

Komets!

Our aviation book collection keeps growing, mainly due to our love of used book stores. A recent trip to San Diego California netted "Rocket Fighter," by William Green, a book which describes many of the world's rocket powered fighter aircraft and is part of Ballantine's Illustrated History of World War II series. In looking through Green's book, we came to realize the significant number of swept wing tailless aircraft which were a part of the Messerschmitt Me 163 "Komet" development program.

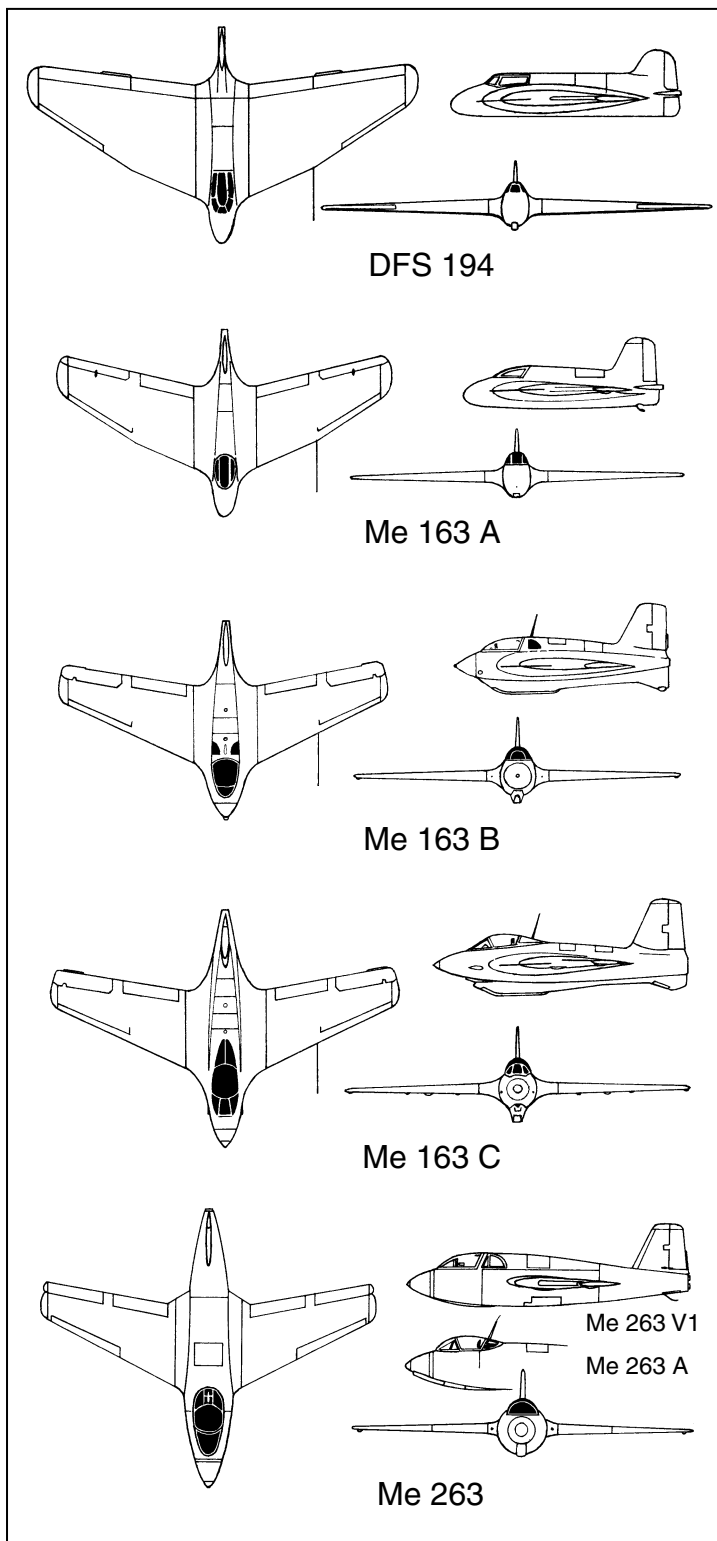
Then while placing our new acquisition on the library shelf, we found ourselves looking at several other books focused on the "Komet," and World War Two aircraft in general. And for some reason we suddenly realized that each of the "Komet" project prototypes was first flown without power. In fact, all five versions were towed to altitude for at least their initial flight. As PSS subjects, all five would do well, and in fact the Me 163 B has been kitted by several manufacturers, both as a PSS model and for conventional piston engine power.

