

LINEAR SLOT DIFFUSER PLENUMS FOR TECHZONE™ TYPE CEILING

Model Series 5300TZ Plenums are designed to fit the 5000TZ Series Slot Diffusers. The plenums are constructed from corrosion-resistant steel and are available in two different styles for an extensive performance range.

Available choice of 1 to 4 slots are available to suit capacity requirements and three frame styles for Armstrong® TechZone™ and USG Logix™ ceiling systems. The standard constructed plenum is suited for applications that require longer throws and shorter spreads, whereas the modified plenum increases the spread and reduces the throw. Specially designed end caps can be turned up for continuous runs. All styles are offered with internal or external insulation.

Standard Performance (non-insulated) –

Model 5375TZ

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Standard Performance (internally insulated) –

Model 5375TZI

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Modified Performance (non-insulated) –

Models 5375TZMP

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Modified Performance (internally insulated) –

Models 5375TZIMP, 5310TZIMP, 5315TZIMP

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Model 5375TZ



Models 49-240, 49-280 and 49-480

LINEAR BAR GRILLES

4900 Series provides an extruded aluminum bar grille that offers beautiful styling and efficient performance.

Linear bar grilles offer a choice of fixed air patterns with 0°, 15° or 30° air deflection, a choice of bar widths and spacing and a wide choice of border/frame style combinations to suit most types of installation. They are available with an optional opposed blade damper for volume control. Linear bar grilles are recommended for supply air applications in floors, window sills, and high sidewall locations. They are not generally suited to ceiling mounted supply applications (other than for directional spot heating or cooling as an air curtain) as they are not designed for horizontal projection from the face.

Models 49-240, 49-241, 49-243, 49-280, 49-281, 49-480, 49-481

Suffix '-O' adds a steel OBD.

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LINEAR LOUVER DIFFUSERS

48LL Series Linear Louver (Vane) Diffusers are designed to provide a high capacity, architecturally pleasing linear diffuser that can supply large volumes of air at relatively low sound levels and pressure drops.

High quality, extruded aluminum angular discharge louvers are designed to create a stable horizontal air pattern that is tight to the ceiling. Ideal for applications in VAV systems, these diffusers create a strong ceiling coanda effect at typical maximum and minimum flow rates and ensure optimal comfort conditions.

Models 48LL, 48LL2

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Suffix '-O' adds a steel OBD.

Suffix '-OA' adds an aluminum OBD.



Models 48LL2 and 48LL1

LINEAR LOUVER DIFFUSERS

- EXTRUDED ALUMINUM
- ARCHITECTURAL
- HIGH CAPACITY
- SQUARE OR RECTANGULAR NECKS

Models:

48LL1 One-Way Pattern

48LL2 Two-Way Pattern

- Suffix '-O' adds a steel OBD
- Suffix '-OA' adds an aluminum OBD



Models 48LL1 and 48LL2

Model Series 48LL Linear Louver (Vane) Diffusers feature architectural linear styling for high capacity supply and return air applications in hard ceilings or sidewalls. They are designed for duct mounted installation. Designed for use in discrete lengths, the fixed louvers provide a tight horizontal discharge pattern over a wide range of airflow rates and are an excellent choice for VAV systems.

STANDARD FEATURES:

- Spring-loaded core. Removable without the use of tools for ease of installation and access to the optional damper.
- Secure core attachment.
- Installation is with concealed screws through the neck of the outer frame, providing an aesthetically clean visual appearance (Type N).

- Standard lengths are 24", 36", 48", 60" and 72" (600, 900, 1200, 1500 and 1800).

CONSTRUCTION MATERIAL:

