Henschel Hs 123

Henschel Hs 123V5, prototype du Hs 123B

En 1933, l'arrivée au pouvoir des nazis en Allemagne ouvrit la voie à un programme de réarmement de moins en moins clandestin et de plus en plus massif. Des sommes considérables furent investies dans l'organisation des forces militaires allemandes. La volonté des nouvelles autorités allemandes ne manqua pas d'être notée par de nombreux industriels du pays, soucieux de profiter de la manne des commandes publiques et d'être bien vu du nouveau régime. L'entreprise Henschel, basée à Cassel et jusque-là spécialisée dans la fabrication de locomotives ferroviaires, décida de se lancer dans la conception et la production de matériels militaires. Elle fut notamment l'une des plus importantes firmes allemandes pour la construction de chars. Mais en 1933, Henschel fit aussi le choix de développer une filiale aéronautique avec deux usines principales, Schönefeld et Johannistahl. Après avoir suscité l'intérêt de la *Luftwaffe* avec un premier prototype d'avion d'entraînement (le Henschel Hs 121), l'entreprise fut autorisée à poursuivre ses efforts. Les aviateurs allemands, parmi lesquels l'ancien as de la Première Guerre Mondiale Ernst Udet, s'intéressaient alors de près à une méthode de bombardement particulière, le bombardement en piqué. Le Ministère de l'Air allemand, le RLM, s'adressa donc aux constructeurs allemands pour qu'ils développement un bombardier en piqué. Deux entreprises répondirent : Fieseler et Henschel. Les ingénieurs d'Henschel mirent alors au point un modèle dédié, le Henschel Hs 123. Trois prototypes furent assemblés (Hs 123 V1, V2 et V3) qui se distinguaient surtout par des choix aérodynamique différents. Le 1er avril 1935, le V1 décolla pour la première fois avant d'être présenté en vol au public le 8 mai suivant. En août 1935, les trois Hs 123 et le Fieseler Fi-98 furent testés sur la base aérienne de Rechlin. Bien que durant ces essais le Fi-98 se soit révélé inférieur à son rival, la partie n'était pas gagnée pour autant. Deux des Hs 123 s'écrasèrent au sol après des piqués, leurs ailes supérieures s'étant disloquées durant la manœuvre. Il fallut en urgence trouver une solution : le Hs-123 V4 vit sa structure renforcée au niveau des ailes et passa avec succès la phase de tests. Convaincu, le RLM passa officiellement commande du modèle Henschel, rebaptisé Hs 123A-1. Le Hs 123 était un appareil sesquiplan, le plan supérieur de la voilure étant plus long de 2,5 mètres que le plan inférieur. La cellule était entièrement métallique, à l'exception des gouvernes (entoilées). Le train d'atterrissage se composait de deux jambes principales et d'une roulette de queue, toutes trois recouvertes d'un carénage (fréquemment enlevé durant les opérations à partir de terrains peu préparés).

