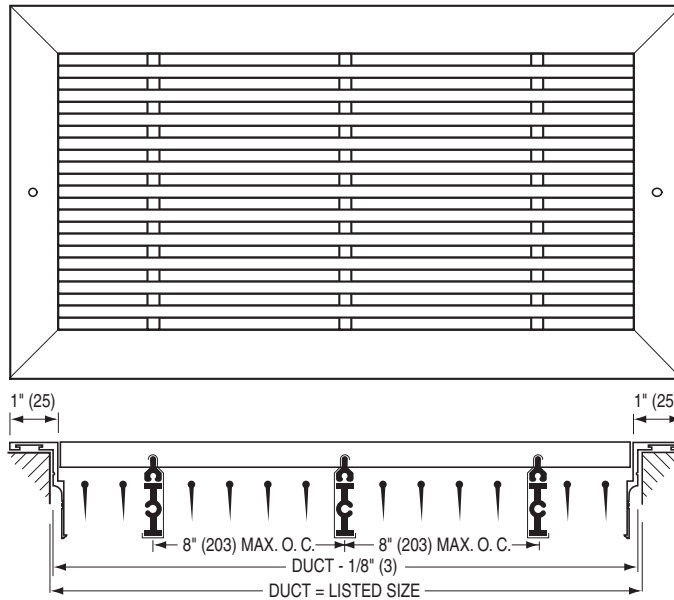
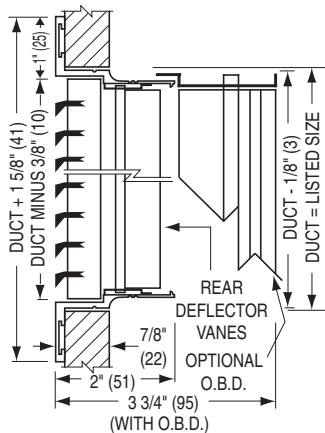




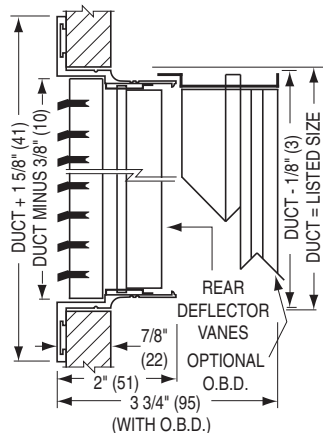
**ALUMINUM HEAVY DUTY BAR SUPPLY GRILLES  
GYMNASIUM**  
**MODELS: 51D30H-HD(-O), 51D30V-HD(-O),  
 51D15H-HD(-O), 51D15V-HD(-O), 51DFH-HD(-O)  
 AND 51DFV-HD(-O)**



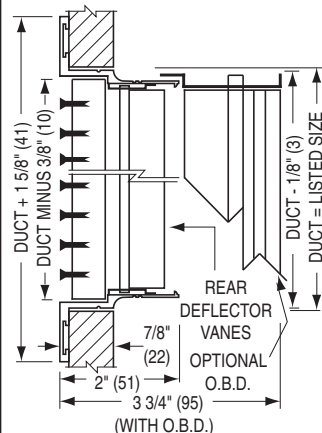
- MODEL 51D30H-HD**  
30° Horizontal Blades
- MODEL 51D30H-HD-O**  
30° Horizontal Blades  
(Includes O. B. Damper)
- MODEL 51D30V-HD**  
30° Vertical Blades
- MODEL 51D30V-HD-O**  
30° Vertical Blades  
(Includes O. B. Damper)
- MODEL 51D15H-HD**  
15° Horizontal Blades
- MODEL 51D15H-HD-O**  
15° Horizontal Blades  
(Includes O. B. Damper)
- MODEL 51D15V-HD**  
15° Vertical Blades
- MODEL 51D15V-HD-O**  
15° Vertical Blades  
(Includes O. B. Damper)
- MODEL 51DFH-HD**  
0° Horizontal Blades
- MODEL 51DFH-HD-O**  
0° Horizontal Blades  
(Includes O. B. Damper)
- MODEL 51DFV-HD**  
0° Vertical Blades
- MODEL 51DFV-HD-O**  
0° Vertical Blades  
(Includes O. B. Damper)



