



ENGINEERING DATA

AFP Series																								
SIZE	Velocity	300	400	500	600	700	800	900	1000															
	Duct Pt	0.007	0.011	0.017	0.024	0.034	0.044	0.055	0.068															
2 1/4 x10	Eff. Area .084 ft ²	CFM	28		34		39		45		50		62		67		73							
		NC	<20		25		25		30		30		30		35		35							
	Throw	2	2	2	2	2.5	3	2.5	3	3.5	4.5	5	6	5	6	7	6	7	8	6.5	8	9.5	7	8.5
2 1/4 x12	Eff. Area .102 ft ²	CFM	34		45		50		62		67		78		84		95							
		NC	<20		25		25		30		30		30		35		35							
	Throw	3.5	4	4.5	4	4.5	5	4.5	5	5.5	5	6	7	5	6	7	7	8	9	6.5	8	9.5	7	9
2 1/4 x14	Eff. Area .121 ft ²	CFM	39		50		56		67		73		84		95		101							
		NC	<20		25		25		30		30		30		35		35							
	Throw	4	4.5	5	4.5	5	5.5	5	5.5	6	5	6	7	6	7	8	7	8	9	7.5	9.5	11.5	8	10
4x10	Eff. Area .158 ft ²	CFM	50		62		78		95		112		129		146		162							
		NC	<20		25		25		30		30		30		35		40							
	Throw	3.5	4	4.5	4.5	5	5.5	5.5	6	6.5	7	8	9	7.5	9	10.5	8	9.5	11	9	11	13	9.5	12
4x12	Eff. Area .195 ft ²	CFM	67		84		101		123		140		168		185		207							
		NC	<20		25		25		30		30		35		35		40							
	Throw	4	4.5	5	5.5	6	6.5	6.5	7	7.5	7	8.5	10	8	9.5	11	9.5	11	12.5	9.5	12	14.5	11.5	14.5
4x14	Eff. Area .232 ft ²	CFM	73		90		118		140		162		185		207		235							
		NC	<20		25		30		30		30		35		35		40							
	Throw	4	4.5	5	5.5	6	6.5	7	8	9	8	9.5	11	9.5	11	12.5	10	12	14	10.5	13	15.5	11.5	14.5
6x10	Eff. Area .245 ft ²	CFM	78		106		140		168		196		218		246		274							
		NC	<20		25		30		30		30		35		40		40							
	Throw	5.5	6	6.5	5.5	6	6.5	7	8	9	8	9.5	11	9.5	11	12.5	10	12	14	11.5	14.5	17	13	16
6x12	Eff. Area .245 ft ²	CFM	101		134		168		202		235		269		302		336							
		NC	<20		25		30		30		35		35		40		40							
	Throw	5.5	6	6.5	6.5	7	7.5	8	9	10	8.5	10	11.5	10	12	14	12.5	14.5	17	13	16	19	14.5	18
6x14	Eff. Area .353 ft ²	CFM	118		162		202		241		280		319		358		403							
		NC	<20		30		30		30		35		35		40		40							
	Throw	5.5	6	6.5	7	8	9	8.5	9.5	10.5	9.5	11	12.5	11.5	13.5	15.5	13.5	16	18	14.5	18	22	16	20
8x14	Eff. Area .353 ft ²	CFM	159		219		273		325		378		431		483		544							
		NC	<20		30		30		30		35		35		40		40							
	Throw	5.5	7	8.5	7.5	9.5	11.5	9	11.5	14	10.5	13	15.5	13	16	19	15	19	23	17	22	26	19	24

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