

## DRDO handovers ground-based Mobile elint system to IAF

Ground-Based Mobile ELINT System handed over to the Indian Air Force The Ground-based Mobile Electronic Intelligence (ELINT) System (GBMES) was handed over to the Indian Air Force (IAF) at the BEL, Hyderabad Unit on 18 March 2018. DRDO's Defence Electronics Research Laboratory (DLRL), Hyderabad, is responsible for the system design, development of critical sub-systems, and realisation of engineered version of truncated GBMES system as successfully proved in the field. BEL, Hyderabad is the production agency for GBMES.



### SALIENT FEATURES

- ✧ Wide Frequency coverage from 70 MHz to 40 GHz and COMINT segment 30-1000 MHz
- ✧ Quad Superhet Receiver Front-end Technology
- ✧ Quad Digital Receiver Technology
- ✧ Built-in Radar Finger Printing System (RFPS)
- ✧ Location Fixing (LF) using triangulation

Dr S Christopher, Chairman, DRDO, and Secretary, Department of Defence R&D, Ms J Manjula, DS and DG (ECS), DRDO, along with Mr MV Gowtama, CMD, BEL, handed over the system to the Air Vice Marshal BR Krishna, AVSM, SC, ACAS (Plans). The GBMES comprises one Control Station (CS) and three Receiving Stations (RS) integrated in master/slave concept to search, detect, monitor, record and process the hostile emissions as well as to find out the location of the emitter fulfilling the strategic EW requirements of the IAF. One of the three RS has also been configured to operate in master/ slave configuration (with minimal degradation) in the absence of control station. Each RS contains three ELINT Receiver Segments in the 70 MHz – 40 GHz frequency range. In addition, one Communication Intelligence (COMINT) Receiver Segment, operating in 30- 1000 MHz frequency range, intercepts and monitors the COMINT signals.

<https://defenceaviationpost.com/drdo-handovers-ground-based-mobile-elint-system-to-iaf/>

THE HINDU  
**BusinessLine**

## Army to get 'enhanced' Akash missiles

*Global tender for surface-to-air missiles cancelled*

*By Amrita Nair-Ghaswalla*

The Akash surface-to-air missile defence system is once again in the news with the Army looking to order another batch, despite having previously discarded the idea in favour of Israel's quick-reaction surface-

to-air missiles (QR-SAMs). Confirming that a new order is in the works, a Defence Ministry official said the missiles would be “greatly enhanced” to perform to their fullest capability.

### Capabilities

“Akash can fly at supersonic speeds, ranging from Mach 2.8 to 3.5, and engage aerial targets up to a range of 30 km. The kill probability of the missile is 88 per cent and can be increased to 98.5 per cent by launching a second missile after five seconds of launching the first. These features will enhance the system,” said the official. The indigenous missile was officially inducted into the Indian Army in 2015. Though the Army initially planned to add additional Akash batteries, repeat instances of the system not meeting operational requirements as it failed mobility tests, led the Army to announce in



2016 that it would not order any more batteries.

### Ministry order

The decision dealt a body blow to state-owned Defence Research and Development Organisation (DRDO), which designed and is developing the missile. However, last year, the Defence Ministry cancelled a global tender for surface-to-air missile system in favour of the Akash missile system.

Russia’s Rosonboronexport, Israel’s Rafael Advanced Defence Systems and Swedish Saab were competing for the tender, with decisions weighing in favour of Israel’s QR-SAMs. At the same time, the ministry also allocated \$2.8 billion for the procurement of two regiments of the Akash missile systems for the Indian Army. A regiment has 240/288 launchers and 625/750 missiles. Developed under the integrated guided-missile development programme (IGMDP), which also involved the development of the Nag, Agni and Trishul missiles, as well as the Prithvi ballistic missile, the Akash missile has an indigenous content of 96 per cent.

“Last year, Akash was tested successfully with an indigenous seeker for the first time. This has given us the confidence to make any type of surface-to-air missile,” said a DRDO official, pointing out that it is the first indigenous weapon system developed by the DRDO to get production orders worth more than ₹25,000 crore. As of now, 8/8 squadrons of Akash missile systems have been delivered and inducted into the IAF. “All Akash systems are independently operated by the IAF and the Army,” the official said.

<https://www.thehindubusinessline.com/news/army-to-get-enhanced-akash-missiles/article23776393.ece>

**THE TIMES OF INDIA**

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## New smoke grenades for army battle tanks

*By Sandip Dighe/*

The Indian Army’s tanks and infantry fighting vehicles (BMPs) will soon be equipped with advanced smoke grenades to confound enemy forces. The anti-thermal and anti-laser grenades will create a short-duration smoke screen to prevent detection in battle by the hostile battle tanks and infantry fighting vehicles. “The grenade generates thick smoke, completely blinding the enemy party. Even thermal imager and laser rangefinders on enemy vehicles would not be able to detect our tanks,” a senior scientist with the Defence Research and Development Organisation (DRDO) said.

At the moment, the Indian tanks and BMPs are equipped with the 3D6 smoke grenade, which is effective only in the visible region of the electromagnetic spectrum. “This can pose problems in a tank-to-tank battle,” a scientist said. DRDO’s Pune-based laboratory, High Energy Materials Research Laboratory, developed the new grenade in 2014 as an alternative to the Russian projectiles. Several trials were since carried out by scientists and army authorities at the K K Range in Ahmednagar.

