



Hs 129 - Historical Notes for Mission Builders



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Operational History

The structure of Germany's ground-attack arm underwent a number of changes and evolutions during the war. The Hs-129 was initially meant to be the one-and-only true ground-attack aircraft but soon production problems made it clear that it would never become as widespread as Luftwaffe command had hoped.

Unremarkable Beginnings

The first unit which was issued the Hs-129 B-1 was the *Schlachtgeschwader 1* (to be specific: II./SchG 1 with 4., 5., 6. and 7. Staffel) in mid-1942, just in time for the offensives against the Kerch Peninsula (*Unternehmen "Trappenjagd"*) and the following summer offensive towards Stalingrad and the Caucasus. It was followed by an unusual unit - Panzerjagdstaffel/JG 51. Due to the limited production it was decided to attach one Staffel of Hs 129 to each Jagdgeschwader on the Eastern Front, but in the end Panzerjagdstaffel/JG 51 would remain the only one. And it would operate totally independent from its parent unit.

Already at this point Hermann Göring himself expressed considerable interest in employing the aircraft as tank-buster using the massive 30mm Mk 101 cannon. Pilots, however, were extremely sceptical and outright refused to fly the aircraft in this role. As a result the cannons and the special tungsten-cored ammunition remained in Luftwaffe depots in Russia or even Germany. It was not before late June 1942, and only after Generalfeldmarschall Milch had personally intervened, that 4./SchG 1 was equipped with enough Mk 101s to make an impact on the battlefield near Kharkov. Still pilots didn't feel confident in using the weapon and greatly preferred bombs for ground-attacks (see chapter about loadouts for specifics).

Ultimately the RLM sent an expert on armor-piercing ammunition (and its correct use) to train pilots in September 1942. It was this somewhat improvised training which brought the first real successes in using the 30mm cannons, all of which were reported by Panzerjagdstaffel/JG 51. On the other hand II./SchG 1 had abandoned the cannon due to issues with the low temperatures of the winter, requirements of the front and - especially - due to the pilot's distrust of the weapon.

African Interlude

The end of 1942 was overshadowed by the disaster of Stalingrad but it also brought on the beginning of the end for Erwin Rommel's *Panzerarmee Afrika*. In September 1942 the nucleus of a second *Schlachtgeschwader* (SchG 2) was established in Germany with the same planned outfit as SchG 1. At that point, however, combat losses and the totally inadequate production had shrunken the number of Hs 129s in the OOB of SchG 2 to two Staffeln - 4.(Pz)/SchG 2 and (a yet to be established) 8.(Pz)/SchG 2. The main load for ground-attack work was to rest on the new Fw 190 fighter-bombers. Initially the new Staffel was to be sent to the Eastern Front, but Montgomery's breakthrough at El Alamein forced the Luftwaffe to reinforce its assets in North Africa. Among the units sent there was 4.(Pz)/SchG 2 ... a deployment that was to end in disaster. Equipped with totally insufficient dust filters the aircraft were simply unable to operate in the conditions of the desert. After a chaotic retreat pilots and mechanics were evacuated by air to Comiso in mid-January 1943.

The other Staffel to be deployed to the African theater was to enjoy much more success. In late November 1942 5./SchG 1 (SchG 1 had not yet been reorganized in the same way as the new SchG 2) was sent to the Tunisian bridgehead. It had received brand-new Hs 129 B-2 with tropical equipment which included a functional dust filter. Most missions were flown against british motorized columns, tanks or the ever-present armored reconnaissance vehicles. Due to the allied fighter presence operations were flown at an extremely low altitude (not more than 5m above the ground, often less) - a decidedly dangerous style of flying. Apart from using the Mk 101 for attacking tanks the aircraft usually carried two AB23 cluster-bombs or two SC50 general purpose bombs on the



wingracks for use against soft targets such as the ubiquitous light AAA or trucks. In late April the growing allied air superiority put an end to the operations in Tunisia and the Staffel, which had been redesignated 8.(Pz)/SchG 2 at the beginning of 1943, was withdrawn to Italy.

