

Duct

A duct, or ducting, is a pipe or conduit that facilitates the movement of air, specifically extracted air, away from an extraction zone, such as kitchens or bathrooms. Ducting is essential for effective ventilation systems, ensuring that stale or moist air is efficiently removed from indoor environments.

Ducts come in various sizes to accommodate the spigot sizes of extractor fans. In domestic settings, the most common duct sizes are **4 inches** and **6 inches** in diameter, while commercial applications may require larger ducting, such as **9 inches** and **12 inches**.

The primary materials used for ducting include:

- **Solid Ducting:** Typically made of metal or plastic, providing a rigid structure.
- **PVC Ducting:** Lightweight and resistant to corrosion, often used in residential applications.
- **Aluminium Ducting:** Flexible and lightweight, commonly used in both domestic and commercial settings.
- **Insulated Ducting:** Designed to reduce heat loss or gain, thereby improving energy efficiency.

Important Note: Flexible ducting should be avoided wherever possible! While it may seem convenient for installation in tight spaces, flexible ducting can lead to issues such as increased resistance to airflow, potential kinks, and reduced overall efficiency of the ventilation system. Rigid ducting is always preferred for optimal performance.

In a typical UK kitchen, an extractor fan might be installed above the cooking area to remove smoke and odours. The ducting connected to this fan must be at least **4 inches** in diameter to ensure adequate airflow. If a smaller duct were used, it could restrict airflow, putting undue pressure on the fan motor, potentially leading to reduced efficiency or failure.

When selecting ducting, it is crucial to ensure that the duct diameter is **equal to or larger** than the fan unit's diameter. Using ducting with a smaller diameter than the fan unit is inadvisable, as it can create a bottleneck effect, hindering airflow and increasing the risk of motor strain.