

DF1L-HC

Heat/Cool Ceiling Displacement Diffuser

PERFORMANCE DATA

Cooling Displacement Pattern

Unit Size W x H [in]	Face Velocity [fpm]	Air Flow [cfm]	Total Pressure [in. w.g.]	Static Pressure [in. w.g.]	Noise Criteria [NC]	Proximity to Outlet [ft]		Adjacent Zone	
						DR 20%		DT = 5°F	DT = 10°F
						ΔT = 5 °F	ΔT = 10 °F		
24 x 24	20	51	-	-	-	-	-	-	1
	30	77	0.02	0.02	-	-	1	-	2
	40	102	0.04	0.04	-	-	1	-	2
	50	128	0.06	0.06	-	-	2	-	3
48 x 24	20	110	-	-	-	-	1	-	2
	30	165	0.02	0.02	-	-	2	1	3
	40	221	0.04	0.03	-	-	2	1	4
	50	276	0.06	0.05	17	1	3	2	4

Heating Vertical Pattern

Unit Size W x H [in]	Neck Velocity, fpm	50	100	150	200	250	300
	Velocity Pressure, in. w.g.	0	0.001	0.001	0.002	0.004	0.006
24 x 24	Total Pressure, in. w.g.	0.001	0.03	0.07	0.13	0.2	0.29
	Flow Rate, cfm	27	54	81	108	136	163
	NC	-	-	18	26	32	37
	Throw 150, 100, 50	0-1-4	2-4-9	4-7-11	6-9-13	8-10-14	9-11-16
24 x 48	Total Pressure, in. w.g.	0.01	0.03	0.06	0.11	0.17	0.25
	Flow Rate, cfm	54	108	162	217	271	325
	NC	-	-	22	30	36	41
	Throw 150, 100, 50	1-1-2	2-2-5	2-4-7	3-5-9	4-6-10	5-7-10

Heating Horizontal Pattern

Unit Size W x H [in]	Neck Velocity, fpm	50	100	150	200	250	300
	Velocity Pressure, in. w.g.	0	0.001	0.001	0.002	0.004	0.006
24 x 24	Total Pressure, in. w.g.	0.001	0.03	0.07	0.13	0.2	0.29
	Flow Rate, cfm	27	54	81	108	136	163
	NC	-	-	18	26	32	37
	Throw 150, 100, 50	0-0-1	0-1-4	1-3-5	2-4-7	3-4-9	4-5-11
24 x 48	Total Pressure, in. w.g.	0.01	0.02	0.05	0.09	0.14	0.21
	Flow Rate, cfm	54	108	162	217	271	325
	NC	-	-	22	30	36	41
	Throw 150, 100, 50	0-1-4	2-4-12	4-9-18	8-12-21	10-15-23	12-18-25

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."
- 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.
- Blanks "-" indicate that the DR is below the specified value at all distances from the diffuser face.
- ΔT is the difference between the room air temperature 3 ½ ft above the floor and the temperature of the supply air.
- Proximity to outlet is the minimum distance from an outlet to the occupant in order to achieve the listed DR 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.
- Throw values are given for terminal velocities of 150, 100, 50 fpm.
- Throw data is based on supply air and room air at iso-thermal conditions.
- 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.