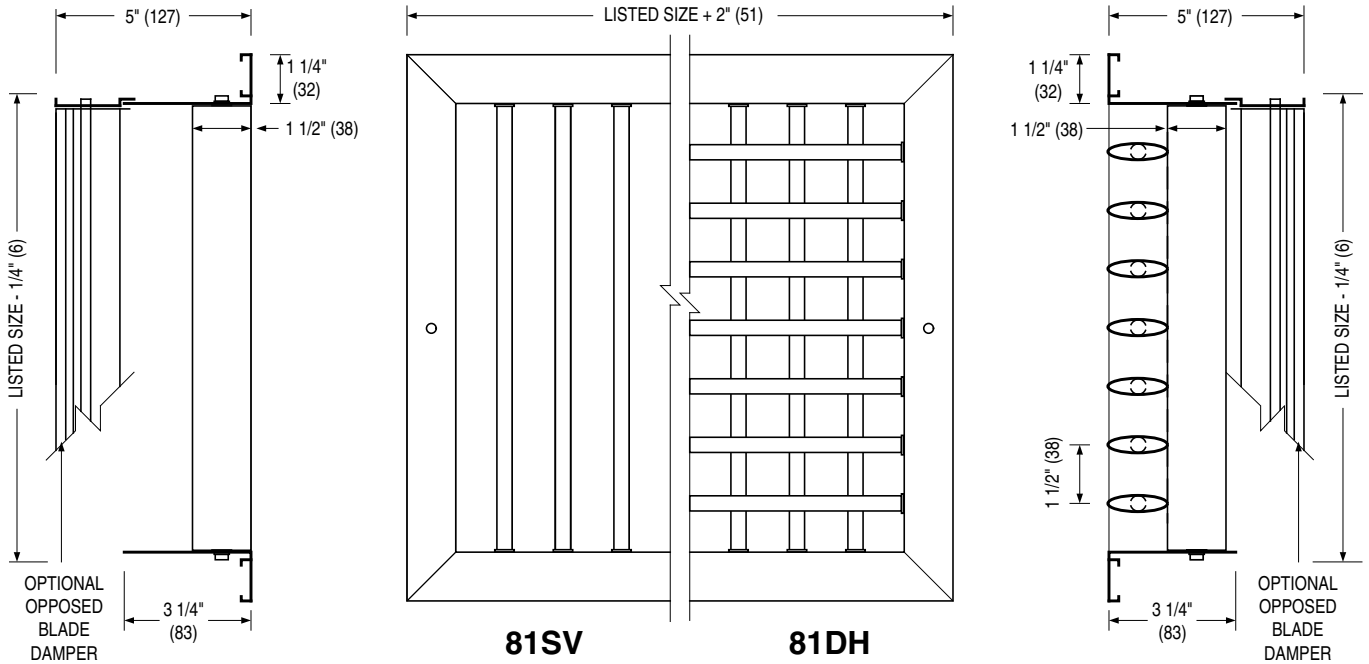




INDUSTRIAL GRILLES AND REGISTERS
 SUPPLY • ALUMINUM • HIGH CAPACITY
MODELS: 81SH(-O), 81SV(-O), 81DH(-O) AND
81DV(-O) TYPE S



SINGLE DEFLECTION MODELS

- 81SH** Horizontal front blades.
- 81SH-O** Horizontal front blades with opposed blade damper.
- 81SV** Vertical front blades.
- 81SV-O** Vertical front blades with opposed blade damper.

DOUBLE DEFLECTION MODELS

- 81DH** Horizontal front and vertical rear blades.
- 81DH-O** Horizontal front and vertical rear blades with opposed blade damper.
- 81DV** Vertical front and horizontal rear blades.
- 81DV-O** Vertical front and horizontal rear blades with opposed blade damper.

NOTES:

1. Heavy-duty extruded aluminum (.07") frame with staked reinforced mitered corners and screw holes for face screw mounting.
2. Heavy-duty extruded aluminum (.05") individually adjustable airfoil blades on 1 1/2" (38) centers.
3. Available in nominal duct sizes 6" x 4" (152 x 102) through 36" x 36" (914 x 914) in one piece construction.
4. Optional opposed blade damper has a key operator or screwdriver adjustment accessible through face of the register.
5. Standard finish is AW Appliance White.

