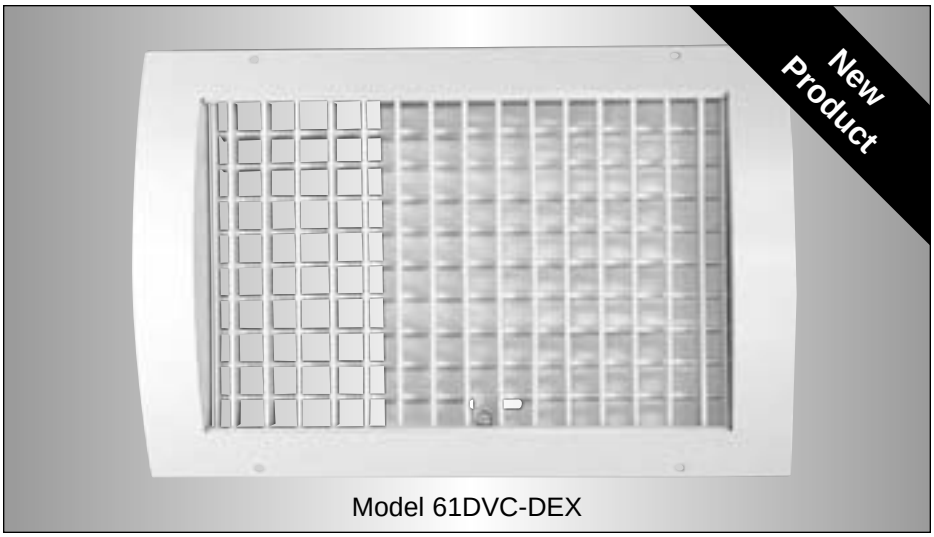
CURVED SPIRAL DUCT GRILLES

- TRUE FULL RADIUS DESIGN
- DOUBLE DEFLECTION
- SUPPLY

Models:
61DVC and 61DHC



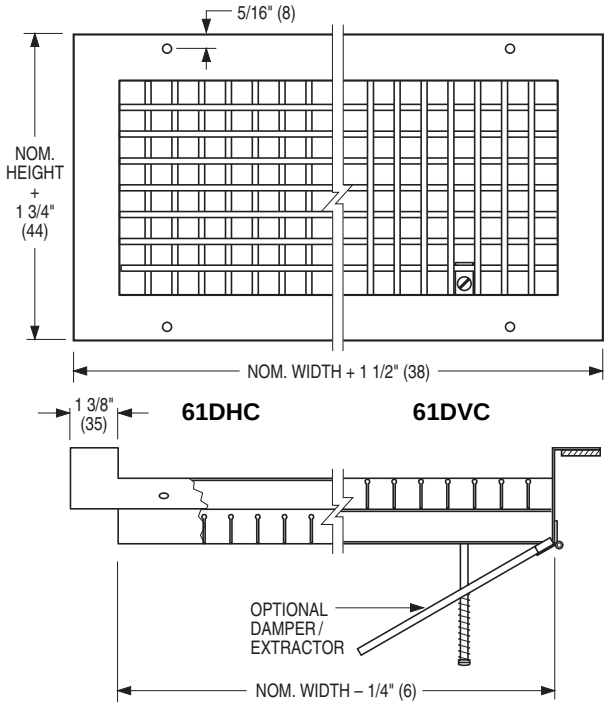
Model 61DVC-DEX

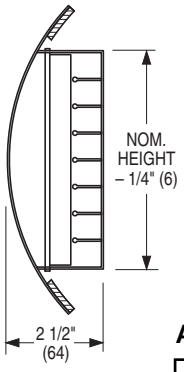
Models 61DVC and 61DHC Curved Spiral Duct Supply Grilles are for use in exposed spiral duct applications requiring maximum flexibility. The front set of blades has the greatest effect on the air pattern, therefore should be selected based on particular requirements. Vertical front blades will control the spread and throw distance of the air pattern whereas horizontal front blades will control the rise and drop of the air pattern, typically directing warm air downwards or cool air upwards.

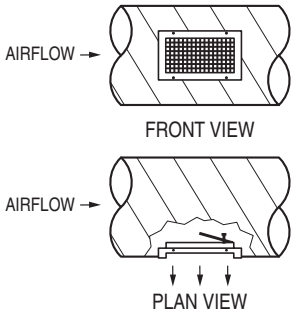
The innovative design incorporates a unique one piece frame, rolled to match the required duct radius, which eliminates any visible lines in the corners of the grille, enhancing the appearance. The grille frame mounts flush with the spiral duct and thus reduces the labor and installation cost by eliminating the need to fabricate stand-off saddles.

