



LIGHT UTILITY HELICOPTER (LUH)



Versatile & Adaptable

ROTARY WING RESEARCH AND DESIGN CENTRE
HINDUSTAN AERONAUTICS LIMITED
Bengaluru, India

ROTARY WING RESEARCH & DESIGN CENTRE (RWR&DC), DESIGN COMPLEX



Spearheads Design & Development of Helicopters with state-of-the-art technologies.



Equipped with modern facilities.



Products to meet customer requirements for military & civil applications.



Designed & developed Helicopters

- Advanced Light Helicopter (ALH).
- Light Combat Helicopter (LCH).
- Currently the Light Utility Helicopter (LUH) is under development.



LIGHT UTILITY HELICOPTER (LUH)



New generation 3 Tonne class



Powerful Single Turbo engine (Ardiden-1U) with dual channel FADEC and EACB



Light weight, flexible, crashworthy



Designed for Sea level & High altitude operations



Capable of performing multi-missions like Reconnaissance & Surveillance, Under slung, MEDEVAC, Troop transport and Armed roles.

CHARACTERISTICS

Weight of LUH: Basic Empty Weight, BEW : <2000 Kg Max. All Up Weight, MAUW : 3150 Kg Useful load : 950 Kg	Performance Data: (Speed at SL with Max. AUW) Max. Cruise speed : 235 kmph Never Exceed Speed : 260 kmph Oblique Rate of Climb : 7.5 m/s Vertical Rate of Climb : 5.5 m/s Service Ceiling : 6.5 km Range with 500kg payload : 350 km Endurance : 3 hours
Powerful Ardiden-1U Engine: Take Off Power : 860 KW Max. Continuous Power : 750 KW	Seating Capacity: : 6 Passengers : 4 VIP seats : 2 Stretchers
Transmission limit: Take Off Power : 750 KW Max. Continuous Power : 620 KW	
Payload : At Sea Level, Internal : 500 Kg External Cargo : 1000 Kg At 6 km (High Altitude) : 75 Kg	

LUH DESIGN AND DEVELOPMENT

The LUH is designed as a replacement for Cheetah and Chetak helicopter being operated by Indian Armed forces. RWR&DC has taken up ab-initio development of the Structure, Rotor, Transmission and electrical & mechanical systems. State-of-the-art technologies and systems are being integrated in LUH for catering to emerging needs in this class of helicopter.



INDIGENOUS DESIGN AND DEVELOPMENT

As part of Development and towards Certification, stringent qualification testing has been carried out at component, subsystem, system and at Helicopter level. A dedicated Ground Test Vehicle (GTV) has been built and subjected to various load levels to ensure the airworthiness and safety of structure and systems.



Ground Test Vehicle (GTV)

Three prototypes are built and development Flight Testing is under progress.



LUH PT1



LUH PT2



LUH PT3



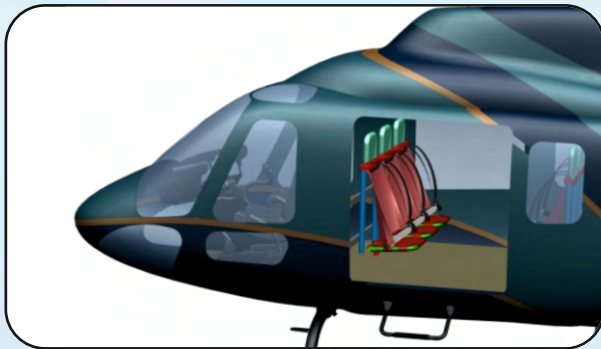
LUH AT LEH

MISSIONS/ROLES

Design concepts adopted in the LUH make it versatile platform, meeting various needs of both military and civil sectors. Structural provisions are available for integration and certification of Operational and Role equipment to meet the requirements of LUH:

- ❖ Auto Pilot System
- ❖ Rescue Hoist
- ❖ Cargo Sling
- ❖ Emergency Floatation System
- ❖ Stretchers & Passenger Seats
- ❖ Electro Optic System

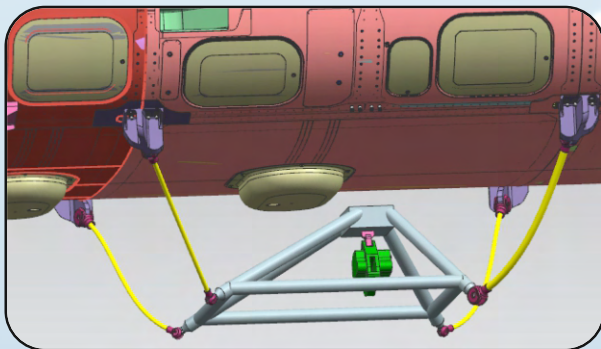
LUH is designed to perform the required missions from sea level to high altitude. LUH has growth potential to accommodate additional equipment in future based on emerging needs. These features make LUH superior in comparison to other contemporary helicopters in its class.



Troop Transport - 6 Seats



VVIP Variant - 4 Seats



External Cargo (1000 kg)



Rescue Operation (200 kg)



Reconnaissance
& Surveillance



Emergency
Floatation System

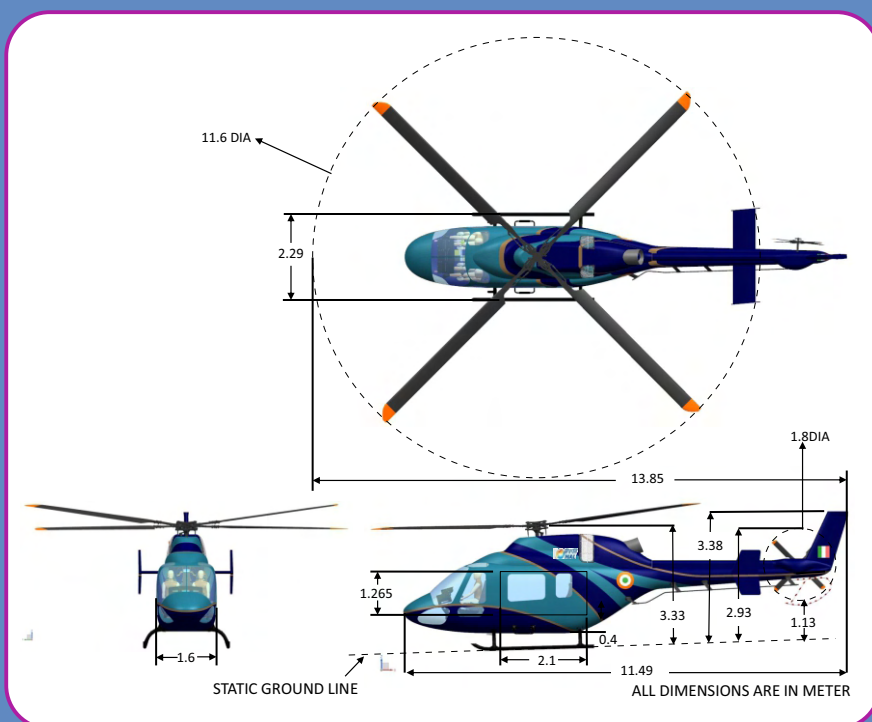


Emergency Medical
Services - 2 Stretchers

ERGONOMICS & EASE OF MAINTENANCE



LUH OVERALL DIMENSIONS



Extensive use of composites, 90% by surface area & 30% by weight



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