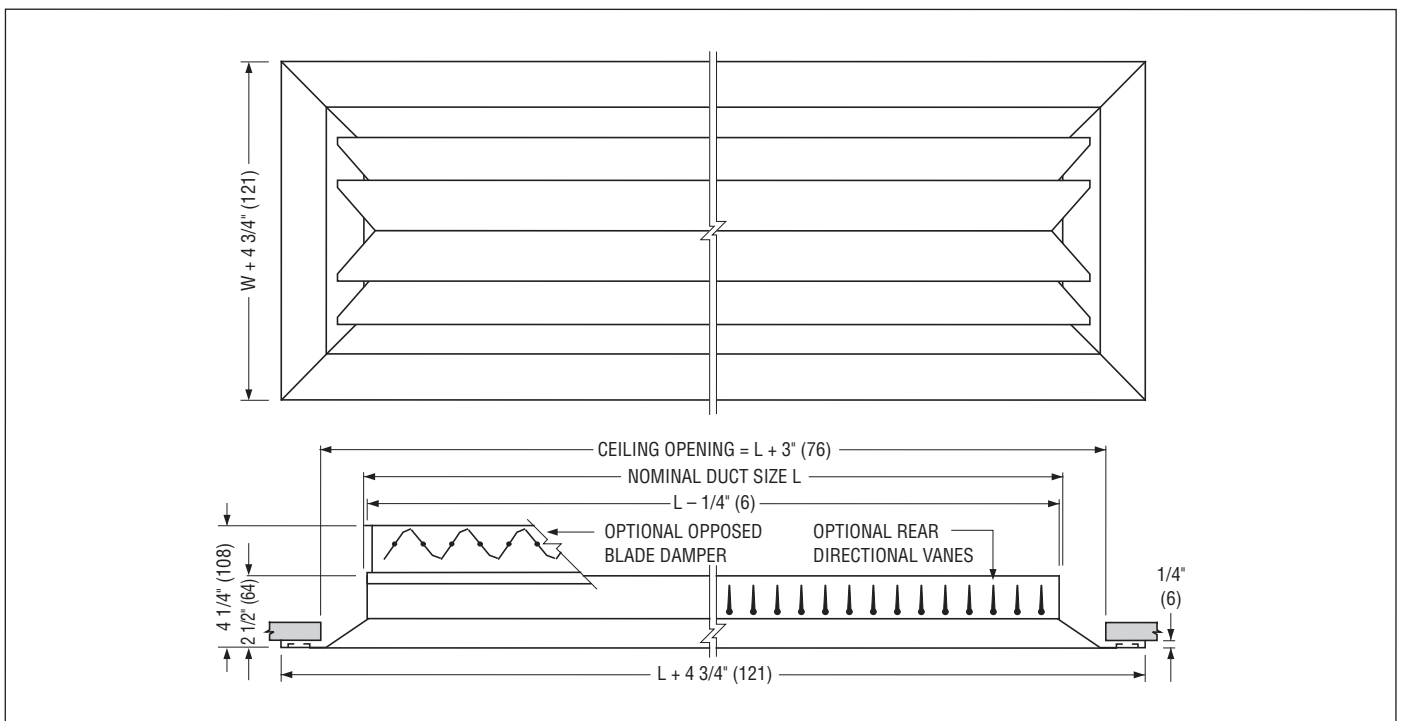
Extruded Aluminum.

FINISH OPTIONS:

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

OPTIONS & ACCESSORIES:

- Steel opposed blade damper (factory mounted) – Model 48LL1-O or 48LL2-O.
- Aluminum opposed blade damper (factory mounted) – Model 48LL1-OA or 48LL2-OA.
- DV Directional vanes (rear).
- Type A screw fastening (face).



DIMENSIONAL DATA:

LINEAR LOUVER DIFFUSERS

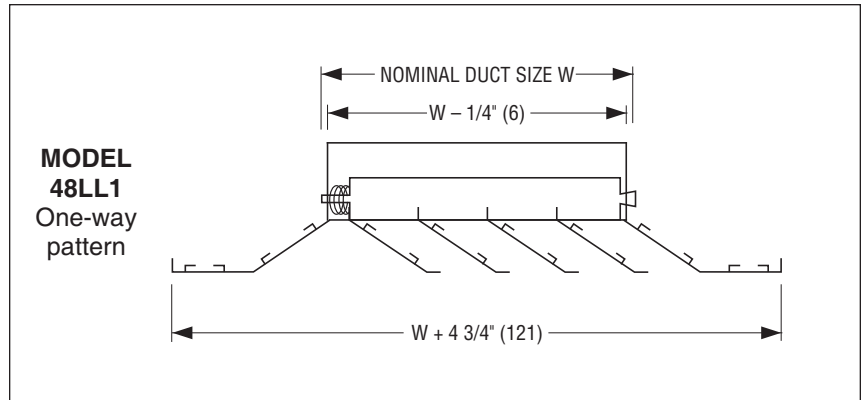
AVAILABLE SIZES:

Unit Size is determined by duct width W.
Diffuser necks are undersized.

Model 48LL1:

Available widths are 3", 4 1/2", 6", 7 1/2", 9", 10 1/2", 12" (76, 114, 152, 191, 229, 267, 305).

Standard lengths are 24", 36", 48", 60" and 72" (600, 900, 1200, 1500 and 1800).