FEATURES:

- Unique one piece, corrosion-resistant steel frame, with a 1 3/8" (35) face border, rolled to match required duct radius.
- Custom fabricated to fit only a single specified duct diameter.
- A dual set of individually adjustable, friction pivoted, extruded aluminum "teardrop" blades on 3/4" (19) centers.
- Furnished with Type A screw holes and mounting screws as standard.
- Standard finish is AW Appliance White baked enamel. Other finishes are available.
- A thick foam gasket is provided to ensure a tight seal to duct.
- An extensive range of sizes are available.
- Optional DEX Damper/Extractor (Air Scoop) is available.







Available Sizes

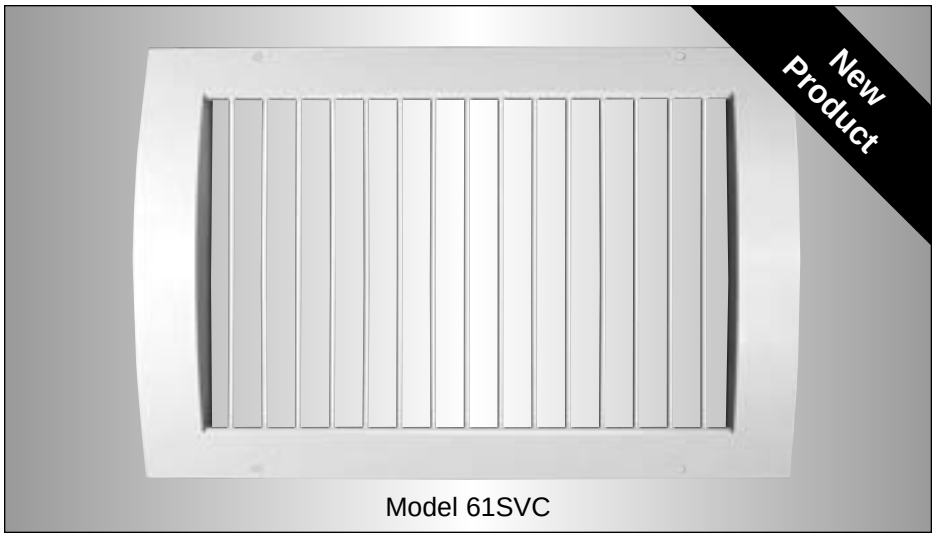
Width Min. - Max.	Height	Duct Diameter Min. - Max.
10 – 48 (254 – 1219)	3 (76)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	4 (102)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	6 (152)	8 – 36 (203 – 914)
10 – 48 (254 – 1219)	8 (203)	10 – 36 (254 – 914)
10 – 48 (254 – 1219)	10 (254)	12 – 36 (305 – 914)
12 – 36 (305 – 914)	12 (305)	14 – 36 (356 – 914)

Duct diameters in even sizes only. Grilles available in nominal 1" (25) increments in width.

