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MIg-21bis

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Editorial and Graphics - Marketing department, Eduard - Model Accessories, Ltd.



MAY 2025

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EDITORIAL

Dear Friends,

So I have to say that this April was a good ride. Over the more than thirty-five years of our company's existence, we have experienced various historical events, starting with the revolution and the overthrow of the communist regime in 1989 (yes, Eduard was already a functioning entity back then and we thoroughly enjoyed the revolution), through the terrorist attacks on New York on September 11th, 2001, to the collapse of Lehman Brothers bank and the economic crisis of the late 1990s. All of these events were social and economic upheavals, changing the economic situation and significantly affecting the way business was conducted. To be honest, changing established patterns out of necessity is always difficult and the need to change your behavior and do things differently is not a comforting affair, and when such changes take place, they mainly cause stress and anxiety. Positive feelings only come with time. You may be wondering what the hell was going on here and what actually changed. Well, change it did. The crisis in 2008 was a strong impetus for innovation for us. We introduced the technology that we use to produce our kits today just after 2008. We bought new machines, introduced the production of technically new molds, establishing the path to the current standard in Eduard model kits. The same is true of the Brassins line, they are also a child of the crisis of 2008. Preparations for the production of the cast sets began in the spring of 2009 and the first Brassins were released in January 2010. We had 3D printers in the process from the very beginning of the line, since the masters were always designed using 3D design programs, and then they were printed and refined to be then turned into molds for resin casting.

The situation today is similar. After the covid episode, which was probably the golden age of the modeling industry, all the companies that had survived until then recovered and experienced two years of unprecedented prosperity. There were shocks in the form of inflation, supply disruptions, the Russian attack on Ukraine, and right now we have another incarnation of the post-covid crisis in the form of US President Trump's tariffs. The start to April was tense. We had to deal with the shock brought on by the introduction of US tariffs, forcing us to a new *modus operandi* with our American partners and implement it in practice. Maintaining the US market is absolutely crucial for us due to our commitment to it, we export 20% of our production to the US, and we certainly do not

feel that we are robbing America in any way. In the end, we found a solution that should maintain the current level of our American prices. But how it all turns out is of course up in the air, the model market will be hit not only in America. Chinese companies are most likely out of the game in America for at least some time, which is certainly not something we are happy about. We do not need the liquidation of competing companies and their elimination from the market, we need them for our life and prosperity, as I have explained several times in the past. So we hope that the whole situation will settle down again. But it will never be the same as before the tariffs. The world has started moving and it will not just stop. We'll see where this road takes us.

We're not stopping, either. April's positives include two significant events, Easter Prostejov and the Moson show. We were in Prostejov at Easter and in Moson in Hungary a week later, both events were great, well-organized and, from our point of view, very successful. Both seemed to be better attended than last year, at least from the point of view of our tables, which were full of activity from morning to evening. We had our May releases at both events, and the 72nd scale MiG-21bis proved to be a great success at both. At Moson we had the MiGs sold out by noon, and the P-40E in the Pacific Star kit joined a few hours later. We also had the first sprues for the MiG-21F-13 in 1:48th for display purposes, in Prostejov just the canopy, which is of course an interesting piece of plastic in and of itself, and in Moson we added two more sprues, the fuselage and the wing, and the reactions were extremely positive. We don't think that this comes as much of a surprise; the kit will probably be the best we have ever produced both in terms of the execution of surface and internal details, and in terms of buildability. The release schedule is also already taking shape. The F version will have its premiere at E-day in the form of a Limited Edition series kit, dedicated to the service of the MiG-21F-13 in various world air forces. This issue will be derived from the Czechoslovak Limited Edition kit, dedicated to the production of the MiG-21F-13 at Aero Vodochody and its service in the Czechoslovak Air Force. The form of this kit will be decided next week, but in any



case it is certain that this kit will include a book about the Czechoslovak MiG-21F-13 by Martin Janousek, and that it will be sold by pre-order in general and from retailers. We will only produce as many kits as we have orders, and the ordered kits will then be shipped a week before E-day with the option of pick up at that show.

We still have a long way to go until E-day and a lot will happen before October 4th. However, as long as we are on the topic of all these shows, why not say something about this year's E-day, no? We took the opportunity to visit the venue in Litomerice a week before Easter. The Gardens of Bohemia exhibition was taking place there and we wanted to see the area in action. Jirka Fiala, who is significantly involved in the activities of the judges, wanted to see the main exhibition hall, where the competition models will be. And of course, the other halls too, because we will be occupying a total of five halls at the venue. You don't have to worry about that, the halls are not far from each other, and they are mainly concentrated around the central area where the food court will be located, which will be inside military tents. There will also be direct access from the catering area to the hall, where there will be workshops and a space for tables, where visitors will be able to enjoy refreshments from the catering tent in case of inclement weather, which is a bit of a threat in October. Regardless of the weather, it will also be one of the areas for sitting and chatting. There are several of these in the area, and they will certainly be put to good use, because one of the reasons why modelers go to these shows is for the opportunity to meet friends and have a good chat with them. That is why, in addition to the classic Pot Q and A, and other lectures, which will also be in a separate hall, we are preparing a chat session in the 'Cafe by the Lake', which is between the Q and A hall



and the workshop hall. The plan is that various personalities from our company and the model industry will take turns behind the counter, making coffee, pouring beer and chatting with modelers. It will be an experiment, we have never done anything like this, but something tells me that it will be interesting and fun. From our company, I will be there, as will Katka Borecka, and Jakub and Martin Nademlejnsky, and from other companies we will also invite Fredy Riedel from Special Hobby, Jindra Sterbacek from Modelar and Petr Muzikant from KP, and in general anyone with the courage to show up will be welcome.

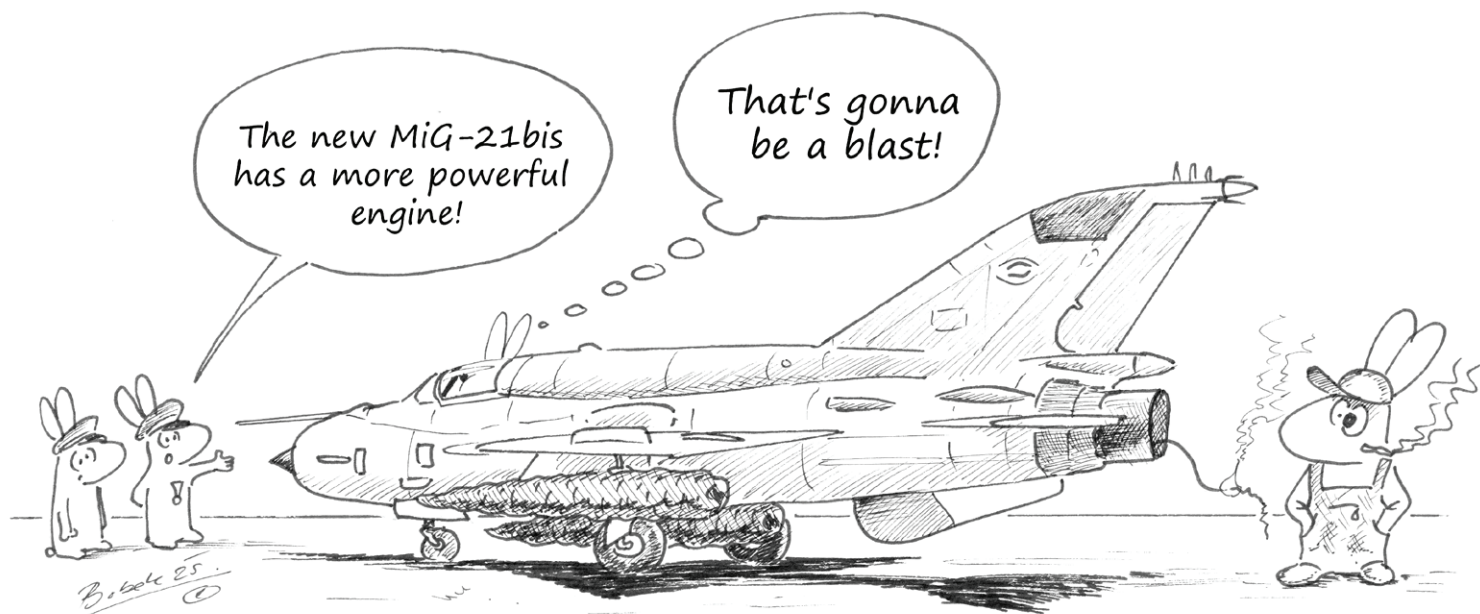
The lecture format is also being formulated and we have secured pilots who flew MiG-21Fs to be there, and we are working on getting someone who still remembers the Avia S-199

to attend. This is quite important, because it will coincide with the release of our S-199. As with the MiG, for which we already have all the molds milled, we are working very hard on the S-199 to have it ready to go on sale at E-day. In fact, we want to have both models completely ready by September, and during September we will present them at a series of meetings with modelers. One will be in Prague, one again in Prostějov, and we are planning the very first presentation of both kits in Pilsen at the Pilsenský Velbloud (Pilsen Camel) competition. We'll be explaining the concept of the kits, which will be quite novel and innovative, and there will probably be the first units in plain white boxes up for grabs. And here too, something tells me you'll like both of these little things.

To conclude this editorial, let's move from autumn back to spring. At the end of May, preorders for the 48th scale Royal Class P-40N Warhawk will begin. This is a continuation of the P-40 project. The N model is the most beautiful and interesting Warhawk in my opinion, and it will be a colorful and attractive affair in all its releases yet to come. Presentation of the aircraft selected for the Royal boxing will begin during May. We will start the preorders on Friday, May 23rd, and the kit production run will again be determined based on the number of preorders. We will produce as many as there are orders from the e-shop and from dealers. Along with the Royal Class P-40N, it will be possible to order everything from the e-shop assortment, as well as selected accessories, which, like the Royal Class itself, will be among the new releases for August. We will then ship orders to customers in the second week of July, to dealers from July 15th. We will talk more about other new products for August in the next editorial. It will be an interesting month, because just as the November lineup of new items sold on E-day will be distinctly Czechoslovak, the August lineup will be very American. In addition to the P-40N, there will also be a 48th scale F-18C, which will be our boxing of the Kinetic kit. As an example.

But more on that next time. Today, enjoy looking over May's new releases, the main focus of which is the 72nd scale MiG-21bis. This is also reflected in today's newsletter, where you will find, for example, an article describing the armament of the MiG-21bis and among new releases, a number of printed accessories, of which, in my opinion, the most attractive is the exhaust nozzle.

Happy Modelling!
Vladimir Sulc

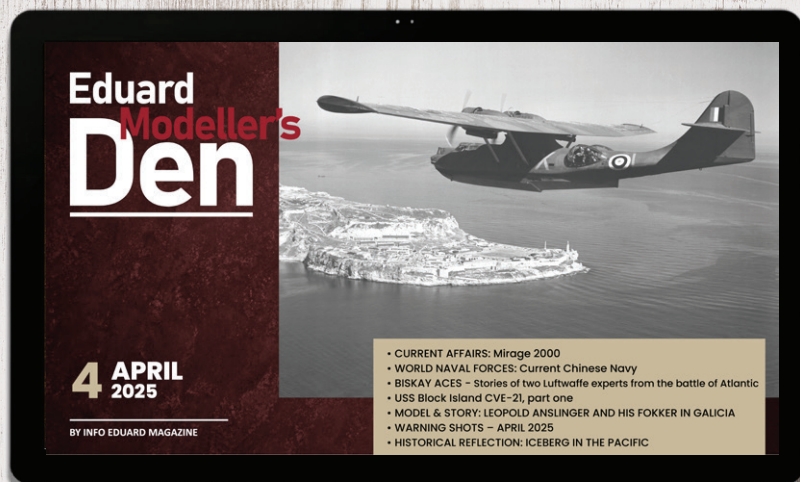


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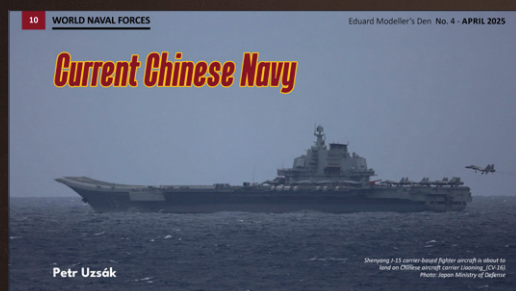
Highlights EMD 04/2025

Mirage 2000 – The New Defender of Ukrainian Skies

Current Affairs / Miro Barič

Ukraine had placed high hopes in the F-16s, although many experts warned early on against overly optimistic expectations. And indeed, their deployment has not brought any dramatic turning point. They arrived slowly, in small numbers, giving Russia enough time to prepare. The pilot training is long and complicated by language barrier.

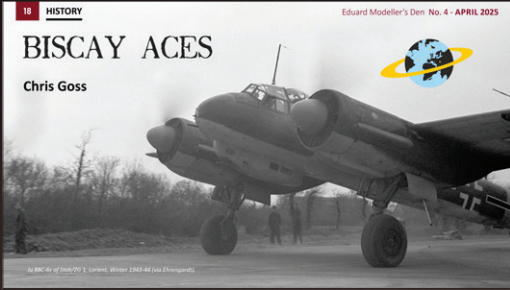
Having said that, not all is negative – the F-16s have certainly been helpful. While they didn't revolutionize the war, they have been crucial in defending Ukrainian cities from daily Russian attacks. They've also started to conduct the air-to-ground attacks with guided weapons, an important role.



Current Chinese Navy

World Naval Forces / Petr Uzsák

The People's Liberation Army Navy was founded in 1949 and, for many years, focused primarily on coastal defense and related operations. As strategic missile forces and other military branches were prioritized, the navy was relegated to a secondary role, largely tasked with coastal operations, including defending against potential Taiwanese landings on the mainland. Starting in the 1970s, however, the navy began receiving more attention, which led to increased production and operational capabilities. This shift helped elevate the People's Republic of China (PRC) to the status of a regional maritime power. The growing rift with the Soviet Union also played a role, as the PRC quickly lost access to many Soviet industries, especially in shipbuilding.



18 HISTORY Eduard Modeler's Den No. 4 - APRIL 2025 BISCAY ACES

With the air war over the eastern Atlantic escalating by the end of 1941, it was obvious to the Luftwaffe that some form of long-range fighter cover was needed. No solution immediately sprang to mind but early in 1942, the latest version of the Ju 88C-6 was coming off the production line. With increased offensive and defensive armament, on 23 June 1942, the Luftwaffe promised four Ju 88C-6s to protect U-boats entering and leaving the Bay of Biscay. Three days later, four Ju 88C-6s fresh from the production line were allocated and would be based at Bordeaux-Mérignac, the unit initially being designated Zerst.St./Küstenfliegergruppe 106 (Zerst.St./Kü.Fl.Gr. 106) or Zerst.St./KG 6 subordinate to the Fw 200 unit III./KG 40. On 2 July 1942, it was then announced these four aircraft would be increased by another 24. V. Gruppe/Kampfgeschwader 40 (V./KG 40) was the result and over the next two years, a number of aces would emerge. These are the stories of two of them.

ALBRECHT
Albrecht Heide was born in Bremen on 13 February 1922. He then joined the Luftwaffe in November 1939. He was trained as a non-commissioned technician, joining the Messerschmitt 120 unit I Gruppe/Kampfgeschwader 76 at Jever in northern Germany in April 1940. After three months, he joined Luftwaffe 5 and then in April 1941, began flying training at Jagdfliegerschule (Jf) 4 at Spangdahlem. In October 1942, he started his third flying tour.

Heide was selected to be a heavy fighter pilot, two joining II./Zerstörergeschw 2 and then in January 1943, I./Zerstörergeschw 106. Heide finally joining I./KG 40 at Bordeaux-Mérignac on 13 February 1943.

INTO COMBAT
V./KG 40 was commanded by Hans Alfred Oelt Kurt Neumann who had recently taken command following the death in combat of

Herrn Hans Wilhelm Heide on 10 January 1943. The purpose of V./KG 40 was to intercept Allied aircraft attempting to attack U-boats operating into and out of French Atlantic ports, to intercept Allied aircraft transiting the Bay of Biscay, to escort U-boats and larger and more powerful Luftwaffe maritime reconnaissance aircraft and general reconnaissance for Fliegerführer Atlantik, the HQ which commanded Luftwaffe air assets over the Bay of Biscay and the Atlantic.

Albrecht flew his first operational flight, an armed reconnaissance, on 28 February 1943 but it was not until his fifth flight that he had encountered his fate.

On 10 April 1943, Albrecht and another Ju 88 had taken off to escort the Italian blockade breaker Hordaya together with an escort of three destroyers and five torpedo boats. His Sgt James Heather flying a Halifax of 58 Squadron had taken off from RAF St Eval in Cornwall to locate the same blockade breaker. At 1800hrs, the Halifax reported being attacked by two Ju 88s receiving light damage but coming to base probably because of one of his airmen and damaging another. Albrecht reported attacking the Halifax four times and his fighter was hit 13 times but no German aircraft

were lost or badly damaged. James Heather would be awarded the Distinguished Flying Medal for this action only to be shot down and killed by V./KG 40 on 9 May 1943.

Albrecht did not have to wait long for his first success as on 17 April 1943, he reported shooting down a Whitley. This was from 10 Operational Training Unit (OTU) flown by Sgt Leonard Smith and Sgt Off Colin Thomas; there were no survivors from the six



36 HISTORY Eduard Modeler's Den No. 4 - APRIL 2025 USS BLOCK ISLAND CVE-21

At 0800 hours on 23 October 1943, a patrol Grumman TBF-1C Avenger took off from the deck of the escort carrier USS Block Island, piloted by Lieutenant William M. Munn, accompanied by an Avenger crew consisting of Lieutenant J. Handshuh. At 0900, about 40 nautical miles from the carrier, Munn spotted two surfaced submarines at a distance of approximately 20 miles. The USS Block Island's logbook states the distance as 13 miles from the ship. Avenger's radio operator, William O. Parmer, reported the contacts to the carrier, and the crew of both aircraft prepared for an attack.

On Munn's command, the Wildcat moved to the left and ahead of the Avenger and attacked first about ten minutes later, targeting the closer of the two submarines, which of the involved aviators described as the smaller one. The Wildcat strafe the sub with machine guns, followed by the Avenger attacking with two depth charges. The aircraft attacked the submarine head-on at a 200° angle to its course. According to Munn's report, the two depth charges exploded on either side of the submarine. During the Wildcat's attack and the Avenger's bombing run, the submarine turned to starboard, and the

USS Block Island CVE-21 at sea on 3 February 1944. Photo: US Naval History and Heritage Command



51 MODEL & STORY Eduard Modeler's Den No. 4 - APRIL 2025 Model & Story Leopold Anslinger and His Fokker in Galicia

The aerial battles of the First World War in Eastern Europe remain somewhat overshadowed by the stories of famous aviators like Manfred Freiherr von Richthofen, René Fonck, Billy Bishop, and Mick Mannock. Over the eastern frontlines, however, under very different geographical and logistical conditions, German and Austro-Hungarian airmen engaged in fierce combat against the air forces of Imperial Russia and its allies. During World War I, the Austro-Hungarian Empire awarded the prestigious Order of the Iron Crown, Third Class with War Decoration, to only three German combat aviators. Two of these honours went to Manfred von Richthofen and Oswald Boelcke in recognition of their achievements on the Western Front. The third recipient, however, was honored for his service on the Eastern Front: Lieutenant Leopold Anslinger. Although his name is not widely known today, Anslinger achieved the highest number of aerial victories of any Central Powers pilot in the Eastern Theater.

The Road to the Air Service
Leopold Anslinger was born on April 13, 1885, in Freiburg im Breisgau, in the Grand Duchy of Baden, as the second son in his family. His father was a publicist and a lawyer, and his mother was a pianist. Anslinger was a talented student, and he was awarded a gold medal for his excellent performance in school. He was also a member of the local sports club, and he was a skilled athlete. He was also a member of the local sports club, and he was a skilled athlete. He was also a member of the local sports club, and he was a skilled athlete.

On October 14, 1913, Leopold Anslinger received his pilot's certificate (No. 366). Before he was, he became a chief factory pilot and completed in several air races. Thanks to his salary and prize money, he was able to repay to his father much of the money that had been invested in his aviation career.

Following the announcement of mobilization in early August 1914, Anslinger promptly volunteered for military service. He was assigned as a Geführer to Flieger-Einheit 10 in St. Gallen. By the end of the year, he had been promoted from the rank of Geführer to early 1915, he was

promoted to the newly formed Flieger-Abteilung 14 (Fl. 14) and promoted to Fliegerführer. He was ordered to move to Eastern Europe, but it was not until a year later that its members learned they would be deployed to the Eastern Front in the Carpathian Mountains.

In Combat
Fl. 14 was equipped with two-seat reconnaissance

Biscay Aces

History / Chris Goss

With the air war over the eastern Atlantic escalating by the end of 1941, it was obvious to the Luftwaffe that some form of long-range fighter cover was needed. No solution immediately sprang to mind but early in 1942, the latest version of the Ju 88C-6 was coming off the production line. With increased offensive and defensive armament, on 23 June 1942, the Luftwaffe promised four Ju 88C-6s to protect U-boats entering and leaving the Bay of Biscay. Three days later, four Ju 88C-6s fresh from the production line were allocated and would be based at Bordeaux-Mérignac, the unit initially being designated Zerst.St./Küstenfliegergruppe 106 (Zerst.St./Kü.Fl.Gr. 106) or Zerst.St./KG 6 subordinate to the Fw 200 unit III./KG 40. On 2 July 1942, it was then announced these four aircraft would be increased by another 24. V. Gruppe/Kampfgeschwader 40 (V./KG 40) was the result and over the next two years, a number of aces would emerge.

USS Block Island CVE-21, pt. 1

History / Vladimír Šulc

USS Block Island CVE-21 was a Bogue-class escort aircraft carrier. A total of 45 Bogue-class carriers were built based on the hulls of C-3 type transport ships. The first 22 were conversions of completed or partially built C3-S-A1 or C3-S-A2 ships. Of these, 11 ships were transferred to the Royal Navy under Lend-Lease and served as the Attacker-class. The remaining 23 were purpose-built as escort carriers and all went to the Royal Navy, which classified them as the Ruler-class, the largest carrier class in Royal Navy service.

The two-part article on the USS Block Island is not just about the ship itself; it also reflects the history of the fierce battles fought in the Atlantic to maintain vital transport routes between North America and Great Britain.

Leopold Anslinger and His Fokker in Galicia

Model & Story / Jan Bobek, Danny Clark

The aerial battles of the First World War in Eastern Europe remain somewhat overshadowed by the stories of famous aviators like Manfred Freiherr von Richthofen, René Fonck, Billy Bishop, and Mick Mannock. Over the eastern frontlines, however, under very different geographical and logistical conditions, German and Austro-Hungarian airmen engaged in fierce combat against the air forces of Imperial Russia and its allies. During World War I, the Austro-Hungarian Empire awarded the prestigious Order of the Iron Crown, Third Class with War Decoration, to only three German combat aviators. Two of these honours went to Manfred von Richthofen and Oswald Boelcke in recognition of their achievements on the Western Front. The third recipient, however, was honored for his service on the Eastern Front: Lieutenant Leopold Anslinger. Although his name is not widely known today, Anslinger achieved the highest number of aerial victories of any Central Powers pilot in the Eastern Theater.

MiG-21bis Weapons Variants and Combinations

Part One: Air-Air Weapons

Tomáš Dedera

The loadout possibilities of the most modern version of the MiG-21bis fighter aircraft were determined primarily by the role for which the aircraft was intended. Since it was used as a multi-role aircraft, the range of armament was very wide. The use of a specific weapon loadout, relevant also to model building, depends on the specific mission. However, the combination of armament was also subject to certain regulations and technical limitations. This two-part article deals primarily with this issue and also shines a light on individual types of armament from a technical, military and modeling perspective. The first part describes the general scheme of armament carried with a focus on the different types of air-air weapons utilized. Air-ground armament used on the MiG-21bis will be covered in the second part of this article in the June issue.

The basic integral (permanently installed) armament of the MiG-21bis was the twin barreled GSh-23 23mm aircraft cannon, built into the lower part of the fuselage, with two hundred rounds located in a compartment in the fuselage of the aircraft.

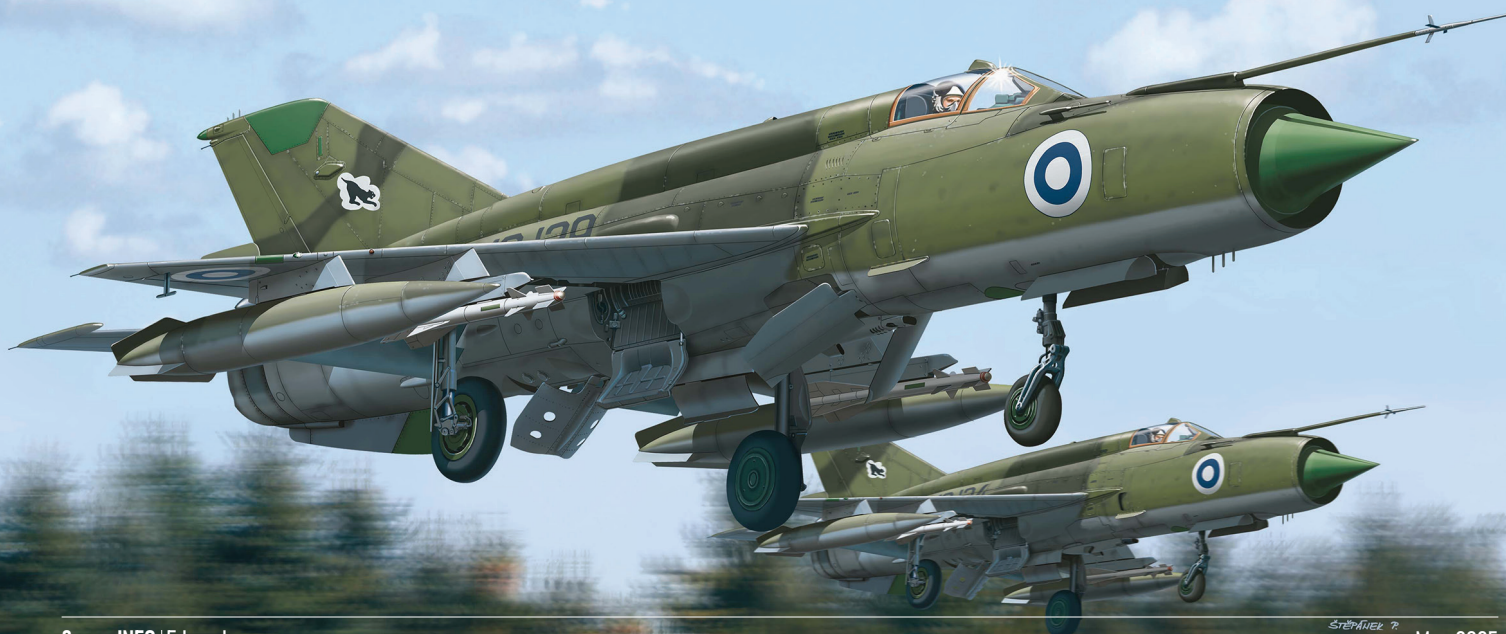
Other types of armament were suspended under four pylons located beneath the wings of the aircraft. This armament possibilities varied widely, dictated by mission requirements. Intercept or CAP missions would most often be flown with a combination of infrared guided dogfighting missiles together with semi-active, radar guided missiles. The exclusive carriage

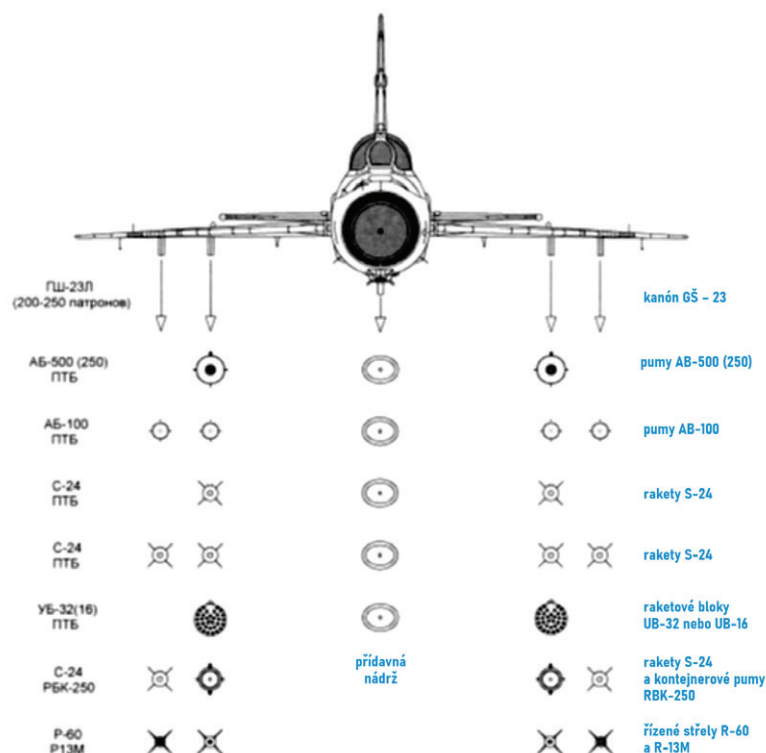
of heat seekers were also seen, and all of these permutations could be carried in combination with external fuel tanks. There were conflicts, however, in which the MiG-21bis flew combat missions carrying air-ground weapons only (for example, the war in Afghanistan 1979 - 1989, and the war for the independence of Croatia 1991 - 1995 during the breakup of Yugoslavia). Furthermore, in practice, it depended on what specific external armament the given country purchased, or developed and produced itself. The best reference on what to hang under your model is going to be photographs of your actual subject.

The following chart indicates the practical variations of weapons carried in the war in Afghanistan, in the years 1979 to 1989, according to Viktor Markovsky (Military Air Force in the Afghan War, Moscow, 2016, ISBN 978 - 5 - 699 - 88481 - 0)

The usual combinations of external armament on the MiG-21bis are listed in the tables below, and certain rules apply. For example, the heaviest bombs in the 500 kg category were carried only under the inboard pylons, as were the MBD-2-67U multiple ejector racks.

MiG-21bis Finnish airforce. Illustration - Petr Štěpánek senior.





Bomb Armament – Aerial Bombs and Cluster Bombs (Caliber, in mm)

50	50		50	50
100	100		100	100
100	4 x 100 (MBD – 2 – 67U)		4 x 100 (MBD – 2 – 67U)	100
250	250		250	250
	500		500	

Unguided Rockets (Rocket Pods) / Adapters

UB – 16 – 57UMP	UB – 16 – 57UMP		UB – 16 – 57UMP	UB – 16 – 57UMP
	UB – 16 – 57UMP		UB – 16 – 57UMP	
	UB – 32A		UB – 32A	
UB – 16 – 57UMP	UB – 32A		UB – 32A	UB – 16 – 57UMP
	S – 24B (APU – 7)		S – 24B (APU – 7)	
S – 24B (APU – 7)	S – 24B (APU – 7)		S – 24B (APU – 7)	S – 24B (APU – 7)

Guided Missiles / Launch Rails

R – 3S (APU – 13)	R – 3S (APU – 13)		R – 3S (APU – 13)	R – 3S (APU – 13)
R – 13M (APU – 13MT)	R – 13M (APU – 13MT)		R – 13M (APU – 13MT)	R – 13M (APU – 13MT)
R – 3R (APU – 13U2)	R – 3R (APU – 13U2)		R – 3R (APU – 13U2)	R – 3R (APU – 13U2)
R – 60M (P – 62 – IM)	R – 60M (P – 62 – IM)		R – 60M (P – 62 – IM)	R – 60M (P – 62 – IM)
2 x R – 60M (APU – 62 – IIM)	R – 60M (P – 62 – IM)		R – 60M (P – 62 – IM)	2 x R – 60M (APU – 62 – IIM)
R – 60M (P – 62 – IM)	R – 13M (APU – 13MT)		R – 13M (APU – 13MT)	R – 60M (P – 62 – IM)
2 x R – 60M (APU – 62 – IIM)	R – 3R (APU – 13U2)		R – 3R (APU – 13U2)	2 x R – 60M (APU – 62 – IIM)
R – 3R (APU – 13U2)	R – 13M (APU – 13MT)		R – 13M (APU – 13MT)	R – 3R (APU – 13U2)

Auxiliary Fuel Tanks (in liters)

After replacing the outboard wing pylons with wet items, two 490 liter droptanks could be carried.

490		490		490
		800		

The R-13M Guided Air-Air Missile

This weapon was used by interceptor aircraft for engaging aerial targets. It could be used effectively against both maneuvering and non-maneuvering bogies under normal weather conditions, day or night, with a maximum launch overload of 3.7g. It could be launched from a wide range of altitudes when fired from the rear hemisphere. In terms of aerodynamic configuration, it was a canard type missile, meaning the control rudders were in the front part of the missile, stabilizing fins in the rear. It was guided to the target with the help of an infrared seeker, which was cooled using nitrogen to increase its sensitivity.



An overall view of the R-13M air-air IR guided missile.

Specifications:

- Length: 2870mm
- Diameter: 127mm
- Span: 632mm
- Front Fin Span: 420mm
- Weight: 90kg
- Warhead: 11.3kg
- Guided Flight Endurance: 55 seconds
- Flight Hours: 40h

Main Components:

Guidance and Control Section – is designed to acquire the target and guide the missile to it. It also issues a command to arm the proximity fuse and controls initiation upon direct contact of the missile with the target and detonation of the warhead. It consists of 2 parts – **the control section (1)**, which integrates the infrared homing head, the steering and power supply block and the rudders, and **the proximity fuse (2)**.
Warhead (3) – serves to effectively destroy the target. It consists of a body, a rod cylinder and an explosive charge (approx. 4 kg of phlegmatized octogen with aluminum powder).

Solid propellant rocket motor (Fig. 4) – the source of reactive thrust for the missile, which gives it the speed necessary for its effective use. On the body of the rocket motor there are three guides for hanging the missile on its launcher, while the aft part of the motor has four wings attached with studs, placed in the shape of a letter 'X', equipped with gyroscopic stabilizers at their ends, providing control of the angular velocity of rotation of the missile around its longitudinal axis, commonly called rollersons, which ensure the stability of the missile around its various axes.
The missile is suspended under and launched from an APU-13MT launcher, which contains a nitrogen cylinder to cool the homing head's photo resistor. The launcher weighs 56 kg.



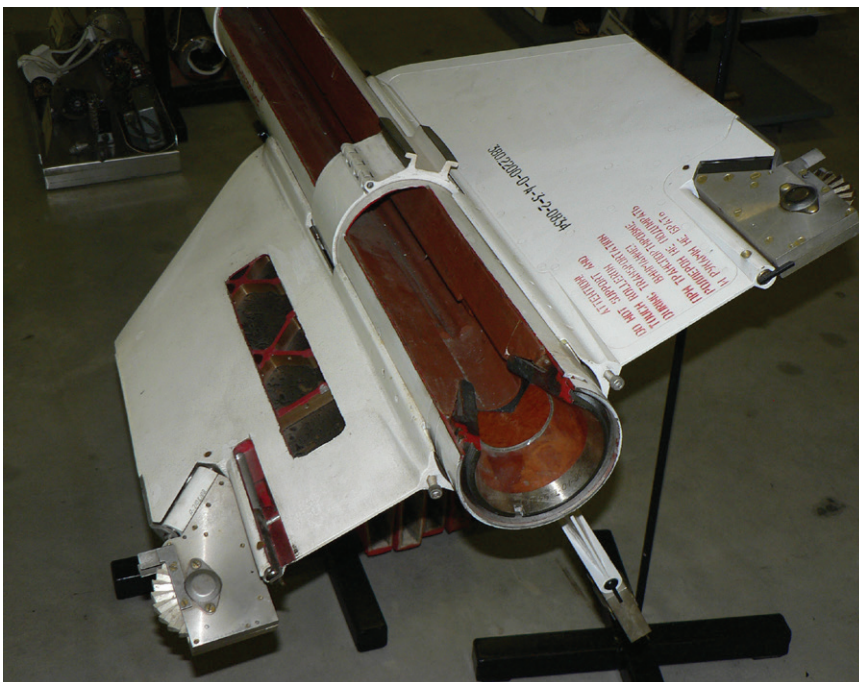
Guidance and Control Section of the missile. In the upper part of the control section, a pull-out cable connection is visible, which connects the missile with the aircraft's onboard network.



Warhead and proximity fuse, R-13M



Solid rocket motor with four fins on an R-13M.



Section of the rocket motor and nozzle, with the rollerons visible on the fins.



Structural details of the rollerons on an R-13M missile.

The R-3S Guided Air-Air Missile

The direct predecessor of the R-13M missile was the R-3S. It was also intended for the destruction of air targets day and night, under normal weather conditions (except for clouds and fog), with a required deviation from the sun of more than 20°. The maximum overload at the moment of launch was 2g (up to a height of 12,000m) and a maximum of 1.6g (above 12,000m). Compared to the R-13M missile, it had a shorter range, smaller permissible overload at launch, and the photo resistor of the self-guided infrared warhead was not cooled.

General view of the R-3S anti-aircraft guided missile, in partial section, with a practise round in behind (with a red longitudinal stripe).



Specifications:

Length: 2838mm

Diameter: 127mm

Span: 525mm

Weight: 75.3kg

Warhead: 11.3kg

Guided Flight Endurance: 21s

Detonation Time: 21-28s

Main Components:

Thermal Seeker (1), used to acquire and track thermal targets.

Control section with rudders (2), reaction contacts (3) and communication link (4) – using the rudders, the missile would maneuver towards the target, the reaction contacts would then activate the impact fuse, which in turn activated the warhead. The communication link connected the guided missile via the launcher with the aircraft's onboard systems.

Warhead (5) Detonated to eliminate the target.

Optical proximity fuse (6) – reacts to infrared radiation from the target if the missile passes closer than 9m from the target. If it passes further, the missile's self-destruction circuits are activated.

Solid fuel rocket motor (7) – with four stabilizing fins, at the ends of which are, once again, rollerons, which are fixed with locking pins until the missile is launched.



Forward section of the R-3S missile in cutaway.



Proximity fuse and rocket motor of the R-3S in cross section.



Stabilizing fins of the R-3S missile (note the red stripe and inscription). It is also worth noting the slightly different design of the rollerons compared to the more modern R-13M missile. The missile is suspended under and launched from an APU-13 launcher rail.

The R-3R Guided Air-Air Missile

This variant of the missile was created by replacing the infrared seeker of the R-3S with a PARG-13VV semi-active radar guidance system. This change was visible at first glance by the fact that the guidance section (the section in front of the forward fins) was extended, the front part of which was narrowed and equipped with a dielectric, semi-transparent cover. Furthermore, the optical proximity fuse was replaced with a new, also non-contact, Jastreb radio proximity device. Communication with the on-board radar of the RP-22M type allowed the destruction of air targets at short distances from both the rear and, in addition, the front hemisphere, day and night, in all meteorological conditions. Most aircraft were armed with a combination of radar-guided (R-3R) and heat seeking missiles (R-3S, or R-13M, and later the R-60/60M). Such combinations of anti-aircraft armament can be seen below in the images available on the Internet.



R-3R air-air guided missile in cross-section. Compared to the R-3S missile, the extended section housing the semi-active radar guidance electronics is clearly visible. In behind it is a cross-section of the R-13M missile mounted on its launch rail.



MiG-21bis of the former Yugoslav Air Force (JRV), armed with two R-3Rs inboard and four R-60M on twin launchers outboard during the civil war in the early 1990s. Fuselage numbers are painted over to make identification by the enemy more difficult.



MiG-21bis of the former German Democratic Republic Air Force (NVA DDR), this time with a pair of R-13Ms on the inboard pylons and two R-3Rs outboard, in the period before the reunification of Germany on October 3rd, 1990.

The R-60M Guided Air-Air Missile

This weapon was designed to destroy maneuvering air targets at short distances. The aerodynamic layout was of a canard type, the fins, rudders and canards, the latter being dubbed as 'destabilizers' being placed in an 'X' configuration. The task of the destabilizers was to increase the efficiency of the rudders (control surfaces) at high angles of attack. At the ends of the rear fins were equipped with rollerons that dampen the rotation of the missile around its longitudinal axis. The missile consists of five main parts. The missiles can be mounted and launched from either a single P-62-IMD launcher (also known as APU-62-IM or APU-60-IM) or a twin APU-62-IIM (APU-60-IIM) launcher.

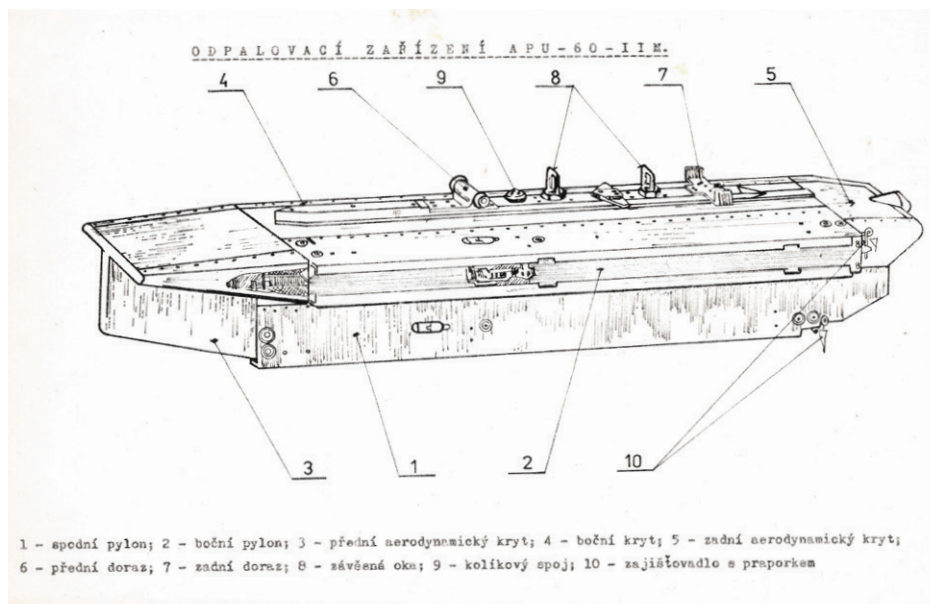


Overall view of an R-60M guided air-air missile with a red protective cap covering the seeker head, suspended from a simple P-62-IMD launch rail under a MiG-21MF.

APU-62 IIM Components

1. Lower Pylon
2. Side Pylon
3. Forward Aerodynamic Cover
4. Side Cover
5. Rear Aerodynamic Cover
6. Front Stop
7. Rear Stop
8. Mounting Eye
9. Mounting Lug
10. Arming Pin with RBF Tag

Twin APU-62 IIM (APU-60-IIM) launcher.



Specifications:

Length: 2095mm

Diameter: 120mm

Span: 390mm

Weight: 43.5kg

Warhead: 3kg

Service Life: 40 Flight Hours
or 40 Landings

Main Components:

Infrared seeker head with destabilizers

(1) – serves to capture and track a thermally contrasting target, is of a passive type (only receives reflected energy from the target, does not emit anything itself), and is equipped with a simple, uncooled seeker. It detects and identifies the target, transmits a signal about its capture to the APU launch rail, measures the angular velocity of the target and generates control signals for guiding the missile in flight.

The warhead (2) is of the high-explosive type, equipped with a non-contact radar proximity fuse and a detonation mechanism.

Control section (3) – contains an impact sensor that sends an electrical impulse to the detonation mechanism when the missile directly hits the target, it also contains autopilot

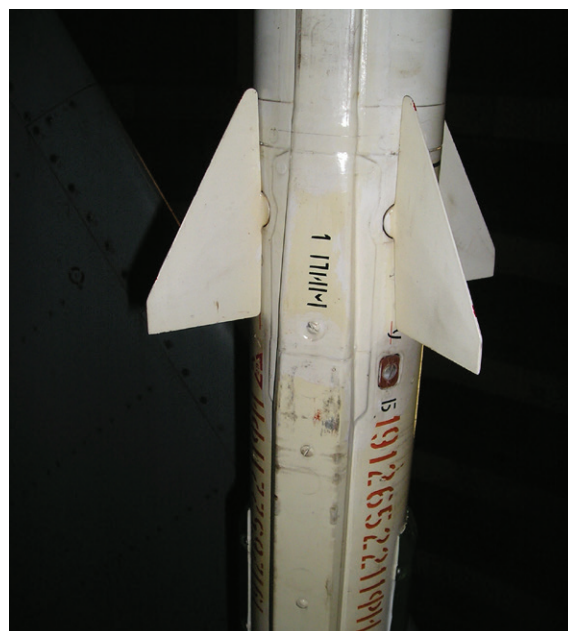
blocks, automation blocks and a power supply voltage stabilizer and a connecting cable (for missile-launcher-aircraft communication). The control section also contains rudders (which change the missile's flight trajectory) and the 'U-B' switch, the position of which determines whether the missile is in combat or combat training mode.

