

**NZAR ID 188, ARM TYPE: Machine Gun. Draft date (V1) 7 February 2016, Compiled by Phil Cregeen**

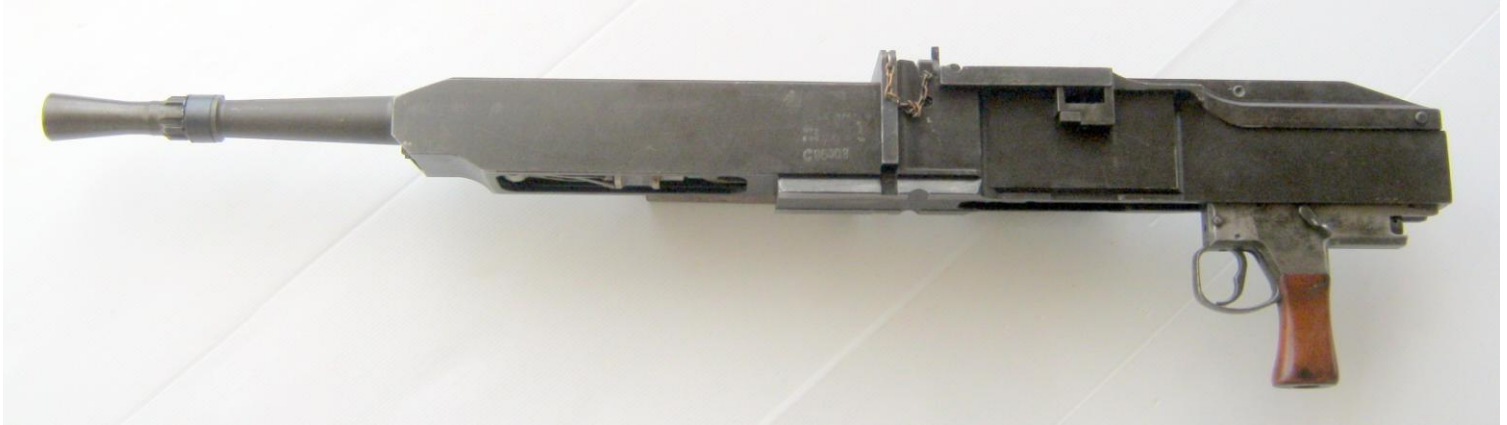
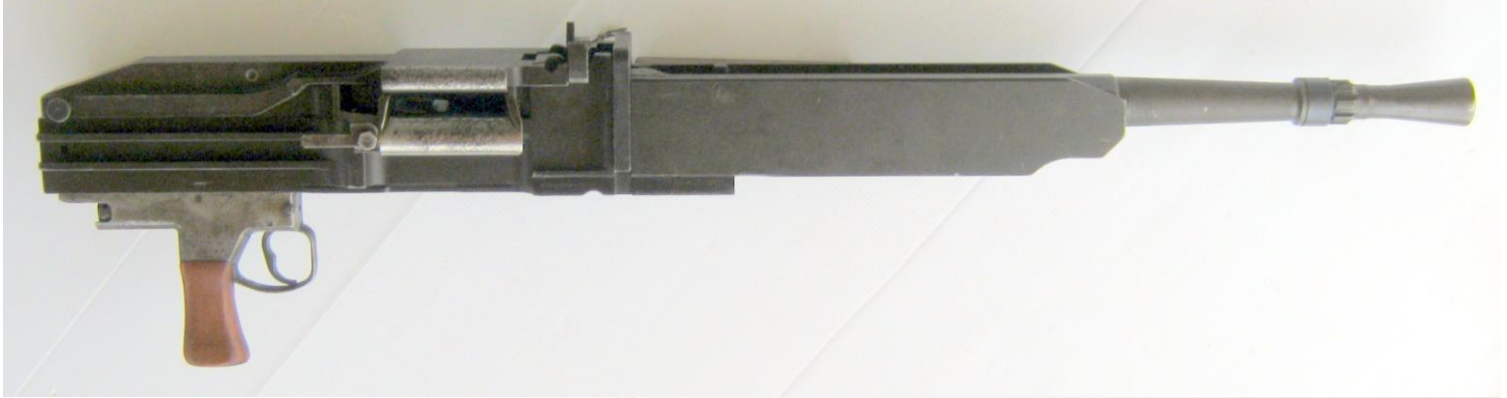
**Pattern: "Gun, Machine, Besa 7.92 mm, Mark I, II & III\*";** air cooled machine gun for armoured vehicles.

Introduced into NZ service: 1941 Withdrawn: 1963

Makers: Birmingham Small Arms Co. UK

Calibre: 7.92 mm, Bore: 4 groove RH twist, Barrel length: 29.0 in. OA Length: 43.5 in. Weight: 47- 54Lb.