CURVED SPIRAL DUCT GRILLES

- TRUE FULL RADIUS DESIGN
- SINGLE DEFLECTION
- SUPPLY

Models:
61SVC and 61SHC



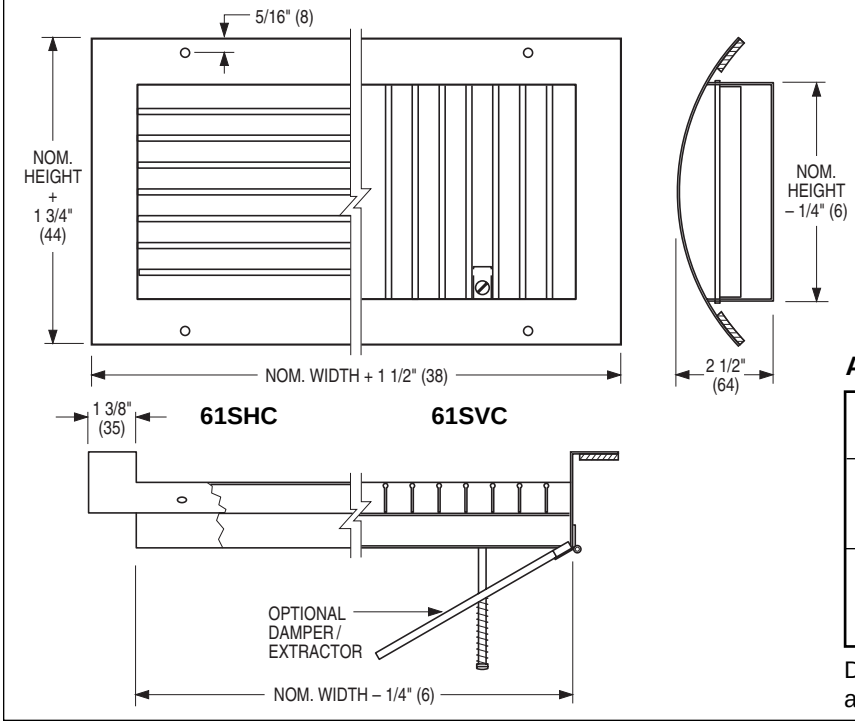
Model 61SVC

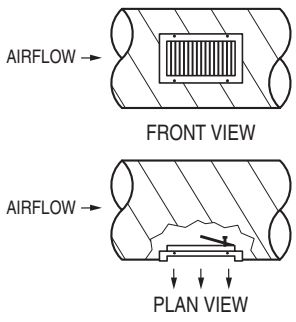
Models 61SVC and 61SHC Curved Spiral Duct Supply Grilles are for use in exposed spiral duct applications requiring adjustment in a single horizontal or vertical plane. The vertical blades will control the spread and throw distance of the air pattern to accommodate various layouts. Horizontal blades will control the rise and drop of the air pattern, typically directing warm air downwards or cool air upwards.

The innovative design incorporates a unique one piece frame, rolled to match the required duct radius, which eliminates any visible lines in the corners of the grille, enhancing the appearance. The grille frame mounts flush with the spiral duct and thus reduces the labor and installation cost by eliminating the need to fabricate stand-off saddles.

FEATURES:

- Unique one piece, corrosion-resistant steel frame, with a 1 3/8" (35) face border, rolled to match required duct radius.
- Custom fabricated to fit only a single duct diameter.
- A single set of individually adjustable, friction pivoted, extruded aluminum "teardrop" blades on 3/4" (19) centers.
- Furnished with Type A screw holes and mounting screws as standard.
- Standard finish is AW Appliance White baked enamel. Other finishes are available.
- A thick foam gasket is provided to ensure a tight seal to duct.
- An extensive range of sizes are available.
- Optional DEX Damper/Extractor (Air Scoop) is available.





Available Sizes

Width Min. - Max.	Height	Duct Diameter Min. - Max.
10 – 48 (254 – 1219)	3 (76)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	4 (102)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	6 (152)	8 – 36 (203 – 914)
10 – 48 (254 – 1219)	8 (203)	10 – 36 (254 – 914)
10 – 48 (254 – 1219)	10 (254)	12 – 36 (305 – 914)
12 – 36 (305 – 914)	12 (305)	14 – 36 (356 – 914)

Duct diameters in even sizes only. Grilles available in nominal 1" (25) increments in width.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Curved Spiral Duct Supply Grilles – Model Series 6100C

61 DV C - 12 x 6 - 12 - S - AW - A - —

MODEL
- Steel Frame 61

SUPPLY

Double Deflection with:
- Vertical Front Blades DV
- Horizontal Front Blades DH

Single Deflection with:
- Vertical Front Blades SV
- Horizontal Front Blades SH

CURVED DESIGNATION

WIDTH x HEIGHT
inches (mm) x inches (mm)

DUCT DIAMETER inches
- 06 through 36 (in 2" (51) increments)

FRAME / BORDER TYPE
- Surface Mount (default) S

FINISH
- Appliance White (default) AW
- Aluminum AL
- Special Custom Color SP

FASTENING
- Screw Holes (default) A
- None N

DAMPER / EXTRACTOR
- None (default) —
- Damper/Extractor DEX

Notes:
1. Nailor recommends the selection of vertical front blades on supply models for the majority of applications.
2. Refer to "Available Sizes" table on page G47 or G48 for grille height / duct diameter limitations.
3. Not available in fractional or metric sizes.
4. For a standard grille with no special requirements, the "default" will automatically be selected. For example, a double deflection grille with vertical front blades is Model 61DVC. Unit will be supplied with screw holes and AW Appliance White baked enamel finish.

SUGGESTED SPECIFICATION:

61DVC, 61DHC Double Deflection

Furnish and install **Nailor Model** (select one) **61DVC** or **61DHC Double Deflection Curved Spiral Duct Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a dual set of extruded aluminum "teardrop" blades spaced on 3/4" (19) centers. The frame is to be one piece construction, made from corrosion-resistant steel, and rolled to match the specified radius. The finish shall be AW Appliance White baked enamel (optional finishes are available).