Power section (4) – here are located the PAD pressure accumulator among other devices, a proximity radar detonator (green antennas, rectangular in shape) and a **missile launch indicator (5)**.

Rocket motor with solid propellant is the source of propulsion that carries the missile to the target. The motor body also houses the missile suspension nodes for the launcher and fins complete with rollerons.



Infrared seeker head with destabilizers, to which is attached the warhead (between the destabilizers and rudders) of the R-60M missile.



Control section of the R-60M missile, a view of the lower front part with the four control fins, the 'U-B' switch and concealed electrical wiring and piping on the outer surface of the missile.



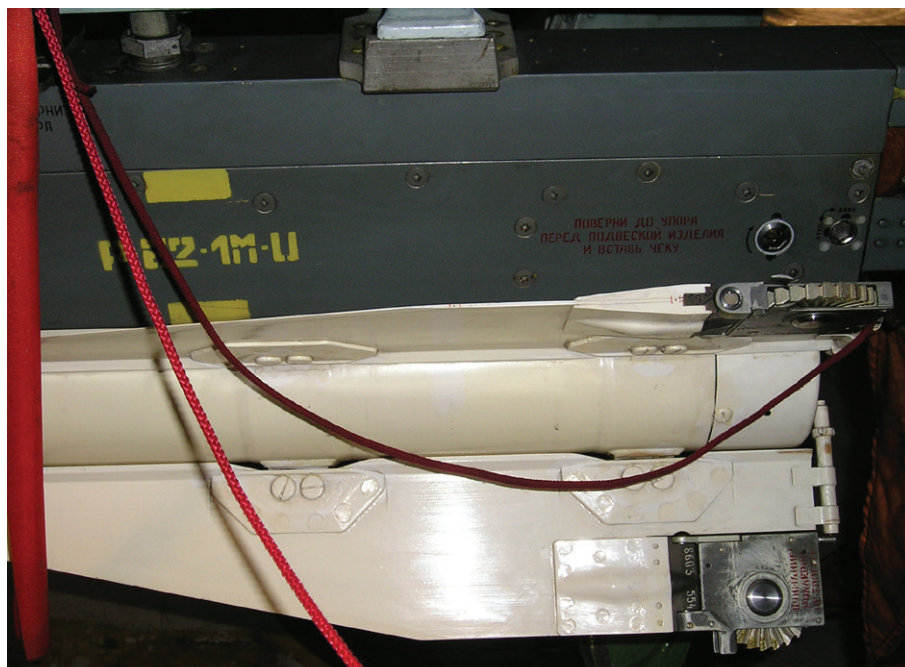
Open forward edge of the launch rail, into which the communication cable is connected, located in the missile's control section.



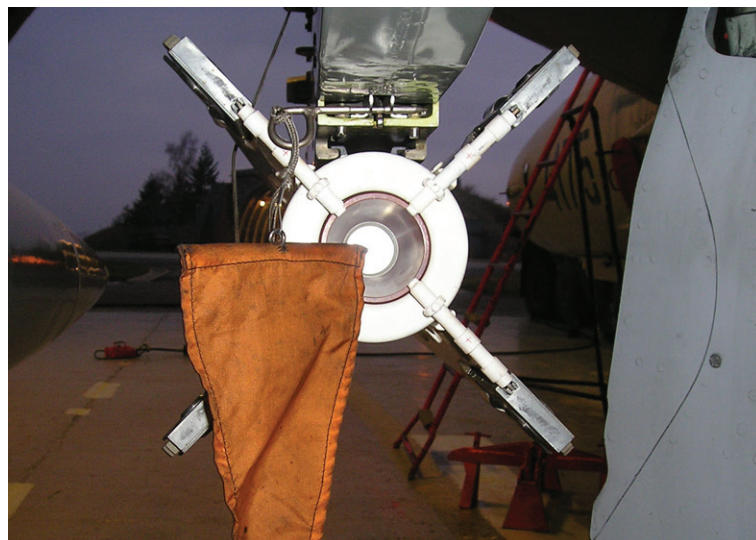
Power section, on the outer part of which are located the green antennas of the proximity detonator system and the R-60M launch indicator.



Lower view of the rocket motor section, complete with rolleron equipped fins.



Detail showing the method of the rear fin attachment to the rocket section of the R-60M and the rolleron design.



View of the R-60M rocket motor nozzle, fins in an 'X' configuration and the arming pin inserted with an orange warning tag.



For training purposes, a UZR-60 acquisition round was developed (shown here slung under an L-39ZA Albatros), which was easily identifiable by the three black bands around the rear of the missile. The fins on this type of piece of equipment were removed, as was the rocket motor and warhead. An internal evaluation device that recorded certain data during target acquisition was installed in these rounds. Two arming pins are installed with RBF tags for visibility.

SPRD-99 Rocket Assisted Take-Off System (RATO Bottles)

These solid rocket boosters were used on the MiG-21 to reduce its take-off run. Two were mounted under the fuselage and were jettisoned once the aircraft was airborne and their fuel had been exhausted. These items were not reusable.



A detail shot of the same airplane showing the front and rear attachment points for the right SPRD-99 RATO bottle.

Specifications:

Length: 1680mm

Diameter: 650mm

Height: 540mm

Weight: 220 +/- 5kg

Ignition Duration: 9.8 to 17.8 seconds

Maximum Thrust: 1300 to 3000 kp, which corresponds to a force of between 12,749 and 29,420 N.



SPRD-99 RATO bottle installed under the left half of the fuselage of a MiG-21bis of the former GDR Air Force. The method of attaching the rear of the bottle and details of the nozzle are visible. Photo: Ing. Martin Janousek

Main Components:

Shell, acts as the combustion chamber of the solid rocket fuel.

Front cover, ensures hermetic sealing of the casing and also serves to store the igniter housing with the igniter proper. The inner surface of the lid is covered with thermal insulation.

Igniter casing, serves to safely store the igniter in the front lid.

Rear cover with grate, hermetically seals the casing and serves to secure the nozzle.

Nozzle with insert, inclined $24^\circ \pm 10'$ with respect to the longitudinal axis of the launch rocket, serves to create a fixed mode of powder gas outflow, converts the thermal energy of the exhaust gases into kinetic energy and creates the necessary reactive force of the rocket motor.

Sealing Membrane, ensures hermetic sealing of the launch rocket, is located in front of the nozzle insert, is made of aluminum sheet and is marked 314 - P, which denotes the product index.

Nozzle cover, protects the inner part of the



SPRD-99 RATO bottle, with the method of attaching the front mount and the shape of the bottle itself visible. Photo: Ing. Martin Janousek

nozzle from contamination and damage to the membrane, the nozzle cover must be removed before takeoff, and it is colored red.

Cable, connects the pyro cartridges stored in the front cover to the aircraft's electrical system.

Aerodynamic cover, a thin-walled, hat-shaped aluminum container, its task is to protect the electrical wiring from damage.

Nut, used to secure and tighten the rear cover to the grate.

Protective cap, designed to protect the front cover from mechanical damage during transport and storage, also painted red.

Igniter, used to safely ignite the solid fuel of the RATO unit, consists of 350g of coarse-grained, black powder, which is enclosed in an aluminum hermetic case.

Pyro cartridges, type DP-1-4, used to initiate the igniter, two pyro cartridges are inserted for safe and reliable operation.

Fuel, consists of NMF-2D solid propellant, cylindrical in shape with a longitudinal cavity.

The Principal behind the RATO

System's Functionality:

The two RATO bottles, suspended from the aircraft, are activated by sending an electrical signal to the pyro cartridge contacts, after which the electrical impulse is applied to the filaments of the double heating bridge of the



SPRD-99 RATO bottle, overall view of the installation method under the right side of the fuselage.
Photo: Ing. Martin Janousek

pyro cartridges. The heating filament ignites the pyrotechnics and the pyro cartridge initiates the igniter. The igniter ignites the solid propellant. The powder gases generated by the burning of the fuel create pressure inside the RATO bottle, which is converted into reactive force by the flow of gases through the nozzle. After the bottle burns out, the pilot activates a pneumatic cylinder, which ensures

the jettisoning of the front attachment node from the aircraft. Due to the effect of its own weight and the action of aerodynamic forces, the RATO bottles separate from the aircraft and fall to the ground.

**To be continued with
MiG-21bis ground attack
ordnance.**



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神風特攻隊



Mari Kučera

The World of Japanese Calligraphy *Shodō*

As part of the box design for the April limited edition 1/48 Kamikaze Tokkōtai IJN Special Attack Units, there is a calligraphy inscription of "Kamikaze Tokkōtai" (Kamikaze Special Attack Unit), created by the Japanese calligraphy teacher living in Prague, Mrs. Mari Kučera. Since unique calligraphy created specifically for a plastic model kit is not a common occurrence, even in Japan, we asked Mrs. Kučera to introduce us to the history and secrets of calligraphy creation. (Editorial note)

In Japanese calligraphy, shodō, we use Chinese characters (kanji) and two types of native Japanese syllabic scripts, kana.

Chinese characters originated in ancient China, where the reasons and outcomes of divinations were recorded by carving them onto animal shoulder blades or turtle shells. Thus, the act of writing (recording) itself was considered sacred. Each character carries meaning, and by studying the origins of individual characters, one can glimpse the worldview, philosophy, and lifestyle of ancient people. Later, with the invention of soft brushes made from animal hair, it became possible to draw curved and varied-width lines. The calligraphy brush is unique because it is both soft and resilient. Thanks to this quality, we can sensitively capture the various rhythms and movements of our bodies and our inner selves. Living tools, such as the calligraphy brush and absorbent paper, allow us to express music, dance, and the image of our soul, evoking different emotions and impressions in viewers and affecting their spirit. In this way, "writing characters" became

an art form. Because of the brush's flexibility, each stroke and character contains substance, depth, movement, and direction. Unlike painting, where an artist can pause, have tea, and contemplate where and what color to add, Japanese calligraphy must be executed "in one breath," requiring high energy concentration and yet complete relaxation of the body and senses. Only when we tune into the waves of energy around us – depending on our state and the waves we connect to – and let the energy flow through us without obstruction do substance, depth, movement, and direction appear in every stroke and character. These physical aspects follow natural laws, and harmony reigns in the work, just like in the universe. When everything is connected by one wave of energy and functions in unity, the work becomes alive and beautiful.

The flow of energy is a very important aspect of Japanese calligraphy. This again is enabled by the brush's flexibility. Through an invisible yet palpable current of energy, we can experience the mental state or emotions of the creator at the moment the



Mist



Storm Clouds

work was made, even if it is several years old. In Japanese culture in general, "things that cannot be seen" remain an essential part of life. If the energy flow were not part of the creative process, the written inscription would essentially be meaningless. It is also often said that the "remaining" white space, where nothing is written, is an "essential" white space. This is called *johaku*. *Johaku* can be seen everywhere in Japanese culture, most typically in ink paintings, traditional Japanese houses and gardens, and tea ceremonies. By writing letters, we often strive to create beautiful "empty" space.

However, it is not possible to create this space with the mind alone. The inscription and the "empty" space must resonate, and to achieve this, we need to maintain perspective and perceive the work as

a whole during its creation. The slightest thought flashing through the mind interrupts the energy flow, creating disharmony.

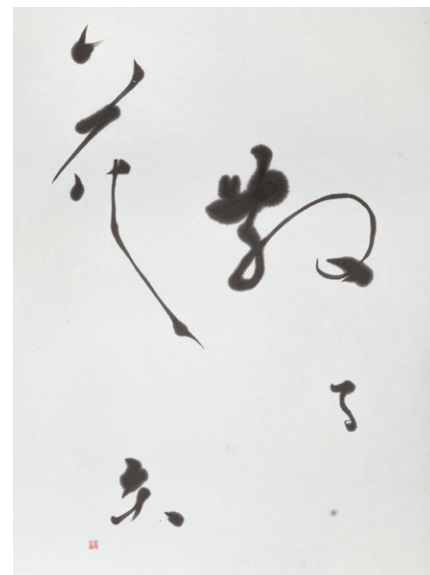
The effort to create good work largely involves removing various obstacles within ourselves. These include the desire for success, a closed view on the world, fixed ideas, etc., which are associated with bodily tension.

Often, we ignore our own feelings due to thoughts influenced by our nature or approach to life, resonating somewhere deep in our subconscious without our clear awareness. Subconsciously, we tell ourselves we don't want to ruin the work and we want to succeed. Even before we start writing, we fear failure, and both the soul and the body tense up unpleasantly.

If the mind constantly dictates, "This stroke should be this long," or "The next stroke should start here," the senses fail to perform their primary function of maintaining balance in the developing work. And when the mind controls everything and something doesn't go as planned, internal criticism immediately follows – "Damn, that stroke should have been longer!" This can thoroughly destabilize us, at least until the work is finished.

It's truly fascinating to observe how clearly all of this appears on the paper, how our inner world manifests there, and how the body reacts at such moments. Our body's movement is closely tied to our inner state, making it essential to cultivate our inner selves for calligraphy.

A finished piece of calligraphy reflects not only the personality and personal approach of the calligrapher but also their shortcomings and weaknesses, which usually show up as flaws in the work. Improvement in Japanese calligraphy demands self-awareness



Falling Flowers

and self-cultivation. This is probably why Japanese calligraphy became one of the "Ways – Dō," just like *kendō*, *judō*, *sadō*, and others. By observing our own calligraphy, we can improve our approach to life.

As you can see, a calligrapher must carefully choose their tools and writing style to best express their inner self in a given work. These choices greatly influence the atmosphere of the work.

For the inscription "Kamikaze Tokkōtai," I wanted to create an atmosphere of dignity and severity, containing inner strength while avoiding harshness. Therefore, I used the *kaisho* style – standard script – with a hint of *gyōsho* – semi-cursive script – which conveys strength and movement within a certain tension. Through this, I wished to express my respect for the souls of those who fought in these aircraft.

Mari Kučera

She has been practicing Japanese calligraphy, *shodō*, since the age of six. Her life and calligraphy are deeply intertwined with faith and Asian philosophy, heavily influenced by nature, Taoism, and Buddhism. She has lived in the Czech Republic since 2003. Besides her own artistic work, she leads numerous courses and workshops throughout the country, gives lectures, and performs large-format demonstrations. She has written several articles for magazines and appeared on the "Dobré ráno" (Good Morning) program on Czech Television. She belongs to the *Kenshin Shodō Kai*, one of the most traditional schools of Japanese calligraphy in Japan, and received the *Hōjō Award* at exhibitions in 2024 and 2025.



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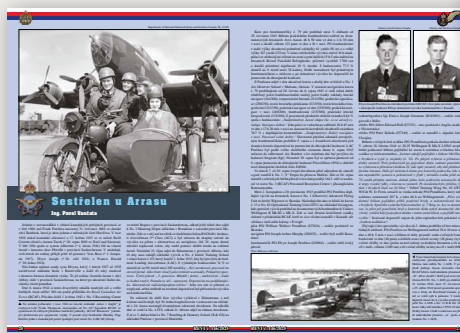
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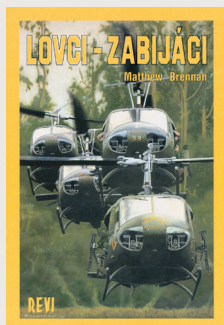
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Aerial War in Ukraine

Retreat from the Kursk Region and Global Chaos

Miro Barič

In this continuation of the series, we cover events that occurred between March 1 and March 31. The fighting continued on land, at sea, and in the air—despite U.S. efforts to broker a ceasefire. With the benefit of hindsight, it can be said that Russia is playing for time and stringing Trump along...

On the ground battlefield, the most significant events took place in Russia's Kursk region. Russian and North Korean troops finally managed a successful counteroffensive there, during which they recaptured the town of Sudzha. The Ukrainians had to withdraw from almost the entire Kursk region, retaining only two villages near the border. Drones played a key role in this Russian counteroffensive, particularly those with optical fibers that cannot be jammed. Using them, the Russians cut off Ukrainian supply lines, which was the main reason the Ukrainians had to retreat.

On the other hand, the Ukrainian armed forces launched a raid into Russia's Belgorod region, where fighting took place in several border villages. At the same time, there were several successful counterattacks were launched, especially around the towns of Pokrovsk and Toretsk, as well as in other areas. As a result, the Russian advance in eastern Ukraine essentially stalled during the monitored period.

Does He Want Peace or Capitulation?

On the global stage, U.S. President Trump was the key player. The question is whether anyone, including himself, really knows what he's doing. Consider the trade wars he has started with virtually the entire world—imposing tariffs in the morning, only to lift them by evening. And the next day, the cycle repeats... Even American companies are now speaking out against this chaos.

Practically the only country on which Trump hasn't imposed additional tariffs is Russia. This might seem puzzling, but in the context of peace negotiations, it starts to make sense. He is demanding that Ukraine give up Crimea and other territories, and also abandon its ambitions to NATO membership. Additionally, he is pressuring Ukraine into an unfavorable agreement that would effectively hand over its mineral resources to the U.S. And what is he demanding from Russia, the aggressor in this war? Nothing... In fact, Trump's administration has even begun efforts to halt investigations into Russian war crimes.

During the observed period, Ukraine agreed to an unconditional 30-day ceasefire. Russia rejected it. Ukraine then agreed to at least a limited ceasefire concerning attacks on energy infrastructure and military operations in the Black Sea. Russia seemingly agreed too, but immediately began setting conditions, saying such a ceasefire was only possible if certain sanctions were lifted.

Both of these limited ceasefires are, from the start, more advantageous to Russia. Although Ukraine has long been facing attacks on its power plants and heating facilities, it has adapted to this situation. A mild winter and current warming trends also play in its favor. On the other hand, Ukraine's attacks on Russian refineries, fuel depots, and other oil infrastructure have significantly impacted the Kremlin. Last year, these attacks caused a 10 percent drop in Russian production, costing Moscow a great deal of money.

In the Black Sea as well, Ukraine holds a more advantageous position, making the ceasefire more beneficial to Russia. Ukrainian

New footage of Ukrainian F-16 fighter jets.





New footage of Ukrainian F-16 fighter jets.

naval drones and cruise missile attacks have sunk many ships of Russia's Black Sea Fleet, forcing the remainder into ports in the eastern part of the sea. Despite regular Russian attacks, Ukraine has managed to resume grain exports on its own. Therefore, it is primarily Russia that is interested in free navigation.

Despite everything, Ukraine agreed to the U.S. ceasefire proposals without any further conditions. And who does Trump blame for obstructing a peace deal? Ukraine...

Oil Infrastructure

As mentioned earlier, Ukrainian long-range drones continued attacking the Russian oil infrastructure during this reporting period. During the night of Tuesday, March 4, two Russian refineries were hit—one in Syzran and the other in Novoshakhtinsk. Both had been targeted in the past and had only recently



Close-up image from Maxar showing the ammunition depot hit at Engels-2.



Satellite image of Engels-2 air base by Maxar Technologies. The struck ammunition depot is in the upper right corner.



Comparison of the depot before (top) and after the explosion, in Maxar images.



A burning fuel depot in Kavkazskaya as seen in satellite imagery from Planet Labs PBC.



Explosion of an ammunition depot at the Russian Engels-2 air base.

resumed full operation. That same night, a pipeline in the Rostov region was also struck.

On Saturday, March 8, Ukrainian drones attacked an oil refinery near St. Petersburg. Several drones also struck a cannery in Bryansk, which produced food rations for Russian troops. Ukrainians also continued their tactics of launching FPV drones from naval drones in the Black Sea, using them to destroy two Russian air defense systems along the coast.

On the night of Monday, March 10, the target was the Novokuybyshevsk refinery near Samara, which produces aviation fuel for strategic bombers.

The following night, Tuesday, March 11, Ukrainians carried out one of the most extensive attacks to date. They launched 337 drones at Russia, with 70 to 100 targeting

Moscow and over 120 targeting the Kursk region. The drones hit railway facilities, fuel depots, and other infrastructure. Debris from intercepted drones and missiles from Russian air defenses damaged several homes in the suburbs of Moscow.

On Saturday, March 15, more than 100 drones again flew towards targets in Russia. A refinery belonging to Lukoil and a railway station near Volgograd were hit.

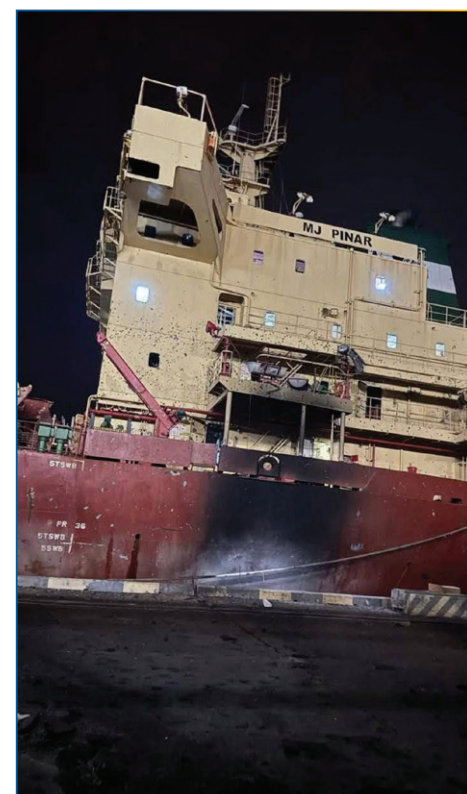
On Wednesday, March 19, the large Kavkazskaya fuel depot near Krasnodar was hit. It continued to burn and explode for nearly a week.

A daring operation took place during the night of Thursday, March 20, when Ukrainians attacked Engels-2 airbase near Saratov—home to the Russian strategic bombers used against Ukrainian cities. Ukraine had previously

attacked this base several times. This time, kamikaze drones hit an ammunition depot. The Ukrainian General Staff later announced that 96 Kh-101 cruise missiles were destroyed in the strike. While the exact number is unknown, secondary explosions shook the area well into the next day. Unconfirmed reports later surfaced on social media stating that a Tu-95MS bomber was damaged, and its pilot Ilya Balkin and flight engineer Yevgeny Sidorov were killed.



Center of the Ukrainian city of Dobropillia after a Russian attack on March 7, which killed 11 people.



On March 12, a Russian missile hit a civilian ship in Odesa killing four crew members.

Civilian Targets

And what targets did Russia attack? On Friday, March 7 in the evening, it was the city center of Dobropillia in the Donetsk region. Rockets with cluster munitions struck the area. It was Russia's infamous "double-tap" strike—launching a second wave to kill rescuers aiding victims of the first. The result: eight five-story apartment buildings were destroyed or damaged, and a shopping center was hit. Worse yet, 11 people were killed and 50 injured, including 7 children.

On Wednesday, March 12, a similar double-tap attack hit the city center of Kryvyi Rih. The target was the Druzhba Hotel. Once rescuers arrived, a second missile struck. Nine people were seriously injured. On the same day, an Iskander missile struck a cargo ship flying the flag of Barbados docked in the port of Odesa. Shrapnel killed four crew members.

Odesa was again targeted on Friday, March 21, when Russia launched 214 drones in three waves against four Ukrainian cities. Ukrainians shot down 114 drones; another 84 crashed due to jamming or were simply decoys designed to overwhelm air defenses. The attack on Odesa occurred during a visit by Czech President Petr Pavel. Drones struck a shopping center and residential buildings, killing two and injuring ten.

On Sunday, March 23, Russian drones again targeted multiple Ukrainian cities. In Kyiv, several high-rise apartment buildings were hit. In one of them, a man and his 5-year-old daughter—who had fled from Orikhiv in the Zaporizhzhia region—were killed. The mother was the only survivor, injured and hospitalized.

On Saturday, March 29, Russia launched several ballistic missiles at Kryvyi Rih, hitting homes, a car wash, and a school, injuring seven. Kamikaze drones struck Dnipro, killing four people and injuring more than 20. Eleven homes, an auto shop, a hotel, and a restaurant were damaged. Russian propaganda then used its usual formula, claiming that "10 NATO officers and members of Ukraine's secret services who were celebrating at the restaurant" had been killed.

Mirage in Action for the First Time

One of the largest Russian air raids of the war occurred at the beginning of the reporting period but deserves its own section because, in addition to F-16s, French Mirage 2000-5F fighter jets took part in Ukrainian defense efforts for the first time.

On Friday, March 7, Russia launched a massive assault on Ukraine's energy infrastructure: 194 Shahed drones and 67 missiles and cruise missiles. The missile group included 35 Kh-101/Kh-55s, 8 Kalibrs,



On March 21 Odesa was also targeted, during a visit by Czech President Petr Pavel.



City of Dnipro in flames after a raid by the Russian kamikaze drones.



Russian drones often veer off course and crash due to electronic jamming or technical failure. This Shahed drone flew as far as Kazakhstan.



A "warhead" made of wooden slats inside a drone sent as a decoy to overwhelm Ukrainian air defenses.

8 Kh-59/69s, 3 Iskander missiles, and 4 S-300 missiles used in a ground-to-ground mode. Ukrainian air defenses shot down 100 drones and 34 missiles. Another 86 drones crashed.

In Kharkiv, the attack damaged at least 30 homes, and in Poltava, a gas facility was hit. Two people were killed and 24 injured.

After the attack, a video from the cockpit of a Ukrainian Mirage 2000-5F fighter jet was published, showing the downing of one Russian cruise missile.

Just like the F-16s in their early days of deployment last year, the Mirage jets are now taking part in defense against Russian



A view from the cockpit of a Ukrainian Mirage 2000 fighter jet, which on March 7 shot down a Russian cruise missile.



Russian Ministry of Defense photograph of a Mi-28 helicopter.



A wreckage of the Russian Mi-28 that crashed on March 18.

air raids. Their pilots are gaining valuable experience before participating in various types of missions.

First F-16 Combat

F-16s are now also striking Russian ground targets. During one mission in this reporting period, the first encounter with Russian fighters occurred — ending without a shootdown but showing the F-16's vulnerability due to the Russian air superiority.

It happened on Thursday, March 21, over Ukraine's Sumy region. Russian military bloggers initially claimed to have shot down an F-16, but later corrected the record. According to Russian and Ukrainian sources, two Ukrainian aircraft (likely MiG-29s) loaded with bombs were escorted by one F-16. They flew at low altitude to evade Russian S-400 detection.

A Su-35 was patrolling high above and fired two long-range R-37 missiles at the group. The Ukrainian aircraft evaded them. As they turned to complete their bombing run, the Su-35 relayed targeting data to an S-400 battery, which launched multiple missiles. One locked onto the F-16. The Ukrainian pilot had to use onboard electronic countermeasures, flares, and extreme maneuvering to evade it. The missile eventually ran out of fuel.

Another „Black Day“ for Russia

The Ukrainian F-16 escaped the ambush, and Ukraine suffered no confirmed losses during

this period. However, several older losses were confirmed. Russia, meanwhile, lost multiple aircraft and helicopters in March. On Tuesday, March 18, a Mi-28 helicopter crashed during a training flight in the Leningrad region, killing both crew members, including Captain Ilya Vankovsky.

On Saturday, March 22, a video showed a Su-34 making an emergency belly landing at Lipetsk airbase after landing gear failure. The engine caught fire after losing a nozzle. The aircraft was likely irreparably damaged.



Footage of an emergency landing of a Russian Su-34 at the Lipetsk airbase.

On Monday, March 24, a Su-25 crashed in Russia's Far East — the pilot ejected safely. That same day, four Russian helicopters were destroyed in Belgorod region when Ukrainian

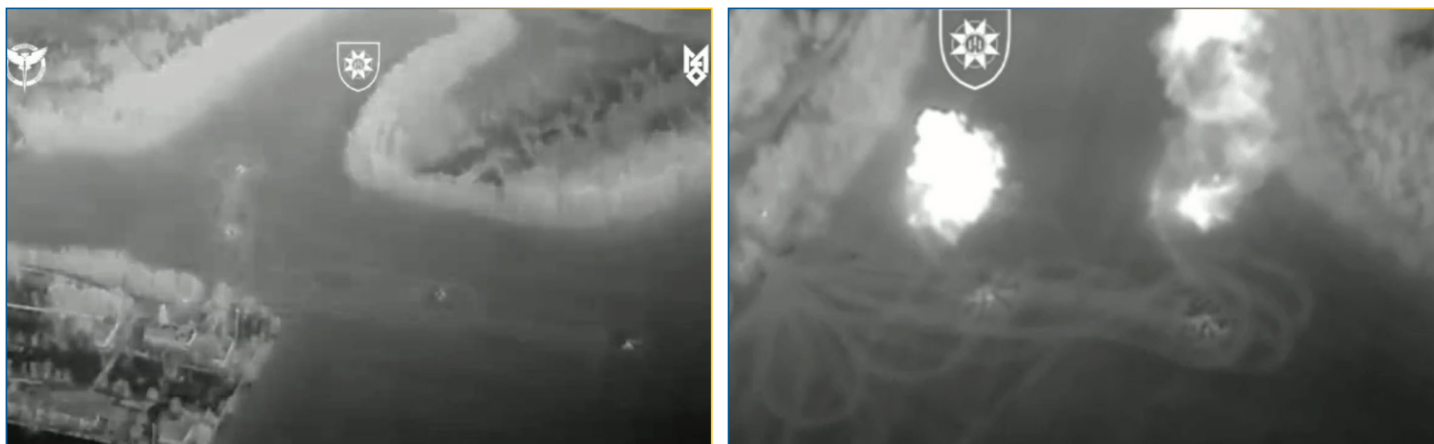
HIMARS rockets struck a temporary landing site near the town of Ivnya. A reconnaissance drone had spotted them. The GMLRS warheads, filled with tungsten balls, rendered the helicopters irreparable: one Mi-8MTV-5M ("red 54"), one Mi-28NM ("red 96"), and likely two Ka-52s.

Older Losses Confirmed

On Wednesday, March 19, Ukraine's military intelligence released a video of FPV drone attacks launched from naval drones against targets in Crimea — including S-300 and Pantsir-S1 systems, as well as various radar stations. One clip shows a drone exploding next to a parked Mi-8 helicopter at Veseloje airbase. Satellite images confirmed the helicopter had been stationary since at least February 24, suggesting the strike occurred in February and left it irreparably damaged.

According to the analysis of published footage and satellite images by the Military Watch website, the Mi-8 helicopter had been parked in the same place since at least 24 February and had not moved for the entire following month. All the other helicopters disappeared from the base in mid-February and did not return. Previously, several had been present there every day. This suggests that the attack on Veseloje airport took place in February, and that the Mi-8 seen in the video was so badly damaged that it was left behind.

During the period under review, various losses on both sides were confirmed.



Drone footage dated March 24 showing HIMARS rocket strikes on four Russian helicopters near the town of Ivnyia in Belgorod region.

For example, official documents state that a Russian Mi-8 helicopter was damaged on 21 January this year. While flying at 220 km/h at an altitude of 200 metres, the helicopter began to rotate constantly to the left. When the pilot was unable to stop the rotation by steering, he attempted an emergency landing, resulting in a crash.

Ukrainian court documents show that, on 22 February this year, a Westland Sea King HU.5 helicopter with the tail number "White 51", belonging to the 10th Naval Aviation Brigade, was seriously damaged (probably beyond repair). Due to a malfunction, the aircraft made an emergency landing near Mykolaiv (presumably at the Kulbakino airbase), sustaining damage and causing injuries ranging from minor to moderate to the crew members. This is the first loss of this type of helicopter in Ukrainian service.

Two further losses are evident in a documentary film released on Sunday 2 March. It shows the wrecks of two Su-25M1 aircraft with the tail numbers "Blue 21" and "Blue 23". The footage was shot at the Kulbakino base in autumn 2024. Both aircraft were destroyed prior to this date. However, the circumstances of their destruction remain unclear, as does the question of whether they were destroyed at the base or elsewhere and their wrecks were subsequently transported there.



Aftermath of the March 24 attack on four Russian helicopters — all were riddled with shrapnel and damaged beyond repair.



Wrecks of the Ukrainian Su-25M1 aircraft with tail numbers "blue 21" and "blue 23" at the Kulbakino airbase. The footage was filmed in fall 2024 and recently released in a documentary.



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Hungarian Shark

Text: Vladimír Šulc

Illustration: Piotr Forkasiewicz



The Hungarian MiG-21bis Model 75A, with the serial number 75061904 and the fuselage number 1904, was repainted in its famous anti-camouflage livery in 1992. This colour scheme was originally intended to represent enemy aircraft during combat training exercises. Around this time, aircraft 1904 became part of the Sky Hussars aerobatic team. It bore the logo of the Camel tobacco company on the side of the fuselage and in several other places, and due to the shark's mouth on the nose it was named Cápeti ('Shark') and presented at an air show in Taszár.

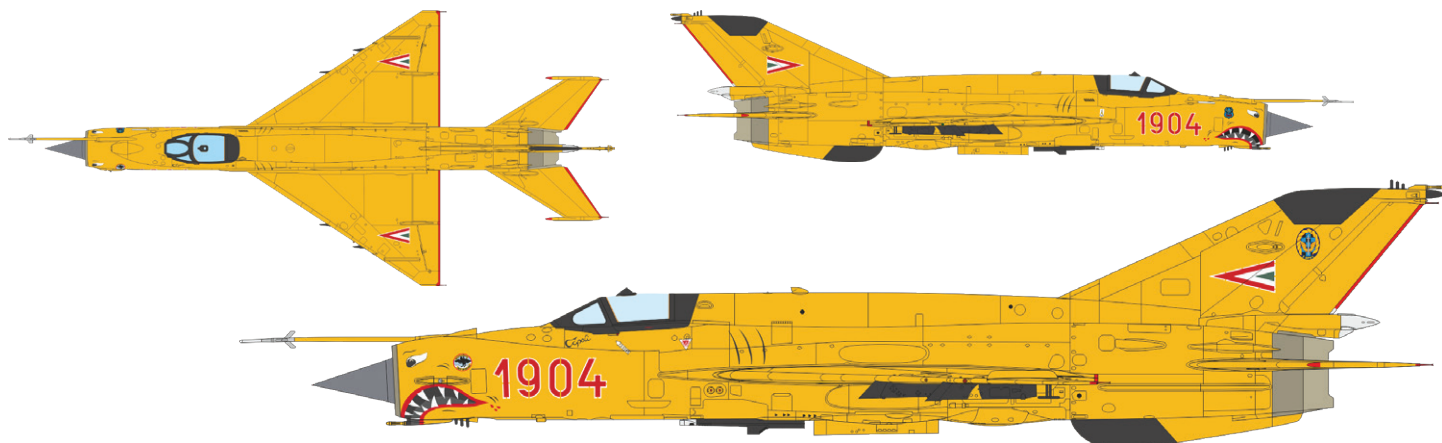
It took part in a number of other air shows and, in 1993, its paintwork was restored, giving the aircraft a slightly different look. In the same year, the Sky Hussars performed at the International Air Tattoo in Fairford, UK, probably the most famous performance in the group's

history. The International Air Tattoo was first held in Fairford in 1993 and has been held there annually ever since. Until then, it had been held every two years since 1971. That memorable year, the Slovak Biele Albatrosy also took part in the event alongside other famous aerobatic groups. The newly formed Czech Republic was represented by Su-25Ks from the 30th Fighter Aviation Regiment in Pardubice.

The Sky Hussars performed their final demonstration in Kecskemét on 6 August 1993. Following their decommissioning, the Shark 1904 ended up in the aviation museum in Szolnok. Although it was completely renovated, the museum's livery differs in detail from the original design. The Shark's mouth, gills and eyes are different; it has different insignia on the tail and wings; the font used for the pilot and technician's names is different; and most

importantly, there are no labels. The aircraft in the kit represents the second colour scheme of the 1904 aircraft, as it appeared at Fairford.

If you are surprised by the high mountains in the background of the MiG-21bis box art, don't expect to see an air show in the foothills of the Alps or Scandinavia. This is artistic licence on the part of the title image's author, Piotr Forkasiewicz. Unlike the cover images of the Profipack and Weekend series, where we aim to depict real historical events and combat scenes realistically, the Limited series is different. In this series, the background and scene are fictional and neutral, and the focus is solely on the colour scheme of the aircraft. The mountains are therefore mainly in the picture to make it look better. The image gains drama and dynamism, and that's what counts!



The Night Tests

Text: Jan Bobek

Illustration: Piotr Forkasiewicz



In Germany, prior to the Second World War, flight test centres known as Erprobungs-Stelle (abbreviated as E-Stelle) began operating. These centres were responsible for testing new types of aircraft, their armament, and on-board systems. One such centre, E-Stelle Rechlin, also began testing captured equipment from 1940 onwards.

In April 1942, the E-Stelle Werneuchen was established at the airfield of the same name. Its mission was to test and develop radar and targeting equipment for air combat and naval reconnaissance, working closely with the Flugfunkforschungsinstitut at Oberpfaffenhofen. Branches for testing ground-based radar equipment were located in Weesow and Tremmen.

Flight tests of newly developed equipment were initially carried out by the Erprobungsstaffel within the Technisches Versuchskommando (TVK). Among its tasks was the development and testing of equipment designed to defend against jamming and deception by enemy air forces.

In January 1944, Nachtjagdgruppe 10 (NJGr. 10) was established, with Major Rudolf Schoenert, a successful night fighter pilot, appointed as its commander. At that time, Schoenert had 55 aerial victories to his credit and had previously commanded II./NJG 5 in Western Europe and I./NJG 100 on the Eastern Front. He was also one of the main proponents of installing oblique forward-firing guns, known as *Schräge Musik*.

The task of his new unit was to test night-time radio-electronic warfare equipment in combat, using both single- and two-seat aircraft. In this role, NJGr. 10 took over from the aforementioned Erprobungsstaffel TVK and continued close

cooperation with E-Stelle Werneuchen. Thus NJGr. 10 was based at the same airfield as the E-Stelle.

Some aircraft, including the Me 262 and Ar 234 B-2/N test jets, continued to fall under the authority of E-Stelle Werneuchen. Aircraft intended for combat testing, however, were assigned to Schoenert's NJGr. 10. His unit was organized into a staff (Stab) and 1st, 2nd, and 3rd Staffeln (squadrons). Later, probably in August 1944, a 4th Staffel was established.

Single-engine aircraft of various Bf 109 F/G and Fw 190 A variants were concentrated within the 1st Staffel, which was partly formed from personnel of I./JG 300. Its commander was the experienced night fighter Hauptmann Friedrich-Karl "Nasen" Müller. Articles about him can be found in INFO magazine issues [11/2023](#) and [11/2019](#). Within the 2nd Staffel, during 1944 various versions of the Ju 88, several Bf 110s, and one He 219 were concentrated. In February 1944, Hauptmann Martin Lüdtkke was appointed commander of 2./NJGr. 10, and in early March 1945, he took over command of the entire NJGr. 10.

Several well-known night fighter pilots served with NJGr. 10, including Heinz-Martin Hadeball and Kurt Welter, the latter of whom later participated in the deployment of the Me 262 as a night fighter.

During 1944, NJGr. 10 achieved a total of 18 victories, lost an equal number of aircraft in combat, and wrote off an additional 23 aircraft due to non-combat reasons. Müller's 1st Staffel accounted for ten of these victories, with Müller himself credited with half of them.

The second most successful pilot of the 1st Staffel was former transport airman Oberleutnant

Fritz Krause, whose aircraft is depicted in a box art illustration by Piotr Forkasiewicz. Krause achieved his first success on 8 July 1944, when he shot down a Mosquito from No. 692 Sqn RAF. Details of this dramatic battle can be found on [Neil Page's blog](#).

His Fw 190 A-6 (WNR. 550143), equipped with FuG 217 Neptun radar, was later handed over, without its radar equipment, to the operational training unit of JGr. West, where it was designated "Yellow 26." It was subsequently destroyed in a fatal crash on 7 October 1944.

During his service with 1./NJGr. 10, Fritz Krause was forced to abandon his aircraft several times, once even after being shot down by his own flak. He apparently achieved one more victory with the unit, claiming a Lancaster from No. 419 Sqn RCAF on 4 November 1944. In this engagement, however, he was shot down while flying a Bf 109. Some sources suggest that he scored this victory as a member of 3./NJG 11.

Krause's colleagues from the 1st Staffel scored two additional four-engine bombers and two Mosquitos. At the end of August 1944, half of the 1./NJGr. 10 personnel were detached to form 2./NJG 11. The remaining members of 1./NJGr. 10 were similarly transferred to 3./NJG 11 in October.

In 1945, NJGr. 10 continued its combat operations, engaging both night bombers and conducting night attacks on Red Army ground columns. However, I have not found any record of air victories by this unit in 1945 in Theo Boiten's publications. NJGr. 10 was disbanded in April 1945, with its remaining elements absorbed by NJG 5.

Cobras over Sicily

Text: Jan Zdiarský

Illustration: Gareth Hector



The Allied landings on the Italian island of Sicily, intensively prepared in the spring of 1943, were intended to open up the Italian campaign with the aim of expelling Italian and German troops from the entire territory of Italy.

The preparations for the invasion, codenamed Operation Husky, included not only the concentration of British, Canadian and American invasion forces in Tunisia, Malta and the Suez. An accompanying bombing offensive would disrupt transport, air force bases, ground force bases, and several deception operations of a military and intelligence nature would be used as well. These were intended to convince the enemy as to the areas of an anticipated Allied invasion, and thus to induce him to redeploy his own assets. This part of the preparation later proved to be very effective and certainly saved many Allied lives.

The commander-in-chief of the entire operation was General Dwight D. Eisenhower, as Commander-in-Chief of American forces in North Africa. His deputy was British General Sir Harold Alexander. The ground invasion forces were divided into two tactical groups (Task Forces). No. 545, the eastern section (consisting of British and Canadians, under the command of Sir Bernard Montgomery) and No. 343, the western section (American General George S. Patton commanding). The ground invasion forces were to land on the southeast coast of the island and in the middle of the south coast. The invasion counted on the support of naval artillery fire, bombardment of the lines behind the invasion front, as well as direct air support.

The landings themselves began on the night of July 9/10th 1943. They were preceded by intensive bombing of Sicilian airfields and its transport network. On the

other hand, the coastal batteries remained out of the main focus of the air attacks, so as not to undermine the effect of the misleading information that the Allies managed to sow through the aforementioned diversionary operations. The main burden of the invasion rested on the ground troops, concentrated in landing craft and on paratroopers. The activities of both of these were severely affected by strong winds, which greatly disrupted the plans of the invasion planners in many places. Several units landed in places other than where they had planned. Despite the initial difficulties, the element of surprise was not lost and subsequent progress was relatively rapid.

Strong air support combined with the pressure applied in the previous months had also paid off. From May, 1943 to the beginning of the July invasion, Allied airmen destroyed more than four hundred enemy aircraft. Of course, this was not without cost, as their own losses reached 250 aircraft, most of them falling victim to the island's anti-aircraft artillery. By July 10th, only two airfields remained operational in Sicily, and about half of the German and Italian aircraft had been forced to withdraw to the continent.

The 81st Fighter Group also provided air support for the invasion, undertaking escort duties and direct support of the invasion ships. Its Airacobras took off from Sidi Ahmed Air Base in Tunisia to participate in the invasion process. The unit, which was formed in January, 1942, and after advanced training of its pilots in joint operations and tactics, moved to Europe and then to Africa, from where it participated in the fighting in the Mediterranean from early 1943 under the command of the 12th Air Force. Its main tasks included protecting Allied ships in the Mediterranean and in June, 1943 participated in the occupation of the

island of Pantelleria. This was only a prelude to the invasion of Sicily, which came a month later.

Fierce fighting continued until the end of July, when the evacuation of German troops began, mainly through the Strait of Messina, to the continent. By August 18th, Sicily was considered cleared for the Allies. According to contemporary reports, the Germans managed to move over 60,000 men to the continent, the Italians even around 75,000. The actual numbers will be somewhat lower, but they nevertheless make it clear that opposition to the Allies was fierce.

However, Allied losses were also high. Official records put the count at 8,781 dead, wounded and captured members of the American Seventh Army, while for the British Eighth Army this total reached almost 12,000 and for the Canadians, close to 2,500. Add to that 1,200 sailors (for the US and Royal Navy combined). For the USAAF, losses exceeded 150 men. On the German side, losses incurred in the defense of Sicily against the Allies reached almost 28,000 troops and for the Italians it was almost 190,000 (according to the historical section of the Italian army). The price of the occupation of Sicily was enormous on both sides. Unfortunately, there was also a lot of violence committed against the civilian population and war crimes against prisoners, which some Allied soldiers committed during the occupation of Sicily.

As a result, this operation opened the door to the advance into continental southern Europe, which continued through September, 1943. It was also one of the reasons for the fall of Mussolini's regime at the end of July. Another significant benefit was the full opening up of the Mediterranean shipping lanes to the Allies.

