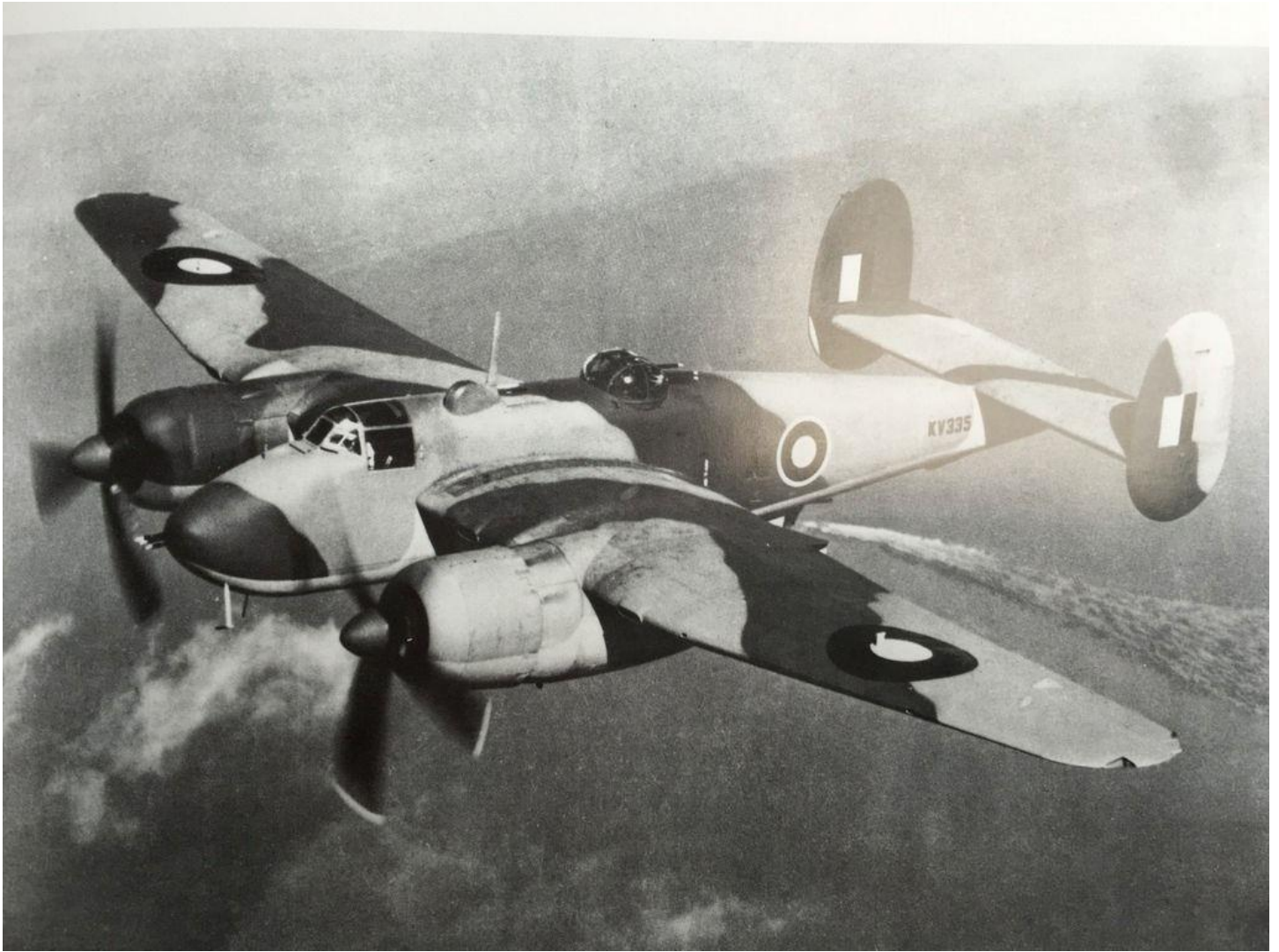


## Bristol Buckingham



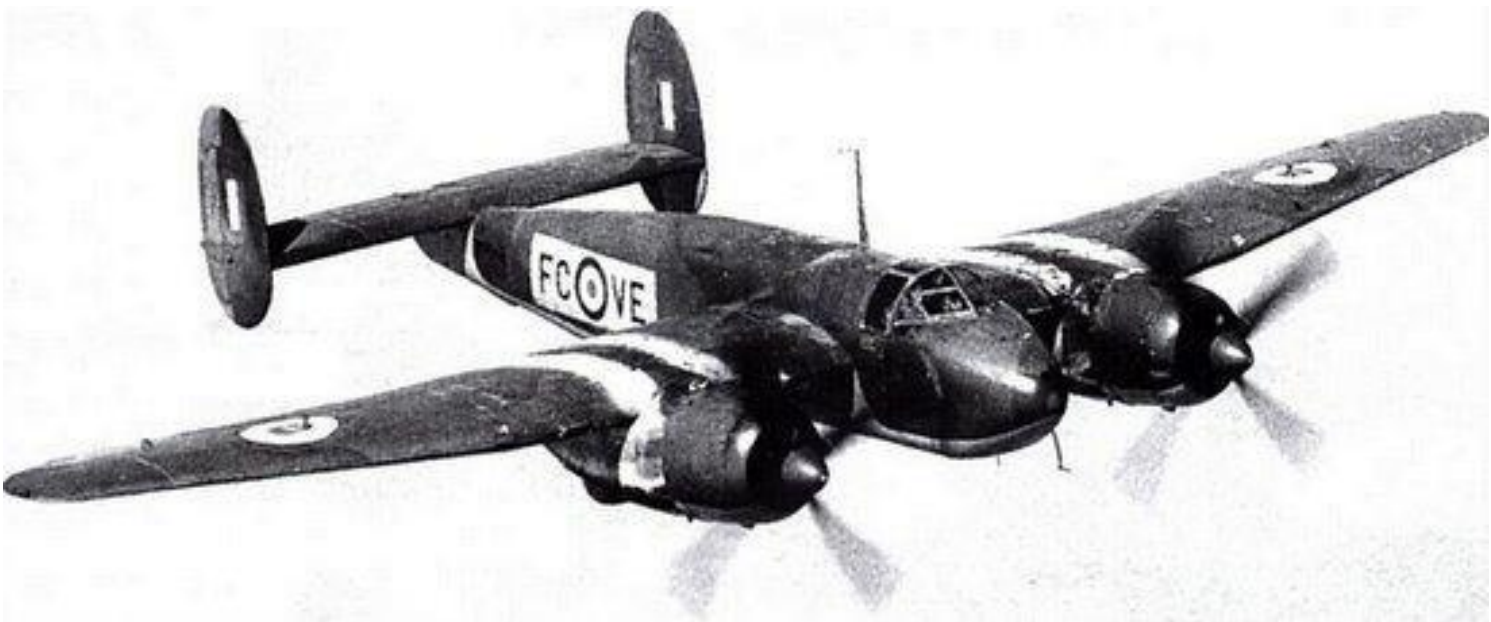
Le Bristol Buckingham (Type 163) est un bombardier moyen Britannique de la Seconde Guerre mondiale. Début 1939, la compagnie Bristol étudie une variante du bombardier Beaufighter équipée de ses moteurs Hercules. La politique britannique de l'époque est plutôt pour les bombardiers moyens fournis par les États-Unis permettant à l'industrie britannique de se concentrer sur la conception de bombardiers lourds. La spécification B.7/40 de L'Air Ministry est émise début 1940 en vue du remplacement du Blenheim. Le cahier des charges prévoit une vitesse d'au moins 480 km/h avec une charge de 450 Kg de bombes et d'une tourelle armée d'au moins deux mitrailleuses de calibre 12,7 mm. Bristol est le seul constructeur à répondre à cette demande, d'abord refusé, puis après modification accepté pour la fabrication de 3 prototypes, appelés Beaumont. Le Beaumont est conçu avec l'arrière du fuselage et la queue d'un Beaufighter avec une nouvelle section centrale et fuselage avant. L'armement est composé d'une tourelle supérieure avec quatre mitrailleuses, quatre de plus à l'avant et deux à l'arrière. La construction commence début 1941, suite à une nouvelle spécification, la B.2/41, avec de nouvelles exigences. Le bombardement en piqué et le soutien au sol sont supprimés. La demande de vitesse passe de 480 à 600 Km/h et celle de l'emport de 450 à 1800 Kg, signifiant le remplacement des moteurs Hercules par des Centaurus. Cette refonte donne naissance au Bristol Type 163 Buckingham. La soute à bombes pouvait contenir au choix : une seule bombe de 1800 Kg, deux de 900 Kg, quatre de 450 kg ou six bombes de 250 Kg. L'armement se compose de 10 mitrailleuses 7,7 mm disposées comme suit : 4 mitrailleuses à l'avant, 2 en dorsale, 2 en soute et 2 dans la tourelle arrière à commande hydraulique. Le premier vol a lieu le 4 Février 1943. Au cours des essais, le Buckingham fait preuve d'une mauvaise stabilité qui nécessite l'élargissement de la dérive. Au moment où le Buckingham entre en production, les exigences ont déjà changé, les opérations de jour sont couvertes par l'USAAF et le bombardement nocturne est confié au De Havilland Mosquito. Le rôle de bombardier du Buckingham est donc revu en août 1944.

