

What is a Centrifugal Fan?

Centrifugal fans are mechanical devices used to move air or gases in ventilation systems. They operate by blowing air at right angles to the intake of the fan, utilising centrifugal force to spin the air outward to the outlet. The impeller rotates, drawing air in near the shaft and propelling it perpendicularly to the opening in the scroll-shaped fan casing.

Centrifugal fans are known for producing higher pressure compared to axial fans, making them ideal for longer duct runs. They are commonly used in residential ventilation systems, such as inline duct fans or wall-mounted units, particularly in UK house building, retrofitting, and home renovation projects.

Synonyms: Radial fan, Blower

Related Terms:

1. **Axial Fan:** A fan that moves air parallel to the shaft, typically used for high airflow at low pressure.
2. **Impeller:** The rotating component of a centrifugal fan that accelerates air outward.
3. **Scroll Casing:** The spiral-shaped housing that directs air flow in a centrifugal fan.
4. **Duct Run:** The length of ductwork through which air is transported.
5. **Building Regulations Part F:** UK regulations governing ventilation requirements in residential buildings.
6. **Approved Document F:** Guidance on meeting Building Regulations Part F, including ventilation system design.
7. **Inline Duct Fan:** A fan installed within ductwork to boost airflow in ventilation systems.

Practical Example:

In a UK residential retrofit project, a centrifugal fan might be installed in a kitchen extraction system to ensure efficient removal of cooking odours and moisture. The fan's ability to handle longer duct runs makes it suitable for connecting the kitchen to an external vent, complying with Building Regulations Part F.