

FlyPast Classics

HENSCHEL Hs 129

No 03

Armed and Deadly

Comparatively small and underpowered, Henschel's Hs 129 was still an effective ground-attack and anti-armour aircraft – but never available in sufficient numbers to make an impression. **Malcolm V Lowe** tells the story of this diminutive 'tank killer'

Experience during World War One and in the Spanish Civil War of 1936-39 had shown the usefulness of close-support and ground-attack aircraft for aiding friendly forces on the battlefield. In some cases, aerial support could be proven to have tipped the balance on the ground in favour of the side with the best air power.

Partly as a result of early experience during the Spanish Civil War, in the spring of 1937 the Technisches Amt (technical office) of Nazi Germany's air ministry, the Reichsluftfahrtministerium (RLM), issued a specification for a dedicated

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heavily armed and armoured ground-attack aircraft for Luftwaffe service. Four companies were asked to tender, but just two – Focke-Wulf and Henschel – reached the design and prototype phase. Both firms proposed a twin-engined type powered by the Argus As 410 V12 inline engine. Focke-Wulf's entry was an armoured derivative of its Fw 189 Uhu (Owl) twin-boom reconnaissance aircraft and received the designation Fw 189C.

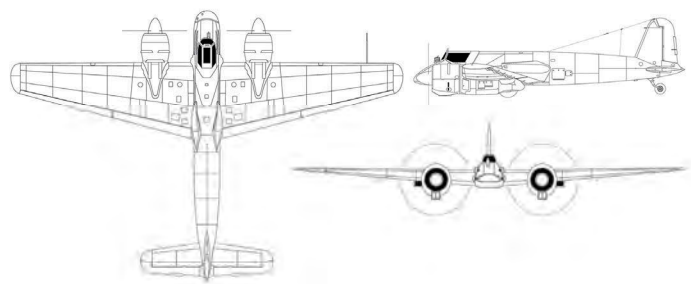
In contrast, Henschel's design was brand new. Henschel already had considerable experience of designing and producing ground-attack aircraft for the Luftwaffe, with its Hs 123 biplane, which proved its worth over Spain (albeit in fairly small numbers) and in the

opening phases of World War Two with the Luftwaffe.

For this new requirement, the company offered a twin-engined, heavily armoured low-level attack aircraft, with a forward-placed cockpit and useful forward-firing machine gun and cannon armament. Small bombs could be carried beneath the fuselage and/or wings. The forward location of the cockpit allowed the pilot to easily spot small ground targets, while armour protection for the cockpit and engines allowed the aircraft to survive in an environment in which intense small arms fire would exist.

Design acceptance

In October 1937, both the Focke-Wulf and Henschel proposals were accepted, the latter being called the P.46 programme. The latter's design team, led by Friedrich Nicolaus, was rewarded in April 1938 by the granting of the official designation Hs 129. Apart from its odd truncated triangular fuselage cross-section, the Hs 129 emerged as a conventional cantilever monoplane of all-metal construction, with



