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Checked:	SF, WTK, NB, MP	Revision:	0

Tools required:

- 1 x Pop Riveter
- 1 x Ø3.5mm Drill Bit
- 1 x Battery Operated Drill

Installation

1. Install the Plenum Box, suspending it from its mounting holes with Drop Rods (supplied by others). Centralise the Plenum Box in both directions within the opening where the Diffuser is to be fitted (see figure 1).

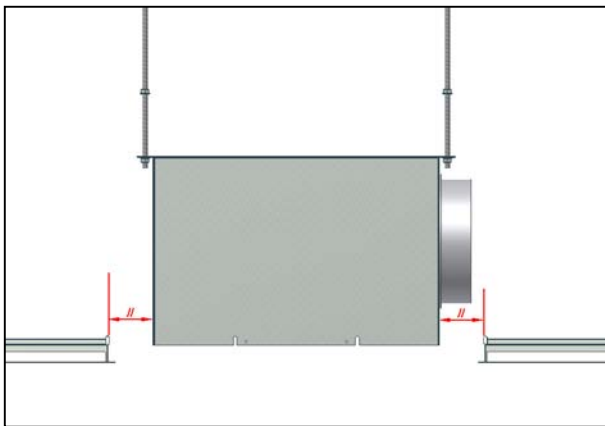


Figure 1: Centralise Plenum

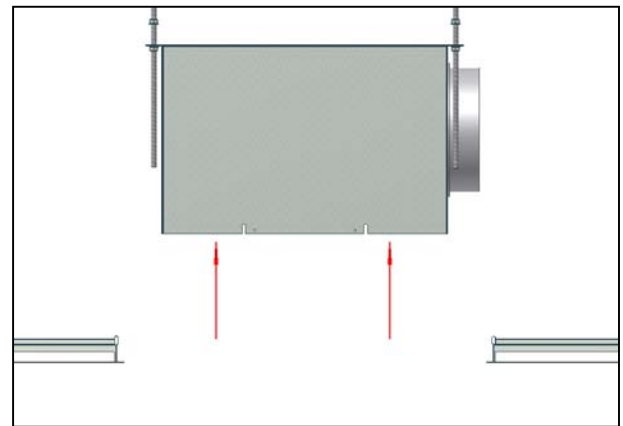


Figure 2: Raise Plenum Box

2. Once you are satisfied with its alignment within the ceiling grid, raise the Plenum Box approximately 200mm (or as required) above the grid to allow sufficient space to install the Diffuser (See figure 2).

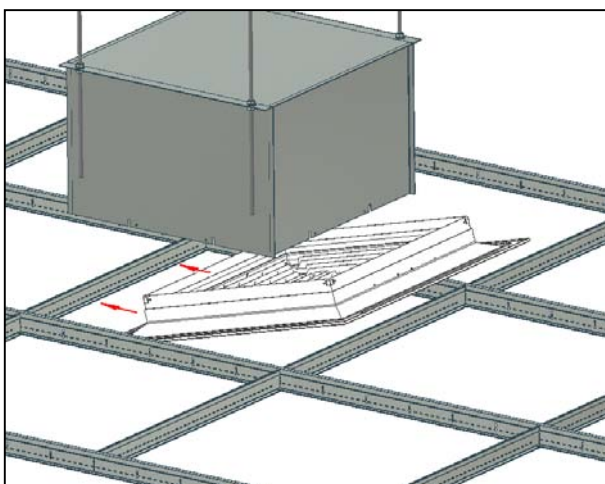
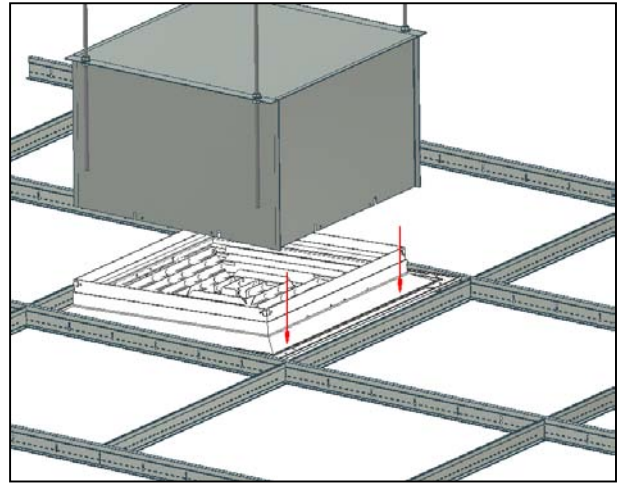


