

Proven Performance

NEWLY RELEASED DATA FOR
BRITISH MILITARY AIRCRAFT

Hawker Hunter F.4s

AS a result of a relaxation in their security classification, it is permissible to publish basic weights, tankage and performance figures for certain types of British military aeroplanes. Naturally enough, the types involved are not of the very latest design, but they are by no means obsolete and still equip an important proportion of the front-line squadrons of the Royal Air Force and Royal Navy. The figures have been supplied by the manufacturers concerned, and can be relied upon implicitly.

Armstrong Whitworth Meteor NF.11 (two Rolls-Royce Derwent 8 turbojets of 3,500 lb thrust each). Two-seat night and all-weather fighter. Span, 43ft; length, 48ft 6in; height, 13ft 10in; basic operating weight, 12,260 lb; gross weight, 18,567 lb; max. wt. with two 100-gal drop tanks, 20,357 lb; take-off (zero wind), 4,200ft at 20,050 lb or 3,600ft at 18,567 lb; rates of climb with ventral and under-wing tanks (705 gal total) taking off at 20,050 lb, 6,000ft/min at sea level, 4,100 at 10,000ft, 3,000 at 20,000ft and 1,000 at 40,000ft; times to height, 10,000ft in 2.5 min, 20,000 in 6 min and 30,000 in 11 min; level speeds (L = performance limited by aircraft restriction, figures in brackets are with ventral tank only), 435 kt or M 0.66 L (435, 0.66 L) at sea level, 482 kt M 0.75 L (500, 0.78) at 10,000ft, 475 kt M 0.77 L (487, 0.79) at 20,000ft, 465 kt M 0.79 (470, 0.8) at 30,000ft, 455 kt M 0.79 (460, 0.805) at 40,000ft; full-load single-engine performance (14,700 r.p.m., figures in brackets are ventral tank only), rate of climb at sea level 1,130ft/min (1,480), rate of climb at 20,000ft negative (+270), service ceiling for +100ft/min 18,000ft (23,000), level speed 280 kt at sea level (325 kt) or 250 kt at 20,000ft (295 kt); landing from 50ft, 4,500ft.

The Meteor NF.12 has Derwent 9 engines and an improved radar which increases the length to 50ft and requires a larger fin area; the Mk 13 has cockpit refrigeration but otherwise resembles the Mk 11; the Mk 14 is the Mk 12 with a new canopy and windscreen. Their performance differs only slightly from that of the Mk 11.



Armstrong Whitworth Meteor NF.14

Armstrong Whitworth Sea Hawk FGA.4 (Rolls-Royce Nene 101 turbojet of 5,000 lb thrust). Single-seat carrier-based fighter/bomber. Span, 39ft (folded, 13ft 4in); length, 39ft 8in; height, 8ft 8in (folded, 16ft 10in); gross weight, 16,000 lb; max. landing weight, 12,100 lb; take-off at max. wt. (zero wind), unstick after 3,150ft at 115 kt, reaching 50ft after total distance of 4,800ft; rates of climb (two external tanks and bomb load), 4,200ft/min at sea level, 2,500ft/min at 20,000ft (reached in 6.2 min) and 900ft/min at 35,000ft (15.6 min); max. level speed, 450 kt (M 0.68) at sea level, 470 kt (0.765) at 20,000ft, 445 kt (0.775) at 35,000ft; max. wt. landing (zero wind), approach at 115 kt, ground run 2,700ft, total distance from 50ft is 4,200ft.

The lighter (13,200 lb) Sea Hawk F.1 achieves 510 kt clean, climbs at 6,200ft/min, reaches 35,000ft in 8.6 min and still climbs at 2,400ft/min at that height, unsticks at 105 kt after 2,010ft and reaches 50ft in 3,300ft.



Armstrong Whitworth Sea Hawk FGA.4

Armstrong Whitworth Sea Hawk FGA.6 (Rolls-Royce Nene RN.6 Mk 103 turbojet of 5,400 lb thrust). As above except:

As fighter, clean, at 13,600 lb: take-off (zero wind), unstick after 1,935ft at 105 kt, reaching 50ft after total distance of 3,765ft; rates of climb, 5,700ft/min at sea level, 3,400 at 20,000ft (reached in 4 min) and 850ft/min at 40,000ft (14 min); level speeds, 520 kt M 0.79 at sea level, 510 kt 0.83 at 20,000ft, 460kt 0.8 at 40,000ft; radius of action, with allowances, about 200 n.m.; landing at 12,100 lb (zero wind), approach at 115 kt, ground run 2,400ft, total distance from 50ft is 3,750ft.

