



PHOTOS MADE BY BERTRAND HANDWORK AT SCHARFOLDENDORF

The Modified Horten IV of the AHQ BAFO Club

By BERTRAND HANDWORK

Perhaps the most successful of the long line of all-wing sailplanes in Germany prior to and during the recent War was the Horten IV, designed and built by the Horten brothers.

Though similar in configuration to the highly popular Horten III, which had won wide approval from the critical sailflyers of prewar Germany, the IV featured a prone-position cockpit. This was, perhaps, the first time the pilot had lain in that position in flight since the pioneering days of the Wright brothers.

This feature was adopted in an attempt to further reduce the parasitic drag of the already exceptionally clean design. As recent tests by the United States Air Force have proved, the prone-position offers other advantages in addition to the drag reduction. Among these advantages are pilot comfort and reduced susceptibility to "blackout" during high-speed maneuvers.

In order to acquaint pilots with the prone cockpit, a number of two-place Kranich sailplanes were modified by converting to the prone position. After

being "checked out" on the novel arrangement, the flyers proceeded to the Horten.

By the use of a large number of molded plastic panels, an excellent visibility range was obtained with no loss of pilot protection. Since the design was, and still is, experimental, the protection of the pilot was of utmost importance and was fully considered in the design of the unique cockpit.

To reduce wear and tear on the comparatively fragile sailplane while being launched, a wheel was attached to the forward hardwood skid for take-offs. Once in the air, the wheel can be jettisoned and the skid retracted flush with the tiny fuselage.

On the landing approach, the skid is again extended and the hydraulic shock-absorber cushions the impact. A conventional skid protects the rear of the fuselage.

Since the Horten IV was designed for aero tows, as well as winch launching, two locations for the tow line have been installed. The first, for aero tows, is located in the nose on the thrust line. Some diffi-

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