

Atlas deutscher und ausländischer Seeflugzeuge.

THE HANSA-BRANDENBURG SEAPLANES PART 2

THE EARLY W-PREFIXED MACHINES

Compiled by Paul Leaman

THE W.11 WAS A SLIGHTLY LARGER VERSION of the KDW single seat fighter floatplane and resembled that machine in both construction and appearance. It was fitted with a 200hp Benz Bz IV engine and armed with two Spandau machine guns. Three were built but we have no record of any service with the German navy.

The two-seat W.12 was designed by Ernst Heinkel in response to requests from the seaplane stations whose single seat floatplane fighters were proving vulnerable to attacks from behind. Their requirement was for a fighter floatplane with both forward and rearward firing machine guns.

Design work on the W.12 was started in the autumn of 1916 and the prototype was completed in January 1917. Because the Havel River at the factory was frozen, the prototype was shipped to Warnemunde for trials. These were successful though they revealed faults – amongst them unacceptable tail heaviness – that were overcome. Despite its size and weight, the prototype was found to be manoeuvrable and with a good speed. Although badly damaged by heavy surf after an emergency landing before the tests were completed, it had sufficiently impressed the authorities that production orders were placed.

In appearance the W.12 was unconventional, but it was conventional in construction. Its plywood-covered fuselage was built around spruce longerons (that sloped slightly upward towards the tail) and spacers. Plywood formers in front of the cockpit supported the engine bearers. At the rear, the slab sided fuselage came to a vertical knife edge. The tailplane sat on top of this. The balanced rudder was hinged to the sternpost and entirely below the level of the tailplane. There was no fin either above or below the fuselage, the deep flat sided fuselage compensated for this, as did the effect of the float side areas.

Because of these features, the gunner had an almost unrestricted field of fire. Added to this, the lack of struts

supporting the tailplane meant that he could also shoot downward close to the fuselage. Windows set into the floors of the two cockpits provided good downward visibility.

The fabric covered wings, both of constant chord, were of conventional wooden construction but built with a thick airfoil section and closely spaced ribs to provide the strength required to eliminate the need for bracing wires. (This also had the advantage of allowing the gunner to fire forward between the wings without risking damage.) Early models had square cut wing tips and ailerons on the top wing only, but later versions had rounded wing tips and ailerons (linked upper and lower by a strut, but both provided with control cables) on both wings. The ailerons and the rudder were constructed from welded steel tube and, like the wings, covered in fabric. Initially the trailing edge of the upper centre section had a shallow cutout to provide upward forward vision for the pilot and this was deepened when the wing stagger was reduced to bring the aircraft's centre of gravity forward.

The single stepped marine plywood floats were supported on a faired steel tube structure that was attached to the fuselage by ball joints, with additional struts reaching out to the interplane strut location adding rigidity to the wing structure. As mentioned, production batches of W.12s varied in detail. The later production batches had a lengthened fuselage; some were fitted with 160hp Mercedes engines and a radiator fitted in front of the top wing; others were fitted with a 150hp Benz engine and a vertical car type radiator in front of the engine. In service, deployed at stations along the North Sea coast, the W.12s proved able to hold their own in combat with the British seaplanes and the large heavily armed flying boats. In addition to their role as fighter aircraft, stripped of the forward firing gun and equipped with a radio, they were also used in a reconnaissance role.

W.13 was a medium sized flying boat designed by Ernst Heinkel for use by the Austro-Hungarian navy and built

Late model Hansa Brandenburg W.12, serial 2124, in flight over the sea. The effectiveness of the hexagonal camouflage pattern is noticeable on the lower wing.
: CCI Archive

