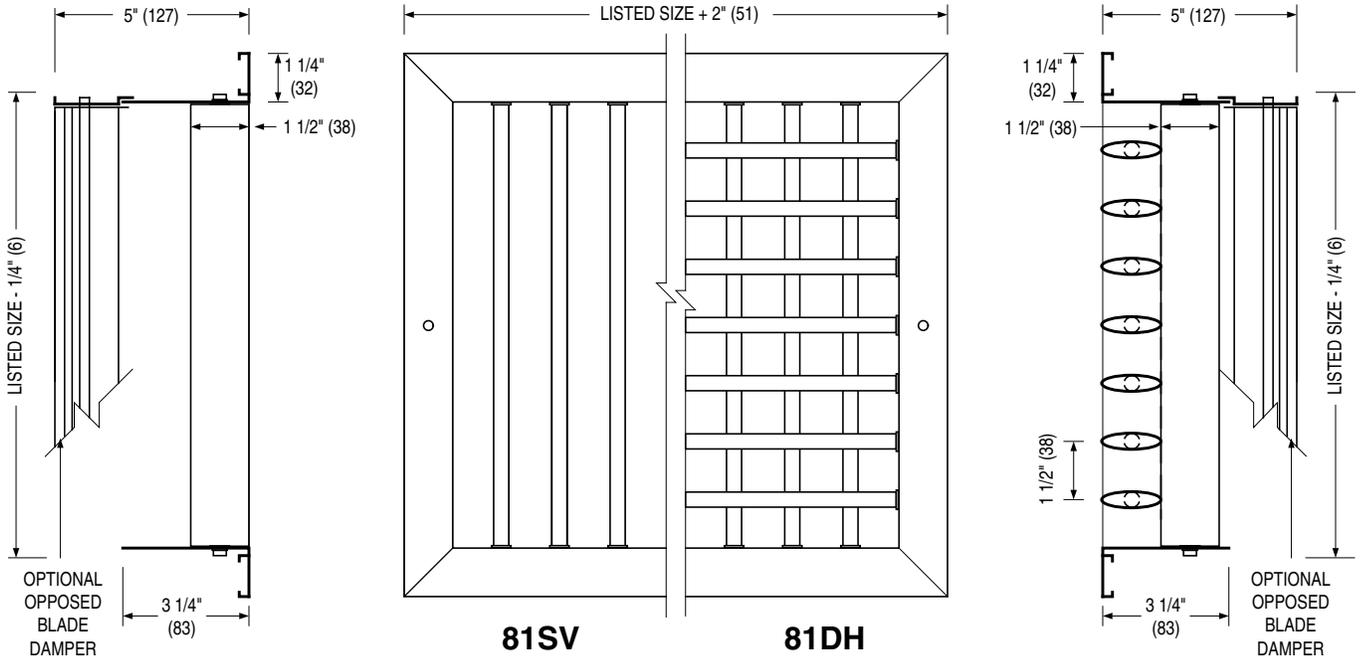




INDUSTRIAL GRILLES AND REGISTERS
 SUPPLY • ALUMINUM • HIGH CAPACITY
MODELS: 81SH(-O), 81SV(-O), 81DH(-O) AND
81DV(-O) TYPE S



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.