**Model 51D30H-HD  
Model 51D30H-HD-O**  
(Horizontal Shown)



**Model 51D15H-HD  
Model 51D15H-HD-O**  
(Horizontal Shown)



**Model 51DFH-HD  
Model 51DFH-HD-O**  
(Horizontal Shown)

**NOTES:**

1. Material: Heavy duty aluminum extrusions.
2. Construction: Heavy duty frame is staked and welded for maximum strength. Fixed front bars on 1/2" (13) centers are available in 30°, 15° or 0° deflection to suit air pattern requirement. 0° and 15° models feature 1/8" (3) bars and the 30° model features 1/4" (6) bars. All models are supplied with a set of friction pivoted rear vanes on 3/4" (19) centers that are individually adjustable for directional control and air pattern spread. Bars are reinforced and supported by an additional deep profile cross-bar. Spacing does not exceed 8" (203) on centers.
3. Optional opposed blade damper has a screwdriver adjustment accessible through the face of the register.
4. The minimum size is 6" x 4" (152 x 102).  
The maximum size is 48" x 36" (1219 x 914).

5. Standard fastening is Type A countersunk screw holes.
6. Standard finish is AW Appliance White.

**OPTIONS:**

- Fastening:
- Type C Concealed mounting straps [36" x 36" (914 x 914) max.]
- Finish:
- AL Aluminum
  - SA Satin Anodized
  - SP Special \_\_\_\_\_ .

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 16 - 17	5100	2 - 1 - 11	5100-HD-2

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.

