

PERFORMANCE DATA:

CURVED SPIRAL DUCT SUPPLY GRILLES • 6100C/5100C SERIES

MODELS: 61DVC, 61DHC, 61SVC, 61SHC, 51DVC, 51DHC, 51SVC, 51SHC

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		300	400	500	600	700	800	1000	1200	1400
				Velocity	Pressure	.006	.010	.016	.022	.031	.040	.062	.090	.122
10 x 3	0.15			CFM		45	60	75	90	105	120	150	180	210
				Noise Criteria		—	—	—	—	18	22	28	34	39
				Throw	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
22 1/2°	2-3-6	3-4-7	4-5-9		5-6-10	6-8-11	6-9-12	7-10-13	9-11-15	9-11-15				
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
				Noise Criteria		—	—	—	—	19	23	29	35	40
				Throw	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
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				
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
				Noise Criteria		—	—	—	—	19	23	29	35	41
				Throw	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
22 1/2°	3-4-8	4-6-10	5-7-10		6-8-12	6-9-13	7-10-14	8-10-14	9-11-15	10-12-16				
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
				Noise Criteria		—	—	—	15	20	24	30	36	41
				Throw	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
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				
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
				Noise Criteria		—	—	—	16	21	25	31	37	42
				Throw	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
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				
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
				Noise Criteria		—	—	—	16	21	25	31	37	42
				Throw	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
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				
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
				Noise Criteria		—	—	—	17	22	26	32	38	43
				Throw	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 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				
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
				Noise Criteria		—	—	—	17	22	26	32	38	43
				Throw	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
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				
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
				Noise Criteria		—	—	—	18	23	26	32	39	43
				Throw	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
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				
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
				Noise Criteria		—	—	—	18	23	27	33	39	44
				Throw	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
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				
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
				Noise Criteria		—	—	—	19	24	28	34	40	45
				Throw	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
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				
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
				Noise Criteria		—	—	—	19	24	28	34	40	45
				Throw	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
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				
45°	3-4-8	4-6-8	5-7-10		6-8-12	6-8-11	7-8-13	8-10-14	8-11-15	10-11-16				

For performance data notes, see F60.

PERFORMANCE DATA:

CURVED SPIRAL DUCT SUPPLY GRILLES • 6100C/5100C SERIES

MODELS: 61DVC, 61DHC, 61SVC, 61SHC, 51DVC, 51DHC, 51SVC, 51SHC

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		300	400	500	600	700	800	1000	1200	1400
				Velocity Pressure		.006	.010	.016	.022	.031	.040	.062	.090	.122
				Total Pressure	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		195	260	325	390	455	520	650	780	910
				Noise Criteria		-	-	15	20	25	29	35	41	46
				Throw	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 8-8-12	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		222	296	370	444	518	592	740	888	1036
				Noise Criteria		-	-	15	20	25	29	35	41	46
				Throw	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		240	320	400	480	560	640	800	960	1120
				Noise Criteria		-	-	16	21	26	30	36	42	47
				Throw	0° 22 1/2° 45°	6-9-12 4-7-14 3-5-9	8-13-20 6-10-15 4-6-10	11-15-22 8-13-18 5-8-11	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		270	360	450	540	630	720	900	1080	1260
				Noise Criteria		-	-	16	21	26	30	36	42	47
				Throw	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		339	452	565	678	791	904	1130	1356	1582
				Noise Criteria		-	-	17	22	27	31	37	43	48
				Throw	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		360	480	600	720	840	960	1200	1440	1680
				Noise Criteria		-	-	17	22	27	31	37	43	48
				Throw	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		411	548	685	822	959	1096	1370	1644	1918
				Noise Criteria		-	-	18	23	28	32	38	44	49
				Throw	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		456	608	760	912	1064	1216	1520	1824	2128
				Noise Criteria		-	-	18	23	28	32	38	44	49
				Throw	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	1.61		CFM		483	644	805	966	1127	1288	1610	1932	2254
				Noise Criteria		-	-	18	23	28	32	38	44	49
				Throw	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		555	740	925	1110	1295	1480	1850	2220	2590
				Noise Criteria		-	-	19	24	29	33	39	45	50
				Throw	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		612	816	1020	1224	1428	1632	2040	2448	2856
				Noise Criteria		-	-	19	24	29	33	39	45	50
				Throw	0° 22 1/2° 45°	9-15-28 7-12-22 4-7-13	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		696	928	1160	1392	1624	1856	2320	2784	3248
				Noise Criteria		-	-	20	25	30	34	40	46	51
				Throw	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

GRILLES AND REGISTERS

L

For performance data notes, see F60.

PERFORMANCE DATA:

CURVED SPIRAL DUCT SUPPLY GRILLES • 6100C/5100C SERIES

MODELS: 61DVC, 61DHC, 61SVC, 61SHC, 51DVC, 51DHC, 51SVC, 51SHC

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		300	400	500	600	700	800	1000	1200	1400	
				Velocity	Pressure	.006	.010	.016	.022	.031	.040	.062	.090	.122	
32 x 12	38 x 10	2.48	1.70 1.48 1.29	CFM		744	992	1240	1488	1736	1984	2480	2976	3472	
				Noise Criteria		-	-	-	-	-	-	-	-	-	-
				Throw	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	
					22 1/2° 45°	8-13-25 5-8-16	13-18-29 8-11-18	15-22-32 10-14-20	18-25-36 11-16-22	21-27-38 13-18-24	24-29-42 15-18-26	27-32-46 17-20-29	29-36-50 18-22-32	32-38-55 20-24-34	
40 x 10	44 x 10	2.56	1.77 1.54 1.34	CFM		768	1024	1280	1536	1792	2048	2560	3072	3584	
				Noise Criteria		-	-	20	25	30	34	40	46	51	
				Throw	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	
					22 1/2° 45°	8-13-26 6-8-16	13-18-29 8-11-19	15-23-33 10-15-21	18-26-36 11-16-23	21-28-39 13-18-25	25-29-42 15-19-27	27-33-47 18-21-29	29-36-52 19-23-32	32-39-55 20-25-35	
36 x 12	44 x 10	2.79	1.90 1.65 1.44	CFM		837	1116	1395	1674	1953	2232	2790	3348	3906	
				Noise Criteria		-	-	20	25	30	34	40	46	51	
				Throw	0°	11-18-34	16-24-39	20-29-43	24-34-48	28-36-51	32-39-54	34-43-60	39-48-67	41-51-72	
					22 1/2° 45°	8-14-27 6-9-17	13-19-31 8-12-20	15-24-34 10-15-22	19-27-38 12-17-24	22-29-41 14-18-26	25-31-43 16-20-27	28-34-48 18-22-30	31-38-53 20-30-34	33-41-57 21-26-36	
48 x 10	44 x 10	3.08	2.16 1.87 1.63	CFM		924	1232	1540	1848	2156	2464	3080	3696	4312	
				Noise Criteria		-	-	21	26	31	35	41	47	52	
				Throw	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	
					22 1/2° 45°	10-15-28 6-10-18	13-20-32 8-13-20	16-25-36 11-16-23	20-28-40 13-18-25	24-30-43 15-19-27	27-32-46 17-20-29	29-36-52 19-23-32	32-40-57 20-25-36	35-43-61 22-27-39	

Performance Notes:

- All pressures are in inches w.g..
- Core Velocity is in feet per minute.
- Performance data is based on double deflection grille without damper/extractor.
- 0°, 22 1/2° and 45° represent vertical blade deflection angles and horizontal spread.
- 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.
- Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts @ 0° deflection. Dash (-) in space indicates an Noise Criteria of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

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

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

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

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