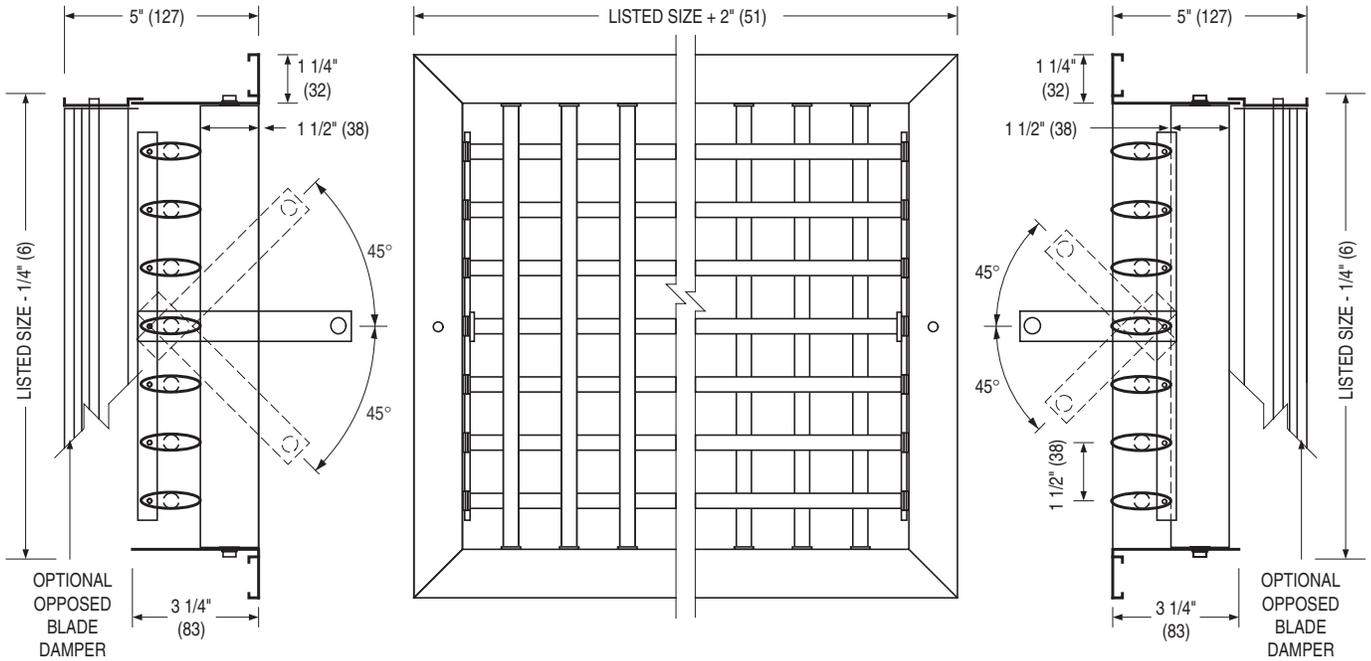
OPTIONS:

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.

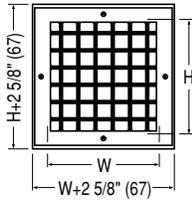
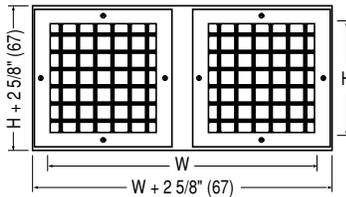
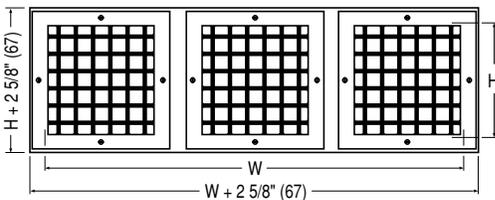
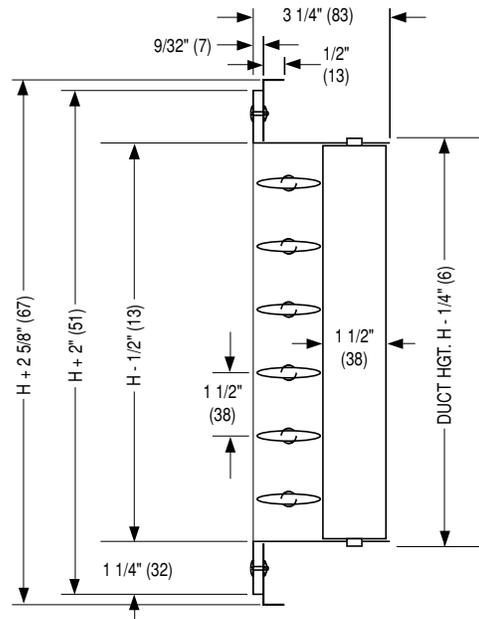
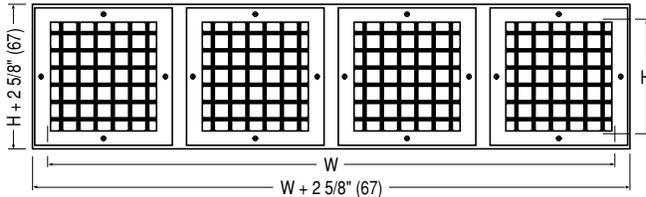
NOTES:

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.

