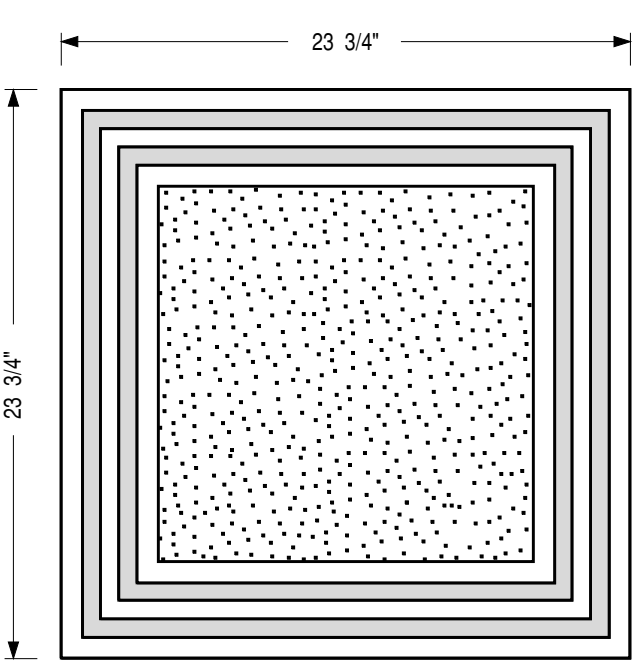
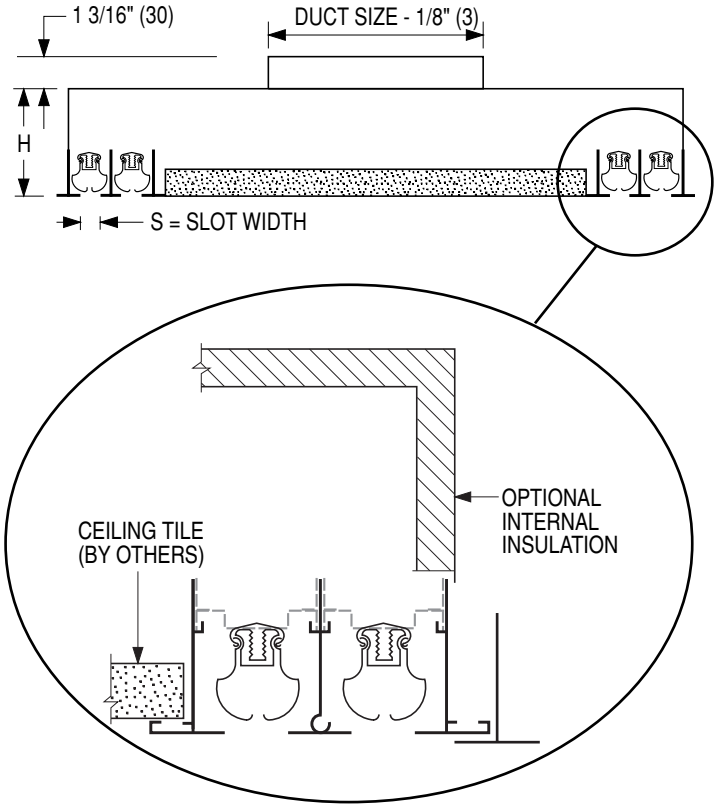
ARCHITECTURAL CEILING TILE SLOT DIFFUSER

SUPPLY • 24" x 24" MODULE

MODELS: 5075 CTD 3/4" SLOT
5010 CTD 1" SLOT

FOR STANDARD WIDTH AND NARROW GRID LAY-IN T-BAR CEILINGS





MODEL TYPE:

- ❑ 5075 CTD 3/4" SLOT
- ❑ 5010 CTD 1" SLOT

NO. OF SLOTS:

- ❑ 1 SLOT ❑ 3 SLOT
- ❑ 2 SLOT ❑ 4 SLOT

INLET SIZE:

- ❑ 6" ❑ 10" ❑ 14"
- ❑ 8" ❑ 12"

OPTIONS:

- ❑ Internal Insulation
- ❑ External Foil Back Insulation
- ❑ SP Special Paint Finish _____ .