Figure 3: Slide Diffuser into opening

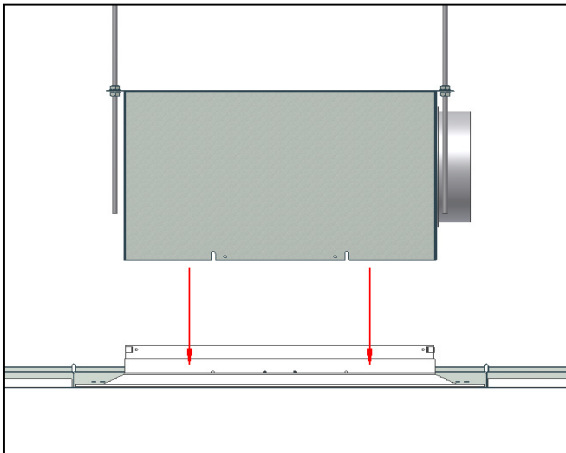
3. Locate one end of the Diffuser into the ceiling opening, and in a sliding motion move it to the far end of the opening (figure 3).

- Place the Diffuser into the opening, ensuring that it is firmly seated against the tee bars of the ceiling grid. (See figure 4).

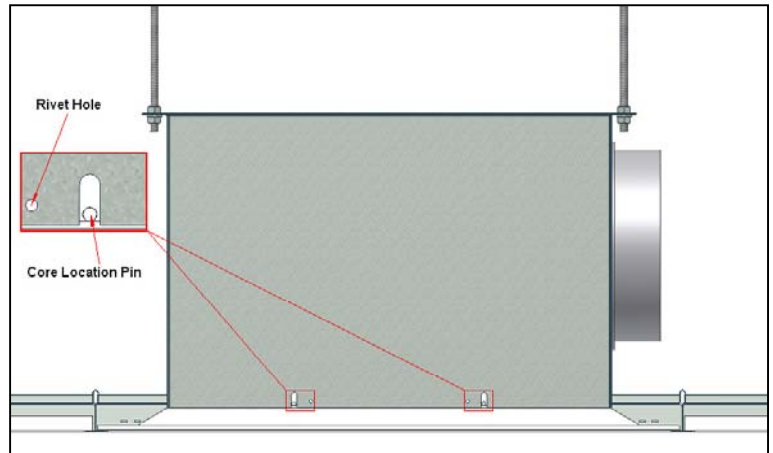


*Figure 4: Drop Diffuser into position*

- Lower the Plenum Box over the rear stack of the Diffuser until it is seated on the rear face (figure 5), whilst taking care that the slots in the lower part of the Plenum provide sufficient clearance for the location pins of the Diffuser Core (if applicable, shown in figure 6). Once you are happy with it's positioning, secure the Plenum Box using the Lock Nuts on the Drop Rods.



*Figure 5: Lower Plenum Box*



*Figure 6: Locate on rear of Diffuser*

- Using the rivet holes in the Plenum walls as a guide, drill through the Diffuser Outer Frame and rivet or screw the Plenum Box to the Frame.

In some situations it is not possible to fix the Diffuser to the Plenum from the outside, so it will be necessary to remove the Diffuser Core and attach it from the interior of the Diffuser Frame.

Dependent on which variant of DF Series Diffuser is being installed, there are two different methods for the fixing of the Core in the Diffuser. The first, utilises a spring on the Core Location Pins, and the second utilises “Bunny Ear” Spring Clips mounted on the Core Centre Bars.

The removal details of both these types is as follows:

Spring Loaded Core removal

- a) Locate which side of the Diffuser Core has springs fitted to the Location Pins.

