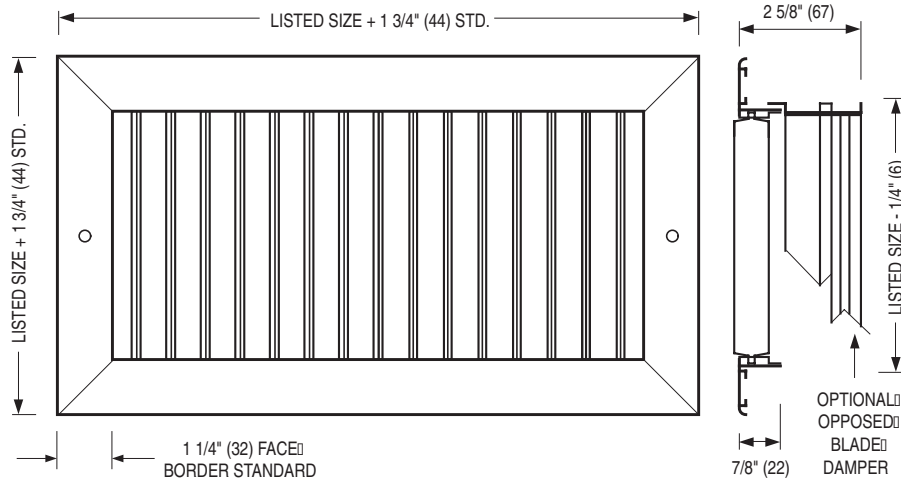




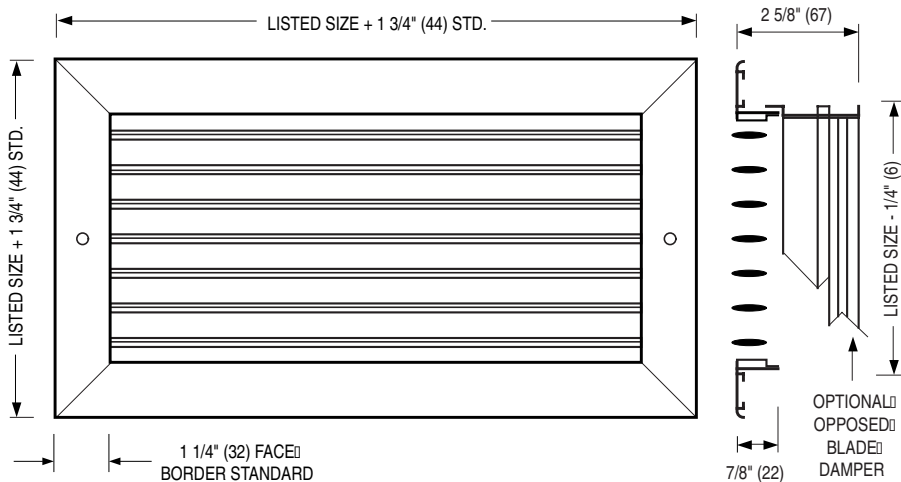
**ALUMINUM AIRFOIL BLADE
SUPPLY GRILLES & REGISTERS**
SINGLE DEFLECTION • ADJUSTABLE
MODELS: 71SV(-O) AND 71SH(-O)



Frame/Border Type S:
Surface Mount

Model 71SV
Single Deflection Grille
Vertical Front Blades

Model 71SV-O
Single Deflection Register
Vertical Front Blades
(Includes O. B. Damper)



Frame/Border Type S:
Surface Mount

Model 71SH
Single Deflection Grille
Horizontal Front Blades

Model 71SH-O
Single Deflection Register
Horizontal Front Blades
(Includes O. B. Damper)

DESCRIPTION:

1. Construction: Extruded aluminum. Rigid heavy-gauge frame mechanically interlocked with reinforced mitered corners. A single set of streamlined airfoil shaped solid blades on 3/4" (19) centers provide air control in a single plane. Blades are adjustable and individually pivoted to ensure positive positioning when adjusted to desired deflection setting.
2. Optional roll-formed steel opposed blade damper has a screw driver slot operator accessible through face of register.
3. Minimum size is 4" x 4" (102 x 102).
Maximum size one piece construction is 48" x 48" (1219 x 1219).
4. Type S Surface mount standard frame has 1" (25) overlap margin. Available in multiple sections with mullions - see submittal OG-1-A.
5. Standard fastening is Type A countersunk screw holes.
6. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 - SA Satin (clear) anodized
 - SP Special _____ .
2. Fastening:
 - Type C Concealed mounting straps
 - Type D Concealed screw holes in neck
 - Type N None.
3. OA Aluminum Opposed Blade Damper
4. 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).
5. PF Plaster sub-frame
6. IS Insect screen

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
9 - 1 - 20	7100	2 - 1 - 11	7100-1

Panel Mounted/Ceiling Modules
 Border Type PLS: Steel Lay-in Panel
 Border Type PLA: Aluminum Lay-in Panel

The grille or register is mounted in an extended panel to suit standard T-Bar Lay-in type ceilings.

 Border Type FPS: Steel Fineline[®] Panel
 Border Type FPA: Aluminum Fineline[®] Panel

The grille or register is mounted in an extended panel that will fit a 9/16" (14) narrow regressed (bolt slot) T-Bar ceiling grid or 9/16" (14) Flat T-Bar with tegular ceiling tile.

 Border Type SPS: Steel Spine Panel
 Border Type SPA: Aluminum Spine Panel

The grille or register is mounted in an extended panel to suit spline type ceiling modules. CM 24" x 24" (600 x 600) only.

 Border Type MPS: Steel Metal Pan Panel
 Border Type MPA: Aluminum Metal Pan Panel

The grille or register is mounted in an extended panel to suit metal pan ceilings that have snap-in type ceiling modules. CM 24" x 24" (600 x 600) only.

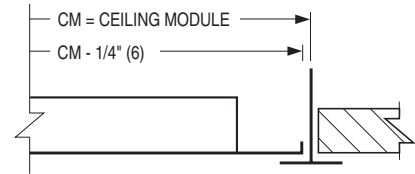
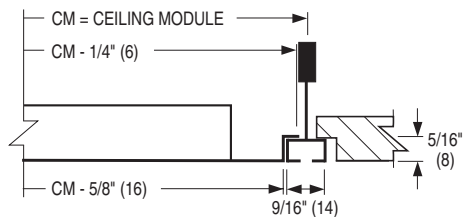
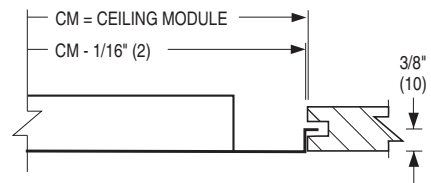
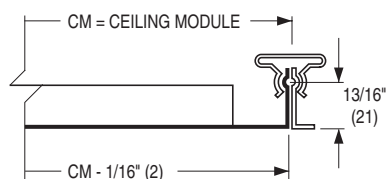
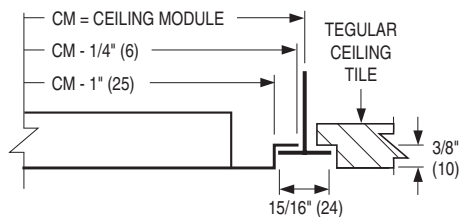
 Border Type TPS: Steel Tegular Panel
 Border Type TPA: Aluminum Tegular Panel

The grille or register is mounted in a panel that will extend below a 15/16" (24) Flat T-Bar ceiling grid.

