



MES ENERGY SERVICES

A Guide to Air Leakage in Buildings

The vast majority of properties we test will pass the minimum criteria to fulfil Building Regulation requirements. However developers are becoming more aware of the importance of reducing 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 measure how many cubic metres of air are lost through each square metre of building surface area per hour at a pressure difference of 50Pa ($m^3/h.m^2@50Pa$). The maximum air loss allowable under Building Regulations is $10m^3/h.m^2@50Pa$; however some SAP/SBEM calculations require a lower amount.

When is a test carried out?

When the property is completed. It doesn't have to be decorated or carpets fitted but everything else should be finished. 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?

We need a full set of scale plans (preferably as .pdf's) and a copy of the properties SAP/SBEM calculations. Please send these to us prior to the test. This means we can give you the results on the day.

Environmental conditions

If it's very windy we may not be able to test the property. We can normally let you know the day before if it's going to be too windy and we will rebook. It's also important that the temperature inside the property is not too high compared to the exterior. Please ensure the heating system is switched off the day before to ensure the test can be carried out.

What if your property fails the test?

Very few properties we test will fail. In fact 98% of residential properties we test pass. However 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. We will then re-test for free. If the problems can't be fixed at the time then we will show you what needs to be done to achieve a pass and re-test at a later date. This is charged 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 kitchens and bathrooms 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.

Head Office

Newark Beacon | Beacon Hill Office Park
Cafferata Way | Newark
Nottinghamshire NG24 2TN
T: 01636 653 055

London Office

344-354 Gray's Inn Road | London WC1X 8BP
T: 0207 033 3757

E: info@mesenergyservices.co.uk

www.mesenergyservices.co.uk

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