

HEAVY DUTY STAINLESS STEEL

This grille is used mainly for return air applications that require strength and durability in corrosive or high humidity environments. The frame is welded and the blades are spaced on 1/2" (13) centers and reinforced with a mullion on 8" (203) centers.

Stainless Steel – Models 6755H-HD, 6755V-HD **Page F159**
 Suffix '-O' adds a stainless steel OBD



Model 6755H-HD



Models 45DL1, 45DL2

DRUM LOUVERS

These extruded aluminum drum louvers are appropriate when high volumes of air are used and in spot heating and cooling applications. A split-vane style and a pole operating bracket are available.

Models 45DLC1, 45DLC2 **Page F168**
 Suffix '-DEX' adds a damper/extractor (air scoop)

Models 45DL1, 45DL2 **Page F170**
 Suffix '-O' adds a steel OBD

INDUSTRIAL SUPPLY

The industrial supply grilles and registers have contoured airfoil blades that are extruded aluminum and are available with either 1 1/2" (38) or 3" (76) blade spacing. The heavy gauge, 1 1/4" (32) frame includes reinforced and staked mitered corners.

• **Double Deflection**
1 1/2" (38) Blade Spacing – Models 81DV, 81DH **Page F177**

3" (76) Blade Spacing – Models 813DV, 813DH **Page F177**
 Suffix '-O' adds a steel OBD

• **Single Deflection**
1 1/2" (38) Blade Spacing – Models 81SV, 81SH **Page F177**

3" (76) Blade Spacing – Models 813SV, 813SH **Page F177**
 Suffix '-O' adds a steel OBD

• **Gang Operated – Models 81GDV, 81GDH** **Page F177**
 Suffix '-O' adds a steel OBD



Models 813SH-O, 813DV



Model 81MG3

MODULAR CORE - INDUSTRIAL SUPPLY

Nailor has incorporated the features of the 8100 Series (double deflection) industrial supply grilles with an aluminum modular frame, which allows for extra directional flow flexibility. Up to four modules are available in specific sizes from 8" x 8" to 15" x 15" (203 x 203 to 381 x 381).

Models 81MG1, 81MG2, 81MG3, 81MG4 **Page F184**

Suffix '-O' adds a steel OBD

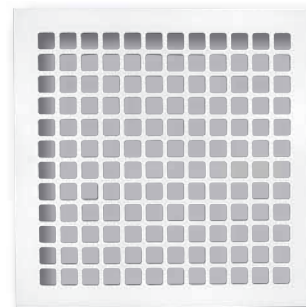
LATTICE FACE

Lattice face grilles are available in heavy gauge aluminum, steel and stainless steel construction with a selection of hole patterns to choose from. Countersunk screw holes and mounting screws are optional.

Aluminum – Model 51LG **Page F189**

Steel – Model 61LG **Page F189**

Stainless Steel – Model 67LG **Page F189**



Model 61LG75

INDUSTRIAL SUPPLY GRILLES AND REGISTERS

- HIGH CAPACITY
- EXTRUDED ALUMINUM
- 1 1/2 (38) OR 3 (76) SPACING

Double Deflection Models:

81DV, 81DH, 813DV, 813DH

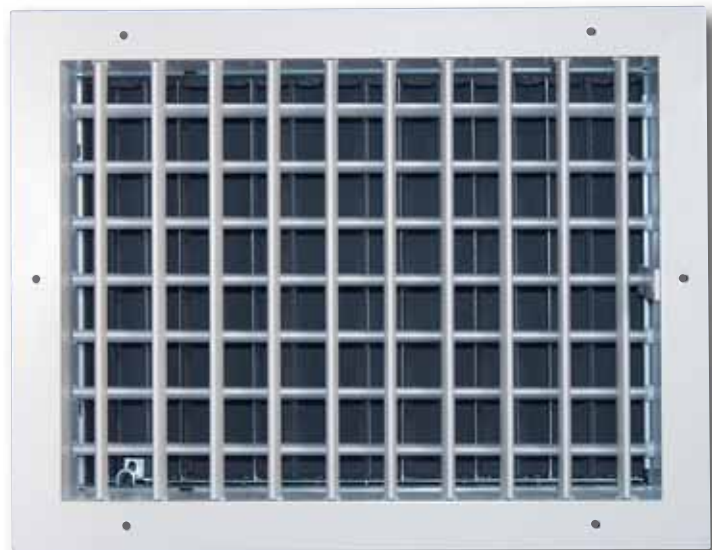
Single Deflection Models:

81SV, 81SH, 813SV, 813SH

Gang Operated Models:

81GDV, 81GDH

- Suffix '-O' adds a steel opposed blade damper



Model 81GDV-O

Model Series 8100 Industrial Supply Grilles and Registers have been specially designed to handle the large air volumes common in industrial applications and provide a product that is superior in design and performance when compared to the industry standard. The exclusive use of heavy gauge extrusions and attention to assembly detail ensure the product is well suited to handling the higher face velocities commonly associated with industrial applications where longer throws are desired. Such applications include factories, warehouses, textile mills and commercial projects where longer than normal throws or a more robust grille design are required.

STANDARD FEATURES:

- Surface mount 1 1/4" (32) face border frame, furnished with screw holes and painted screws.
- The single deflection models have one set of blades and the double deflection have two sets of perpendicular blades. Blades are individually friction pivoted on screws and nylon washers to securely hold deflection setting.
- Models with 1 1/2" (38) blade spacing on centers, feature 1 1/2" (38) deep, smooth contoured airfoil blades with a minimum wall thickness of 0.05" (1.27) for optimum performance.

- The double deflection 1 1/2" (38) blade spacing models are available 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.
- Models with 3" (76) blade spacing, feature robust 3" (76) deep, smooth contoured airfoil blades.
- The 1 1/2" (38) blade spacing models are available in sizes 6" x 4" (152 x 102) through 36" x 36" (914 x 914) in single section construction. The 3" (76) blade spacing models are available in sizes 12" x 12" (305 x 305) through 48" x 48" (1219 x 1219) in single section construction. Multiple sections are furnished for larger sizes.

CONSTRUCTION MATERIAL:

- High quality, extruded aluminum construction.
- Heavy gauge, extruded frame with reinforced mitered corners.
- Optional opposed blade damper has a screwdriver slot operator.

FINISH OPTIONS:

- AW Appliance White finish is standard. Other finishes are available.

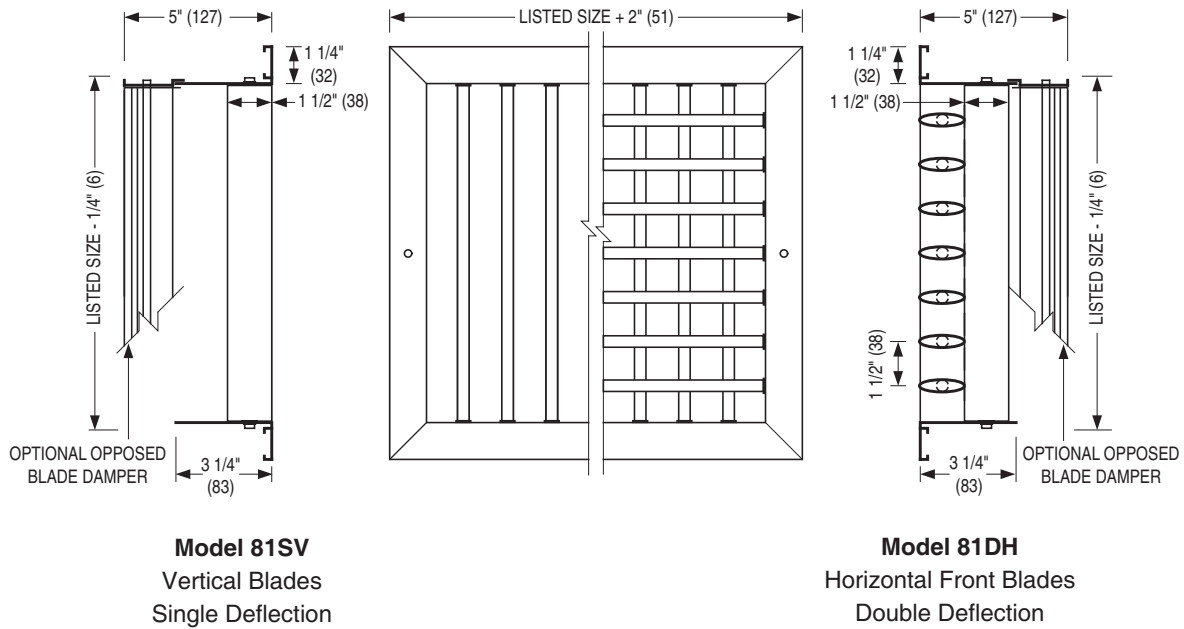
OPTIONS AND ACCESSORIES:

