

## SNAP VENTS

Snap vents are a great way of improving the ventilation in any aircraft. They fit in the canopy and, provided the curvature is not too great, will seal completely even at high speed.

The Snap vent is supplied with a metal spring. The spring is removed for installation and only fitted when you are satisfied with the actual fit of the vent in the window. To start carefully remove the clip from the vent by pulling one end out of its locating hole.

**The key issue is temperature.** Perspex is brittle unless warm and may chip or even crack without careful handling. Use a fan heater over the area you are cutting and make sure the Perspex is warm to touch before starting.

There are two ways of fitting the vents depending on your preference and patience. Always undersize the hole you make and take the last material away gradually, sanding by hand and trying the snap vent in position regularly until it becomes easily moveable but **not loose**.

Before you start drilling the pilot-hole mark a slightly undersized guide line circle on the Perspex with a felt pen or scribe, 3 1/8" for a 3 1/4" vent (or less). Sit in the aircraft and check the position, think of the proximity to your headset microphone and being able to take photo's though the canopy/window.

### Two suggested methods

#### 1 - By Hand

Obtain an adjustable cutter of the type with a central drill and outer blade(s). Adjust the blade to close to the diameter of the snap vent. Using an adjustable cutter it is not recommended to use a power drill if you are cutting the hole close the actual size, it's long winded but operate the cutter by hand gradually making the cut.

#### 2 - Using a hole-saw in a drill and a Dremel.

Using a hole-saw (as big as you dare), suggested maximum 50 mm, cut out a starting hole. Then using a Dremel with a sand paper drum work round the edge of the hole gradually making the hole bigger until you get to your guide line.

**With both methods above** when you are close to the right size scribe round the hole with a felt pen so you can see what you are doing as you remove the last small amount of Perspex. Regularly try the snap vent in position (without metal spring clip). Keep the Perspex warm at all times. Let the cutter do the work and don't force it. When you have the hole cut to the correct size, the vent collar should be a snug interference fit in the window. It will pull closed from the inside so that the circular dome is flush with the outside of the canopy/screen.

The technique for fitting is to hold the two corners between finger and thumb and compress, the vent will go in quite easily when the hole is getting close to the right size, if you are having to force it the hole maybe not be quite big enough yet.

After the final fit and the vent is a snug interference fit in the hole, add the clip. The clip ensures that there is a constant radial pressure on the collar increasing the friction within the hole to resist air pressure. The clip is fitted by inserting one end in its hole and then easing the other end into the other hole. A good tip is to keep the clip in the second vent while you work on the first, that way you do not forget what it fits like.

When you fly along with a cool gale blowing in your face you'll remember fondly the stressful day you cut a hole in your precious window, you'll be glad you did it though!

If you over do the size of the hole and the vent is loose and drops open all is not lost. Build up the vent next to the wedge shaped profile under the flange with araldite. After it's solid dress it down to the right size with a Swiss file trying it in place regularly until the friction is right to make it a snug fit.