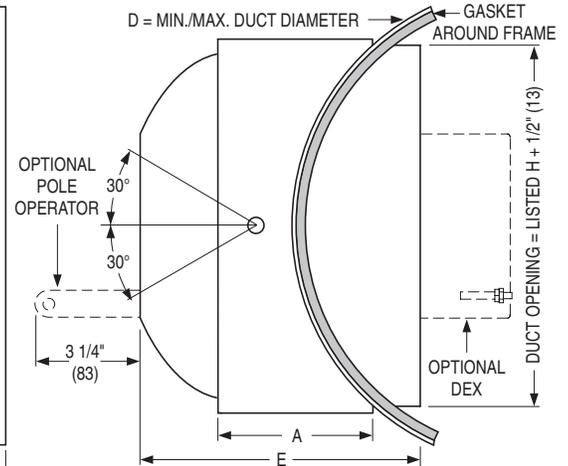
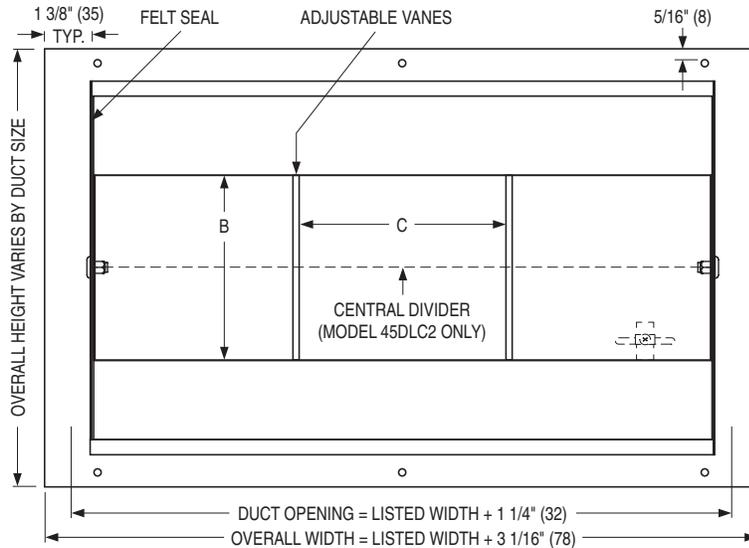




DRUM LOUVER • HIGH CAPACITY
INDUSTRIAL SUPPLY GRILLES • ALUMINUM
MODELS: 45DLC1 & 45DLC2 SPIRAL DUCT MOUNT

45DLC1 Adjustable Vanes

45DLC2 Split Vanes



AVAILABLE SIZES AND DIMENSIONAL DATA

Height	6		10		12		15	
	W x H	No. of Vanes	W x H	No. of Vanes	W x H	No. of Vanes	W x H	No. of Vanes
Listed Sizes Nominal Width x Height in Inches	9 x 6	2	18 x 10	2	18 x 12	2	18 x 15	2
	12 x 6	3	24 x 10	3	24 x 12	3	24 x 15	3
	15 x 6	4	30 x 10	4	30 x 12	4	30 x 15	4
	18 x 6	5	36 x 10	5	36 x 12	5	36 x 15	5
	24 x 6	7	42 x 10	6	42 x 12	6	42 x 15	6
	30 x 6	9	48 x 10	7	48 x 12	7	48 x 15	7
	36 x 6	11	54 x 10	8	54 x 12	8	54 x 15	8
	48 x 6	15	60 x 10	9	60 x 12	9	60 x 15	9
	54 x 6	17	-	-	-	-	-	-
	60 x 6	19	-	-	-	-	-	-

Dimensions in Inches (mm)	A	2 3/4 (70)	4 1/2 (114)	5 1/2 (140)	7 (178)
	B	3 3/8 (86)	5 3/8 (137)	6 3/8 (162)	9 3/8 (238)
	C	3 (76)	6 (152)	6 (152)	6 (152)
	D	10 - 60 (254 - 1524)	14 - 60 (356 - 1524)	16 - 60 (406 - 1524)	20 - 60 (508 - 1524)
	E	5 (127)	8 1/8 (206)	9 9/16 (243)	11 9/16 (294)

DESCRIPTION:

1. Material: Aluminum.
2. Models 45DLC1/45DLC2 are designed to handle large air capacities and provide long throws. It is ideally suited for applications where ductwork cannot be brought close to the occupants in large conditioned spaces such as; shopping malls, industrial plants and stadiums.
3. Curved frame installs directly on spiral ducts without the use of duct taps.

4. Length of throw, direction and horizontal spread can be controlled by means of the rotating drum and pivoted adjustable vanes.
5. Felt seal around drum minimizes air leakage and holds drum secure in selected position.
6. 45DLC2 Split Vane option allows bi-directional horizontal throw.
7. Standard finish is AW Appliance white.

OPTIONS:

- OBD Opposed Blade Damper
 - DEX Damper/Extractor (Air Scoop)
 - PB Pole Operator
- Finish:
- AL Aluminum
 - MI Mill
 - SP Special _____

Dimensions are in inches (mm).

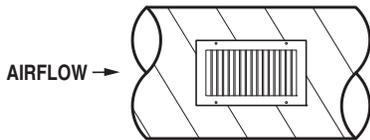
SCHEDULE TYPE:				
PROJECT:				
ENGINEER:		DATE	B SERIES	SUPERSEDES
CONTRACTOR:		6 - 25 - 20	4500	12 - 4 - 17
				DRAWING NO.
				45DLC-1



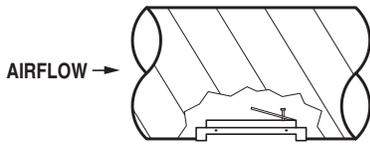
ALUMINUM CURVED SPIRAL DUCT GRILLES
TRUE FULL RADIUS DESIGN
SINGLE DEFLECTION • ADJUSTABLE BLADES
MODELS: 51SHC AND 51SVC

MODEL 51SHC
 Single Deflection
 Horizontal Blades

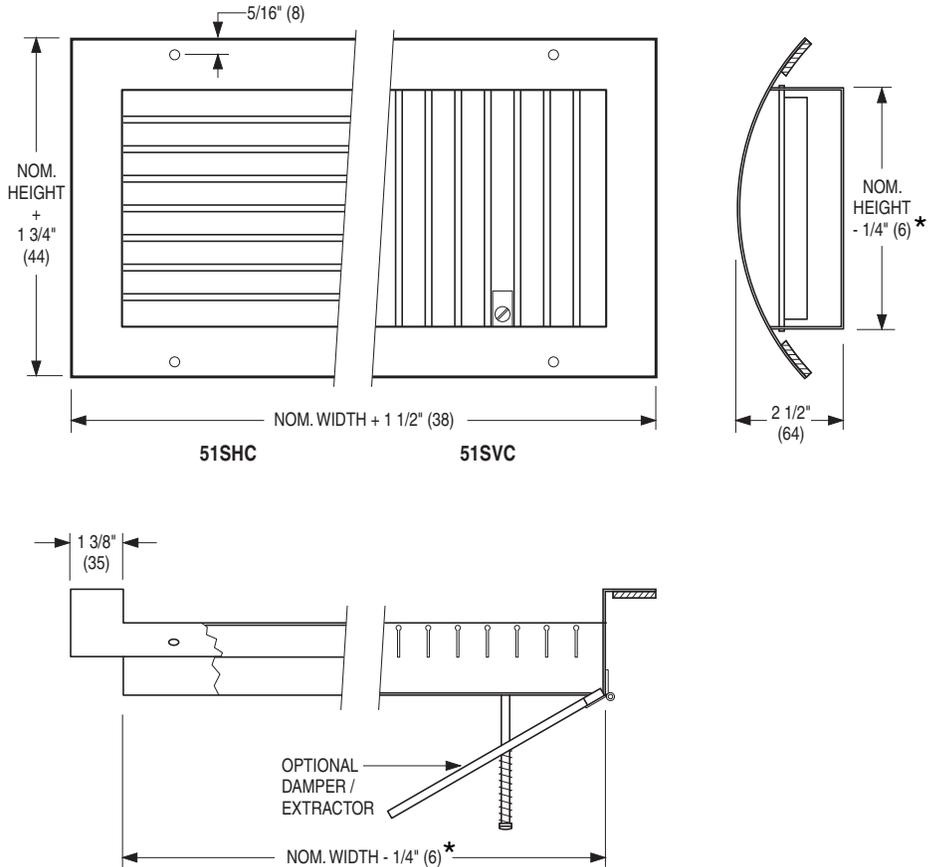
MODEL 51SVC
 Single Deflection
 Vertical Blades



FRONT VIEW



PLAN VIEW



Available Sizes

Grille Width Min. - Max.	Grille 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.

