



ENGINEERING DATA

915 & 916 Series

SIZE	Velocity		400	500	600	700	800	900	1000
	Duct Ps		0.032	0.048	0.07	0.092	0.12	0.14	0.16
10x6	Eff. Area .38 ft ²	CFM	152	190	228	266	304	342	380
		NC	20-25	20-25	25	25-30	25-30	25-30	30
10x10	Eff. Area .40 ft ²	CFM	233	290	347	404	466	523	580
		NC	20-25	20-25	25	25-30	25-30	30	30-35
12x6	Eff. Area .47 ft ²	CFM	190	233	280	328	371	418	466
		NC	20-25	25	25-30	25-30	25-30	25-30	30
12x12	Eff. Area .81 ft ²	CFM	361	451	542	632	760	812	903
		NC	25	25-30	25-30	30	30-35	30-35	30-35
14x6	Eff. Area .70 ft ²	CFM	214	266	323	428	371	480	532
		NC	20-25	20-25	25-30	25-30	25-30	30	30-35
14x8	Eff. Area .74 ft ²	CFM	277	347	418	485	556	623	694
		NC	20-25	20-25	25-30	25-30	25-30	30	30-35
14x14	Eff. Area 1.19 ft ²	CFM	475	589	708	827	941	1059	1178
		NC	20-25	25-30	25-30	30-35	30-35	30-35	35
16x16	Eff. Area 1.54 ft ²	CFM	614	765	917	1069	1226	1378	1530
		NC	25-30	25-30	30-35	30-35	30-35	35-40	35-40
18x12	Eff. Area 1.27 ft ²	CFM	504	632	760	884	1012	1140	1264
		NC	25-30	25-30	30	30-35	30-35	30-35	35-40
18x18	Eff. Area 1.85 ft ²	CFM	736	922	1107	1292	1473	1658	1843
		NC	25-30	25-30	30-35	30-35	35	35-40	35-40
20x10	Eff. Area 1.23 ft ²	CFM	485	608	732	850	974	1093	1216
		NC	25-30	25-30	30-35	30-35	30-35	35-40	35-40
20x20	Eff. Area 2.33 ft ²	CFM	922	1154	1382	1615	1848	2076	2309
		NC	25-30	30-35	30-35	35	35-40	35-40	35-40
22x22	Eff. Area 2.77 ft ²	CFM	1097	1373	1648	1919	2199	2470	2746
		NC	30	30-35	30-35	35-40	35-40	35-40	40
24x12	Eff. Area 1.67 ft ²	CFM	665	831	998	1164	1330	1496	1663
		NC	25-30	30	30-35	30-35	30-35	35-40	35-40
24x20	Eff. Area 2.74 ft ²	CFM	1083	1354	1625	1895	2166	2523	2708
		NC	30	30-35	30-35	35-40	35-40	35-40	35-40
24x24	Eff. Area 3.26 ft ²	CFM	1292	1615	1938	2261	2584	2907	3230
		NC	30-35	30-35	35	35-40	35-40	35-40	40



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	Duct Ps		0.032	0.048	0.07	0.092	0.12	0.14	0.16
30x12	Eff. Area	CFM	817	1021	1226	1430	1634	1838	2043
	2.06 ft ²	NC	30-35	30-35	35	35-40	35-40	35-40	>40
30x18	Eff. Area	CFM	1235	1544	1853	2161	2470	2779	3088
	3.12 ft ²	NC	30-35	30-35	35	35-40	35-40	35-40	>40
30x20	Eff. Area	CFM	1520	1900	2280	2660	3040	3420	3800
	3.83 ft ²	NC	30-35	30-35	35	35-40	35-40	35-40	>40
30x24	Eff. Area	CFM	1596	1995	2394	2793	3192	3591	3990
	4.02 ft ²	NC	30-35	35	35-40	35-40	35-40	40	>40
30x30	Eff. Area	CFM	1957	2446	2936	3458	3914	4403	4893
	4.93 ft ²	NC	30-35	35	35-40	35-40	35-40	40	>40
36x18	Eff. Area	CFM	1520	1805	2166	2527	2888	3249	3610
	3.64 ft ²	NC	30-35	30-35	35-40	35-40	35-40	40	>40
36x24	Eff. Area	CFM	2000	2375	1900	2375	3800	4275	4750
	4.79 ft ²	NC	30-35	35	35-40	35-40	35-40	40	>40
36x30	Eff. Area	CFM	2356	2945	3534	4123	4712	5301	6890
	5.94 ft ²	NC	30-35	35	35-40	35-40	40	>40	>40
36x36	Eff. Area	CFM	2774	3468	4161	4885	5548	6242	6935
	6.99 ft ²	NC	35	35-40	35-40	40	40-45	40-45	40-45
48x24	Eff. Area	CFM	2600	3088	3705	4323	4940	5558	6175
	6.22 ft ²	NC	35	35-40	35-40	35-40	40	40-45	40-45
48x36	Eff. Area	CFM	3880	4608	5529	6451	7372	8294	9215
	9.28 ft ²	NC	35-40	35-40	40	40-45	40-45	40-45	45
48x48	Eff. Area	CFM	5000	5938	7125	8313	9500	10688	11875
	11.981 ft ²	NC	30-40	35-40	40-45	40-45	45	<50	<50

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