MiG-21bis

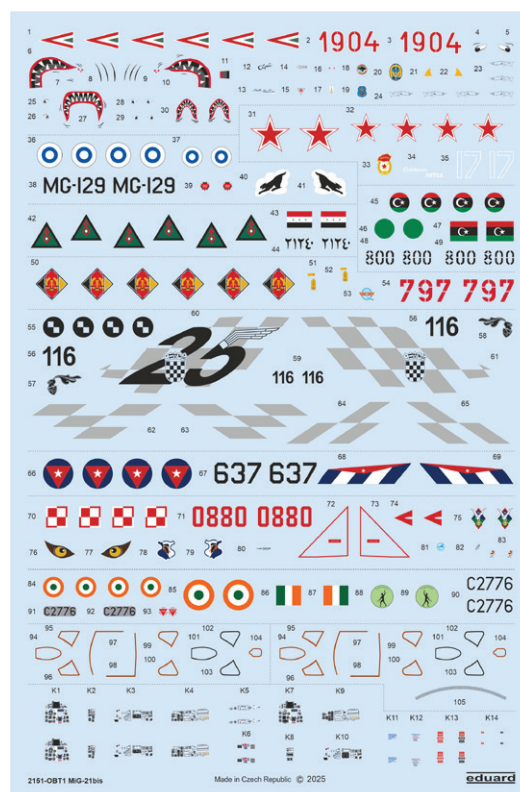
1/72

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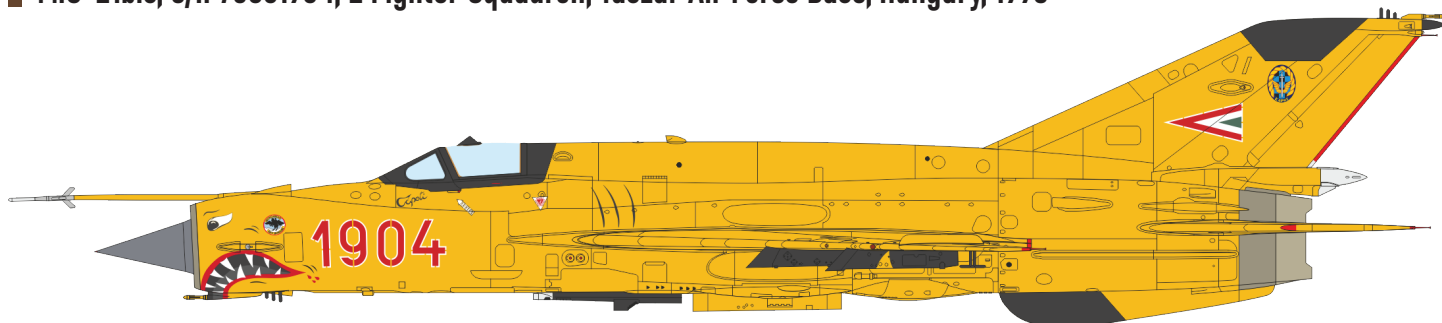
The Limited edition kit of the Soviet jet plane MiG-21bis in 1/72 scale. The kit offers markings for 10 aircraft used in different countries around the world. The box contains plastic sprues for two complete kits.

Dual Combo

- plastic parts: Eduard
- marking options: 10
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: no

[Product page](#)


■ MiG-21bis, c/n 75061904, 2 Fighter Squadron, Taszár Air Force Base, Hungary, 1993

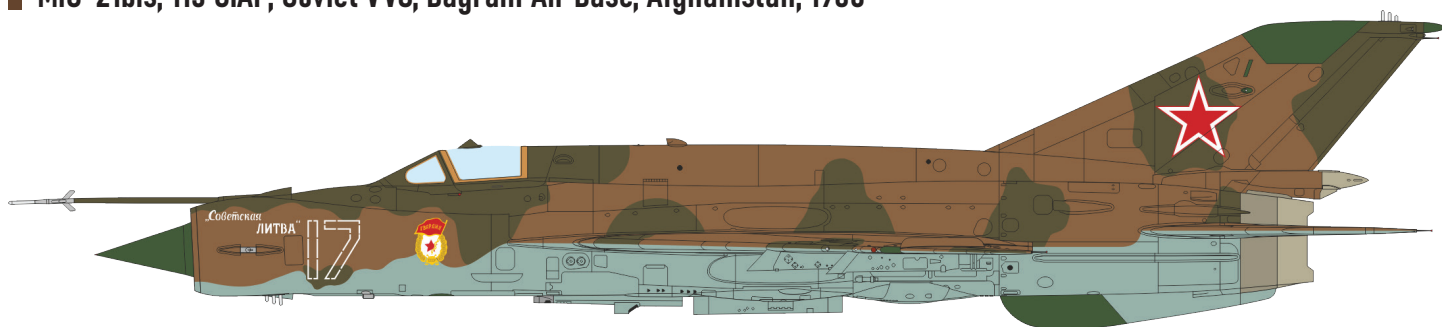


Ground personnel from Taszár Air Base sprayed a special paint scheme on the MiG-21bis in 1992. The purpose of the coloring was to represent the enemy aircraft in training combat. The color

scheme shown here is a representation of the aircraft's appearance at the 1993 International Air Tattoo in Fairford. The aircraft named Capeti (shark) 1904 is currently on display at the

Szolnok Air Museum in a similar color scheme to the one it flew in 1992.

■ MiG-21bis, 115 GIAP, Soviet VVS, Bagram Air Base, Afghanistan, 1980

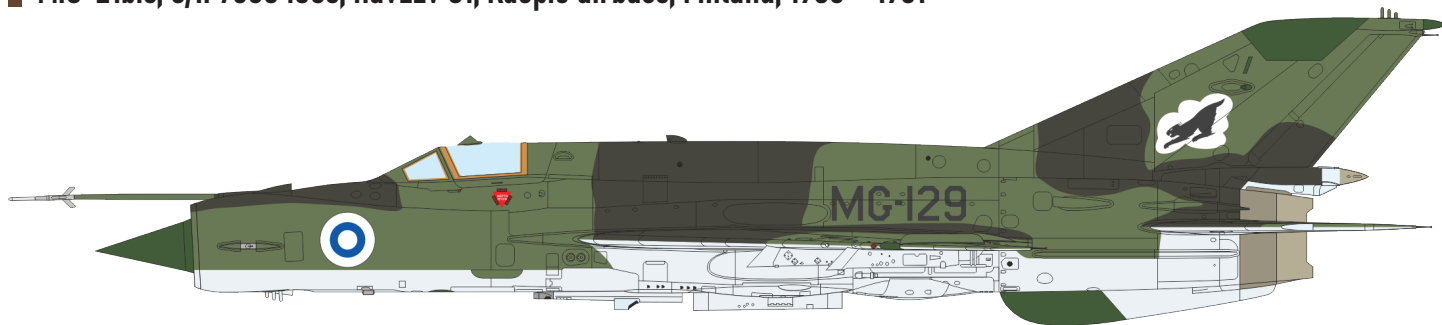


Fighter cover duties during the Soviet invasion of Afghanistan were conducted by the 115 Guards' Regiment at the end of 1979. The unit was equipped with the MiG-21bis and was based at Kokaity in Uzbekistan, a Soviet Socialist Republic at the time. Three days into the

invasion, the first squadron moved to Bagram Air Base, followed by a second squadron on January 23, 1980. Due to the lack of enemy aerial power, the 115 GIAP became involved in ground support duties together with the 136 APIB. MiG-21bis aircraft of the 115th GIAP used

in Afghanistan were painted in green and brown on the upper surfaces at the beginning of the war, with bottom surfaces in a blue-grey shade.

■ MiG-21bis, c/n 75084300, HävLLv 31, Kuopio airbase, Finland, 1980 – 1981



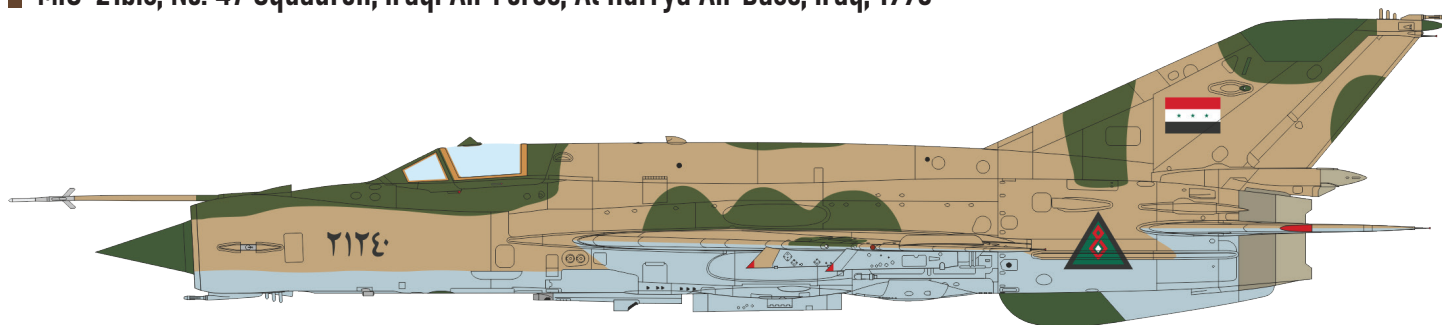
This aircraft was accepted for service on July 17, 1980, and assigned to 31 Fighter Squadron (Hävittäjälentolaivue 31, abbreviated HävLLv 31). It became the last of six Finnish MiG-21BIS fighters to be modified for reconnaissance tasks. After the modification, the aircraft was

assigned to TiedLLv (Reconnaissance Squadron) and following its end of service it was used as a teaching aid at the Technical School located at the Kuopio Air Base. The aircraft is shown as it appeared between 1980 and 1981 before being upgraded by western avionics, which included

cockpit instrumentation. Unlike other users, Finland used capital letters for designation of their MiGs, that's why it is written as BIS here as well.



■ MiG-21bis, No. 47 Squadron, Iraqi Air Force, Al Hurrya Air Base, Iraq, 1990

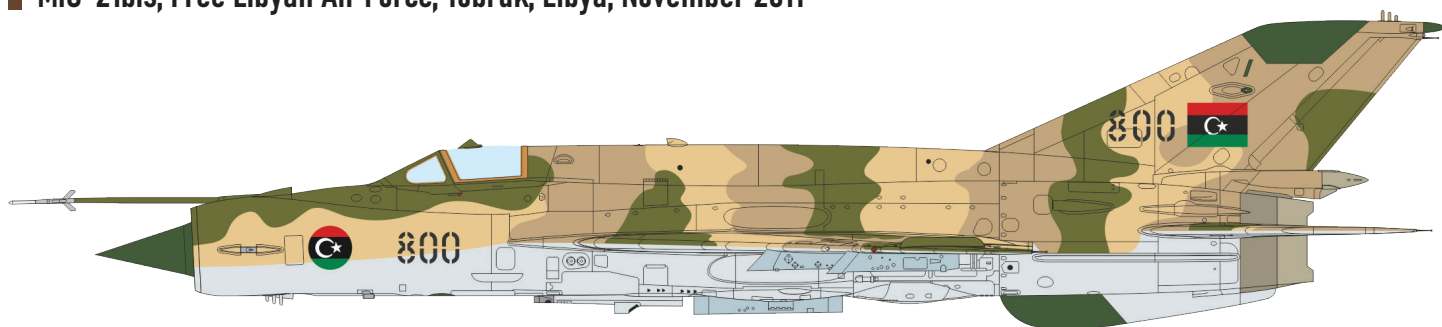


The No. 47 Squadron was equipped with the MiG-21bis through the seventies, and over the fall of 1980 scored significant number of kills of Iranian F-4s and F-5s. During the Iran-Iraq

war, Iraqi pilots flying the MiG-21bis fired not only Soviet air-to-air missiles (R-3S, R-13M), but also the French R.550. A typical loadout configuration consisted of two air-to-air

rounds and three drop tanks. The aircraft were camouflaged according to the period MiG-21 standards developed for export aircraft going to Africa and the Middle East.

■ MiG-21bis, Free Libyan Air Force, Tobruk, Libya, November 2011

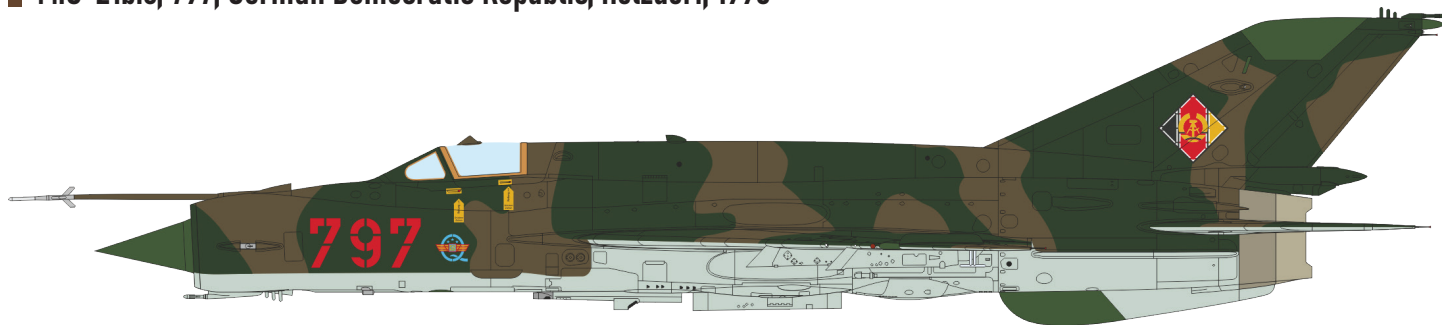


The Free Libyan national army, under the leadership of General Khalifa Haftar, occupied several air bases after its formation, some of which yielded airworthy examples of aircraft abandoned by forces loyal to Muammar Gaddafi. One of these was this one, which was subsequently coded "800" and was flown by pilots of the Free Libyan National Army. The Free

National Army, under Haftar's leadership, added aircraft to their inventory from other airfields (MiG-21s, MiG-23s, Mirage F-1s and Su-22s) and purchased other ones from foreign sources (these again were MiG-21s and 23s, along with Mi-24/35 helicopters). The camouflage scheme of this particular aircraft hails from the days of Khaddafi and was first displayed at Lavex in

2007 in Tripoli. The upper and side surfaces of this plane were in sand, brown and green, the lower surfaces were painted a light blue-grey. The national insignias on the upper surfaces of the wing remained the pre-revolutionary Libyan ones.

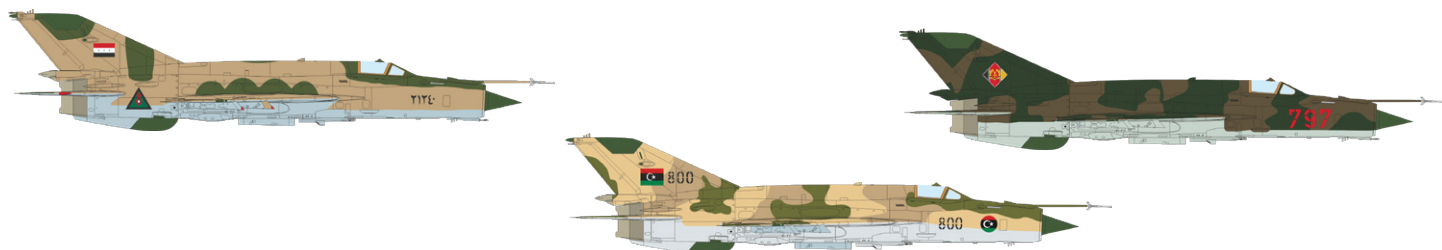
■ MiG-21bis, 797, German Democratic Republic, Holzdorf, 1990



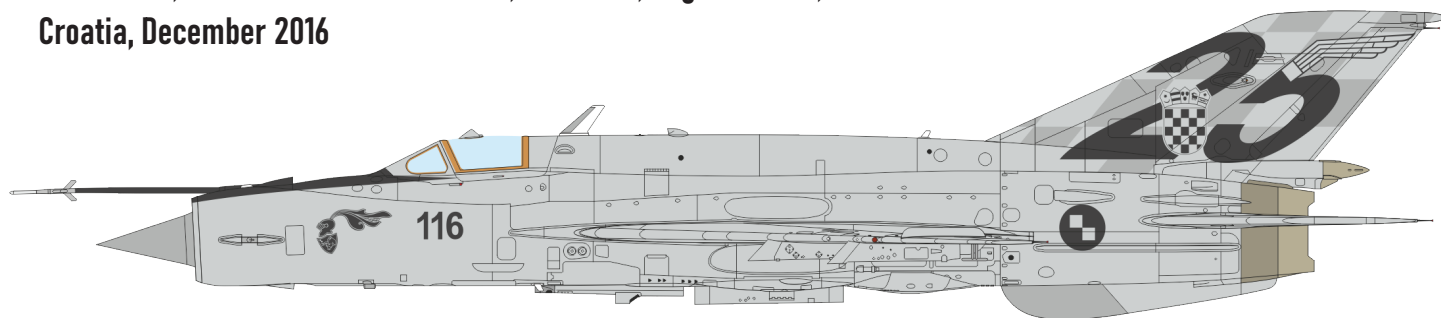
In the mid-1970s, the GDR Air Force began taking deliveries of its first MiG-21bis to bolster its fighter fleet of aging MiG-21MFs and PFM. German Democratic Republic was to receive 46 aircraft of this type, 14 of which were to be of

the "Fishbed-L" variant, i.e., equipped with the Lazur-M GCI (Ground Controlled Interception) guidance system. The remaining 32 were to be delivered in the "Fishbed-N" version with the Polyot-OI guidance system. To distinguish

the two variants, the aircraft were designated MiG-21bis Lazur-M and MiG-21bis-SAU in GDR service.



■ MiG-21bisD, Eskadrila borbenih aviona, HRZ i PZO, Zagreb-Pleso, Croatia, December 2016

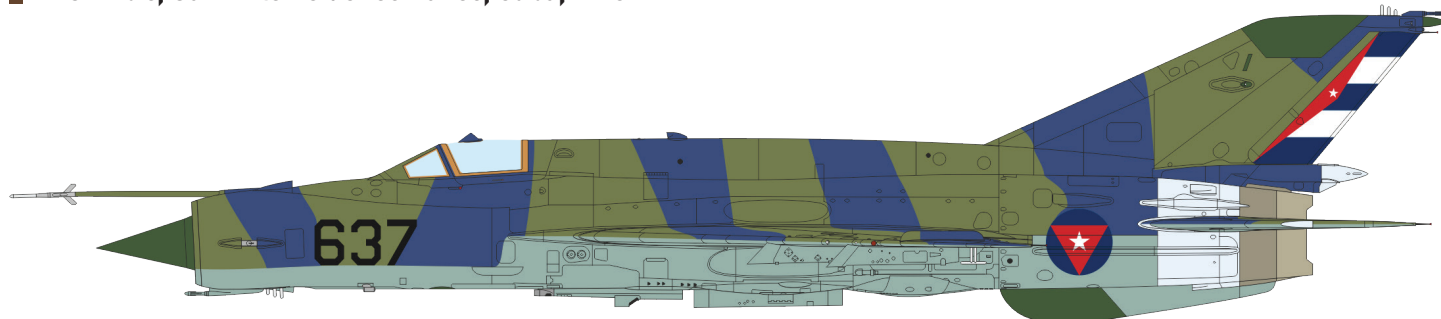


The Croatian Air Force purchased forty MiG-21bis fighters and MiG-21UM trainers from Ukraine in 1995. In 2003, eight MiG-21bis aircraft were modernized to bisD standard in Romania. The modernization program included an

upgrade of the navigation, communication and IFF equipment. In 2014, another modernization took place involving seven Croat MiG-21bisD/UMD aircraft, along with the purchase of another five aircraft from a repair facility in Odessa.

The modernized aircraft received an all-grey camouflage scheme. Aircraft coded 116 received a stylized number 25 on the left side of the fin to commemorate 25th anniversary of the Croatian Air Force.

■ MiG-21bis, San Antonio de los Baños, Cuba, 1990

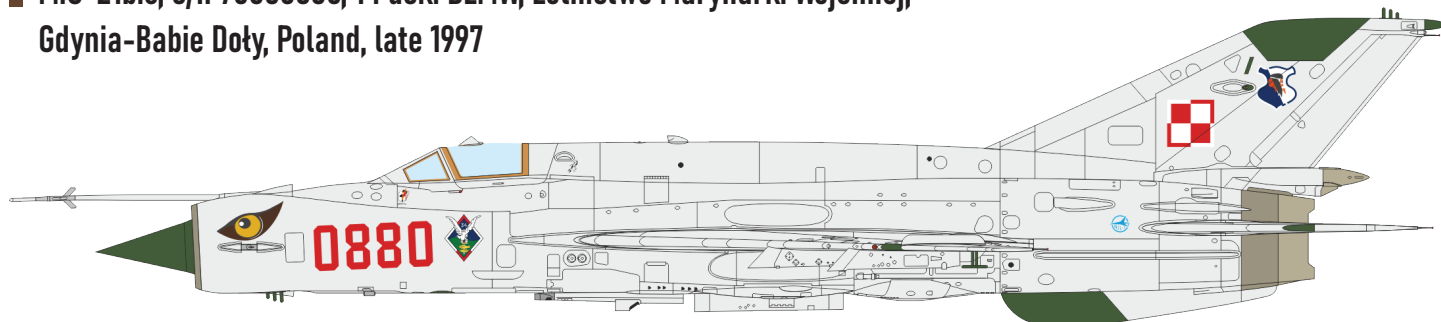


Deliveries of the most modern MiG-21bis aircraft to the Cuban Air Force began in 1981. A total of eighty (with some sources claiming ninety) aircraft served in four regiments. After

completing its military career, aircraft coded 637 was used as an instructional airframe at the Instituto Tecnico Militar in Havana. The aircraft was camouflaged in a green and blue-grey

scheme, which was used by the Cubans from the beginning of the nineties.

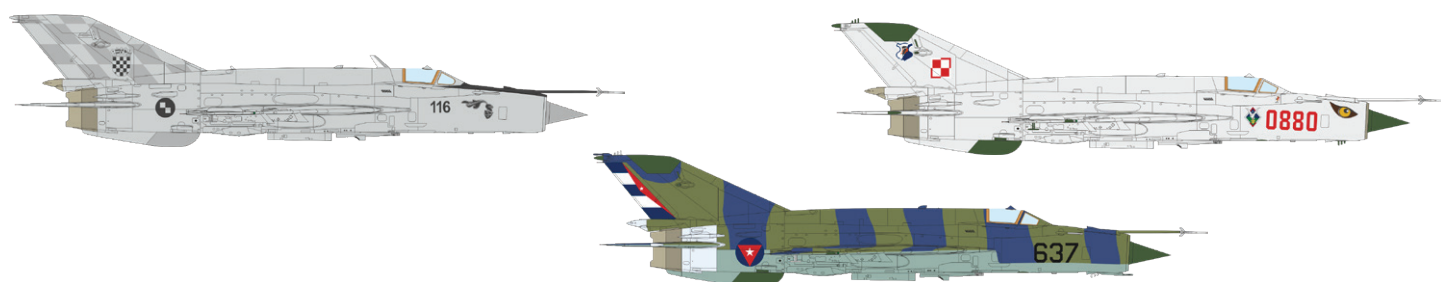
■ MiG-21bis, c/n 75080880, 1 Pucki DLMW, Lotnictwo Marynarki Wojennej, Gdynia-Babie Doły, Poland, late 1997



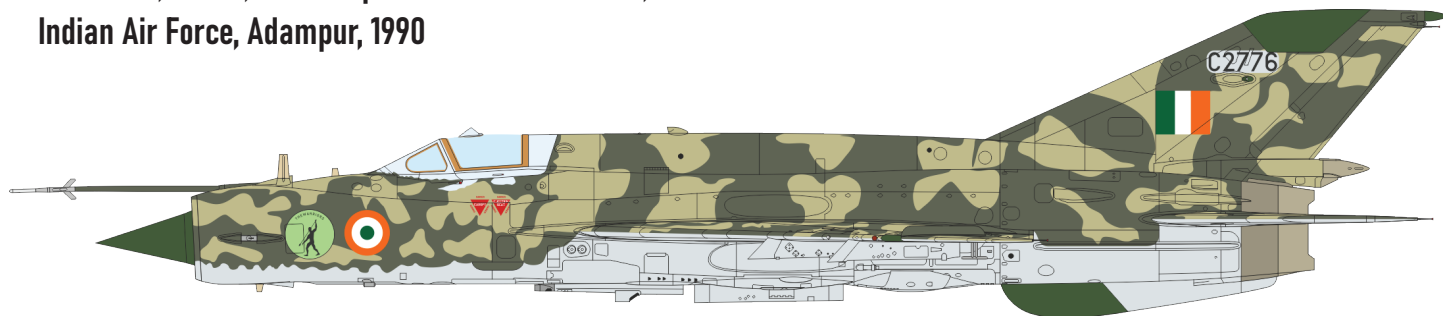
This aircraft was delivered to Poland on March 22, 1980 and was assigned to the 1 Pucki Dywizjon Lotniczy (Air Division) of the Polish Naval Forces.

The emblem on the tail surface indicates service with the 2 Eskadra (Squadron) of the Division. The look of the plane evolved over time and in

2001 it flew with a sharkmouth and a tiger motif on the brake chute housing.



■ MiG-21bis, C2776, No. 26 Squadron "The Warriors", Indian Air Force, Adampur, 1990



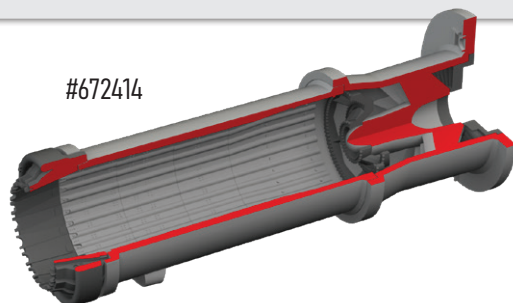
No. 26 Squadron took of Indian Air Force an active part in combat on the Indo-Pakistani border at the end of 1971. At that time, however, they were equipped with the Sukhoi Su-7.

Most Indian MiG-21bis aircraft were painted in an overall light grey with only a few being camouflaged with more colors. This particular aircraft was also photographed without the unit

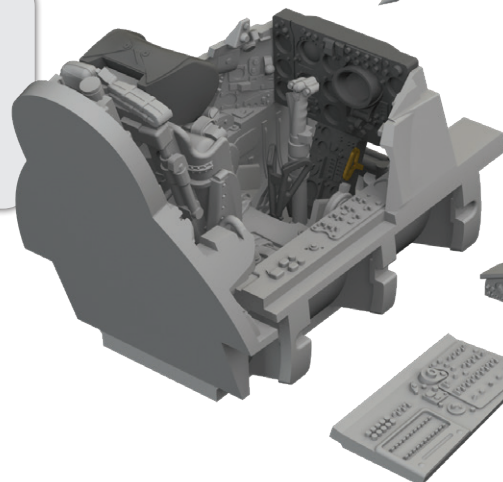
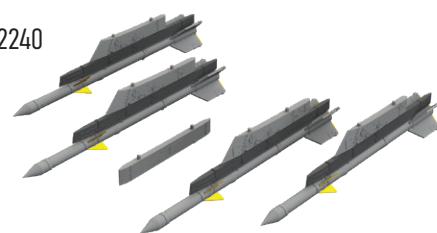
badge as well. The camouflage was sprayed over the original light grey surface, which was still visible around the aircraft code on the tail and on the canopy frame.

For MiG-21bis 1/72 RECOMMENDED:

- | | |
|----------|--|
| 672149 | R-60 / AA-8 Aphid (Brassin) |
| 672240 | R-3R missiles w/ pylons for MiG-21 (Brassin) |
| 3DL72064 | MiG-21bis SPACE (3D Decal Set) |
| 72744 | MiG-21bis upgrade set (fotolept) release 06/2025 |
| 672414 | MiG-21bis exhaust nozzle PRINT (Brassin) release 06/2025 |
| 672415 | MiG-21bis cockpit PRINT (Brassin) release 06/2025 |



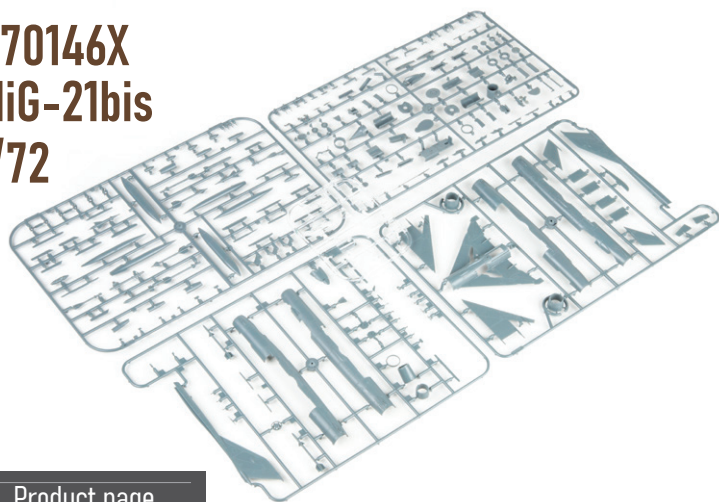
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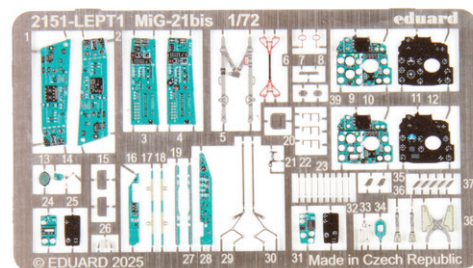
OVERTREES

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MiG-21bis
1/72


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Warpaint series No.147

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Nakajima Ki-43 Hayabusa/Oscar

One of the great unsung fighters of the Imperial Japanese Army Air Force was Nakajima's Ki-43 *Hayabusa* (Peregrine Falcon). Codenamed 'Oscar' by the Allies, the aircraft was frequently mistaken for the Navy's A6M2 Zero by those encountering it in combat, to the extent that it was widely referred to by its adversaries as the 'Army O'. Highly regarded in Japan, where it was much more widely recognised than the Zero, the Ki-43 was the only Japanese fighter from the Pacific War to see active service with other air forces, being supplied to both Thailand and Manchukuo by the Japanese, but also seeing use by France in Indochina, and by the air forces of Indonesia, the Republic of China, and North Korea, who pressed abandoned but airworthy airframes into service, some of which survived into the early 1950s. Author Daniel Kowalczyk has compiled a compelling narrative that puts the aircraft in context, describes its development and active service history in detail, and explains how it came to be so widely regarded by the Japanese – so much so that it is the aircraft of choice for producers of Anime rather than its better-known contemporary. With colour artwork by Sam Pearson.



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Grumman A-6 Intruder & EA-6B Prowler



The US Navy's experience in the Korean War showed the need for a new long-range strike aircraft with high subsonic performance at very low altitude that could penetrate enemy defences and find and destroy small targets in any weather. The Grumman A-6 Intruder was designed with these needs in mind and was a true *bomb truck*. From the jungles of Vietnam to the deserts of Iraq the Intruder proved its worth, able to carry a plethora of weaponry and pack a mighty punch. From the Intruder airframe the KA-6D tanker variant was derived, along with the specialised EA-6A Intruder and then the EA-6B Prowler, a sophisticated four-seat electronic warfare variant, packed with jamming equipment and electronics. Like the A-6, the Prowler was used by both the Navy and Marine Corps. After nearly thirty-seven years and with 693 airframes constructed, on February 28, 1997, VA-34 the *Blue Blasters*, retired the Navy's last operational A-6E Intruders. The Navy retired its Prowlers in 2015, however, the Marines Corps carried on flying the EA-6B into the early months of 2019. *Warpaint 146* is packed full of all the usual historical and reference material, with walkarounds of both Prowler and Intruder, colour artwork by Sam Pearson, and a well-paced narrative that places this essential aircraft in context and showcases its role in US naval operations over nearly sixty years.

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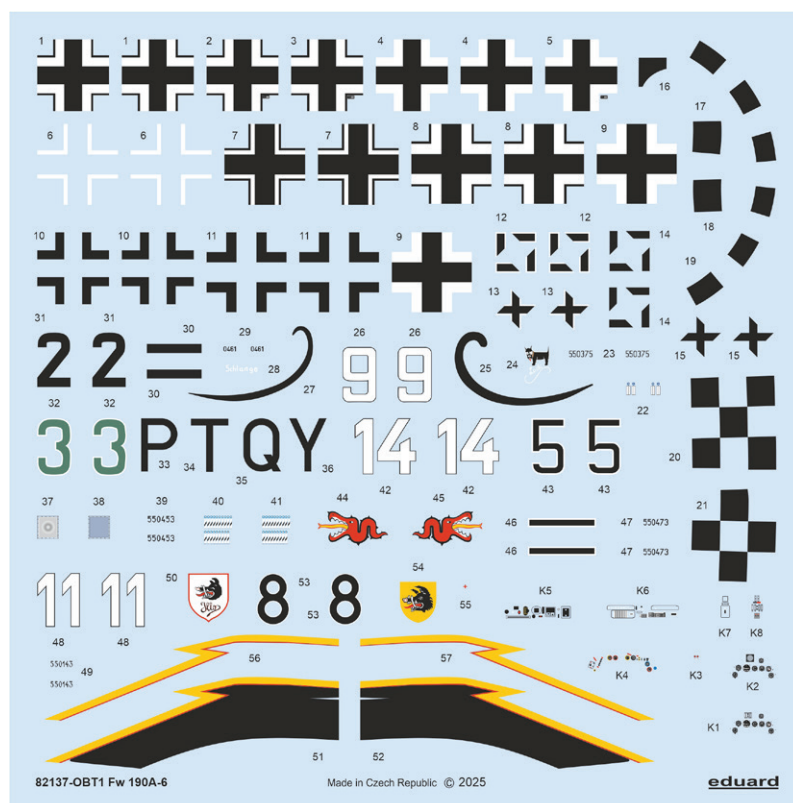
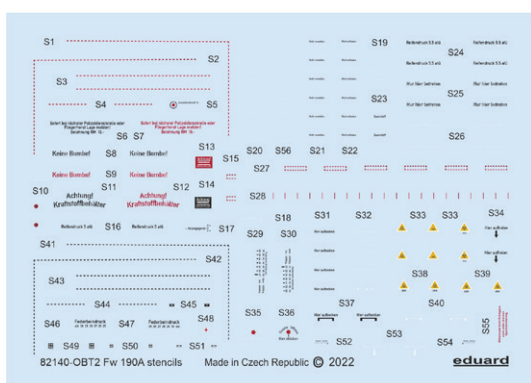
Fw 190A-6

1/48

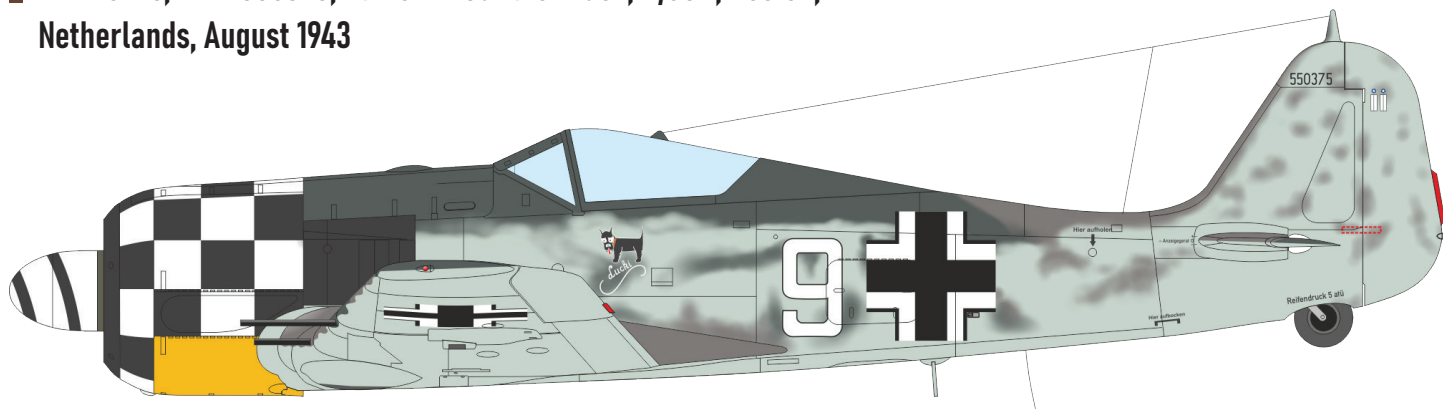
#82137

The ProfiPACK edition kit of German WWII fighter aircraft Fw 190A-6 in 1/48 scale. Machines are from the Eastern and Western Front and from the night sky over Germany.

- plastic parts: Eduard
- marking options: 7
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: no

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■ Fw 190A-6, WNr. 550375, Lt. Heinz-Günther Lück, 1./JG 1, Deelen, Netherlands, August 1943

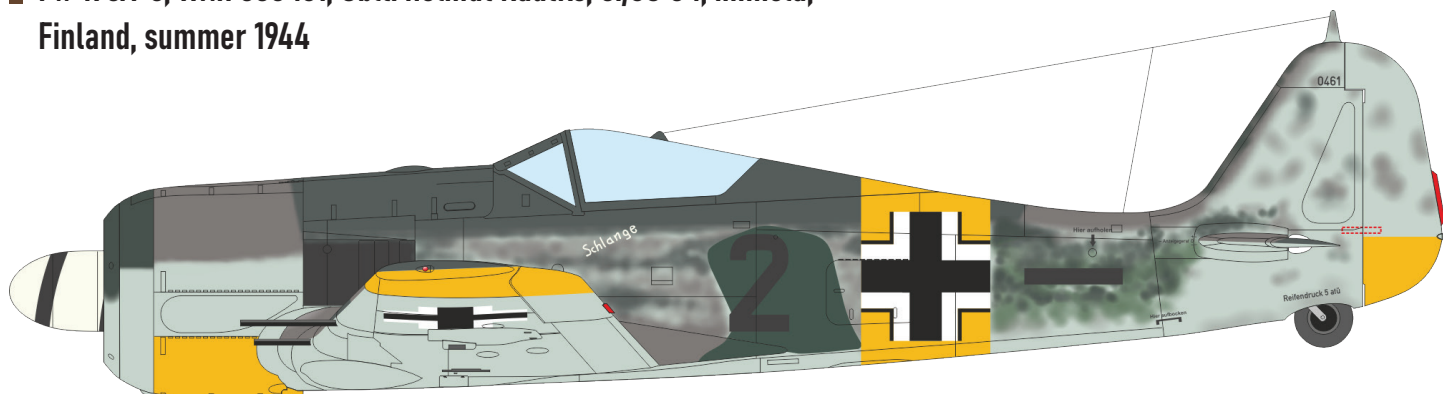


Lt. Lück, a pilot with five aerial victories (all over B-17 aircraft) flew during his whole wartime career with JG 1. At the beginning of 1944, he became the commander of 1./JG 1 and was seriously injured on April 9 during an emergency landing in Denmark. He never returned to

combat duty. During the summer of 1943, I. Gruppe aircraft carried garish markings in the form of the checkerboard on the engine cowling, black and white in the case of 1. Staffel. It was deleted after the US Thunderbolts sporting identical markings attacked Deelen airbase and

the anti-aircraft gunners did not engage as they confused them with friendly aircraft on landing approach. Heinz-Günther Lück had his dog pet, a black Scottish terrier named Lucki, painted under the canopy and his rudder sported two victories in the form of white bars.

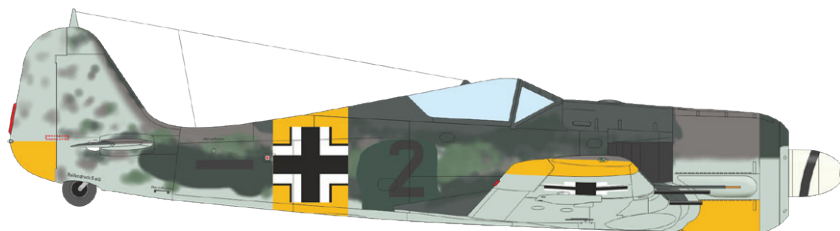
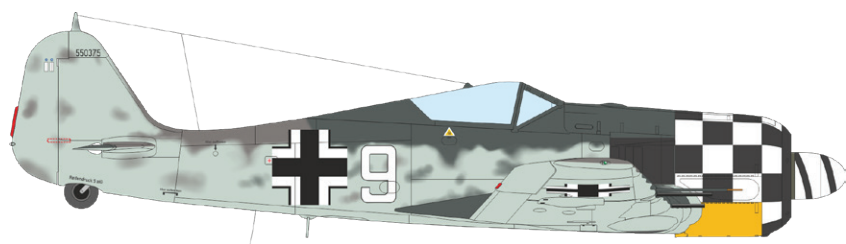
■ Fw 190A-6, WNr. 550461, Oblt. Helmut Radtke, 5./JG 54, Immola, Finland, summer 1944



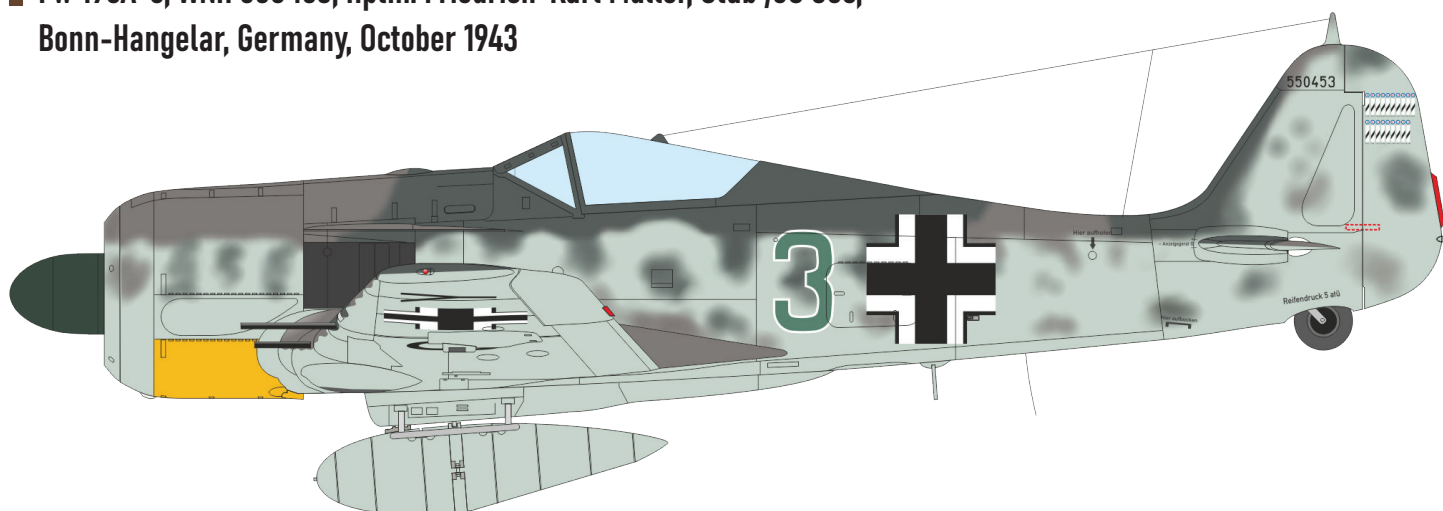
On June 9th, 1944, the Red Army launched the Karelian operation against the Finnish forces in Karelian Isthmus on the front north of Leningrad. Marshal Mannerheim being aware of his inferior forces asked Germans for the air support. German Luftwaffe created Gefechtsverband Kuhlmei, named after SG 3 commander Obstd. Kuhlmei. Besides I./SG 3 (Ju-87D) and I./SG 5 (Fw 190 F) attack

units a detachment of Focke Wulf Fw 190A-6 from Stab, 4. and 5. Staffel of II./JG 54 was included under his command. Focke Wulf fighters used the airfield in Immola from where they sortied under the command of Maj. Erich Rudorffer as an escort to the attack aircraft. One of the pilots fighting against the Soviet much larger forces was Oblt. Helmut Radtke who joined 5./JG 54 in June 1944 after previous service with the

operational training unit JG 110. He was killed in action on the Western Front on January 14, 1945. He was flying black 2 aircraft camouflaged in standard RLM 74/75/76 colors. This camouflage was complemented by yellow markings peculiar to the aircraft operating on the Eastern Front. There is an inscription Schlange (snake) painted on the side of the fuselage.