**Available Border Type PL, FP and TP
 Ceiling Module Sizes**

Ceiling Module	
Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300
24 x 12	600 x 300
36 x 12	900 x 300
48 x 12	1200 x 300
20 x 20	500 x 500
24 x 24	600 x 600
36 x 24	900 x 600
48 x 24	1200 x 600

Maximum grille neck size is CM Ceiling Module – 3" (76).

Type PL (S or A) Lay-in Panel

Type FP (S or A) Fineline[®] Panel

Type SP (S or A) Spine Panel

Type MP (S or A) Metal Pan Panel

Type TP (S or A) Tegular Panel

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Page 2 of 2 Dimensions are in inches (mm).

DATE
B SERIES
SUPERSEDES
DRAWING NO.

9 - 1 - 20

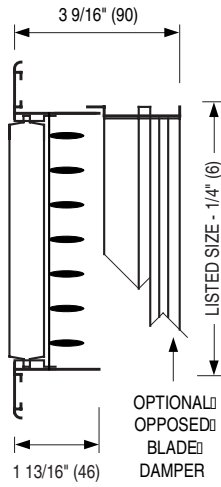
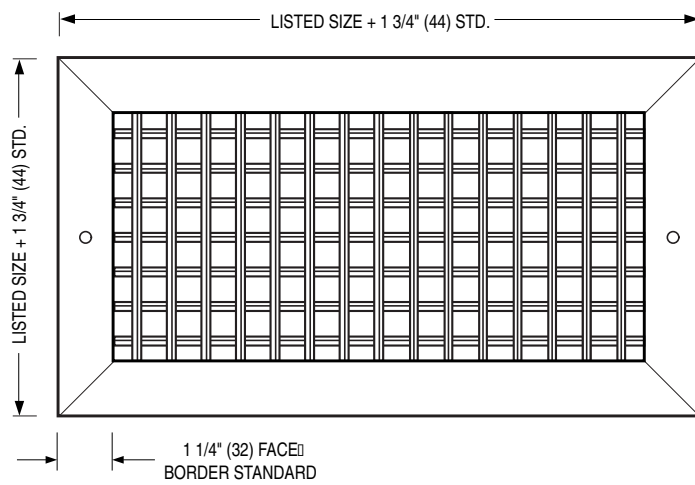
7100

2 - 1 - 11

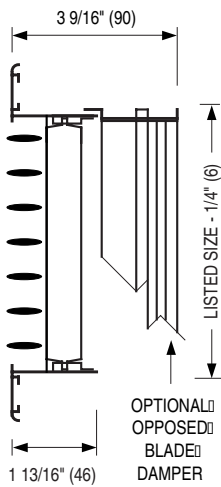
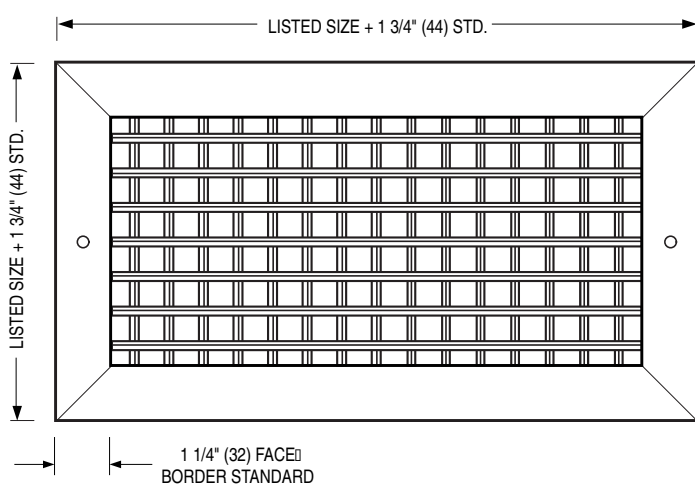
7100-1



**ALUMINUM AIRFOIL BLADE
SUPPLY GRILLES & REGISTERS
DOUBLE DEFLECTION • ADJUSTABLE
MODELS: 71DV(-O) AND 71DH(-O)**



- Frame/Border Type S:**
Surface Mount
- Model 71DV**
Double Deflection Grille
Vertical Front Blades
- Model 71DV-O**
Double Deflection Register
Vertical Front Blades
(Includes O. B. Damper)



- Frame/Border Type S:**
Surface Mount
- Model 71DH**
Double Deflection Grille
Horizontal Front Blades
- Model 71DH-O**
Double Deflection Register
Horizontal Front Blades
(Includes O. B. Damper)

DESCRIPTION:

1. Construction: Extruded aluminum.
Rigid heavy-gauge frame mechanically interlocked with reinforced mitered corners. Two sets of perpendicular streamlined airfoil shaped solid blades on 3/4" (19) centers provide air pattern control in two planes. Blades are adjustable and individually pivoted to ensure positive positioning when adjusted to desired deflection setting.
2. Optional roll-formed steel opposed blade damper has a screw driver slot operator accessible through face of register.
3. Minimum size is 4" x 4" (102 x 102).
Maximum size one piece construction is 48" x 48" (1219 x 1219).
4. Type S Surface mount standard frame has 1" (25) overlap margin.
Available in multiple sections with mullions - see submittal OG-1-A.
5. Standard fastening is Type A countersunk screw holes.
6. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 - SA Satin (clear) anodized
 - SP Special _____ .
2. Fastening:
 - Type C Concealed mounting straps
 - Type D Concealed screw holes in neck
 - Type N None.
3. OA Aluminum Opposed Blade Damper
4. 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).
5. PF Plaster sub-frame
6. IS Insect screen

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
9 - 1 - 20	7100	2 - 1 - 11	7100-2

Panel Mounted/Ceiling Modules

Border Type PLS: Steel Lay-in Panel

Border Type PLA: Aluminum Lay-in Panel

The grille or register is mounted in an extended panel to suit standard T-Bar Lay-in type ceilings.

