Focke - Wulf FW 200 Condor

GC

FW 200 Condor

History Manual

by

PETER HARRIS

GROUNDCREW

Art work

GREG LAW

GROUNDCREW

The Focke-Wulf Fw 200 "Condor”

Early Prototypes and Commercial Transport Variants

Work on the design and construction of 3 prototypes of the 4-engined airliner commenced in 1936 following discussions between Focke-Wulf's Kurt Tank and Deutsche Lufthansa (DLH). The prototype, the **Fw 200 V1** with P&W S1E-G engines, first flew on July 27 1937 and was later registered D-AERE and named "Saarland". The BMW 132 G-1 engined V2 prototype was registered D-AETA "Westfalen", whilst the following V3 prototype (D-2600 "Immelan III") became Hitler's Fuhermaschine.

The initial 3 prototypes were followed by 8 **Fw 200A-0** pre-production machines that were delivered to DLH, Det Danske Luftfartselkab (DDL) and the Brazilian Sindicato Condor Limitada. During 1938, the **Fw200 S-1** (the redesignated **V1**) and **Fw 200A-01 V4** flew a number of long distance publicity flights from Berlin to Cairo, Berlin to New York and Berlin to Tokyo.

The **Fw 200B** was the production series of the airliner, B-1and B-2 aircraft being respectively fitted with BMW 132Dc and BMW 132H engines. The Condor did not see widespread use with Lufthansa but, with the outbreak of hostilities, machines that had been ordered by the Dai Nippon Kabushiki Kaisha and the Finnish Aer O/Y were delivered to DLH on completion.

The Fw 200C Series Maritime Reconnaissance-Bomber

The Japanese first expressed interest in the Condor as a military aircraft when they placed an order for a single **Fw 200B** configured as a long-range maritime reconnaissance aircraft in 1939. The resulting **Fw 200 V10** was similar to the **Fw 200B**, but featured a small dorsal turret with a 7.9mm MG 15 machine gun, a short ventral gondola or observer's station fitted with 2 MG15s and the fuselage was fitted with additional fuel tanks and cameras.

Due to problems and the resulting delays with the Heinkel He 177 program, the RLM recognised the urgent need for an interim maritime reconnaissance-bomber. The Focke-Wulf team responded with a proposal for the **Fw 200C**, based on a development of the **V10**, and the RLM rapidly placed an order for 10 pre-production aircraft in September 1939.

The pre-production **Fw 200C-0** was similar to the Fw 200B, apart from using BMW 132H engines enclosed within refined nacelles and cowling, some structural strengthening and twin wheel main undercarriage units. The first 4 **C-0** aircraft were modified B Series airframes finished as transports, whilst the remaining 6 **C-0** Condors were completed for the anti-shipping role and were delivered to the Luftwaffe in spring 1940. The **C-0** had 1 7.9mm MG 15 mounted in a dorsal turret immediately aft of the flight deck, another MG 15 flexibly being mounted in an aft dorsal position and a third ventral MG 15 firing aft through a hatch.

The **Fw 200C-1** replaced the dorsal turret with a fixed cupola and featured a ventral gondola offset to starboard, this gondola being fitted with a forward firing 20mm MG FF canon and rear facing MG 15. Up to four 250kg bomb could be carried under the outboard engines, on bomb racks outboard of the engines and a single cement 250kg could be carried within the ventral gondola to assist in adjusting the low-level Revi bombsight. The normal crew of 5 comprised of a pilot, co-pilot, navigator/radio-operator/bombardier/gunner, engineer/gunner and rear dorsal gunner. Additional endurance could be achieved by fitting an auxiliary armoured fuel tank in the ventral gondola and a form of "in-flight refuelling" was possible via fuel drums stowed within the fuselage. The **Fw 200C-2** was an interim model, featuring modified outboard engine nacelles, each of which could carry either a bomb or auxiliary fuel tank, and faired wing racks.

.

