

# Ju 290 JUNKERS' COLOSSUS

**Robert Forsyth** looks at the Junkers Ju 290, a four-engined long-range transport and maritime patrol aircraft.



**A**s with several of Germany's multi-engined aeroplanes of World War Two, such as the Focke-Wulf Fw 200 Condor, the Heinkel He 111 and the Junkers Ju 52/3m, the origins and concept of the Junkers Ju 290 lay in the design of a commercial transport aircraft intended for Deutsche Lufthansa.

The Ju 90 was built as a large, 38 to 40-seat airliner, powered progressively by four 830hp BMW 132H radials (as in the Ju 90 V1), Jumo 211 Fs (on the V4), Pratt & Whitney SC3-G Twin Wasps (on W.Nr.0002 and 0004) or BMW 801As (on the V7 and V8).

It was an impressive aircraft, elegant for its size, constructed of smooth-skinned duralumin, flush-riveted to the trademark Junkers all-metal structure with corrugated metal-skinned rudders and rear elevator sections.

Passengers were accommodated four-abreast in facing rows, in a cabin measuring

**Ju 290 A3 W.Nr.0161/9V+DK of 2./FAGr 5 over France in late 1943. Clearly seen here are the forward dorsal HD 151 gun turret and low-drag rear turret; visible at the extreme rear is the single MG 151 mount, while the underside forward gondola carries an MG 151 cannon and MG 131 machine gun.** All photos EN-Archive

9ft 3in (2.83m) across internally, with, in addition, two toilets, a cloakroom and a mail compartment aft, while a food storage area, baggage hold and another cloakroom were located forward. Further baggage holds were positioned between the two wings spars and at the extreme aft of the fuselage.

The first prototype of the Junkers Ju 90, the V1, W.Nr.4913, D-AALU, made its inaugural flight on August 12, 1937 and had been adapted from the big, all-metal, four-engined Ju 89 bomber. However, after a just few months' trials, D-AALU, named *Der Grosse Dessauer* after the Junkers plant at

Dessau, broke up in flight and crashed at Libbesdorf, a village near the factory, after conducting flutter tests on February 7, 1938.

Nevertheless, from this inauspicious start, a short run of Ju 90s followed, with Lufthansa taking delivery of 11 aircraft. One example of Lufthansa employment was the two aircraft used on the airline's Berlin-Vienna route in July 1938. Interest also came from South African Airways, but this did not progress, and the outbreak of World War Two prevented further civil use of the type.

## MILITARY USE

In 1940, it was decided to further exploit the design of the Ju 90 in order to create a large military aircraft able to undertake long-range transport and reconnaissance operations. But it was not until February 11, 1941 that the Technical Office of the Reich Air Ministry instructed provisionally that the Ju 90 V11, W.Nr.900011, D-AFHG, *Oldenburg*, was ▶



**A Ju 290 A-4 or A-5 of 1./FAGr 5 probably photographed at Mont-de-Marsan in southwest France in late 1943 or early 1944. FAGr 5's Ju 290s were deployed by the Luftwaffe to search for, and shadow, Allied convoys in the Atlantic on behalf of U-boats.**

to be assigned for this purpose, although this was not fully confirmed until October of that year. Given an increased span of 137ft 7in (42m), new angular tail fins and rudders and square fuselage windows, the aircraft was also a little longer than the Ju 90, measuring 94ft 1in (28.68m) in length. The aircraft also featured the Trapoklappe hydraulically operated ventral loading ramp which would enable military vehicles and guns to be driven directly into the fuselage, as well the dropping of large quantities of supplies by parachute.

When lowered to the ground the Trapoklappe raised the angle of the rear fuselage to a level position, giving vehicles sufficient clearance to embark and, when closed, the ramp was pneumatically sealed. One of the ramp's most practical features was that it had access steps centrally along its length with treaded edges to assist vehicles with adhesion during loading and unloading. Powered by four BMW 801 A engines, the former Ju 90 V11 D-AFHG emerged as a Ju 290 V1, W.Nr.00001, BD+TX, and flew, without problems, for the first time on July 16, 1942 with Junkers test-pilot, Flugkapitän Hans-Joachim Pancherz, at the controls.

## VARIANTS

The first of the new series aircraft, the Ju 290 A-1, followed a pair of pre-production A-0s in late 1942, and were powered by 1,600hp BMW 801 L radials. They featured armament that had originally been trialled in the Ju 90 V8 in the form of a forward, dorsally mounted, hydraulically swivelling HD151 turret installed with a single 20mm MG 151 cannon and a forward, ventral gondola housing an MG 151 and a rearward-firing 13mm MG 131 machine gun.

From 1943 onwards, this basic design was refined and upgraded to provide the Luftwaffe with both an improved long-range, high-capacity transport, as well as with a new maritime reconnaissance aircraft, or

Fernerkunder, intended to replace the, by that time, relatively slow, Fw 200.

