



# ATR 42-500

# A New

# Standard of

# Excellence

## The Latest Generation

ATR 42-500 offers a combination of exceptional overall performance and comfort unmatched in its class, while keeping the competitive economics which are the trademark of ATR aircraft.

An Alenia Aeronautica and EADS joint venture

**ATR**

# Outstanding Features

The ATR 42-500 is the latest evolution of the successful ATR 42 family. It benefits from the experience of more than 700 ATR aircraft flying worldwide with an average dispatch reliability in excess of 99.6%.

## Excellent passenger comfort

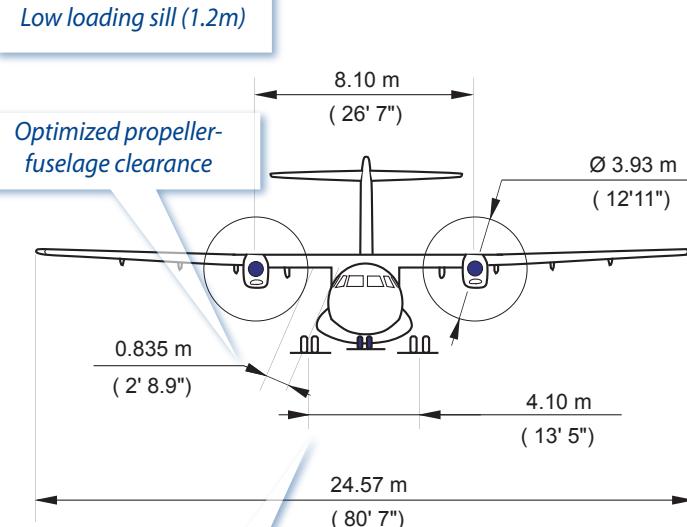
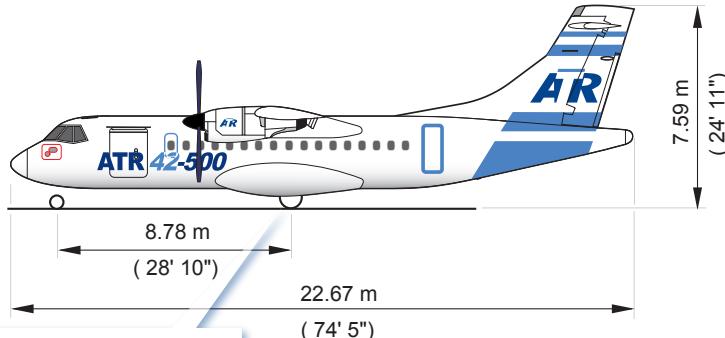
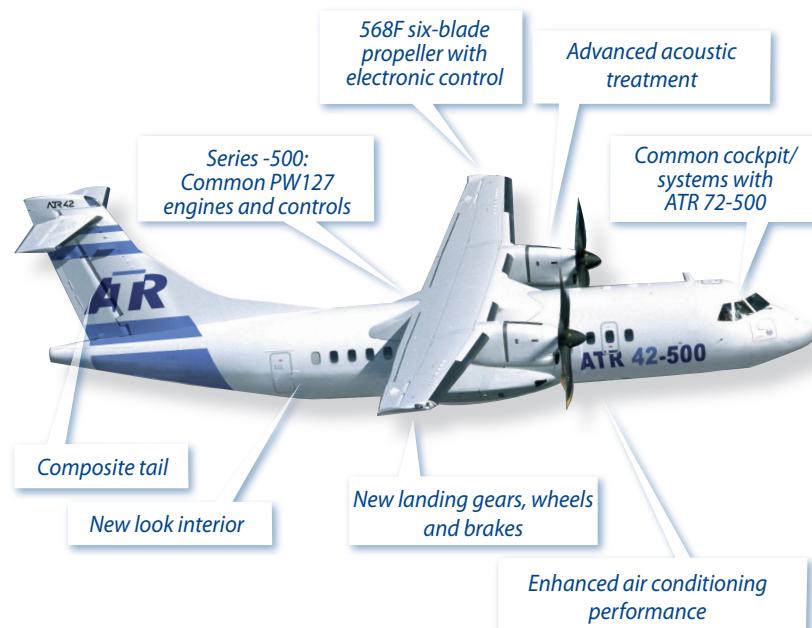
Comfort levels are equivalent to those of jet aircraft, and a high capacity air conditioning system is fitted, in addition to a completely restyled cabin and interior design renewed.

