



## 1.2 - ATR sales and delivery status

End year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>ATR 42 orders</b>	10	22	13	24	14	20	4	14	6	1
<b>ATR 72 orders</b>	9	33	12	20	7	34	17	16	18	16
<b>Total ATR orders</b>	<b>19</b>	<b>55</b>	<b>25</b>	<b>44</b>	<b>21</b>	<b>54</b>	<b>21</b>	<b>30</b>	<b>24</b>	<b>17</b>
<b>Cumulative total ATR orders</b>	<b>363</b>	<b>418</b>	<b>443</b>	<b>487</b>	<b>508</b>	<b>562</b>	<b>583</b>	<b>613</b>	<b>637</b>	<b>654</b>
<b>ATR 42 deliveries</b>	22	18	16	12	28	18	10	12	7	2
<b>ATR 72 deliveries</b>	29	29	32	27	11	19	21	23	15	6
<b>Total ATR deliveries</b>	<b>51</b>	<b>47</b>	<b>48</b>	<b>39</b>	<b>39</b>	<b>37</b>	<b>31</b>	<b>35</b>	<b>22</b>	<b>8</b>
<b>Cumulative total ATR deliveries</b>	<b>315</b>	<b>362</b>	<b>410</b>	<b>449</b>	<b>488</b>	<b>525</b>	<b>556</b>	<b>591</b>	<b>613</b>	<b>621</b>
<b>Total ATR backlog</b>	<b>48</b>	<b>56</b>	<b>33</b>	<b>38</b>	<b>20</b>	<b>37</b>	<b>27</b>	<b>22</b>	<b>24</b>	<b>33</b>

Those figures make ATR the leading turboprop manufacturer. 17 aircraft have been sold during the last 4 months and 40 during the last 12 months, thus highlighting that turboprop aircraft still have a key role to play in the regional transport development throughout the world.

## 2. - Market trends and forecasts

### 2.1 - World market forecasts

ATR market forecasts are based on the FEAMA (Forum of European Aerospace Market Analysts) consensus. The FEAMA members include all the most important European airframe, engine, systems manufacturers and suppliers (extended as well to non-European manufacturers). FEAMA members are :

Airframe Manufacturers	Engine Manufacturers	Systems Suppliers	Lessors / Airlines
Alenia	BMW	DTI	GECAS
ATR	General Electric	Honeywell	KLM
British Aerospace	MTU	Lucas Aerospace	
Dassault Aviation	Pratt & Whitney	Messier Dowty	
EADS	Rolls Royce	Smiths Industries	
Embraer	Snecma	Volvo Aerospace	
Fairchild-Dornier			

The consensus reached on the regional market forecast is presented hereafter for the 30 to 90 seat market segment :

	2001	2002	2003	2004	2005	Sum	Average
<b>30-89 seats turboprops</b>	75	69	66	63	61	335	67
<b>30-89 seats regional jets</b>	249	226	215	208	193	1090	218
<b>30-89 seats total</b>	<b>323</b>	<b>295</b>	<b>281</b>	<b>271</b>	<b>255</b>	<b>1424</b>	<b>285</b>
<b>% of turboprop aircraft</b>	<b>23.1</b>	<b>23.5</b>	<b>23.5</b>	<b>23.4</b>	<b>24.0</b>	<b>23.5</b>	<b>23.5</b>

Those figures have been established in 1999 and it is likely that the next consensus revision will give a better role to turboprops when compared to regional jets because of the following factors :

- the tripling of oil prices in two years has certainly improved turboprop perception in the industry
- regional jets pilot pay rise is unavoidable, especially in the US where pilots claim for similar salaries than those paid to narrow body (B737, A320, etc..) pilots, as indicated for instance by the current Comair pilots strike for more than 50% wage increase
- yield decline is still an issue
- some signs of recession and declining traffic levels have been observed

## 2.2 - Expected ATR orders

As indicated in previous chapter, the expected delivery rate for 30 to 89 seat turboprops is 67 aircraft per year in average.

During the late 90s, industry consolidation has led to the closure of British Aerospace, Saab and Fokker assembly lines. Today only two turboprop manufacturers are remaining on the market : De Haviland and ATR.

ATR and De Haviland have approximately a 50 percent market share each. It is ATR's intention to keep this market share thanks to:

- its unique customer base (more than 100 operators in nearly 60 countries)
- the ability of its products (especially in terms of operating economics) to be operated in new and emerging markets (such as Asia and Latin America) or in tough economic environments (such as Europe).

Therefore, ATR forecast is based on an annual production of both ATR 42 and ATR 72 close to 30 aircraft for year.