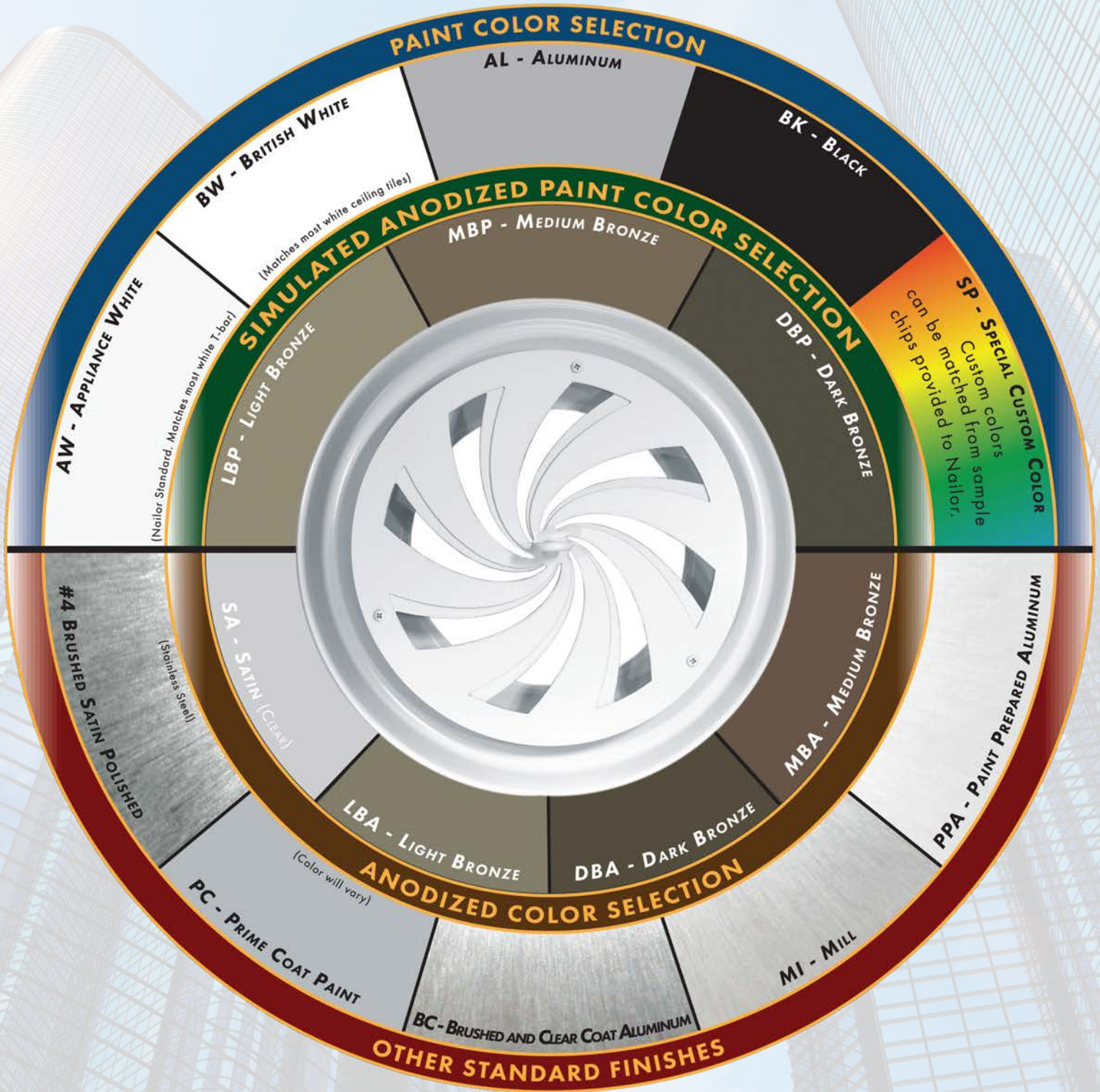




**Nailor**<sup>®</sup>  
Industries Inc.

## 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](http://www.nailor.com)

## PERFORMANCE DATA:

### ALUMINUM HEAVY DUTY BAR GRILLES AND REGISTERS • 51D00-HD SERIES

#### MODELS: 51D30H-HD, 51D30V-HD, 51D15H-HD, 51D15V-HD, 51DFH-HD, 51DFV-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		200	300	400	500	600	700	800	900	1000
				Velocity	Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062
				Total Pressure	0° 22 1/2° 45°	.014 .016 .025	.031 .037 .057	.057 .064 .099	.088 .101 .154	.127 .146 .220	.174 .199 .304	.228 .261 .400	.287 .330 .503	.353 .408 .620
6 x 6	8 x 4 10 x 4	0.20		CFM	Noise Criteria	40	60	80	100	120	140	160	180	200
				Throw	0°	2-5-10	5-7-13	7-9-16	8-12-18	10-14-20	11-15-21	12-16-23	14-17-24	15-18-25
					22 1/2° 45°	2-4-8 1-2-5	4-6-10 3-4-7	6-7-13 4-5-8	6-10-14 5-7-10	8-11-16 6-8-11	9-12-17 8-10-12	10-13-18 7-8-12	11-14-19 8-9-13	12-14-20
8 x 6	10 x 5 12 x 4	0.27		CFM	Noise Criteria	54	81	108	135	162	189	216	243	270
				Throw	0°	2-5-12	5-8-15	8-12-18	10-14-20	11-16-23	13-18-25	15-19-27	16-20-28	17-21-30
					22 1/2° 45°	2-4-10 1-2-6	4-6-12 3-4-8	6-10-14 4-6-9	8-11-16 5-7-10	9-13-18 6-8-12	10-14-20 7-9-13	12-15-22 8-10-14	13-16-22 8-10-14	14-17-24 9-11-15
10 x 6	12 x 5 16 x 4	0.35		CFM	Noise Criteria	70	105	140	175	210	245	280	315	350
				Throw	0°	3-6-14	6-9-18	9-13-21	10-16-24	12-19-26	15-20-28	17-21-30	19-22-31	20-23-33
					22 1/2° 45°	2-5-11 1-3-7	5-7-14 3-5-9	7-10-17 5-7-11	8-13-19 5-8-12	10-15-21 6-10-13	12-16-22 8-10-14	14-18-26 9-11-15	16-19-27 9-11-15	18-20-28 10-12-17
8 x 8	14 x 5	0.38		CFM	Noise Criteria	76	114	152	190	228	266	304	342	380
				Throw	0°	3-6-15	6-9-19	9-14-22	11-16-25	13-19-27	16-21-29	18-22-32	18-23-32	19-24-34
					22 1/2° 45°	2-5-12 1-3-7	5-7-15 3-5-10	7-11-18 5-7-11	9-13-20 6-8-13	10-15-22 7-10-14	13-17-23 8-11-15	14-18-26 9-11-16	15-19-27 9-11-16	16-18-26 10-12-17
12 x 6	18 x 4	0.42		CFM	Noise Criteria	84	126	168	210	252	294	336	378	420
				Throw	0°	3-6-15	6-9-19	9-14-22	11-16-25	13-19-27	16-21-30	18-22-32	18-23-32	19-11-16
					22 1/2° 45°	2-5-12 1-3-7	5-7-15 3-5-10	7-11-18 5-7-11	9-13-20 6-8-13	10-15-22 7-10-14	13-17-24 8-11-15	14-18-26 9-11-16	15-19-27 9-11-16	16-18-26 10-12-17
14 x 6	10 x 8	0.50		CFM	Noise Criteria	100	150	200	250	300	350	400	450	500