Henschel Hs 129

Specifications

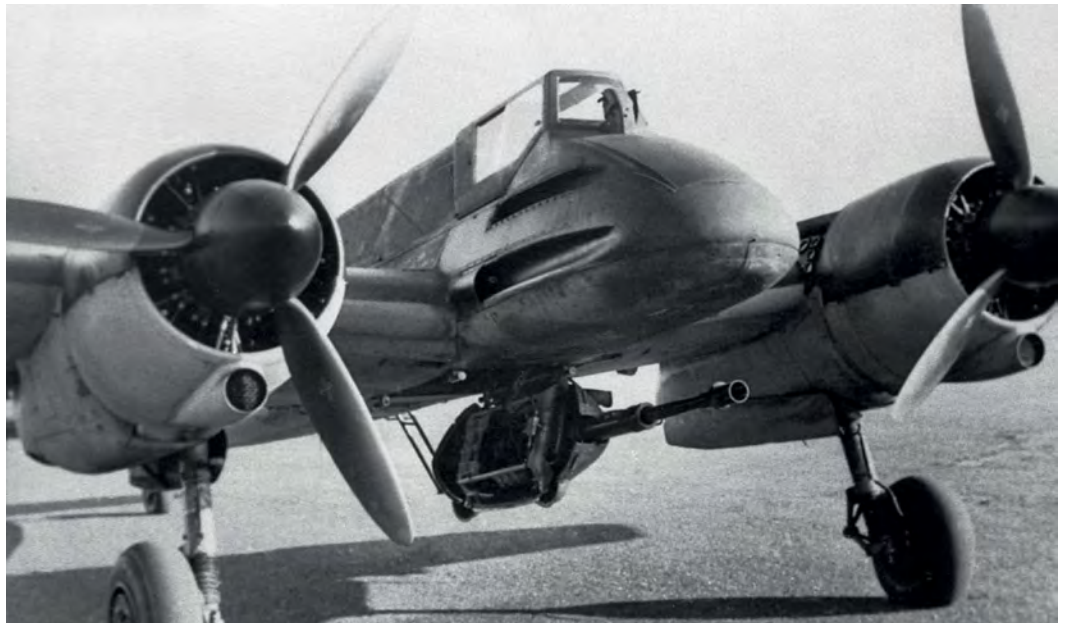
| | |
|----------------------------|--|
| Powerplant | 2 × Gnome-Rhône 14M-4/5 14-cylinder air-cooled radial engines, of 700hp (522kW) each for take-off |
| Crew | 1 |
| Length | 31ft 11 3/4in (9.75m) |
| Wingspan | 46ft 7in (14.2m) |
| Height | 10ft 8in (3.25m) |
| Empty weight | 8,400lb (3,810kg) |
| Max take-off weight | 11,574lb (5,250kg) |
| Performance | |
| Maximum speed | 217mph (350km/h) at 6,562ft |
| Range | 423 miles (680km) at cruising speed |
| Service ceiling | Circa 29,000ft (see note below) |
| Armament | 2 × 20mm MG 151/20 fuselage-mounted, 2 × 7.92mm MG 17 machine guns wing root-mounted, 1 × MK 101 or MK 103 30mm cannon beneath fuselage, up to some 441lb (200kg) of external ordnance |

Note: Although the Hs 129 had a theoretical service ceiling of some 29,000ft, a figure that was discovered in the type's manufacturer and service testing, combat was never flown at that high altitude by Hs 129s, which were used virtually exclusively for low-level operations.



ABOVE Several Luftwaffe officers stand beside their Argus-powered Hs 129A-0, believed to have been assigned to Schlachtgeschwader 101. The very angular nose of these early Henschels encouraged the painting of the 'Pike's Head' insignia.

fabric-covered control surfaces. It was basically designed and built around the extensively armoured forward fuselage with its cramped cockpit. So small was the pilot's compartment that some of the engines' instrumentation had to be mounted outside, on the inner faces of the powerplant nacelles. Similarly, the weapons sight for the aircraft's varied armament needed to be placed externally, ahead of the windscreen. The cockpit featured small look-out panels of armoured glass, but it was realised very rapidly that they were far too small for safe flying.

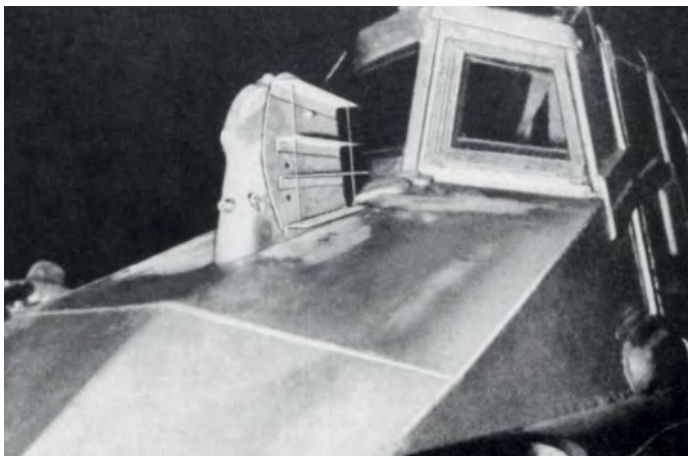


ABOVE An Hs 129B-1 with early round intakes/filters beneath its engine cowlings displays the lower fuselage gun pod fairing for the Mk 101 30mm cannon, which could be swung down for maintenance/re-arming. The ammunition box sat inside the fuselage.

design was victorious over the planned Focke-Wulf Fw 189C.