(Optional) Damper/Extractor (DEX), constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

61SVC, 61SHC Single Deflection

Furnish and install **Nailor Model** (select one) **61SVC** or **61SHC Single Deflection Curved Spiral Duct Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a single set of extruded aluminum "teardrop" blades spaced on 3/4" (19) centers. The frame is to be one piece construction, made from corrosion-resistant steel, and rolled to match the specified radius. The finish shall be AW Appliance White baked enamel (optional finishes are available).

(Optional) Damper/Extractor (DEX), constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

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

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		0.15		**CFM**		**45**	**60**	**75**	**90**	**105**	**120**	**150**	**180**	**210**
				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 G52.

Performance Data

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

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP / TP	300 .006 / .013 .015 .023	400 .010 / .023 .026 .040	500 .016 / .036 .041 .063	600 .022 / .052 .060 .091	700 .031 / .071 .082 .125	800 .040 / .093 .107 .164	1000 .062 / .145 .167 .254	1200 .090 / .209 .241 .367	1400 .122 / .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	1.61		**CFM** NC	**483** —	**644** 11	**805** 18	**966** 23	**1127** 28	**1288** 32	**1610** 38	**1932** 44	**2254** 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 G52.

Performance Data

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

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**		**744**	**992**	**1240**	**1488**	**1736**	**1984**	**2480**	**2976**	**3472**
				NC		—	13	20	25	30	34	40	46	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**		**768**	**1024**	**1280**	**1536**	**1792**	**2048**	**2560**	**3072**	**3584**
				NC		—	13	20	25	30	34	40	46	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**		**837**	**1116**	**1395**	**1674**	**1953**	**2232**	**2790**	**3348**	**3906**
				NC		—	13	20	25	30	34	40	46	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**		**924**	**1232**	**1540**	**1848**	**2156**	**2464**	**3080**	**3696**	**4312**
				NC		—	14	21	26	31	35	41	47	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 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

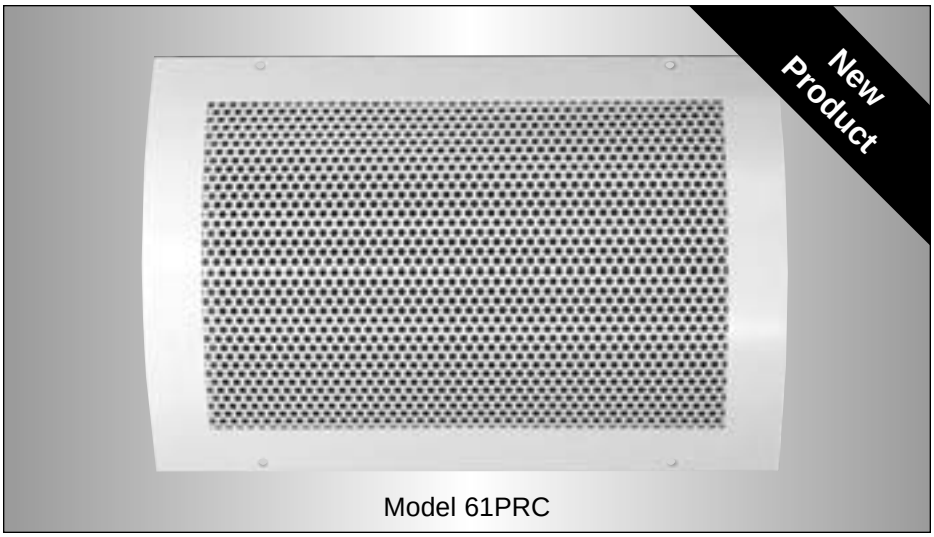
TP Correction Factors for Grilles with Damper/Extractor set at 45 degrees.

