



# ENGINEERING DATA

951 Series																										
SIZE	VELOCITY		400	500	600	700	800	1000	1200	1400																
	DUCT PT		.011	.017	.024	.034	.044	.055	.068	.100																
8x4	Eff. Area .155 ft <sup>2</sup>	CFM	67			90			106			123			140			168			207			246		
		NC	20			25			30			30			30			35			35			40		
		Throw	5.5	6	6.5	7	8	9	8.5	10	11.5	10	12	14	11	13	15	13.5	17	20	16	20	24	19	24	29
10x4	Eff. Area .198 ft <sup>2</sup>	CFM	90			112			134			157			179			224			269			314		
		NC	20			25			30			30			30			35			35			40		
		Throw	7	8	9	9	10	11	10	12	14	11	13	15	13.5	16	18	15	19	23	19	24	29	22	27	32
12x4	Eff. Area .241 ft <sup>2</sup>	CFM	106			134			162			190			213			269			325			375		
		NC	20			25			30			30			30			35			35			40		
		Throw	7	8	9	9	10	11	10	12	14	13	15	17	14.5	17	20	14.5	18	22	18	22	26	23	29	35
14x4	Eff. Area .280 ft <sup>2</sup>	CFM	129			157			190			218			252			314			381			443		
		NC	20			25			30			30			30			35			35			40		
		Throw	8	9	10	10	11	12	11	13	15	13.5	16	18	15.5	18	21	15	19	23	19	24	29	25	31	37
10x6	Eff. Area .313 ft <sup>2</sup>	CFM	140			174			213			246			280			353			420			493		
		NC	20			25			30			30			30			35			35			40		
		Throw	8	9	10	11	12	13	13	15	17	14.5	17	20	17	20	23	20	25	30	24	30	36	28	35	42
12x6	Eff. Area .380 ft <sup>2</sup>	CFM	168			213			213			297			342			426			510			594		
		NC	20			25			30			30			30			35			35			40		
		Throw	9	10	11	11.5	13	14.5	13.5	16	18	15.5	18	21	17	21	24	22	27	32	26	32	38	30	38	46
14x6	Eff. Area .446 ft <sup>2</sup>	CFM	202			252			302			347			398			498			599			700		
		NC	20			25			30			30			30			35			35			40		
		Throw	10	11	12	13.5	15	17	15.5	18	21	17	20	23	20	24	28	24	30	36	28	35	42	34	43	52
16x6	Eff. Area .510 ft <sup>2</sup>	CFM	230			286			342			403			459			571			689			801		
		NC	20			25			30			35			35			35			35			40		
		Throw	10	11	12	13.5	15	17	15.5	18	21	17	21	24	20	24	28	24	30	36	30	37	44	34	43	52
20x6	Eff. Area .645 ft <sup>2</sup>	CFM	291			364			431			504			577			722			868			1014		
		NC	20			25			30			35			35			35			35			40		
		Throw	11.5	13	14.5	16	18	20	18	21	24	20	24	28	24	28	32	26	32	38	32	40	48	36	45	54
14x8	Eff. Area .590 ft <sup>2</sup>	CFM	269			330			398			465			526			661			795			924		
		NC	20			25			30			35			35			40			40			40		
		Throw	11	12	13	14.5	16	18	16	19	22	19	22	25	22	26	30	25	31	37	30	38	46	35	44	53
16x8	Eff. Area .660 ft <sup>2</sup>	CFM	297			370			448			515			588			739			885			1036		
		NC	20			25			30			35			35			40			40			45		
		Throw	13.5	15	17	17	19	21	19	22	25	22	26	30	25	30	35	30	37	45	34	43	52	38	47	56
20x8	Eff. Area .880 ft <sup>2</sup>	CFM	398			493			594			689			790			986			1187			1383		
		NC	20			25			30			35			35			40			40			45		
		Throw	15.5	17	19	18	20	22	20	24	28	23	28	32	27	32	37	32	40	48	37	46	55	42	52	62

# 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