Henschel initially envisaged the Hs 129A series for production, which would have been Argus-powered. To that end, a batch of 12 service test Hs 129A-0 airframes was ordered by the RLM. They were armed with two 7.92mm MG 17 machine guns and as many Mauser 20mm MG151/20 cannon. The MG 17 were mounted, one in each wing root, firing forwards along a

prominent trough in the lower forward fuselage. The MG 151/20 weapons were fitted higher within the fuselage, one on each side, firing along a similar, corresponding recess. Various combinations of bombs were envisaged to be carried beneath the fuselage and wings for the type's intended ground-attack role, including a single 551lb (250kg) bomb, anti-personnel munitions, or four 110lb (50kg) bombs under the fuselage centreline.



The extraordinary cockpit area of the Hs 129A-series aircraft, with the small, heavily armoured vision panels including the V-shaped windscreen, which proved totally inadequate. The external structure ahead of the cockpit was intended to house the weapons sight.

The first prototype/development airframe, the Hs 129V1, was completed during spring 1939, but its first flight was held up by delays in the delivery of its Argus powerplants. It first flew on May 26, 1939 (some sources state May 25) – just over two years after the original specification had been published. It was followed by two further prototype/development examples, the Hs 129V2 and 'V3. The former debuted in the air during November 1939, but testing was postponed due to several factors mainly associated with the engines. In the event, the less expensive Henschel



Engine problems

Unfortunately, service trials uncovered various problems with the Hs 129A design, and the Luftwaffe rapidly doubted the type's potential as a serious frontline warplane. Underpowered, and difficult to fly with its restricted pilot vision, it never entered production. Henschel's designers had been aware of the A-version's shortcomings and had

production type. Even so, the planned Gnome-Rhône engine was not without its faults. Although service-proven by some versions of the French twin-engined Potez 630-series recon/heavy fighter, the Germans found it to run comparatively hot; overheating problems, especially due to the closely cowled fitting planned for the Hs 129B, took time to remedy. Its fuel



ABOVE Hs 129B-2 'Red J' served on the Russian Front with 8.(Pz)/SchG 1, during May 1943. It wore eight tank 'kill' markings on its rudder, and its Werk Nummer (WNr, factory serial number), 0364, on its lower fin.

considered possible solutions. The company eventually chose to re-engine the Hs 129 with the French Gnome-Rhône 14M radial, captured in quantity (and available for further production) after the capitulation of France in June 1940.

This led to the Hs 129B-series, which became the main

consumption was also high.

The Gnome-Rhône engines for the Henschel were made in France and 'handed', with opposite rotation for port and starboard installation, each driving a three-bladed Ratier constant speed propeller unit. The initially inadequate, lower cowl circular filters

LEFT Often claimed to have been captured by the British at El Aouina in Tunisia, this Hs 129B-2 displays the elaborate upper surface camouflage worn by some Henschels during the closing stages of the war in North Africa.



ABOVE With just one man steering from behind, an Hs 129B-2 of 8.(Pz)/SchG 2 is towed along a Tunisian road on its way to a maintenance area, to have its dust/sand filters replaced. The Hs 129B coped much better with the harsh conditions in the Soviet Union than it did in the baking deserts of North Africa.

"The Luftwaffe rapidly doubted the type's potential as a serious frontline warplane"

were replaced by much better installations in a prominent, somewhat more square-shaped fairing.

The Hs 129V3 was used as the test aircraft for the new Gnome-Rhône 14M layout, and first flew in this guise as the Hs 129V3/U1 on March 19, 1941. It successfully proved

the type, highlighting its enhanced performance. The RLM and Henschel therefore decided that an initial batch of 16 planned Hs 129A-1 Argus-powered airframes would be completed as Gnome-Rhône-engined development aircraft for a planned new production, the Hs 129B-series. They were therefore completed as Hs 129B-0 service test aircraft.

