THE FAIREY AVIATION COMPANY LTD.

CONTRACTORS TO THE BRITISH, DOMINION AND FOREIGN GOVERNMENTS

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PRESS RELEASE

6th November 1957

THE FAIREY ROTODYNE FLIES

Maiden Flight of World's First Vertical Take-off Airliner

The Fairey Rotodyne, world's first vertical take-off airliner flew for the first time at White Waltham airfield, Berks, today. It took off vertically at 8.45 a.m. and its behaviour was entirely satisfactory. The aircraft was piloted by S/Ldr. Ronald Gellatly, A.F.C.

The Rotodyne is the most advanced aeroplane concept flying anywhere in the world. Carrying up to 48 passengers it ascends vertically as a helicopter and having gained height, flies horizontally as a normal fixed-wing airliner, at a speed of nearly 200 m.p.h.

In it are realised for the first time, plans for the transport of passengers and freight from the centres of cities and from small unprepared spaces, combined with the ability to undertake the multifarious roles that have hitherto been the province of the normal helicopter.

The Rotodyne is essentially an orthodox twin-engined airliner, powered by two Napier Eland propeller-turbines driving normal forward-facing propellers, with the addition of a 90 ft. diameter four-blade rotor mounted well above the fuselage. The rotor blades are of stainless steel and each blade has a Fairey Pressure-Jet unit at its tip.

For take-off compressed air from the Eland engines is piped through the blades and is burned with fuel in the tip jet units. The resultant lift from the rotor takes the Rotodyne into the air vertically as a helicopter. This system of ducting the air to a tip-jet drive dispenses with the gears, shafts and clutches inseparable from a normal helicopter and ensures greatly increased life and safety.

At operative height the engine power is transferred to the forward-facing propellers and the Rotodyne then flies forward as a normal aeroplane with the rotor auto-rotating (or "free-wheeling") and sharing the lift with the fixed wing. The sequence is reversed for landing.

Thus the Rotodyne has all the advantages of the fixed wing aircraft, such as speed, economical payload, lack of vibration, twin engine safety, simple maintenance and the ability to fly at night and in all weathers, which are denied the pure helicopter, plus the unique advantages of true vertical take-off and landing.

Considered purely as a helicopter it is the largest transport helicopter in the world today, with very considerable military as well as civil applications. With an all-up weight of just over 17 tons, it will carry up to 48 passengers or 4½ tons of freight over ranges of up to 400 miles at a cruising speed of 185 m.p.h.

The Rotodyne was designed and developed by a team led by the Company's Technical Director, Mr. R.L. Lickley,B.Sc.,D.I.C.,M.I.Mech.E., F.R.Ae.S. Under him Dr. George S. Hislop,Ph.D.,B.Sc.,A.R.T.C., M.I.Mech.E.,F.R.Ae.S., the Chief Designer, was in charge of design, and Mr. F. Parker (Engineering Manager) in charge of manufacture.

S/Ldr. Ronald Gellatly,A.F.C., is the Company's Senior Rotary-Wing Test Pilot and will be in charge of all flight testing of the Rotodyne. He is a New Zealander, born in Dunedin 36 years ago, and one of the most experienced helicopter pilots in this country. In 1953 he piloted H.R.H. The Duke of Edinburgh for the first Royal flight in a helicopter.

From Derek O. Thurgood
Publicity Manager
The Fairey Aviation Group of Companies
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