■ Fw 190A-6, WNr. 550453, Hptm. Friedrich-Karl Müller, Stab /JG 300, Bonn-Hangelar, Germany, October 1943

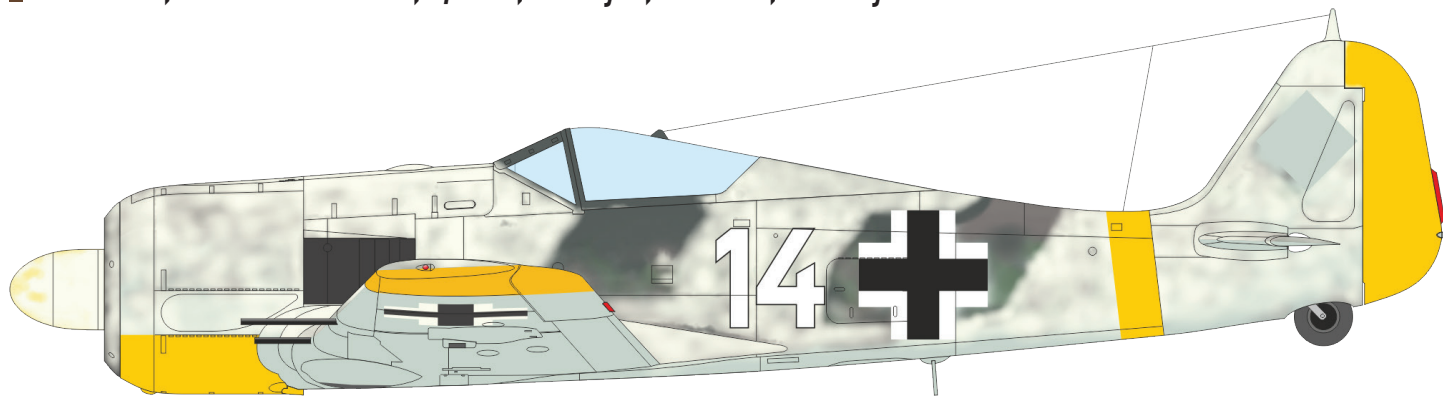


A future Knight's Cross recipient with 30 night victories over enemy aircraft, Friedrich-Karl Müller was born on December 4th, 1912, in Sulzbach in Saarland. In 1934 he completed his pilot training and got a job with Lufthansa. After the outbreak of World War II, he was ordered to the Luftwaffe. Initially he was flying as a transport pilot, later as an instrument flying instructor. In December 1942 he was assigned to KG 50 operating He 177 aircraft, in the summer of the following year he responded to Hajo Hermann call and requested reassignment to

JG 300, famous for its Wilde Sau (single-engine fighter night interception deployment) tactics. While serving with this unit he was credited with 19 kills and in January 1944 he was ordered to form I./NJGr. 10. In August 1944 he was promoted to command I./NJG 11 and lead this unit until the end of World War II, flying a total of 52 combat missions and achieving 30 victories. He passed away on November 2nd, 1987. His Focke Wulf Fw 190A-6 carrying standard camouflage and green 3 marking retained the factory call signs on the wing lower surfaces during combat

service. During its service with JG 300 this aircraft was equipped with deflectors to prevent the exhaust flashes blinding the pilot. To save weight the armor head rest was removed. During the night from 18th to 19th of October 1943, Hptm. Müller scored his 19th kill flying this aircraft over Hildesheim. British Lancaster crew from No. 207 Squadron parachuted to safety and spent the rest of hostilities in the POW camp. This aircraft featured a search light installed in the leading edge of the wing.

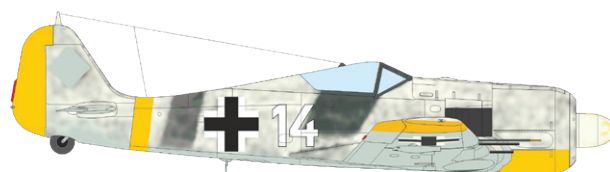
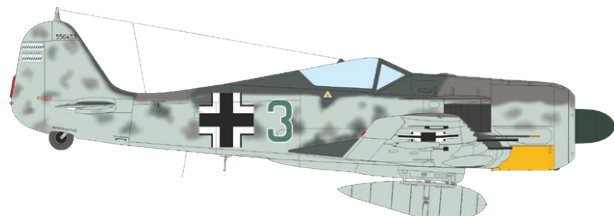
■ Fw 190A-6, Fw. Günther Josten, 1./JG 51, Bobruysk, the USSR, January 1944



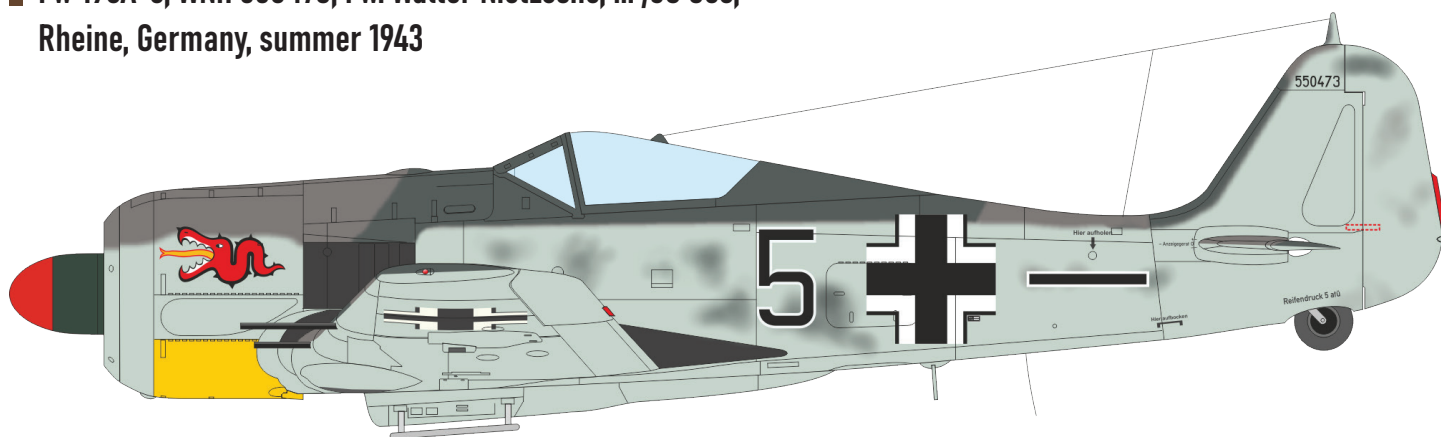
Eighteen year old Gunther Josten joined the Luftwaffe in January 1940, completed fighter training, and after serving with JGr. Drontheim and Erg.JGr. Ost in Western Europe, he reported to 3./JG 51 in September 1942. He scored his first victory on February 23, 1943 and achieved 19 kills in July and 30 more in August. From September 1943 to February 1944, he served with the training unit LKS Fürstenfeldbruck. He received the Ritterkreuz on February 5, 1944, after his 84th victory. On July 20, 1944, he surpassed 100

victories and was soon appointed commander of 3./JG 51. During the Warsaw Uprising, on September 18, he shot down a B-17 carrying supplies for the resistance. He was awarded the Eichenlaub on March 28, 1945, after his 161st of 178 kills and was appointed commander of IV. Gruppe JG 51 on April 18. Josten joined the Bundesluftwaffe on April 4, 1956 and became commander of JG 71 in 1962. His final post was Deputy Commander of 4. Luftwaffendivision. He retired on March 31, 1981, as an Oberst and

died on July 7, 2004. The camouflage of Josten's aircraft was darkened on the fuselage sides with the same paints applied to the upper surfaces. The yellow recognition markings, used on the aircraft operating on the Eastern Front, were added. To better conceal the aircraft in the surrounding terrain during winter the upper and side surfaces were partially painted white. His brother Reinhard Johannes, Oberleutnant with I./JG 51, scored 6 victories and was killed on April 21, 1942.



■ Fw 190A-6, WNr. 550473, Fw. Walter Nietzsche, II. /JG 300,
 Rheine, Germany, summer 1943

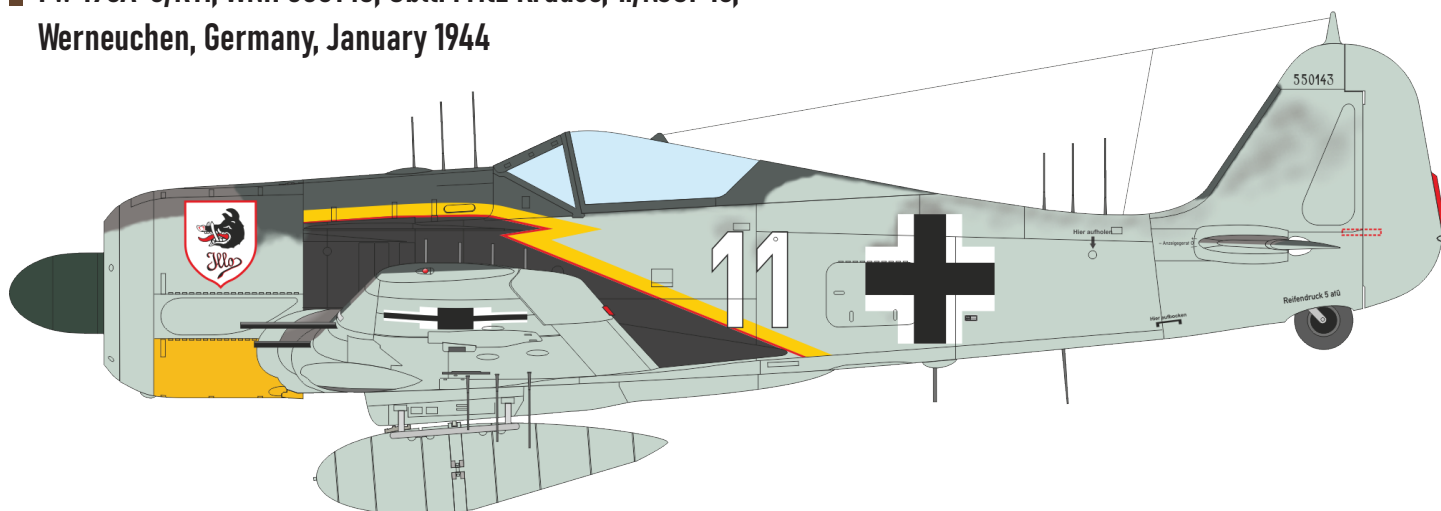


In the middle of June 1943, II. /JG 1, commanded by Hptm. Hoeckner, was transferred from Woensdrecht, in Holland, to Rheine from where, in the course of the following eight months, it sortied against large formations of American four-engine bombers penetrating, in ever increasing numbers, the German Reich airspace.

The same airbase was home to II. /JG Hermann as well, later renamed II. /JG 300, which for the rest of 1943 operated II. /JG 1 aircraft in the night-fighting role since JG 300 pilots had been trained in single-engine aircraft at night. One of the II. /JG 300 pilots flying this Fw 190A-6 night fighter "borrowed" from II. /JG 1 was Fw. Walter

Nietzsche, who during the night from 27th to 28th September 1943 was killed in the cockpit while fighting over Braunschweig. The legendary worm Tatzelwurm painted in red confirms that this aircraft belonged to 5. Staffel JG 1.

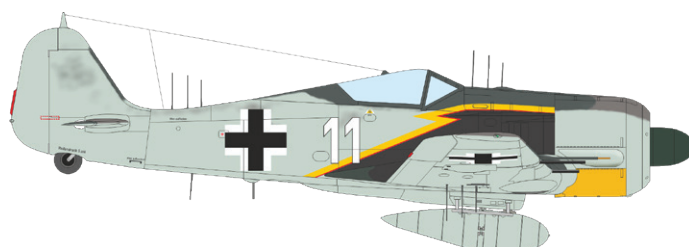
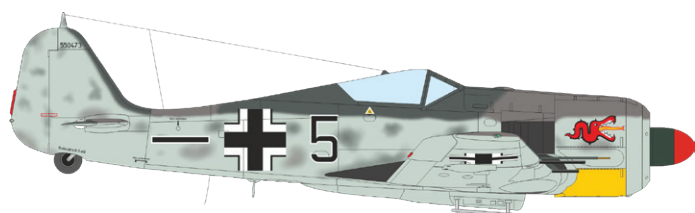
■ Fw 190A-6/R11, WNr. 550143, Oblt. Fritz Krause, 1./NJGr 10,
 Werneuchen, Germany, January 1944



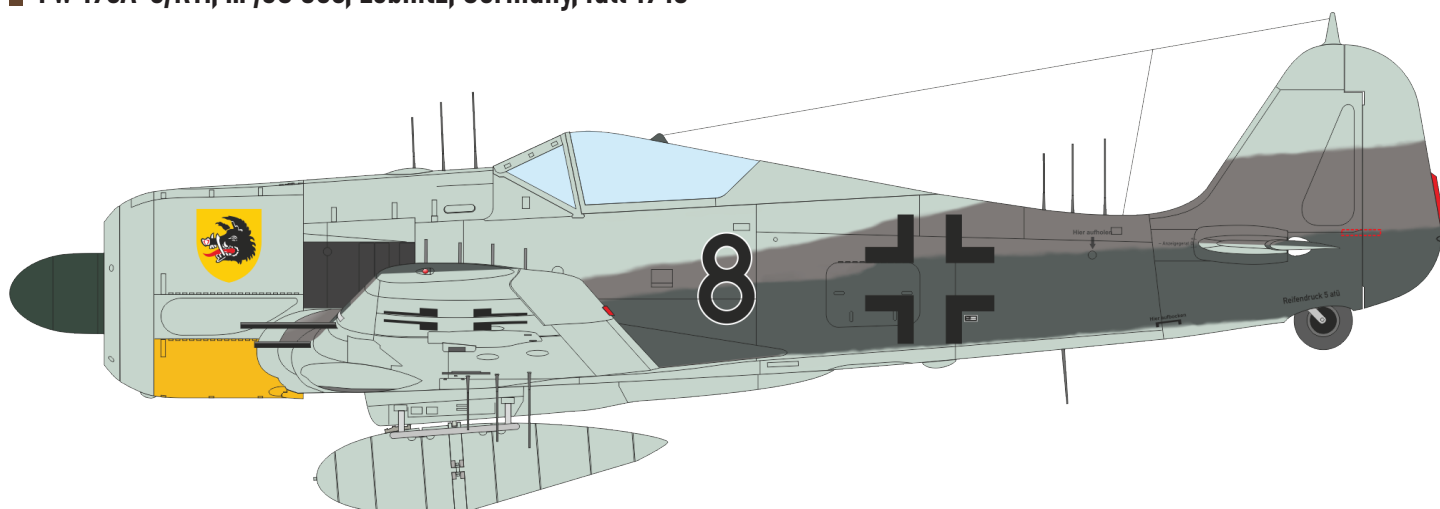
Fritz Krause started his wartime career with III./JG 300 and in January 1944 was transferred to 1./NJGr. 10. He was assigned to 1./NJG 11. In September 1944 and became the commander of 3./NJG 11 in November. In January, he was appointed head of the entire III./NJG 11, which he led until the end of the war. He completed 213 combat missions and achieved a total of four

victories. NJGr 10 was formed as a nightfighter unit on January 1, 1944. It was equipped with various types of aircraft. The 1st Staffel flew Bf 109Gs and Fw 190As. The FuG 217 Neptun radar was installed in NJGr. 10 aircraft to test its efficiency under combat conditions. A total of 48 Fw 190As were converted to this nightfighter configuration. Fritz Krause flew the

aircraft depicted for a short period only, as in the early summer of 1944, the NJGr 10 Fw 190As were handed over to fighter schools and were replaced with Bf 109G-6/AS. The Messerschmitts were more capable in intercepting Allied bombers and Mosquitos. The origins of the badge on the cowling can be found with JG 300, as NJGr 10 was formed using JG 300 pilots.



■ Fw 190A-6/R11, II. /JG 300, Lobnitz, Germany, fall 1943



The Jagdgeschwader 300 "Wilde Sau" was formed from the JG Herrmann in July 1943, its main task was the perfecting of single-engined aircraft night fighting tactics. Besides the visual acquisition of targets, it initiated testing on-board radar systems. The Fw 190 was equipped with FuG 217 Neptun, along with associated radar antennae. The illustrated Fw 190A-6 Black 8 field modified R11 for night fighting was one of the Neptun equipped aircraft

of JG 300. What makes this aircraft even more interesting is its camouflage application. The search for effective camouflage schemes gave rise to interesting color variations. The pictured Fw 190 received a lighter spray of RLM 76 over the top portions of the fuselage that blended into the darker sides of RLM 75 and 74 and into the RLM 76 bottom. Known photographs of this aircraft have been interpreted as the sides of the fuselage being composed of sharply

demarked RLM 76 and 74. Closer inspection reveals that the contrast between the darker and lighter shades were not so strong, and further research leads to the presentation here. The top and bottom camouflage colors are RLM 74/75/76. The Wilde Sau emblem in its classic style as used by JG 300 on a yellow background and as per the usual practice of the unit, appeared only on the left side.

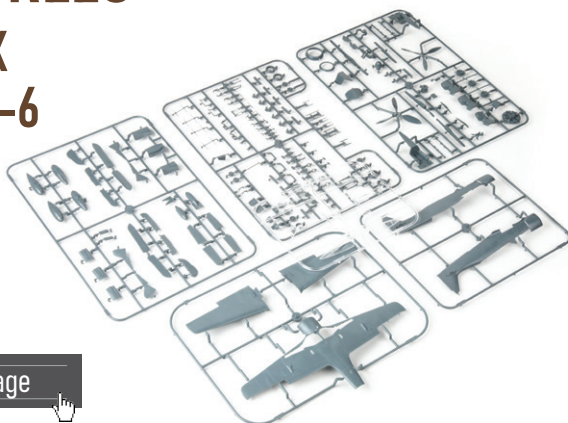
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FE863 Fw 190A seatbelts STEEL (PE-Set)
644050 Fw 190A-6 LööK (Brassin)
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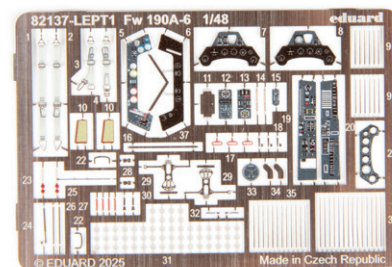
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Fw 190A-6
1/48



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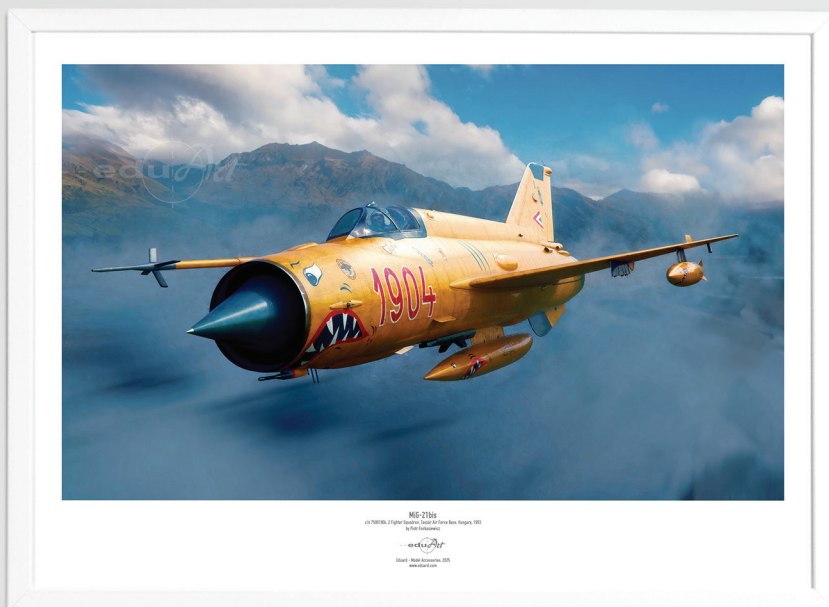
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Fw 190A-6
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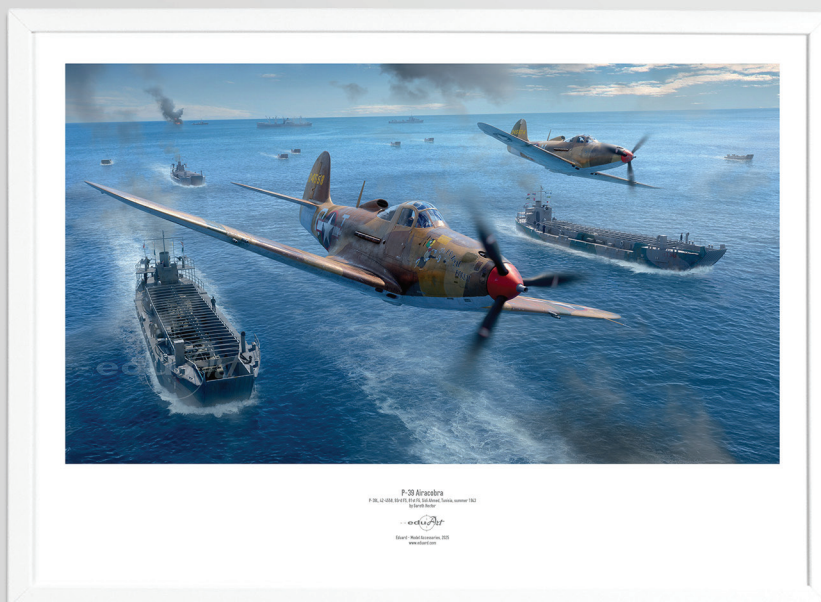
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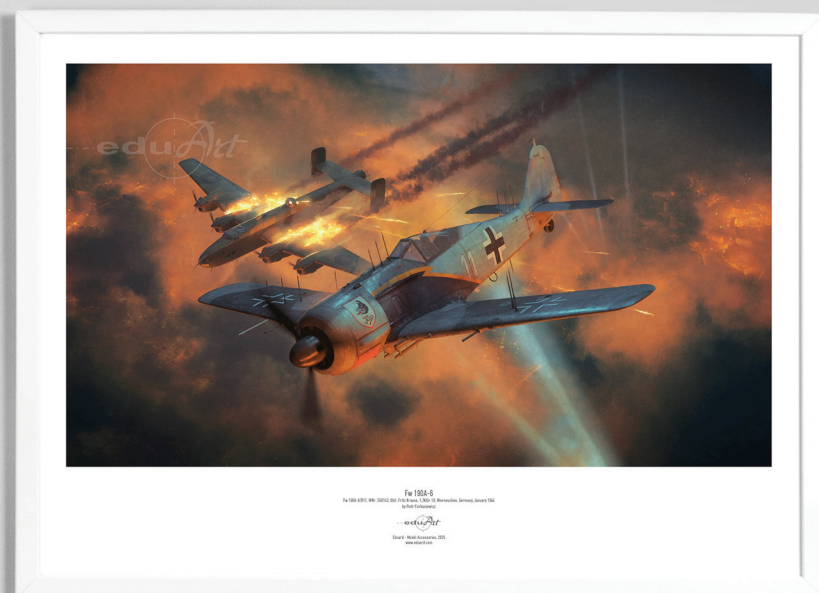
2151-ART

A2 (594 x 420 mm)
Roll Up Vinyl, 160g/m²



8463-ART

P-39 Airacobra



82137-ART

Fw 190A-6

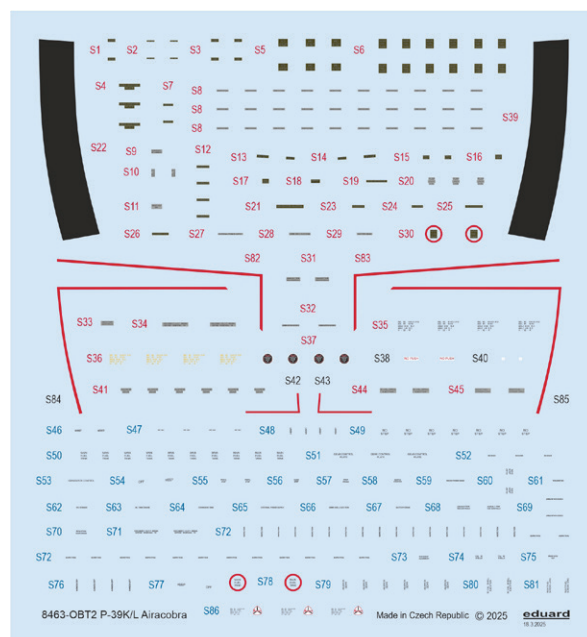
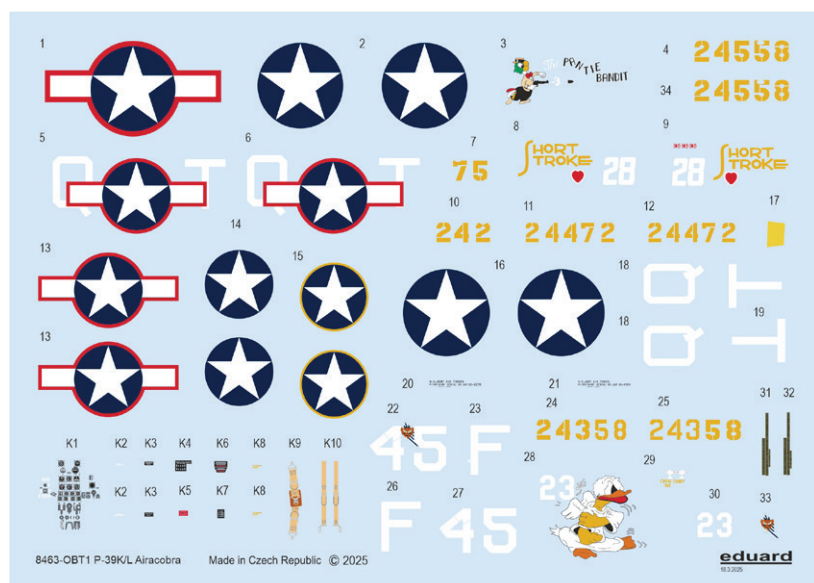
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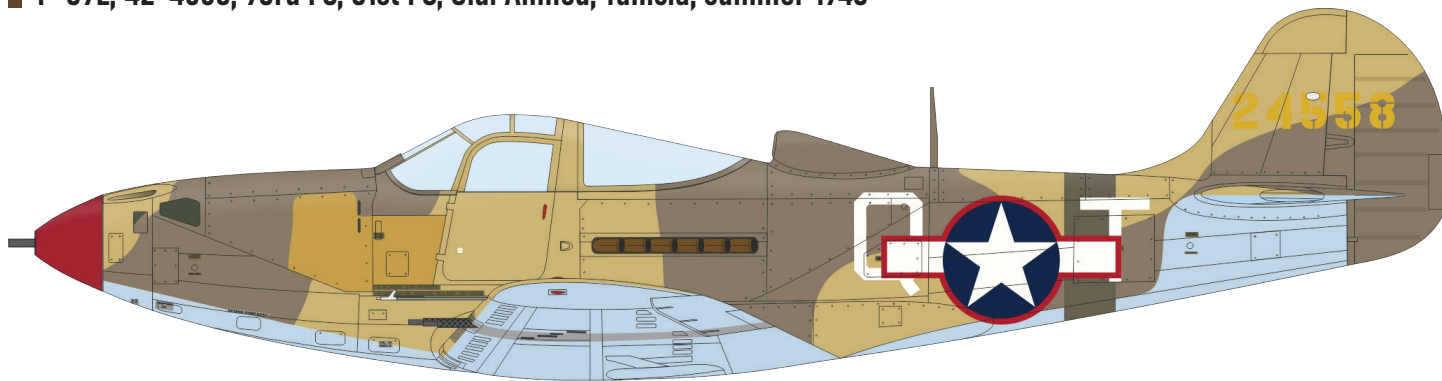
The Weekend edition kit of US WWII fighter aircraft P-39K/L Airacobra in 1/48 scale.

- plastic parts: Eduard
- marking options: 4
- decals: Eduard
- PE parts: no
- painting mask: no
- resin parts: no

Product page



■ P-39L, 42-4558, 93rd FS, 81st FG, Sidi Ahmed, Tunisia, summer 1943

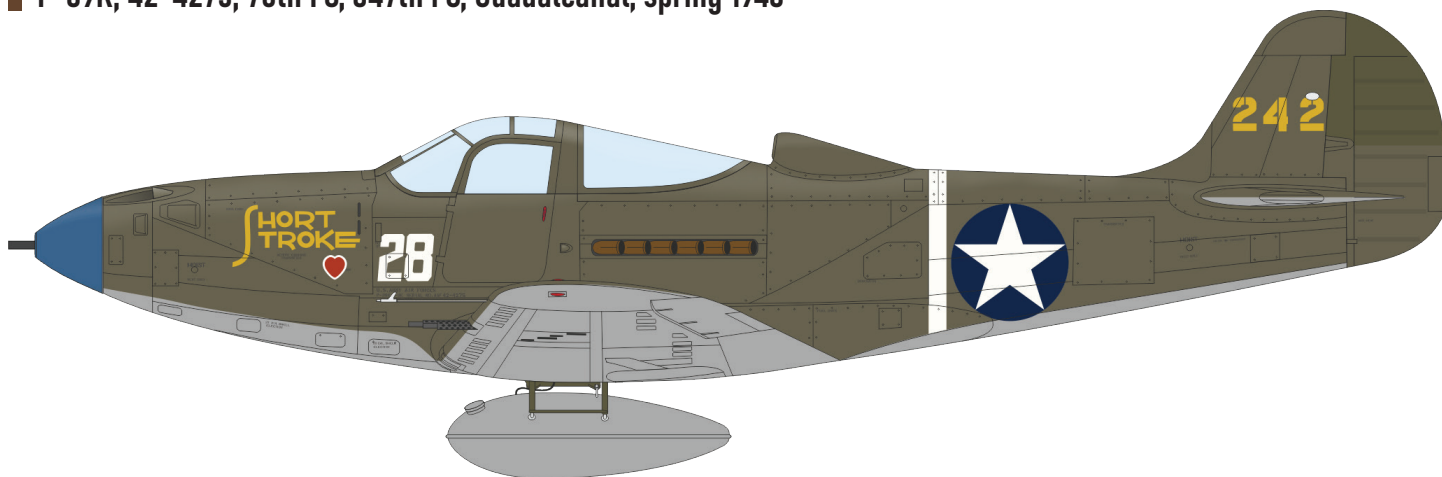


The 81st Pursuit Group was formed on January 13, 1942, and activated less than a month later. Its pilots began training on the P-39s and in May the unit changed designation to the 81st Fighter Group. After further training in England, the pilots began combat operations in Africa in early 1943. Their mission was primarily to support ground and naval forces in Tunis. As an air patrol they then covered the Allied landings in Sicily in June and July 1943. The Airacobra named Petite Bandit with a drawing of a parrot-gunslinger on the starboard side of

the nose. These were taken from another machine of some of the previous versions of P-39, so the aircraft did not have the vents typical of aircraft starting with the P-39K version up. These covers also did not match the camouflage of the aircraft. The original yellow stripes on the wing and fuselage were repainted in Olive Drab, the national insignia on the lower wing was left in its older form without the wings with a red border.

the nose. These were taken from another machine of some of the previous versions of P-39, so the aircraft did not have the vents typical of aircraft starting with the P-39K version up. These covers also did not match the camouflage of the aircraft. The original yellow stripes on the wing and fuselage were repainted in Olive Drab, the national insignia on the lower wing was left in its older form without the wings with a red border.

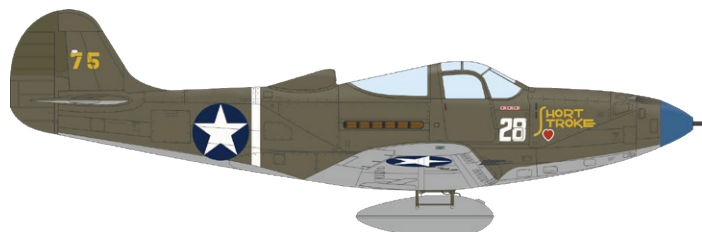
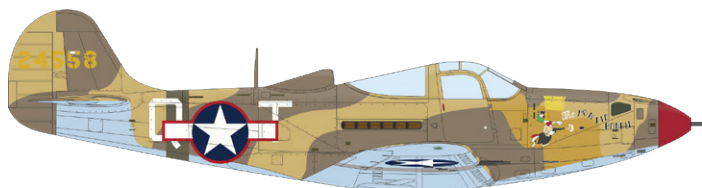
■ P-39K, 42-4275, 70th FS, 347th FG, Guadalcanal, spring 1943



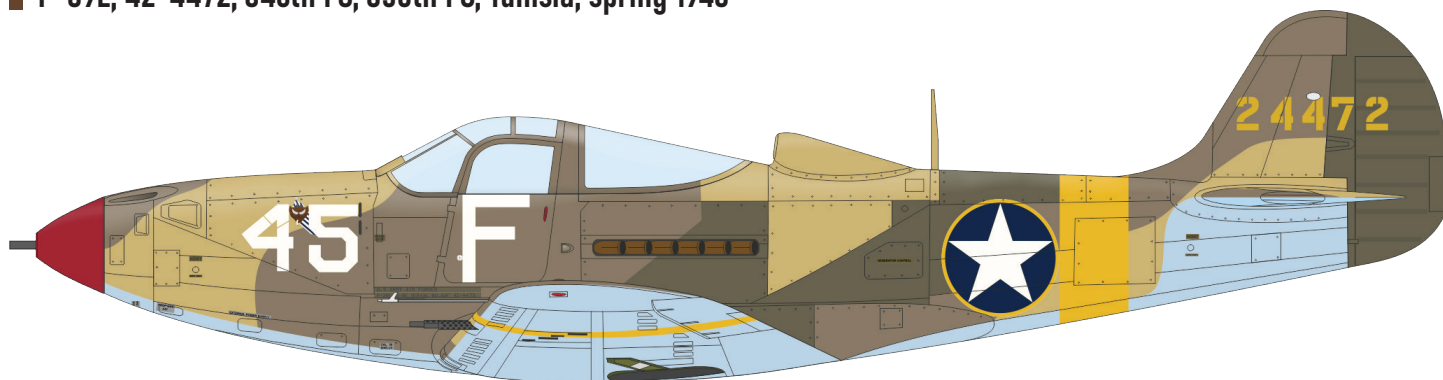
The Airacobra named Short Stroke fought on Guadalcanal in the ranks of the 12th FS/18th FG from late 1942 and retained the squadron markings after transferring to the 70th FS. It cannot be documented whether the aircraft was assigned to a specific pilot at that time. However, one of the photographs shows Lt. Darrell R. Cosart posing with the aircraft. A small heart is also documented on another

70th FS Airacobra, apparently a Flight symbol. Although all versions of the Airacobras at Guadalcanal were used primarily for ground attacks, the victory symbols marked on the starboard side of the Short Stroke prove that they could succeed in aerial combat as well. Interestingly, the appearance of the kills was changed during service. Also documented is the replacement of the rudder from an Airacobra of

D mark. The color scheme thus shows the latest known appearance of the aircraft with the serial number on the rudder already blacked out. In the summer of 1943, Short Stroke was transferred to the 67th FS, with which it provided air defense for the base built on Wodlark Island from July 23, suffering unspecified damage.



■ P-39L, 42-4472, 346th FS, 350th FG, Tunisia, spring 1943

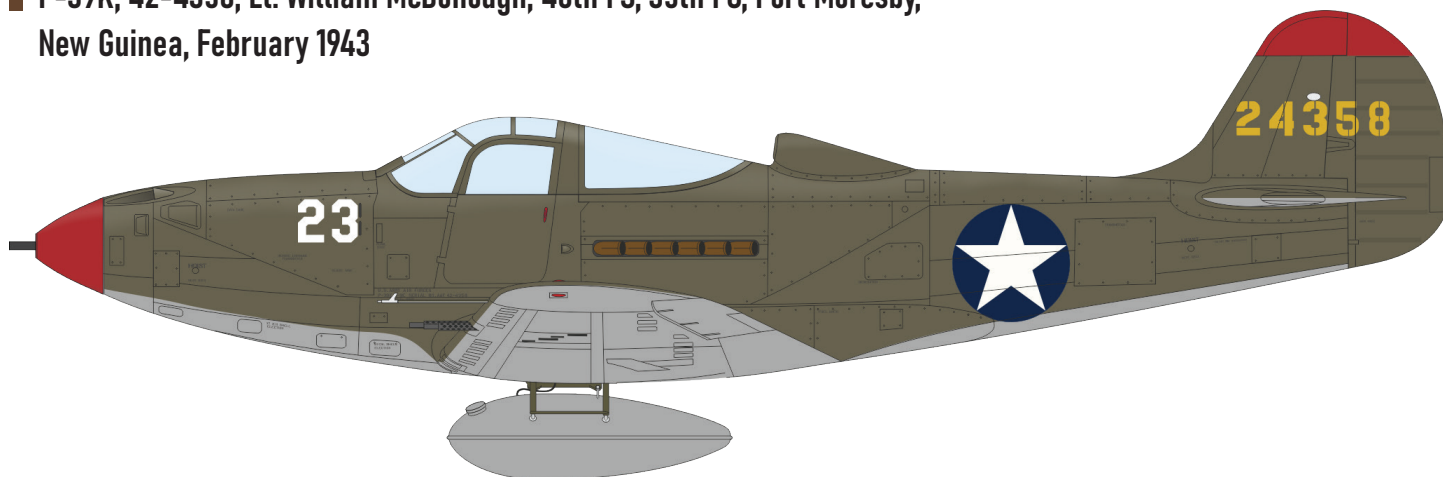


The 350th FG was activated in England with American pilots fighting as volunteers filling the ranks of the RAF. The unit was equipped with export versions of the P-39, originally ordered by France. These aircraft remained in the UK after the fall of France, where they subsequently served as a quick-fix armament solution for the new American units needed to support the

upcoming invasion of North Africa. The group operated as part of the 12th AF from January 1943 until the end of the war, its pilots flying patrol and interdiction missions, protecting convoys, conducting aerial reconnaissance, and providing air support to ground forces. The aircraft shown here underwent repairs during its service, which added Olive Drab

fields to the standard desert livery. These were either parts from another aircraft in Olive Drab or original parts repainted with this shade. Between numbers 4 and 5 on the nose, there was a small drawing not very clearly visible in the photo. The decal offers a reconstruction of its probable appearance.

■ P-39K, 42-4358, Lt. William McDonough, 40th FS, 35th FG, Port Moresby, New Guinea, February 1943



In February 1942, William F. McDonough used, in combat over New Guinea, an Airacobra decorated on the bow with a painting of Donald Duck. The "Angry Duck" was a popular motif for other 40th FS pilots, who liked to have their pictures taken in front of it. This Airacobra served with the unit from late 1942 until at least the end of the summer of 1943, but sometime during the spring the painting of the Donald Duck was removed from the nose. His combat account

was opened by Lt. McDonough in an air battle over Wau on February 6, 1943, by shooting down two Ki-43 Oscar fighters and another probably. The pilot had the confirmed kills marked on the starboard side below the cockpit in small silhouettes. However, these were eventually replaced by Japanese flags. For the successful action, the pilot was awarded the Distinguished Flying Cross (DFC) and promoted to the rank of Captain. In the spring of 1944, McDonough

became the 35th FG's first Ace outside the 39th FS when he shot down one of a quartet of Tony fighters that made a surprise raid over the Gusap base on March 3, 1944. By this time, he was already a member of the 35th FG staff at the rank of Major. William McDonough was killed on April 22, 1944, just before the end of a combat tour when he had to bail out of a malfunctioning P-47 Thunderbolt and his parachute failed to open.

For P-39K/L Airacobra 1/48 RECOMMENDED:

48872 P-39/400 landing flaps (PE-Set)
49238 P-39Q/N (PE-Set)
FE919 P-39 seatbelts STEEL (PE-Set)
648202 P-39 wheels early (Brassin)
648203 P-39 wheels late (Brassin)
648957 P-39 seat PRINT (Brassin)

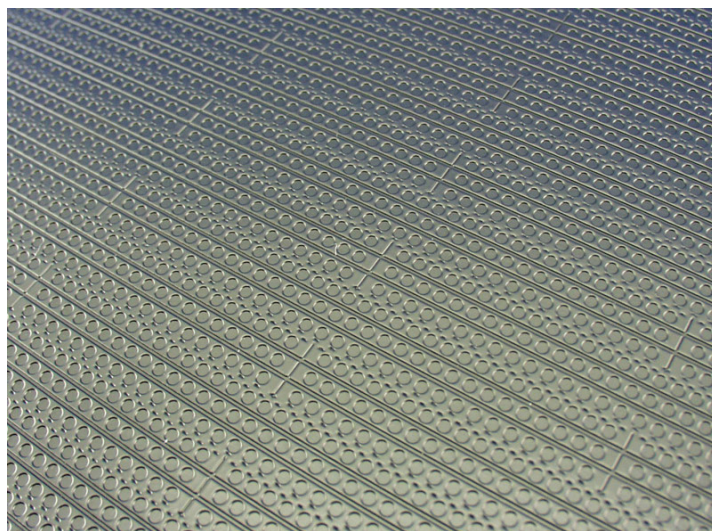
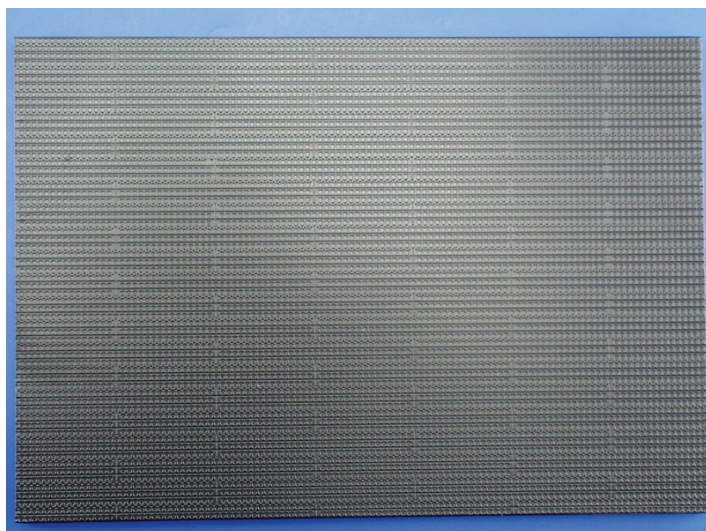
648958 P-39 exhaust stacks fishtail PRINT (Brassin)
648959 P-39 exhaust stacks rounded PRINT (Brassin)
D48068 P-39 stencils (Decal Set)
EX250 P-39/P-400 Weekend (Mask)
EX702 P-39/P-400 TFace (Mask)

PSP plates – perforated steel plates 1/48

#8801

Size of display 220x157 mm.

- plastic parts: Eduard
- marking options: none
- decals: no
- PE parts: no
- painting mask: no
- resin parts: no

[Product page](#)

644305

Lysander Mk.I/Mk.III LööK

1/48 Airfix

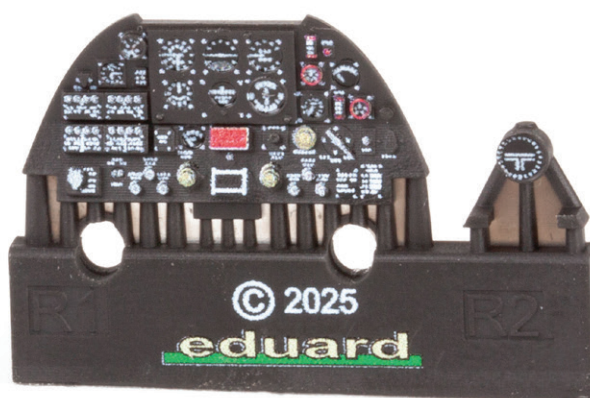
LööK set - Brassin pre-painted dashboard and STEEL seat belts for Lysander Mk.I/III in 1/48 scale.

Easy to assemble, replaces plastic parts.

Recommended kit: Airfix

Set contains:

- resin: 2 parts
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)


LööK

674032

Mosquito FB Mk.VI LööK

1/72 Tamiya

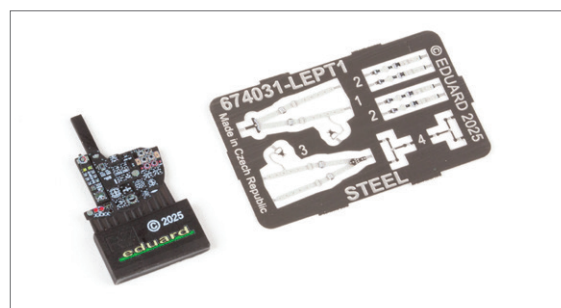
LööK set - Brassin pre-painted dashboard and STEEL seat belts for Mosquito FB Mk.VI in 1/72 scale.

Easy to assemble, replaces plastic parts.

