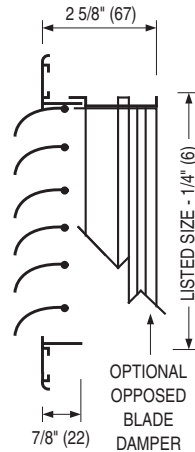
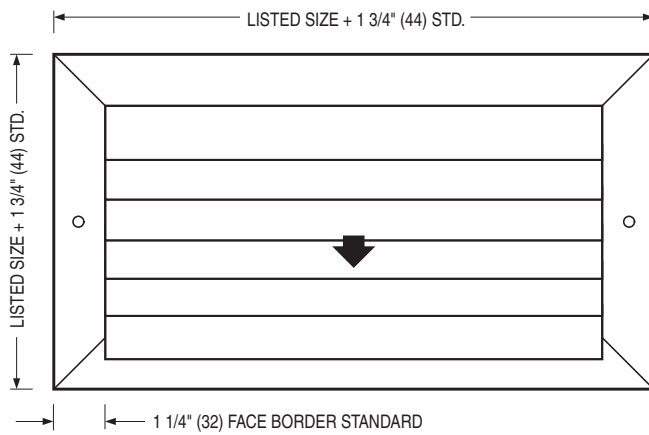


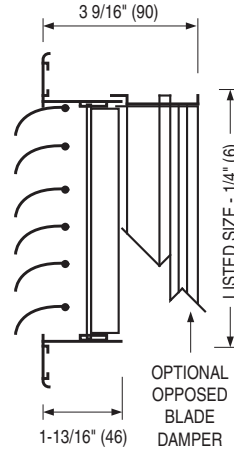
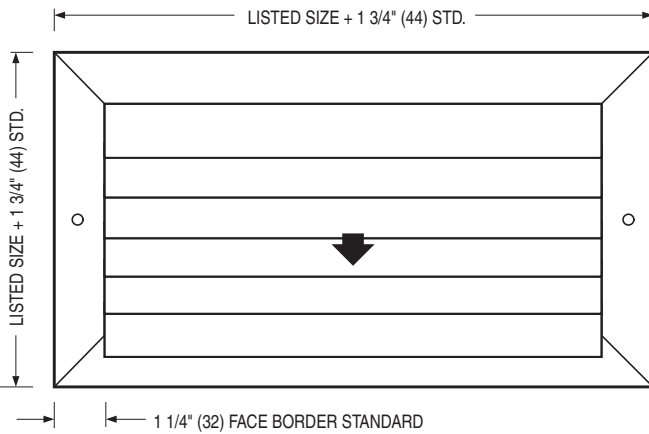


**ALUMINUM CURVED BLADE
GRILLES & REGISTERS
ONE-WAY DISCHARGE PATTERN
MODELS: 51C(-O) AND 51CD(-O) TYPE S**



MODEL 51C
Curved Blade Grille
1-Way Discharge Pattern


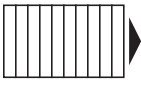
MODEL 51C-O
Curved Blade Register
1-Way Discharge Pattern
(Includes O. B. Damper)



MODEL 51CD
Curved Blade Grille with
rear directional vanes
1-Way Discharge Pattern

MODEL 51CD-O
Curved Blade Register with
rear directional vanes
1-Way Discharge Pattern
(Includes O. B. Damper)

DESCRIPTION:

- Construction: Extruded aluminum blades and frame. Curved vanes on 1" (25) centers. Frame is mechanically inter-locked for strength with hairline miters. Rear adjustable equalizing vanes on 51CD models are "teardrop" on 3/4" (19) centers. Roll-formed steel opposed blade damper on registers has screwdriver slot operator.
- The min. size is 6" x 4" (152 x 102). The maximum size is 36" x 36" (914 x 914).
- Discharge Pattern Selection:**
 1A 1B


- Type S Surface mount standard frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.
- Curved blades are individually adjustable and regulate angle of discharge.
- Standard fastening is Type A countersunk screwholes.
- Standard finish is AW Appliance White.

OPTIONS:

- Finish:
 SP Special _____ .
- Fastening:
 Type C Concealed mounting straps
 Type D Concealed screwholes in neck
 Type N None
- Type FB Fixed Curved Blades
- OA Aluminum opposed blade damper (model suffix)
- Type NF Narrow frame with 1" (25) face border and a 3/4" (19) overlap margin. O.A. flange to flange dim. = listed size + 1 1/4" (32).
- PF Plaster sub-frame
- IS Insect screen
- Other _____ .

SCHEDULE TYPE:

PROJECT:

ENGINEER:

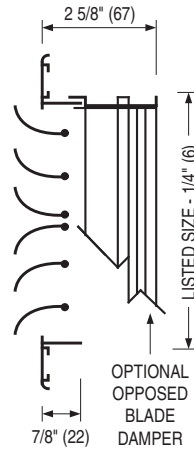
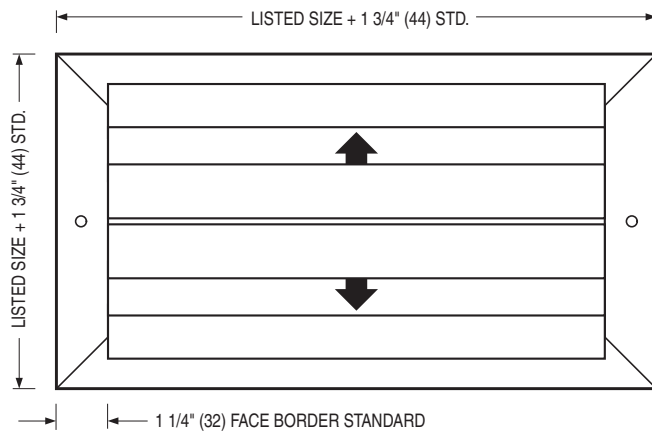
CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 1 - 11	5100	5100-6/15-3-00R	51C-1

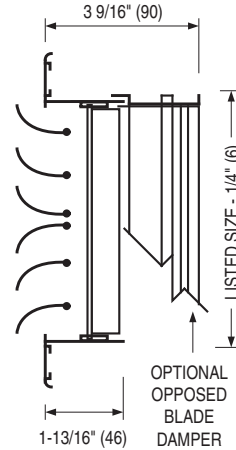
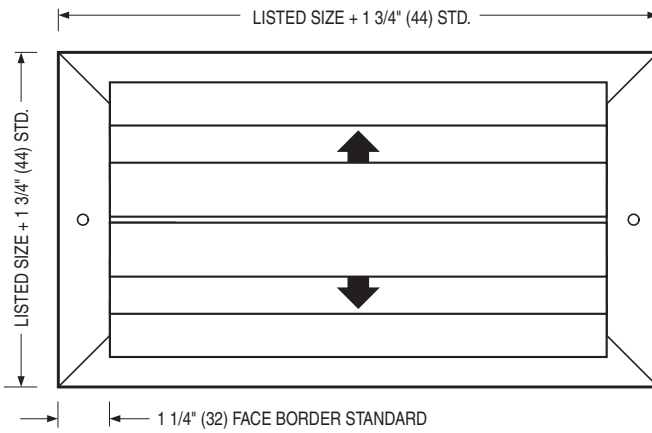


**ALUMINUM CURVED BLADE
GRILLES & REGISTERS
TWO-WAY DISCHARGE PATTERN
MODELS: 51C(-O) AND 51CD(-O) TYPE S**



MODEL 51C
Curved Blade Grille
2-Way Discharge Pattern

MODEL 51C-O
Curved Blade Register
2-Way Discharge Pattern
(Includes O. B. Damper)



MODEL 51CD
Curved Blade Grille with
rear directional vanes
2-Way Discharge Pattern

MODEL 51CD-O
Curved Blade Register with
rear directional vanes
2-Way Discharge Pattern
(Includes O. B. Damper)

DESCRIPTION:

- Construction: Extruded aluminum blades and frame. Curved vanes on 1" (25) centers. Frame is mechanically inter-locked for strength with hairline miters. Rear adjustable equalizing vanes on 51CD models are "teardrop" on 3/4" (19) centers. Roll-formed steel opposed blade damper on registers has screwdriver slot operator.
- The min. size is 6" x 4" (152 x 102). The maximum size is 36" x 36" (914 x 914).
- Discharge Pattern Selection:**
 2A 2B 2C 2D
- Type S Surface mount standard frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.
- Curved blades are individually adjustable and regulate angle of discharge.
- Standard fastening is Type A countersunk screwholes.
- Standard finish is AW Appliance White.

