Handley Page Hermes 4 of Silver City (Bristol Hercules 763)

Fuel capacity and water-methanol capacity: As 100 series.

Performance: Typical cruising speed, 265kt (305 m.p.h.) TAS at 20,000ft and 35,000lb; corres fuel consumption, 0.1805 n.m./lb; balanced field length, max weight, SL, ISA, 3,450ft; at ISA+15°C, 3,900ft; at 5,000ft, ISA, 5,150ft; range A (max payload), 267 n.m. (307 st.m.); range B (max fuel), 1,530 n.m. (1,761 st.m.); corres payload, 5,187lb; V_{NE}, 259kt (298 m.p.h.) IAS; V_{NO}, 227kt (261 m.p.h.) IAS; V_{SO}, 66kt (76 m.p.h.) RAS.

Fokker F.27 Series 300 (Freightship)

Powerplant: Two Rolls-Royce Dart 511 RDa.6 turboprops of 1,600 s.h.p. driving Rotol 12ft diameter 4-blade propellers.

Dimensions: As 100 series.

Weights: As 100 series except capacity payload, 13,400lb; weight less fuel and payload, 21,800lb;

Payload accommodation: As 100 series except dimensions of largest door, 91.5in × 70in.

Fuel and water-methanol capacity: As 100 series.

Performance: As 100 series.

Fokker F.27 "Long Friendship"

Powerplant: Two Rolls-Royce Dart RDa.7/2 or RDa.10 turboprops.

Dimensions: As 100 series except length, 84ft ½in and height, about 28ft.

Weights: Max take-off, 42,000lb; max landing, 41,000lb

Payload accommodation: Cabin volume, 2,480 cu ft; max usable floor area (less flight deck) 360 sq ft; max seats, 48 at 35½in pitch or 60-64 at 30in pitch.

Performance: Range with max payload, plus reserves, 48-seater, RDa.7/2, 655 n.m. (755 st.m.); RDa.10, 603 n.m. (695 st.m.); 60-seater, RDa.7/2, 338 n.m. (390 st.m.); RDa.10, 286 n.m. (330 st.m.).

GRUMMAN *Grumman Aircraft Engineering Corp, Bethpage, Long Island, New York, USA.*

Grumman Amphibians The Grumman G-21 **Goose** six-seater airline and executive amphibian first flew in June, 1937, powered by two 450 h.p. Pratt & Whitney R-985 Wasp Juniors, and a total of 345 were built. There are 30 still in service with 12 operators, mostly in Alaska, Canada and the Caribbean. The Goose was followed by the smaller, five-seater G-44 **Widgeon,** first flown in July, 1940, and powered by two 200 h.p. Ranger 6-440-C5 engines. About half a dozen of the 286 Widgeons built remain in airline service. The G-73 **Mallard,** first flown in 1946, is rather larger; it seats up to 10 and is powered by two 600 b.h.p. Pratt & Whitney R-1340-S3H-1 Wasps. Only two of the 61 Mallards built are in airline service, with Pacific Western Airlines. The SA-16A-GR **Albatross** is much larger, having over twice the gross weight and engine power and a 13ft 4in greater wing span. Albatross production (over 300 have been built) has been entirely for military use, but three ex-USAF SA-16As are used by Transocean Airlines. Also in military use is the SA-16B, a variant with a larger wing span. *Flight* reference to the G-21 Goose: November 20, 1959.

G-159 Gulfstream The twin-Dart Gulfstream is Grumman's contender for the American "heavy twin" executive market. The prototype made its first flight on August 14, 1958, and the company has now received orders for some 56 aircraft. Up to 12 passengers can be accommodated, or 19 in a high-density layout. Current basic price is about $1m.

Flight reference: April 3, 1959.

Powerplant: Two Rolls-Royce RDa.7/2 Dart 529 turboprops of 2,190 e.h.p. each driving 11ft 6in diameter Rotol four-bladed propellers.

Dimensions: Span, 78ft 4in; length, 63ft 8in; height, 22ft 9in; wing area, 615 sq ft.

Weights: Max take-off, 35,100lb; landing, 33,600lb; zero fuel, 26,170lb; capacity payload, 4,270lb; weight less fuel and payload, 21,909lb.

Payload accommodation: Cabin volume, 1,040 cu ft; baggage and freight volume, 100 cu ft; cabin length, 33ft; max width, 7ft 4in; max height 6ft 1in; usable floor area, 177 sq ft; dimensions of largest door, 63in × 36in; max seats, 19 at 35in pitch.

Fuel capacity: 1,291 Imp gal (1,550 US gal), and 600lb water-methanol.

Performance: Cont cruising speed, 302kt (348 m.p.h.) at 25,000ft and 27,500lb, with a fuel consumption of 1,400lb/hr, balanced field length, max take-off weight, sea level, ISA, 4,480ft; sea level, ISA+15°C, 4,810ft; at 5,000ft, ISA, 5,700ft; landing distance from 50ft, 2,680ft; range A (max payload), 1,059 n.m. (1,218 st.m.); range B (max fuel), 2,448 n.m. (2,818 st.m.); corres payload, 2,740lb; V_{NE}, 310kt (357 m.p.h.) IAS; V_{NO}, 290kt (334 m.p.h.) IAS; V_{SO}, 75½kt (87 m.p.h.) EAS.

