



The first roadworthy Mark IV tank assembled at the Nibelungenwerk on 8. October 1941. The hull and superstructure were supplied by Friedrich Krupp AG in Essen. [Archive ECS]

Because of start-up difficulties, no Mark IV tanks could be assembled in November 1941. In the course of December, those problems had been resolved and two further Mark IVs were produced.³⁵² By the end of December 1941, a total of three new Mark IV tanks had been completed and delivered, together with a repaired Mark IV.³⁵³

Month	Completed	Variant	Chassis Numbers	Delivered
October	1	F	82 601 – 82 601	1
November	0	F		0
December	2	F	82 602 – 82 603	2
1941 total:	3			3

³⁵² Collection Perz, Page Ni56, Table with delivery data for the Mark IV tank in business years 1941/1942, 1942/1943

³⁵³ Collection Perz, Page Ni56, Table with delivery data for the Mark IV tank in business years 1941/1942, 1942/1943; AMM, NARA Microcopy T-77 Roll 744, KTB RüKo Linz, Nibelungenwerk GmbH report on output for October to December 1941; HF, manuscript „Mark IV tank”, using inter alia acceptance reports of the Army Ordnance Office, documents of the Inspector General of Armored Troops, including entries and call-off figures of the Army Equipment Depots



On the day of completion, Works Director Judtman also attended the first trial runs on the plant site in front of Workshop VII that was still under construction. He is standing in the middle of the forward superstructure and wearing a black armband. [Archive ECS]



The first Mark IV chassis during its trial runs at the running-in grounds. [Archive ECS]

Orders and preparations to expand production

In 1941, the Nibelungenwerk was contracted to manufacture, in addition to the Mark IV tank, six „Porsche-Kampfwagen” [Porsche combat vehicles] under an order valued at RM 4 500 000.³⁵⁴ On top of preparations for producing the Mark IV tank, this trial vehicle VK3001(P) designed by Prof.Dr.-Ing.h.c. Ferdinand Porsche was added to the manufacturing program. The first hull was delivered to the assembly bay in July already. Because of its power train, this vehicle was much more complicated to manufacture than the Mark IV tank. Despite substantial difficulties, the company succeeded in obtaining materials and tooling so that the transmission system could be installed in the first vehicle by the end of August 1941. Completion of the first test vehicle was originally specified for January/February 1942. Ultimately, only two vehicles were completed. The production contract for the remaining vehicles of this trial series was cancelled in favor of another battle tank development.³⁵⁵

A new contract for 100 battle tanks, type VK4501 (P) was close to being concluded. Design activities were again headed by Prof. Ferdinand Porsche. Production with particularly short delivery deadlines was to be undertaken by the Nibelungenwerk in collaboration with the main SDP works in Steyr and the group „Reichswerke 'Hermann Göring' für Waffen and Maschinenbau”. Because of the urgency, the OKH ordered that the production of the VK4501 (P) be brought forward. As a result, the maximum number of potential deliveries of Mark IV tanks reported by the Nibelungenwerk was reduced to the level prescribed by the Army Ordnance Office.³⁵⁵

Orders from the highest level specified that production of the VK4501(P) was to come on stream as quickly as possible and without a testing phase:³⁵⁶

»The Führer has decreed that production of the heavy tank 4501 (design Prof.Dr.Ing.Porsche) is to be accelerated by all means and that the customary testing prior to issuing the contract be dispensed with. Based on the available documentation it appears initially that production of 10 units in May, 10 in June, 12 units in July and 15 in August 1942 is feasible. These figures are to be used when issuing the order.«

³⁵⁴ Collection Perz, Nibelungenwerk GmbH board of directors meeting dated 23. July 1941: Report of the commercial management

³⁵⁵ Collection Perz, Nibelungenwerk GmbH board of directors meeting dated 23. July 1941: Report of the technical directors; Collection Perz, Maximum Program A, Proposal of the Nibelungenwerk GmbH, Page Ni 33a, with OKH program targets, status: 21. July 1941

³⁵⁶ HF, Chief of Army High Command, Wi Rü Amt / Rü IIa, No. 2255/41 g.Kdop., Transcript, 3. Copy, Berlin, 3. July 1941



One of the two VK 3001 (P) testing on the running-in track in winter 1941/42. The vehicles were not fitted with turrets. Instead, an equivalent weight was mounted for chassis testing. [Archive ECS]



In the winter of 1941/42, Prof. Dr.-Ing. h. c. Ferdinand Porsche also drove with one of the two VK 3001 (P) through an area of St. Valentin. [Archive ECS]

In summer 1941, preparations began for a prospective order covering 100 units VK 1302. According to the specified schedule, the first vehicle of this series was to be delivered in August 1942.³⁵⁷ However, production of this model was never started at the Nibelungenwerk.³⁵⁸