OPTIONS:

- Finish:
 SP Special _____ .
- Fastening:
 Type C Concealed mounting straps
 Type D Concealed screwholes in neck
 Type N None
- Type FB Fixed Curved Blades
- OA Aluminum opposed blade damper (model suffix)
- Type NF Narrow frame with 1" (25) face border and a 3/4" (19) overlap margin. O.A. flange to flange dim. = listed size + 1 1/4" (32).
- PF Plaster sub-frame
- IS Insect screen
- Other _____ .

SCHEDULE TYPE:

PROJECT:

ENGINEER:

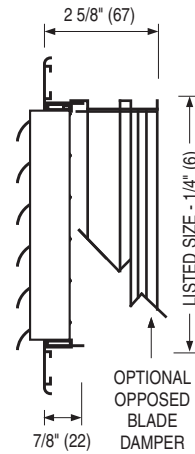
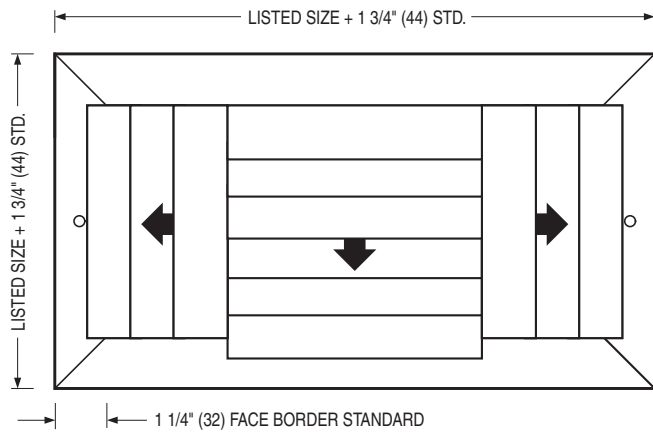
CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 1 - 11	5100	5100-7/15-3-00R	51C-2

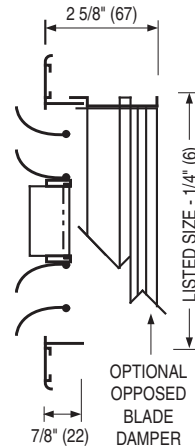
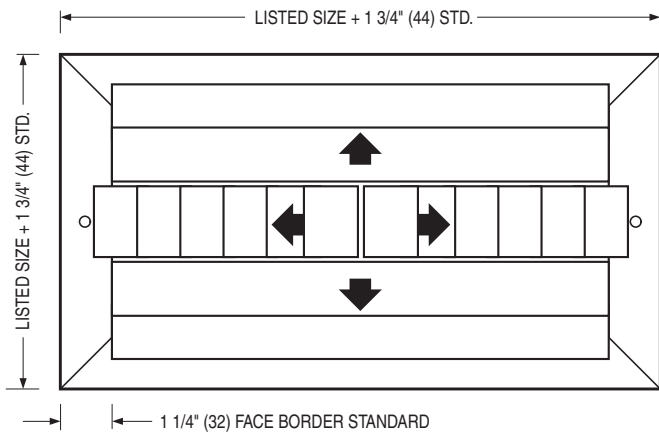


ALUMINUM CURVED BLADE GRILLES & REGISTERS THREE AND FOUR-WAY DISCHARGE PATTERN MODELS: 51C(-O) TYPE S



MODEL 51C
Curved Blade Grille
3-Way Discharge Pattern

MODEL 51C-O
Curved Blade Register
3-Way Discharge Pattern
(Includes O. B. Damper)



MODEL 51C
Curved Blade Grille
4-Way Discharge Pattern

MODEL 51C-O
Curved Blade Register
4-Way Discharge Pattern
(Includes O. B. Damper)

DESCRIPTION:

- Construction: Extruded aluminum blades and frame. Curved vanes on 1" (25) centers. Frame is mechanically inter-locked for strength with hairline miters. Roll-formed steel opposed blade damper on registers has screwdriver slot operator.
- The min. size is 6" x 4" (152 x 102). The max. size is 36" x 36" (914 x 914).
- Discharge Pattern Selection:**
 - 3A 3B 3C 3A 4A 4B 4C
- Type S Surface mount standard frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.
- Curved blades are individually adjustable and regulate angle of discharge.
- Standard fastening is Type A countersunk screwholes.
- Standard finish is AW Appliance White.

OPTIONS:

- Finish:
 - SP Special _____ .
- Fastening:
 - Type C Concealed mounting straps
 - Type D Concealed screwholes in neck
 - Type N None
- Type FB Fixed Curved Blades
- OA Aluminum opposed blade damper (model suffix)
- Type NF Narrow frame with 1" (25) face border and a 3/4" (19) overlap margin. O.A. flange to flange dim. = listed size + 1 1/4" (32).
- PF Plaster sub-frame
- IS Insect screen
- Other _____ .

Dimensions are in inches (mm).

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

DATE

B SERIES

SUPERSEDES

DRAWING NO.

2 - 1 - 11

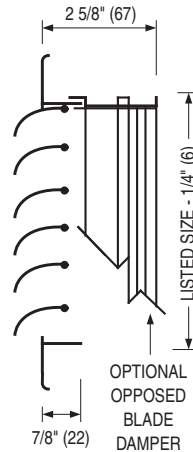
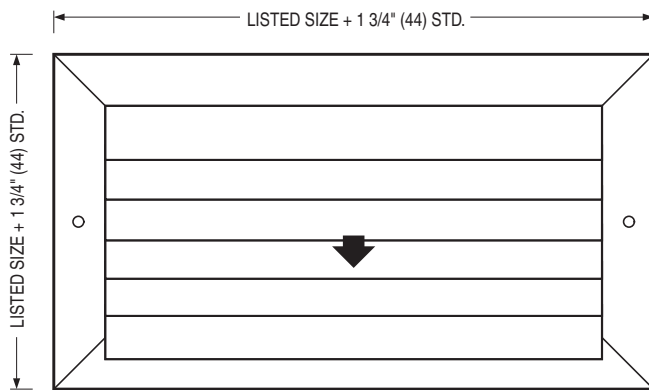
5100

5100-8/15-3-00R

51C-3

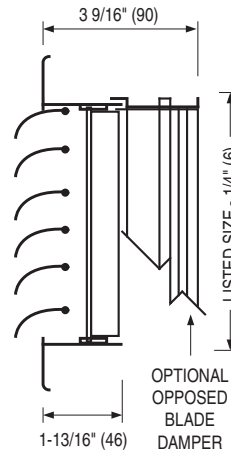
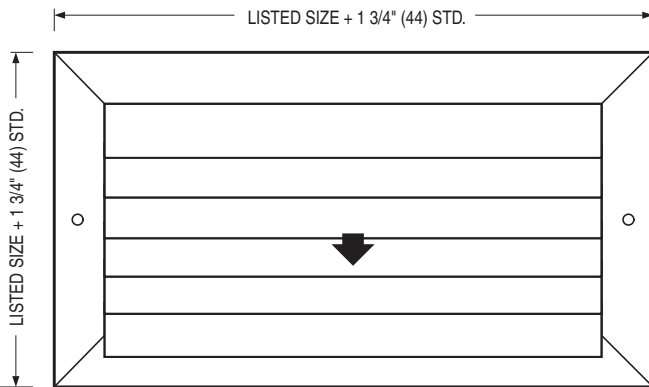