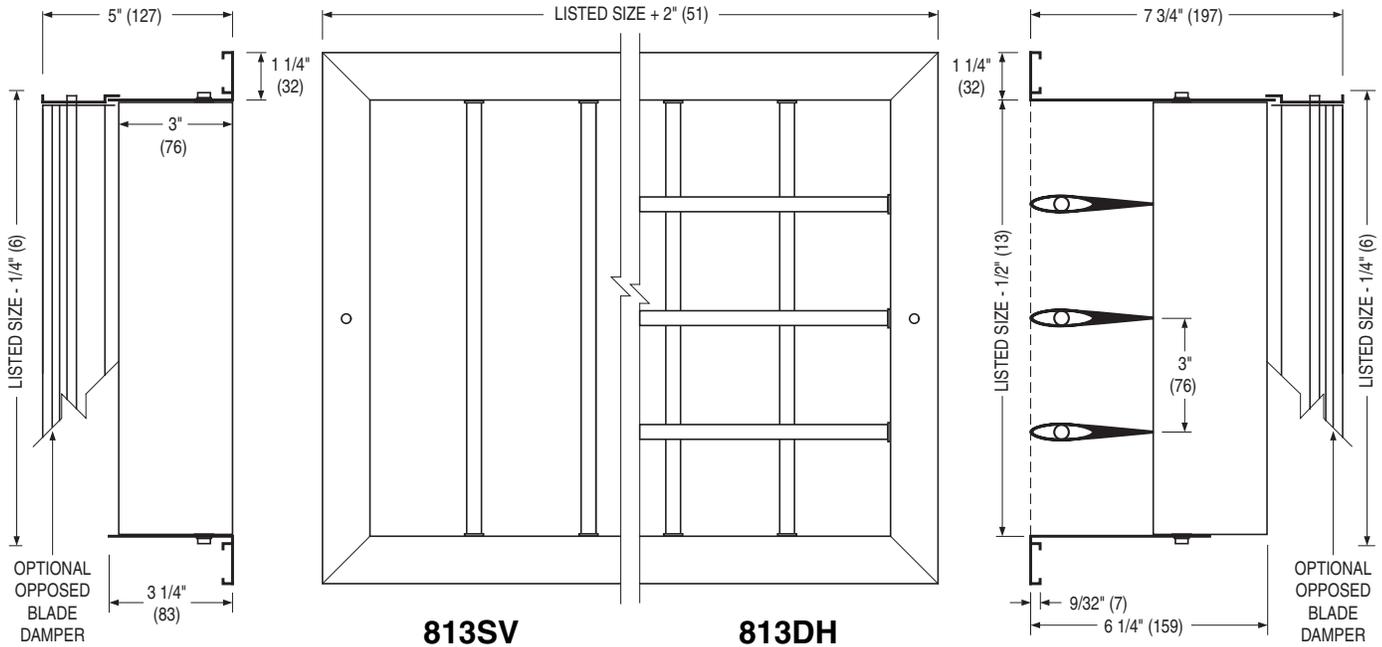
Special Features:
SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

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[®]
Industries Inc.

STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

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

NAILOR POWDER COAT PROPERTIES

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

ELECTROCOATING PROPERTIES

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



POWDER COAT

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

ELECTROCOATING

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

CLEAR ANODIZING (Aluminum products only)

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

COLOR ANODIZING (Aluminum products only)

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

BRUSHED AND CLEAR COAT

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

#4 BRUSHED SATIN POLISHED (Stainless Steel products only)

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

PRIME COAT

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

PAINT PREPARED ALUMINUM (Aluminum products only)