Recommended kit: Tamiya

Set contains:

- resin: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)


LööK

674033

Mosquito B Mk.IV/PR Mk.IV LööK

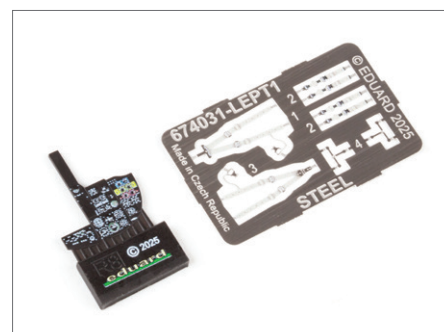
1/72 Tamiya

LööK set - Brassin pre-painted dashboard and STEEL seat belts for Mosquito B Mk.IV or PR Mk.IV in 1/72 scale. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- resin: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)



LööK

644303

F4F-4 w/ early wheels LööKplus

1/48 Academy

Collection of 4 sets for F4F-4 in 1/48 scale.
Recommended kit: Academy

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- exhaust stacks
- painting mask

[Product page](#)



LööKplus

644304

F4F-4 w/ late wheels LööKplus

1/48 Academy

Collection of 4 sets for F4F-4 in 1/48 scale.

Recommended kit: Academy

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- exhaust stacks
- painting mask

[Product page](#)


674029

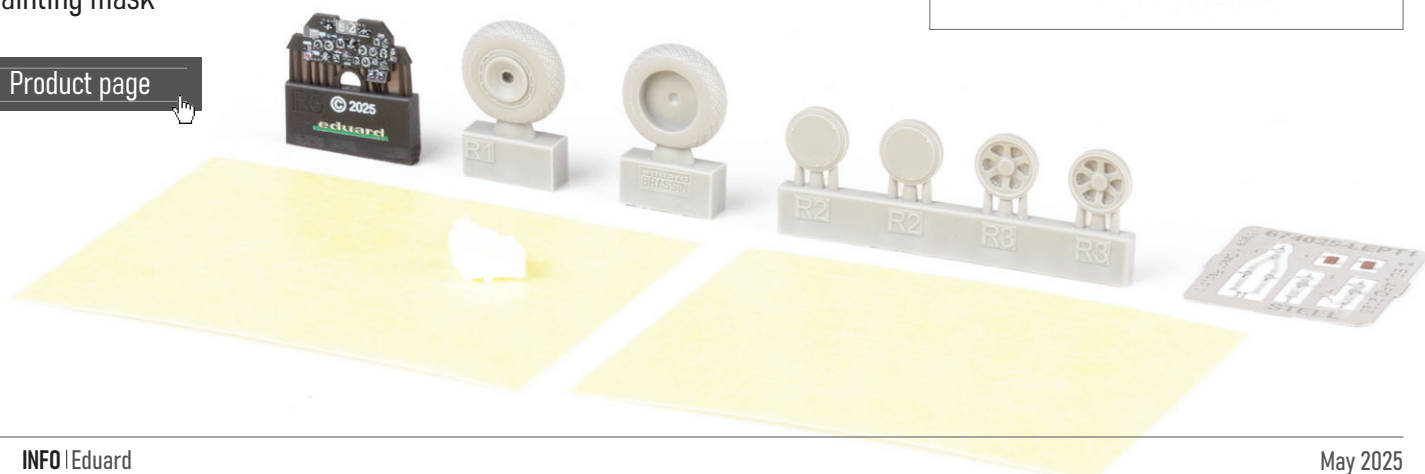
P-47D Bubbletop LööKplus

1/72 Tamiya

Collection of 3 sets for P-47D Bubbletop in 1/72 scale.

Recommended kit: Tamiya

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- painting mask

[Product page](#)


674035

Mosquito NF Mk.II LööKplus

1/72 Tamiya

Collection of 4 sets for Mosquito NF Mk.II in 1/72 scale.

Recommended kit: Tamiya

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- exhaust, stacks
- painting mask



Product page


635038

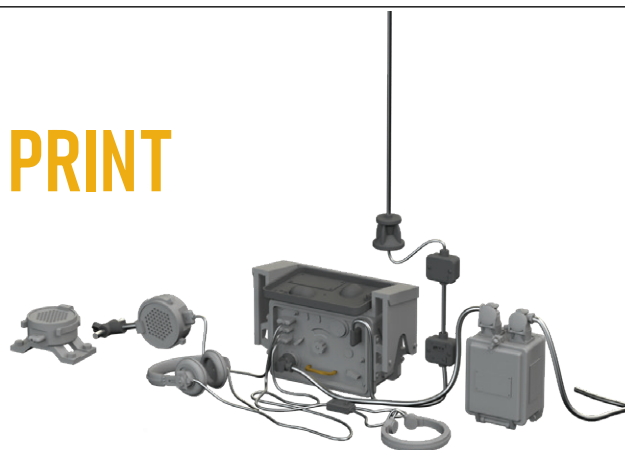
Sd.Kfz. 250 radio equipment PRINT

1/35 Takom

Brassin set - pre-painted radio equipment for Sd.Kfz. 250 in 1/35 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Takom

Set contains:

- 3D print: 14 parts
- resin: 1 part, pre-painted
- decals: yes
- photo-etched details: yes
- painting mask: no



Product page



6481073

Mosquito exhaust stacks PRINT

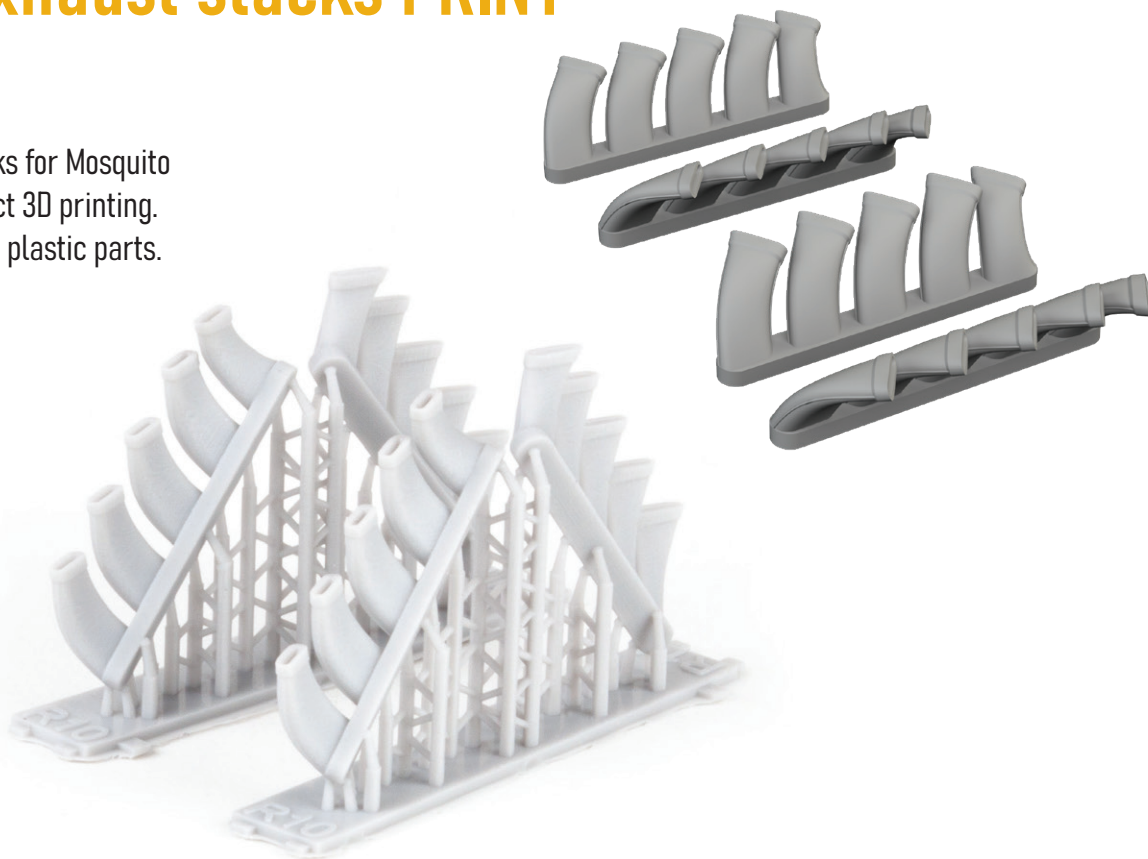
1/48 Tamiya

Brassin set - exhaust stacks for Mosquito in 1/48 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)



6481077

P-40 250lb Mk.2 British bomb

1/48 Eduard

Brassin set - 250lb British bomb for P-40E in 1/48 scale. Set consists of 1 bomb. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 6 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)



6481078

P-40 30lb frag bombs

1/48 Eduard

Brassin set - 30lb bombs for P-40E
 in 1/48 scale. Set consists of 6 bombs.
 Easy to assemble, replaces plastic parts.
 Recommended kit: Eduard

Set contains:

- 3D print: 6 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)

6481080

P-40 500lb GP British bomb

1/48 Tamiya

Brassin set - 500lb British bomb for P-40E
 in 1/48 scale. Set consists of 1 bomb.
 Easy to assemble, replaces plastic parts.
 Recommended kit: Eduard

Set contains:

- 3D print: 7 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)


6481081

P-40 250lb Mk.1 British bomb

1/48 Eduard

Brassin set - 250lb British bomb for P-40E
in 1/48 scale. Set consists of 1 bomb.
Easy to assemble, replaces plastic parts.
Recommended kit: Eduard

Set contains:

- 3D print: 5 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)


6481082

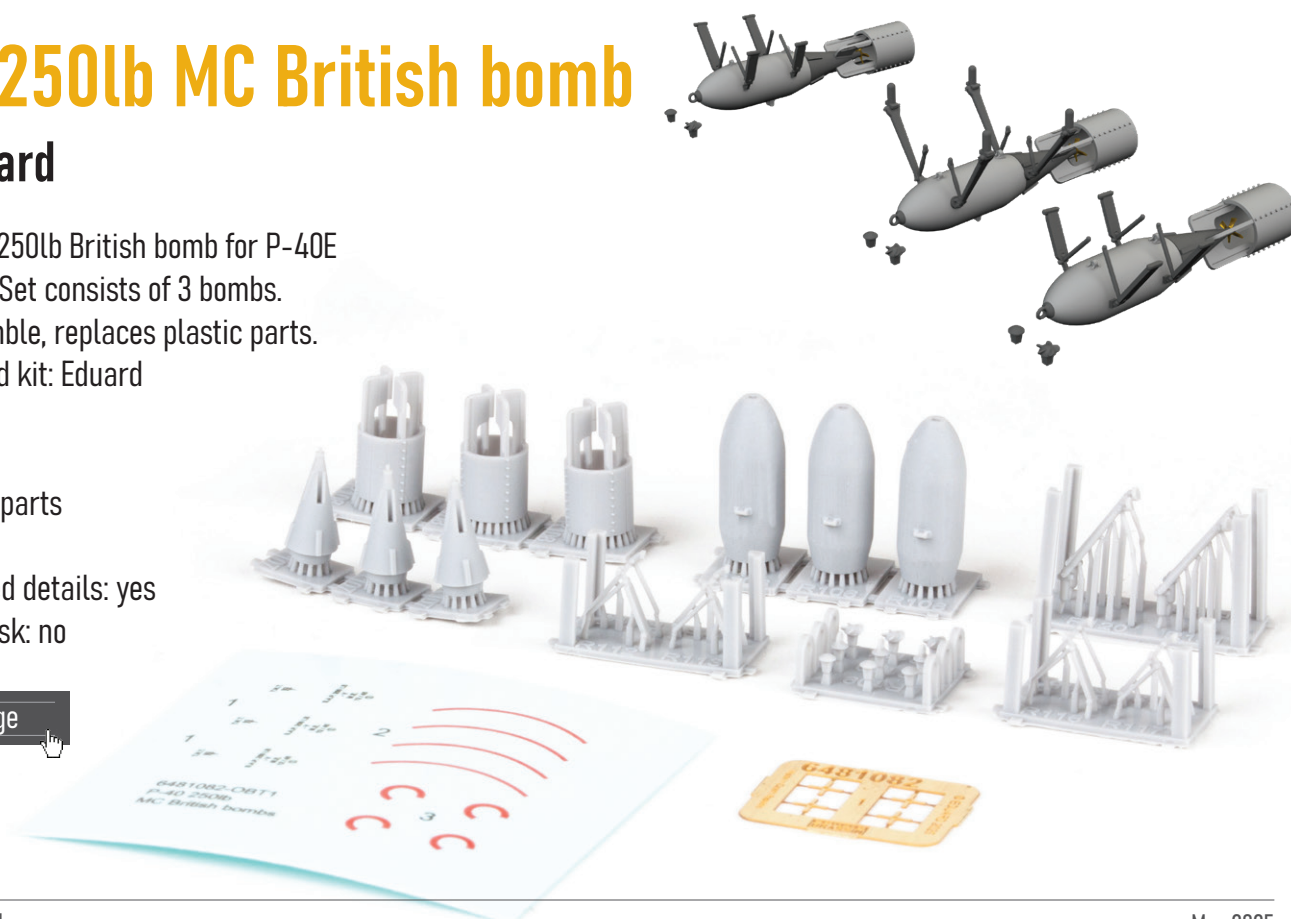
P-40 250lb MC British bomb

1/48 Eduard

Brassin set - 250lb British bomb for P-40E
in 1/48 scale. Set consists of 3 bombs.
Easy to assemble, replaces plastic parts.
Recommended kit: Eduard

Set contains:

- 3D print: 30 parts
- decals: yes
- photo-etched details: yes
- painting mask: no

[Product page](#)


6481091

F-35B exhaust nozzle PRINT

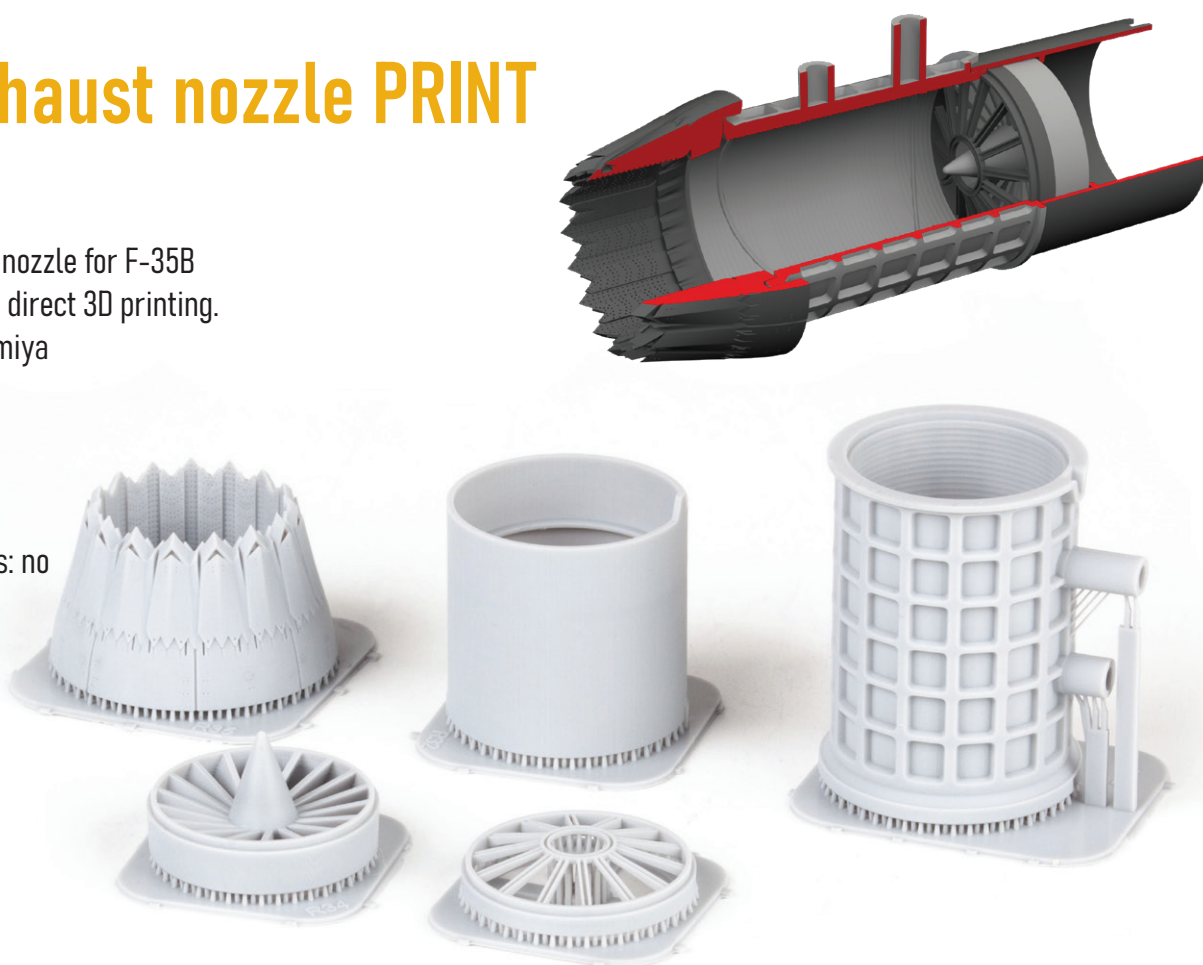
1/48 Tamiya

Brassin set - exhaust nozzle for F-35B
in 1/48 scale. Made by direct 3D printing.
Recommended kit: Tamiya

Set contains:

- 3D print: 5 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)



6481095

A6M5 Type 52 gun bays PRINT

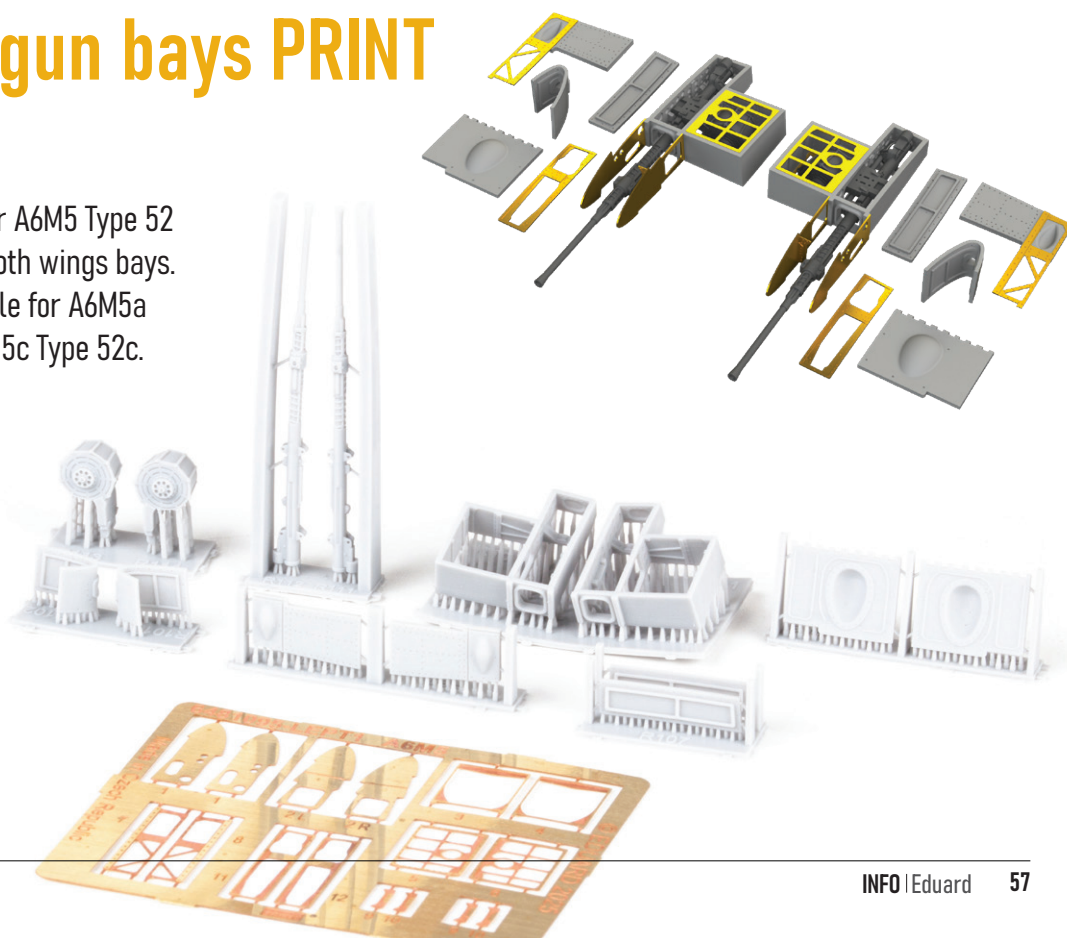
1/48 Eduard

Brassin set - the wing gun bays for A6M5 Type 52
in 1/48 scale. The set consists of both wings bays.
Made by 3D direct print. Not suitable for A6M5a
Type 52a, A6M5b Type 52b nor A6M5c Type 52c.
Recommended kit: Eduard

Set contains:

- 3D print: 14 parts
- decals: no
- photo-etched details: yes
- painting mask: no

[Product page](#)

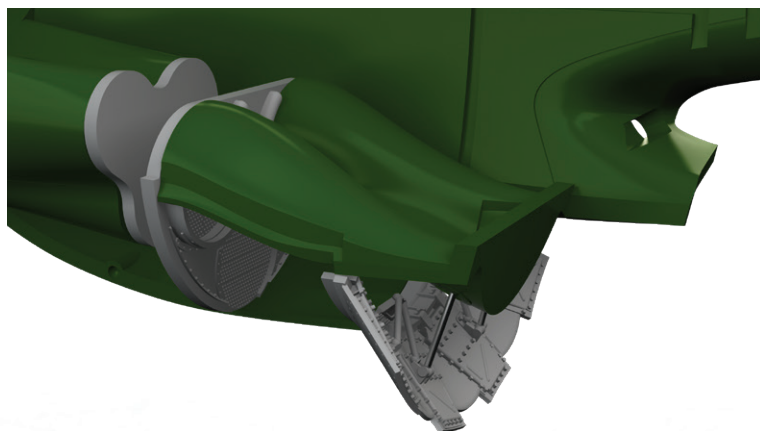


6481097

P-40E radiators upgrade set PRINT

1/48 Eduard

Brassin set - engine oil and cooling radiators and radiator flaps for P-40E in 1/48 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard



Set contains:

- 3D print: 3 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)

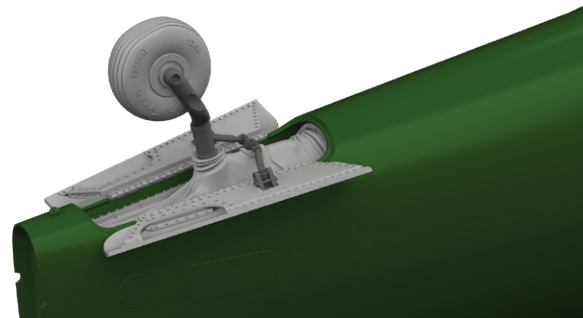


6481100

P-40E tail wheel bay PRINT

1/48 Eduard

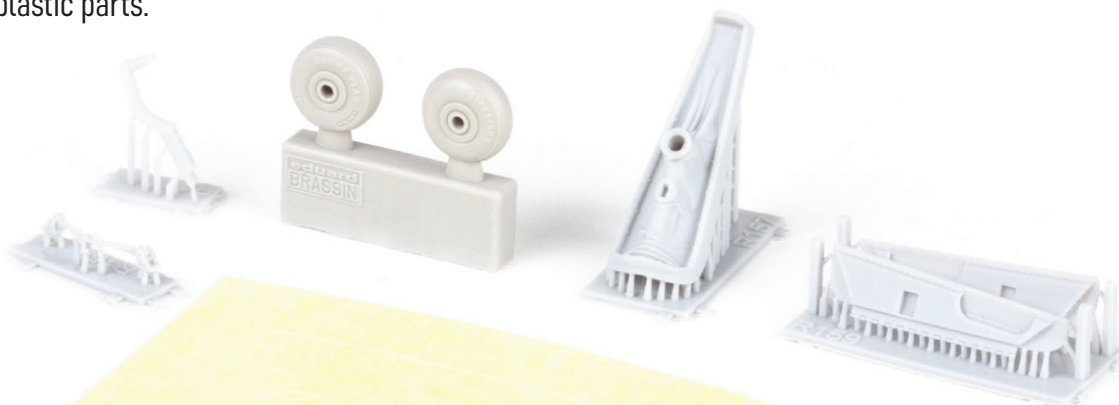
Brassin set - tail wheel bay for P-40E in 1/48 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard



Set contains:

- 3D print: 5 parts
- resin: 2 parts
- decals: no
- photo-etched details: yes
- painting mask: yes

[Product page](#)



6481101

Fw 190A-6 cockpit PRINT

1/48 Eduard

Brassin set - cockpit for Fw 190A-6 in 1/48 scale.
 Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 19 parts
- decals: yes
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)

6481102

Fw 190A-6 engine

1/48 Eduard

Brassin set - a complete engine for Fw 190A-6 in 1/48 scale. Cowlings are included.
 Recommended kit: Eduard

Set contains:

- resin: 32 parts
- decals: no
- photo-etched details: yes
- painting mask: no

[Product page](#)


672411

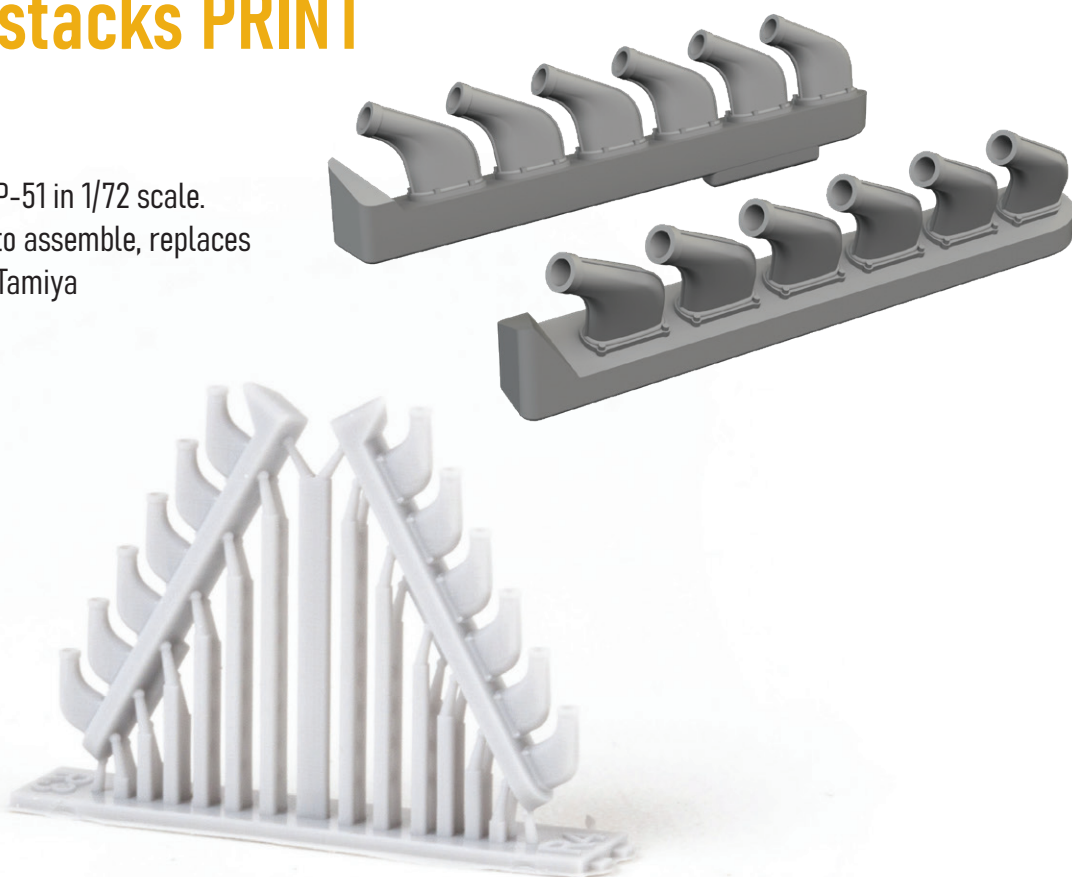
P-51 exhaust stacks PRINT

1/72 Tamiya

Brassin set - exhaust stacks for P-51 in 1/72 scale.
Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)

672412

P-51 exhaust stacks w/ fairing PRINT

1/72 Tamiya

Brassin set - exhaust stacks for P-51 in 1/72 scale.
Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)

672413

P-51D seat w/ integral belts PRINT

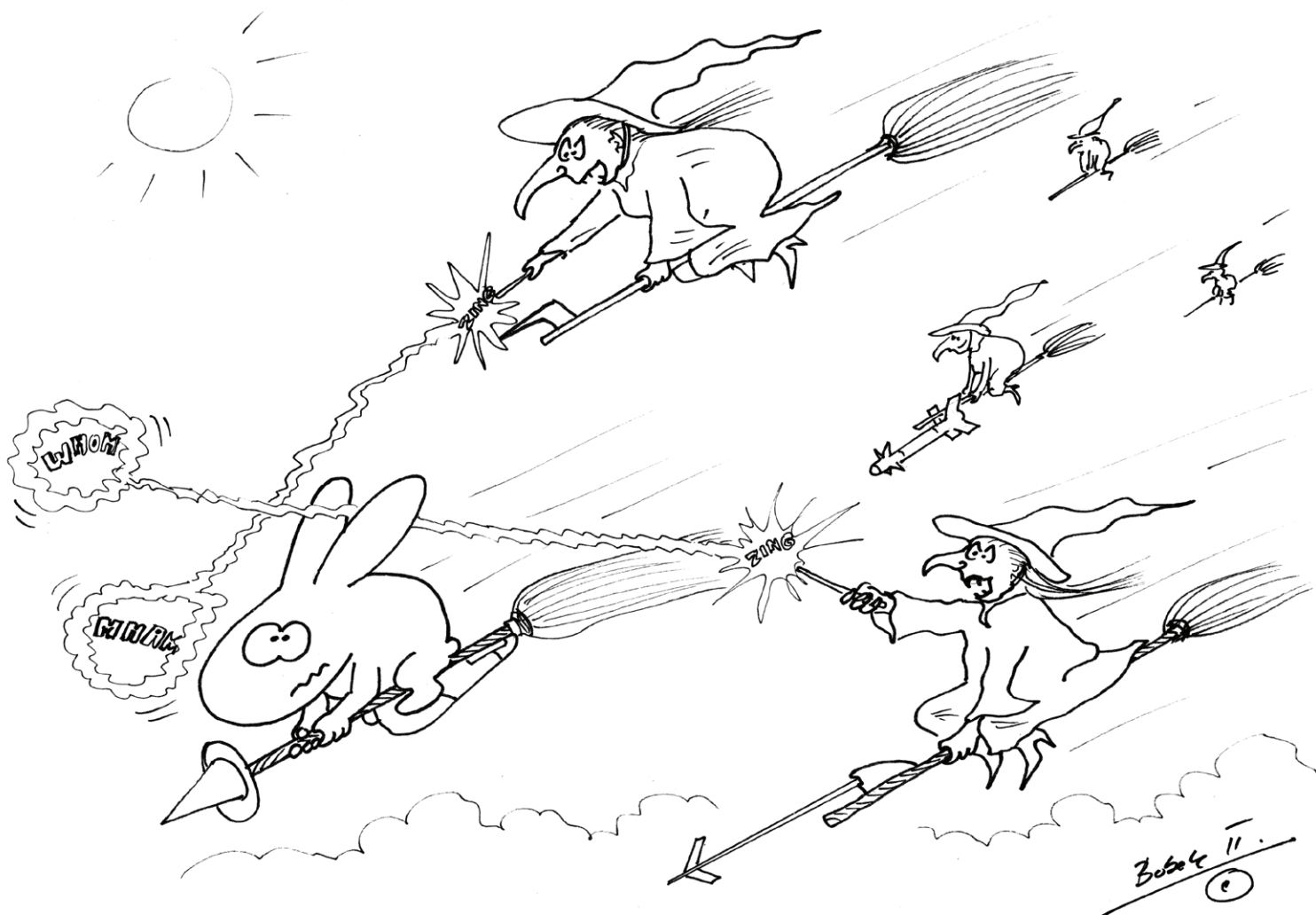
1/72 Eduard

Brassin set - pilot seat for P-51D in 1/48 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 1 part
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)



SIN648138

A-10A armament

1/48 Great Wall Hobby

Collection of 10 sets for A-10A in 1/48 scale.
Recommended kit: Great Wall Hobby

- AGM-65 Maverick
- TER
- LAU-3/A
- GBU-10 Paveway II
- AIM-9M/L Sidewinder
- Mk.82 bombs w/airbrake early
- GBU-12 bomb
- Sniper ATP
- AN/ALQ-131 (deep) ECM pod
- AN/ALQ-184 (short) ECM pod

All sets included in this BIG SIN are available separately,
but with every BIG SIN set you save up to 30 %.

Product page



SIN67233

F-35B

1/72 Tamiya

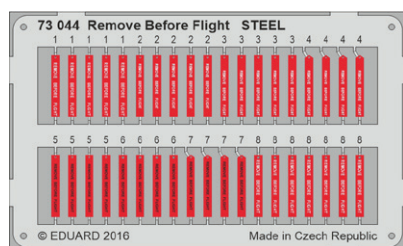
Collection of 4 sets for F-35B in 1/72 scale.

Recommended kit: Tamiya

- cockpit
- undercarriage wheels
- RAM coating panels die-cut painting mask
- Remove Before Flight tags

All sets included in this BIG SIN are available separately, but with every BIG SIN set you save up to 30 %.

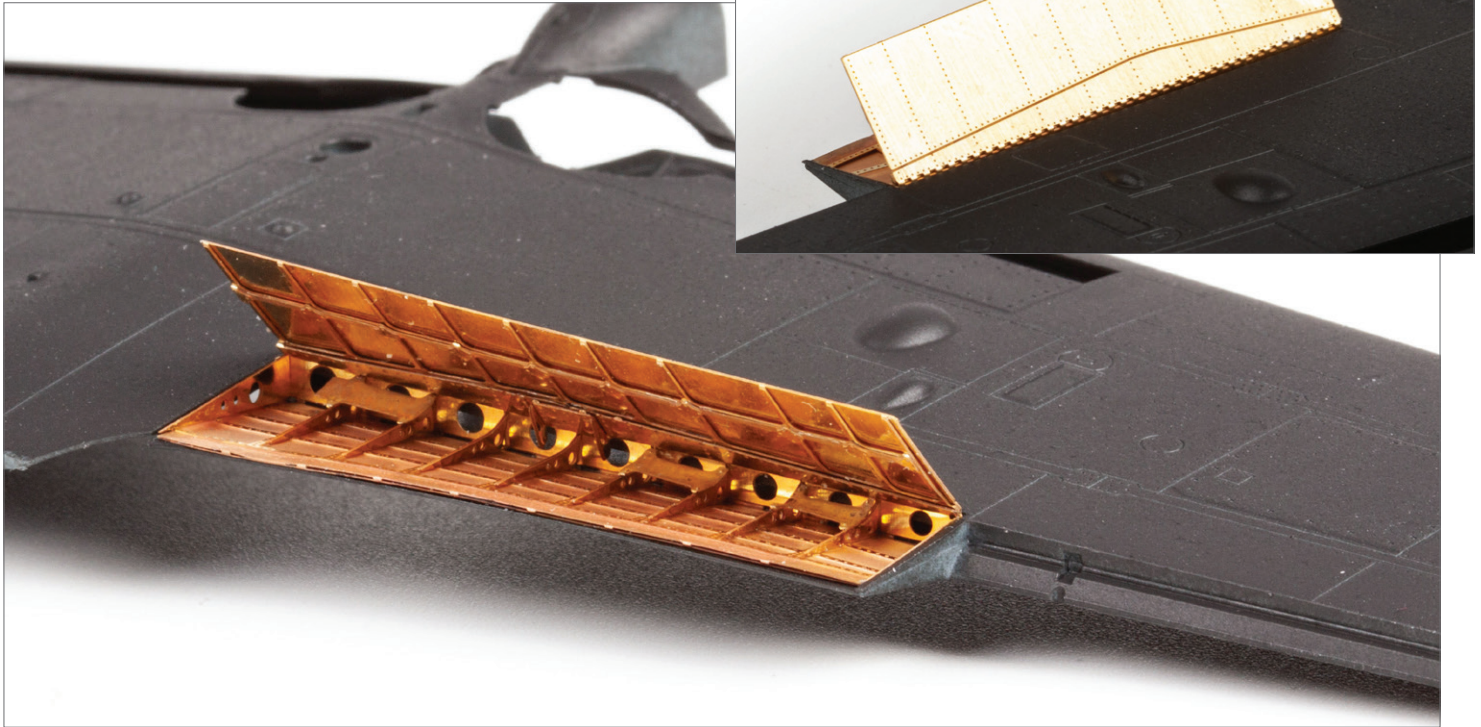
Product page



A6M5 landing flaps

1/48 Eduard

#481163



Go 242A

1/72 IBG

#73849



Sea King HC.4

1/48 Airfix

#491523

#FE1523

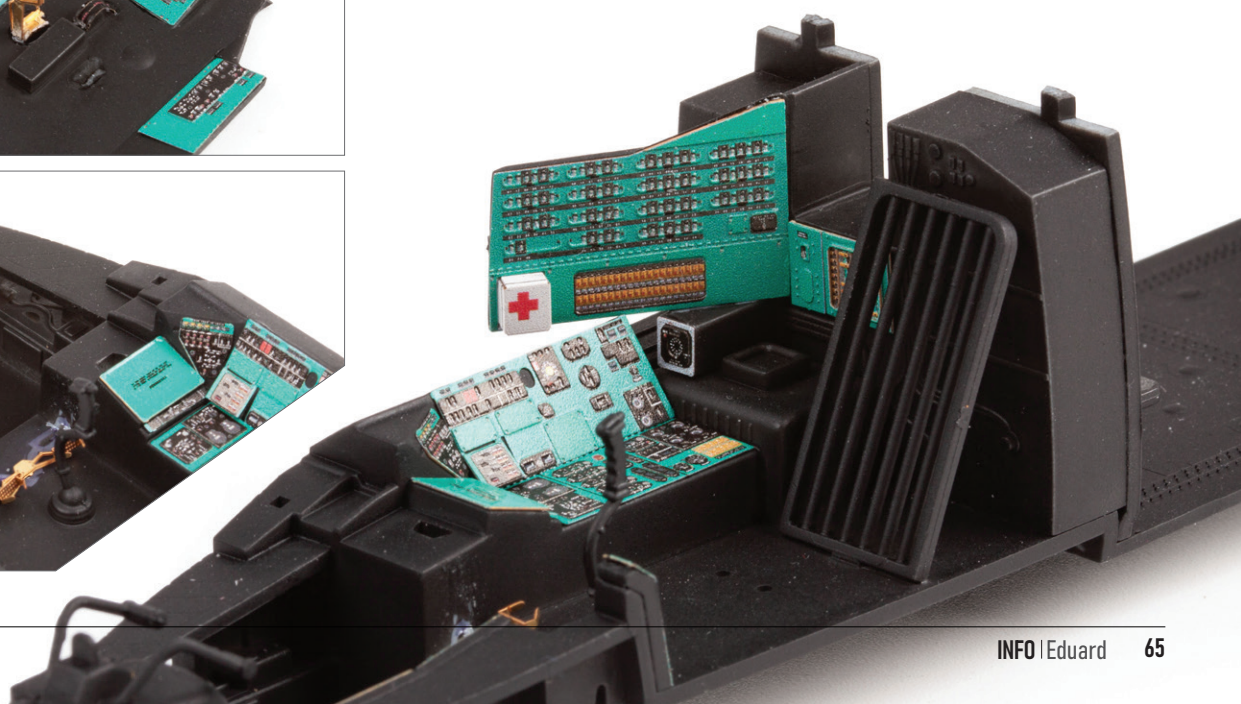
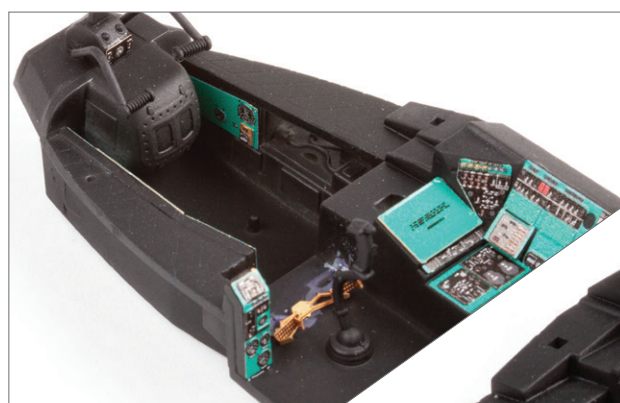


Mi-24A

1/48 Trumpeter

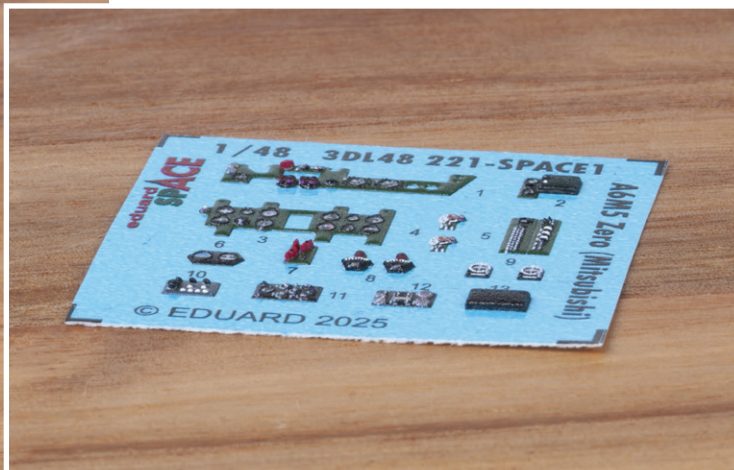
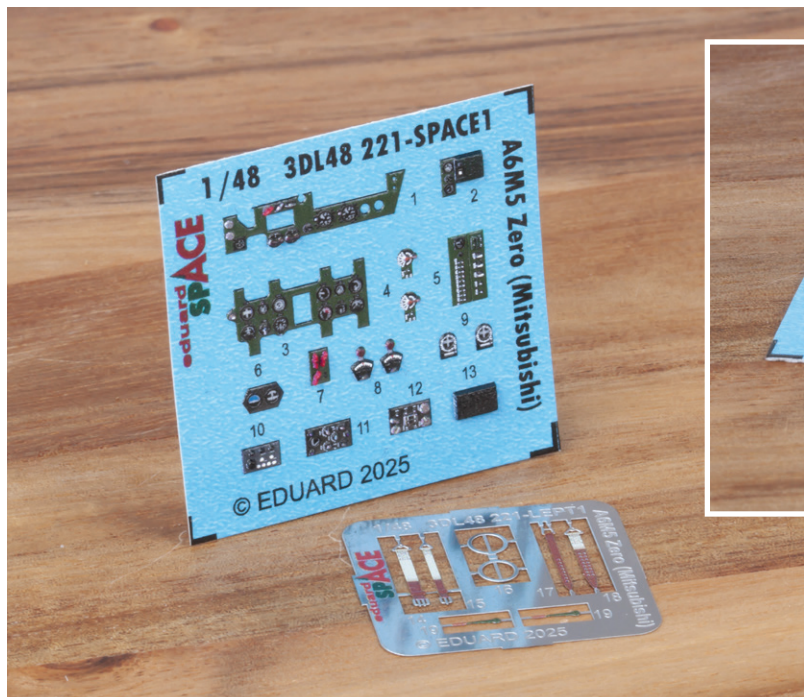
#491527