				Throw	0°	3-7-16	6-11-20	10-15-23	12-18-25	15-20-28	16-22-31	19-23-33	20-24-34	21-25-36
					22 1/2° 45°	2-6-13 1-3-8	5-9-16 3-6-10	8-12-18 5-8-12	10-14-20 6-9-13	12-16-22 8-10-14	13-18-25 8-11-16	15-18-26 10-12-17	16-19-27 10-12-17	17-20-29 11-13-18
12 x 8	16 x 6 24 x 4	0.58		CFM	Noise Criteria	116	174	232	290	348	406	464	522	580
				Throw	0°	3-7-17	7-11-21	10-15-24	12-19-27	15-21-30	17-23-32	20-24-34	21-26-36	22-27-38
					22 1/2° 45°	2-6-14 1-3-8	6-9-17 4-6-11	8-12-19 5-8-12	10-15-22 6-10-14	12-17-24 8-11-15	14-18-26 9-12-16	16-19-27 10-12-17	17-21-29 10-13-18	18-22-30 11-14-19
10 x 10	14 x 7 26 x 4	0.61		CFM	Noise Criteria	122	183	244	305	366	427	488	549	610
				Throw	0°	3-7-17	7-11-21	10-16-24	13-19-28	16-21-30	17-23-32	20-24-35	22-27-37	23-28-39
					22 1/2° 45°	2-6-14 1-3-8	6-9-17 4-6-11	8-13-19 5-8-12	10-15-22 7-10-14	13-17-24 8-11-15	14-18-26 9-12-16	16-19-28 10-12-18	18-20-28 11-13-18	18-22-31 12-14-20
18 x 6	14 x 8 28 x 4 30 x 4	0.65		CFM	Noise Criteria	130	195	260	325	390	455	520	585	650
				Throw	0°	3-8-18	7-12-22	11-16-25	13-20-29	16-22-32	18-24-34	21-25-36	23-27-38	24-29-40
					22 1/2° 45°	2-6-14 1-3-9	6-10-18 4-6-11	9-13-20 6-8-13	10-16-23 7-10-15	13-18-26 8-11-16	14-19-27 9-12-17	17-20-29 11-13-18	18-22-30 11-13-19	19-23-32 12-15-20
12 x 10	20 x 6 24 x 5	0.74		CFM	Noise Criteria	148	222	296	370	444	518	592	666	740
				Throw	0°	4-8-19	8-13-24	11-17-27	14-21-31	17-24-33	20-26-36	22-27-39	24-29-41	25-31-43
					22 1/2° 45°	3-6-15 1-3-9	6-10-19 4-7-12	9-14-22 6-9-14	11-17-25 7-11-16	14-19-26 9-12-17	16-21-29 10-13-18	18-22-31 11-14-20	19-23-33 12-14-20	20-25-34 13-16-22
22 x 6	16 x 8 28 x 5 36 x 4	0.80		CFM	Noise Criteria	160	240	320	400	480	560	640	720	800
				Throw	0°	4-8-20	8-13-25	11-18-28	15-22-32	18-25-35	20-27-38	23-28-41	25-30-43	26-32-45
					22 1/2° 45°	3-6-16 1-3-10	6-10-20 4-7-13	9-14-22 6-9-14	12-18-26 8-11-16	14-20-28 9-13-18	16-22-30 10-14-19	18-22-33 12-14-21	20-24-34 12-15-21	21-26-36 13-16-23
12 x 12	14 x 10 18 x 8 24 x 6 38 x 4	0.90		CFM	Noise Criteria	180	270	360	450	540	630	720	810	900
				Throw	0°	4-9-21	9-14-26	12-18-29	15-23-33	18-26-36	21-27-39	24-29-42	26-31-45	27-33-47
					22 1/2° 45°	3-7-17 1-4-10	7-11-21 5-7-13	10-14-23 6-9-15	12-18-26 8-12-17	14-21-29 9-13-18	17-22-31 11-14-20	19-23-34 12-15-21	21-25-36 13-15-22	22-26-38 14-17-24