The DFS 194, the real pioneer in what was to become the "Komet" series, is somewhat lacking so far as streamlining is concerned. But the original had a fairly good glide ratio, and a thermalling model may not be out of the question. The Me 163 A is in the same general class.

The popularity of the Me 163 B is understandable, but we feel the good looks of the Me 163 C have been overlooked for too long. Perhaps this is because people have been under the mistaken impression that it did not fly. Both the Me 163 C and Me 263 did in fact fly as gliders.

We hope that presenting this information along with the accompanying three-views will stimulate readers to try their hand at producing models of these great aircraft.

It should be noted the information for the various designations was gathered from several sources, with sometimes conflicting information. There are hopefully no inaccuracies.



DFS 194

The *Deutschen Forschungsinstitut für Segelflug* (German Research Institute for Sailplanes) DFS 194 was originally designed to be powered by a pusher propeller and conventional gasoline engine, but served instead as the testbed for the first of the Walter “cold” powerplants. As a glider it had a glide ratio of better than 20 to 1. Under rocket power, with 882 pounds of thrust, it reached 342 m.p.h., even though stressed for only 190 m.p.h. maximum speed.

Me 163 A

First flown as a glider on February 13, 1941, and with rocket power (1653 pounds of thrust) on August 13 of that year. Despite its relatively low aspect ratio of 1:4.4 and rather bulbous fuselage, the Me 163 A had a sink rate of just 5 ft./sec. at 137 m.p.h. The performance of the Me 163 A as a glider was very impressive; Ernst Udet witnessed one of the gliding flights, with speeds of over 400 m.p.h., and was astounded to learn the aircraft was not powered. Early trials showed the airframe easily capable of 550 m.p.h., and by the first part of October the Me 163 A had exceeded 1000 k.p.h. or 623.85 m.p.h. (Mach 0.85). Compressibility effects near the wing tips had a detrimental effect on stability, and this led to a change in wing sweep angle and amount of washout for the B model. A number of glider only airframes, designated Me 163 A-0, were constructed by the Wolf Hirth firm for use in later pilot training.

Me 163 B

This model, dubbed “Komet,” became an operational fighter in May of 1944 with first delivery to Jagdgeschwader 400. The “hot” rocket motor produced 3750 pounds of thrust for six minutes. The fuselage was of light alloy, while the wings, with a spar at about 25% chord, were of wood. Control surfaces were fabric covered. Altitudes of over 39,000 ft. could be reached in just 3.5 minutes! On July 6 1944 Rudolph Opitz flew the Me 163 B V18, equipped with a second smaller combustion chamber for greater cruise duration, to a speed of 702 m.p.h. during climb calibration trials.

Me 163 C

The Me 163 C was designed to make use of a refined powerplant with greater duration. Three of the C versions were built, only one was flown, and never under power. Because of the failure of the new motor to provide the additional duration, further development was dropped in favor of the Me 163 D, and all three of the C models were destroyed a short time later, at the end of the war.

Me 163 D/Ju 248/Me 263

This Me 163 D was somewhat larger than the Me 163 C and had a retractable tricycle landing gear. Plans included both a pressurized cabin and an advanced powerplant with an auxiliary cruise combustion chamber. Production models were to have a bubble canopy. Designed by Messerschmitt but to be produced by Junkers, hence the Ju 248 designation; Messerschmitt successfully petitioned to have the designation prefix changed back to Me following successful initial trials. The Me 263 was flown as both a glider and under power but, because of the end of the war, tooling was not completed and it was never put into production.

Within the references noted below, the two books by Green contain some very fine 3-views of the various "Komet" models, while the two Schiffer publications present several paint schemes. The Späte book contains some color photographs, the emblem of the Jagdgeschwader 400, and reproductions of factory drawings. Wooldridge's "Winged Wonders" integrates the "Komet" program into the overall history of tailless aircraft development.

References:

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