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(Redirected from Focke-Wulf Fw 44)

The **Focke-Wulf Fw 44 Stieglitz** (Goldfinch) is a twin-seat biplane designed and produced by the German aircraft manufacturer Focke-Wulf. It was the company's first major international success.[1]

The Fw 44 had a relatively conventional layout for a biplane, possessing a pair of open cockpits that were arranged in tandem, both cockpits were equipped with flight controls and instrumentation. The aircraft had straight unstagered wings, fixed tailwheel landing gear, and was powered by a Siemens-Halske Sh 14 radial engine. It was furnished with ailerons on both upper and lower wings, but did not use flaps. The design team was headed by Kurt Tank.[2] Intended for use as a pilot training and sports aircraft, the first prototype conducted its maiden flight in the latter half of 1932, while initially proving to be troublesome, remedial modifications and design tweaks quickly adapted the Fw 44 into a suitable aircraft for performing aerobatic manoeuvres, a feat which numerous noted pilots took advantage of.

The aircraft quickly garnered substantial orders from flight schools and flying clubs, both in Germany and abroad. The rate of orders was such that not only did Focke-Wulf establish a second factory but multiple licences were issued to other companies, leading to the Fw 44 being produced in several other countries. The Fw 44C had been considered to be the definitive version of the aircraft, it was powered by a Siemens-Halske Sh 14-radial engine. On occasions, the type saw service by military use; the Republic of China Air Force had their aircraft adopted for frontline combat during the Second Sino-Japanese War. The Luftwaffe operated numerous Fw 44s during the early years of the Second World War.

Design and development [edit]

During the mid-1920s, the recently formed German aircraft manufacturer Focke-Wulf commenced limited production of their first civil-orientated aircraft, such as the Focke-Wulf A 16.[3] In 1931, the company benefitted from two key events, the merger of rival German aircraft manufacturer Albatros Flugzeugwerke with Focke-Wulf and the arrival of the aeronautical engineer Kurt Tank as the leader of the firm's design department. In this capacity, Tank played a key role in the development of what would become the Fw 44, which commenced that same year.[4]

The Fw 44 was a single-bay strut-and-wire-braced twin-seat biplane intended for use as a primary trainer and sporting aircraft.[5] It had equal span wings which had slight sweepback, stagger, and dihedral. The lower wings attached directly to the bottom of the fuselage, the upper wings were connected to the upper fuselage by a pair of inverted-V-shaped struts on either upper wing and lower wings on either side of the aircraft.[6] Wood was used for the wing's structural members, such as pinewood spars and ribs; a combination of fabric and plywood was used to cover the wing. The structure of the fuselage comprised welded steel tubing; metal panels covered the forward fuselage while a fabric covering was used for elements aft of the rear cockpit.[6]

The tail unit featured mixed construction, with both fabric and plywood; the angle of incidence was adjustable mid-flight.[6] To reduce the risk of a fire within the engine bay, a bulkhead composed of duralumin was present behind the tubular engine mount. The fuselage contained two fuel tanks such that Focke-Wulf was able to perform aerobatic manoeuvres (such as the execution of the bulkhead), as was a third tank containing lubricating oil.[7] Both of the aircraft's two cockpits, which were open, were compatible with seat-type parachutes. Just aft of the rear cockpit was a luggage locker that was accessed by folding down the seat.[6]

During late summer 1932, the first prototype performed its maiden flight.[7] Early test flights were troubled by a range of technical issues, compelling a detailed redesign of the aircraft.[2] Following extensive modifications and testing, it was determined that the redesigned aircraft not only possessed favourable flight characteristics but was also capable of withstanding considerable stresses; these qualities proved to be quite beneficial for conducting aerobatic manoeuvres. Several noted pilots opted to perform aerial displays using the type, such as Gerd Achgelis, Ernst Udet, and Ernst Kropf, the latter's aircraft bore the registration *D-EMIL*.[6]