Les premiers prototypes du Hs 123 avaient été équipés d'un BMW 132A-3 de 725 ch. Ce moteur fut remplacé sur les avions de série par un BMW 132Dc de 880 ch entraînant une hélice bipale. Avec une vitesse de pointe de 341 km/h à basse altitude, le Hs-123 était plus rapide que son équivalent japonais, l'Aichi D1A (309 km/h). Une tentative de remotorisation avec un BMW 132K de 960 ch (Hs-123B) ne suscita aucune commande officielle, de même qu'une version avec cockpit fermé et deux nouvelles mitrailleuses (Hs-123C). Le rayon d'action du Henschel atteignait à peu près les 400 kilomètres avec le plein de carburant. Le pilote du Hs 123, installé dans un cockpit ouvert à l'avant du fuselage, disposait de deux mitrailleuses fixes de calibre 7,92 mm. Il n'était protégé par aucun blindage, mais la cellule de l'avion se révéla très robuste et très résistante au feu ennemi. L'arme principale de l'avion prenait place sous la voilure. Quatre points d'emport sous le plan de voilure inférieur permettaient de porter quatre bombes SC50 de 50 kilos chacune. Sous la partie centrale du fuselage, un cinquième point fut installé pour porter une bombe SC250 de 250 kilos. A l'usage, cette bombe fut souvent remplacée par un réservoir auxiliaire de 130 litres de carburant. Après une première série d'avions de présérie (He-123A-0), les Hs 123A-1 entrèrent en service à l'automne 1936. Ils furent intégrés dans des unités spécialisées dans le bombardement en piqué, les *Stukageschwader*. Dans le même temps, une unité d'évaluation fut déployée en Espagne, alors déchirée par la guerre civile entre les nationalistes et les républicains. Cinq Hs 123 furent envoyés combattre aux côtés des nationalistes au sein de la *Legion Condor*. Les rapports allemands signalèrent le peu d'efficacité du Hs 123 en bombardement horizontal. En revanche, l'efficacité et la précision de l'appareil dans les missions d'appui rapprochée furent largement mises en avant. Capable d'encaisser un feu ennemi très nourri, pouvant opérer à partir de terrains peu préparés, le Hs-123 était également très manœuvrant et doté d'une bonne vitesse ascensionnelle (900 mètres par minute au niveau de la mer). Si les militaires nationalistes se montrèrent suffisamment impressionnés pour acquérir les cinq Hs 123 d'évaluation ainsi que onze exemplaires neufs supplémentaires et si la Chine nationaliste s'en procura douze, la production cessa dès le mois d'octobre 1938 en Allemagne. En effet, le Henschel avait été prévu comme un appareil de transition, devant être remplacé dès que possible par un modèle plus évolué. Ce nouvel appareil devint le Junkers Ju-87 Stuka et sa production devint vite une priorité du régime nazi. Seuls 250 exemplaires devaient être finalement assemblés. La chaîne d'assemblage fut démontée en 1940, ce qui eut des conséquences pour la suite. En septembre 1939, les Hs 123 étaient dispersés entre les unités d'instruction de la *Luftwaffe* et un unique groupe, le II (Schlacht)/LG 2. Cette formation n'était plus destinée au bombardement en piqué, mais à l'appui rapprochée. Un peu moins de quarante Hs 123 servirent au sein de cette formation en Pologne, puis en Belgique et dans le nord de la France. Ils s'y montrèrent redoutables et furent très demandés sur le front. En revanche, ils ne furent pas engagés dans la bataille d'Angleterre, leur rayon d'action trop faible le leur interdisant. En 1941, après un séjour dans les Balkans, les Hs 123 encore en première ligne participèrent à l'opération *Barbarossa* contre l'Union Soviétique. D'abord déployés dans la partie septentrionale du front, ils furent ensuite intégrés à une toute nouvelle formation d'attaque au sol, le *Schlachgeschwader 1*. Ils se révélèrent très adaptés au front de l'Est, bien que leur cockpit ouvert fasse souffrir leurs pilotes en hiver. Rustiques, pouvant être déployés n'importe où ou presque, capables d'endurer des conditions très sévères, les Hs-123 participèrent à toutes les grandes opérations méridionales, que ce soit en Crimée, dans la région de Kharkov (mai 1942), le sud de la Russie (plan Bleu, été 1942) ou encore durant la bataille de Koursk (juillet 1943). Ils furent également très employés dans des opérations de harcèlement nocturne en arrière de la ligne de front. Diverses améliorations furent testées sur le terrain. Certains Hs 123 auraient opéré avec une paire de canons MG FF de calibre 20 mm sous la voilure. D'autres utilisèrent en lieu et place de leurs bombes les redoutables sous-munitions SD 2, montées dans des conteneurs. Des plaques de blindage furent aussi montées sur plusieurs appareils. Les chasseurs soviétiques rencontraient beaucoup de difficultés durant les combats avec les Hs 123. Bien qu'ils ne soient pas équipés d'armes tirant vers l'arrière, leur grande résistance et leur capacité à voler lentement les rendait difficiles à aborder. Les besoins sur le front de l'Est étaient tels que plusieurs officiers allemands de haut rang, dont le maréchal Wolfram von Richtofen, demandèrent au début de l'année 1943 la reprise de la production en série du Hs 123. Mais la chaîne avait été démantelée et décision fut prise de ne pas la remettre en état. On se contenta de réparer autant d'appareils que possible et de transférer sur le front les avions des unités d'instruction. Malgré tout, l'usure progressive du parc de Hs 123 finit par détruire l'intégralité des exemplaires encore utilisables, sans doute vers le milieu de l'année 1944. Quelques exemplaires espagnols survécurent aux années 1940. L'ultime exemplaire semble avoir été rayé des effectifs en 1952. Aucun appareil n'a subsisté jusqu'à aujourd'hui.