The Ju 290 A-2 series, of which three aircraft were completed with first flights taking place in May and June 1943, was fitted with additional radio equipment and FuG 200 Hohentwiel search radar for sea reconnaissance work, with extra armament in the form of a second HDL 151 dorsal turret. These machines would eventually see service with Fernaufklärungsgruppe 5 (FAGr 5) in reconnaissance missions over the Atlantic that started later in the year. The five-aircraft Ju 290 A-3 series was similar to the A-2, but was installed with more powerful 1,700hp BMW 801 Ds together with a Focke-Wulf Fw 20 reduced-drag, lower-profile aft dorsal gun turret and improved gondola design. Additionally, both the A-2 and A-3 carried a single MG 151 in the tail operated by a prone gunner, and in the case of the A-3, provision was made to mount MG 131s in left and right waist positions.

The Ju 290 V7 formed the first aircraft of what would be the A-4 series, which saw a run of five aircraft, first taking to the skies

**Junkers Ju 90 V8, W.Nr.4920, DJ+YE, was deployed by *Lufttransportstaffel* 290 on operations in the Mediterranean from 1942, but suffered 50% damage when its undercarriage collapsed at Rome Ciampino on 18 August 1943. The type was a forerunner to the Ju 290 and the inspiration for its design.**



piloted by Flugkapitän Eduard Dautzenberg on September 8, 1943. The A-4 benefited from two low drag turrets, the forward one being of the Fw 19 hydraulically operated type.

The Ju 290 received further sophisticated design changes in 1944 with the introduction of the A-5 Fernerkunder intended specifically for long-range operations out over the Atlantic in support of the U-boat fleet. Eleven examples were completed, again powered by the BMW 801 D, and they were also installed with increased armour protection, while MG 151s replaced the previous MG 131s in the beam positions.

On April 1, 1944 Junkers pilot, Flugkapitän Karl Friedrich Maringer, piloted W.Nr.110181, the first of the new Ju 290 A-7s on its maiden flight from Dessau. This variant was intended from the outset as a maritime reconnaissance/anti-shipping aircraft, and heralded the incorporation of a bulbous, glazed nose into which was fitted another MG 151 cannon.

In addition to FuG 200 radar, the A-7 could be rigged to carry an offensive load of three air-launched Henschel Hs 293 (1,100lb warhead) or three Ruhrstahl FX 1400 Fritz-X (3,300lb) guided stand-off bombs, one such weapon mounted on an ETC rack under each wing with a third carried under the fuselage.

Just one A-8 was finished out of a proposed batch of ten machines and this variant was identical to the A-7 but was better armed, fielding no fewer than ten MG 151/20 cannon, one weapon being installed in each of four dorsal turrets. Finally, two Ju 290 A-9s were built as ultra-long-range reconnaissance aircraft, but with much reduced armament in order to reduce weight in favour of endurance.

## LUFTWAFFE SERVICE

The Ju 290 first saw operational service under some of the most demanding conditions imaginable – especially for a still largely untried aircraft. At the end of December 1942, along with a Staffel (flight squadron) of Ju 90s and some Fw 200s from I. and IV./KG 40, the Ju 290 V1 as well as some A-1s, were assigned to take part in the attempt to keep the German Sixth Army –



Junkers Ju 290 A4 W.Nr.0165 makes a test flight over the American countryside in the autumn of 1945, carrying its US designation, FE 3400, on its tail. In November 1944 it had been assigned to 1./KG 200 as A3+HB to conduct an agent-dropping mission to Mosul in Iraq, piloted by Hauptmann Heinz Braun and Leutnant Dipl.-Ing. Wolfgang Pohl.



The first Ju 290, the V1 (W.Nr.00001/BD+TX), passes overhead, the propellers of two of its BMW 801 A engines idling. It suffered a fatal crash during an airlift from the Stalingrad pocket on 13 January, 1943 with 70 wounded troops aboard, many of whom were killed.

surrounded by Soviet forces amid the frozen ruins of Stalingrad – supplied by air. The aircraft were allocated to the mixed-type heavy transport Gruppe, KGr.z.b.V.200, based at Berlin-Staaken under the command of Major Hans-Jürgen Willers.

The first two Ju 290s to depart for Russia were the V1, coded BD+TX, and the A-1, W.Nr.0152, SB+QB. The latter aircraft suffered engine problems and was forced to return to the Junkers plant at Dessau for attention, from where it took off once again on January 6, staging via Warsaw, Kiev, Poltava and Stalino (312miles/502km west of Stalingrad) to Pitomnik airfield inside the Stalingrad pocket.

Following a stop at Wiener Neustadt, the V1 BD+TX landed at Stalino on December 28. The aircraft reached Pitomnik, however when the Junkers factory pilot, Flugkapitän Walter Hänig, attempted to take off from the airfield on his second supply flight in the early hours of January 13, the aircraft crashed. Hänig, along with his Junkers flight engineer, Robert Stiefel, and three of his Luftwaffe crew members, together with 40 of the 75 wounded Wehrmacht troops on board, were killed.

