



Introducing
a Continental Star
from Yugoslavia

ACHILLES

By EMIL FRESL

Many times a member of Yugoslavian Wakefield and Power teams . . . builds his own diesels, was co-designer of the Oskar 150 reviewed on page 130.

TOP place as land or seaplane in the Yugoslavian National contests, and a three year record of continuous high placings, forms the contest background to this outstanding design. Emil Fresl is now internationally renowned as a regular representative of his country in Wakefield and Power finals, and needs no introduction for the contest-minded reader. He adheres to the power design formula originated by American Leon Shulman, whose "Banshee" and "Zoomer" achieved fame in the '46-'49 seasons, and in Achilles, Emil adds the many detail improvements we have come to expect from his ingenious countrymen.

High wing and tail angles, with built-in pylon fuselage and single wheel undercarriage give it the Shulman stamp. Gone is the symmetrical tailplane, and in its place, an anhedral tail with novel

dethermalising tip arrangement allows safe trim and gives better performance. Gone is the extreme dihedral, and added is the drag tab for glide turn. These, and many another structural feature, go to make Achilles one of the neatest F.A.I. power designs it has been our pleasure to witness, and we venture to suggest that its reputation for "in the groove" power flight pattern will make it extremely popular with all power fans.

Construction is robust and practical—the fuselage being built on the crutch system, with F.2 and F.3 installed first, then the wing platform, the spine, and the diagonals. This can be completed over the crutch plan on the building board, with the front portion overhanging the edge. Planking, underside stringers and formers, engine, timer and tank installation follow, then the fin is added, with ply bracing plates at the leading edge joint. Tail and wing structure are conventional, except that the spars are assembled first and each panel built in turn over the plan. All ribs are cap stripped top and bottom, and the tail must be built upside down because of its anhedral.

Initial glide tests with the C.G. at 56% Chord and rudder 3° to the left, should produce a shallow descent with very slight left turn. Try an 8 seconds power run at half revs, and check the power turn which should be to the right rather than left. (3° right thrust and 5° downthrust was used on the original.) Actual flight pattern is 30 ft. take-off run, blending into a fast straight climb and left glide circle after a quick recovery from power cut.

In later contests, following the example of Lederer at the '53 World Championships, Emil has used the vertical take off system with every satisfaction and resulting increase in height gained during the precious seconds of the power run, has improved the high average flight time even further.

As a design for the experienced power modeller, Achilles possesses a rare combination of qualities that should make it extremely popular.



Vertical take-off is advantageous for 10 second motor run contests since it saves valuable seconds of the power run. Achilles climbs away from this launch with ease, but must be fitted with three points of contact to comply with rules.