

### 3.7" Anti-Aircraft

Written by David Boyd

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#### The 3.7" Anti-Aircraft Gun



In the late thirties the British Army were looking for a weapon between the 3" and 4.7" calibre Anti-Aircraft guns. After research it was found that a 3.7" gun firing a 25lb shell could fill the gap and so in 1933 a specification for a 3.7" gun weighing 8 tons, capable of being put into action in 15 minutes and being towed at 25mph was issued. A design by Vickers was accepted and the pilot model passed proof in April 1936 with production being authorised a year later. The first production guns were delivered in January 1938.

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The gun was extremely advanced and complicated and was regarded as one of the best weapons of its type in the world. Production was initially slow, particularly due to its complicated carriage but modifications to the design to simplify it for production helped and peak production was reached for guns in March 1942 (228) and for mountings June 1942 (195).

In January 1941 the War Office issued specifications for a gun that could reach 50,000 feet within 30 seconds and have the ability to fire 3 rounds and have the fourth loaded within 20 seconds. The 5.25" was chosen but for a shorter term solution it was decided to line down the 4.5" gun down to 3.7". A new system of rifling was required, this was known as Research Department (RD) rifling and was first used on the Mk 6 version of the gun introduced in 1943, where a 65 calibre 3.7" liner was inserted in the jacket of a 4.5" gun. By 1942-43 the threat of German aircraft had been greatly reduced and so production decreased.

Many sources state that the 3.7" anti-aircraft gun either couldn't or wasn't used in an Anti-Tank role, this is false. Up until 1938 it had been standard practice for anti-aircraft crews to be trained in a direct fire role, this was dropped due to reduce costs and quicken training. There are multiple reports of the weapons being used against tanks and other direct fire roles, I have also come across the 1944 handbook for direct fire with 3.7" anti-aircraft guns. There were both a SAP and an AP rounds produced during the war for the 3.7" guns and as around 1/3 of a million of these rounds were made it seems very unlikely that the guns were incapable of firing them.

There is no doubt that the 3.7" anti-aircraft gun was not used in an Anti-Tank role to the same degree as the German Flak36, there are many reasons for this - chiefly the weight of the gun and the wish to use the guns in their intended anti-aircraft role also that the 25 Pounder was perfectly capable of dealing with the majority of German tanks. Penetration wise the 3.7" anti-aircraft gun was superior to the German Flak36 and with an auto reloader it was a weapon a tank would not like to come across, but at over 20,000lb in weight the Flak36 was clearly easier to handle in the field.

#### 3.7" Gun Data

Mk I	Mk VI
Weight 8,193 lb	10,521 lb and breech
Total 10,521 lb	15,000 lb
Length 50 ft 6 in	55 ft 6 in
Rifling 28 grooves	27 1/30

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Elevation	5 to 30 degrees
Travel	360 degrees
Weight	20.15 lbs (Mobile)
Weight	23 in 18.5 lbs (Static)
Rate	10 firs (Hand)
Rate	25 firs (Auto)
Muzzle	2600 firs 125 firs
Max	20 to 2500 yards
Max	4 to 1500 feet

**Production of 3.7" Anti-Aircraft Guns by year** \*no data for guns from June onwards,  
Commonwealth data from May onwards

	P	Se	1	1	1	1	1	1945 (May)
3.7	6	1	2	3	5	-	-	
Mount	240	12	3	15	100			static)
Canada (Mount	445	115						Guns)
Australia	Static	502						Huntings

Sources - British & American Artillery of WWII, AVIA 22 456 - 514