

THE MODERN SAILPLANES

Part II

by George B. Moffat, Jr.



Photo by Richard Miller

Sisu 1A

There seems little doubt that the all metal Sisu 1A is the best contest sailplane in the world today for medium to strong conditions. Such international notables as Dick Johnson, Adam Witek of Poland and Camille Labar of France agree. At a price tag of over \$10,000, however, for a bare ship, which means around \$11,000 if equipped with trailer and instruments, one wonders if it is really worth the money, particularly in view of its very mediocre performance last summer at the Nationals in the hands of such proven champions as A.J. Smith and Bill Ivans.

Through the kindness of Gleb Derujinsky, who owns the Sisu that Dick Johnson flew in the Internationals, I had the chance to pilot this ship against my own HP-8 as well as conduct test flights against it. In straight flight performance it is very good indeed, probably just a trifle under the HP-8. In tests we held for many miles at speeds between 70 and 90 mph, the HP-8 seemed slightly better at best L/D and noticeably better over 100 mph. The latter, of course is a result of the 7½ lb. per sq. ft. wing loading of the HP-8 compared to about 6½ for the Sisu. Essentially, the HP-8, the HP-10 and 11, and the Sisu are equal at speeds from 60-90 mph, if one can judge from many long glides made together

during the Nationals. What distinguishes the Sisu is its circling speed. While the HPs circles best in an average thermal, between 50 and 55 mph, (more likely 55 to 60 for the HP-8), the Sisu, which stalls at 45 mph with flaps up, and 36 IAS, flaps down, circles comfortably at 43-45 mph indicated. This amazing performance is due entirely to the 25 percent Fowler flap lowered to 20 degrees. Rate of sink increases noticeably with the flaps down, but the slow circling speed allows better climb. In tests against the HP-8, the Sisu climbed away depressingly easily. When I tried thermaling the Sisu without flap, both speeds and climb were similar to the HP-8. The climb performance is surprisingly like that of a 1-26.

In handling the Sisu 1A is outstanding. Controls are light, well coordinated with the possible exception of the flap handle which is fairly stiff. The dive brakes are very good although not as powerful as a Ka-6's. The ship shows positive stability in all axes, a bit too much in pitch for my taste. The rather awkward trimmer on the stick must be adjusted for all changes of airspeed over 10 mph. In circling a constant airspeed is easily maintained and the sailplane is pleasant to fly, climbing best in moderately banked, slowly flown circles. Unfortunately the rate of roll is on the slow side, about five

seconds, 25 percent more than a Ka-6. In straight flight one encounters the low yaw stability characteristic of the V-tail. This requires a reasonable amount of attention in order to keep the string straight on the canopy, but the Sisu is well above average for V-tails, about like the Austria and the production model HP-10.

Rigging and derigging are fairly easy. The tail folds up and remains attached to the fuselage. The multiple-pin wing attachment has lots of hardware but goes together quickly, as do the many controls. Taping is held to a minimum by the very well fitted fiberglass fairings.

The cockpit is large and comfortable with a roomy instrument panel and excellent visibility. All controls are easy to reach and operate. For my taste the seating is too upright for long flights, but most pilots seem to prefer this traditional position.

To summarize, the Sisu flies beautifully and is as good as the best in performance. Had I \$11,000 lying around handy I would certainly purchase one. The only catch that I can see lies in the fact that like all metal ships, the Sisu is only as good as the filling job on the wings. The one Gleb has had hundreds of hours of extra work done for the Internationals. Bill Ivans' ship at our Nationals seemed inferior in performance when I flew beside him, with a much higher rate of sink than the HP-8. A.J. Smith told me that he had a lot more work to do on his, as well. Both ships were delivered with primer and a minimum of filling.

HP-10

I'll start by sticking my neck out and saying that this all-metal ship seems to be the best buy in performance sailplanes today. Kits sell for about \$3,500 from Helisoar Aircraft, Danbury Conn. There are no current plans to manufacture completed HP-10s although an ATC is in the works.

The preformed sandwich construction of the wing accounts for a speedy construction, and the molded shape makes performance less subject to filling than on most metal ships. The rectangular wing takes a bit of getting used to at first but the 37 to 1 L/D helps.

The HP-10, like the Sisu 1A, had a poor record in the Nationals,