* Opening = Nominal + 1/4" (6) with DEX Damper/Extractor option.

Important:

Grilles are custom fabricated to fit only a single specified duct diameter.

DESCRIPTION:

- Nailor's unique curved spiral duct grille design offers an architecturally superior appearance and saves installation time and money by directly mounting to the duct and hence eliminating the need to fabricate stand-off saddles for standard grilles.
- Construction: Unique architectural single piece aluminum frame design is rolled to match required duct radius, eliminating unsightly non-aligned butted corners. A single set of extruded aluminum "teardrop" blades on 3/4" (19) centers provide air control in a single plane. Individually adjustable blades are friction pivoted to ensure positive positioning when adjusted to desired deflection setting.
- A thick foam gasket is provided as standard to ensure a tight seal to duct.
- Standard fastening is Type A screw holes.
- Standard finish is AW Appliance White.

Options:

DEX Damper/Extractor* (Air scoop) (For supply air applications).

Finish:

AL Aluminum.

MI Mill.

SP Special. Specify _____.

SCHEDULE TYPE

PROJECT

ENGINEER

CONTRACTOR

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 22 - 11

5100C

4 - 12 - 11

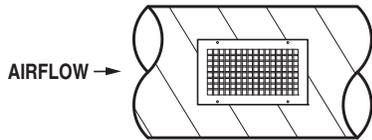
5100C-1



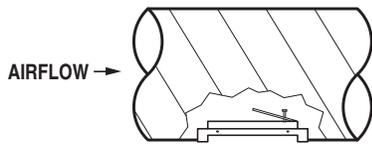
ALUMINUM CURVED SPIRAL DUCT GRILLES
TRUE FULL RADIUS DESIGN
DOUBLE DEFLECTION • ADJUSTABLE BLADES
MODELS: 51DHC AND 51DVC

MODEL 51DHC
 Double Deflection
 Horizontal Front Blades

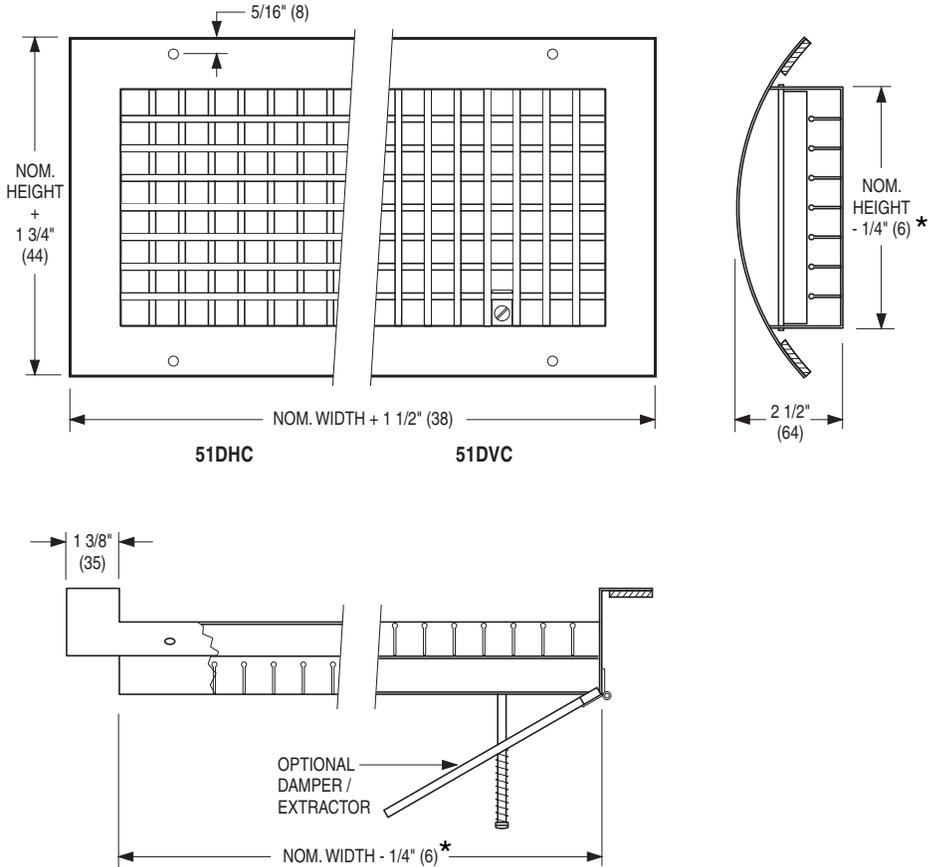
MODEL 51DVC
 Double Deflection
 Vertical Front Blades



FRONT VIEW



PLAN VIEW



Available Sizes

Grille Width Min. - Max.	Grille 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.

* Opening = Nominal + 1/4" (6) with DEX Damper/Extractor option.

Important:

Grilles are custom fabricated to fit only a single specified duct diameter.

DESCRIPTION:

- Nailor's unique curved spiral duct grille design offers an architecturally superior appearance and saves installation time and money by directly mounting to the duct and hence eliminating the need to fabricate stand-off saddles for standard grilles.
- Construction: Unique architectural single piece aluminum frame design is rolled to match required duct radius, eliminating unsightly non-aligned butted corners. Two sets of perpendicular extruded aluminum "teardrop" blades on 3/4" (19) centers provide air control in two planes. Individually adjustable blades are friction pivoted to ensure positive positioning when adjusted to desired deflection setting.
- A thick foam gasket is provided as standard to ensure a tight seal to duct.
- Standard fastening is Type A screw holes.
- Standard finish is AW Appliance White.

Options:

DEX Damper/Extractor* (Air scoop) (For supply air applications).

Finish:

AL Aluminum.

MI Mill.

SP Special. Specify _____.

SCHEDULE TYPE

PROJECT

ENGINEER

CONTRACTOR

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 22 - 11

5100C

4 - 12 - 11

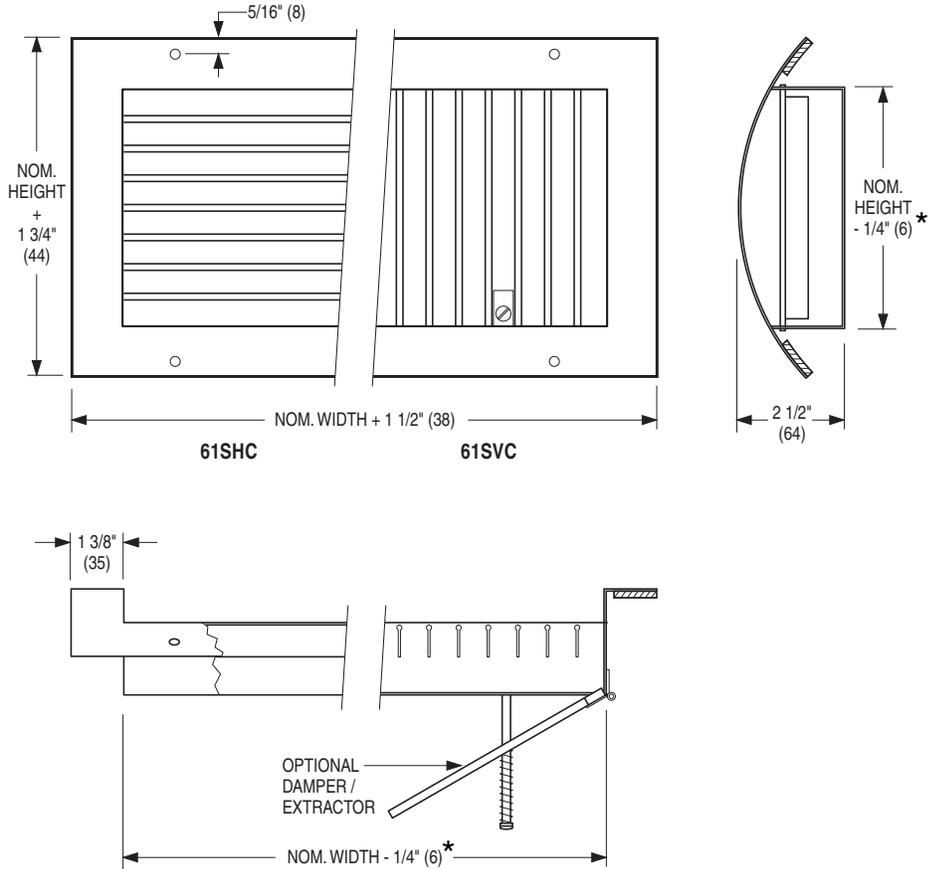
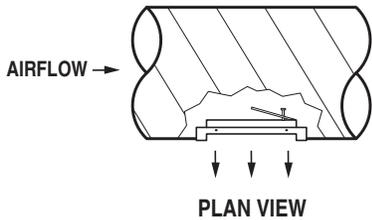
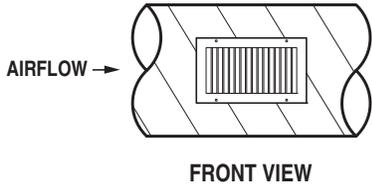
5100C-2



STEEL CURVED SPIRAL DUCT GRILLES
 TRUE FULL RADIUS DESIGN
 SINGLE DEFLECTION • ADJUSTABLE BLADES
MODELS: 61SHC AND 61SVC

MODEL 61SHC
 Single Deflection
 Horizontal Blades

MODEL 61SVC
 Single Deflection
 Vertical Blades



Available Sizes

Grille Width Min. - Max.	Grille 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.

* Opening = Nominal + 1/4" (6) with DEX Damper/Extractor option.

Important:

Grilles are custom fabricated to fit only a single specified duct diameter.

DESCRIPTION:

1. Nailor's unique curved spiral duct grille design offers an architecturally superior appearance and saves installation time and money by directly mounting to the duct and hence eliminating the need to fabricate stand-off saddles for standard grilles.
2. Construction: Unique architectural single piece corrosion-resistant steel frame design is rolled to match required duct radius, eliminating unsightly non-aligned butted corners. A single set of "teardrop" blades on 3/4" (19) centers provide air control in a single plane. Individually adjustable blades are friction pivoted to ensure positive positioning when adjusted to desired deflection setting.
3. A thick foam gasket is provided as standard to ensure a tight seal to duct.
4. Standard fastening is Type A screw holes.
5. Standard finish is AW Appliance White.

Options:

DEX Damper/Extractor* (Air scoop) (For supply air applications).

Finish:

AL Aluminum.

MI Mill.

SP Special. Specify _____.

SCHEDULE TYPE

PROJECT

ENGINEER

CONTRACTOR

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 29 - 11

6100C

4 - 12 - 11

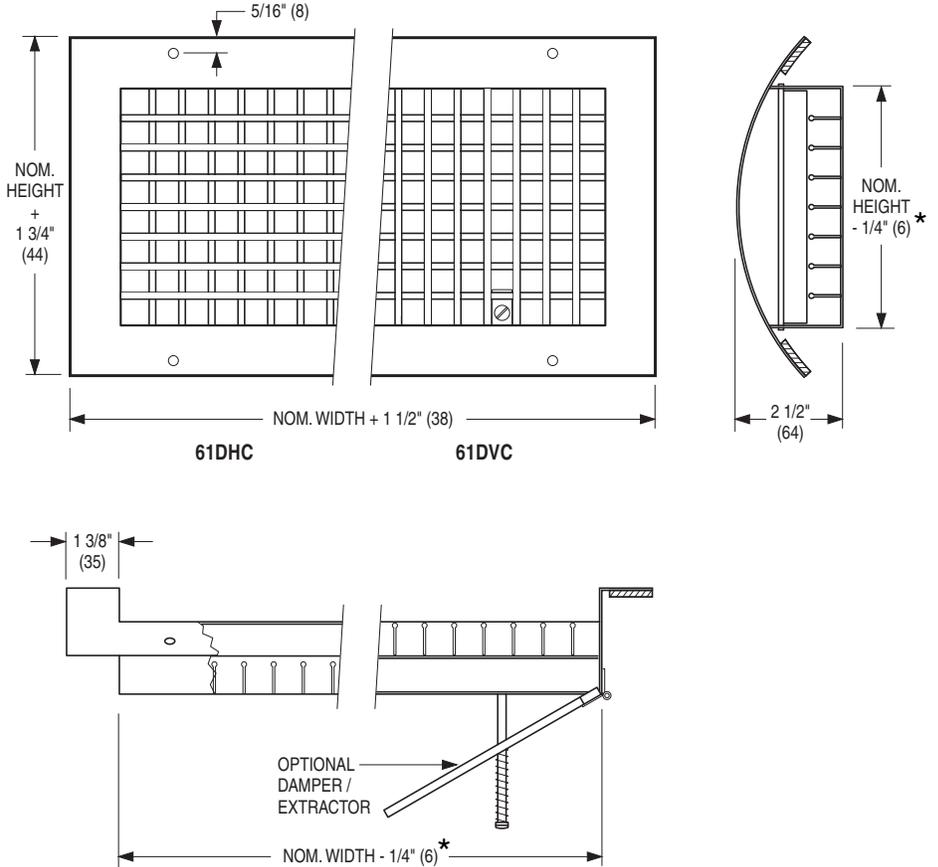
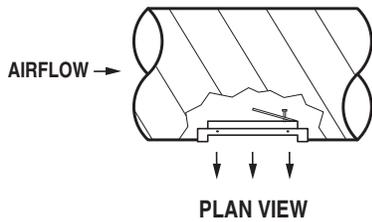
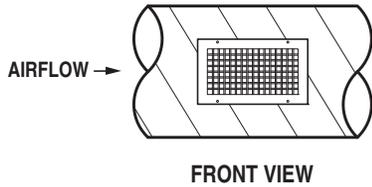
6100C-1



STEEL CURVED SPIRAL DUCT GRILLES
 TRUE FULL RADIUS DESIGN
 DOUBLE DEFLECTION • ADJUSTABLE BLADES
MODELS: 61DHC AND 61DVC

MODEL 61DHC
 Double Deflection
 Horizontal Front Blades

MODEL 61DVC
 Double Deflection
 Vertical Front Blades



Available Sizes

Grille Width Min. - Max.	Grille 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.

* Opening = Nominal + 1/4" (6) with DEX Damper/Extractor option.

Important:

Grilles are custom fabricated to fit only a single specified duct diameter.

DESCRIPTION:

- Nailor's unique curved spiral duct grille design offers an architecturally superior appearance and saves installation time and money by directly mounting to the duct and hence eliminating the need to fabricate stand-off saddles for standard grilles.
- Construction: Unique architectural single piece corrosion-resistant steel frame design is rolled to match required duct radius, eliminating unsightly non-aligned butted corners. Two sets of perpendicular "teardrop" blades on 3/4" (19) centers provide air control in two planes. Individually adjustable blades are friction pivoted to ensure positive positioning when adjusted to desired deflection setting.
- A thick foam gasket is provided as standard to ensure a tight seal to duct.
- Standard fastening is Type A screw holes.
- Standard finish is AW Appliance White.

Options:

DEX Damper/Extractor* (Air scoop) (For supply air applications).

Finish:

AL Aluminum.

MI Mill.

SP Special. Specify _____.