“The army has sanctioned the newly-developed smoke grenade last year. We have recently signed a transfer of technology agreement with the Ordnance Factory, Dehu Road, as well as a Nagpur-based private firm for mass production,” K P S Murthy, HEMRL director, said. “Manoeuvring tanks effectively is crucial during a battle. An advanced smoke grenade is key to changing the position of a tank, particularly during a battle,” a senior armoured corps officer said.

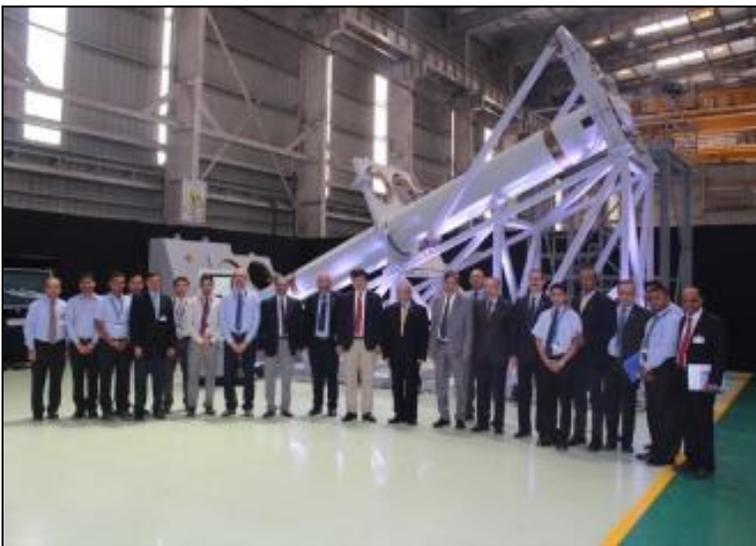
<https://timesofindia.indiatimes.com/city/pune/new-smoke-grenades-for-army-battle-tanks/articleshow/64035138.cms>



Sat, 05 May, 2018

## L&T defence to produce quad launcher for BrahMos missiles

L&T Defence, the defence arm of Larsen & Toubro (L&T) and one of the leading industry partners of BrahMos Aerospace Pvt. Ltd. (BAPL), has successfully completed the design and prototype realisation of the ‘Quadruple Canisterised Inclined Launcher’ (QCIL or Quad Launcher) for BRAHMOS missiles and after rigorous trials, has handed over the prototype Quad Launcher to BAPL, at an event today. The Quad Launcher



is designed for launching BRAHMOS supersonic cruise missiles in an inclined configuration on-board Indian Naval ships. The launcher provides superior firepower as compared to the twin canister, deck mounted launchers and has a capability to support and launch four missiles in a single or salvo mode. The new Quad Launcher is suitable for warships which have space constraints to accommodate a Vertical Launch Module. Mr. Jayant Patil, Whole-time Director (Defence) and Member of L&T Board, handed over QCIL prototype to Dr. Sudhir Mishra, Director General (BrahMos) DRDO and CEO & MD, BrahMos Aerospace, at an event held at L&T Defence’ Strategic Systems Complex near Pune. The production units of the QCIL will be

ready for deployment on Indian Naval Ships in next 18 months.

Speaking on the occasion, Mr. Jayant Patil said, “We have been associated with the development of BRAHMOS missile programme since 2000, when as part of the composite team led by DRDO, we engaged with the Russian Federation and embarked on this vast project. As proven partners of all variants of Naval missile launchers for BRAHMOS, we took up the design of the unique Quad Launcher and realised the prototype in 18 months. The Launcher underwent rigorous testing, including by the NPOM specialists, prior to receiving of production clearance. L&T will now take up the bulk production of the Quad Launchers.” While receiving the new launcher, Dr. Sudhir Mishra said, “BrahMos has taken an exemplary lead in the Indian Government’s ‘Make-In-India’ drive. In fact, BrahMos Aerospace practices ‘Design-In-India’ – the next level of ‘Make-In-India’, which has resulted in the establishment of a consortium of over 200 industries involved in the design, development, testing and production of various systems and sub-systems for the universal BRAHMOS missile and its various ground / air / sea based systems.” “The BrahMos concept of ‘Mind-to-Market’ has led to technology development along with skilled manpower creation and a huge business, thus leading to in-country wealth generation,” Dr. Mishra remarked while adding that, “Our major partner L&T is

an ideal example of ‘Design-In-India’ and ‘Make-In-India’ today.” As a leading industry partner of BrahMos Aerospace, L&T has been closely involved in the design, development and production of the Launchers & Fire Control Systems for naval platforms as well as development and production of key aero-structural sections of the formidable BRAHMOS Weapon System.

**Background:**

Larsen & Toubro is an Indian multinational engaged in technology, engineering, construction, manufacturing and financial services with over USD 17 billion in revenue. It operates in over 30 countries worldwide. A strong, customer-focused approach and the constant quest for top-class quality have enabled L&T to attain and sustain leadership in its major lines of business for over seven decades.

BrahMos Aerospace is a joint venture between Defence Research and Development Organisation (DRDO) of India and NPO Mashinostroyenia (NPOM) of Russia and is one of the successful Make-in-India programs in defence. The company was established in India through an inter-Government Agreement signed in 1998 between The Republic of India and The Russian Federation. The company is responsible for designing, developing, producing and marketing the BRAHMOS supersonic cruise missile with active participation of a consortium of Indian and Russian industries.

<http://www.dailypioneer.com/business-and-finance/landt-defence-to-produce-quad-launcher-for-brahmos-missiles.html>