STANDARD

MACHINE AND AUTOMATIC GUNS AND MACHINEGUN TRAINERS THROUGH 30-MM

TO ALL ACTIVITIES:

1. The following pages of Mil-Std-637A have been revised and supersede the pages listed.

<i>New page</i>	<i>Date</i>	<i>superseded page</i>	<i>Date</i>
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29	10 December 1962	(29	13 February 1961)
		(30	13 February 1961)
		(31	13 February 1961)

2. Retain this notice and insert before the table of contents.

Custodian:
Army—WC
Navy—Wep
Air Forc—WRA

Preparing Activity:
Army—WC
(Springfield Armory)

FSC 1005

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4. GENERAL REQUIREMENTS

4.1 Standard machineguns, automatic guns, and machinegun trainers. The following is a compilation of all standard machine and automatic guns and machinegun trainers through 30-mm arranged by weapon type. These items are authorized for procurement, stock, and issue in the military supply system and shall be used, wherever practicable, in future design of military materiel. Detailed data on each item is contained in section 5 herein.

4.1.1 *Machinegun.*

4.1.1.1 *Caliber .30.*

- (a) Machinegun, caliber .30: M37.

4.1.1.2 *7.62-mm.*

- (a) Machinegun, 7.62-mm: M60.
- (b) Machinegun, 7.62-mm: fixed, M73.

4.1.1.3 *Caliber .50.*

- (a) Machinegun, caliber .50: Browning, heavy barrel, (flexible), M2.

- (b) Machinegun, caliber .50: Browning, heavy barrel, (turret type) , M2.
- (c) Machinegun, caliber .60: Browning, heavy barrel, (turret type), M2G.
- (d) Machinegun, caliber .50: fixed, M85.

4.1.2 *Automatic guns.*

4.1.2.1 *20-mm.*

- (a) Gun, 20-mm, automatic: MK 12 MOD 0.
- (b) Gun, 20-mm, automatic: MK 12 MOD 3.
- (c) Gun, 20-mm, automatic: M39A2.
- (d) Gun, 20-mm, automatic: M61.

4.1.3 *Machinegun trainers.*

(None)

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booster assist, and has a short receiver, fixed headspace, a quick-change barrel, and a flash hider. The M73 fixed machinegun is designed to fire the NATO 7.62-mm cartridge using the M13 link—the same cartridge-link combination used with the M60 general purpose machinegun.

The ammunition belt can be fed from either side of the weapon with change in cover assembly from one side to the other accomplished by repositioning of parts. Empty links are discharged from the side opposite the ammunition belt; empty cartridge cases are ejected from the bottom of the receiver. The weapon is charged by means of an integral manual charger. Firing is by manual or solenoid operation from the open-bolt position. The M73 fixed machinegun is used by the Army.

Physical and performance characteristics:

Weight of gun (complete)	28 lb.
Weight of barrel	5 lb. 10 oz.
Overall length of gun	37.94 in.
Overall length of barrel	22 in.
Overall width of gun	4 13/32 in.
Overall height of gun	5 5/16 in.
Method of operation	Recoil— (gas booster assist).
Method of cooling	Air.
Rate of fire (rigid mount)	350–600 rpm.
Cookoff protection	Yes (open bolt).
Direction of feed	Either side.
Headspace	Fixed.
Method of charging gun	Manual charger.
Method of firing	Manual or solenoid.
Case ejection	Bottom of receiver.
Link ejection	Side of receiver.
Type link (M13)	Push through, metallic.
Type safety	Spring-loaded slide block trigger.
Type sight	None.
Type flash hider	Cone.
Weight of 100 linked round	61 lb.

Accuracy

Nine shots of a 10-round burst shall group within or cut the edge of a 10.8 dia. circle at a range of 100 yards.

Ammunition:

Cartridge, 7.62-mm, ball, NATO, M59.
 Cartridge, 7.62-mm, high pressure, NATO, M60.
 Cartridge, 7.62-mm, AP, NATO, M61.
 Cartridge, 7.62-mm, tracer, NATO, M62.
 Cartridge, 7.62-mm, dummy, NATO, M63.
 Cartridge, 7.62-mm, ball, NATO, M80.
 Cartridge, 7.62-mm, blank, NATO, XM82.

Links:

Link, cartridge, metallic belt, 7.62-mm, M13.

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5.1.3.4 Machinegun, caliber .50: fixed, M85. FSN 1005-690-2790 (see fig. 7).

Description and application:

The caliber .50, M85, fixed machinegun is an air-cooled, link-belt fed machinegun designed for tank cupola or coaxial installations. It is recoil operated, and has a short receiver, fixed headspace, a quick change barrel and a flash suppressor. The ammunition belt is fed from either side of the weapon with change from one side to the other accomplished by disassembling a limited number of components and repositioning them. Field stripping is easily and quickly performed as quick release pins and locking mechanisms are extensively used. The M85 fixed machinegun is used by the Army and the Marine Corps.

Physical and performance characteristics:

Weight of complete gun .61.5 lbs.
 Length including flash suppressor .54.5 in.
 Width .5.3 in.
 Height .6.0 in.
 Barrel:
 Length .36.0 in.
 Weight .14.4 lb.
 Quick change .Yes.
 Method of operation .Recoil.
 Method of cooling .Air.
 Rate of fire w/rigid mount:
 High .1050 ± 50 rpm.
 Low .400 ± 50 rpm.
 Cookoff protection .Yes (open bolt).
 Direction of feed .Left or right
 Manual sear-off force (min.) .30 lb.
 Belt pull .30 lb.
 Headspace .Fixed.
 Method of charging gun .Manual.
 Method of firing gun .Manual or solenoid.
 Case ejection .Side.
 Link ejection .Side.
 Type link (M16) .Push through, metallic.
 Type safety .Spring lock.
 Type sight .None.

Type flash suppressor .Prong.
 Weight of 100 linked rounds .29.2 lbs.
 Accuracy .(To be inserted when requirements have been fully established).

Ammunition:

Cartridge, cal. .50, ball, M33.
 Cartridge, cal. .50, API M8.
 Cartridge, cal. .50, API&T, M20.
 Cartridge, cal. .50, incendiary, M1.
 Cartridge, cal. .50, tracer, M17.
 Cartridge, cal. .50, dummy, M2.

Link:

Link, cartridge, metallic belt, cal. .50, M15.

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Links:

- Link, metallic, cartridge, 20-mm, M14 (used with M2 feeder).
- Link, metallic, cartridge, 20-mm, B17 (used with M3 feeder).

(Copies of this standard for Military use may be obtained as indicated in the foreword to the Index of Military Specifications and Standards.)

(Both the title and identifying symbol number should be stipulated when requesting copies of Military standards.)

Notice. When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

Custodians:

Army—Ord
Navy—Wep
Air Force—WRA

Preparing activity:
Army—Ord

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(None)		

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Cal. 30:		
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M60	4.1.1.2, 6.1.2.1	4, 7
M73 (fired)	4.1.1.2, 6.1.2.2	4, 7
Cal. .50:		
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Machinegun:		
Cal. 30:		
M37	4.1.1.1, 5.1.1.1	4, 5
7.62-mm:		
M60	4.1.1.2, 6.1.2.1	4, 7
M73 (fired)	4.1.1.2, 5.1.2.2	4, 7
Cal. .50:		
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(None)		

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