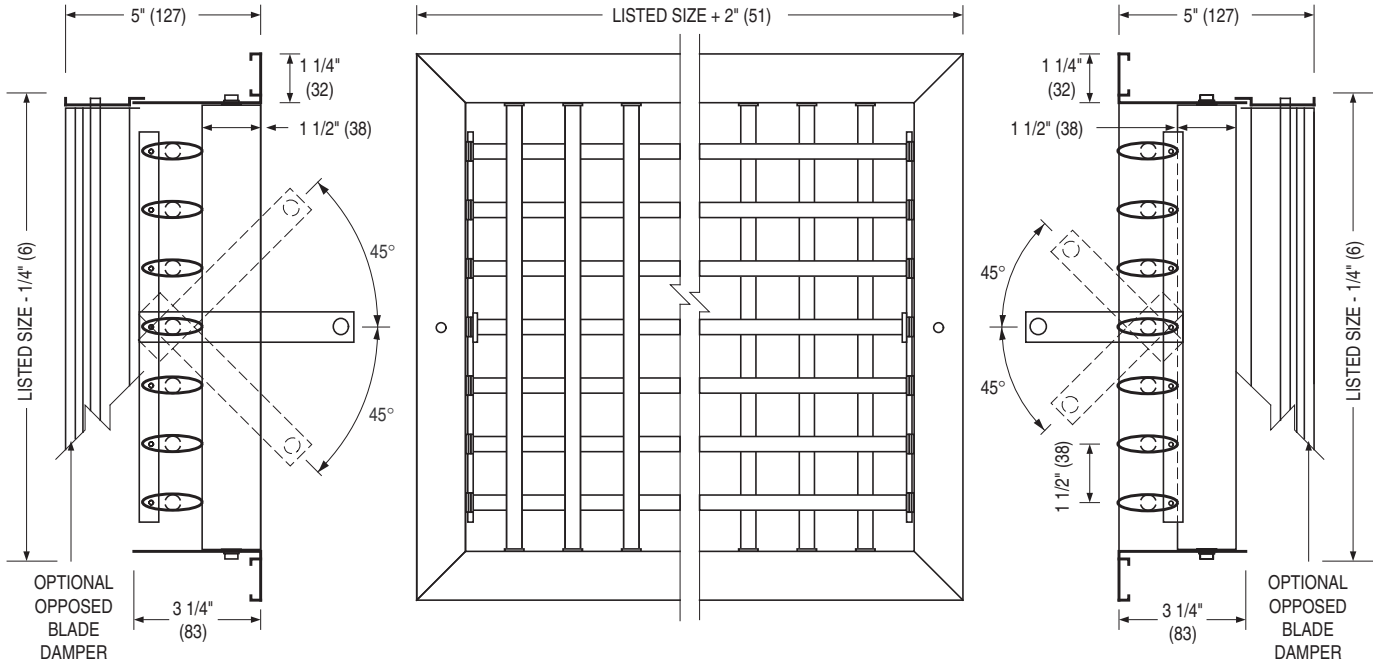
OPTIONS:

1. Optional finish:
 - AL Aluminum.

SCHEDULE TYPE:		Dimensions are in inches (mm).			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	2 - 1 - 11	8100	11 - 97RR	8100-1	



INDUSTRIAL GRILLES AND REGISTERS
GANG OPERATED DOUBLE DEFLECTION
SUPPLY • ALUMINUM • HIGH CAPACITY
MODELS: 81GDH(-O) AND 81GDV(-O) TYPE S



REAR BLADES GANGED

- 81GDV** Vertical front and horizontal rear blades.
- 81GDV-O** Vertical front and horizontal rear blades with opposed blade damper.

FRONT BLADES GANGED

- 81GDH** Horizontal front and vertical rear blades.
- 81GDH-O** Horizontal front and vertical rear blades with opposed blade damper.

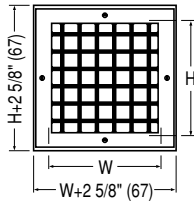
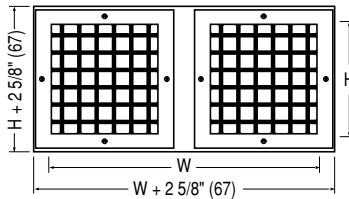
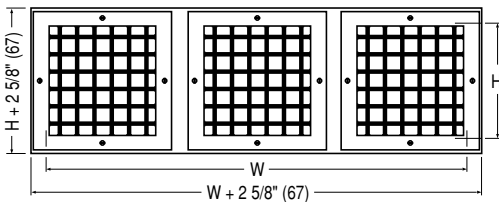
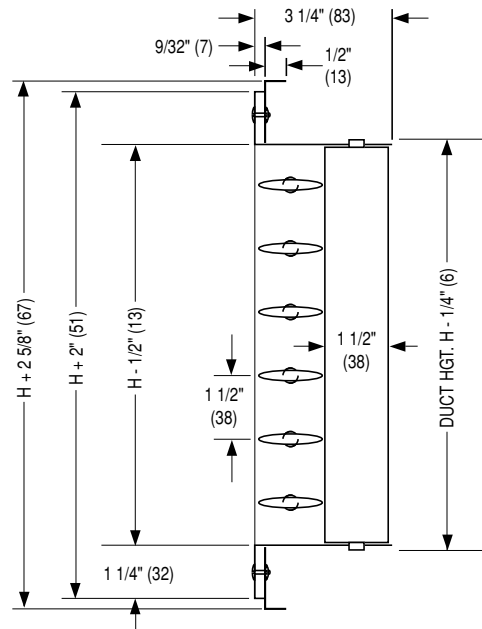
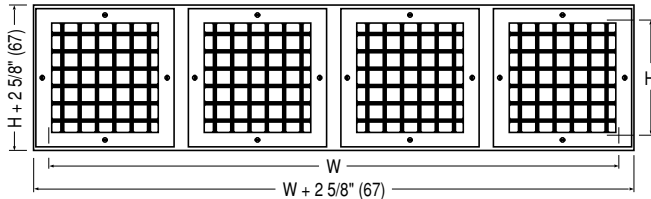
NOTES:

1. Heavy-duty extruded aluminum (.07") frame with staked reinforced mitered corners and screw holes for face screw mounting.
2. Heavy-duty extruded aluminum (.05") adjustable airfoil blades on 1 1/2" (38) centers.
 These double deflection grilles are supplied with front or rear gang operated blades to allow directional control of airflow in remote mounted locations. A pole operated lever on the face of the unit permits deflection of the ganged blades 45° from either side of center. The second set of perpendicular blades are individually adjustable from the face of the grille for additional directional control.
3. Available in nominal duct sizes 6" x 4" (152 x 102) through 36" x 36" (914 x 914) in one piece construction.
4. Optional opposed blade damper has a key operator or screwdriver adjustment accessible through face of the register.
5. Standard finish is AW Appliance White.