**STEEL CURVED BLADE
GRILLES & REGISTERS
ONE-WAY DISCHARGE PATTERN
MODELS: 61C(-O) AND 61CD(-O) TYPE S**



MODEL 61C
Curved Blade Grille
1-Way Discharge Pattern


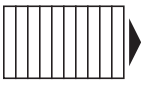
MODEL 61C-O
Curved Blade Register
1-Way Discharge Pattern
(Includes O. B. Damper)



MODEL 61CD
Curved Blade Grille with
rear directional vanes
1-Way Discharge Pattern

MODEL 61CD-O
Curved Blade Register with
rear directional vanes
1-Way Discharge Pattern
(Includes O. B. Damper)

DESCRIPTION:

- Construction: Corrosion-resistant steel. Curved vanes on 1" (25) centers. Frame is mechanically inter-locked for strength with hairline miters. Rear adjustable equalizing vanes on 61CD models are "teardrop" on 3/4" (19) centers. Roll-formed steel opposed blade damper on registers has screwdriver slot operator.
- The min. size is 6" x 4" (152 x 102). The maximum size is 36" x 36" (914 x 914).
- Discharge Pattern Selection:**
 1A 1B


- Type S Surface mount frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.
- Curved blades are individually adjustable and regulate angle of discharge.
- Standard fastening is Type A countersunk screwholes.
- Standard finish is AW Appliance White.

OPTIONS:

- Finish:
 SP Special _____.
- Fastening:
 Type C Concealed mounting straps
 Type D Concealed screwholes in neck
 Type N None
- Type FB Fixed Curved Blades
- PF Plaster sub-frame
- IS Insect screen
- Other _____.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

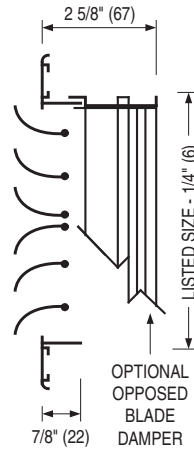
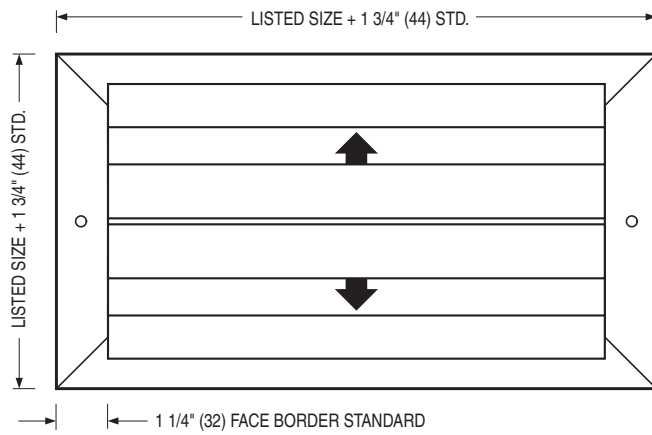
CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 1 - 11	6100	6100-6/13-10-00R	61C-1

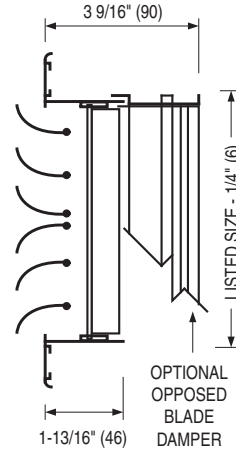
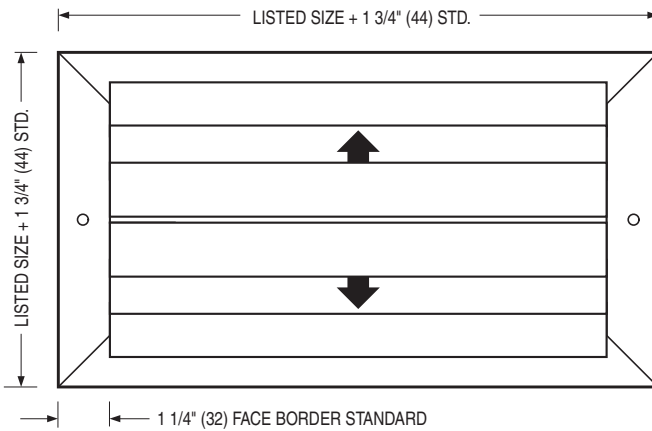


**STEEL CURVED BLADE
GRILLES & REGISTERS
TWO-WAY DISCHARGE PATTERN
MODELS: 61C(-O) AND 61CD(-O) TYPE S**



MODEL 61C
Curved Blade Grille
2-Way Discharge Pattern

MODEL 61C-O
Curved Blade Register
2-Way Discharge Pattern
(Includes O. B. Damper)



MODEL 61CD
Curved Blade Grille with
rear directional vanes
2-Way Discharge Pattern

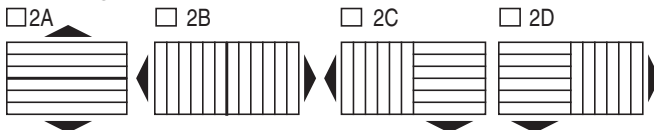
MODEL 61CD-O
Curved Blade Register with
rear directional vanes
2-Way Discharge Pattern
(Includes O. B. Damper)

DESCRIPTION:

1. Construction: Corrosion-resistant steel. Curved vanes on 1" (25) centers. Frame is mechanically inter-locked for strength with hairline miters. Rear adjustable equalizing vanes on 61CD models are "teardrop" on 3/4" (19) centers. Roll-formed steel opposed blade damper on registers has screwdriver slot operator.

2. The min. size is 6" x 4" (152 x 102). The maximum size is 36" x 36" (914 x 914).

3. Discharge Pattern Selection:



4. Type S Surface mount frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.

5. Curved blades are individually adjustable and regulate angle of discharge.

6. Standard fastening is Type A countersunk screwholes.

7. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 - SP Special _____ .
2. Fastening:
 - Type C Concealed mounting straps
 - Type D Concealed screwholes in neck
 - Type N None
3. Type FB Fixed Curved Blades
4. PF Plaster sub-frame
5. IS Insect screen
6. Other _____ .

SCHEDULE TYPE:

PROJECT:

ENGINEER:

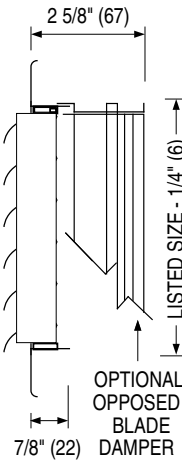
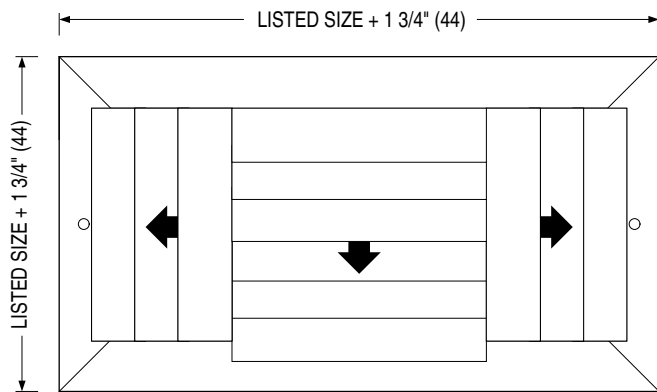
CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 1 - 11	6100	6100-7/13-10-00R	61C-2

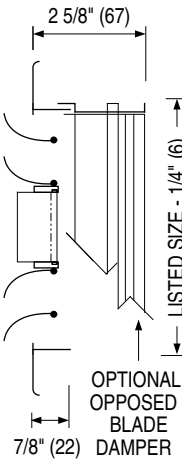
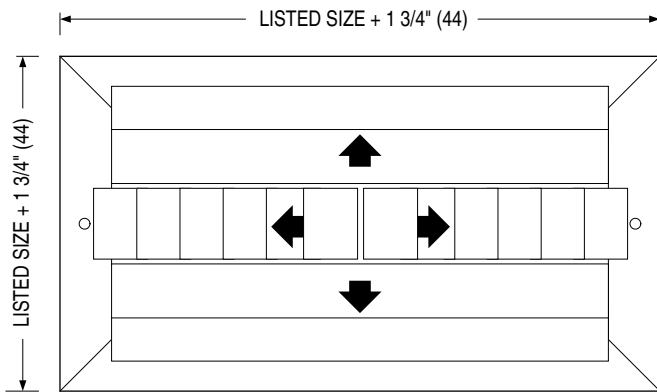


