



FLOWLINE™ LINEAR DIFFUSERS

Nailor
Industries Inc.

Contents

	Page No.
Overview of FlowLine™ System	A3
Continuous FlowLine™ Linear	
FLH Series • Horizontal High Throw Pattern Controllers	A6
FLV Series • Vertical Jet Throw Pattern Controllers	A7
Standard Frame/Border Styles, Dimensional Data	A8 - A9
Special Frame/Border Styles, Dimensional Data	A10
End Border Configurations	A11
Options and Accessories	A12 - A13
FLP Series • Engineered Plenums	A14
Application and Installation Methods, Mounting Hardware	A15 - A19
Lay-in FlowLine™ Linear with Plenum (For T-Bar Suspension Ceiling System Applications)	
FT Series	
FTH and FTBH Series • Horizontal High Throw Pattern Controllers	A20
FTV and FTBV Series • Vertical Jet Throw Pattern Controllers	A20
Dimensional Data	A21 - A22
Applications	A23
Performance Data • FLH and FTH Series Horizontal High Throw	
Continuous Slot Pressurized Plenum • Supply Air	A24
Return Air Applications	A25
Engineered Plenum	A26 - A31
Performance Data • FLV and FTV Series Vertical Jet Throw	
Continuous Slot Pressurized Plenum • Supply Air	A32
Engineered Plenum	A33 - A38
Modular FlowLine™ Square Ceiling Diffuser	
FM and FMB Series • Supply	A39
FMR and FMBR Series • Return	A39
Dimensional Data	A40 - A41
Performance Data	A42
How to Specify or Order by Model Number	
FM Series Square Ceiling Diffuser	A42
FLH and FLV Series Continuous FlowLine™ Linear	A43
FLP Series Plenums	A44
FT Series Lay-in FlowLine™ Linear	A45
Suggested Specifications	A46

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FLOWLINE™ LINEAR DIFFUSERS



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FLOWLINE™ LINEAR DIFFUSERS

The FlowLine™ System...

An architectural solution for superior air distribution.

FlowLine™ is a custom architectural linear diffuser system designed to integrate and blend supply and return air openings harmoniously into interior commercial building designs. The flexibility of FlowLine™ provides design and application possibilities that are limited only by your imagination. FlowLine™ can blend or contrast as you integrate it into either ceiling or sidewall applications. FlowLine™ linear may be used to either inconspicuously hide the air distribution system or conversely it may be used as a contrasting, architectural design element, using straight lines and/or curves to enhance the interior of a building.

Whether you require straight lines, mitered angles or smooth curves, Nailor can custom fabricate FlowLine™ to meet your most demanding architectural and engineering performance requirements.

FlowLine™ can be custom curved in any plane to suit architectural requirements. Flat face radiuses for ceilings and concave or convex curving for sidewall applications are available to special order. FlowLine™ is fabricated using sturdy heavy wall aluminum extrusions. A variety of frame/border styles and associated mounting hardware allows FlowLine™ to be installed either during or after ceiling installation. In acoustical suspension ceiling systems using continuous runs, the FlowLine™ system is installed at the same time as the ceiling grid and becomes an integral part of the ceiling assembly.

FlowLine™ linear is available in five slot widths providing a much higher air volume capability than conventional multiple slot linear designs, which are more visible. A two slot option is also available for even higher capacities. Engineered for outstanding

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FLOWLINE™ LINEAR DIFFUSERS



performance and tested in accordance with the latest ASHRAE Standard 70, FlowLine™ can provide higher airflows at lower noise levels than traditional linear slot designs, making it an ideal solution for high profile architectural projects.

FlowLine™ is available in two air pattern controller designs. The FLH Series features adjustable horizontal high throw pattern controllers for ceiling applications. The FLV Series features adjustable vertical jet pattern controllers for high ceiling and sidewall applications.

...Invisible Air

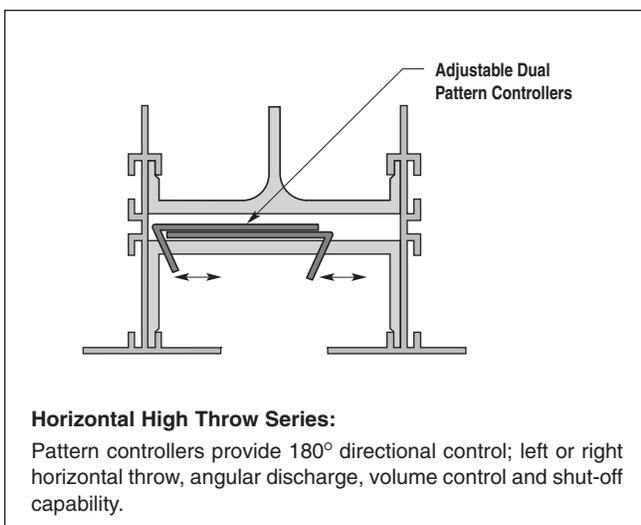


Key Features:

- High capacity single slot linear diffuser available in five slot widths, offers an attractive alternative to traditional multi-slot designs. Available slot widths are 1" (25), 1½" (38), 2" (51), 2½" (64) and 3" (76). A two slot option is also available.
- Comprehensive selection of frame/border styles and mounting hardware to suit any installation.
- Choice of FLH Series Horizontal or FLV Series Vertical Pattern Controllers. May be combined within a single system.
- Custom curving availability to meet specific design requirements, provides architectural appeal.
- Heavy wall extruded aluminum construction permits support and full integration with ceiling system.
- Mitered end borders are available which maximize aesthetic appeal.
- Available in single sections up to 12 ft. (3658) in length. Longer lengths are supplied in multiple sections with alignment strips for field assembly.
- High performance design is ideally suited to VAV systems, both heating and cooling.
- Custom colors and anodized finishes are available.

FLH Series:

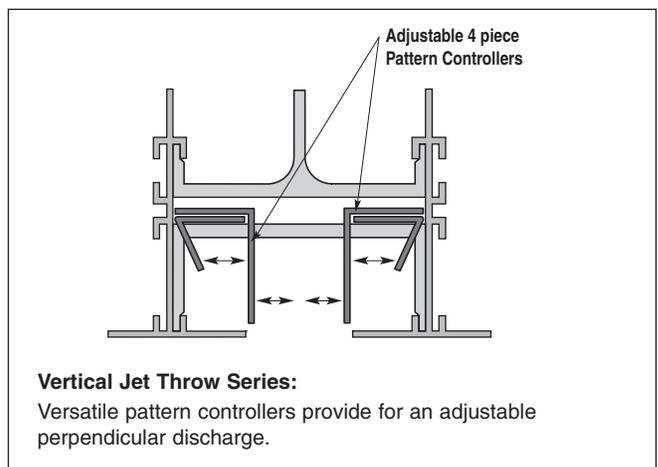
Designed primarily for continuous linear slot ceiling applications requiring horizontal air patterns. Tight, high induction air pattern maximizes coanda effect under a wide range of airflow volumes for maximum occupant comfort. Typical applications would include open office perimeter zones, entrance foyers and lobbies, mall and office entrance atriums and conference meeting rooms.



FLV Series:

Designed primarily for continuous linear slot ceiling applications requiring an adjustable extended throw vertical air pattern. Typical applications would include perimeter glass curtain walls and high bays for heated and/or cooled air, which may be directed downwards, terminating at the floor at a comfortable velocity. Also suitable for interior zones with high ceilings, such as entrance foyers and lobbies, mall and office entrance atriums, convention center and theaters.

This model may also be used in high sidewall applications with long throw requirements.



FLP(I) Series:

Nailor offers factory built supply air plenum boots in various lengths to suit the application in both uninsulated and insulated versions. Nailor engineered plenums save on costly field labor and ensure a sure-fit trouble free installation.

FT Series:

The FlowLine™ Series is available in modular lengths for lay-in T-Bar applications, utilizing either the horizontal high throw or vertical jet throw pattern controllers. Units are supplied with factory installed engineered plenums in uninsulated or insulated versions.

FM Series:

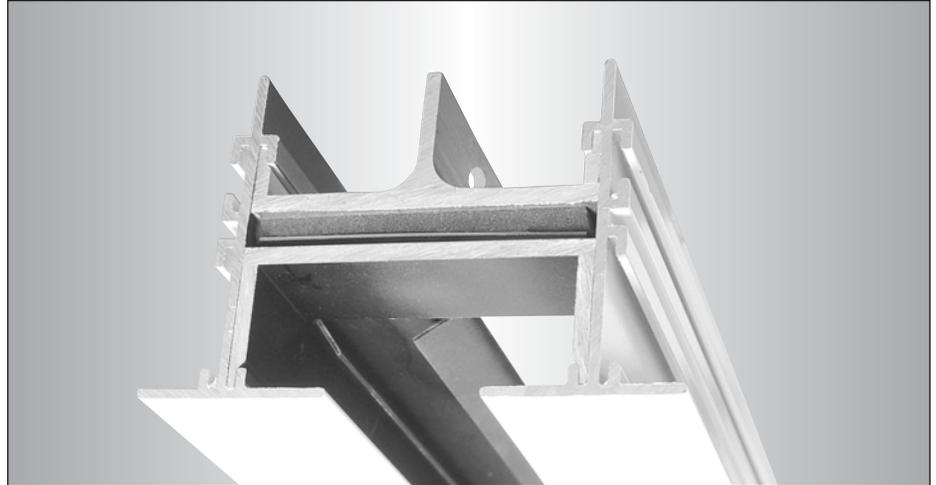
The FM Series is an architecturally pleasing modular square ceiling diffuser primarily for lay-in T-Bar applications. Designed to compliment the FlowLine™ Linear Diffuser System, the FM Series features a single slot at the perimeter of a 2 ft. x 2 ft. (600 x 600) ceiling module and accommodates a center acoustic ceiling tile.