SCHEDULE TYPE

PROJECT

ENGINEER

CONTRACTOR

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 22 - 11

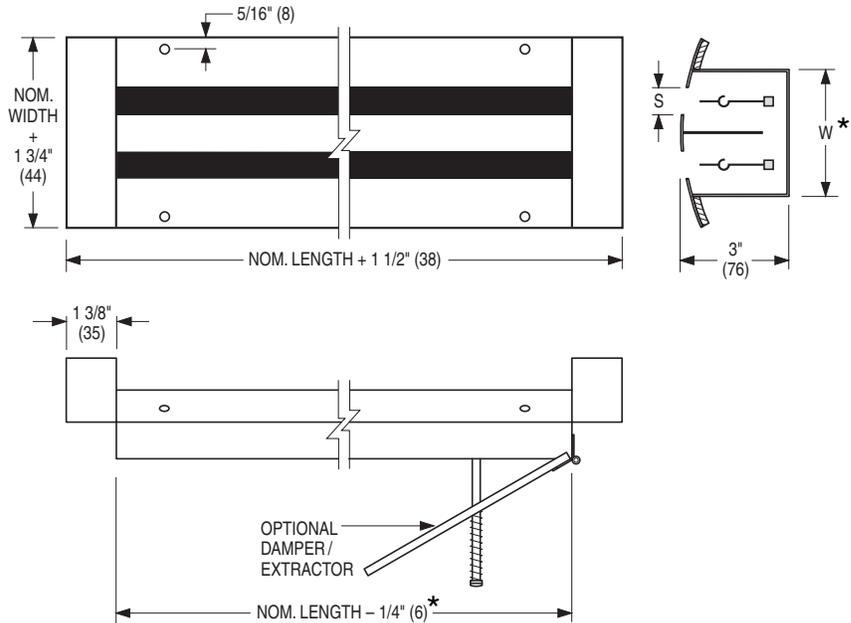
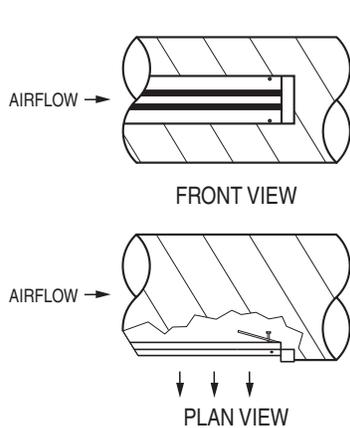
6100C

4 - 12 - 11

6100C-2



STEEL CURVED SPIRAL DUCT GRILLES
 TRUE FULL RADIUS DESIGN
 LINEAR SLOT FACE
MODELS: 61L50C, 61L75C AND 61L10C



Available Slot Widths:

- 61L50C** 1/2" (13) Slot
- 61L75C** 3/4" (19) Slot
- 61L10C** 1" (25) Slot

Standard No. of Slots:

1, 2, 3 or 4

Available Lengths:

12" through 72"
 (nominal 1" increments only)

Available Sizes

No. of Slots	61L50C		61L75C		61L10C	
	S = 1/2" (13)		S = 3/4" (19)		S = 1" (25)	
	W	Duct Dia. Min. - Max.	W	Duct Dia. Min. - Max.	W	Duct Dia. Min. - Max.
1	1 3/4 (44)	6 - 36 (152-914)	2 (51)	6 - 36 (152-914)	2 1/4 (57)	6 - 36 (152-914)
2	3 (76)	6 - 36 (152-914)	3 1/2 (89)	6 - 36 (152-914)	4 (102)	6 - 36 (152-914)
3	4 1/4 (108)	8 - 36 (203-914)	5 (127)	8 - 36 (203-914)	5 3/4 (146)	8 - 36 (203-914)
4	5 1/2 (140)	8 - 36 (203-914)	6 1/2 (165)	10 - 36 (254-914)	7 1/2 (191)	10 - 36 (254-914)

W = Nominal Width (duct opening)

* Opening = Nominal + 1/4" (6) with DEX Damper/Extractor option.

S = Slot Width

Duct diameters in even sizes only.

Important:

Grilles are custom fabricated to fit only a single specified duct diameter.

DESCRIPTION:

1. Nailor's unique curved spiral duct grille design offers an architecturally superior appearance and saves installation time and money by directly mounting to the duct and hence eliminating the need to fabricate stand-off saddles for standard grilles.
2. Construction: Unique corrosion resistant steel frame design is rolled to match required duct radius. Extruded aluminum "Wiper Blade" pattern controllers with gasket edge seal. The volume and direction of the discharge air can be adjusted by moving the pattern controllers.
3. A thick foam gasket is provided as standard to ensure a tight seal to duct.
4. Standard fastening is Type A screw holes.
5. Standard finish is AW Appliance White frame with black pattern controllers.

Options:

- DEX Damper/Extractor* (Air scoop) (For supply air applications).

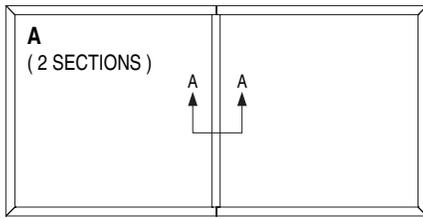
Finish:

- SP Special. Specify _____.

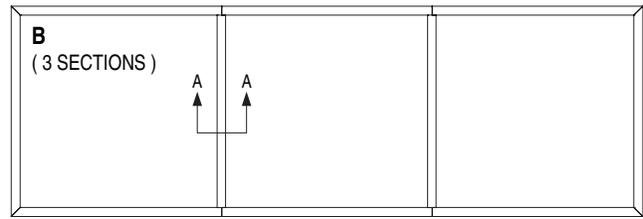
SCHEDULE TYPE		Dimensions are in inches (mm).			
PROJECT					
ENGINEER		DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR		9 - 22 - 11	6100C	2 - 1 - 11	6100C-5



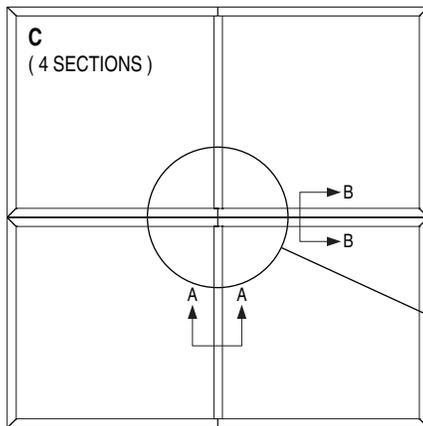
**OVERSIZED GRILLE CONSTRUCTION
ALUMINUM SUPPLY AND RETURN GRILLES
FOR DUCTS OR OPENINGS LARGER THAN 48" (1219)
MODEL SERIES: 5100 AND 7100**



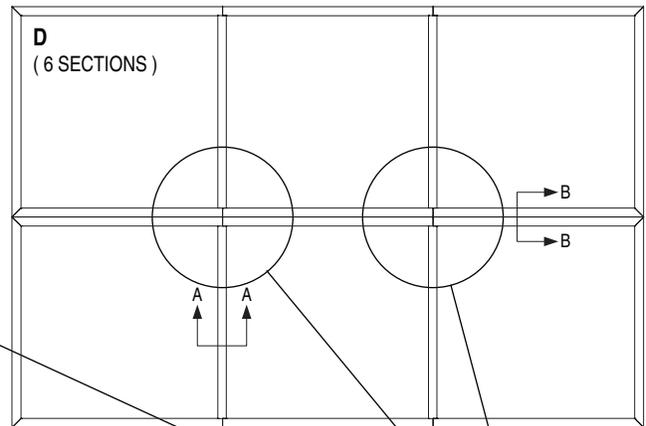
OVER 48" (1219) IN WIDTH UP TO 96" x 48" (2438 x 1219)



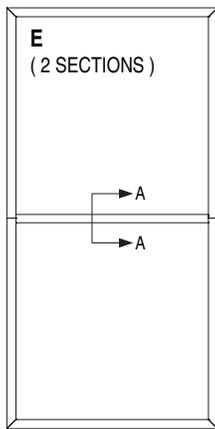
OVER 96" (2438) IN WIDTH UP TO 144" x 48" (3658 x 1219)



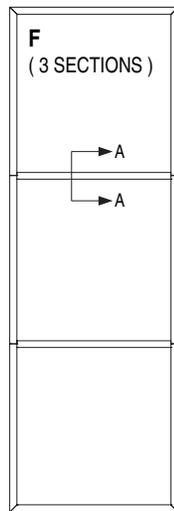
OVER 48" (1219) IN WIDTH AND HEIGHT UP TO 96" x 96" (2438 x 2438)



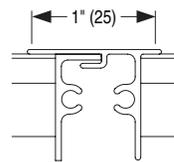
OVER 96" x 48" (2438 x 1219) UP TO 144" x 96" (3658 x 2438)



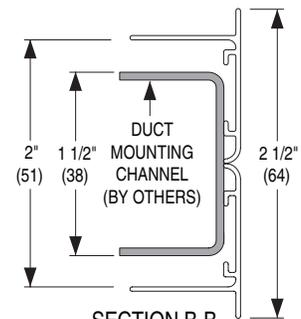
UP TO 48" (1219) IN WIDTH AND
UP TO 96" (2438) IN HEIGHT



UP TO 48" (1219) IN WIDTH AND
UP TO 144" (3658) IN HEIGHT



SECTION A-A
FACE MULLION WITH
ALIGNMENT TAB
OVERLAP DETAIL



SECTION B-B
DOUBLE FRAME / BORDER DETAIL

NOTES:

- Maximum single section size is 48" x 48" (1219 x 1219).
- Detail A-A frame joints are sheared and butted together. Alignment tabs interlock and keep the face surfaces parallel.
- Detail B-B shows two separate grille frames butted together.
- Mounting countersunk screw holes are located per the standard screw hole chart on grille frames, but not on face mullion.
- Sections ship loose for field installation.
- Additional structural support (Duct mounting support channels by others) is required for diagrams C and D.
- This detail applies to Type S Surface Mount Frame/Border only.