	CEILING TILE CUTTING DIMENSION		
NO. OF	SLOT WIDTHS (S)		H
SLOTS	3/4"	1"	DIM.
1	19 1/2 x 19 1/2	19 x 19	5
2	16 1/2 x 16 1/2	15 1/2 x 15 1/2	5
3	13 1/2 x 13 1/2	12 x 12	6 3/4
4	10 1/2 x 10 1/2	8 1/2 x 8 1/2	6 3/4

DESCRIPTION:

1. The Nailor 5000 CTD Series has been designed with the architect in mind to provide an unobtrusive high performance ceiling diffuser that utilizes a center ceiling tile matching the surrounding ceiling system.

2. The Nailor 'Ice Tong' Pattern Controllers are individually adjustable for each slot to provide a tight horizontal or vertical throw as well as volume control. The unit is ideally suited for use in VAV systems. Discharge patterns are fully field adjustable for 1-way, 2-way corner, 2-way opposite, 3-way or 4-way blow patterns.

3. The 5000 CTD Series is designed for use with standard 15/16" T-bar and narrow 9/16" flat T-bar ceiling systems.

4. MATERIAL: Extruded aluminum face with staked and welded mitered corners. Steel pattern controllers and plenum. Plenum is easily removable for installation of ceiling tile (by others).

5. FINISH: AW Appliance white with flat black pattern controllers.

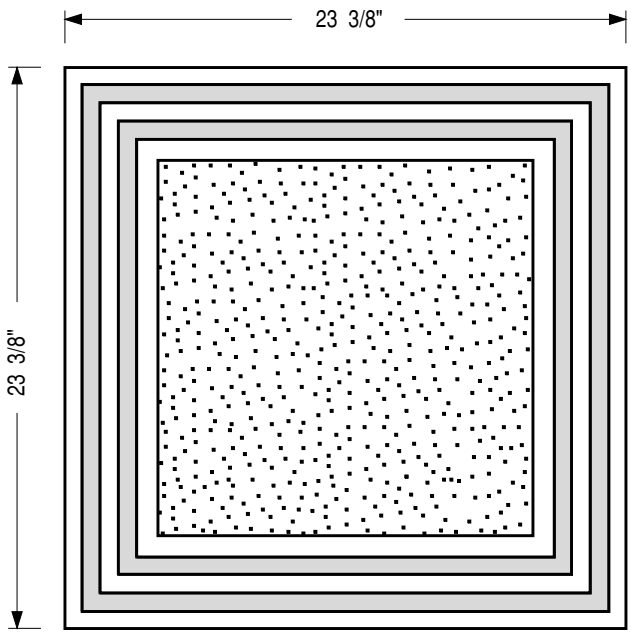
SCHEDULE TYPE:	Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 13 - 09**	**5000**	**31 - 8 - 00RR**	**5000-CTD**

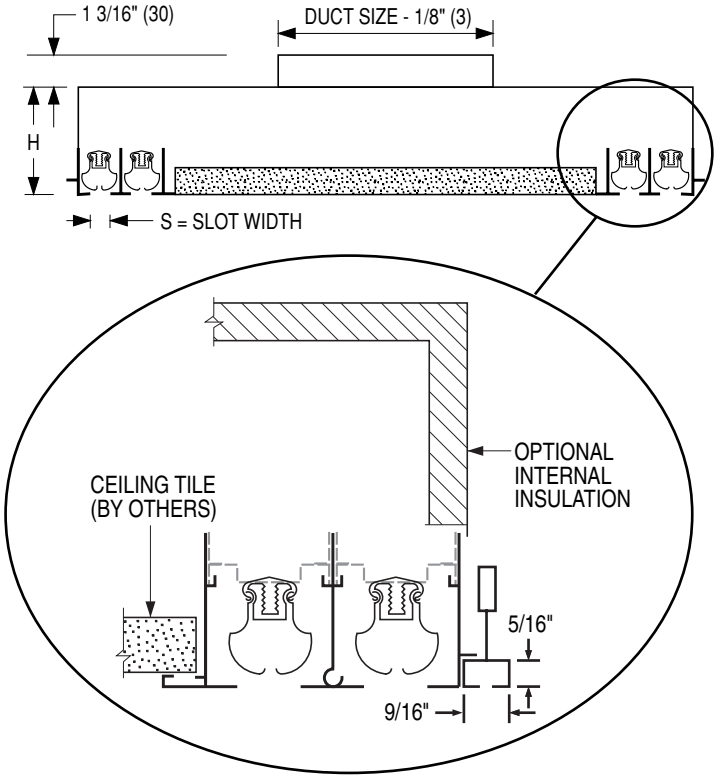
ARCHITECTURAL CEILING TILE SLOT DIFFUSER

