

Mechanical Ventilation with Heat Recovery (MVHR), Approved Document L , Approved Document F and SAP

Approved document L (ADL) is now structured to ensure new build homes are thermally efficient and air tight. In addition, and aware of the increasing importance of ventilation within air tight dwellings, **Approved Document F** (ADF) is pushing for minimum whole house ventilation rates for all new dwellings.

Now, more than ever before, **it is vital that ventilation is considered as a key element of the building process** to protect the health of the occupants and preserve the structure of the building through the prevention of mould growth. The outcome of this type of performance based regulatory approach is that **ventilation must be considered very early in the new build design process.**

The demands of ADL and ADF have seen the spotlight shine on central whole house mechanical ventilation systems. In particular, demand has increased for MVHR as specifiers try to satisfy the requirements of the new regulations.

Mechanical systems offer the best practical solution for delivering required extract rates, and in the case of MVHR, will deliver the level of supply air needed to ensure a healthy internal environment. In addition, MVHR can provide some heat benefit to the dwelling, which is best described as 'energy positive' as it reduces the need to use fossil fuel driven heating systems and mitigates against energy use.

Up till now **SAP** (Standard Assessment Procedure) has provided default Specific Fan Power (SFP) consumption figures for MVHR (2w/l/s). Likewise the heat exchanger efficiency figure has been a default of 66%.

The problem with defaults is that if a manufacturer produces a product that improves on the assumed figures, he cannot receive an energy efficiency benefit.

With the introduction of **Appendix Q¹** to SAP, innovative new products can be specified within SAP. Products can be tested and listed in appendix Q and the resulting test figures used in the SAP procedure to improve upon the default SAP figures.



Currently the best performing figures in Appendix Q for SFP and heat exchanger efficiency, in its class, are from the MVHR.90 unit.

Up till now the growth of MVHR has been limited by its treatment in SAP. The new appendix Q scheme stands to make these ventilation technologies the rising stars in the new build segment. **This is a government backed energy efficiency scheme** to drive the market forward and the future trends for new build means that energy efficient mechanical ventilation must be the norm.

With acknowledgements to Kelly Butler (Director The Electric Heating & Ventilation Association TEHVA)

¹ See our paper on SAP and Appendix Q