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	4 - 27 - 20	GR	NEW	OG-1-A

Dimensions are in inches (mm)



Nailor[®]
Industries Inc.

STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

Nailor offers a selection of standard colors and finishes available on our grilles, registers and diffusers. For painted finishes, our state-of-the-art paint systems provide environmentally friendly finishing solutions with uniform coverage and coating thickness. The result is an exceptionally durable finish that resists scratching, corrosion and general wear. Additional facilities for special requirements, as well as a selection of anodized or brushed finishes, complete our ability to provide unmatched beauty and durability for any application.

NAILOR POWDER COAT PROPERTIES

FILM THICKNESS	2.0 to 3.0 mils
HARDNESS	2 H
IMPACT RESISTANCE	Direct: 160 inch - lbs. Reverse 160 inch - lbs.
SALT SPRAY	1000 hours

ELECTROCOATING PROPERTIES

FILM THICKNESS	.8 to 1.2 mils
HARDNESS	HB TO H
IMPACT RESISTANCE	80 inch - lbs
SALT SPRAY	100 hours



POWDER COAT

Nailor's powder coat is a high-tech thermosetting polyester powder coating with superior physical properties that provide excellent color and gloss retention. The finish offers extreme durability and hardness that resists scratching, chipping and general wear. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse before a final powder coat finish is applied and baked. The environmentally friendly Nailor powder coat system assures uniform coverage and color consistency resulting in a long lasting superior finish. Colors, including simulated anodizing, which is far more economical than color anodizing, can be selected from Nailor's standard color chart or non-standard colors and can be matched from sample chips provided to Nailor.

ELECTROCOATING

E-Coat is an environmentally friendly coating that provides complete coverage and a wide range of performance properties, formulated to meet corrosion, durability and other performance specifications. Electrocoating is a highly automated process in which paint is electrically deposited onto a metal foundation. Film build thickness is uniform and overall application efficiencies are in excess of 90%. Paint is consistent on all part-to-part surfaces, preventing sags, runs or drips. E-Coat offers flexibility, better first yield pass and quicker production times compared to other forms of paint applications. Electrocoating is an excellent solution that offers superior properties and uniform finish.

CLEAR ANODIZING (Aluminum products only)

Clear anodizing is a clear oxide coating that exemplifies an aluminum surface's natural oxide coating producing a hard, scratch resistant surface that is resistant to general wear and mild chemicals. The process provides a natural looking, virtually maintenance free finish that will endure for many years.

COLOR ANODIZING (Aluminum products only)

Color anodizing is an electrolytic process where, after standard anodizing procedures, colored metallic pigments penetrate the oxide surface pores producing a corrosion resistant, colorfast finish. The process results in a natural metallic appearance that requires little maintenance.

BRUSHED AND CLEAR COAT

Available on specific aluminum products (consult applicable product page for availability). Surface is brushed to achieve a scratch finish texture before being degreased and chemically cleaned. A clear lacquer coating is then applied to provide a durable protective finish.

#4 BRUSHED SATIN POLISHED (Stainless Steel products only)

Surface is polished to ASTM A480 #4 standard to achieve a bright durable finish that is resistant to mild chemicals and corrosion. A final coating is not required due to the inherent anti-corrosion properties of the stainless steel.

PRIME COAT

Prime coat provides a stable base for painting in the field. Surface pretreatment includes degreasing and a chemical cleaning before an alkyd prime coat is applied. After a thorough cleaning for dust, etc. that can contaminate the final finish and cause premature flaking or peeling, finish coat should be field applied as soon as possible.

PAINT PREPARED ALUMINUM (Aluminum products only)

Allows for field applied paint. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse. Finish coat should be field applied as soon as possible.

MILL FINISH

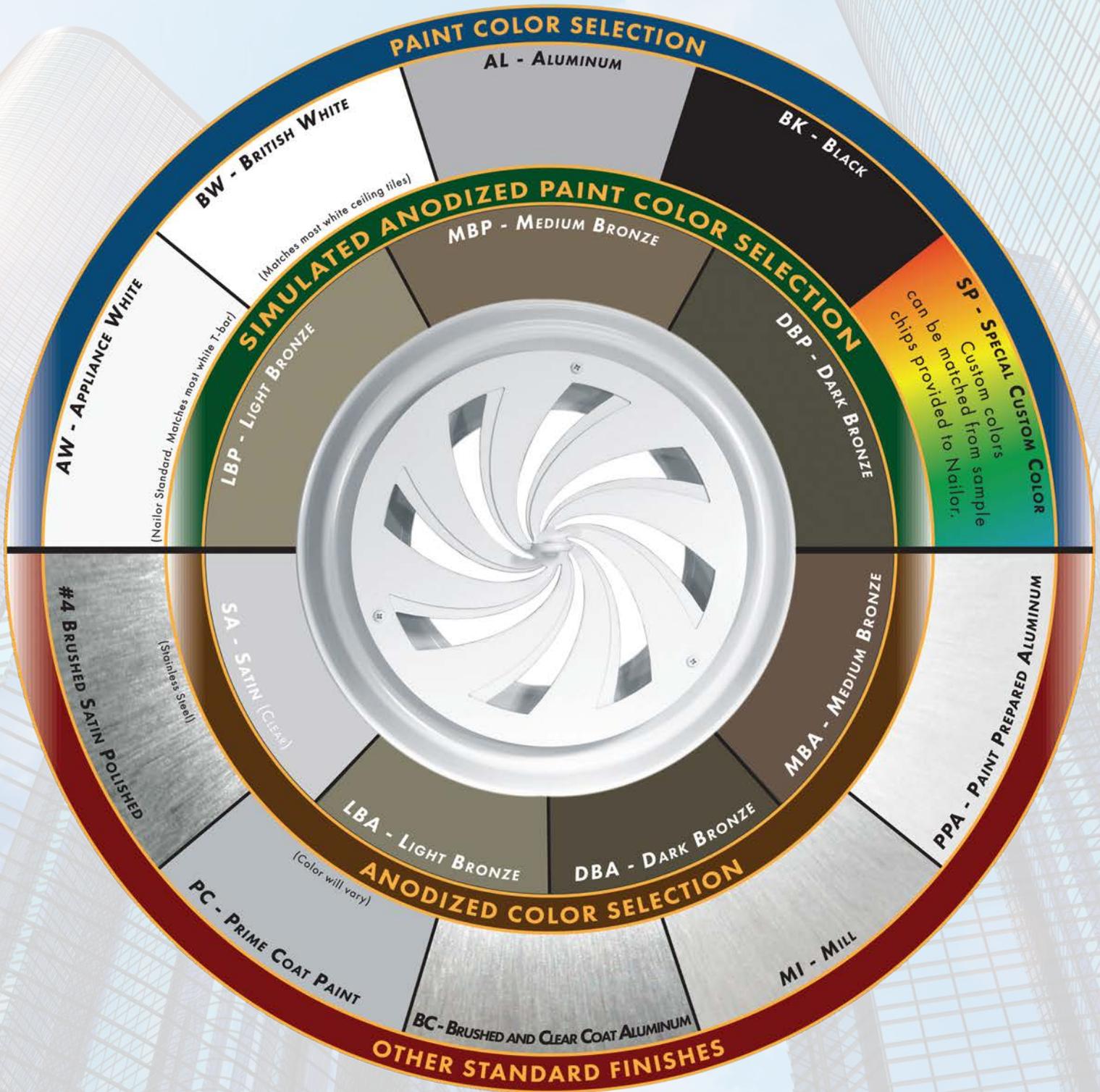
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



Nailor[®]
Industries Inc.

STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

The following standard colors and finishes are available on applicable Nailor air distribution products. Consult individual product pages for availability



The pictured finishes have been represented as best as possible within printing limitations. However, actual finish may vary. Contact your Nailor representative for a color chip sample on the material specified for a more accurate representation.

DBK - Black (for registers ordered with factory mounted dampers) - **BA** - Perforated Diffusers (4300 series only) Appliance White (AW) face with black back pan and pattern controllers.

"Complete Air Control and Distribution Solutions."

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PERFORMANCE DATA:

MODEL SERIES: 45DLC SPIRAL DUCT DRUM LOUVER AND 45DL DRUM LOUVER • 10" (254)

SIZE	Neck Velocity, FPM Velocity Pressure	270 .005	400 .012	536 .018	670 .028	800 .040	940 .055	1075 .072	1340 .112	1610 .162
18 x 10	Airflow, CFM	336	504	672	840	1008	1176	1344	1680	2016
	Total Pressure	.02	.05	.08	.10	.18	.19	.25	.40	.60
	Throw	15-20-32	21-28-45	26-35-52	32-42-64	34-44-74	36-50-78	44-54-90	48-65-100	54-72-110
	Noise Criteria	–	–	–	26	33	39	44	52	60
24 x 10	Airflow, CFM	450	675	900	1125	1350	1575	1800	2250	2700
	Total Pressure	.02	.05	.08	.13	.18	.20	.3	.45	.7
	Throw	19-25-40	25-35-52	30-42-64	35-46-74	38-52-80	44-54-94	50-65-100	54-72-110	64-82-125
	Noise Criteria	–	–	21	30	34	43	48	58	63
30 x 10	Airflow, CFM	560	840	1120	1400	1680	1960	2240	2800	3360
	Total Pressure	.02	.05	.08	.13	.18	.24	.31	.48	.7
	Throw	22-28-46	29-40-62	36-50-82	42-55-86	46-62-96	50-68-100	54-72-110	65-82-130	72-92-145
	Noise Criteria	–	–	23	31	38	46	50	58	64
36 x 10	Airflow, CFM	670	1005	1340	1675	2010	2345	2680	3350	4020
	Total Pressure	.02	.04	.08	.13	.18	.25	.32	.48	.70
	Throw	23-32-52	30-43-68	36-50-82	44-60-100	50-68-105	56-76-115	60-80-120	70-90-140	80-115-180
	Noise Criteria	–	–	25	35	40	47	52	60	69
42 x 10	Airflow, CFM	785	1177	1570	1962	2355	2748	3140	3925	4710
	Total Pressure	.02	.05	.08	.13	.19	.26	.34	.52	.75
	Throw	25-34-54	32-45-70	40-54-86	46-62-100	54-72-110	60-80-120	66-86-140	75-100-150	88-115-180
	Noise Criteria	–	–	26	35	42	48	53	60	69
48 x 10	Airflow, CFM	895	1342	1790	2238	2685	3133	3580	4475	5370
	Total Pressure	.02	.04	.08	.13	.17	.24	.32	.48	.68
	Throw	26-34-58	33-48-73	43-58-94	53-74-108	56-76-116	60-80-120	66-90-140	78-105-150	90-110-180
	Noise Criteria	–	–	26	35	41	47	52	61	68
54 x 10	Airflow, CFM	1010	1515	2020	2525	3030	3535	4040	5050	6060
	Total Pressure	.02	.05	.08	.13	.17	.24	.31	.46	.68
	Throw	28-36-60	35-50-75	50-68-100	55-76-110	60-80-120	65-88-135	70-95-145	90-120-180	95-120-190
	Noise Criteria	–	–	27	35	42	48	53	61	68
60 x 10	Airflow, CFM	1120	1120	2240	2800	3360	3920	4480	5600	6720
	Total Pressure	.02	.05	.08	.13	.17	.23	.30	.46	.68
	Throw	28-36-60	40-54-72	50-68-100	58-76-120	65-84-130	70-92-140	78-100-150	90-120-180	100-13-190
	Noise Criteria	–	–	27	35	42	48	53	61	68
72 x 10	Airflow, CFM	1345	2018	2690	3362	4035	4707	5380	6725	8070
	Total Pressure	.02	.05	.08	.13	.19	.26	.35	.52	.75
	Throw	34-44-72	44-58-90	54-70-110	62-82-130	70-92-140	78-100-160	85-110-170	98-130-200	110-140-230
	Noise Criteria	–	–	28	37	44	48	54	63	70

Performance Notes:

1. All pressures are in inches w.g..
2. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
3. Total pressure, throw and Noise Criteria are based on 45DL1 at 0° deflection. Correction factors for other conditions are listed in the chart.

5. Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (–) in space indicates an Noise Criteria of less than 15.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Correction Factor

Model	Deflection	TP	Throw	NC
45DL1	15°	x 1.5	x .85	+ 4
	30°	x 1.9	x .73	+ 9
45DL2	0°	x 1.3	—	—
	15°	x 1.7	x .85	+4
	30°	x 2.2	x .73	+9

PERFORMANCE DATA:

MODEL SERIES: 45DLC SPIRAL DUCT DRUM LOUVER AND 45DL DRUM LOUVER • 12" (305)

SIZE	Neck Velocity, FPM Velocity Pressure	265 .004	400 .010	530 .018	660 .027	795 .039	930 .054	1060 .070	1325 .109	1600 .160
18 x 12	Airflow, CFM	400	600	800	1000	1200	1400	1600	2000	2400
	Total Pressure	.033	.08	.14	.22	.30	.44	.55	.86	1.04
	Throw	14-20-34	19-27-46	24-34-60	30-40-70	35-47-78	38-56-95	44-60-100	50-70-120	55-80-130
	Noise Criteria	–	–	–	25	32	36	40	47	52
24 x 12	Airflow, CFM	530	795	1060	1325	1590	1855	2120	2650	3180
	Total Pressure	.03	.07	.13	.20	.29	.42	.53	.82	1.10
	Throw	17-24-42	24-34-54	26-37-64	35-47-78	38-56-95	45-65-110	52-72-120	65-85-140	72-98-160
	Noise Criteria	–	–	–	27	32	35	40	46	52
30 x 12	Airflow, CFM	665	998	1330	1662	1993	2328	2660	3324	3990
	Total Pressure	.03	.06	.10	.14	.21	.28	.35	.58	.80
	Throw	18-25-44	26-37-64	33-45-76	37-54-90	45-65-110	50-70-120	58-80-130	67-92-155	85-110-180
	Noise Criteria	–	–	21	27	32	38	40	48	54
36 x 12	Airflow, CFM	800	1200	1600	2000	2400	2800	3200	4000	4800
	Total Pressure	.03	.05	.08	.12	.17	.22	.30	.46	.63
	Throw	22-31-54	30-44-74	38-54-90	46-64-110	50-70-120	58-80-135	65-90-150	78-105-180	90-120-200
	Noise Criteria	–	–	22	28	34	38	42	50	55
42 x 12	Airflow, CFM	930	1395	1860	2325	2790	3255	3720	4650	5580
	Total Pressure	.03	.05	.10	.16	.22	.31	.40	.62	.80
	Throw	25-35-60	34-46-80	44-58-100	50-70-120	58-80-130	65-90-150	75-100-170	85-115-200	100-140-230
	Noise Criteria	–	–	26	31	35	41	45	52	55
48 x 12	Airflow, CFM	1065	1598	2130	2663	3195	3728	4260	5326	6390
	Total Pressure	.03	.06	.08	.14	.20	.28	.36	.56	.80
	Throw	25-33-53	35-46-80	44-56-96	52-70-115	58-78-125	60-98-150	75-100-170	88-120-210	100-140-230
	Noise Criteria	–	–	26	31	36	41	45	52	55
54 x 12	Airflow, CFM	1200	1800	2400	3000	3600	4200	4800	6000	7200
	Total Pressure	.03	.06	.11	.17	.25	.34	.42	.68	.95
	Throw	28-37-65	37-50-88	46-62-108	56-75-130	65-85-145	72-98-160	80-105-180	95-125-220	110-150-250
	Noise Criteria	–	–	24	31	36	41	45	52	55
60 x 12	Airflow, CFM	1350	2025	2700	3375	4050	4725	5400	6750	8100
	Total Pressure	.03	.06	.11	.17	.22	.30	.38	.58	.83
	Throw	28-37-65	42-56-100	47-63-110	54-74-130	64-84-150	72-100-170	80-110-190	92-120-240	110-140-260
	Noise Criteria	–	–	20	28	33	37	42	48	54
72 x 12	Airflow, CFM	1600	2400	3200	4000	4800	5600	6400	8000	9600
	Total Pressure	.03	.06	.11	.17	.22	.30	.38	.58	.83
	Throw	32-42-72	42-54-100	52-72-120	62-74-140	72-100-170	82-110-190	92-120-240	110-140-260	120-160-290
	Noise Criteria	–	–	25	31	36	41	45	52	55

