

DOOR/TRANSFER GRILLES

Nailor provides an assortment of door grilles that are designed to be completely sight proof and unobtrusive in appearance. They are constructed using extruded aluminum or steel materials. A fire-rated version is also available.

Aluminum – Models 51DGD, 51DGS

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Steel – Models 61DGD, 61DGS, 61DGC

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Steel Fire Rated – Models 61DGD-FR

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Models 51DGD, 61DGD-FR



Model 51RCD

REVERSIBLE CORE

The versatile core in this series allows a combination of four different deflections and is removable without the need of special tools. Optional deflector vanes and an opposed blade damper are available for additional air control.

Aluminum – Models 51RC, 51RCD

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Suffix '-O' adds a steel OBD

Suffix '-OA' adds an aluminum OBD

HEAVY DUTY EXTRUDED ALUMINUM BAR GRILLES AND REGISTERS

The grilles in this series are constructed to offer strength and durability for applications requiring strong impact resistance. The extruded aluminum frames are staked and welded, and the extruded aluminum blades are offered with a 0°, 15°, or 30° fixed deflection. Available for both supply and return air applications.

SUPPLY AIR

FIXED FRONT BARS WITH REAR DEFLECTION VANES

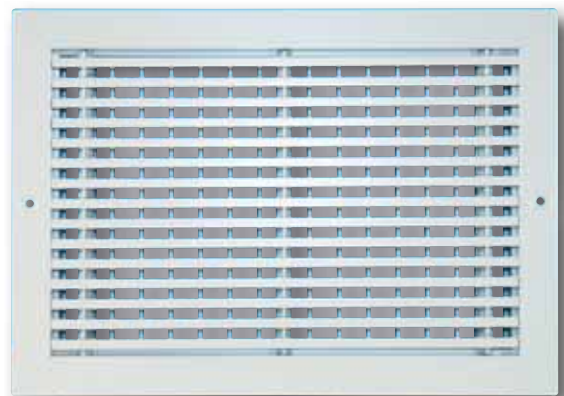
This supply air grille has adjustable rear vanes for directional control. The fixed extruded aluminum front blades are supported by a deep profile cross bar for strength.

Models 51D30H-HD, 51D30V-HD, 51D15H-HD, 51D15V-HD, 51DFH-HD, 51DFV-HD

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Suffix '-O' adds a steel OBD

Suffix '-OA' adds an aluminum OBD



Model 51D15H-HD

ALUMINUM DOOR/TRANSFER GRILLES

- SIGHT-PROOF

Models:

51DGD Double Flange

51DGS Single Flange



Model 51DGD

Nailor Model Series 51DG Door/Transfer Grilles are designed to meet the demand for top quality and competitive prices. The grilles are carefully constructed to be unobtrusive in appearance for architectural excellence.

Model Series 51DG offers the largest free area possible (average > 50%) with a completely sight-proof design, utilizing an inverted "V" shape louver on 3/4" (19) centers.

Widely used, not only in doors and partitions, but also in place of conventional exhaust and return grilles where it is important that the interior of the plenum or duct be concealed.

The inverted-V blades not only block vision, but also provide strength. When mounted in the lower portion of a door, a door grille is naturally subjected to bumps and kicks. The 51DG durability assures good looks and long service.

Screw holes in the frame are countersunk for smooth appearance after installation.

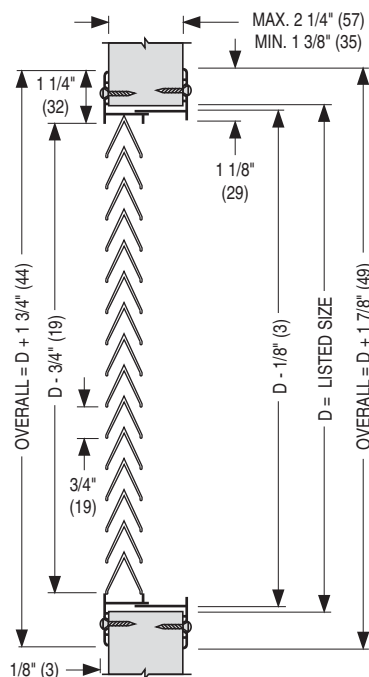
Available sizes 4" x 4" (102 x 102) through 36" x 36" (914 x 914) in 2" (51) increments.

