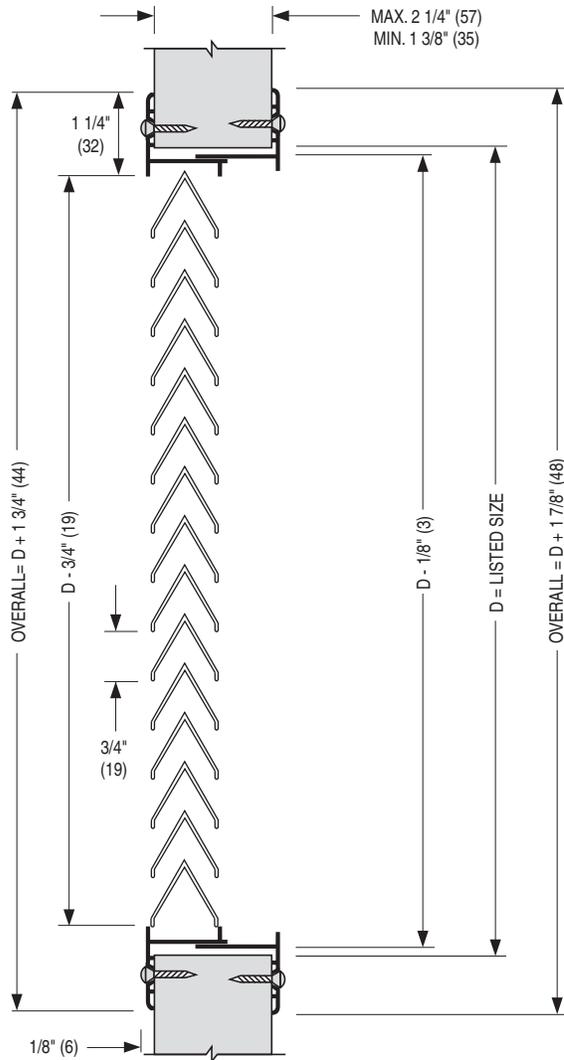
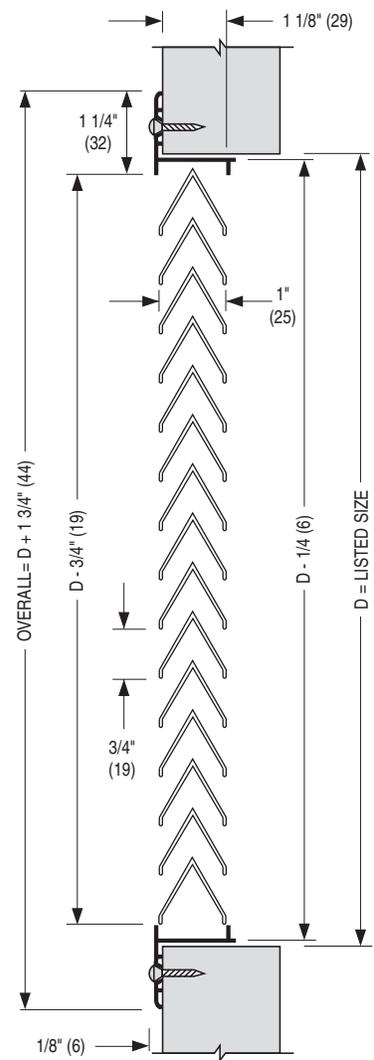


MODEL 51DGD (DOUBLE FLANGE)


AUXILIARY FRAME ASSEMBLY

MODEL 51DGS (SINGLE FLANGE)


CORE AND FLANGE FRAME ASSEMBLY

DESCRIPTION:

1. Construction: Extruded aluminum, heavy gauge frame, mechanically interlocked with reinforced mitered corners for strength. Heavy duty chevron louvers provide rigidity and strength and are mechanically locked in place.
2. Model Series 51DG offers a high free area with a completely sightproof design, utilizing an inverted 'V' louver on 3/4" (19) centers. Solid construction will tolerate abuse from bumps and kicks. The 51DG Series Door Grille may also be used as a transfer grille and in place of standard design exhaust and return air grilles where it is important that the interior of the plenum or duct be concealed.

3. Minimum size is 6" x 4" (152 x 102). Maximum size is 36" x 36" (914 x 914). Available in nominal 1" (25) increments.
4. Standard fastening is Type 'A' countersunk screw holes.
5. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 - SP Special _____ .
 - AL Aluminum paint
 - BK Black
 - SA Satin (Clear) Anodized.

Dimensions are in inches (mm).

