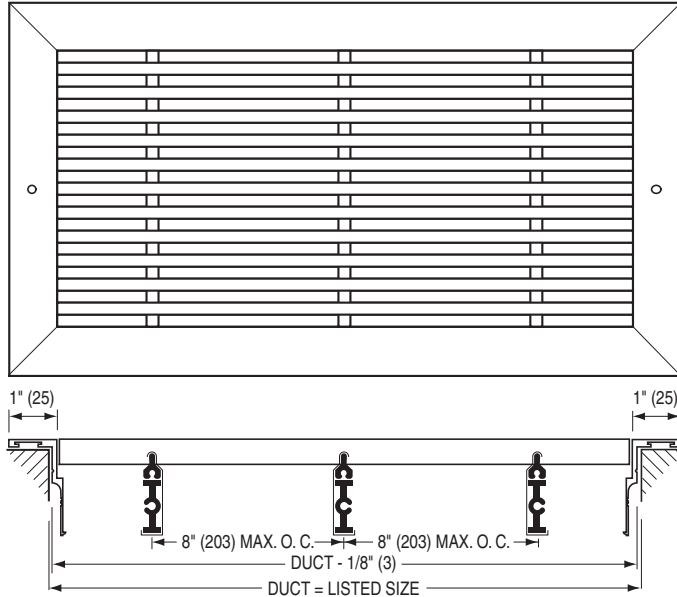
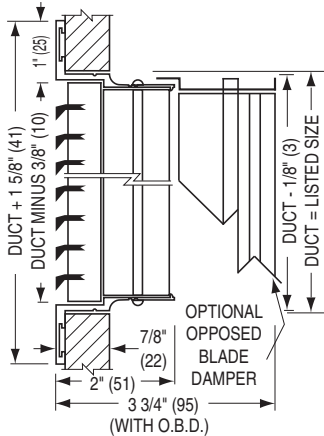




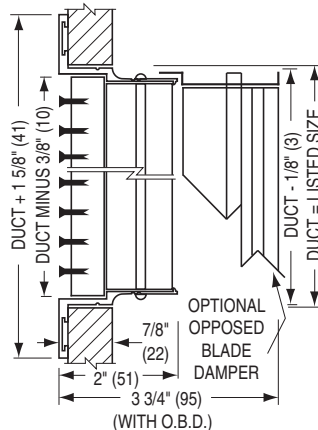
ALUMINUM HEAVY DUTY BAR RETURN GRILLES • GYMNASIUM
MODELS: 5130H-HD(-O), 5130V-HD(-O), 51FH-HD(-O) AND 51FV-HD(-O)



- MODEL 5130H-HD**
30° Horizontal Blades
- MODEL 5130H-HD-O**
30° Horizontal Blades
(Includes O. B. Damper)
- MODEL 5130V-HD**
30° Vertical Blades
- MODEL 5130V-HD-O**
30° Vertical Blades
(Includes O. B. Damper)
- MODEL 51FH-HD**
0° Horizontal Blades
- MODEL 51FH-HD-O**
0° Horizontal Blades
(Includes O. B. Damper)
- MODEL 51FV-HD**
0° Vertical Blades
- MODEL 51FV-HD-O**
0° Vertical Blades
(Includes O. B. Damper)



Model 5130H-HD
Model 5130H-HD-O
 (Horizontal Shown)



Model 51FH-HD
Model 51FH-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° or 0° deflection to suit air pattern requirement. 0° models feature 1/8" (3) bars and the 30° model features 1/4" (6) bars. 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 48" (1219 x 1219).
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
 - MI Mill
 - 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-1