Performance Notes:

1. All pressures are in inches w.g..
2. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
3. Total pressure, throw and Noise Criteria are based on 45DL1 at 0° deflection. Correction factors for other conditions are listed in the chart.

5. Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (–) in space indicates a Noise Criteria of less than 15.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Correction Factor

Model	Deflection	TP	Throw	NC
45DL1	15°	x 1.5	x .85	+ 4
	30°	x 1.9	x .73	+ 9
45DL2	0°	x 1.3	—	—
	15°	x 1.7	x .85	+4
	30°	x 2.2	x .73	+9

PERFORMANCE DATA:

MODEL SERIES: 45DLC SPIRAL DUCT DRUM LOUVER AND 45DL DRUM LOUVER • 15" (381)

SIZE	Neck Velocity, FPM Velocity Pressure	312 .006	470 .014	625 .024	780 .038	935 .054	1090 .074	1250 .097	1560 .152	1870 .218
18 x 15	Airflow, CFM	585	878	1170	1463	1755	2048	2340	2925	3510
	Total Pressure	.02	.05	.09	.14	.21	.27	.36	.55	.82
	Throw	15-21-36	21-30-52	28-40-67	32-45-75	37-51-94	42-59-100	47-65-110	58-82-140	66-92-160
	Noise Criteria	–	–	22	28	33	38	42	49	54
24 x 15	Airflow, CFM	780	1170	1560	1950	2340	2730	3120	3900	4680
	Total Pressure	.02	.04	.08	.12	.19	.25	.34	.50	.68
	Throw	18-25-45	25-35-62	33-46-80	40-55-100	45-65-110	54-75-130	60-84-140	70-100-170	80-110-190
	Noise Criteria	–	–	22	28	34	39	43	50	55
30 x 15	Airflow, CFM	975	1463	1950	2438	2925	3413	3900	4875	5850
	Total Pressure	.02	.05	.08	.13	.20	.25	.34	.50	.72
	Throw	21-30-52	30-42-74	38-54-97	45-64-110	54-75-130	60-84-140	66-94-160	80-110-190	92-130-225
	Noise Criteria	–	–	22	29	35	40	44	51	56
36 x 15	Airflow, CFM	1170	1755	2340	2925	3510	4095	4680	5850	7020
	Total Pressure	.025	.05	.10	.15	.20	.26	.36	.55	.78
	Throw	23-33-58	32-45-80	40-56-100	47-65-110	56-76-130	62-88-150	70-100-170	80-110-190	110-130-220
	Noise Criteria	–	–	25	32	37	42	45	52	58
42 x 15	Airflow, CFM	1365	2048	2730	3413	4095	4778	5460	6825	8190
	Total Pressure	.02	.05	.10	.15	.22	.30	.38	.60	.85
	Throw	27-37-66	38-52-92	47-65-110	56-76-130	62-88-150	70-100-170	80-110-190	100-130-220	110-150-260
	Noise Criteria	–	–	25	31	36	41	44	51	57
48 x 15	Airflow, CFM	1565	2348	3130	3913	4695	5478	6260	7825	9390
	Total Pressure	.02	.05	.08	.13	.18	.25	.33	.50	.8
	Throw	28-40-70	40-55-100	50-70-120	60-82-140	70-98-160	80-110-190	90-130-220	110-150-260	120-180-300
	Noise Criteria	–	–	25	32	37	42	45	52	58
54 x 15	Airflow, CFM	1760	2640	3520	4400	5280	6160	7040	8800	10560
	Total Pressure	.025	.05	.10	.16	.21	.30	.40	.65	.85
	Throw	30-44-75	44-60-110	54-78-130	65-90-160	75-105-180	90-120-210	10-135-240	120-160-280	130-180-310
	Noise Criteria	–	–	26	32	37	42	45	52	58
60 x 15	Airflow, CFM	1950	2925	3900	4875	5850	6825	7800	9750	11700
	Total Pressure	.02	.045	.08	.12	.17	.25	.30	.50	.75
	Throw	34-45-76	44-60-110	54-78-130	65-90-160	75-105-180	90-120-210	10-135-240	120-160-280	130-180-310
	Noise Criteria	–	–	26	33	38	43	46	53	59
72 x 15	Airflow, CFM	2345	3518	4690	5863	7035	8208	9380	11725	14070
	Total Pressure	.02	.05	.10	.14	.20	.26	.33	.55	.80
	Throw	37-50-90	50-70-120	62-88-160	76-100-190	90-125-220	100-140-250	115-150-280	130-190-330	160-220-400
	Noise Criteria	–	–	27	34	39	44	47	54	60

Performance Notes:

1. All pressures are in inches w.g..
2. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
3. Total pressure, throw and Noise Criteria are based on 45DL1 at 0° deflection. Correction factors for other conditions are listed in the chart.

5. Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (–) in space indicates an Noise Criteria of less than 15.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Correction Factor

Model	Deflection	TP	Throw	NC
45DL1	15°	x 1.5	x .85	+ 4
	30°	x 1.9	x .73	+ 9
45DL2	0°	x 1.3	—	—
	15°	x 1.7	x .85	+4
	30°	x 2.2	x .73	+9

PERFORMANCE DATA:

MODEL SERIES: 45DL1 SPIRAL DUCT DRUM LOUVER AND 45DL2 DRUM LOUVER • 6" (152)

SIZE	Neck Velocity, FPM Velocity Pressure	280 .005	420 .011	560 .020	700 .031	840 .044	980 .060	1120 .078	1400 .122	1680 .176
9 x 6	Airflow, CFM	105	158	210	263	315	368	420	525	630
	Total Pressure	.022	.06	.10	.16	.21	.30	.40	.60	.90
	Throw	7-10-18	10-14-24	13-18-30	15-21-35	17-23-40	20-28-46	22-30-50	26-35-56	30-40-66
	Noise Criteria	–	–	–	22	27	32	36	41	46
12 x 6	Airflow, CFM	140	210	280	350	420	490	560	700	840
	Total Pressure	.03	.06	.10	.16	.23	.32	.40	.63	.90
	Throw	8-11-18	12-16-27	16-21-34	18-24-40	20-26-45	23-31-50	25-34-55	30-40-66	35-47-76
	Noise Criteria	–	–	–	23	28	33	37	42	47
18 x 6	Airflow, CFM	210	315	420	525	630	735	840	1050	1260
	Total Pressure	.022	.06	.10	.16	.24	.33	.40	.60	.90
	Throw	12-16-27	17-22-36	21-27-45	25-32-52	28-37-62	31-42-70	34-46-76	42-54-90	48-62-101
	Noise Criteria	–	–	–	24	29	34	38	43	49
24 x 6	Airflow, CFM	280	420	560	700	840	980	1120	1400	1680
	Total Pressure	.03	.06	.10	.16	.24	.32	.40	.63	.90
	Throw	16-21-33	21-28-44	26-33-54	31-40-64	35-45-72	38-50-80	42-52-88	48-64-100	52-71-110
	Noise Criteria	–	–	–	26	31	36	40	47	52
30 x 6	Airflow, CFM	350	525	700	875	1050	1225	1400	1750	2100
	Total Pressure	.022	.06	.10	.16	.21	.32	.40	.63	.90
	Throw	19-24-38	25-32-50	30-38-60	35-45-70	39-50-78	43-56-86	47-60-94	54-70-100	60-78-120
	Noise Criteria	–	–	20	27	32	37	41	48	53
36 x 6	Airflow, CFM	420	630	840	1050	1260	1470	1680	2100	2520
	Total Pressure	.03	.06	.10	.16	.22	.30	.40	.60	.90
	Throw	20-26-40	26-35-54	32-41-64	36-46-74	40-52-82	44-55-90	48-62-100	54-72-115	62-80-130
	Noise Criteria	–	–	21	28	33	38	42	49	55
48 x 6	Airflow, CFM	565	848	1130	1412	1695	1978	2260	2825	3390
	Total Pressure	.03	.06	.10	.16	.24	.32	.40	.63	.90
	Throw	24-31-39	31-42-63	37-49-76	44-56-89	48-62-100	50-70-110	58-74-120	65-82-130	74-95-150
	Noise Criteria	–	–	22	29	34	39	43	50	56
60 x 6	Airflow, CFM	700	1050	1400	1750	2100	2450	2800	3500	4200
	Total Pressure	.03	.06	.10	.16	.24	.32	.40	.63	.90
	Throw	28-36-54	34-46-66	43-55-84	49-63-96	52-70-110	60-75-120	65-82-130	75-90-150	84-105-170
	Noise Criteria	–	–	23	30	35	40	44	51	57

