



A Guide to Air Leakage in Dwellings

With the most recent changes to Part L of the Building Regulations it is crucial to reduce air leakage in a new building. The information below will help you to achieve as good an air leakage score as possible.

How is air loss measured?

We depressurise buildings using a fan to determine how many cubic metres of air are lost through each square metre of building surface ($m^3/m^2/hr@50Pa$). The maximum air loss allowable under Building Regulations is $10m^3/m^2/hr$. However, normally SAP or SBEM calculations will require a lower amount.

What do we need to test a building?

- We need a full set of scale drawings – floor plans, sections and elevations (preferably as CAD files or .pdf's).
- A copy of the property's SAP/SBEM calculations.
- Mains power available on site on the date of the test.
- An external opening of approx. 2.1m high x 1m wide (a standard external door opening is suitable).
- High level vents (including trickle vents on rooflights) to be closed/sealed. We will seal vents that are within reach.

Are we accredited for air leakage testing?

Yes, MES are members of ATTMA (www.attma.org) and considered competent persons for the purposes of testing for air leakage in buildings. All our tests are carried out in line with the requirements of ATTMA TS1 and TSL1 for residential properties and ATTMA TS1 and TSL2 for commercial buildings.



When is a test carried out?

When any works to seal the envelope against air leakage are finished and the property is completed. It does not have to be decorated or floor finishes installed, but everything else should be completed. 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 if your property fails the test?

If the property only just fails we will show you the main problem areas and allow a reasonable amount of time on the day for you to seal these areas. We will then re-test for free whilst we are still on site. If the problems can't be fixed at the time then we will show you what needs to be done to improve performance and re-test at a later date. This is subject to an additional charge, albeit at a discounted rate.

What can you do to reduce air loss?

- Sealing the internal envelope of the building is much more effective than the exterior
- Ensure all weather strips are effective.
- Seal around all penetrations through floors, walls and ceilings.
- Seal skirting boards to floors.
- Particular care should be taken to seal around waste pipes (particularly as these are often difficult to access after kitchen and bathroom units have been fitted).
- Ensure a continual line of adhesive along the top and bottom of dot & dabbed plasterboard (and around sockets).
- Consider wet plastering as this improves air tightness.
- If joists are supported in a wall, seal around joists into cavities. The use of joist hangers is preferable.
- In timber framed buildings, ensure the sole plate is effectively sealed to the floor slab
- Timber framed buildings tend to be easier to seal due to the use of a vapour barrier, however ensure this is complete, all joints have been sealed and it has not been damaged.
- Particular attention should be given to airing cupboards. These can have particularly high levels of air leakage where pipe work has not been adequately sealed. It can be difficult to do this after the cylinder is fitted.
- Ensure loft hatches are sealed adequately.
- In commercial buildings ensure junctions between metal cladding and masonry walls are sealed adequately. Also ensure areas above suspended ceilings are sealed.



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