

3 inch Gun M7

Carriage and mount:	Motor Carriages M10 and M10A1 in Mount M5
Length of Chamber (to Rifling):	23.15 inches
Length of Rifling:	126.85 inches
Length of Chamber (to projectile base):	21.5 inches (square base projectiles)
Travel of Projectile in Bore:	128.5 inches (square base projectiles)
Length of Bore:	150.00 inches, 50 calibers
Depth of Breach Recess:	8.10 inches
Length of Muzzle to rear face of Breach:	158.10 inches, 52.7 calibers
Additional length, Muzzle Brake, etc.:	None
Overall length:	158.10 inches
Diameter of Bore:	3.00 inches
Chamber Capacity:	205.585 cubic inches (APC M62), 203.50 inches (HE M42A1)
Total Weight:	1990 pounds
Type of Breechblock:	Semiautomatic verticle sliding wedge.
Rifling:	28 groves, unifom right hand twist, one turn in 40 calibers
Ammunition:	Fixed
Primer:	Percussion
Weight Complete Round in pounds:	APC M62 27.24, HVAP M93 20.77, AP M79 26.56, HE M42A1 24.91, HC BI M88 smoke 15.40
Weight, Projectile in pounds:	APC M62 15.44, HVAP M93 9.40, AP M79 15.00, HE M42A1 12.87, HC BI M88 smoke 7.38
Maximum Powder Pressure:	38,000 psi
Maximum Rate of Fire:	15 rounds a minute
Muzzle Velocity:	APC M61 2,600 ft/sec, HVAP M93 3,400 ft/sec, AP M79 2,600 ft/sec, HE M42A1 2,800 ft/sec
Muzzle Energy of Projectile: KE=1/2MV ² <small>Rotational energy is neglected and valuse are based on long tons (2,240 pounds)</small>	APC M62 724 ft-tons, HVAP M93 753 ft-tons, AP M79 703 ft-tons, HE M42A1 699 ft-tons
Maximum Range (independent of mount):	M62 16,100 yards, M93 13,100 yards, M79 12,770, M42A1 14,780, M88 2,000 yards

Gun Penetration Tables

Shell Name	500 Yards	1000 Yards	1500 Yards	2000 yards
Homogenous Armor at 30 degrees obliquity				
APC M62 Projectile (APCBC/HE-T)	3.7 inches 93mm	3.5 inches 88mm	3.2 inches 75mm	3.0 inches 76mm
HVAP M93 Shot(AP-T)	6.2 inches 157mm	5.3 inches 135mm	4.6 inches 116mm	3.9 inches 98mm
AP M79 Shot (AP-T)	4.3 inches 109mm	3.6 inches 92mm	3.0 inches 76mm	2.5 inches 64mm
Homogenous armor at 55 degrees obliquity				
APC M62 Projectile (APCBC/HE-T)		2.0 inches 51mm		1.7 inches 43mm
HVAP M93 Shot(AP-T)		2.1 inches 53mm		1.5 inches 38mm

Chart created by the Sherman tank site with data from Hunnicutt's Sherman, and Firepower books and various technical manuals.

This gun used the same projectiles as the M1, M1A1, M1A1 guns.

The M1 series of guns was developed to creat a lighter 3 inch gun suitable for medium tank use

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Notes: