

What is a Filter?

A filter is a device or component designed to remove particulate matter, contaminants, or impurities from air (or other fluids) within a ventilation system. In the context of UK residential building, retrofits, and extensions, filters are commonly integrated into whole-house ventilation systems (such as Mechanical Ventilation with Heat Recovery, MVHR) and kitchen extractor fans to improve indoor air quality (IAQ) by capturing dust, pollen, and cooking fumes.

Context & Application

- **Whole-House Ventilation (MVHR/MEV):** Filters in MVHR systems prevent outdoor pollutants (e.g., PM2.5, pollen) from entering while also trapping indoor particulates before air is exhausted.
- **Kitchen Extractor Fans:** Grease and carbon filters are often used to reduce odours and airborne grease particles, complying with **Part F (Ventilation)** of the Building Regulations (2021 edition).
- **Retrofit Considerations:** When upgrading ventilation in older homes, filters must be selected based on **efficiency (MERV or F7+ ratings)** and maintenance requirements.

Synonyms

- Air filter
- Particulate filter
- Pollen filter (in MVHR systems)

Related Terms

1. **Mechanical Ventilation with Heat Recovery (MVHR)** - A system that extracts stale air, recovers heat, and supplies filtered fresh air.
2. **Part F (Ventilation) - Building Regulations** - Mandates minimum ventilation rates and filter efficiency for new builds and retrofits.
3. **Indoor Air Quality (IAQ)** - The measure of air cleanliness, influenced by filtration.
4. **Particulate Matter (PM2.5/PM10)** - Airborne particles targeted by filters.