

# Velocity

**Velocity refers to the speed at which air travels through a duct or ventilation unit. It is usually measured in metres per second (m/s) and is critical for ensuring adequate air exchange and maintaining indoor air quality.**

In the context of building ventilation systems, velocity plays a vital role in determining the efficiency of air distribution. Proper velocity ensures that fresh air is delivered effectively throughout the space, helping to prevent the build-up of pollutants and maintain a comfortable environment.

## **Practical Example**

In a typical UK residential retrofit, a mechanical ventilation system may be installed to improve energy efficiency and indoor air quality. If the velocity of air entering the living space is too low, it may result in inadequate ventilation, leading to issues such as mould growth and poor air quality. Conversely, if the velocity is too high, it can create drafts and discomfort for the occupants. Therefore, it is essential to calculate the optimal velocity based on the size of the ductwork and the specific ventilation requirements of the building.