

MULTI SWIRL CEILING DIFFUSER



DESCRIPTION

The SMARTEMP® Multi Swirl Ceiling Diffuser, type MSC-FD, is ideally suited to 300mm wide ceiling grids in combination with high air flow rates.

Integrating two, three or even four high induction swirl diffusers into a rectangular ceiling panel, the outcome is a smooth and homogeneous air pattern that spreads across the ceiling.

Each of the radial swirl diffusers discharges the supply air with high induction swirl in a fixed radial pattern, producing horizontal discharge into the space. 20 off-set radial swirl vanes with helical twist and cambered leading edges increase both the maximum airflow rate and the VAV operating range, whilst reducing noise and minimum permissible supply air temperature.

The MSC-FD is the highest capacity and highest performing fixed vane VAV swirl diffuser available for 300mm wide ceiling grids. The high induction of swirl diffusers offers many advantages. Intense mixing at the diffuser discharge surface strongly dilutes the swirling supply air stream with large quantities of room air. Rapid temperature equalisation of the supply air with room air is achieved, preventing cold air dumping and producing uniform temperature distribution with high comfort levels in the space. Supply air stream temperature dilution also improves heating performance by reducing the buoyancy of the supply air stream.

High induction produces a strong increase in the mass flow rate of the supply air stream, due to induced room air, as well as rapid discharge velocity decay.

At any given airflow rate, the SMARTEMP MSC-FD swirl diffuser is suitable for both long throws (due to the high momentum of the swirling supply air stream) as well as short throws (due to its low velocity).

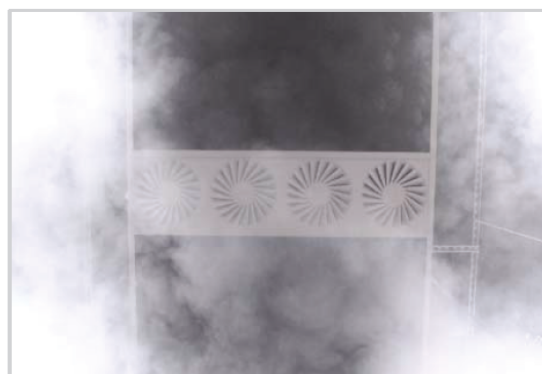


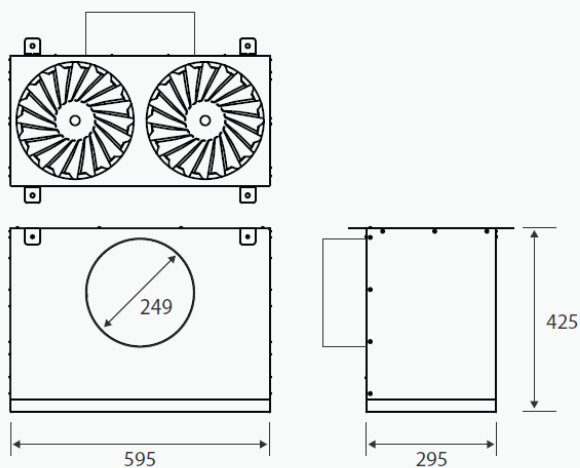
Figure 1: Smoke pattern at maximum airflow

Recommended Airflow Ranges [L/s]

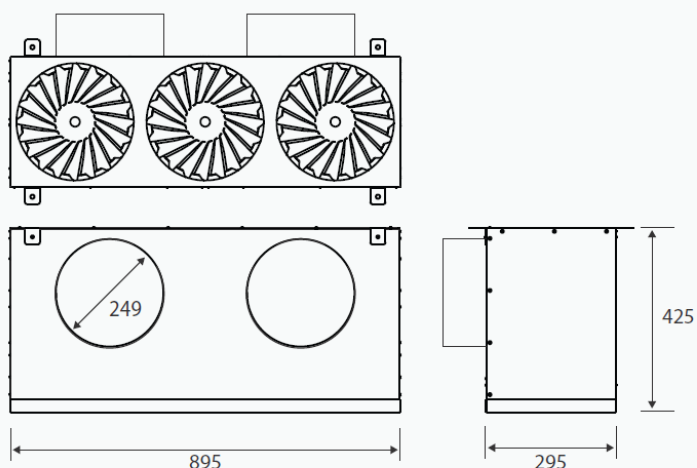
	-K8	-10K	-12K
MSC-FD-2	60-190	65-190	75-190
MSC-FD-3	85-285	100-285	115-285
MSC-FD-4	115-380	130-380	150-380

