

7c Veco Pursuit - Tail to Wing Area Ratio & MAC

1 message

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Veco Pursuit

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The wing panel area was calculate as 134.27 sq. in. as shown below.

The total wing area is then $134.27 \times 2 = 268.54 \text{ sq. in.}$

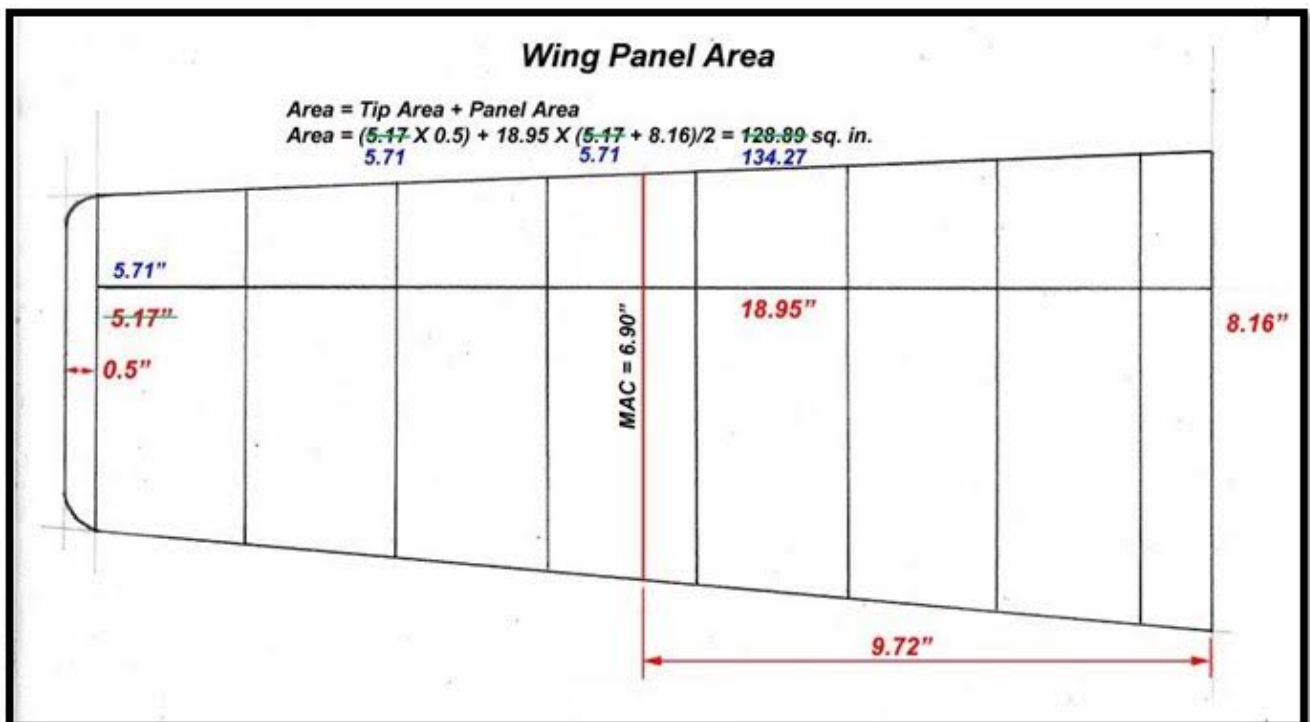
The total wing span is $2 \times (18.95 \times .5) = 38.90''$

Wing MAC (MAC_w) = $268.54/38.90 = 6.90334''$

MAC span wise location $L_{mac} = (C_r - MAC_w)/\text{Taper Ratio}$

Taper Ratio = $(8.16 - 5.71)/18.95 = 0.12929$

$L_{mac} = (8.16 - 6.90334)/0.12929 = 9.72''$



The horizontal tail panel area was calculate as 35.61 sq. in. as shown below.