Toutefois, afin de garder la main-d'œuvre de Bristol en fonction pour la production ultérieure du Brigand et du Hawker Tempest, un lot de 119 avions est construit, en ce, en vue d'une utilisation comme appareil de transport. Les 54 premiers exemplaires construits comme bombardier, sont suivi d'appareils convertis en avions de transport par l'enlèvement de tout l'armement et l'installation de 4 sièges. L'avion est désigné Buckingham C.1. En dépit de ses 480 km/h de vitesse et une portée supérieure a d'autres avions de transport, le Buckingham a été rarement mis à contribution. Un total de 65 bombardiers Buckingham inachevés sur les lignes de production, sont convertis en Buckmaster, avions utilisé comme appareil de formation au futur pilotes du Bristol Brigand, et ce jusqu'en 1950.

***Bristol Buckingham :***

- 2 Moteurs Bristol Centaurus VII
- 2 X 2520 Ch
- 540 Km/h
- 10 Mitrailleuses 7.7 mm 1800 Kg de Bombes
- 17260 Kg en charge
- 7600 m de plafond pratique
- 5100 Km en distance franchissable
- 4 Equipiers





Source : <http://les-avions-de-legende.e-monsite.com/pages/les-bombardiers/les-bombardiers-anglais/bristol-buckingham.html>

Version anglaise Wikipédia

The **Bristol Type 163 Buckingham** was a British [Second World War medium bomber](#) for the [Royal Air Force](#) (RAF). Overtaken by events, it was built in small numbers and was used primarily for transport and [liaison](#) duties.

### Design and development

In early 1939 Bristol suggested a bomber variant of the [Beaufighter](#) with their Hercules engines. British policy at the time was for medium bombers to be obtained from the US allowing British industry to concentrate on heavy bomber designs; nonetheless a design was requested preferably based on an existing aircraft. This meant working with the Beaufighter or [Beaufort](#). Bristol worked on their design first as the **Bristol Type 161** then the **Type 162 Beaumont**.<sup>[1]</sup> Air Ministry specification B.7/40 called for a medium bomber to replace the [Blenheim](#). The specification stipulated a speed of at least 300 mph at 5,000 ft, a normal load of 1,000 lb of bombs and a centre turret armed with at least two 0.5 inch (12.7 mm) machine guns. Only one manufacturer (Armstrong Whitworth) tendered a full design but it did not meet with approval.<sup>[2]</sup> So when Bristol brought their Type 162 ("tentatively named Beaumont"), which was well matched to B.7/40, to the Air Staff, the company received a request to complete a mockup in 1940 and then a confirmed contract for three prototypes in February 1941. The Beaumont was based on the rear fuselage and tail of a Beaufighter, with a new centre and front fuselage. The armament was a mid-upper turret with four machine guns, with four more machine guns firing forward and two firing to the rear. Construction began in late 1940, with a new [Air Ministry Specification](#) B.2/41 to be written around it. Changes in the requirements, removing dive bombing and "direct army support" which incoming US bombers were expected to be capable of and increasing the performance to allow for the future, meant the Beaumont would no longer suffice. The changes in performance (requiring a bomb load of 4,000 lb, a speed of 360 mph and a range of 1,600 miles) meant a redesign by Bristol to use the [Bristol Centaurus](#) engine.<sup>[1]</sup> The Bristol redesign with a larger wing and the more powerful engines was the **Type 163 Buckingham**.<sup>[1]</sup> It had gun installations in the nose, dorsal and ventral turrets. Generally conventional in appearance, one unusual feature was that the bomb-aimer/navigator was housed in a mid-[fuselage](#) ventral gondola, resembling those on the earlier German [Heinkel He 111H](#) and American [Boeing B-17C](#) and -D in appearance.<sup>[3]</sup> This was part of an attempt to give all the crew positions unobstructed views and access to each other's positions. The bomb bay could hold a 4,000 lb, two 2,000 lb, four 1,000 lb or six 500-lb bombs.<sup>[4]</sup> The rear of the gondola had a hydraulically powered turret with two 0.303 Browning machine guns. The Bristol-designed dorsal turret carried four Brownings. A further four fixed, forward-firing Brownings were controlled by the pilot.<sup>[4]</sup> Following more changes, specification B.2/41 was replaced by B.P/41. An order for 400, at an initial rate of 25 per month, was made with deliveries expected in March 1943 but Bristol were still concerned that this not a reasonable scale and would prove expensive, and as such complained to MAP about poor planning. The first flight took place on 4 February 1943.<sup>[5]</sup> During testing, the Buckingham exhibited poor stability which led to the enlargement of the twin [fins](#), along with other modifications.<sup>[3]</sup>