Much of the early demand for the type came from flight schools and flying clubs; the order numbers were such that Focke-Wulf was able to establish a second production facility to produce the type.[6] Customers were not only confined to the German market; numerous nations in South America, Europe, and Asia would purchase the type, some opting to establish local production of the Fw 44 in order to meet their requirements. Multiple variants of the aircraft were developed, many of which were for these export customers.[6]

The *Fw 44B* was the second production version of the aircraft; it was powered by an Argus As 8 four-cylinder inverted inline air-cooled engine, capable of producing up to 90 kW (120 hp).[7] The cowling for this engine gave the plane a more slender and aerodynamic nose.[6] The lower deflection of the aircraft was the *Fw 44C*, which was powered by a Siemens-Halske Sh 14 radial engine instead.[6]

The last series version was the *Fw 44J*, which was sold or built under license in several countries around the world.

Operational history [edit]

Nineteen Fw 44s (Twelve Fw 44Fs and seven Fw 44Js) were purchased by the provincial government of Canton (Guangdong) in 1935–36, for use by its own air force.[9] The Canton Air Force was incorporated into the main Nationalist Air Force in July 1936, as Canton lost its independence.[10] These were modified for combat missions and participated in the early stage of the Second Sino-Japanese War, all are believed to have been lost in action. [citation needed]

Many Fw 44Cs were operated by the Luftwaffe; this included during the Second World War, with the Flugzeugführerschulen and one or two Flugkreigsschulen.[citation needed]

Variants [edit]

Fw 44B

Fw 44C

Main production version with minor equipment changes, powered by a seven-cylinder Siemens-Halske Sh 14a radial piston engine.

Fw 44D

Fw 44E

Fw 44F

Fw 44J

Final production model, powered by a seven-cylinder Siemens-Halske Sh 14a radial piston engine.

I.Ae.Ah

Fw 44J produced under license in Brazil by Fábrica do Galeão.[11]

Fw 44J G-STIG at Old Warden 2008. 47

I.Ae. 23 [edit]

Between 1937 and 1942 the Fábrica Militar de Aviones (FMA) of Argentina had 190 units of the FW-44J Stieglitz. It was powered by a domestically built version of the Siemens Bramo Sh 14 engine called the I. Ae. Sh 14. The Fw 44Js were destined for the Argentine Military Aviation School and for numerous aero clubs for use as training aircraft.

I.Ae. 23, the Argentinian "Wooden Focke-Wulf" 47

In 1944, the Instituto Aerotécnico received the request to experiment with the construction of the Fw 44J, but using purely national woods instead of importing them, following the pattern initiated by the development of the I.Ae. 22 "DL" trainer. The project was named **I.Ae. 23**. It was known as "Wooden Focke-Wulf" (*Focke-Wulf de Madera* in Spanish).[12][13][14] The I.Ae. 23 flew for the first time on July 7, 1945.[15] The plane was used for training and experiments. It was configured with a Kodak photo gun. Despite its success, only one was built, as its design was surpassed by other machines of British origin that were acquired in 1946.

Operators [edit]

- **Argentina**
  - Argentine Air Force
  - Argentine Naval Aviation

  The aircraft was produced under license in 1937–1942 period.[16]
- **Austria**
  - Austrian Air Force (1927–1938) – license production
- **Bolivia**
  - Bolivian Air Force – one aircraft was delivered in November 1937.[17]
- **Brazil**
  - Brazilian Air Force
  - Brazilian Naval Aviation