FLH Series

- HORIZONTAL HIGH THROW PATTERN CONTROLLERS
- CONTINUOUS CUSTOM LINEAR DIFFUSER

Models:

FLH10	1" (25) Slot
FLH15	1½" (38) Slot
FLH20	2" (51) Slot
FLH25	2½" (64) Slot
FLH30	3" (76) Slot



The FlowLine™ FLH Series continuous slot diffuser is designed primarily for ceiling applications. The adjustable pattern controllers, which are easily adjusted from the face, allow the discharge air to be directed to the left or right as well as downward. When positioned for horizontal discharge, a tight horizontal air pattern is produced that makes full use of the ceiling (coanda) effect, even at reduced air volumes. High induction characteristics maximize room air movement and mixing, making FlowLine™ FLH Series eminently suitable for variable air volume systems.

STANDARD FEATURES:

- Heavy wall extruded aluminum construction with galvanized steel pattern controllers.
- Sliding pattern controller design provides easy adjustment for horizontal or vertical directional control as well as a volume control or shut-off capability.
- Dual blade pattern controllers are constructed on 24" (610) centers as standard for maximum flexibility.
- Five slot widths in a one or two slot configuration provide a high air volume capability.
- Single section lengths up to 12 ft. (3658) reduce the number of joints in continuous runs.
- Multiple section assemblies are divided into equal length single

sections and are provided with alignment strips.

- Mitered end borders on standard frame Type AA provide a superior architectural finish not available from several competitors.
- FlowLine™ can be custom curved in any plane - concave, convex or flat radius.

FRAME/BORDER STYLES:

- FlowLine™ FLH Series is designed for continuous length installation in both hard drywall or acoustical suspension (T-Bar) ceiling systems. Optional mounting hardware is available to suit the installation method.
- Available in two standard and various special frame/border designs to suit any installation requirement.

- Various end border options are available to suit installation.
- Mitered corner and transition sections are available.

SUPPLY AIR PLENUMS:

- Model Series FLP(I) factory engineered plenum boots are available, which ensure both a trouble free installation and that catalog performance is met.

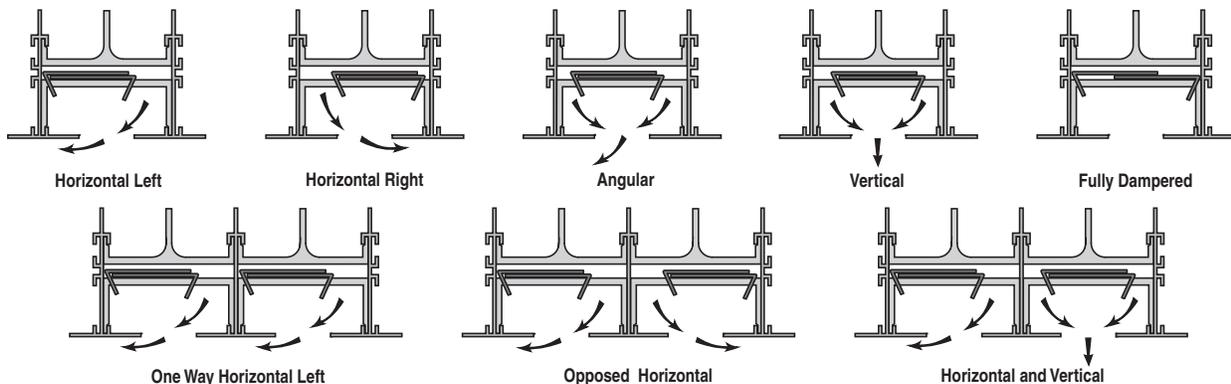
FINISH:

- Standard finish is AW Appliance White baked enamel on exposed frame surfaces. Pattern controllers and interior surfaces are black.
- Custom color baked enamel and anodized finishes are available to suit architectural requirements.