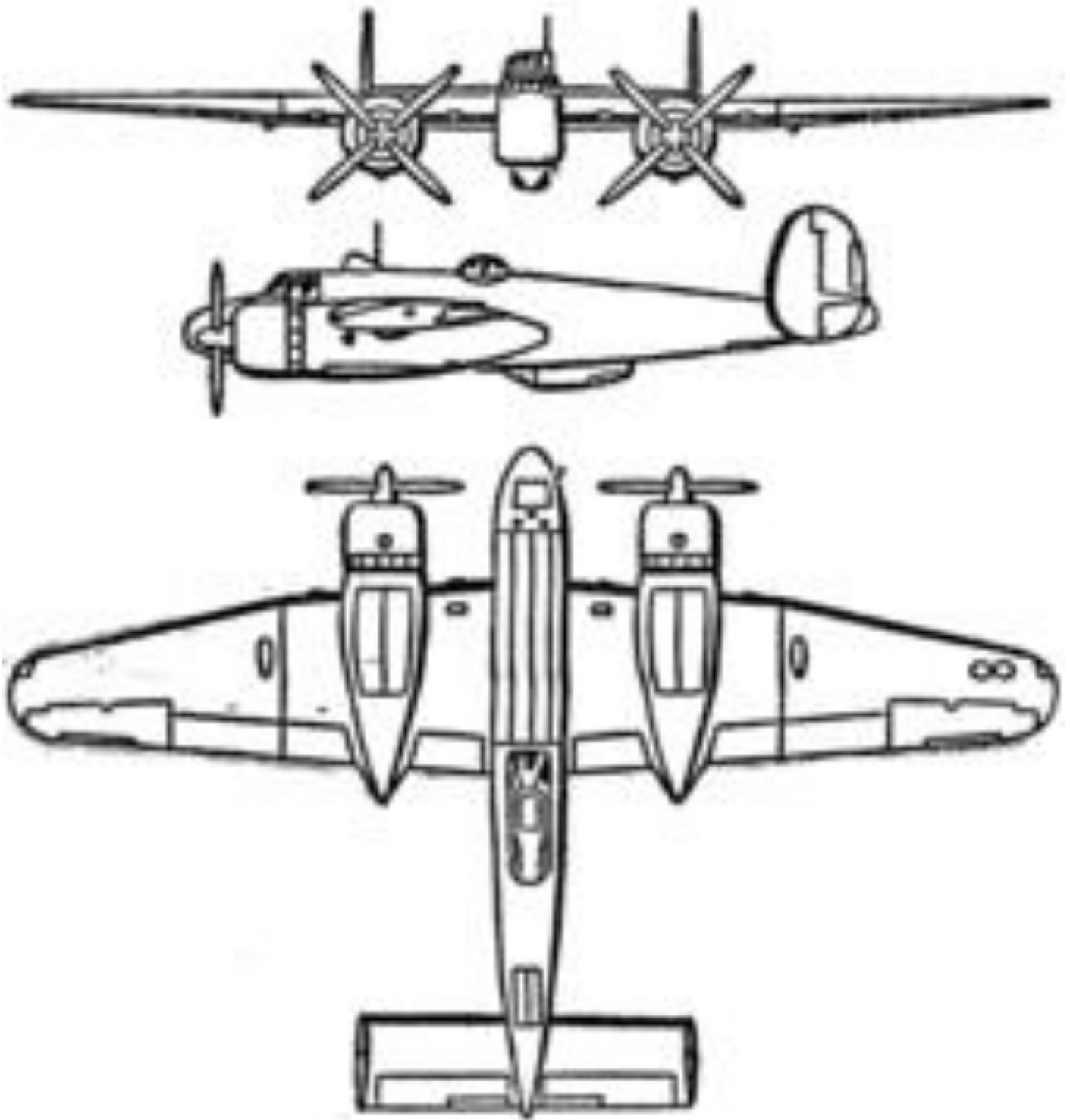
## Operational history



A Buckingham B1 in 1945

By the time the design entered production, requirements had changed, with attacks against German industry being covered by the US by day and by RAF Bomber Command [de Havilland Mosquitos](#) by night. The Buckingham was not considered suitable for unescorted daytime use over Europe and in January 1944, it was decided that all Buckinghams would be sent overseas to replace [Vickers Wellingtons](#).<sup>[6]</sup> Once the Buckingham's handling problems were revealed, it was realised that the type was of little use. As a result, it was cancelled in August 1944.<sup>[7]</sup> To keep the Bristol workforce together, for later production of the Brigand and the Hawker Tempest, a batch of 119 were built. Uses for the aircraft were sought and a conversion to a communications aircraft was devised. After the first 54 had been built as bombers, the remainder were converted for high-speed courier duties with [RAF Transport Command](#). The gun installations were removed and four seats and windows fitted in the fuselage. The aircraft was named **Buckingham C.1**. Despite its 300 mph (480 km/h) speed and superior range to the Mosquito transports, with room for only four passengers, the Buckingham was rarely put to use.<sup>[3]</sup> A total of 65 Buckingham bombers were unfinished on the production line and ended up being rebuilt as the [Buckmaster](#), a [trainer](#) for the similar [Brigand](#).