



ENGINEERING DATA

1100 Series			See Footnotes B						
SIZE	Velocity		400	500	600	700	800	900	1000
	Duct Ps		.032	.048	.070	.092	.120	.140	.160
14x6	Eff.Area .74 ft ²	CFM	225	280	340	450	390	505	560
14x8	Eff.Area .78 ft ²	CFM	292	365	440	510	585	655	730
14x10	Eff.Area .85 ft ²	CFM	380	475	570	665	760	855	950
20x6	Eff.Area .88 ft ²	CFM	350	438	525	613	700	788	875
20x8	Eff.Area 1.14 ft ²	CFM	455	569	735	797	910	1024	1138
20x10	Eff.Area 1.29 ft ²	CFM	510	640	770	895	1025	1150	1280
20x12	Eff.Area 1.44 ft ²	CFM	570	713	855	998	1140	1328	1425
24x6	Eff.Area .85 ft ²	CFM	380	475	570	665	760	855	950
24x8	Eff.Area 1.29 ft ²	CFM	510	640	770	895	1025	1150	1280
24x10	Eff.Area 1.44 ft ²	CFM	570	713	855	998	1140	1328	1425
24x12	Eff.Area 1.72 ft ²	CFM	680	850	1020	1190	1360	1530	1700
30x6	Eff.Area 1.09 ft ²	CFM	430	538	645	753	860	968	1075
30x8	Eff.Area 1.44 ft ²	CFM	570	713	855	998	1140	1328	1425
30x10	Eff.Area 2.02 ft ²	CFM	800	1000	1200	1400	1600	1800	2000
30x12	Eff.Area 2.12 ft ²	CFM	840	1050	1260	1470	1680	1890	2100

ENGINEERING FOOTNOTES

Footnote A:

Size: Nominal size or the duct opening.

Effective Area: The space between the vanes actually utilized by the air.

Velocity: The actual velocity of the air through the vanes measured with a velometer or similar device.

Duct Pt: The total pressure behind the register in the duct forcing that air through the register.

Throw: The throws noted in the tables are the distance from the register to where the air stream velocity has dropped to not under 100/75/50 F.P.M.

Footnote B:

Size: Nominal size or the duct opening.

Effective Area: The space between the vanes actually utilized by the air.

Velocity: The actual velocity of the air through the vanes measured with a velometer or similar device.

Duct Ps: The static pressure in the duct behind the grille. The static load on the fan chargeable against that grille. Velometer readings are taken between grille vanes giving actual velocity.

Footnote C:

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.

Footnote D:

1) Tested without filters. Typical disposable 1" capacity is 2 cfm per square inch of gross filter area. Recommended velocity is 300-400 fpm. Velocities higher than 500 fpm will decrease filter performance. Increase flow resistance, and possibly blow off agglomerates of collected dirt. Velocity measured 1" from face.

2) Generally the more surface area of media you have in an air filter the lower pressure drop you will have across the filter.

3) Lower face velocities (the air speed at the face of the filter) will also produce less pressure drop across the filter while higher return air velocities cause higher pressure drop and can cause the filter to blow off agglomerates. Ashrae calls out for 300 FPM face velocity across the filter face. This is the ideal return air velocity. Actual face velocities will vary depending on the system design."

Example: 20x25 filter = 3.47 SF x 300 FPM face velocity = 1041 CFM

20x25 filter = 3.47 SF x 500 FPM face velocity = 1736 CFM

Footnote E:

Size: Nominal size or the duct opening.

Effective Area: The space between the vanes actually utilized by the air.

Velocity: The actual velocity of the air through the vanes measured with a velometer or similar device.

Duct Pt: The total pressure behind the register in the duct forcing that air through the register.

Throw: The throws noted in the tables are the distance from the register 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.