Despite their valuable load capacities, the big aircraft proved an easy target for Soviet fighters. Aircraft SB+QB's flight to the pocket

**A Ju 290 A-1, W.Nr.0152, SB+QB, of the composite transport Gruppe, KGr.z.b.V.200, at Stalino airfield in Russia during the Stalingrad airlift in early 1943. The hydraulically operated ventral loading ramp, with its central stairway, known as the Trapoklappe, is lowered for soldiers, vehicles and field guns to be loaded on the aircraft.**

on the 13th would be its only one. Piloted by Major Hugo Wiskandt, the aircraft took off from Stalino in clear winter skies, en route for Pitomnik, accompanied by an Fw 200. But a short while into their flight the German aircraft were attacked by a formation of five Soviet fighters. The Ju 290 A-1 received multiple hits but was able to make it to Pitomnik, where an inspection revealed that the aircraft's fuel feed system had been damaged.

After some hasty and temporary repairs, the aircraft took off again to return to Stalino, but with a restricted load of just ten badly wounded soldiers. At Stalino, a full count showed that the Junkers had been hit 123 times. Under such circumstances, no further operations were considered possible, and so on January 17, it undertook a 5hr 30min direct flight back to Rangsdorf in Germany. From there it flew to Berlin Tempelhof for major repair work.

The Ju 290 A-1 did return to the Eastern Front in early February 1943, but worsening conditions on the ground combined with the appalling sub-zero conditions meant that it became all but impossible to continue making any meaningful flights. Eventually, Stalingrad and the Sixth Army were lost with 91,000 survivors passing into Soviet captivity.

Two Ju 290 A-1s were delivered to Lufttransportstaffel 290, which had been established under Hauptmann (Hptm) Heinz Braun at Tempelhof in January 1943. LTSt.290 – believed to be known alternatively as the Viermotorige-Transportstaffel – was a specialist four-engine transport unit that operated under the direct control of the Luftwaffe High Command and which, as well as its Ju 290s, numbered six Ju 90 B-1s, a pair of Fw 200 B-0s, a Ju 252 and eventually a small number of Italian Piaggio P.108 bombers. In March 1943, the Staffel departed Tempelhof for Grosseto, Italy, from where it was to operate as a transport unit within the Mediterranean Theatre.

## MARITIME WORK

Perhaps the Ju 290's most notable operational role was as a long-range maritime reconnaissance aircraft and convoy-shadower. Fernaufklärungsgruppe 5 (FAGr 5) was formed at Achmer, near Osnabrück, in July 1943 under the command of Hptm Hermann Fischer, and comprised 1.Staffel under Hptm Josef Augustin and 2.Staffel under Hptm Karl-Friedrich Bergen.

Briefed to act as 'eyes' for Admiral Karl Dönitz's U-boats which were now fighting a faltering and attritional war against



the Allied convoys ranging across the Atlantic and the western Mediterranean. The unit transferred to Mont-de-Marsan, in southwestern France, in early November from where it began operations, undertaking long-range missions from Gibraltar in the south, across the Bay of Biscay, and out into the Atlantic to the west of Ireland.

Over the course of its six months of operations, during which it flew just under 200 missions covering more than 2.1m miles (3,379,622km) from November 1943 to May 1944, FAGr 5 met with mixed success. True, usually operating in relayed pairs of aircraft and aided by its state-of-the-art ship-search radar equipment, the Gruppe did successfully spot and report back to Dönitz's headquarters the location of thousands of tons of Allied shipping; however, it lost nine of its crews in the process, including 20 officers.

The loss of seven of these crews was directly attributable to enemy action. The

truth was that the Ju 290 was no match for the Bristol Beaufighters or de Havilland Mosquitos of RAF Coastal Command. By August 1944, with the Allies having consolidated their hold in France, and the U-boat war all but at an end, FAGr 5's Ju 290s pulled back to Germany and an uncertain future as occasionally required transport aircraft.

In addition to its transport and reconnaissance roles, in mid-1943 it was planned to operate the Ju 290 as a high-altitude Fernkampfflugzeug – long-range

**This Junkers Ju 290 A-5, W.Nr.0170, is fitted with a FuG 200 search radar and is still carrying its factory code, KR+LA. It was subsequently assigned to 1./FAGr 5 for long-range reconnaissance operations over the Atlantic and coded 9V+DH. After FAGr 5's return to Germany in mid-1944, the aircraft was destroyed at Rechlin during an Allied bombing raid in March 1945.**

bomber with pressurised cockpit and gun stations. Work started on the Ju 290 B-1 late that year, the design for which removed the Trapoklappe ramp. Powered by 2,000hp BMW 801 E engines, it was proposed to protect the aircraft with strong defensive armament in the form of nose and tail MG 131V turrets each containing four 13mm machine guns, two dorsal turrets with MG 151s and a ventral barbette with a further pair of such cannon. However, poor technical performance and difficulties with the pressurisation system forced further development on the aircraft, as well as a proposed B-2 variant, to be abandoned by November 1944.

The Ju 290 earns its place in aeronautical history as an ambitious project, featuring innovative design, but by the time of its appearance in 1943 and set against Germany's worsening war situation, its days were prematurely numbered. **AN**



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