# ATR 72-500

# The Ultra Efficient Standard


*An Alenia Aeronautica and EADS joint venture*

ATR


**The ATR 72-500 represents the Latest Generation of turboprop aircraft with technology, comfort, passenger appeal, performance and economics which open up new horizons to regional airlines worldwide. Providing exactly what the customer needs in a rapidly evolving market, ATR 72-500 is playing a major role in the growth of regional carriers, offering the lowest seat-mile costs in its class, great efficiency and reliability, key to modern regional operation.**

# Technology Features

The ATR 72-500 is the latest development of the ATR 72.

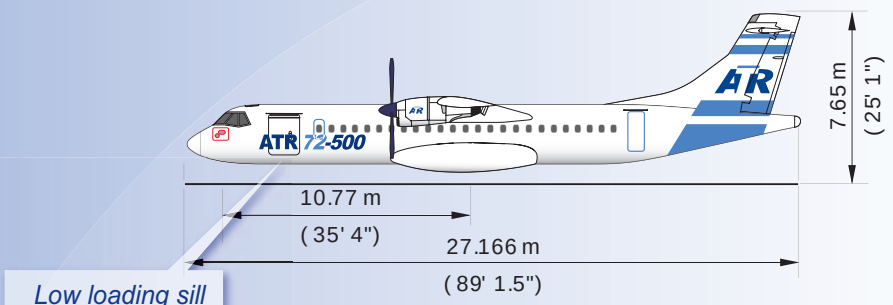
It benefits from the in-service experience of about 700 ATR aircraft flying world-wide, with a proven average dispatch reliability of more than 99%.

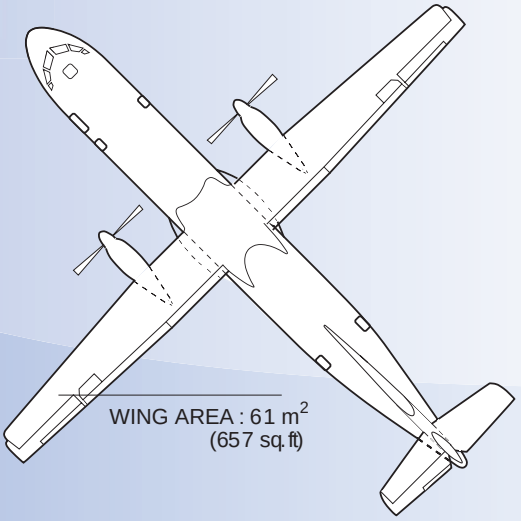
The ATR 72-500 incorporates:

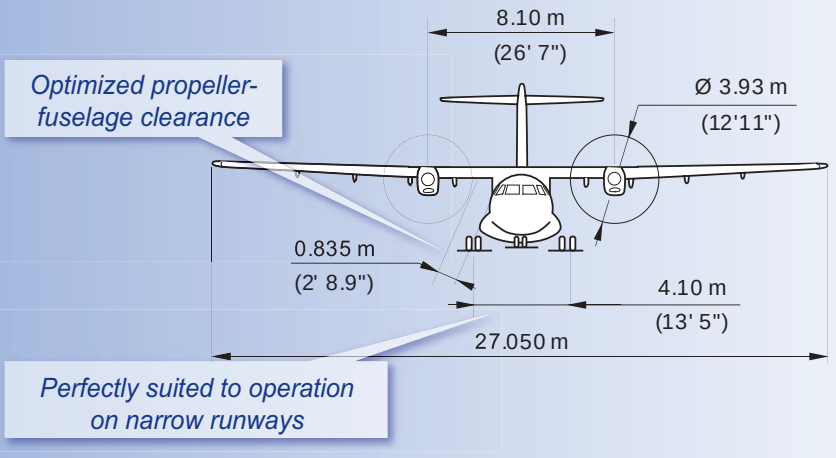
- Totally renewed cabin interior design
- Technologically advanced acoustic treatment
- New propeller system
- Excellent field performance

offering all the commonality benefits of the proven and successful ATR family and namely of the Latest Generation ATR -500 series aircraft.





