



ENGINEERING DATA

1050 and 1075 Series				See Footnotes B							
SIZE	Effective Area	Free Area	Velocity	300	400	600	800	1000	1200	1400	1600
			Duct Ps	0.007	0.01	0.023	0.04	0.064	0.09	0.123	0.16
10x4	0.14 ft ²	28	CFM	38	56	84	112	140	168	196	224
10x6	.220 ft ²	44	CFM	59	88	132	176	220	264	308	352
10x8	.300 ft ²	59	CFM	80	120	180	240	300	360	420	480
10x10	0.38 ft ²	75	CFM	102	152	228	304	380	456	532	608
10x12	0.46 ft ²	91	CFM	123	184	276	368	460	552	644	736
10x14	0.54 ft ²	107	CFM	145	216	324	432	540	648	756	864
10x16	0.62 ft ²	123	CFM	166	248	372	496	620	744	868	992
10x20	0.78 ft ²	155	CFM	209	312	468	624	780	936	1092	1248
12x4	0.182 ft ²	34	CFM	49	72.8	109.2	145.6	182	218.4	254.8	291.2
12x6	0.286 ft ²	54	CFM	77	114.4	171.6	228.8	286	343.2	400.4	457.6
12x8	0.39 ft ²	74	CFM	105	156	234	312	390	468	546	624
12x10	0.494 ft ²	93	CFM	132	197.6	296.4	395.2	494	592.8	691.6	790.4
12x12	0.598 ft ²	113	CFM	160	239.2	358.8	478.4	598	717.6	837.2	956.8
12x14	0.702 ft ²	133	CFM	188	280.8	421.2	561.6	702	842.4	982.8	1123.2
12x16	0.806 ft ²	152	CFM	216	322.4	483.6	644.8	806	967.2	1128.4	1289.6
12x18	0.91 ft ²	172	CFM	244	364	546	728	910	1092	1274	1456
12x20	1.014 ft ²	192	CFM	272	405.6	608.4	811.2	1014	1216.8	1419.6	1622.4
14x4	0.21 ft ²	40	CFM	56	84	126	168	210	252	294	336
14x6	0.33 ft ²	63	CFM	88	132	198	264	330	396	462	528
14x8	0.45 ft ²	86	CFM	121	180	270	360	450	540	630	720
14x10	0.57 ft ²	106	CFM	153	228	342	456	570	684	798	912
14x12	0.69 ft ²	131	CFM	185	276	414	552	690	828	966	1104
14x14	0.81 ft ²	154	CFM	217	324	486	648	810	972	1134	1296
14x16	0.93 ft ²	177	CFM	249	372	558	744	930	1116	1302	1488
14x18	1.05 ft ²	200	CFM	281	420	630	840	1050	1260	1470	1680
14x20	1.17 ft ²	223	CFM	314	468	702	936	1170	1404	1638	1872
16x6	0.352 ft ²	69	CFM	94	140.8	211.2	281.6	352	422.4	492.8	563.2
16x8	0.48 ft ²	94	CFM	129	192	288	384	480	576	672	768
16x10	0.608 ft ²	119	CFM	163	243.2	364.8	486.4	608	729.6	851.2	972.8
16x12	0.736 ft ²	144	CFM	197	294.4	441.6	588.8	736	883.2	1030.4	1177.6
16x14	0.864 ft ²	169	CFM	232	345.6	518.4	691.2	864	1036.8	1209.6	1382.4
16x16	0.992 ft ²	194	CFM	266	396.8	595.2	793.6	992	1190.4	1388.8	1587.2
16x20	1.248 ft ²	244	CFM	334	499.2	748.8	998.4	1248	1497.6	1747.2	1996.8
18x6	0.429 ft ²	81	CFM	115	171.6	257.4	343.2	429	514.8	600.6	686.4
18x8	0.585 ft ²	111	CFM	157	234	351	468	585	702	819	936
18x10	0.741 ft ²	140	CFM	199	296.4	444.6	592.8	741	889.2	1037.4	1185.6
18x12	0.897 ft ²	170	CFM	240	358.8	538.2	717.6	897	1076.4	1255.8	1435.2
18x14	1.053 ft ²	199	CFM	282	421.2	631.8	842.4	1053	1263.6	1474.2	1684.8
18x16	1.209 ft ²	229	CFM	324	483.6	725.4	967.2	1209	1450.8	1692.6	1934.4
18x18	1.365 ft ²	258	CFM	366	546	819	1092	1365	1638	1911	2184

