

Single Room Mechanical Ventilation with Heat Recovery (srMVHR)

Single Room Mechanical Ventilation with Heat Recovery (srMVHR) is a decentralised ventilation system designed to provide fresh air supply and extract stale air from individual rooms while recovering heat from the exhaust air. It uses a heat exchanger to transfer thermal energy from outgoing air to incoming fresh air, reducing heat loss and improving energy efficiency. This system is particularly suited for retrofitting older UK homes or supplementing ventilation in specific rooms (e.g., kitchens, bathrooms) without requiring extensive ductwork.

Key Features

1. Heat Recovery Mechanism:

- A counter-flow heat exchanger recovers up to 90% of heat from extracted air, pre-warming incoming fresh air in winter and passively cooling it in summer.
- Operates at efficiencies of 75-90%, significantly reducing heating demand in line with UK Part L building regulations.

2. Decentralised Design:

- Installed per room, avoiding the need for whole-house duct networks. Ideal for retrofitting historic UK properties where structural modifications are restricted.
- Features low-energy fans for continuous airflow, often with humidity or CO₂ sensors to adjust ventilation rates automatically.

3. Energy and Compliance Benefits:

- Supports compliance with UK Building Regulations Part F (ventilation) and Part L (conservation of fuel and power).
- Reduces reliance on space heating, aligning with the Energy Savings Trust's recommendations for low-carbon retrofits.