



ENGINEERING DATA

700 MA & 700 MCB Series																				
SIZE	VELOCITY		400			500			600			700			800			1000		
	DUCT PT.		0.038			0.108			0.155			0.22			0.285			0.438		
6x6	Eff. Area 0.11 ft ²	CFM	86			111			136			161			173			222		
		NC	<20			<20			<20			20			20			20		
		Throw(ft.)	5	7	9	6	9	12	7	10	14	8	12	16	9	13	17	11	15	19
8x8	Eff. Area 0.21 ft ²	CFM	161			198			234			272			321			395		
		NC	<20			<20			<20			20			20			20		
		Throw(ft.)	8	10.5	13	9	12	15	10	14	18	11	15.5	20	12	16	21	14	20	26
10x10	Eff. Area 0.33 ft ²	CFM	234			297			359			420			470			593		
		NC	<20			<20			20			25			25			25-30		
		Throw(ft.)	10	12.5	15	10	14.5	19	12	16.5	21	13	18	22	14	19	24	16	22	27
12x12	Eff. Area 0.475 ft ²	CFM	359			420			518			606			692			865		
		NC	<20			20			25			25			25-30			30		
		Throw(ft.)	11	15	19	13	17	21	15	19	23	16	20	25	17	22	27	19	26	32
14x14	Eff. Area 0.65 ft ²	CFM	470			593			717			827			951			1186		
		NC	<20			20			25			25-30			25-30			30		
		Throw(ft.)	12	17	21	14	19	24	17	22	27	18	23	28	19	24	29	21	29	37
16x16	Eff. Area 0.75 ft ²	CFM	595			734			892			1047			1190			1499		
		NC	<20			20			25			25-30			30			30		
		Throw(ft.)	13	19	25	16	22	28	18	24	30	19	25	31	21	27	33	23	31	39
18x18	Eff. Area 1.00 ft ²	CFM	759			964			1178			1356			1523			1903		
		NC	20			20			25			25-30			30			30		
		Throw(ft.)	15	21	27	18	26	32	20	27	33	22	29	36	24	31	38	25	33	40
20x20	Eff. Area 1.18 ft ²	CFM	904			1166			1380			1618			1856			2284		
		NC	20			20			25			25-30			30			30		
		Throw(ft.)	18	23	28	21	27	33	23	29	35	25	32	39	26	34	41	28	36	44

Note: For square neck multiply CFM x 1.21

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