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

CURVED SPIRAL DUCT GRILLES

- TRUE FULL RADIUS DESIGN
- PERFORATED FACE
- SUPPLY OR RETURN

Model:
61PRC

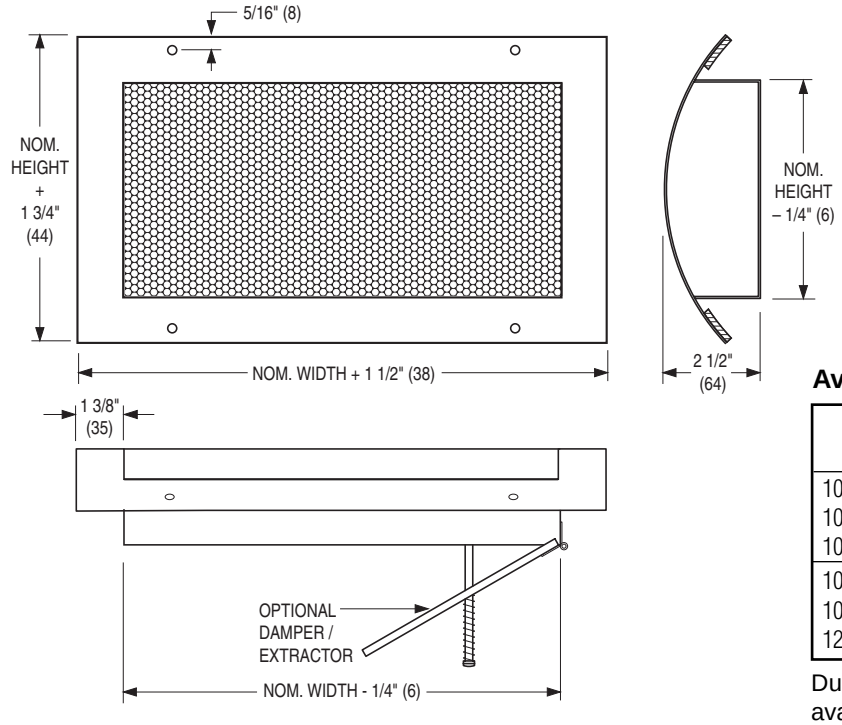


Model 61PRC

Model 61PRC Curved Spiral Duct Grilles are for use in exposed spiral duct supply or return applications. The innovative design incorporates a unique one piece corrosion-resistant steel frame, rolled to match the required duct radius, which eliminates any visible lines in the corners of the grille, enhancing the appearance. The grille frame mounts flush with the spiral duct and thus reduces the labor and installation cost by eliminating the need to fabricate stand-off saddles. The perforated face has 3/16" (5) diameter holes on 1/4" (6) staggered centers, providing 51% free area. Many architects prefer the smooth, unobtrusive appearance this grille has to offer.

FEATURES:

- Unique one piece, corrosion-resistant steel frame, with a 1 3/8" (35) face border, rolled to match required duct radius.
- Custom fabricated to fit only a single specified duct diameter.
- The perforated face has 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area.
- Furnished with Type A screw holes and mounting screws as standard.
- Standard finish is AW Appliance White baked enamel. Other finishes are available.
- A thick foam gasket is provided to ensure a tight seal to duct.
- An extensive range of sizes are available.
- Optional DEX Damper/Extractor (Air Scoop) is available.



Available Sizes

Width Min. - Max.	Height	Duct Diameter Min. - Max.
10 – 48 (254 – 1219)	3 (76)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	4 (102)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	6 (152)	8 – 36 (203 – 914)
10 – 48 (254 – 1219)	8 (203)	10 – 36 (254 – 914)
10 – 48 (254 – 1219)	10 (254)	12 – 36 (305 – 914)
12 – 36 (305 – 914)	12 (305)	14 – 36 (356 – 914)

Duct diameters in even sizes only. Grilles available in nominal 1" (25) increments in width.