As fighter/bomber, with two 100-gal tanks and two 500 lb bombs, at 16,200 lb; take-off (zero wind), unstick after 3,450ft at 118 kt, reaching 50ft after a total distance of 5,790ft; rates of climb, 4,720ft/min at sea level, 2,340 at 20,000ft (reached in 5.8 min) and 750 at 35,000ft (16.8 min); level speeds, 450 kt M 0.68 at sea level, 450 kt 0.73 at 20,000ft, 455 kt 0.77 at 35,000ft; radius of action, with allowances, about 250 n.m.; landing at 13,300 lb (zero wind), approach at 120 kt, ground run 2,700ft, total distance from 50ft is 4,080ft.

Avro Shackleton MR.3 (S.A.A.F.)



Avro 496 Shackleton MR.3 (four Rolls-Royce Griffon 57A piston engines of 2,455 h.p. each). Ten-seat maritime-patrol aircraft. Span (over tip tanks), 119ft 10in; length, 92ft 6in; height, 23ft 4in; gross weight, 100,000 lb; normal cruising speed, up to 220 kt; typical cruising range at 1,500ft with full military load, 3,180 n.m.; at a radius of 1,000 n.m. from base the MR.3 can conduct a 9 hr search with radome extended.

de Havilland 112 Venom FB.4 (D.H. Ghost Mk 103 turbojet of 4,850 lb thrust). Single-seat fighter/bomber. Span (over tip tanks), 41ft 8in; length, 33ft; height, 6ft 8in; normal war load, four 20mm guns with 600 rounds plus either two 1,000 lb bombs or two 500 lb bombs and eight 60 lb R.P.s. or similar stores; fuel capacity, including tip-tanks but excluding two 80-gal drop tanks, 489 imp. gal; gross weight with underwing stores, 15,310 lb; sea-level rate of climb (combat r.p.m. at 11,500 lb), 7,230ft/min; times to height, 20,000ft 4.5 min, 30,000ft 7 min; 45,000ft 14.3 min; level speeds at mean weight, 519 kt (M 0.785) at sea level, 500 kt (0.815) at 20,000ft, 484 kt (0.820) at 30,000ft, 468 kt (0.817) at 40,000ft, 461 kt (0.805) at 45,000ft; patrol duration, allowing for take-off, climb, 10 min combat and descent, 1.35 hr at sea level at 175 kt, 2.25 hr at 20,000ft at 235 kt and 2.45 hr at 40,000ft at 340 kt.



de Havilland Sea Venom FAW.22

de Havilland 112 Sea Venom FAW.22 (D.H. Ghost Mk 105 turbojet of 5,300 lb thrust). Two-seat carrier-based all-weather fighter. Span (over tip tanks), 42ft 10in; length, 36ft 8in; height, 8ft 6in; normal war load, four 20 mm guns with 600 rounds plus eight 60-lb R.P.s.; fuel capacity, 461 imp. gal (can be supplemented by two 50-gal drop tanks in place of underwing stores); gross weight, with R.P.s., 15,800 lb; max. wt. take-off (zero wind), 4,230ft to 50ft; rates of climb (combat r.p.m. after max. wt. take-off), 5,900ft/min at sea level, 3,700 at 20,000ft and 2,600 at 30,000ft; operational ceiling (1,000ft/min), 40,000ft; level speeds with tip-tanks only, 500 kt at sea level, 494 kt at 20,000ft, 461 kt at 40,000ft; still-air range at 35,000ft with drop tanks, 612 n.m.; radius of steady turn at 30,000ft, 1.8 n.m.; patrol duration at 30,000ft, 2.11 hr (1.73 hr with full allowances, including 20 min loiter at 20,000ft).