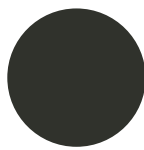
Important changes

The first 'off the shelf' version of the new and much-improved Hs 129B was the Hs 129B-1. This retained the basic armament layout pioneered by A-0 examples, but introduced a revised cockpit canopy with significantly larger

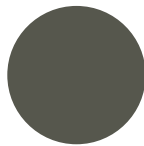
LEFT One of the best-known '129 examples was this Hs 129B captured at El Aouina airfield, Tunisia, during May 1943 and shipped to the US, where it received the evaluation identification code FE-4600. It had been serving with 8.(Pz)/SchG 2. Although later scrapped, its forward fuselage was subsequently preserved in Australia.



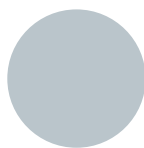
FlyPast Classics 03 HENSCHEL Hs 129



RLM 70 Schwarzgrün
(black green)



RLM 71 Dunkelgrün
(dark green)



RLM 65 Hellblau
(light blue)



RLM 23 Rot
(red)



RLM 04 Gelb
(yellow)



Henschel Hs 129B-2, 'Red L', Wk.Nr 140830, 10.(Pz)/Schlachtgeschwader 9, flown by Georg Dornemann, July 1943. This airframe wore the standard splinter scheme and was armed with an MK 103 30mm cannon; most sorties by this aircraft were flown with the cannon fairing removed. ALL ARTWORK ANDY HAY-FLYING ART



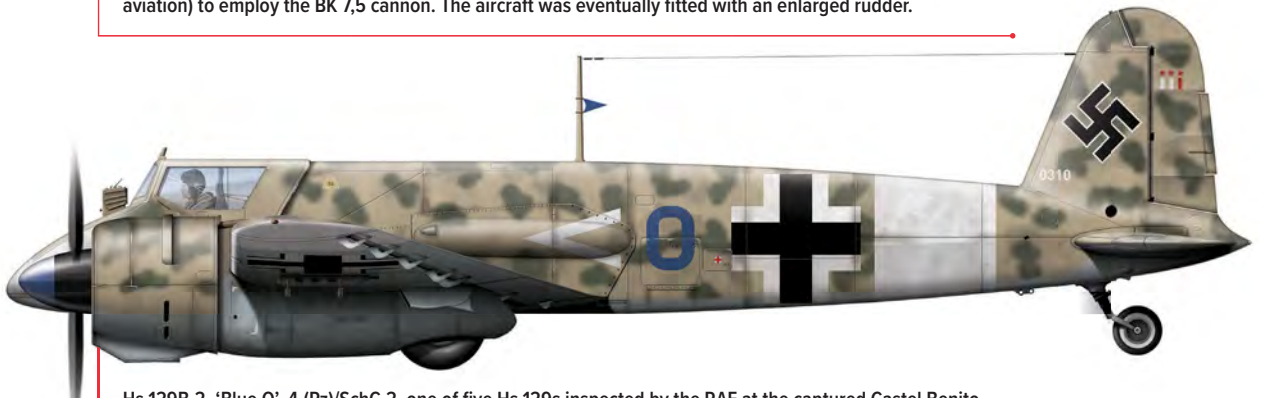
Hs 129A-0, 'White 10', Schlachtgeschwader 101, Clermont-Ferrand, France, 1944; 'GM+OG' factory codes on wing undersides and fuselage. This aircraft was damaged in an allied bombing raid on April 30, 1944.



Hs 129B-2, WNr 0249. This was one of several trials airframes employed in testing the downward-firing, six-tube SG 113A Forstersönde anti-tank mortar. The antenna under the nose was an electro-static detection device that would fire the mortar automatically on sensing enemy armour.



Hs 129B-3, 'DO+XG', WNr 140404, test-flown by the Reichsluftfahrtministerium (RLM – German ministry of aviation) to employ the BK 7,5 cannon. The aircraft was eventually fitted with an enlarged rudder.



Hs 129B-2, 'Blue O', 4.(Pz)/SchG 2, one of five Hs 129s inspected by the RAF at the captured Castel Benito, Libya, North Africa. The aircraft wears a sand shade akin to RLM 79 Sandgelb (sand yellow), with RLM 71 patches, over RLM 65 undersides. It was also fitted with an MK 101 30mm cannon.



