



ENGINEERING DATA

780 & 781 Series																				
COLLAR SIZE	VELOCITY		400			500			600			700			800			1000		
	DUCT PT.		0.038			0.108			0.155			0.22			0.285			0.438		
6"	Eff.	CFM	80			100			120			140			160			200		
	Area	NC	20			20			20-25			25-30			30-35			35-40		
	.56	Throw (ft.)	2.5	3	3.5	3.5	4	4.5	4.5	5	6	5	6	7	5.5	7	8.5	6.5	8	9.5
8"	Eff.	CFM	140			175			210			245			280			350		
	Area	NC	20			20			20			20			25			35-40		
	.64	Throw (ft.)	2.5	3	3.5	3.5	4	4.5	4.5	5	6	5	6	7	5.5	7	8.5	7	9	11
10"	Eff.	CFM	220			270			330			380			435			545		
	Area	NC	20			20			20-25			25-30			30			35-40		
	.68	Throw (ft.)	4.5	5	5.5	5.5	6	6.5	7	8	9	7.5	9	10.5	8	10	12	9	11	13
12"	Eff.	CFM	315			390			470			550			630			785		
	Area	NC	20			20			20-25			25-30			25-30			40		
	.72	Throw (ft.)	6.5	7	7.5	7	8	9	7.5	9	10.5	9.5	11	12.5	9.5	12	14.5	10.5	13	15.5
14"	Eff.	CFM	425			530			635			745			850			1060		
	Area	NC	20			20-25			25-30			30-35			35-40			>40		
	.91	Throw (ft.)	8	9	10	9	10	11	8.5	10	11.5	9.5	11	12.5	10.5	13	15.5	11	14	17
16"	Eff.	CFM	575			720			860			1010			1150			1420		
	Area	NC	25			25-30			30-35			35-40			>40			>40		
	1.27	Throw (ft.)	10	12	14	11	13	16	13	16	18	14	16	19	15	18	21	17	19	22

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