Source : https://aviationsmilitaires.net/v3/kb/aircraft/show/1533/henschel-hs-123

Version anglaise Wikipédia

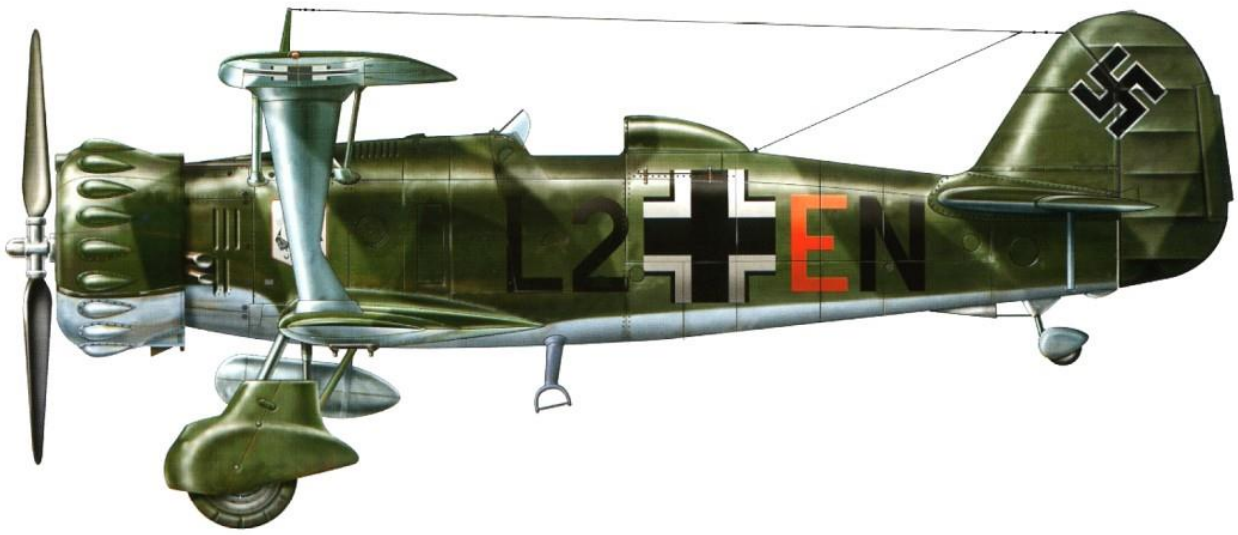
The **Henschel Hs 123** was a single-seat biplane dive bomber and close-support attack aircraft flown by the German *Luftwaffe* during the Spanish Civil War and the early to midpoint of World War II. It proved to be robust, durable and effective especially in severe conditions. It continued to see front-line service until 1944, only to be withdrawn due to a lack of serviceable airframes and spare parts (production ended in 1940).