CONSTRUCTION MATERIAL:

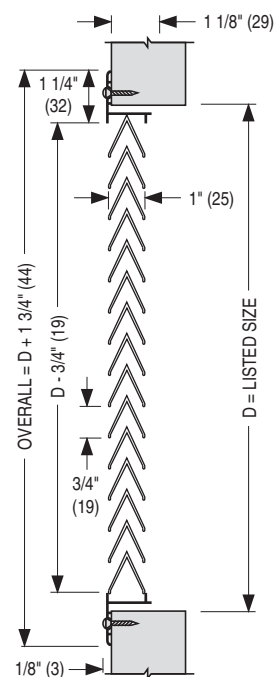
- Heavy gauge, extruded aluminum.

FINISH OPTIONS:

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



MODEL 51DGD (Double Flange)
Auxiliary Frame Assembly



MODEL 51DGS (Single Flange)
Core and Flange Frame Assembly

STEEL DOOR/TRANSFER GRILLES

- SIGHT-PROOF

Models:

- 61DGD Double Flange
- 61DGS Single Flange
- 61DGC Core Only



Models 61DGD, 61DGC

Nailor Model Series 61DG Door/Transfer Grilles are designed to meet the demand for top quality and competitive prices. The grilles are carefully constructed to be unobtrusive in appearance for architectural excellence.

Model Series 61DG offers the largest free area possible (average > 50%) with a completely sight-proof design, utilizing a 90° inverted 'V' louver on 1/2" (13) centers.

Widely used, not only in doors and partitions, but also in place of conventional exhaust and return grilles where it is important that the interior of the plenum or duct be concealed.

The inverted-V blades not only block vision, but also provide strength. When mounted in the lower portion of a door, a door grille is naturally subjected to bumps and kicks. The 61DG durability assures good looks and long service.

Screw holes in the frame are countersunk for smooth appearance after installation.

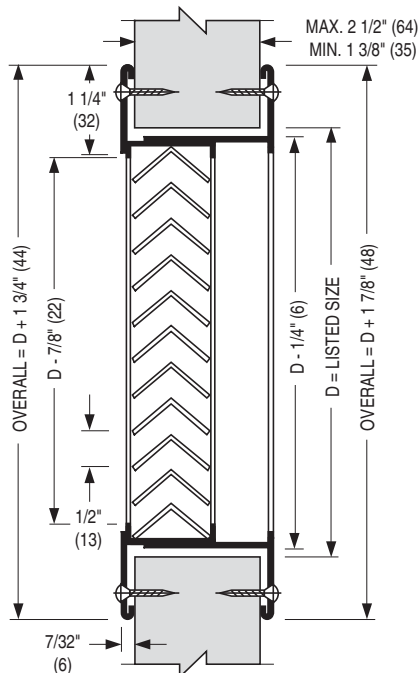
Available sizes 6" x 4" (152 x 102) through 36" x 36" (914 x 914) in 2" (51) increments.

CONSTRUCTION MATERIAL:

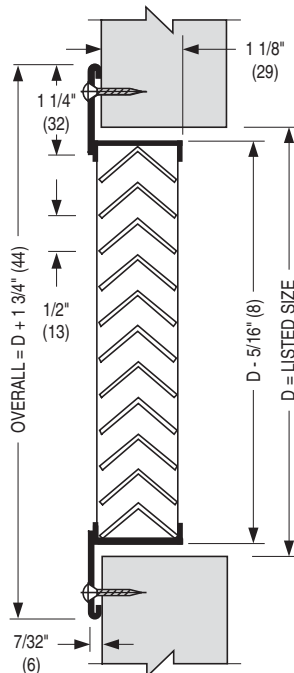
- Heavy gauge, corrosion-resistant steel.