Type of Action: gas operated; Cyclic rate: 500 - 800 rpm; Magazine: 225 round metal link belt. Sights: Telescopic



**Above – right and left view of Mk III gun**



**Left - typical markings on left side of body**

Designed by Vaclac Holek of Zbrojovka Brno as the ZB 53 this air-cooled, gas-operated machine gun was adopted and modified by the British in 1938. It was acquired primarily for mounting in tanks and armoured cars, and would therefore be a relatively limited issue, the British departed from their prudent policy of chambering all light and medium machine guns for one cartridge only – the .303 rimmed. The Czechs designed the ZB53 around the German 7.92 x 57 mm rimless cartridge and the British

avoided the problems associated with a change of calibre, particularly from a rimless to a rimmed case, by producing their versions in the same calibre.

The gun was produced by Birmingham Small Arms Co. (BSA) and was given the designation Besa. Production of the 7.92 mm model commenced in 1939 and BSA manufactured 59,322 of the model during the 1939-1945 War.

While the Besa was gas-operated, it also had a recoiling barrel, giving what was termed a 'differential system'. In essence, the cartridge was chambered and discharged while the operating mechanism was still moving forward in counter-recoil. The recoil produced by the fired cartridge had then to arrest the inertia of the forward-moving bolt before reversing the movement. This action aided in buffing the bolt and it is said that the imposed change of direction absorbed much of the recoil and contributed to a reduction of stress on the weapon and its mounting. Whether or not this enhanced the weapon's performance, British troops had a particularly high opinion of the Besa's accuracy.

The Besa 7.92 mm was put into service in seven different versions. The Mark I and Mark II were both introduced in June 1940, with the Mark I being declared obsolescent on the same day. The Mark II varied from the Mark I in minor details, with most of the changes being made to facilitate production. Both marks were designed for automatic fire only and had an accelerator that enabled variation of the rate of fire. With the accelerator set to L (low), the cyclic rate of fire was 450-550 rounds per minute (rpm). On H (high), the cyclic rate of fire was increased to 750-850 rpm. The lower rate of fire was for normal use while the higher rate provided greater power in repelling attacks or in other pressing circumstances.

The Mark II\*, Mark III and Mark III\* were all introduced in August 1943. The Mark II\* was a transitional model between the Mark II and the Mark III and, although some parts were simplified, there was complete interchangeability of Mark II and Mark II\* parts. Mark III parts would not, however, interchange with earlier marks. The Mark III and Mark III\* were further simplified and had the accelerator removed. The only difference between the Mark III and the Mark III\* was that the Mark III had the rate of fire set at 750-850 rpm while the Mark III\* was set at 450-550 rpm. All Mark III models were later converted to Mark III\*.

The Mark III/2 introduced in 1952 modified the Mark III\* with a new bracket and body cover. Introduced in 1954, the Mark III/3 had a new design of barrel and sleeve and larger gas vents, to facilitate the use of belts of mixed types of ammunition. Some Mark III/2 guns were converted to Mark III/3 but there was no manufacture of new Mark III/3 guns.

Besas mounted in armoured fighting vehicles (AFVs) used telescopic sights.

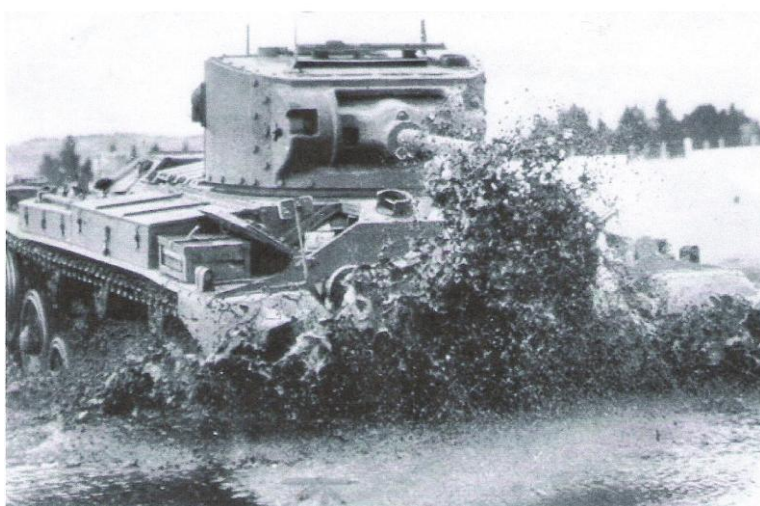
The earlier marks of the Besa 7.92 mm were made obsolete in 1951 but the Mark III/2 and Mark III/3 remained in service to the late 1960s.

### **New Zealand Service**

Besa 7.92 MGs were fitted as co-axial MGs in the following New Zealand tanks from 1941: Schofield, Matilda and Valentine, they were also fitted in Humber and Daimler armoured cars. They were withdrawn from service when the last Daimler armoured cars were withdrawn in 1963.



Daimler Armoured Car



Valentine Tank

Acknowledgements and Special thanks to: Rod Woods

<http://www.acant.org.au/Articles/BesaMGs.html> Article by- Don Davie