

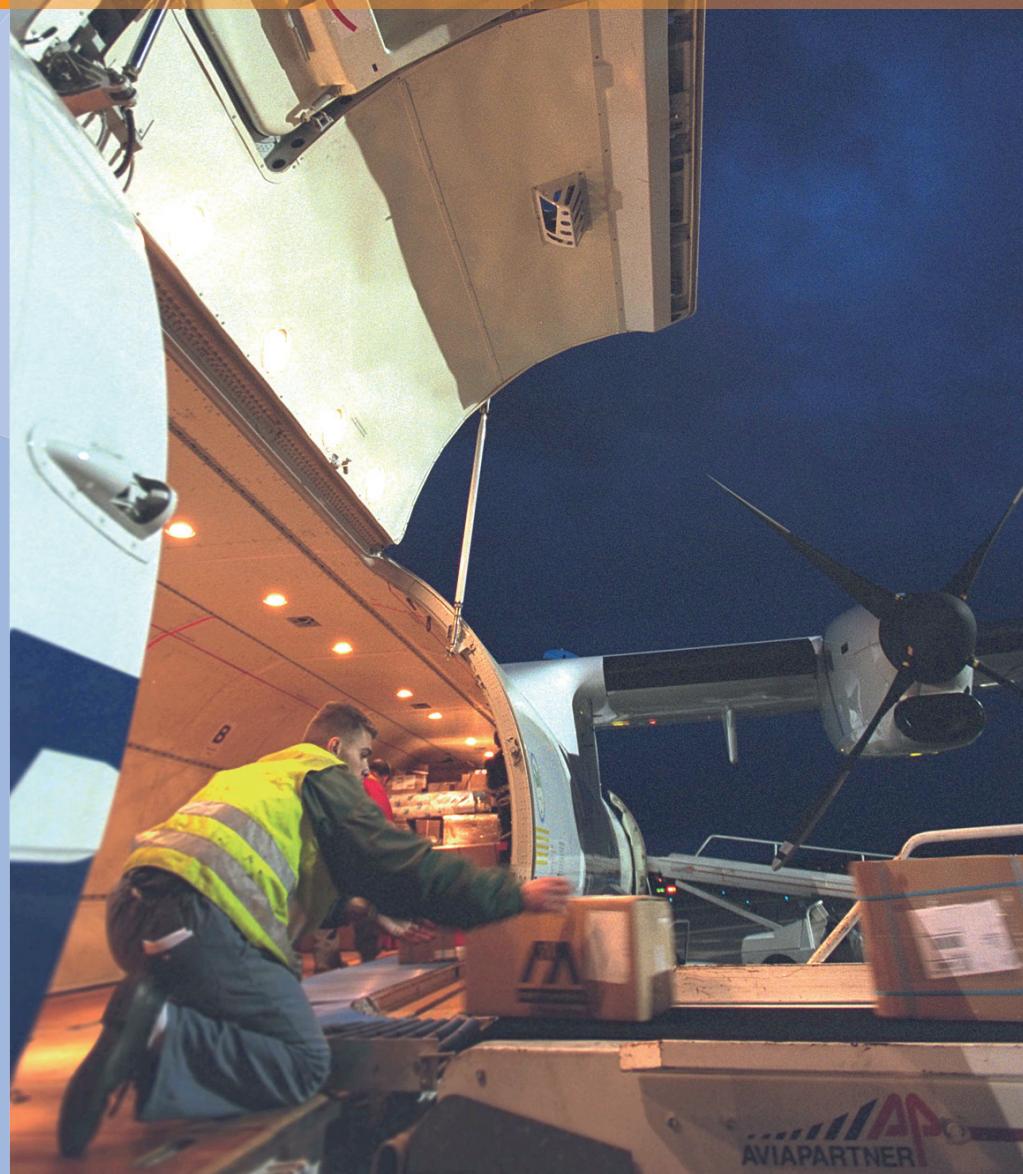
The New Standard in Regional  
and Feeder Cargo Transport

# ATR Freighter Version



*An Alenia Aeronautica and EADS joint venture*

**ATR**



# ATR in the Cargo Market



**F**irst ATR 72 Freighter delivery occurred on July 2002 to the Swiss company Farnair, followed by the first ATR 42 with Large Cargo Door delivered to Northern Air Cargo.

By January 2005, less than three years later, 56 ATR passenger to freighter conversions have been performed or are on order; regional or feeder operators are spread worldwide.

