Positive Pressure Ventilation (PPV)

Positive Pressure Ventilation is a system that introduces fresh air into a property to reduce humidity and contaminants, rather than extracting air. Also known as Positive Input Ventilation (PIV), these systems have been in use for decades, primarily to address condensation and mould issues.

Positive Pressure Ventilation (PPV) systems work by forcing fresh, filtered air into a building while maintaining a slight positive pressure. This pressure differential can help push stale air out through existing leaks and openings, theoretically improving indoor air quality.

One significant drawback of PPV systems is the absence of heat exchangers. Unlike Mechanical Ventilation with Heat Recovery (MVHR) systems, which capture and reuse heat from outgoing air, PPV systems do not recover heat. As a result, they can lead to increased heating costs, especially in colder climates like the UK. The introduction of unconditioned air can also make it challenging to maintain a comfortable indoor temperature, particularly during winter months when the incoming air is cold.

In a typical UK home, a PPV system might be installed to combat persistent mould problems due to inadequate ventilation. While it can reduce humidity levels, the lack of heat recovery means that homeowners may experience higher energy bills as they need to heat the incoming cold air. For instance, homes in colder regions could find that the benefits of reducing dampness come at the cost of increased heating demands.

The resurgence of Positive Pressure Ventilation systems in both domestic and commercial settings has raised concerns about their efficiency. Many new builds and retrofitted homes are incorporating PPV, but the lack of heat recovery can undermine the energy efficiency goals that many homeowners aim to achieve. As regulations around indoor air quality become stricter, the limitations of PPV systems may lead to a preference for more efficient alternatives like MVHR.

PPV systems are often confused with Mechanical Extract Ventilation (MEV). However, while MEV systems focus on removing stale or contaminated air, PPV systems emphasise the introduction of clean air without the benefit of heat recovery. This distinction is crucial for understanding the best approach to ventilation in various building scenarios.