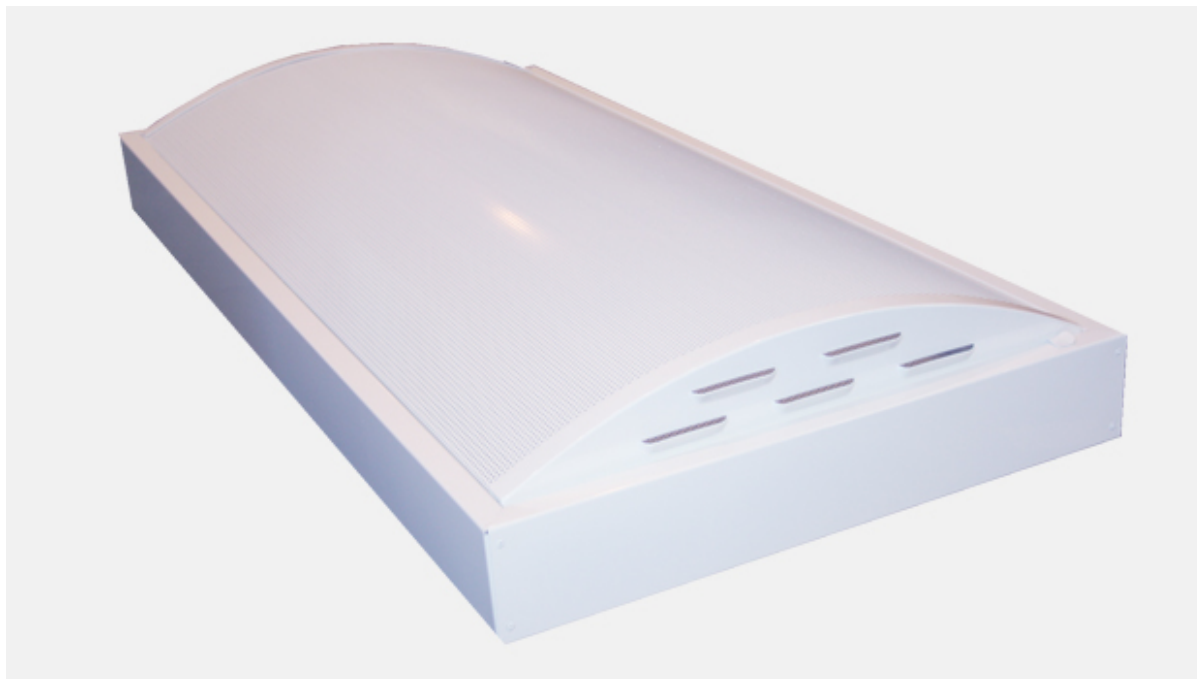


KCD – Kitchen Ceiling Diffuser



Overview

Uncontrolled draughts – even the smallest ones – can totally ruin the Capture & Containment capacity of hoods and ventilated ceilings. A well designed make up air strategy contributes not only to guarantee this efficiency but also to the final Indoor Air Quality (IAQ) inside the kitchen. It should always be considered as an inherent part of the kitchen ventilation solution.

Halton's KCD ceiling diffuser has been specifically designed for kitchens. It provides for a high volume of supply air ideally at 60 cm minimum of the hood(s) without disrupting hood performance. Tested performance of supply air discharge ensures that airflow, pressure drop, and NC (Noise Criteria) specifications are met.

KCD diffusers are particularly suitable for small kitchens, especially when they are equipped with Halton's **M.A.R.V.E.L.** (Demand Controlled Ventilation). This technology constantly adjusts the exhaust airflow rates depending on cooking activity as well as the associated supply airflow rates. KCD diffusers have an excellent reaction to variable airflows.

- Best balance ratio efficiency/ceiling coverage.
- Limited draft compared to traditional 4-way diffusers. Do not degrade the capture efficiency of the hoods.
- Low pressure drop and sound pressure levels.
- Front face made of 1.0 mm AISI 304 stainless steel. Plenum made of galvanised steel.
- Front face mounted on hinges for easy access to the MSM balancing damper (if used). Can be totally removed for cleaning.
- Compatible with 600×600 mm ceilings.
- Optional: plenum equipped with MSM balancing damper.

Operation & Description

With Demand Controlled Ventilation (DCV) becoming the norm rather than the exception, managing the changes in exhaust and supply air volumes for a specific group of hoods (or zone) has been a challenge.

The M.A.R.V.E.L.+ system is unique among DCV systems as it measures exhaust rates in each hood and the associated supply air in real time. This capability ensures that proper space balance is maintained as the system varies the exhaust airflows during operation. The majority of capture and containment problems occur because of two issues:

- high velocity discharge from diffusers (such as 4-way louvered diffusers) causing poor hood performance
- unbalanced supply air in kitchens around hoods.

The KCD design from Halton addresses both of these issues. No longer will designers have to rely on office building type diffusers, but can select from a series of high volume diffusers that are appropriate for kitchen supply air distribution.

The system is self balancing and automatically adjusts exhaust air volumes and the appropriate makeup air requirement to each zone and/or hood and delivers it in a way that does not interfere with the cooking operation. For the first time ever the design team can provide a complete exhaust and air distribution system that is synchronized and encompasses all the design criteria needed to excel in the commercial kitchen setting.

Specification

Furnish and Install Halton Model KCD kitchen ceiling supply diffuser as indicated on the drawings and diffuser schedule.

The model KCD diffuser shall be constructed of 22 ga. Aluminized body with 20ga aluminized internal baffle and perforated face with a power coat baked enamel standard white finish or 20 ga. stainless steel body and perforated face with aluminized internal baffle. The unit shall have a hinged perforated face panel with flush latching mechanism for ease of cleaning. The internal structure shall include internal angled baffles and a 29% perforated face with louvered ends.

KCD diffuser shall include T.A.B. testing and balancing port for measuring the pressure difference. Corresponding air flows can be read from pressure versus airflow chart provided.

Performance data shall include, neck velocity, air volume, pressure loss, sound level data, horizontal and vertical throw as tested in accordance with the following standards.

Sound testing was completed in accordance with ISO Standard 3741. Performance testing was per ANSI/ ASHRAE Standard 70.

Dimensions