Border Type FPS: Steel Finline® Panel

Border Type FPA: Aluminum Finline® Panel

The grille or register is mounted in an extended panel that will fit a 9/16" (14) narrow regressed (bolt slot) T-Bar ceiling grid or 9/16" (14) Flat T-Bar with tegular ceiling tile.

Border Type SPS: Steel Spline Panel

Border Type SPA: Aluminum Spline Panel

The grille or register is mounted in an extended panel to suit spline type ceiling modules. CM 24" x 24" (600 x 600) only.

Border Type MPS: Steel Metal Pan Panel

Border Type MPA: Aluminum Metal Pan Panel

The grille or register is mounted in an extended panel to suit metal pan ceilings that have snap-in type ceiling modules. CM 24" x 24" (600 x 600) only.

Border Type TPS: Steel Tegular Panel

Border Type TPA: Aluminum Tegular Panel

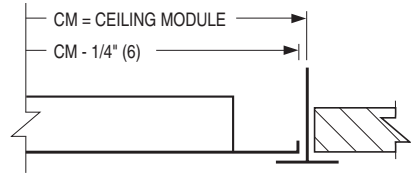
The grille or register is mounted in a panel that will extend below a 15/16" (24) Flat T-Bar ceiling grid.

Available Border Type PL, FP and TP Ceiling Module Sizes

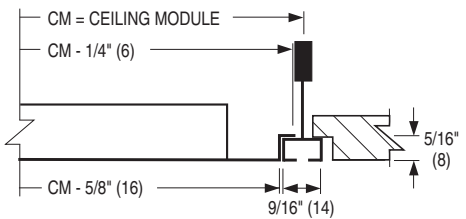
Ceiling Module	
Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300
24 x 12	600 x 300
36 x 12	900 x 300
48 x 12	1200 x 300
20 x 20	500 x 500
24 x 24	600 x 600
36 x 24	900 x 600
48 x 24	1200 x 600

Maximum grille neck size is CM Ceiling Module - 3" (76).

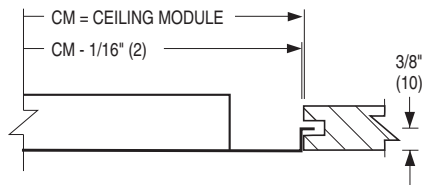
Type PL (S or A) Lay-in Panel



Type FP (S or A) Finline® Panel

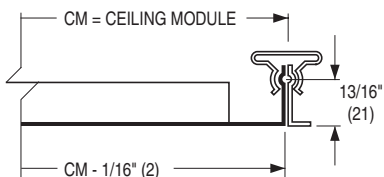


Type SP (S or A) Spline Panel

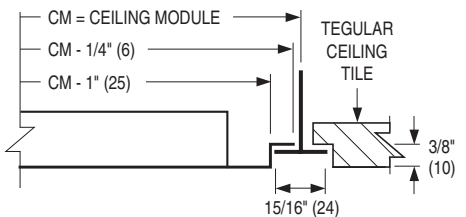


Note: Splines on two opposite sides.

Type MP (S or A) Metal Pan Panel



Type TP (S or A) Tegular Panel



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 2 Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 1 - 20

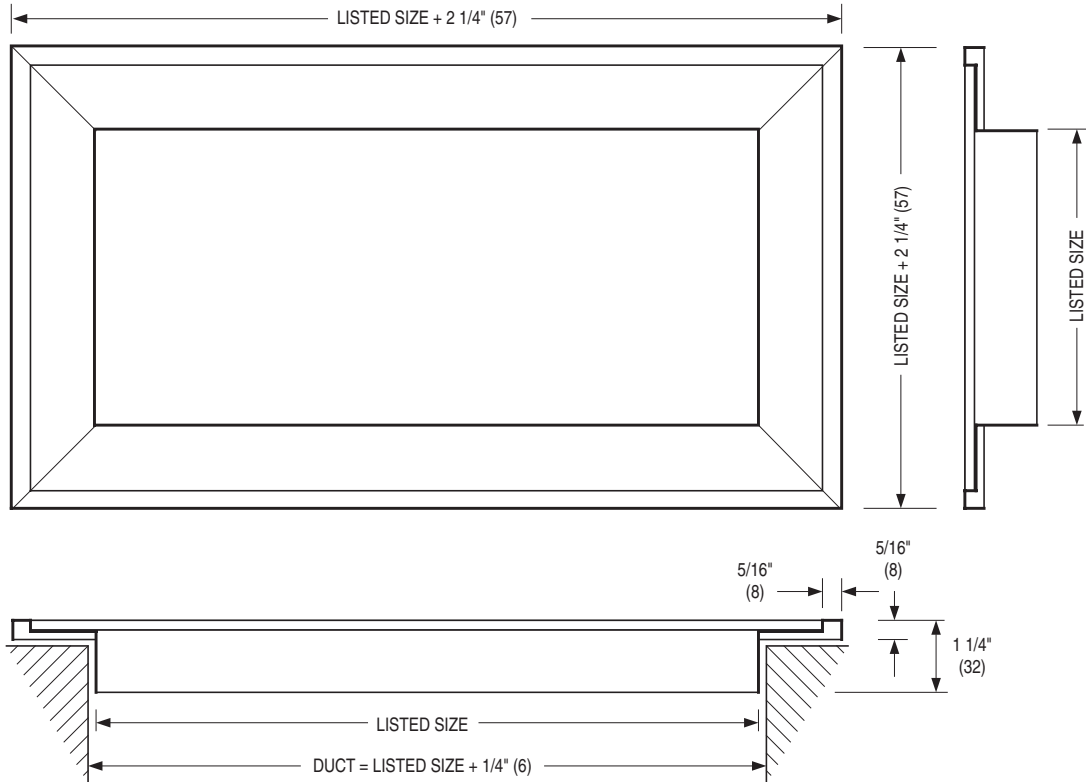
7100

2 - 1 - 11

7100-2

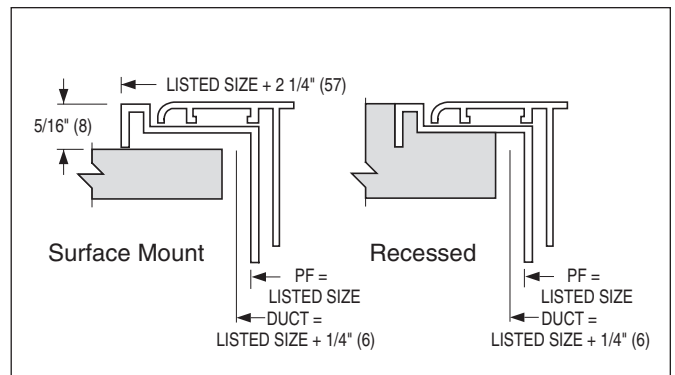


**GRILLES AND REGISTERS ACCESSORY
PLASTER/MOUNTING FRAME**
(FOR USE WITH MODEL SERIES 5100, 6100, AND 7100)
MODEL: PF



DESCRIPTION:

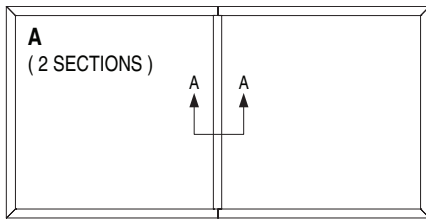
1. Construction: Extruded aluminum frame with staked and mitered mitered corners for strength.
2. Model PF Plaster frame provides a convenient and professional method for finishing off a grille or register opening. It provides a stable anchor for attachment, while enabling the grille or register to be 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.



