

COMMERCIAL AIRCRAFT OF THE WORLD.

been provided as repayable launch aid by the Dutch Government. With the F.27 and F.28 out of production, the company's success as a builder of airliners depends on the success of the two new models.

There can be no doubt that the Dutch company has a wide customer base, built up by the F.27 and F.28. The two new models however, appeal not only to traditional Fokker customers, but also to large, scheduled airlines based in the developed world. This brings with it the possibility of large orders which have to be delivered against a very tight timetable. This is one of the reasons Fokker has talked with Lockheed about a second production line in the USA.

For the longer term, the Fokker company is working with Boeing, MBB, and IPTN on the ATRA-90 project.

Fokker F.28. Fokker sold the last F.28 in 1987 and production has ceased. About 200 examples are in airline service and will remain there, given no ban on Chapter 2/Stage 2 aircraft, for a considerable time.

The first prototype F.28 made its maiden flight in May 1967, and the 85-seat Mk4000, the ultimate model, in October 1976. An updated F.28, using F100 technology, now looks unlikely.

Programme status: F.28, all models: orders, 241; delivered, 241; production ended.

Fokker 100. The first Fokker 100 made its maiden flight on November 30, 1986, and deliveries of certificated aircraft to Swissair began in February this year. Fokker and GPA Fokker 100 announced a complex deal in July, under which Braniff is to purchase 12 Fokker 100s with options on six additional examples. In order to obtain early delivery positions, the 12 aircraft will be taken from the present order for 40 with 60 options held by GPA Fokker 100. Deliveries of the initial 12 aircraft will take place between September 1989 and December 1990. The six additional aircraft could follow in the first half of 1991 if the options are exercised on schedule, beginning at the end of this year.

It is now known that Inter-Canadian, a feeder subsidiary of Canadian Airlines International, has arranged to take seven of the eight Fokker 100s on order by leasing company ILFC.

As a natural successor to the F.28, the stretched and re-engined Fokker 100 has sold more quickly and in much larger numbers. As well as a refined wing and Tay rather than Spey engines, the Fokker 100 has an advanced "glass" cockpit and a redesigned interior. In a typical single-class configuration it has seats for 107 passengers. It easily meets the Stage 3/Chapter 3 noise rules and has significant growth potential. Aircraft are to be certificated initially at 95,000lb (43,182kg), but weights up to 105,000lb (47,727kg) are in prospect with an uprated Tay 670 engine. Development possibilities include extended range (up to 2,000 n.m.) or a fuselage stretch (126-140 passengers).

The \$380 million order from US Air in July 1985 was made against tough competition from the BAe 146 and the proposed 737L (Lite)—as well as from "outside possibilities" like the MD-87 and A320. To secure the deal, Fokker had to offer a number of refinements, including a higher gross weight, more thrust, a taller passenger door, and a relocation of the avionics to provide greater below-deck cargo volume. It was changes such as these, modifications requested by Swissair, and the simultaneous development of the Fokker 50, which seriously delayed the programme.

Aircraft for launch customer Swissair will have a gross weight of 95,000lb (43,090kg) and will be powered by the 13,850lb (55.4kN)-thrust Tay 620-15. Subsequent aircraft, for US Air, have a maximum weight of 98,000lb (44,450kg), and are powered by the 15,100lb (60.4kN)-thrust Tay 650. The availability of this more-capable aircraft will doubtless be of long-term benefit to the success of the Fokker 100.

The Swissair order for eight with six options in

July 1984 was followed by the KLM order for ten plus five options in May 1985. The US Air order at the end of July 1985 for 20 with 20 options was particularly significant because it came from a leading North American carrier, and this is likely to be an important influence on other potential customers. US Air has a requirement for up to 80 aircraft. There was then a pause in sales until August 1986, when the International Lease Finance Corporation ordered seven in a deal valued at \$147 million. Fokker, with a 25 per cent share, entered into a joint-venture leasing arrangement with the GPA Group (50 per cent), Mitsubishi Trust and Banking Corporation (15 per cent) and the Mitsubishi Corporation (10 per cent) in November 1986, in a deal involving 40 aircraft plus 60 options. ILFC ordered one more aircraft in January 1987. Speculation centred on the possibility that Wardair Canada would buy 24 Fokker 100s to set up a regional feeder network were proved correct with an announcement made at Farnborough.

Programme status: orders, 100 including 1 unnamed; options, 91; delivered, 8; production building up to three a month.

International

ATRA-90 The study of a 90-seat unducted-fan-powered airliner, begun last year by a group including Boeing, MBB, Fokker, and IPTN of Indonesia, has effectively been shelved. The executive council of the consortium decided in May that an early launch was unlikely and that, for the moment, it would simply monitor developments and continue to evaluate changes in the market.

MPC-75 Messerschmitt-Bolkow-Blohm and Catic of China have been working since October 1985 on the definition of an all-new 60-85-seat airliner powered by two rear-mounted unducted fans. The proposal is to include advanced technology such as fly-by-wire, composites, aluminium-lithium, and laminar-flow wing aerodynamics. The General Electric GE-38-B5 has been suggested as a possible powerplant, as has the Allison T406-based 501-M80R33. Separate memoranda of understanding with GE and Allison have been signed. Shorts recently began talks with the aim of becoming a partner in the programme. A new company called MPC-75 GmbH is being formed, with MBB remaining as consortium leader. A family of aircraft comprising

an MPC-50 and MPC-90 may emerge, with the proposed Shorts FJX becoming the smallest member of the family. MPC has held talks with the Japanese industry, and a decision about its participation could be made soon.

Lockheed

The three aircraft divisions of the Lockheed Corporation have been integrated into a single operating company, focussing its combined strengths on advanced aeronautical products and services. Known as Lockheed Aeronautical Systems Company (LASC), it comprises three divisions, at Burbank (headquarters), Georgia, and Ontario, California.

86 South Cobb Drive, Marietta, Georgia 30063, USA
◀SF (404) 424-9411

LASC-Georgia is continuing negotiations to become a subcontractor or a risk-sharing partner with Airbus on a second assembly line for the stretched A320-300, and with Fokker for assembly of the Fokker 100. The division also continues its involvement in the Future International Military/Commercial Airlifter (Fima) project that has expanded from its original European group of BAe, Aerospatiale, and MBB, to take in Aeritalia and Casa.

L-100 Commercial Hercules. The Commercial Hercules is the only propeller-driven aircraft in the Survey. The original civil model, the L-100, was certificated in October 1965. In October 1968, the L-100-20, which featured a 100in (2.54m) fuselage stretch over the basic military C-130 and Commercial L-100, was certificated. The latest model, the L-100-30, was certificated in October 1970 and has a further 80in (2.03m) stretch so that its volume and lift capability are better suited to the typical densities of civil air freight. The largest operators of L-100 are Safair Freighters (8), and Southern Air Transport (17). L-100s are in service with 32 operators, including 21 airlines. The current price for a Commercial Hercules is about \$30 million.

Programme status: some 1,900 Hercules of all variants have been ordered and 1,865 delivered. 111 are L-100 Commercial models. The planned production rate, military and civil, for 1989 is around 30 aircraft.

Although TriStar production ended in 1983, subtypes continue to be created by conversion