STEEL CURVED BLADE GRILLES & REGISTERS
THREE AND FOUR-WAY DISCHARGE PATTERN
MODELS: 61C(-O) TYPE S



MODEL 61C
 Curved Blade Grille
 3-Way Discharge Pattern

MODEL 61C-O
 Curved Blade Register
 3-Way Discharge Pattern
 (Includes O. B. Damper)

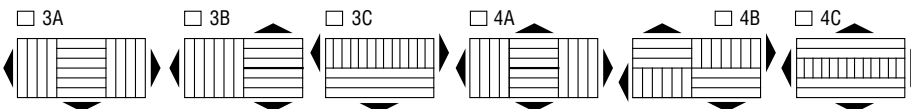


MODEL 61C
 Curved Blade Grille
 4-Way Discharge Pattern

MODEL 61C-O
 Curved Blade Register
 4-Way Discharge Pattern
 (Includes O. B. Damper)

DESCRIPTION:

1. Construction: Corrosion resistant steel. Curved vanes on 1" (25) centers. Roll formed frame mechanically inter-locked with reinforced mitered corners for strength. Roll-formed steel opposed blade damper on registers has screwdriver slot operator.
2. The minimum size is 6" x 4" (152 x 102). The maximum size is 36" x 36" (914 x 914).
3. **Discharge Pattern Selection:**



4. Type S Surface mount frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.
5. Curved blades are individually adjustable and regulate angle of discharge.
6. Standard fastening is Type A countersunk screwholes.
7. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 - SP Special _____ .
2. Fastening:
 - Type C Concealed mounting straps
 - Type D Concealed screwholes in neck
 - Type N None
3. Type FB Fixed Curved Blades
4. PF Plaster sub-frame
5. IS Insect screen
6. Other _____ .

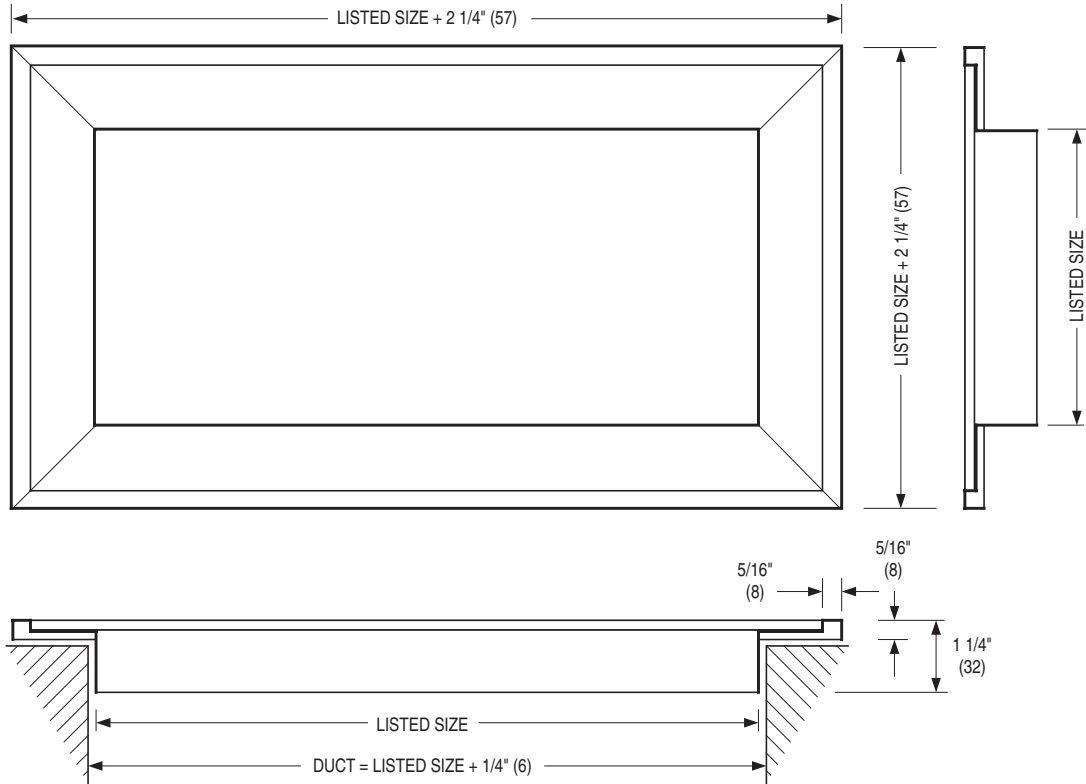
SCHEDULE TYPE:	
PROJECT:	
ENGINEER:	
CONTRACTOR:	

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 1 - 11	6100	6100-8/13-10-00R	61C-3

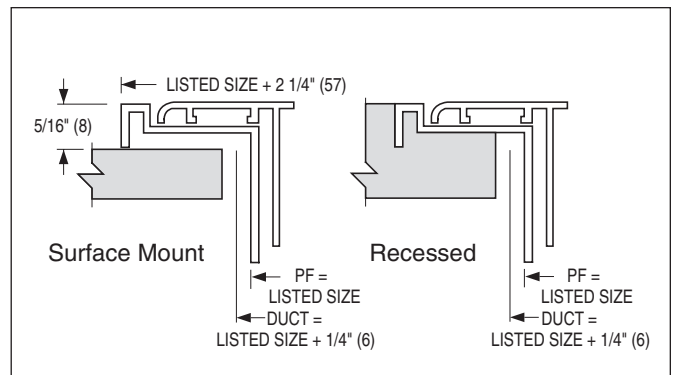


**GRILLES AND REGISTERS ACCESSORY
PLASTER/MOUNTING FRAME**
(FOR USE WITH MODEL SERIES 5100, 6100, AND 7100)
MODEL: PF



DESCRIPTION:

1. Construction: Extruded aluminum frame with staked and mitered mitered corners for strength.
2. Model PF Plaster frame provides a convenient and professional method for finishing off a grille or register opening. It provides a stable anchor for attachment, while enabling the grille or register to be readily removed and replaced without disturbing the finished surface of the wall or ceiling.
3. Frames can be installed before plastering and installed in a recessed fashion or surface mounted afterwards on plaster or other material.
4. Duct openings should be 1/4" (6) larger than nominal listed size to accommodate frame.
5. Finish: Baked enamel finish to match grille or register.



