He 274
High Altitude Heavy Bomber
Heinkel

The ability of bombers to operate at a height inaccessible to fighters has always interested the Germans. So it is not surprising that with the start of work on the He 177, a version with a pressurized cabin for flight at extreme altitudes was considered. The design of this version of the He 177 began in 1940, work on it proceeded in parallel with the conventional version of the He 177a-3 bomber.

The high-altitude version of the He 177a-4 differed from the AZ by the pressurized cabin for three crew members. Sealing was provided by double-walled cabins, flat sandwich-type glazing panels and inflatable rubber tubes at the joints. The high-altitude system maintained a pressure in the cockpit equivalent to an altitude of 2500 m. Defensive armament was limited to one MG-131 machine gun forward and MG-131 twin guns on remotely controlled installations above and below the fuselage. The sighting equipment was mounted in the pressurized cabin blister.

Design work on the He 177a-4 was going on in the Austrian Schwechat. It soon became clear that it would not be possible to ensure the use of the He 177a-3 airframe to achieve the specified flight altitude, a much larger wing lengthening was required, the project of a simple lengthening of the He 177 single-spar wing was not suitable - a new two-spar wing with an aspect ratio of 13 had to be installed.

Heinkel's congestion with the development of the He 177 forced RLM to transfer the development of drawings and fine-tuning of the aircraft to the French Farman plant in Suren, ordering two experimental and four pre-production aircraft. The development of the He 274 project in the Farman bureau proceeded slowly, despite the fact that 250 French draftsmen were working under the supervision of

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Heinkel representatives. Constant changes led to the fact that the new aircraft no longer resembled the He 177a-3. Its length was increased from 19.6 to 22.5 m. The main landing gear of the He 177 type were replaced by two-wheeled, retracted into the engine nacelles.

The assembly of two experimental He 274-V1 and V2 began in Suren only in 1943. They were supposed to be equipped with DB-603A-2 engines with TK-11 turbochargers.

Wing He 274 had a two-section center section with consoles, two spars of which were connected by jumpers and formed a solid truss. Between the spars there were four fuel tanks (two in the center section and two in the consoles) with a total capacity of 4400 liters and oil tanks for engines. Fowler's slotted flaps were located under the center section, 10 sections of which were released using hydraulics. Ailerons with servo-controlled trim tabs.

The fuselage had a classic semi-monocoque design, immediately behind the pressurized cabin there was a 1500 liter tank and two bomb compartments. In one of them, for long-distance flights, it was possible to install an additional 1900 liter tank, which, together with two 1000 liter tanks in the tail section, provided a total capacity of 10,000 liters with a 2 ton bomb load.

The He 274 crew was planned to consist of four people: the pilot and co-pilot, sitting together, the navigator-bombardier and the radio operator behind them. The latter operated two FDL-131Z turrets using a blister in the cockpit roof and a glazed ledge under the fuselage.

Luftwaffe | Heinkel | He 45 | He 50 | He 51 | He 59 | He 60 | He 70 | He 72 | He 100 | He 111B2 | He111P | He 111H | He 111H-11 | He 111Z-1 | He 112 | He 114 | He 115 | He 116 | He 118 | He 119 | He 162 | He 177A5 | He 178 | He 219 | He 274 | He 277 | He 280 | Photos & Drawings |

Combat Use

He 59 | He 60 | He 112 | He 177 |

	He 277 B-5/R-2	He 274 V1
Crew	7	4
Dimensions		
Wing span, m	31,40	44.20
Length, m	21.20	23.80
Height, m	6.65	5.50
Wing area, m²	99.70	170.00
Weight, kg:		
Empty	22,100	21,320
Loaded weight	44,000	38,000
Powerplant		

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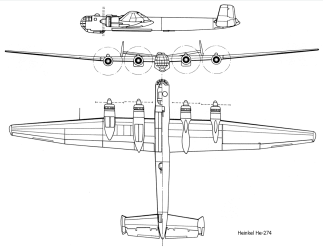
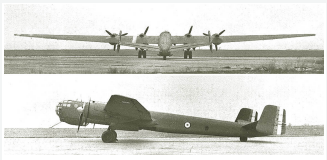
4 × PE Daimler-Benz power, h.p.	DB-603A 4×1750	DB-603A-2 4×1750
Performance		
Maximum speed over ground, km/h	480	430
Maximum speed at altitude, km/h	565	575
Cruising speed, km/h	458	510
Service range, km	6000	4225
Service ceiling, m	15,000	14,300

Armament. One 13-mm MG-131 machine gun in the bow, two MG-131 in the remotely controlled upper and lower FDL-131Z turrets; bombs up to 4000 kg.

He 274-V1 was ready for flight in July 1944, but the Allied offensive forced the Heinkel employees working on the project to be evacuated, the engines were blown up by explosive charges, after which the Germans, capturing all the blueprints, fled. However, the He 274-V1 glider was almost not damaged, and soon after the liberation, the Allies began to restore the aircraft. The engines were found at another plant, the first flight took place in December 1945 in Orleans.

By this time, "Farman" was nationalized and received the designation AAS, and He 274-V1 was renamed AAS-01a. Flight tests continued at Brittany-sur-Orge. Basically, the performance of the high-altitude system was assessed. The proposal to complete He 274-V2 was not accepted. He 274-V1 (AAS-01a) was scrapped in 1953.

Photo	Description
	Drawing He 274
	He 274

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