- IS Insect Screen
- PF Plaster Frame
- GK Foam Gasket

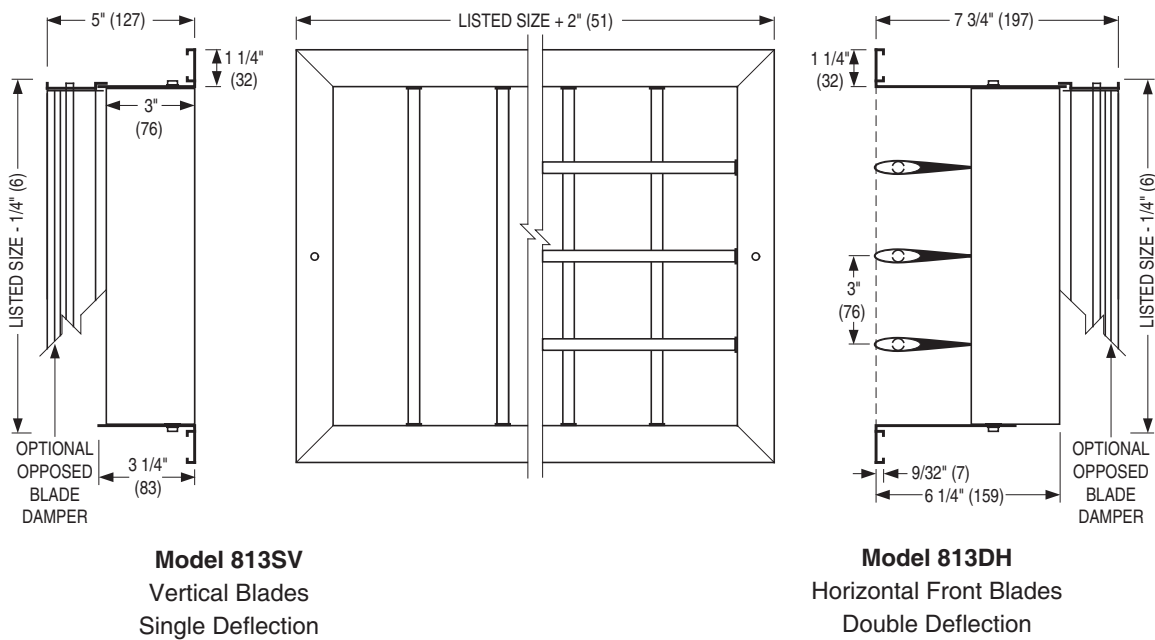
For additional options and accessories, see page F191.

DIMENSIONAL DATA:

MODEL SERIES 8100 • INDUSTRIAL SUPPLY GRILLES AND REGISTERS



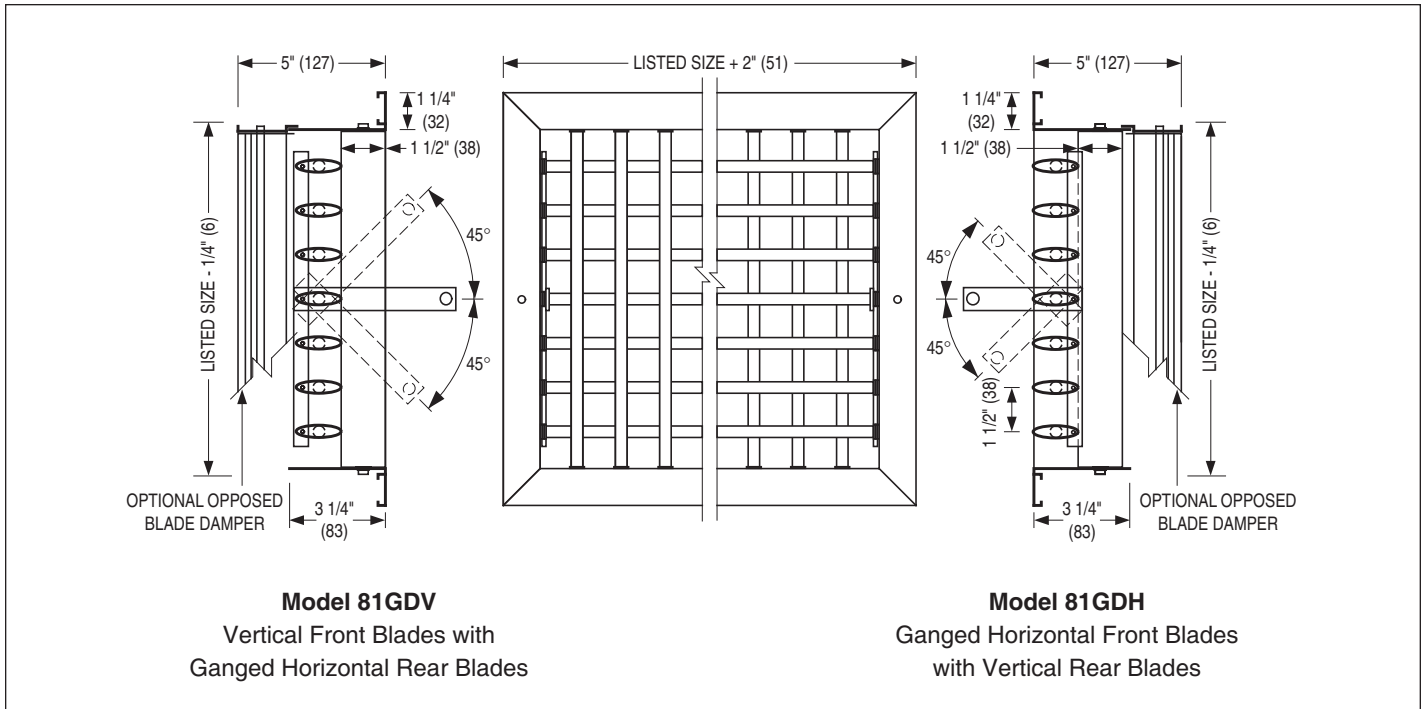
1 1/2" (38) Spacing



3" (76) Spacing

DIMENSIONAL DATA:

MODEL SERIES 81DG • GANG OPERATED INDUSTRIAL SUPPLY GRILLES AND REGISTERS



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.

HOW TO ORDER

MODEL SERIES: 8100

ALUMINUM INDUSTRIAL SUPPLY GRILLES AND REGISTERS

EXAMPLE: 81DV - O - 24 x 12 - S - AW - DMI - A - —

1. Models

Single Deflection

81SH Horizontal Front Blades,
1 1/2" (38) Spacing

81SV Vertical Front Blades,
1 1/2" (38) Spacing

813SH Horizontal Front Blades,
3" (76) Spacing

813SV Vertical Front Blades,
3" (76) Spacing

Double Deflection

81DH Horizontal Front Blades,
1 1/2" (38) Spacing

81DV Vertical Front Blades,
1 1/2" (38) Spacing

813DH Horizontal Front Blades,
3" (76) Spacing

813DV Vertical Front Blades,
3" (76) Spacing

Gang Operated Double Deflection

81GDH Horizontal Front with Vertical
Rear Blades, 1 1/2" (38)
Spacing

81GDV Vertical Front with Horizontal
Rear Blades, 1 1/2" (38)
Spacing

2. Damper (OBD)

- O Steel
- OA Aluminum
- No Damper

3. Width x Height

inches (mm)

4. Frame/Border Type

S Surface Mount (default)

5. Finish

AW Appliance White (default)

AL Aluminum

BK Black

BW British White

LBP Light Bronze Paint

MBP Medium Bronze Paint

DBP Dark Bronze Paint

MI Mill

PPA Paint Prepared Aluminum

SP Special Custom Color

6. Opposed Blade Damper Finish

DMI Mill (default)

DBK Painted Black

— None

7. Fastening

A Screw Holes (default)

N None

OPTIONS & ACCESSORIES:

— None

8. Plaster Sub-Frame

PF Plaster Sub-Frame

9. Insect Screen

IS Insect Screen

10. Gaskets

GK Foam Gasket

Notes:

1. On double deflection gang operated models, the horizontal blades (parallel to width) are ganged, whether front (81GDH) or rear (81GDV). The other set are individually adjustable.

2. For a standard grille with no special requirements, specification is only required as far as the damper selection. The "default" will automatically be selected. For example, a double deflection register with 3" (76) blade spacing, vertical front blades, and a damper is Model 813DV-O. Unit will be supplied with screw holes and AW Appliance White finish.

