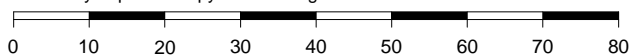


If you print or copy this drawing - check that the size is correct!



The "fuselage" is a 1 x 1 mm piece of balsa glued to the bottom of the trailing edge and the reinforcement at the leading edge. Let it extend 15 mm in front of the wing.

Adjust the centre of gravity with clay or (small!) pieces of soldering wire at the tip of the fuselage.

Hangflygar'n
Jonas Romblad
Solna MSK, Sweden, 2003

Leading and trailing edges are 0,8 mm wide and 1,0 mm high.

Reinforcement of 1,0 x 1,0 mm balsa is glued to the bottom of the leading edges.

32

The centre of gravity shall be about 32 mm from the leading edge of the wing. The precise position depends on how "up elevator" is applied and has to be found by test flying.

Ribs are 1,0 mm wide and 1,0 mm high.

The three centre ribs have camber, all others are flat.

Make a small cut at the bottom of the trailing edge and the two outer ribs. Lift the trailing edge 6 - 8 mm at the tip and fix with a bit of glue. Let dry thoroughly.

Template for the three centre ribs.

Trimming the Hangflygar'n

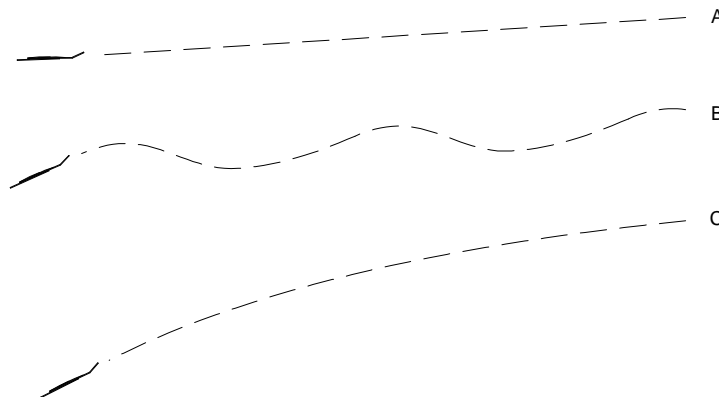
The flight speed of the Hangflygar'n is the result of a balance. The elevators are used to raise the nose while the centre of gravity (the nose weight) wants to lower the nose. At one speed the two balance each other.

The effect of the elevator increases if the speed increases. The effect of the centre of gravity is independent of speed. This is how the model will adjust its flight speed. The speed the model wants to attain is called trimmed flight speed.

When the Hangflygar'n is perfectly trimmed it will fly straight ahead like the path **A** in the sketch. The flight speed shall be as low as possible without the model stalling or performing "dolphin flight".

If the trimmed flight speed is too low, the model will stall or fly along a bobbing path, "dolphin flight". See path **B** in the sketch. Reduce up elevator and/or move the centre of gravity forward.

If the trimmed flight speed is too high, the model will dive to reach the trimmed flight speed, see path **C** in the sketch. Increase up elevator and/or move the centre of gravity backwards.



Stability

A model with lots of up elevator and a forward centre of gravity can fly at the same trimmed speed as a model with less up elevator and a centre of gravity further to the rear. The difference is the stability.

A Hangflygar'n with plenty of up elevator and a centre of gravity far forward will quickly adjust its flight speed to get back to the trimmed flight speed. This is a more stable behaviour.

With less up elevator and the centre of gravity more to the rear the model will adjust its flight speed more slowly. There is less stability in this case.

Drop your Hangflygar'n with the nose pointing straight down. With a suitable level of stability it pulls out into level flight in a bit less than one meter of altitude.

