

## जमीन से हवा में मार करने वाली आकाश-1 एस का टेस्ट सफल

नई दिल्ली,  
(पंजाब केसरी)  
: भारत ने  
सोमवार को  
आकाश-1एस  
मिसाइल का  
सफलतापूर्वक  
परीक्षण किया।  
यह मिसाइल



सतह से हवा में मार करके दुश्मन को नेस्तनाबूद कर सकती है। पिछले दो दिनों में मिसाइल का यह दूसरा सफल परीक्षण है। यह आकाश मिसाइल का नया वर्जन है, जिसमें अचूक निशाना लगाने वाली स्वदेशी तकनीक लगी है। इस मिसाइल का निर्माण डिफेंस रिसर्च एंड डिवेलपमेंट ऑर्गनाइजेशन (डीआरडीओ) ने किया है। आकाश मिसाइल फाइटर जेट्स, ड्रोन, क्रूज मिसाइल और हवा से जमीन में मार करने वाली मिसाइल को ध्वस्त कर सकती है। आकाश मिसाइल ब्रह्मोस की तरह सुपरसॉनिक मिसाइल है, जिसकी अधिकतम रफ्तार 2.5 माक (3,087 किलोमीटर प्रति घंटा) है। यह मीडियम रेंज मिसाइल है, जो 25 किलोमीटर तक मार कर सकती है। कमांड गाइडेंस सिस्टम के साथ यह 60 किलो तक विस्फोटक ले जाने में सक्षम है। किसी भी मौसम में यह मार कर सकती है। इस मिसाइल का पहला परीक्षण ओडिशा के चांदीपुर रेंज से साल 2017 में किया गया था।

## THE TIMES OF INDIA

## DRDO successfully test fires new version of Akash air defence missile

Balalore: DRDO on Monday successfully test fired the new version of the Akash surface to air defence missile system with a new indigenously-developed seeker.

The missile was test-fired in Balasore off the Odisha coast.

This is the second successful test of the missile in last two days as a successful test was done by them on Saturday also.

This is a new version of the missile fitted with an indigenous seeker.

Akash missile is a medium range Surface to Air Missile with multi-target engagement capability.

The missile was developed as part of Integrated Guided-Missile Development Programme (IGMDP) other than Nag, Agni, Trishul, and Prithvi missiles.

The supersonic Akash missile has a range of around 25 km and up to the altitude of 18,000m.

The missile uses high-energy solid propellant for the booster and ramjet-rocket propulsion for the sustainer phase. The missile system is said to be highly mobile.

Several variants of the missile- Akash MK1, Akash-MK2 with improved accuracy and higher ranges are under development by the Defence Research and Development Organisation (DRDO).

The Akash missile system was formally inducted into the Indian Air Force on July 10, 2015, and in Indian Army on May 5, 2015.

In September that year, the Defence Acquisition Council cleared seven additional squadrons of the missile for the Air Force.

However, the missile system has been bogged in controversies with a Comptroller and Auditor General (CAG) report in 2017 stating that as many as 30 per cent of the missiles failed when tested.

The Indian Army too had said in 2017 that the missile does not meet its operational requirements due to higher reaction time.

India is slowly plugging holes in its air-defence elements by developing advanced surface-to-air missile named MRSAMMedium Range Surface to Air Missile in collaboration with Israel.

Besides that, five regiments of renowned S-400 air defence system are under procurement from Russia. The delivery is slated to begin in 2020.

<https://timesofindia.indiatimes.com/india/drdo-successfully-test-fires-new-version-of-akash-air-defence-missile/articleshow/69525769.cms>



*Tue, 28 May 2019*

## **DRDO successfully test fires Akash-1S surface to air defence missile**

*This is a new version of the missile fitted with an indigenous seeker. The Akash missile system has the capability to neutralise aerial targets such as fighter jets, cruise missiles and air-to-surface missiles as well as ballistic missiles*

The Defence Research and Development Organisation (DRDO) on Monday successfully test fired the Akash-1S surface to air defence missile system.