OPTIONS:

1. Optional finish:
 - AL Aluminum.

SCHEDULE TYPE:		Dimensions are in inches (mm).			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	2 - 1 - 11	8100	11 - 97RR	8100-2	

81MG1 One Module

 81MG2 Two Modules

 81MG3 Three Modules

 81MG4 Four Modules

Dimensional Data/Imperial (inches)

H - Listed Size (Duct)	W- Listed Size (Duct)			
	1 Module	2 Modules	3 Modules	4 Modules
8	8	19	30	41
10	10	23	36	49
12	12	27	42	57
15	15	33	51	69

Dimensional Data/Metric (mm)

H - Listed Size (Duct)	W- Listed Size (Duct)			
	1 Module	2 Modules	3 Modules	4 Modules
203	203	483	762	1041
254	254	584	914	1245
305	305	686	1067	1448
381	381	838	1295	1753

DESCRIPTION:

1. Heavy-duty 18 ga. galvanized steel frames accommodate up to four individual grilles. Modular grilles are designed to deliver large volumes of air with a long throw. Adjustments to blade settings can produce wide spread with shorter throws.

Once blades are set, quick changes in air direction can be made by removing one or more grilles, rotating and reinserting them. Individual grilles are attached to the modular frame by four quick release 1/4-turn fasteners. The modular frame is supplied with pre-punched holes for attachment to flanged ductwork.

Modular grilles are ideal for applications such as factories, warehouses, shopping malls, atriums and stadiums.

2. Each grille features a heavy-duty extruded aluminum (.07") frame with staked re-inforced mitered corners. The double deflection blade design incorporates two sets of heavy-duty extruded aluminum (.05" min. wall thickness) individually adjustable airfoil blades on 1 1/2" (38) centers for premium performance.

Individual grille modules are available in sizes 8" x 8", 10" x 10", 12" x 12" and 15" x 15" (203 x 203, 254 x 254, 305 x 305, 381 x 381).

3. Standard finish is AW Appliance White.

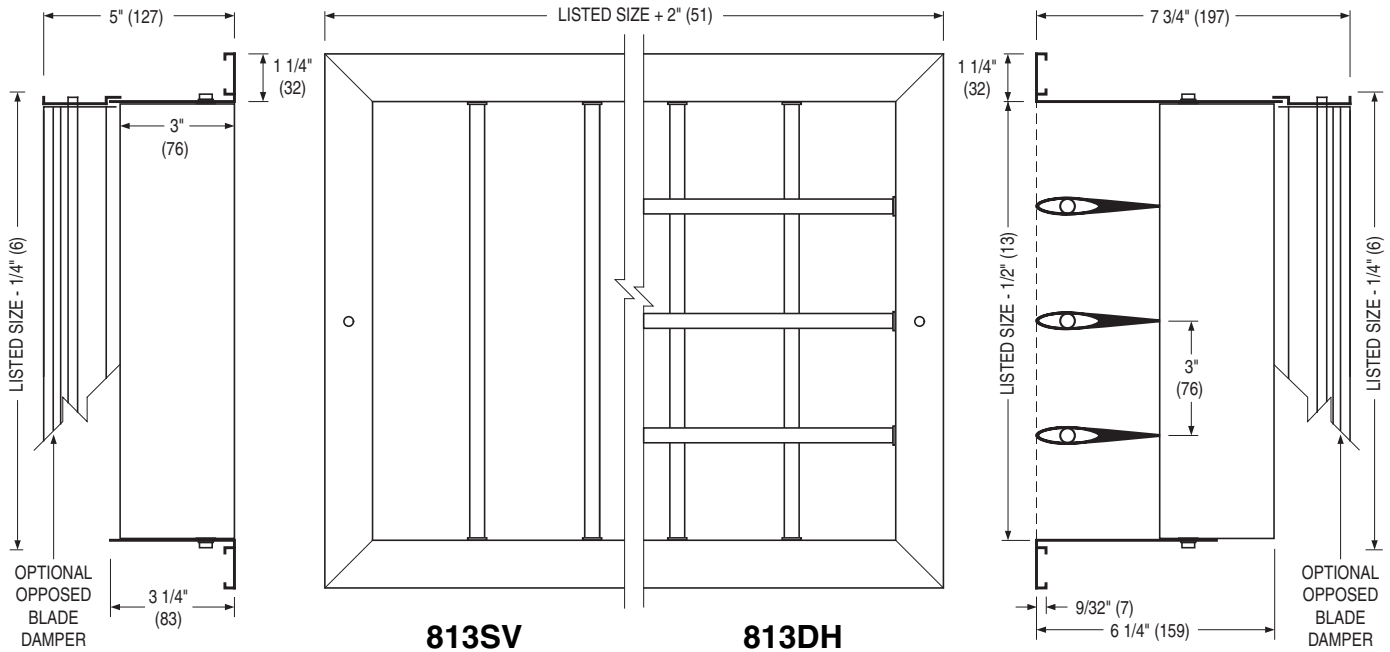
Special Features:
SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Dimensions are in inches (mm).