The total horizontal tail area is then $35.61 \times 2 = 71.22 \text{ sq. in.}$

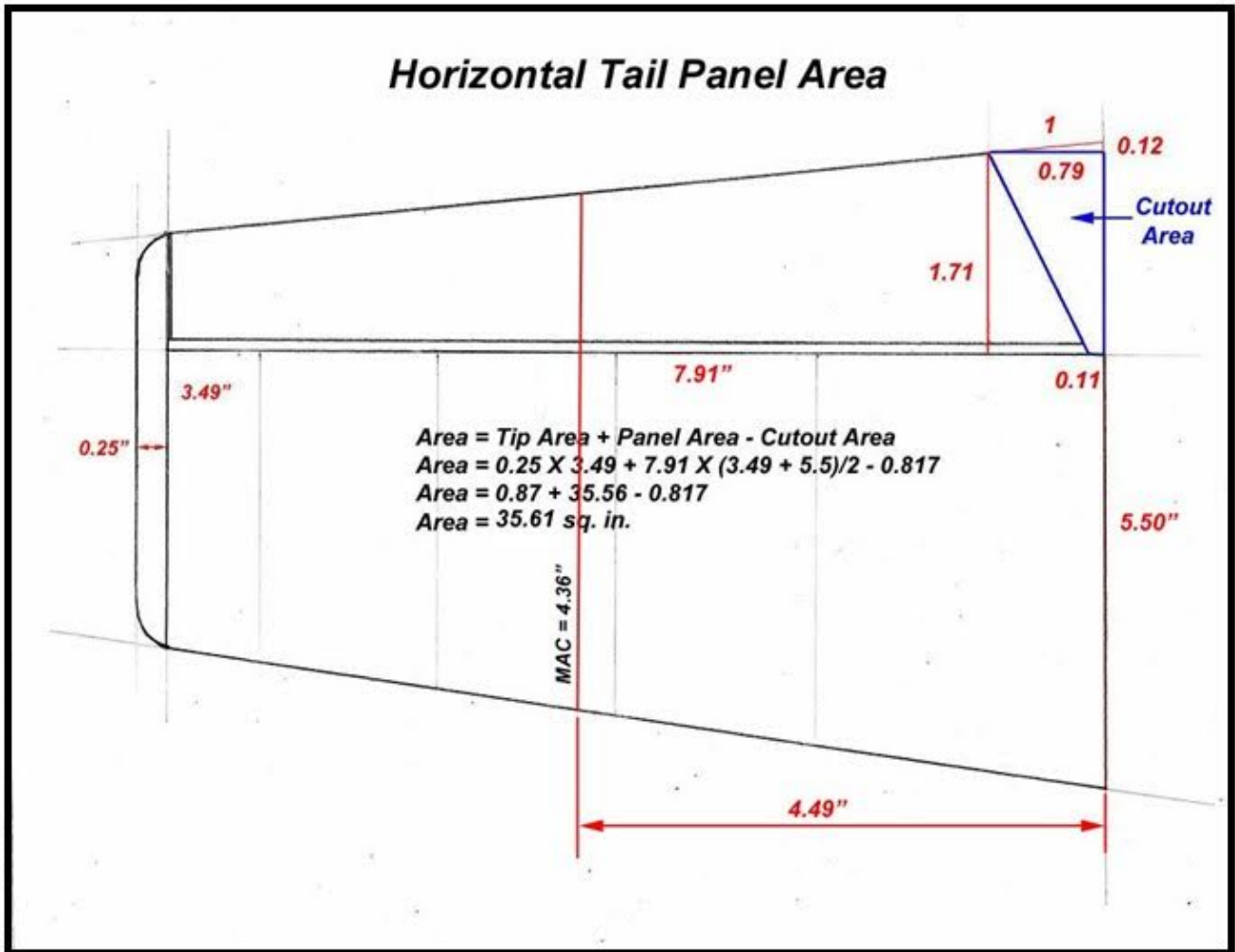
The horizontal tail span is $2 \times (7.91 + .25) = 16.32''$

Stab mac (MAC_s) = $71.22/(7.91 + .25) = 4.36''$

MAC span wise location $L_{mac} = (Cr-MACs)/Taper\ Ratio$

$$Taper\ Ratio = (5.50-3.94)/7.91 = 0.25411$$

$$L_{mac} = (5.50-4.36)/0.25411 = 4.49''$$



The tail/wing ratio is $100 \times (71.22/268.54) = 26.5\%$ Tandy