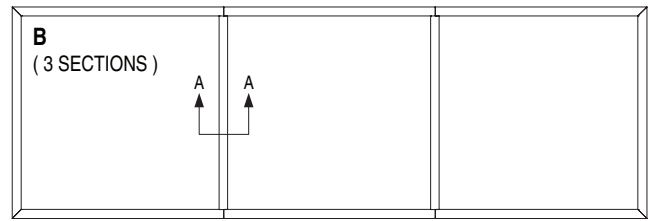
SCHEDULE TYPE:		Dimensions are in inches (mm).			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	10 - 24 - 01	ACC-GR	5100-11	ACC-PF	



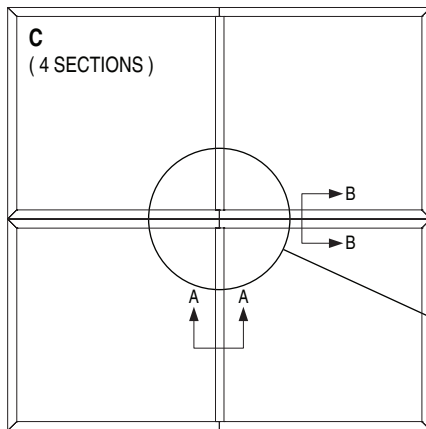
OVERSIZED GRILLE CONSTRUCTION
ALUMINUM SUPPLY AND RETURN GRILLES
FOR DUCTS OR OPENINGS LARGER THAN 48" (1219)
MODEL SERIES: 5100 AND 7100



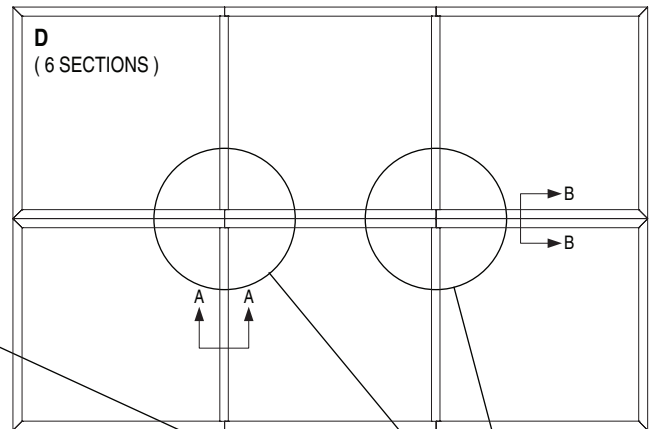
OVER 48" (1219) IN WIDTH UP TO 96" x 48" (2438 x 1219)



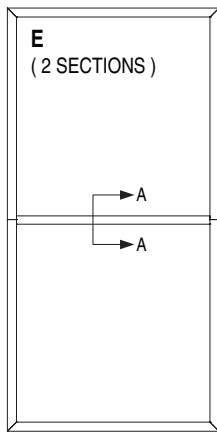
OVER 96" (2438) IN WIDTH UP TO 144" x 48" (3658 x 1219)



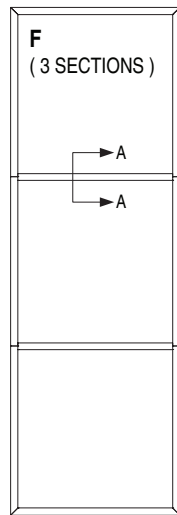
OVER 48" (1219) IN WIDTH AND HEIGHT UP TO 96" x 96" (2438 x 2438)



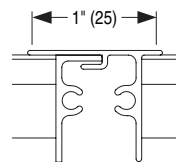
OVER 96" x 48" (2438 x 1219) UP TO 144" x 96" (3658 x 2438)



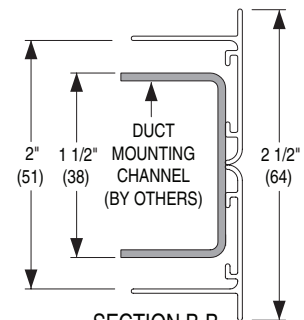
UP TO 48" (1219) IN WIDTH AND UP TO 96" (2438) IN HEIGHT



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:	Dimensions are in inches (mm)			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	4 - 27 - 20	GR	NEW	OG-1-A