For performance data notes, see F142.



## PERFORMANCE DATA:

### ALUMINUM HEAVY DUTY BAR GRILLES AND REGISTERS • 51D00-HD SERIES

MODELS: 51D30H-HD, 51D30V-HD, 51D15H-HD, 51D15V-HD, 51DFH-HD, 51DFV-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		200	300	400	500	600	700	800	900	1000	
				Velocity	Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062	
18 x 10	30 x 6	1.13		CFM		226	339	452	565	678	791	904	1130	1130	
				Noise Criteria		-	-	20	27	32	37	41	44	44	47
				Throw	0°	4-10-23	9-15-29	14-20-33	17-25-36	20-29-40	24-30-43	27-33-46	28-34-48	30-36-51	
22 1/2°	3-8-18	7-12-23	11-16-26		14-20-29	16-23-32	19-24-34	22-26-37	22-27-38	24-29-41					
14 x 14	16 x 12 20 x 10 24 x 8 34 x 6	1.24		CFM		248	372	496	620	744	868	992	1116	1240	
				Noise Criteria		-	-	20	27	32	37	41	44	47	
				Throw	0°	5-12-26	11-18-33	16-25-39	20-29-42	24-33-47	27-36-51	31-39-54	33-40-57	35-42-60	
22 1/2°	4-10-21	9-14-26	13-20-31		16-23-34	19-26-38	22-29-41	25-31-43	26-32-46	28-34-48					
18 x 12	16 x 14 22 x 10 28 x 8 38 x 6	1.37		CFM		274	411	548	685	822	959	1096	1233	1370	
				Noise Criteria		-	-	21	28	33	38	42	45	48	
				Throw	0°	5-12-26	11-18-33	16-25-39	20-29-42	24-33-47	27-36-51	31-39-54	33-41-58	35-43-61	
22 1/2°	4-10-21	9-14-26	13-20-31		16-23-34	19-26-38	22-29-41	25-31-43	26-32-46	28-34-49					
24 x 10	20 x 12 30 x 8	1.52		CFM		304	456	608	760	912	1064	1216	1368	1520	
				Noise Criteria		-	-	21	28	33	38	42	45	48	
				Throw	0°	6-12-28	12-19-35	16-25-41	21-32-45	25-35-50	29-38-53	34-41-57	35-43-61	37-45-64	
22 1/2°	5-10-22	10-15-28	13-20-33		17-26-36	20-28-40	23-30-42	27-33-46	28-34-49	30-36-51					
16 x 16	18 x 14 22 x 12 30 x 8	1.64		CFM		328	492	656	820	984	1148	1312	1476	1640	
				Noise Criteria		-	-	21	28	33	38	42	45	48	
				Throw	0°	6-13-30	12-20-37	17-26-42	22-32-47	26-37-51	31-40-56	35-42-59	37-45-64	39-47-67	
22 1/2°	5-10-24	10-16-30	14-21-34		18-26-38	21-30-41	25-32-45	28-34-47	30-36-51	31-38-54					
24 x 12	18 x 16 22 x 14 30 x 10 36 x 8	1.85		CFM		370	555	740	925	1110	1295	1480	1665	1850	
				Noise Criteria		-	15	22	29	34	39	43	46	49	
				Throw	0°	6-13-30	12-20-38	18-27-44	22-33-48	27-38-54	32-40-58	36-44-62	38-46-65	40-48-69	
22 1/2°	5-10-24	10-16-30	14-22-35		18-26-38	22-30-43	26-32-46	29-35-50	30-37-52	32-38-55					
18 x 18	20 x 16 24 x 14 28 x 12 32 x 10	2.10		CFM		420	630	840	1050	1260	1470	1680	1890	2100	
				Noise Criteria		-	15	22	29	34	39	43	46	49	
				Throw	0°	6-14-32	13-21-40	19-29-47	24-36-52	29-40-57	33-43-62	38-47-66	40-49-70	42-52-74	
22 1/2°	5-11-26	10-17-32	15-23-38		19-29-42	23-32-46	26-34-50	30-38-53	32-39-66	34-42-59					
30 x 12	20 x 18 22 x 16 26 x 14 36 x 10	2.32		CFM		464	696	928	1160	1392	1624	1856	2088	2320	
				Noise Criteria		-	16	23	30	35	40	44	47	50	
				Throw	0°	7-15-34	14-23-43	21-31-50	26-39-56	31-43-61	36-47-67	41-50-71	44-53-75	46-56-79	
22 1/2°	6-12-27	11-18-34	17-25-40		21-31-45	25-34-49	29-38-54	33-40-57	35-42-60	32-45-63					
24 x 16	32 x 12	2.50		CFM		500	750	1000	1250	1500	1750	2000	2250	2500	
				Noise Criteria		-	16	23	30	35	40	44	47	50	
				Throw	0°	7-16-36	14-24-45	22-32-52	27-40-58	32-45-64	37-49-68	43-52-74	46-55-78	48-58-82	
22 1/2°	6-13-29	11-19-36	18-26-42		22-32-46	26-36-51	30-39-54	34-42-59	37-44-62	38-46-66					
20 x 20	22 x 18	2.61		CFM		522	783	1044	1305	1566	1827	2088	2349	2610	
				Noise Criteria		-	16	23	30	35	40	44	47	50	
				Throw	0°	7-16-37	15-24-46	22-32-53	27-41-59	32-46-65	38-50-70	44-53-75	46-56-80	49-59-84	
22 1/2°	6-13-30	12-19-37	18-26-42		22-33-47	26-37-52	30-40-56	35-42-60	37-45-64	39-47-67					
36 x 12	22 x 20 24 x 18 26 x 16 30 x 14	2.79		CFM		558	837	1116	1395	1674	1953	2232	2511	2790	
				Noise Criteria		-	16	23	30	35	40	44	47	50	
				Throw	0°	7-16-38	15-25-48	23-34-55	28-42-61	34-48-68	4-51-73	45-55-77	47-58-82	50-61-86	
22 1/2°	6-13-30	12-20-38	18-27-44		22-34-49	27-38-54	32-41-58	36-44-62	38-46-66	40-49-69					
22 x 22	24 x 20 26 x 18 30 x 16 40 x 12	3.17		CFM		634	951	1268	1585	1902	2219	2536	2853	3170	
				Noise Criteria		-	17	24	31	36	41	45	48	51	
				Throw	0°	8-18-40	17-27-50	24-36-58	29-45-65	36-50-71	42-54-77	47-58-82	50-62-87	53-65-92	
22 1/2°	6-14-32	14-22-40	19-29-46		23-36-52	29-40-57	34-43-62	38-46-66	40-50-70	42-52-74					
						45°	4-9-20	9-14-25	12-18-29	15-23-33	18-25-36	21-27-39	24-29-41	25-31-43	

