

Messerschmitt

Me-262



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Before the end of the WW II about half a dozen gruppen used Me 262 fighters. Also some radar-equipped Me 262B-1a/U1 nightfighters were used in last weeks of war. Bober versions of Me 262 also entered service alongside with reconnaissance planes. The apperance of German jets caused some consern to the Allies on account of their high speed and heavy armament.

History

16.09.2008 Pienoismalli osa päivitetty, CS-92, Revell 1/72, ja pakettien kuvat. Kirjaosa lisätty. 18.03.2004 New feedbackform

10.03.2004 New homepage at saunalahti.fi

02.09.2002 [1943](#) and [Feedback](#) added

25.06.2002 [First flight under jet power](#) added

17.06.2002 Second capter of Me 262 prototypes writed and one [link](#) added

14.06.2002 Picture of Me 262A2-a to top of the page and first capter of [Me 262 Prototypes](#) writed

13.06.2002 Rederect from [www.me-262.cjb.net](#) adopted

P.1065 Development

Messerschmitt had recieved an official study contract from the Technical Office. Their requirements were outlined on 4 January 1939. The specification described the antisipated requirements for the aircraft. There were two versions proposed: high-speed pursuit and target defence. The specifications were as follows:

	High-speed fighter	Interceptor fighter
Power plant	One turbojet	One turbojet
Crew	One	One
Installation of weapons	Possibly in the fuselage, or close to the fuselage	
Armament	2x MG 17 machine-guns with 1000 rpg, 1x MG 151/20 cannon with 500 rounds	2x MG 17 machine-guns with 1000 rpg, 1x MG 151/20 cannon with 250 rounds
Installation of weapons	Possibly in the fuselage, or close to the fuselage	Possibly in the fuselage, or close to the fuselage
Radio	FuG VII	FuG VII
Maximum speed	900 km/h	900 km/h
Filght duration	1h at maximum performance	30mins at maximum performance
Airframe	Complete metal construction throughout. Simple and cheapest construction is required.	Complete metal construction throughout. Simple and cheapest construction is required.

The first concrete proposal for the fighter evolved from series of quite different design studies: Becouse of RLM requirements for one turbojet, team began to consider signle engine layout. The first proposal was to mount the engine inside the fuselage with an intake extreme nose (like F-86 and Mig-15). This was quickly abandoned in favor of a twin-boom arangement (like Vampire). Third version was a pod and boom layout, witch redused the fuselage cross section and total wetted areas to minumum. This was abandoned, only to be employed five years later in P 1101 (Americans built Bell X-5 based on this), because single engine could not offer enough performance.

After twin-engine configuration had been selected, the first configuration was a straightforward low-wing plane with engine nacelles mounted centrally in the wings. The main undercacarriage units were located to retracted into wing fuselage intersection, one before other. This was not possible however to make this configuration, even if it would have offered optimum drag.

The Messershmitt AG began with concept designated Project (P) 1065, following these studies, in 1 April 1939. This proposal had virtually same wing as early Bf 109 and it was to be powered two BMW TL turbojet.

There were also suggested larger 22m² wing and three different armament combinations by September 1939.

The first drawing of the P 1065 is from 17 October 1939 and it has oval fuselage, mid wing ans tricycle undercarriage. For the next several months, a steady stream of refinements would be made including, fuselage shape and cross section, wing location and shape, engine placement and landing gear configuration. Study triangular fuselage and low-mounted wing was preferred by many reasons including main undercarriage problem.

Two engine layouts were proposed: two BMW P.3302 engines under the wings or two slimmer BMW P.3304 engines mounted centrally. The Junkers T 1 (Jumo 004 A) engines entered picture in November 1939.