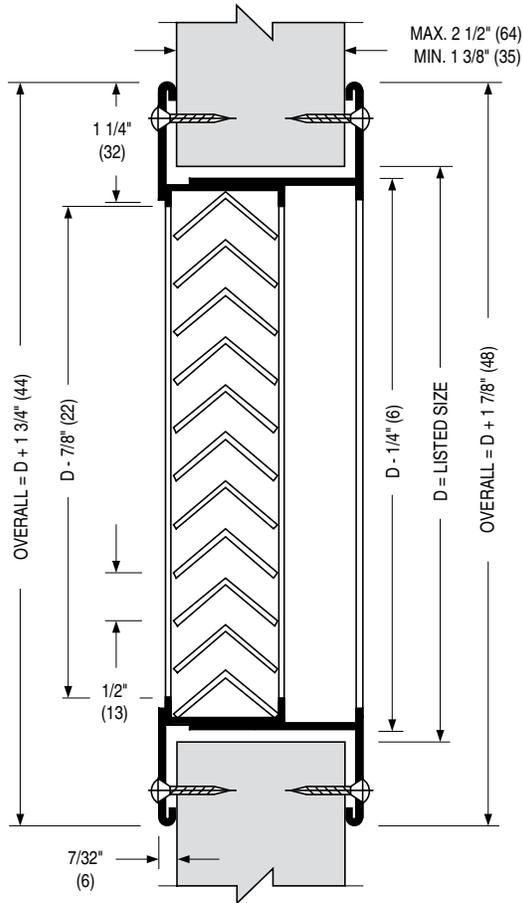
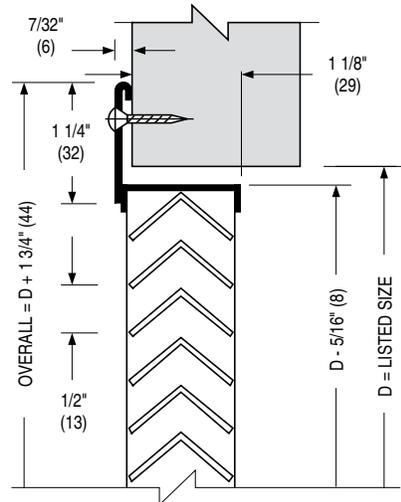
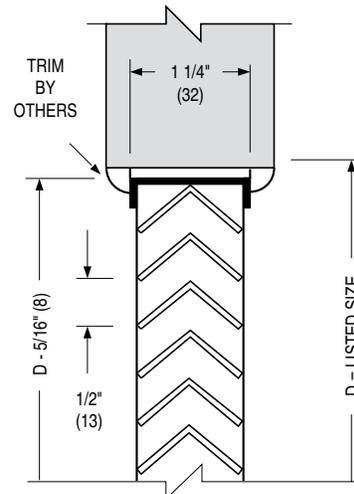
SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:
DATE
B SERIES
SUPERSEDES
DRAWING NO.

2 - 26 - 13

5100

7 - 17 - 12

51DG-1

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
DESCRIPTION:

1. Construction: Corrosion-resistant steel. Roll-formed frame mechanically interlocked with reinforced mitered corners for strength. Heavy duty inverted 'V' louvers in 22 ga. (0.86) steel provides rigidity and strength and are mechanically locked in place using a double tab and slot method.
2. Model Series 61DG offers the largest free area possible with a completely sight-proof design, utilizing a 90° inverted 'V' louver on 1/2" (13) centers. Solid construction will tolerate abuse from bumps and kicks. The 61DG Series Door Grille may also be used as a transfer grille and in place of standard design exhaust and return air grilles where it is important that the interior of the plenum or duct be concealed.
3. Minimum size is 6" x 6" (152 x 152).
Maximum size is 36" x 36" (914 x 914).
Available in nominal 2" (51) increments.
4. Standard fastening is Type 'A' countersunk screw holes.
5. Standard finish is AW Appliance White.

OPTIONS:

1. Finish:
 SP Special _____ .

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Dimensions are in inches (mm).

