

Spinning around

The feeling you get from flying a completely centered Helico is intoxicating. Similar to the very first SAT, the apparent ease and quiet with which the horizon revolves around you is fascinating. Completely lost in thought one must take care not to miss the correct moment for the exit.



pilot: mike kling photo: gudrun fuchs



In Helico one side of the glider has a positive flow, the opposite side has a negative flow. This can be easily recognised by:

1. the indentations in the upper sail (the fig. shows a Helico to the right where the left side of the wing has a negative flow)
2. the A-lines on the negative side are blown out to the front by backward rotation.

Helicopter

Pilot in the photo series: Xandi Meschuh

The Helico is undisputedly one of the most difficult acrobatic manoeuvres. Many motivated acro beginners lose heart when practicing this manoeuvre and then limit their repertoire to dynamic flight figures. There are very few beginner's success stories with this manoeuvre, excepting the odd fluke success. To get ten successful Helicos from ten attempted entries demands a lot of patience, time and above all motivation.

But even just by practicing Helico the pilot can learn a lot about the flight behaviour of his wing in Deep Stall, Stall and Spin. In order to attempt the first Helico, the pilot must have perfected Full Stall, Spin and especially Deep Stall. No Helico is possible without being able to do a controlled Deep Stall first. The entry is the all-important factor that determines the success or failure of this manoeuvre.

Helico is a required manoeuvre for the qualification round of acro competitions. It is also a very popular selection by professionals in the announced programme. Many points can be achieved with this manoeuvre if it is performed well, and it has the advantage of requiring little altitude.

The sink rate is around 4-7 m/sec depending on the rotating speed of the glider, which is dependant again on the glider type. Generally, the higher the wing load, the faster the rotation.

The aim of Helico is to fly as many fast turns as possible, perfectly vertically on the vertical axis with a completely open canopy.

EVERYTHING STARTS WITH THE DEEP STALL

The pilot should be able to hold the glider over one hundred meters descent in a controlled Deep Stall. Only then should you make the first attempts at Helico. If you cannot do Deep Stall to perfection you will probably be really lucky to complete just a few successful Helicopter rotations, but the entry will not be reproducible.

ENTRY

The pilot keeps an eye on the glider. He can settle back easily in the harness and brings his legs into a stable but at ease position so that he can correct the Helico later on with pressure on the seat plate.

Then the glider is brought into Deep Stall. After the sail drops away a bit to the rear, the pilot lets the glider come exactly vertically over him again by a short release of the brakes. The canopy is prevented from resuming forward flight by a further easy brake impulse. Now the glider is in Deep Stall. Only now the pilot can briskly release the outer brake. At the same time he slightly pulls the brake on the inside for a brief moment in order to give the manoeuvre the direction of rotation. As soon as the glider starts to turn,