DATE
B SERIES
SUPERSEDES
DRAWING NO.
2 - 1 - 11
8100
3 - 11 - 99RR
8100-3



INDUSTRIAL GRILLES AND REGISTERS
SUPPLY • ALUMINUM • HIGH CAPACITY
3" (76) BLADE SPACING
MODELS: 813SH(-O), 813SV(-O), 813DH(-O)
AND 813DV(-O)



SINGLE DEFLECTION MODELS

- 813SH** Horizontal front blades.
- 813SH-O** Horizontal front blades with opposed blade damper.
- 813SV** Vertical front blades.
- 813SV-O** Vertical front blades with opposed blade damper.

DOUBLE DEFLECTION MODELS

- 813DH** Horizontal front and vertical rear blades.
- 813DH-O** Horizontal front and vertical rear blades with opposed blade damper.
- 813DV** Vertical front and horizontal rear blades.
- 813DV-O** Vertical front and horizontal rear blades with opposed blade damper.

NOTES:

1. Heavy-duty extruded aluminum frame with staked reinforced mitered corners. Frame/Border Type S Surface Mount.
2. Heavy-duty solid extruded aluminum airfoil blades on 3" (76) centers. Blades are adjustable and individually friction pivoted on screws and nylon washers to securely hold deflection setting.
3. Standard fastening is Type A screw holes.
4. Available in nominal duct sizes 12" x 12" (305 x 305) through 48" x 48" (1219 x 1219) in one piece construction.
5. Optional roll-formed steel opposed blade damper has a screwdriver slot operator adjustment accessible through face of the register.
6. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 - AL Aluminum.
 - SP Special. Specify _____.
2. Fastening:
 - Type N None.
3. OA Aluminum Opposed Blade Damper.
4. PF Plaster Sub-frame.
5. IS Insect Screen

SCHEDULE TYPE:		Dimensions are in inches (mm).			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	2 - 1 - 11	8100	9 - 5 - 03	8100-4	

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

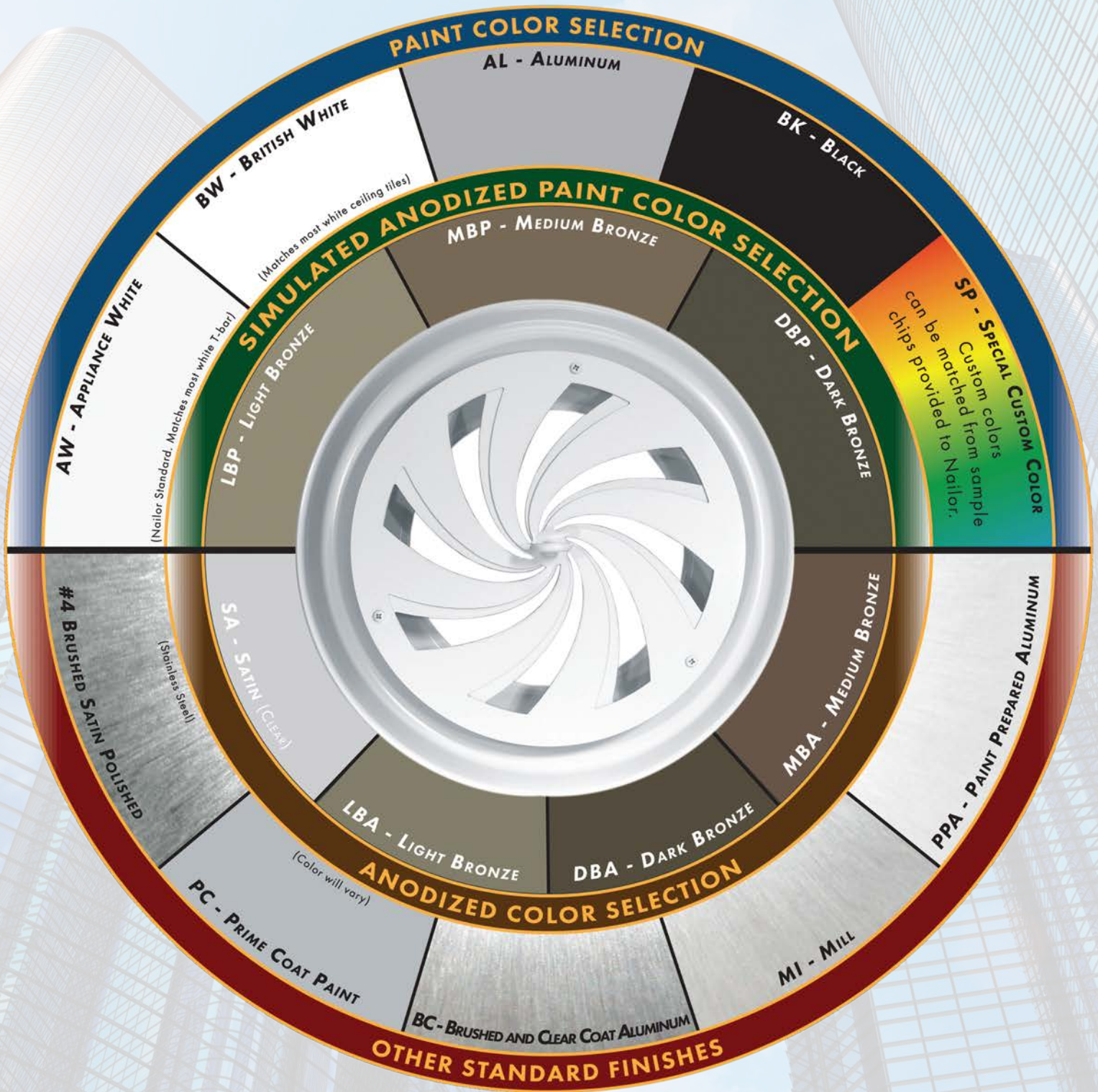
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