FINISH OPTIONS:

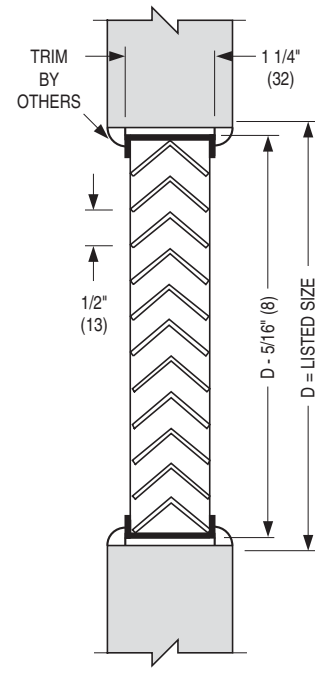
- AW Appliance White finish is standard. Other finishes are available.



MODEL 61DGD (Double Flange)
Auxiliary Frame Assembly



MODEL 61DGS (Single Flange)
Core and Flange Frame Assembly



MODEL 61DGC (Core Only)
Core and Channel Frame Assembly

STEEL FIRE RATED DOOR GRILLES

- LOUVERED FACE
- UL LISTED
- SELF ATTACHING AUXILIARY FRAME



Model 61DGD-FR

Model:
61DGD-FR

Nailor Model Series 61DGD-FR Fire Rated Door Grilles are listed by Underwriters Laboratories for use in hollow metal and composite type fire doors with up to a 1 1/2 hour rating.

The frame is designed to suit doors that are 1 3/4" (44) thick, and includes a self-attaching auxiliary frame which eliminates the need to drill holes in the door. The 18 gauge formed steel blades are "Z" shaped and are adjustable using the pull operator. 45% free area. The closing assembly features a 160°F (71° C) UL listed fusible link with stainless steel operating spring and dead lock bar.

STANDARD FEATURES:

- Material: 18 gauge cold rolled steel frame and blades.
- 1 1/8" (29) wide face border with a 3/16" (5) bevelled edge.
- UL Listed with up to a 1 1/2 hr. rating, 160° F (71° C) fusible link.

- Available in 2" (51) incremental sizes from 10" x 6" (254 x 152) to 24" x 24" (610 x 610).