Panzerjäger!

In early 1943 it had become obvious that a larger number of Hs 129s would not be available any time soon and so the decision was made to equip all of them as tank-busters. As such the Hs 129 fulfilled a very special role within the Luftwaffe's ground-attack arm and required different tactical employment. As such one of the most experienced *Schlachtflieger*, Oberstleutnant Otto Weiss, was put in command of the so-called *Panzerjagdkommando Weiss* to which all available Staffeln flying the Hs 129 were subordinated. Weiss' command was a pure staff unit, it did not have any aircraft assigned to it (apart from a number of liaison aircraft), and its only task was to oversee the operational employment, training and supply of the subordinated Staffeln. Because of the insufficient numbers available Weiss had to carefully husband his forces and therefore laid down a number of pretty strict regulations for the operational employment:

1. The decision to fly combat operations or not solely rested with the staff of Panzerjagdkommando Weiss (except when the Red Army managed a sudden breakthrough in a sector).
2. The only mission type to be flown was hunting enemy tanks. Any other mission type (i.e. reconnaissance) was ruled out.
3. The units were to be employed only in sectors which was clearly the focal point of an enemy offensive.

At that point the effectiveness of the Mk 101 had been established and pilots had been trained in its use so that the previous skepticism had disappeared. In fact some of the achievements had drawn so much interest from Luftwaffe command that it led to the development of other tank-busters such as the Ju 87 G (which would later be just as famous, mostly because of its main protagonist Hans-Ulrich Rudel).

The first major engagements of 1943 in which the Hs 129 took part were the Battles for the Kuban Bridgehead. Deployed to this area was only 8.(Pz)/SchG 1 at first, which operated from one of the several airfields of Kertch before moving to Anapa. The other Staffeln were spread out all over Southern Russia before both Panzerjagdstaffel/JG 51 and 4.(Pz)/SchG 2 were moved to the Kuban as well. Operations were flown exclusively against soviet tank breakthroughs, in fact pilots were forbidden to enter enemy airspace, but nonetheless they gained a brilliant reputation with the ground forces and received an almost endless stream of telegrams thanking and congratulating them for their efforts. Losses were suffered mostly from soviet AAA but the large presence of soviet fighters also began to make itself felt. Pilot losses remained surprisingly low, a tell-tale sign for the ruggedness of the Henschel's design.

Early in June 1943 all Hs-129s were withdrawn from the frontline to Zaporoshye for a period of rest & refit (except Panzerjagdstaffel/JG 51 which had escaped heavy losses and remained at Kharkov). At this time 4.(Pz)/SchG 1 was transferred to Russia from Germany and it brought along a full complement of brand-new Hs 129 B-2 and, even more importantly, the first Mk 103 which were supposed to replace the old Mk 101 (although these were to remain in frontline service well into 1944 along with the Mk 103). All Henschels were kept from flying operations for the Luftwaffe wanted to preserve them for the upcoming Operation "Zitadelle", the Battle of Kursk.

For "Zitadelle" the Luftwaffe concentrated all Henschels on the southern front with Luftflotte 4. Operating from Varvarovka (south-west of Belgorod) the aircraft usually flew armed sweeps against soviet tanks dug in in the path of II. SS-Panzerkorps or marching against it. On several occasions



SchG 1 and the subordinated tank-hunters badly mauled the soviet 2nd Guards Tank Corps which severely disrupted soviet plannings. The developing crisis at Orel, however, forced Luftflotte 4 to transfer all Henschels except 8.(Pz)/SchG 1 to Luftflotte 6 where they continued hunting soviet tanks which had broken through the german lines north and northwest of Orel. But despite their efforts the soviet advance could not be stopped and the Henschels found themselves pushed back along with the rest of the german Eastern Front.