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FLOWLINE™ LINEAR DIFFUSERS

FLH Series Pattern Controller Adjustment

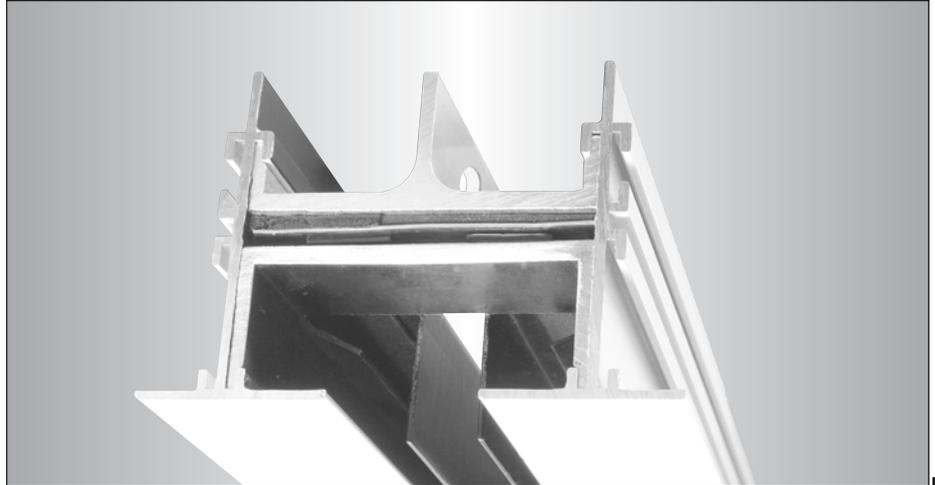


FLV Series

- VERTICAL JET THROW PATTERN CONTROLLERS
- CONTINUOUS CUSTOM LINEAR DIFFUSER

Models:

FLV10	1" (25) Slot
FLV15	1½" (38) Slot
FLV20	2" (51) Slot
FLV25	2½" (64) Slot
FLV30	3" (76) Slot



The FlowLine™ FLV Series continuous slot diffuser is designed for both ceiling and high sidewall applications and provides total air pattern control flexibility. Similar in appearance to the FLH Series, the FLV Series features adjustable pattern controllers that direct the airstream perpendicular to the face, providing a strong vertical projection when installed in a ceiling and horizontally when installed in a sidewall application. The pattern controllers permit angular discharge, allowing the airstream to be directed left or right in a ceiling application and up or down in a sidewall application. The pattern controllers also provide a variable aperture capability to adjust performance to specific applications.

STANDARD FEATURES:

- Heavy wall extruded aluminum construction with galvanized steel pattern controllers.
- Sliding pattern controller design provides easy adjustment for vertical directional control as well as a volume control capability.
- Dual blade pattern controllers are constructed on 24" (610) centers as standard for maximum flexibility.
- Five slot widths in a one or two slot configuration provide a high air volume capability.
- Single section lengths up to 12 ft. (3658) reduce the number of joints in continuous runs.
- Multiple section assemblies are divided into equal length single

sections and are provided with alignment strips.

- Mitered end borders on standard frame Type AA provide a superior architectural finish not available from several competitors.
- FlowLine™ can be custom curved in any plane - concave, convex or flat radius.

FRAME/BORDER STYLES:

- FlowLine™ FLV Series is designed for continuous length installation in both hard drywall or acoustical suspension (T-Bar) ceiling systems. Optional mounting hardware is available to suit the installation method.
- Available in two standard and various special frame/border designs to suit any installation requirement.

- Various end border options are available to suit installation.

- Mitered corner and transition sections are available.

SUPPLY AIR PLENUMS:

- Model Series FLP(I) factory engineered plenum boots are available, which ensure both a trouble free installation and that catalog performance is met.

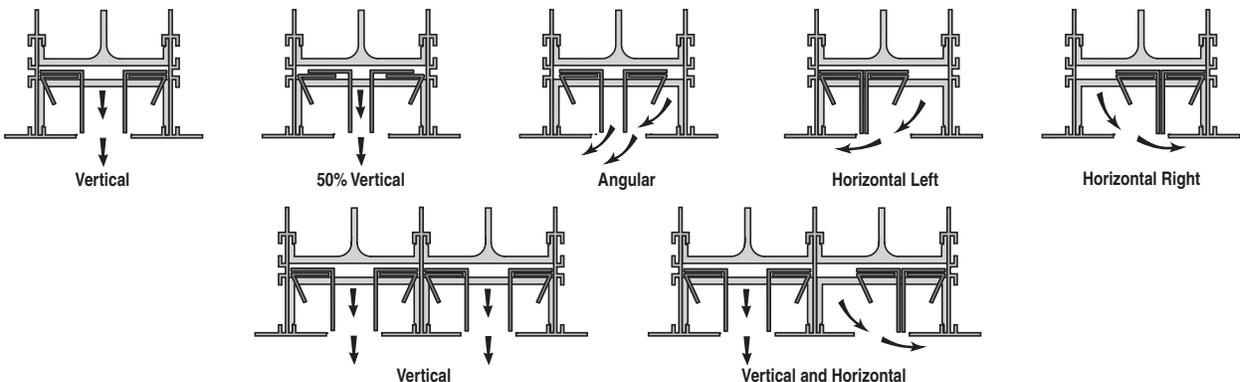
FINISH:

- Standard finish is AW Appliance White baked enamel on exposed frame surfaces. Pattern controllers and interior surfaces are black.
- Custom color baked enamel and anodized finishes are available to suit architectural requirements.