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

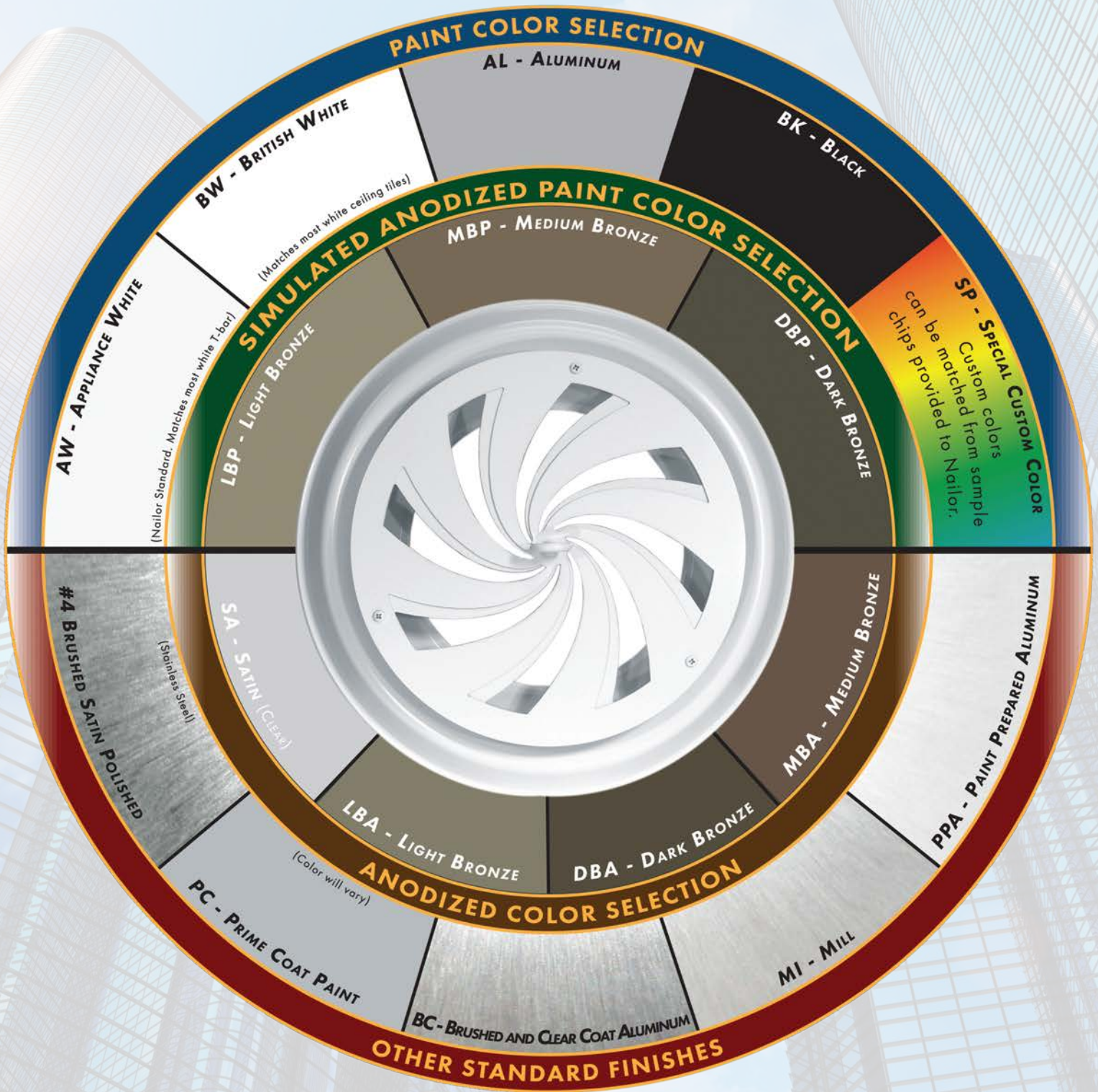
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



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."

WGDSOF2015

www.nailor.com

PERFORMANCE NOTES FOR SUPPLY GRILLES AND REGISTERS: AIRFOIL BLADE 7100 SERIES

Throw, Spread and Drop

The isovel diagrams shown below, illustrate in plan view, the relationship of horizontal spread to throw for three standard vertical blade deflections and represent a typical high side wall supply outlet. The isovels (throw values) are for the cataloged terminal velocities of 150, 100 and 50 fpm.

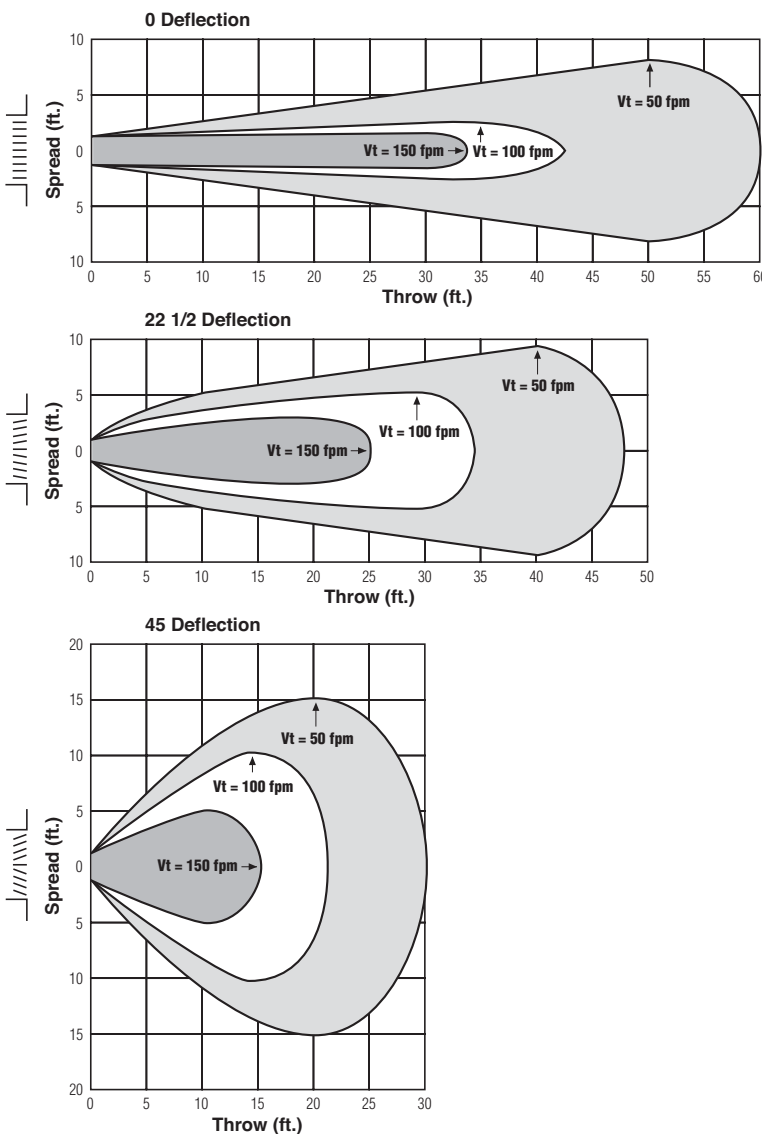
Cataloged data, in accordance with the test code, is with the grille mounted 9" (229) below the ceiling and benefiting from the ceiling coanda effect under isothermal conditions. Throw values without ceiling effect (greater than 24" (610) from a surface parallel to the airflow) may be approximated by multiplying the cataloged throw by x 0.7.

In order to offset potential draft problems caused by premature drop, it is recommended to set the blades with an upward deflection setting of 15 – 20° in free space conditions. The angle of spread and temperature differential between the supply air and room air (ΔT) also effects the drop of the airstream.

Under constant conditions of temperature, volume and core velocity, the wider the spread, the smaller the drop. Typical cold supply air (20°F ΔT) reduces horizontal throw by approximately 30%. Warm air will increase throw by approximately 30% and reduce drop.

For a full explanation of the effects of spread, throw, temperature and drop, refer to the engineering guide at the back of the catalog.

SPREAD CHARACTERISTICS WITH THREE DEFLECTION SETTINGS



NC Corrections for Blade Deflection (add)

Model Type	Damper	Blade Deflection		
		0°	22 1/2°	45°
Double Deflection	With	0	+ 2	+ 7
	Without	- 4	- 2	+ 3
Single Deflection	With	- 4	- 1	+ 4
	Without	- 8	- 6	+ 1

Note: Damper corrections are for wide open damper.

