



A Guide to Extract Fan Testing & MVHR Commissioning

The requirement to have ventilation systems checked and commissioned before handover was introduced in the October 2010 edition of Approved Document F - all properties that had their Building Regulations application made after the 1st October 2010 are required to have the in-situ performance of the ventilation system checked and compared to the requirements of Approved Document F and the Domestic Ventilation Compliance Guide.

Why is this required?

With the recent revisions to Approved Documents L1A & L1B in 2006 and 2010 buildings have been designed to be more and more airtight in order to minimise uncontrolled ventilation through the building fabric. This helps reduce heat loss and improves the SAP performance. However, it also removes a ventilation source and, unless the ventilation system of the dwelling is providing sufficient air movement then this can result in damp and condensation issues within the building. This testing is to ensure that the ventilation system as installed meets the Building Regulations requirements.

When does a test involve?

For System 1 (individual extract fans with background trickle vents in windows) and decentralised System 3 (continuous mechanical extract) installations we use an anemometer and cone to measure the flow rate of each extract fan. For centralised System 3 and System 4 (continuous mechanical supply and extract) we use the same equipment to set the flow rate at each terminal to the design rate and commission and balance the system.

When is a test carried out?

When the property is completed. It doesn't have to be decorated or have carpets fitted, but all of the parts of the ventilation system should be installed and fully operational. Please try to give us as much notice as possible. However if an urgent test is required we can normally do this within a couple of days.

What do you need to send us?

For a System 1 test nothing - we can gather all of the information we need on site during the test. For System 3 and 4 we will need a set of floor plan and section drawings, a drawing showing the ductwork layout & terminal locations and, if available, a copy of the design calculations showing the flow rates at each terminal.



What can you do for best performance?

- Use rigid ductwork rather than flexible.
- Ensure duct runs are as short and straight as possible with few corners and bends.
- Seal around all ductwork joins, both between sections of ductwork and between ductwork and terminals.
- If using flexible ductwork ensure it is not kinked, trapped or crushed during installation.
- Consider specifying an extract fan with a slightly higher duty than required to give some leeway when it comes to the test.
- Ensure there is at least a 10mm undercut to all internal doors above the finished floor level (including floor coverings).
- With MVHR and centralised System 3 installations, terminals need to be located in such a way as to maximise the volume of each room ventilated by the system.
- For MVHR systems, consider the duct layout to minimise sound transmission between rooms.
- When specifying an MVHR unit be aware that, for a given flow rate, a larger capacity unit running at a lower speed will generate less noise than a smaller unit running at a higher speed.
- Ensure that all installations have sufficient access to allow easy access for maintenance and filter changes

Why should I use MES?

We are fully qualified to carry out flow rate testing and commissioning for all ventilation systems. We are also able to undertake this testing at the same time as performing an air leakage test, minimising site disruption and reducing costs. We use UKAS calibrated equipment, including a pressure compensating anemometer, so you can be certain that our on-site measurements are completely accurate and reliable.

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