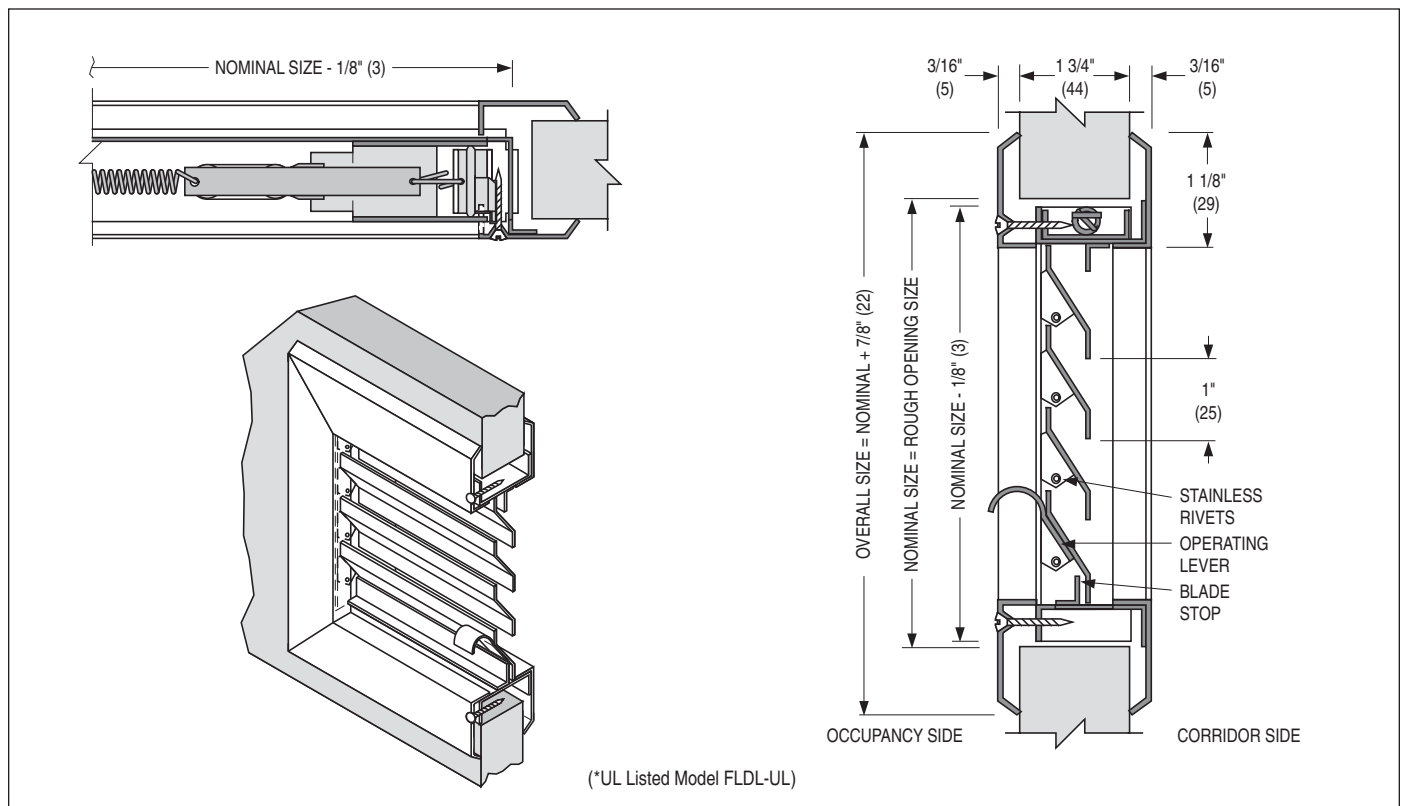
For your convenience, size Quick Delivery sizes are available. Contact your Nailor representative for details.

CONSTRUCTION MATERIAL:

- Cold rolled steel construction.

FINISH OPTIONS:

- BP Dark Bronze primer is standard. Other finishes are available.



PERFORMANCE DATA:

DOOR/TRANSFER GRILLES – 5100 AND 6100 SERIES

MODELS: 51DG, 61DG

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100	150	200	250	300	350	400	450
					.001 .005	.001 .012	.002 .021	.004 .033	.006 .048	.008 .065	.010 .085	.013 .108
6 x 6	8 x 4 10 x 4	0.18	0.25	CFM	18	27	36	45	54	63	72	81
				Noise Criteria	-	-	-	18	22	25	28	30
8 x 6	12 x 4	0.25	0.33	CFM	25	38	50	63	75	88	100	113
				Noise Criteria	-	-	-	19	23	26	29	31
10 x 6	16 x 4	0.32	0.41	CFM	32	48	64	80	96	112	128	144
				Noise Criteria	-	-	15	20	24	27	30	33
8 x 8		0.35	0.44	CFM	35	53	70	88	105	123	140	158
				Noise Criteria	-	-	15	20	24	27	30	32
12 x 6	18 x 4	0.40	0.50	CFM	40	60	80	100	120	140	160	180
				Noise Criteria	-	-	16	21	25	28	31	33
12 x 8	16 x 6 24 x 4	0.55	0.66	CFM	58	83	110	138	165	193	220	248
				Noise Criteria	-	-	17	22	26	29	32	34
10 x 10	26 x 4	0.58	0.69	CFM	61	87	116	145	174	203	232	261
				Noise Criteria	-	-	17	22	26	29	32	35
12 x 10	16 x 8 20 x 6	0.70	0.82	CFM	74	105	140	175	210	245	280	315
				Noise Criteria	-	-	19	23	27	30	33	36
12 x 12	14 x 10 24 x 6 18 x 8	0.86	0.99	CFM	90	129	172	215	258	301	344	387
				Noise Criteria	-	-	20	24	28	31	34	36
14 x 14	16 x 12 24 x 8 20 x 10 34 x 6	1.20	1.35	CFM	124	180	240	300	420	420	480	540
				Noise Criteria	-	15	21	25	29	32	35	37
18 x 12	16 x 14 28 x 8 22 x 10	1.32	1.49	CFM	132	198	264	330	396	462	528	594
				Noise Criteria	-	16	22	26	30	33	36	38
16 x 16	18 x 14 30 x 8 22 x 12	1.59	1.76	CFM	159	239	318	398	477	557	636	716
				Noise Criteria	-	16	22	27	32	34	36	39
24 x 12	18 x 16 30 x 10 20 x 14	1.79	1.98	CFM	179	269	358	448	537	627	716	806
				Noise Criteria	-	17	23	28	33	35	37	40
18 x 18	20 x 16 28 x 12 24 x 14 32 x 10	2.04	2.23	CFM	204	306	408	510	612	714	816	918
				Noise Criteria	-	18	24	29	34	36	38	41
30 x 12	20 x 18 26 x 14 22 x 16 36 x 10	2.25	2.48	CFM	225	338	450	563	675	788	900	1013
				Noise Criteria	-	18	24	29	34	36	38	41
20 x 20	24 x 18 30 x 14 26 x 16 36 x 12	2.54	2.75	CFM	254	381	508	635	762	889	1016	1143
				Noise Criteria	-	19	25	30	35	43	39	42
22 x 22	24 x 20 30 x 16 26 x 18 36 x 14	3.10	3.33	CFM	310	465	620	775	930	1085	1240	1395
				Noise Criteria	-	19	25	30	35	38	40	43
30 x 18	24 x 22 40 x 14 34 x 16	3.46	3.71	CFM	346	519	692	865	1038	1211	1384	1557
				Noise Criteria	-	20	26	30	35	38	40	43
24 x 24	26 x 22 32 x 18 28 x 20 36 x 16	3.71	3.96	CFM	371	557	742	928	1113	1299	1484	1670
				Noise Criteria	-	20	26	30	35	38	41	44
36 x 18	32 x 20 46 x 14 40 x 16	4.18	4.46	CFM	418	627	836	1045	1254	1463	1672	1881
				Noise Criteria	-	20	26	30	35	39	41	44
26 x 26	28 x 24	4.38	4.65	CFM	438	657	876	1095	1314	1533	1752	1971
				Noise Criteria	-	20	27	31	36	39	41	44
30 x 24	28 x 26 36 x 20 32 x 22	4.68	4.95	CFM	468	702	936	1170	1404	1638	1872	2106
				Noise Criteria	-	21	27	31	36	39	41	44
28 x 28	30 x 26 36 x 22	5.11	5.39	CFM	511	767	1022	1278	1533	1789	2044	2300
				Noise Criteria	-	21	28	32	37	40	42	45
36 x 24	30 x 28	5.64	5.94	CFM	564	846	1128	1410	1692	1974	2256	2538
				Noise Criteria	-	22	28	32	37	40	42	45
30 x 30	34 x 26	5.89	6.19	CFM	589	884	1178	1473	1767	2062	2356	2651
				Noise Criteria	-	22	28	32	37	40	42	45

Performance Notes:

1. All pressures are in inches w.g..
2. Core Velocity is in feet per minute.
3. Ak balancing factors are based on an Alnor velometer with a 2220A or 6070P Jet Probe.