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FLOWLINE™ LINEAR DIFFUSERS

FLV Series Pattern Controller Adjustment



Standard Frame/Border Styles

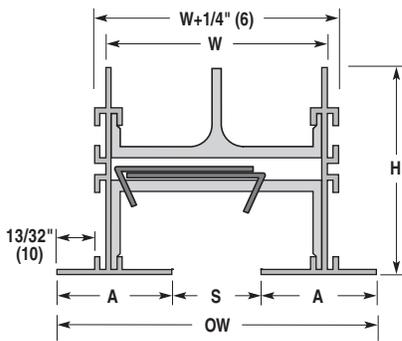
(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

These frame/border styles require installation of the FlowLine™ diffuser prior to installation of the drywall. The ceiling opening should be framed and the diffuser attached with optional mounting clips or suspended from the building structure with hanger wire using the integral hanger brackets supplied with the diffuser.

One Slot

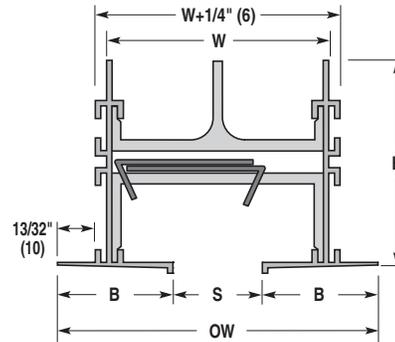
Type AA Exposed Flange Frame

- Drywall (ceiling, wall), T-Bar



Type BB Concealed Tapered Frame

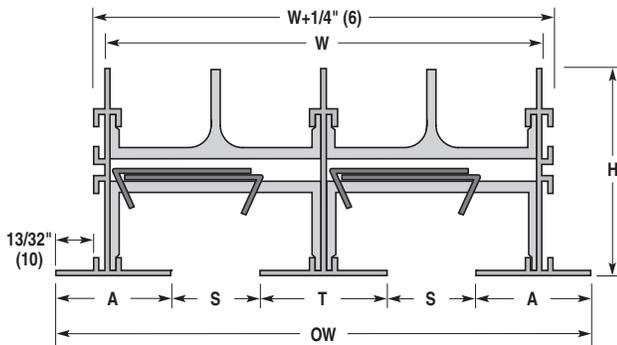
- Drywall (ceiling, wall)
- Tape and Spackle



Two Slot

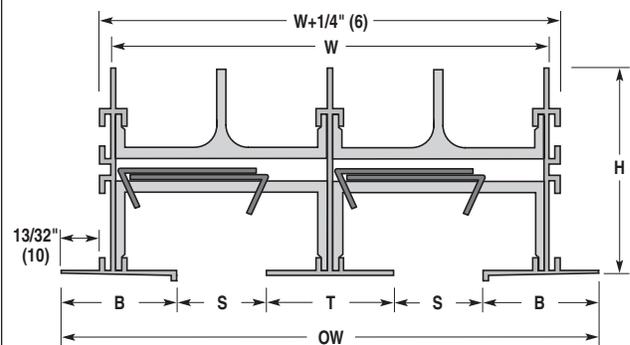
Type AA Exposed Flange Frame

- Drywall (ceiling, wall), T-Bar



Type BB Concealed Tapered Side Frame

- Drywall (ceiling, wall)
- Tape and Spackle



Dimensional Data - Imperial (Metric) Units

Model	S Slot Width	1 Slot		2 Slot		A, B Border Width	H Height	T 2 Slot
		W	OW	W	OW			
FL(HorV)10	1 (25)	2 1/2 (64)	3 9/16 (90)	4 15/16 (125)	6 (152)	1 1/2 (33)	2 3/8 (60)	1 7/16 (37)
FL(HorV)15	1 1/2 (38)	3 1/2 (89)	4 9/16 (116)	6 15/16 (176)	8 (203)	1 7/32 (39)	2 5/8 (67)	1 15/16 (49)
FL(HorV)20	2 (51)	4 1/2 (114)	5 9/16 (141)	8 15/16 (227)	10 (254)	1 25/32 (45)	2 7/8 (73)	2 7/16 (62)
FL(HorV)25	2 1/2 (64)	5 1/2 (140)	6 9/16 (167)	10 15/16 (278)	12 (305)	2 1/2 (52)	3 1/8 (79)	2 15/16 (75)
FL(HorV)30	3 (76)	6 1/2 (165)	7 9/16 (192)	12 15/16 (329)	14 (356)	2 3/32 (58)	3 3/8 (86)	3 7/16 (87)