TP Correction Factors for Grilles Without Damper (multiply)

Blade Deflection	0°	22 1/2°	45°
Double Deflection Factor	x .73	x .76	x .84
Single Deflection Factor	x .66	x .70	x .80

NC Corrections for Throttling Damper (add)

Additional Pressure Drop (in. w.g.)	.05"	.15"	.25"
Approx. Damper Opening	75%	67%	50%
NC add	+ 6	+ 11	+ 18

PERFORMANCE DATA: SUPPLY GRILLES AND REGISTERS • AIRFOIL BLADE 7100 SERIES
MODELS: 71DV, 71DH, 71SV, 71SH

GRILLES AND REGISTERS

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure	300	400	500	600	700	800	1000	1200	1400
					.006	.010	.016	.022	.031	.040	.062	.090	.122
				Total Pressure	0°	22 1/2°	45°	.011	.019	.030	.044	.060	.078
6 x 6	8 x 4 10 x 4	0.20		CFM	60	80	100	120	140	160	200	240	280
				Noise Criteria	—	—	—	—	16	20	26	32	37
				Throw	0°	5-7-13	7-9-16	8-12-18	10-14-20	11-15-21	12-16-23	15-18-25	16-20-27

PERFORMANCE DATA: SUPPLY GRILLES AND REGISTERS • AIRFOIL BLADE 7100 SERIES MODELS: 71DV, 71DH, 71SV, 71SH

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure	300	400	500	600	700	800	1000	1200	1400
					.006	.010	.016	.022	.031	.040	.062	.090	.122
				Total Pressure	0°	22 1/2°	45°	0°	22 1/2°	45°	0°	22 1/2°	45°
14 x 14	16 x 12 20 x 10 24 x 8 34 x 6	1.24		CFM	372	496	620	744	868	992	1240	1488	1736
				Noise Criteria	-	-	-	19	24	28	34	40	45
				Throw	0°	11-18-33	16-25-39	20-29-42	24-33-47	27-36-51	31-39-54	35-42-60	39-47-66
18 x 12	16 x 14 22 x 10 28 x 8 38 x 6	1.37		CFM	411	548	685	822	959	1096	1370	1644	1918
				Noise Criteria	-	-	15	20	25	29	35	41	46
				Throw	0°	11-18-33	16-25-39	20-30-43	24-33-47	28-36-51	32-39-54	35-43-61	39-47-67
24 x 10	20 x 12 30 x 8	1.52		CFM	456	608	760	912	1064	1216	1520	1824	2128
				Noise Criteria	-	-	15	20	25	29	35	41	46
				Throw	0°	12-19-35	16-25-41	21-32-45	25-35-50	29-38-53	34-41-57	37-45-65	41-50-70
16 x 16	18 x 14 22 x 12 30 x 8	1.64		CFM	492	656	820	984	1148	1312	1640	1968	2296
				Noise Criteria	-	-	15	20	25	29	35	41	46
				Throw	0°	12-20-37	17-26-42	22-32-47	26-37-51	31-40-56	35-42-59	39-47-67	42-51-73
24 x 12	18 x 16 20 x 14 30 x 10 36 x 8	1.85		CFM	555	740	925	1110	1295	1480	1850	2220	2590
				Noise Criteria	-	-	16	21	26	30	36	42	47
				Throw	0°	12-20-38	18-27-44	22-33-48	27-38-54	32-40-58	36-44-62	40-48-69	44-54-76
18 x 18	20 x 16 24 x 14 28 x 12 32 x 10	2.10		CFM	630	840	1050	1260	1470	1680	2100	2520	2940
				Noise Criteria	-	-	16	21	26	30	36	42	47
				Throw	0°	13-21-40	19-29-47	24-36-52	29-40-57	33-43-62	38-47-66	42-52-74	47-57-81
30 x 12	20 x 18 22 x 16 26 x 14 36 x 10	2.32		CFM	696	928	1160	1392	1624	1856	2320	2784	3248
				Noise Criteria	-	-	17	22	27	31	37	43	48
				Throw	0°	14-23-43	21-31-50	26-39-56	31-43-61	36-47-67	41-50-71	46-56-79	50-61-86
24 x 16	32 x 12	2.50		CFM	750	1000	1250	1500	1750	2000	2500	3000	3500
				Noise Criteria	-	-	17	22	27	31	37	43	48
				Throw	0°	14-24-45	22-32-52	27-40-58	32-45-64	37-49-68	43-52-74	48-58-82	52-64-90
20 x 20	22 x 18	2.61		CFM	783	1044	1305	1566	1827	2088	2610	3132	3654
				Noise Criteria	-	-	17	22	27	31	37	43	48
				Throw	0°	15-24-46	22-32-53	27-41-59	32-46-65	38-50-70	44-53-75	49-59-84	53-65-92
36 x 12	22 x 20 24 x 18 26 x 16 30 x 14	2.79		CFM	837	1116	1395	1674	1953	2232	2790	3348	3906
				Noise Criteria	-	-	17	22	27	31	37	43	48
				Throw	0°	15-25-48	23-34-55	28-42-61	34-48-68	4-51-73	45-55-77	50-61-86	55-68-95
22 x 22	24 x 20 26 x 18 30 x 16 40 x 12	3.17		CFM	951	1268	1585	1902	2219	2536	3170	3804	4438
				Noise Criteria	-	-	18	23	28	32	38	44	49
				Throw	0°	17-27-50	24-36-58	29-45-65	36-50-71	42-54-77	47-58-82	53-65-92	58-71-101
42 x 12	36 x 14	3.27		CFM	981	1308	1635	1962	2289	2616	3270	3924	4578
				Noise Criteria	-	-	18	23	28	32	38	44	49
				Throw	0°	17-27-51	24-36-59	30-45-66	36-51-72	42-55-77	48-59-83	53-66-93	59-72-101
30 x 18	24 x 22 34 x 16 40 x 14	3.54		CFM	1062	1416	1770	2124	2478	2832	3540	4248	4956
				Noise Criteria	-	-	18	23	28	32	38	44	49
				Throw	0°	18-28-53	25-37-61	31-47-69	37-53-75	44-57-81	50-61-86	56-69-97	61-75-106

GRILLES AND REGISTERS



For performance data notes, see F77.