Hs 129B-2, 327 'HAIFETITO', 60 Asalt Escadrilă, Grupul 8 Asalt, Rumanian Air Force. This Henschel may have been flown by Lt Lazăr Munteanu. The wording on the fuselage translates as 'Come on, girl'.



ABOVE 'Red K' was one of the Hs 129B-2s left behind by 8.(Pz)/SchG 2 at Tunis-El Aouina during the final phase of the fighting in North Africa – and duly captured by the Allies. Here it is being examined by curious US personnel. El Aouina and its satellite strips were an eventual graveyard of different Luftwaffe types.

RIGHT The Luftwaffe's 4.(Pz)/SchG 2 had little good luck during its operations in Libya. Here, 'Blue O' is seen taxiing over a rough airfield surface. It is believed to have been captured at Castel Benito airfield in Libya during 1943.



armoured transparent panels, improving pilot visibility. The new, bulletproof, laminated windscreen comprised two layers of glazing, the outer being some 2 1/4in (57mm) thick. The forward fuselage shape was made more rounded, again allowing for better forward and downwards vision. Weapons sighting was by means of a revised Revi C12/C or C12/D sight in conjunction with a shaped mounting, again carried externally, with guidelines to give a crude indication of the aircraft's angle of attack during stores delivery.

Just 50 examples of the Hs 129B-1 were completed as such. Manufacture switched comparatively rapidly to the better Hs 129B-2, which became the main production standard of the whole Hs 129 series. This version possessed several upgrades from trials and initial operational use

of the Hs 129B-1, including improved exhausts and 'tropical' equipment and, eventually, much more lethal armament.

Initially intended simply for ground-attack, using its forward-firing guns and bombs, operational experience – coupled with the reality of the Eastern Front – transformed the Hs 129 into an excellent anti-tank tool, thanks to the heavy armament adapted for it. At first, the Rheinmetall-Borsig MK 101 30mm cannon was employed, a single example being mounted in a 'scabbed' underside gun-pod fairing, while its ammunition sat within the fuselage. To begin with it was equipped solely with a handful of rounds, but later an ammunition box containing 30 shells was standardised. During the summer of 1942, the gun was fitted to some of the Hs 129B-1 airframes, but

it was then added to the Hs 129B-2 and, by the following summer, the latter had become synonymous with the Rheinmetall-Borsig MK 103 30mm cannon – a faster-firing, harder-hitting weapon with an improved ammunition feed. But both these guns were lethal against Soviet armour on the Eastern Front, and for a brief time the MK 101 was successful against British armour in North Africa.

Heavy weapons

Among many armament options examined for the Hs 129 was a battery of four MG 17 machine guns in a side-by-side mounting beneath the fuselage, as one of several Rüstsatz add-on conversion kits (in this case R2). The success of the 30mm cannon for anti-tank work led to experimentation with other, heavier weapons for the Hs 129B. These included the BK 3,7 cannon as used successfully

"Experimentation continued, especially into even heavier weapons"





ABOVE The Hs 129B-3 was armed with the BK 7,5 75mm gun (often also referred to as a cannon), but only 20 examples are recorded in official records as having been completed. This aircraft is believed to be a B-2 converted as a prototype/development airframe for the intended installation.

by the Ju 87G-series 'Stuka' anti-tank variants. But trials at the Tarnowitz weapons testing establishment and by the specialist anti-tank trials unit Versuchskommando fur Panzerbekämpfung, did not find any major improvement over the increasingly accepted 30mm cannon.

Nevertheless, experimentation continued, especially into even heavier weapons. This led to the Hs 129B-3, one of the few aircraft of World War Two that mounted a truly large aerial gun. It was not a success. Flying artillery such as this was virtually impossible to aim properly, had a slow rate of fire and was so heavy that a very powerful and

strong structure was needed to accommodate this type of weapon. The Hs 129 really was too small and underpowered to successfully achieve this. The gun chosen was the BK 7,5 75mm cannon, a real beast developed from the 7.5cm Pak 40 anti-tank gun that was also trialled on the Ju 88P-1 aircraft. With the 75mm gun installed, the Hs 129's wing root MG 17 machine guns were deleted and their channel in the lower forward fuselage faired over. The whole installation could be jettisoned in an emergency. With it installed, though, the Hs 129 proved very difficult to fly and only 20 examples appear to have been completed.