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 DATA:

MODEL SERIES 8100 AND 81GD • INDUSTRIAL SUPPLY GRILLES AND REGISTERS

MODELS: 81DV, 81DH, 81SV, 81SH, 813DV, 813DH, 813SV, 813SH, 81GDV, 81GDH

Listed Duct Size (inches)	Ak Factor	Neck Velocity, FPM	500	600	700	800	1000	1200	1400	1600	1800
		Velocity Pressure	.016	.022	.031	.040	.062	.090	.122	.160	.202
		Total Pressure	0° .035	.050	.068	.088	.138	.198	.271	.354	.448
			22 1/2° .039	.056	.076	.099	.155	.222	.305	.398	.503
			45° .059	.084	.115	.149	.233	.334	.458	.598	.757
18 x 4 14 x 5 12 x 6		CFM	250	300	350	400	500	600	700	800	900
		Noise Criteria	–	–	–	–	26	30	34	38	41
		Throw	0° 13-20-28	15-22-31	17-24-34	19-26-36	22-28-39	24-30-42	26-32-45	28-34-48	30-36-51
		22 1/2° 10-16-22	12-18-24	13-20-26	15-21-28	17-23-31	18-25-33	20-27-35	22-29-37	23-31-39	
		45° 7-10-13	8-11-14	9-12-16	10-12-17	11-13-19	12-14-20	13-15-22	14-16-23	15-17-25	
26 x 6 18 x 8 16 x 10 12 x 12		CFM	500	600	700	800	1000	1200	1400	1600	1800
		Noise Criteria	–	–	–	23	29	34	38	41	44
		Throw	0° 17-26-37	20-29-41	23-32-45	26-35-49	29-38-53	33-42-58	36-45-62	39-48-66	42-51-70
		22 1/2° 14-20-29	16-23-32	19-25-36	21-28-39	24-31-43	26-33-46	28-36-49	31-39-53	33-42-56	
		45° 9-12-18	10-14-20	12-15-22	13-17-24	15-19-26	16-20-29	17-22-31	19-24-33	20-26-35	
24 x 8 20 x 10 16 x 12 14 x 14		CFM	750	900	1050	1200	1500	1800	2100	2400	2700
		Noise Criteria	–	–	22	25	31	36	40	43	46
		Throw	0° 24-35-48	28-38-53	31-42-58	35-45-63	39-49-69	42-52-74	46-56-79	50-59-84	53-63-89
		22 1/2° 19-28-38	22-31-42	25-34-46	27-36-50	30-39-55	33-42-59	36-45-63	39-48-67	42-51-71	
		45° 12-17-24	14-19-26	16-21-29	17-23-31	19-25-34	21-27-36	23-29-39	25-31-41	27-33-44	
36 x 8 30 x 10 24 x 12 20 x 14 18 x 16		CFM	1000	1200	1400	1600	2000	2400	2800	3200	3600
		Noise Criteria	–	–	23	26	32	37	41	44	48
		Throw	0° 25-37-54	29-41-60	34-46-66	39-51-73	43-55-79	48-60-85	52-64-92	57-69-98	61-73-104
		22 1/2° 20-30-44	24-33-49	27-37-54	31-41-58	35-44-63	38-48-68	42-51-73	46-55-78	50-58-83	
		45° 12-18-27	14-20-30	17-23-33	19-25-36	22-28-39	24-30-42	26-32-45	29-35-48	31-37-51	
36 x 12 30 x 14 26 x 16 24 x 18		CFM	1500	1800	2100	2400	3000	3600	4200	4800	5400
		Noise Criteria	–	21	25	28	34	39	43	46	49
		Throw	0° 30-44-66	36-50-74	42-56-81	47-62-89	53-68-97	59-74-104	65-80-112	71-86-120	77-92-127
		22 1/2° 24-35-53	28-40-59	33-45-65	37-50-71	42-55-78	46-60-84	51-65-90	55-70-96	60-75-102	
		45° 15-22-33	18-25-37	21-28-41	23-31-44	26-34-48	29-37-52	32-40-56	35-43-60	38-46-64	
48 x 12 36 x 16 30 x 20 24 x 24		CFM	2000	2400	2800	3200	4000	4800	5600	6400	7200
		Noise Criteria	–	22	26	30	36	40	44	48	51
		Throw	0° 33-49-76	40-56-85	47-63-94	53-70-102	60-77-111	67-85-120	74-92-129	81-99-138	88-106-147
		22 1/2° 27-40-61	32-45-68	38-51-75	43-57-82	49-62-89	54-68-96	59-73-103	65-79-110	70-84-117	
		45° 16-25-38	19-28-42	23-32-47	27-35-51	30-39-56	34-42-60	37-45-64	41-49-69	44-52-73	
60 x 12 54 x 14 48 x 16 42 x 18 36 x 20 30 x 24		CFM	2500	3000	3500	4000	5000	6000	7000	8000	9000
		Noise Criteria	–	23	27	31	37	41	45	49	52
		Throw	0° 38-56-87	45-64-96	52-72-105	60-79-115	67-87-124	74-95-133	82-103-143	89-111-152	96-119-161
		22 1/2° 30-45-70	36-51-77	42-57-85	47-63-92	53-70-100	59-76-107	65-83-114	71-89-122	77-95-129	
		45° 19-28-44	23-32-48	26-36-53	30-39-58	34-43-62	37-47-67	41-51-71	45-55-76	49-59-80	
72 x 12 60 x 14 54 x 16 48 x 18 36 x 24		CFM	3000	3600	4200	4800	6000	7200	8400	9600	10800
		Noise Criteria	–	24	28	32	38	42	46	50	53
		Throw	0° 42-62-95	50-70-105	58-79-115	66-88-126	74-96-136	82-105-146	90-113-157	98-122-167	106-130-177
		22 1/2° 33-50-75	39-57-83	46-64-91	53-70-99	59-77-107	66-84-115	72-91-123	79-98-131	85-105-139	
		45° 21-32-48	25-36-53	29-40-58	33-44-63	37-48-68	41-53-74	45-57-79	49-61-84	53-65-89	
72 x 14 60 x 16 54 x 18 48 x 20 30 x 30		CFM	3500	4200	4900	5600	7000	8400	9800	11200	12600
		Noise Criteria	20	25	29	32	38	43	47	50	54
		Throw	0° 44-55-101	53-66-112	62-77-124	70-88-136	79-99-147	88-111-159	97-122-170	106-133-182	115-144-193
		22 1/2° 35-53-80	42-60-89	49-68-98	57-76-108	64-83-117	71-91-126	79-98-136	86-106-145	93-113-154	
		45° 22-32-50	26-37-56	31-42-62	35-47-67	40-52-73	44-57-79	48-62-85	53-67-91	57-72-97	