  – license production
- **Bulgaria**
  - Bulgarian Air Force – license production
- **China**
  - Republic of China Air Force
- **Chile**
  - Chilean Air Force – 15 aircraft delivered in February 1938[18]
- **Colombia**
  - Colombian Air Force
- **Czechoslovakia**
  - Czechoslovak Air Force (postwar)
- **Finland**
  - Finnish Air Force
- **Germany**
  - Luftwaffe
- **Hungary**
  - Hungarian Air Force
- **Poland**
  - Polish Air Force
- **Romania**
  - Royal Romanian Air Force
- **Slovakia**
  - Slovak Air Force (1939–1945)
- **Spain**
  - Spanish Air Force
- **Sweden**
  - Swedish Air Force – license production; called Sk 12[19]
- **Switzerland**
  - Swiss Air Force - One Fw 44F defected to Switzerland in 1945, and was purchased from the Allied Control Commission later that year, serving with the Swiss Air Force until 1953.[20]
- **Turkey**
  - Turkish Air Force (1937–1962)
- **Yugoslavia**
  - SFR Yugoslav Air Force – postwar

A Focke-Wulf Fw 44 in 2005 47

Focke-Wulf Fw 44s from Argentina, c. 1937 47

Specifications [edit]

Data from Flugzeug Typenbuch 1941[21]

General characteristics

- **Crew:** 2
- **Length:** 7.3 m (23 ft 11 in)
- **Wingspan:** 9 m (29 ft 6 in)
- **Height:** 2.7 m (8 ft 10 in)
- **Wing area:** 20 m² (220 sq ft)
- **Empty weight:** 565 kg (1,246 lb)
- **Gross weight:** 870 kg (1,918 lb)
- **Powerplant:** 1 × Bramo Sh 14A-4 seven-cylinder air-cooled radial piston engine 150 PS (148 hp; 110 kW)
- **Propellers:** 2-bladed Starrschraube, 2.25 m (7 ft 5 in) diameter fixed-pitch RH rotation wooden propeller

Performance

- **Maximum speed:** 185 km/h (115 mph, 100 kn)
- **Cruise speed:** 172 km/h (107 mph, 93 kn)
- **Landing speed:** 74 km/h (46 mph; 40 kn)
- **Range:** 675 km (419 mi, 364 nmi)
- **Endurance:** Four hours and 24 minutes
- **Service ceiling:** 3,000 m (12,000 ft)
- **Rate of climb:** 3.4 m/s (670 ft/min)
- **Time to altitude:**
  - 1,000 m (3,300 ft) in five minutes and 30 seconds
  - 3,000 m (9,800 ft) in 23 minutes and 36 seconds
- **Wing loading:** 43.5 kg/m² (8.9 lb/sq ft)
- **Powerr/mass:** 0.1724 PS/kg (0.0771 hp/lb; 0.1268 kW/kg)
- **Fuel consumption:** 20 L/km (0.071 mpg-imp)
- **Oil consumption:** 01 L/km (0.0035 mpg-imp)
- **Take-off distance:** 140 m (460 ft)
- **Landing distance:** 140 m (460 ft)

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3. ^ Munson 1977, p. 129.
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- Pavlovic, Gabriel; Raczynsk, Esteban (4 October 2018). *Focke-Wulf 44J en Argentina* ↗ (in Spanish).

External links [edit]

- Musee volant de l'Amicale Jean-Baptiste Salis ↗
- Commemorative Air Force ↗
- Biplanes.de's Fw 44 D-EMMI Stieglitz Photo Page ↗ (in German)
- YouTube's D-EMMI Stieglitz Takeoff at Eisenhardt airshow in 2010 ↗
- Biplanes.de's 85th Anniversary of Focke-Wulf's founding Stieglitz Fly-In Page ↗ (in German)

Wikimedia Commons has media related to Focke-Wulf Fw 44.

Focke-Wulf aircraft [show]
Reich Air Ministry (RLM) aircraft designations (list) [show]
Aircraft designed by Kurt Tank [show]
Swedish military aircraft designations 1926–current [show]
Czechoslovak Air Force trainer aircraft designations, 1945–1958 [show]
Brazilian Naval Aviation aircraft designations [show]
Fábrica Militar de Aviones (FMA)/Fábrica Argentina de Aviones (FAdeA) aircraft [show]

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