For performance data notes, see F142.

## PERFORMANCE DATA:

### ALUMINUM HEAVY DUTY BAR GRILLES AND REGISTERS • 51D00-HD SERIES

#### MODELS: 51D30H-HD, 51D30V-HD, 51D15H-HD, 51D15V-HD, 51DFH-HD, 51DFV-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		200	300	400	500	600	700	800	900	1000
				Velocity	Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062
				0°	22 1/2°	.014	.031	.057	.088	.127	.174	.228	.287	.353
Total Pressure		45°	.016	.037	.064	.101	.146	.199	.261	.330	.408			
CFM					.025	.057	.099	.154	.220	.304	.400	.503	.620	
42 x 12	36 x 14	3.27	1.68 1.56 1.44	CFM	654	981	1308	1635	1962	2289	2616	2943	3270	
				Noise Criteria	-	17	24	31	36	41	45	48	51	
				Throw	0°	8-18-41	17-27-51	24-36-59	30-45-66	36-51-72	42-55-77	48-59-83	50-63-88	53-66-93
			22 1/2°	6-14-33	14-22-41	19-29-47	24-36-53	29-41-58	34-44-58	38-47-66	40-50-70	42-53-74		
			45°	4-9-20	9-14-26	12-18-30	15-23-33	18-26-36	24-30-42	25-31-44	27-33-47			
30 x 18	24 x 22 34 x 16 40 x 14	3.54	1.81 1.68 1.56	CFM	708	1062	1416	1770	2124	2478	2832	3186	3540	
				Noise Criteria	-	17	24	31	36	41	45	48	51	
				Throw	0°	9-18-42	18-28-53	25-37-61	31-47-69	37-53-75	44-57-81	50-61-86	53-65-92	56-69-97
			22 1/2°	7-14-34	14-22-42	20-30-49	25-38-55	30-42-60	35-46-65	40-49-69	42-52-74	45-55-78		
			45°	4-9-20	9-14-27	13-19-31	16-24-35	19-27-38	22-29-41	25-31-43	26-32-46	28-35-49		
24 x 24	26 x 22 28 x 20 32 x 18 36 x 16	3.79	1.93 1.80 1.66	CFM	758	1137	1516	1895	2274	2653	3032	3411	3790	
				Noise Criteria	-	17	24	31	36	41	45	48	51	
				Throw	0°	9-19-44	18-29-55	26-39-62	33-48-70	39-55-77	45-59-83	51-62-89	54-66-94	57-70-99
			22 1/2°	7-15-35	14-23-44	21-31-50	26-38-56	31-44-62	36-47-66	41-50-71	45-53-75	46-56-79		
			45°	4-9-22	9-15-28	13-20-31	17-24-35	20-28-39	23-30-42	26-31-45	27-33-47	29-35-50		
36 x 18	32 x 20 40 x 16 46 x 14	4.29	2.18 2.03 1.87	CFM	858	1287	1716	2145	2574	3003	3432	3861	4290	
				Noise Criteria	-	18	25	32	37	42	46	49	52	
				Throw	0°	9-20-46	19-31-58	28-42-68	35-52-75	42-58-83	48-63-89	55-68-95	58-71-101	61-75-106
			22 1/2°	7-16-37	15-25-46	22-34-54	28-42-60	34-46-66	38-50-71	44-54-76	46-57-81	49-60-85		
			45°	4-10-23	10-16-29	14-21-34	18-26-38	21-29-42	24-32-45	28-34-48	29-35-50	31-38-53		
26 x 26	28 x 24 48 x 14	4.47	2.25 2.10 1.93	CFM	894	1341	1788	2235	2682	3129	3576	4023	4470	
				Noise Criteria	-	18	25	32	37	42	46	49	52	
				Throw	0°	9-21-47	19-32-59	28-43-69	35-53-77	43-59-85	49-65-91	56-69-98	60-73-103	63-77-109
			22 1/2°	7-17-38	15-26-47	22-34-55	28-42-62	34-47-68	39-52-73	45-55-78	48-58-82	50-62-87		
			45°	4-10-23	10-16-30	14-22-35	18-27-32	22-30-43	25-33-46	28-35-49	30-36-51	32-39-55		