<sup>[8][9]</sup> Considered the "highest performance trainer in the RAF," the Buckmaster continued to serve as a trainer until its retirement in the mid-1950s.

## Specifications (Buckingham C.1)



Bristol Buckingham 3-view drawing from Les Ailes February 1, 1947

### General characteristics

- **Crew:** 2
- **Capacity:** 4 passengers
- **Length:** 46 ft 10 in (14.27 m)
- **Wingspan:** 71 ft 10 in (21.89 m)
- **Height:** 17 ft 6 in (5.33 m)
- **Wing area:** 708 sq ft (65.8 m<sup>2</sup>)
- **Airfoil:** RAF 28 modified<sup>[10]</sup>
- **Empty weight:** 24,042 lb (10,905 kg)

- **Gross weight:** 34,000 lb (15,422 kg)
- **Powerplant:** 2 × [Bristol Centaurus VII](#) 18-cylinder air-cooled sleeve-valve piston engines, 2,520 hp (1,880 kW) each
- **Propellers:** 4-bladed constant-speed propellers

### Performance

- **Maximum speed:** 336 mph (541 km/h, 292 kn) at 12,000 ft (3,658 m) in supercharger 'S' gear
- **Range:** 2,300 mi (3,700 km, 2,000 nmi) at sea level and 165 mph (143 kn; 266 km/h)
- **Ferry range:** 3,000 mi (4,800 km, 2,600 nmi) with two 185 imp gal (222 US gal; 840 L) tanks in bomb bay
- **Rate of climb:** 2,000 ft/min (10 m/s)
- **Wing loading:** 48 lb/sq ft (230 kg/m<sup>2</sup>)
- **[Power/mass:](#)** 0.15 hp/lb (0.25 kW/kg)



Source : [https://en.wikipedia.org/wiki/Bristol\\_Buckingham](https://en.wikipedia.org/wiki/Bristol_Buckingham)