## Outstanding performance

The ATR 42-500 offers excellent performance in terms of cruise speed, 'hot and high' take-off capability, short field requirement.

## Low cost of operation

The ATR 42-500 takes advantage of a proven design and a high degree of commonality with other models to minimize training and maintenance costs and provide superlative economics for improved profitability.



Perfectly suited to operations on narrow runways



# Flexibility



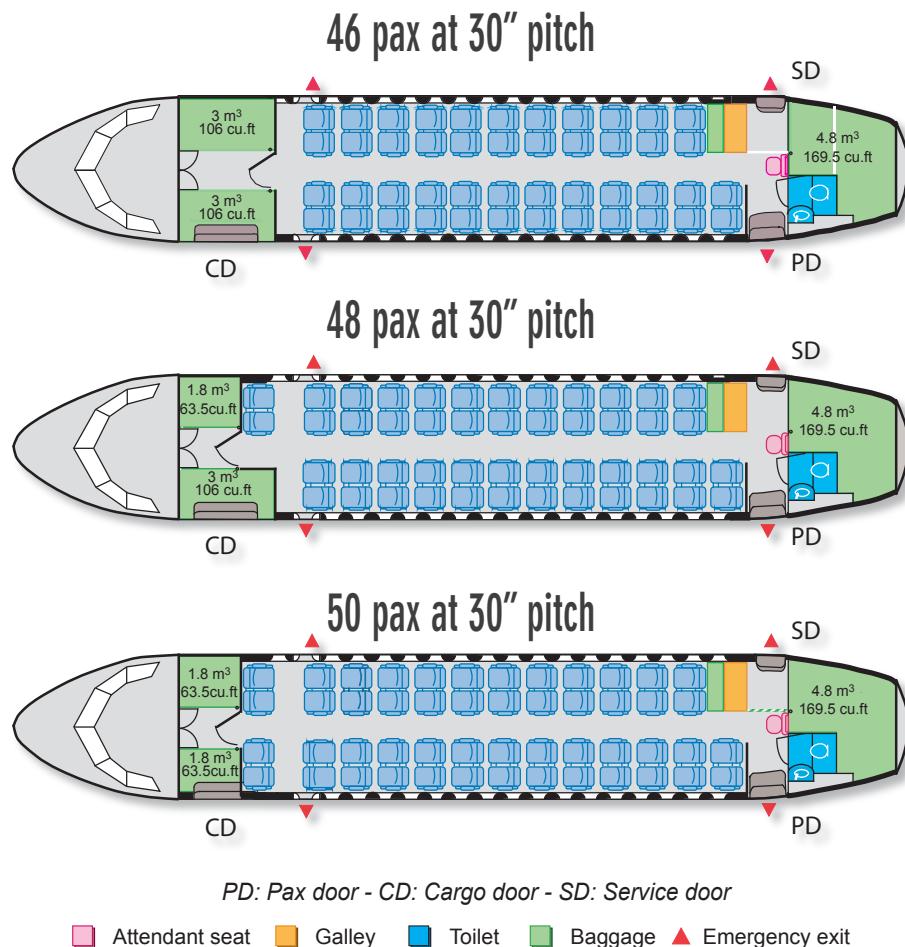
to match  
Customer  
needs



The ATR 42-500 cabin layout provides the passengers with an environment equivalent to that of jet airliners.

The standard cabin layout is 48 seats at 30 inch pitch. The dimensions of the front cargo compartment can be adapted to accommodate 50-seat and 46-seat configurations at 30 inch pitch.

Making the Best Use  
of Available Space



Volumes	46 seats		48 seats		50 seats	
	<i>m<sup>3</sup></i>	<i>cu.ft</i>	<i>m<sup>3</sup></i>	<i>cu.ft</i>	<i>m<sup>3</sup></i>	<i>cu.ft</i>
Baggage compartment	10.8	381.5	9.6	339	8.4	296.5
Baggage per pax	0.235	8.29	0.2	7.06	0.168	5.93
Total baggage <i>incl. overhead bins and stowages</i>	13.35	471.5	12.25	432.5	11.1	392
Total baggage per pax	0.29	10.25	0.255	9.01	0.222	7.84

# Some ATR 42-500 Operators

Regional airlines worldwide are taking advantage of the ATR 42-500 operation, thanks to its excellent performance, exceptionally low operational costs, optimum passenger comfort and outstanding reliability.