3. The larger dimension must always be specified first; for example, 24" x 12" (610 x 305), not 12" x 24" (305 x 610).

HOW TO SPECIFY

MODEL SERIES: 8100

ALUMINUM INDUSTRIAL SUPPLY GRILLES AND REGISTERS

SUGGESTED SPECIFICATION:

81DV, 81DH Double Deflection – 1 1/2" (38) Blade Spacing

Furnish and install **Nailor Model** (select one) **81DV** or **81DH Double Deflection Industrial Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a double set of perpendicular extruded aluminum adjustable blades that are airfoil shaped and spaced on 1 1/2" (38) centers. The frame is to be constructed from heavy gauge extruded aluminum with reinforced mitered corners. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

81SV, 81SH Single Deflection – 1 1/2" (38) Blade Spacing

Furnish and install **Nailor Model** (select one) **81SV** or **81SH Single Deflection Industrial Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a single set of extruded aluminum adjustable blades that are airfoil shaped and spaced on 1 1/2" (38) centers. The frame is to be constructed from heavy gauge extruded aluminum with reinforced mitered corners. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

813DV, 813DH Double Deflection – 3" (76) Blade Spacing

Furnish and install **Nailor Model** (select one) **813DV** or **813DH Double Deflection Industrial Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a double set of perpendicular extruded aluminum adjustable blades that are airfoil shaped and spaced on 3" (76) centers. The frame is to be constructed from heavy gauge extruded aluminum with reinforced mitered corners. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

813SV, 813SH Single Deflection – 3" (76) Blade Spacing

Furnish and install **Nailor Model** (select one) **813SV** or **813SH Single Deflection Industrial Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a single set of extruded aluminum adjustable blades that are airfoil shaped and spaced on 3" (76) centers. The frame is to be constructed from heavy gauge extruded aluminum with reinforced mitered corners. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

81GDV, 81GDH Double Deflection Gang Operated – 1 1/2" (38) Blade Spacing

Furnish and install **Nailor Model** (select one) **81GDV** or **81GDH Double Deflection Gang Operated Industrial Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a double set of perpendicular extruded aluminum adjustable blades that are airfoil shaped and spaced on 1 1/2" (38) centers. The horizontal blades shall be gang operated. The frame is to be constructed from heavy gauge extruded aluminum with reinforced mitered corners. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, constructed of heavy gauge corrosion-resistant steel and operable from the face of the grille, shall be provided with all units.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

INDUSTRIAL SUPPLY GRILLES AND REGISTERS

- MODULAR CORE
- HIGH CAPACITY

Models:

81MG1 - One Module

81MG2 - Two Modules

81MG3 - Three Modules

81MG4 - Four Modules

- Suffix '-O' adds a steel opposed blade damper



Model 81GDV-O

Model Series 81MG Industrial Supply Grilles and Registers have been specially designed to incorporate the industry leading characteristics of the 8100 Series into a unique modular mounting arrangement. The double deflection blade design incorporates two sets of heavy duty extruded aluminum, individually adjustable airfoil blades on 1 1/2" (38) centers allowing maximum flexibility. Quick release fasteners on each module allow them to be quickly removed and adjusted or rotated to control the spread, throw distance and air pattern.

Ideal for use in applications such as factories, warehouses, shopping malls, atriums and stadiums, the removable modules can be easily readjusted to suit almost any application.

STANDARD FEATURES:

- Grilles are attached to modular frame by quick release 1/4 turn fasteners.

Modular frame has pre-punched holes for attachment to flanged duct.

- Blades are friction pivoted on screws and nylon washers to securely hold deflection setting.

- 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 and 381 x 381).

CONSTRUCTION MATERIAL:

- Heavy duty 18 gauge galvanized steel frame accommodates up to four individual grilles.

- Each grille features a heavy duty extruded aluminum frame with reinforced mitered corners.

- Streamlined airfoil shaped, individually adjustable, heavy duty aluminum blades 1 1/2" (38) deep with a minimum wall thickness of 0.05" (1.27) on 1 1/2" (38) centers for optimum performance.

- Optional opposed blade damper has a screwdriver slot operator.

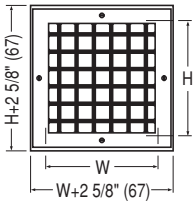
FINISH OPTIONS:

- AW Appliance White finish is standard. Other finishes are available.

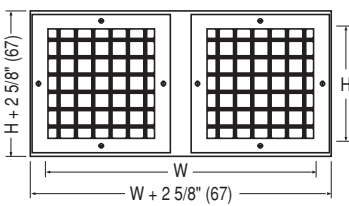
DIMENSIONAL DATA:

MODEL SERIES 81MG • INDUSTRIAL SUPPLY GRILLES • MODULAR FRAMES

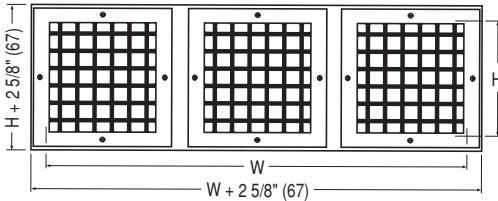
81MG1 One Module



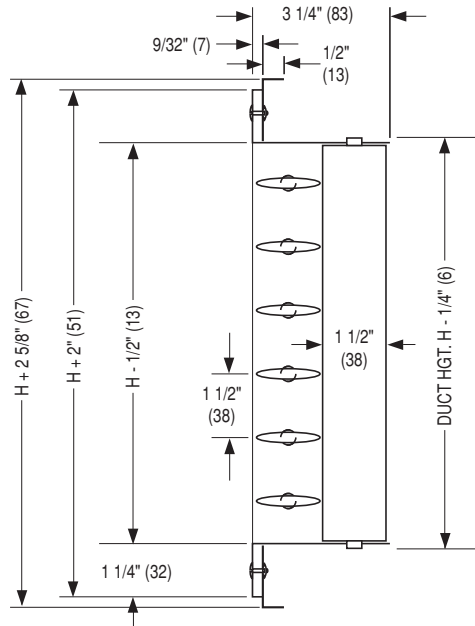
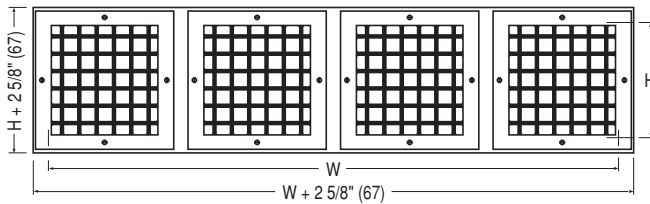
81MG2 Two Modules



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

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

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 24-29-40	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.

HOW TO ORDER

MODEL SERIES: 81MG

MODULAR CORE INDUSTRIAL SUPPLY GRILLES AND REGISTERS

EXAMPLE: 81MG2 - O - 10 - S - AW - DMI

1. Models

- 81MG1 1 Modular Core Grille
- 81MG2 2 Modular Core Grilles
- 81MG3 3 Modular Core Grilles
- 81MG4 4 Modular Core Grilles

2. Damper (OBD)

- O Steel
- No Damper

3. Module Size

- | Imperial (inches) | Metric (mm) |
|-------------------|-------------|
| 08 8 x 8 | (203 x 203) |
| 10 10 x 10 | (254 x 254) |
| 12 12 x 12 | (305 x 305) |
| 15 15 x 15 | (381 x 381) |

4. Frame/Border Type

- S Surface Mount (default)

5. Finish

- AW Appliance White (default)
- AL Aluminum
- BK Black
- BW British White
- LBP Light Bronze Paint
- MBP Medium Bronze Paint
- DBP Dark Bronze Paint
- MI Mill
- PPA Paint Prepared Aluminum
- SP Special Custom Color

6. Opposed Blade Damper Finish

- DMI Mill (default)
- DBK Painted Black
- None

Notes:

1. For a standard grille with no special requirements, specification is only required as far as the damper selection. The "default" will automatically be selected. For example, a two module register with a damper is Model 81MG2-O. Unit will be supplied with AW Appliance White finish.
2. Refer to individual model submittal for guidance on availability of options and accessories.

GRILLES AND REGISTERS

F

HOW TO SPECIFY

MODEL SERIES: 81MG

MODULAR CORE INDUSTRIAL SUPPLY GRILLES AND REGISTERS

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one) **81MG1, 81MG2, 81MG3 or 81MG4 Double Deflection Modular Core Industrial Supply Grilles** of the type and size as shown on the plans and air distribution schedules. The grilles shall have a double set of perpendicular extruded aluminum adjustable blades that are airfoil shaped and spaced on 1 1/2" (38) centers. The frame is to be constructed from heavy gauge extruded aluminum and have reinforced mitered corners. Grilles are to be attached to a modular frame by quick release 1/4 turn fasteners. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, adjustable from the face of the grille, shall be provided with all units. Dampers shall be attached to the grille core and be completely removable.

The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

PRODUCT OVERVIEW OPTIONS AND ACCESSORIES FOR GRILLES AND REGISTERS

MOUNTING FRAMES

- Up to four methods of fastening available for most models.
- Sub-frame available for professionally finished openings.
- Surface mount adapter frame for plaster and sheet rock ceilings are available in steel and aluminum. They simplify installation, save time and allow ceiling plenum access.
- Panel mounting available to suit architectural ceiling systems.

OPTIONS

- A selection of optional items that are available on grilles and registers.
- Information on custom sizing for special applications.

FINISHES

- Selection of standard and non-standard finishes to choose from.
- Anodizing of aluminum products.