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 pressures are based upon a grille without an opposed blade damper. Correction for grille with opposed blade damper – Multiply total pressure by 1.12.

- Noise Criteria values are based upon a grille without an opposed blade damper and a 0° deflection. Correction for grille with opposed blade damper – Add 5 dB to Noise Criteria. Correction for 22 1/2° deflection – Add 1 dB to Noise Criteria. Correction for 45° deflection – Add 7 dB to Noise Criteria.

- Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts @ 0° deflection. Dash (–) in space indicates an Noise Criteria of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

MODEL SERIES 8100 AND 81GD • INDUSTRIAL SUPPLY GRILLES AND REGISTERS

MODELS: 81DV, 81DH, 81SV, 81SH, 813DV, 813DH, 813SV, 813SH, 81GDV, 81GDH

Listed Duct Size (inches)	Ak Factor	Neck Velocity, FPM	500	600	700	800	1000	1200	1400	1600	1800	
		Velocity Pressure	.016	.022	.031	.040	.062	.090	.122	.160	.202	
		Total	0°	.035	.050	.068	.088	.138	.198	.271	.354	.448
		Pressure	22 1/2°	.039	.056	.076	.099	.155	.222	.305	.398	.503
			45°	.059	.084	.115	.149	.233	.334	.458	.598	.757
64 x 18 58 x 20 54 x 22 48 x 24 44 x 26 38 x 30		CFM	4000	4800	5600	6400	8000	9600	11200	12800	14000	
		Noise Criteria	21	26	30	33	39	44	48	51	54	
	6.10 5.90 4.71	Throw	0°	47-59-108	56-71-120	66-83-132	75-94-145	85-106-157	94-118-169	103-130-182	113-142-194	122-154-206
			22 1/2°	37-57-85	45-65-95	53-73-105	60-81-115	68-89-125	76-97-135	84-105-145	92-113-155	100-121-165
			45°	23-34-53	28-39-59	33-44-65	37-50-72	42-55-78	47-60-84	52-66-91	57-71-97	62-76-103
72 x 18 60 x 22 54 x 24 48 x 28 36 x 36		CFM	4500	5400	6300	7200	9000	10800	12600	14400	16200	
		Noise Criteria	22	26	30	34	40	44	48	52	55	
	6.94 6.72 5.36	Throw	0°	50-63-115	60-76-128	70-88-141	80-101-154	90-113-167	100-126-181	110-139-194	120-151-207	130-164-220
			22 1/2°	39-61-91	47-69-101	56-78-112	64-87-123	73-95-133	81-104-144	89-112-154	98-121-165	106-129-175
			45°	25-36-56	30-42-63	35-47-69	40-53-76	45-59-83	51-64-89	56-70-96	61-76-103	68-82-110

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 pressures are based upon a grille without an opposed blade damper. Correction for grille with opposed blade damper – Multiply total pressure by 1.12.

4. Noise Criteria values are based upon a grille without an opposed blade damper and a 0° deflection.
Correction for grille with opposed blade damper – Add 5 dB to Noise Criteria.
Correction for 22 1/2° deflection – Add 1 dB to Noise Criteria.
Correction for 45° deflection – Add 7 dB to Noise Criteria.

5. Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts @ 0° deflection. Dash (–) in space indicates a Noise Criteria of less than 15.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

INDUSTRIAL SUPPLY GRILLES & REGISTERS • MODULAR CORE MODELS • 81MG SERIES

Model 81MG1 • One Module

Listed Duct Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity, FPM		500	600	700	800	1000	1200	1400	1600	1800	
			Velocity	Pressure	.016	.022	.031	.040	.062	.090	.122	.160	.202	
8	0.38		CFM											
			Noise Criteria											
			Throw	0°	11-18-25	12-19-27	14-21-29	16-22-30	19-24-33	21-26-36	23-28-39	25-30-41	27-32-44	
				22 1/2°	9-14-20	10-16-22	11-17-23	13-17-24	15-19-26	17-21-29	18-22-31	20-24-33	22-25-35	
10	0.61		CFM											
			Noise Criteria											
			Throw	0°	14-22-30	17-24-33	19-26-36	22-28-39	25-30-42	27-33-45	29-35-49	31-37-52	33-40-55	
				22 1/2°	11-17-24	14-19-26	15-21-29	18-22-31	20-24-34	22-26-36	23-28-39	25-30-41	26-32-44	
12	0.90		CFM											
			Noise Criteria											
			Throw	0°	17-27-37	20-29-40	22-31-43	25-33-46	28-36-50	31-39-54	34-42-58	37-44-62	40-47-66	
				22 1/2°	14-21-30	16-23-32	18-25-34	20-26-37	22-29-40	25-31-43	27-33-46	30-35-50	32-37-53	
15	1.44		CFM											
			Noise Criteria											
			Throw	0°	23-33-46	27-37-52	31-41-57	34-44-61	38-48-67	42-52-72	45-55-77	49-59-82	52-63-87	
				22 1/2°	18-26-37	22-30-42	25-33-46	27-35-49	30-39-54	33-41-58	36-44-62	39-47-66	42-50-70	

Model 81MG2 • Two Module

Listed Duct Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity, FPM		500	600	700	800	1000	1200	1400	1600	1800	
			Velocity	Pressure	.016	.022	.031	.040	.062	.090	.122	.160	.202	
8	0.76		CFM											
			Noise Criteria											
			Throw	0°	15-23-32	18-26-36	20-29-40	22-31-43	26-33-46	29-36-50	31-39-54	34-41-57	36-44-61	
				22 1/2°	12-18-26	14-21-29	16-23-32	18-25-34	21-26-37	23-29-40	25-31-43	27-33-46	29-35-49	
10	1.22		CFM											
			Noise Criteria											
			Throw	0°	18-30-42	22-34-47	27-37-52	30-40-56	34-43-60	37-46-65	41-50-69	44-53-74	47-55-78	
				22 1/2°	14-24-34	28-27-38	22-30-42	24-32-45	27-35-48	30-37-52	32-40-55	35-42-59	38-44-62	
12	1.80		CFM											
			Noise Criteria											
			Throw	0°	24-37-52	28-42-59	32-46-64	36-49-68	41-54-75	45-57-81	50-61-86	54-65-92	58-69-97	
				22 1/2°	19-30-42	22-34-47	26-37-51	29-39-54	33-43-60	36-46-64	40-49-69	43-52-73	46-55-78	
15	2.87		CFM											
			Noise Criteria											
			Throw	0°	29-47-65	35-52-72	40-57-80	45-62-87	51-67-95	57-73-102	63-78-110	69-83-117	75-88-124	
				22 1/2°	23-37-52	28-41-58	32-45-64	36-49-70	41-54-76	46-58-82	50-62-88	55-66-93	60-70-99	

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 pressures are based upon a grille without an opposed blade damper. Correction for grille with opposed blade damper – Multiply total pressure by 1.12.

- Noise Criteria values are based upon a grille without an opposed blade damper and a 0° deflection. Correction for grille with opposed blade damper – Add 5 dB to Noise Criteria. Correction for 22 1/2° deflection – Add 1 dB to Noise Criteria. Correction for 45° deflection – Add 7 dB to Noise Criteria.

- Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts @ 0° deflection. Dash (-) in space indicates an Noise Criteria of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