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

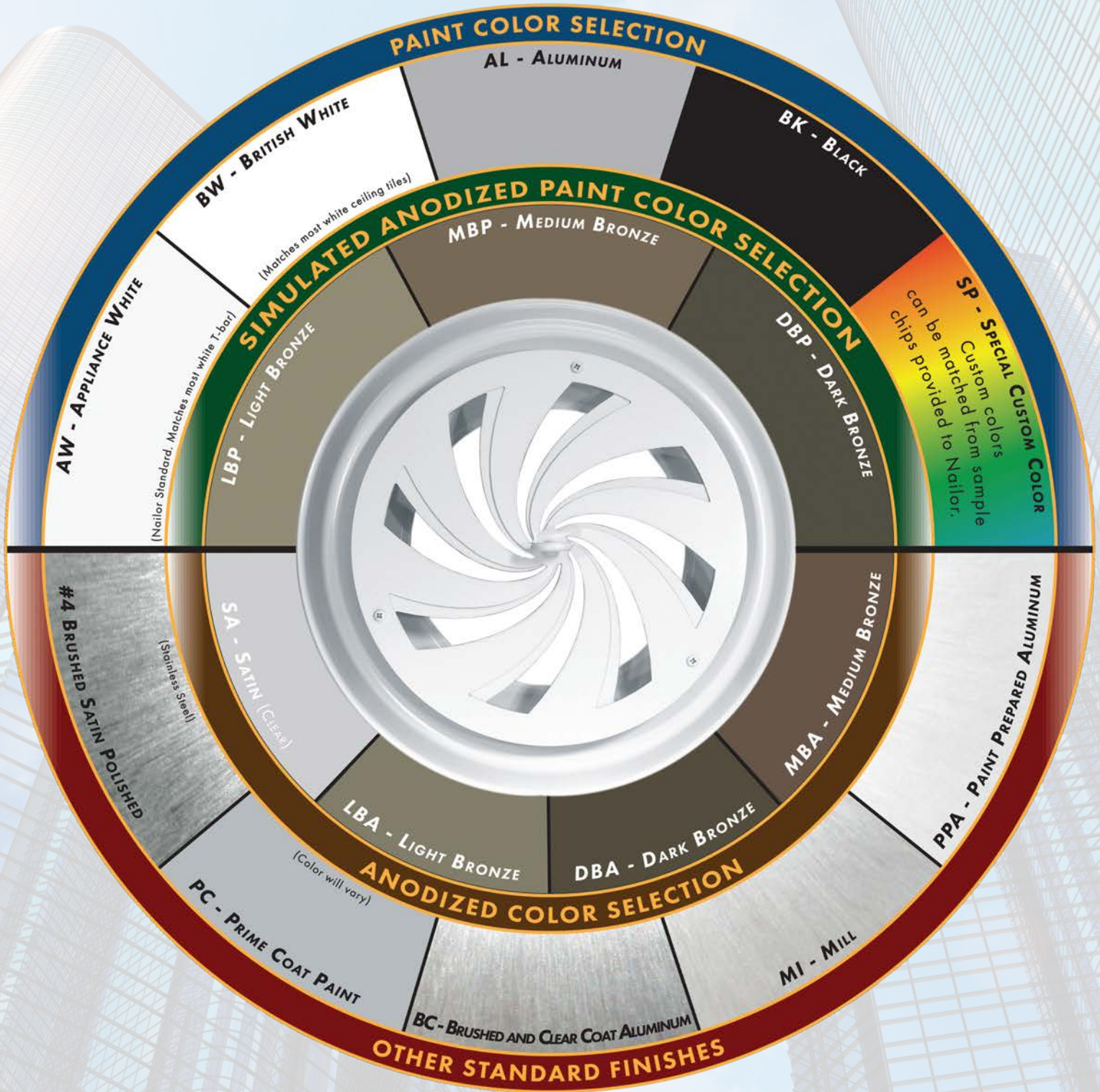
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



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:

ALUMINUM HEAVY DUTY BAR RETURN GRILLES • GYMNASIUM • 5100-HD SERIES

MODELS: 5130H-HD, 5130V-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100	200	300	400	500	600	700	800	900	1000
					.001 .004	.002 .016	.006 .037	.010 .065	.016 .102	.022 .146	.031 .199	.040 .260	.050 .330	.062 .407
6 x 6	8 x 4 10 x 4	0.20	0.23	CFM Noise Criteria	20 -	40 15	60 21	80 27	100 31	120 35	140 37	160 40	180 44	200 49
8 x 6	10 x 5 12 x 4	0.28	0.30	CFM Noise Criteria	28 -	56 15	84 21	112 27	140 32	168 36	196 38	224 41	252 45	280 50
10 x 6	12 x 5 16 x 4	0.35	0.37	CFM Noise Criteria	35 -	70 16	105 22	140 28	175 33	210 37	245 39	280 42	315 46	350 51
8 x 8	14 x 5	0.38	0.40	CFM Noise Criteria	38 -	76 16	114 22	152 28	190 33	228 38	266 40	304 43	342 47	380 51
12 x 6	18 x 4	0.42	0.45	CFM Noise Criteria	42 -	84 17	126 23	168 29	210 34	252 38	294 41	336 44	378 48	420 52
12 x 8	16 x 6 24 x 4	0.58	0.59	CFM Noise Criteria	58 -	116 17	174 23	232 29	290 34	348 38	406 41	464 45	522 49	580 53
10 x 10	14 x 7 26 x 4	0.61	0.62	CFM Noise Criteria	61 -	122 18	183 24	244 29	305 34	366 38	427 41	488 46	549 49	610 54
18 x 6	14 x 8 30 x 4 28 x 4	0.65	0.67	CFM Noise Criteria	65 -	130 18	195 24	260 30	325 35	390 39	455 42	520 46	585 50	650 54
12 x 10	16 x 8 20 x 6 24 x 5	0.74	0.74	CFM Noise Criteria	74 -	148 18	222 25	296 30	370 35	444 40	518 43	592 47	666 51	740 54
12 x 12	14 x 10 24 x 6 18 x 8 38 x 4	0.90	0.89	CFM Noise Criteria	90 -	180 19	270 25	360 31	450 36	540 40	630 43	720 48	810 51	900 54
14 x 14	16 x 12 24 x 8 20 x 10 34 x 6	1.24	1.22	CFM Noise Criteria	124 -	248 20	372 26	496 31	620 36	744 41	868 44	992 48	1116 52	1240 55
18 x 12	16 x 14 28 x 8 22 x 10 38 x 6	1.37	1.34	CFM Noise Criteria	137 -	274 20	411 26	548 32	685 37	822 42	959 45	1096 50	1233 53	1370 56
24 x 10	20 x 12 30 x 8	1.52	1.49	CFM Noise Criteria	152 15	304 21	456 26	608 32	760 37	912 42	1064 46	1216 51	1368 54	1520 57
16 x 16	18 x 14 30 x 8 22 x 12	1.64	1.58	CFM Noise Criteria	164 15	328 21	492 27	656 33	820 38	984 42	1148 46	1312 51	1476 54	1640 57
24 x 12	18 x 16 30 x 10 20 x 14 36 x 8	1.85	1.78	CFM Noise Criteria	185 15	370 21	555 27	740 33	925 38	1110 43	1295 46	1480 51	1665 54	1850 58
18 x 18	20 x 16 28 x 12 24 x 14 32 x 10	2.10	2.01	CFM Noise Criteria	210 16	420 22	630 27	840 33	1050 38	1260 43	1470 47	1680 52	1890 55	2100 58
30 x 12	20 x 18 26 x 14 22 x 16 36 x 10	2.32	2.23	CFM Noise Criteria	232 16	464 22	696 27	928 33	1160 38	1392 43	1624 47	1856 52	2088 55	2320 59
20 x 20	24 x 18 30 x 14 26 x 16 36 x 12	2.61	2.48	CFM Noise Criteria	261 17	522 22	783 27	1044 33	1305 38	1566 43	1827 47	2088 52	2349 55	2610 59
22 x 22	24 x 20 30 x 16 26 x 18 36 x 14	3.17	3.00	CFM Noise Criteria	317 17	634 23	951 28	1268 34	1585 39	1902 44	2219 48	2536 52	2853 55	3170 59
30 x 18	24 x 22 40 x 14 34 x 16	3.54	3.34	CFM Noise Criteria	354 18	708 24	1062 28	1416 34	1770 39	2124 44	2478 48	2832 53	3186 56	3540 60
24 x 24	26 x 22 32 x 18 28 x 20 36 x 16	3.79	3.56	CFM Noise Criteria	379 18	758 24	1137 28	1516 34	1895 39	2274 44	2653 49	3032 53	3411 56	3790 60
36 x 18	32 x 20 46 x 14 40 x 16	4.27	4.01	CFM Noise Criteria	427 18	854 24	1281 29	1708 36	2135 41	2562 45	2989 49	3416 54	3843 57	4270 61
26 x 26	28 x 24 48 x 14	4.47	4.19	CFM Noise Criteria	447 19	894 25	1341 30	1788 36	2235 41	2682 45	3129 49	3576 54	4023 57	4470 61
30 x 24	28 x 26 36 x 20 32 x 22 40 x 18	4.77	4.46	CFM Noise Criteria	477 19	954 25	1431 30	1908 37	2385 42	2862 46	3339 50	3816 54	4293 58	4770 62
28 x 28	30 x 26 40 x 20 36 x 22	5.20	4.85	CFM Noise Criteria	520 19	1040 25	1560 30	2080 37	2600 42	3120 46	3640 50	4160 55	4680 58	5200 62
36 x 24	30 x 28 44 x 20 40 x 22	5.74	5.35	CFM Noise Criteria	574 19	1148 25	1722 30	2296 37	2870 42	3444 46	4018 50	4592 55	5166 59	5740 63
30 x 30	34 x 26 48 x 20 38 x 24	5.99	5.57	CFM Noise Criteria	599 20	1198 26	1797 31	2396 37	2995 42	3594 47	4193 51	4792 55	5391 59	5990 63