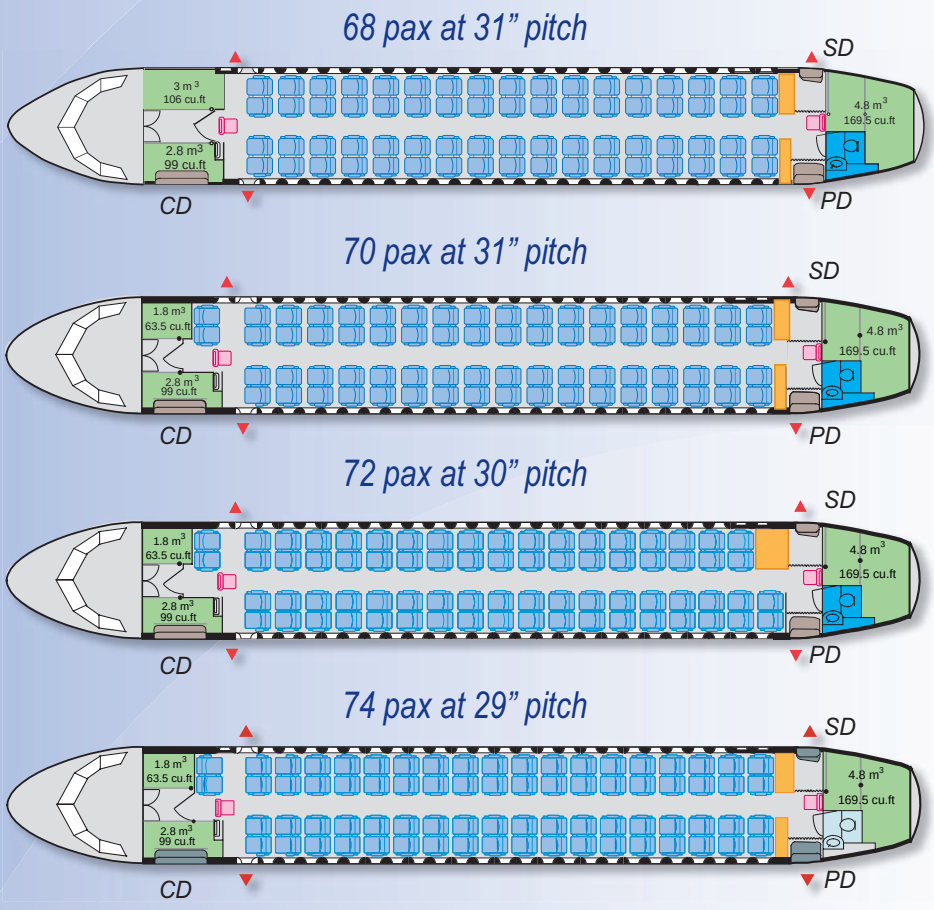



# Dimensioned for Revenue

The standard ATR 72-500 with front cargo door configuration consists of 68 seats at a pitch of 31 inches, with a straight partition including a front cabin attendant station.

- Two cargo areas are available:
  - Front cargo compartment: volume 5.8 m³ (205 cu.ft)
  - Rear cargo compartment: volume 4.8 m3 (169.5 cu.ft)
- In the cabin, overhead bins are provided, offering 3.15 m³ (111 cu.ft) for the hand baggage
- Other seating configurations are proposed, ranging from 64 seats at 32" pitch to 74 seats at 29" pitch.

## Making the Best Use of Available Space




*PD: Pax door - CD: Cargo door - SD: Service door*



| Volumes | 68 seats | | 70 seats | | 72 seats | | 74 seats | |
|---|---|---|---|---|---|---|---|---|
| | m³ | cu.ft | m³ | cu.ft | m³ | cu.ft | m³ | cu.ft |
| Baggage compartment | 10.6 | 374.5 | 9.4 | 332 | 9.4 | 332 | 9.4 | 332 |
| Baggage per pax | 0.156 | 5.51 | 0.134 | 4.74 | 0.131 | 4.61 | 0.127 | 4.48 |
| Total baggage *incl. overhead bins and stowages* | 13.75 | 485.4 | 12.62 | 444.8 | 12.65 | 446.5 | 12.62 | 444.8 |
| Total baggage per pax | 0.202 | 7.14 | 0.18 | 6.35 | 0.176 | 6.20 | 0.7 | 6.01 |

# Main ATR 72-500 Operators


Bangkok Airlines

Since its introduction, ATR 72-500 has become the regional air transport industry reference for reliability and profitability, providing unmatched seat mile cost and unbeatable economics.

