FIN DIMENSIONS

NOTES

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fins</td>
<td>3</td>
</tr>
<tr>
<td>Fin root cord</td>
<td>27.876&quot;</td>
</tr>
<tr>
<td>Distance to TC</td>
<td>19.000&quot;</td>
</tr>
<tr>
<td>Fin span</td>
<td>6.125&quot;</td>
</tr>
<tr>
<td>Fin tip cord</td>
<td>7.625&quot;</td>
</tr>
<tr>
<td>Fin thickness</td>
<td>0.130&quot;</td>
</tr>
<tr>
<td>LE sweep</td>
<td>72°</td>
</tr>
</tbody>
</table>

27.063"

20.343"

1 of 3 slots 0.190" wide

13.530"

6.718"

0.000" Datum

-0.813"

0.438"

8.063"

7.5 degree diamond airfoil on leading and trailing edges.

Material: 0.130" thick G10 fiberglass sheet

Epoxy root edge of fin to central motor tube and reinforce joints with 8oz fiberglass strips.

Angelfire

Project: FIN DIMENSIONS

All dimensions are in inches

CAD scale: 1" = 6"

Drawing: FIN DIMENSIONS

Rev: A

Date: Jan. 29, 2005

By: Vern Knowles

Print scale in Inches
AIRFRAME MID SECTION

Datum 0.000" — Top of body tube

6.688" — Retainer screw holes
Drill 4 holes 9/64" Ø at 90° spacing.
Use #6-32 screws to secure body tube to altimeter bay.

25.625" — Vent hole

28.625" — Shear pin holes
Drill 3 holes 7/64" Ø at 120° spacing.
Use #4-40 nylon screws as shear pins.

34.125" — Bottom of body tube

Body tubing 5.000" ID x 34.125" length.
0.075" wall thickness. G-12 fiberglass.

Project: Angelfire
All dimensions are in inches
CAD scale: 1" = 6"

Drawing: AIRFRAME MID SECTION
Rev: A
Date: Jan. 29, 2005
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Print scale in Inches: 0 1 2 3 4 5 6 7 8 9 10 11 12
Igniter wire seal plates

- **Top plate**
- **Bottom plate**

These plates seal off the wires from two Daveyfire igniters.

Two plates of 1/16" thick G10 fiberglass with 5/32" diameter holes at each end for 6-32 x 0.5" screws. Two slots 7/64" wide are cut into the bottom plate for igniter wire routing.

- 1.25" diameter holes for ejection charge holder to pass through the bulkhead.
- 5/16" x 2.0" U-bolt for recovery harness attachment.
- Two 3/4" PVC end plugs screwed to bulkhead to serve as redundant ejection charge holders.

![Top View](image)

Main Chute Compartment

- Drill 3 holes 7/64" Ø at 120° spacing 2.0" below the top of the body tube. Use #4-40 nylon screws as shear pins.
- Parachute compartment pressure vent hole 0.125" Ø 5.0" inches from top.
- Body tubing 5.000" ID x 36.000" length. 0.075" wall thickness. G12 fiberglass.
- Two sections of coupler tubing 0.75" long. One above and one below the bulkhead.
- 5/16" x 2.75" stainless steel threaded rod

![Main Chute Compartment](image)

Altimeter bay removed from airframe.

- 5/16" x 1.0" stainless steel U-bolt McMaster-Carr part number 8896T68

![Altimeter bay removed from airframe](image)

Altimeter bay installed in airframe.

- 0.25" x 15.25" threaded rod
- (1 of 4) threaded brass inserts for securing mid-section body tube to altimeter bay. McMaster-Carr part number: 900164007. Use six #6-32 x 0.500" button head screws.

![Altimeter bay installed in airframe](image)

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NOSECONe

Shape: 5:1 Ogive
Material: G-12 filament wound fiberglass

Radio finder transmitter antenna

(1 of 4) threaded brass inserts for securing base plate to nosecone.
McMaster-Carr part number 90016A021.

Drill and tap 3 holes for #4-40 screws at 2.0° below the shoulder, 120° spacing.
Use #4-40 nylon screws as shear pins.

1 of 4
#10-32 x 0.75" machine screws

1/4" x 1" stainless steel U-bolt
McMaster-Carr part number 8896T123

Bottom View

Project: Angelfire
All dimensions are in inches
CAD scale: 1" = 6"

Drawing: NOSECONe
Rev: A
Date: Jan. 29, 2005
By: Vern Knowles
Three holes 13/64" diameter, spaced 120° at 2.281" radius.

Thrust plate
Material: Aluminum

Retainer plate
Material: Aluminum