What is Decentralised Heat Recovery Ventilation (DHRV)?

Decentralised Heat Recovery Ventilation (DHRV) is a mechanical ventilation system designed to provide continuous fresh air supply and extract stale air from individual rooms or zones within a building. Unlike centralised systems, DHRV operates on a room-by-room basis, using compact units installed in external walls or ceilings. These units recover heat from the outgoing air and transfer it to the incoming fresh air, improving energy efficiency while maintaining indoor air quality.

DHRV is particularly suited for residential retrofit projects, home renovations, and extensions where installing a centralised ventilation system is impractical or costly. It is commonly used in UK homes to comply with **Part F (Ventilation)** of the Building Regulations, which mandates adequate ventilation to prevent condensation, mould growth, and poor indoor air quality.

Synonyms

Room-by-room heat recovery ventilation, Localised heat recovery ventilation

Related Terms

1. **Mechanical Ventilation with Heat Recovery (MVHR):** A centralised system that provides whole-house ventilation and heat recovery.
2. **Passive Stack Ventilation (PSV):** A natural ventilation system that uses stack effect to extract stale air.
3. **Continuous Mechanical Extract Ventilation (MEV):** A system that continuously extracts air from wet rooms (e.g., kitchens, bathrooms) to maintain air quality.
4. **Air Permeability:** A measure of how airtight a building is, influencing the effectiveness of ventilation systems.
5. **Part L (Conservation of Fuel and Power):** Building Regulations that set energy efficiency standards, relevant when considering heat recovery systems.
6. **Condensation Risk Analysis:** A process to assess the risk of condensation and mould growth in buildings, often influencing ventilation design.

Practical Examples

- **Retrofit Scenario:** In a Victorian terrace house with single-glazed windows and poor insulation, installing DHRV units in key rooms (e.g., bedrooms, living rooms) can improve air quality without compromising the building’s historic fabric.
- **Extension Project:** Adding a DHRV system to a new kitchen extension ensures compliance with Part F while recovering heat from cooking activities.
- **Renovation:** In a damp-prone bathroom, a DHRV unit can extract moist air and introduce fresh air, reducing the risk of mould growth.