After presentation of cockpit and aircraft mockups in December 1939 and January 1940, the RLM ordered twenty prototype aircraft. Under this provisional contract, tooling and jigging work for two prototypes, began in January 1940. The first prototype layout was described by February 1940. The plane had two BMW P.3302 engines under the wings and leading edge of the outer wing sections were swept back 18 degrees. This was because BMW engineers reported production versions of their P.3302 prototype would be larger in diameter and heavier than originally anticipated. Also Junkers T 1 engines were being considered as alternative. Various placement options for the engines, for example overwing, were examined via wind tunnel testing in June 1940. These refinements plus others, for example redesigned fuselage and its cross-section (now embracing the familiar triangular shape), gave rise to P.1065/III officially submitted to the RLM in October 1940. Armament was standardized to three MG 151 cannons. Also other was suggested like ejection seat, braking parachute, pressurized cabin and dive brakes were proposed but never entered final product.

In order to get the prototype flying as soon as possible a single piston engine (Jumo 210 G) was to be fitted in the nose. On 10 January Messerschmitt proposed that first prototype would be powered with two rocket engines and piston engine in the nose. But also rocket motors ran into development problems and the idea was soon dropped. Construction of the first P 1065 prototype took place between February and March 1941. Project received the official RLM designation Me 262 on 8 April 1941.

Me 262 Prototypes

Construction of the first prototype Me 262V1 began in January 1941. The first flight tests would take place without engine nacelles, and with Jumo 210Ga 12-cylinder engine with two blade propeller. The later flights would include nacelles to evaluate their effects on aerodynamics. Practical testing began as of 17 April 1941 with taxiing tests. On 18 April Me 262V1 had its first flight which lasted 18 minutes. The flight characteristics were discovered satisfactory. Prototype could attain maximum speed of 420 km/h in level flight and 540 km/h in a dive. The RLM was becoming more interested in the aircraft, ordering five more V-series and twenty 0-series Me 262 in 25 July 1941. By the summer of 1942, five prototypes with BMW 003 turbines had been planned.

Although both jet engines Jumo and BMW showed more promise, Messerschmitt still considered alternative engines for second prototype. This time alternative engines were Argus impulse duct engines. These engines were simple but extremely fuel-consuming. This idea was abandoned when engines progressed to flight tests, because it was found that vibrations induced by its intermittent operation made it dangerous to use the engine to normal service aircraft. The Argus pulsejet was later used in V-1 flying bomb.

23 flights were done with only Jumo 210Ga engine. In February 1942 pair of BMW P.3302 pre-production engines were fitted into nacelles and number of ground tests were conducted. The first flight of the Me 262 under jet power took place on 25 March 1942. There was still Jumo piston engine alongside with BMW jet engines.

Just after takeoff, about altitude of 10 m when jet engines one after one flamed out. This forced testpilot Fritz Wendel to land heavily laden aircraft only with a piston engine. The jet engines were immediately removed and checked and it was found that the compressor blades were broken in both engines. It was determined that the BMW 003 engine needed to be totally redesigned.

Fortunately in the meantime Jumo had succeeded overcoming most of the problems of their engine. The Me 262 design was modified to accommodate larger and heavier Jumo 004 engines. On 1 June 1942 the first two engines were delivered to Messerschmitt. The second and third prototypes (V2 and V3) were the first ones to accommodate the Jumo engines.

The V3 was the first Me 262 to fly with only jet power. During high speed taxiing trials it was found that it was impossible to raise the tailwheel off the ground. Aerodynamist Curt Zeiler suggested that tapping the brakes to jerk off the tail from ground. This manoeuvre worked and first flight began 18 July 1942 at 8.40 and lasted 12 minutes.

The second flight took place about three and half hours later. This flight lasted minute more than the first one and it only small problems uncovered. One of the problems was that airflow brake early from the wing centre section. The modification to cure this problem was to increase the wing chord by continuing the leading edge sweep back of the outer panels across centre section. Leading-edge slots were extended across the center section.

Four more tests were made by Wendel and the seventh flight was conducted by Henrich Beauvais on 11 August 1942. Despite Wendel informed him of the method to raise the tailwheel off the ground Beauvais failed to raise the tail and his wing impacted an large pile of manure. The aircraft was severely damaged: both undercarriage and engines were ripped off causing damage.

