



ENGINEERING DATA

1165 Series			See Footnotes B									
SIZE	Velocity		300	400	500	600	700	800	900	1000	1200	1400
	Duct Ps		.007	.011	.017	.023	.031	.040	.051	.062	.089	.122
14x6	Eff.Area .334 ft ²	CFM	103	134	165	196	230	263	299	336	408	479
14x8	Eff.Area .458 ft ²	CFM	140	183	226	268	315	360	409	458	556	652
20x6	Eff.Area .466 ft ²	CFM	142	186	230	273	320	367	416	466	565	711
20x8	Eff.Area .636 ft ²	CFM	195	254	314	373	437	501	569	636	773	909
24x6	Eff.Area .570 ft ²	CFM	174	228	282	334	392	448	509	570	691	812
24x8	Eff.Area .777 ft ²	CFM	238	310	383	455	534	610	694	777	943	1107
30x6	Eff.Area .711 ft ²	CFM	218	285	352	418	488	559	636	712	862	1014
30x8	Eff.Area .970 ft ²	CFM	297	388	480	570	667	762	867	970	1178	1384

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.

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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.