ATR 72-500 is unanimously recognized by Customers worldwide as the lowest seat mile cost in its category and low cost provider for regional airlines.

Follow-on, repeat orders have been made by 14 out of the 21 ATR 72-500 since 1998. Major airlines directly or through regional affiliates fly profitably ATR 72-500 in every climates.


Air Deccan


Iran Aseman

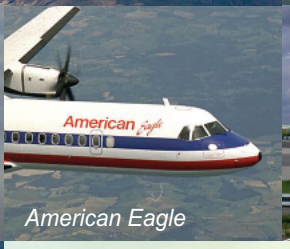

Alitalia Express


Vietnam Airlines


Binter

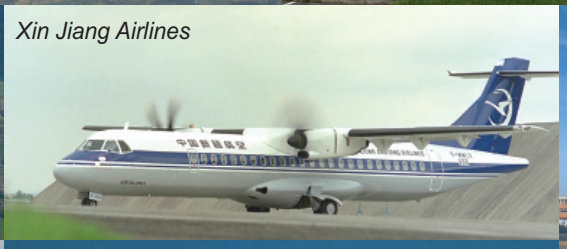

Transasia


Arkia


American Eagle


Air Tahiti


Eurowings


Xin Jiang Airlines


Air Caraibes


Air Algérie


Air New Zealand


Air Mauritius


Cimber

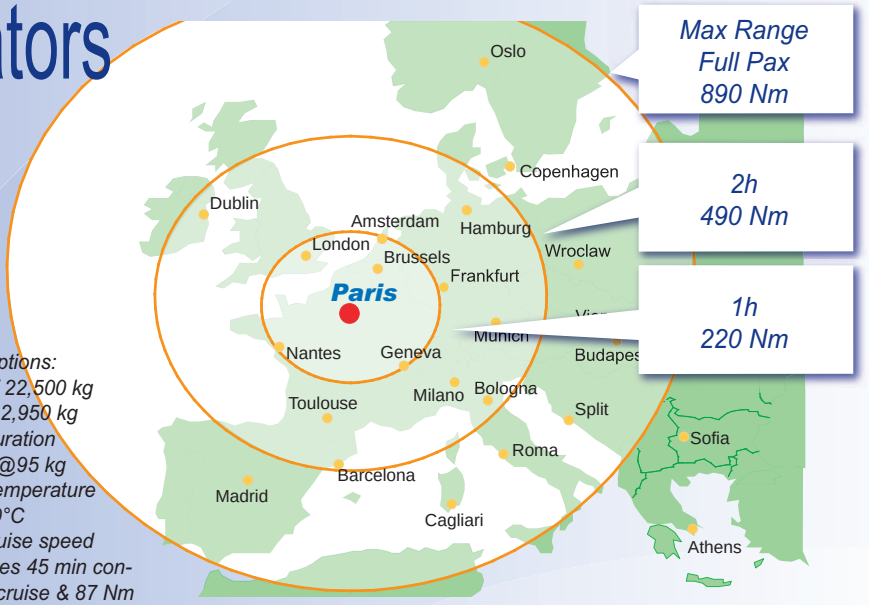

Jet Airways


Air Dolomiti

# Operational Advantages
## to Regional Operators

Powered by PW127 engines, also used to power the ATR 42-500, the ATR 72-500 provides outstanding short field performance for an aircraft of this size, even on difficult hot and high airfields.

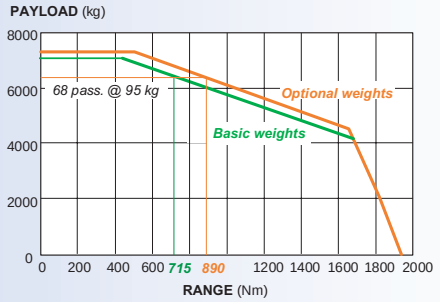
The operational weights respond to the new regulations increasing the standard passenger weight and provide the ATR 72-500 with a maximum range of 890 Nm or an out and return trip of 420 Nm (without refuelling), both being at full passenger payload.