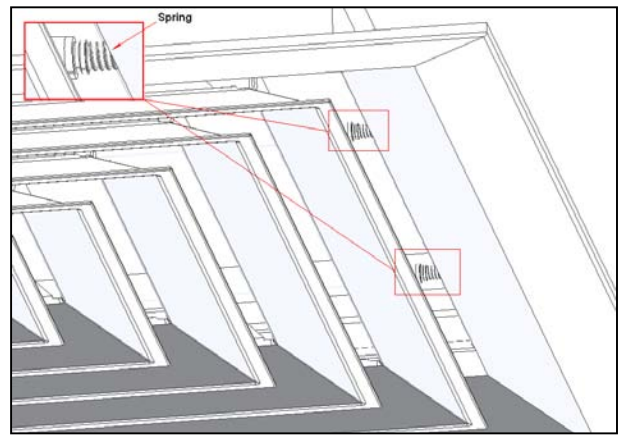


Figure 7: Locate springs

- b) Place your hands on the Core Blade that opposes the spring position, and gently push towards the centre of the Diffuser. This operation will compress the Location Pin springs and allow the Pins on the opposing side to come free of their holes.

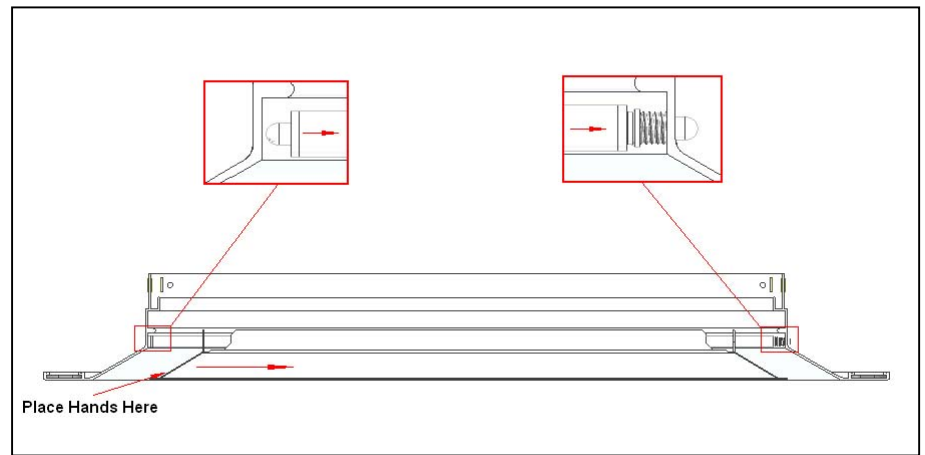


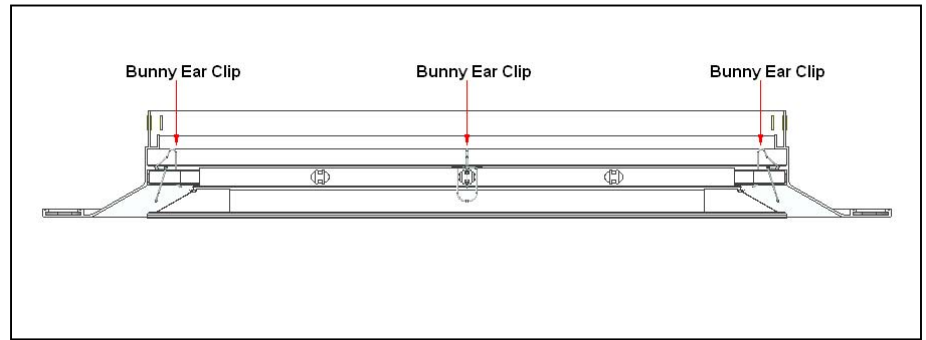
Figure 8: Push Core towards the centre to compress springs

- c) Whilst still compressing the springs, rotate the Core downwards. The Diffuser Core may now be removed and stored away to prevent damage.



Figure 9: Rotate Core downwards to remove

- d) To replace the core, simply reverse these instructions. i.e. Locate the spring loaded Pins in their respective Location Holes, compress the springs then rotate the Core into position so that the opposing Pins can slide into their respective Location Holes.