AIR BALANCING DEVICES

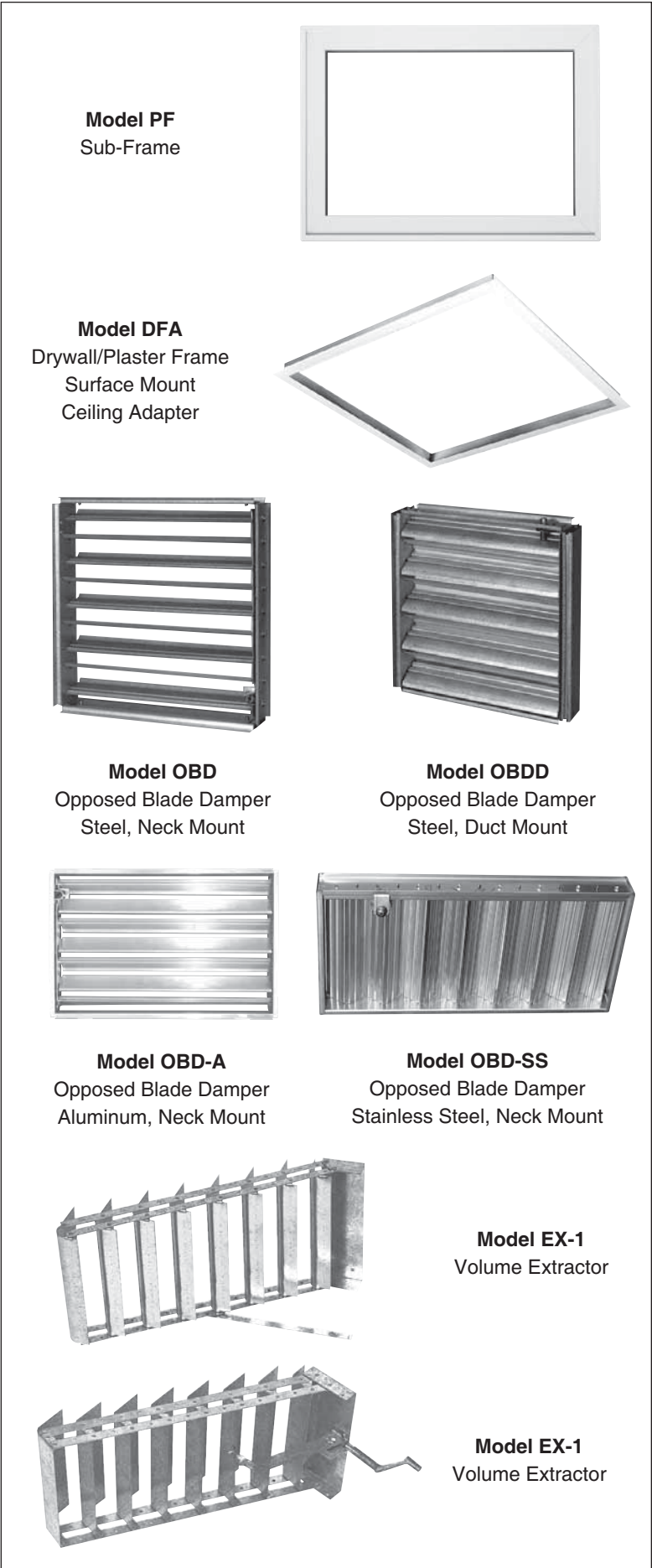
- Opposed blade dampers for every application.
- Volume extractors.

Effective air balancing of an HVAC System requires the correct selection, specification and installation of the right product to suit the system design.

Nailor offers a comprehensive range of models and options to cover all applications.

Nailor balancing devices are:

- Easy to select and specify. Many items can be supplied as factory mounted or packaged accessories on grilles and registers.
- Designed to offer a smooth, accurate and predictable response during adjustment for precise air metering.
- Designed to provide quick access and adjustment.
- Engineered with attention to optimizing airflow, in order to minimize noise, turbulence and pressure drop.



Model PF
Sub-Frame

Model DFA
Drywall/Plaster Frame
Surface Mount
Ceiling Adapter



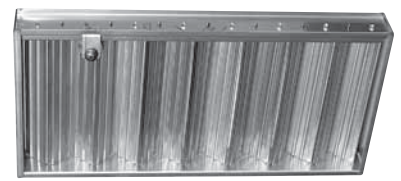
Model OBD
Opposed Blade Damper
Steel, Neck Mount



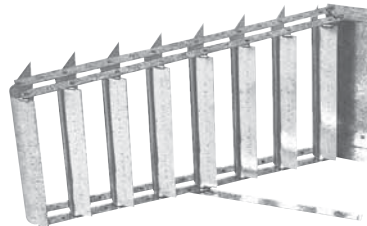
Model OBDD
Opposed Blade Damper
Steel, Duct Mount



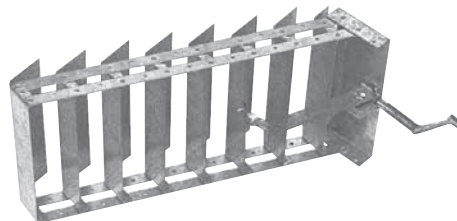
Model OBD-A
Opposed Blade Damper
Aluminum, Neck Mount



Model OBD-SS
Opposed Blade Damper
Stainless Steel, Neck Mount



Model EX-1
Volume Extractor



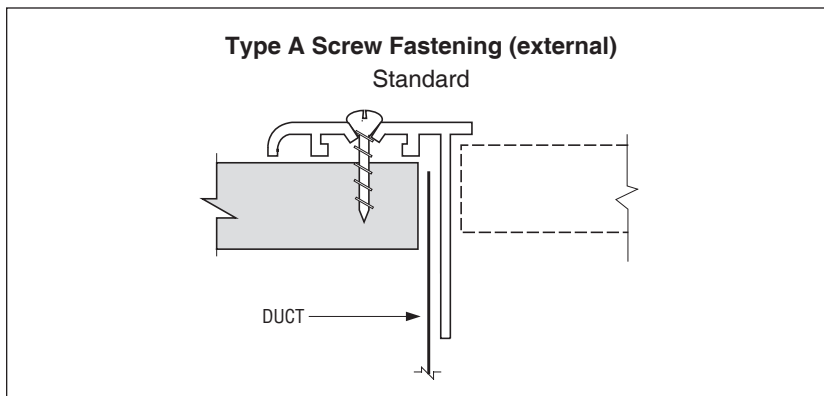
Model EX-1
Volume Extractor

Fastening and Border Frames

Type A Screw Fastening (External)

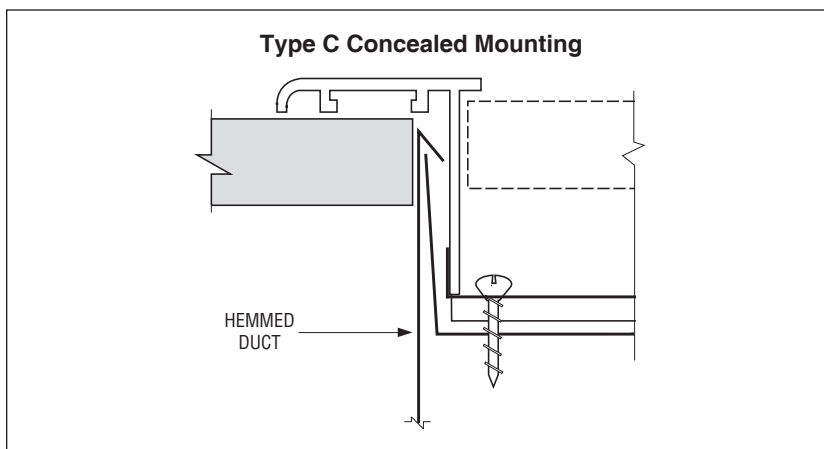
Standard method of fastening for all Nailor grilles and registers in surface mount applications. All Nailor grilles and registers are supplied this way unless specified otherwise. Universal application for all models and cost effective installation.

Screw holes are countersunk in the frame for most models to provide an aesthetically pleasing appearance and are sized for #8 x 1 1/2" (38) oval-head screws which are supplied from the factory packed with each grille or register and are painted to match the specified finish.



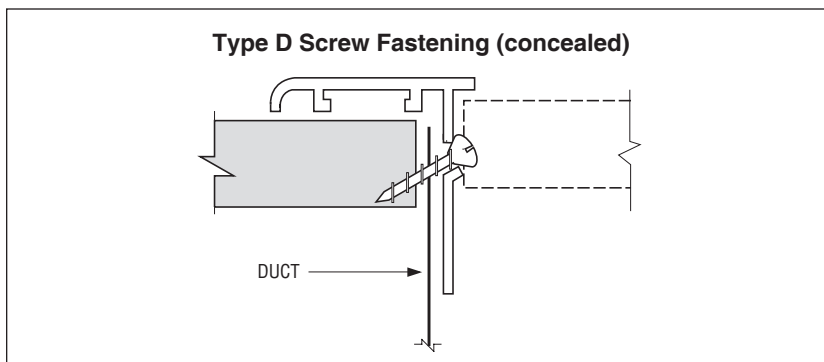
Type C Concealed Mounting

Grilles and registers are supplied with concealed mounting straps (at additional cost) which permit surface mounting with concealed screws, allowing a clean frame appearance. The bracket is shipped loose for installation in the field (by others). The bracket attaches to the back of the grille screws to an adjustable mounting strap which can either be secured directly to the duct wall or hooked into a hem formed in the end of the duct. Not available on return air grilles with 1/2" (13) spacing and a fixed angled blade deflection. Maximum size: 36" x 36" (914 x 914).



