Performance Data

Curved Spiral Duct Grilles • 6100C Series
Models: 61SHC, 61SVC, 61DHC, 61DVC

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP		300 .006	400 .010	500 .016	600 .022	700 .031	800 .040	1000 .062	1200 .090	1400 .122
				TP	0°	.013	.023	.036	.052	.071	.093	.145	.209	.285
					22 1/2°	.015	.026	.041	.060	.082	.107	.167	.241	.328
					45°	.023	.040	.063	.091	.125	.164	.254	.367	.499
10 x 3		0.16		**CFM**		**48**	**64**	**80**	**96**	**112**	**128**	**160**	**192**	**224**
				NC		—	—	—	13	18	22	28	34	39
			.14	**T**	0°	3-4-8	4-5-9	5-6-11	6-8-13	7-10-14	8-11-15	9-12-16	11-13-18	11-14-19
			.12		22 1/2°	2-3-6	3-4-7	4-5-9	5-6-10	6-8-11	6-9-12	7-10-13	9-10-14	9-11-15
			.10		45°	2-2-4	2-3-5	3-3-6	3-4-7	4-5-7	4-6-8	5-6-8	6-7-9	6-7-10
12 x 3		0.19		**CFM**		**57**	**76**	**95**	**114**	**133**	**152**	**190**	**228**	**266**
				NC		—	—	—	14	19	23	29	35	40
			.14	**T**	0°	4-5-9	5-6-11	6-8-13	7-10-14	8-11-15	8-11-16	11-13-18	11-14-19	12-15-21
			.12		22 1/2°	3-4-7	4-5-9	4-7-10	6-8-11	6-8-12	7-9-13	8-10-14	9-11-15	10-12-17
			.10		45°	2-3-5	3-4-6	3-4-6	4-5-7	4-6-8	4-6-8	6-6-9	6-7-10	6-8-11
10 x 4	14 x 3	0.22		**CFM**		**66**	**88**	**110**	**132**	**154**	**176**	**220**	**164**	**308**
				NC		—	—	—	14	19	23	29	35	41
			.14	**T**	0°	4-5-10	5-7-12	6-9-13	7-10-15	8-11-16	9-12-17	11-14-19	12-15-20	13-16-22
			.12		22 1/2°	3-4-8	4-6-10	5-7-10	6-8-12	6-9-13	7-10-14	9-11-15	10-12-16	10-13-18
			.10		45°	2-3-5	3-4-6	3-5-7	4-5-8	4-6-8	5-6-9	6-7-10	6-8-10	7-8-11
12 x 4	16 x 3	0.27		**CFM**		**81**	**108**	**135**	**162**	**189**	**216**	**270**	**324**	**378**
			NC		—	—	—	10	15	20	24	30	36	41
			.18	**T**	0°	4-6-11	6-8-13	7-10-14	8-11-16	9-13-18	11-13-19	12-15-21	13-16-22	13-17-25
			.16		22 1/2°	3-4-8	4-7-10	6-8-11	6-9-13	7-10-14	8-11-15	10-12-17	10-13-18	11-13-20
			.14		45°	2-3-6	3-4-6	4-5-7	4-6-8	5-6-9	6-7-10	6-8-11	6-8-11	7-8-13
18 x 3		0.29		**CFM**		**87**	**116**	**145**	**174**	**203**	**232**	**290**	**348**	**406**
			NC		—	—	—	11	16	21	25	31	37	42
			.18	**T**	0°	4-6-12	6-9-14	7-11-15	8-12-17	10-13-19	12-14-20	13-16-22	14-17-24	14-18-26
			.16		22 1/2°	3-5-10	5-7-11	6-9-12	6-10-14	8-10-15	10-11-16	10-13-18	11-14-19	11-14-21
			.14		45°	2-3-6	3-5-7	4-6-8	4-6-9	5-7-10	6-7-10	7-8-11	7-9-12	7-9-13
20 x 3	10 x 6 14 x 4	0.32		**CFM**		**96**	**128**	**160**	**192**	**224**	**256**	**320**	**384**	**448**
				NC		—	—	11	16	21	25	31	37	42
			.24	**T**	0°	4-6-13	6-9-15	7-11-17	8-13-18	11-14-20	12-15-21	14-16-23	15-18-25	15-19-27
			.21		22 1/2°	4-5-10	5-7-12	6-9-13	7-11-15	8-11-15	10-12-17	11-13-18	12-14-20	13-15-22