## 2.3 - European market specificity

ATR analysis is that jetmania ruling the US market will not affect Europe at such levels than those experienced among US operators. In fact, it is very unlikely that regional jets are going to flood Europe and to storm the market as in the US, because of the following reasons:

- European environment is in general more expensive for regional airlines than in the US and is increasing the gap between jets and turboprops
  - higher weight related costs (landing , Eurocontrol)
  - higher crew salaries and social charges
  - even higher fuel prices, which are likely to stay
- 50% of the regional flights in Europe are below 250 NM, where the economics of turboprops are compelling
- turboprops are better placed to face increasing ecological pressure in Europe and potential associated taxes

In fact, the European market is today the most important market for ATR when compared to the North American market, as expressed by the following figures:

- 271 new aircraft sold to European operators (vs. 188 aircraft sold in North America)
- 250 aircraft in service with 50 operators in 21 countries (vs. 150 aircraft with 5 operators in North America)
- 6 full flight simulators located in France, Greece and Finland (vs. 4 located in the USA)

### 3. - ATR aircraft airfield data and requirement

#### 3.1 - Basic airfield data

##### 3.1.1 - Airfield performance

Given the declared distances at Kiel airport, ATR 42 and 72 performance indicate that basic required take-off and landing distances are fully compatible with efficient operations from and to this airfield.

	ATR 42-500	ATR 72-500
Take Off Field Length ISA – Sea Level – MTOW	1 165 m	1,223 m
Take-Off Field Length ISA – Sea Level – TOW for 300 NM	990 m	1,079 m
Landing Field Length ISA – Sea Level – MLW	1,126 m	1,048 m
Landing Field Length ISA – Sea Level – Max pax LW	1,040 m	985 m

Nevertheless, a specific analysis taking into account all declared distances (TODA/ASDA/TODA/LDA) and flight path obstacles will be performed to assess ATR 42-500 and 72-500 performance at Kiel.

##### 3.1.2 – Certificated noise levels

Certificated noise levels expressed in EPNdB are summarized in the table below and compared to current chapter III limits :

	ATR 42-500	ATR 72-500	ICAO / FAR 36 chapter III limit
Take-off	76.6	79.0	89
Sideline	80.7	83.2	94
Approach	92.4	92.2	98
Global	249.7	254.4	281

ATR aircraft are fully compliant with current chapter III limits as well as with future chapter IV regulations, which are anticipated to be at 271 global EPNdB.

### 3.2 - ATR performance at Kiel airport

#### 3.2.1 - Considered data

Runway	08	26
Elevation	92 ft	86 ft
TORA	1 260 m	1 180 m
ASDA	1 260 m	1 260 m
TODA	1 320 m	1 180 m
LDA	1 100 m	1 216 m
Slope	-0.15%	+0.15%
Obstacles	1 considered	6 considered

#### 3.2.2 - ATR 42-500 & 72-500 specific airfield performance at Kiel

The specific performance is computed using the following assumptions :

- Wet runway
- No surface wind
- ISA conditions

Under those conditions, both ATR 42-500 and ATR 72-500 are able to perform at Kiel at their structural weights:

- ATR 42-500 : TOW = MTOW = 18 600 kg    LW = MLW = 18 300 kg
- ATR 72-500 : TOW = MTOW = 22 500 kg    LW = MLW = 22 350 kg

#### 3.2.3 - ATR 42-500 & 72-500 specific range out of Kiel

The range at full passenger payload is computed using the following assumptions :

- 97 kg passenger unit weight
- No en route wind
- ISA conditions
- JAR reserves

Under those conditions, ATR 42-500 and ATR 72-500 are able to carry their maximum passenger payload on the following distances:

- ATR 42-500 : 48 pax on 752 NM
- ATR 72-500 : 68 pax on 777 NM

ATR range out of Kiel allows reaching most of destinations within Western and Central Europe as well as most of Scandinavian cities, as shown here below:



### 3.2.4 - Conclusions

As indicated in the previous analysis, ATR 42-500 & 72-500 aircraft can perform at maximum efficiency to and from Kiel airport, as demonstrated by day to day Cimber Air's operations.

ATR 42-500 and 72-500 offer the ability to Kiel passengers to reach most of Western, Northern and Central European economic centers with a high degree of comfort and reliability.

From this perspective, the current runway does not need any extension and is fully adapted to efficient regional operations using ATR aircraft.

I trust all this data will meet your expectations and will constitute a useful material to build your airport development plan.

I have also attached to this fax a copy of a 4 pages leaflet showing ATR products benefit as far as environment is concerned.

I stand at your disposal for any additional data or clarification you may require;

Best regards,

Fabrice VAUTIER  
Director, Technical Sales