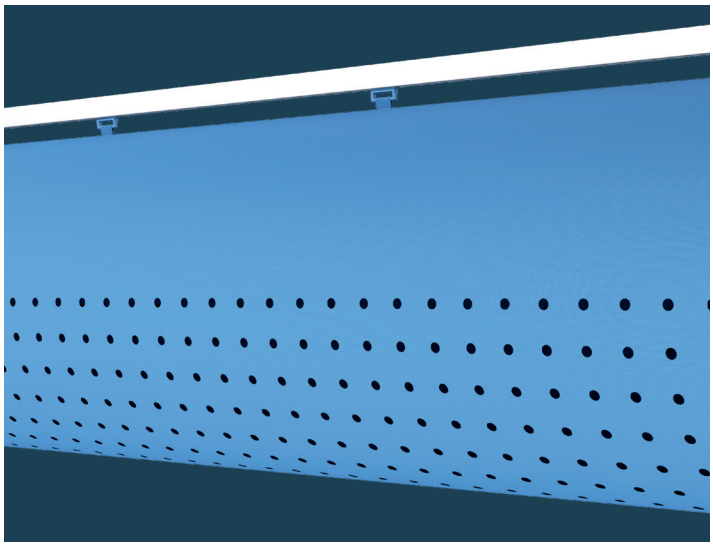
PerfoFlow™

With PerfoFlow™, the air exits the duct via laser-cut perforations covering a larger percentage of the duct's surface area. When used as the primary flow model perforations cover between 25 % to 100 % of the total surface area.

The size of the near-zone depends on the static pressure inside the duct, the percentage of the surface that is perforated and the size and spacing of the perforations.

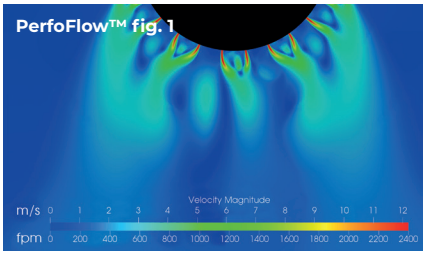
PerfoFlow™ enables distribution of large volumes of air in a non-specific direction; hence, high accuracy in the design phase is important. Careful engineering will ensure maximum efficiency without sacrificing the comfort of the workers.

As a primary flow model, it is typically used for make-up air in industrial applications with high ceiling heights and a need for large airflows to replace high levels of exhausted process air, such as painting and printing facilities, where air is extracted intensively to eliminate fumes and pollutants.

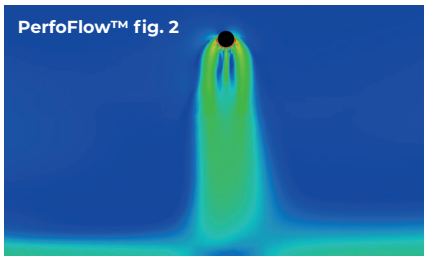


With PerfoFlow™, each perforation hole forms a separate air jet. As the air jets move away from the duct, they merge into confluent jets, which then merge together ultimately forming a uniform air diffusion. The resulting air diffusion will depend on many factors, including the size of holes and distance between them, perforation pattern and static pressure inside the duct.

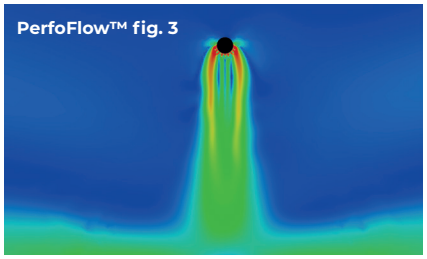
Perforation size impact on air pattern



Air discharge through PerfoFlow™ perforation at 120 Pa [0.48 inwg].



Air diffusion with perforation of Ø 5 mm [≈0.2 in] holes located at 180˚ over 6 o'clock position. Cooling at ΔT of -6 K [-10.8°F].



Air diffusion with perforation of Ø 10 mm [≈0.4 in] holes located at 180˚ over 6 o'clock position. Cooling at ΔT of -6 K [-10.8°F].