Strato 2C takes flight but funds stay low

ANDREJ JEDZIORSKI/MUNICH

BURKHART GROB has flown its Strato 2C high-altitude research aircraft successfully for the first time, in an hour-long test flight on 31 March.

The Strato 2C, the largest all-composite aircraft in the world, took off from Grob’s Mindelheim site in Bavaria with former NASA test pilot Einar Enevoldson and Hans-Ludwig Meyer at the controls. After landing at Memmingberg, the crew described the aircraft's performance and handling as "excellent" and "trouble-free".

The company is still struggling to get the project's Government sponsor, the Federal Ministry of Research and Technology, to cover a DM30 million ($20 million) budget over-run to fund avionics and testing. A decision on this additional money had been expected in January, following the freezing of Government funding for the programme in June 1994 — leaving Grob DM10 million short of the DM72 million the ministry had promised to pay towards the DM93 million programme.

Grob says that the ministry is now "slowly" paying off this last tranche of the original funding. Grob, however, has meanwhile been forced to fund the two-and-a-half-year-old programme itself.

The Strato 2C is to be a one-off aircraft for use by the German Aerospace Research Establishment. The aircraft will be used to transport two pilots and two researchers into the upper stratosphere to carry out atmospheric and meteorological research, Earth observation or telecommunications work. The manufacturer says that it is having preliminary discussions with other unspecified commercial customers, but has not yet begun to market the aircraft for military applications.

The 24m-long aircraft has a wing span of 56.5m and a maximum take-off weight of 13.5t. It can carry a full crew complement and 1t of cargo at 59,000ft (18,000m) for 48h on a single tank of fuel, and can be operated for 8h at 78,700ft.

With the air density at these altitudes only some 3.5% of that at sea-level, Grob — with partner IABG — has developed a compound propulsion system which uses compound turbochargers to supply sea-level pressure air to the Telecynhe Continental Voyager TSIOL-550 piston engines, maintaining a 300kW power output up to 24km altitude.

Opus 280 restarts

ASL HAGFOR AERO has restarted production of the Opus 280 single-engine trainer, following receipt of its JAR Very Light Aircraft type certificate. Production work stopped in 1994 after certification took longer than expected. Two partially built airframes are on schedule for delivery in June to the Bromma Flight School, the local Scandinavian distributor. ASL has orders for four aircraft.

AlliedSignal releases mini-APU details

ALLIEDSIGNAL HAS revealed details of a mini auxiliary power unit (APU), the RE100, which it is offering to Cessna for the Citation Excel and proposing for other corporate aircraft.

The RE100 is a smaller version of the 36-130 APU used on the Falcon 900 and others. It measures 520mm in length and 360mm in depth. AlliedSignal believes that between 1,000 and 1,200 RE100s could be produced for applications already identified on aircraft such as the Learjet 45 and Beechjet 450. Other projects, such as the forthcoming Dassault Falcon 20 replacement, are also believed to be suitably sized for the APU.

The single-stage centrifugal compressor and single-stage turbine APU would generate around 100kW (135shp). Without the 9kg of the associated starter generator, the basic weight of the RE100 is 34kg. "This gives us a phenomenal power-to-weight ratio for an engine of this size," says director of engineering for commercial APUs Jim Rhoden.

The first engine will undergo tests ten months after the first order is received.

Orenda to certificate piston engine for King Air 90

HAWKER SIDDELEY Canada's Orenda division is to seek certification of the new Orenda Series piston engine on the Raytheon Beech King Air 90 under an agreement with US modification centre Stevens Aviation.

Toronto-based Orenda will supply two 450kW (600hp) OE-600A liquid-cooled, twin-turbocharged, Vee-8 engines in July for installation on a Stevens-owned King Air C90B in place of the present Pratt & Whitney Canada PT6A turboprops.

Orenda plans to certificate the OE-600A by the end of this year and will own the supplemental type certificate for the re-engined King Air. Greensboro, North Carolina-based Stevens will market, install and service the engines.

Stevens says that the Orenda 600 is expected to increase the climb performance and cruise speed (and reduce the field length and operating cost) of the King Air "at very low installed cost".

The two companies see a market for more than 300 King Air conversions. At $100,000, the Orenda 600 costs less than the likely overhaul cost of a PT6A, the manufacturer argues.

In addition, fuel consumption is reduced and altitude performance improved. Orenda is aiming for an initial time between overhauls for the OE-600 of 1,500h, compared with 3,000h for a turboprop, but overhaul cost will be only $25,000, the company says.

Orenda is planning similar agreements to re-engine the de Havilland Beaver and agricultural aircraft, such as the Grumman Ag-Cat, which are powered by radial piston engines.

With a power range of 370-560kW, and a 750kW variant planned, the Orenda Series could become the most powerful general-aviation piston-engine family available. The Canadian company acquired the rights to the former Thunder aluminium-alloy Vee-8 engine from CanAir in 1994.