*Assumptions:*
*MTOW 22,500 kg*
*OEW 12,950 kg*
*Configuration*
*68 pax@95 kg*
*Paris temperature*
*ISA+10°C*
*Max cruise speed*
*Reserves 45 min continued cruise & 87 Nm alternate*

| Performance | Basic | | Optional | |
|---|---|---|---|---|
| **Take-Off Field Length** ■ ISA, SL, MTOW ■ 3,000ft, ISA +10°C, TOW for 300Nm, 68 pax at 95 kg/209 lb | 1,223 m<br>1,300 m | 4,012 ft<br>4,265 ft | 1,290 m<br>1,300 m | 4,232 ft<br>4,265 ft |
| ■ **Landing Field Length** (SL, MLW, FAR rules) | 1,048 m | 3,438 ft | 1,067 m | 3,500 ft |
| ■ **Max Cruise Speed** (97% MTOW, 17,000ft) | 276 kt | | 275 kt | |

## Range Capability




*OEW 12,950 kg (28,550 lb) - High cruise speed*
*Reserves 45 min continued cruise & 87 Nm alternate*

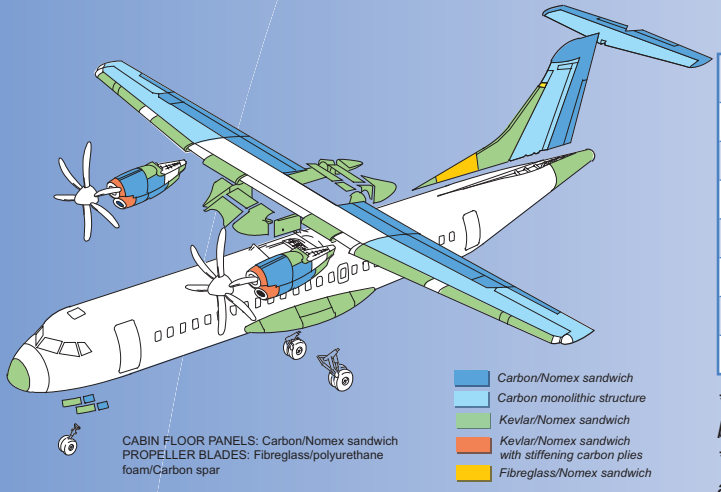
## Structural Efficiency

The ATR 42 and ATR 72 secondary structures are extensively made of composite material, which are not subject to corrosion.
In addition, the ATR 72 innovates by the use of carbon fiber for its outer wings and a composite tail, thus reducing weight further.
The in-service advantages of composites are numerous:

- Immunity to corrosion and fatigue
- Reduction of inspection
- Payload gain and fuel savings.

Not including the commercial furnishing weight, the corresponding result for the ATR 72 can be summarized as follows:

- Composite / total structure: 19%
- Weight saving 400 kg, equivalent to **4 pax.**




CABIN FLOOR PANELS: Carbon/Nomex sandwich
PROPELLER BLADES: Fibreglass/polyurethane foam/Carbon spar

## Block Fuel & Block Time
*on typical sectors*

| | |
|---|---|
| ■ **200 Nm Sector** | 611 kg (1,347lb) |
| | 55.4 min |
| ■ **300 Nm Sector** | 854 kg (1,883lb) |
| | 78 min |

***The most efficient compromise between low fuel consumption and speed***

| Weights | Basic | | Optional | |
|---|---|---|---|---|
| | *kg* | *lb* | *kg* | *lb* |
| ■ MTOW | 22,000 | 48,501 | 22,500* | 49,604 |
| ■ MLW | 21,850 | 48,171 | 22,350 | 49,272 |
| ■ MZFW | 20,000 | 44,092 | 20,300** | 44,753* |
| ■ OEW | 12,950 | 28,549 | 12,950 | 28,549 |
| ■ Max. payload | 7,050 | 15,542 | 7,350 | 19,204 |
| ■ Max. fuel load | 5,000 | 11,023 | 5,000 | 11,023 |

** Optional MTOW at 22,800 kg (50,265 lb) available on option by 2005*
*** Optional MZFW: 20,500 kg (45,194 lb) - 20,800 kg (45,856 lb), available on option by end 2005*