Type D Screw Fastening (Concealed)

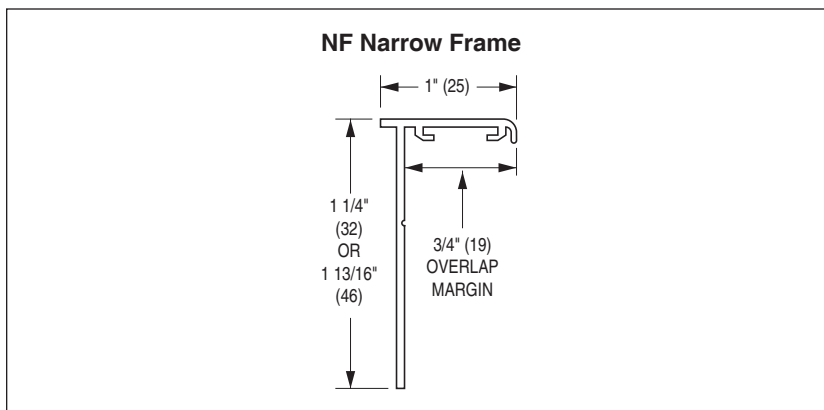
Screw holes are provided in the neck of the grille or register frame. Screws are field installed at an angle through the grille frame and into the ductwork, providing a clean frame appearance. Installation is more difficult than Type A due to the space constriction between the grille blades. Care must be taken not to bend or scratch the grille. Not recommended on return air grilles with a fixed angled blade deflection as accessibility to screw holes is greatly restricted.



Type NF Narrow Frame

An optional reduced 1" (25) wide narrow border frame is available on most aluminum models to satisfy architectural considerations.

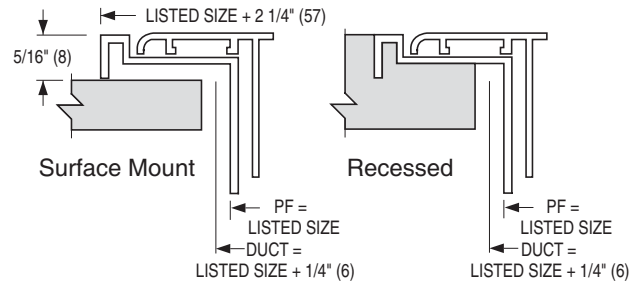
See individual models for availability.



Mounting Frames

PF Plaster/Mounting Frame

Available (at additional cost) with most standard steel and aluminum grilles and registers. The Model PF Plaster Frame is constructed from extruded aluminum and provides a convenient and professional way for finishing off the grille or register opening. It provides a stable anchor for attachment, while enabling the grille or register to be detached and replaced readily without disturbing the finished surface of the wall or ceiling opening. It may be used for surface mounting on various materials or recess mounted in wet plaster.



Model PF Plaster Frame

DFS (Steel), DFA (Aluminum) Drywall/Plaster Frame

The DF Series are for mounting in finished drywall or plaster ceilings to accept any standard lay-in type grille, register, diffuser or other ceiling component. Installation of the air outlet is as simple as inserting them in a standard lay-in T-Bar type ceiling system.

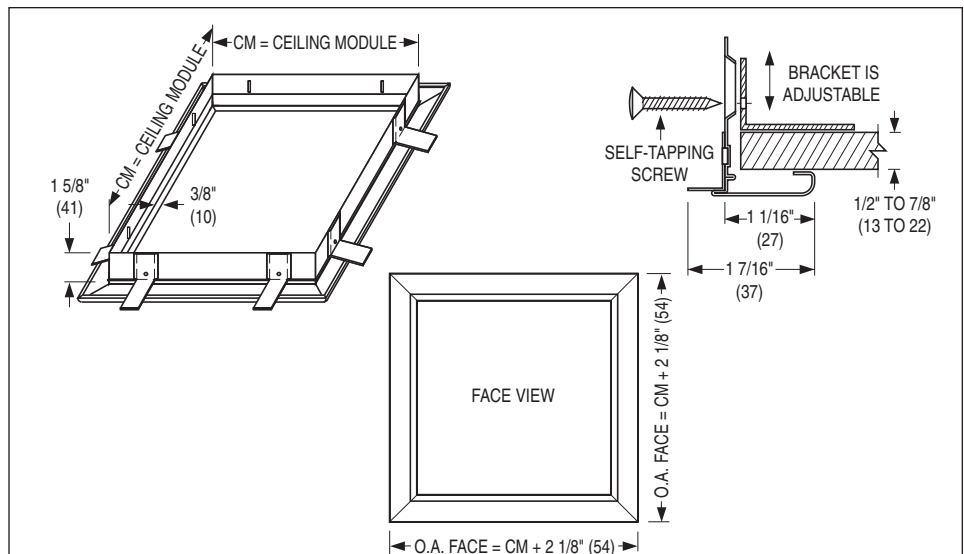
The DF Series simplifies and reduces installation time compared with surface mount type diffusers. This is especially true where flexible duct is utilized. A major benefit is that the DF Series allows access to the ceiling plenum space above for maintenance purposes without the need for separate access doors. The finished appearance is professional and aesthetically pleasing.

Standard Finish: AW Appliance White. Other finishes are available.

Model DFS is installed quickly and easily using adjustable fastening angle brackets which adapt to various ceiling thicknesses. Frames are roll-formed corrosion-resistant steel with staked and mitered corners.

IMPERIAL MODULES		METRIC MODULES
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
16 x 16	406 x 406	400 x 400
20 x 20	508 x 508	500 x 500
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600

Ceiling opening = CM + 1/4" (6)

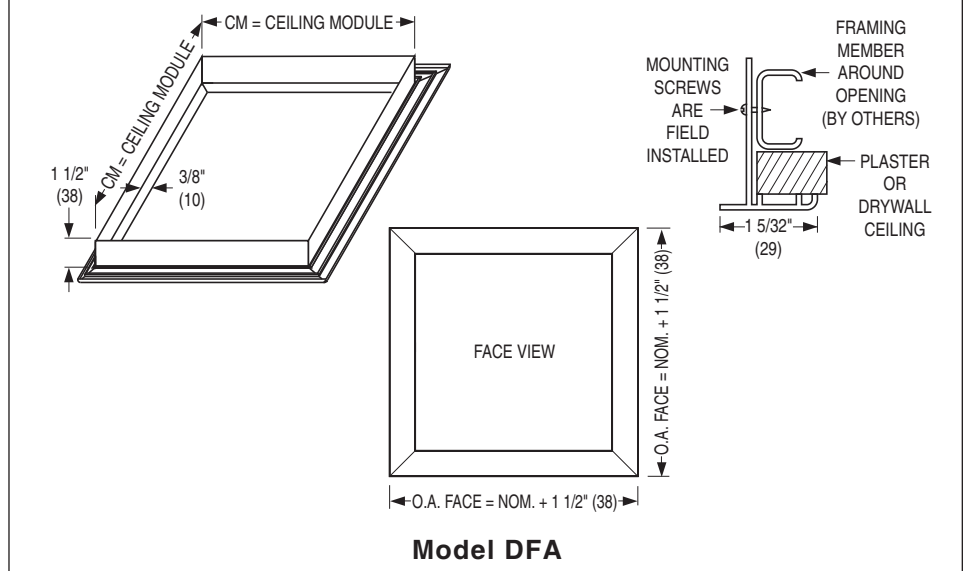


Model DFS

Model DFA requires framing of the ceiling opening with 'C' channel or wood studs for attachment with mounting screws (by others).

IMPERIAL MODULES		METRIC MODULES
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
16 x 16	406 x 406	400 x 400
20 x 20	508 x 508	500 x 500
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 12	1219 x 305	1200 x 300
48 x 24	1219 x 1219	1200 x 600
60 x 12	1524 x 305	1500 x 300

Ceiling opening = CM + 1/4" (6)



Model DFA

Panel Mounting/Ceiling Modules

A panel can be added to the majority of Nailor's steel and aluminum return grilles to suit many special architectural ceiling designs and ceiling module sizes. These panel mount grilles are available in corrosion-resistant steel for the 6100 series steel grilles and both aluminum and corrosion-resistant steel for the 5100 and 7100 series aluminum grilles.

To specify a steel panel; add the suffix S to the end of the selected panel variant. To specify an aluminum panel; add the suffix A to the end of the selected panel variant. e.g. If a steel panel is required with a Spline Type ceiling module, the variant code will become SPS.