The Fw 200C3 Series

The BMW-Bramo 323R-2 engined **Fw 200C-3** featured major structural strengthening of the rear spar and fuselage as the basic structure of the Condor had not been originally designed to endure the stresses of long low-level maritime patrols or evasive manoeuvring. Even with this additional structural strengthening and the imposition of rigid operating limits, Focke-Wulf reduced but never overcame the problem of structural failures. The **C-3** carried an additional crew member and an increased maximum bombload of two 500kg bombs under the engine nacelles, four 250kg bombs on the outboard wing racks and twelve 50kg bombs within the ventral gondola. The C-2's forward dorsal cupola was replaced with a low-drag Fw 19 hydraulically operated turret with a 7.9mm MG 15 and 2 additional MG 15s were beam mounted in the aft fuselage. **Fw 200C-3** sub variants included:

Fw 200C-3/U1: a larger HDL 151 turret mounting a 15mm MG 151 canon replaced the Fw 19 forward dorsal turret and, within the ventral gondola, a 20mm MG 151 replaced the forward firing MG FF;

Fw 200C-3/U2: reverted to the Fw 19 forward dorsal turret and replaced the ventral gondola's low-level Revi bombsight and MG 151 with the Lofte 7D sight and a 13mm MG 131 machine gun; and

Fw 200C-3/U3 had an EDL forward dorsal turret with a MG 131 machine gun and another MG 131 in the aft dorsal position.

Fw 200C-3/U4 featured increased fuel capacity, an additional gunner and used the Fw 19 turret but replaced the beam mounted 7.9mm MG 15s with 13mm MG 131s.

The Fw 200C4 Series

The **Fw 200C-4** replaced the **C-3** on the production line in February 1942 and was produced in larger numbers than any other Condor variant. The **C-4** was fitted with the larger HDL forward dorsal turret and all other defensive positions were fitted with 7.9mm MG 15 machine guns, apart from the forward firing ventral canon which was either a 20mm MG 151 or, if the Lofte bombsight was fitted, a 13mm MG 131 canon.

Early **C-4s** were fitted with FuG Rostock search radar, however the later FuG 200 Hohentweil radar was more widely fitted and was more useful during for blind-bombing purposes. To take advantage of the differing performance characteristics of both radars, a small number of Condors were fitted with both Hohentweil and Rostock equipment.

Fw 200C-4 sub variants included:

Fw 200C-4/U1 and **U2:** transport versions with smaller ventral gondola with two 7.9mm MG 15 machine guns, a forward dorsal Fw 19 turret and similar rear dorsal Fw 20 turret. The **U1** provided accommodation for 11 passengers, whilst the **U2** accommodated 14 passengers; and

Fw 200C-4/U3: identical to **C-4**, but with a Fw 19 instead of HDL dorsal turret.

The Late Fw 200C6-8 Series

A number of **C-3/U1** and **U2** Condors were modified to carry the **Henschel Hs293** guided missile under each of the outboard engine nacelles and were re-designated as the **Fw 200C-6**. The **C-6** also featured an extended ventral gondola and a FuG 203 Kehl III fitted to transmit guidance commands to the HS 293's FuG 230b Strassburg receiver.

The **Fw 200C-8** was the last Condor production model. Similar to the **C-6**, the **Fw 200C-8/U8** variant was optimised for HS293 operations with deeper outboard engine nacelles and an extended ventral gondola. The final **C-8s** were completed in February 1944.

Early Operations

The **Condor** first saw operational service with the Luftwaffe in spring 1940. Most of Deutsche Lufthansa's **Fw 200B** aircraft were requisitioned to serve as transports with K.Gr.z.b.V. 105, along with the first 4 **C-0** aircraft, which supported the invasion of Norway in April 1940.

The remaining 6 **C-0** Condors, completed for the anti-shipping role, were delivered to 1./KG40 which began operations in April 1940 from Aalborg-West and subsequently Copehnahgen (Kastrup) in Denmark. However, 1./KG 40 was soon withdrawn from operations to re-equip with the **Fw 200C-1**. I/KG 40, which included 1./KG 40 and the newly formed 2./KG 40 and 3./KG 40, was transferred to Bordeaux-Merignac in June 1940 following the fall of France.

After a high loss rate was incurred during mine-laying sorties in July 1940, I/KG 40 was assigned the long-range reconnaissance role. From Bordeuax-Merignac, the Condors would fly out across the Bay of Biscay, and follow an arc around Eire's Atlantic coast sometimes as far as 20W. They would complete these up to 13 hour sorties by landing at their bases in Denmark (Aaloborg), in the case of the earlier missions, and Norway (Tronheim-Vaernes, Oslo-Garermoen and Stavanger-Sola) during the majority of later missions. On the following day the crew would then fly back to Bordeaux using the reverse route, an average of 2 or 3 Condors operating per day.

Armed Reconnaissance

Successful attacks on single targets of opportunity during these reconnaissance missions soon led to Condors attacking ships sailing within convoys. The target would be approached at 200-400m, followed by a shallow dive, attacking at 150m or less with bombs, canon and machine guns. Sources differ as to the precise tonnage of sinkings attributed to I/KG 40, but include 90,000 tons between August and September 1940 and a total of 363, 000 tons between August 1 1940 and February 9 1941. The magnitude of these shipping losses led to Winston Churchill labelling the Fw 200 Condor as **"The Scourge of the Atlantic"**.