GRILLES AND REGISTERS

F

For performance data notes, see F146.

PERFORMANCE DATA:

ALUMINUM HEAVY DUTY BAR RETURN GRILLES • GYMNASIUM • 5100-HD SERIES

MODELS: 5130H-HD, 5130V-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100	200	300	400	500	600	700	800	900	1000
					.001 .004	.002 .016	.006 .037	.010 .065	.016 .102	.022 .146	.031 .199	.040 .260	.050 .330	.062 .407
32 x 32	36 x 30 46 x 22 38 x 28	6.84	6.34	CFM	684	1368	2052	2736	3420	4104	4788	5472	6156	6840
				Noise Criteria	20	26	31	37	43	47	51	56	60	64
48 x 24	34 x 34 38 x 30 36 x 32 48 x 28	7.69	7.13	CFM	769	1538	2307	3076	3845	4614	5383	6152	6921	7690
				Noise Criteria	21	26	31	37	43	48	52	56	60	64
36 x 36	38 x 34 46 x 28 42 x 30 48 x 26	8.69	8.02	CFM	869	1738	2607	3476	4345	5214	6083	6952	7821	8690
				Noise Criteria	21	27	32	38	43	48	53	57	61	65
38 x 38	42 x 34 48 x 30 44 x 34	9.70	8.94	CFM	970	1940	2910	3880	4850	5820	6790	7760	8730	9700
				Noise Criteria	22	27	33	38	44	49	53	57	61	65
40 x 40	42 x 36 48 x 32 46 x 34	10.77	9.90	CFM	1077	2154	3231	4308	5385	6462	7539	8616	9693	10770
				Noise Criteria	22	27	33	39	45	49	54	57	62	66
42 x 42	44 x 40 48 x 36 46 x 36	11.89	10.92	CFM	1189	2378	3567	4756	5945	7134	8323	9512	10701	11890
				Noise Criteria	22	27	33	39	45	50	54	58	62	66
44 x 44	46 x 42	13.07	11.98	CFM	1307	2614	3921	5228	6535	7842	9149	10456	11763	13070
				Noise Criteria	22	28	34	39	45	50	54	58	62	66
46 x 46		14.30	13.10	CFM	1430	2860	4290	5720	7150	8580	10010	11440	12870	14300
				Noise Criteria	23	29	34	40	46	51	55	59	63	67
48 x 48		15.59	14.26	CFM	1559	3118	4677	6236	7795	9354	10913	12472	14031	15590
				Noise Criteria	23	29	35	40	46	51	55	59	63	67

Performance Notes:

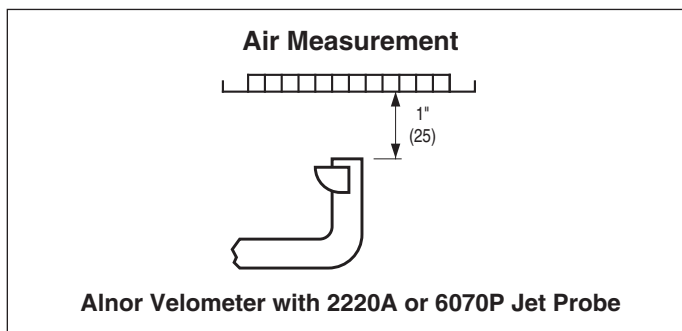
- All pressures are in inches w.g..
- Core Velocity is in feet per minute.
- Performance data is for grille with opposed blade damper. Apply the following correction factors for grille without damper.

