

Iliouchine Il-4 (OTAN : Bob)



[Iliouchine Il-4 Bob soviétique vu de l'avant](#)

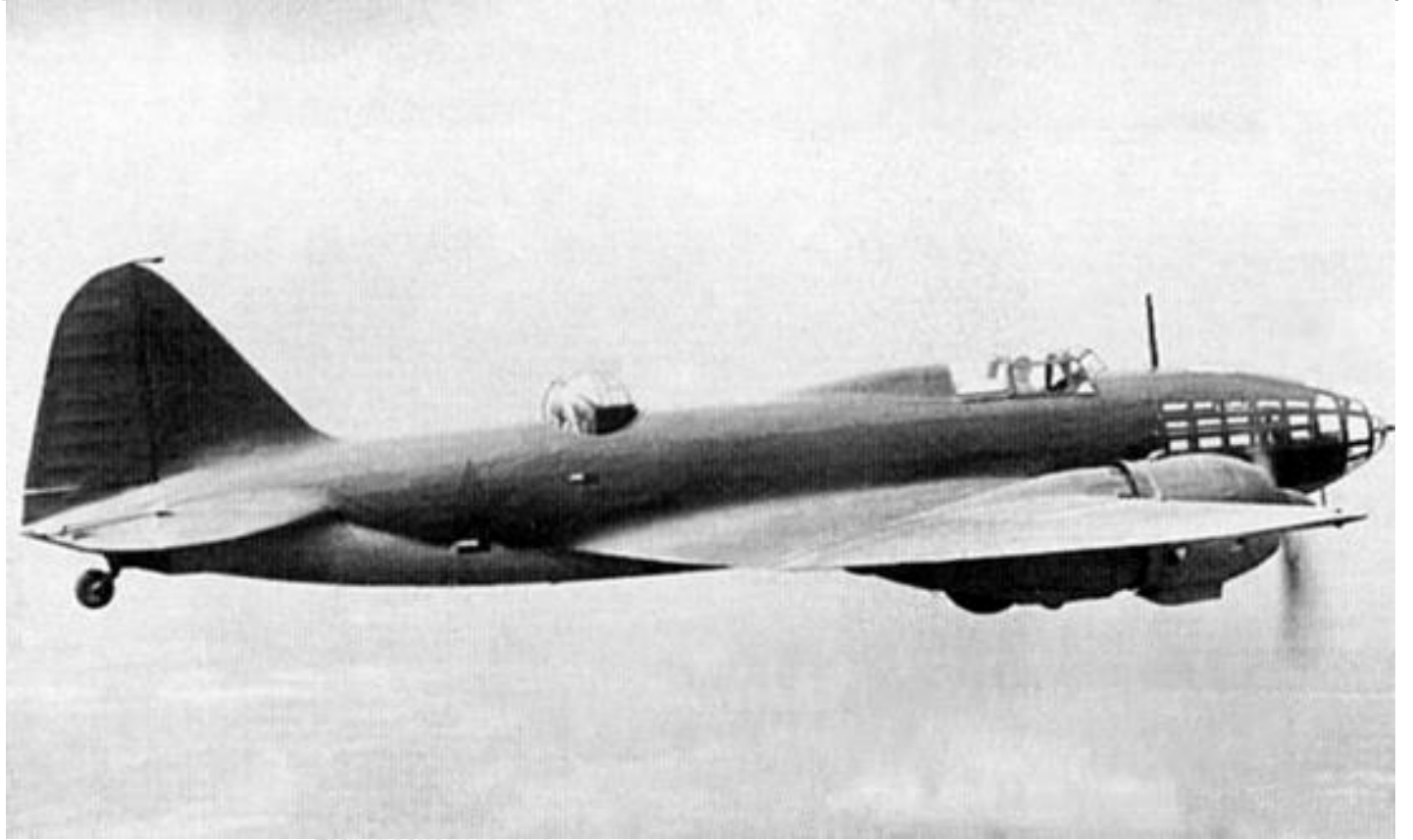
L'Il-4 est un bombardier soviétique de la Seconde Guerre Mondiale, dérivé du DB-3 de 1936. Appelé à l'origine DB-3F, il est propulsé par 2 Tumansky M-88 de 1100 chevaux. Il est également armé de mitrailleuses UBT de 12,7 mm, remplaçant les mitrailleuses de 7,62 mm qui s'étaient montrées insuffisantes face aux chasseurs finlandais. Des blindages destinés à protéger les mitrailleurs furent rajoutés. La cellule avait également été rallongée. L'aluminium manquant en 1938, certaines parties sont construites en bois. Il effectua son vol inaugural le 21 mai 1939 entre les mains de Vladimir Kokkinaki, et prit le nom d'Il-4 en 1942. Les essais montrèrent que le poids supplémentaire ralentissait la machine malgré le surcroît de puissance. Ceux-ci furent terminés en juin 1939. L'Il-6, une version censément améliorée, se révéla un échec et ne fut pas produit en série. L'Il-4 fut produit à 5256 exemplaires de 1942 à 1944. L'Il-4 avait été conçu comme bombardier moyen, mais eut l'autonomie nécessaire pour accomplir des missions stratégiques.

