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Wellington

Bomber

Vickers



VICKERS WELLINGTON (Bomber variants) - Twin-engined day bomber to meet Operational Requirement OR.5 and conforming to Specification B.9/32, designed under Rex Pierson and Barnes Wallis. Initial studies (as Vickers Type 249) with R-R Goshawk or Bristol Perseus engines, but definitive prototype (Type 271) as ordered in September 1933 powered by 980 hp Bristol Pegasus X engines. Geodetic construction, gross weight of 21,000 lb (9,526 kg) and defensive armament of single 0.303-in (7.7-mm) guns in nose, tail and dorsal positions. Unarmed, prototype K4049 first flown at Weybridge on June 15, 1936; provisionally known as Crecy until name Vickers Wellington confirmed in September. Lost on April 19, 1937, during A&AEE trials at Martlesham Heath, by which time first production contract placed.

Vickers Wellington I: Initial production version, as defined by Specification 29/36, to be armed with pairs of Browning 0.303-in (7.7-mm) guns in Vickers nose and tail, and Frazer-Nash ventral (in place of dorsal) gun positions. Gross weight, 21,000 lb (9,527 kg) with up to nine 500-lb (227-kg) or two 2,000-lb (907-kg) bombs. First production aircraft flown with Pegasus X engines (as Vickers Type 285) on December 23, 1937, and with definitive 815 hp Pegasus XVIIIIs (Type 290) on April 12, 1938. Total of 175 built at Weybridge (of which 61 with dual controls and two completed as Mk II and III prototypes) and three at Vickers-operated caption factory at Broughton, Chester. RNZAF order for 30 Vickers

Wellingtons (Type 403) placed in 1937 to be met by diversions from RAF contracts. First six (NZ300-NZ305) at RAF Marham for conversion training of New Zealand Flight handed back to RAF in September 1939 and re-acquired original RAF serials. Most or all Mk Is flown without planned FN9 ventral turret because of CG difficulties. Initial deliveries October 1938, to No 99 Sqn at Mildenhall; eight more squadrons equipped by September 1939. First operations September 4, 1939, by Nos 9 and 149 Sqs.

Vickers Wellington IA: Similar to Mk I, but with Frazer-Nash two-gun turrets - FN5 nose, FN10 tail and FN9 ventral - plus general airframe improvements designed for Mk II and III. Gross weight 28,000 lb (12,700 kg) and strengthened u/c. Deliveries began August 1939, and production (Vickers Type 408) totalled 170 from Weybridge and 17 from Chester. Replaced Vickers Wellington Is in initial squadrons and in service by December 1939. Balance of RNZAF order (see Vickers Wellington I) for 24 Mk IAs (Type 412) absorbed into RAF production, and No 75 (NZ) Sqn, with No 3 Group of Bomber Command, issued with Vickers Wellington IAs and ICs from RAF stocks. Designation Vickers Wellington IB reserved for Mk I with armament improvements; not built.

Vickers Wellington 1C: Similar to Mk IA, but FN9 ventral turret deleted. Two belt-fed 0.303-in (7.7-mm) Brownings in beam mountings, one each side. Electrical system changed from 12 to 24-volt, and hydraulic system revised. Production (Vickers Type 405) totalled 1,056 at Weybridge (of which four completed as later marks), 1,583 at Chester and 50 at Vickers-operated caption factory at Squires Gate, Blackpool. Bomb-load could include one 4,000-lb (1,814-kg) bomb on 33 Mk ICs with Vickers Type 453 modification. Deliveries from April 1940, and formed backbone of Bomber Command through 1941, primarily in squadrons of 3 Group. Operational in Middle East from September 1940, initially with No 70 Sqn, RAF, and in the Far East (India) from April 1942, initially with No 214 Sqn. One to CLE in March 1942, with parachute exit in place of ventral turret.

Max speed, 234 mph (377 km/h) at 15,200ft (4,633 m). Economical cruising speed, 165 mph (266 km/h) at 10,000ft (3,050 m). Time to 10,000ft (3,050 m), 25 min. Service ceiling, 16,000 ft (4,877 m). Range with max bombs, 1,0-55 mis (1,698 km). Empty weight, 18,800 lb (8,528 kg). Gross weight, 30,000 lb (13,608 kg). Span, 86ft 2 in (26.26 m). Length, 64 ft 7 in (19.69 m). Wing area, 830 sq ft (77 m²).

Vickers Wellington II: Developed during 1938 as first major Vickers Wellington upgrade, in parallel with Mk III, to take advantage of uprated engines. Based on Mk I airframe with 1,145 hp R-R Merlin X engines; Frazer-Nash FN5 (nose) and FN10 (tail) turrets plus beam guns; 28,000 lb (12,700 kg) gross weight with strengthened u/c and -after early testing - wider-chord tailplane. One Mk I completed as Mk II prototype (Vickers Type 298), flown on March 3, 1939.