Neg. Static Pressure Listed Value x 0.91.

Noise Criteria Listed value – 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.



Airflow Measurements

- Balancing factors are applicable with or without dampers, providing uniform airflow exists into grille or register.
- Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.
- Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (V_k in FPM).
- Calculate the airflow (CFM) by multiplying the average velocity by the appropriate Ak factor.
Airflow (CFM) = Average velocity (V_k) x Ak.

PERFORMANCE DATA:

ALUMINUM HEAVY DUTY BAR RETURN GRILLES • GYMNASIUM • 5100-HD SERIES

MODELS: 51FH-HD, 51FV-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100	200	300	400	500	600	700	800	900	1000
					.001 .003	.002 .010	.006 .023	.010 .041	.016 .065	.022 093	.031 .127	.040 .166	.050 .210	.062 .259
6 x 6	8 x 4 10 x 4	0.20	0.23	CFM Noise Criteria	20 -	40 -	60 -	80 15	100 19	120 23	140 25	160 28	180 32	200 37
8 x 6	10 x 5 12 x 4	0.28	0.30	CFM Noise Criteria	28 -	56 -	84 -	112 15	140 20	168 24	196 26	224 29	252 33	280 38
10 x 6	12 x 5 16 x 4	0.35	0.37	CFM Noise Criteria	35 -	70 -	105 -	140 16	175 21	210 25	245 27	280 30	315 34	350 39
8 x 8	14 x 5	0.38	0.40	CFM Noise Criteria	38 -	76 -	114 -	152 -	190 21	228 26	266 28	304 31	342 35	380 39
12 x 6	18 x 4	0.42	0.45	CFM Noise Criteria	42 -	84 -	126 -	168 -	210 22	252 26	294 29	336 32	378 36	420 40
12 x 8	16 x 6 24 x 4	0.58	0.59	CFM Noise Criteria	58 -	116 -	174 -	232 -	290 22	348 26	406 29	464 33	522 37	580 41
10 x 10	14 x 7 26 x 4	0.61	0.62	CFM Noise Criteria	61 -	122 -	183 -	244 -	305 22	366 26	427 29	488 34	549 37	610 42
18 x 6	14 x 8 30 x 4 28 x 4	0.65	0.67	CFM Noise Criteria	65 -	130 -	195 -	260 18	325 23	390 27	455 30	520 34	585 38	650 42
12 x 10	16 x 8 20 x 6 24 x 5	0.74	0.74	CFM Noise Criteria	74 -	148 -	222 -	296 18	370 23	444 28	518 31	592 35	666 39	740 42
12 x 12	14 x 10 24 x 6 18 x 8 38 x 4	0.90	0.89	CFM Noise Criteria	90 -	180 -	270 -	360 19	450 24	540 28	630 31	720 36	810 39	900 42
14 x 14	16 x 12 24 x 8 20 x 10 34 x 6	1.24	1.22	CFM Noise Criteria	124 -	248 -	372 -	496 19	620 24	744 29	868 32	992 36	1116 40	1240 43
18 x 12	16 x 14 28 x 8 22 x 10 38 x 6	1.37	1.34	CFM Noise Criteria	137 -	274 -	411 -	548 20	685 25	822 30	959 33	1096 38	1233 41	1370 44
24 x 10	20 x 12 30 x 8	1.52	1.49	CFM Noise Criteria	152 -	304 -	456 -	608 20	760 25	912 30	1064 34	1216 39	1368 42	1520 45
16 x 16	18 x 14 30 x 8 22 x 12	1.64	1.58	CFM Noise Criteria	164 -	328 -	492 15	656 21	820 26	984 31	1148 34	1312 39	1476 42	1640 45
24 x 12	18 x 16 30 x 10 20 x 14 36 x 8	1.85	1.78	CFM Noise Criteria	185 -	370 -	555 15	740 21	925 26	1110 31	1295 34	1480 39	1665 42	1850 46
18 x 18	20 x 16 28 x 12 24 x 14 32 x 10	2.10	2.01	CFM Noise Criteria	210 -	420 -	630 15	840 21	1050 26	1260 31	1470 35	1680 40	1890 43	2100 46
30 x 12	20 x 18 26 x 14 22 x 16 36 x 10	2.32	2.23	CFM Noise Criteria	232 -	464 -	696 15	928 21	1160 26	1392 31	1624 35	1856 40	2088 43	2320 47
20 x 20	24 x 18 30 x 14 26 x 16 36 x 12	2.61	2.48	CFM Noise Criteria	261 -	522 -	783 15	1044 21	1305 26	1566 31	1827 35	2088 40	2349 43	2610 47
22 x 22	24 x 20 30 x 16 26 x 18 36 x 14	3.17	3.00	CFM Noise Criteria	317 -	634 -	951 15	1268 22	1585 27	1902 32	2219 36	2536 40	2853 43	3170 47
30 x 18	24 x 22 40 x 14 34 x 16	3.54	3.34	CFM Noise Criteria	354 -	708 -	1062 16	1416 22	1770 27	2124 32	2478 36	2832 41	3186 44	3540 48
24 x 24	26 x 22 32 x 18 28 x 20 36 x 16	3.79	3.56	CFM Noise Criteria	379 -	758 -	1137 16	1516 22	1895 27	2274 32	2653 37	3032 41	3411 44	3790 48
36 x 18	32 x 20 46 x 14 40 x 16	4.27	4.01	CFM Noise Criteria	427 -	854 -	1281 17	1708 24	2135 29	2562 33	2989 37	3416 42	3843 45	4270 49
26 x 26	28 x 24 48 x 14	4.47	4.19	CFM Noise Criteria	447 -	894 -	1341 18	1788 24	2235 29	2682 33	3129 37	3576 42	4023 45	4470 49
30 x 24	28 x 26 36 x 20 32 x 22 40 x 18	4.77	4.46	CFM Noise Criteria	477 -	954 -	1431 18	1908 25	2385 30	2862 34	3339 38	3816 42	4293 46	4770 50
28 x 28	30 x 26 40 x 20 36 x 22	5.20	4.85	CFM Noise Criteria	520 -	1040 -	1560 18	2080 25	2600 30	3120 34	3640 38	4160 43	4680 46	5200 50
36 x 24	30 x 28 44 x 20 40 x 22	5.74	5.35	CFM Noise Criteria	574 -	1148 -	1722 18	2296 25	2870 30	3444 34	4018 38	4592 43	5166 47	5740 51
30 x 30	34 x 26 48 x 20 38 x 24	5.99	5.57	CFM Noise Criteria	599 -	1198 -	1797 19	2396 25	2995 30	3594 35	4193 39	4792 43	5391 47	5990 51