Design and development

Henschel was a German locomotive manufacturer. Soon after Hitler's rise to power, Henschel decided to start designing aircraft, one of the first being the Hs 123. The aircraft was designed to meet the 1933 dive bomber requirements for the reborn *Luftwaffe*. Both Henschel and rival Fieseler (with the Fi 98) competed for the production contract requirement, which specified a single-seat biplane dive bomber. The first prototype, the Hs 123V1, was cleared for its maiden flight on 1 April 1935; General Ernst Udet, a World War I ace, flew it on its first public demonstration flight on 8 May 1935. The first three Henschel prototypes, with the first and third powered by 485 kW (650 hp) BMW 132A-3 engines and the second by a 574 kW (770 hp) Wright Cyclone, were tested at Rechlin in August 1936.[2] Only the first prototype had "smooth" cowlings; from that point on, all aircraft had a tightly fitting cowling that included 18 fairings covering the engine valves. The Henschel prototypes did away with bracing wires and although they looked slightly outdated with their single faired interplane struts and cantilever main landing gear legs attached to smaller (stub) lower wings, the Hs 123 featured an all-metal construction, clean lines and superior maneuverability. Its biplane wings were of a "sesquiplane" configuration, whereby the lower wings were significantly smaller than the top wings. The overall performance of the Hs 123 V1 prototype prematurely eliminated any chance for the more conventional Fi 98, which was cancelled after a sole prototype had been constructed. During testing, the Hs 123 proved capable of pulling out of "near-vertical" dives; however, two prototypes subsequently crashed due to structural failures in the wings that occurred when the aircraft were tested in high-speed dives. The fourth prototype incorporated improvements to cure these problems; principally, stronger centre-section struts were fitted. After it had been successfully tested, the Hs 123 was ordered into production with a 656 kW (880 hp) BMW 132Dc engine. The Hs 123 was intended to replace the Heinkel He 50 biplane reconnaissance and dive bomber as well as acting as a "stop-gap" measure until the Junkers Ju 87 became available. As such, production was limited and no upgrades were considered, although an improved version, the **Hs 123B**, was developed by Henschel in 1938. A proposal to fit the aircraft with a more powerful 716 kW (960 hp) "K"-variant of its BMW 132 engine did not proceed beyond the prototype stage, the Hs 123 V5. The **V6** prototype fitted with a similar powerplant and featuring a sliding cockpit hood was intended to serve as the **Hs 123C** prototype.

