

ARDIDEN 1H1

FOR THE DHRUV / LCH

PROVEN DESIGN, LOW COST, RELIABLE & HIGH PERFORMING



Latest member of the Turbomeca engine family, the Ardiden is a compact design built around a gas generator with two centrifugal compressor stages, coupled to a single-stage high-pressure turbine. For helicopters in the 5 to 6.5 ton class.



The Ardiden programme

- > Launched in 2002.
- > First variant, Ardiden 1H/Shakti (with HAL).

Generating Power and Performance

> The Ardiden experience

- High temperature margins, and constant power all the way to overhaul.
- Full performance in hot and high conditions.
- 25% growth potential.

> Applications

- 1H variant with Hindustan Aeronautic Limited (HAL) for Dhruv.
- On offer for EC175, KHP, KA-60/62, AB139.

> Simple modular design

- 3 modules.
- High reliability and maintainability.

> Low direct maintenance costs

- Initial TBO is 3000 hours, with no interim visit, including hot parts.
- Easy access for boroscope inspections of gas path allowing full inspection of all turbine stages and combustion chamber.

> Dual channel Engine Electronic Control Unit

- Improves overall safety, reduces pilot work load.
- Indicates operational parameters.
- Drives engine life safely to its TBO limit.
- Signals maintenance actions on automatic engine overrun display.
- Gas generator and power turbine over-speed protections.

> **Helicopters:**



Dhruv

powered by two Ardiden 1H1/Shakti



LCH

powered by two Ardiden 1H1

Engine Electronic Control System
• More than 20 years of experience

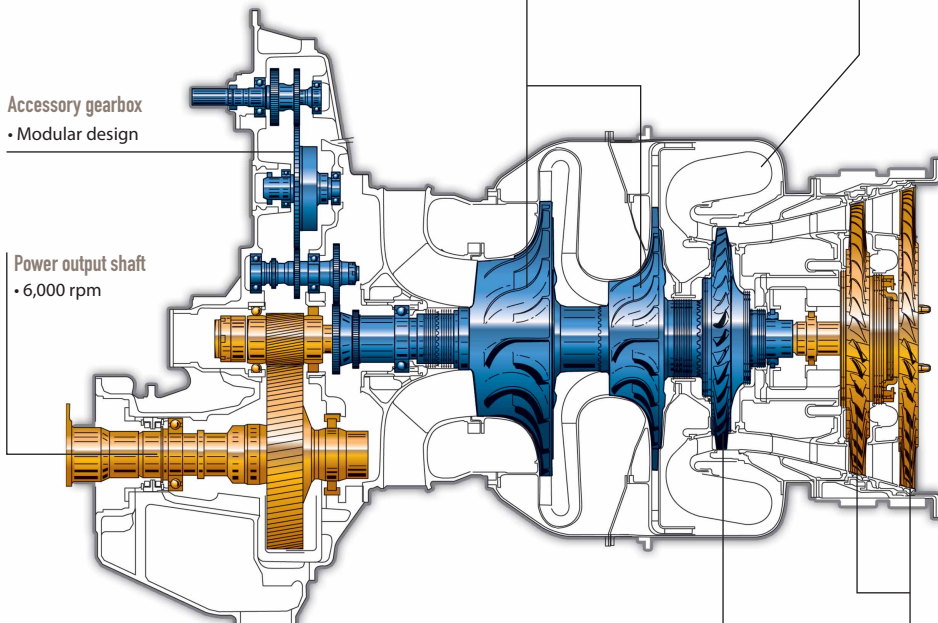
High efficiency 2-stage centrifugal compressor

Low emission reverse flow combustion chamber

Accessory gearbox
• Modular design

Power output shaft
• 6,000 rpm

Maintaining close contact with Ardiden operators worldwide
• Turbomeca-approved Repair & Overhaul centers.
• 24/7 Turbomeca hotline.



High performance Single-stage HP turbine

Modular field-replaceable 2 stage power turbine

> **Power rating (ISA, sea level, kW/shp):**

Ardiden	1H1	1H1
> One Engine Inoperative (OEI)	Mechanical Power	Thermal Power
OEI 30 sec.	N/A	1,255/1,682
OEI 2 minutes	N/A	1,113/1,492
OEI continuous	N/A	1,067/1,430
> All Engines Operative (AEO)		
Take-off	741/993	1,067/1,430
Max. continuous	650/871	910/1,220

> **Description:**

- Features easy maintenance and engine control to suit operators wishes for lower maintenance costs and optimum engine availability.
- HIP/SARM power rating used for up to 30 minutes at a power setting between max continuous and take-off power without any specific maintenance actions required.

Turbomeca is dedicated to the design, production, sale and support of gas turbines for helicopters. Turbomeca offers the world's most comprehensive range of engines, along with strong industrial cooperation associated to close-by customer services structures. Dedicated to 2,350 customers in 155 countries, Turbomeca provides a proximity service thanks to its 16 sites, 26 Maintenance Centers, 24 Repair & Overhaul Centers and 90 Field representatives and Field technicians.



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