			.18		45°	2-4-6	4-5-8	4-6-8	4-7-9	6-7-10	6-8-11	7-8-12	8-9-13	8-10-14
16 x 4	22 x 3	0.36		**CFM**		**108**	**144**	**180**	**216**	**252**	**288**	**360**	**432**	**504**
				NC		—	—	12	17	22	26	32	38	43
			.26	**T**	0°	4-6-13	6-10-15	8-11-18	9-13-19	11-15-20	13-15-22	13-17-24	15-18-26	16-20-28
			.22		22 1/2°	4-5-11	5-8-13	6-9-14	7-11-15	9-12-16	10-13-18	11-13-19	12-15-21	13-15-22
			.20		45°	2-4-7	4-5-8	4-6-9	5-7-10	6-8-11	6-8-11	7-8-12	8-9-13	8-10-14
12 x 6	18 x 4 24 x 3	0.42		**CFM**		**126**	**168**	**210**	**252**	**294**	**336**	**420**	**504**	**588**
				NC		—	—	12	17	22	26	32	38	43
			.29	**T**	0°	4-6-13	6-10-15	8-11-18	9-13-19	11-15-21	13-15-22	13-17-24	15-20-27	16-20-29
			.25		22 1/2°	4-5-11	5-8-13	6-9-14	7-11-15	9-12-17	10-13-18	11-13-19	12-15-21	13-16-23
			.22		45°	2-4-7	4-5-8	4-6-9	5-7-10	6-8-11	6-8-11	7-8-12	8-10-13	8-11-15
20 x 4	28 x 3	0.45		**CFM**		**135**	**180**	**225**	**270**	**315**	**360**	**450**	**540**	**630**
				NC		—	—	13	18	23	26	32	39	43
			.34	**T**	0°	4-7-14	6-10-15	8-12-17	10-13-18	11-14-19	11-15-22	13-17-24	15-18-25	6-20-28
			.30		22 1/2°	3-6-11	5-8-12	6-10-14	8-10-14	9-11-15	9-12-18	10-14-19	12-14-20	13-16-22
			.26		45°	2-4-7	3-5-8	4-6-9	5-7-9	6-7-10	6-8-11	7-9-12	8-9-13	8-10-14
14 x 6	10 x 8 22 x 4	0.50		**CFM**		**150**	**200**	**250**	**300**	**350**	**400**	**500**	**600**	**700**
				NC		—	—	13	18	23	27	33	39	44
			.34	**T**	0°	4-8-14	7-11-16	8-13-18	11-14-20	11-15-22	13-16-23	15-18-25	16-20-28	18-22-30
			.30		22 1/2°	4-6-11	6-8-13	7-10-14	8-11-15	9-13-18	11-13-18	12-14-20	13-15-22	14-18-24
			.26		45°	2-4-7	4-6-8	4-6-9	6-7-10	6-8-11	7-8-12	8-9-13	8-10-14	9-11-15
12 x 8	16 x 6 24 x 4 32 x 3	0.58		**CFM**		**174**	**232**	**290**	**348**	**406**	**464**	**580**	**696**	**812**
				NC		—	—	14	19	24	28	34	40	45
			.39	**T**	0°	5-8-15	7-11-17	8-13-19	11-15-21	12-16-22	14-17-24	15-19-27	17-21-29	18-22-32
			.34		22 1/2°	4-6-12	6-8-13	7-11-15	8-12-17	10-13-18	11-13-19	13-15-21	13-17-24	15-18-25
			.30		45°	3-4-8	4-6-8	4-7-10	6-8-11	6-8-11	7-8-12	8-10-13	8-11-15	9-11-16
10 x 10	26 x 4 34 x 3	0.61		**CFM**		**183**	**244**	**305**	**366**	**427**	**488**	**610**	**732**	**854**
				NC		—	—	14	19	24	28	34	40	45
			.41	**T**	0°	5-8-15	7-11-17	9-13-20	11-15-21	12-16-22	14-17-25	16-20-27	17-21-30	19-22-32
			.36		22 1/2°	4-6-12	6-9-13	7-11-15	9-12-17	10-13-18	11-13-20	13-15-22	13-17-24	15-18-26
			.31		45°	3-4-8	4-6-8	5-7-10	6-8-11	6-8-11	7-8-13	8-10-14	8-11-15	10-11-16

For performance table notes, see page 3.