SCHEDULE TYPE:		Dimensions are in inches (mm).			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	10 - 24 - 01	ACC-GR	5100-11	ACC-PF	

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

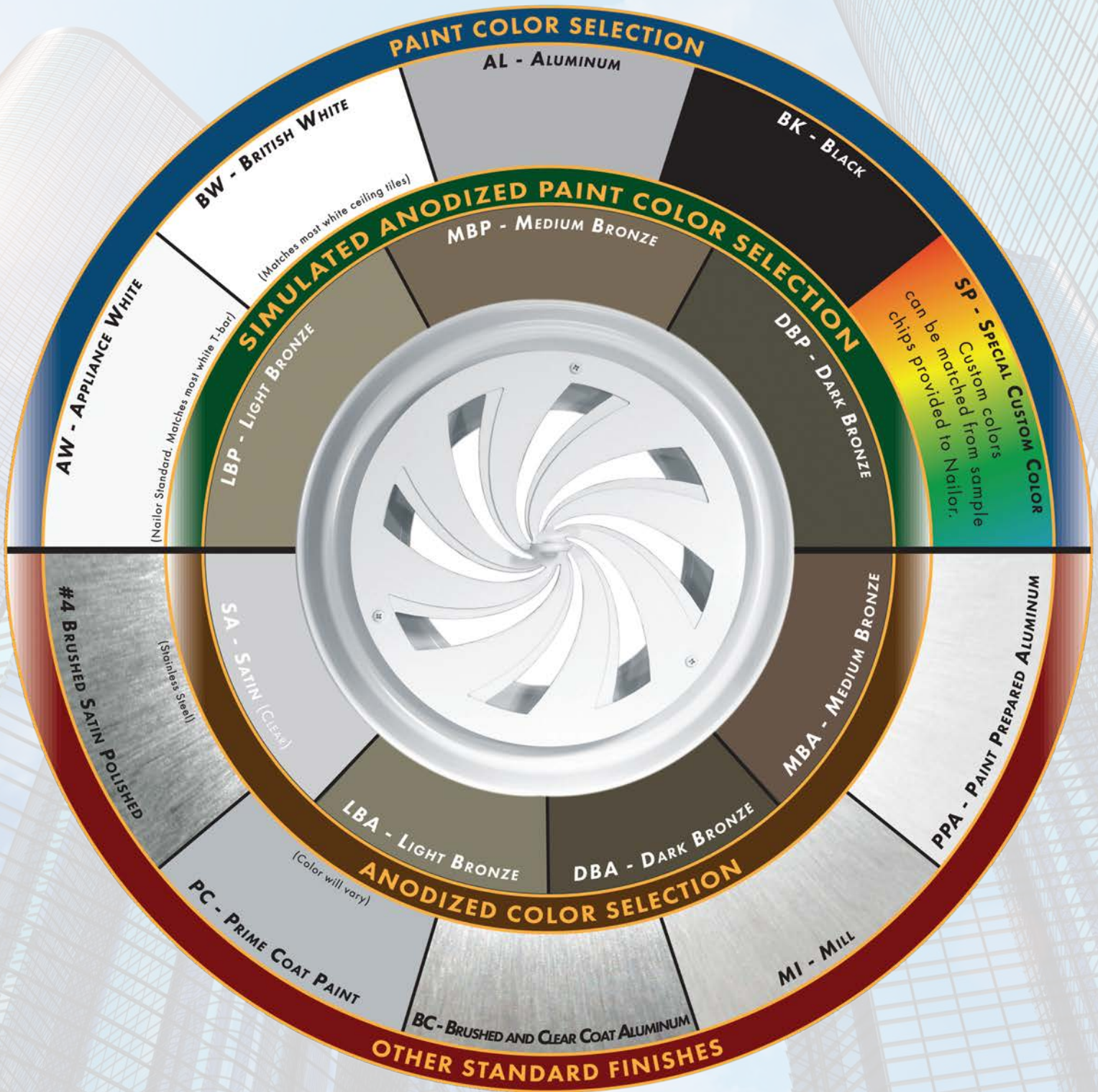
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



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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www.nailor.com

PERFORMANCE DATA:

CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM										
		100	200	300	400	500	600	700	800	900	1000	
.12	6 x 4	Total Pressure	.003	.015	.032	.058	.094	.136	.182	.234	.302	.369
		CFM	10	25	35	50	60	70	85	95	110	120
		Noise Criteria	-	-	-	-	20	23	27	30	33	36
		Throw	4-Way 3-Way 2-Way 1-Way				5-7-11 5-7-12 5-8-13 7-10-16	5-8-13 9-6-14 7-10-16 8-12-18	7-10-16 7-11-16 8-12-18 10-14-22	8-12-18 8-12-19 9-14-21 11-16-26	9-13-20 10-14-22 10-16-24 12-18-29	10-15-23 10-16-24 12-17-27 14-20-33
.16	8 x 4	Total Pressure	-	-	-	15	20	25	29	31	34	37
		CFM	15	30	50	65	80	95	110	130	145	160
		Noise Criteria	-	-	-	15	20	25	29	31	34	37
		Throw	4-Way 3-Way 2-Way 1-Way		4-6-9 4-6-10 5-7-11 5-8-13	5-7-12 5-8-13 6-9-14 7-11-16	6-9-14 6-9-15 7-11-16 9-13-20	7-11-16 8-12-18 9-13-20 10-16-24	8-12-19 9-14-21 10-15-23 12-17-28	9-14-21 10-15-23 11-16-26 13-19-31	10-16-24 11-16-26 12-18-29 15-21-35	12-17-27 12-18-29 14-20-32 16-24-39
.20	10 x 4 6 x 6	Total Pressure	-	-	-	15	21	26	29	32	35	38
		CFM	20	40	60	80	100	120	140	160	180	200
		Noise Criteria	-	-	-	15	21	26	29	32	35	38
		Throw	4-Way 3-Way 2-Way 1-Way		4-6-9 4-6-10 5-7-11 6-9-14	5-8-13 6-9-14 5-9-15 8-11-17	6-9-15 7-10-16 8-11-17 9-14-21	8-11-17 8-12-19 9-14-21 11-16-25	9-13-20 10-14-22 9-14-21 12-18-29	10-15-23 11-16-25 10-16-24 14-20-33	11-16-26 12-17-28 13-19-31 16-23-37	12-17-28 13-19-31 15-21-39 17-25-41
.26	12 x 4 8 x 6	Total Pressure	-	-	-	16	22	27	30	33	36	39
		CFM	25	50	80	105	130	155	180	210	235	260
		Noise Criteria	-	-	-	16	22	27	30	33	36	39
		Throw	4-Way 3-Way 2-Way 1-Way	3-4-7 3-4-7 3-5-8 4-6-10	4-6-10 5-7-11 5-7-12 6-9-15	6-9-14 6-9-15 7-10-16 8-12-18	7-10-16 8-11-17 8-12-19 10-15-23	8-12-19 9-13-20 8-12-19 12-17-27	10-14-22 10-15-23 11-16-26 13-19-31	11-16-25 11-16-26 13-18-30 15-22-36	12-17-29 13-18-30 14-20-33 16-25-40	13-19-31 14-20-33 16-23-37 17-27-44
.30	14 x 4	Total Pressure	-	-	-	17	22	27	31	34	37	40
		CFM	30	60	90	120	150	180	210	240	270	300
		Noise Criteria	-	-	-	17	22	27	31	34	37	40
		Throw	4-Way 3-Way 2-Way 1-Way	3-4-7 3-5-8 3-5-8 4-6-10	4-6-10 5-7-11 5-8-13 6-9-15	6-9-14 6-9-15 7-11-16 8-12-19	7-11-16 8-12-18 8-12-19 10-16-24	7-11-16 8-12-18 9-13-20 10-16-24	9-13-20 9-14-21 10-15-23 12-17-28	10-15-23 10-16-24 14-20-32 14-20-33	12-18-29 13-19-31 16-23-37 17-26-42	14-20-32 15-21-34 16-23-38 19-28-46
.35	16 x 4 10 x 6 8 x 8	Total Pressure	-	-	-	18	23	28	31	35	37	40
		CFM	35	70	105	140	175	210	245	280	315	350
		Noise Criteria	-	-	-	18	23	28	31	35	37	40
		Throw	4-Way 3-Way 2-Way 1-Way	3-4-7 3-5-8 4-6-9 4-6-10	5-7-11 5-7-12 5-8-13 7-10-16	6-9-15 6-9-15 7-11-16 9-13-20	8-11-17 8-12-18 8-12-19 10-16-24	9-13-20 10-14-22 10-16-24 12-18-29	10-16-24 11-16-25 10-16-24 15-21-34	12-17-27 14-18-29 14-20-32 17-24-39	13-18-30 14-20-32 15-22-36 17-26-43	14-20-33 15-22-36 16-23-40 19-30-48
.40	18 x 4 12 x 6	Total Pressure	-	-	-	19	24	29	32	35	38	41
		CFM	40	80	120	160	200	240	280	320	360	400
		Noise Criteria	-	-	-	19	24	29	32	35	38	41
		Throw	4-Way 3-Way 2-Way 1-Way	3-5-8 3-5-8 4-6-9 5-7-11	5-7-11 5-8-13 6-9-14 7-10-16	6-9-15 7-10-16 8-11-17 9-14-21	8-12-18 8-12-19 9-14-21 11-16-25	9-14-21 10-15-23 11-16-25 13-18-30	11-16-25 11-16-26 12-18-29 15-21-35	12-17-28 13-18-30 14-20-33 16-25-40	13-19-31 15-21-34 16-23-37 18-28-45	15-21-34 16-23-37 17-25-41 20-31-49
.45	20 x 4 14 x 6 10 x 8	Total Pressure	-	-	-	19	25	29	32	36	39	42
		CFM	45	90	135	180	225	270	315	360	405	450
		Noise Criteria	-	-	-	19	25	29	32	36	39	42
		Throw	4-Way 3-Way 2-Way 1-Way	3-5-8 3-5-8 4-6-9 5-7-11	5-7-12 5-8-13 6-9-14 7-11-16	6-9-15 7-11-16 8-12-18 9-14-21	8-12-18 9-13-20 10-14-22 11-16-26	10-14-22 10-15-23 10-14-22 13-19-31	11-16-25 12-17-27 11-16-26 15-22-36	12-18-29 13-19-31 13-18-30 17-25-41	14-20-32 15-21-35 16-23-38 19-28-46	15-22-36 16-23-38 17-26-43 21-32-51
.55	24 x 4 16 x 6 12 x 8	Total Pressure	-	-	-	20	25	29	33	37	39	42
		CFM	55	110	165	220	275	330	385	440	495	550
		Noise Criteria	-	-	-	20	25	29	33	37	39	42
		Throw	4-Way 3-Way 2-Way 1-Way	2-3-4 2-3-5 2-3-5 2-4-6	3-5-8 4-6-9 4-6-10 5-7-12	5-7-12 5-8-13 6-9-15 8-11-17	7-10-16 8-11-17 8-12-19 10-14-22	8-12-19 9-14-21 10-15-23 12-17-28	10-15-23 11-16-25 12-17-28 14-20-33	12-17-27 12-18-29 14-26-32 16-23-38	13-18-30 14-20-32 15-22-36 17-26-43	15-22-34 16-23-37 16-25-40 20-30-49