SUPPLY • 24" x 24" MODULE

MODELS: 5075 CTD-F 3/4" SLOT
5010 CTD-F 1" SLOT

FOR "FINELINE®" TYPE AND NARROW REGRESSED T-BAR CEILINGS





MODEL TYPE:

- ❑ 5075 CTD-F 3/4" SLOT
- ❑ 5010 CTD-F 1" SLOT

NO. OF SLOTS:

- ❑ 1 SLOT
- ❑ 2 SLOT
- ❑ 3 SLOT
- ❑ 4 SLOT

INLET SIZE:

- ❑ 6"
- ❑ 8"
- ❑ 10"
- ❑ 12"
- ❑ 14"

OPTIONS:

- ❑ Internal Insulation
- ❑ External Foil Back Insulation
- ❑ SP Special Paint Finish _____ .

NO. OF SLOTS	CEILING TILE CUTTING DIMENSION		H DIM.
	SLOT WIDTHS (S)		
	3/4"	1"	
1	20 1/8 x 20 1/8	19 5/8 x 19 5/8	5
2	17 1/8 x 17 1/8	16 1/8 x 16 1/8	5
3	14 1/8 x 14 1/8	12 5/8 x 12 5/8	6 3/4
4	11 1/8 x 11 1/8	9 1/8 x 9 1/8	6 3/4

NOTES:

1. The Nailor 5000 CTD-F Series has been designed with the architect in mind to provide an unobtrusive high performance ceiling diffuser that utilizes a center ceiling tile matching the surrounding ceiling system.
2. The Nailor 'Ice Tong' Pattern Controllers are individually adjustable for each slot to provide a tight horizontal or vertical throw as well as volume control. The unit is ideally suited for use in VAV systems. Discharge patterns are fully field adjustable for 1-way, 2-way corner, 2-way opposite, 3-way or 4-way blow patterns.
3. The 5000 CTD-F Series is designed for use with "Donn Fineline" and "Chicago Ultraline 3500/3600" type narrow regressed T-bar ceiling systems.
4. MATERIAL: Extruded aluminum face with staked and welded mitered corners. Steel pattern controllers and plenum. Plenum is easily removable for installation of ceiling tile (by others).
5. FINISH: AW Appliance white with flat black pattern controllers.

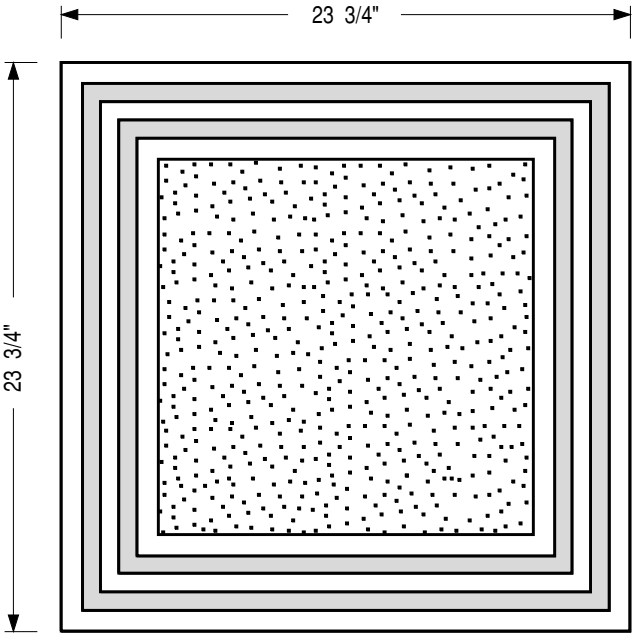
SCHEDULE TYPE:	Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 13 - 09**	**5000**	**31 - 8 - 00R**	**5000-CTDF**

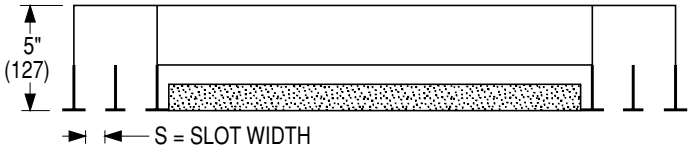
ARCHITECTURAL CEILING TILE SLOT DIFFUSER

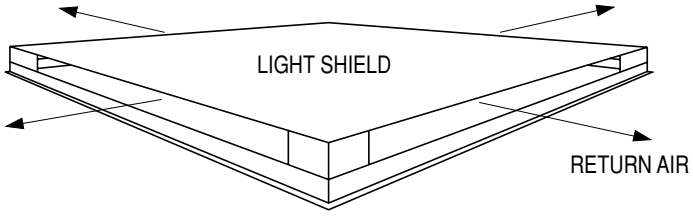
RETURN • 24" x 24" MODULE

MODELS: 5075R CTD 3/4" SLOT
5010R CTD 1" SLOT

FOR STANDARD WIDTH AND NARROW GRID LAY-IN T-BAR CEILINGS







MODEL TYPE:

- ❑ 5075R CTD 3/4" SLOT
- ❑ 5010R CTD 1" SLOT

NO. OF SLOTS:

- ❑ 1 SLOT
- ❑ 2 SLOT
- ❑ 3 SLOT
- ❑ 4 SLOT

OPTIONS:

- ❑ SP Special Paint Finish _____ .

NO. OF SLOTS	CEILING TILE CUTTING DIMENSION	
	SLOT WIDTHS (S)	
	3/4"	1"
1	19 1/2 x 19 1/2	19 x 19
2	16 1/2 x 16 1/2	15 1/2 x 15 1/2
3	13 1/2 x 13 1/2	12 x 12
4	10 1/2 x 10 1/2	8 1/2 x 8 1/2

NOTES:

1. The Nailor 5000 CTD Series has been designed with the architect in mind to provide an unobtrusive high performance ceiling diffuser that utilizes a center ceiling tile matching the surrounding ceiling system.
2. The Nailor 5000R CTD Series has been designed as a matching return to compliment the supply diffuser. The unit is similar in design but minus pattern controllers. For ductless plenum return applications, the 5000R CTD incorporates a light shield to block out light and prevent see-through.
3. The 5000R CTD Series is designed for use with standard 15/16" T-bar and narrow 9/16" flat T-bar ceiling systems.
4. MATERIAL: Extruded aluminum face with staked and welded mitered corners. Steel pattern controllers and light shield. Light shield is easily removable for installation of ceiling tile (by others).
5. FINISH: AW Appliance white face. Interior of light shield is painted flat black.

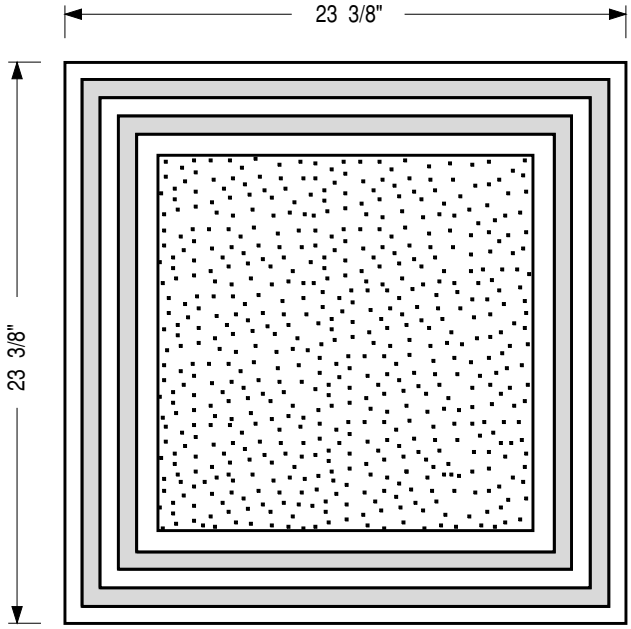
SCHEDULE TYPE:	Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 13 - 09**	**5000**	**31 - 8 - 00R**	**5000R-CTD**