CURVED SPIRAL DUCT GRILLES

- TRUE FULL RADIUS DESIGN
- FIXED 45° BLADES WITH 3/4" (19) OR 1/2" (13) SPACING
- RETURN

Models:
6145HC and 6155HC

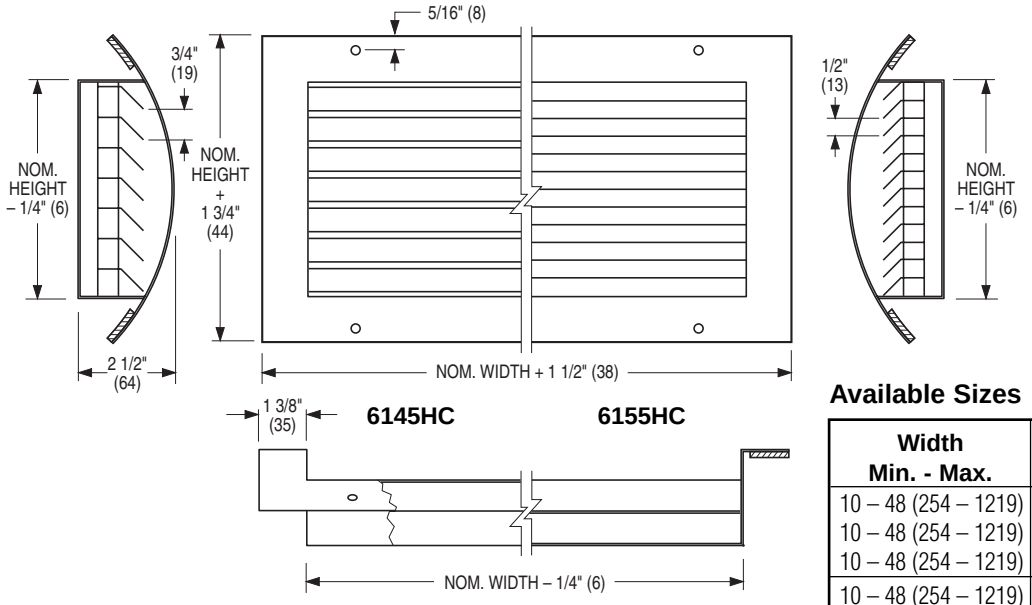
Model 6155HC

Models 6145HC and 6155HC Curved Spiral Duct Grilles are for use in exposed spiral duct, return air applications. The streamlined blades and open spacing minimizes intake velocity, reduces inlet pressure and provides quiet operation.

The innovative design incorporates a unique one piece corrosion-resistant steel frame, rolled to match the required duct radius, which eliminates any visible lines in the corners of the grille, enhancing the appearance. The grille frame mounts flush with the spiral duct and thus reduces the labor and installation cost by eliminating the need to fabricate stand-off saddles. A single set of roll-formed blades on 3/4" (19) or 1/2" (13) centers are fixed at 45° and incorporate a concealed rear reinforcing mullion [max. 16" (406) centers] and a single blade pack that provides a continuous louvered appearance.

FEATURES:

- Unique one piece, corrosion-resistant steel frame, with a 1 3/8" (35) face border, rolled to match required duct radius.
- Custom fabricated to fit a single specified duct diameter.
- A single set of roll formed blades on 3/4" (19) or 1/2" (13) centers fixed at 45°.
- Furnished with Type A screw holes and mounting screws as standard.
- Standard finish is AW Appliance White baked enamel. Other finishes are available.
- A thick foam gasket is provided to ensure a tight seal to duct.
- An extensive range of sizes are available.



Available Sizes

Width Min. - Max.	Height	Duct Diameter Min. - Max.
10 – 48 (254 – 1219)	3 (76)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	4 (102)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	6 (152)	8 – 36 (203 – 914)
10 – 48 (254 – 1219)	8 (203)	10 – 36 (254 – 914)
10 – 48 (254 – 1219)	10 (254)	12 – 36 (305 – 914)
12 – 36 (305 – 914)	12 (305)	14 – 36 (356 – 914)

Duct diameters in even sizes only. Grilles available in nominal 1" (25) increments in width.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Curved Spiral Duct Return Grilles – Model Series 6100C

61 45H C - 12 x 6 - 12 - S - AW - A - —

MODEL
- Steel Frame 61

RETURN
- Perforated Face PR
- Fixed 45° Defl., 3/4" (19) Spacing 45H
- Fixed 45° Defl., 1/2" (13) Spacing 55H

CURVED DESIGNATION

WIDTH x HEIGHT

inches (mm) x inches (mm)

DAMPER / EXTRACTOR
- None (default) —
- Damper/Extractor * DEX

FASTENING
- Screw Holes (default) A
- None N

FINISH
- Appliance White (default) AW
- Aluminum AL
- Special Custom Color SP

FRAME / BORDER TYPE
- Surface Mount (default) S

DUCT DIAMETER inches
- 06 through 36 (in 2" (51) increments)

Available Sizes

Width Min. - Max.	Height	Duct Diameter Min. - Max.
10 – 48 (254 – 1219)	3 (76)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	4 (102)	6 – 36 (152 – 914)
10 – 48 (254 – 1219)	6 (152)	8 – 36 (203 – 914)
10 – 48 (254 – 1219)	8 (203)	10 – 36 (254 – 914)
10 – 48 (254 – 1219)	10 (254)	12 – 36 (305 – 914)
12 – 36 (305 – 914)	12 (305)	14 – 36 (356 – 914)

Duct diameters in even sizes only. Grilles available in nominal 1" (25) increments in width.

Notes:
1. Refer to table above for grille height/duct diameter limitations.
2. Not available in fractional or metric sizes.
3. * Only available on Model 61PRC.
4. For a standard grille with no special requirements, the "default" will automatically be selected. For example, a perforated face grille is Model 61PRC. Unit will be supplied with screw holes and AW Appliance White baked enamel finish.

