



(Photo: DRDO)

TAPAS/Rustom-II: India's high-end military drone

Aerial warfare has come a long way from bows and arrows to fighter jets to military drones. As per former US Army General, Stanley McChrystal, the military drones are an 'all seeing eye' permanently on call which can give reliable, real-time intelligence and apparently riskless, pinpoint accurate strike capability. The recent Azerbaijan-Armenia war and the ongoing Ukraine-Russia war have also highlighted the importance of military drones in modern-day warfare. India is not far behind in drone technology, where various concurrent projects on different types of drone development is going on. One such project which is set to begin its user trials soon is TAPAS BH-201 or Rustom-II.

Rustom-II/Tapas BH-201 (Tactical Advanced Platform for Aerial Surveillance Beyond Horizon-201) is a Medium Altitude Long Endurance (MALE) drone being

developed by Aeronautical Development Establishment (ADE) and Defence Research & Development Organisation (DRDO).

Evolution of TAPAS BH-201

It all started with the development of manned, twin-seater Light Canard Research Aircraft (LCRA) by the National Aerospace Laboratories (NAL) team headed by Prof Rustom Damania. The design of Rustom-I, a MALE drone developed by ADE, was derived from LCRA. In Rustom-I, necessary sensors and avionics were integrated and tested with the required aerodynamic configuration which later proved as a test bed for the development of Rustom-II. But it had its limitations of payload, endurance and altitude. To improve these limitations, Rustom-H was developed with a completely new and improved design. It featured a larger airframe, higher payloads, an increase in composite materials

in the airframe, increased Lift to Drag ratio, higher redundancy (to enable safe operation in case of failure of the hydraulic systems), and stronger data link (for better communication with the ground stations) and better propulsion systems. Rustom-II or TAPAS BH-201 is the improved version of Rustom-H in user configuration to meet the specified Qualitative Requirements.

Timelines & Updates

- The first maiden flight of Rustom-II was carried out on 16 November 2016 at Aeronautical Test Range (ATR) in Chitradurga, Karnataka.
- As per then DRDO Chief, S. Christopher, 9 prototypes would be built, advanced from the initial aircraft for testing purposes before the process of certification.
- The first flight of Rustom-II/TAPAS BH-201 in user configuration with the