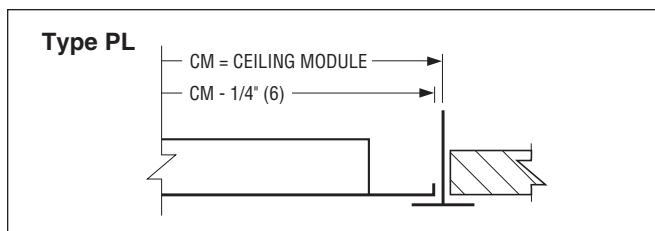
The maximum grille neck sizes available for panel mounting will be the ceiling module size selected - 3" (76).

Available 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

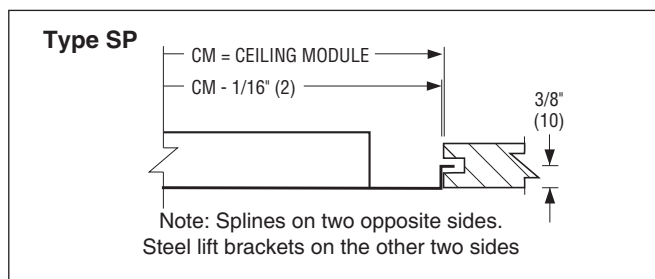
Border Type PL: Lay-in T-Bar

Grille or register is mounted in an extended panel to suit standard T-Bar Lay-in Type ceilings.



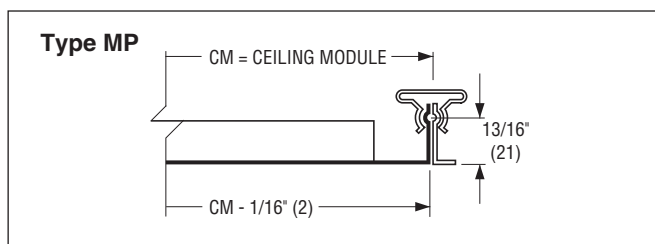
Border Type SP: Spline

The grille or register is mounted in an extended panel to suit spline type ceiling modules.



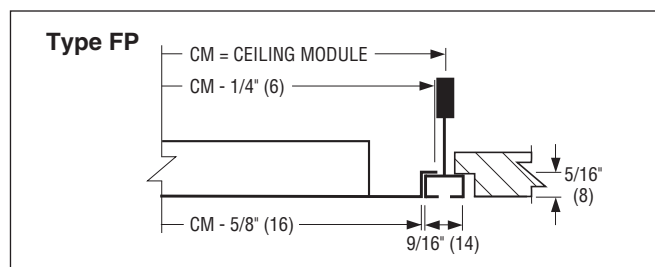
Border Type MP: Metal Pan/Snap-in

The grille or register is mounted in an extended panel to suit metal pan ceilings that have snap-in type ceiling modules.



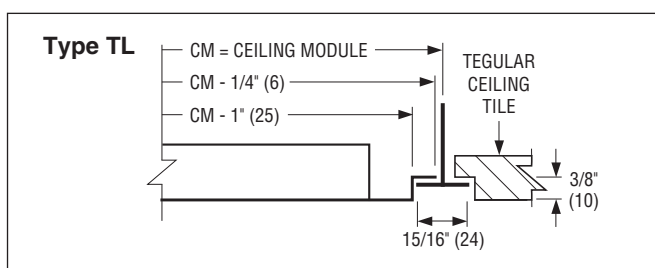
Border Type FP: Narrow Regressed T-Bar (Fineline®)

The grille or register is mounted in an extended panel that will fit a narrow regressed T-Bar ceiling grid.



Border Type TL: Tegular Type T-Bar

The grille or register is mounted in a panel that will extend below the T-Bar ceiling grid.



Options, Custom Sizing and Finishes

OPTIONS:

RACA Return Air Crosstalk Attenuator

Return Air Crosstalk Attenuator is designed to greatly reduce the amount of sound transferred from the return air plenum through open vents or return grilles, into the adjoining space.

EQT Earthquake Tabs

Earthquake (seismic) retaining safety tabs are available; factory installed on grilles or registers when required by local building code that units be independently restrained and safety wired to supporting structure.

GK Foam Gaskets

An optional foam gasket is available factory installed on the rear of all Type S corrosion-resistant steel and aluminum surface mount grilles and registers.

Eliminates air leakage and the possibility of dirt streaking and smudging from entrainment, particularly when installed on unevenly finished surfaces such as stucco.

IS Insect Screen

1/16" (2) galvanized steel mesh, factory installed.

CUSTOM SIZING:

Oversized Units

For specialized applications and architectural considerations; certain grilles and registers can be manufactured in single sections larger than the standard published maximum size at additional cost. Aspect ratio, tolerances, manufacturing capability and weight have all to be considered by the factory prior to acceptance. Consult your Nailor representative for specific applications.

Fractional/Hard Metric Sizes

Nailor grilles and registers have been designed and are manufactured to suit HVAC systems where the duct design has been done using Imperial Units of measurement (i.e. feet and inches). The majority of Nailor grilles and registers are fabricated as standard in 1" (25) nominal incremental units, giving the designer great flexibility during sizing selection.

At additional cost, the majority of Nailor grilles and registers can be custom fabricated in fractional sizes for special applications and in Hard Metric (S.I. Units) when the HVAC duct design has been done using the Metric System.

Consult your Nailor representative for availability on specific project applications.

FINISHES:

POWDER COAT

AW Appliance White (standard)

A white finish that is currently the industry standard. Closely matches standard finishes supplied by the majority of T-Bar ceiling system manufacturers. (No additional cost).

AL Aluminum

Contains suspended metal particles to give the appearance of a silver grey metallic or anodized finish. (No additional cost).

WH Off-White

Has a creamy appearance. (Additional cost)

BW British White

Matches most white ceiling tiles. (No additional cost)

LBP Light Bronze Paint

An economical alternative that closely matches industry standard anodizing in color, sheen and appearance. (Additional cost)

MBP Medium Bronze Paint

An economical alternative that closely matches industry standard anodizing in color, sheen and appearance. (Additional cost)

DBP Dark Bronze Paint

An economical alternative that closely matches industry standard anodizing in color, sheen and appearance. (Additional cost)

BK Black

This black has a matte finish. (Additional cost)

SP Special

The Nailor range of diffusers are available in any color for special architectural consideration. Custom colors are individually mixed to match customer supplied samples. (Additional cost)

ALUMINUM PRODUCT FINISHES:

SA Satin (Clear) Anodized

Adds a smooth satin finish to further protect the aluminum from corrosion (clear). (Additional cost)

STAINLESS STEEL PRODUCT FINISH ONLY:

#4 Brushed Satin Polished

Stainless Steel models only. (No additional cost)

ALSO AVAILABLE:

MI Mill Finish

(No additional cost).

PPA Paint Prepared Aluminum (Washed only)

(No additional cost).

PC Prime Coat Paint

Color will vary (Additional cost).