HAMBURGER FLUGZEUGBAU *Postschliessfach 11 524, Hamburg-Finkenwerder, Krectslag 10.*

H.F.B. 314 This is a 70-78 seat short-medium range jet transport in the D.H.121/Boeing 727/Caravelle 14 class, powered by two Rolls-Royce RB 141/11 turbojets. The West German Government is reported to have been advised by Lufthansa that the project is worthy of government backing. In October 1960 the West German Economics Minister said in Parliament that the Government is ready to negotiate with the firm with regard to financing.

Powerplant: Two Rolls-Royce RB.141/11 (or General Electric CJ-805-23, or two P. & W. JT3D-3).

Dimensions: Span, 93ft; length, 119ft; height, 26ft 10in; wing area, 1,230 sq ft; sweepback, 35°.

Weights: Max take-off, 89,100lb; max landing, 83,800lb; zero fuel weight, 70,600lb; capacity payload, 23,600lb; weight less fuel and payload, 46,000lb.

Payload accommodation: Cabin volume, 3,460 cu ft; baggage and freight volume, 880 cu ft; cabin length, 72ft 10in; max internal width, 9ft 2in; max height, 6ft 10in; max usable floor area, 577 sq ft; dimensions of largest door(s), 71in × 36in; max number of seats, 78; corres. pitch, 34in.

Fuel capacity: 4,530 Imp gal (5,450 US gal).

Performance: Opt. cost cruising speed at 36,000ft and 77,000lb, 513kt (591 m.p.h.); corres. fuel consumption, 880 Imp gal/hr; range A (max payload), 1,320 n.m. (1,520 st.m.); range B (max. fuel), 2,290 n.m. (2,640 st.m.), corres. payload, 8,800lb; cruise Mach number, 0.815; V_{NE}, 425kt (489 m.p.h.) IAS; V_{NO}, 370kt (426 m.p.h.) IAS; V_{SO}, 106kt (122 m.p.h.) EAS.

HANDLEY PAGE *Cricklewood, London NW2.*

H.P.81 Hermes 4 Developed from the H.P.68 Hermes 1 prototype of 1945, through the experimental Hermes 2, the Hermes 4 was the first British four-engined airliner of post-war design to enter service with BOAC. It was used extensively on the corporation's African routes from March 1950, and a total of 25 were built, all for BOAC. This fleet was sold to various British independents, and a total of 15 are now operated by Silver City, Air Safaris, Falcon and Skyways.

Hermes have been up for sale at £10,000 each.

Powerplant: Four Bristol Hercules 763 of 2,100 b.h.p. each driving 13ft de Havilland four-bladed propellers.

Dimensions: Span, 113ft; length, 96ft 10in; height, 30ft; gross wing area, 1,408 sq ft.

Weights: Max take-off, 86,000lb; landing, 75,000lb; capacity payload, 17,000lb; empty, 51,655lb.

Payload accommodation: Baggage and freight volume, 452 cu ft; cabin length, 44ft 5in; max width, 10ft 3in; max seats, 74.

Fuel capacity: 3,206 Imp gal.

Performance: Max weak mixture cruising speed, 232kt (266 m.p.h.) at 20,000ft; take-off distance to 50ft, 4,086ft; landing distance from 50ft, 3,375ft; payload for max range, 6,349lb; a 14,400lb payload can be carried 1,740 n.m. (2,000 st.m.) at 240kt (276 m.p.h.) at 20,000ft.

Marathon Designed by Miles Aircraft, the Marathon prototype made its first flight on May 19, 1946, and production was undertaken by Handley Page (Reading) Ltd, which took over Miles Aircraft in June 1948. A total of 40 Marathons were built, of which 29 were operated by the RAF as navigational trainers. First commercial operator of Marathons was West African Airways Corporation, followed by Union of Burma Airways and Far East Airlines (now part of All Nippon Airways). The two Japanese Marathons have now been grounded, and Derby Aviation, with three aircraft, is the only operator of this type.

Powerplant: Four D.H. Gipsy Queen 70 Mk 3 (Marathon 1) or 70 Mk 4 (Marathon 1A) engines of 340 b.h.p. each driving 7ft 6in de Havilland Hydromatic three-bladed propellers.

Data appeared in *Flight* for November 20, 1959, page 609.

H.P.R.3 Herald Series 100 and 200 Designed as a private-venture replacement for the DC-3, the Herald prototype, powered by four 825 b.h.p. (max take-off) Alvis Leonides Major 701 piston engines, made its first flight on August 25, 1955; the second prototype took to the air just over a year later. Increasingly wide acceptance of the Rolls-Royce Dart led to the piston-engined version eventually being abandoned in favour of the Dart Herald, announced in May 1957.

The first prototype Herald (manufacturer's designation: H.P.R.3) was re-engined with two Darts and made its first flight in this form on March 11, 1958, and the second prototype was similarly re-engined. This air-