However, these successes were achieved with relatively few aircraft. In September 1940 I/KG 40 only had 15 Condors on strength and didn't reach its' full complement of 36 until March 1941 due to the Condor's low production rate. 26 Condor **C-1s** were produced by the end of 1940, 58 Condors were produced in 1941 and a total of 84 Condor **C-3** and **C-4** aircraft were completed during 1942. Furthermore, Condor serviceability rates were as low as 25%.

It should also be noted that I/KG 40 participated in the night bombing of the Liverpool-Birkenhead area in September 1940

U Boat Co-operation

Condor reconnaissance sorties for the U-boat arm proved problematic throughout the war. Due to equipment incompatibility, there was no direct communication between aircraft and U-Boats, any sighting reports were first transmitted to the Befehlshaber der U Boote, the reports evaluated and appropriate orders transmitted to the U-Boats. Due to positional errors within the sighting reports, the Befehlshaber der U Boote would often apply DF techniques to the reports' transmissions, or subsequent homing signals, to correct the Condors' initial position-fixes.

Once a Condor had reported a sighting, the endurance, range and the small number of available Condors could also limit the effectiveness of its shadowing or "Fuhlungshalter" (contact plane) role for the U-boat arm. Obviously U-Boats could take some time to reach an intercept position following a sighting report and by that time a convoy may have moved beyond the Condor's operational range before a subsequent flight had re-established contact.

However, these limitations were not as critical to the Condor's spotting/shadowing role for more immediate air attacks by other Condor, He 111, Do 217 and later He 177 aircraft. **Doenitz** wryly commented that the DF fixes from Luftwaffe radio traffic during these air attacks were as useful to the U-boat arm as specific sighting reports!

On occasion the U-Boat arm provided a reciprocal service for Luftwaffe Condors. If circumstances permitted, a U-Boat would report a sighting of a target suitable for air attack and would remain in contact with that sighting, emitting homing signals for the benefit of approaching Luftwaffe aircraft.

It should also be noted Condors engaged in long-range sorties often carried an additional weather observer or "frog".

Increasing Allied Countermeasures

CAMship Hurricane

The Condor's anti-shipping successes of mid 1940 to mid 1941 were possible, in part, due to a lack of effective Allied defensive measures. Most merchant ships were unarmed, many ships sailed alone, there were insufficient escort ships and shore-based fighter aircraft had insufficient range to effect interceptions within the Condors' operating areas. However, the introduction of allied countermeasures resulted in increasing Condor losses and a corresponding reduction in successful attacks.

Many of the Allied countermeasures, such as fewer single sailings, the availability of more armed escorts to accompany convoys, the introduction of Escort Carriers and Merchant Aircraft Carriers (MACs), along with long-range patrol aircraft, were also directed towards U-Boats but resulted in increased Condors losses or deterred Condors attacks, eg; a FAA Martlet from HMS Audacity scored the first Condor kill from an escort carrier in December 1941. More specific allied anti-aircraft measures included:

Defensively Equipped Merchant Ships (DEMS) fitted with anti-aircraft guns (12 pdr HA guns and 20mm Oerlikon canon), barrage balloons and PAC (parachute and cable) launchers;

Catapult Aircraft Merchantmen (CAM) were equipped with a RAE developed rocket catapult and a **RAF Hawker Hurricane Mk 1a**. Between mid 1941 and mid 1943 thirty-five CAM ships completed a total of 170 voyages, 8 operational launches achieved 6 kills for the loss of 1 pilot; and

RN Fighter Catapult Ships (FCS) were similarly equipped with either a cordite or rocket propelled catapult and RN Fairey Fulmar or Hawker Sea Hurricane aircraft, the four FCS achieving 1 kill from 10 operational launches between late 1940 and mid 1942.

Note: Both the CAM and FCS were emergency interim measures and were phased out as more escort carriers became available.

Evolving Condor Operations and Tactics

By mid 1941 mounting losses led to Condors being confined to reconnaissance/shadowing operations. The crews were ordered not to initiate attacks and seek cloud cover if attacked by allied aircraft. In order to preserve the relatively small force of fragile Condors, crews were ordered to immediately return to base in the event of sustaining minor damage or mechanical problems.