There are several ATR cargo conversions but the most effective, including a Largo Cargo Door, is certified through a STC held by Alenia, the Original Equipment Manufacturer (OEM) of ATR fuselage.

The manufacturing and installation of the bulk conversion and the Large Cargo Door is performed by Officine Aeronavali (OAN), an internationally established firm for cargo conversion integration.

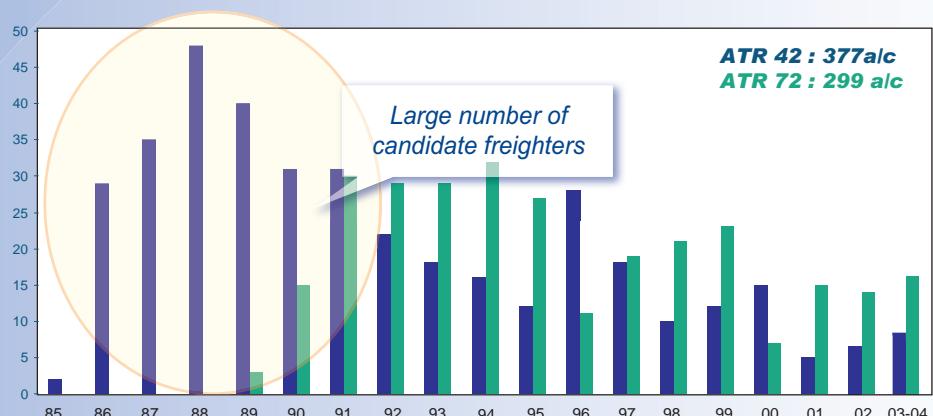
## Market Trends

ATR Freighter appeal is explained by the specific conditions that drive cargo market:

- Global cargo market growth approaching 5% per year
- Express parcels fastest growing segment, boosted by e-commerce : >20% yearly growth
- Increasing demand for modules of ATR size as feeders for large integrators (FedEx, UPS, DHL...)
- Ageing cargo fleet in this category
- Excellent ATR characteristics allowing LD3 containers and 88" width pallet accommodation with Large Cargo Door
- Growing availability of ATR a/c on the 2<sup>nd</sup> hand market at prices consistent with cargo market requirements.

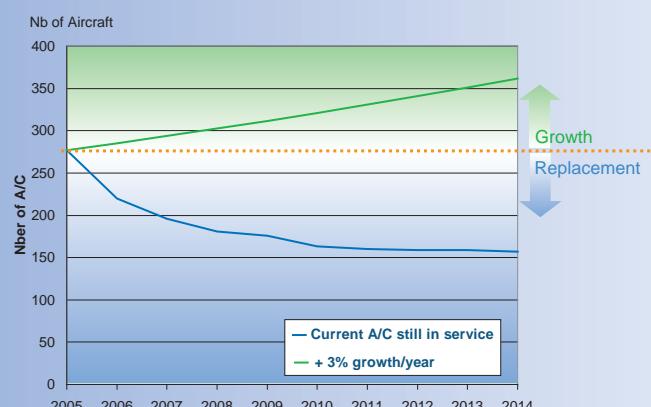


**ATR Passenger Fleet in Service per year of delivery**



Average fleet age : 11 years - ATR 42: 12 years - ATR 72: 9 years

**Regional Turboprop Freighter Fleet Forecast (3 to 9 tonnes category)**



More than  
200 turboprop  
freighters are  
needed over the  
next 10 years.

*Nota: CIS manufactured aircraft and Cessna not included.*

# Bulk Freighter

ATR bulk Freighter version provides with a cabin entirely dedicated to bulk cargo carriage. Freight is loaded using the front left hand cargo door and is partitioned by nets.

## Cabin Modifications

### Basic cargo conversion

- Interior stripping, removal of all passenger related furnishing
- Two added floor rails in aft door area;
- Class E cargo
- 400 kg/m<sup>2</sup> (82 lb/sq.ft) floor load capability
- Cargo door opening from inside.

### Bulk freighter features

- Structural lining to withstand in-flight lateral bulk loads
- Addition of 6 tracks on the cabin lateral panels to allow multiple attachments along the fuselage.