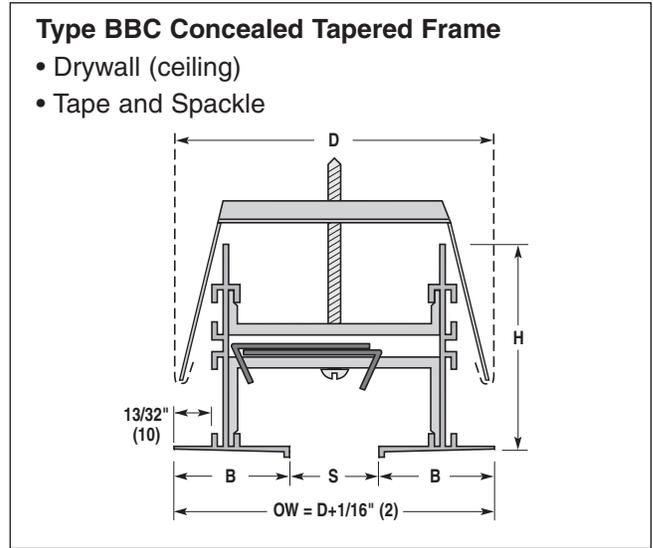
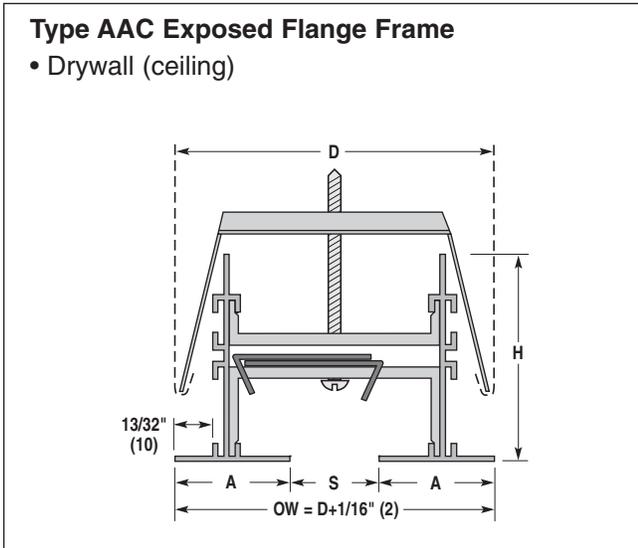
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FLOWLINE™ LINEAR DIFFUSERS

Standard Frame/Border Styles with Concealed Mounting Bracket

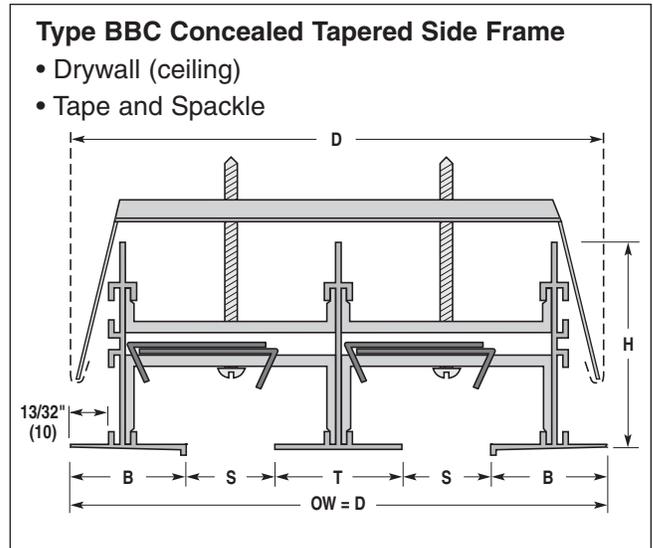
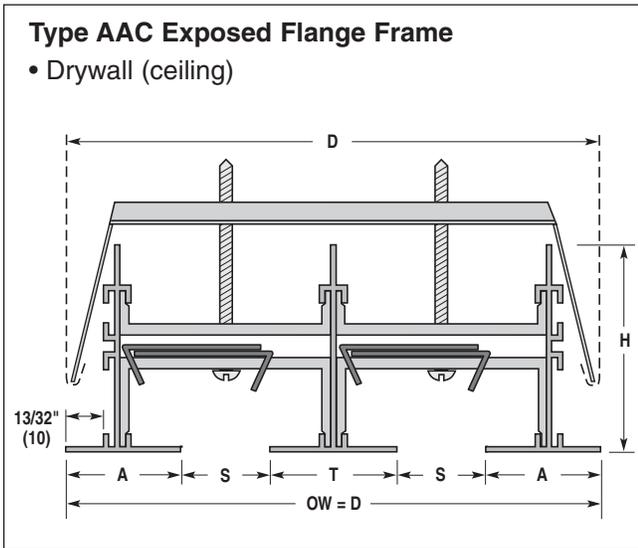
(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

The concealed mounting bracket option permits surface mounting of the FlowLine™ diffuser after the ceiling installation. Diffuser simply pushes up into the ceiling opening until the legs of the factory supplied mounting brackets locate into a hemmed duct plenum or onto the topside of the drywall. Factory supplied levelling screws then draw the diffuser up until it is tight and snug with the ceiling.

