

Focke Wulf Ta154 'Moskito'

Au début de 1942, l'équipe du professeur Kurt Tank, au sein de la firme Focke-Wulf, travaillait à l'élaboration d'un bombardier rapide d'attaque désigné provisoirement Ta-211, en prévision de l'utilisation des moteurs Jumo 211R. En août de cette même année, le RLM fit connaître sa volonté d'obtenir un chasseur de nuit, et trois constructeurs proposèrent chacun un projet en cours d'étude : Heinkel avec le [He-219 Uhu](#), Messerschmitt avec le [Me-210/410](#) et Focke-Wulf en adaptant ses travaux conformément à la demande manifestée. La version modifiée du Ta-211 reçut la désignation de Ta-154. L'appareil biplace de Kurt Tank était un bimoteur à aile haute, entièrement en bois, hormis le cockpit pressurisé, avec un train d'atterrissage tricycle escamotable. Le futur [Grumman F7F Tigercat](#) aura avec lui une certaine ressemblance.

1942 est aussi l'année où le [De Havilland DH 98 Mosquito](#), tout en bois, léger et rapide, survola l'Allemagne et établit aussitôt un record : sur les 600 premières missions de bombardement, un seul appareil fut abattu alors que pour les bombardiers lourds, le rapport était de 1 pour 5. C'est par les similitudes du Ta-154 et en hommage au redoutable adversaire que Kurt Tank surnommera son avion Moskito. La compétition entre les constructeurs fut de courte durée : le Me-210 rencontra de nombreux problèmes de développement et fut éliminé ; le RLM se méfiait de l'appareil en bois et lui préféra le He-219, métallique et qui possédait en outre une meilleure visibilité vers l'arrière ainsi qu'un plus grand rayon d'action. Mais le maréchal Erhard Milch, inspecteur général de l'air et directeur de l'armement de l'air, qui voulait une réponse allemande aux attaques des Mosquito, prit l'initiative personnelle d'accélérer le développement du Ta-154 et d'en démarrer la production en dehors des circuits habituels, retardant de près d'un an la sortie du He-219, attendu par le RLM et les unités de chasse de nuit.

Le premier prototype du nouvel appareil (Ta-154 V1) effectua son vol inaugural le 1er juillet 1943. Il fut suivi par 11 autres (V2 à V12) qui se distinguaient par des variantes dans la motorisation (Jumo 211F, N, R, 213 E), l'armement ou l'emport de radar de chasse de nuit (FuG 212 Lichtenstein, FuG 220 SN-2). Ces prototypes et les modèles de présérie (Ta-154A-0) furent testés pendant presque un an et le premier appareil de série ne vola que le 13 juin 1944. Les livraisons aux unités combattantes venaient de commencer quand la fabrique de Tego-film (colle utilisée pour le contre-plaqué dont était constitué l'avion) fut bombardée. Un produit de remplacement fut essayé, mais, moins résistant et induisant une réaction chimique avec le bois, il provoqua le crash de plusieurs appareils. Kurt Tank dut suspendre la production le 14 août 1944 et le RLM arrêta définitivement le programme en septembre. Au total, 50 « Moskito » furent produits (dont les 12 prototypes et 3 de présérie), principalement dans les versions Ta-154A-1, A-2/U4 et A-4. Quelques-uns furent affectés à l'escadrille de chasse de nuit NJG.3 et d'autres servirent plus tard à l'entraînement des futurs pilotes de jet.



version anglaise

The **Focke-Wulf Ta 154 Moskito** was a fast twin-engined [German night fighter](#) aircraft designed by [Kurt Tank](#) and produced by Focke-Wulf during late [World War II](#). Only a few were produced, proving to have less impressive performance than the [prototypes](#).

Development

Kurt Tank's team at Focke-Wulf had been working for some time on a fast attack-[bomber](#) aircraft named [Ta 211](#), so named because it planned to use an updated [Jumo 211R](#) engine. The intended "Ta 211" design was a high-wing twin-engined design, built primarily of [plywood](#), bonded with a special [phenolic resin](#) adhesive called [Tego film](#). The only large-scale use of metal was in the [pressurized cockpit](#). The project's designation was changed to [Reichsluftfahrtministerium](#) (RLM—Ministry of Aviation) airframe number **8-154** (hence Ta 154) when it became apparent that the most suitable engine for the aircraft was the more powerful [Jumo 213](#), and that Junkers could not deliver the Jumo 211R in time due to technical and production problems. The 154 was also allocated the name "*Moskito*" as a form of recognition of the [Royal Air Force](#)'s (RAF) [de Havilland Mosquito](#).