Ces missions ne faisaient pas partie de la doctrine des VVS, mais quelques raids sur Berlin furent montés en épingle par la propagande : le premier date du 8 août 1941. L'IL-4 fut surtout utilisé pour des missions rapprochées, avec 2500 kg de bombes en soute et 1500 kg sous les ailes (soit 3 bombes de 500 kg). Les IL-4 menèrent également d'autres missions : remorquage de planeurs (A-7 et G-11), reconnaissance stratégique (avec une caméra dans la soute à bombes), transport. La Luftwaffe captura plusieurs exemplaires et en céda 4 à la Finlande. Ils furent codés DF-22 à DF-25. Le DF-22 s'écrasa lors du convoi entre Bryansk et la Finlande. En 1945, la Finlande ne disposait plus que du DF-25, qui s'écrasa le 23 février 1945. Après-guerre, de nombreux IL-4 furent convertis pour le transport de fret et des missions de recherche scientifique. L'Union soviétique l'utilisa jusqu'en 1949, y compris au sein de sa Marine, où il était doté d'une torpille de 940 kg (version IL-4T). Il était basé sur la Mer Noire, la Baltique et la Mer du Nord. Bien que l'IL-4 a été seulement un bombardier moyen, il a la capacité d'être utilisé pour les missions stratégiques. La VVS n'était pas très intéressé par ce rôle, mais, néanmoins, l'IL-4 a été utilisé à plusieurs reprises dans des raids sur Berlin. Il fut surnommé "Bob" par l'OTAN. Bien que méconnu, il s'agissait d'un des meilleurs bombardiers soviétiques de la Seconde Guerre Mondiale, comparable au B-25.

Iliouchine IL-4 :

- 2 Moteurs Tumansky M88
- 2 X 1100 Ch
- 430 Km/h
- 1 Mitrailleur 12.7 mm et 2 de 7.62 mm 2500 Kg de bombes
- 11300 Kg en charge
- 9700 m de plafond pratique
- 3800 Km en distance franchissable
- 4 Equipiers