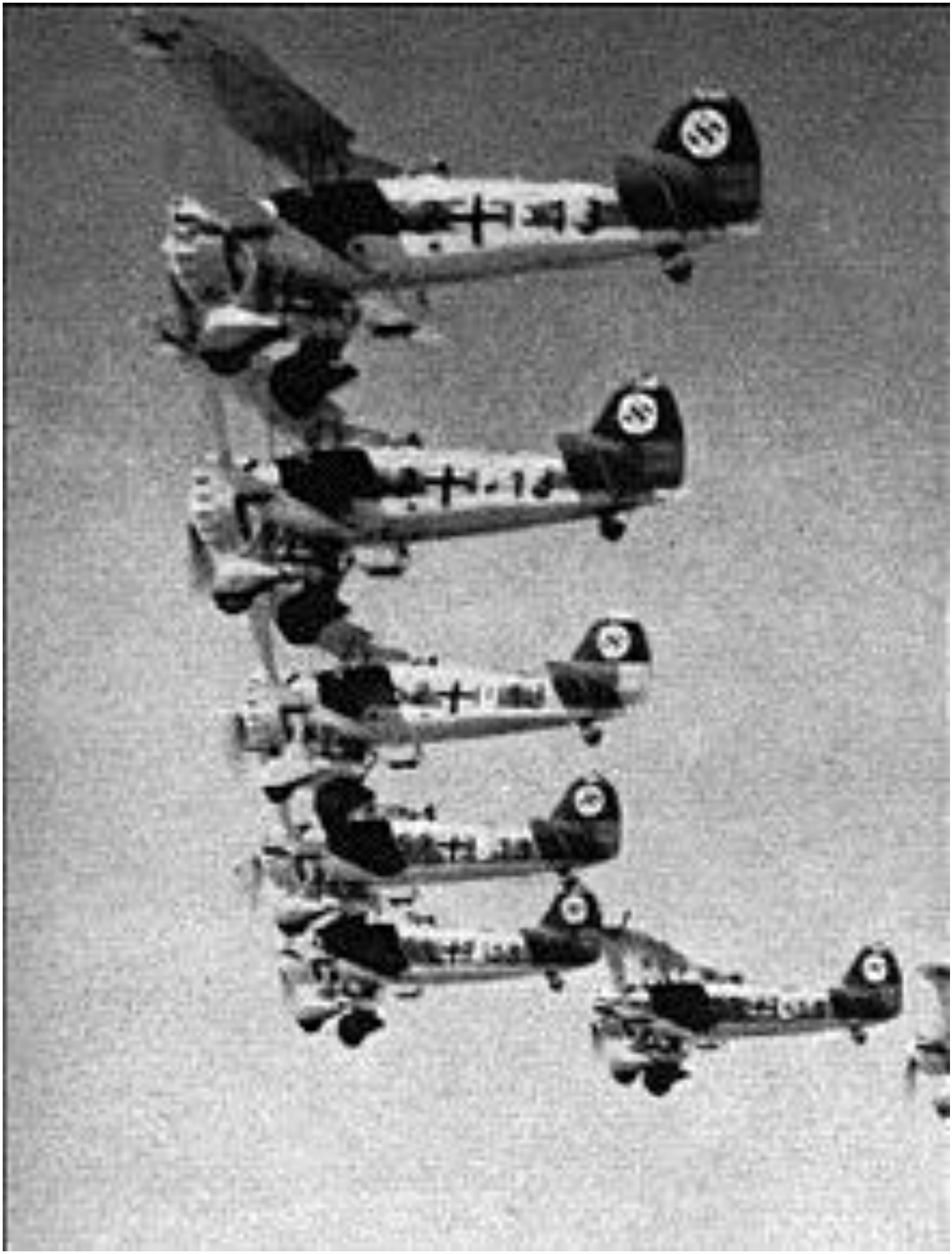
Production

The Hs 123 was manufactured at Henschel's Schönefeld and Johannistal factories.[3] The first production Hs 123 were delivered in 1936.[4] About 265 aircraft were produced.[5] Production of the Hs 123A ended in Autumn 1938.[6] A prototype Hs 123B and a prototype Hs 123C were produced just before production of the Hs 123A ended.[6] Some were exported to China,[5] and 14 were transferred to the Spain Nationalist Air Arm.[7]



Operational history

Prior to World War II



A squadron of Luftwaffe Henschel Hs 123As in flight before the Second World War

A small pre-production batch of **Hs 123A-0**s was completed in 1936 for service evaluation by the Luftwaffe. This initial group was followed by the slightly modified **Hs 123A-1** series, the first production examples. The service aircraft flew with an armoured headrest and fairing in place (a canopy was tested in the Hs 123V6) as well as removable main wheel spats and a faired tailwheel. The main weapon load of four SC50 50 kg (110 lb) bombs could be carried in lower wing racks along with an additional SC250 250 kg (550 lb) bomb mounted on a "crutch" beneath the fuselage. The usual configuration was to install an auxiliary fuel "drop" tank at this station that was jettisoned in emergencies. Two 7.92 mm (.312 in) MG 17 machine guns were mounted in the nose synchronized to fire through the propeller arc. The aircraft entered service at StG 162 in autumn 1936. Its career as a dive bomber was cut short when the unit received its first Ju 87A the next year. Remaining Hs 123s were incorporated into the temporary *Fliegergeschwader* 100 at the time of the Munich Crisis. The *Geschwader* (wing) had been created as an emergency measure, equipped with obsolete aircraft and tasked with the ground attack role. With the signing of the Munich agreement, the crisis was over and the *geschwader* was disbanded, the *gruppen* being transferred to other established units. By 1939, despite its success in Spain, the *Luftwaffe* considered the Hs 123 obsolete and the *schlachtgeschwader* (close-support wings) had been disbanded with only one *gruppe*, *II.(Schl)/LG2* still equipped with the Hs 123.