Deliveries began October 1940 and 400 built (Type 406) at Weybridge. Gross weight increased to 33,000 lb (14,990 kg) and 22 with the Type 423 mod for 4,000-lb (1,814-kg) bomb, first used by Nos 9 and 149 Sqns on night of March 31/April 1, 1941. Also served in Middle East, with earlier marks.

Vickers Wellington III: Developed in parallel with Vickers Wellington II, with same new features but powered by Bristol Hercules engines. One Mk I completed as Mk III prototype (Vickers Type 299), flown on March 19, 1939, with two-stage supercharged Hercules HE-ISM engines. Production Mk III (Type 417) powered by 1,400 hp Hercules II engines, as tested on second prototype (Mk 1C conversion) early 1941, or 1,590 hp Hercules XIs. Four-gun FN20A tail turret in place of two-gun FN10, and gross weight increased to 34,500 lb (15,650 kg). Production total 780 at Chester and 737 at Blackpool, delivered 1942-43. Succeeded or supplemented Mk ICs in 3 Group in the UK, 205 Group in the Middle East and 221 Group in Far East. Also used by six Canadian-manned squadrons of 6 Group in UK during 1943, and for Special Duties units of 100 Group in 1943/44.

Max speed, 261 mph (420 km/h) at 12,500ft (3,810 m). Economical cruising speed, 211 mph (340 km/h). Time to 15,000 ft (4,572 m), 25 min. Service ceiling, 22,750 ft (6,934 m). Range with max bombs, 1,200 mis (1,931 km). Empty weight, 25,100 lb (11,385 kg). Gross weight, 34,500 lb (15,650 kg). Dimensions as Mk IC.

Vickers Wellington IV: Similar to Mk III with 1,050 hp Pratt & Whitney R-1830-S3C4-G Twin Wasp engines. Prototype (Mk 1C conversion) completed at Chester, December 1940, followed by 219 production examples (Vickers Type 410) delivered from June 1941, First operational use October 16, 1941.

Vickers Wellington V and VI: High-altitude bomber variants using pressurised crew accommodation. See separate entry below.

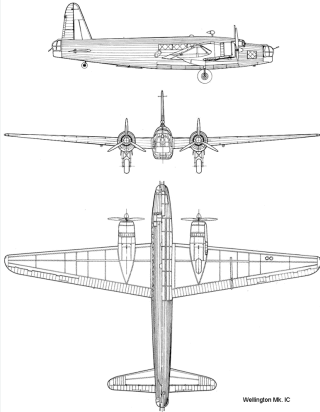
Vickers Wellington VII: Designation reserved for Mk II derivative with 1,390 hp Merlin XX powerplants. Not built.

Vickers Wellington B Mk X: Final variant for Bomber Command, based on definitive Mk III but powered by 1,615 hp Bristol Hercules VI or XVI engines. Improved DTD646 aluminium alloy used throughout, with better strength-weight ratio, allowing gross weight to increase to 36,500 lb (16,556 kg). Two Mk IIIs with Hercules VI engines flown as prototypes (Type 440) at Blackpool. Production (Type 448) totalled 1,369 at Blackpool and 2,434 at Chester. Served in the Bomber Command Vickers Wellington squadrons that remained operational until October 1943; and in others on special duties and in Middle and Far East through 1944. Vickers Wellington production ended with delivery of a B Mk X at Blackpool on October 25, 1945, bringing overall total built to 11,461 - the most multi-engine aircraft of any single type ever built in Britain.

Wellington Mk.II Specification

Crew	5
Dimensions	
Wing span, m	26.26
Length, m	19.69
Height, m	5.31
Wing area, m ²	79.10
Powerplant	
1 PE x Rolls-Royce Merlin , hp	2 X 1145
Weight, kg:	
Empty weight	9189
Load weight	14969
Performance	
Maximum speed, km/h	435
Cruise speed, km/h	290
Service ceiling, m	7163
Service range, km	3540
Armament	
2-4x7,69-mm machine guns, bombs ,kg 1134 (1814)	

Photo



Description

Drawing Wellington Mk.IC



The Vickers Wellington was the backbone of Bomber Command for three years. No 115 Squadron was one No 3 Group unit that did not convert to Stirlings, retaining its faithful Wellingtons until March 1943, when it was the first squadron in No 3 Group to convert to Lancasters. However, in flying more Wellington sorties than any other squadron in Bomber Command, it also suffered the highest losses with the type — more than a hundred, including crash-landings. X3662/KO:P was a survivor and after 36 raids was retired to serve with No 20 OTU. It was lost in a ditching off Skye on 8 October 1943. (IWM CHI6994)



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Wellington. Combat Use.



