



ENGINEERING DATA

4000 - 4100 Series

SIZE	VELOCITY		300	400	500	600	700	800	900
	DUCT PT.		0.18	0.25	0.4	0.610	0.82	1.1	1.4
14x6	Eff. Area 0.50 ft ²	CFM	60	76	96	116	136	156	192
10x8		NC	<20	<20	<20	20	25	30	35
12x8	Eff. Area 0.62 ft ²	CFM	90	119	147	180	209	238	300
10x10		NC	<20	<20	<20	20	25	30	35
12x12	Eff. Area 0.89 ft ²	CFM	72	91	115	139	163	187	230
18x8		NC	<20	<20	<20	20	25	30	35
16x12	Eff. Area 1.11 ft ²	CFM	109	143	180	219	252	290	361
14x14		NC	<20	<20	<20	20	25	30	35
24x12	Eff. Area 1.60 ft ²	CFM	85	113	140	171	199	226	285
20x14		NC	<20	<20	<20	20	25	30	35
30x14	Eff. Area 2.21 ft ²	CFM	128	171	214	256	300	342	428
20x16		NC	<20	<20	<20	20	25	30	35
24x20	Eff. Area 2.64 ft ²	CFM	170	227	284	340	400	454	568
20x24		NC	<20	<20	<20	20	25	30	35
30x20	Eff. Area 3.12 ft ²	CFM	170	227	284	340	400	454	568
24x24		NC	<20	<20	<20	20	25	30	35

ENGINEERING FOOTNOTES

ENGINEERING FOOTNOTES FOR SHOEMAKER DIFFUSERS & GRILLES:

SIZE: Nominal size or the duct opening / neck size.

EFFECTIVE AREA: The space between the blades actually utilized by the air.

VELOCITY: The actual velocity of the air through the blades measured with a velometer in at least 4 places.

FILTERVELOCITY: Some velocities higher than 500 FPM will decrease filter effectiveness and possibly blow off agglomerates.

Special Note: The 920FG table gives the air flow for different filter grilles at 2 CFM per square inch of filter with allowance for the blockage caused by the grille.

DUCT PT: The total pressure behind the diffuser in the duct forcing that air through the diffuser.

DUCT PS: The static pressure in the duct directly behind the grille or neck of the T-Bar grille. The static load on the fan chargeable against that grille. Velometer readings are taken between grille vanes giving actual velocity.

THROW: The throws noted in the tables are the distances from the diffuser to where the air stream velocity has dropped to not under 100/75/50 F.P.M.

NOISE CRITERIA:

NC "A" scale.

- (1) Below NC25 extremely quiet.
- (2) Below NC30 Quiet Office.
- (3) Below NC35 Conference Rooms; normal voice 10-30 ft.
- (4) Below NC40 Conference Rooms; 6-12 ft. normal voice.
- (5) NC45 Conference Rooms; 3-6 ft. normal voice.

NOISE CRITERIA addition for RD series:

The NC values are based on a room absorption of 18 db, re 10-13 watts.

NOISE CRITERIA addition for OBR – Damper Throttling:

- ¼ Closed – 5
- ⅓ Closed – 10
- ½ Closed – 15