

# 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 Enhanced 💽

#### Features:

The Pinaka Multi Barrel Rocket System (MBRS) is an all-weather indirect fire free flight artillery Rocket System. The free flight Rockets are fired from launch vehicles each of which can fire 12 Rockets. The System delivers accurate and massive fire power at a high rate over extended ranges. A Battery of six launchers can fire a solvo of 72 Rockets in 44 Seconds. Over 7.2 Ton of pay load in the form of lethal warhead can be delivered up to range of 48 Km and can effectively neutralize the target 1000m x 800m.

The Pinaka Multi Barrel Rocket launching System, is a state of the art weapon for destroying/neutralizing enemy troop concentration areas, communication centres, 'air terminal complexes, gun/rocket locations and for laying mines by firing rockets with several warheads from launching vehicle.

The system delivers accurate and massive fire power at a high rate over extended ranges. The system has a high operational mobility, flexibility and accuracy which provide edge in modern artillery warfare. The Pinaka is meant as a supplement to the existing artillery system at a range beyond 30 km and it can be fitted with a variety of warheads. like PF, RHE & DPICM.

Range	13 km to 48 Km.
Calibre	214 mm.
Length	4.72 m.
Rocket Weight	280 Kg.
Propellant Weight	111 Kg.
Warhead Weight	100 Kg.
Accuracy	<1.5% of range (PE).
Warheads	PF, RHE, DPICM.
Guidance	Free Fight.
Rate of Fire	Approximately 44 s.
Flight Stabilization	6 flat fins (WAF).
Salvo reload time	4 minutes.
Detonation Mechanism	Electronic Time & Proximity Fuze.
Shelflife	15 years.
POD	6 Nos. of Rockets are loaded in each POD.



## Guided Pinaka

#### Features:

The Pinaka Multi Barrel Rocket launching System, is a state of the art weapon for destroying/neutralizing enemy troop concentration areas, communication centres, air terminal complexes, gun/rocket locations and for laying mines by firing rockets with several warheads from launching vehicle.

Guided Pinaka Rocket system (GPRS) is capable of striking targets located deep into enemy territory up to 75 km range with accuracy of  $\leq$  60 m (CEP).

It is equipped with a Guidance and Navigation (GNC) Kit and has canard based aerodynamic control to achieve an accuracy of  $\leq$  60 m (CEP). The Guided Pinaka Rockets are fired from launch vehicles each of which can fire 8 Rockets. Only 2-3 rockets are required for achieving a kill probability of 99% against a single target. The Pinaka is meant as a supplement to the existing artillery system at a range beyond 30 km and it can be fitted with a variety of warheads like PF, RHE & DPICM. The system delivers accurate and massive fire power at a high rate over extended ranges. The system has a high operational mobility, flexibility and accuracy which provide edge in modern artillery warfare.

Range	20 km to 75 Km.
Calibre	214 mm.
Length	5.17 m.
Rocket Weight	325 Kg.
Propellant Weight	131.5 Kg.
Warhead Weight	100 Kg.
Accuracy	< 60m of range (CEP).
Warheads	PF, RHE, DPICM.
Guidance	INS+GPS.
Rate of Fire	Approximately 44 s.
Flight Stabilization	6 flat fins (WAF).
Salvo reload time	4 minutes.
Detonation Mechanism	Electronic Time & Proximity Fuze.
Shelf life	15 years.
POD	4 Nos. of Rockets are loaded in each POD.

## 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.

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	more than 90%
functioning	A. H
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

#### 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  $700 \times 500$  m. In light of the requirement of the Army for a free flight rocket with enhanced range, Pinaka Mk-II rocket with  $60 \, \mathrm{km}$  range.

### **Technical Specification:**

60 km (37mi)
5.17 m (17.0 ft)
214 mm (8.4 in)
100 kg (220 lb)
325 kg (717 lb)
131.5 kg (290 lb)
Approximately 44 seconds
≤ 1.5% range
4 minutes
PF, RHE, DPICM
Electronic time and Proximity fuze
Free flight
6 flat wrapped around fins
2 detachable pods, each carrying 6 rockets



PINAKA MK



## Pinaka Mk-I

#### Features:

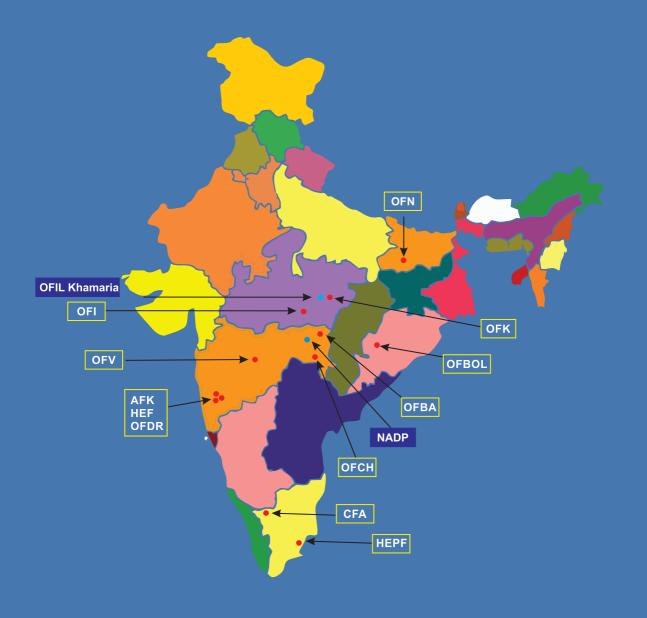
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The Pinaka Multi Barrel Rocket launching System, is a state of the art weapon for destroying/neutralizing enemy troop concentration areas, communication centres, air terminal complexes, gun/rocket locations and for laying mines by firing rockets with several warheads from launching vehicle.

The system delivers accurate and massive fire power at a high rate over extended ranges. The system has a high operational mobility, flexibility and accuracy which provide edge in modern artillery warfare. The Pinaka is meant as a supplement to the existing artillery system at a range beyond 30 km and it can be fitted with a variety of warheads like PF, RHE & DPICM.

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Range	10 km to 38 Km.
Calibre	214 mm.
Length	4.88 m.
Rocket Weight	280 Kg.
Propellant Weight	100 Kg.
Warhead Weight	100 Kg.
Accuracy	<1.5% of range (PE).
Warheads	PF, RHE, DPICM.
Guidance	Free Fight.
Rate of Fire	Approximately 44 s.
Flight Stabilization	4 curved fins (WAF).
Salvo reload time	4 minutes.
Detonation Mechanism	Electronic Time & Proximity Fuze.
Rocket Configurations	a. Without Brake Ring - 30 to 38 Km.
	b. With Small Brake Ring - 18 to 29 Km.
	c. With Big Brake Ring - 12.6 to 18 Km.
Shelflife	10 years.
POD	6 Nos. of Rockets are loaded in each POD.







## **Munitions India Limited**

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