It was at about this time that the light and very fast de Havilland Mosquito, also made of wood, arrived over Germany. It quickly racked up an impressive record; in its first 600 bombing missions, only one was shot down, compared to an average of 5% for RAF [medium](#) and [heavy bombers](#). [Erhard Milch](#) personally requested a purpose-built German answer, and selected the 154. Infighting within German circles started almost immediately, because the RLM and night fighter units — as well as [Ernst Heinkel](#) himself — still wanted the [Heinkel He 219](#). Milch took this personally, and spent the better part of the next two years trying to have the 219 program terminated, partly against Ernst Heinkel's wishes.

Flight tests

Development of the Ta 154 was already well advanced, and the first prototype **V1** with Jumo 211F engines, bearing the *Stammkennzeichen* identification code **TE+FE**, made its maiden flight on July 1, 1943. It was followed by **V2** with Jumo 211N engines, which was kept at the factory for handling trials. V1 was then sent to [Rechlin-Lärz Airfield](#) for fly-off testing against the He 219A and the new [Junkers Ju 388](#). There the 154 reached almost 700 km/h (440 mph) and easily outflew the other two aircraft, but those were both fully armed and equipped with [radar](#).

The first armed example of the Ta 154 was the **V3** prototype, which was also the first to fit the Jumo 211R engines. The added weight of the guns and drag of the 32-dipole element *Matratze* radar antennas used on its [UHF-band](#) FuG 212 C-1 [Lichtenstein radar](#) unit slowed the aircraft by a full 75 km/h, although it was still somewhat faster than the He 219. The rest of the 15 prototypes were then delivered as **A-0** models, identical to the V3. Some of these also included a raised [canopy](#) for better vision to the rear.

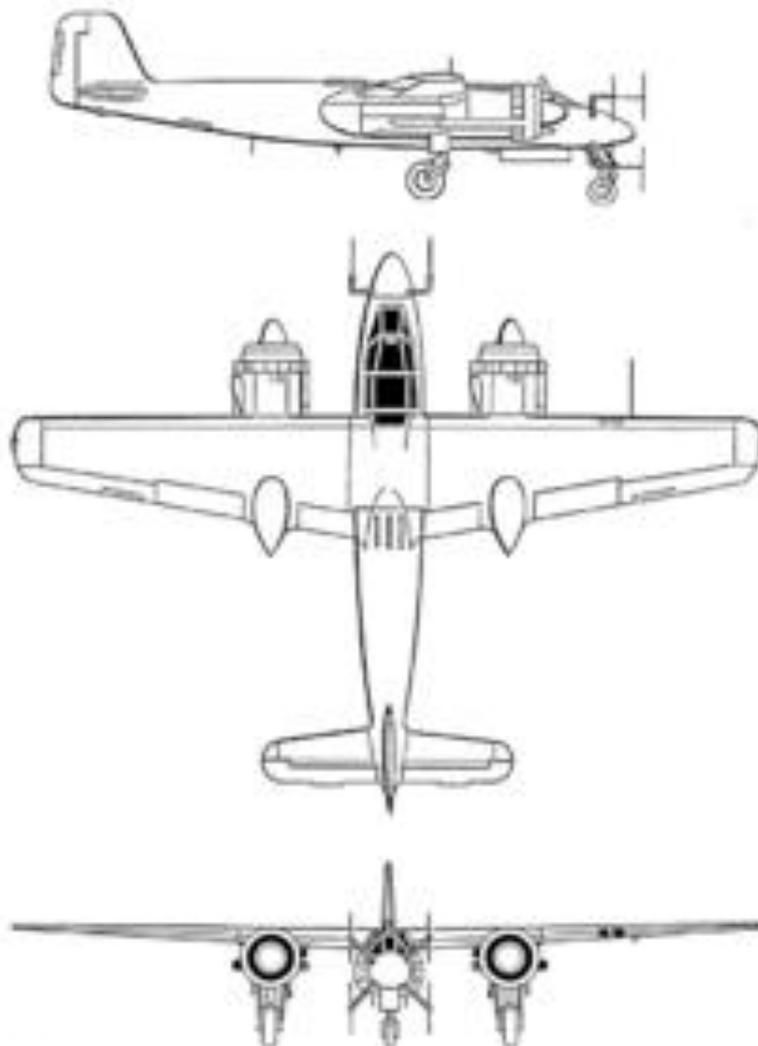
By June 1944, the Jumo 213 was finally arriving in some numbers, and a production run of 154 **A-1s** was completed with these engines. Just prior to delivery the only factory making Tego-Film, in [Wuppertal](#), was [bombed out](#) by the [Royal Air Force](#), and the plywood glue had to be replaced by one that was not as strong, and was later found to react chemically, apparently in a corrosive manner, with the wood in the Ta 154's structure. In July, several A-1s crashed with wing failure due to plywood delamination. This same problem also critically affected the [Heinkel He 162 Spatz](#), Ernst Heinkel's "*Volksjäger*" jet fighter program entry.