Position probe 1" (25) out from face of grille and take the average of several readings at various positions.

$$\text{Airflow (CFM)} = \text{Average Velocity (V}_k\text{)} \times \text{A}_k$$

4. Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (-) in space denotes a Noise Criteria level of less than 15.
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

HOW TO ORDER

MODEL SERIES: 51DG • ALUMINUM DOOR/TRANSFER GRILLE

EXAMPLE: 51DGD - 24 x 12 - AW

- | | |
|---|---|
| <p>1. Models
 51DGD Double Flange
 51DGS Single Flange</p> <p>2. Width x Height
 inches (mm)</p> <p>3. Finish
 AW Appliance White (default)
 AL Aluminum</p> | <p>BK Black
 BW British White
 LBP Light Bronze Paint
 MBP Medium Bronze Paint
 DBP Dark Bronze Paint
 MI Mill
 PC Prime Coat
 SA Satin Anodized
 SP Special Custom Color</p> |
|---|---|

Notes:

1. For a standard grille with no special requirements, the "default" will automatically be selected. For example, an aluminum door grille with a double flange, is Model 51DGD. Unit will be supplied with screw holes and AW Appliance White finish.

MODEL SERIES: 61DG • STEEL DOOR/TRANSFER GRILLE

EXAMPLE: 61DGD - 24 x 12 - AW

- | | |
|--|--|
| <p>1. Models
 61DGD Double Flange
 61DGS Single Flange
 61DGC No Flange (core only)
 61DGD-FR Double Flange, Fire Rated</p> <p>2. Width x Height
 inches (mm)</p> <p>3. Finish
 AW Appliance White *
 AL Aluminum</p> | <p>BK Black
 BW British White
 LBP Light Bronze Paint
 MBP Medium Bronze Paint
 DBP Dark Bronze Paint
 BP Dark Bronze Primer **
 MI Mill
 PC Prime Coat
 SP Special Custom Color *</p> |
|--|--|

Notes:

1. For a standard grille with no special requirements, the "default" will automatically be selected. Example: a steel door grille with a double flange, is Model 61DGD. Unit supplied with AW Appliance White finish.

2. * AW Appliance White is default on Models 61DGD, 61DGS and 61DGC.

** BP Dark Bronze Primer is the only available finish on Model 61DGD-FR.

GRILLES AND REGISTERS

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HOW TO SPECIFY

MODEL SERIES: 51DG • ALUMINUM DOOR/TRANSFER GRILLE

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one) **51DGD** or **51DGS Door/Transfer Grilles** of the types and sizes as shown on the plans and air distribution schedules. The grille shall have extruded aluminum inverted 'V' shaped blades and an extruded aluminum frame. The door grille is to be sight-proof. The finish shall be AW Appliance White (optional finishes are available). The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

MODEL SERIES: 61DGD, 61DGS, 61DGC • STEEL NON-FIRE RATED DOOR/TRANSFER GRILLE

MODEL SERIES: 61DGD-FR • STEEL FIRE RATED DOOR/TRANSFER GRILLE

SUGGESTED SPECIFICATION:

61DGD, 61DGS AND 61DGC – Steel Non-Fire Rated Door/Transfer Grille

Furnish and install **Nailor Model** (select one) **61DGD, 61DGS** or **61DGC Door/Transfer Grilles** of the types and sizes as shown on the plans and air distribution schedules. The grille shall have corrosion-resistant steel inverted 'V' shaped blades and frames. The door grille is to be sight-proof. The finish shall be AW Appliance White (optional finishes are available). The manufacturer shall provide published performance data for the grille, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 2006.

61DGD-FR – Steel Fire Rated Door/Transfer Grille

Furnish and install **Nailor Model 61DGD-FR Fire Rated Door/Transfer Grilles** of the types and sizes as shown on the plans and air distribution schedules. The grille shall have corrosion-resistant steel blades and frames, UL Listed with a fire-rating up to 1 1/2 hours. The finish shall be BP Dark Bronze Primer. 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