SUGGESTED SPECIFICATION:

61PRC Perforated Face

Furnish and install **Nailor Model 61PRC Perforated Face Curved Spiral Duct Supply** or **Return Grilles** of the type and size as shown on the plans and air distribution schedules. The perforated face shall have 3/16" (5) dia. holes on staggered 1/4" (6) centers providing 51% free area. The frame shall be one piece construction, made from corrosion-resistant steel, and rolled to match the specified radius. The finish shall be AW Appliance White baked enamel (optional finishes are available).

(Optional) Damper/Extractor (DEX), constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

6145HC, 6155HC 45° Deflection

Furnish and install **Nailor Model** (select one) **6145HC** or **6155HC Fixed Blade 45° Deflection Curved Spiral Duct Return Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a single set of roll formed blades on 3/4" (19) or 1/2" (13) centers. The frame shall be one piece construction, made from corrosion-resistant steel, and rolled to match the specified radius. The finish shall be AW Appliance White baked enamel (optional finishes are available).

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Curved Spiral Duct Return Grilles • 6100C Series
Models: 6145HC, 6155HC

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP Neg. SP	100 .001 .003	200 .002 .013	300 .006 .028	400 .010 .050	500 .016 .078	600 .022 .113	700 .031 .153	800 .040 .200	900 .050 .253	1000 .062 .313
10 x 3		0.15	0.18	**CFM**	**15**	**30**	**45**	**60**	**75**	**90**	**105**	**120**	**135**	**150**
				NC	—	—	—	—	—	15	20	24	28	32
12 x 3		0.19	0.22	**CFM**	**19**	**38**	**57**	**76**	**95**	**114**	**133**	**152**	**171**	**190**
				NC	—	—	—	—	—	15	20	24	28	32
10 x 4	14 x 3	0.22	0.25	**CFM**	**22**	**44**	**66**	**88**	**110**	**132**	**154**	**176**	**198**	**220**
				NC	—	—	—	—	—	16	21	25	29	33
12 x 4	16 x 3	0.27	0.29	**CFM**	**27**	**54**	**81**	**108**	**135**	**162**	**189**	**216**	**243**	**270**
				NC	—	—	—	—	—	16	21	25	29	33
18 x 3		0.29	0.31	**CFM**	**29**	**58**	**87**	**116**	**145**	**174**	**203**	**232**	**261**	**290**
				NC	—	—	—	—	—	17	22	26	30	34
20 x 3	10 x 6 14 x 4	0.32	0.34	**CFM**	**32**	**64**	**96**	**128**	**160**	**192**	**224**	**256**	**288**	**320**
				NC	—	—	—	—	—	17	22	26	30	34
16 x 4	22 x 3	0.36	0.38	**CFM**	**36**	**72**	**108**	**144**	**180**	**216**	**252**	**288**	**324**	**360**
				NC	—	—	—	—	—	18	23	27	31	35
12 x 6	18 x 4 24 x 3	0.42	0.45	**CFM**	**42**	**84**	**126**	**168**	**210**	**252**	**294**	**336**	**378**	**420**
				NC	—	—	—	—	—	19	23	28	32	36
20 x 4	28 x 3	0.45	0.47	**CFM**	**45**	**90**	**135**	**180**	**225**	**270**	**315**	**360**	**405**	**450**
				NC	—	—	—	—	—	19	23	28	32	36
14 x 6	10 x 8 22 x 4	0.50	0.51	**CFM**	**50**	**100**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**
				NC	—	—	—	—	15	20	24	29	33	37
12 x 8	16 x 6 24 x 4 32 x 3	0.58	0.59	**CFM**	**58**	**116**	**174**	**232**	**290**	**348**	**406**	**464**	**522**	**580**
				NC	—	—	—	—	15	20	24	29	33	37
10 x 10	26 x 4 34 x 3	0.61	0.62	**CFM**	**61**	**122**	**183**	**244**	**305**	**366**	**427**	**488**	**549**	**610**
				NC	—	—	—	—	15	20	25	30	33	37
18 x 6	14 x 8 28 x 4 30 x 4 36 x 3	0.65	0.67	**CFM**	**65**	**130**	**195**	**260**	**325**	**390**	**455**	**520**	**585**	**650**
				NC	—	—	—	—	16	21	26	30	34	37
12 x 10	20 x 6 30 x 4	0.74	0.74	**CFM**	**74**	**148**	**222**	**296**	**370**	**444**	**518**	**592**	**666**	**740**
				NC	—	—	—	—	16	21	26	31	35	38
22 x 6	16 x 8 34 x 4	0.80	0.80	**CFM**	**80**	**160**	**240**	**320**	**400**	**480**	**560**	**640**	**720**	**800**
				NC	—	—	—	—	16	21	26	31	35	38
12 x 12	14 x 10 18 x 8 24 x 6 36 x 4	0.90	0.89	**CFM**	**90**	**180**	**270**	**360**	**450**	**540**	**630**	**720**	**810**	**900**
				NC	—	—	—	—	17	22	27	32	35	38
18 x 10	30 x 6	1.13	1.12	**CFM**	**113**	**226**	**339**	**452**	**565**	**678**	**791**	**904**	**1017**	**1130**
				NC	—	—	—	—	17	22	27	32	36	39
24 x 8	16 x 12 20 x 10 24 x 8 34 x 6	1.20	1.19	**CFM**	**120**	**240**	**360**	**480**	**600**	**720**	**840**	**960**	**1080**	**1200**
				NC	—	—	—	—	17	22	27	32	36	39