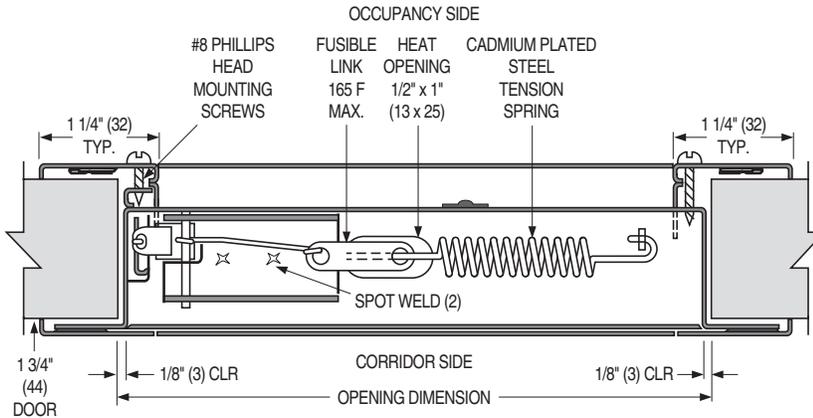
DATE	B SERIES	SUPERSEDES	DRAWING NO.
9 - 24 - 25	6100	2 - 1 - 11	61DG-1



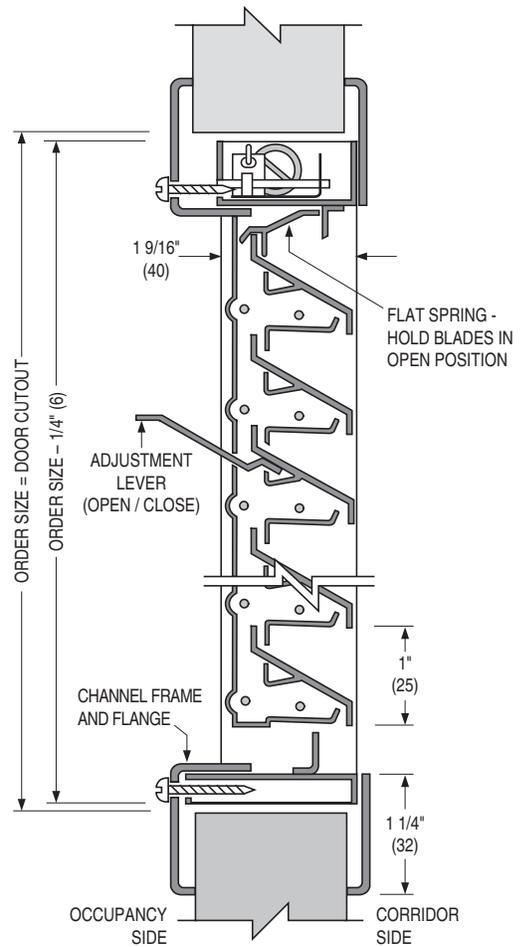
**STEEL FIRE RATED DOOR
GRILLE (LOUVER)
MODEL: 61DGD-FR***



Intertek

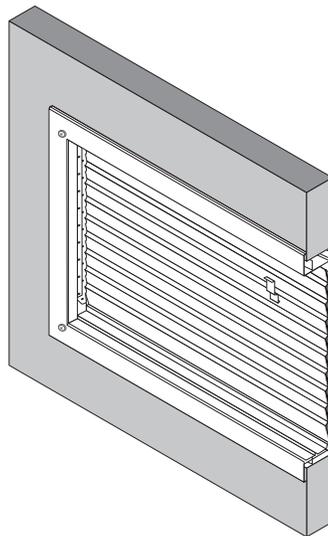


HORIZONTAL SECTION



VERTICAL SECTION

Stock Sizes:	
12 x 12	(305 x 305)
18 x 12	(457 x 305)
18 x 18	(457 x 457)
24 x 12	(610 x 305)
24 x 24	(610 x 610)



DESCRIPTION:

The 61DGD-FR is listed by Underwriters Laboratories for use in hollow metal type and composite type fire doors with up to a 1 1/2 hr. rating. Suitable for doors 1 3/4" (44) thick. Ideal for installation in existing door cutouts.

Tested and Listed for UL10C, and classified in accordance with UBC7-2-94, ASTM E152, CAN/ULC S104, NFPA 252. Install in accordance with NFPA 80.

- **Material:** Cold rolled steel 18 ga. frame and 16 ga. blades.
- **Frame:** Mitered and welded corners.
- **Closing Assembly:** 165°F (74°C) UL listed fusible link with stainless steel operating spring and action bar.
- **Installation:**

- Before installing Model 61DGD-FR Fire Door Louver into a fire door; be sure that the door cutout (order size) is accurate.
- Position one side of Model 61DGD-FR in the door cutout (as it would be installed). Model 61DGD-FR requires a single door cutout only for installation.

c. With the frames in place, screw the mounting screw through the prepunched holes in the frame on the room side. Screw firmly together. Note: Use the 1/2" (13) long screws in hole nearest fusible link.

d. Visually inspect the fusible link to assure that it is unbroken. Do not install if link is not intact. **Paint should not be applied to the fusible link or any of the connecting hardware including the hold-open clip.** Note: Nailor is not responsible for customer painted louvers, due to possible changes to operating condition.

e. Tighten the Phillips head screws by hand. Power screwdrivers are not recommended.