Short and narrow runways, hot and high airports, demanding airfields are the daily environment for ATR 42-500 worldwide.

From Latin America to Asia-Pacific region, everywhere in Europe and in tough African climates, ATR 42-500 provides unrivalled reliability, generating revenues and profitability for regional airlines.





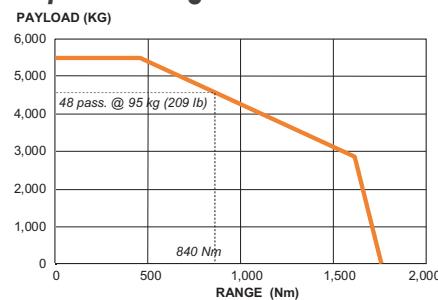
# Excellent Performance

## Tailored to Regional Operation

Thanks to the Pratt and Whitney Canada PW127E engines, the ATR 42-500 offers an excellent level of performance:

- A cruise speed of 300 kt;
- A fast climb from 1,500 ft to 17,000 ft in less than 10 min;
- Outstanding take-off and single engine performance maintained even in 'hot and high' conditions.

### Payload/Range



MTOW 18,600 kg (41,005 lb)  
OEW: 11,250 kg (24,802 kg)  
ISA conditions; high cruise speed  
Reserves: 45min continued cruise & 87Nm alternate

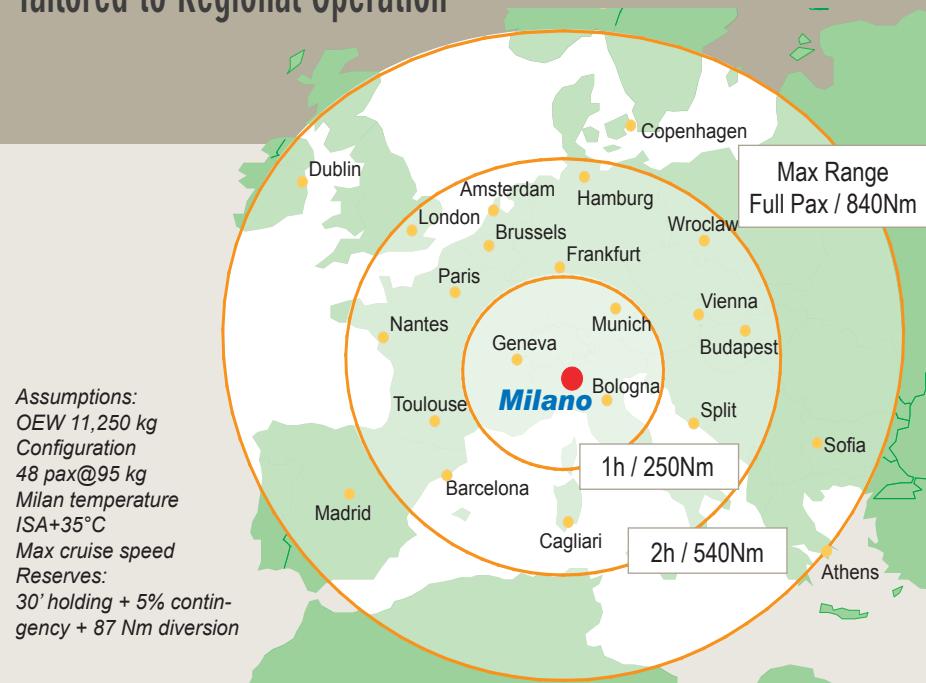
### Block Fuel & Block Time on typical sectors

200 Nm Sector	536 kg (1,241lb)
	51.9 min
300 Nm Sector	797 kg (1,757lb)
	72.6 min

The most efficient compromise between low fuel consumption and speed

Weights	kg	lb
MTOW	18,600	41,005
MLW	18,300	40,344
MZFW	16,700*	36,817
OEW	11,250	24,802
Max. payload	5,450*	12,015
Max. fuel load	4,500	9,920

