

Where should trickle vents be positioned on a window?

Trickle vents should be positioned at the top of the window frame, ideally above the sash, to facilitate natural airflow while minimising draughts. However, for superior air quality and precise control, mechanical ventilation systems like MVHR or dMEV offer a more efficient and adjustable solution.

Why Trickle Vent Placement Matters (And When to Consider Mechanical Alternatives)

1. The Science Behind Trickle Vent Positioning

- **Top-of-Frame Placement:** Warm, moist air rises, so vents at the top of windows allow stagnant air to escape naturally. This reduces condensation but offers limited control over airflow rates.
- **Equivalent Area Requirements:** Under UK Building Regulations Part F, habitable rooms need 8,000–10,000mm² of vent area, while wet rooms require 4,000mm². Achieving this with trickle vents alone can be restrictive.

2. Limitations of Trickle Vents

- **Passive and Uncontrollable:** Trickle vents rely on wind pressure and temperature differences, making airflow inconsistent. In contrast, mechanical systems like **MVHR (Mechanical Ventilation with Heat Recovery)** or **dMEV (Decentralised Mechanical Extract Ventilation)** provide steady, adjustable airflow.
- **Energy Efficiency Trade-offs:** While trickle vents avoid energy loss from open windows, they still introduce cold air in winter. MVHR systems recover heat from extracted air, cutting heating costs by up to 30%.

3. When Mechanical Ventilation Outperforms

- **Precision Control:** Systems like **AUREN (single-room MVHR)** or **RESPIRO (whole-house MVHR)** allow users to adjust ventilation rates room-by-room, addressing humidity and pollutants more effectively than passive vents.
- **Filtration:** Mechanical systems filter incoming air, removing pollen, dust, and pollutants—something trickle vents cannot do.
- **Compliance Made Easier:** Meeting Part F's whole-dwelling ventilation rates (e.g., 19–43 l/s based on bedrooms) is simpler with a centralised system like RESPIRO, avoiding the patchwork approach of trickle vents.

4. Hybrid Solutions for Existing Homes

- **Retrofitting:** In older properties, combining trickle vents with **ARIA dMEV fans** in wet rooms ensures compliance without major structural changes.
- **New Builds:** For optimal performance, architects increasingly specify MVHR systems, which integrate seamlessly with modern airtight designs.

For healthier air and total control, mechanical ventilation systems outperform passive

trickle vents. While vents meet basic regulations, solutions like MVHR or dMEV offer filtration, heat recovery, and precision—key for modern UK homes.