For performance data notes, see F93.

PERFORMANCE DATA:

CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM	100	200	300	400	500	600	700	800	900	1000	
		Total Pressure	.003	.015	.032	.058	.094	.136	.182	.234	.302	.369	
.62	18 x 6 10 x 10	CFM	60	125	185	250	310	370	435	495	560	620	
		Noise Criteria	-	-	-	20	26	30	34	37	40	43	
		Throw	4-Way	2-3-4	4-6-9	5-8-13	7-11-16	9-13-20	10-16-24	12-17-27	13-19-21	15-21-35	16-24-39
			3-Way	2-3-5	4-6-9	6-9-14	8-11-17	9-14-21	11-16-26	13-18-30	14-20-33	16-24-38	17-26-42
			2-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-33	16-23-37	17-26-42	19-28-46
1-Way	2-4-6		5-7-12	8-11-17	10-15-27	12-18-29	15-21-24	17-25-40	18-28-45	20-31-49	23-35-55		
.70	30 x 4 20 x 6 14 x 8 12 x 10	CFM	70	140	210	280	350	420	490	560	630	700	
		Noise Criteria	-	-	-	20	26	30	34	38	40	43	
		Throw	4-Way	2-3-5	4-6-9	5-8-13	7-11-16	9-13-20	10-16-24	12-19-28	14-20-32	15-22-36	16-25-40
			3-Way	2-3-5	4-6-9	6-9-14	8-12-18	10-14-22	11-16-26	13-19-31	15-21-35	16-24-39	17-26-43
			2-Way	2-4-6	5-7-11	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	17-24-39	17-26-43	19-30-48
1-Way	3-4-7		5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-32-52	24-36-57		
.81	36 x 4 24 x 6 16 x 8 14 x 10	CFM	80	160	245	325	405	485	565	650	730	810	
		Noise Criteria	-	-	15	21	27	31	35	38	41	44	
		Throw	4-Way	2-3-5	4-6-9	6-9-14	8-11-17	9-14-21	11-16-25	12-18-29	14-20-33	16-23-37	17-26-42
			3-Way	2-3-5	4-6-10	6-9-15	8-12-19	11-16-25	12-17-27	14-20-32	15-22-36	16-25-40	18-28-45
			2-Way	2-4-6	5-7-11	7-10-16	9-14-21	11-16-25	13-18-30	15-21-35	17-25-40	18-28-45	20-31-49
1-Way	3-4-7		5-8-13	8-12-18	11-16-25	13-19-31	16-23-37	17-26-43	19-30-48	22-33-53	25-38-60		
.87	18 x 8 12 x 12	CFM	85	175	260	350	435	520	610	695	785	870	
		Noise Criteria	-	-	-	21	27	31	35	38	41	44	
		Throw	4-Way	2-3-5	4-6-9	6-9-14	8-12-18	10-14-22	11-16-26	13-18-30	15-21-34	16-23-38	17-26-42
			3-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-32	16-23-37	17-25-41	19-28-46
			2-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-26	13-19-31	15-22-36	17-25-41	19-28-46	21-31-51
1-Way	3-4-7		6-9-14	8-12-19	11-16-25	13-19-30	16-23-38	18-27-44	20-30-49	22-35-55	25-38-62		
1.02	30 x 6 20 x 8 16 x 10 14 x 12	CFM	100	205	305	410	510	610	715	815	920	1020	
		Noise Criteria	-	-	15	22	28	32	36	39	42	45	
		Throw	4-Way	2-3-5	4-6-10	6-9-15	8-12-18	10-15-23	12-17-27	13-19-31	15-21-35	16-25-40	18-27-44
			3-Way	2-4-6	4-6-10	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	16-23-38	17-26-43	19-29-47
			2-Way	2-4-6	5-7-12	7-11-16	10-14-22	12-17-27	14-20-32	16-23-38	17-26-42	19-30-48	22-33-53
1-Way	3-4-7		6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-46-57	26-40-63		
1.15	24 x 8 18 x 10 16 x 12	CFM	115	230	345	460	575	690	805	920	1040	1150	
		Noise Criteria	-	-	16	23	29	32	36	40	43	46	
		Throw	4-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-32	16-23-37	17-25-41	18-28-45
			3-Way	2-4-6	5-7-11	7-10-16	9-13-20	11-16-25	13-18-30	15-21-35	16-25-40	18-27-44	20-30-49
			2-Way	2-4-6	5-7-12	8-11-17	10-14-22	12-17-28	14-20-33	16-24-39	18-27-44	20-30-49	22-34-54
1-Way	3-5-8		6-9-15	9-14-21	12-17-27	15-21-34	17-25-40	19-28-46	21-33-53	24-36-58	27-41-66		
1.25	36 x 6 20 x 10 14 x 14	CFM	125	250	375	500	625	750	875	1000	1120	1250	
		Noise Criteria	-	-	16	23	29	33	37	40	43	46	
		Throw	4-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-33	16-23-37	17-26-42	19-28-46
			3-Way	2-4-6	5-7-11	7-10-16	9-14-21	11-16-26	13-19-31	15-22-36	16-25-40	18-28-45	20-31-49
			2-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-18-29	15-21-34	16-25-40	18-28-45	20-31-49	23-35-55
1-Way	3-5-8		6-9-15	9-14-21	12-17-28	15-21-34	17-25-40	19-29-47	22-33-53	25-38-60	28-42-67		
1.35	16 x 14 18 x 12	CFM	135	270	405	540	675	810	945	1080	1220	1350	
		Noise Criteria	-	-	16	23	29	33	37	40	43	46	
		Throw	4-Way	2-4-6	4-6-10	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	16-23-38	17-26-38	19-29-47
			3-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-28	13-19-31	15-22-36	17-25-41	19-27-46	21-31-50
			2-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-32-51	24-36-57
1-Way	3-5-8		6-9-15	10-14-22	12-17-28	15-21-35	17-26-42	20-30-49	22-34-54	25-38-61	28-43-68		
1.53	30 x 8 24 x 10 18 x 14 16 x 16	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
		Noise Criteria	-	-	17	24	29	34	38	41	44	47	
		Throw	4-Way	2-4-6	5-7-11	7-10-16	9-13-20	11-16-25	13-18-30	15-21-35	16-24-39	18-27-44	20-30-49
			3-Way	2-4-6	5-7-12	7-11-16	10-14-22	12-17-27	14-20-32	16-23-38	17-26-43	19-30-48	21-33-52
			2-Way	3-4-7	5-8-13	8-12-18	10-16-24	13-19-31	15-22-36	17-26-42	19-29-46	22-33-53	24-36-58
1-Way	3-5-8		7-10-16	10-14-22	12-18-29	15-22-36	17-26-43	2-31-49	23-35-49	26-40-63	29-45-71		

For performance data notes, see F93.