1050 and 1075 Series
See Footnotes B

SIZE	Effective Area	Free Area	Velocity Duct Ps	300	400	600	800	1000	1200	1400	1600
				0.007	0.01	0.023	0.04	0.064	0.09	0.123	0.16
18x20	1.521 ft ²	288	CFM	408	608.4	912.6	1216.8	1521	1825.2	2129.4	2433.6
20x6	0.44 ft ²	95	CFM	118	176	264	352	440	528	616	704
20x8	0.6 ft ²	130	CFM	161	240	360	480	600	720	840	960
20x10	0.76 ft ²	164	CFM	204	304	456	608	760	912	1064	1216
20x12	0.92 ft ²	199	CFM	247	368	552	736	920	1104	1288	1472
20x14	1.08 ft ²	233	CFM	289	432	648	864	1080	1296	1512	1728
20x16	1.24 ft ²	268	CFM	332	496	744	992	1240	1488	1736	1984
20x18	1.4 ft ²	302	CFM	375	560	840	1120	1400	1680	1960	2240
20x20	1.56 ft ²	337	CFM	418	624	936	1248	1560	1872	2184	2496
20x24	1.88 ft ²	406	CFM	504	752	1128	1504	1880	2256	2632	3008
20x30	2.36 ft ²	510	CFM	632	944	1416	1888	2360	2832	3304	3776
24x6	0.572 ft ²	120	CFM	153	228.8	343.2	457.6	572	686.4	800.8	915.2
24x8	0.78 ft ²	164	CFM	209	312	468	624	780	936	1092	1248
24x10	0.988 ft ²	207	CFM	265	395.2	592.8	790.4	988	1185.6	1383.2	1580.8
24x12	1.196 ft ²	251	CFM	321	478.4	717.6	956.8	1196	1435.2	1674.4	1913.6
24x14	1.404 ft ²	294	CFM	376	561.6	842.4	1123.2	1404	1684.8	1965.6	2246.4
24x16	1.612 ft ²	338	CFM	432	644.8	967.2	1289.6	1612	1934.4	2256.8	2579.2
24x18	1.82 ft ²	382	CFM	488	728	1092	1456	1820	2184	2548	2912
24x20	2.028 ft ²	425	CFM	544	811.2	1216.8	1622.4	2028	2433.6	2839.2	3244.8
24x24	2.44 ft ²	513	CFM	655	977.6	1466.4	1955.2	2444	2932.8	3421.6	3910.4
24x30	3.068 ft ²	641	CFM	822	1227.2	1840.8	2454.4	3068	3681.6	4295.2	4908.8
30x6	0.715 ft ²	150	CFM	192	286	429	572	715	858	1001	1144
30x8	0.975 ft ²	206	CFM	261	390	585	780	975	1170	1365	1560
30x10	1.235 ft ²	259	CFM	331	494	741	988	1235	1482	1729	1976
30x12	1.495 ft ²	314	CFM	401	598	897	1196	1495	1794	2093	2392
30x14	1.755 ft ²	368	CFM	470	702	1053	1404	1755	2106	2457	2808
30x16	2.015 ft ²	423	CFM	540	806	1209	1612	2015	2418	2821	3224
30x18	2.275 ft ²	477	CFM	610	910	1365	1820	2275	2730	3185	3640
30x20	2.535 ft ²	532	CFM	679	1014	1521	2028	2535	3042	3549	4056
30x24	3.055 ft ²	641	CFM	819	1222	1833	2444	3055	3666	4277	4888
30x30	3.835 ft ²	804	CFM	1028	1534	2301	3068	3835	4602	5369	6136
36x6	0.858 ft ²	804	CFM	230	343.2	514.8	686.4	858	1029.6	1201.2	1372.8
36x8	1.17 ft ²	245	CFM	314	468	702	936	1170	1404	1638	1872
36x10	1.482 ft ²	311	CFM	397	592.8	889.2	1185.6	1482	1778.4	2074.8	2371.2
36x12	1.794 ft ²	376	CFM	481	717.6	1076.4	1435.2	1794	2152.8	2511.6	2870.4
36x14	2.106 ft ²	442	CFM	564	842.4	1263.6	1684.8	2106	2527.2	2948.4	3369.6
36x16	2.418 ft ²	507	CFM	648	967.2	1450.8	1934.4	2418	2901.6	3385.2	3868.8
36x18	2.73 ft ²	572	CFM	732	1092	1638	2184	2730	3276	3822	4368
36x20	3.042 ft ²	638	CFM	815	1216.8	1825.2	2433.6	3042	3650.4	4258.8	4867.2
36x24	3.666 ft ²	769	CFM	982	1466.4	2199.6	2932.8	3666	4399.2	5132.4	5865.6
36x30	4.602 ft ²	965	CFM	1233	1840.8	2761.2	3681.6	4602	5522.4	6442.8	7363.2
36x36	5.538 ft ²	1161	CFM	1484	2215.2	3322.8	4430.4	5538	6645.6	7753.2	8860.8

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.