



**HEAT RECOVERY VENTILATION SYSTEMS**

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## **Are Filters an Important Part of the System?**

One of the many advantages of having a Heat Recovery Ventilation system in your home is it continuously supplies **clean** fresh air from outside. Not all external air is as clean as we would like. This is the reason that air filters are designed into the intake section of your system. These are made from a polyester material similar to dust masks one can buy.

The filter units are designed so that the material can be pleated and this ensures a maximum surface area to entrap dust and dirt. These filters can be got in different grades which can trap finer dust particles if necessary. Finer filters create an increased resistance to airflow and a balance must be achieved between air-quality and system efficiency. Sometimes it is better to employ a cheaper low resistance filter and change it at appropriate intervals than using the expensive one and leaving it longer in service.

What is the optimum frequency for filter-changing?

Sorry, but the answer is that there isn't one, as there are a range of factors to be taken into consideration:

1. How dirty is your external air? This will depend on where you live. Is it in town or by a busy road or have you an idyllic setting with a view of the Atlantic Ocean?
2. How much air is moving through your filter? Is your house quite large and approaching the limits of the size of your HRV unit or is the unit operating at a low speed to coincide with the size of your house?
3. How many people are living in the house and are there pets also? This will have a bearing on the return filter which is there to protect the heat exchanger from dust coming from the house.

At ProAir, we can take some of these factors into account and recommend a suitable frequency at commissioning stage. We can then send reminders to the client based on this.

It is important to realise that clean filters and clean exchanger surfaces have a bearing on efficiency. Tests are being carried out to ascertain this exact relationship as part of ProAir's continuous R&D. We will return to this subject in another blog post.