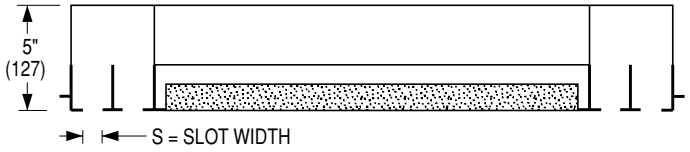
ARCHITECTURAL CEILING TILE SLOT DIFFUSER

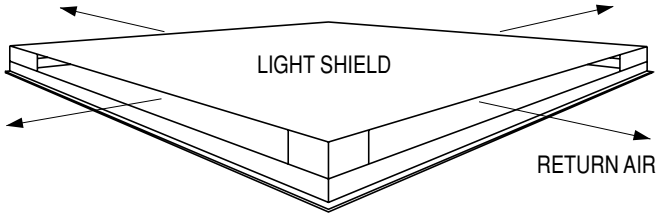
RETURN • 24" x 24" MODULE

MODELS: 5075R CTD-F 3/4" SLOT
5010R CTD-F 1" SLOT

FOR "FINELINE®" TYPE AND NARROW REGRESSED T-BAR CEILINGS







MODEL TYPE:

- ❑ 5075R CTD-F 3/4" SLOT
- ❑ 5010R CTD-F 1" SLOT

NO. OF SLOTS:

- ❑ 1 SLOT
- ❑ 2 SLOT
- ❑ 3 SLOT
- ❑ 4 SLOT

OPTIONS:

- ❑ SP Special Paint Finish _____.

NO. OF SLOTS	CEILING TILE CUTTING DIMENSION	
	SLOT WIDTHS (S)	
	3/4"	1"
1	20 1/8 x 20 1/8	19 5/8 x 19 5/8
2	17 1/8 x 17 1/8	16 1/8 x 16 1/8
3	14 1/8 x 14 1/8	12 5/8 x 12 5/8
4	11 1/8 x 11 1/8	9 1/8 x 9 1/8

NOTES:

1. The Nailor 5000 CTD-F Series has been designed with the architect in mind to provide an unobtrusive high performance ceiling diffuser that utilizes a center ceiling tile matching the surrounding ceiling system.
2. The Nailor 5000R CTD-F Series has been designed as a matching return to compliment the supply diffuser. The unit is similar in design but minus pattern controllers. For ductless plenum return applications, the 5000R CTD-F incorporates a light shield to block out light and prevent see-through.
3. The 5000R CTD-F Series is designed for use with "Donn Fineline" and "Chicago Ultraline 3500/3600" type narrow regressed T-bar ceiling systems.
4. MATERIAL: Extruded aluminum face with staked and welded mitered corners. Steel pattern controllers and light shield. Light shield is easily removable for installation of ceiling tile (by others).
5. FINISH: AW Appliance white face. Interior of light shield is painted flat black.

SCHEDULE TYPE:	Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 13 - 09**	**5000**	**31 - 8 - 00R**	**5000R-CTDF**

Nailor Industries Inc.

Standard and Optional Finishes For Grilles and Diffusers

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.