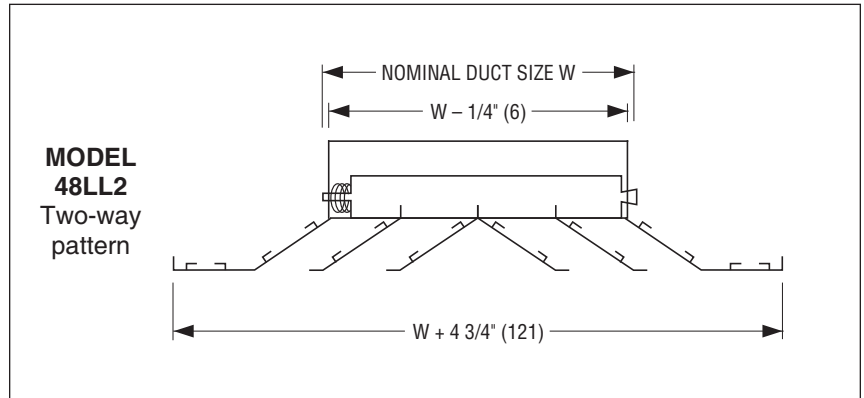
Available Widths

Nominal Duct Width W	inches	3	4 1/2	6	7 1/2	9	10 1/2	12
	mm	76	114	152	191	229	267	305

Model 48LL2:

Available widths are 3", 6", 9", 12" (76, 152, 229 and 305).

Standard lengths are 24", 36", 48", 60" and 72" (600, 900, 1200, 1500 and 1800).



Available Widths

Nominal Duct Width W	inches	3	6	9	12
	mm	76	152	229	305

PERFORMANCE DATA:

LINEAR LOUVER DIFFUSERS

Model: 48LL1 • One-Way Pattern

Nominal Duct Width Size	Neck Velocity, FPM	300	400	500	600	700	800	900
	Velocity Pressure	.006	.010	.016	.022	.031	.040	.050
Total Pressure	.037	.064	.101	.145	.197	.258	.326	
3"	Airflow, CFM/FT.	75	100	125	150	175	200	225
	Noise Criteria	–	–	20	24	28	32	35
	Throw	14-17-24	16-20-28	16-22-31	20-24-34	21-26-38	20-28-39	24-30-42
4 1/2"	Airflow, CFM/FT.	113	150	188	225	263	300	338
	Noise Criteria	–	16	22	26	30	34	37
	Throw	18-22-32	21-26-37	23-29-41	28-32-44	28-34-48	30-37-51	32-39-55
6"	Airflow, CFM/FT.	150	200	250	300	350	400	450
	Noise Criteria	–	17	23	27	31	35	38
	Throw	21-25-36	24-29-31	27-33-46	29-36-51	32-39-55	34-41-59	36-44-63
7 1/2"	Airflow, CFM/FT.	187	150	312	375	437	500	563
	Noise Criteria	–	17	23	27	31	35	38
	Throw	3-29-41	27-33-47	29-37-52	33-41-56	36-43-61	38-47-65	41-49-70
9"	Airflow, CFM/FT.	225	300	375	450	525	600	675
	Noise Criteria	–	18	24	28	32	36	39
	Throw	25-31-44	30-36-52	33-40-58	35-45-63	39-48-67	42-52-73	45-56-77
10 1/2"	Airflow, CFM/FT.	263	350	438	525	613	700	788
	Noise Criteria	–	18	25	28	33	37	40
	Throw	27-34-48	32-39-60	34-43-61	39-48-66	42-50-72	48-55-76	48-58-82
12"	Airflow, CFM/FT.	300	400	500	600	700	800	900
	Noise Criteria	–	19	25	29	33	37	40
	Throw	29-36-51	34-42-59	37-46-65	42-51-71	45-54-77	48-59-82	51-62-88

Model 48LL2 • Two-Way Pattern

Nominal Duct Width Size	Neck Velocity, FPM	300	400	500	600	700	800	900
	Velocity Pressure	.006	.010	.016	.022	.031	.040	.050
Total Pressure	.037	.064	.101	.145	.197	.258	.326	
3"	Airflow, CFM/FT.	75	100	125	150	175	200	225
	Noise Criteria	–	–	18	23	27	30	34
	Throw	8-12-22	11-16-25	13-20-28	16-22-30	19-23-33	20-25-35	21-26-37
6"	Airflow, CFM/FT.	150	200	250	300	350	400	450
	Noise Criteria	–	16	21	26	30	33	37
	Throw	11-17-30	16-23-34	19-27-39	23-30-42	27-33-45	28-34-49	30-36-52
9"	Airflow, CFM/FT.	225	300	375	450	525	600	675
	Noise Criteria	–	18	24	28	32	36	39
	Throw	25-31-44	30-36-52	33-40-58	35-45-63	39-48-67	42-52-73	45-56-77
12"	Airflow, CFM/FT.	300	400	500	600	700	800	900
	Noise Criteria	–	19	25	29	33	37	40
	Throw	16-24-42	21-32-48	26-38-54	32-42-59	37-45-64	39-48-68	41-51-72