### Cabin length

- ATR 42: 14.72 m (579")
- ATR 72: 19.21 m (756")

### Cross section dimensions

- 2.29 m (90") floor width
- 1.85 m (73") height



## Transverse nets

A kit including 6 transverse nets to be installed on the floor and lateral tracks is provided. These nets will retain the bulk within a longitudinal compartment and have the capability to withstand 9g forward loads, up to the following :

- 1,600 kg (3,527 lb)
- 1,300 kg (2,866 lb) for forward compartment

## ATR Loading Bulk Freight

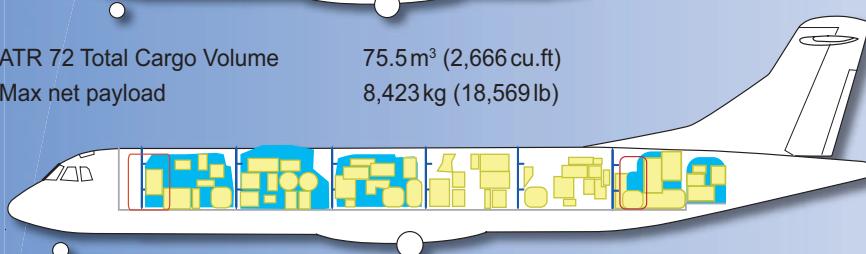
- ATR 42 Total Cargo Volume
- Max net payload

56 m<sup>3</sup> (1,978 cu.ft)  
5,613 kg (12,374 lb)



- ATR 72 Total Cargo Volume
- Max net payload

75.5 m<sup>3</sup> (2,666 cu.ft)  
8,423 kg (18,569 lb)



# ATR is Setting Standards in Regional Cargo Market



## Matching Regional Operator needs

- Optimized volume and payload capability for bulk operation
- Unique Standard containers capability in the regional market
- Active second-hand market with opportunities for low cost, early serial number a/c for replacement of obsolete 5 to 9 tonnes freighter fleet
- Low operating costs.

## Operational Flexibility



**Matching Operators Needs**



**ATR 42**  
5.8 tonnes of max P/L  
450 Nm Range at Max P/L

**BULK FREIGHTER**  
Version

**ATR 72**  
8.6 tonnes of max P/L  
500 Nm Range at Max P/L

**CONTAINER FREIGHTER**  
Version

## Reliability and Customer Services

Reliability is the key for modern regional cargo operation and ATR reliability is proven by more than 12 million flight hours of worldwide regional passenger service.

ATR success worldwide is also based on its first class Customer Services. ATR offers a comprehensive range of services responding to each Operator's need and an extended OEM support on cargo cabin modifications (Large Cargo Door, structural linings...).

## Low operating costs

<b>Typical Operational Costs</b> US\$ per trip	<b>200 Nm Sector</b>		<b>300 Nm Sector</b>	
	<b>ATR 42-300I-320</b>	<b>ATR 72-200I-210</b>	<b>ATR 42-300I-320</b>	<b>ATR 72-200I-210</b>
<b>Maintenance</b>	220	238	283	301
<b>Crew</b>	201	198	281	274
<b>Fuel</b>	237	278	322	381
<b>Navigation &amp; Landing Charges</b>	311	372	383	455
<b>Total Cash Operating Costs</b>	<b>969</b>	<b>1,086</b>	<b>1,269</b>	<b>1,411</b>

### Assumptions

- Utilization: 1,000 BH/year
- Fuel: 1.4 US \$/US gal
- Cockpit crew: 200 US \$/BH (Europe)
- Charges: Navigation (Eurocontrol type - Function of MTOW) - Landing & parking (statistical function of MTOW)

- Maintenance labor cost: Line (50 US \$/FH) - Shop (63 US \$/FH)

# Containers & Pallets

**C**ontainers and pallets Freight conversion is based upon the cabin modifications of the bulk Freighter version with, in addition, a Large Cargo Door and a cargo loading system.

## ATR Large Cargo Door

- 116"x71" (2.94 m x 1.80 m) Large Cargo Door in place of the standard front left hand door
- An auxiliary crew door is incorporated to facilitate crew access on loaded aircraft
- Hydraulically actuated
- Powered by DC pump
- Max door opening: 110°
- Door sill height: 1.05 m (3.44 ft)



A cargo loading system is available for container & pallet loading.



## 9g Front Net

According to the regulation, a 9g front net is required to prevent cargo from blocking cockpit access.

To simplify loading operation the net is divided in two parts mutually secured through quick connection devices. Installation time is less than 3 min (one person).



