What is Alternate-Flow Heat Recovery (AFHR) Ventilation?

Alternate Flow Heat Recovery Ventilation (AFHR) is an advanced mechanical ventilation system designed to improve indoor air quality while recovering heat from outgoing stale air. It operates by alternating the direction of airflow through a heat exchanger, allowing for efficient heat transfer between incoming and outgoing air streams. This system is particularly effective in reducing energy consumption for heating and cooling in residential buildings.

AFHR systems such as FLUXO or AUREN are commonly used in UK residential buildings, especially in retrofits, extensions, and new builds where energy efficiency and compliance with Building Regulations are prioritised. They are particularly suitable for homes with high airtightness, as they ensure adequate ventilation without significant heat loss.

Synonym(s):

- Bidirectional Heat Recovery Ventilation
- Alternating Flow Ventilation

Related Terms:

1. **Mechanical Ventilation with Heat Recovery (MVHR):** A continuous ventilation system that recovers heat from exhaust air and transfers it to incoming fresh air.
2. **Building Regulations Part F (Ventilation):** UK regulations that set standards for ventilation in buildings to ensure adequate indoor air quality.
3. **Airtightness:** The measure of how well a building prevents uncontrolled air leakage, often improved in modern builds to enhance energy efficiency.
4. **Heat Exchanger:** A component in AFHR systems that facilitates heat transfer between incoming and outgoing air streams.
5. **Passivhaus Standard:** A rigorous energy efficiency standard that often incorporates AFHR or MVHR systems to minimise energy use.