For performance data notes, see F148.

PERFORMANCE DATA:

ALUMINUM HEAVY DUTY BAR RETURN GRILLES • GYMNASIUM • 5100-HD SERIES

MODELS: 51FH-HD, 51FV-HD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100	200	300	400	500	600	700	800	900	1000
					.001 .003	.002 .010	.006 .023	.010 .041	.016 .065	.022 .093	.031 .127	.040 .166	.050 .210	.062 .259
32 x 32	36 x 30 46 x 22 38 x 28	6.84	6.34	CFM Noise Criteria	684 -	1368 -	2052 19	2736 25	3420 31	4104 35	4788 39	5472 44	6156 48	6840 52
48 x 24	34 x 34 38 x 30 36 x 32 48 x 28	7.69	7.13	CFM Noise Criteria	769 -	1538 -	2307 19	3076 25	3845 31	4614 36	5383 40	6152 44	6921 48	7690 52
36 x 36	38 x 34 46 x 28 42 x 30 48 x 26	8.69	8.02	CFM Noise Criteria	869 -	1738 -	2607 20	3476 26	4345 31	5214 36	6083 41	6952 45	7821 49	8690 53
38 x 38	42 x 34 48 x 30 44 x 34	9.70	8.94	CFM Noise Criteria	970 -	1940 15	2910 21	3880 26	4850 32	5820 37	6790 41	7760 45	8730 49	9700 53
40 x 40	42 x 36 48 x 32 46 x 34	10.77	9.90	CFM Noise Criteria	1077 -	2154 15	3231 21	4308 27	5385 33	6462 37	7539 42	8616 45	9693 50	10770 54
42 x 42	46 x 42 48 x 36 46 x 38	11.89	10.92	CFM Noise Criteria	1189 -	2378 15	3567 21	4756 27	5945 33	7134 38	8323 42	9512 46	10701 50	11890 54
44 x 44	46 x 42	13.07	11.98	CFM Noise Criteria	1307 -	2614 16	3921 22	5228 27	6535 33	7842 38	9149 42	10456 46	11763 50	13070 54
46 x 46		14.30	13.10	CFM Noise Criteria	1430 -	2860 17	4290 22	5720 28	7150 34	8580 39	10010 43	11440 47	12870 51	14300 55
48 x 48		15.59	14.26	CFM Noise Criteria	1559 -	3118 17	4677 23	6236 28	7795 34	9354 39	10913 43	12472 47	14031 51	15590 55