“Bunny Ears” Core removal

Figure 10: Locate Bunny Ear Clips

- a) Locate the Bunny Ear Clips holding the Core in position. Please note that there will be at least 1x Clip fitted on all four sides, though there could be more dependent on the Diffuser Size (figures 10 & 10a).

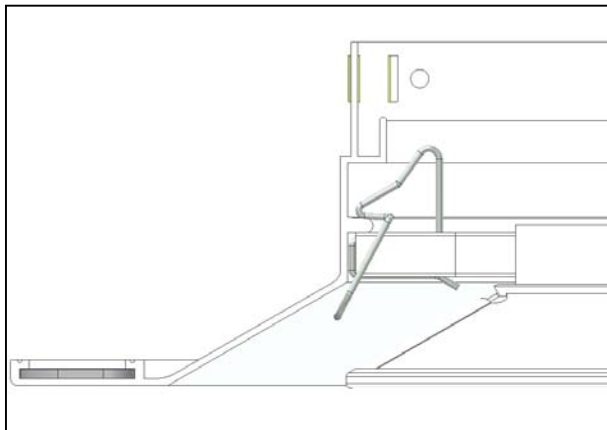


Figure 10a: Bunny Clip Detail

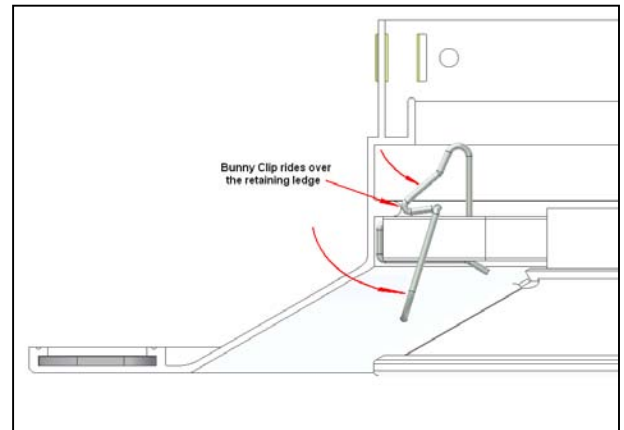


Figure 11: Push Clip inwards to release

- b) Push the Bunny Ear clips towards the centre of the Diffuser. This will disengage the Clip from the Outer Frame and release that side of the Core. (See figure 11).
- c) Repeat this operation on the remaining three sides, taking care to support the core, so as not to allow it to drop out onto the floor (figure 12). Lower the Core from the Diffuser and store away to prevent damage.

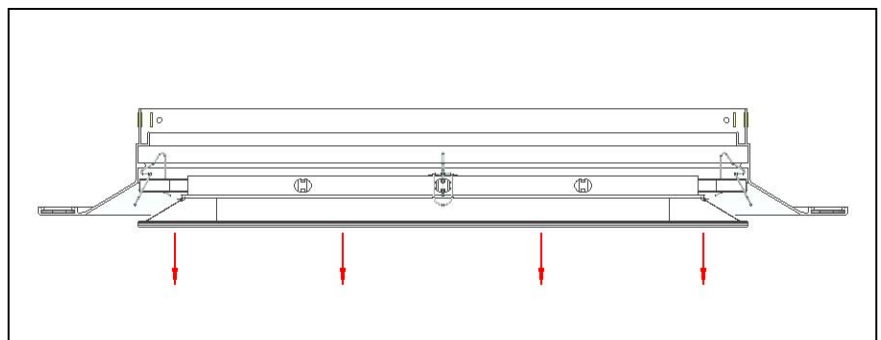
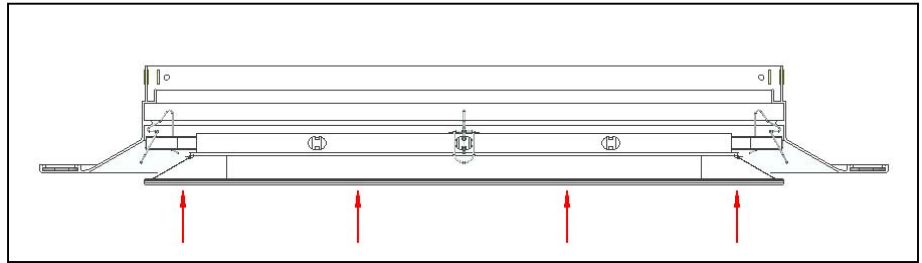
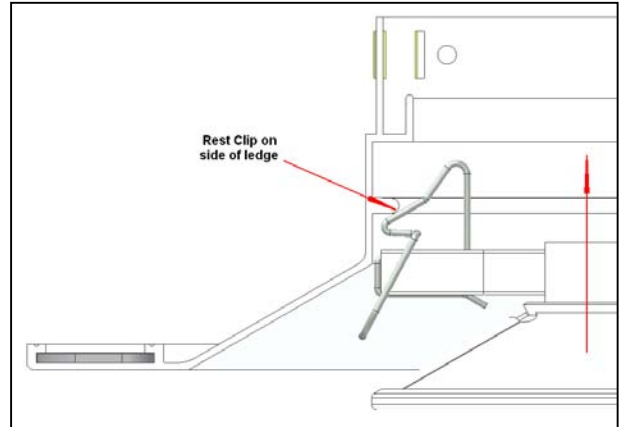