INDUSTRIAL SUPPLY GRILLES & REGISTERS • MODULAR CORE MODELS • 81MG SERIES

Model 81MG3 • Three Modules

Listed Duct Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity, FPM		500	600	700	800	1000	1200	1400	1600	1800
			VP		.016	.022	.031	.040	.062	.090	.122	.160	.202
			Total Pressure	0° 22 1/2° 45°	.036 .042 .061	.052 .060 .088	.071 .081 .119	.092 .106 .156	.144 .166 .244	.208 .239 .351	.283 .325 .478	.370 .425 .624	.468 .538 .790
8	1.15		CFM		565	678	791	904	1130	1356	1582	1808	2034
			Noise Criteria		–	15	19	23	29	34	38	41	45
		0.91 0.88 0.70	Throw	0° 22 1/2° 45°	17-29-40 14-23-32 8-14-19	21-32-44 17-25-35 10-15-21	25-35-49 20-28-39 12-17-24	28-38-53 22-31-42 13-18-25	31-41-57 25-33-46 15-20-27	34-44-61 27-35-49 16-21-29	38-46-66 30-38-52 20-24-33	41-50-70 33-40-56 20-24-33	44-53-74 35-42-59 21-25-36
10	1.83		CFM		915	1098	1281	1464	1830	2196	2562	2928	3294
			Noise Criteria		–	17	22	25	31	36	40	43	47
		1.46 1.42 1.14	Throw	0° 22 1/2° 45°	24-37-52 19-30-42 12-18-25	28-42-59 22-34-47 13-20-28	32-46-64 26-37-51 15-22-31	36-50-69 29-40-55 17-24-33	41-55-76 33-44-61 20-26-36	45-58-82 36-46-65 22-28-39	50-62-88 40-50-70 24-30-42	54-66-93 43-53-75 26-32-45	58-7099 46-56-79 28-34-48
12	2.70		CFM		1350	1620	1890	2160	2700	3240	3780	4320	4860
			Noise Criteria		15	19	23	27	33	38	42	46	49
		2.16 2.09 1.67	Throw	0° 22 1/2° 45°	29-45-63 23-36-50 14-22-30	35-50-70 28-40-56 17-24-34	40-55-77 32-44-62 19-27-37	45-60-84 36-48-67 22-29-40	50-65-92 40-52-74 24-31-44	56-70-99 44-56-79 27-34-48	61-76-107 49-60-85 29-36-51	67-81-114 53-65-91 32-39-55	72-86-121 58-69-97 35-41-58
15	4.31		CFM		2155	2586	3017	3448	4310	5172	6034	6896	7758
			Noise Criteria		18	22	26	30	36	40	44	48	51
		3.44 3.34 2.67	Throw	0° 22 1/2° 45°	35-58-82 28-47-66 17-28-39	42-63-89 34-51-71 20-30-43	49-69-97 39-55-78 24-33-47	55-75-105 44-60-84 26-36-50	62-82-115 50-65-92 30-39-55	69-88-124 55-71-99 33-42-60	77-95-134 61-76-107 37-45-64	84-101-143 67-81-114 40-49-69	91-108-152 73-86-122 44-52-73

GRILLES AND REGISTERS

Model 81MG4 • Four Modules

Listed Duct Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity, FPM		500	600	700	800	1000	1200	1400	1600	1800
			VP		.016	.022	.031	.040	.062	.090	.122	.160	.202
			Total Pressure	0° 22 1/2° 45°	.036 .042 .061	.052 .060 .088	.071 .081 .119	.092 .106 .156	.144 .166 .244	.208 .239 .351	.283 .325 .478	.370 .425 .624	.468 .538 .790
8	1.51		CFM		755	906	1057	1208	1510	1812	2114	2416	2718
			Noise Criteria		–	18	22	25	31	36	40	43	46
		1.21 1.17 0.94	Throw	0° 22 1/2° 45°	24-34-48 19-27-38 12-16-23	28-38-53 22-30-42 13-18-25	31-41-58 25-33-46 15-20-28	35-45-63 28-36-50 17-21-30	39-49-69 31-39-55 19-24-33	42-53-74 34-42-59 20-25-36	46-56-79 37-45-63 22-27-38	50-60-84 40-48-67 24-29-40	53-63-89 42-51-71 25-30-43
10	2.44		CFM		1220	1464	1708	1952	2440	2928	3416	3904	4392
			Noise Criteria		17	20	24	28	34	38	42	45	48
		1.95 1.89 1.51	Throw	0° 22 1/2° 45°	27-43-60 22-34-48 13-20-29	32-47-66 26-37-53 15-22-32	37-52-73 30-41-58 18-25-35	41-57-80 33-45-64 20-27-38	47-62-87 38-49-70 23-30-42	52-67-94 42-53-75 25-32-45	58-71-101 46-57-80 28-34-48	63-76-107 50-61-86 30-37-51	68-81-114 54-65-91 33-39-55
12	3.59		CFM		1795	2154	2513	2872	3590	4308	5026	5744	6462
			Noise Criteria		18	22	26	30	36	40	44	48	51
		2.88 2.78 2.23	Throw	0° 22 1/2° 45°	32-53-73 26-42-58 15-25-35	39-57-80 31-45-64 19-27-38	45-63-89 36-51-71 22-30-43	51-69-97 41-55-78 24-33-47	57-75-105 46-60-84 27-36-50	64-81-114 51-64-91 31-39-54	71-87-122 56-69-98 34-42-59	77-93-131 62-74-104 37-44-63	84-99-139 67-79-111 40-48-67
15	5.74		CFM		2870	3444	4018	4592	5740	6888	8036	9184	10332
			Noise Criteria		20	24	28	32	38	42	46	50	53
		4.59 4.45 3.56	Throw	0° 22 1/2° 45°	39-66-92 31-53-74 19-32-44	47-72-102 38-58-82 23-35-49	55-80-112 44-64-90 26-38-54	63-87-123 50-70-98 30-42-59	71-94-133 57-76-106 34-45-64	79-102-143 63-81-115 38-49-69	87-109-154 70-87-123 42-52-74	95-116-164 76-93-131 46-56-79	103-127-174 82-102-139 49-61-84

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 pressures are based upon a grille without an opposed blade damper. Correction for grille with opposed blade damper – Multiply total pressure by 1.12.
- Noise Criteria values are based upon a grille without an opposed blade damper and a 0° deflection. Correction for grille with opposed blade damper – Add 5 dB to Noise Criteria. Correction for 22 1/2° deflection – Add 1 dB to Noise Criteria. Correction for 45° deflection – Add 7 dB to Noise Criteria.
- Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts @ 0° deflection. Dash (–) in space indicates a Noise Criteria of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.