The next day RLM decided that five prototypes and ten pre-production (A-0) planes could be built. The planes were proposed following tests: divebreak, ejection seat, tricycle undercarriage, pressurized cabin, radio, armament and armor.

On 1 October the V2 made its first flight from Lechfelds airfield, which was much longer than Leipheim's. These flight tests were primarily performance and calibration tests. It was found that although small wing fillet between fuselage and engine nacelle produced more lift, the modification led to vibration of outer wing panel. This was later cured.

On January 1943 the Me 262 received the highest development priority. Messerschmitt proposed the development of jet powered Bf 109, because there could be some problems with Me 262 airframe. This was abandoned because it was found that they could not save time with this arrangement.

There is much evidence that Messerschmitt was responsible of delays of getting Me 262 into production: After Me 309 was abandoned in January company started tooling up for Me 209 piston engined fighter. Messerschmitt felt that development of Me 209 was higher priority than Me 262, this resulted temporary reduction of Me 262 design work.

In January and February 1943 two specially prepared fuselages were dropped in order to obtain information about the tail flutter and airframe terminal velocity. The tests were failed because the recovery system didn't work.

In March the first successful bench test of Jumo 004 B-series engines. B-type had modified compressor, improved intake and it was 100 kg lighter than previous series. In the same month the Me 262 V1 was converted to Jumo engines only.

After repairs, the Me 262 V3 flew on March with Wolfgang Späte, who was the first service pilot to do so. Späte's second flight resulted emergency landing after dual flame-out. Even though he was highly impressed and reported Oberkommando Luftwaffe that Me 262 was superior over existing planes. By May 1943, despite all efforts, only four test planes were available.

The Me 262 V2 made a total of 48 flights before it crashed killing test pilot Wilhelm Ostertag on 18 April 1943. Aircraft went suddenly into dive after one engine had flamed-out. Even though Wendel reported that adjustable tailcone had detached and blocked exhaust orifice, the official Messerschmitt report concluded that crash was due to electrically operated trimming tabs. The introduction of a stronger electric actuator appeared to solve the problem.

On 15 May the fourth prototype Me 262 V4 flew first time.

The fuselage of the Me 262 V3 was modified to extend the canopy fairing in an attempt to reduce drag and solve directional stability problem. The modification didn't help to correct instability problem but provided a small decrease in drag.

Me 262 Variants

Model	Variant	Description
A-1a		4 MK 108 guns. Most common version
	U1	Two 20mm MG 151 cannon with 146 rounds each, two 30mm MK 103 cannon with 72 rounds each, and two 30mm MK 108 cannon with 66 rounds each. The MK 103 had a longer barrel and a higher muzzle velocity than the MK 108. Produced only test versions
	U2	One seat night fighter with radar. Only one produced
	U3	Reconnaissance with one MK 108 gun or without guns
	U4	50mm cannon in the nose. This was intended to be the ultimate bomber-killer.
	U5	Fighter with six MK 108 cannon, two with 100 rounds, two with 85 rounds and two with 65 rounds. Only one produced
A-1b		The BMW 003 turbojet engines instead of the Jumo 004 turbojets used in the A-1a
A-2a		Fighter-bomber or "Jabo"
	U1	Fighter-bomber with TSA. Three prototypes
	U2	Loft cabin (two crew members) Fighter-bomber
B-1a		Two seat trainer
	U1	Two seater night fighter
C-1a		Jumo 004 turbojets and rocket motor in the tail
C-2b		BMW 003 turbojets and two rocket motors above engines

Me 262 test aircraft

Versuchs number	Werk.Num.	Registration	Testing Assignments	Model
V1	262 000001	PC+UA	Aerodynamic tests, engine tests (BMW)	
V2	262 000002	PC+UB	Performance and calibration tests	
V3	262 000003	PC+UC	Engine tests (Jumo)	
V4	262 000004	PC+UD	Engine tests (Jumo)	

