

GUIDANCE NOTES

Produced by

Tendring District Council
Building Control Service



Guidance on Pressure Testing for New Buildings

Since the introduction of Approved Documents L1A and L2A there has been a requirement for Air Tightness testing to be carried out on a majority of both domestic and non-domestic new buildings and large extensions to buildings (over 100m² or 25% of the floor area).

Air tightness testing is carried out in accordance with the procedures detailed in *CIBSE Technical Memorandum 23* published by the [Chartered Institution of Building Services Engineers](#). TM23 describes how to carry out the test and the analysis required to determine the air permeability. Air permeability is expressed as volume flow per hour (m³ 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. $\text{m}^3 \text{h}^{-1} \text{m}^{-2}$ at 50Pa.

The test involves connecting a fan, or a number of fans, to a suitable aperture in the building envelope and pressurising it over a range of pressure differences. The fan speed is increased in steps up to a maximum and then decreased in steps. 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 at each fan speed. In calculating air permeability, corrections are made for temperature and barometric pressure. Local wind speed should preferably be below 3m s⁻¹.

Before the test is carried out, all mechanical ventilation systems must be switched off. All ventilation grilles and openings to the outside must be sealed. Sealing can be achieved with plywood sheeting or plastic sheeting and strong adhesive tape. Smoke vents should be closed but **not** sealed. Drainage traps should be filled.

While the pressurisation test is being carried out all external doors and windows must be closed and secured to avoid them being blown open.

Internal doors must to be wedged open during the test to avoid them slamming shut. The fan unit will create draughts in the building. Lightweight objects and paper near the fan unit should be removed or covered to avoid them being blown about. Fixtures and furniture will not be affected.

Access in and out of the building during the test will not be possible (unless there is an emergency and a need to evacuate the building). The test will take approximately 30 minutes. Site workers can remain in the building during the test, or will have to remain outside until the test is complete. There are no health risks to site workers who remain in the building during the pressure test, however there may be some discomfort due to cold draughts and some noise from the fan.



What happens next? The results of the pressure test should be passed on to your SAP assessor as soon as possible, as it will form part of the 'as-built' SAP calculation (a measurement of the energy and environmental performance of the building) he will need to do before you can be given your completion certificate.

A current list of members of the Air Tightness Testing and Measurement Association (ATTMA) can be found [here](#)



**For More Information please call
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**or alternatively call into our offices in Thorpe Road
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Other guidance leaflets can be downloaded using the following link:

[Click here for further guides](#)