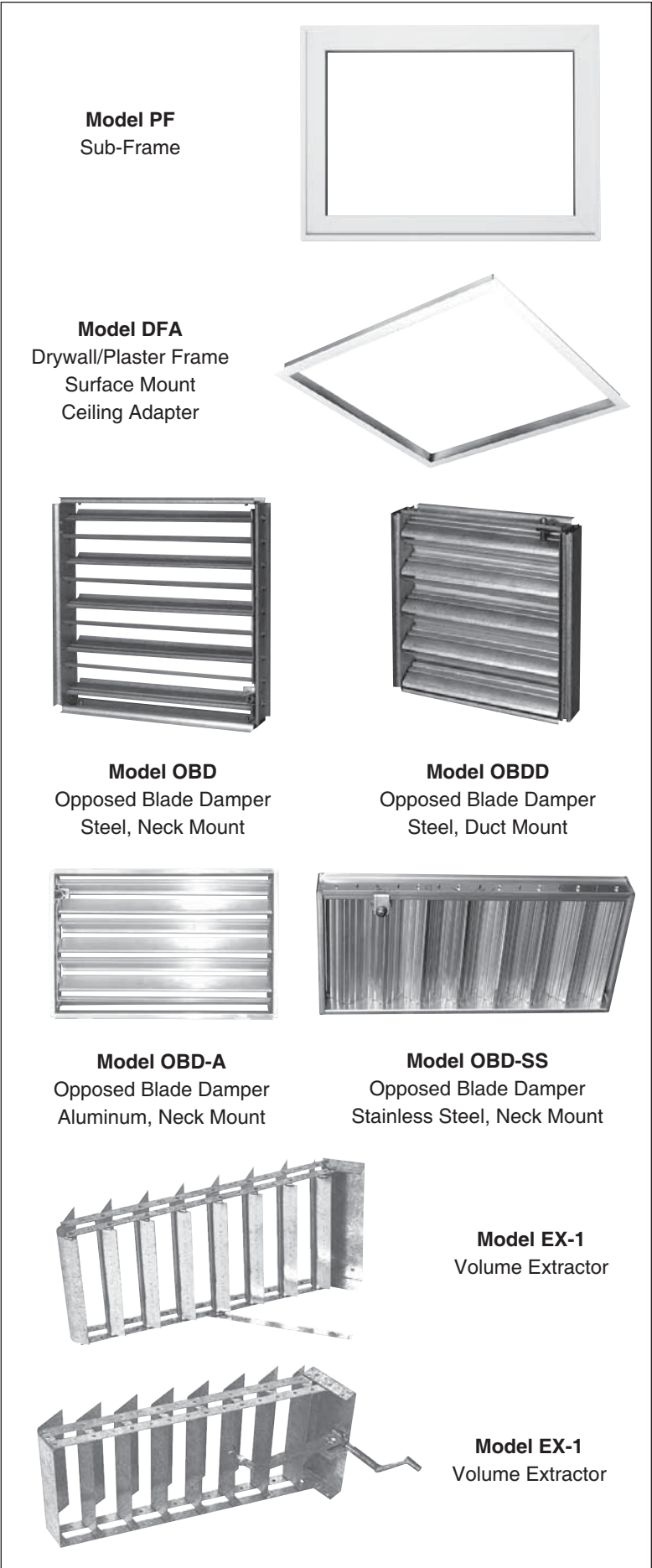
- Opposed blade dampers for every application.
- Volume extractors.

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.

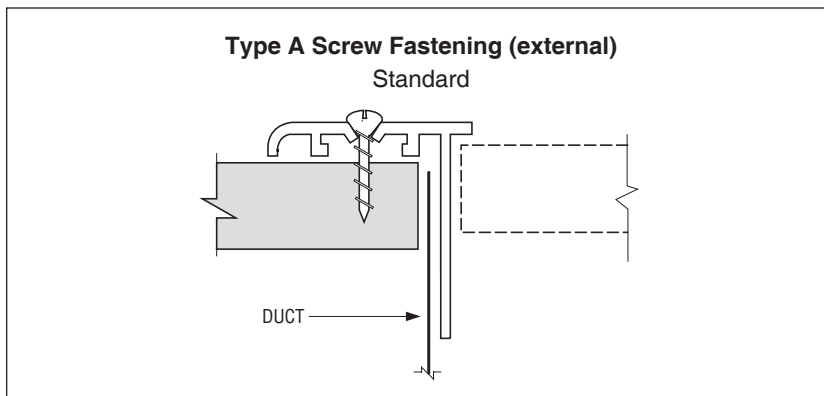


Fastening and Border Frames

Type A Screw Fastening (External)