- **Free Area:** 45%
- **Finish:** BP Dark Bronze powder coat paint.
- **Available Sizes. In 2" (51) nominal increments:**
Minimum 10" x 6" (254 x 152).
Maximum 24" x 24" (610 x 610).

SCHEDULE TYPE:		Dimensions are in inches (mm).			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	8 - 20 - 20	6100	7 - 30 - 20	61DGD-FR	

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

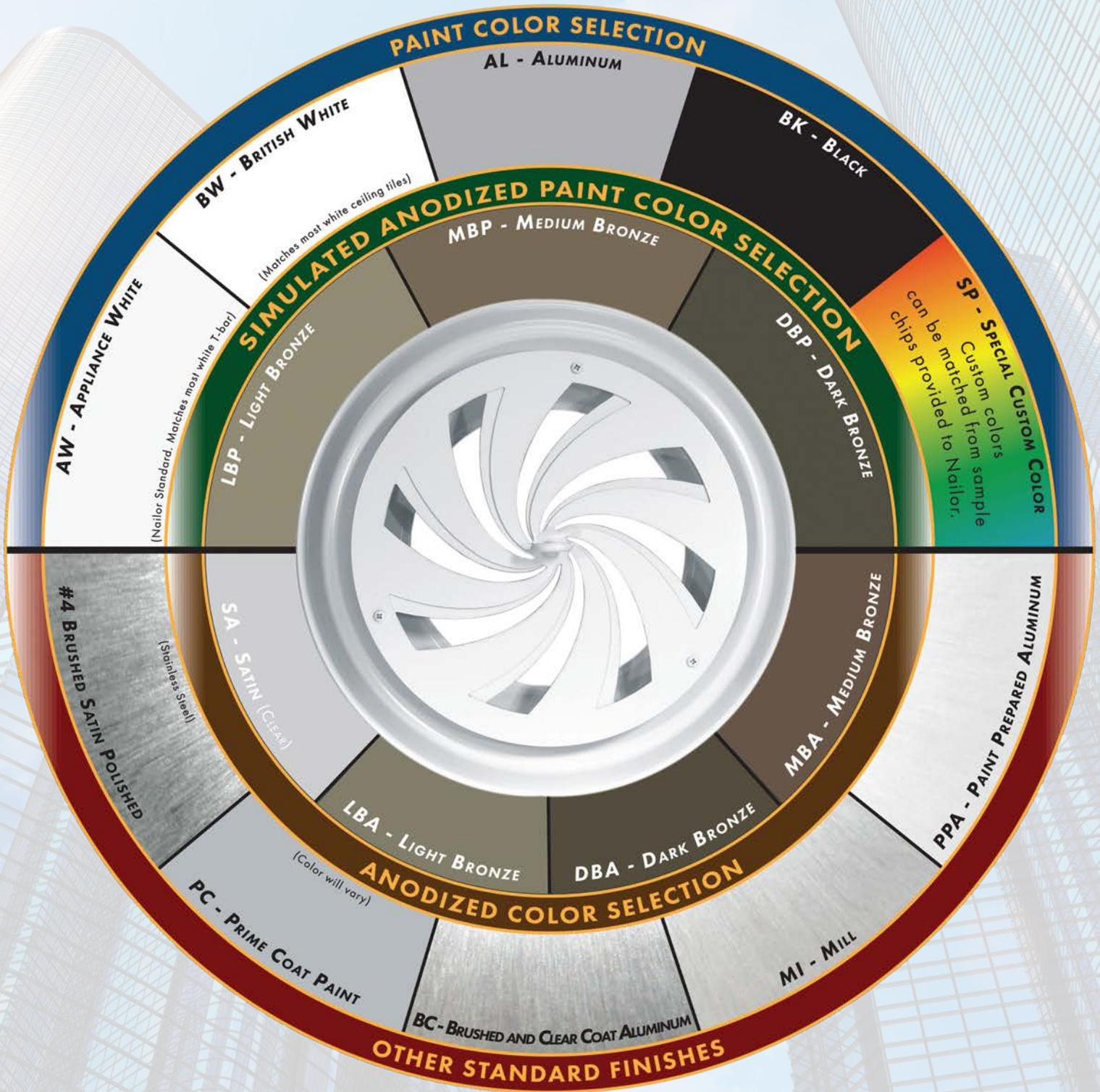
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



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:

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:

- All pressures are in inches w.g..
- Core Velocity is in feet per minute.
- 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.

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

- 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.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.