October marked a considerable change for the german ground-attack arm as the previously separated branches (Stukas and Schlachtflieger) were amalgamated into one and all units engaged in ground-attacking operations were gathered into the new *Schlachtgeschwader* (SG). For the Henschels this meant the creation of a new all-Henschel Gruppe - IV.(Pz)/SG 9 and the existing Staffeln were redesignated as follows:

4.(Pz)/SchG 1 -> 10.(Pz)/SG 9
8.(Pz)/SchG 1 -> 11.(Pz)/SG 9
4.(Pz)/SchG 2 -> 12.(Pz)/SG 9
8.(Pz)/SchG 2 -> 13.(Pz)/SG 9
PzJSt/JG 51 -> 14.(Pz)/SG 9

For the rest of the year (and most of the remaining winter months in 1944) the Gruppe operated over the battlefields of the Ukraine but despite some local successes they were powerless to affect the overall situation. And in April 1944 the Gruppe found itself concentrated on Romanian airfield of Bacau (near Iasi) ...

In Romanian Service

In March 1943 the Royal Romanian Air Force (*Aeronautica Regală Română*) redesignated the 8th Fighter Group (*Grupul 8 vânătoare*) as 8th Ground-Attack Group (*Grupul 8 asalt*) because its pilots had already gained some experiences with ground-attack operations when flying their IAR 81s in the dive-bomber role. It was not before May, however, that it was decided to equip the *Grupul* with Hs 129 B-2 supplied from Germany. Not part of the deal were the Mk 101 or 103 cannons and the special tungsten-cored ammunition since production couldn't even fulfill the needs of the Luftwaffe and so the Romanians took the Henschel to war with bombs only.

Training, which contained a crash-course in flying twin-engined aircraft on types such as the Fw 189 since the pilots came from flying single-engined fighters and fighter-bombers, took place at Uman and Kirovograd and dragged on till August. When the unit was finally deemed ready for frontline service it was sent to the southern part of the Eastern Front and operated from airfields near Izyum, Melitopol and Maruipol. Since the Luftwaffe's main assets were locked in the desperate struggles for Orel and Kharkov the romanians were pretty much the only ground-attack forces available in that sector of the front. But eventually they were swept up in the general retreat after the failure of the german attack at Kursk and withdrew via airfields in Southern Russia until it finally found itself on romanian soil at Roman. From there the *Grupul* flew a large number of operations against the attacking soviets until August 24 brought the sudden end of the war and the changeover for Romania from Axis to Allies.

When the Romanian Army joined the offensive operations against the retreating Wehrmacht the remaining Henschels continued to fly ground-attack operations, but losses were high, both from german defenses and the overeager gunners of soviet AAA batteries which did not recognize the romanians as allies (something that happened quite often to other types as well). The last campaign for the romanian Henschels was the support of the soviet-romanian advance through Slovakia in early 1945, with the last missions flown against elements of General Vlasov's Russian Liberation



Army which refused to surrender to the Red Army.

From Bagration to the End

After a brief period of rest in April 1944 the Red Army initiated a major operation against the axis positions to the north of Roman and at Iasi in order to capture these two major towns. All of IV.(Pz)/SG 9 was concentrated at Bacau and in conjunction with their comrades from SG 2 (led by a certain Hans-Ulrich Rudel) and the romanian *Grupul 8 asalt* they supported german and romanian ground troops so that they managed to hold the soviet forces at bay in the battles for Targul-Frumos and Iasi.

When the major soviet summer offensive of 1944 swept away Army Group Center most of *Luftflotte 4's* ground-attack forces were moved north to support the crumbling german front and played no further part in the defense of Romania (which, as said above, would change sides after a second soviet attempt to capture Iasi in late August 1944 was successful). The Henschels found themselves in the midst of a merciless battle near Lvov, where the Red Army was relentlessly attacking the left flank of 1st Panzerarmee. Again the tank-busters did manage to achieve a number of local successes, but these mattered little in comparison to the forces engaged in this struggle and ultimately IV.(Pz)/SG 9 found itself scattered across several airfields along the river Vistula and in East Prussia (and even Hungary, 14.(Pz)/SG 9 was transferred there in September 1944). When the soviet offensive finally ran out of steam flying almost completely ceased for the rest of 1944 as there was an acute shortage of fuel. For example 10.(Pz)/SG 9 did not fly a single mission between September 1944 and mid-January 1945.