The Wellingtons took part in the fighting two days after the declaration of war, when two squadrons equipped with modification "1" made a daytime raid on the German port of Wilhelmshaven. German ships were the main target of British bombers at the beginning of the war, because the British command was afraid of civilian casualties, which would provoke Luftwaffe raids on English cities. The effect of these "reconnaissance in force" was minimal. However, as well as opposition - almost all the forces of the Luftwaffe were concentrated on the Polish front. But on December 14, 1939, the brand new Wellingtons Mk.1A, who were trying to attack ships in Helgoland Bay from low altitude in close formation, came under concentrated anti-aircraft fire, which led to the loss of five bombers. Five days later, 24 Wellington Mk.1A were intercepted by Messerschmitt Bf 109E and Messerschmitt Bf 110C fighters guided by an experimental German early warning radar. Attacking from the side "dead" zones, using 22-mm Oerlikon MG FF cannons, the Germans dispersed the bomber formation and shot down ten of them. Fleeing from interceptor attacks, some crews went far north and lost two more Wellingtons due to water landings with dry tanks. Three machines went on forced already in England. The Germans lost two Bf 109Es. This was the Wellingtons' last daylight sortie against German targets.

The abandonment of all restrictions on the bombing of German cities after the outbreak of the German Blitzkrieg on the Western Front brought the Wellingtons to the main roles in the Royal Air Force. During the hostilities of 1939, the aircraft was improved: an astro-hatch appeared in the middle part, the radio semi-compass antenna was hidden in a fairing and an emergency fuel drain system was installed. At the beginning of the war, the crew consisted of six people: two pilots, one of whom was a trainee, a navigator-scorer, a radio operator and two

gunners. By the middle of the war, due to significant losses in personnel, the British abandoned the co-pilot on large aircraft.

On the Wellington Mk.1C, which began to enter the Royal Air Force in April 1940, the retractable FN9 turret was abandoned in favor of two on-board mounts with Vickers "K" machine guns, and American Browning machine guns with a caliber of 7.67 mm were installed on serial bombers. The firing angle of the turrets was increased until the "dead" zone on the sides of the aircraft disappeared. The Pegasus XVIII engines were quite reliable, but the failure of one of them led to a sharp loss of altitude due to the inability to feather the de Havilland fixed-angle propellers used. Mk.1C was the first version of the bomber, released in large quantities - about 2700 copies. The standard bomb load was nine 500 lb (227 kg) bombs or two 2,000 lb (907 kg) bombs.

Experience has shown that aircraft of this type were the best among British bombers in the early stages of the war, with a higher cruising speed than the Whitley B.V and with a large combat radius with a larger bomb load than the Hampden B.1.

By mid-1941, it became clear that the accuracy of night bombing was extremely low. This circumstance forced us to look for instrumental methods of aiming aircraft at a target, based on our own and captured developments. From August 1941, the Mk.1S began to use the Gee (GEF) device for blind targeting by radio beam. The target was the cities of the Ruhr and the administrative centers of Germany, attacks on which were dangerous due to the powerful multi-component air defense system created by the Germans by the end of 1941.

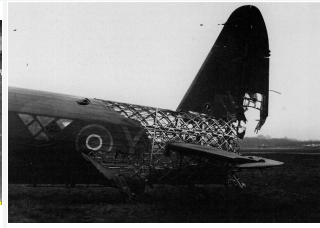
From September 1940, Wellingtons Mk.1A began to be used in the Mediterranean theater of operations, where they attacked the positions of Italian troops in Albania, the port of Wallona and the Italian cities of Bari, Brindisi. A daytime attack on Vallona on 7 November in heavily cloudy conditions resulted in the loss of two bombers to obsolete Fiat GR.32 biplane fighters. The appearance of new high-speed Fiat G.50 fighters over Albania in early December forced the British to switch to their usual night operations. For attacks on Italy, airfields in Malta were used, where in the middle of 1942 more advanced Mk.II and Mk.III bombers arrived. In addition, the Wellingtons participated in the suppression of the pro-German rebellion in Iraq in May 1941.

In February 1942, the tactics of bombing Germany were revised. The new methods were based on concentrating as many bombers as possible on a single target in as little time as possible. Having collected all the planes capable of taking off from combat and training units, the British assembled an armada of 1042 bombers. Her powerful attacks on Cologne, Rostock, Lübeck, the cities of the Ruhr were called "terror raids" by the German press.

Beginning in the spring of 1942, the Royal Air Force began to use the Mk. VIII in military operations.

This aircraft also had significant success as a torpedo bomber, especially over the Mediterranean. So, in October 1942, operating from airfields in Malta, Wellington Mk.VIII sank several tankers with fuel for Rommel's tanks and damaged a large number of ships.

During its history Wellingtons were used by the air forces of Great Britain, Canada, Australia, New Zealand and the Union of South Africa, and after the war by the air forces of France and Greece. In addition, the Royal Air Force had squadrons manned entirely by Polish and Czech personnel. Captured Wellingtons were used by the German and Italian Air Forces.



[Read more](#)

- [WELLINGTON III, X, XI, XII, XIII AND XIV-PILOT'S NOTES. January 1944.](#)

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