



Airbus Industrie A330 entered service with Air Inter and Aer Lingus this year

AIRBUS INDUSTRIE

1 Rond Point Maurice Bellonte, F-31707 Blagnac Cedex, France. Tel: +33 (61) 933333; fax: +33 (61) 933792; telex: 530526 FAIRBU.

A300/310

The A300 and A310 remain in production as derivatives of Airbus' first product — the A300B. The first A300-600F freighter was flown in December 1993 and is in service with launch customer FedEx, which is using them initially on its US domestic routes, replacing Boeing 727-100s. The aircraft has a heavily modified fuselage with a 3.5 x 2.5m main-deck cargo door, strengthened floor, 9g safety-barrier net and only two forward personnel doors. A main-deck cargo-loading system is installed. Two configurations are on offer: the first is for maximum payload and will carry 54.78t some 3,550km, while the other is for maximum range, taking 50t for 4,850km.

The A300-600R and A310 both have 180min ETOPS clearance for all engine types, allowing them to be operated at up to 180min single-engine diversion time from the nearest suitable airport. Airbus says that, despite the current low-production rates for the aircraft, it expects demand to return from about 1998 as growth orders supplant the replacement market in the Boeing 707/McDonnell Douglas DC-8 class.

A320

The fly-by-wire A320 provides the core of Airbus' short/medium-haul family, typically seating 150 people in a two-class layout. With some 650 aircraft ordered, Airbus is now beginning to see the fruits of the A320's commonality with its other products. The USA has approved Airbus' cross-crew-qualification concept, which allows airlines to have pools of pilots simultaneously rated on the narrowbody family and the A330/340.

A319

The 124-seat A319 is due to be flown in mid-

1995, with deliveries to Swissair beginning in the second quarter of 1996. It has a common type-rating with the A320 and A321. The Swissair aircraft will have a maximum take-off weight of 64t, but a 68t version is available and has been ordered by Air Canada. Heavier, longer-range, versions are under study. Airbus has talked of a market of some 400 aircraft all told and is exploring the potential for a corporate version. Final assembly will take place, as with the A321, at Hamburg. Both CFMI and IAE offer downrated versions of their A320 engines for the A319. The type is in competition with the proposed Fokker 130, in which DASA has an interest as well, but Airbus does not believe that it competes with any of the smaller types of regional aircraft.

A321

The A321 is a stretched version of the A320 which entered service with Air Inter, Alitalia and Lufthansa during 1994. The type is assembled in Hamburg, making it the first large civil aircraft to be built in Germany since the Second World War. The aircraft is 6.93m longer than the A320, with 13 more fuselage frames. It has 24% more seats and 40% greater hold volume.

Heavier operating weights and the extra length allow it to carry 186 passengers in a two-class layout. Airbus says that the A321 was designed to cut costs rather than increase range, so that it is now a candidate for a "throttle-push" which could increase range by 50% with only a small cost increase. In late 1994, it appeared likely that the resultant A321 growth would go ahead.

A330

The medium-range, twin-engine, widebody A330 entered service with Air Inter and Aer Lingus during 1994, but has recently sold more slowly than the largely identical, but four-engined, A340. For the first time, Airbus is offering a R-R engine on its aircraft — the Trent 700. The Trent-powered version was flown in January 1994 and is due for certification in December 1994, followed by deliveries to Cathay Pacific starting the following

month. Airbus also offers the GE CF6-80E1 and PW4000 for the A330. The A330 was the world's first airliner to be awarded simultaneous US and European certification. The version in service is the GE-powered model, which has 120min ETOPS clearance, but deliveries of the PW4000-powered version to Malaysian Airlines and Thai International, due in August 1994, were delayed because of quality problems with the Martin Marietta-supplied thrust reversers. Airbus' A330 future ETOPS targets now are:

- GE, 180min in the first quarter of 1995;
- P&W, 120min in "spring 1995" and 180min in mid-1995;
- R-R, 120min in mid-1995, and 180min at the end of 1995.

The A330, together with the A340, was the first airliner to receive general approval for satellite-navigation equipment. The global-positioning system is being specified by many customers. Airbus is studying reduced-capacity/increased-range versions of the A330, with fuselage-frame reductions varying from 17 to eight. A model carrying 240 three-class passengers, with a range similar to that of the Boeing 767-300ER, is theoretically possible, but Airbus says that its operating costs may be too close to those of the A340 to justify development.

A340

The A340, fitted with four CFM56-5C2 engines, has the longest range of any airliner and has sold well to long-haul carriers which cannot justify an aircraft the size of a Boeing 747-400 on some or all routes. Airbus promotes the commonality advantages of the type, which has the potential for cross-crew qualification with all of its models from the A320 onwards. The A340, although not the A330, also has substantial engine commonality with the narrowbodies. The fly-by-wire A340 shares the technical developments of the A330 and also has a lower-deck crew-rest compartment which has been ordered by several airlines, including Lufthansa. Airbus is formulating an avionics package, called the Airbus Interoperable Modular Future Air Navigation System (AIM-FANS), which will make the A340, and other types, compatible with the global FANS. For the future, Airbus is considering an "A340-8000" with a thrust bump, increased weight and extra fuel, to give a range of 15,000km carrying 260 three-class passengers. It says that it could be available as soon as 1997. Various 180kN-class engines being proposed would allow development of a series of range/capacity trade-offs, including a version with 20h endurance.

A3XX

Airbus is discussing with the airlines the prospect of a 500- to 800-seat aircraft for entry into service in 2003. Its conceptual design contains two passenger decks above a cargo deck in an ovoid cross-section. It would have a wing-span of less than 80m and a MTOW of 470t. It could carry 530-570 three-class pas-