Standard ROTAROC

B4-2,B6-2,or C6-3 power

Plans page 1 (Design & assembly)

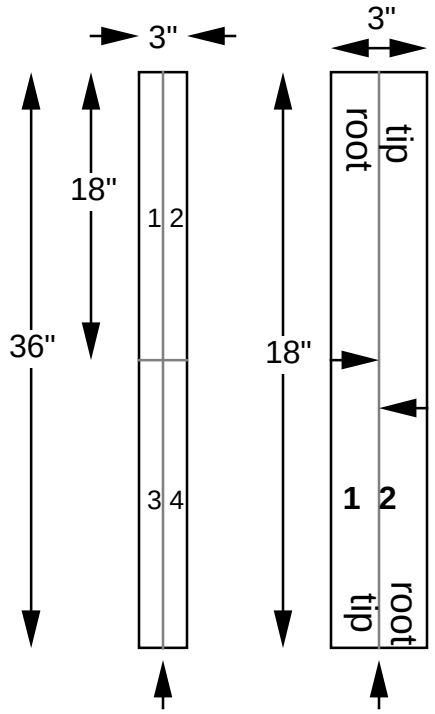
Drawings show model which would rotate counter-clockwise as viewed from above.

PARTS: light 3/32" balsa (fins & rotor supports), Medium light stiff 3/32" balsa or very light 1/8" for rotors), 18" and 4.5" BT-20, tube coupler, BT-20 nose cone, Klett RK2 model plane hinges (3), pins or model railroad spikes, rubber bands

Rotors are 1.5" wide (chord), 18" long. Made from medium-light stiff 3/32" or light 1/8" balsa. Balsa should be somewhat stiff so it will not bow outward much when folded for boost.

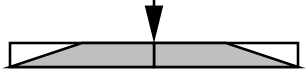
Rotors are fragile and easy to damage or break while sanding the trailing edge. Below is how to sand the trailing edge of all rotors before cutting out from balsa sheet.

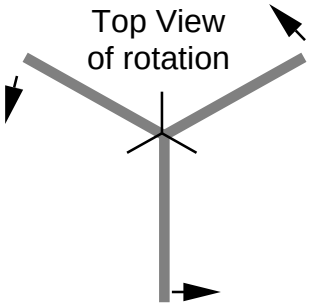
Middle arrows point in direction of leading edge. Top view for models rotating counter-clockwise



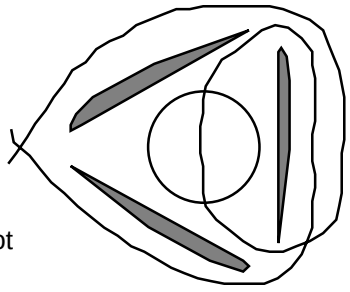
Layout for shaping and cutting 3 rotors plus spare from one sheet of balsa.