The long range reconnaissance missions between the Condors' French and Norwegian bases were abandoned following due to increasing Coastal Command Beaufighter and Mosquito operations, splitting the Condors' area of operations.

Kliene Aufklarung (limited reconnaissance) missions from the French bases ranged as far north as 45N and as far west as 19W, whilst Grosse (extended) Aufklarung extended to 34N and 25W. Despite the activities of V/KG 40's Junkers Ju 88C fighters within the Bay of Biscay, Condors bound for the northern area might fly in a defensive formation at sea level as far south as Cape Ortegal (44N) to avoid patrolling fighters. They would then fly to 11W before the formation would break up and proceed to conduct individual search patterns. One pattern was known as Fucher (Fan) search, eg; starting from 15W a Condor would fly due west for 3 degrees, due south for 30 miles, due east for 3 degrees, due South for 30 miles, and would continue to repeat that sequence until the search area had been covered.

Condors conducted reconnaissance missions from Norway to either the northeast coast of Iceland or Jan Mayen Island and back, or alternatively to the north coast of Iceland, then to within 40 miles of the Greenland coast and returning to Norway.

In 1943 the Junkers Ju 290As of FaGr 5 would supplement the Condor in the long-range maritime reconnaissance role.

Anti-Shipping Operations

Henschel Hs293

With the lifting of restrictions on shipping attacks, Condors resumed anti-shipping operations from Tronhiem against Allied convoys bound for Russia and against Gibraltar or Trans-Atlantic convoys from the French bases. (Note: the French-based Condor's were transferred to Norway and Germany with the loss of the French bases in 1944.)

A typical anti-shipping mission by radar equipped Fw 200 (**C-4** or later) aircraft would consist of a minium of 4 aircraft that would proceed in formation to the search area at sea level. The aircraft would then fan out to fly parallel courses at 25-30 mile intervals, periodically climbing to 1500ft and circling whilst scanning the surrounding area with the FuG 200 Hohentweil search radar. The first plane to find the target(s) would contact its companions and the subsequent attack would be conducted from a minimum 9000 feet, unless suitable cloud cover permitted a low-level attack.

Anti-shipping attacks using the HS 293 radio-guided missile were initiated from a minimum of 4500 feet. Once the missile had been launched a flare attached to the missile's tail would ignite to provide a visual guidance aid. The operator then used a simple joystick to guide the missile onto the target, whilst the aircraft would continue to fly an arc centred on the target. However, any post-launch defensive or evasive manoeuvring could result in the loss of ether visual or radio contact with the missile. In comparison to the FX 1400 radio-guided bomb, the HS 293 had relatively low penetrative ability and was only suitable for attacks on merchant or lightly armoured naval ships.

Transport Operations

The Fw 200 served in the transport role within the Mediterranean Theatre, in the Russian Front and with the Reichskurierstaffel. Condors from 9./KG 40 operated as transports in Italy, whilst 1. and 3./KG 40 were transferred to Russia, serving as emergency transports at Stalingrad. With the disbanding of KG 40, all remaining Condors operated as transports.

Units known to operate the Focke-Wulf Fw 200

Aufkl.Gr (F) 120
Aufkl.Gr (F) 122
Aufkl.Gr/Ob.d.L. (Kdo Rowehl)
Fliegerfuhrer Nordmeer
KG 40 (only Stab, I, III and IV Gruppe)
KG 100
KGzbV 105
KGrzbV 108
KGrzbV 172
KGrzbV 200
LTStaffel 5
LTStaffel 290
Ob.d.L.
TGr 20
Transport Staffel Condor
Tr.Fl.Staffel 5

Sources and Additional Reading

Brown, Captain Eric: "Wings of the Luftwaffe", Airlife
Butler, Phil: "War Prizes", Midlands
Green, William: "Warplanes of the Third Reich", Doubleday
Hague, Arnold: "The Allied Convoy System", Chatham Publications
Hessler: "The U-Boat War in the Atlantic, 1939-1945", HMSO
Hooton, E.R.: "Phoenix Triumphant", Arms & Armor
Hooton, E.R.: "Eagle In Flames", Arms & Armor
Mason, Francis: "Battle Over Britain", RAF Museum
Price, Alfred: "The Luftwaffe Data Book", Greenhill
Rosch, Barry: "Luftwaffe Codes, Markings and Units, 1939 - 1945", Schiffer
Smith & Gallaspy: "Luftwaffe Camouflage and Markings", Vols 2 & 3, Kookaburra
Sturtivant, Ray: "British Naval Aviation", Arms & Armor