#FE1527



3DL48221 A6M5 Zero (Mitsubishi) SPACE 1/48 Fine Molds

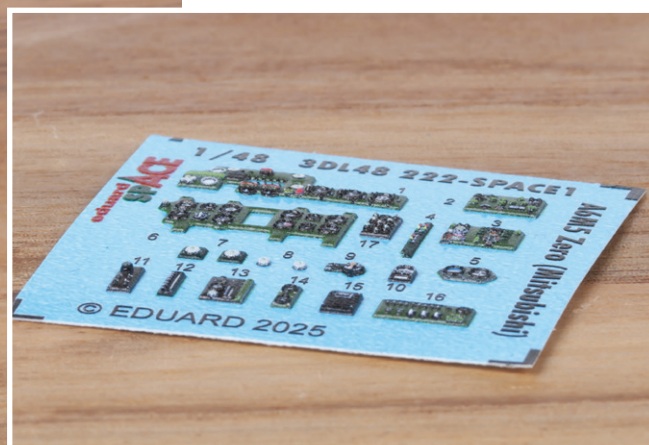
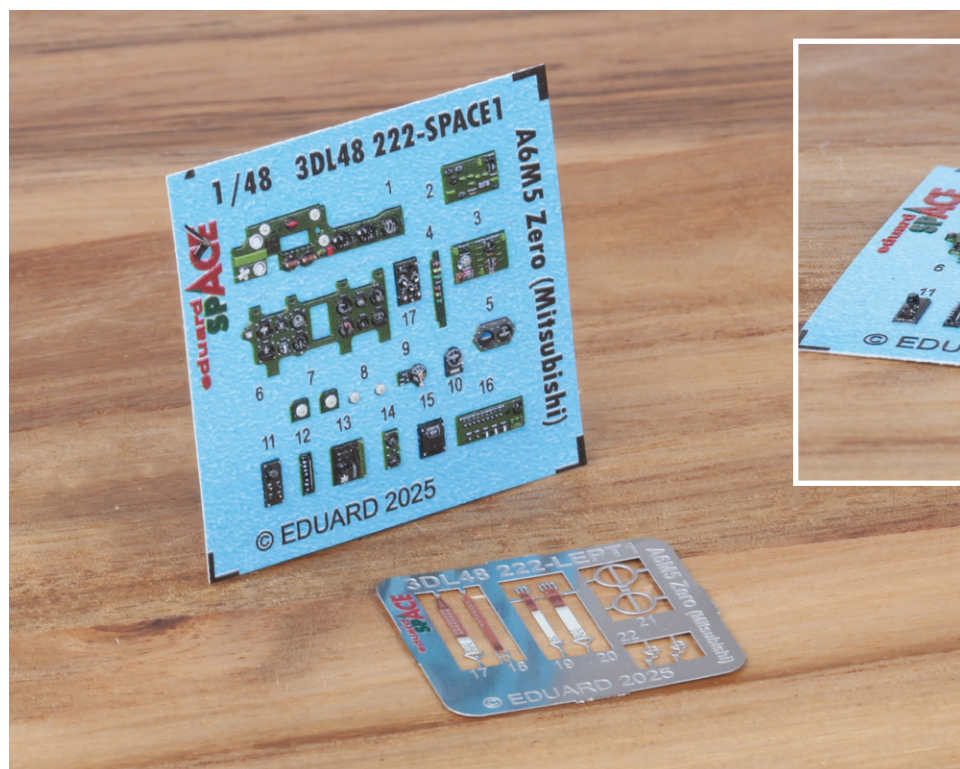
[Product page](#)



*EASY
APPLICATION*

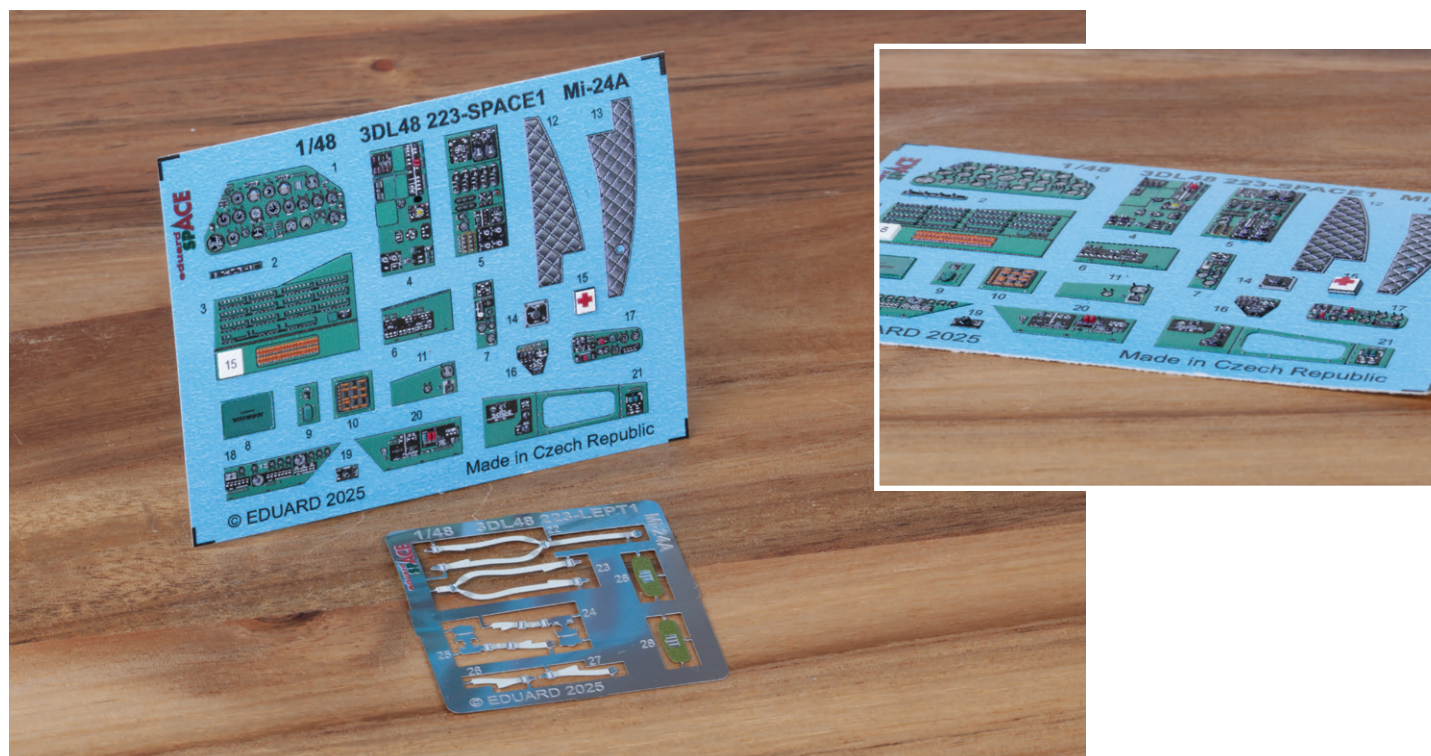
3DL48222 A6M5 Zero (Mitsubishi) SPACE 1/48 Eduard

[Product page](#)



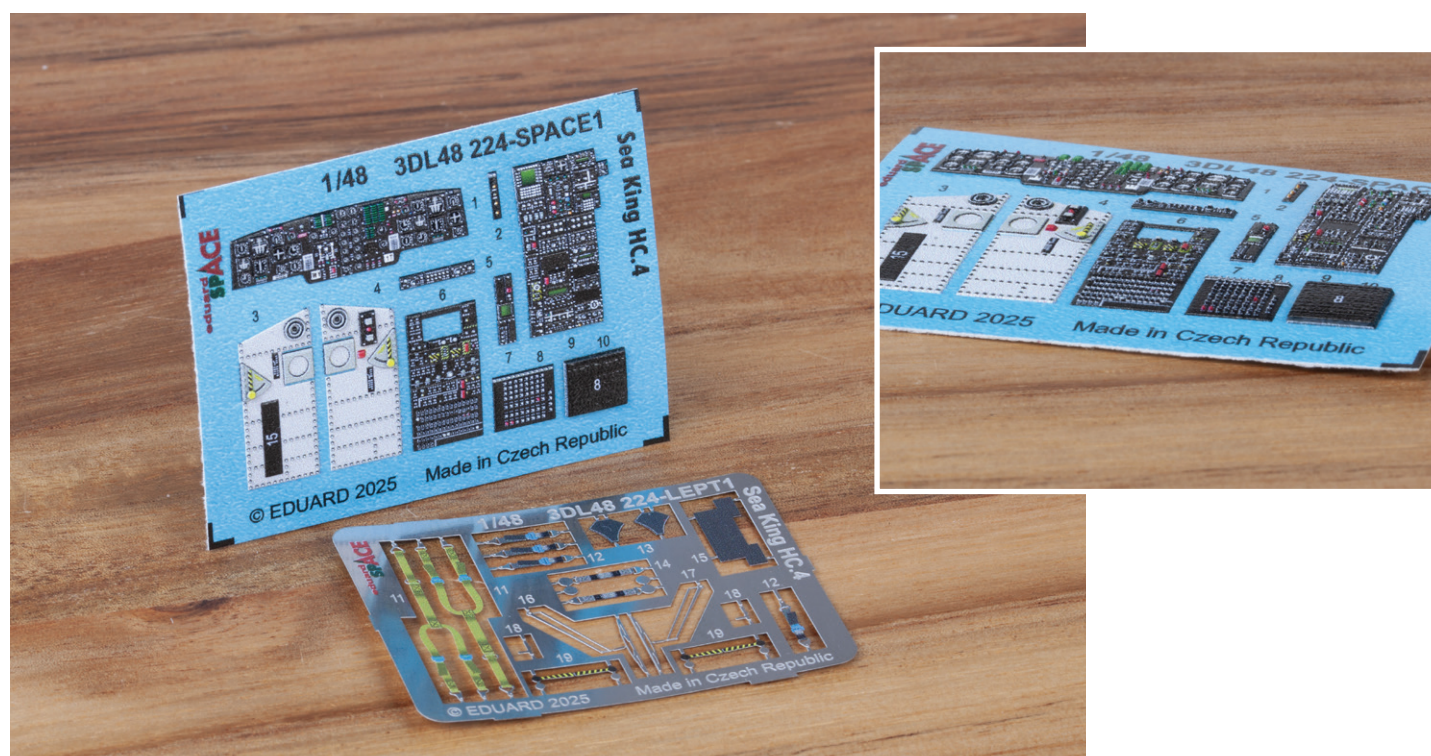
3DL48223 **Mi-24A SPACE** 1/48 Trumpeter

[Product page](#)

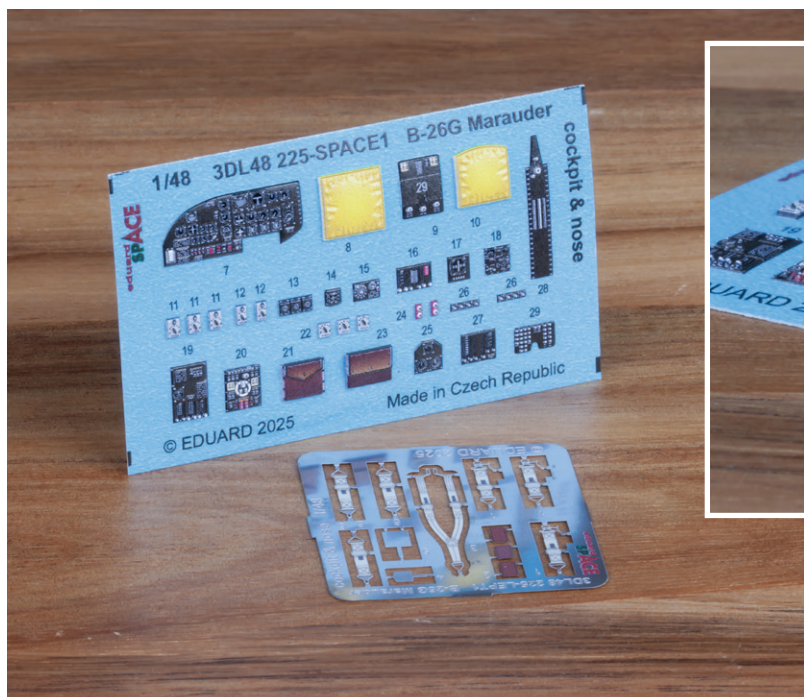


3DL48224 **Sea King HC.4 SPACE** 1/48 Airix

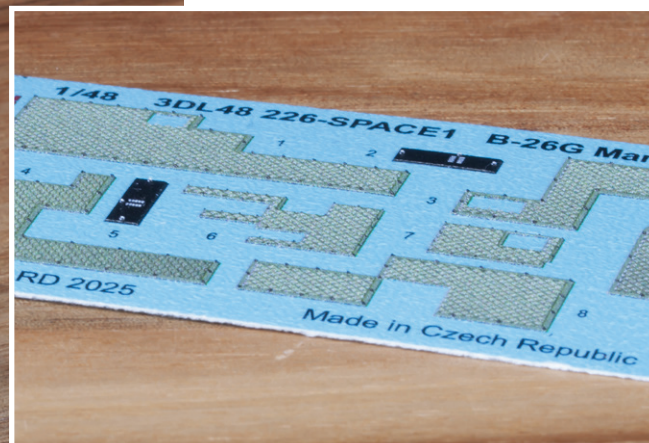
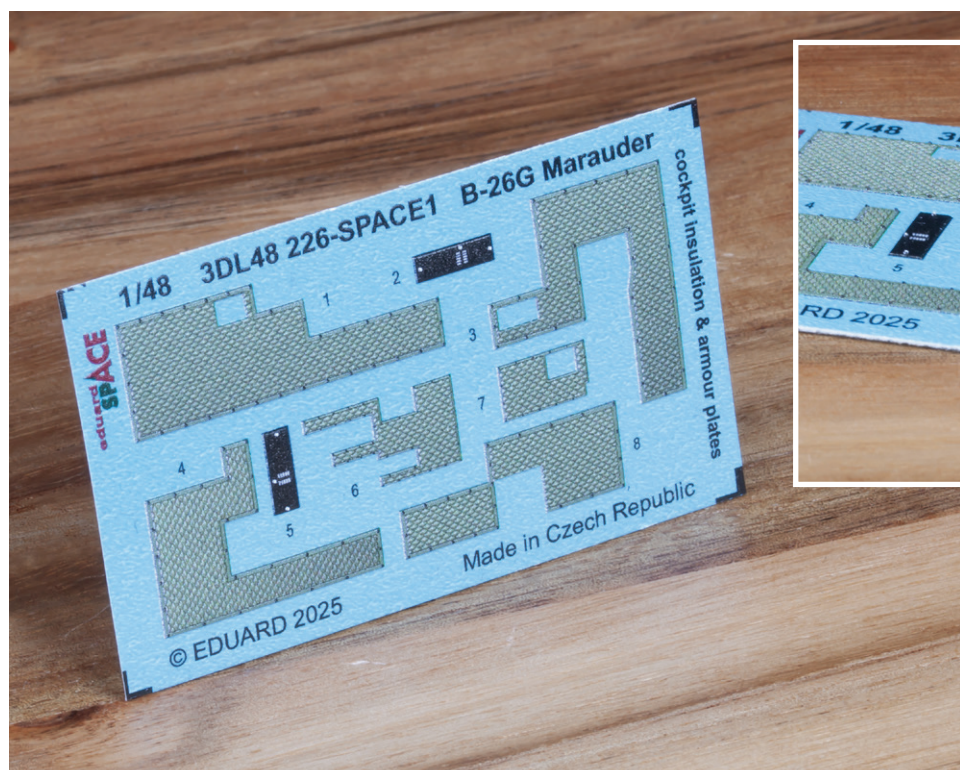
[Product page](#)



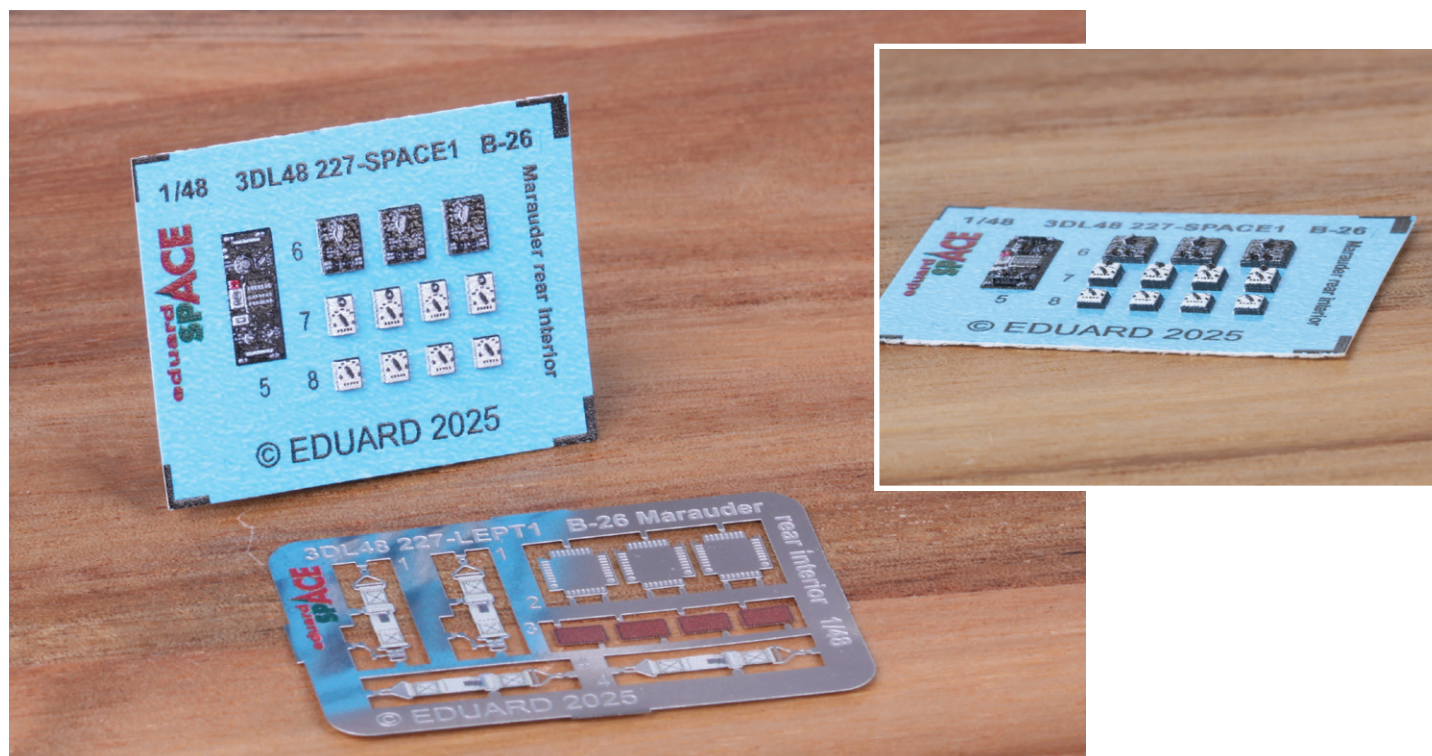
3DL48225 B-26G Marauder cockpit & nose SPACE 1/48 ICM

[Product page](#)


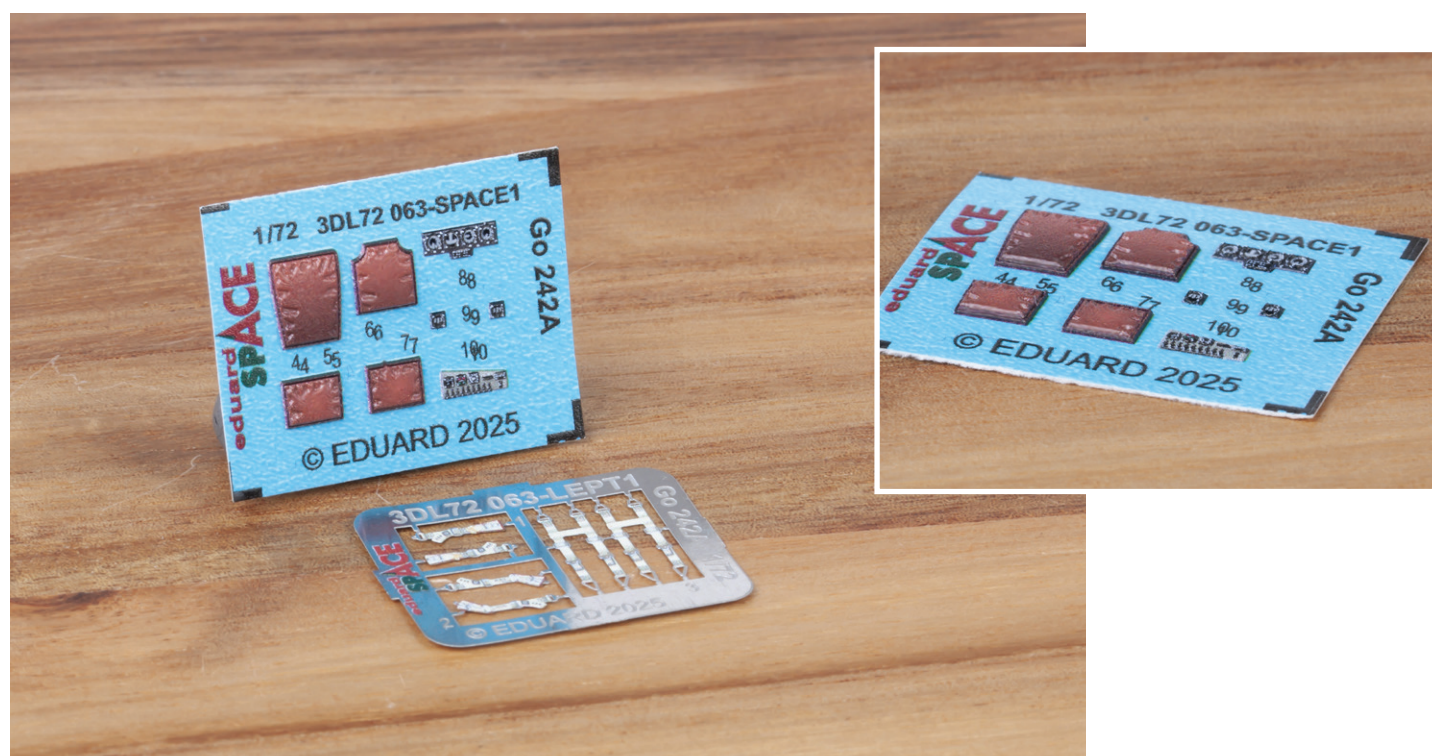
3DL48226 B-26G Marauder cockpit insulation & armour plates SPACE 1/48 ICM

[Product page](#)


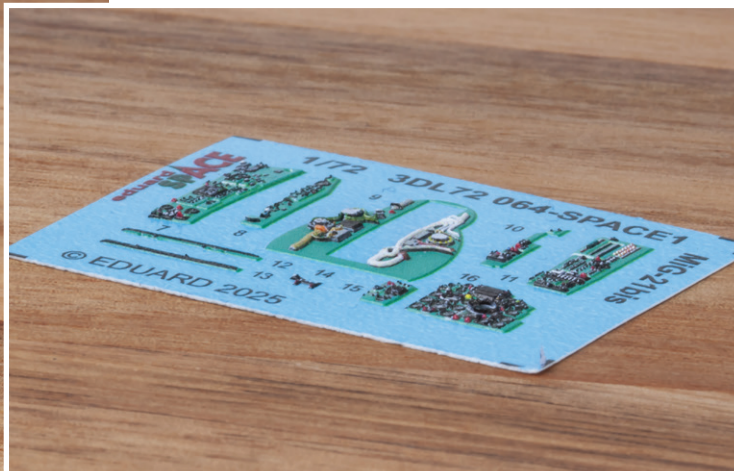
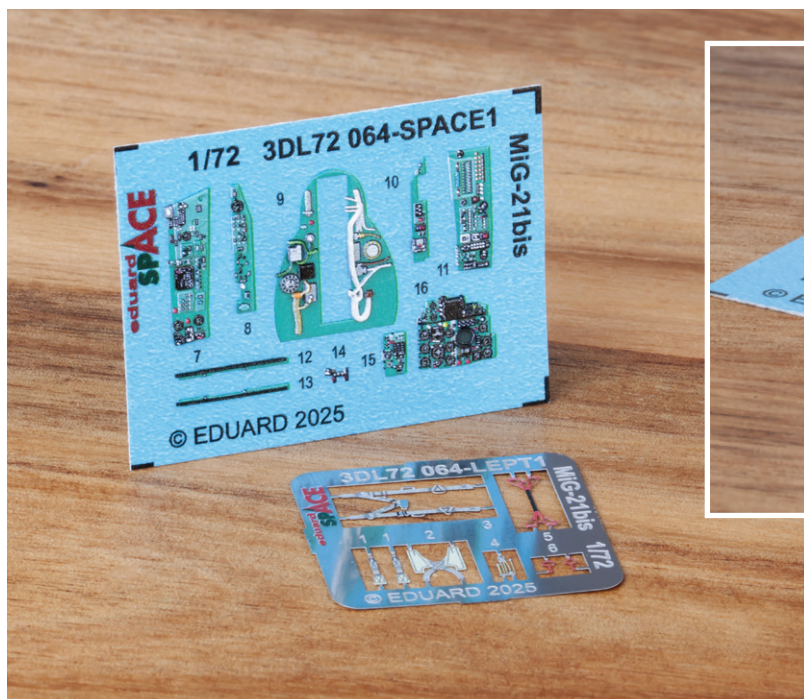
3DL48227 B-26 Marauder rear interior SPACE 1/48 ICM

[Product page](#)


3DL72063 Go 242A SPACE 1/72 IBG

[Product page](#)


3DL72064 MiG-21bis SPACE 1/72 Eduard

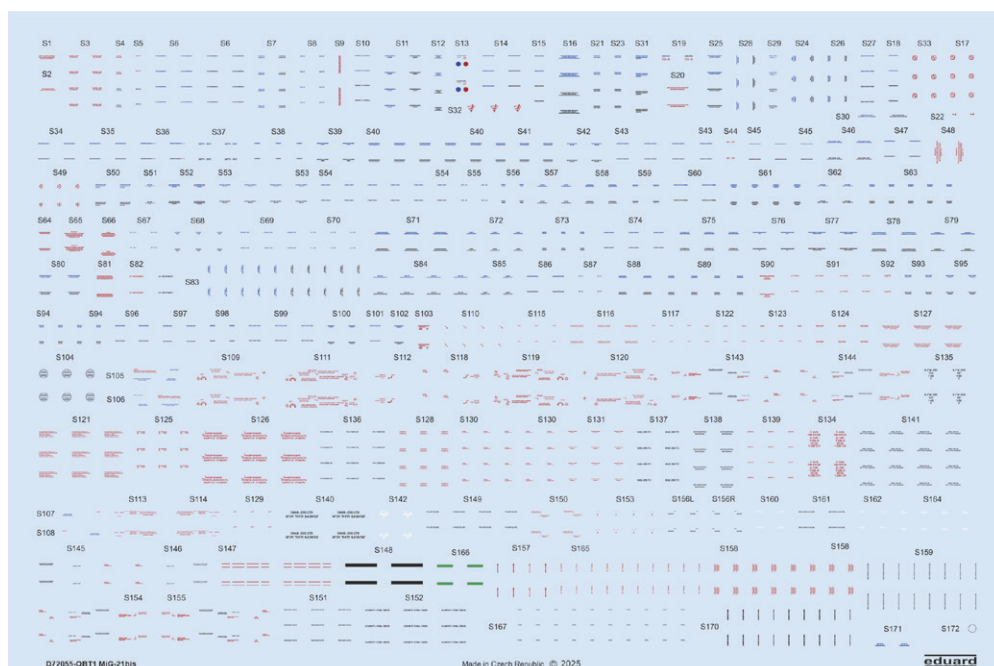
[Product page](#)


DECALS

D72055

MiG-21bis stencils

1/72 Eduard

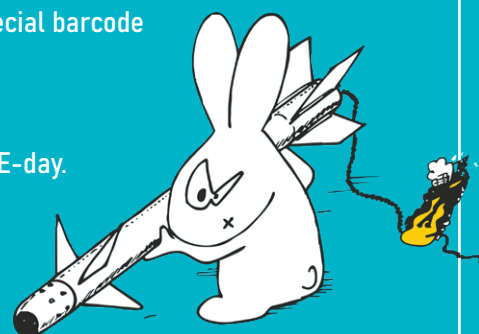
[Product page](#)


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- Unique valuable Club kits and accessories – you will gain access to unique and nowhere else to be sold products, specially made for BFC members.
- Even better prices at Eduard events stand – do you know that Eduard usually has huge discounts on their products at fairs and events all over the world? BFC members will have even higher discount at these events.
- Club T-shirt – you will receive fancy BFC T-shirt with unique design and special barcode (used for event discounts). This exclusive T-shirt will be only available to the members of BFC.
- Free entry fee on E-day – you will not have to pay a penny to visit Eduard's E-day. That means lot of fun at E-day for two days and entry kit, absolutely free!

* E-day - INTERNATIONAL SCALE KIT EXHIBITION - IPMS Czech Republic Championship

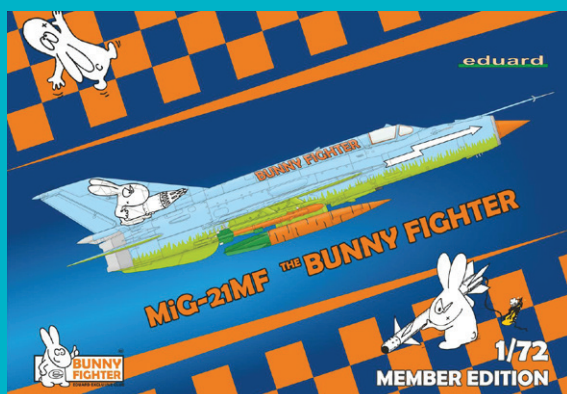


How to become a member of BFC?

Simply by purchasing the Activation product. You will be given 15% discount on (almost) every Eduard product in your shopping cart. To apply this discount, the Activation product has to be in your shopping cart. Activation product is excluded from this calculation.

Activation products:

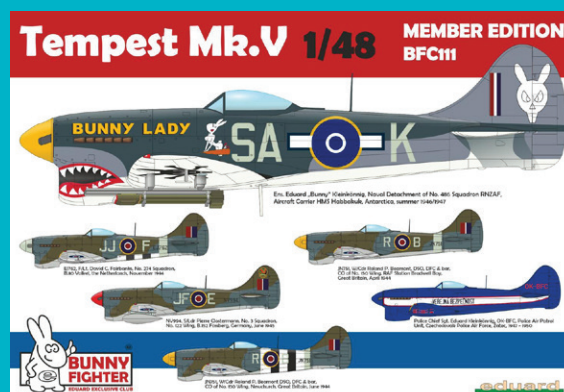
MiG-21MF + T-shirt 1/72



BOX CONTENT:

Plastic parts, Marking options 4, Decal Set, PE parts, Mask, Brassin parts (undercarriage wheels, cockpit, exhaust nozzle, FOD).

Tempest Mk. V + T-shirt 1/48



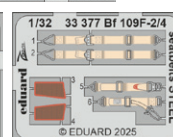
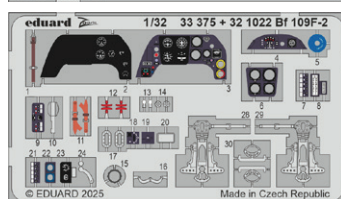
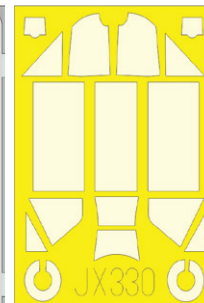
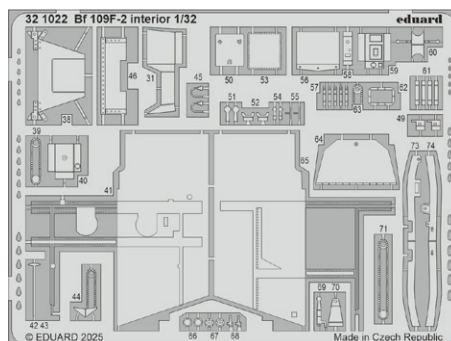
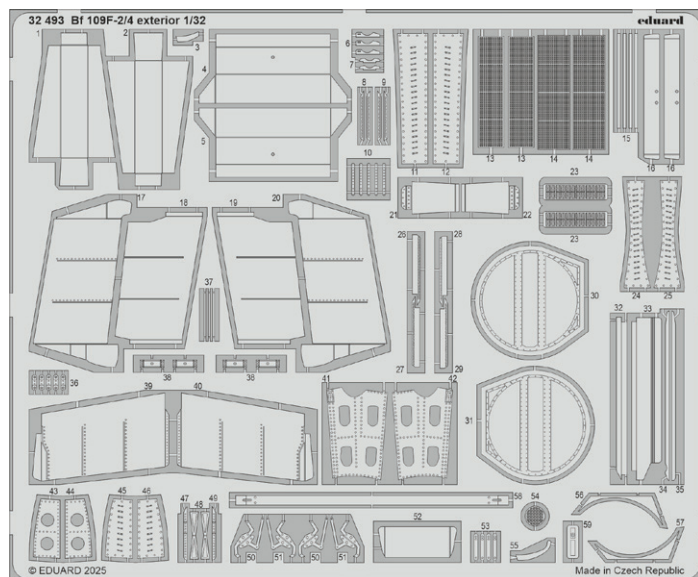
BOX CONTENT:

Plastic parts, Marking options 6, Decal Set, PE parts, Mask, Brassin parts (two different types of wheels, landing flaps, dust filter with eyelid, intake ring and RP-3 60lb rockets), 3D decals for main and side-walk instrument and control panels with photo-etched details and seat belts.

BIG33166 **Bf 109F-2** 1/32 Hobby 2000 / Hasegawa

[Product page](#)

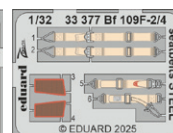
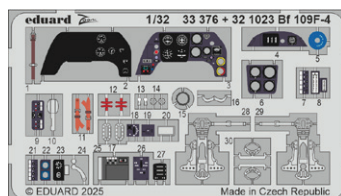
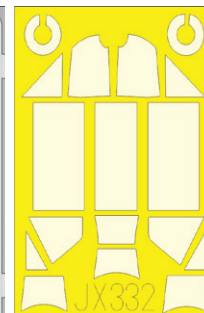
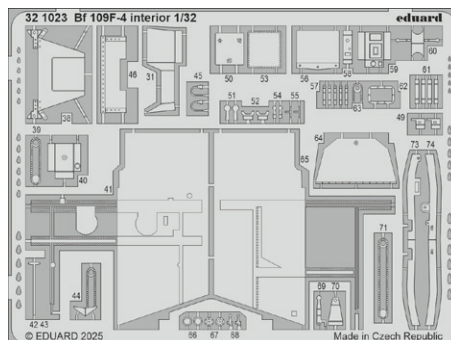
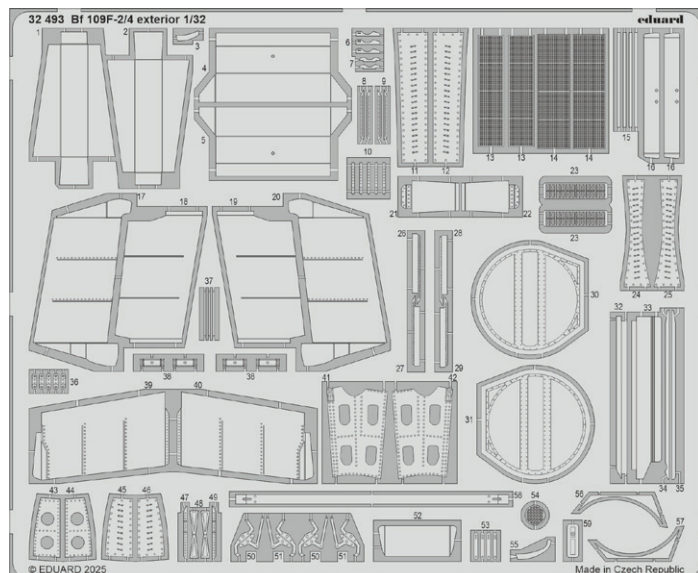
32493 Bf 109F-2/4 exterior
321022 Bf 109F-2
33377 Bf 109F-2/4 seatbelts STEEL
JX330 Bf 109F-2



BIG33167 **Bf 109F-4** 1/32 Hobby 2000 / Hasegawa

[Product page](#)

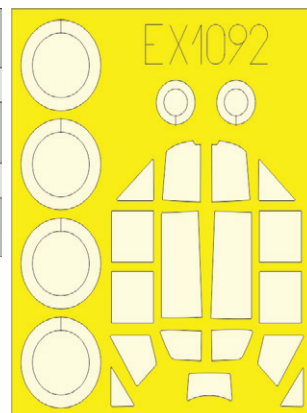
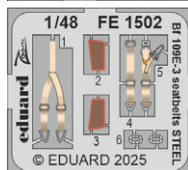
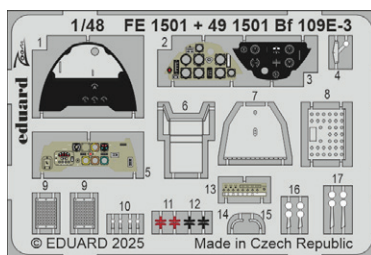
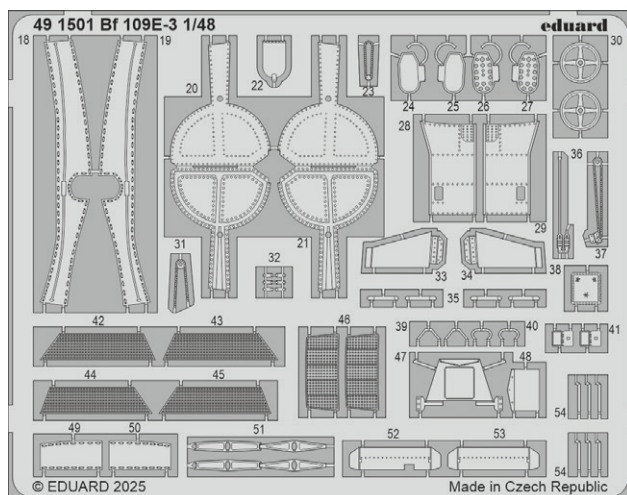
32493 Bf 109F-2/4 exterior
321023 Bf 109F-4
33377 Bf 109F-2/4 seatbelts STEEL
JX332 Bf 109F-4



BIG49444 Bf 109E-3 1/48 Hobby Boss

[Product page](#)

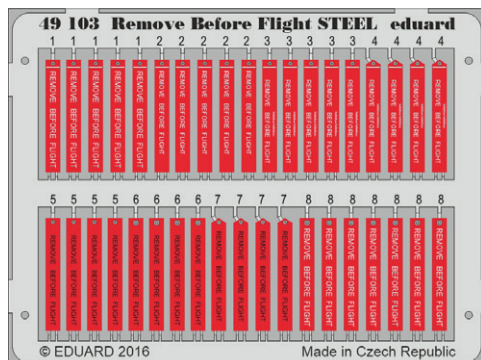
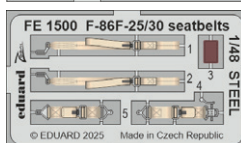
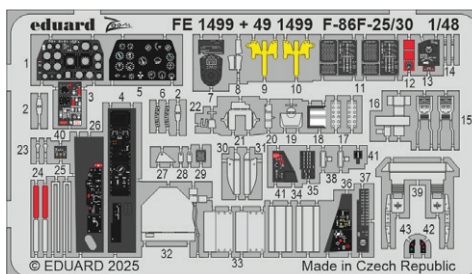
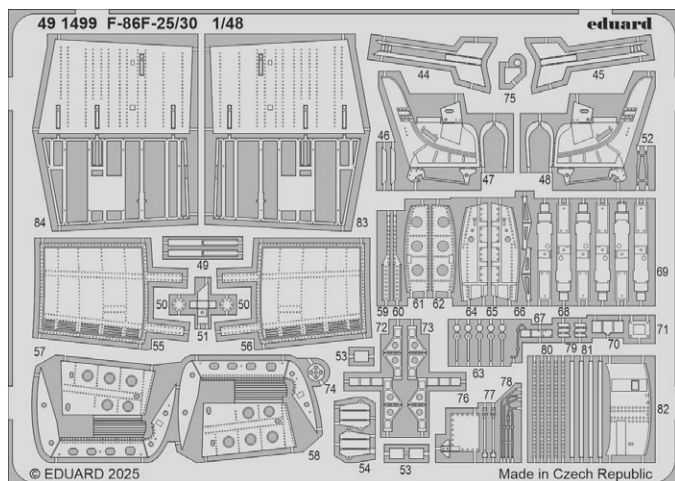
491501 Bf 109E-3
FE1502 Bf 109E-3 seatbelts STEEL
EX1092 Bf 109E-3



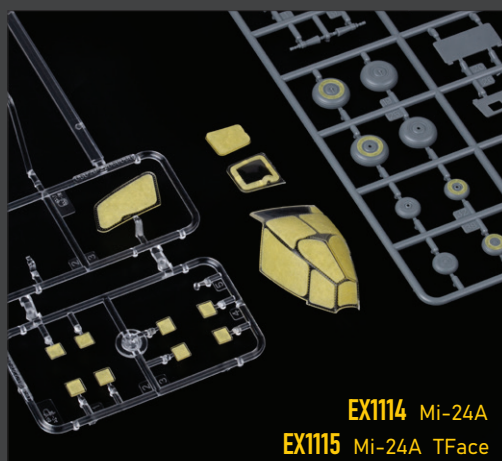
BIG49445 F-86F-25/30 1/48 Airix

[Product page](#)

49103 Remove Before Flight STEEL
491499 F-86F-25/30
FE1500 F-86F-25/30 seatbelts STEEL
EX1090 F-86F-25/30



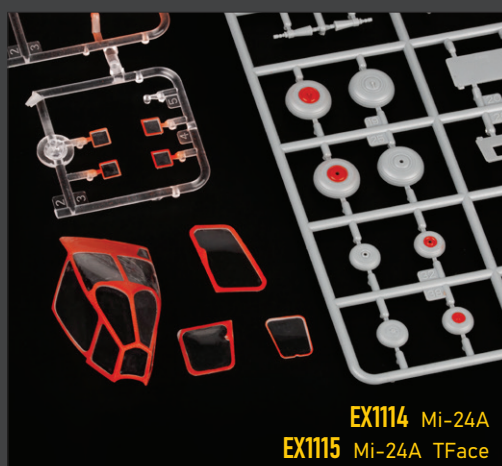
EX1114 Mi-24A
 1/48 Trumpeter
EX1115 Mi-24A TFace
 1/48 Trumpeter
EX1116 B-26G Marauder
 1/48 ICM
EX1117 B-26G Marauder TFace
 1/48 ICM
EX1118 B-26G Marauder
 US national insignia
 1/48 ICM
EX1119 P-51B/C D-day stripes
 1/48 Eduard
EX1120 P-40E US national
 insignia circular
 1/48 Eduard



EX1114 Mi-24A
EX1115 Mi-24A TFace



EX1115 Mi-24A TFace



EX1114 Mi-24A
EX1115 Mi-24A TFace



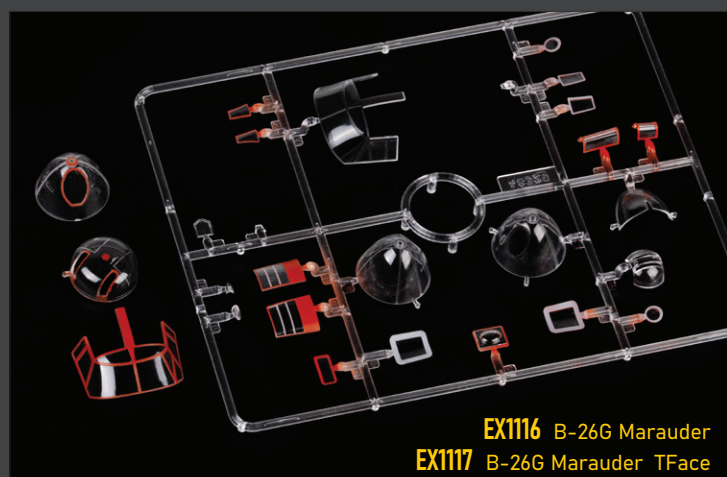
EX1115 Mi-24A TFace



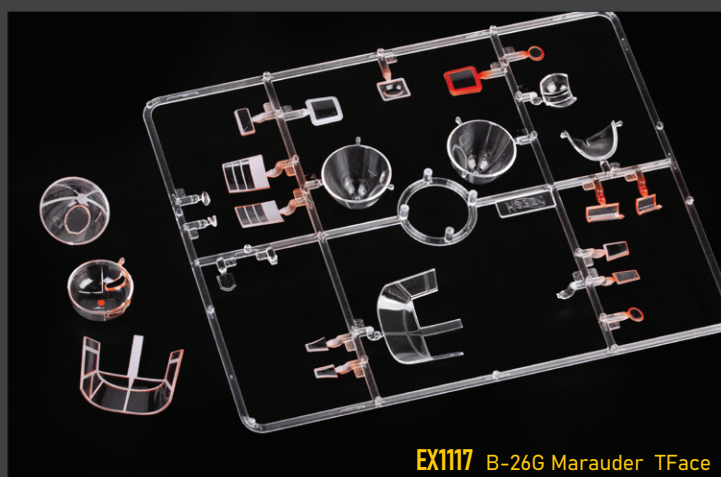
EX1116 B-26G Marauder
EX1117 B-26G Marauder TFace



EX1117 B-26G Marauder TFace



EX1116 B-26G Marauder
EX1117 B-26G Marauder TFace



EX1117 B-26G Marauder TFace



eduard

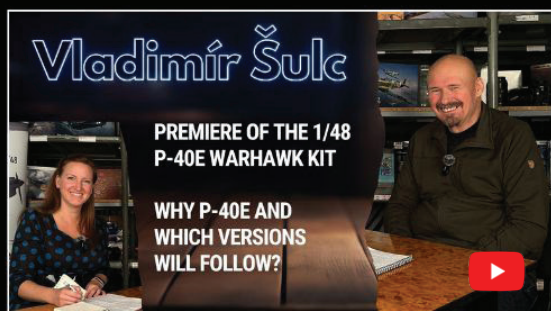


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Borecká

WE HAVE JUST LAUNCHED A NEW YOUTUBE PODCAST CHANNEL

hosted by Katka Borecká!
Her guests will gradually introduce
the new 1/48 scale P-40E model kit
throughout November.