Performance Notes:

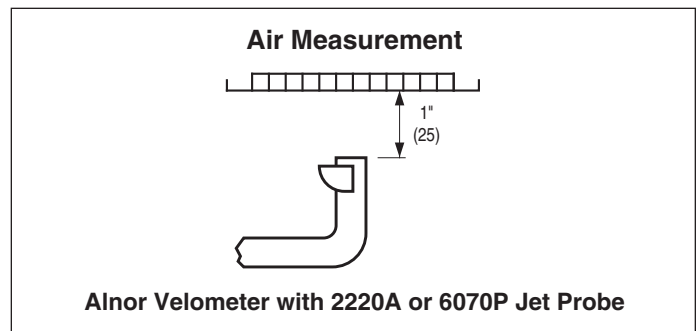
1. All pressures are in inches w.g..
2. Core Velocity is in feet per minute.
3. Performance data is for grille with opposed blade damper. Apply the following correction factors for grille without damper.

Neg. Static Pressure Listed Value x 0.91.

Noise Criteria Listed value - 4.

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.

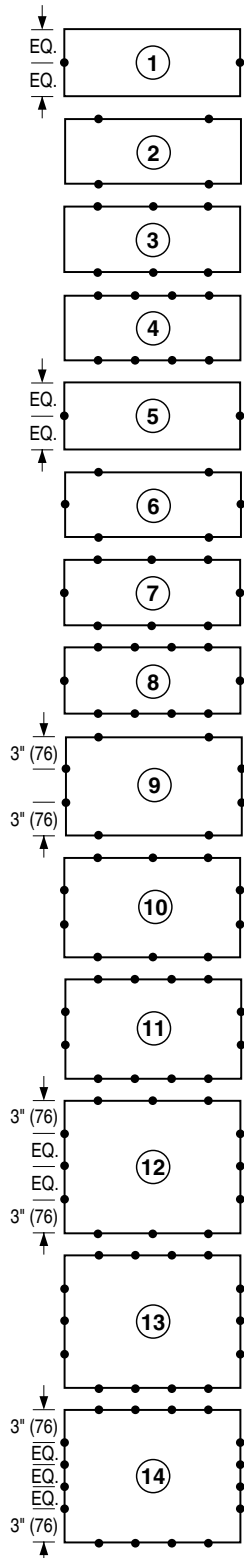
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 - 2006.



Airflow Measurements:

1. Balancing factors are applicable with or without dampers, providing uniform airflow exists into grille or register.
 2. Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.
 3. Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (Vk in FPM).
 4. Calculate the airflow (CFM) by multiplying the average velocity by the appropriate Ak factor.
- Airflow (CFM) = Average velocity (Vk) x Ak.

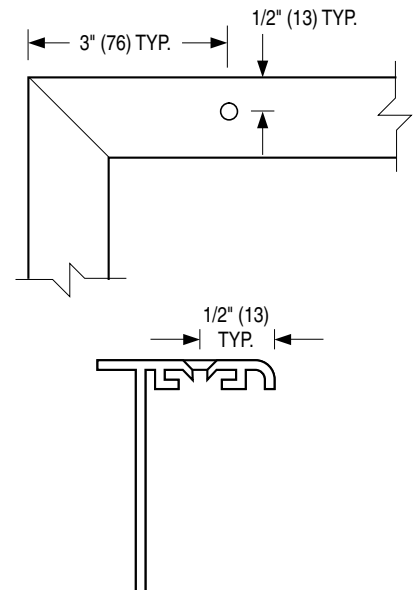
SCREW HOLE LOCATION CHART FOR MODELS: 5100-HD AND 6100-HD



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																							
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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).

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