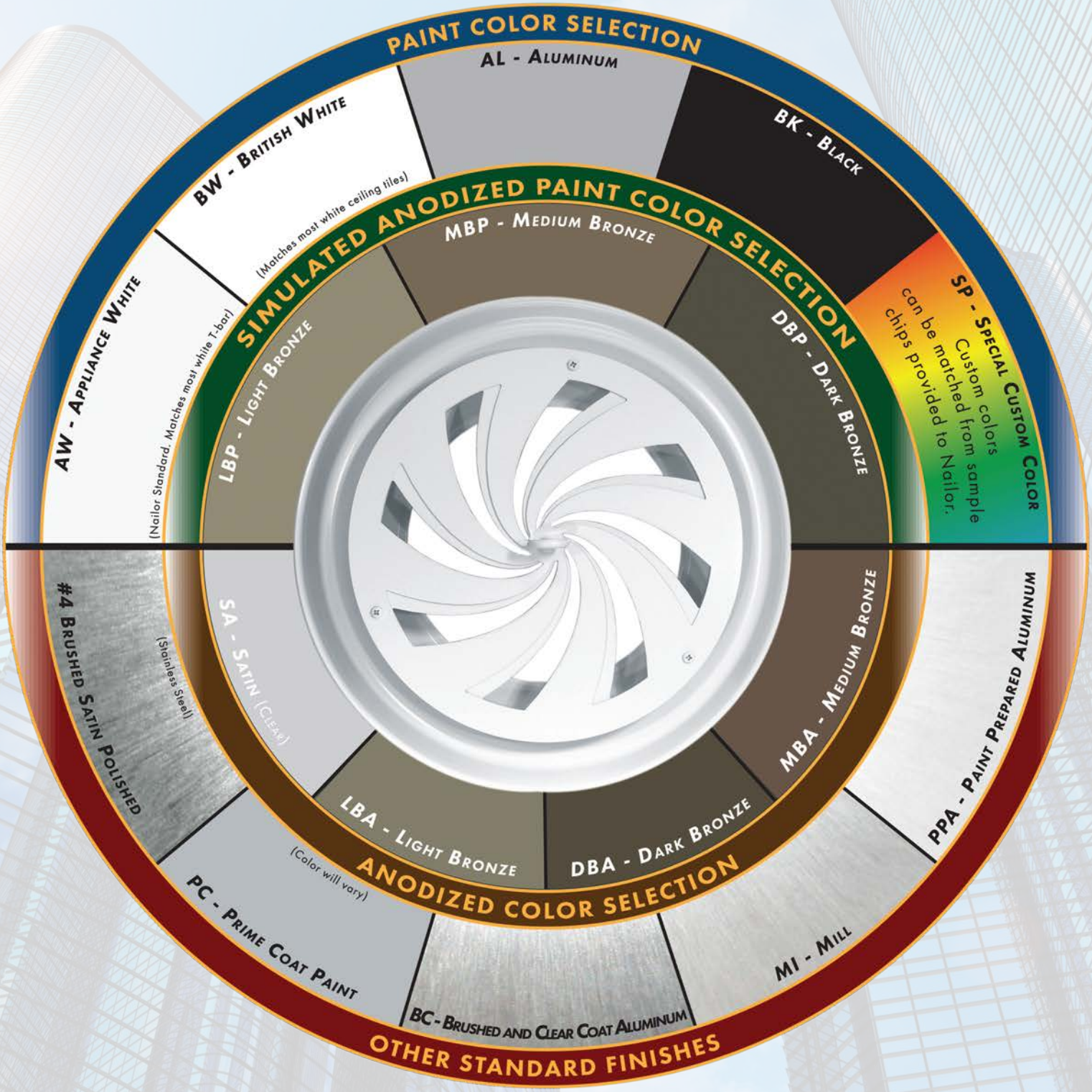
MILL FINISH

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.

