



ENGINEERING DATA

825 Series																										
COLLAR SIZE	VELOCITY		300			400			500			600			700			800			900			1000		
	DUCT PT.		0.007			0.011			0.017			0.024			0.032			0.044			0.056			0.067		
6"	Eff. Area .220 ft ²	CFM	55			73			95			110			130			150			170			195		
		NC	<20			<20			<25			25			<30			30			<35			35		
		Throw (ft.)	2.5	3	3.5	3.5	4	4.5	4.5	5	5.5	6	7	8	7	8	9	7.5	9	10.5	8	10	12	9	11	13
7"	Eff. Area .285 ft ²	CFM	80			105			135			155			185			210			235			270		
		NC	<20			20			<25			25			<30			30			<35			35		
		Throw (ft.)	3.5	4	4.5	4.5	5	5.5	6.5	7	7.5	7	8	9	7.5	9	10.5	8.5	10	11.5	9	11	13	9.5	12	14.5
8"	Eff. Area .345 ft ²	CFM	100			135			170			200			240			270			305			340		
		NC	<20			20			25			<30			30			<35			35			<40		
		Throw (ft.)	5.5	6	6.5	6.5	7	7.5	8	9	10	8.5	10	11.5	9.5	11	12.5	10	12	14	10.5	13	14.5	11	14	17
9"	Eff. Area .420 ft ²	CFM	130			175			220			260			310			335			380			440		
		NC	<20			20			25			<30			30			<35			35			40		
		Throw (ft.)	6.5	7	7.5	7	8	9	9	10	11	9.5	11	12.5	10	12	14	11	13	15	11	14	17	12	15	18
10"	Eff. Area .510 ft ²	CFM	160			215			270			320			380			430			490			540		
		NC	<20			<25			25			30			<35			35			40			<45		
		Throw (ft.)	7	8	9	8	9	10	10	11	12	10	12	14	11	13	15	12	14	16	12	15	18	13	16	19
12"	Eff. Area .710 ft ²	CFM	230			310			385			465			545			620			700			775		
		NC	20			25			30			<35			35			40			<45			45		
		Throw (ft.)	8	9	10	10	11	12	11	12	13	12	14	16	13	15	17	13.5	16	18	13.5	17	20	14.5	18	22
14"	Eff. Area .950 ft ²	CFM	315			420			530			635			745			845			950			1060		
		NC	20			30			<35			<40			<45			45			<50			50		
		Throw (ft.)	9	10	11	11	12	13	11.5	13	14.5	13	15	17	13.5	16	18	14.5	17	20	14.5	18	22	15	19	23
16"	Eff. Area 1.33 ft ²	CFM	425			560			720			850			1000			1150			1290			1440		
		NC	25			30			30-35			40-45			45			45-50			50			50>		
		Throw (ft.)	10	12	14	11	14	16	14	16	19	15	17	20	17	19	22	20	23	27	21	25	29	23	27	32

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