

## Air Permeability (Airtightness)

When we "Air Test" a panel, we are measuring how much air can physically pass through the unit when the building is pressurised. This is often referred to as "Draft Proofing."

### 1. The Measurement (m<sup>3</sup>/hr @ 50Pa)

- **The Technical Bit (example panel):** 0.76 m<sup>3</sup>/hr @ 50Pa.
- **What it means:** We place the panel in a test rig and pump air against it at a pressure of 50 Pascals (simulating a high wind or a building's HVAC system). The "0.76" is the volume of air that escaped.
- **Why it matters: Lower is better.** A result of 0.76 is considered "Class 4" (the highest standard), meaning the panel is virtually airtight.

### 2. Preventing the "Chimney Effect"

- **The Problem:** Hot air rises. In many buildings, warmth escapes through unsealed loft hatches or service risers, acting like a chimney that sucks cold air in from elsewhere.
- **The Solution:** Our air-tested panels use a dual-seal system. This creates a physical vacuum-like seal between the door and the frame, stopping "stack effect" heat loss.

### 3. Building Regulations (Part L)

- **What it means:** Part L of the Building Regulations governs "Conservation of Fuel and Power."
- **Why it matters:** To pass a modern building inspection, the entire "envelope" of the building must be tested for airtightness. Using a certified air-tested panel ensures that the access point isn't the reason the building fails its pressure test.

### 4. Dust and Particle Control

- **Beyond Energy:** Air testing isn't just about heat. In "Clean Room" environments, laboratories, or hospitals, an air-tested panel prevents dust, fibers, or contaminants from being sucked out of the ceiling void and into the clean environment.

### 5. Air Permeability Performance Guide

This chart shows how our result compares to building industry standards.

Air Leakage Level	Result (m <sup>3</sup> /hr @ 50Pa)	Building Category
Standard	8.0 to 10.0	The legal "passing" limit for most new UK homes. Functional, but allow significant heat loss.
Improved	3.0 to 5.0	Considered "Good Practice." Commonly targeted by developers to meet energy efficiency goals.
High Performance	1.0 to 2.9	"Best Practice." Recommended for air-conditioned buildings and luxury energy-efficient homes.
Super-Airtight	0.0 to 0.9	Example Product Range (0.76) Suitable for Passive House standards and high-tech clean rooms.