

FAQ

Tailored Air Distribution

Question:

What is the ideal velocity in a fabric duct?

Answer:

The ideal air velocity inside a fabric duct depends on the project type and available pressure in the system. However, as a general design guideline, it's best to keep velocity below 8.0 m/s to balance performance, comfort, and energy efficiency.

/ Low velocity systems

For **quiet environments** like theatres, offices or cinemas, lower air velocity is recommended – typically between **2.0–4.0 m/s**. Lower velocities reduce noise levels and are often paired with gentle diffusion methods such as **micro-perforations** or **low-pressure designs**.

/ Medium velocity systems

Most fabric ducting installations fall into this category. With velocities between **4.0–7.0 m/s**, they're common in **retail spaces, leisure facilities, laboratories and industrial halls**. These systems operate with moderate mounting heights and typical air temperature differences.

/ High velocity systems

Velocities above **7.0 m/s**, and up to or exceeding **10.0 m/s**, are usually used in industrial applications where noise is less critical. These systems are more cost-effective to install, but they consume more energy due to higher fan pressure requirements. To control airflow direction, we recommend using **fabric nozzles** in high-velocity designs.

/ Additional considerations

Air velocity is one factor affecting overall system noise. Diffuser type, pressure, and airflow direction also play a role. Sizing a fabric duct should follow similar principles as traditional ductwork, while optimising for performance and comfort in each unique space.

Key terms:

air velocity in ductwork; low-noise ventilation; HVAC airspeed guidelines; fabric duct sizing; airflow velocity range; low velocity duct systems; medium velocity airflow; high velocity air distribution; fan pressure requirements; energy-efficient ducting; industrial ventilation design; fabric nozzles; ductwork noise control; diffuser type selection; Prihoda system design



to learn more about fabric duct sizing and airflow velocity design, visit our [Design Tools page](#) or contact us via info@prihoda.com



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