PERFORMANCE DATA:

Models 5075RCTD, 5075RCTD-F • 3/4" (19) Slot • Return

No. of Slots	Negative Static Pressure	.006	.028	.065	.110	.170	.250	.350	.465
1	CFM	70	140	210	280	350	420	490	560
	Noise Criteria	—	—	16	24	30	35	39	43
2	CFM	130	260	390	520	650	780	910	1040
	Noise Criteria	—	—	19	27	33	38	42	46
3	CFM	180	360	540	720	900	1080	1260	1440
	Noise Criteria	—	10	21	29	35	40	44	48
4	CFM	220	440	660	880	1100	1320	1540	1760
	Noise Criteria	—	10	21	29	35	40	44	48

Models 5010RCTD, 5010RCTD-F • 1" (25) Slot • Return

No. of Slots	Negative Static Pressure	.006	.028	.065	.110	.170	.250	.350	.465
1	CFM	140	210	280	350	420	490	560	700
	Noise Criteria	—	—	17	23	28	32	36	42
2	CFM	253	380	507	633	760	887	1013	1267
	Noise Criteria	—	12	20	26	31	35	39	45
3	CFM	340	510	680	850	1020	1190	1360	1700
	Noise Criteria	—	13	21	27	32	36	40	46
4	CFM	400	600	800	1000	1200	1400	1600	2000
	Noise Criteria	—	14	22	28	33	37	41	47

Performance Notes:

1. All pressures are in inches w.g..

2. Noise Criteria (NC) values are based upon 10dB room absorption, re 10^{-12} watts. Dash (—) in space indicates an Noise Criteria of less than 10.

3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

Models 5010CTD, 5010CTD-F • 1" (25) Slot • Supply

	Size	Neck Velocity, FPM	200	300	400	500	600	700	800	900
		Velocity Pressure	.002	.006	.010	.016	.022	.031	.040	.050
1 Slot	8" Neck Dia.	Airflow, CFM	70	105	140	175	210	245	280	315
		Total Pressure	.014	.031	.055	.087	.125	.170	.221	.280
		Throw	2-3-6	3-5-10	4-6-12	5-8-14	6-9-15	7-11-17	8-12-18	9-14-19
		Noise Criteria	—	11	18	24	28	32	36	39
	10" Neck Dia.	Airflow, CFM	110	160	220	270	330	380	435	490
		Total Pressure	.030	.064	.122	.184	.274	.364	.477	.605
		Throw	3-5-10	5-8-14	6-9-15	7-11-17	9-14-19	11-15-21	12-16-22	13-17-23
		Noise Criteria	—	21	28	34	38	42	46	49
2 Slot	8" Neck Dia.	Airflow, CFM	70	105	140	175	210	245	280	315
		Total Pressure	.007	.015	.027	.042	.060	.082	.106	.135
		Throw	1-2-4	2-3-6	3-4-9	3-5-11	4-6-13	4-7-15	5-9-16	7-11-19
		Noise Criteria	—	—	—	14	18	22	26	29
	10" Neck Dia.	Airflow, CFM	110	160	220	270	330	380	435	490
		Total Pressure	.013	.027	.051	.077	.115	.153	.200	.254
		Throw	2-3-7	3-5-11	4-7-13	5-9-16	7-11-19	8-14-22	9-15-23	10-16-25
		Noise Criteria	—	11	18	24	28	32	36	39
	12" Neck Dia.	Airflow, CFM	155	235	315	390	470	550	630	705
		Total Pressure	.023	.052	.094	.144	.210	.287	.377	.472
		Throw	3-5-11	5-8-15	7-11-19	8-14-21	10-16-23	12-18-25	14-18-26	15-19-28
		Noise Criteria	—	17	24	30	34	38	42	45
3 Slot	10" Neck Dia.	Airflow, CFM	110	160	220	270	330	380	435	490
		Total Pressure	.008	.018	.033	.050	.075	.099	.130	.165
		Throw	2-3-6	3-4-9	4-6-12	5-7-15	6-9-18	8-11-20	9-12-22	10-14-24
		Noise Criteria	—	—	14	20	24	28	32	35
	12" Neck Dia.	Airflow, CFM	155	235	315	390	470	550	630	705
		Total Pressure	.020	.032	.057	.088	.128	.175	.229	.287
		Throw	3-4-9	4-6-13	6-9-18	8-11-20	9-13-23	10-15-25	12-18-27	13-19-28
		Noise Criteria	—	15	21	27	31	35	39	42
4 Slot	12" Neck Dia.	Airflow, CFM	155	235	315	390	470	550	630	705
		Total Pressure	.010	.024	.042	.065	.094	.129	.170	.210
		Throw	2-4-8	4-5-11	5-8-15	7-10-20	8-12-21	9-14-23	11-15-25	12-17-27
		Noise Criteria	—	13	19	25	29	33	37	40
	14" Neck Dia.	Airflow, CFM	215	320	430	535	640	750	855	960
		Total Pressure	.017	.039	.070	.108	.154	.212	.275	.347
		Throw	3-5-10	5-8-15	7-10-21	9-14-23	11-16-25	13-18-28	15-19-30	17-20-32
		Noise Criteria	13	20	26	32	36	40	44	47