PERFORMANCE DATA: SUPPLY GRILLES AND REGISTERS • AIRFOIL BLADE 7100 SERIES MODELS: 71DV, 71DH, 71SV, 71SH

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure		300	400	500	600	700	800	1000	1200	1400
				0°	22 1/2°	.006	.010	.016	.022	.031	.040	.062	.090	.122
24 x 24	26 x 22 28 x 20 32 x 18 36 x 16	3.79	—	CFM		1137	1516	1895	2274	2653	3032	3790	4548	5306
				Noise Criteria		—	—	18	23	28	32	38	44	49
				Throw	0°	18-29-55	29-36-62	33-48-70	39-55-77	45-59-83	51-62-89	57-70-99	62-77-108	68-83-117
					22 1/2°	14-23-44	21-31-50	26-38-56	31-44-62	36-47-66	41-50-71	46-56-79	50-62-86	54-66-94
					45°	9-15-28	13-20-31	17-24-35	20-28-39	23-30-42	26-31-45	29-35-50	31-39-54	34-42-59
36 x 18	32 x 20 40 x 16 46 x 14	4.29	—	CFM		1287	1716	2145	2574	3003	3432	4290	5148	6006
				Noise Criteria		—	—	19	24	29	33	39	45	50
				Throw	0°	19-31-58	28-42-68	35-52-75	2-58-83	48-63-89	55-68-95	61-75-106	68-83-117	73-89-125
					22 1/2°	15-25-46	22-34-54	28-42-60	34-46-66	38-50-71	44-54-76	49-60-85	54-66-94	58-71-100
					45°	10-16-29	14-21-34	18-26-38	21-29-42	24-32-45	28-34-48	31-38-53	34-42-59	37-45-63
26 x 26	28 x 24 48 x 14	4.47	—	CFM		1341	1788	2235	2682	3129	3576	4470	5364	6258
				Noise Criteria		—	—	19	24	29	33	39	45	50
				Throw	0°	19-32-59	28-43-69	35-53-77	43-59-85	49-65-91	56-69-98	63-77-109	69-85-120	75-91-129
					22 1/2°	15-26-47	22-34-55	28-42-62	34-47-68	39-52-73	45-55-78	50-62-87	55-68-96	60-73-103
					45°	10-16-30	14-22-35	18-27-32	22-30-43	25-33-46	28-35-49	32-39-55	35-43-60	38-46-65
30 x 24	32 x 22 36 x 20 40 x 18	4.77	—	CFM		1431	1908	2385	2862	3339	3816	4770	5724	6678
				Noise Criteria		—	—	19	24	29	33	39	45	50
				Throw	0°	20-33-61	29-44-71	36-54-79	44-61-87	51-67-94	58-71-101	65-79-112	71-87-123	77-94-133
					22 1/2°	16-26-49	23-35-57	29-43-63	35-49-70	41-54-75	46-57-81	52-63-90	57-70-98	62-75-106
					45°	10-17-31	15-22-36	18-27-40	22-31-44	26-34-47	29-36-51	33-40-56	36-44-62	39-47-67

GRILLES AND REGISTERS

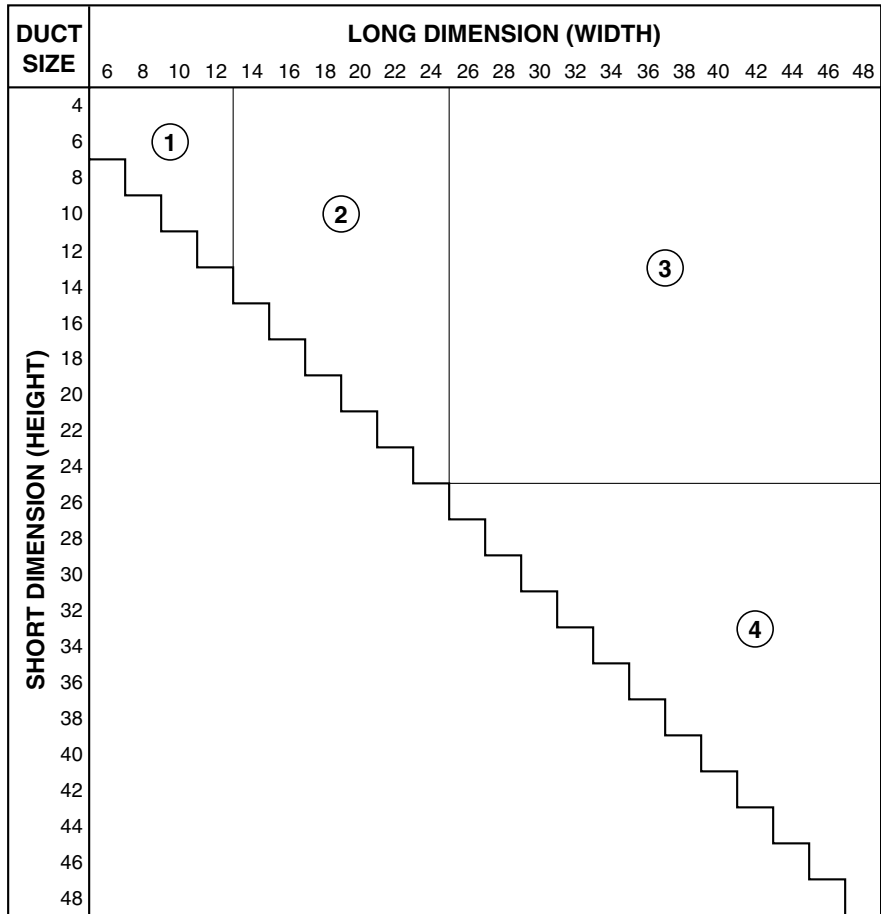
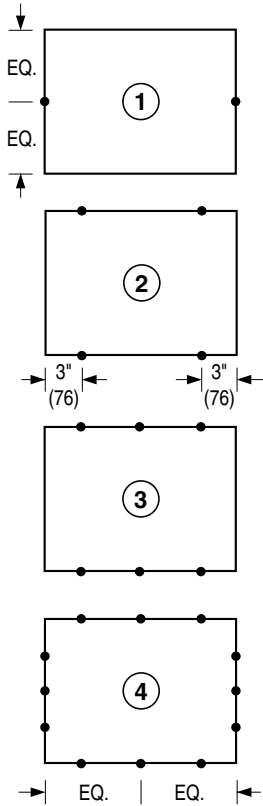
For performance data notes, see F77.