Sand trailing edges to shape before cutting apart at middle





How to tie elastic thread to hold rotors for boost

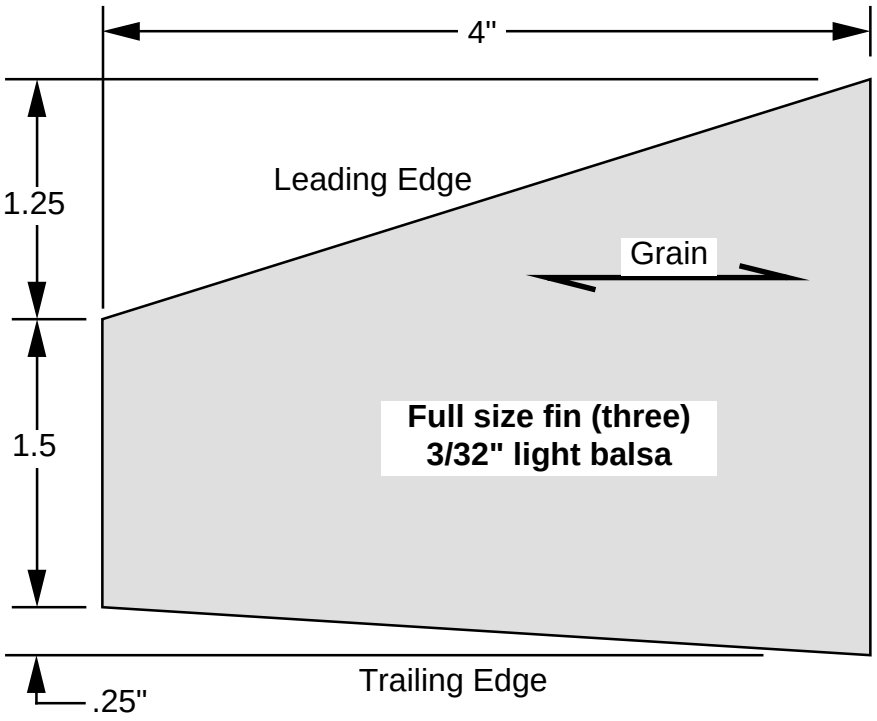


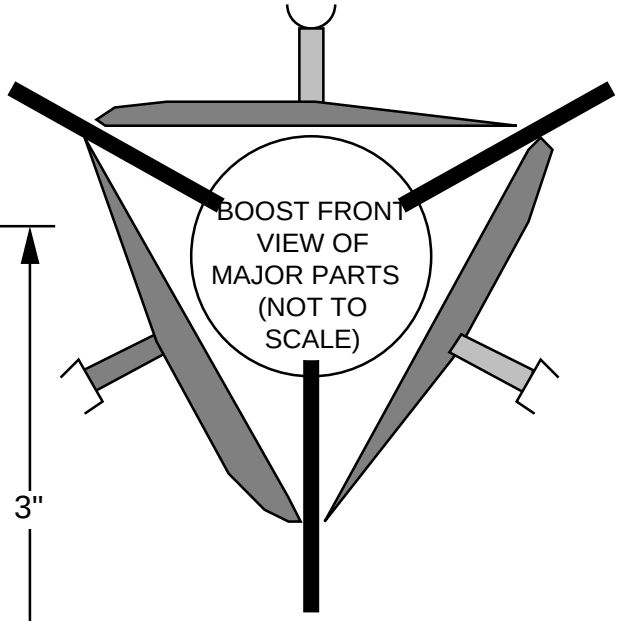
Pull snug, then tie knot

Standard ROTAROC

Plans page 2 (with full size templates & details)

Power: B4-2, B6-2, C6-3

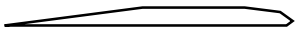




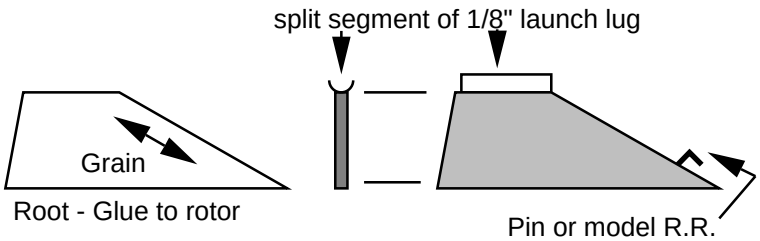
Double size airfoil shape (3" chord)

ROTOR AIRFOIL

Actual size airfoil

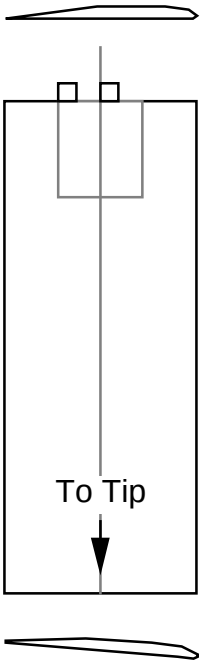


Full size rubber band standoff & dihedral angle support (3 from 3/32" hard balsa, note grain)



Perpendicular hinge mount

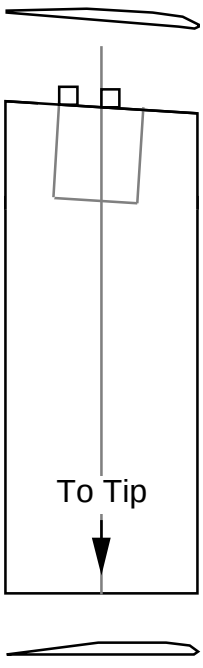
Blade flat at root, must be angleddown out towards tip to rotate



Down angle achieved by twisting outer portion of blade

Skewed hinge mount

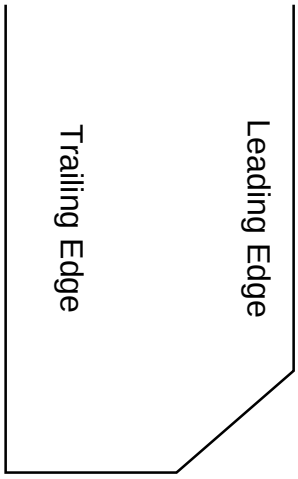
Blade angled at root, will rotate fine without any additional work.



Twist tip of blade up nearly horizontal for more efficiency, but will work OK if blade is same angle all across

Optional Rotor tip shape

(Full size, top view)



Construction:

For best performance, build model carefully so that parts are not grossly out of alignment and so it will deploy and rotate properly.

Keep model lightweight in selection of parts, wood, and in construction. Use Cyanoacrylate glue.

For finish, use only 1 coat of thinned clear dope on fins and nose cone, 1-2 coats of clear thin dope on rotors. Do not use any paint. For coloring, use magic marker.