Sound Reduction for Return Air Grilles

RETURN AIR CROSSTALK ATTENUATOR – STEEL – RETURN AIR GRILLES

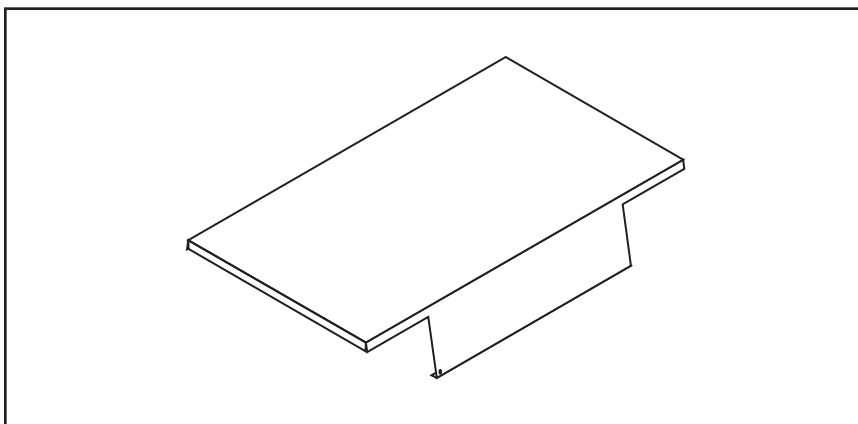
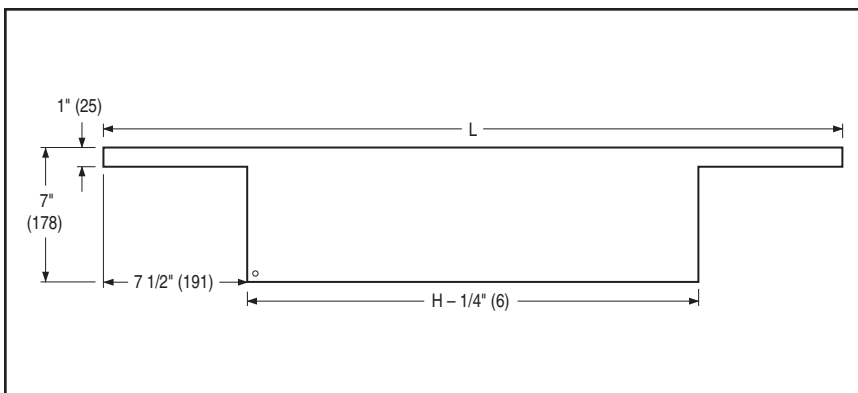
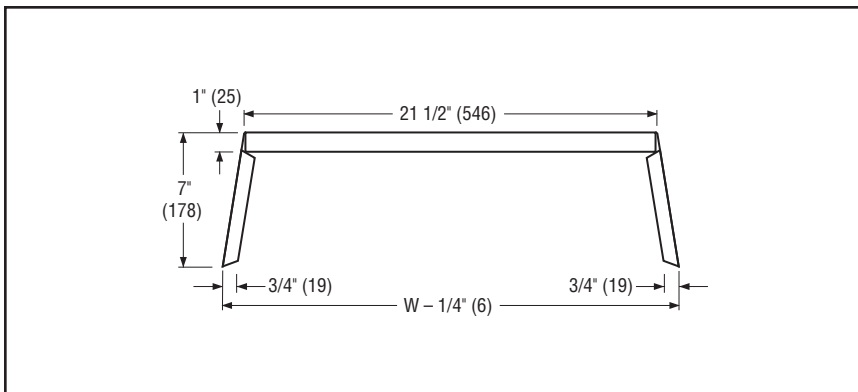
Nailor Model RACA Return Air Crosstalk Attenuator is designed to greatly reduce the amount of sound transferred from the return air plenum through open vents or return grilles, into the adjoining space. For use with non-ducted return grilles in Lay-in T-Bar applications, the RACA allows return air to flow through with minimal pressure drop, while reducing the sound transmission by 7 – 10 NC. Constructed of 22 gauge galvanized steel, the compact, light weight design takes up minimal space in the return plenum, rests on the ceiling grid for easy installation and works effectively as a light shield. Available with 1" (25) fiberglass insulation as standard or optional 1" (25) fiber-free closed cell foam insulation. The RACA fits standard grille sizes and is ideal for interior offices, conference rooms, hotel rooms as well as recording studios.

FEATURES:

- Economical and light- weight design.
- Fits standard grille sizes.
- Easy installation sits on ceiling grid.
- Compact design takes up minimal space in return plenum.
- 1" (25) fiberglass insulation (standard).

DIMENSIONAL DATA:

CM Ceiling Module	W	H	L
12" x 12" (305 x 305)	12" (305)	12" (305)	26 1/2" (673)
24" x 12" (610 x 305)	24" (610)	12" (305)	26 1/2" (673)
20" x 20" (508 x 508)	20" (508)	20" (508)	34 1/2" (876)
24" x 24" (610 x 610)	24" (610)	24" (610)	38 1/2" (978)
30" x 30" (762 x 762)	30" (762)	30" (762)	44 1/2" (1130)
48" x 24" (1219 x 610)	48" (1219)	24" (610)	38 1/2" (978)



Air Balancing Devices

OPPOSED BLADE DAMPERS — STEEL AND ALUMINUM

Nailor Opposed Blade Dampers are manufactured from heavy gauge, roll-formed, corrosion-resistant steel or extruded aluminum blades and frame with miscellaneous steel components.

The gang operated multi-blade design with blades closing at 45 degrees permits fine volume control for accurate balancing with minimum disturbance to the airflow pattern. Blades are individually pivoted on 1" (25) centers.

GRILLE MOUNT MODELS:

OBD Steel

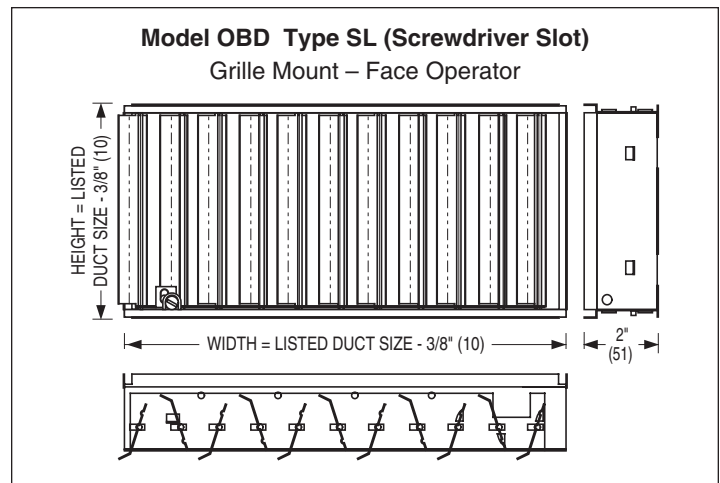
OBD-A Aluminum

This style of damper mounts directly on the neck of the grille and is sized to fit most Nailor grilles. Uses steel barbed S-clips for easy field mounting or removal when ordered separately. Supplied as standard with a screwdriver slot operator (Type SL) on supply registers and a screwdriver pivot lever operator (Type PL) on fixed, angled deflection return registers. Type SL operator is standard if damper is ordered separately from grille. A lever operator (Type GL) is available as an option on fixed, angled deflection return registers. Can be specified as an integral part of the grille (register) by adding a - O (steel) or - OA (aluminum) suffix to the grille model.

Min. Size = 4" x 2 1/2" (102 x 64) Max. Size = 24" x 24" (610 x 610).

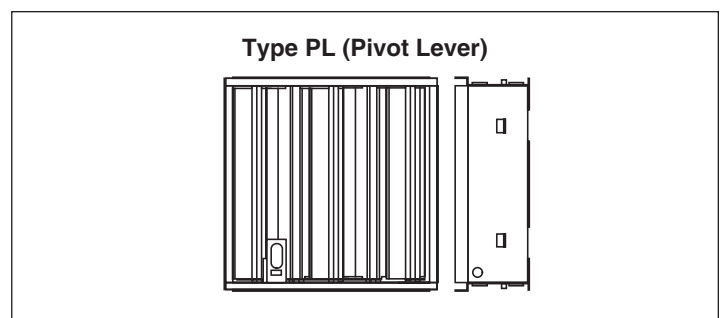
Type SL Operator

The SL Operator incorporates a screwdriver slot, which adjusts from the face of the register. This operator is the standard supplied with supply air registers such as the single and double deflection adjustable blade.



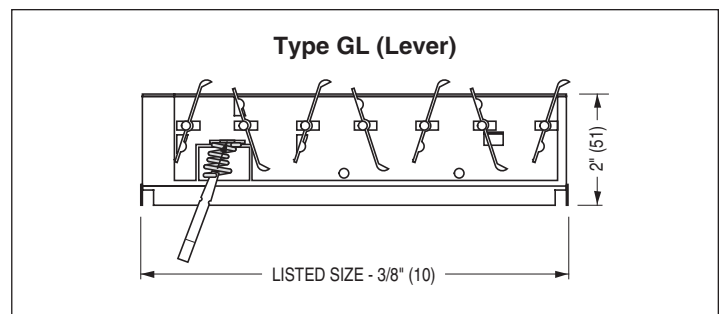
Type PL Operator

The PL Operator is a concealed pivot lever, which is adjusted from the face of the register using a screwdriver. This operator is for use only on fixed blade, angled deflection, return air grilles. When specifying, the blade orientation of the damper must be opposite of the grille.



Type GL Operator

The GL Operator incorporates a lever that adjusts without the use of tools. The lever operator extends through the grille face and is an alternative for fixed blade, angled deflection, return air grilles. When specifying, the blade orientation of the damper must be opposite of the grille being used and the grille model must be specified.



Air Balancing Devices

DUCT MOUNT MODELS:

OBDD Steel

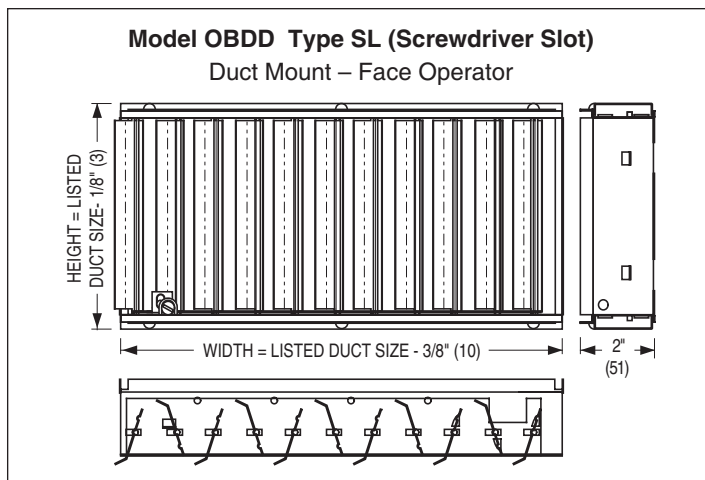
OBDD-A Aluminum

Designed for field installation, this damper mounts independently in the duct, separate from and behind the grille. Sized to suit and offer a friction fit in nominally sized ducts. Secure the dampers with 1/2" (13) long sheet metal screws (by others) through the double walled sub-frame. Supplied as standard with a screwdriver slot operator (Type SL).