Spanish Civil War

During the same time, at the request of *Oberst* (later *Generalfeldmarschall*) Wolfram von Richthofen, chief of staff of the *Legion Condor*, five aircraft had been deployed to Spain as a part of the *Legion Condor*, intended to be used as tactical bombers. In their intended role, the Hs 123s proved to be somewhat of a failure, hampered by their small bomb capacity and short range. Instead, the Hs 123s based in Seville were used for ground support, a role in which their range was not such a detriment, and where the ability to accurately place munitions was more important than carrying a large load. The combat evaluation of the Hs 123 demonstrated a remarkable resiliency in close-support missions, proving able to absorb a great deal of punishment including direct hits on the airframe and engine. The Nationalists in Spain were impressed with the Hs 123's performance in battle, purchasing the entire evaluation flight and ordering an additional 11 aircraft from Germany. The Spanish Hs 123s were known as "*Angelito*" (dear angel or little angel), and at least one Hs 123 was in service with the *Ejército del Aire* (Spanish Air Force) after 1945.

Second Sino-Japanese War

Twelve Hs 123s were also exported to China, where they were used extensively as dive bombers by the temporarily-organized 15th Squadron of the China Central Air Force Academy Group, operating against Imperial Japanese warships along the Yangtze River, especially in 1938.[8]

World War II

Service from Poland to Greece

At the outbreak of hostilities, the surviving 39 Hs 123s assigned to II. (Schl)/LG 2, were committed to action in the Polish Campaign.[9] This single unit proved to be particularly effective. Screaming over the heads of enemy troops, the Hs 123s delivered their bombs with devastating accuracy. A frightening aspect of an Hs 123 attack was the staccato noise of its engine that a pilot could manipulate by changing rpm to create "gunfire-like" bursts.[8] The Hs 123 proved rugged and able to take a lot of damage and still keep on flying. Operating from primitive bases close to the front lines, the type was considered by ground crews to be easy to maintain and reliable in field conditions. The Polish campaign was a success for an aircraft considered obsolete by the *Luftwaffe* high command. Within a year, the Hs 123 was again in action in the *blitzkrieg* attacks through the Netherlands, Belgium and France. General Heinz Guderian was continually impressed by the quick turnaround time offered by II.(Schl)/LG 2. Often positioned as the *Luftwaffe*'s most-forward based combat unit, the Hs 123 flew more missions per day than other units, and again proved their worth in the close-support role. With Ju 87s still being used as tactical bombers rather than true ground support aircraft and with no other aircraft capable of this mission in the *Luftwaffe* arsenal the Hs 123 was destined to continue in service for some time, although numbers were constantly being reduced by attrition. The Hs 123 was not employed in the subsequent Battle of Britain as the English Channel proved an insuperable obstacle for the short-ranged aircraft.

The sole operator, II.(Schl)/LG 2 went back to Germany to re-equip with the Messerschmitt Bf 109E fighter bomber (*Jabo*) variant. The Bf 109E fighter bomber was not capable of carrying any more bombs than the Hs 123. It did, however, have a greater range and was far more capable of defending itself. On the downside were the notoriously tricky taxiing, ground handling, and takeoff/landing characteristics of the Bf 109, which were exacerbated with a bomb load. At the beginning of the Balkans Campaign, the 32 examples of the Hs 123 that had been retired after the fall of France were taken back into service to equip **10.(Schl)/LG 2**. The aircraft performed well enough to warrant its use in Operation Barbarossa.