Tank halted production in August, and the RLM eventually cancelled the entire project in September (Milch had been removed by then). At that time about 50 production aircraft had been completed, and a number of the A-0 preproduction aircraft were later modified to production standard. An unknown number of the aircraft served with [Nachtjagdgeschwader 3](#), and a few were later used as [training](#) aircraft for jet pilots.

Mistel/Pulkzerstörer variants

The designation Ta 154A-2/U3 was given to six unfinished 154A-1 airframes completed and converted into *Pulkzerstörer* (Formation Destroyer) aircraft. At least three *Pulkzerstörer* and *Mistel* parasite fighter schemes were mooted for the 154. The only one of the three that was actually brought to operational readiness (Ta 154A-2/U3) was a system whereby the entire forward fuselage ahead of the fuel tanks was filled with *Amatol* high explosive. A new and extremely small cockpit for the pilot was added to the airframe directly ahead of the tailfin. From this cramped cabin, the pilot would fly the 'Bomb *Moskito*' into an Allied bomber formation, arm the onboard charges and quickly bail out. A timer would then detonate the explosives a few seconds later. Fragmentation charges in the warhead would maximize the effective area of destruction. It was hoped that this *flying bomb* system would tear large holes in the Anglo-American bomber streams at little cost to the Luftwaffe in terms of pilot casualties. The six Ta 154A-2/U3 'Bomb *Moskitos*' were completed at the Focke-Wulf plant near *Poznań* shortly before the occupation of the area by the Red Army, but were not used in combat. Their ultimate fate is unknown, though it is likely they were destroyed by the plant's staff to prevent them being captured. One Ta 154 *Mistel* scheme, reportedly designated *Mistel 7*, envisaged a *Focke-Wulf Fw 190* 'mother aircraft' mounted on struts above an unmanned Bomb *Moskito*. Takeoff would be effected via a sturdy three-wheeled trolley of the same type designed for the abandoned A-series of the *Arado Ar 234 jet reconnaissance bomber*. The trolley would be jettisoned after takeoff, leaving the *Mistel Moskito* to fly to its target with all three engines running. The combination would formate above an Allied bomber stream before the 190 pilot released the Bomb *Moskito*, which would then hopefully crash straight into a bomber with massively destructive effect. A related scheme would see a standard Ta 154 towing a Bomb *Moskito* behind it into the middle of a bomber stream, whereupon release and detonation would be initiated by the manned 154's pilot.

Specifications (Ta 154 A-1)



General characteristics

- **Crew:** 2
- **Length:** 12.45 m (40 ft 10 in) (without radar antennae)
- **Wingspan:** 16 m (52 ft 6 in)
- **Height:** 3.5 m (11 ft 6 in)
- **Wing area:** 32.4 m² (349 sq ft)
- **Empty weight:** 6,600 kg (14,551 lb)
- **Gross weight:** 8,930 kg (19,687 lb)
- **Max takeoff weight:** 9,550 kg (21,054 lb)
- **Fuel capacity:** 1,500 L (400 US gal; 330 imp gal) in two fuselage tanks
- **Powerplant:** 2 × [Junkers Jumo 213E](#) V-12 inverted liquid-cooled piston engines, 1,305 kW (1,750 hp) each for take-off
984 kW (1,320 hp) at 10,000 m (33,000 ft)
- **Propellers:** 3-bladed Junkers VS-9 wooden constant-speed propellers

Performance

- **Maximum speed:** 650 km/h (400 mph, 350 kn) at 7,090 m (23,260 ft)
534 km/h (332 mph; 288 kn) at sea level
- **Range:** 1,365 km (848 mi, 737 nmi) at 7,000 m (23,000 ft)
1,860 km (1,160 mi; 1,000 nmi) with two 300 L (79 US gal; 66 imp gal)
- **Service ceiling:** 10,900 m (35,800 ft)
- **Rate of climb:** 15 m/s (3,000 ft/min)
- **Time to altitude:** 8,000 m (26,000 ft) in 14 minutes 30 seconds

Armament

- **Guns:**
- 2 × 20 mm (0.787 in) [MG 151/20 cannon](#) 200 rpg.
- 2 × 30 mm (1.181 in) nose-mounted [MK 108 cannon](#) 110 rpg.
- (Ta 154C) + 2 × fuselage-mounted [Schräge Musik](#) 30 mm (1.181 in) MK 108 cannon)