# The Low-Cost Reference for Regional Market

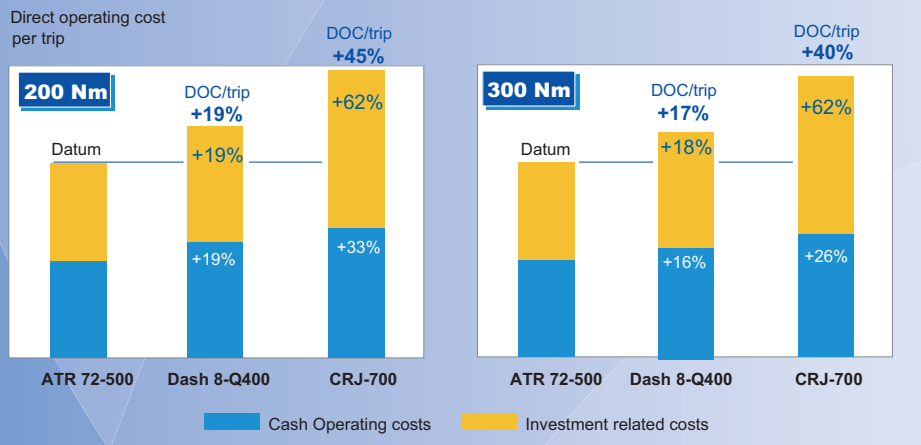

*ATR 72-500: the lowest seat-mile cost in its market segment*

## Direct Operating Costs

ATR 72-500 features exceptionally low operating costs when compared to similar sized turboprop and jet competitors on typical regional sectors. Turboprops are unrivalled on short-haul sectors.

**ATR 72-500 main advantages:**

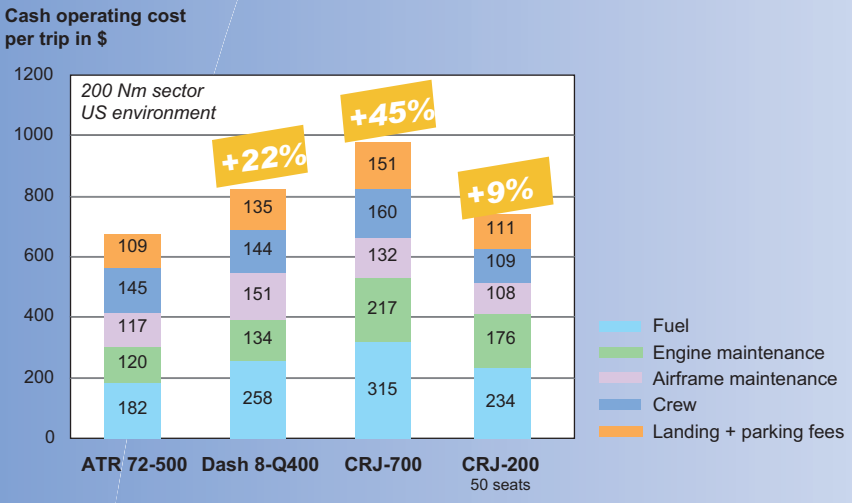
- Lower engine and airframe maintenance costs
- Less fuel costs
- Significantly lower airport charges
- Speed adapted to regional low-cost operation





## Cash Operating Costs

More than offset the speed effect even compared to 50-seater jet




## Economic Assumptions

*North American and European Environment, Standard Economics*

- **Stage length**: 200 and 300 Nm
- **Fuel price**: 0.8$/US gal (US) - 0.9$/US gal (EU)
- **Aircraft prices**: As published by price catalog
- **Spares**: 10% aircraft price
- **Depreciation**: 12 years with 20% residual value
- **Financing**: 85% of investment over 10 years
- **Interest**: 5% per year
- **Insurance**: 1% of aircraft price/year
- **Block time & fuel**: Minimum time schedule (time allowance: 4 min taxi)
- **Annual utilisation**: 200 Nm: 2700 (US) or 2200 (EU) flights - 300 Nm: 2200 (US) or 1800 (EU) flights
- **Crew** : Cockpit: statistical - Cockpit Jet: statistical - Cabin: 20$ (US) or 35$ (EU)/ BH/FA
- **Maintenance**
  - **ATR family**: as estimated by ATR
  - **Competitors**: estimated by ATR, based on manufacturers data
- **Maintenance labour rate**
  - Powerplant: 69.75$/MH
  - In house: 25$/MH
  - Contracted: 63$/MH
- **Landing charges**: US type; general method in EU environment
- **Ground handling**: Not considered
- **Provision for IOC**: 100% cash DOC (fuel cost + crew cost + maintenance + fees)

The ATR 72-500, fully mature and technically proven aircraft, with demonstrated economics and widespread worldwide is an insurance of low risk choice and strong residual value.