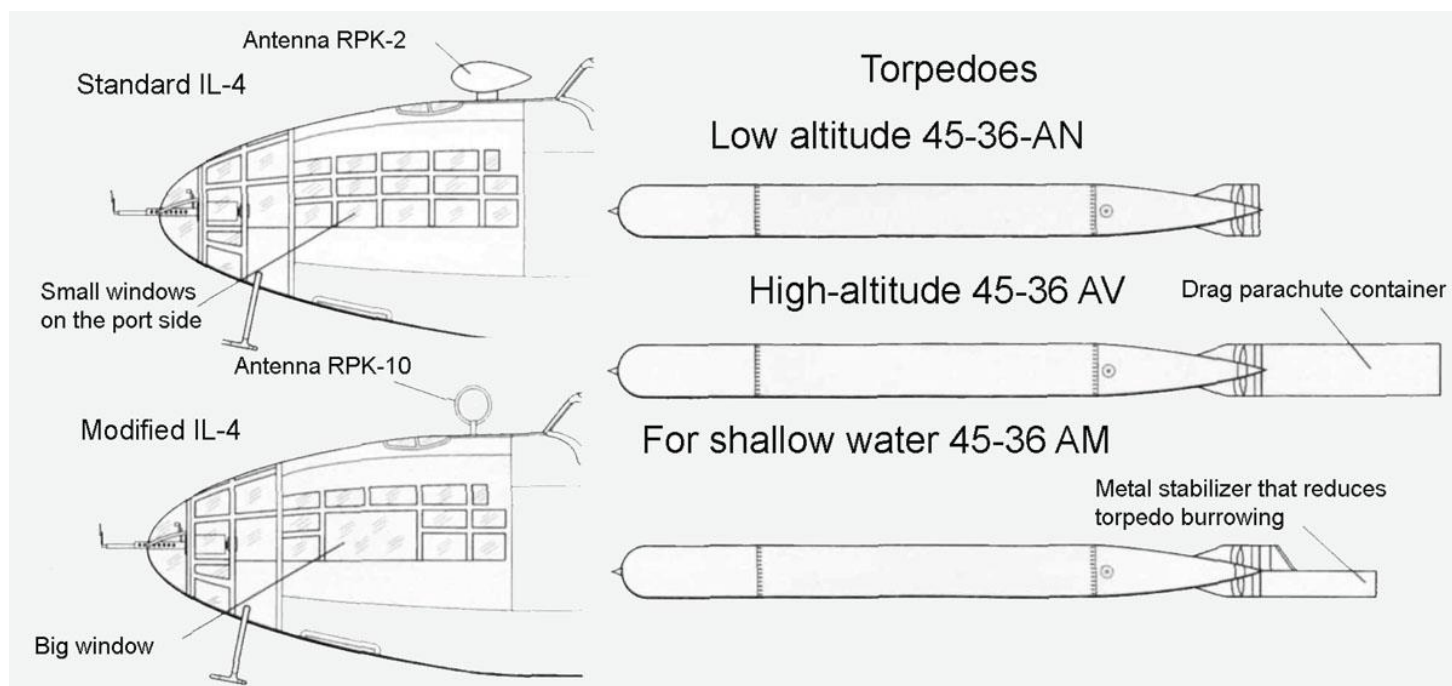
Ил-4 №6 (зав. №10207). Пилот мл. лт. П.И.Трифонов, штурман лт. Ф.А.Авдеев, стрелок-радист мл. серж. П.Л.Зайцев. Перелет Краснознаменка-Чита. 1 марта 1943 г. Сверху – поля черного и зеленого цвета, снизу – голубой. Правый борт – реконструкция.

