



ENGINEERING DATA

830 Series												
COLLAR SIZE	VELOCITY		200	300	400	500	600	700	800	900	1000	1200
	DUCT PT.		0.006	0.018	0.032	0.048	0.07	0.092	0.12	0.14	0.16	0.23
6"	Eff. Area .240 ft ²	CFM	35	55	75	95	115	135	150	175	200	230
		NC	<20	<20	<20	<20	<20	<20	<20	20	20-25	25-30
7"	Eff. Area .275 ft ²	CFM	55	80	110	130	155	185	205	240	325	320
		NC	<20	<20	<20	<20	<20	<20	<20	20	20-25	25-30
8"	Eff. Area .310 ft ²	CFM	70	105	145	170	200	235	270	310	350	420
		NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30
9"	Eff. Area .354 ft ²	CFM	90	130	175	220	260	345	380	406	450	540
		NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30
10"	Eff. Area .398 ft ²	CFM	105	160	210	265	325	380	440	495	550	645
		NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30
12"	Eff. Area .502 ft ²	CFM	150	230	305	385	470	545	620	695	775	945
		NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30
14"	Eff. Area .633 ft ²	CFM	215	315	430	535	640	750	855	950	1055	1275
		NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30
16"	Eff. Area .887 ft ²	CFM	280	425	575	720	860	1010	1150	1290	1420	1720
		NC	<20	<20	<20	<20	20	20	20-25	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