DFC CEILING DISPLACEMENT DIFFUSER





DFC Ceiling Displacement Diffuser

The Ceiling Displacement Diffuser (DFC) supplies low velocity discharge air into the occupied zone. The DFC is designed to be installed in a standard T-bar ceiling making it ideal for spaces with minimal floor or wall space, transient areas (hallways and corridors) or along the perimeter. The low noise levels, superior air quality and overhead mounting make the DFC ideal for classrooms, offices and hallways.



CONSTRUCTION

- + Material
 - Frame and equalization baffle Aluminum
 - Plenum and perforated discharge Steel
- + Options
 - Inlet locations: bottom, top rear, or side

- Field-cut inlet
- Ships with protective film on face and inlet
- Standard finishes: White (B12), Aluminum (B15), Black (B17)
- Custom color to match

DIMENSIONAL DATA



Available Sizes (in.)						
WxH	Inlet					
12 x 24	6, 8					
24 x 24	8, 10					
12 x 48	6, 8					
24 x 48	8, 10					

PERFORMANCE DATA

Unit Size	Inlet Size [in]	Face Velocity	Face Air Flow	Total Pressure	Static Pressure	Noise Criteria	Proximity to Outlet [ft] DR 20%		Adjacent Zone [ft]	
W X H [III]		[fpm]	[ciiii]	[in. w.g.]	[in. w.g.]	[NC]	ΔT = 5 °F	ΔT = 10 °F	DT = 5°F	DT = 10°F
12 x 24	6	20	25	-	-		-	-	-	-
		30	38	0.01	0.01				-	-
		40	50	0.02	0.02			1	-	1
		50	63	0.04	0.03			1	1	2
24 x 24	8	20	60	-	-	-	-	-	-	-
		30	90	0.02	0.02				-	1
		40	120	0.03	0.03			1	1	2
		50	150	0.05	0.04	15	1	2	2	3
24 x 48	10	20	129	0.01	0.01	-	-	1	1	2
		30	193	0.03	0.03		1	2	3	4
		40	258	0.06	0.05	21	2	4	4	5
		50	322	0.09	0.07	27	4	5	6	7

Performance Notes:

 Sound and pressure drop tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

2. Air flow is in cubic feet per minute, cfm.

- Pressure is in inches of water, in. w.g.
 The NC values, sound pressure level, are based on a room absorption of 10 dB, re 10⁻¹² watts and one diffuser.
- ΔT is the difference between the room air temperature 3 ½ ft above the floor and the temperature of the supply air.
- 6. Proximity to outlet is the minimum distance from an outlet to the occupant in order to achieve the listed DR value.
- 7. Distances closer to the diffuser have a higher DR than the cataloged value.
- DR is the predicted percentage of people dissatisfied (PPD) due to draft. A value of less than 20 meets the requirements of ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy.
- 9. Blanks "-" indicate that the DR is below the specified value at all distances from the diffuser face.
- 10. DR catalog data is presented for an occupant density of 25 people/1000ft2, which is the default occupancy density for classrooms (ages 5-8) given by ASHRAE 62.1-2004. For other occupant densities, please refer to the DV Room Designer Software.
- 11. The Adjacent zone describes the distance from the face of the diffuser and measured 1 in. from the floor, at which the supply air velocity is 50 fpm.



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