V5	262 000005	PC+UE	Nose landing gear tests, take-off aid	
		+	two 20mm MG 151 cannon + two 30mm MK 103 cannon + two 30mm MK 108 cannon test	A-1a/U1
V484	110484	+	Lofte cabin, course control	A-2a/U2
V11/V555	110555	+	Lofte cabin II, navigation	A-2a/U2
	111355	+	Weapon system with 6 MK 108	A-1a/U5
	111358	+	High speed fighter	HG II
	111857	+	Improved production model	-
	111899	+	weapon system with MK 214	A-1a/U4
	111994	+	Rocet launcher 21, R100	A-1a
	112355	+	Weapon system with six MK 108	A-1a/U5
V6	130001	VI+AA	Engine tests (Jumo), hydraulically fully-retractable landing gear	A-0
V7	130002	VI+AB	Pressurized cabin	A-0
V8	130003	VI+AC	Revi 16b gunsight tests	A-0
V9	130004	VI+AD	Towed-bomb tests	A-0
V10	130005	VI+AE	Wooden drop tanks, towed-bomb tests	A-1a
	130010	+	two-seat version	B-1a
	130018	E3+01	Engine tests (Jumo)	A-1a
	130170?	+	Engine tests (BMW)	A-1b
	130163	E2+01	Landing gear tests	A-1a
	130164	WA+TA	Weapons & TSA tests	A-1a/U1
	130165	E4+E5	Hydraulic & FT tests	A-1a
V5/V167	130167	SQ+WF	Jettisonable tanks, brakes	A-1a
	130168	E3+02	High-altitude engine tests	A-1a
	130170	E2+02	Performance tests	A-1a
	130172	EK+L1	Fuel & tire tests	A-1a
	130174	EK+L2	Long-term tests	A-1a
	130175	+	General flight tests	A-1a

V9/V186	130186	+	Homeland Defender I	C-1a
	130188	E7+01	Diving sight, BZA, TSA	A-1a/U1
	130189	+	Flight tests	A-1a
	170038	E3+03	Engine tests (Junkers)	A-1a
	170039	E3+L3	Long-term engine tests	A-1a
V2/V56	170056	+	Take-off aid, stability tests, FuG 218, 266	A-1a/U2
	170057	WA+02	Weapon tests	A-1a
	170070	E7+02	TSA, drop tests	A-1a
V074	170074	+	Homeland Defender II	C-2b
V078	170078	+	Engine tests (BMW 003 A-1)	A-1b
	170079	+	Wheel drive tests	A-1a
V083	170083	+	MK 214, taxiing tests	A-1a/U4
	170086	+	Stability, jettisonable tanks	A-1a
	170095	+	Landing gear, night tests	A-1a
V7/V303	170303	+	Drop tests to 1000 kg	A-1a
	170394	+	General flight tests	A-1a
	500095	+	Two Rb 50/30 cameras	A-4a

Eduard SC-92 1/144

 Kuva Eduard CS-92 maalausohjeesta

Ei ollenkaan pahvista pakettia, ainoastaan muovipussi, jossa yksi ranka, johon valettu kaikki paitsi kirkkaat osat ja taitettu kaksin kerroin pussiin yksisivuisen värillisen ohjeen kanssa. Erittäin laadukkaan oloinen, vaalean ruskea muovi ja hienosti kaiverretut panelilinjat. Pystyy rakentamaan joko yksi tai kaksipaikkaisen version, molempiin on reilliset rungot ja kuomut, sekä siirtokuvat, siipiä on vain yhteen koneeseen. Painoa pitää laittaa nokkaan todella paljon, jottei olisi pyrstöllään. Itselläni pysyy hädin tuskin oikeassa asennussa, vaikka koko painolle varattu tila täynnä hauleja (liikaakin, sillä runko ei sopinut täydellisesti yhteen enää haulien lisäyksen jälkeen.

[Kuvia valmiista mallista](#)

Revell Me 262A-1a 1/72



Valettu vaaleanharmaaseen muoviin, kaiverretut panelilinjat. Yhteensopivuus erittäin hyvä. Päälaskutelinekuilut pitää avata, jotta saataisiin ohjaamon pohja näkyviin kuten aidossa. Siirtokuvat pariin eri hävittäjäversioon.

