What is a Back Draught Shutter?

A back draught shutter (also spelled *back draft shutter*) is a mechanical device installed within ventilation ducting to prevent reverse airflow—stopping cold or contaminated air from re-entering a room when the fan is inactive. It is particularly critical in UK residential and retrofit projects to maintain thermal comfort and comply with Part F (Ventilation) of the Building Regulations (2021 edition).

Types & Mechanisms

1. **Integral Shutters**:
   - Built into extractor fans (e.g., bathroom/kitchen fans).
   - Typically use a lightweight hinged flap or membrane that opens under fan pressure but closes via gravity when off.
2. **Standalone Shutters**:
   - Fitted separately in duct runs, often for centrifugal fans or complex systems.
   - May use **thermo-electric actuators** for precision (e.g., in mechanical ventilation with heat recovery/MVHR systems).

Regulatory Context

- **Approved Document F (2021)**: Requires ventilation systems to minimise uncontrolled air leakage (Section 2.16). Back draught shutters help meet **dwellings' airtightness targets** under **Part L (Conservation of Fuel and Power)**.
- **BS EN 13141-1:2019**: Covers performance testing for ventilation components, including shutters.

Practical Applications

- **Retrofit Projects**: Essential when upgrading older properties to prevent cold draughts via existing ducts.
- **Extensions**: Ensures new ventilation systems (e.g., kitchen extractors) do not compromise thermal efficiency.

Related Terms

1. **Centrifugal Fan**: A high-pressure fan type often paired with standalone shutters for longer duct runs.
2. **MVHR (Mechanical Ventilation with Heat Recovery)**: Systems where shutters prevent heat loss during off-cycles.
3. **Airtightness (Part L)**: Shutters contribute to reducing unintended airflow in sealed homes.
4. **Intermittent Extract Ventilation (IEV)**: A Part F-compliant strategy using shutters for humidity control.
5. **Ductwork Leakage Testing**: Shutters must be inspected during post-installation tests per **BS EN 12237**.