## Capabilities

The widest cross-section in its category plus the large cargo door:

- allows standard container & pallet operations
- allows oversized bulk freight loading
- allows flexible operational use with the capability to carry unit load devices (ULD) and bulk simultaneously or alternatively.

ATR is the only turboprop capable of carrying 88" wide container or pallet. Other standard ULD, such as LD3, can be carried as well.

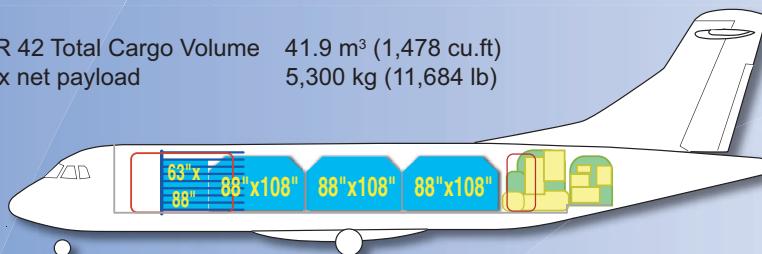
Containers can be directly interlined between large freighters (B747, A300...) and ATR, avoiding the long and expensive transfer from large to smaller containers.



# ATR: the Family Effect

## ATR Loading 88"x56" & 88"x108" Containers + Bulk Freight (LCD)

- ATR 42 Total Cargo Volume 41.9 m<sup>3</sup> (1,478 cu.ft)
- Max net payload 5,300 kg (11,684 lb)

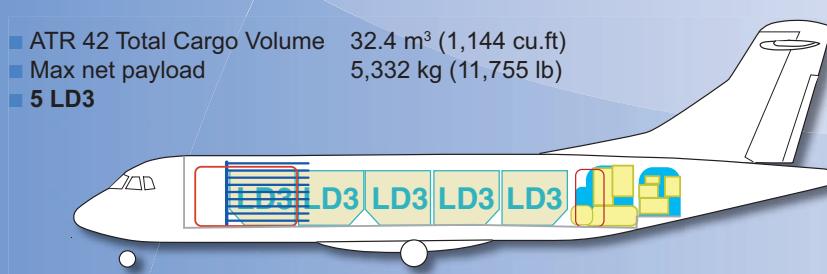


- ATR 72 Total Cargo Volume 55.9 m<sup>3</sup> (1,975 cu.ft)
- Max net payload 8,093 kg (17,842 lb)

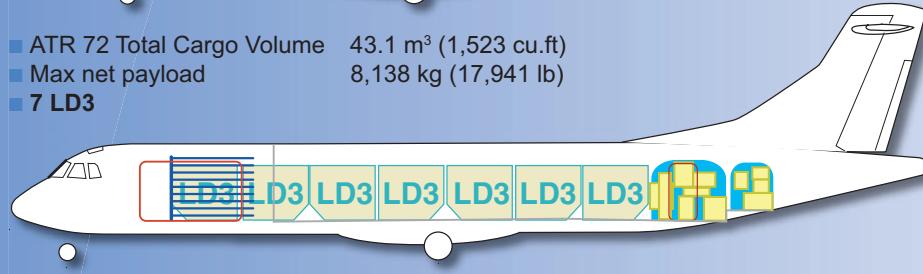


## ATR Loading LD3 Containers + Bulk Freight (LCD)

- ATR 42 Total Cargo Volume 32.4 m<sup>3</sup> (1,144 cu.ft)
- Max net payload 5,332 kg (11,755 lb)
- 5 LD3



- ATR 72 Total Cargo Volume 43.1 m<sup>3</sup> (1,523 cu.ft)
- Max net payload 8,138 kg (17,941 lb)
- 7 LD3



## Operational Flexibility

ATR Freighter family allows a unique flexibility in the turboprop cargo market with:

- A wide range of payload (5.3 to 8.6 tonnes) and usable volume (56 to 75 m<sup>3</sup>)
- The capability to carry bulk or containerized freight.

## Family Commonality Benefits

ATR 42 and 72 commonality permits:

- Spare parts optimization, about 90% of common spares in Part Number
- Cross crew qualification
- Common ground equipment resulting in significant savings for the operators.

## Environment friendly

Thanks to the latest propulsion technology combined with good aerodynamic design, ATR aircraft feature:

- A very low exterior noise level, well below ICAO Annex 16 Ch. 3 and Ch. 4 requirements
- Exceptionally low fuel consumption and minimum exhaust emissions.