English Electric Canberra B.2 (two Rolls-Royce Avon RA.3 turbojets of 6,500 lb thrust each). Three-seat high-level bomber. Span, 63ft 11in; length, 65ft 6in; height, 15ft 7in; normal gross weight, 44,500 lb (40,500 without tip tanks); max. gross weight, 46,000 lb; internal fuel capacity, 1,377 imp. gal (1,865 gal with tip tanks); bomb load, 6,000 lb; take-off (zero wind) to 50ft at max. wt., 4,590ft (3,540ft without tip tanks); rate of climb at sea level at full load, 3,800ft/min; level speeds, 450 kt M 0.68 at sea level, 495 kt M 0.82 above 30,000ft; limiting altitude determined by pressure-breathing system, 48,000ft; max. still-air range with full bomb load, 2,310 n.m.; ferrying range, 2,597 n.m.; landing from 50ft, 4,500ft at max. landing wt. of 40,000 lb or 2,520ft with only 250 gal fuel.

Canberra PR.3. As above except: length, 66ft 8in; normal gross weight, 44,000 lb (40,000 without tip tanks); internal fuel capacity, 1,917 imp. gal (2,405 with tip tanks); no bombs; take-off to 50ft, 4,410ft (3,450 without tip tanks); max. still-air range, 3,115 n.m. (ferrying, 3,180).

Canberra T.4. As B.2 except: normal gross weight, 37,000 lb (33,000 without tip tanks); internal fuel capacity as B.2; take-off to 50ft, 3,120ft (2,370ft without tip tanks); rate of climb at sea level, 4,300ft/min; max. still-air range, 2,700 n.m.; landing from 50ft, 3,450ft at max. landing wt. of 31,500 lb.

The Canberra B.5, U.10, T.11 and T.13 are closely related to (respectively) the B.2, B.2, T.4 and T.4.

English Electric Canberra PR.7 (two Rolls-Royce Avon RA.7 Mk 109 turbojets of 7,500 lb thrust each). Span, 63ft 11in; length, 66ft 8in; height, 15ft 7in; normal gross weight, 53,000 lb (49,000 without tip tanks); internal fuel capacity, 2,817 imp. gal (3,305 gal with tip tanks); take-off (zero wind) to 50ft, 4,755ft (3,360 without tip tanks); rate of climb at sea level, 3,600ft/min; level speeds, as B.2 at sea level, 504 kt M 0.83 at 40,000ft; max. still-air range, 3,821 n.m.; landing from 50ft, 3,900ft at max. landing wt. of 40,000 lb or 2,320ft with only 250 gal fuel.

The Canberra B.6, B(1).6 and B(1).8, and their export derivatives are not likely to differ very greatly from the PR.7, although the precise data for these variants may not yet be published.

Hawker P.1067 Hunter F.4 (Rolls-Royce Avon RA.21 Mk 115 or 113 turbojet of 8,050 lb thrust). Single-seat fighter/bomber. Span, 33ft 8in; length, 45ft 10in; height, 10ft; normal gross weight (clean, in interceptor role), 17,100 lb; max. gross weight (long-range ground-attack role with two 1,000 lb bombs and two 97-gal drop tanks), 21,200 lb; internal fuel capacity, 410 imp. gal (max. fuel normally 798 gal with four 97-gal drop tanks, although 230-gal tanks can theoretically be carried); max. wt. take-off (zero wind, dry runway, etc.), 3,990ft to 50ft; rates of climb (clean, 1/2-fuel, max. r.p.m.), 10,500ft/min at sea level, 8,400 at 20,000ft, 3,100 at 40,000ft, 1,700 at 45,000ft and zero at 52,000ft; times to height (same conditions), 1.4 min to reach climbing speed from brakes off, 2.25 min to 20,000ft, 6.15 min to 40,000ft and 8.45 min to 45,000ft; level speeds (clean, 1/2-fuel), 610 kt M 0.925 at sea level, 573 kt 0.935 at 20,000ft, 533 kt 0.93 at 40,000ft, 525 kt 0.915 at 45,000ft; landing with 100 gal fuel remaining over 50ft, total distance 3,900ft. (The F.4 has been flown to limits of 635 kt e.a.s. in conjunction with M 0.955 and to M 1.23 in conjunction with about 500 kt e.a.s.)

English Electric Canberra B.2s