The lull ended when soviet artillery opened up on the meager german defenses in the wee hours of January 12 1945. Its fire was so devastating that whole divisions - already burnt-out remnants in most places - were totally annihilated. And through the resulting gaps the Red Army pushed a total of eight Tank Corps. The germans didn't have the slightest chance to establish a secure frontline. But despite low clouds and fog the Henschels were flying constantly, attacking soviet armor which had broken through. But it was, of course, to no avail - the tank-busters found themselves pushed back towards the heart of Germany. If they were lucky. 13.(Pz)/SG 9 wasn't so - it had to destroy its remaining Henschels when a surprise breakthrough forced them to flee from their airfield at Tonndorf (today: Wagrowiec) on January 22 1945. On May 8 1945 only 10. and 14.(Pz)/SG 9 were still operational (although greatly reduced in numbers) with 12. and 13. Staffel having been put out of action in the battles for East Prussia (11.(Pz)/SG 9 had become a test unit in 1943 already).

Heavy Metal - The Hs 129 B-3

The idea to mount a 7,5cm PAK 40 on an aircraft went back as far as 1942 when the RLM proposed tests with this new weapon to deal with the heavy soviet tanks such as the KV-1 and KV-2. The first tests were carried out with Ju 88s and it was not before August 1944 that a Hs 129 was equipped with this massive weapon. Tests proved that the Henschel could operate with this weapon and that even the heaviest soviet tanks (IS-2) were vulnerable to it. The first unit to receive a Hs 129 B-3 (as the new type was officially designated) was 13.(Pz)/SG 9 in East Prussia. Owing to teething troubles with the massive cannon frontline trials weren't completed when the Staffel was overrun by soviet tanks in January 1945. The other units to fly it in combat were 10. and 14.(Pz)/SG 9 which took over the remaining Hs 129 from 12. Staffel (which was to be renamed 1.(Pz)/SG 9 and given Fw 190 with the new "Panzerblitz II" AT-rockets). Because a total of only 23 Hs 129 B-3 were manufactured (3 converted B-2 and 20 factory-fresh B-3) mixed operations were flown. Results proved that no soviet tank could withstand the impact of the 7,5cm shell when attacked properly.

Appendix

Historical Units in 4.10

The following units operated the Hs 129 during World War II and are available in II-2 Sturmovik : 1946 patch 4.10.

Germany	Romania
II./SchG 1	Escadrila 41 asalt
Pz.J.St./JG 51	
4.(Pz)/SchG 1	Escadrila 42 asalt
8.(Pz)/SchG 1	
4.(Pz)/SchG 2	Escadrila 60 asalt
8.(Pz)/SchG 2	
IV.(Pz)/SG 9	

Listed below is a rough guideline which units should be used in which timeframe and location.

Year	Operation / Location	Units
1942	German attack towards Kertch (Crimea, early May 1942)	II./SchG 1
	Soviet Offensive vs Kharkov (late May 1942)	II./SchG 1
	Fall Blau (June 1942 to early 1943)	II./SchG 1
	Rzhev (from August 1942 on)	Pz.J.St./JG 51
	Lybia (withdrawal - Nov/Dec 1942)	4.(Pz)/SchG 2
	Tunisia (November 42 - April 1943)	II./SchG 1 (use 2nd Squadron only)
1943	Defensive battles in the Kuban Bridgehead (spring 1943)	8.(Pz)/SchG 1 4.(Pz)/SchG 2 Pz.J.St./JG 51
	Battle of Kursk (Unternehmen Zitadelle) Southern Wing - July 5 to 15 1943	4.(Pz)/SchG 1 8.(Pz)/SchG 1 4.(Pz)/SchG 2 8.(Pz)/SchG 2 Pz.J.St./JG 51
	Battle of Kursk (Defense of Orel)	4.(Pz)/SchG 1 8.(Pz)/SchG 1 4.(Pz)/SchG 2 Pz.J.St./JG 51