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions, using a 4-way pattern.

2. All pressures are in inches w.g.. To obtain static pressure, subtract the velocitiy pressure from the total pressure.

3. Noise Criteria (NC) values are based upon 10dB room absorption, re 10^{-12} watts. Dash (—) in space indicates an Noise Criteria of less than 10.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

Models 5075CTD, 5075CTD-F • 3/4" (19) Slot • Supply

	Size	Neck Velocity, FPM	200	300	400	500	600	700	800	900
		Velocity Pressure	.002	.006	.010	.016	.022	.031	.040	.050
1 Slot	8" Neck Dia.	Airflow, CFM	70	105	140	175	210	245	280	315
		Total Pressure	.017	.039	.070	.109	.156	.213	.278	.351
		Throw	2-3-6	3-5-10	4-7-12	5-9-14	7-11-16	8-12-17	9-13-18	10-14-19
		Noise Criteria	—	12	22	28	32	36	40	43
2 Slot	8" Neck Dia.	Airflow, CFM	70	105	140	175	210	245	280	315
		Total Pressure	.008	.019	.033	.052	.075	.102	.134	.169
		Throw	1-2-5	2-3-7	3-5-10	4-6-13	5-7-14	6-9-15	7-11-17	8-12-18
		Noise Criteria	—	—	12	18	22	26	30	33
	10" Neck Dia.	Airflow, CFM	110	160	220	270	330	380	435	490
		Total Pressure	.017	.036	.068	.102	.153	.203	.266	.337
		Throw	2-4-8	3-6-11	5-8-14	6-10-16	8-13-18	9-15-20	10-16-21	11-17-22
		Noise Criteria	—	14	20	26	30	34	38	41
3 Slot	10" Neck Dia.	Airflow, CFM	110	160	220	270	330	380	435	490
		Total Pressure	.011	.024	.045	.068	.101	.136	.176	.224
		Throw	2-4-7	3-5-9	4-6-12	5-8-15	7-11-19	8-12-21	9-14-23	10-16-25
		Noise Criteria	—	11	17	23	27	31	35	38
	12" Neck Dia.	Airflow, CFM	155	235	315	390	470	550	630	705
		Total Pressure	.020	.045	.081	.125	.181	.248	.326	.408
		Throw	3-5-10	5-8-14	6-10-18	8-12-21	10-16-25	12-18-26	14-19-27	15-20-28
		Noise Criteria	13	20	26	32	36	40	44	47
4 Slot	12" Neck Dia.	Airflow, CFM	155	235	315	390	470	550	630	705
		Total Pressure	.015	.034	.062	.092	.138	.189	.248	.310
		Throw	3-4-9	4-6-13	6-9-17	8-11-20	8-13-22	9-16-23	12-18-25	13-19-26
		Noise Criteria	10	17	23	29	33	37	41	44
	14" Neck Dia.	Airflow, CFM	215	320	430	535	640	750	855	960
		Total Pressure	.027	.059	.106	.165	.236	.324	.420	.530
		Throw	4-6-12	6-9-18	8-12-21	10-15-23	12-18-25	14-20-27	16-21-29	17-22-31
		Noise Criteria	17	24	30	36	40	44	48	51

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions, using a 4-way pattern.

2. All pressures are in inches w.g.. To obtain static pressure, subtract the velocitiy pressure from the total pressure.

3. Noise Criteria (NC) values are based upon 10dB room absorption, re 10^{-12} watts. Dash (—) in space indicates an Noise Criteria of less than 10.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.