

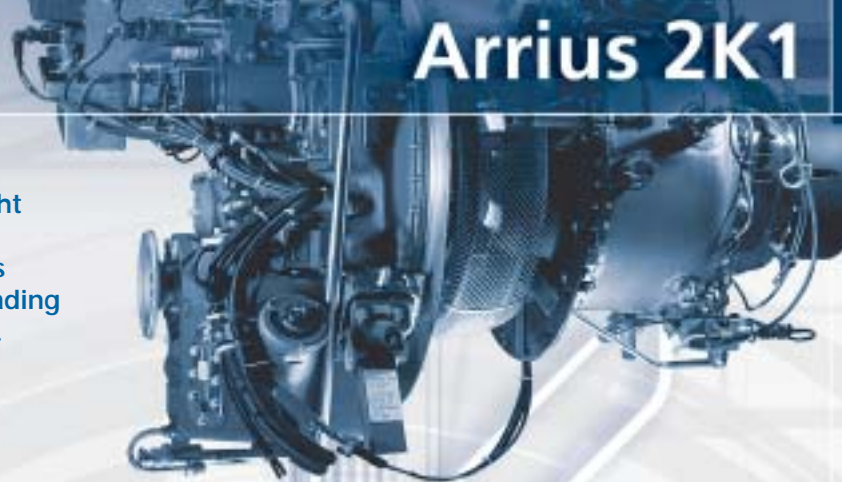
The Arrius family new generation turboshafts have been specifically developed to power light singles and light twins. Particularly prized for Medevac missions, the Arrius 2K1 incorporates the latest achievements in control systems, leading edge materials and aerodynamic technologies.

## The Arrius family

- ▶ Entered service in 1983
- ▶ 1,900,000 operating hours
- ▶ 1,600 engines delivered



A109 Power



A109 Power powered by two Arrius 2K1



Arrius: 480 - 716 shp

## Generating Power and Performance

### The Arrius 2K1 experience

- ▶ The Arrius 2K1 brings A109 Power operators the mature Arrius potential.
- ▶ Superior responsiveness, unmatched rise rate, unbeatable in hot and high conditions.
- ▶ In Cat A, the Arrius 2K1 enables operators to carry two extra passengers.
- ▶ Arrius has the lowest smoke number ever.
- ▶ EMS operators in the US and Europe choose the Arrius 2K1 engine for its outstanding availability and performance.

### Simple modular design

- ▶ Very low scheduled maintenance: under 1 minute per flight hour. ▶ Few maintenance tools.

### Reduced cycle consumption

- ▶ Life limited parts last 2 overhaul periods.
- ▶ Reduced operating costs.

### Low direct maintenance costs

- ▶ Long TBO period, 3,000 hours. ▶ Long component life.

### Engine Electronic Control Unit experience

- ▶ Improves overall safety and reduces pilot work load.
- ▶ N1 control optimizes engine life.
- ▶ Indicates operational parameters.
- ▶ Includes OEI training function.
- ▶ Drives engine life safely to its TBO limit.
- ▶ Signals maintenance actions on automatic engine overrun display.

Arriel  
640 - 944 shp



TM 333  
900 - 1,100 shp



Ardiden  
993 shp  
mech. power



MTR 390  
1,280 - 1,600 shp



Makila  
1,800 - 2,100 shp



RTM 322  
2,100 - 2,650 shp



## Technical Characteristics (ISA, sea level, kW/shp)

ARRIUS	2K1
Application	A109 Power
One Engine Inoperative (OEI)	kW / shp
OEI 2.5 min.	560 / 750
OEI continuous	500 / 670
All engines operative (AEO)	
Take-off	500 / 670
Max. continuous	426 / 571

### Geared to rapid response

- ▶ Offering a high rate of climb, the Arrius 2K1 delivers the superior rapid response pilots expect from a Turbomeca engine.
- ▶ MTOW A109 Power, Arrius 2K1: 2,850 kg / 6,283 lb (ISA sea level) in both Cat A and Cat B class.

### Engine Electronic Control System

- ▶ More than 20 years of experience

### Reduction gear

- ▶ Designed and tested with high torque and speed margins: (torque 30%, speed 4%)

### Power output shaft

- ▶ 6,000 rpm

### Air intake

- ▶ Lowest engine installation losses on the market

### Single-stage power turbine

- ▶ Economical
- ▶ Very easy access
- ▶ Best high temperature alloys

### Single-stage centrifugal compressor with high compression ratio

- ▶ High surge margin
- ▶ Low engine installation losses

### Reverse flow combustion chamber

- ▶ With manifold drain
- ▶ Optimized emission reduction

### Single pedestal bearings

- ▶ One generator rear bearing and one power turbine front bearing on one single pedestal = lowest oil rejection levels

### Maintaining close contact with Arrius 2K1 operators worldwide

- ▶ Turbomeca-approved Repair & Overhaul centers
- ▶ 24/7 Turbomeca hotline

Turbomeca is the world's leading manufacturer of small-to-medium gas turbine engines. Turbomeca designs, develops, manufactures and supports helicopter engines for operators across the world. Unique in aviation history, helicopter engines have been the company's core business for over 50 years. Today, nearly half of the world's civil helicopters are Turbomeca-powered.

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