

Other British Tank Armaments

Machine Guns

Before the Second World War the standard machine gun armament for British tanks was the Vickers .303 machine gun. In 1936 B.S.A signed an agreement that allowed them to manufacture the Czech ZB53 machine gun and in 1938 the War Office placed their first order with the first guns being completed in 1939. It was soon realised that the gun was not suitable for mass production and so the weapon was modified, the result of which became known as the 7.92 Besa. The Besa 7.92 became the standard machinegun armament for British tanks during the War. There were four different versions of the gun but the difference between them was minor - the biggest being that the Mk I and Mk II versions had an adjustable rate of fire.

Initially these guns were armed with standard ball ammunition. This was followed by a tracer round in mid 1940, armour piercing ammunition towards the end of 1941 and incendiary at the end of 1942.

Besa tank 7.92mm gun specifics

Version

MMMMIIII*

Calibre 7.92mm

System ~~air~~ operation only

Weight 15.5lb

Overall length

43.5"

43.5"

Barrel length

Feed device link or metal and canvas belt

Muzzle velocity

2700fps

2700fps

Cyclic rate

450rpm

450-550

The Besa 15mm gun was based off the Czech 15mm ZB60 and the basically design was similar to that of the 7.92mm Besa except that it could be used in both automatic and semi automatic modes and had a fixed rate of fire. A number of the ZB60 guns were imported before the war and production of the Besa 15mm began in 1939 with the first examples being finished in May 1940. These weapons were usually used on armoured cars, the standard ammunition was armour piercing with armour piercing tracer introduced from June 1941.

Version

Mk I

Calibre

System of operation

Weight

Overall length

80.75"

Barrel length

Feed device

Muzzle velocity

2940fps

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Cyclic rate

400-500

15mm Besa penetration (range in yards)



Plate

Angle

100

200

400

681000

15mm AP

HH

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30

18.5

17

15

13.8 2.5

Production of Besa guns and ammunition by year (UK only, ammunition in thousands)



Pre-V Sep-Dec 1939

1940

1941

1942

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1943

1944

1945

Besa 7.92

- 418

2,618

6,608

22,437

18,636

6,862

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Besa 15mm

-

289

759

1,180

-

-

-

Besa 7.92 Ball	3,256	56,689	25,049	86,070	110,976	3,400	8,500
Besa. 7.92 Tracer	-	2,102	15,597	52,740	73,330	37,200	27,670
Besa 7.92 AP	-	-	-	2,778	79,040	44,620	5,380
Besa 7.92 Incendiary	-	-	-	130	22,610	18,010	2,500

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Besa 15mm	AP	10	357	1,177	2,778	350	-	-
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Besa 15mm AP Tracer

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19.5

130

1,260

-

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Smoke Weapons

The British made extensive use of smoke weapons on their tanks during the Second World War, practically every had some sort of smoke emitting device fitted. The two principle devices were the 4" Smoke Generator and the 2" bomb

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thrower. The 4" Smoke generator launched a smoke generator that created a smoke screen for around a minute and a half, there were usually two of these devices fitted on the turret of the tank and they could be fire from inside by pulling the control cable. Usually 6 additional generators where stored inside the vehicle. The second type was the 2" bomb thrower, this was essentially a 2" mortar fitted inside the tank. Usually the weapon was fired through the roof of the turret and around 30 smoke bombs were carried per vehicle.

Production of smoke weapons by year (UK only) *no discharger figures available before August 1942



1941

1942

1943

1944

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1945(May)

2" Bomb thrower

2,384

10,767

10,403

3,460

1,586

4" Smoke discharger*

NF

8,118

33,187

14,895

5,723

95mm Tank Howitzer

The 95mm was an attempt to add increased high explosive capability to British tanks, the weapon was originally to have the same weight as the 6pdr but a counterweight needed to be added which increased the weight. The 95mm was the same as the 95mm infantry howitzer except that it only used only used a single charge while the infantry weapon used three. The weapon was capable of firing both HE and Smoke rounds, it was also one of the first British tank weapons to make use of High Explosive Anti-Tank ammunition - penetration of this projectile was around 110mm at 30 degrees but do to accuracy issues the effective range was limited to around 600-700 yards.

95mm Tank Howitzer specifications

Barrel Length

80.47"

Total Length 85.52"

Barrel Weight 398lb

Body with breech and counterweight

1091lb

Maximum range

Less than 6,000 yards

Sources - Small Arms of the World, AVIA 46 456-512