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

MILL FINISH

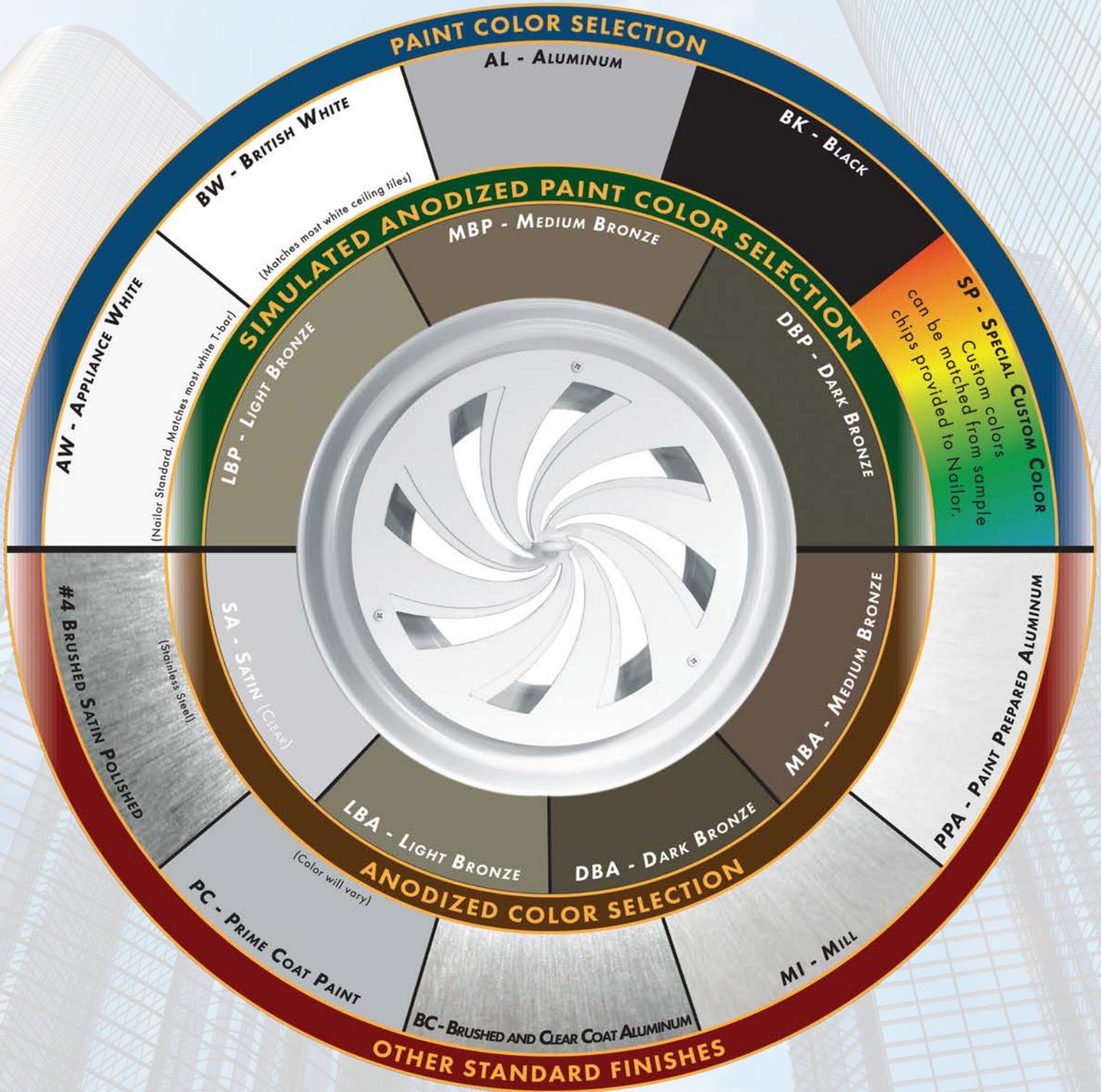
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



Nailor[®]
Industries Inc.

STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

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



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

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

"Complete Air Control and Distribution Solutions."

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 |
| | .33 | | 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 | |
| | .26 | | 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 |
| | .71 | | 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 | |
| | .69 | | 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 | |
| | .55 | | | | | | | | | | | |
| 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 |
| | .98 | | 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 | |
| | .95 | | 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 | |
| | .76 | | | | | | | | | | | |
| 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 |
| | 1.47 | | 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 | |
| | 1.43 | | 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 | |
| | 1.14 | | | | | | | | | | | |
| 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 |
| | 2.22 | | 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 | |
| | 2.15 | | 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 | |
| | 1.75 | | | | | | | | | | | |
| 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 |
| | 3.03 | | 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 | |
| | 2.93 | | 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 | |
| | 2.34 | | | | | | | | | | | |
| 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 |
| | 3.80 | | 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 | |
| | 3.67 | | 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 | |
| | 3.93 | | | | | | | | | | | |
| 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 |
| | 4.59 | | 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 | |
| | 4.45 | | 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 | |
| | 3.55 | | | | | | | | | | | |
| 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 |
| | 4.79 | | 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 | |
| | 4.63 | | 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 | |
| | 3.69 | | | | | | | | | | | |

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 – 2023..

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 an Noise Criteria of less than 15.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

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 – 2023.

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 18-23-31 | 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 – 2023.