



ENGINEERING DATA

110 Series																												
COLLAR SIZE	VELOCITY	300			400			500			600			700			800			900			1000			1200		
	DUCT PT.	0.007			0.011			0.017			0.024			0.032			0.044			0.056			0.067			0.095		
6"	CFM	61			87			95			114			143			163			175			190			220		
	NC	<20			<20			<20			<20			<20			<20			20			20			20		
	Throw (ft.)	4.5	5	5.5	5.5	6	6.5	6.5	7	7.5	7.5	9	10.5	9.5	11	12.5	11	13	15	11	14	17	12	15	18	14.5	18	22
8"	CFM	105			153			171			214			238			266			290			333			400		
	NC	<20			<20			<20			<20			<20			<20			20			20			25		
	Throw (ft.)	5.5	6	6.5	6.5	7	7.5	8	9	10	9.5	11	12.5	11	13	15	13	15	17	12	15	18	13	16	19	15	19	23
10"	CFM	152			209			257			326			388			418			465			523			685		
	NC	<20			<20			<20			<20			<20			<20			20			25			25		
	Throw (ft.)	6.5	7	7.5	9	10	11	11	12	13	12	14	16	13.5	16	18	16	19	22	17.5	22	26	21	26	31	22	28	34
12"	CFM	228			326			380			490			532			599			670			751			900		
	NC	<20			<20			<20			<20			<20			<20			20			25			30		
	Throw (ft.)	8	9	10	10	11	12	12.5	14	15.5	15.5	18	21	18	21	24	20	23	27	19	24	29	22	27	32	24	30	36
14"	CFM	326			409			551			618			713			867			970			1071			1310		
	NC	<20			<20			<20			<20			<20			<20			20			25			30		
	Throw (ft.)	9	10	11	11	12	13	14.5	16	17.5	17	20	23	20	23	27	21	25	29	22	27	32	24	30	36	26	33	40
16"	CFM	438			500			625			740			890			990			1150			1400			1600		
	NC	<20			<20			<20			<20			<20			20			25			25			25-30		
	Throw (ft.)	11	12	13	12.5	14	15.5	16	18	20	17	20	23	20	24	28	21	25	29	22	28	34	24	30	36	28	35	42



ENGINEERING DATA

111 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"	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"	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"	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"	CFM	90	130	175	220	260	345	380	405	450	540
	NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30
10"	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"	CFM	150	230	305	385	470	545	620	695	775	945
	NC	<20	<20	<20	<20	<20	<20	<20	20-25	25-30	30
14"	CFM	215	315	430	535	640	750	855	950	1055	1275
	NC	<20	<20	<20	<20	<20	<20	<20	20-25	25-30	30
15"	CFM	250	365	495	610	740	865	990	1110	1230	1475
	NC	<20	<20	<20	<20	<20	<20	<20	20-25	20-25	30
16"	CFM	290	420	560	700	840	975	1115	1275	1410	1550
	NC	<20	<20	<20	<20	<20	<20	20-25	20-25	25-30	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