

# AIR Tightness

ACOUSTIC  
CONSULTANTS

*Air tightness testing is a non-invasive and cost effective technique to assess an important part of domestic energy efficiency. Draughts are unnecessary ventilation and will reduce occupant comfort levels.*

*Furthermore, these can account for up to 20% of domestic heat loss and up to 30% of a commercial buildings heat loss. It is for this reason air tightness was included in the 2006 England and Wales Building Regulations. This is often accompanied with Thermographic images of a building's fabric which can show the continuity of insulation or highlight construction defects and the general quality of the build.*

*PDA has joined forces with RMP to provide a full service of both sound insulation testing for Part E and air pressure testing for Part L1A. RMP staff Russell Macdonald, Scott Lothian, Elena Prokofieva and Roddy Mackenzie have recently undergone the rigorous training required to become BINDT (British Institute for Non Destructive Testing) registered testers required for Part L1A&B domestic air tightness compliance testing in England and Wales. Upon completion of a successful air tightness test, a BINDT certificate can be issued for building control satisfaction.*

## Air tightness testing procedure;

- All features that are designed for ventilation purposes should be closed or sealed, these include: extract vents, extract fans and window trickle vents.
- Connect a fan, or series of fans, to a building aperture (usually a single fan in a single door).
- Gradually increase/decrease the fan flow to give a accurate building leakage curve passing through 50Pa.
- Record the fan pressures and differential building pressures.
- From the building leakage curve, calculate the air permeability at 50Pa and ratio this to the internal surface area.

## There are a few things to consider regarding air tightness testing:

- The client needs to send our test engineers the drawings of the development (sections and plans) and the design air permeability requirements.
- Air tightness testing can normally be undertaken in 45-60mins, during which time the building or dwelling should be empty.
- Local weather conditions should not exceed 6m/s.
- The building must be in a practically complete state.



For further information please contact:

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