What is a Diffuser Grille?

A diffuser grille is an internal grille designed to regulate airflow into or out of a room by adjusting a valve mechanism. This valve can be spun open to increase airflow or closed to restrict or stop it entirely. Diffuser grilles are primarily used in multi-room ventilation systems, such as Mechanical Extract Ventilation (MEV) or Mechanical Ventilation with Heat Recovery (MVHR) systems. They are not typically suitable for use with inline fans.

In the UK house building, residential retrofit, and home renovation sectors, diffuser grilles play a critical role in ensuring efficient air distribution while maintaining indoor air quality. They are often installed in ceilings or walls and are integral to systems that comply with **Part F of the Building Regulations (Ventilation)**, which mandates adequate ventilation to prevent condensation, mould growth, and poor air quality.

For example, in a retrofit project involving an MVHR system, diffuser grilles are strategically placed in living rooms, bedrooms, and kitchens to ensure balanced airflow. The adjustable valve allows occupants to customise ventilation based on occupancy or seasonal needs, enhancing comfort and energy efficiency.

Synonyms

- Airflow control grille
- Ventilation grille

Related Terms

1. **Mechanical Extract Ventilation (MEV)**: A system that extracts stale air from wet rooms (e.g., kitchens, bathrooms) and supplies fresh air via background ventilators.
2. **Mechanical Ventilation with Heat Recovery (MVHR)**: A system that extracts stale air, recovers heat from it, and supplies fresh, pre-warmed air to living spaces.
3. **Building Regulations Part F (Ventilation)**: UK regulations specifying ventilation requirements for new and existing dwellings to ensure adequate air quality.
4. **Airflow Rate**: The volume of air moving through a ventilation system, measured in litres per second (l/s) or cubic metres per hour (m^3/h).
5. **Background Ventilator**: A small, fixed opening (e.g., trickle vent) in a window or wall that provides continuous airflow.