

Armament Research & Development Establishment

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Introduction

Due to embargoes in 1965 and 1971 Wars, imposed by our traditional sources of conventional munitions, resulted in necessity to achieve self reliance in conventional munitions by developing and utilizing local industrial potential, ARDE was thus established in 1974 to develop Armament stores for three services. To achieve the goal of indigenous development of armament store, ARDE collaborates with local vendors/industries and in turn creates an infrastructure capable of Defence Production through private sector



120mm MORTAR

120 mm Mortar is a simple weapon which combines mobility with fire power. It is developed as a light field artillery against enemy troops. It fires a variety of ammo and provides all round fire support from 500m (min) to 7150m (max). The mortar is developed for firing by a crew of five. Weapon is currently in use with Pakistan Army

Weight	402 Kg
Elevation	45° to 80°
Traverse	17°
Rate of fire	8 RPM





RPG-7 ROCKET LAUNCHER

RPG-7 is a shoulder fire launcher which is highly destructive, accurate anti tank weapon and has penetration of 320mm at a range of 500m. Features like portability and quick deployment has made it very effective weapon in anti tank role. The weapon is currently on the inventory of Pakistan Army

Caliber	40mm
Weight	6.3 Kg
Muzzle velocity	300 m/s
Range static target	500 m
Range moving target	300 m
Rate of fire	4-6 RPM





ROCKET RPG-7 WITH ENHANCED PENETRATION

RPG-7 anti tank grenade is robust, simple and lethal ammo having penetration power of 230-300mm in RHA which is considered insufficient to defeat modern tanks therefore, a modified rocket with enhanced penetration has been developed at 500m range





ROCKET 40 mm PRACTICE SHOT RPG-7

The practice shot has been designed and produced to conduct training at minimum cost as the live round used for training is expensive. The practice shot indigenously developed is cheaper and can be re-used a number of times

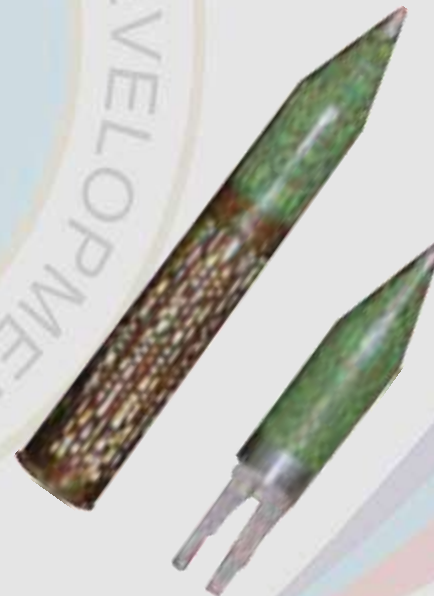
Length	435 mm
Max Dia	83.6 mm
Weight	1.6 Kg
Propelling Cartridge	Standard as used with service ammo





ROUND 106mm RR WITH ENHANCED PENETRATION

106mm HEAT Round has been developed for use against armoured targets. It is fins stabilized for use with 106mm RR M-40 or M40A1. Previous version of 106mm HEAT Round has penetration of 300mm in RHA which is considered insufficient to defeat modern tanks therefore, a modified round with enhanced penetration has been developed





MULTI CHANNEL EXPLODER (MCE)

Equipment has been developed which is capable to explode up to 20 PRESET EXPLOSIVES at a remote distance using radio frequency or line wire. MCE comprises of master control unit with 20 x slave firing units

Communication mode	UHF
Operating range	5 Km at RF 1.5 Km at land line
Operating temp	-10°C to +60°C
Battery operation time	72 hrs
Battery	12 Vdc / 2.1 AH NiMH





100mm APFSDS/T

100mm Armour Piercing Fin Stabilized Discarding Sabot tracer kinetic energy round was developed by ARDE. The accuracy of round is 0.3 x 0.3 mils and it can penetrate 300mm thick amour plate from 2000 meters

Weight	19.88 Kg
Muzzle velocity	1345 m/s
Pressure	4200 kg/cm²





100 mm DS/T PRACTICE

100 mm Discarding Sabot/Tracer Practice ammo has been designed by ARDE in which tungsten alloy core is replaced with Alloy steel core. Besides economy, the firing of practice ammo limits the range of safety by 10000m. The trajectory of this round matches up to 2000 m with that of service ammo. The ammo is much cheaper than service ammo

Weight	16.15 Kg
Muzzle velocity	1460 m/s
Pressure	2523 kg/cm²





105 mm DS/T PRACTICE

105 mm Discarding Sabot/Tracer is a practice ammo for 105 mm tank gun. The trajectory of the ammo matches with service ammo up to 2000 m and is capable of firing from existing graticule. Ammo is cheaper than service ammo. Besides economy the firing of practice ammo limits the range of safety by 15000 m

Weight	14.6 Kg
Muzzle velocity	1470+10 m/s
Pressure	2800 kg/cm²





ROUND 105mm APFSDS/T (ENHANCED) PENETRATION

105 mm APFSDS/T is Kinetic Energy round which is fired from M48 & T69 Tanks. ARDE has under taken project for enhancement of penetration of the round to a desired level. Development work is in progress.





ROUND 125 mm FSDS/T (PRACTICE)

The round has been developed for practice firing. The practice ammo appears similar to service kinetic energy ammo in configuration and is accurate upto 2000 m.





ROUND 125mm APFSDS/T (NEW DESIGN) WITH ENHANCED PENETRATION

125 mm APFSDS/T (New Design) has been under taken by ARDE to increase the existing penetration.