Year	Operation / Location	Units
	Soviet Counter-Offensives towards the Dniepr (September - October 1943)	4.(Pz)/SchG 1 8.(Pz)/SchG 1 4.(Pz)/SchG 2 8.(Pz)/SchG 2 Pz.J.St./JG 51 Escadrila 41 asalt Escadrila 42 asalt Escadrila 60 asalt
1943/44	Withdrawal through the Ukraine from October 1943 on (Battles for Kiev, Korsun, Kiev-Zhitomir, Tcherkassy, Uman, Nikopol, ...)	IV.(Pz)/SG 9 Escadrila 41 asalt Escadrila 42 asalt Escadrila 60 asalt
1944	Battle of Sevastopol (only April - May 1944)	IV.(Pz)/SG 9 (use 1st Squadron only)
	Defense of Romania (Battles of Targul-Frumos and 1st Battle for Iasi) May - June 1944	IV.(Pz)/SG 9 Escadrila 41 asalt Escadrila 42 asalt Escadrila 60 asalt
	2nd Battle for Iasi (August 1944)	Escadrila 41 asalt Escadrila 42 asalt Escadrila 60 asalt
	Soviet Summer Offensives 1944 (Battles for Lvov, East Prussia, Vistula Line etc)	IV.(Pz)/SG 9
	Defense of Hungary (August 1944 - April 1945)	IV.(Pz)/SG 9 (use 4th Squadron only)
1945	Soviet Winter Offensive (January - February 1945)	IV.(Pz)/SG 9

For more information please refer to the websites and books listed in the sources at the end of this document.

List of Loadouts

The Hs 129 B-2 contains a number of user-selectable loadouts in Il-2 Sturmovik : 1946 Patch 4.10. In this chapter mission builders will find comments about their historical relevance.

1. Hs 129 B-2/R3 - Mk 101 gunpod

Consistently used from early 1943 on, first operational use by 4./SchG 2 in June 1942. Can be combined at will with 2x SC50 or AB23 on wing racks. Despite being supplemented by the Mk 103 in mid-1943 the Mk 101 remained in service well into 1944 since the Mk 103 did have reliability issues for quite some time.

Note! Do not use the Mk 101 on romanian Hs 129s!

2. Hs 129 B-2/R3 - Mk 103 gunpod

Was introduced in July 1943 (by 4.(Pz)/SchG 1) during the Battle of Kursk and was continuously used until the end of the war. Can be combined at will with 2x SC50 or AB23 on wing racks.

Note! Do not use the Mk 103 on romanian Hs 129s!

3. Hs 129 B-2/R2 - 4x MG17 gunpod

Despite being listed in virtually all official manuals regarding the Hs 129 there is no evidence that it was ever used operationally (because at first bomb loadouts were greatly preferred and then tank-busting was the sole task of the Hs 129). As such it is a non-historical loadout and should not be used.

4. SC250

This loadout was used on the front but it seemed to have been rare.

5. Combinations of SC50 and AB23

Bomb loadouts with these types were used quite often (and in 1942 almost exclusively since the pilots didn't like the Mk 101 installations). The most common combination was either a full load of six SC50s or four SC50 on the fuselage rack and two AB23 on the wing racks.

6. Hs 129 B-2/Wa - Bk 3.7 gunpod

Although tested and supposed to replace the 30mm cannon pods this weapon proved to be a major disappointment. The installation had such a negative effect on flight performance that test flights and development were aborted early. As such this weapon was not used historically and should not be selected in a historical mission.