Throw Correction Factors for Various Lengths

Length (ft.)	2	3	4	5	6	8	10	12
Multiplier	.70	.86	1.0	1.1	1.25	1.4	1.55	1.7

Noise Criteria Correction Factors for Various Lengths

Length (ft.)	2	3	4	5	6	8	10
Supply	-3	-1	0	+1	+2	+3	+5

Performance Notes:

- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- Throw values are based on a 4 ft. section. For other lengths, use the correction factor table above.
- Total Pressure is in inches w.g..
- Noise Criteria [NC] values are based on a 4 ft. section and a room absorption of 10 dB, re 10⁻¹² watts. For other lengths, use the correction factor table shown.
- Return Air Applications:
Noise Criteria value is increased by + 4.
Negative Static Pressure = 0.8 x Total Pressure.
- Dash (–) in space indicates an Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70–2006.

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LINEAR DIFFUSERS AND BAR GRILLES

HOW TO ORDER OR TO SPECIFY

LINEAR LOUVER DIFFUSERS – MODEL SERIES 48LL MODELS 48LL1 AND 48LL2

EXAMPLE: 48LL2 - O - 48" x 6" - AW - N - MM - DV

1. Models

One-Way Pattern

48LL1

Two-Way Pattern

48LL2

2. Damper (OBD)

(standard model suffix)

— None (default)

O Steel (standard)

OA Aluminum

3. Nominal Length

inches (mm's)

4. Width

inches (mm's)

3, 4 1/2, 6, 7 1/2, 9, 10 1/2 and 12 - available on 48LL1

(76, 114, 152, 191, 229, 267 and 305) - available on 48LL1

inches (mm's)

3, 6, 9 and 12 - available on 48LL2

(76, 152, 229 and 305) - available on 48LL2

5. Finish

AW Appliance White (default)

AL Aluminum

BK Black

BW British White

MI Mill

PC Prime coat paint

PPA Paint prepared aluminum

SP Special

LBP Light Bronze Paint

MBP Medium Bronze Paint

DBP Dark Bronze Paint

6. Fastening

N None (default)

A Screw Holes

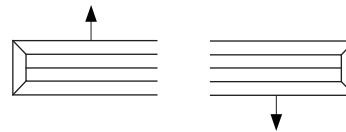
7. End Cap Configuration

MM Mitered Mitered (default)

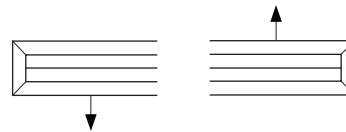
OO Open Open

MO Mitered Open (for 48LL2)

MU Mitered Open (for 48LL1)



MD Mitered Open (for 48LL1)



8. Accessories

— None (default)

DV Directional Vanes

Notes:

1. Maximum single section length is 72" (1800).

Multiple section assemblies are supplied in equal length sections with alignment strips.

2. Blank-offs are constructed of steel and supplied in 6 ft. sections for field trimming. Order Model 48BO separately.

3. Mitered corner sections are ordered separately. For one-way module, select (48MC1) or two-way module (48MC2).

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one) **48LL1** (one-way pattern) or **48LL2** (two-way pattern) **Linear Louver (Vane) Diffusers** of the sizes and capacities shown on the plans and air distribution schedules. The diffuser shall be manufactured from extruded aluminum and incorporate fixed pattern discharge louvers for a horizontal throw pattern. The entire core assembly shall be removable without the use of tools. The length shall be available in standard nominal lengths of 24", 36", 48", 60" and 72" (600, 900, 1200, 1500 and 1800 mm). The rectangular duct connection collar shall be an integral part of the frame assembly and be not less than 1 1/2" (38) high. The finish is to be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper, constructed of heavy gauge corrosion-resistant steel (aluminum is optional) and operable from the face of the diffuser, shall be provided on all units.

The manufacturer shall provide published performance data for the linear louver diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.