ABOVE RAF technicians work on damaged Hs 129B-2 WNr 0297, which was captured in North Africa having been 'Blue C' of 4.(Pz)/SchG 2. Transported to Britain, the aircraft was eventually made airworthy again.

Throughout its development and subsequent service life, it was clear the Hs 129 would have benefited from more powerful engines. To address this problem, Henschel's designers studied several possibilities for future powerplants. This study was partly conducted hand-in-hand with the various trials of possible alternative weapons.

Further plans

One of the lines of investigation was the Gnome-Rhône 14M38 radial engine, rated for take-off at some 820hp (611kW). This would have powered a possible Hs 129C-series, which was intended to carry heavier firepower due to the increased engine rating. One weapons configuration for this new mark envisaged two MK 103 30mm cannon mounted beneath the fuselage, which would have been a formidable combination if it were produced. A rearwards-firing MG 17 machine gun installation was also considered to protect from attacking fighters in the '6 o'clock' position. Other armament options included a

BK 7,5 gun beneath the fuselage coupled with two forward firing 13mm MG 131 machine guns. However, the overheating sometimes encountered with the closely cowled Gnome-Rhône 14M4/5 engines, fitted as standard to Hs 129B-series airframes, was not cured in the 38-series powerplant configuration and this plan was abandoned. On the other hand, the Italian Isotta-Fraschini Delta inline engine, which promised more power than the Gnome-Rhône 14M, was a genuine possibility for the proposed He 129C-series until obvious potential supply problems caused by the Italian armistice, in September 1943, similarly rendered this plan without substance. Eventually, the Hs 129C was abandoned, Henschel being told this by the RLM during March 1944, although one C-1 development aircraft appears to have existed.

The final Hs 129 examples were supposedly built in September 1944. Ironically, this was the time when these aircraft were urgently needed in their hundreds to stave off the Soviets' massive armour thrusts, which were increasingly



LEFT The muzzle break of the MK 103 30mm cannon was rectangular, compared with the circular muzzle of the Mk 101. This MK 103 has been swung down from the lower fuselage of an Hs 129B-2 of 10.(Pz)/SG 9 on the Eastern Front, for re-arming.

making headway while only being faced with dwindling Luftwaffe aerial opposition.

Restricted production

Henschel manufacture was officially terminated during the latter half of 1944. This was in line with the RLM ending construction of several types in favour of 'emergency' fighters to defend German airspace against Allied strategic bombers, and the intended introduction of jet-powered

underpowered. This, together with poor pilot visibility and somewhat unsatisfactory flying characteristics, rendered the type unsuitable for combat. Nevertheless, the A-series did serve a useful purpose in a training capacity. Several examples were operated by SchG 101 (Schlachtgeschwader or attack wing 101) – a specialist attack school – its assigned Hs 129A aircraft being stationed in France, principally at Paris-Orly airfield. It



warplanes. The exact number of Hs 129s ordered/completed remains contentious; quoted totals have differed over the years. These have variously put overall manufacture at just over 1,000 examples, or the recently more favoured figure of just below 900 machines of all marks. This includes 12 Hs 129A-0, 16 B-0, 50 B-1, 794 B-2 and 20 B-3 versions.

What is beyond doubt is that there were never enough useful Hs 129B-series airframes on the front line, particularly the B-2. The fatal phasing out of production of this useful tactical machine – just when it was most needed during 1944 – finally denuded Wehrmacht units of one of the best-available ground-attack/anti-tank support aircraft, to aid their increasingly difficult struggle against Soviet armoured forces.

Initial operations

Although the Hs 129 had been hailed as showing considerable promise, it was clear from the outset that the Argus-powered Hs 129A series was hopelessly

ABOVE The much photographed 'White K' of 10.(Pz)/SG 9 during early 1944 on the Eastern Front. It was often flown by Lt Walter Krause and featured one of the unique colour schemes employed by that unit's Henschels.

appears this unit's II. Gruppe flew a mixed bag of Hs 129s, including both Gnome-Rhône and Argus-powered examples.