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get to join Katka and her guests on
this platform regularly!



www.youtube.com/@EduardOnAirPodcast

KITS

2151	MiG-21bis DUAL COMBO	1/72	Limited
82137	Fw 190A-6	1/48	ProfiPACK
8463	P-39K/L Airacobra	1/72	Weekend
8801	PSP Display - perforated steel plates	1/48	

PE-SETS

481161	Fw 190A landing flaps	1/48	Eduard
481162	A6M2-K landing flaps	1/48	Eduard
481163	A6M5 landing flaps	1/48	Eduard
481164	B-26G Marauder exterior	1/48	ICM
481165	B-26G Marauder bomb bay	1/48	ICM
491520	A6M5 (Nakajima) upgrade set	1/48	Eduard
491521	A6M5 (Mitsubishi) upgrade set	1/48	Eduard
491522	A6M2-K upgrade set	1/48	Eduard
491523	Sea King HC.4	1/48	Airfix
491524	Sea King HC.4 cargo seatbelts STEEL	1/48	Airfix
491527	Mi-24A	1/48	Trumpeter
491529	B-26G Marauder	1/48	ICM
491530	B-26G Marauder rear interior	1/48	ICM
73849	Go 242A	1/72	IBG

ZOOMS

FE1527	Mi-24A	1/48	Trumpeter
FE1528	Mi-24A seatbelts STEEL	1/48	Trumpeter
FE1523	Sea King HC.4	1/48	Airfix
FE1525	A6M5 seatbelts STEEL	1/48	Eduard
FE1526	A6M2-K seatbelts STEEL	1/48	Eduard
FE1529	B-26G Marauder	1/48	ICM
FE1530	B-26G Marauder seatbelts STEEL	1/48	ICM

MASKS

EX1114	Mi-24A	1/48	Trumpeter
EX1115	Mi-24A TFace	1/48	Trumpeter
EX1116	B-26G Marauder	1/48	ICM
EX1117	B-26G Marauder TFace	1/48	ICM
EX1118	B-26G Marauder US national insignia	1/48	ICM
EX1119	P-51B/C D-day stripes	1/48	Eduard
EX1120	P-40E US national insignia circular	1/48	Eduard

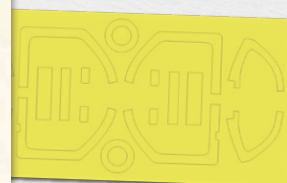
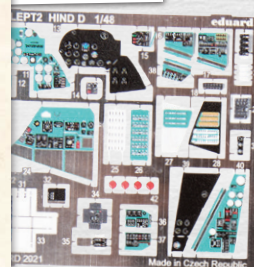
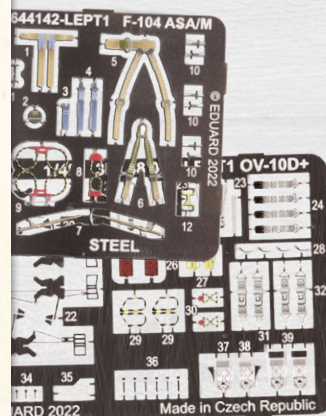
DECAL SETS

D72055	MiG-21bis stencils	1/72	Eduard
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ProfiPACK
edition

WEEKEND
edition



BRASSIN

644305	Lysander Mk.I/Mk.III LööK	1/48	Airfix
674032	Mosquito FB Mk.VI LööK	1/72	Tamiya
674033	Mosquito B Mk.IV/PR Mk.IV LööK	1/72	Tamiya
635038	Sd.Kfz. 250 radio equipment PRINT	1/35	Takom
6481073	Mosquito exhaust stacks PRINT	1/48	Tamiya
6481077	P-40 250lb Mk.2 British bomb	1/48	Eduard
6481078	P-40 30lb frag bombs	1/48	Eduard
6481080	P-40 500lb GP British bomb	1/48	Eduard
6481081	P-40 250lb Mk.1 British bomb	1/48	Eduard
6481082	P-40 250lb MC British bomb	1/48	Eduard
6481091	F-35B exhaust nozzle PRINT	1/48	Tamiya
6481095	A6M5 Type 52 gun bays PRINT	1/48	Eduard
6481097	P-40E radiators upgrade set PRINT	1/48	Eduard
6481100	P-40E tail wheel bay PRINT	1/48	Eduard
6481101	Fw 190A-6 cockpit PRINT	1/48	Eduard
6481102	Fw 190A-6 engine	1/48	Eduard
672411	P-51 exhaust stacks PRINT	1/72	Tamiya
672412	P-51 exhaust stacks w/ fairing PRINT	1/72	Tamiya
672413	P-51D seat w/ integral belts PRINT	1/72	Eduard

LööKPLUS

644303	F4F-4 w/ early wheels LööKplus	1/48	Academy
644304	F4F-4 w/ late wheels LööKplus	1/48	Academy
674029	P-47D Bubbletop LööKplus	1/72	Tamiya
674035	Mosquito NF Mk.II LööKplus	1/72	Tamiya

BIG SIN

SIN648138	A-10A armament	1/48	Great Wall Hobby
SIN67233	F-35B	1/72	Tamiya

SPACE

3DL48221	A6M5 Zero (Mitsubishi) SPACE	1/48	Fine Molds
3DL48222	A6M5 Zero (Mitsubishi) SPACE	1/48	Eduard
3DL48223	Mi-24A SPACE	1/48	Trumpeter
3DL48224	Sea King HC.4 SPACE	1/48	Airfix
3DL48225	B-26G Marauder cockpit & nose SPACE	1/48	ICM
3DL48226	B-26G Marauder Cockpit insulation & armour plates SPACE	1/48	ICM
3DL48227	B-26 Marauder rear interior SPACE	1/48	ICM
3DL72063	Go 242A SPACE	1/72	IBG
3DL72064	MiG-21bis SPACE	1/72	Eduard

BIG ED

BIG33166	Bf 109F-2	1/32	Hobby 2000 / Hasegawa
BIG33167	Bf 109F-4	1/32	Hobby 2000 / Hasegawa
BIG49444	Bf 109E-3	1/48	Hobby Boss
BIG49445	F-86F-25/30	1/48	Airfix

eduard
BRASSINeduard
BRASSIN
Print

LööK

LööK+

BIG
SINeduard
SPACE

BIG-ED

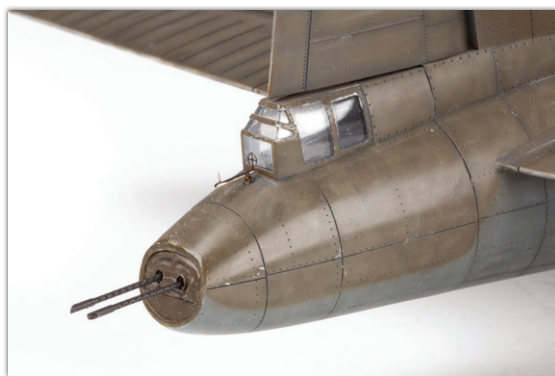
1/48

The Bloody Hundredth 1943

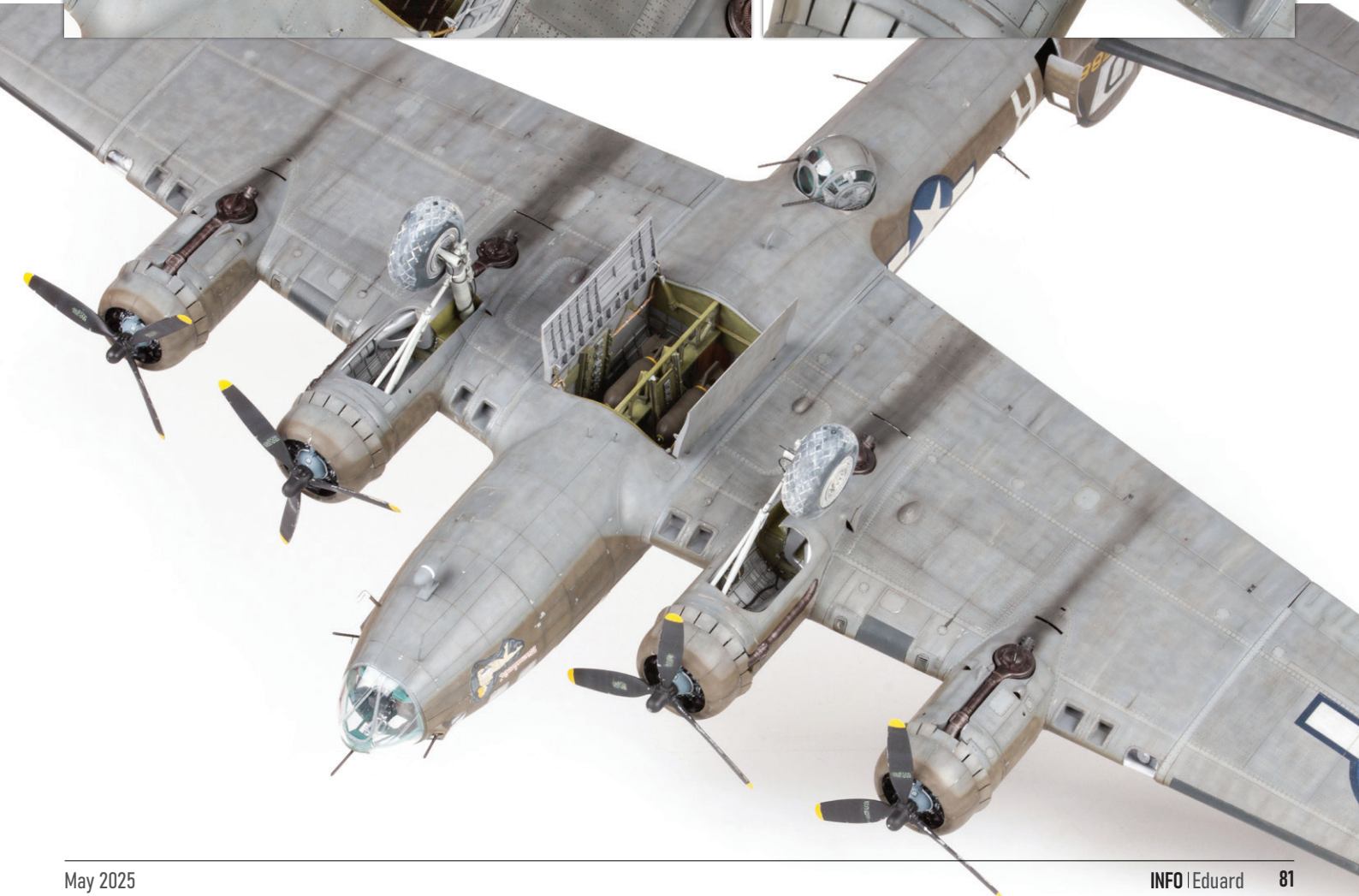
#11183
MARKING N
built by **Robert Szwarc**







B-17F-120-B0 42-30788, Lt. Steward A. McClain crew, 350th BS, 100th BG, Thorpe Abbots, United Kingdom, early 1944



P-39N Airacobra

1/48



#84163

MARKING A

built by **Rene Van Der Hart**

G. Dolnikov, 100 GIAP, 9 GIAD, Germany, 1945



Wessex HU.5

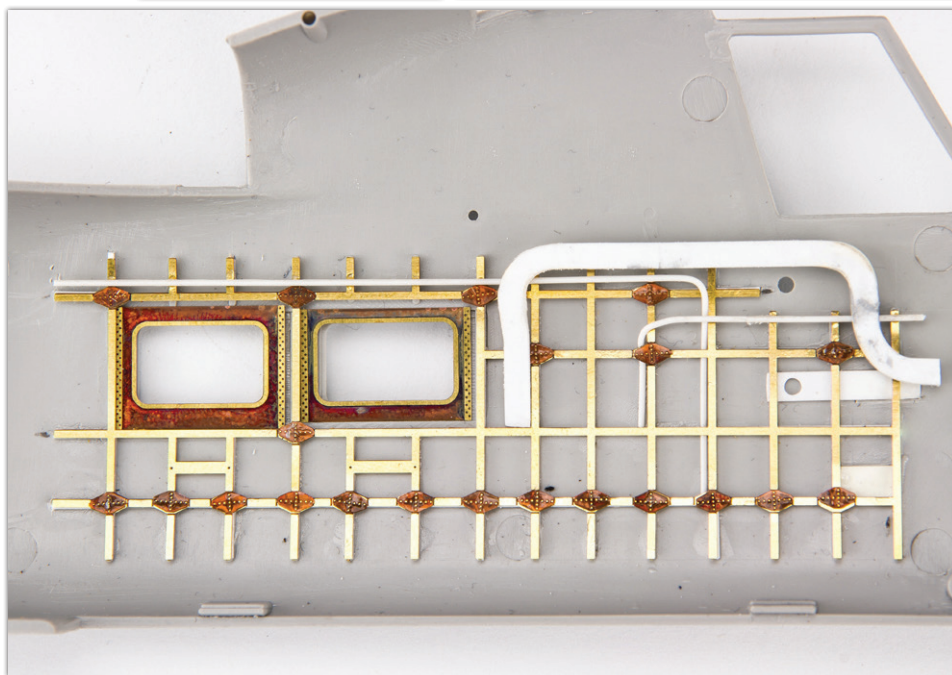
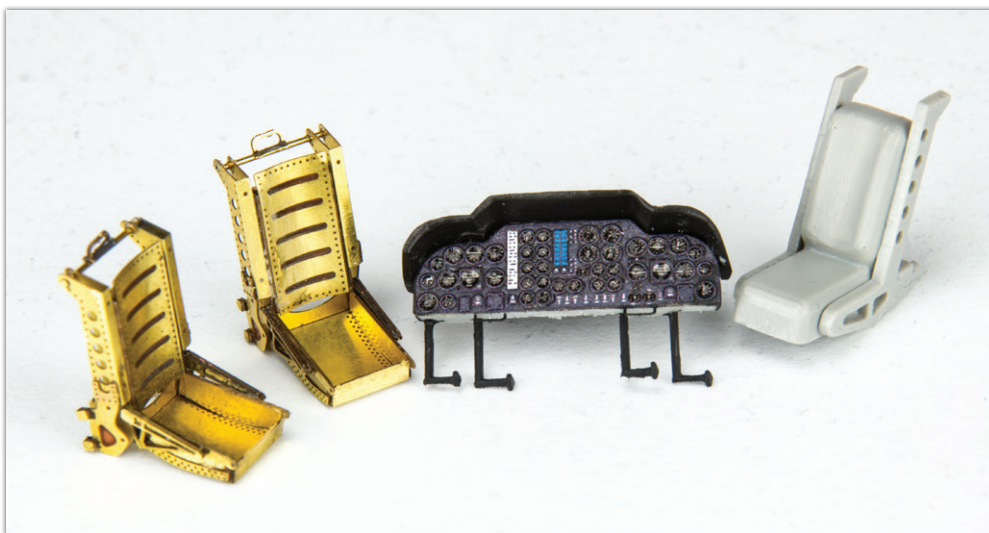
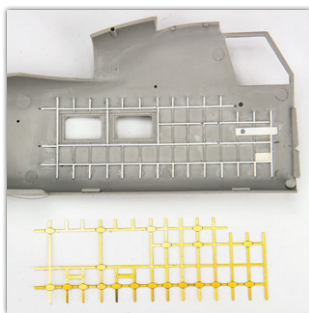
Italeri 1/48

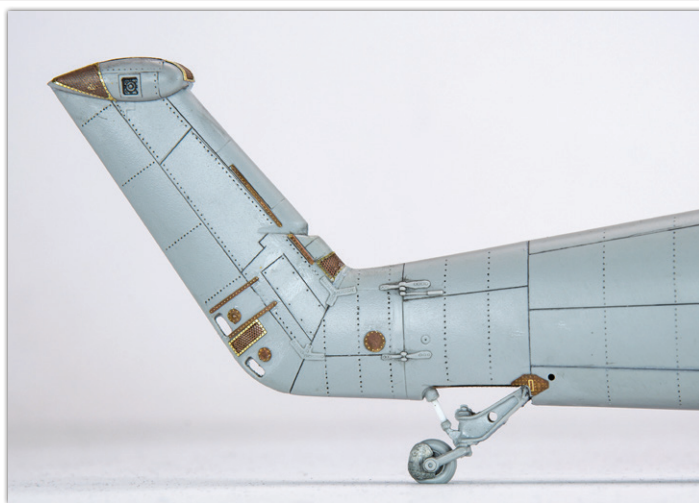
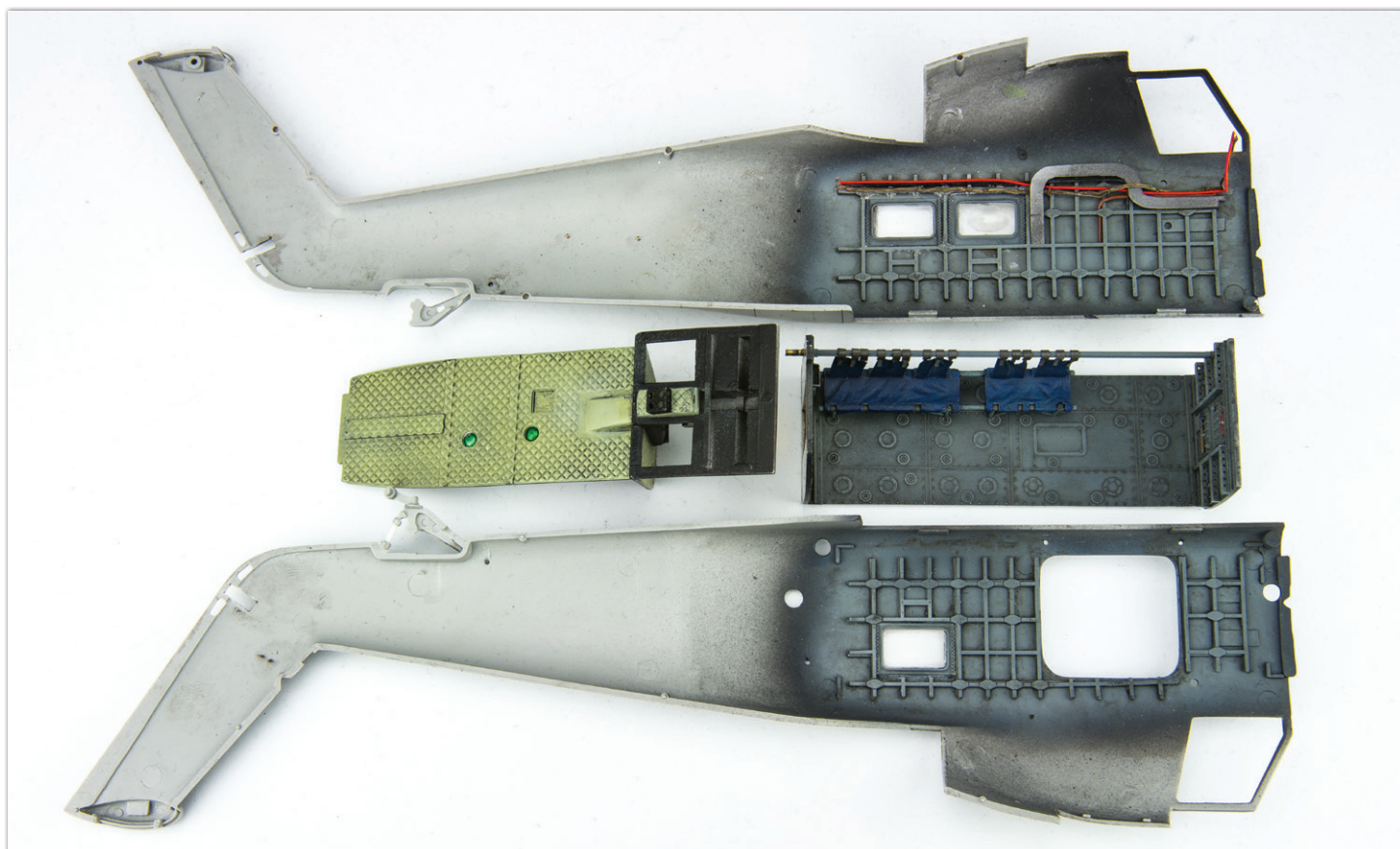
built by **Rene Van Der Hart**



Accessories used:

48754 exterior (PE-Set)
49622 general set (PE-Set)







The history and evolution of the Eduard brand in detail.
The best works seen to date by Juan Manuel Villalba.

**The book everyone
is talking about.**



1/48 Spitfire Mk.IXc • 1/48 Bf 109E-1 • 1/48 Sopwith F.1 CAMEL • 1/48 Fw 190D-9 • 1/48 Bf 108 Taifun • 1/32 A6M2 Type 21 Zero • 1/48 MiG-21MF

AK



AK130022



AK130023 | 256 pages.

JUAN MANUEL VILLALBA • Zdeněk Šebesta • Daniel Zamarbide • Juan Manuel Villegas.



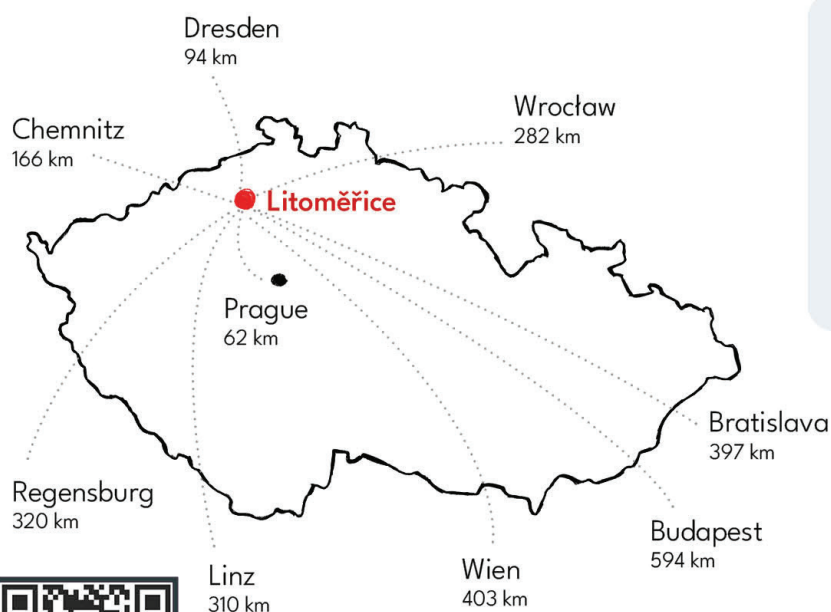
eday

4/10/2025

International plastic kits Competition



Garden of Bohemia ZAHRADA ČECH LITOMĚŘICE



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BIG ED (June)

BIG5376	USS Wasp LHD-1 PART 1 1/350 Trumpeter
BIG49446	F-35C 1/48 Tamiya
BIG49447	A-10A 1/48 Great Wall Hobby
BIG49448	F4F-4 1/48 Academy

BRASSIN (June)

644306	MH-60L LööK 1/48 ICM
644307	Fw 190A-4 LööK 1/48 Eduard
644308	A-10A LööK 1/48 GWH
644309	B-26G LööK 1/48 ICM
6481096	P-40E cockpit PRINT 1/48 Eduard
6481098	P-40 cold weather exhaust stacks fishtail PRINT 1/48 Eduard
6481099	P-40 cold weather exhaust stacks rounded PRINT 1/48 Eduard
6481103	Fw 190A-3 cockpit PRINT 1/48 Eduard
6481105	B-26G wheels 1/48 ICM
6481108	Course Setting Bomb Sight Mk.IX PRINT 1/48
6481109	UH-60 wheels 1/48 ICM
6481110	F-35C wheels 1/48 Tamiya
6481111	B-24D engines PRINT 1/48 Hobby Boss
6481112	B-24D turbochargers PRINT 1/48 Hobby Boss
6481113	B-24D wheels 1/48 Hobby Boss
672414	MiG-21bis exhaust nozzle PRINT 1/72 Eduard
672415	MiG-21bis cockpit PRINT 1/72 Eduard

LööKPlus (June)

674036	P-51D exhaust stacks w/o fairing LööKplus 1/72 Tamiya
674037	Mosquito B Mk.IV/PR Mk.IV LööKplus 1/72 Tamiya
674038	Mosquito FB Mk.VI LööKplus 1/72 Tamiya

BIGSIN (June)

SIN648139	P-40E ADVANCED 1/48 Eduard
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644306**MH-60L LööK****1/48 ICM**

LööK set - Brassin pre-painted dashboard and STEEL seat belts for MH-60L in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: ICM

Set contains:

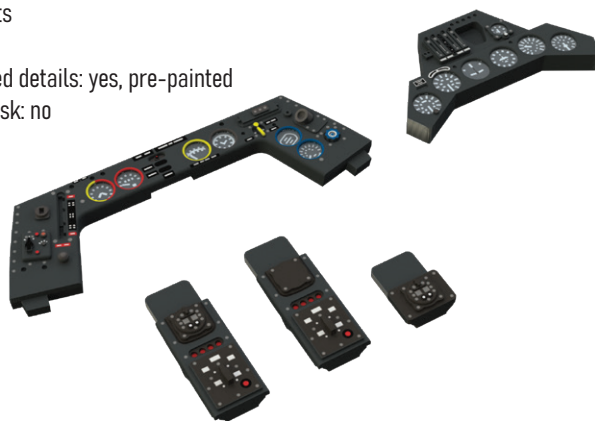
- resin: 2 parts
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

*LööK***644307****Fw 190A-4 LööK****1/48 Eduard**

LööK set - Brassin pre-painted dashboard and STEEL seat belts for Fw 190A-4 in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- resin: 5 parts
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

*LööK***644308****A-10A LööK****1/48 GWH**

LööK set - Brassin pre-painted dashboard and STEEL seat belts for A-10A in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: Great Wall Hobby

Set contains:

- resin: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

*LööK*

644309

B-26G LööK

1/48 ICM

LööK set - Brassin pre-painted dashboard and STEEL seat belts for B-26G in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: ICM

Set contains:

- resin: 2 parts
- 3D print: 2 parts
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no



6481096

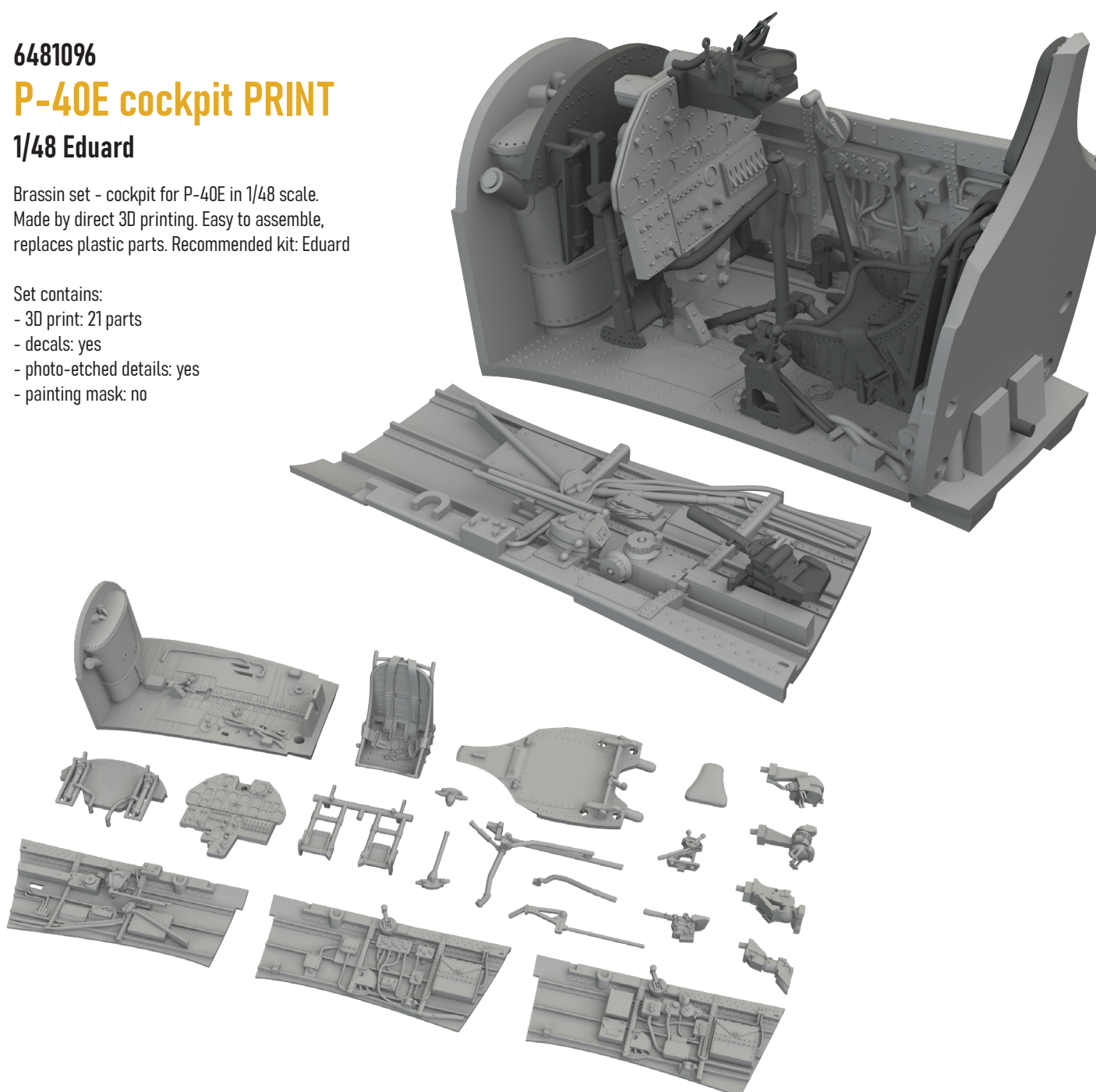
P-40E cockpit PRINT

1/48 Eduard

Brassin set - cockpit for P-40E in 1/48 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 21 parts
- decals: yes
- photo-etched details: yes
- painting mask: no



6481098

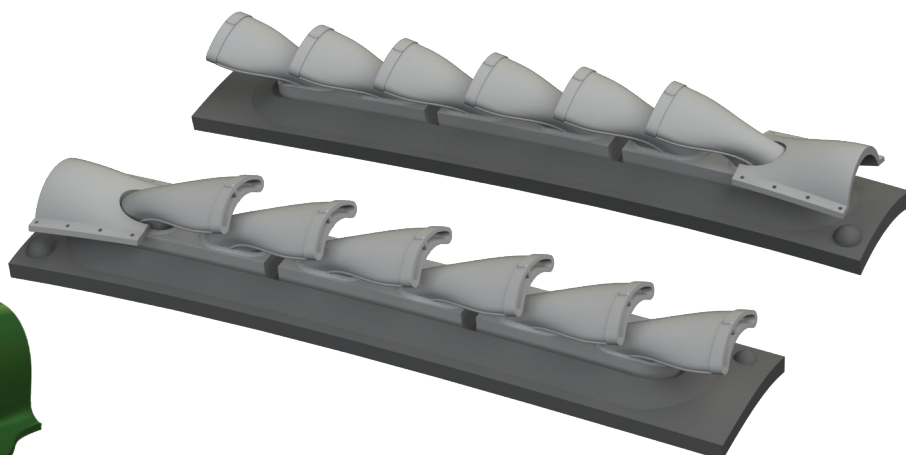
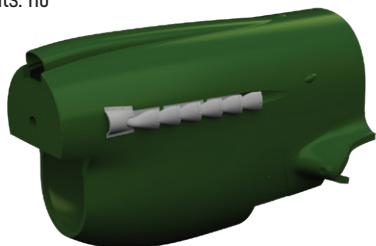
P-40 cold weather exhaust stacks fishtail PRINT

1/48 Eduard

Brassin set - exhaust stacks for P-40 in 1/48 scale.
Made by direct 3D printing. Easy to assemble,
replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 10 parts
- decals: no
- photo-etched details: no
- painting mask: no



6481099

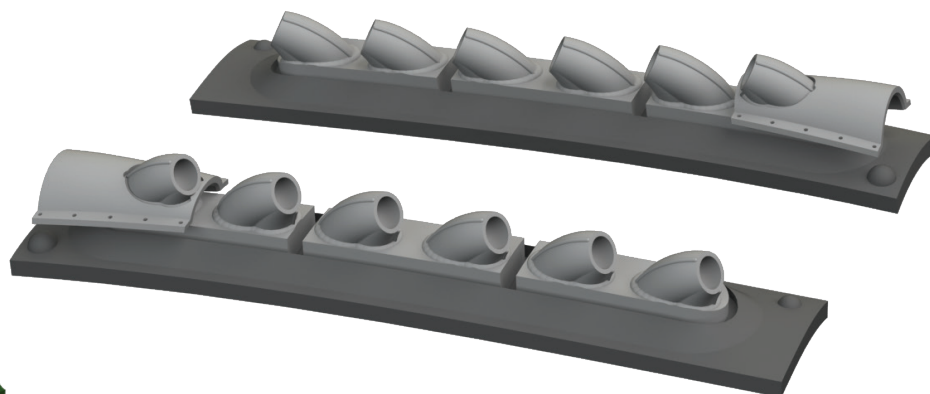
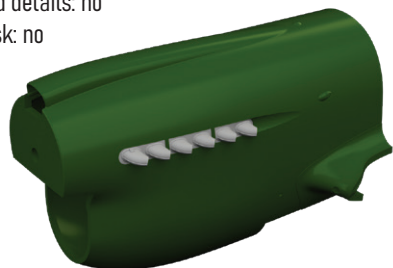
P-40 cold weather exhaust stacks rounded PRINT

1/48 Eduard

Brassin set - exhaust stacks for P-40 in 1/48 scale.
Made by direct 3D printing. Easy to assemble,
replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 10 parts
- decals: no
- photo-etched details: no
- painting mask: no



6481103

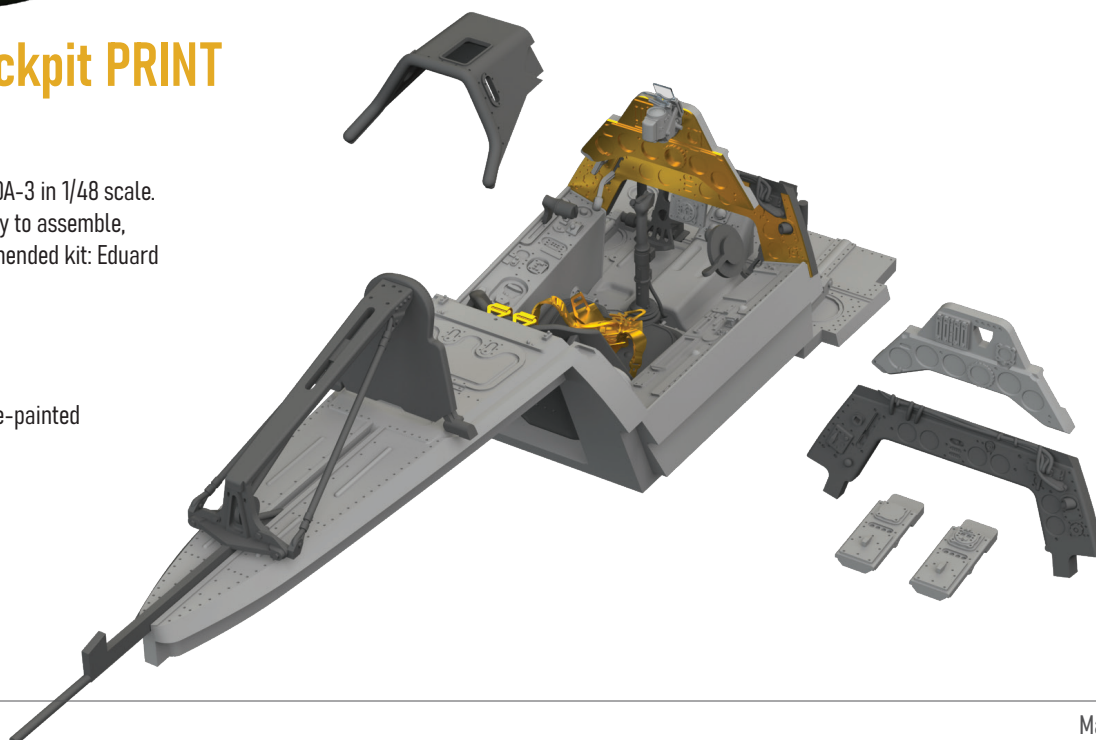
Fw 190A-3 cockpit PRINT

1/48 Eduard

Brassin set - cockpit for Fw 190A-3 in 1/48 scale.
Made by direct 3D printing. Easy to assemble,
replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 21 parts
- decals: yes
- photo-etched details: yes, pre-painted
- painting mask: no



6481105

B-26G wheels**1/48 ICM**

Brassin set - the undercarriage wheels for B-26G in 1/48 scale. The set consists of the main wheels and a nose wheel. Easy to assemble, replaces plastic parts. Recommended kit: ICM

Set contains:

- resin: 3 parts
- decals: no
- photo-etched details: yes
- painting mask: yes



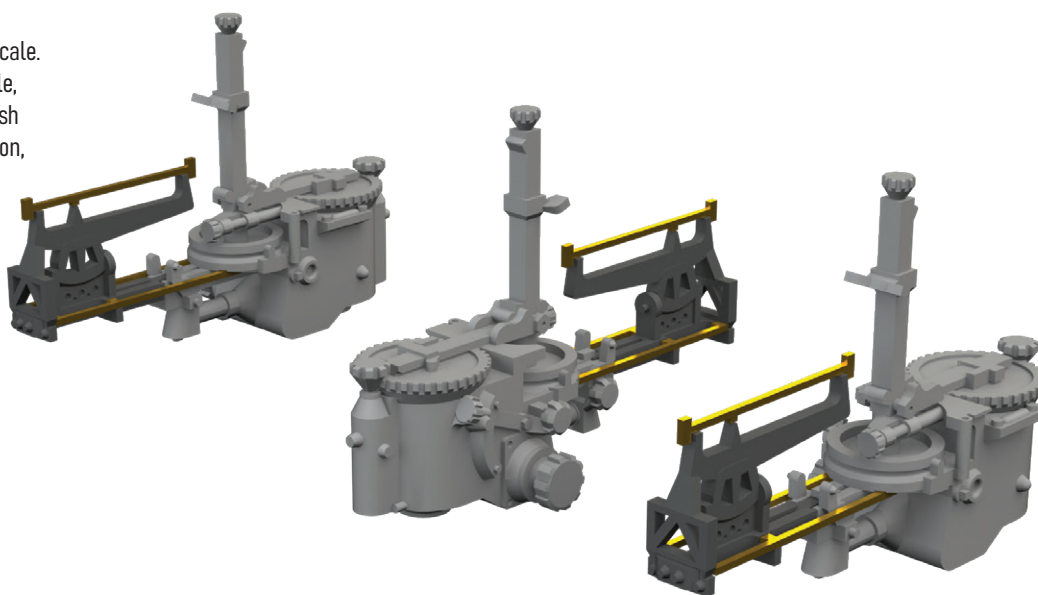
6481108

Course Setting Bomb Sight Mk.IX PRINT**1/48**

Brassin set - British WW2 bomb sight in 1/48 scale. Set consists of 3 bomb sights. Easy to assemble, replaces plastic parts. Recommended for British WW2 bombers like Lancaster, Halifax, Wellington, Beaufort etc.

