

FLOOR "SWIRL" DIFFUSERS FIXED DISCHARGE PATTERN • ROUND UNDERFLOOR AIR DISTRIBUTION SYSTEMS **MODELS: NFD, NFD-VAV**

Performance Data

Airflow, cfm	30	40	50	60	70	80	90	100	110	120
Plenum Pressure	0.012	0.020	0.029	0.040	0.050	0.063	0.077	0.093	0.108	0.125
Vertical Projection, ft. @ 150, 100, 50 fpm	0.1-0.5-1.2	0.4-1.0-2.0	0.8-1.8-2.8	1.2-2.6-3.5	1.6-3.4-4.2	2.2-4.1-4.8	3.1-4.6-5.3	3.9-5.1-5.8	4.6-5.5-6.2	5.2-5.8-6.6
Horizontal Spread, ft. @ 150, 100, 50 fpm	1.0-1.0-1.5	1.0-1.0-2.0	1.5-1.8-2.7	1.7-2.9-4.1	1.9-4.0-5.5	2.1-4.1-5.8	2.5-3.9-5.7	2.9-3.8-5.5	3.1-3.7-5.4	3.3-3.6-5.3
NC	-	-	-	-	-	_	-	15	18	20

Correction Factor for Return Air Applications: Multiply Plenum Pressure by x 2.65 to determine static pressure drop.

Correction Factors for other supply air temperature differentials.

∆ T (°F)	-6	-8	-10	-12	-14	-16
Projection, ft.	x 1.33	x 1.11	x 1.00	x 0.96	x 0.92	x 0.91
Spread, ft.	x 0.87	x 0.94	x 1.00	x 1.06	x 1.11	x 1.16

Performance Notes:

1. Projection and Spread data were determined in a room with a 11' ceiling height and 10°F ΔT , between supply air and averaged occupied room temperature.

2. Vertical projection (throw) is the maximum height above the floor where terminal velocities of 150, 100 and 50 fpm were observed. Horizontal Spread is the total width of the isovel where terminal velocities of 150, 100 and 50 fpm were observed.

3. Noise Criteria (values) based on 10 dB room absorption, re 10 watts. Dash (-) in space denotes an NC value of less than 15.

4. Pressure is in inches w.g..

5. Tests conducted with dirt basket/damper installed. Damper fully open. Ak = 0.104

6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Standard 70 - 1991.



Outline indicates maximum room air velocity of 50 fpm.

SCHEDULE TYPE	Dimensions are in inches (mm).			
PROJECT				
ENGINEER	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR	2 - 26 - 04	NFD	9 - 5 - 02	NFD-2