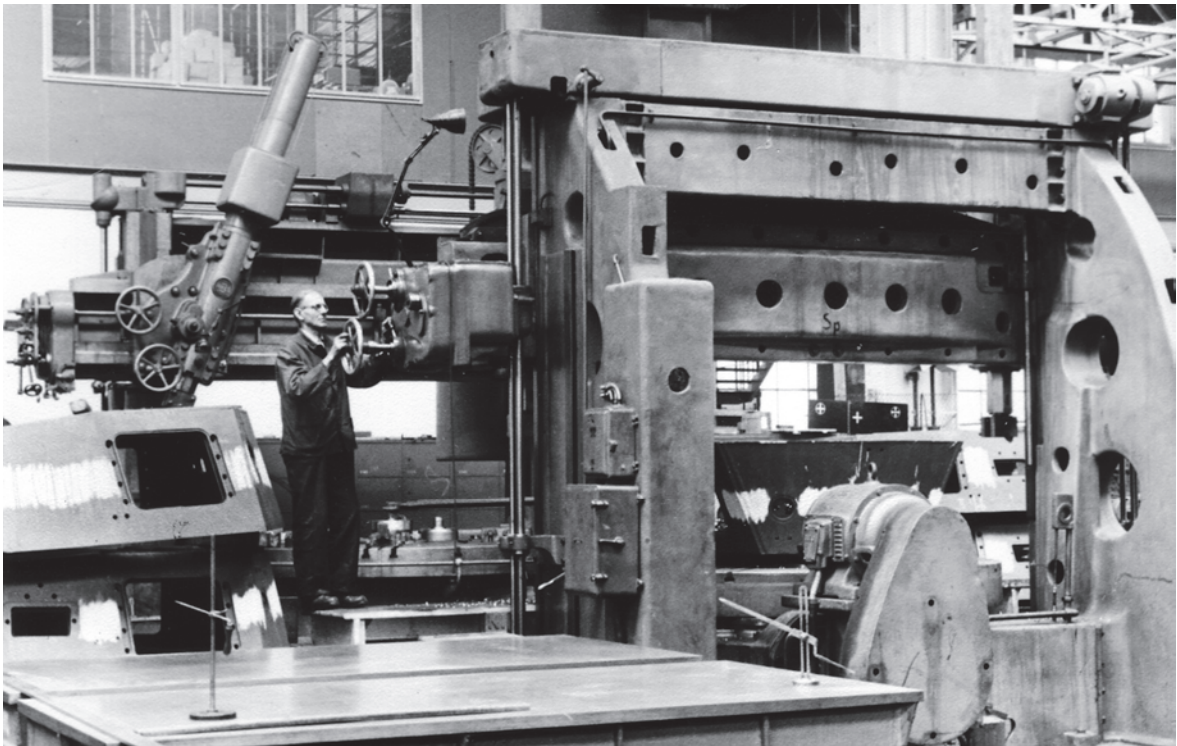
³⁵⁷ Collection Perz, Nibelungenwerk GmbH board of directors meeting dated 23. July 1941: Report of the technical directors

³⁵⁸ Collection Perz, Page Ni56, Table with delivery data for the Mark IV tank in business years 1941/1942, 1942/1943

1942: Pz.Kpf.Wg. IV, VK 4501 (P) "Tiger"

Production of the Mark IV tank, Ausführung F, F(2) and G

The 1942 ramp-up in assembling tanks at the Nibelungenwerk occurred at a critical moment. The Nibelungenwerk itself was still in the build-up phase and the medium Mark IV with its short-barreled 7.5 cm gun KwK (L/24) was the best and heaviest German tank at the time. On the Eastern Front, the Soviet T-34 had appeared, a tank that was superior to the Mark IV in all key aspects. Before, however, the development and subsequent series production of a superior German heavy tank could come on stream, a further increase in output of the Mark IV became essential.



A vertical turning and boring mill in Workshop V being set up to machine the underside of a Mark IV tank turret. The entire turret forging was rotated while the stationary cutting tool was infed on a vertical plane to complete the machining operation. (13. July 1942). [Archive ECS]

Thanks to the superior assignment of tasks among the tank crews, the far more carefully engineered German tanks held the tactical advantage. The five-man crew of a Mark IV tank was made up of the commander, gunner, loader, driver and radio operator.³⁵⁹ Moreover, immediate upgrading of its combat capabilities

³⁵⁹ HF, Reich Ministry for Armaments and War Production, Specification sheets for Army weaponry, vehicles and equipment, 1944, page G 315



A roadworthy chassis for a Mark IV tank Ausf F2 standing in a fire-extinguishing pond adjacent to Workshop V in March 1942. [Archive ECS]

had to be taken in hand. Being fitted with the far more powerful, long 7.5 cm KwK 40 (L/43) gun, the Mark IV could hopefully hold its own against the T-34 until a successor was available. The penetration capacity of the 7.5 cm KwK (L/24) gun used hitherto was limited to 32.5 mm armor plate at a range of 1 500 meters. By contrast, the new 7.5 cm KwK 40 (L/43) gun firing the Panzergranate 39 armor-piercing round was capable of defeating 82 mm thick armor plate at 1 000 meters range, while the Panzergranate 40 round even boasted a penetration capacity of 88 mm.³⁶⁰

At the Nibelungenwerk production of the Ausführung F with the short-barreled gun continued until February 1942. No Mark IVs were delivered in March because retrofitting with the long 7.5 cm KwK 40 (L/43) gun was under way. Then, in April 1941, production of the new model with the long-barreled 7.5 cm KwK 40 (L/43) began. From June to August only 14 vehicles were delivered each month. In the fall of 1942, monthly deliveries improved again, reaching 45 vehicles in

³⁶⁰ HF, Reich Ministry for Armaments and War Production, Specification sheets for Army weaponry, vehicles and equipment, 1944, pages G 23 and G 23 I