Performance Data

Curved Spiral Duct Grilles • 6100C Series

Models: 61SHC, 61SVC, 61DHC, 61DVC

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP		300 .006	400 .010	500 .016	600 .022	700 .031	800 .040	1000 .062	1200 .090	1400 .122
				TP	0° 22 1/2° 45°	.013 .015 .023	.023 .026 .040	.036 .041 .063	.052 .060 .091	.071 .082 .125	.093 .107 .164	.145 .167 .254	.209 .241 .367	.285 .328 .499
18 x 6	14 x 8 28 x 4 30 x 4 36 x 3	0.65		CFM NC		195 —	260 —	325 15	390 20	455 25	520 29	650 35	780 41	910 46
			.44 .38 .33	T	0° 22 1/2° 45°	5-8-15 4-7-13 3-4-8	8-11-18 6-9-14 4-6-9	9-14-20 7-11-16 5-7-11	11-15-22 9-13-18 6-8-11	13-17-24 10-13-19 6-8-12	15-18-25 12-14-20 8-9-13	17-20-28 13-16-22 8-11-14	18-22-32 14-18-25 9-11-16	20-24-34 15-19-27 10-12-17
12 x 10	20 x 6 30 x 4	0.74		CFM NC		222 —	296 —	370 15	444 20	518 25	592 29	740 35	888 41	1036 46
			.50 .44 .38	T	0° 22 1/2° 45°	6-9-17 4-7-13 3-5-8	8-12-19 6-10-15 4-6-10	10-15-22 8-12-18 5-8-11	12-17-23 10-13-18 6-8-12	14-18-25 11-15-20 7-9-13	15-19-27 13-15-22 8-10-14	18-22-30 14-18-24 9-11-15	19-23-34 15-18-27 10-12-17	21-25-36 17-20-29 11-13-18
22 x 6	16 x 8 34 x 4	0.80		CFM NC		240 —	320 —	400 16	480 21	560 26	640 30	800 36	960 42	1120 47
			.54 .47 .41	T	0° 22 1/2° 45°	6-9-18 4-7-14 3-5-9	8-13-20 6-10-15 4-6-10	11-15-22 8-13-18 6-8-11	13-18-25 10-14-20 6-9-13	14-19-27 11-15-21 7-10-13	16-20-29 13-15-23 8-10-15	18-22-32 15-18-25 9-11-16	20-25-35 15-20-28 10-13-18	22-27-37 18-21-29 11-13-19
12 x 12	14 x 10 18 x 8 24 x 6 36 x 4	0.90		CFM NC		270 —	360 —	450 16	540 21	630 26	720 30	900 36	1080 42	1260 47
			.61 .53 .46	T	0° 22 1/2° 45°	6-10-18 5-8-15 4-5-9	8-13-20 7-10-16 4-6-11	11-16-23 8-13-18 6-8-12	13-18-25 10-15-20 6-9-13	15-19-27 12-15-22 8-10-14	17-20-29 13-16-24 8-11-15	19-23-33 15-18-27 10-12-17	20-25-36 16-20-29 11-13-18	22-27-39 18-22-32 11-14-20
18 x 10	30 x 6	1.13		CFM NC		339 —	452 10	565 17	678 22	791 27	904 31	1130 37	1356 43	1582 48
			.77 .67 .58	T	0° 22 1/2° 45°	6-11-20 5-8-16 4-6-11	10-14-23 8-11-18 5-7-12	12-18-25 10-14-20 6-9-13	14-20-28 11-16-22 7-11-14	17-21-30 13-17-24 8-11-15	19-23-32 15-18-26 10-12-16	21-25-36 17-20-29 11-13-18	23-28-40 18-22-32 12-14-20	25-30-43 20-24-34 13-15-22
24 x 8	16 x 12 20 x 10 24 x 8 34 x 6	1.20		CFM NC		360 —	480 10	600 17	720 22	840 27	960 31	1200 37	1440 43	1680 48