This is the second successful test of the missile in last two days. This is a new version of the missile fitted with an indigenous seeker.

Developed by the DRDO, the Akash missile system has the capability to neutralise aerial targets such as fighter jets, cruise missiles and air-to-surface missiles as well as ballistic missiles.

The Akash-1S is capable of striking down enemy fighter jets and drones very effectively and accurately. The Akash surface-to-air missile was designed to intercept enemy aircraft and missiles from a distance of 18 to 30 km.

Earlier on Friday, DRDO successfully test fired an indigenously-developed 500 kg class guided bomb from a Sukhoi combat jet at Pokhran in Rajasthan.

The defence ministry said the guided bomb achieved the desired range and hit the target with high precision.

"The DRDO successfully flight tested a 500 kg class Inertial Guided Bomb today from Su-30 MKI Aircraft from the Pokhran test range in Rajasthan," it said.

(With inputs from Manjeet Negi)

<https://www.indiatoday.in/india/story/drdo-successfully-test-fires-akash-1s-surface-to-air-defence-missile-1535962-2019-05-27>

## THE TIMES OF INDIA

*Tue, 28 May 2019*

# **Trials of advanced artillery gun begin in Pokhran range**

Jaisalmer: India's first high capacity indigenous long range 155mm/52 gun and Dhanush's supplement ATAGS (Advanced Towed Artillery Gun System) firing user trials of next stage began from Friday. The trials began at Pokhran field firing range of Jaisalmer district.

The Indian Army has begun finalising the preliminary specifications qualitative requirements (PSQR). Defence Research & Defence Organisation (DRDO) and senior army officers were present at the trials. The gun during its last trials had fired 47.2 kms long distance which was world's longest distance. Source said that on Friday 48 rounds were fired and on Saturday 12 rounds were fired. Two guns are currently undergoing trials and two more guns will have their trials in a month. The PSQR should be ready by July. Till now there is a sanction for production of 10 guns as part of the development process. The gun currently weighs about 18 tonnes while the ideal weight for the army would be 14-15 tonnes.

Sources said ATAGS is being developed by DRDO on two parallel tracks – one prototype in partnership with Tata Power and another with Kaveri Group (Bharat Forge).

Sources said once the PSQRs are approved, the process for formulating the final qualitative requirements would begin. Guns from both Bharat Forge and Tata Power would be evaluated and based on the commercial bids, the order would be split between them with the lowest bidder getting a larger order. The defence ministry has already approved in-principle purchase of 150 of these guns at an approximate cost of 3,365 crore.

At the moment the firing capacity is being checked on different parameters such as climate, terrain, range accuracy, etc and these guns are performing as per the expectation. The ammunition is also being checked. The gun has world's longest hitting capacity. The user trials will go on for four more days.

The ATAGS, India's first indigenous 155mm/52-caliber towed artillery gun will be a joint project of two private-sector corporations. This is a reversal of the usual practice of giving only state-owned companies these kinds of orders.

<https://timesofindia.indiatimes.com/city/jaipur/trials-of-advanced-artillery-gun-begin-in-pokhran-range/articleshow/69510412.cms>



Tue, 28 May 2019

## India conducts firing trials of ATAGS howitzer in Rajasthan

Final firing tests of the indigenously developed Advanced Towed Artillery Gun System (ATAGS) have begun from Friday at Pokhran field firing range of Rajasthan's Jaisalmer district. Defence Research and Defence Organisation (DRDO) and senior army officers were present at the trials, LatestLY reports.

