



ENGINEERING DATA

500 Series																										
SIZE	VELOCITY		300			400			500			600			700			800			900			1000		
	DUCT PT		.007			.011			.017			.024			.032			.044			.056			.067		
6x6	Eff. Area .09 ft ²	CFM	89			119			149			178			208			238			267			297		
		NC	<20			<20			<20			<20			<20			20			20			25		
		Throw	3	3.5	4	4	5	6	5	6	7	6.5	8	9.5	7	9	11	8.5	10.5	12.5	9	11	13	10	12.5	15
8x8	Eff. Area .17 ft ²	CFM	129			172			215			257			300			343			385			429		
		NC	<20			<20			<20			<20			<20			<20			<20			<20		
		Throw	3	4	5	4	5	6	5	6	7	6	7.5	9	7	9	11	8.5	10.5	12.5	10	12.5	15	12	15	18
10x10	Eff. Area .26 ft ²	CFM	178			237			297			358			413			473			534			594		
		NC	<20			<20			<20			20			20			20			25			25-30		
		Throw	4	5	6	5	6	7	6.5	8	9.5	7	9	11	9	11	13	13	16	19	15	19	23	17	21	25
12x12	Eff. Area .38 ft ²	CFM	242			325			407			484			572			649			726			814		
		NC	<20			<20			<20			20			20			20			25			25-30		
		Throw	5	6	7	6	7.5	9	8.5	10.5	12.5	10	12.5	15	12	15	18	13	16	19	15	18.5	22	17	21	25
14x14	Eff. Area .52 ft ²	CFM	297			396			495			594			693			792			891			990		
		NC	<20			<20			<20			20			20			25			25-30			25-30		
		Throw	5	6	7	7	8.5	11	9	11	13	12	14	17	13	16	19	15	19	22	17	21	25	19	24	29
16x16	Eff. Area .69 ft ²	CFM	372			495			583			704			798			924			1045			1183		
		NC	<20			<20			<20			20			25			25-30			30			30-35		
		Throw	7	7.5	9	8	10	12	10	12.5	15	12	15	18	14	18	21	16	20	24	18	23	27	20	25	30

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