Figure 12: Lower Core from Diffuser Frame

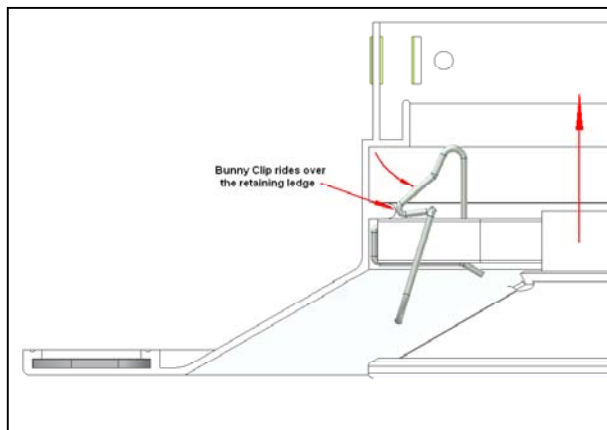


*Figure 13: Locate Core in Diffuser opening*

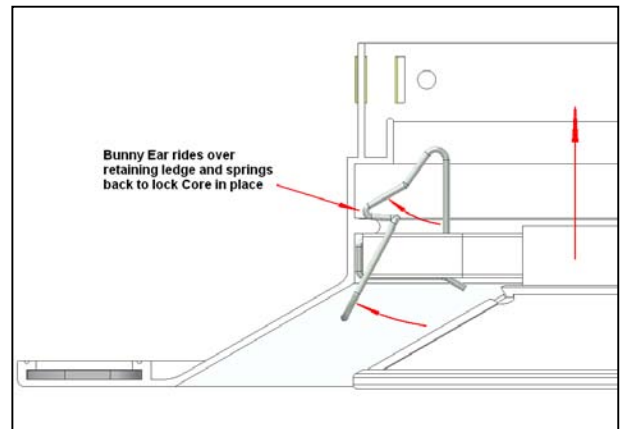
- d) To replace the Core, simply centralise the core in the Diffuser opening, resting the Bunny Clips on the retaining ledge within the Outer Frame (See figures 13 & 13a).
- e) Carefully, push upwards to allow the Bunny Clips to re-engage (figure 14). They will now spring back into the locked position (figure 14a) so retaining the Core in the Diffuser.



*Figure 13a: Rest Bunny Clip on Ledge*



*Figure 14: Clip rides over ledge*



*Figure 14a: Clip springs into position*

### Cleaning and Maintenance

Waterloo recommend that the Diffuser faces are cleaned with warm soapy water. For regular cleaning, a simple wipe down of all accessible faces will suffice.

If a deeper clean is required then simply remove the Diffuser Core as previously described, then clean the interior faces of the Diffuser Frame and the whole of the Diffuser Core then reassemble.

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