Min. Size = 4" x 2 1/2" (102 x 64) Max. Size = 24" x 24" (610 x 610)

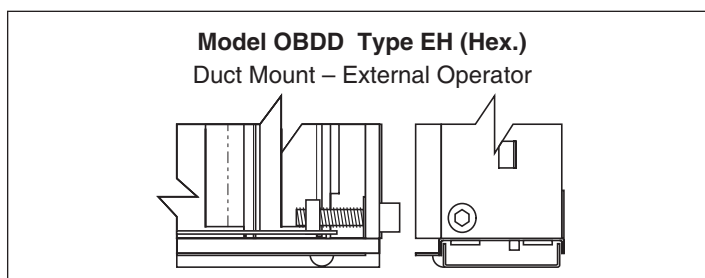
Type SL Operator

These models are supplied with a screwdriver slot face operator that is accessed from inside the duct by removing the grille.



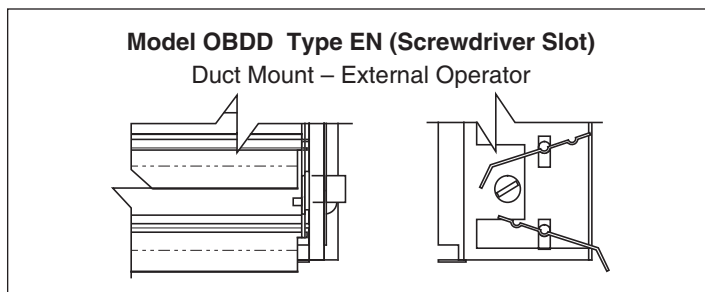
Type EH Operator

The EH Operator incorporates an external hex device that penetrates the duct wall to provide control. For use with 3/16" (5) Allen key wrench (by others).



Type EN Operator

The EN Operator incorporates an external (nylon) screwdriver slot device. This device is controlled externally through the duct.



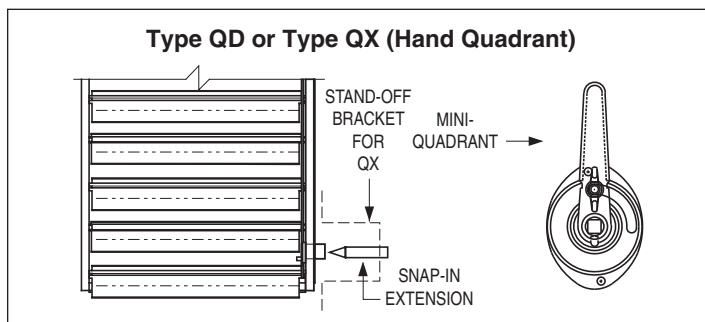
Type QD Operator *

The QD Operator includes a nylon snap-in extension that fits an external (nylon) operator. This device also includes a hand locking quadrant operator for control and position indication.

Type QX Operator *

The QX Operator includes a nylon snap-in extension that fits an external (nylon) operator. This device also includes a 2" (51) stand-off bracket and hand locking quadrant for control and position indication. To ensure quadrant is located on vertical side of duct, specify damper with blades parallel to the horizontal duct dimension.

*Not available on Model OBDD-A



Air Balancing Devices

OPPOSED BLADE DAMPERS — STAINLESS STEEL

Nailor Stainless Steel Opposed Blade Dampers feature heavy gauge, roll-formed blades and a heavy duty frame in all stainless steel construction. Type 304 stainless steel is standard with Type 316 as an available option.

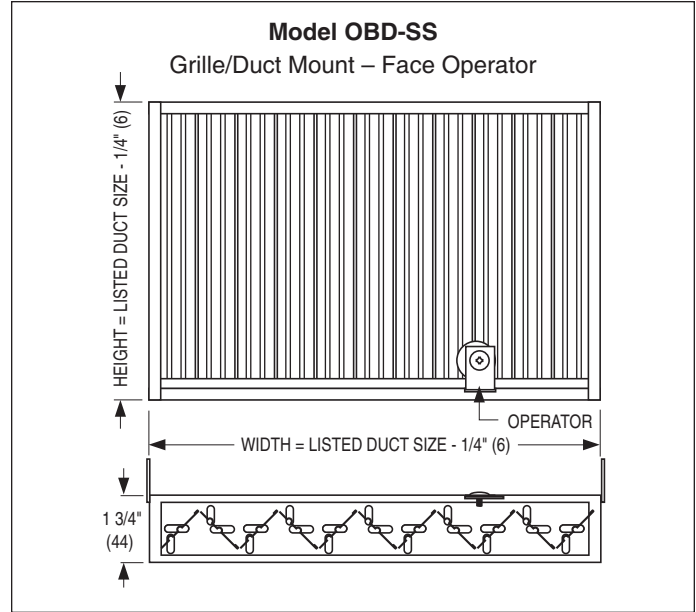
The gang operated multi-blade design with blades closing at 45 degrees permits fine volume control for accurate balancing with minimum disturbance to the airflow pattern. Blades are individually pivoted on 1" (25) centers.

GRILLE/DUCT MOUNT MODELS:

OBD-SS Stainless Steel

When ordered as part of the stainless steel grille, (using the suffix '-O' on the model number), the dampers are factory welded to the grille frame to provide a secure non-removable connection. If the dampers are ordered separately, they are supplied with mounting tabs. The tabs allow the dampers to be field installed onto a grille or to be mounted independently in the duct, separate from and behind the grille.

All Nailor stainless steel dampers feature a Philip's head screwdriver operator that is accessed through the face of the grille.



Volume Extractors

MODEL SERIES

EX Blades on 2" centers

EXD Blades on 1" centers

The **Model Series EX Volume Extractors** uniformly divert air from the main duct into the branch take-off and across the face of a grille or diffuser. Gang-operated parallel blades available on 2" (51) or 1" (25) centers pivot from full open to full closed with blades overlapping for shut-off. The curved blade design improves airflow by reducing turbulence, thereby reducing noise and pressure drop.

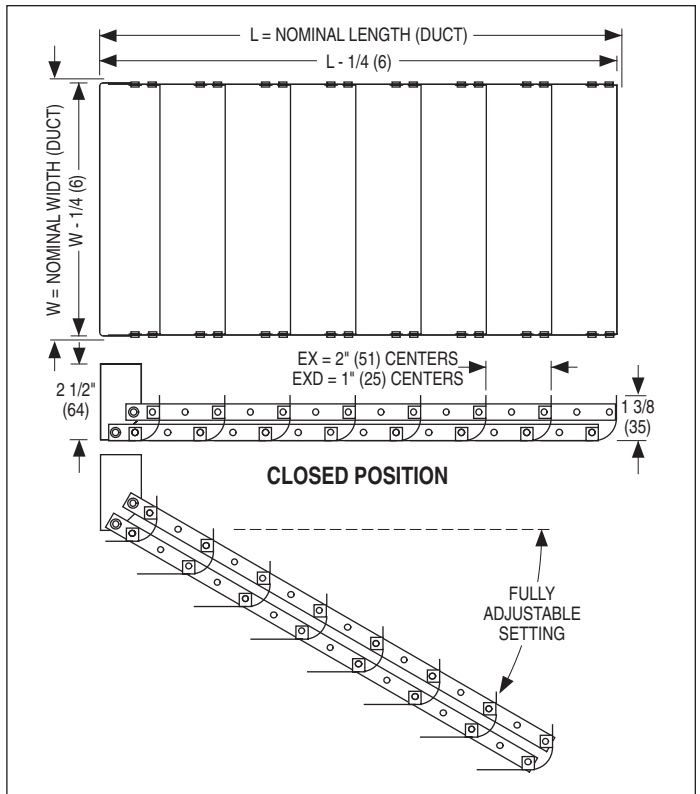
Specify or order: Length x Width. (Length is first dimension. Blades are parallel to width, second dimension).

FEATURES:

- Material: Galvanized steel.
- Minimum size: 6" x 4" (152 x 102).
- Maximum size: 36" x 36" (914 x 914).

Operator Types

<p>EX/EXD-1 Standard unit with adjusting strap.</p>	
<p>EX/EXD-1-R Rod operator for external operation.</p>	
<p>EX/EXD-2 Linkage with 7/16" (11) square hole (2 per unit). Remote operator (eg. Young Regulator #1) by others.</p>	
<p>EX/EXD-3 Screw gear operator. Adjusts with 3/16" (48) wrench (by others).</p>	



Optional Accessories

<p>RLD Locking device for Models EX/EXD-1-R.</p>	
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