„Дальстроевик“



Version anglaise

Since 1938 KB S.V. Ilyushin began to modify the aircraft, which was first named DB-3F, and later - Il-4. This car was distinguished primarily by improved aerodynamics, more powerful high-altitude M-88 engines and a fundamental design change in accordance with the use of new production technology. May 21, 1939 V.K. Kokkinaki first lifted the DB-3F into the air, and on August 31, its state tests began. From the first days of the Great Patriotic War, both army and naval aviation units armed with DB-3, DB-3T and DB-3F aircraft were actively involved in hostilities. Already two days after the Nazi attack, the crews of these aircraft began raids on the military-industrial facilities of Danzig and Königsberg. Then airfields, communications and places of large concentration of enemy troops were bombed. On the night of August 7-8, 1941, fifteen DB-3T aircraft under the command of Colonel E.N. Preobrazhensky (1 mine and torpedo regiment of the Red Banner Baltic Fleet Air Force) bombed Berlin. This raid was the first such operation by Soviet long-range aviation. Three days later, Berlin was struck by a group of DB-3F long-range aircraft of the Air Force under the command of Major V.I. Shchelkunov. Since March 1942, the DB-3F aircraft have been assigned a new designation - IL-4. Gradually replacing other, earlier modifications of the Il-4 are becoming the main type of bomber in Soviet long-range aviation. Since the battle on the Kursk Bulge, the Il-4 is increasingly used during the day as medium front-line bombers, performing a combat mission accompanied by fighters. Many of the major operations of the Red Army were preceded by massive raids by Il-4 bombers on targets located in the main strike zone. Flying at a relatively short range and having a maximum bomb load of 2500 kg on board, the Il-4 aircraft, with powerful bomb strikes, provided significant assistance to ground forces in breaking through the enemy's defensive lines. In addition to conventional high-explosive bombs FAB with a mass of 100, 250, 500 and 1000 kg to destroy enemy personnel and equipment, its engineering structures, Il-4 aircraft also widely used special types of bombs: RRAB-3 rotary dispersal bombs, which were intended for defeat of targets openly standing on a large area (for example, aircraft at an airfield, dispersed, uncovered infantry, etc.), and MAB-250 air bombs to destroy bridges. Another, no less important than bombing, the task of the IL-4 aircraft crews was to conduct long-range operational and strategic reconnaissance deep behind enemy lines. Reconnaissance flights lasting 7 ... 9 hours, the crews of the Il-4 aircraft sometimes performed in very difficult meteorological conditions on the route, at high altitudes and in the clouds, when opposed by enemy anti-aircraft artillery and fighter aircraft. The results of the reconnaissance were recorded by the aircraft's aerial photographic equipment, which provided planned and long-term aerial photography of the detected targets. If necessary, reconnaissance aircraft could hit detected targets with bombs. In the aviation of the USSR Navy, IL-4 aircraft were used as bombers, long-range reconnaissance aircraft, minelayers, as well as high-altitude and low-altitude torpedo bombers.



Possessing a long range and a relatively high cruising flight speed for that time, Il-4 reconnaissance aircraft surveyed significant areas of the sea surface in a short time and immediately informed the command about the situation in the specified areas and detected targets, called bombers or torpedo bombers to destroy them themselves attacked the most important targets. Torpedo-carrying versions of the Il-4 aircraft were armed, as a rule, with one torpedo, but some experienced pilots doubled the combat capabilities of their Il-4T aircraft, flying on combat missions with two torpedoes on board. IL-4 minelayers could carry parachute aviation mines of various types, including those weighing 500 and 1000 kg, as well as parachute-free anchor mines of the "Geyro" type with a diameter of 1.5 m. Mines were placed on sea communications, in straits, on fairways near enemy bases and ports, on navigable rivers. The enemy suffered significant losses from mine laying carried out by Il-4 aircraft. In addition, the naval modifications of the Il-4 aircraft were also armed with rocket weapons - six PC-132 high-explosive fragmentation projectiles, which were suspended under the wings of the aircraft and were intended to suppress the fire of anti-aircraft installations of torpedo ships, destroy escort ships, torpedo boats and seaplanes sitting on the water. IL-4 aircraft were widely used to throw reconnaissance and sabotage groups into the deep rear of the enemy, to provide assistance to the partisans. On the basis of pre-war work on the adaptation of DB-3 aircraft to military transport tasks for the IL-4, various types of external suspensions were developed - suspended 12-seat landing cabins DK-12, suspensions for transporting 45-mm anti-tank guns, 82-mm and 120mm mortars. Small loads and ammunition were transported by IL-4 aircraft in suspended soft landing bags. Three bundles of soft landing bags, each weighing 500 kg, could be attached to the aircraft's outer bomb racks using the UDP-500 universal landing gear. IL-4 airplanes with external suspension of landing cabins and cargoes, also adapted for towing landing gliders, including the G-11 airframe itself, designed by V. K. Gribovsky, were especially widely used in 1943-1944. In the course of serial production, the IL-4 was improved several times. Beginning in the summer of 1942, the OKB and the serial plant carried out research on equipping some of the Il-4 aircraft with anti-icing systems, which provide ice protection for the leading edges of the wing and tail. As a result of comparative flight tests of several types of anti-icing agents for aircraft making long-term combat flights deep behind enemy lines and operating in the sharply changing meteorological conditions of the Arctic Circle, an anti-icing system was recommended, which used warm air in the leading edges of the wing and tail, heated by the exhaust gases of the engines in three suspended heat exchangers. Although the outboard heat exchangers of such an anti-icing system noticeably reduced the flight speed by 10 ... 15 km / h, their installation increased the combat capabilities of a long-range bomber, making it less dependent on the meteorological conditions when performing a combat mission. A fourth crew member (gunner of the hatch mount) was introduced, defensive armament was strengthened, stability and control characteristics were improved, and the fuel supply was increased. Operation of the IL-4 in combat conditions revealed a large variation in fuel consumption due to improper adjustment of carburetors, which reduced the range. The absence of flame arresters on the exhaust pipes of the engines unmasked the aircraft at night, and the blue paint on the underside of the car strongly reflected the light from the searchlights. Outdated machine guns did not provide the required defense capability in air combat.