30 x 24	32 x 22 36 x 20 40 x 18	4.77	2.42 2.25 2.08	CFM	954	1431	1908	2385	2862	3339	3816	4293	4770	
				Noise Criteria	-	18	25	32	37	42	46	49	52	
				Throw	0°	10-22-49	20-33-61	29-44-71	36-54-79	44-61-87	51-67-94	58-71-101	62-75-106	65-79-112
			22 1/2°	8-18-39	16-26-49	23-35-57	29-43-63	35-49-70	41-54-75	46-57-81	50-60-85	52-63-90		
			45°	5-11-24	10-17-31	15-22-36	18-27-40	22-31-44	26-34-47	29-36-51	31-37-53	33-40-56		
28 x 28	30 x 26 36 x 22 40 x 20	5.20	2.66 2.48 2.29	CFM	1040	1560	2080	2600	3120	3640	4160	4680	5200	
				Noise Criteria	-	19	26	33	38	43	47	50	53	
				Throw	0°	10-22-50	21-34-63	30-45-74	38-56-82	45-63-90	53-69-97	60-74-104	64-78-110	67-82-116
			22 1/2°	8-18-40	17-27-50	24-36-59	30-45-66	36-50-72	42-55-78	48-59-83	51-62-88	54-66-93		
			45°	5-11-25	11-17-32	15-23-37	19-28-41	23-32-45	27-35-49	30-37-52	32-39-55	34-41-58		
36 x 24	40 x 22 44 x 20	5.74	2.91 2.71 2.50	CFM	1148	1722	2296	2870	3444	4018	4592	5166	5740	
				Noise Criteria	-	19	26	33	38	43	47	50	53	
				Throw	0°	11-24-54	23-36-68	32-49-78	41-60-88	49-68-96	57-74-104	64-78-112	68-84-118	72-88-124
			22 1/2°	9-19-43	18-29-54	26-39-62	33-48-70	39-54-77	46-59-83	51-62-90	54-67-94	58-70-99		
			45°	5-12-27	12-18-34	16-25-39	21-30-44	25-34-48	29-37-52	32-39-56	34-42-59	36-44-62		
42 x 24	36 x 28 42 x 24 46 x 22	6.72	3.40 3.16 2.31	CFM	1344	2016	2688	3360	4032	4704	5376	6048	6720	
				Noise Criteria	-	20	27	34	39	44	48	51	54	
				Throw	0°	12-26-58	24-39-72	34-51-83	43-64-93	51-72-102	60-78-111	68-84-118	73-88-125	77-93-132
			22 1/2°	10-21-46	19-31-58	27-41-67	34-51-74	41-58-82	48-62-89	54-67-94	58-70-100	62-74-106		
			45°	6-13-29	12-20-36	17-26-42	22-32-47	26-36-51	30-39-56	34-42-59	36-44-62	39-47-66		
36 x 30	38 x 28	7.22	3.64 3.39 3.13	CFM	1444	2166	2888	3610	4332	5054	5776	6498	7220	
				Noise Criteria	-	20	27	34	39	44	48	51	54	
				Throw	0°	12-26-61	25-40-76	36-54-87	45-68-98	54-76-108	63-82-116	71-87-124	76-93-132	80-98-139
			22 1/2°	10-21-49	20-32-61	29-43-70	36-54-78	43-61-86	50-66-93	57-70-99	61-74-106	64-78-111		
			45°	6-13-30	13-20-38	18-27-44	23-34-49	27-38-54	32-41-58	36-44-62	38-46-66	40-49-70		
48 x 24	34 x 34 36 x 32 38 x 30 42 x 28	7.69	3.88 3.61 3.34	CFM	1538	2307	3076	3845	4614	5383	6152	6921	7690	
				Noise Criteria	-	21	28	35	40	45	49	52	55	
				Throw	0°	13-27-62	26-41-77	37-55-90	46-69-100	55-77-109	64-84-118	73-90-127	78-95-135	82-200-142
			22 1/2°	10-22-50	21-33-62	30-44-72	37-55-80	44-62-87	51-67-94	58-72-102	62-76-108	66-80-114		
			45°	6-13-31	13-22-39	19-28-45	23-45-50	28-39-55	32-42-59	37-45-64	39-47-67	41-50-71		