During October 1943, this school was transformed – and its name abbreviated from SchG to SG – into the I. Gruppe of SG 152; the 3rd and 4th Staffeln of this unit (the 3.(Pz)/SG 152 and 4.(Pz)/SG 152) subsequently flying the various Hs 129s assigned to the wing.

Anti-tank success

It was during the first half of 1942 that the Hs 129B-1 began to equip frontline units. Although it was recognised that the type had considerable promise, several factors slowed its introduction. Henschel itself was heavily involved in sub-contract work, particularly to Junkers. Component manufacture therefore had to be delegated to several smaller companies

in what became a major sub-contract programme, with Henschel only performing the actual final assembly of Hs 129B-series aircraft, at its facilities in the Berlin area.

A specialist trials unit, Erprobungskommando 129, performed initial 'shake-down' flying. The first operational attack wing was SchG 1, which formed on January 13, 1942. Its II. Gruppe, II./SchG 1, comprised four Staffeln (squadrons), 4./SchG 1 to 8./SchG 1, mostly equipped with the Hs 129B-1 although the B-2 started appearing during summer 1942. The unit SchG 1 was duly assigned to Luftflotte (air fleet) 4 on the southern front of German operations in the Soviet Union. The unit's pilots at once found the Hs 129B an excellent combat machine, with good

anti-armour role that the Luftwaffe's commander, Hermann Göring, enthused that all Eastern Front fighter wings should have a specialised attack unit attached, although in reality just Jagdgeschwader 51 did so (as 13./JG 51).

Allied support

Eventually, a considerable number of Luftwaffe 'Schlacht' units flew the Hs 129B against Soviet forces. They were joined by one of Nazi Germany's allies, Rumania, which operated the type in comparatively small numbers although 60-plus were apparently on hand at one stage. The Rumanian frontline unit that flew the Hs 129B-2 in combat was the Grupul 8 Asalt, comprising three squadrons, which became

The Henschels of 10.(Pz)/SG 9 on the Eastern Front wore distinctive camouflage and this unit was often in front of propaganda photographers' lenses during March 1944, when this image of the taxiing 'White O' was taken.

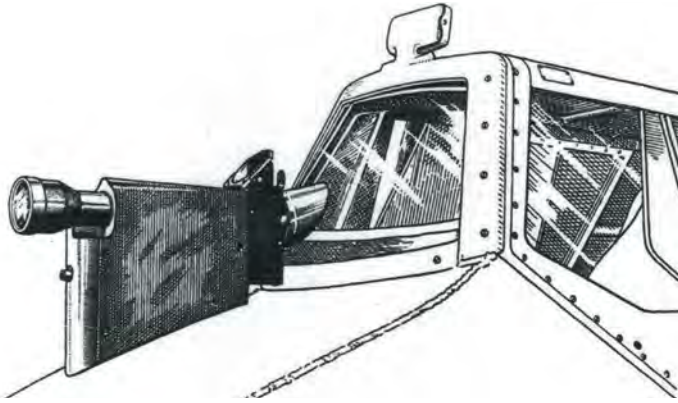


flying characteristics. The arrival of MK 101 30mm cannon for installation on some aircraft immediately had a positive effect against Soviet armour. When firing special tungsten-carbide armour-piercing rounds, this weapon could defeat the hardest Soviet tanks, the KV-1 and T-34/76. The Henschels of SchG 1 were important in defeating Soviet armour advances around Kharkov and, from then on, the Hs 129B established itself as a formidable 'Panzerjäger'.

So successful was the Henschel in its adopted

operational during August 1943. The Rumanians were a generally respected supporter of the Germans and flew the Hs 129B-2 with success. However, during August 1944, Rumania changed sides, subsequently using its surviving Henschels against its former ally.

A further friend of Nazi Germany, Hungary, also flew the Hs 129B, albeit briefly. Four aircraft were assigned for service trials during August 1943. One crashed and the remaining examples were eventually returned to the Germans. None wore Hungarian markings.