For performance table notes, see page G57.

Performance Data

Curved Spiral Duct Return Grilles • 6100C Series
Models: 6145HC, 6155HC

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP Neg. SP	100 .001 .003	200 .002 .013	300 .006 .028	400 .010 .050	500 .016 .078	600 .022 .113	700 .031 .153	800 .040 .200	900 .050 .253	1000 .062 .313
18 x 12	22 x 10 28 x 8 36 x 6	1.37	1.34	**CFM**	**137**	**274**	**411**	**548**	**685**	**822**	**959**	**1096**	**1233**	**1370**
				NC	—	—	—	—	18	23	28	33	36	39
24 x 10	20 x 12 30 x 8	1.52	1.49	**CFM**	**152**	**304**	**456**	**608**	**760**	**912**	**1064**	**1216**	**1368**	**1520**
				NC	—	—	—	—	18	23	28	34	37	40
32 x 8	22 x 12 26 x 10	1.61	1.59	**CFM**	**161**	**322**	**483**	**644**	**805**	**966**	**1127**	**1288**	**1449**	**1610**
				NC	—	—	—	—	19	24	29	34	37	40
24 x 12	30 x 10 36 x 8	1.85	1.78	**CFM**	**185**	**370**	**555**	**740**	**925**	**1110**	**1295**	**1480**	**1665**	**1850**
				NC	—	—	—	—	19	24	29	34	37	41
32 x 10	28 x 12	2.04	1.96	**CFM**	**204**	**408**	**612**	**816**	**1020**	**1224**	**1428**	**1632**	**1836**	**2040**
				NC	—	—	—	—	19	25	30	35	38	41
30 x 12	36 x 10	2.32	2.23	**CFM**	**232**	**464**	**696**	**928**	**1160**	**1392**	**1624**	**1856**	**2088**	**2320**
				NC	—	—	—	15	20	25	30	35	38	42
32 x 12	38 x 10 48 x 8	2.48	2.38	**CFM**	**248**	**496**	**744**	**992**	**1240**	**1488**	**1736**	**1984**	**2232**	**2480**
				NC	—	—	—	15	20	26	31	36	39	42
40 x 10		2.56	2.44	**CFM**	**256**	**512**	**768**	**1024**	**1280**	**1536**	**1792**	**2048**	**2304**	**2560**
				NC	—	—	—	15	20	26	31	36	39	42
36 x 12	44 x 10	2.79	2.66	**CFM**	**279**	**558**	**837**	**1116**	**1395**	**1674**	**1953**	**2232**	**2511**	**2790**
				NC	—	—	—	16	21	27	31	36	39	43
48 x 10		3.08	2.92	**CFM**	**308**	**616**	**924**	**1232**	**1540**	**1848**	**2156**	**2464**	**2772**	**3080**
				NC	—	—	—	16	21	27	31	36	39	43

CFM - cubic feet per minute

VP - velocity pressure - inches w.g.

Neg. SP - negative static pressure - inches w.g.

NC - Noise Criteria values are based on 10 dB room absorption, re 10^{-12} watts.

Core Velocity is in feet per minute.

Performance Notes:

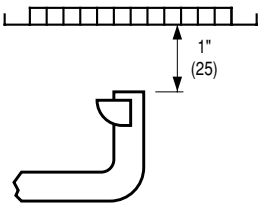
1. Performance data is based on Model 6145HC. For Model 6155HC apply the following correction factors:

Neg. SP Listed Value x 1.3.

NC Listed value + 4.

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

Air Measurement



Alnor Velometer with 2220A or 6070P Jet Probe

Airflow Measurements

1. Balancing factors are applicable with or without dampers, providing uniform airflow exists into grille or register.

2. Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.

3. Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (Vk in FPM).

4. Calculate the airflow (CFM) by multiplying the average velocity by the appropriate Ak factor.
Airflow (CFM) = Average velocity (Vk) x Ak.