			.84 .73 .64	T	0° 22-1/2° 45°	8-13-23 6-10-18 4-6-12	11-18-27 9-14-22 6-9-14	14-20-29 11-16-24 7-11-15	17-23-33 13-18-27 8-12-17	19-25-36 15-20-29 10-13-18	22-27-38 18-22-30 11-14-19	25-29-42 20-24-34 13-15-21	27-33-46 22-27-37 14-17-23	29-36-50 23-29-40 15-18-25
18 x 12	22 x 10 28 x 8 36 x 6	1.37		CFM NC		411 —	548 11	685 18	822 23	959 28	1096 32	1370 38	1644 44	1918 49
			.93 .81 .71	T	0° 22 1/2° 45°	8-13-23 6-10-18 4-6-12	11-18-27 9-14-22 6-9-14	14-21-30 11-17-24 7-11-15	17-23-33 13-18-27 8-12-17	20-25-36 15-20-29 10-13-18	22-27-38 18-22-30 11-14-19	25-30-43 20-24-34 13-15-22	27-33-47 22-27-38 14-17-24	29-36-50 23-29-41 15-18-25
24 x 10	20 x 12 30 x 8	1.52		CFM NC		456 —	608 11	760 18	912 23	1064 28	1216 32	1520 38	1824 44	2128 49
			1.03 .90 .78	T	0° 22 1/2° 45°	8-13-25 7-11-20 4-7-13	11-18-29 9-14-23 6-9-15	15-22-32 12-18-25 8-11-16	18-25-35 14-20-28 9-13-18	20-27-37 16-21-29 11-13-19	24-29-40 19-23-32 12-15-20	26-32-45 21-25-36 13-16-22	29-35-49 23-28-39 15-18-25	30-37-53 24-29-43 15-19-27
32 x 8	22 x 12 26 x 10	1.64		CFM NC		492 —	656 11	820 18	984 23	1148 28	1312 32	1640 38	1968 44	2296 49
			1.12 .97 .84	T	0° 22 1/2° 45°	8-14-26 7-11-21 4-7-13	12-18-29 10-15-24 6-9-15	15-22-33 13-18-27 8-11-17	18-26-36 15-21-29 9-13-18	22-28-39 18-22-32 11-14-20	25-29-41 20-24-33 13-15-21	27-33-47 22-27-38 14-17-24	29-36-51 24-29-41 15-18-26	32-39-55 26-32-44 16-20-28
24 x 12	30 x 10 36 x 8	1.85		CFM NC		555 —	740 12	925 19	1110 24	1295 29	1480 33	1850 39	2220 45	2590 50
			1.26 1.09 .95	T	0° 22 1/2° 45°	8-14-27 7-11-21 4-7-13	13-19-31 10-15-25 6-10-15	15-23-34 13-18-27 8-12-17	19-27-38 15-21-30 10-13-19	22-28-41 18-22-32 11-14-20	25-31-43 20-25-35 13-15-22	28-34-48 22-27-39 14-17-25	31-38-53 25-30-43 15-19-27	34-41-57 27-32-46 17-20-29
32 x 10	28 x 12	2.04		CFM NC		612 —	816 12	1020 19	1224 24	1428 29	1632 33	2040 39	2448 45	2856 50
			1.43 1.24 1.08	T	0° 22 1/2° 45°	9-15-28 7-12-22 5-8-14	13-20-33 11-16-27 7-11-17	17-25-36 13-20-29 8-13-18	20-28-40 16-22-32 11-14-20	23-30-43 18-24-35 12-15-22	27-33-46 21-27-37 13-17-23	29-36-52 24-29-41 15-18-26	33-40-57 27-32-46 17-20-29	35-43-61 28-35-49 18-22-31
30 x 12	36 x 10	2.32		CFM NC		696 —	928 13	1160 20	1392 25	1624 30	1856 34	2320 40	2784 46	3248 51
			1.58 1.37 1.19	T	0° 22 1/2° 45°	10-16-30 8-13-24 5-8-15	15-22-35 13-18-28 8-11-18	18-27-39 15-22-32 9-14-20	22-30-43 18-24-34 11-15-22	25-33-47 20-27-38 13-17-24	29-35-50 23-28-40 15-18-25	32-37-55 22-32-44 16-20-28	35-43-60 28-34-48 18-22-30	38-47-66 30-38-53 19-24-33

For performance table notes, see page 3.