\* Optional MZFW: 17,000 kg (37,478 lb)  
Associated payload: 5,750 kg (12,676 lb)



### Performance

Take-Off Field Length	1,165 m	3,822 ft
■ ISA, SL, MTOW	1,163 m	3,816 ft
■ 3,000ft, ISA+10°C, TOW for 300Nm, 48 pax at 95kg/209lb		
Landing Field Length (FAR rules)		
- SL,MLW	1,126 m	3,694 ft
- SL, 48 pax at 95 kg/209 lb	1,040 m	3,412 ft
■ Max Cruise Speed (97% MTOW, 17,000ft)		300 kt

### Structural Efficiency

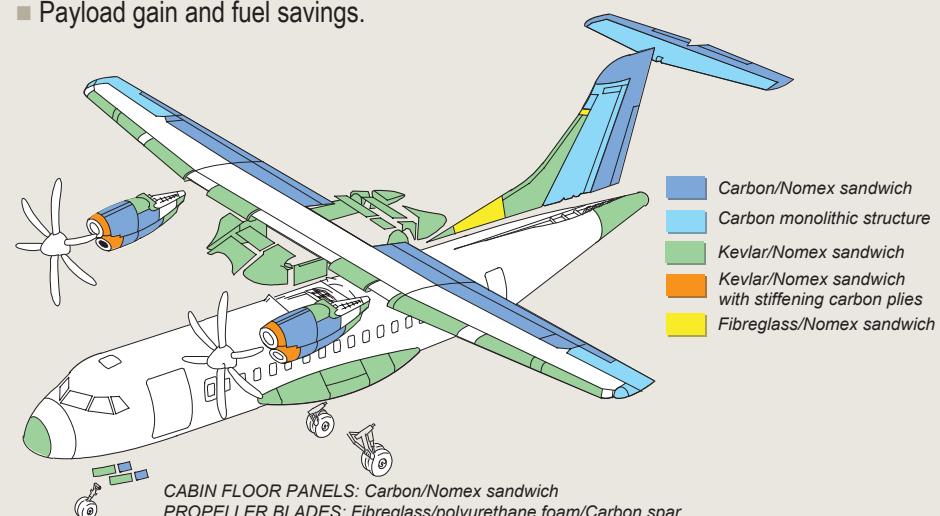
ATR 42 secondary structure is extensively made of composite material, which is not subject to corrosion.

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 42-500 can be summarized as follows:

- Composite / total structure : 14%
- Weight saving 200 kg, equivalent to 2 pax.





# Unbeatable Economics

Turboprops are unrivalled on short-haul sectors.

Economy is a major advantage of ATR -500 series aircraft, thanks to:

## Low maintenance costs

Through simple, mature systems and design-to-maintain philosophy

## Commonality benefits

for airlines operating a mixed ATR fleet

## Excellent reliability

resulting from more than 15 million hours of in service experience worldwide

## Low direct operating costs

The ATR 42-500 has the lowest seat-mile costs in its market segment.

## Direct Operating Costs

On 300 Nm sector, the ATR 42-500 features: less fuel consumption, lower engine maintenance costs and significantly lower airport charges, even when compared to 50-seater jet.

That more than offsets the marginal speed effect of RJet on typical regional sectors.

ATR 42-500 main advantages on Dash 8-Q300:

- Higher cruise speed
- Lower time related costs
- Lower airport charges
- Better airframe maintenance costs

## Economic Assumptions

European Environment, Standard Economics

- Stage length: 200 and 300Nm
- Fuel price: 2.06\$/US gal
- Aircraft prices: As published by price catalog with 10% discount
- 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:
  - 300 Nm: 1800 flights
- Crew : Cockpit: statistical - Cockpit Jet: statistical - Cabin: 32\$ BH/FA
- Maintenance
  - ATR family: as estimated by ATR
  - Competitors: estimated by ATR, based on manufacturers data
- Maintenance labour rate
  - In house: 30\$/MH
  - Contracted: 63\$/MH
- Landing charges: statistical

## Cash DOC and DOC comparison on 300Nm sector

ATR 42-500 less expensive to operate when compared to turboprop and jet competitors on typical regional sectors.

