

ISOTOPE

AN EASY TO BUILD POWER

DURATION MODEL OF 44 in.

WINGSPAN — DESIGNED

by

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FOR
ONE TO
ONE POINT
FIVE cc. ENGINES

THIS easy to build power duration model features anti-warp, geodetic wing and tail structures, plug in undercarriage, and has a good all-weather performance.

Fuselage

Make the tank from thin sheet tin and brass tube. Now cut out K1 and formers F5 to F9 and cement them into position on K1. Cut out F1 and F1A and cement together. Make the rest of the formers and fin, also the undercarriage box and bind it with sellotape.

Cut out the base, mark the position of the formers, and pin to the plan. Now cement the keel and former assembly to the base. Join the F1A assembly to F2 with the engine bearers, at the same time positioning the tank between them. Now add the rest of the formers, fin and $\frac{1}{2}$ -in. sheet tail support, and fill in between F9 and F10 with soft block. The undercarriage box can now be added, also the pylon braces.

Sheet in the sides of the pylon as shown, and cement neoprene tubing to the upper vent of the tank and pass up and over the lower pylon brace and hold in place as shown,

making sure that the orifice is facing into the slipstream. Now add K2 and cement the braces to it. Finally cement into place the soft nose block. When the entire fuselage has set, lift from plan, sand the nose block to shape and the tail support to conform with the fuselage outline. Add the wing and tailplane dowels and the platforms of same. Then finally cement into place the underfin.

The undercarriage is quite straight forward and if required is made from 14 S.W.G. piano wire and plugs into the box in the fuselage.

Wings and tailplane

Warren Girder construction is used, for like most modellers, I hate the necessity of pinning wings down when doping, also there is no danger of future warps. The wings are built as follows. Cut the trailing edge of the centre section to length and notch to accommodate the ribs. Pin the trailing edge and leading edge to the plan and add the ribs making sure that the two ribs W3 are in the centre, then add the spruce main and rear spars plus the dihedral braces. Now add the cement fillets between the tails of the ribs.

When set, remove from plan and build the tips in a similar manner taking care to set the inboard W3 to the angle given by the dihedral

template. Finally cement the tips to the centre section and when dry, add the soft block tips and sand the leading, trailing edge and tips to shape. Now cement to the centre of the centre-section at the trailing edge of a strip of $\frac{1}{32}$ in. ply to protect the trailing edge from the rubber bands, and sheet in the top.

The tailplane construction is similar to that of the wings and finished by binding the D/T hook into position with adhesive tape.

Covering

The entire model is covered with light weight model span, the fuselage then receiving three coats of clear shrinking dope and the flying surfaces two coats. The original was painted with aerolac and another coat of clear dope added. This provided ample fuel proofing with the minimum addition of weight.

Assembly

An Allbon Spitfire with combined jet and cut-out was used, and an E.D. clockwork timer was screwed to the left-hand bearer. This combination proved entirely satisfactory. Other *Isotopes* have performed just as well with 1.5 c.c. engines, but do not use any motor that is heavier than the Spitfire. The wings are held securely in place with three medium thickness rubber bands and ensure that they do not wobble. The tailplane is held by the D/T fuse band and a band around the dowel and passing around the tailplane D/T hook.

Flying

Hand launch the model into wind and a fast glide of about ten yards should be obtained with a slight turn to the right. A left turn is fatal. Now start the engine and with it running under low power give a five second run and note the turn and rate of climb. If the model turns to the right all well and good, if not set the rudder accordingly. If it climbs too fast slight down thrust should be given to the engine by packing washers under the rear of the engine. Now give it a 10 sec. run on full power and trim until an almost vertical spiral climb to the right is obtained. With the Spitfire it was found that a $\frac{1}{32}$ in. upthrust was required. When trimmed to satisfaction, tune the engine to full power, set the timer to 15 sec., light the D/T fuse, and start running. But before you attempt any flying put your name and address on the model.