One Slot



Two Slot



Dimensional Data - Imperial (Metric) Units

Model	S Slot Width	D Duct Width		A, B Border Width	H Height	T 2 Slot	Ceiling Opening Width	
		1 Slot	2 Slot				1 Slot	2 Slot
FL(H or V)10	1 (25)	3 ½ (89)	6 (152)	1 9/32 (33)	2 3/8 (60)	1 1/16 (37)	3 (76)	5 ½ (140)
FL(H or V)15	1 ½ (38)	4 ½ (114)	8 (203)	1 17/32 (39)	2 5/8 (67)	1 15/16 (49)	4 (102)	7 ½ (191)
FL(H or V)20	2 (51)	5 ½ (140)	10 (254)	1 25/32 (45)	2 7/8 (73)	2 7/16 (62)	5 (127)	9 ½ (241)
FL(H or V)25	2 ½ (64)	6 ½ (165)	12 (305)	2 1/32 (52)	3 1/8 (79)	2 15/16 (75)	6 (152)	11 ½ (292)
FL(H or V)30	3 (76)	7 ½ (191)	14 (356)	2 9/32 (58)	3 3/8 (86)	3 7/16 (87)	7 (178)	13 ½ (343)

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FLOWLINE™ LINEAR DIFFUSERS

Special Frame/Border Styles

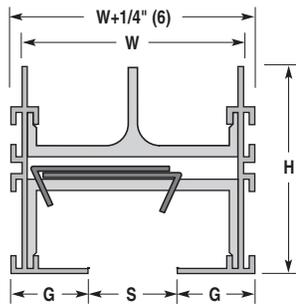
(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

These frame/border styles require installation of the FlowLine™ diffuser prior to installation of the drywall. The ceiling opening should be framed and the diffuser attached with optional mounting clips or suspended from the building structure with hanger wire using the integral hanger brackets supplied with the diffuser.

One Slot

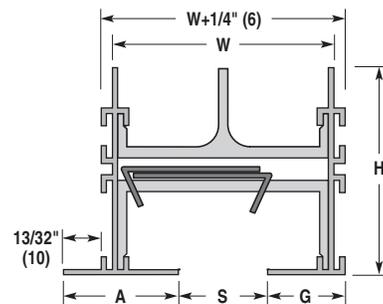
Type GG Flangeless Frame

- Drywall (ceiling, wall)



Type AG Flange / Flangeless Frame

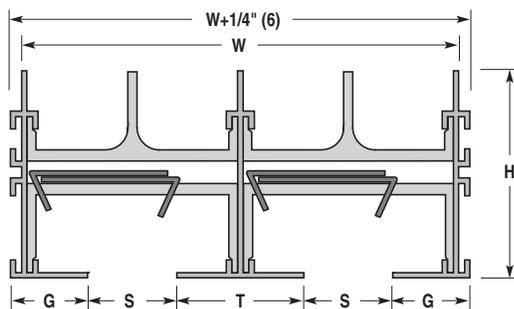
- Drywall (ceiling, wall)



Two Slot

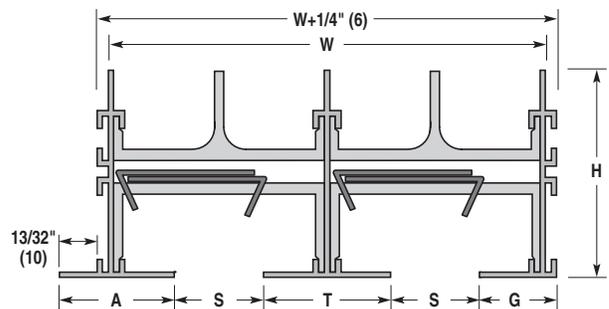
Type GG Flangeless Frame

- Drywall (ceiling, wall)



Type AG Flange / Flangeless Frame

- Drywall (ceiling, wall)



Dimensional Data - Imperial (Metric) Units

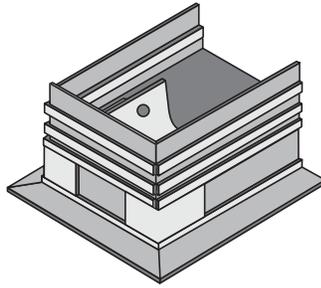
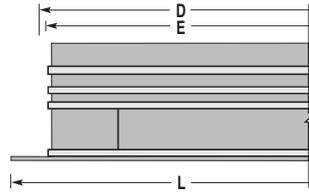
Model	S Slot Width	1 Slot W	2 Slot W	A Border Width	G Border Width	H Height	T 2 Slot
FL(HorV)10	1 (25)	2 1/2 (64)	4 15/16 (125)	1 9/32 (33)	7/8 (22)	2 3/8 (60)	1 7/16 (37)
FL(HorV)15	1 1/2 (38)	3 1/2 (89)	6 15/16 (176)	1 17/32 (39)	1 1/8 (29)	2 5/8 (67)	1 15/16 (49)
FL(HorV)20	2 (51)	4 1/2 (114)	8 15/16 (227)	1 25/32 (45)	1 3/8 (35)	2 7/8 (73)	2 7/16 (62)
FL(HorV)25	2 1/2 (64)	5 1/2 (140)	10 15/16 (278)	2 1/32 (52)	1 5/8 (41)	3 1/8 (79)	2 15/16 (75)
FL(HorV)30	3 (76)	6 1/2 (165)	12 15/16 (329)	2 3/32 (58)	1 7/8 (48)	3 3/8 (86)	3 7/16 (87)