Eastern Front service

Henschel Hs 123 on the Eastern Front

At the start of Operation Barbarossa, the single *Gruppe* of the *Luftwaffe* that was dedicated to ground support was II.(Schl)/LG 2, operating 22 Hs 123s (along with 38 Bf 109Es).[10] In service use on the Eastern Front, the remaining aircraft had been field-modified with the main wheel spats removed, additional armour and extra equipment fitted as well as mounting extra machine guns and even cannons in under-wing housings. Some volunteers of *Escuadrilla Azul* (15 Spanische Staffel/VIII. *Fliegerkorps*) of JG-27 detached in *Luftflotte* 2 managed Hs 123s in collaboration of II.(Schl.)/LG 2 units for ground strikes along Bf 109E-7/B fighter-bombers during 1941–42 period. During the initial drive, the unit participated in action along the central and northern parts of the front, including a brief time in support of the fighting around Leningrad, and participating in the battles for Bryansk and Vyazma. The first weeks revealed problems associated with using the Bf 109E which was plagued by undercarriage and engine problems in the fighter-bomber role. Its liquid-cooled inline engine was also more vulnerable to small arms fire than the Hs 123's radial. The winter brought hardship to all German forces in Russia, and the pilots in the open cockpits of the Henschels suffered accordingly. Despite this, they took part in the Battle of Moscow. In January, the unit was re-designated as the first dedicated ground attack wing (in German *Schlachtgeschwader 1*, **SchlG 1**). The Hs 123 became a part of **7./SchlG 1**.

This "new" unit participated in operations in Crimea in May 1942, after which it operated on the southern sector for some time, participating in the Second Battle of Kharkov and going on to take part in the Battle of Stalingrad. In the meantime, the small number of operational Hs 123 continued to slowly dwindle. Aircraft had been salvaged from training schools and even derelict dumps all over Germany to replace losses.[8] The aircraft that had supposedly replaced the Hs 123, the Ju 87, also started to be assigned to ground support units, leaving tactical bombing to newer aircraft. The greatest tribute to the Hs 123 usefulness came in January 1943 when *Generaloberst* Wolfram von Richthofen,[11] then commander-in-chief of *Luftflotte* 4, asked whether production of the Hs 123 could be restarted because the Hs 123 performed well in a theater where mud, snow, rain and ice took a heavy toll on the serviceability of more advanced aircraft. However, the Henschel factory had already dismantled all tools and jigs in 1940.[8] After taking part in the Battle of Kursk, SG 1 returned to Crimea, and there during late spring 1944, they finally gave up the aircraft that had served all over Europe from Spain to Leningrad. 7./SG 1 traded its last Hs 123s in mid-1944, for Ju 87s, a type that was to have replaced it back in 1937. By 1945, the Hs 123s that remained serviceable were reassigned to secondary duties such as supply dropping and glider towing.[12]