Kuvia valmiista mallista

Revell Me 262B-1a 1/72



Sama kuin ylläoleva, mutta kaksipaikkaisen kuomu ja toinen ohjaamon osa. Siirtokuvat kahteen yöhävittäjäversioon 10 ja 12.

Kuvia rakennetusta mallista

Tamiya Me 262a-1 Clear edition 1/48

 Kuva Tamiyan Me 262a pakkauksesta

Paras versio Tamiyan versioista, tässä on kaikki yhdistetty edellisistä versiosta, pystyy rakentamaan monta eri versiota.

Revell Me 262a-1 1/48

Feedback

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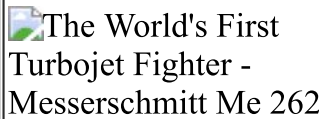
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Me 262 Kirjallisuutta

 Me 262, Volume One	Me 262, Volume One Smith, J Richard	Ensimmäinen osa kyseisestä sarjasta. Erittäin kattava sekä kuviltaan, että tekstiltään. Ei tarvitse muuta Me 262:een liittyviä kirjoja.	Fakta	1903223105
 Me 262, Volume Two	Me 262, Volume Two Smith, J Richard	Toinen osa kyseisestä sarjasta	Fakta	
 Me 262, Volume Three	Me 262, Volume Three Smith, J Richard	Kolmas osa kyseisestä sarjasta	Fakta	1903223008
 Me 262, Volume Four	Me 262,	Neljäs ja viimeinen osa kyseisestä sarjasta	Fakta	1903223040

	Volume Four			
	Smith, J Richard			
	Squadron Signal volume 42: Messerchmitt Me 262 Walk Around Stapher, Hans-Heiri	Hyviä kuvia yksityiskohdista, kuten muissakin vastaavissa Walk Around kirjoissa.	0897475003	
	The World's First Turbojet Fighter - Messerschmitt Me 262 (Schiffer Military History, Vol. 23) Hecht, Heinrich	Ensimmäienn osa. Eipä kovin kummoinen kirja. Mustavalkoiset kuvat, jotka löytyvät muualtakin, eikä tekstiäkään ole paljon.	Fakta	0887402348
	The Messerschmitt Me 262: The World's First Turbojet Fighter (Schiffer Military History, Vol 64)	Toinen osa. Samat kommentit kuin edelliseen osaan.	Ilmailutietokija	0887404103

	Griehl, Manfred			
 Messerschmitt Me 262 Strumvogel</H3><P>	Warbird Tech vol 6: Messerschmitt Me 262 Strumvogel Jenkins, Dennis R	Tiukassa paketissa Me 262:n kehitys ja sotatoimet. Mustavalkokuvia, keskellä väriliite, jossa suurimmaksi osaksi kuvia sodanjälkeisessä kunnossa olevia koneita. Tästä on olemassa myös uudempi painos.	Ilmailutietokija	0933424698

Links:

- [Tamiya Me-262 model](#)
- [Classic Publications](#)
- [Stormbird: Flying through fire as a Luftwaffe ground- attack pilot and Me 262 ace, book review](#)
- [Me-262A-2a, Black X](#)
- [The Messerschmitt Me-262 Schwalbe / Sturmvogel](#)

References:

Kaikki ylläolevat linkit ja kirjat
<http://www.stormbirds.com/>

Muita lentokonesivujani

- [Avro Arrow](#)
- [English Electric \(BAC\) Lightning](#)
- [Fairchild A-10 Warthog](#)
- [Lockheed A-12/YF-12/SR-71 Blackbird](#)
- [Lockheed Martin F-22A Raptor](#)
- [Lockheed U-2 Dragon Lady](#)

North American F-86 Sabre

North American F-100 Super Sabre

North American FJ-4(B) Fury

Rockwell B-1B Lancer

Sukhoi Su-27 Flanker perhe

Vought (LTV) F-8 Crusader