#### Performance Notes:

- Performance data is based on Models 51DFH-HD and 51DFV-HD with 0° deflection front blades. For 15° and 30° deflection models, use: —
- Tabulated data includes OBD (damper). Without OBD, multiply Total Pressure (TP) by 0.8. Subtract 4 NC from the NC value given.

3. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

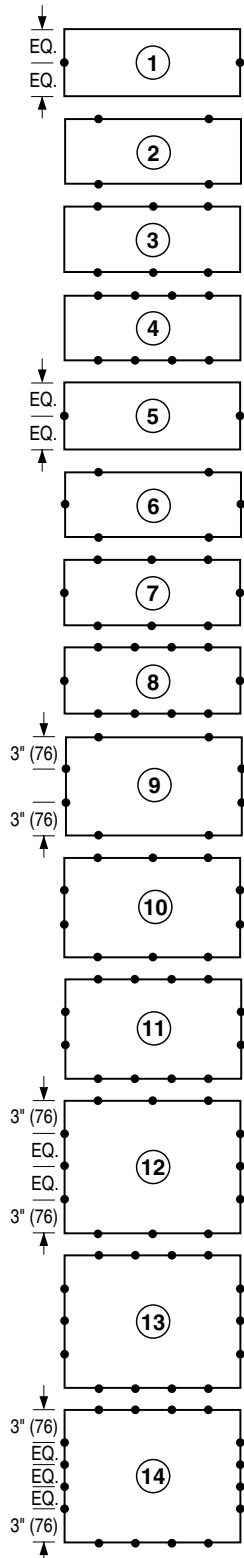
4. Noise Criteria values were obtained using a 0° horizontal deflection near blade setting. For deflection settings of 22 1/2° and 45°, add 2 and 7 Noise Criteria (NC) to the tabulated NC level respectively.

5. Data derived from tests conducted with ANSI/ASHRAE Standard 70 – 2006.

#### Correction Factor

Model	Deflection	TP	NC
51D15	15°	x 1.2	+ 3
51D30	30°	x 1.5	+ 7

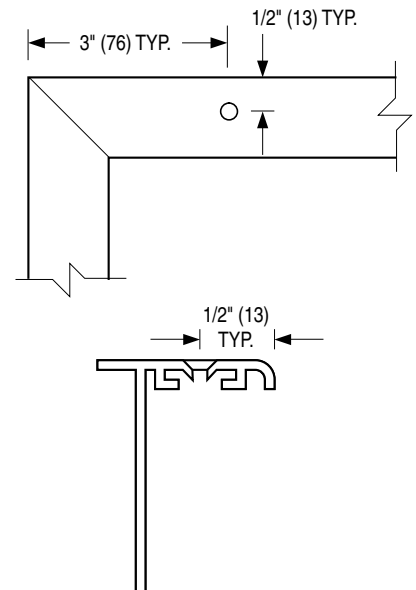
## SCREW HOLE LOCATION CHART FOR MODELS: 5100-HD AND 6100-HD



DUCT SIZE	LONG DIMENSION (WIDTH)																						
	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
4																							
6																							
8			1				2					3								4			
10																							
12																							
14					5		6					7								8			
16																							
18							9																
20																							
22																							
24																							
26																							
28																							
30																							
32																							
34																							
36																							
38																							
40																							
42																							
44																							
46																							
48																							

### DESCRIPTION:

1. All screw holes are located 1/2" (13) in from the outside edge of the frame.
2. Use the chart above to determine which screw hole location diagram applies based on the duct size of the grille or register.
3. This information is provided for general information only. Pre-drilling of mounting holes is not recommended. The actual grille or register, as supplied, should be used as a template to enhance the installation quality.



Dimensions are in inches (mm).

<b>SCHEDULE TYPE:</b>			
<b>PROJECT:</b>			
<b>ENGINEER:</b>			
<b>CONTRACTOR:</b>			
<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
30 - 4 - 01	SUPP./G&R	NEW	SHLC-2