Tactics and Operational Procedures

Missions without Mk 101/103

There were no specific regulations for the operational use of the Hs 129 before the use of the 30mm cannon pods became standard. This had to do with the fact that the aircraft were almost exclusively used in the traditional ground-support role directly over the frontline. Generally speaking missions would be flown at low altitude (below 750m, mostly even below 500m) to minimize the danger of being spotted by enemy fighters. A standard mission consisted of a patrol of 4 aircraft (*Schwarm* in German), if specific targets were to be attacked or if enemy AAA fire was to be expected numbers rose. It was, however, rare to employ the whole Staffel or even the Gruppe at the same time.

Tank-Busting Missions

After the Hs 129 had been converted into a tank-buster certain limitations on its tactical employment were imposed by the Staff of Panzerjagdkommando Weiss.

- The decision to fly combat operations or not solely rested with the staff of Panzerjagdkommando Weiss (except when the Red Army managed a sudden breakthrough in a sector).
- The only mission type to be flown was hunting enemy tanks. Any other mission type (i.e. reconnaissance) was ruled out.
- The units were to be employed only in sectors which was clearly the focal point of an enemy offensive.

This meant that intrusions into enemy airspace were forbidden. The only exception to this rule was the Battle of Kursk as the Wehrmacht was the attacker here. As a result mission builders must not place mission targets - which usually consisted of enemy tank formations on the move - on Russian territory. This is most important since until 1944 Soviet fighters also did not enter German airspace unless specifically tasked. As such encountering enemy fighters behind German lines should be generally avoided unless the mission date is late 1944 or later or unless these fighters escort Soviet ground-attack aircraft. This limitation is, of course, not applicable to missions in Tunisia since the allied air forces weren't hampered by such strict limitations nor were the frontlines as clear as they were in Russia.

Missions were, again, flown in *Schwarm*-strength (4 aircraft) operating in to semi-independent *Rotten* (2 aircraft). It was common practice to drop the wing-mounted bombs (SC50 or AB23) on targets such as light AAA or soft-skinned vehicles first and then move to attacking enemy tanks with the 30mm cannons.

Tactics for attacking enemy tanks

Historically it was not before mid-1944 that a manual for training Hs 129 pilots on attacking enemy armor was created. Before it was up to the preferences of the commanding officer how tanks were attacked. Because of the nature of their targets and the characteristics of the 30mm cannons there were only two approaches that promised a chance to take out an enemy tank.

1. The most common method was to approach the tank from behind and commence a diving attack at about 40°. This brought the guns to bear on the vulnerable rear armor, but it also meant that the pilot had little time for aiming and firing before he had to pull up to evade crashing into the ground.



2. Because of that issue and because a tank is a rather small target when viewed from behind some pilots preferred to approach the tank at very low level (usually below 5m) and aim at its flank. Even if the shells did not penetrate the side armor they usually took out the running gear and immobilized the tank.

The latter is, however, not possible in Il-2 since tank DM does not include such details. The flank attack can be used nonetheless, but the pilot has to dive towards its target from above just as outlined for the first method. The first method is generally preferable, though, since it targets the weakest armor and makes it harder for the tank to fire its main gun at the attacking aircraft.

Some tanks, however, were very difficult or even impossible to destroy for the Mk 101 or Mk 103 even when attacked from behind. Such tanks were the heavy soviet KV-1 and IS-2. Mission builders should use these sparsely.

Sources

1. **Hs 129 - Panzerjäger!** by Martin Pegg, Eddie J. Creek, Tom Tullis & Arthur Bentley (Classic Publications, ISBN: 978-0-952-68671-2)
2. **Military Aircraft in Detail - Henschel Hs 129** by Dénes Bernád (Midland Publishing ISBN: 978-1-857-80238-2)
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4. **Kursk - The Air Battle: July 1943** by Christer Bergström (Classic Publications ISBN: 978-1-903223-88-8)
5. <http://www.ww2.dk> - **The Luftwaffe 1933 - 45** (Michael Holm)
6. <http://www.worldwar2.ro> - **Romanian Armed Forces in World War 2** (Dragos Pusca & Victor Nitu)