

FAQ

Tailored Air Distribution

Question:

How much pressure do I need in a fabric ducting system?

Answer:

Typical operating pressure for fabric ducting ranges from 40 Pa to 400 Pa, with most systems working around 120 Pa. The exact pressure required depends on your specific application – especially the mounting height, type of air being supplied, and what the system is designed to do.

/ Low-pressure applications

In spaces with **low ceilings** (e.g. 2.8 m) and systems providing **cooling or ventilation only**, the required pressure is relatively low. Cold air naturally sinks due to its higher density, so it doesn't need much force to move into the room. In these cases, lightweight materials and specific duct shapes can optimise performance even at lower pressures.

/ High-pressure applications

In **spaces with high ceilings** (e.g. ducts mounted at 15 m), and especially in heating scenarios, more pressure is required. Warm air is lighter and tends to rise, so the system needs enough pressure to push the heated air down into the occupied zone through denser surrounding air.

/ Long duct lengths

Fabric ducts can be designed to run over **200 metres** in length. These long runs may require slightly higher initial pressure to maintain proper inflation throughout. However, as the airflow reduces along the duct (due to diffusion), static pressure tends to balance naturally, minimising pressure loss.

/ System design and support

Our engineering team at Prihoda will always calculate the correct external static pressure during the design process. We use our **in-house design software** to ensure accurate performance calculations – including pressure drop, noise levels, and other key parameters.

Key terms:

static pressure; air pressure requirements; HVAC system design; ventilation airflow; high ceiling ventilation; low ceiling applications; fabric ducting; airflow performance; long duct runs; pressure drop; air distribution system; heating and cooling efficiency; ventilation optimisation; air handling units (AHU); ductwork design



to explore airflow and pressure parameters for your project, try our [Prihoda Velocity Calculator](#) or contact us via info@prihoda.com



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