Twice Hero of the Soviet Union A.I. Molodchiy said: *"There is no autopilot on the plane (some machines were installed - author's note), but by its nature the IL-4 is unstable, every second it strives to roll into a bank, leave the course, lift or lower its nose. turn the steering wheel so that the plane flies in the given mode - IL-4 even without bombs during the day, with good visibility it is not easy to lift into the air. Takeoff was considered one of the most difficult elements of flight.*

In 1942, B-25C Mitchell bombers began to arrive in the USSR under Lend-Lease, which were quickly mastered in Long-Range Aviation. As shown by flight tests carried out at the Air Force Research Institute, the V-25-S, in comparison with the IL-4, had a higher maximum speed, reaching at an altitude of 5000 m to 490 km / h, a significantly shorter range (1960 km with a bomb load of 1400 kg and a lower ceiling, not exceeding 7500 m. B-25-C needed much larger airfields. It should be noted that more comfortable conditions on board, autopilot and good stability in flight significantly improved the work of the crew compared to IL-4. , including take-off and landing, turned out to be so simple that it made it possible to quickly commission young pilots. Stronger was the defensive armament, which consisted of one 7.62-mm and four 12.7-mm machine guns. And still the main long-range bomber in years During the war, the Il-4 remained, because the number of "Americans" delivered to the USSR did not exceed 24% of the "Ilov" produced in 1941-1945.

Over the years of serial construction, domestic factories have produced 4803 DB-3F and IL-4. The production of the IL-4 ended in 1946 with the construction of the last 4 aircraft at the plant number 126. Despite the huge number of long-range bombers built, none of them survived to this day. And everything that is kept in museums and on pedestals has been restored from the remains of the war found by enthusiasts.

Ilyushin's long-range bombers				
		DB-3	DB-3F	IL-4
Crew		3	4	4
Year of issue		1939	1940	1941
Dimensions				
Length, m		14.22	14.76	14.76
Wing span, m		21.44	21.44	21.44
Wing area, m ²		65.6	66.7	66.7
Weight, kg:				
Loaded weight		7450	8030	9470
Maximum takeoff weight		9450	10150	11570
Powerplant				
Engine		M-87	M-88	M-88B
Power, hp		2x950	2x1100	2x1100
Performance				
Maximum speed, km/h	at altitude	439	429	422
	m	4900	6600	6800
Service ceiling, m		9600	9700	8900
Service range with normal bomb load, km		3800	3300	3800
Armament				
Bomb load, kg	Normal		1000	
	Maximum	2500	2500	2500
Defensive Armament	Machine guns	3	3	3
	Cannon	-	-	-

Armament. One [7.62mm ShKAS](#) (or [12.7mm UBT](#)) machine-gun each in nose, dorsal turret, and ventral positions; max bomb load (internal and external) 5,512lb, or 2,205lb bombs internally, plus one 2,072lb torpedo under fuselage. In total 4803 bombers DB-3f and Il-4 were built during war years. Despite of huge quantity of the constructed bombers, any of them has not lived up to now.