Performance Data

Curved Spiral Duct Grilles • 6100C Series

Models: 61SHC, 61SVC, 61DHC, 61DVC

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP		300 .006	400 .010	500 .016	600 .022	700 .031	800 .040	1000 .062	1200 .090	1400 .122
				TP	0°	.013	.023	.036	.052	.071	.093	.145	.209	.285
					22 1/2°	.015	.026	.041	.060	.082	.107	.167	.241	.328
					45°	.023	.040	.063	.091	.125	.164	.254	.367	.499
32 x 12	38 x 10 48 x 8	2.48		CFM NC		744 —	992 13	1240 20	1488 25	1736 30	1984 34	2480 40	2976 46	3472 51
			1.70	T	0°	10-17-32	15-22-36	19-28-41	22-32-45	26-34-48	30-36-52	34-41-57	36-45-63	39-48-68
			1.48		22 1/2°	8-13-25	13-18-29	15-22-32	18-25-36	21-27-38	24-29-41	27-32-46	29-36-50	32-38-55
			1.29		45°	5-8-16	8-11-18	10-14-20	11-16-22	13-18-24	15-18-26	17-20-29	18-22-32	20-24-34
40 x 10		2.56		CFM NC		768 —	1024 13	1280 20	1536 25	1792 30	2048 34	2560 40	3072 46	3584 51
			1.77	T	0°	11-17-32	15-22-37	19-29-41	22-32-46	27-35-49	31-37-53	34-41-59	37-46-64	41-49-69
			1.54		22 1/2°	8-13-26	13-18-29	15-23-33	18-26-36	21-28-39	25-29-42	27-33-47	29-36-52	32-39-55
			1.34		45°	6-8-16	8-11-19	10-15-21	11-16-23	13-18-25	15-19-27	18-21-29	19-23-32	20-25-35
36 x 12	44 x 10	2.79		CFM NC		837 —	1116 13	1395 20	1674 25	1953 30	2232 34	2790 40	3348 46	3906 51
			1.90	T	0°	11-18-34	16-24-39	20-29-43	24-34-48	28-36-51	32-39-54	35-43-60	39-48-67	41-51-72
			1.65		22 1/2°	8-14-27	13-19-31	15-24-34	19-27-38	22-29-41	25-31-43	28-34-48	31-38-53	33-41-57
			1.44		45°	6-9-17	8-12-20	10-15-22	12-17-24	14-18-26	16-20-27	18-22-30	20-30-34	21-26-36
48 x 10		3.08		CFM NC		924 —	1232 14	1540 21	1848 26	2156 31	2464 35	3080 41	3696 47	4312 52
			2.16	T	0°	12-19-35	17-25-41	20-32-46	25-35-50	29-38-54	33-41-57	37-46-64	41-50-71	43-54-76
			1.87		22 1/2°	10-15-28	13-20-32	16-25-36	20-28-40	24-30-43	27-32-46	29-36-52	32-40-57	35-43-61
			1.63		45°	6-10-18	8-13-20	11-16-23	13-18-25	15-19-27	17-20-29	19-23-32	20-25-36	22-27-39

CFM - cubic feet per minute
TP - total pressure - inches w.g.
VP - velocity pressure - inches w.g.
T - throw in feet
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts @ 0° deflection.
Core velocity is in feet per minute.

Performance Notes:

1. Performance data is based on double deflection grille without damper / extractor.

2. 0°, 22 1/2° and 45° represent vertical blade deflection angles and horizontal spread.

3. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions, direct duct mounted grille, exposed duct with no ceiling effect.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

NC Corrections for Blade Deflection and Damper/Extractor set at 45 degrees (add).

Model Type	Damper/ Extractor	Blade Defection 0°	22 1/2°	45°
Double Defection	With	+5	+7	+12
	Without	0	+2	+7
Single Defection	With	+1	+3	+10
	Without	-4	-2	+5

TP Correction Factors for Grilles with Damper/Extractor set at 45 degrees.

Blade Defection	0°	22 1/2°	45°
Double defl. Factor	x 2.00	x 2.08	x 2.23
Single defl. Factor	x 1.83	x 1.91	x 2.13