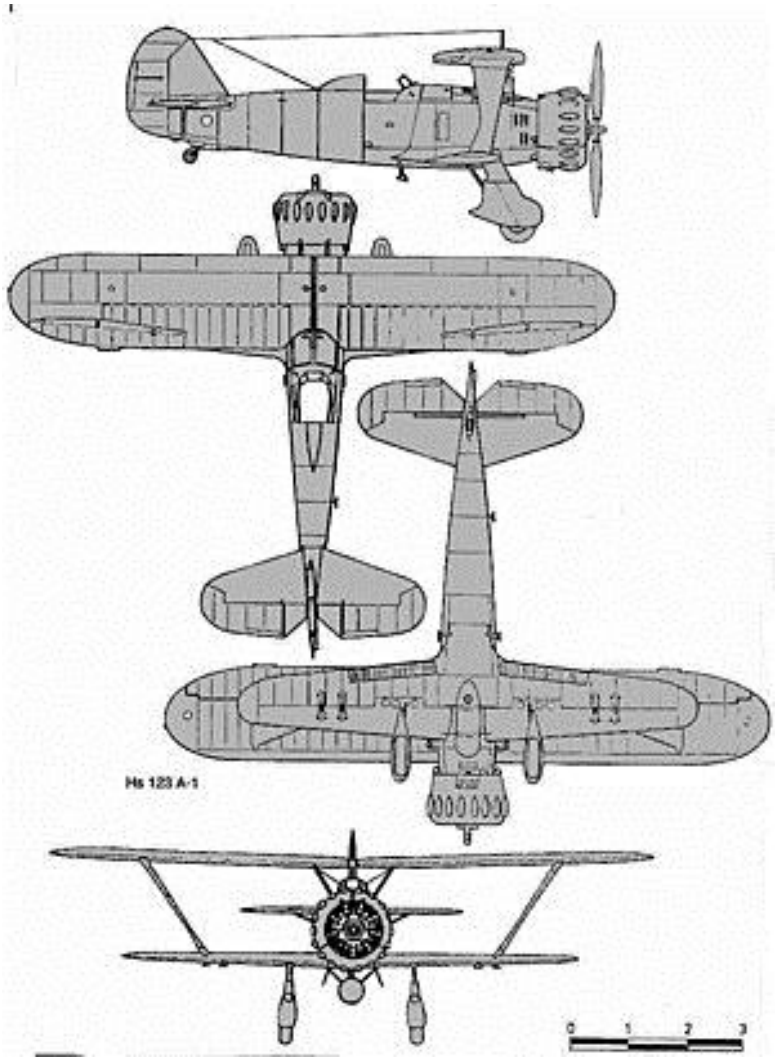
Legacy

The Henschel Hs 123 showed that a slow but rugged and reliable aircraft could be effective in ground attack. Despite its antiquated appearance, the Hs 123 proved useful in every World War II battlefield in which it fought.[13] No Hs 123s are known to have survived.

Follow-on designs

The success of the Hs 123 in the Spanish Civil War led the RLM to put out a request for a successor aircraft. At this point in history, the exact role of aircraft in support of the army was still being developed. This was perhaps the first dedicated attack aircraft design which was intended to fulfill the close air support role in the niche between the tactical bomber and the dive bomber. The successor chosen was the Henschel Hs 129.

Specifications (Hs 123A-1)



General characteristics

- **Crew:** 1
- **Length:** 8.33 m (27 ft 4 in)
- **Wingspan:** 10.5 m (34 ft 5 in)
- **Height:** 3.2 m (10 ft 6 in)
- **Wing area:** 24.85 m^2 (267.5 sq ft)
- **Empty weight:** 1,500 kg (3,307 lb)
- **Gross weight:** 2,215 kg (4,883 lb)
- **Powerplant:** 1 × BMW 132Dc 9-cylinder air-cooled radial piston engine, 660 kW (880 hp)
- **Propellers:** 2-bladed metal variable-pitch propeller

Performance

- **Maximum speed:** 341 km/h (212 mph, 184 kn) at 1,200 m (3,937 ft)
- **Range:** 860 km (530 mi, 460 nmi) with drop tank[15]
- **Combat range:** 480 km (300 mi, 260 nmi) with 200 kg (440.9 lb) of bombs
- **Service ceiling:** 9,000 m (30,000 ft)
- **Rate of climb:** 15 m/s (3,000 ft/min)

Armament

- 2× 7.92 mm MG 17 machine guns, 400 rpg (field modification of 2× 20 mm (0.79 in) MG FF cannon)
- Up to 450 kg (992.1 lb) of bombs (1 x SC250 bomb under fuselage and 4 x SC50 bombs under wings)

Source : https://en.wikipedia.org/wiki/Henschel_Hs_123