Performance Notes:

- All pressures are in inches w.g..
- Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- Total pressure, throw and Noise Criteria are based on 45DL1 at 0° deflection. Correction factors for other conditions are listed in the chart.

- Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (–) in space indicates a Noise Criteria of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Correction Factor

Model	Deflection	TP	Throw	NC
45DL1	15°	x 1.5	x .85	+ 4
	30°	x 1.9	x .73	+ 9
45DL2	0°	x 1.3	—	—
	15°	x 1.7	x .85	+ 4
	30°	x 2.2	x .73	+ 9

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				
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				
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				
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				
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				
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				
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				
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				
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				
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				
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				
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				

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 9-9-13	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 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 16-20-28 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

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°	8-13-25	13-18-29	15-22-32	18-25-36	21-27-38	24-29-42	27-32-46	29-36-50	32-38-55		
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°	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		
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°	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		
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°	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		
				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°	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		
				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°	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		
				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°	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		
				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°	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		
				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°	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		
				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°	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		
				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°	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		
				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°	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		
				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°	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		

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 – 2023.

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

PERFORMANCE DATA:

CURVED SPIRAL DUCT LINEAR SLOT • "WIPER BLADE" PATTERN CONTROLLERS

MODEL: 61L50C • 1/2" (13) SLOT WIDTH

Slot	Airflow, CFM per Ft.	5	10	15	20	25	30	35	40
1 Slot	Static Pressure	.003	.014	.027	.051	.083	.116	.158	.215
	Noise Criteria	-	-	-	-	16	21	25	28
	Throw	1-1-2	2-3-6	3-5-9	4-6-11	4-6-12	4-7-13	5-7-14	5-8-15
2 Slot	Airflow, CFM per Ft.	10	20	30	40	50	60	70	80
	Static Pressure	.003	.014	.027	.051	.083	.116	.158	.215
	Noise Criteria	-	-	-	-	18	24	28	31
3 Slot	Airflow, CFM per Ft.	15	30	45	60	75	90	105	120
	Static Pressure	.003	.14	.027	.051	.083	.116	.158	.215
	Noise Criteria	-	-	-	16	21	26	30	33
4 Slot	Airflow, CFM per Ft.	20	40	60	80	100	120	140	160
	Static Pressure	.003	.014	.027	.051	.083	.116	.158	.215
	Noise Criteria	-	-	-	17	22	27	31	34
Throw		2-3-6	4-6-11	5-8-16	7-10-20	7-11-22	8-12-24	9-13-26	10-15-29

MODEL: 61L75C • 3/4" (19) SLOT WIDTH

Slot	Airflow, CFM per Ft.	5	10	20	25	30	35	40	50
1 Slot	Static Pressure	.003	.012	.026	.042	.065	.092	.125	.174
	Noise Criteria	-	-	-	-	16	20	23	28
	Throw	1-1-2	2-3-6	3-5-10	4-6-12	4-7-13	5-7-14	5-8-15	5-8-16
2 Slot	Airflow, CFM per Ft.	10	20	40	50	60	70	80	100
	Static Pressure	.003	.012	.026	.042	.065	.092	.125	.174
	Noise Criteria	-	-	-	-	19	23	26	31
3 Slot	Airflow, CFM per Ft.	15	30	60	75	90	105	120	150
	Static Pressure	.003	.12	.026	.042	.065	.092	.125	.174
	Noise Criteria	-	-	-	16	21	25	28	33
4 Slot	Airflow, CFM per Ft.	20	40	80	100	120	140	160	200
	Static Pressure	.003	.012	.026	.042	.065	.092	.125	.174
	Noise Criteria	-	-	-	17	22	26	29	34
Throw		2-3-5	4-6-11	6-9-18	7-11-21	9-13-25	9-14-27	10-15-30	11-16-31

NC Correction Factors for Various Lengths

Length (ft.)	2	3	4	5	6
Supply	- 3	- 1	0	+ 1	+ 2
Return	0	+ 2	+ 3	+ 3	+ 4

Throw Correction Factors for Various Lengths

Length (ft.)	2	3	4	5	6
Multiplier	0.70	0.85	1.0	1.125	1.25

Performance Notes:

- All pressures are in inches w.g..
- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions. Exposed duct (no ceiling effect).
- Horizontal throws are based on the same direction of all slots. Pattern controllers set in upright (non-directing) position.
- Throw values are based on a 4 ft. section. For other lengths, use the correction factors table above.
- Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (-) in space denotes a NC level of less than 15.
- Noise Criteria are based on a 4 ft. section, horizontal throw. For other lengths, use the correction factors table above.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

PERFORMANCE DATA:

CURVED SPIRAL DUCT LINEAR SLOT • "WIPER BLADE" PATTERN CONTROLLERS

MODEL: 61L10C • 1" (25) SLOT WIDTH

	Airflow, CFM per Ft.	10	15	25	30	40	50	55	65
1 Slot	Static Pressure	.002	.009	.024	.038	.057	.082	.113	.148
	Noise Criteria	-	-	-	-	19	24	27	31
	Throw	1-1-2	3-4-8	4-6-12	4-7-13	5-8-15	5-8-16	6-9-17	6-9-18
2 Slot	Airflow, CFM per Ft.	20	30	50	60	80	100	110	130
	Static Pressure	.002	.009	.024	.038	.057	.082	.113	.148
	Noise Criteria	-	-	-	15	22	27	30	34
3 Slot	Airflow, CFM per Ft.	30	45	75	90	120	150	165	195
	Static Pressure	.002	.009	.024	.038	.057	.082	.113	.148
	Noise Criteria	-	-	-	17	24	29	32	36
4 Slot	Airflow, CFM per Ft.	40	60	100	120	160	200	220	260
	Static Pressure	.002	.009	.024	.038	.057	.082	.113	.148
	Noise Criteria	-	-	-	19	25	30	33	37
	Throw	2-4-7	4-7-13	7-11-21	9-13-26	10-15-29	10-15-30	12-17-34	12-18-36

NC Correction Factors for Various Lengths

Length (ft.)	2	3	4	5	6
Supply	- 3	- 1	0	+ 1	+ 2
Return	0	+ 2	+ 3	+ 3	+ 4

Throw Correction Factors for Various Lengths

Length (ft.)	2	3	4	5	6
Multiplier	0.70	0.85	1.0	1.125	1.25

Performance Notes:

1. All pressures are in inches w.g..
2. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions. Exposed duct (no ceiling effect).
3. Horizontal throws are based on the same direction of all slots. Pattern controllers set in upright (non-directing) position.

4. Throw values are based on a 4 ft. section. For other lengths, use the correction factors table above.
5. Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (-) in space denotes a NC level of less than 15.

6. Noise Criteria are based on a 4 ft. section, horizontal throw. For other lengths, use the correction factors table above.
7. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.