PERFORMANCE DATA: SUPPLY GRILLES AND REGISTERS • AIRFOIL BLADE 7100 SERIES MODELS: 71DV, 71DH, 71SV, 71SH

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
36 x 34	38 x 32 40 x 30 48 x 26	8.20		CFM		2460	3280	4100	4920	5740	6560	8200	9840	11480
				Noise Criteria		–	15	22	27	32	36	42	48	53
				Throw	0°	26-42-79	37-57-91	47-70-102	57-79-111	65-85-121	75-91-129	84-102-144	91-111-158	98-121-171
					22 1/2° 45°	21-34-63 13-21-40	30-46-73 19-29-	38-56-82 24-35-51	46-63-89 29-40-56	52-68-97 33-43-61	60-73-103 38-46-65	67-82-115 42-51-72	73-89-126 46-56-79	78-97-137 49-61-86
36 x 36	38 x 34 42 x 30 46 x 28	8.69		CFM		2607	3476	4345	5214	6083	6952	8690	10428	12166
				Noise Criteria		–	15	22	27	32	36	42	48	53
				Throw	0°	28-45-84	36-60-96	49-74-108	60-84-117	69-90-127	78-96-136	88-108-152	96-117-166	104-127-180
					22 1/2° 45°	22-36-67 14-23-42	31-48-77 20-30-48	39-59-86 25-37-54	48-67-94 30-42-59	55-72-102 35-45-64	62-77-109 39-48-68	70-86-122 44-54-76	77-94-133 48-59-83	83-102-144 52-64-90
38 x 38	42 x 34	9.70		CFM		2910	3880	4850	5820	6790	7760	9700	11640	13580
				Noise Criteria		–	16	23	28	33	37	43	49	54
				Throw	0°	28-47-88	42-62-101	53-78-114	62-88-125	73-95-134	83-101-143	93-114-161	101-125-176	109-134-190
					22 1/2° 45°	22-38-70 14-24-44	34-50-81 21-31-51	42-62-91 27-39-57	50-70-100 31-44-63	58-76-107 37-48-67	66-81-114 42-51-72	74-91-129 47-57-81	81-100-141 51-63-88	87-107-152 55-67-95
42 x 36	44 x 34 48 x 30	10.16		CFM		3048	4064	5080	6096	7112	8128	10160	12192	14224
				Noise Criteria		–	16	23	28	33	37	43	49	54
				Throw	0°	29-48-90	43-64-104	53-80-117	64-90-127	75-97-138	85-104-147	95-117-165	104-127-180	112-138-195
					22 1/2° 45°	23-38-72 15-24-45	34-51-83 22-32-52	42-64-94 27-40-59	51-72-102 32-45-64	60-78-110 38-49-69	68-83-118 43-52-74	76-94-132 48-59-83	83-102-144 52-64-90	90-110-156 56-69-98
40 x 40	42 x 38 46 x 34 48 x 32	10.77		CFM		3231	4308	5385	6462	7539	8616	10770	12924	15078
				Noise Criteria		–	16	23	28	33	37	43	49	54
				Throw	0°	31-50-94	44-67-108	56-84-121	67-94-132	77-102-143	88-108-153	99-121-171	108-132-187	117-143-203
					22 1/2° 45°	25-40-75 16-25-47	35-54-86 22-34-54	45-67-97 28-42-61	54-75-106 34-47-66	62-82-114 39-51-72	70-86-122 44-54-77	79-97-137 54-61-86	86-106-150 54-66-94	94-114-162 59-72-102
42 x 42	44 x 40 46 x 38 48 x 36	11.89		CFM		3567	4756	5945	7134	8323	9512	11890	14268	16646
				Noise Criteria		–	17	24	29	34	38	44	50	55
				Throw	0°	32-52-97	46-69-112	58-86-125	69-97-138	81-105-149	92-112-159	102-125-178	112-138-195	122-145-210
					22 1/2° 45°	26-42-78 16-26-49	37-55-90 23-35-56	46-69-100 29-43-63	55-78-110 35-49-69	65-84-119 41-53-75	74-90-127 46-56-80	82-100-142 51-63-89	90-110-156 56-69-98	98-119-168 61-75-105
44 x 44	46 x 42	13.07		CFM		3921	5228	6535	7842	9149	10456	13070	15684	18298
				Noise Criteria		–	17	24	29	34	38	44	50	55
				Throw	0°	34-55-104	49-74-120	61-92-133	74-104-146	86-112-158	97-120-168	109-133-189	120-146-207	129-158-223
					22 1/2° 45°	27-44-83 17-28-52	39-59-96 25-37-60	49-74-106 31-46-67	59-83-117 37-52-73	69-90-126 43-56-79	78-96-134 49-60-84	87-106-151 55-67-95	96-117-166 60-73-104	103-126-178 65-79-112
46 x 46		14.30		CFM		4290	5720	7150	8580	10010	11440	14300	17160	20020
				Noise Criteria		–	17	24	29	34	38	44	50	55
				Throw	0°	35-57-107	51-76-124	63-95-138	76-107-151	89-116-163	101-124-174	113-138-195	124-151-214	134-163-231
					22 1/2° 45°	28-46-86 18-29-54	41-61-99 26-38-62	50-76-110 32-48-69	61-86-121 38-54-76	71-93-130 45-58-82	81-99-139 51-62-87	90-110-156 57-69-98	99-121-171 62-76-107	107-130-185 62-82-116
48 x 48		15.59		CFM		4677	6236	7795	9354	10913	12472	15590	18708	21826
				Noise Criteria		–	18	25	30	35	39	45	51	56
				Throw	0°	37-60-113	53-80-131	67-100-146	80-113-159	94-122-173	106-131-185	119-146-206	131-159-226	140-173-244
					22 1/2° 45°	30-48-90 19-30-57	42-64-105 27-40-66	54-80-117 34-50-73	64-90-127 40-57-80	75-98-138 47-61-87	85-105-148 53-66-93	95-117-165 60-73-103	105-127-181 62-80-113	112-138-195 70-87-122

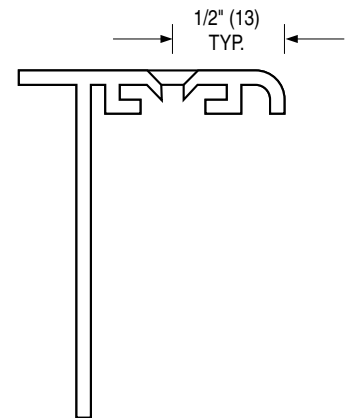
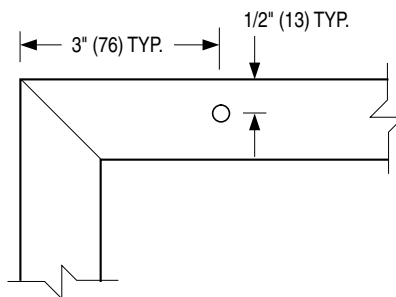
Performance Notes:

- 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 under isothermal conditions.
- Performance data is based on double deflection grille with opposed blade damper (register).
- 0°, 22 1/2° and 45° represent vertical blade deflection angles and horizontal spread.
- Additional performance notes and correction factors for various models and settings may be found on page F73.
- 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.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.



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.



Dimensions are in inches (mm).

SCHEDULE TYPE:			
PROJECT:			
ENGINEER:		DATE	B SERIES
CONTRACTOR:		30 - 4 - 01	SUPP./G&R
		SUPERSEDES	DRAWING NO.
		NEW	SHLC-1