CONSTRUCTION

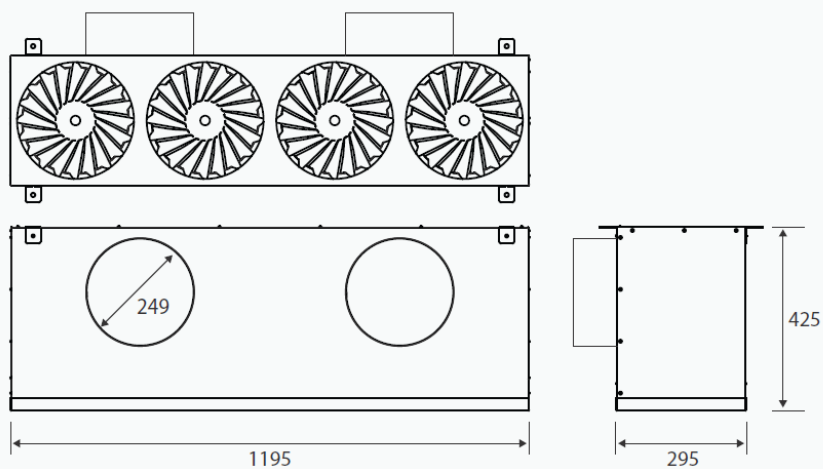
MSC-FD-2-DN250



MSC-FD-3-DN250



MSC-FD-4-DN250



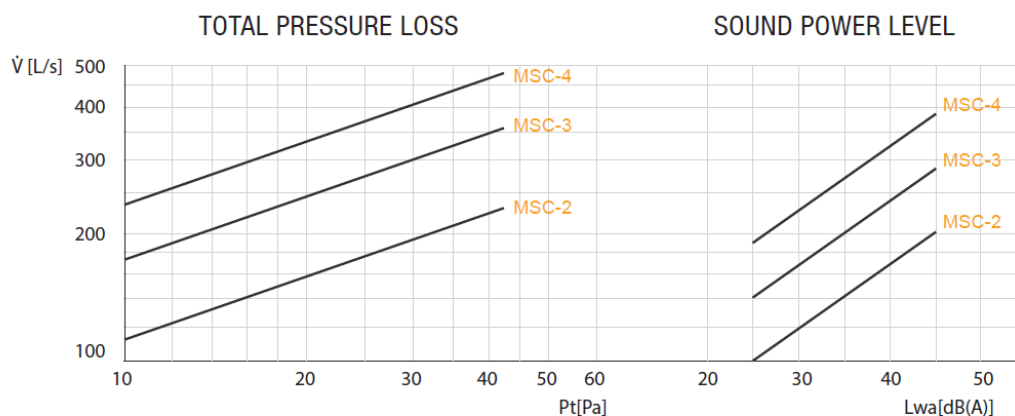
Multi Swirl Ceiling Diffuser

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MSC-FD MULTI SWIRL DIFFUSER

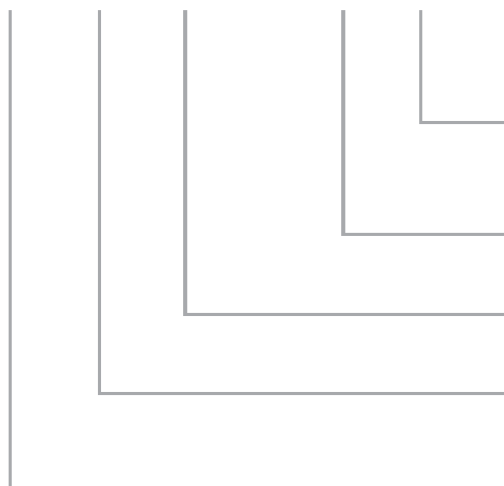
TECHNICAL DATA



Products supplied may differ slightly from those described in this technical brochure due to on-going product development.

ORDER DETAILS

MSC-FD-____-DN250-RAL_____-____



CONNECTION TYPE:

- K = with connection box.
- 0 = no connection box.

SURFACE FINISH:

- Face powder coated to RAL_____

SWIRL ELEMENT SIZE

NUMBER OF SWIRL ELEMENTS:

- 2, 3, 4

MODEL:

- Multi Swirl Ceiling Diffuser - Fixed Direction

Note:

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Issue date : 28/7/26