PERFORMANCE DATA:

CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM		100	200	300	400	500	600	700	800	900	1000
		Total Pressure		.003	.015	.032	.058	.094	.136	.182	.234	.302	.369
1.82	36 x 8 30 x 10 24 x 12 20 x 14 18 x 16	CFM		182	365	545	730	910	1090	1279	1460	1640	1820
		Noise Criteria		–	–	18	25	30	34	38	42	45	48
		Throw	4-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-26	13-19-31	15-22-36	17-25-41	19-28-46	21-32-51
			3-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-17-28	15-21-34	16-24-39	18-27-44	20-31-49	23-35-55
			2-Way	3-4-7	6-9-14	8-12-19	11-16-26	14-20-32	16-23-38	18-27-44	20-30-49	23-35-55	25-38-61
1-Way	3-5-8		7-10-16	10-15-23	13-19-31	16-23-38	18-28-45	21-33-52	24-36-58	28-41-66	31-47-74		
2.10	24 x 14 20 x 16 18 x 18	CFM		210	420	630	840	1050	1260	1470	1680	1890	2100
		Noise Criteria		–	–	19	25	30	35	39	42	45	48
		Throw	4-Way	2-4-6	5-7-12	8-11-17	10-14-22	12-17-27	14-20-33	16-23-43	17-26-43	19-30-48	22-33-53
			3-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-17-28	15-21-35	17-25-41	19-28-46	21-32-51	24-36-57
			2-Way	3-4-7	6-9-14	9-13-20	12-17-29	14-20-33	17-24-39	18-28-45	21-31-50	24-36-57	27-40-64
1-Way	4-6-9		7-11-16	10-16-24	14-20-32	16-24-39	20-39-47	22-33-53	25-38-60	28-43-68	32-49-78		
2.35	36 x 10 30 x 12 24 x 16 20 x 18	CFM		235	470	705	940	1180	1410	1640	1880	2120	2350
		Noise Criteria		–	–	19	26	31	35	39	43	46	49
		Throw	4-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-17-28	15-21-34	16-24-39	18-27-44	20-30-49	23-35-55
			3-Way	3-4-7	5-8-13	8-12-19	10-16-24	13-18-30	15-22-36	17-26-42	19-30-48	22-33-53	24-36-58
			2-Way	3-5-8	6-9-15	9-14-21	12-17-27	15-21-34	17-25-41	19-29-47	21-33-52	24-37-59	33-49-80
1-Way	4-6-9		7-11-16	11-16-25	14-20-33	17-25-41	19-30-48	23-35-55	26-39-62	29-44-70	33-49-80		
2.68	36 x 12 30 x 14 24 x 18 20 x 20	CFM		270	535	805	1070	1340	1610	1880	2140	2410	2680
		Noise Criteria		–	–	19	26	31	36	40	43	46	48
		Throw	4-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-31-50	24-36-57
			3-Way	3-4-7	6-9-14	8-12-19	11-16-25	14-20-32	16-23-38	18-27-44	20-30-49	23-35-55	25-38-61
			2-Way	3-5-8	6-9-15	9-14-21	12-17-28	15-21-35	19-29-47	19-30-48	22-34-54	25-38-60	27-43-68
1-Way	4-6-9		8-11-17	11-16-26	15-21-34	17-26-42	20-31-49	24-36-57	27-40-64	30-46-73	34-51-82		
3.15	36 x 14 30 x 16 24 x 20	CFM		315	630	945	1260	1580	1890	2200	2520	2840	3150
		Noise Criteria		–	–	20	27	32	37	41	44	47	49
		Throw	4-Way	3-4-7	5-8-13	8-12-18	11-16-25	13-18-30	15-22-36	17-26-42	19-30-48	22-34-53	25-38-60
			3-Way	3-4-7	6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-37-57	27-40-64
			2-Way	3-5-8	7-10-16	10-13-23	12-18-29	16-23-37	18-27-44	20-31-49	23-35-56	26-41-63	29-45-71
1-Way	4-6-10		8-12-18	12-17-27	15-20-37	18-27-44	21-32-51	25-38-60	28-42-67	32-49-77	36-54-86		
3.65	36 x 16 30 x 18 24 x 24	CFM		365	730	1100	1460	1820	2190	2560	2920	3280	3650
		Noise Criteria		–	–	20	28	33	37	41	45	48	50
		Throw	4-Way	3-4-7	6-9-14	8-12-19	11-16-26	14-20-32	16-23-38	18-27-44	20-30-49	23-35-55	26-39-62
			3-Way	3-5-8	6-9-15	9-14-21	12-17-27	15-21-34	17-25-41	19-29-47	22-33-53	24-37-59	27-41-66
			2-Way	3-5-8	7-10-16	10-15-23	13-19-31	16-23-38	18-28-45	21-33-52	24-36-58	27-41-66	31-47-74
1-Way	4-6-10		8-12-19	12-17-28	15-22-36	18-28-45	22-33-53	26-39-62	29-44-70	33-50-80	37-55-89		
4.05	36 x 18 30 x 20	CFM		405	810	1220	1620	2020	2430	2830	3240	3640	4050
		Noise Criteria		–	–	21	28	33	38	42	45	48	50
		Throw	4-Way	3-4-7	6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-36-57	27-40-64
			3-Way	3-5-8	6-9-15	9-14-21	12-17-28	15-21-35	17-26-42	19-30-48	22-34-54	25-38-61	28-43-68
			2-Way	4-6-9	7-11-16	10-15-24	13-19-31	16-24-39	19-28-46	22-33-53	25-38-60	28-43-68	32-48-77
1-Way	4-6-10		8-12-19	12-18-29	16-23-38	19-28-46	23-35-55	27-40-64	30-45-72	34-50-81	38-57-91		
4.72	36 x 20 30 x 24	CFM		470	945	1420	1890	2360	2830	3300	3780	4250	4720
		Noise Criteria		–	–	21	30	34	38	42	46	48	51
		Throw	4-Way	3-5-8	6-9-15	9-14-21	12-17-27	15-21-34	17-26-41	19-29-47	31-33-52	24-37-59	27-41-66
			3-Way	3-5-8	7-10-16	10-14-23	12-18-29	16-23-37	18-27-44	21-31-50	23-35-56	27-40-64	30-45-72
			2-Way	4-6-9	7-11-16	11-16-25	14-20-33	17-25-41	19-30-48	23-35-55	26-39-62	29-45-71	33-49-80
1-Way	5-7-11		9-13-20	13-18-30	16-24-39	19-30-48	24-36-57	27-41-66	31-48-76	36-53-85	40-59-95		
5.82	36 x 24 30 x 30	CFM		580	1160	1750	2330	2910	3490	4070	4660	5240	5820
		Noise Criteria		–	–	22	29	35	39	43	47	49	52
		Throw	4-Way	3-5-8	6-9-15	10-14-22	12-18-29	15-22-36	17-26-43	20-31-49	23-35-56	26-39-62	29-44-70
			3-Way	4-6-9	7-10-16	10-16-24	13-19-31	16-24-39	19-28-46	22-33-53	24-37-59	28-43-68	31-48-76
			2-Way	4-6-9	8-11-17	11-16-26	15-21-34	17-26-43	21-31-50	24-36-58	27-41-66	31-47-75	35-52-84
1-Way	5-7-11		9-14-21	13-19-31	11-25-41	21-31-50	25-38-60	28-44-70	33-49-80	38-56-90	43-64-102		

For performance data notes, see F93.

