



Pinaka Multi-Barrel Rocket





Munitions India Limited [MIL] is Defence Public Sector Enterprise [CPSE] under the Ministry of Defence, Government of India.

MIL, India's biggest manufacturer and market leader is engaged in Production, Testing, Research & Development and Marketing of comprehensive range of ammunition & explosives for Army, Navy, Air Force & Para-Military Forces.

With Corporate Office at Pune (India), MIL in its 12 state-of-the-art manufacturing units located across the country employs skilled workforce of around 23,000. These factories have proven integrated base for production of Small, Medium & High Calibre Ammunition, Mortars, Rockets, Hand Grenades etc. with in-house manufacturing of Initiatory Compositions, Propellants and High Explosives for over 150 years. Our primary objective is to provide competitive edge to the Armed Forces by equipping them with modern and quality battlefield ammunition.

Our foreign customers include countries located in North America, South America, Europe, Africa and Asia. The patronage we receive from our customers both in India and abroad reflects their faith in quality of our products and services. We are the Force behind the Armed Forces.

MIL with its 12 manufacturing units provide:

- A broad and versatile production base with multi-technology capabilities
- State-of-the-art manufacturing facilities
- Large pool of skilled and professionally qualified manpower and managerial personnel
- Strict adherence to quality standards (all units are ISO-9001 certified)
- Original as well as adaptive Research & Development
- A strong base for industrial training & testing

Pinaka Mk-I

Features :

It can fire a salvo of 12 rockets over a period of 44 seconds. One battery of the Pinaka system consists of six launch vehicles, accompanied by loader systems, radar and links with network-based systems and a command post. One battery can neutralise an area of 1 km by 1 km.

As a key tactic of long-range artillery battle, the launchers have to 'shoot and scoot' to ensure they themselves do not become the targets, especially being detectable due to its back blast.

Technical Specification :

Range	37.5 km (23.3 mi)
Lenght	4.88 m (16.0 ft)
Rocket Diameter	214 mm (8.4 in)
Warhead Weight	100 kg (220 lb)
Rocket Weight	277.4 kg (612 lb)
Propellant Weight	100 kg (200 lb)
Rate of Fire	Approximately 44 seconds
Accuracy	≤ 1.5% range
Reload time	4 minutes
Warheads	PF, RHE, DPICM
Detonation mechanism	Electronic time and Proximity fuze
Guidance	Free flight
Flight stabilization	4 curved wrapped around fins
Launching pod	2 detachable pods, each carrying 6 rockets



Pinaka Mk-II



Forward
Observer

Features :

Pinaka - II is a free-flight artillery rocket having a maximum range of 38 km with different types of warhead & fuzes, a multi-tube launcher vehicle, a replenishment-cum-loader vehicle, a replenishment vehicle and a command post vehicle. There are two pods containing 6 rockets each, capable of firing in salvo mode within 48 sec neutralizing the area of 700 x 500 m. In light of the requirement of the Army for a free flight rocket with enhanced range, Pinaka Mk-II rocket with 60 km range.

Technical Specification :

Range	60 km (37mi)
Lenght	5.17 m (17.0 ft)
Rocket Diameter	214 mm (8.4 in)
Warhead Weight	100 kg (220 lb)
Rocket Weight	325 kg (717 lb)
Propellant Weight	131.5 kg (290 lb)
Rate of Fire	Approximately 44 seconds
Accuracy	≤ 1.5% range
Reload time	4 minutes
Warheads	PF, RHE, DPICM
Detonation mechanism	Electronic time and Proximity fuze
Guidance	Free flight
Flight stabilization	6 flat wrapped around fins
Launching pod	2 detachable pods, each carrying 6 rockets





Pinaka Mk-I Enhanced

Features :

It can fire a salvo of 12 rockets over a period of 44 seconds. One battery of the Pinaka system consists of six launch vehicles, accompanied by loader systems, radar and links with network-based systems and a command post. One battery can neutralise an area of 1 km by 1 km.

As a key tactic of long-range artillery battle, the launchers have to 'shoot and scoot' to ensure they themselves do not become the targets, especially being detectable due to its back blast.

Technical Specification :

Range	42 km (28mi)
Lenght	4.72 m (15.5ft)
Rocket Diameter	214 mm (8.4 in)
Warhead Weight	100 kg (220 lb)
Rocket Weight	280 kg (620 lb)
Propellant Weight	111 kg (245 lb)
Rate of Fire	Approximately 44 seconds
Accuracy	< 1.5% range
Reload time	4 minutes
Warheads	PF, RHE, DPICM
Detonation mechanism	Electronic time and Proximity fuze
Guidance	Free flight
Flight stabilization	6 flat wrapped around fins
Launching pod	2 detachable pods, each carrying 6 rockets



• Guided Pinaka •

Features :

Pinaka - II of a free-flight artillery rocket having a maximum range of 38 km with different types of warhead & fuzes, a multi-tube launcher vehicle, a replenishment-cum-loader vehicle, a replenishment vehicle and a command post vehicle. There are two pods containing 6 rockets each, capable of firing in salvo mode within 48 sec neutralizing the area of 700 x 500 m. In light of the requirement of the Army for a free flight rocket with enhanced range, Pinaka Mk-II rocket with 60 km range.

Technical Specification :

Range	75 km (17mi)
Lenght	5.17 m (17.0ft)
Rocket Diameter	214 mm (8.4 in)
Warhead Weight	100 kg (220 lb) + additional 15kg (33 lb) for Guidance, navigation and control kit
Rocket Weight	325 kg (717 lb)
Propellant Weight	131.5 kg (290 lb)
Rate of Fire	Approximately 44 seconds
Accuracy	< 40m Averages
Reload time	4 minutes
Warheads	PF, RHE, DPICM
Detonation mechanism	Electronic time and Proximity fuze
Guidance	Inertial navigation system + satelite navigation
Flight stabilization	6 flat wrapped around fins (without fin cant)
Launching pod	2 detachable pods, each carrying 4 rockets



• Pinaka DPICM •

Features:

Aerial Denial Munition (ADM) Type-1 warhead which is also known as Dual Purpose Improved Conventional Munition (DPICM) Warheads consists of outer ballistic casing made up of FRP. Pinaka DPICM W/H is the different version of existing Pinaka W/H which was designed and developed by DRDO. This casing comprises of Shell assembly, Ogive assembly & PUF Container Assy. Shell assembly is screwed to the rear adapter with matching threads.

In case if it fails, SD (self-destruction) mechanism works and demolishes bomblet. Bomblet generates a shaped charge jet & can perforate 80 mm RHA plate. Further fragments generate from the munition body will cause the anti personal effect. Usage: These Warhead cab be used for anti-tank and anti personal targets.

Technical Specification :

Length of entire rocket	4883 mm
Length of warhead	1740 mm
Caliber	214 mm
Weight of Warhead	100kg
Propulsion system	same as existing PINAKA MK-I.
Operating temperature Range	-15°C to + 45°C
Fuze	Impact type with self destruction mechanism
Self Destruct time	Min. 30 Sec.
No of sub-munitions per /WH	Min. 220
Mass of each Sub-munition	230 g
Reliability of sub-munition functioning	more than 90%
Reliability of Fuze functioning	Min. 95%
Shelf life	Min. 10 Years
Accuracy when measured in PE	less than equal to 1.5% of the map range.
Consistency	less than equal to 1.5% of the map range.
Lethal area	Min. 120m x 90m
Self storage temperature range	-20°C to + 55°C