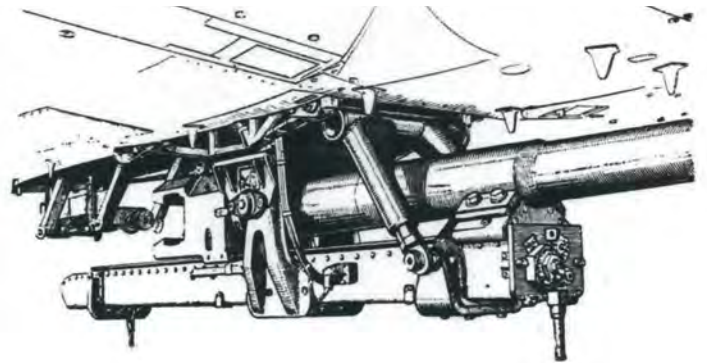
ABOVE The ZFR 3A weapons sight used in conjunction with the BK 7,5 75mm gun fitted to the Hs 129B-3, illustrated by a drawing from a company technical manual.

ABOVE RIGHT The BK 7,5 75mm gun and its associated fairing was mounted beneath the fuselage of the Hs 129B-3 in such a way that it could be jettisoned in an emergency, its fitment being shown in this drawing from the official manual on the Hs 129B-3.

Desert warfare

The second major battleground over which the Hs 129 fought was North Africa. There, as was the case with the Eastern Front, the type was needed in

of October 1942. This was the 4th (Panzer) Staffel of SchG 2 (4.(Pz)/SchG 2). It began operations from El Adem on November 17 that year, achieving much success. But



Despite the failed operations in North Africa, the Hs 129B fought on over the Soviet Union. The type played an important role in the major German offensive Operation Citadel, during July 1943, and the subsequent Battle of Kursk. But by that time it was becoming clear that the Henschels needed considerable escort protection to survive in airspace increasingly

operations, but his brief also included ground-attack formations. The latter did not particularly interest him and it was not until a Luftwaffe restructure during autumn 1943 that ground-attack units at last gained their own leadership. Thus, that October, the office of General der Schlachtflieger was created, together with a major reorganisation of



LEFT Among the many types of weaponry trialled on the Hs 129 was the curious Rheinmetall-Borsig SG 113A Förstersonde downwards-firing anti-tank mortar system. This Hs 129B-0 was one of several that tested the weapon, the mortars being mounted mid-fuselage.

BELOW LEFT The Rheinmetall-Borsig SG 113A Förstersonde comprised a battery of six downwards-firing anti-tank mortars housed in the Hs 129B mid-fuselage area, fired when the aircraft's nose-mounted sensor detected a tank below. It was not used operationally.



much greater numbers than were ever fielded. A piecemeal deployment to Libya by one squadron was made to help in the German and Italian response to the allied success in the El Alamein offensive

rapidly the unit's Henschels suffered from serviceability problems. Their integral engine dust filters were inadequate, and eventually the unit was withdrawn.

Only slightly more successful was 5./SchG 1, which flew in Tunisia from November 30, 1942 onwards. Based initially at El Aouina, the squadron was later re-designated 8.(Pz)/SchG 2. Short of supplies, though, the unit was relocated to Sicily during April the following year, leaving behind some of its Henschels at El Aouina where allied intelligence personnel found them of great interest.

dominated by Soviet fighters.

Although the Luftwaffe recognised the importance of close-support and ground-attack activities, there was a major delay in the implementation of specific plans to give this branch of service the necessary organisational and logistical basis it deserved. Part of the problem was down to none other than the legendary fighter pilot Adolf Galland.

Indifferent attitude

During late 1941, Galland was appointed General der Jagdflieger to oversee fighter

units, the Schlachtgeschwader thenceforward being abbreviated 'SG' from 'SchG'.

Throughout 1944, there was a steady depletion in the number of available Henschels, due to catastrophic attrition, fuel shortages and lack of supplies. Then came the end of production during autumn 1944. The final Luftwaffe unit to fly the Hs 129B during April-May 1945 was 10.(Pz)/SG 9, ending its days at Wels in Austria where, just before the cessation of hostilities, its three surviving aircraft were destroyed on the ground by USAAF P-51 Mustang strafers. **FP**