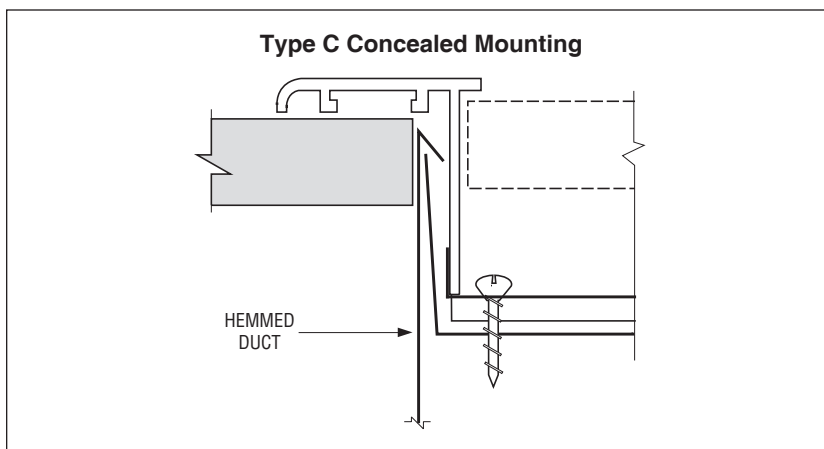
Standard method of fastening for all Nailor grilles and registers in surface mount applications. All Nailor grilles and registers are supplied this way unless specified otherwise. Universal application for all models and cost effective installation.

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.



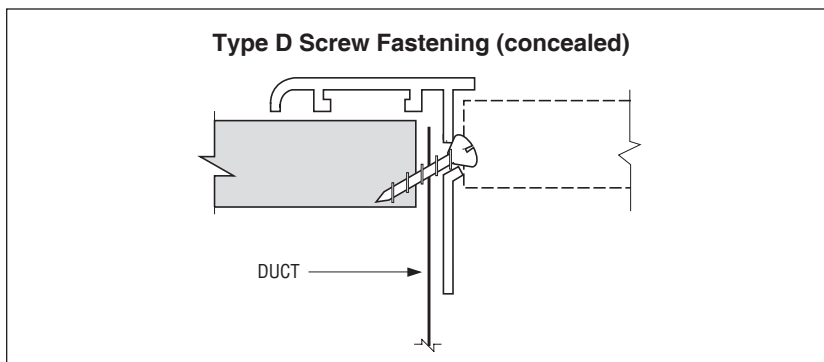
Type C Concealed Mounting

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)

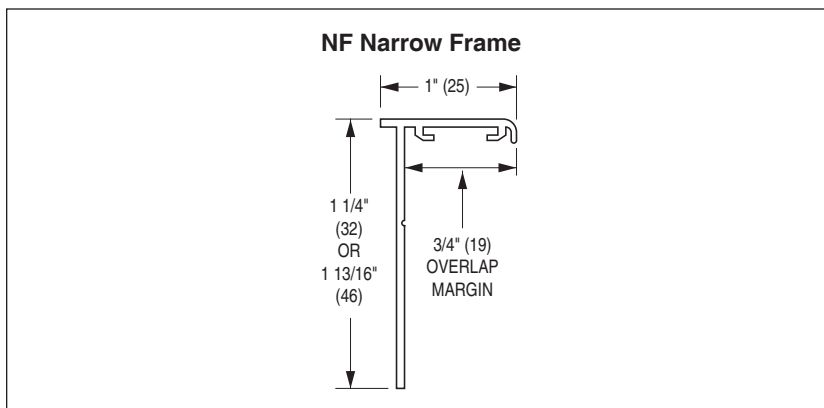
Screw holes are provided in the neck of the grille or register frame. Screws are field installed at an angle through the grille frame and into the ductwork, providing a clean frame appearance. Installation is more difficult than Type A due to the space constriction between the grille blades. Care must 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.



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).