### 155 mm x 52 Calibre Advanced Towed Artillery Gun System (ATAGS)

Sr. No.	Feature	Specifications
1	Calibre	155 mm
2	Barrel length	52 Cal (8060mm)
3	Max Range	35 km with ERFB BT 45 km with ERFB BB
5	Rates of Fire	
	Burst	5 rounds in 45 seconds
	Intense	10 rounds in 2 minutes
	Sustained	60 rounds in 60 minutes
6	Multiple Round Simultaneous Impact (MRSI) capability	Up to 5 Rounds achievable at 15 km with ERFB -BT ammunition
7	Auto Gun Alignment and Positioning System (AGAPS)	RLG based land navigation system
8	Muzzle Velocity Radar (MVR)	Online tracking of Muzzle velocity
9	Traverse	± 30°
10	Elevation	-5° to +75°
11	Automation	<ul style="list-style-type: none"> <li>➤ All electric drive based elevation and traverse</li> <li>➤ Electrically operated ammunition handling &amp; Breech Operation</li> </ul>
12	Mobility	<ul style="list-style-type: none"> <li>➤ Towed mode : 40 kmph</li> <li>➤ Self propelled : 18 kmph</li> </ul>
13	Turning Circle Diameter (TCD)	< 25m
14	Gradeability	> 18°
15	Battery Command Post	Secured digital communication link for battery concept
16	Crew	7

**Subsystems**

Subsystems	Source (s)
Barrel	OFB, BFL
Muzzle Brake	OFB, Punj Lloyd
Breech Mech	OFB, BFL, TPSED
Recoil Sys	MDNS, TPSED
Structure & Automotive	BFL, TPSED
Automation & Control	BFL, TPSED
Optronic Sight	TPSED, Ex-import
Tactical Computer	BEL
Communication Sys	BEL
MVR and AGAPS	Ex-import
Battery Command Post	BFL
Towing System	Ashok Leyland
Ammunition (s)	OFB

OFB - Ordnance Factory Board  
MDNS - Mahindra Defence & Naval Systems  
TPSED - Tata Power Strategic Engineering Division  
BEL - Bharat Electronics Limited

**DRDO Sister Labs**

- VRDE • IRDE
- DEAL • PXE
- CAIR

**Muzzle Brake**

- Modified Double Baffle
- Efficiency >35%

**Inertial Navigation System**

- Auto Gun Alignment and Positioning System (AGAPS)

**Laying Mechanism**

- Servo based Ball Screw Actuators
- Planetary gear box

**Sensors for**

- Barrel temperature
- Charge temperature
- Recoil

**Fire control system**

- Ballistic Computer

**High Pressure Breech Mechanism**

- Screw type • All electric operations

**Gun deployment system**

- Hydraulic Actuators

**Muzzle Brake**

- Modified Double Baffle
- Efficiency >35%

**Gun Barrel**

- High Pressure 25 L/ 465 MPa
- Autofrettage
- EFC: 1500

**Equilibrator**

- Hydro-pneumatic

**Layer controls**

- Thermal sight
- Gunner's display
- Communication system

**Ammunition handling system**

- All electric operations
- Auto-rammer

**Auxiliary Power Unit**

- 110 kW Engine

**Armament Research & Development Establishment**  
**Defence Research & Development Organisation**  
 Dr. Homi Bhabha Road, Armament Post, Pashan, Pune - 411 021, India.

The ATAGS is a 155 mm/52 calibre gun with a theoretical firing range of 40 km. The gun currently weighs about 18 tonnes, while the ideal weight for the army would be 14-15 tonnes. The Indian Army has begun finalising the preliminary specifications qualitative requirements (PSQR) which should be completed by July 2019, reported The Times of India. In the earlier trials which were conducted in December 2018, the gun had fired on targets distant of 47.2 km.

According to the report, on Friday, May 24, the gun had fired 48 rounds. On Saturday, 12 rounds were fired. The trials are going on for four more days. The Defence ministry has already approved the in-principle purchase of 150 of these guns. However, so far, the DRDO has sanctioned funds for the production of 10 guns only.

The guns will be produced by the DRDO in two separate contracts – one with Tata Power and another with Kaveri Group (Bharat Forge). According to the report, the lowest bidder will get a larger order.

<https://www.armyrecognition.com/may-2019-global-defense-security-army-news-industry/india-conducts-firing-trials-of-atags-howitzer-in-rajasthan.html>