

# electrical estimates

## Air Pressure Testing

Electrical Estimates now offer Air Pressure Testing through-out Dyfed Powys and being BINDT approved (British Institute of Non Destructive Testing) you can be assured of a quality insured service, also enabling us to provide certification for all of your LIA building regulation requirements, Our certification will comfortably meet all your local Authorities requirements.

As with all the services electrical estimates offer, you can be assured of an expedient professional service, at a competitive price. Prices starting from £100 + VAT



Picture of Air Pressure Testing Equipment used by our organisation.



### What Can We Test & Certify

Electrical estimates offer a residential / Domestic Package, which accommodate....

#### Residential

- All types of New builds
- Extensions over 25% of original build
- HMO's
- Flats
- In fact all non commercial and industrial buildings
- Benefits - Reduce Fuel Costs per Annum.

#### Commercial & Industrial

Electrical estimates work closely with a national company, who on our behalf will test and certify any sized commercial and industrial building to local authorities guidelines, electrical estimates offer this service at no additional cost to the customer.

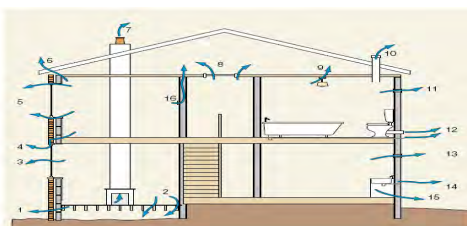
### What is Air Pressure Testing

Air leakage testing can also be referred to as 'Air Permeability Testing' and 'Air pressure testing'. Air Leakage can be defined as: The uncontrolled movement of air in to and out of a building which is not for the specific and planned purpose of exhausting stale air or bringing in fresh air.

Air tightness testing is carried out in accordance with the procedures detailed in ATTMA TS1 and BS EN:13829 (2001). ATTMA TS1 describes how to carry out the test and the analysis required determining the air permeability. Air permeability is expressed as volume flow per hour ( $m^3 h^{-1}$ ) of air supplied to the space per square metre ( $m^2$ ) of envelope area for an internal to external pressure difference of 50 Pa i.e.  $3m^3 h^{-1} m^{-2}$  at 50Pa.

The test involves connecting a Computer monitored fan and calibrated test equipment, to a suitable aperture in the building envelope and pressurising or de-pressurising the dwelling.

Air volume flow rate through the fan (equal to the air leaking through the building envelope) and the pressure difference across the building envelope are recorded. In calculating air permeability, corrections are made for temperature and barometric pressure. Local wind speed should preferably be below  $3m s^{-1}$ .



## Why is it important to build air tight dwellings?

The energy that we use to heat our homes is primarily created by burning fossil fuels that produces carbon dioxide. If we reduce the air leakage of a building we also reduce the amount of energy required to maintain comfort levels and in turn reduce carbon dioxide emissions.

In 2002 the government released a White Paper with a target to reduce carbon dioxide emissions by 20% from 1990 levels by 2010. To achieve these targets, the residential building regs were revised.



## Who is approved to carry out air pressure testing?



Air pressure testing may be carried out by a competent person. **The British Institute of Non-Destructive Testing (BiNDT)** runs a registration scheme of competent persons to ensure adherence to procedures, quality of service and UKAS calibration of equipment. Approved Document Part L1A states that a local authority is authorised to accept a certificate from a person who is registered by The British Institute of Non Destructive Testing. Air pressure testing procedures can also be accredited by UKAS in England, Scotland and Wales

## What happens if a dwelling fails air pressure testing?

Guidance in Approved Document Part L1A advises that failed dwelling types will require remedial work and retesting, along with one additional test on the same dwelling type.

In the event of a failed air pressure test, Electrical Estimates can provide a smoke test and advice to help identify the areas of leakage and give guidance on improving the air tightness performance.



## **Environmental issues**

Using less energy by being more efficient is the best way of reducing carbon emissions, airtightness is a key ingredient of this.

We recommend that best practice is maintained by installing a Mechanical Ventilation with Heat Recovery system (MVHR).

The Government is aiming to achieve a 60% reduction in carbon emissions by the year 2050, this is impossible without addressing the waste caused by leaky buildings. This has been recognised within Conservation of Fuel and Power of the Building Regulations and improvements in airtightness standards are being targeted.

## **Costs**

Energy is wasted by air leakage is one of the most costly factors, sometimes causing the fuel bills to almost double. Building tight buildings/dwellings without providing proper ventilation can increase the potential for health problems to occur. Higher moisture levels found in Inadequately ventilated houses create an ideal environment for moulds, dust mites and there causes of respiratory problems and allergies. Tighter buildings are also more likely to experience problems from back drafting and spillage of combustion products from naturally drafting boiler & Fire etc.



For more information on our Air Testing service please contact mike on 07815843177, or email [sales@electrical estimates.co.uk](mailto:sales@electrical estimates.co.uk)