PERFORMANCE DATA:

CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

MODELS: 51C, 51CD, 61C, 61CD

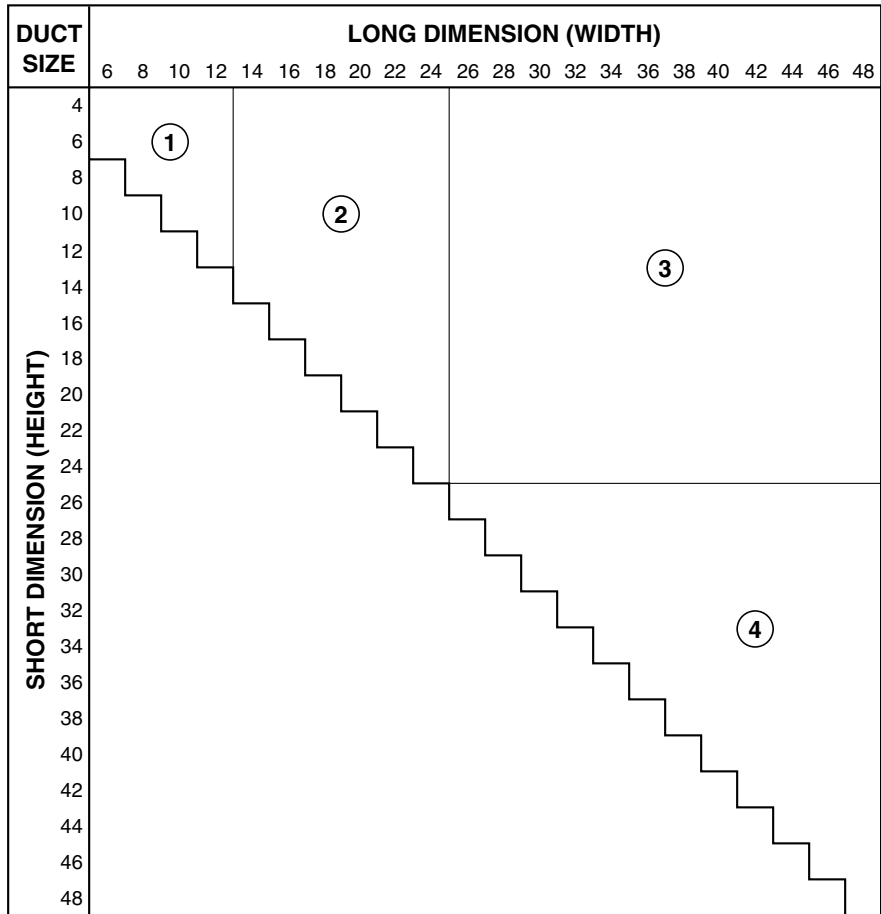
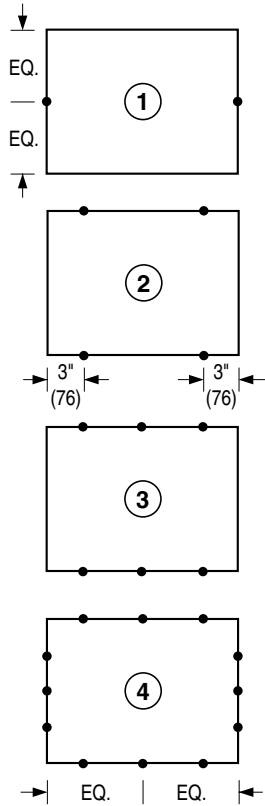
Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM	100	200	300	400	500	600	700	800	900	1000	
		Total Pressure	.003	.015	.032	.058	.094	.136	.182	.234	.302	.369	
7.17	36 x 30	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
		Noise Criteria	–	–	23	29	35	40	44	48	50	53	
		Throw	4-Way	3-5-8	7-10-16	10-15-23	13-19-31	16-22-38	18-28-45	21-33-52	24-36-58	27-41-66	31-47-74
			3-Way	4-6-9	7-11-16	11-16-25	14-20-33	17-25-41	20-30-49	23-35-55	26-40-63	29-45-71	33-49-80
			2-Way	4-6-10	8-12-19	12-17-28	15-22-36	18-28-45	22-33-53	26-39-62	29-44-70	33-49-80	37-55-89
1-Way	5-7-12	10-14-22	14-20-33	17-26-43	22-33-53	27-40-64	31-47-75	35-52-84	40-59-95	45-67-107			
8.63	36 x 36	CFM	865	1730	2590	3450	4320	5180	6040	6900	7700	8630	
		Noise Criteria	–	–	24	30	36	41	45	48	50	53	
		Throw	4-Way	4-6-9	7-11-16	10-16-24	14-20-32	16-25-40	19-30-48	22-34-54	26-39-62	29-43-69	32-49-78
			3-Way	4-6-10	8-11-17	11-16-26	15-21-34	17-28-43	21-31-50	24-36-58	27-41-66	31-47-75	35-52-85
			2-Way	4-6-10	8-12-19	12-18-29	16-23-38	19-30-47	23-35-56	27-41-65	31-47-66	35-52-83	39-59-93
1-Way	5-8-13	10-15-23	15-21-35	18-28-45	23-35-57	28-35-57	32-49-78	37-55-88	42-62-100	47-70-113			

Performance Notes:

- All pressures are in inches w.g..
- Core Velocity is in feet per minute.
- Throw values are given for terminal velocities of 150, 100 and 50 fpm, with a cooling temperature differential (ΔT) of 20°F and are based on surface mount units benefitting from the ceiling coanda effect. The blade settings were set for optimum discharge, parallel to the face of the grille, which has the outer blades closest to the frame, set with an opening of 1/8" (3) and progressively wider spacings between blades away from the frame. (**Note:** The throw values may be increased or decreased by as much as 20% by changing the blade setting).
- Blades in the full open position
 - reduce the Noise Criteria by 6.
 - multiply the Total Pressure x 0.3.
- Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (-) in space denotes a Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

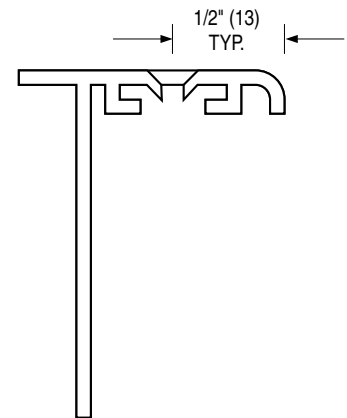
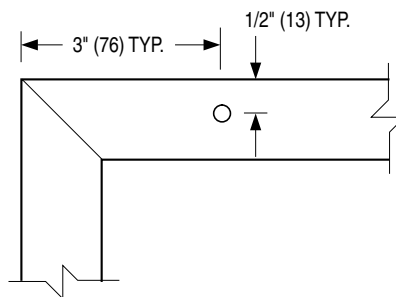
SCREW HOLE LOCATION CHART

FOR MODELS: 51C, 61C, 5100, 6100, 7100, 51EC
 TYPE S, 61EC TYPE S, 51PR, 61PR AND 51RC



DESCRIPTION:

1. All screw holes are located 1/2" (13) in from the outside edge of the frame.
2. Use the chart above to determine which screw hole location diagram applies based on the duct size of the grille or register.
3. This information is provided for general information only. Pre-drilling of mounting holes is not recommended. The actual grille or register, as supplied, should be used as a template to enhance the installation quality.



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

30 - 4 - 01

SUPP./G&R

NEW

SHLC-1