Set contains:

- 3D print: 3 parts
- decals: no
- photo-etched details: yes
- painting mask: no



6481109

UH-60 wheels**1/48 ICM**

Brassin set - the undercarriage wheels for UH-60 in 1/48 scale. The set consists of the main wheels and a tail wheel. Easy to assemble, replaces plastic parts. Recommended kit: ICM

Set contains:

- resin: 3 parts
- decals: no
- photo-etched details: no
- painting mask: yes



6481110

F-35C wheels**1/48 Tamiya**

Brassin set - the undercarriage wheels for F-35C in 1/48 scale. The set consists of the main wheels and a nose wheel. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- resin: 4 parts
- decals: no
- photo-etched details: no
- painting mask: yes



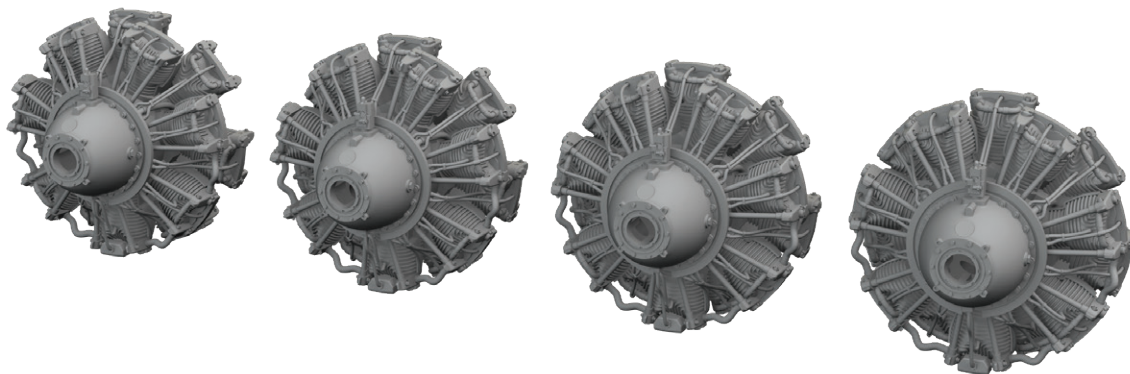
6481111

B-24D engines PRINT**1/48 Hobby Boss**

Brassin set - engines for B-24D in 1/48 scale. Set consists of 4 engines, cowlings are not included. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Hobby Boss

Set contains:

- 3D print: 8 parts
- decals: no
- photo-etched details: no
- painting mask: no



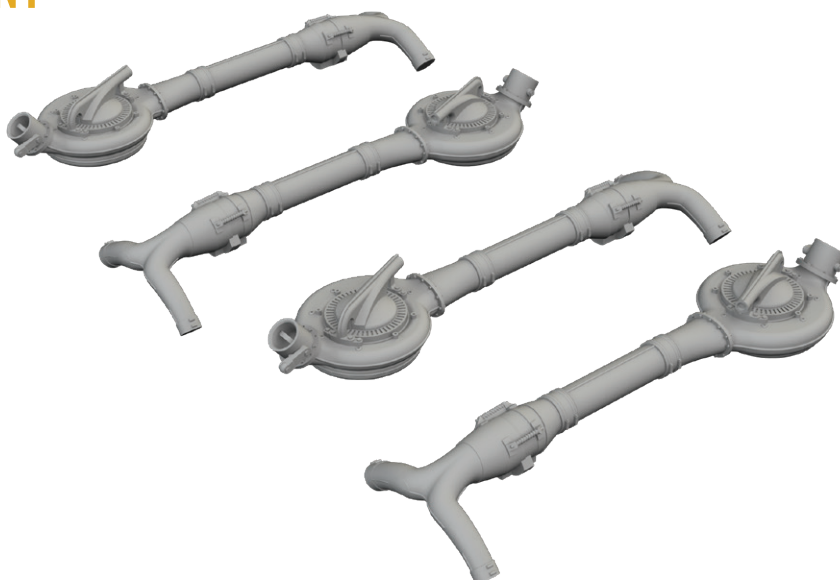
6481112

B-24D turbochargers PRINT**1/48 Hobby Boss**

Brassin set - turbochargers for B-24D in 1/48 scale. Set consists of 4 superchargers. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Hobby Boss

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: no
- painting mask: no



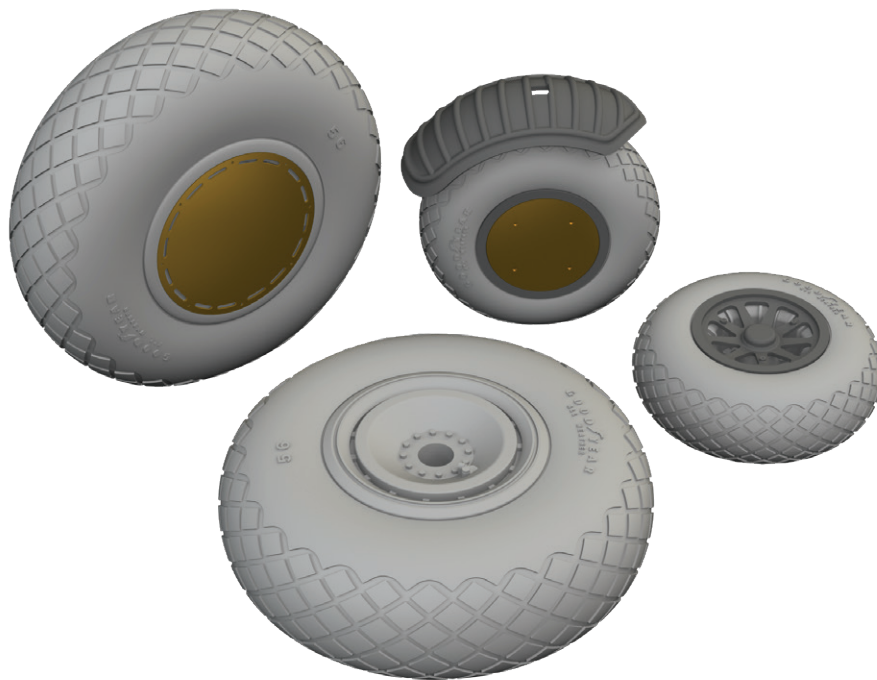
6481113

B-24D wheels**1/48 Hobby Boss**

Brassin set - the undercarriage wheels for B-24D in 1/48 scale. The set consists of the main wheels and a nose wheel. Easy to assemble, replaces plastic parts. Recommended kit: Hobby Boss

Set contains:

- resin: 4 parts
- 3D print: 3 parts
- decals: no
- photo-etched details: yes
- painting mask: yes



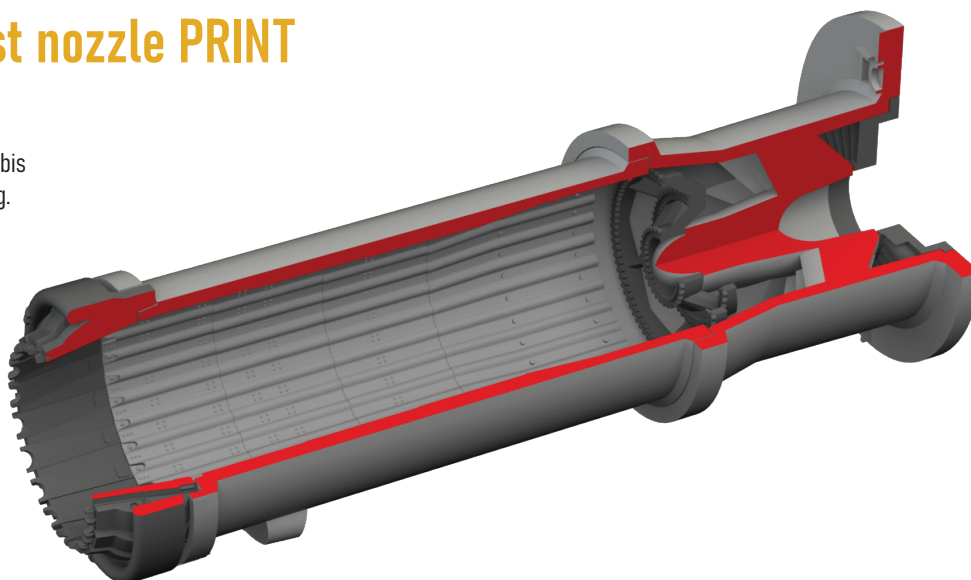
672414

MiG-21bis exhaust nozzle PRINT**1/72 Eduard**

Brassin set - exhaust nozzle for MiG-21bis in 1/72 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 5 parts
- decals: no
- photo-etched details: no
- painting mask: no



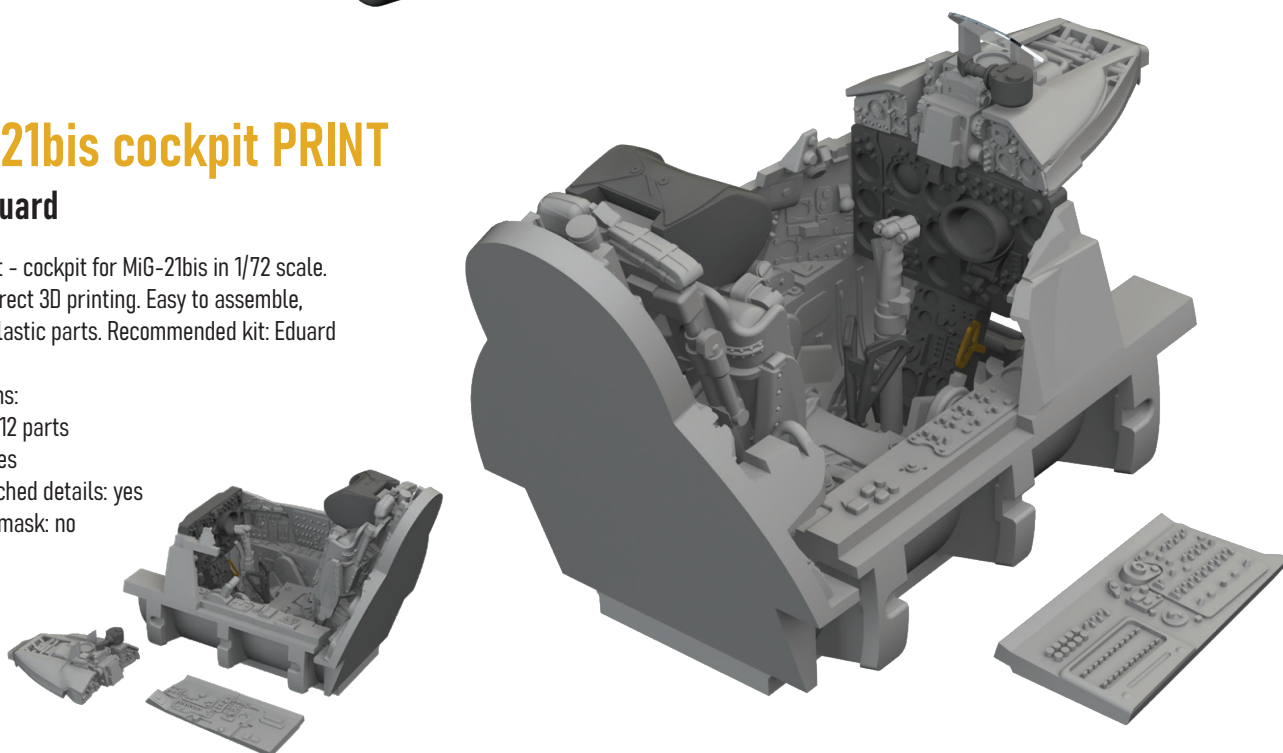
672415

MiG-21bis cockpit PRINT**1/72 Eduard**

Brassin set - cockpit for MiG-21bis in 1/72 scale. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 12 parts
- decals: yes
- photo-etched details: yes
- painting mask: no



674036

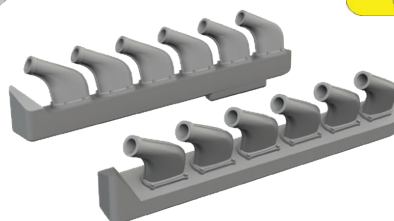
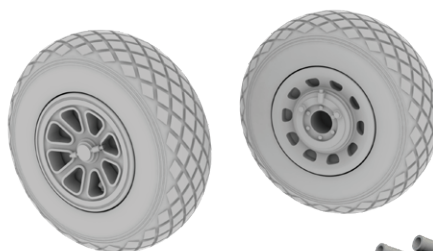
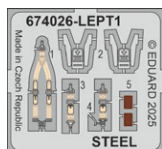
P-51D exhaust stacks w/o fairing LööKplus

1/72 Tamiya

Collection of 4 sets for P-51D in 1/72 scale.

Recommended kit: Tamiya

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- exhaust, stacks
- painting mask



LööK+

674037

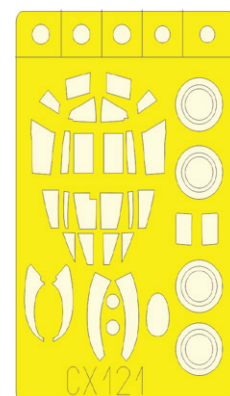
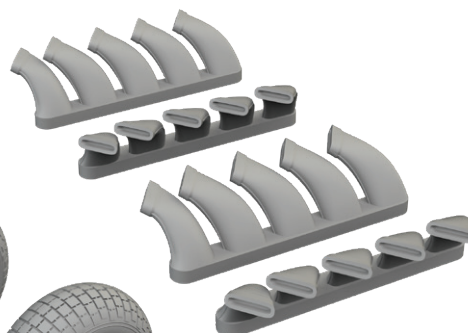
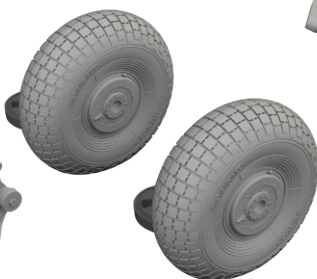
Mosquito B Mk.IV/PR Mk.IV LööKplus

1/72 Tamiya

Collection of 4 sets for Mosquito B Mk.IV or PR Mk.IV in 1/72 scale.

Recommended kit: Tamiya

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- exhaust, stacks
- painting mask



LööK+

674038

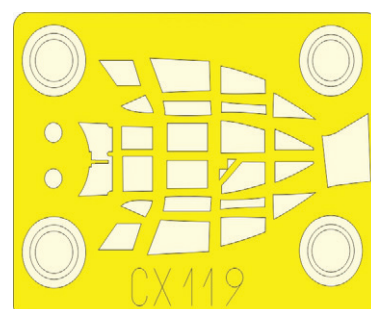
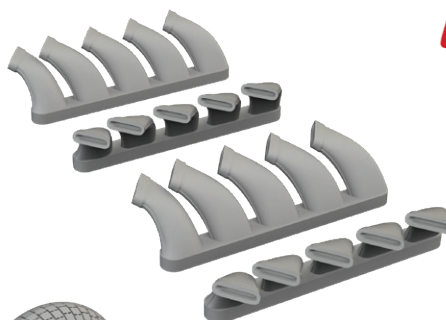
Mosquito FB Mk.VI LööKplus

1/72 Tamiya

Collection of 4 sets for Mosquito FB Mk.VI in 1/72 scale.

Recommended kit: Tamiya

- LööK set (pre-painted Brassin dashboard & Steelbelts)
- undercarriage wheels
- exhaust, stacks
- painting mask



LööK+

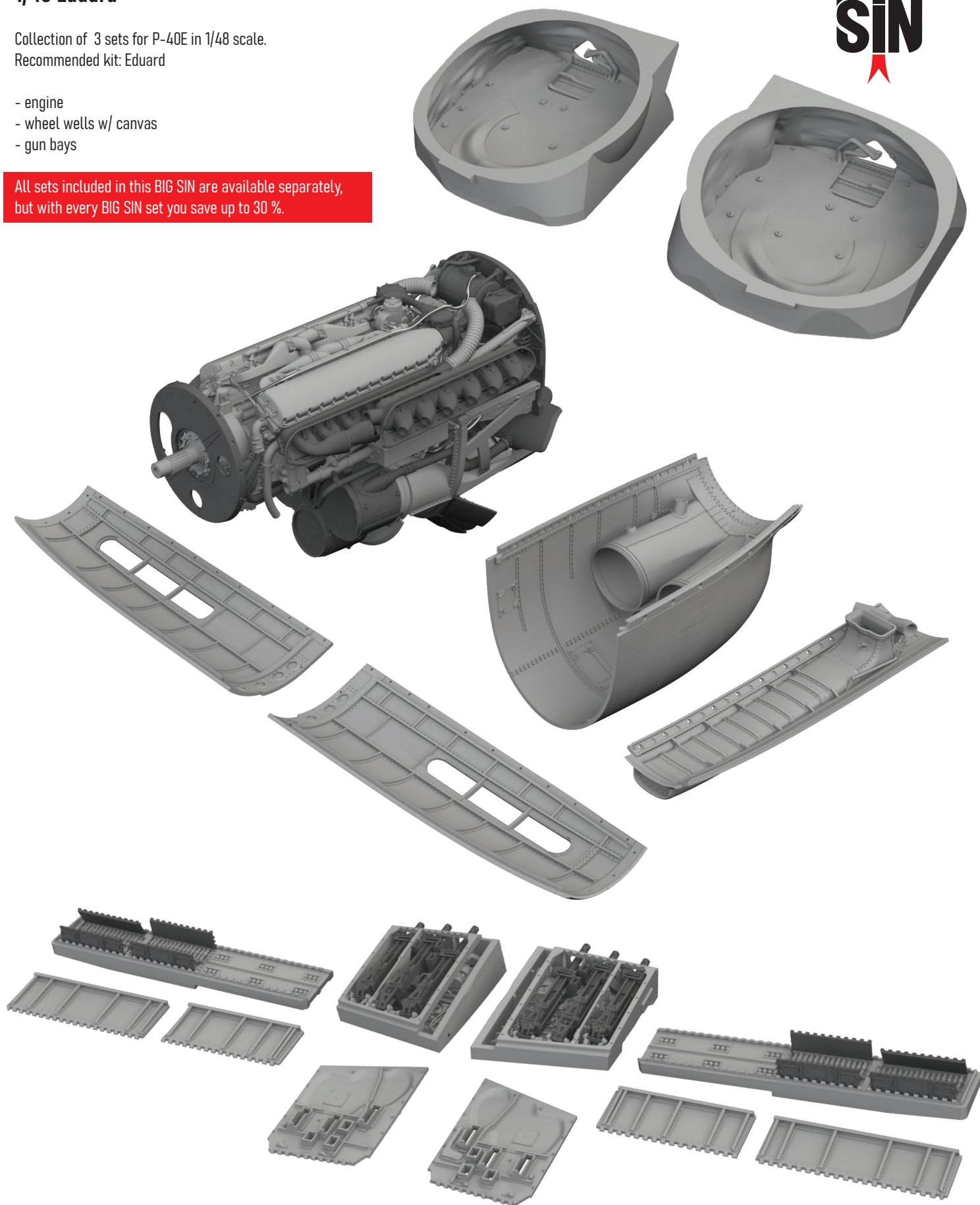
SIN648139

P-40E ADVANCED**1/48 Eduard**

Collection of 3 sets for P-40E in 1/48 scale.
Recommended kit: Eduard

- engine
- wheel wells w/ canvas
- gun bays

All sets included in this BIG SIN are available separately,
but with every BIG SIN set you save up to 30 %.



PE-SETS

53323	USS Gambier Bay CVE-73 part 1	1/350	Hasegawa
36534	T-54	1/35	Hobby Boss
36535	GPA amphibian 4x4 truck	1/35	Tamiya
32494	A6M2 Zero landing flaps	1/32	Tamiya
321024	A6M2 Zero interior	1/32	Tamiya
491531	A-1J	1/48	Tamiya
491532	UH-60A	1/48	ICM
491533	UH-60A cargo seatbelts STEEL	1/48	ICM
72744	MiG-21bis upgrade set	1/72	Eduard
72745	TBM-3 landing flaps	1/72	Hobby Boss
72746	TBM-3 exterior	1/72	Hobby Boss
72747	TBM-3 folded wings	1/72	Hobby Boss
72748	TBM-3 bomb bay	1/72	Hobby Boss
73850	TBM-3	1/72	Hobby Boss

ZOOMS

33378	A6M2 Zero seatbelts STEEL	1/32	Tamiya
33379	A6M2 Zero	1/32	Tamiya
FE1531	A-1J	1/48	Tamiya
FE1532	UH-60A	1/48	ICM
FE1533	UH-60A seatbelts STEEL	1/48	ICM
SS850	TBM-3	1/72	Hobby Boss

MASKS

JX334	A6M2 Zero TFace	1/32	Tamiya
JX335	A6M2 Zero national marking	1/32	Tamiya
EX1121	UH-60A	1/48	ICM
EX1122	UH-60A TFace	1/48	ICM
EX1123	Fi 156C TFace	1/48	Tamiya
EX1124	P-40E US national insignia w/ red center	1/48	Eduard
CX691	TBM-3	1/72	Hobby Boss

SPACE

3DL32031	A6M2 Zero SPACE	1/32	Tamiya
3DL32032	A6M2 Zero seatbelts SPACE	1/32	Tamiya
3DL48228	UH-60A SPACE	1/48	ICM
3DL48229	Fi 156C SPACE	1/48	Eduard
3DL72065	TBM-3 SPACE	1/72	Hobby Boss

DECAL SETS

D72056	Bf 109G tropical camouflage scheme	1/72	Eduard
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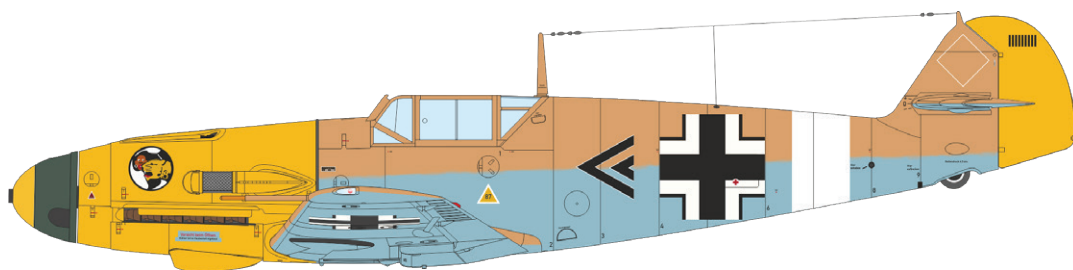
AFRIKA

Dual Combo

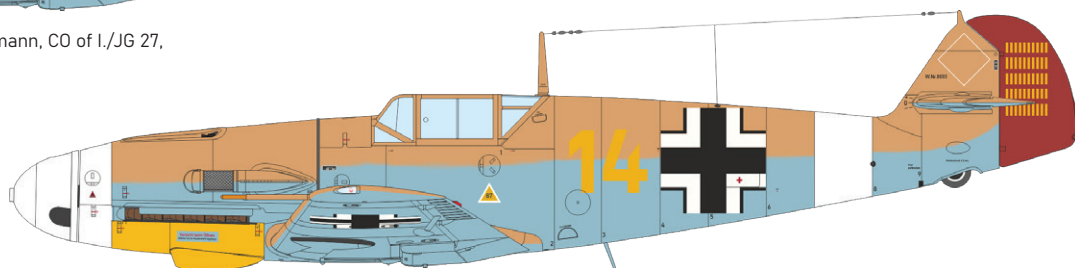
1/72



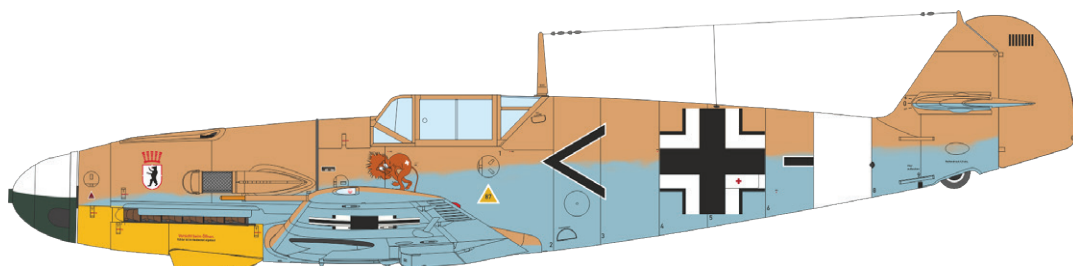
#2112

LIMITED
EDITION


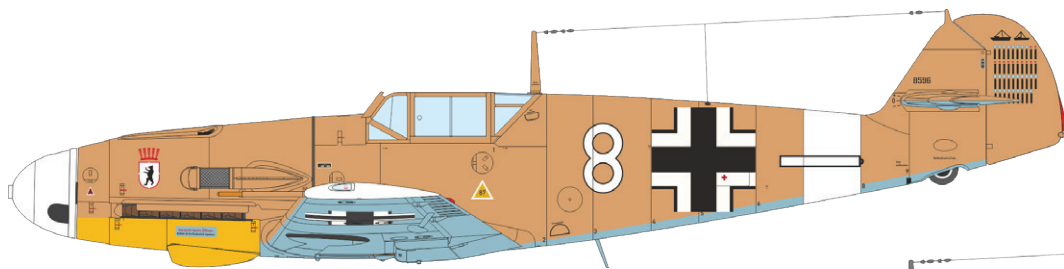
Bf 109F-4/Trop, Hptm. Eduard Neumann, CO of I./JG 27, Martuba, Libya, December 1941



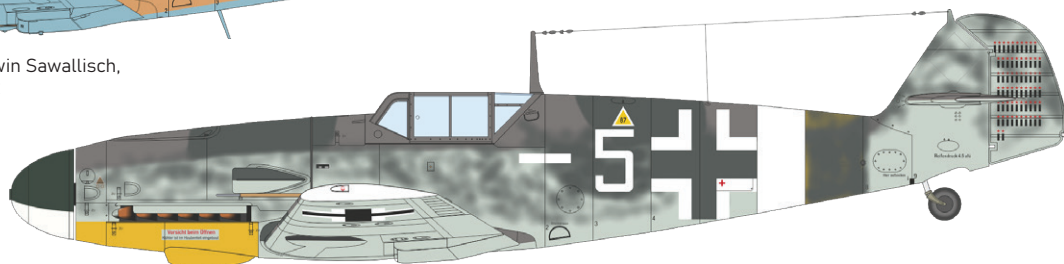
Bf 109F-4/Trop, W.Nr. 8693, Lt. Hans-Joachim Marseille, 3./JG 27, Martuba, Libya, February 1942



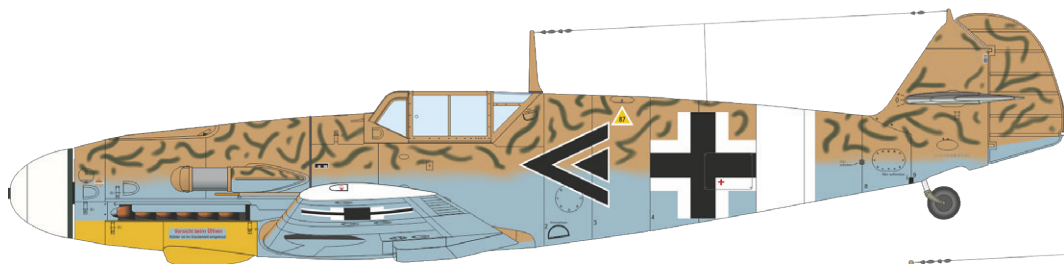
Bf 109F-4/Trop, Obfw. Karl-Heinz Bendert, Stab II./JG 27, Derna, Libya, December 1941



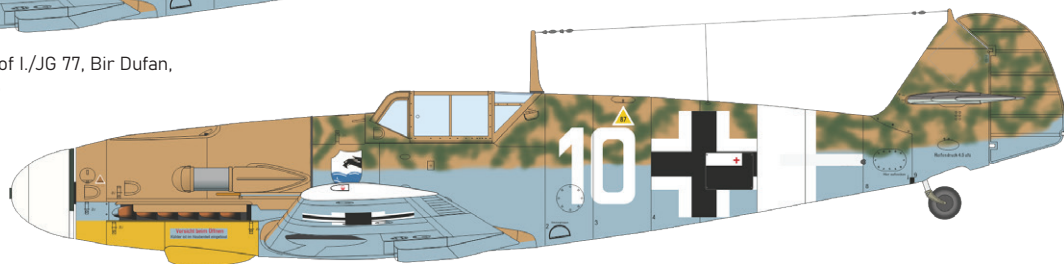
Bf 109F-4/Trop, W.Nr. 8596, Obfw. Erwin Sawallisch,
4./JG 27, Martuba, Libya, August 1942



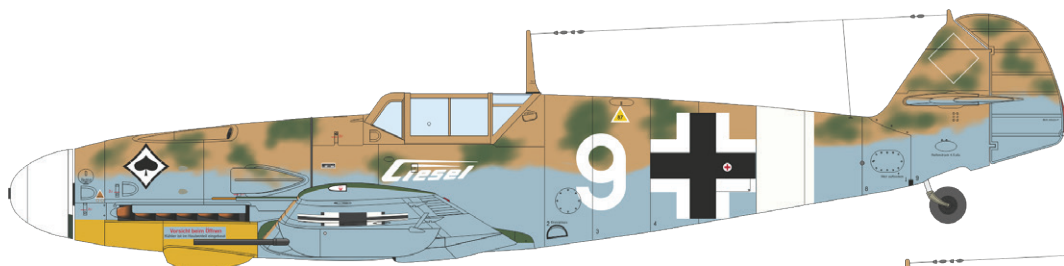
Bf 109G-2/Trop, Fw. Anton Hafner, 4./JG 51, Bizerta, Tunisia, November 1942



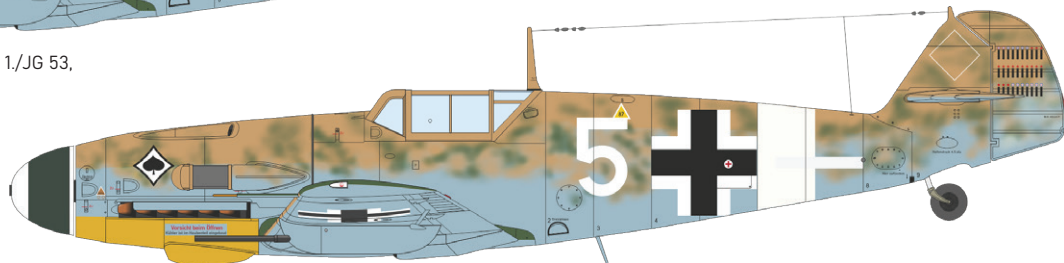
Bf 109G-2/Trop, Hptm. Heinz Bär, CO of I./JG 77, Bir Dufan,
Libya, December 1942 – January 1943



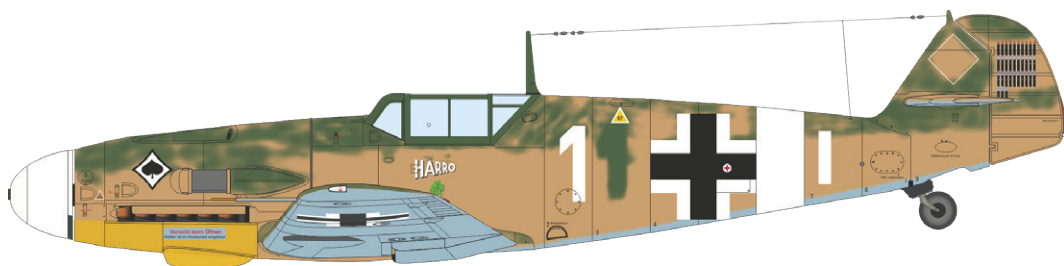
Bf 109G-2/Trop, Obfw. Ernst-Wilhelm Reinert, 4./JG 77, Castell Benito, Libya, January 1943



Bf 109G-4/R6/Trop, Fw. Arno Fischer, 1./JG 53,
Bizerta, Tunisia, February 1943



Bf 109G-4/R6/Trop, Obfw. Stephan Litjens, 4./JG 53, La Marsa, Tunisia, April 1943



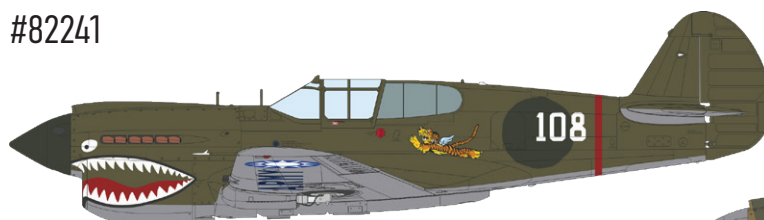
Bf 109G-4/R3/Trop, Oblt. Jürgen Harder, 7./JG 53, Bizerta, Tunisia, February 1943

P-40E Warhawk

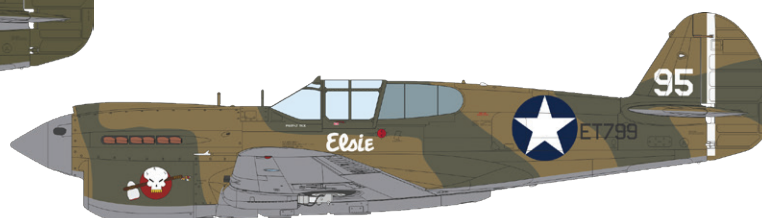
1/48



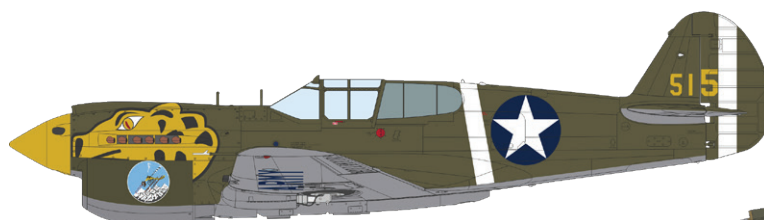
#82241

ProfiPACK
 edition


David L. Hill, 2nd FS, AVG, 14th AF,
Kuomintang, China, May 1942



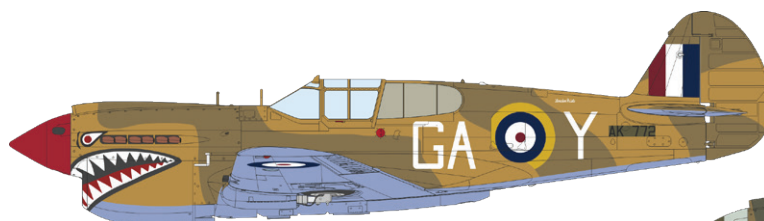
ET795, 1Lt. Clay Tice, Jr, 9th FS, 49th FG,
Port Moresby, New Guinea, 1942



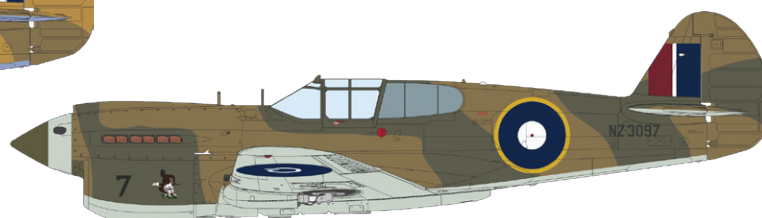
11th FS, 343rd FG, Adak, Adak Island, 1942



ET600, Lt. Andrew J. Reynolds, 9th FS,
49th FG, Darwin, Australia, August 1942



AK772, Sqn. Ldr. Clive Caldwell, F/Sgt Henry G. Burney,
No. 112 Squadron (RAF), LG152 Gambut, Libya,
March-May 1942



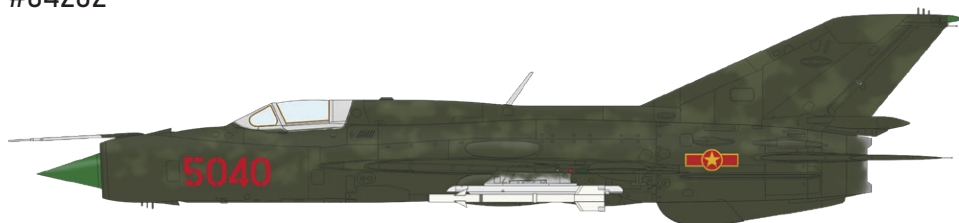
NZ3097, F/O Aitken M. Davis, No. 15 Squadron RNZAF, Espiritu Santo, 1943

MiG-21PFM

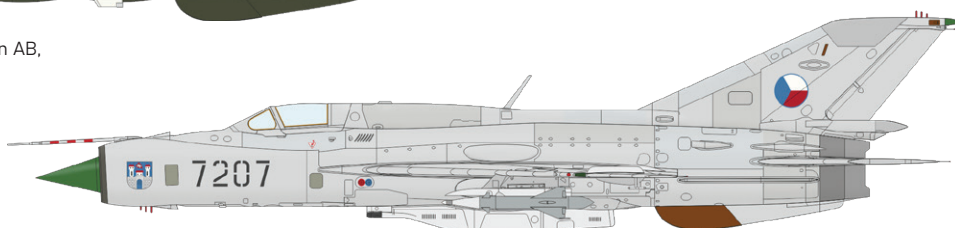
1/48



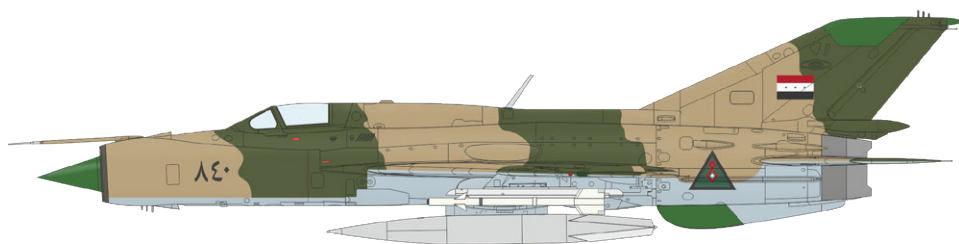
#84202

WEEKEND
 edition


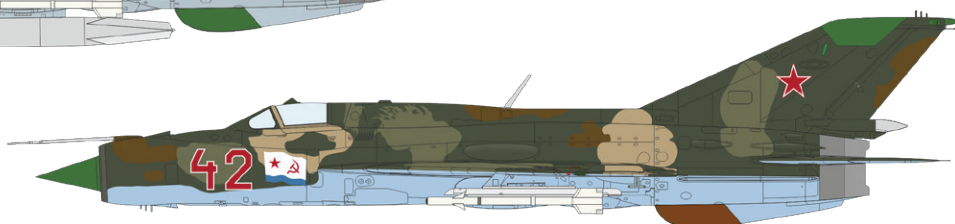
Le Thanh Dao, 927 Fighter Regiment, Lam Son AB,
Democratic Republic of Vietnam, May 1972



3rd Squadron, 11 Fighter Aviation Regiment,
Czechoslovak Air Force, Žatec,
Czechoslovakia, 1987-1991

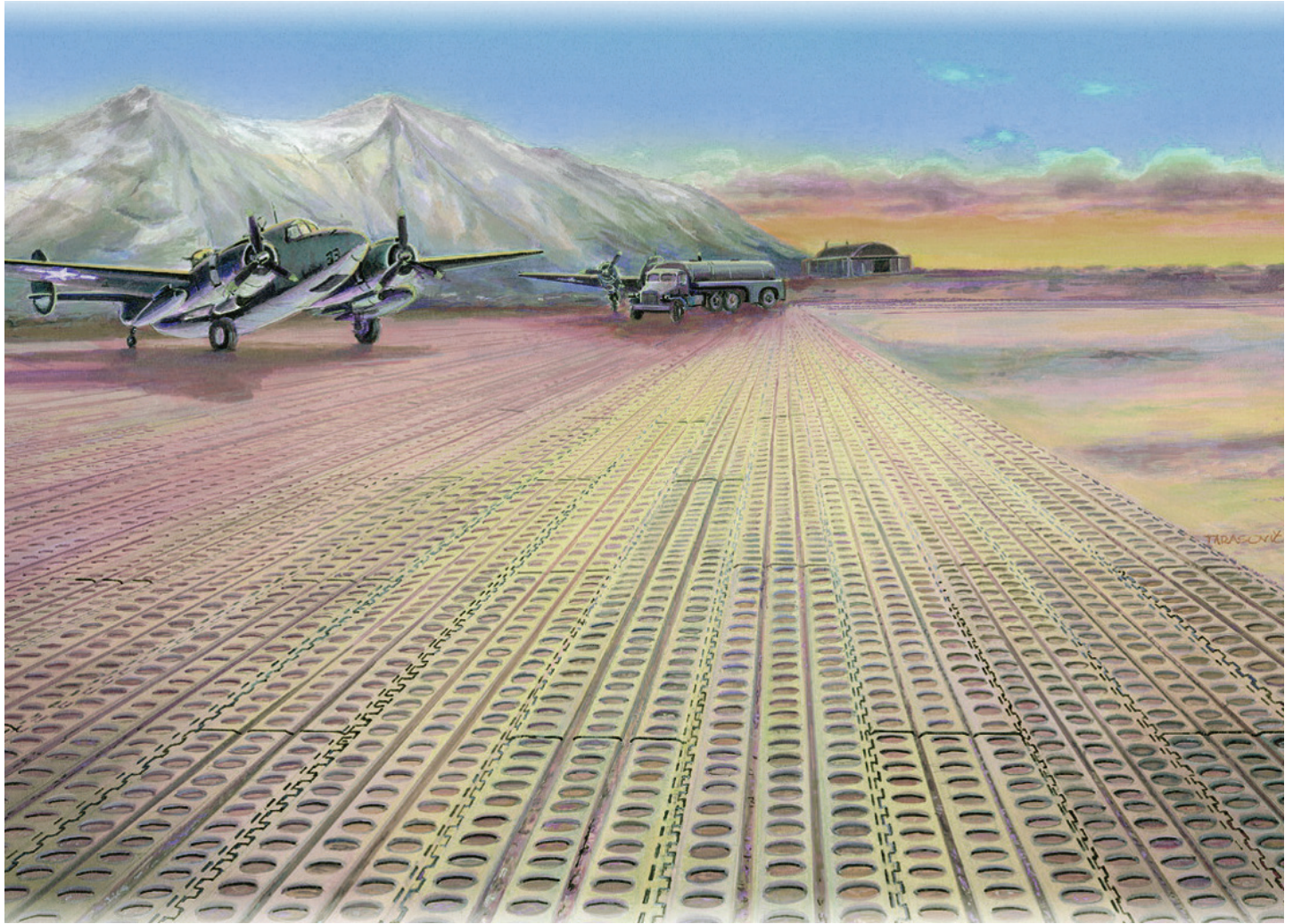


No. 9 Squadron IrAF, Iraq Air Force,
Saddam AB, Iraq, 1973

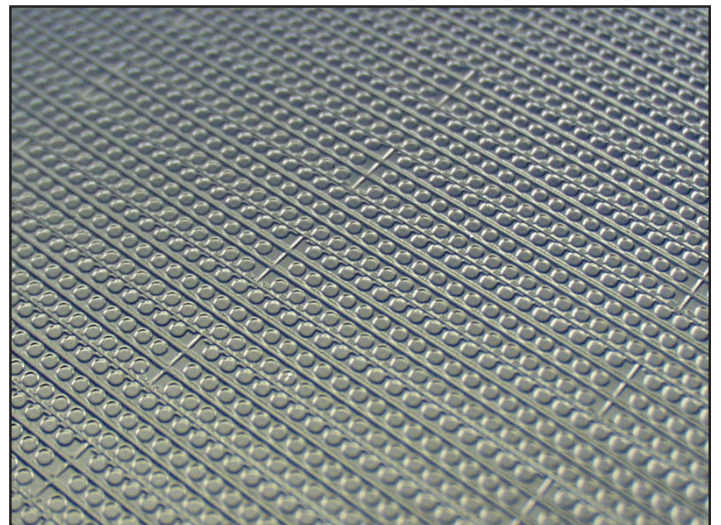
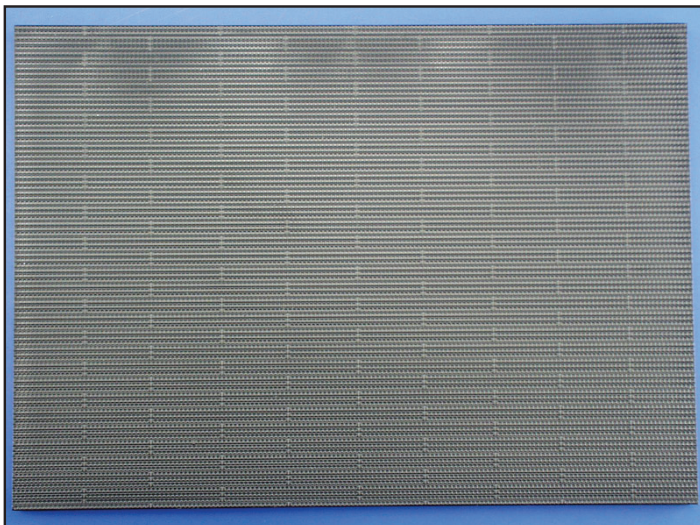


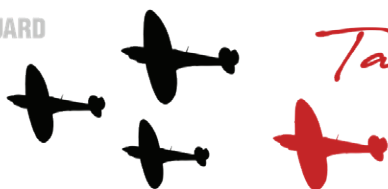
299 Naval Fighter-bomber Regiment, Saki airfield, Crimea, Soviet Union, spring 1980 - 1989

PSP Display - perforated steel plate 1/72



#7701





TOUR OF EXHIBITIONS

Jakub Nademlejnský

The spring round of exhibitions is over. We are glad we could meet with you, happy we were able to visit our favorite places again, and we'll be delighted if we can keep meeting you at these places in the coming years. That's never guaranteed. Here in the Czech Republic, some of the biggest events (Modelbrno, Nymburk's Kitsaloon, or Pilsenkit), where we used to have a booth, have disappeared. And the events meant to replace them attract nowhere near as many modelers as their predecessors did. We see declining interest year by year, for example, at PanthersCup in Prosek. I cannot praise the Panthers highly enough for organizing it, as they are among few still willing and able to host a major event in the Czech Republic. It's actually the last large event in Prague, which might seem odd, but when we researched potential venues for this year's E-day, we discovered that prices for spaces suitable for such an event in and around Prague are so high that organizing it could be financially unsustainable for any modeling club. So we're thankful that at least events like PanthersCup are still going strong, and we're always happy to support them with our participation.

Since we want to continue attending major modeling exhibitions, we've started traveling abroad. In March, we visited exhibitions in Verona, Italy, and Bytom, Poland, for the second time. Bytom is a traditional competition similar in format to those in the Czech Republic. It turned out to be a great destination and

an opportunity to reconnect with our Polish customers, where we hadn't been in years. Verona, however, is a completely different kind of event. It's primarily a commercial fair for models of airplanes, tanks, ships, trains, as well as costumes, masks, toys, and just about anything one can play with. Modelers from all sorts of clubs across Italy come together there, and we thoroughly enjoy the whole experience with them. I highly praise their friendly attitude and warm hospitality.

In April, we took part in the exhibition in Prostějov and wrapped up the spring program last week in Mosonmagyaróvár, Hungary. The "Easter Prostějov" event keeps getting better every year. This year, the tables were literally packed with beautifully built models. I would like to encourage more modeling companies to come and support the Prostějov club and their excellent organizational work—help turn "Easter Prostějov" into an even bigger show. This year, the hall was full of visitors, and I believe this event is well on its way to becoming one of the largest in the Czech Republic.

Let me add a few more lines about Moson. It truly deserves it. The organizers have long done a fantastic job, to the point that Moson is now considered a must-attend event for modelers every year. This year, about 2,500 beautifully built models were on display. The organizers developed a sophisticated category and judging system, secured a high-quality judging team, and most importantly,

arranged for outstanding facilities in cooperation with the city. Combined with the charm of the spa town, they've created a perfect mix that works and attracts visitors from all over the world. Our booth was visited by customers from Taiwan, China, the USA, Latin America, Australia, and all corners of Europe. The only downside is the declining quality of services in the town, which clearly only comes alive during cultural and social events. Otherwise, it seems pretty dead—which, combined with other factors, has led to a sharp rise in prices for accommodation, food, drinks, and even spa admittance, while quality of service has decreased.

So, what's next for us this year? For now, we'll rest and recharge. In summer, we're headed to the IPMS USA Nationals in Virginia Beach. We also plan to attend the Plzeňský Velbloud (Pilsen Camel) for the first time. Later in the year, we'll once again take part in competitions in Eindhoven, Telford, and visit our Slovak brothers in Nitra and Bratislava. And I almost forgot about E-day! This year, for the first time, it will be at a new venue—in my hometown of Litoměřice, at the prestigious "Výstaviště Zahrada Čech", Czech Garden Exhibition Grounds. This place has the potential to offer modelers an experience similar to Moson—or maybe even better. So mark your calendars for October 4th and come to E-day. This year's event is definitely going to be worth it.





SCALE MODEL SHOW

MAY 17th, 2025

MUSEUM OF THE
HOMELAND WAR
KARLOVAC–TURANJ,
CROATIA

MUZEJ DOMOVINSKOG RATA KARLOVAC–TURANJ

ORGANIZED BY



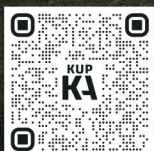
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SPECIAL CATEGORIES › Croatian Homeland War › 'Made in Italy' › Brush painted models



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