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FLOWLINE™ LINEAR DIFFUSERS

End Border Configurations for Various Mountings

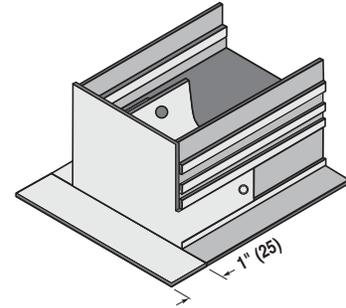
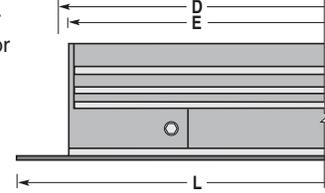
M Mitered End Border

- Architecturally superior look for Type A Frame/Border with Exposed Flange.
- Factory mounted.

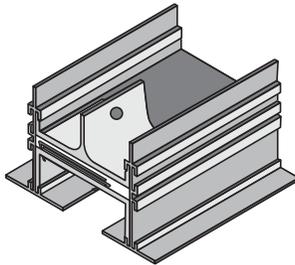
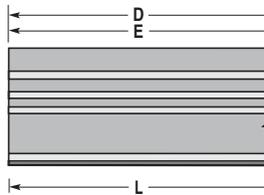


F Flanged End Cap

- Removable for field end trim or stocking.

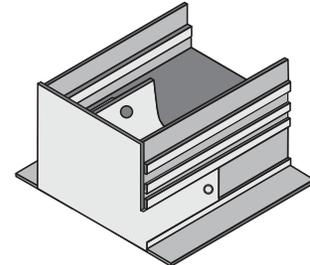
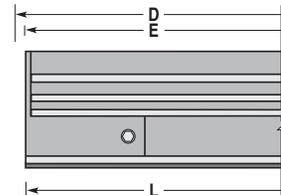


O Open End



C Flat End Cap

- Removable for field end trim or stocking.



Overall Length Dimensions and End Cap Position

D = Duct Length

E = End Cap Position

L = Overall Length

Frame Type	M M		M O		M C		O O		O C	
	E	L	E	L	E	L	E	L	E	L
AA, AAC	$D - \frac{1}{4}$ (6)	$D + \frac{9}{16}$ (14)	$D - \frac{1}{8}$ (3)	$D + \frac{9}{32}$ (7)	$D - \frac{1}{16}$ (2)	$D + \frac{11}{32}$ (9)	D	D	$D - \frac{1}{16}$ (2)	$D + \frac{1}{16}$ (2)
BB, BBC	$D - \frac{1}{4}$ (6)	$D + \frac{9}{16}$ (14)	$D - \frac{1}{8}$ (3)	$D + \frac{9}{32}$ (7)	$D - \frac{1}{16}$ (2)	$D + \frac{11}{32}$ (9)	D	D	$D - \frac{1}{16}$ (2)	$D + \frac{1}{16}$ (2)
GG, AG	N/A	N/A	N/A	N/A	N/A	N/A	D	D	$D - \frac{1}{16}$ (2)	$D + \frac{1}{16}$ (2)

Frame Type	C C		F F		F O		F C	
	E	L	E	L	E	L	E	L
AA, AAC	$D - \frac{1}{8}$ (3)	$D - \frac{1}{8}$ (3)	$D - \frac{1}{4}$ (6)	$D + 1 \frac{5}{8}$ (41)	$D - \frac{1}{8}$ (3)	$D + \frac{13}{16}$ (21)	$D - \frac{1}{16}$ (2)	$D + \frac{7}{8}$ (22)
BB, BBC	$D - \frac{1}{8}$ (3)	$D - \frac{1}{8}$ (3)	N/A	N/A	N/A	N/A	N/A	N/A
GG, AG	$D - \frac{1}{8}$ (3)	$D - \frac{1}{8}$ (3)	$D - \frac{1}{4}$ (6)	$D + 1 \frac{5}{8}$ (41)	$D - \frac{1}{8}$ (3)	$D + \frac{13}{16}$ (21)	$D - \frac{1}{16}$ (2)	$D + \frac{7}{8}$ (22)

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FLOWLINE™ LINEAR DIFFUSERS

Options and Accessories

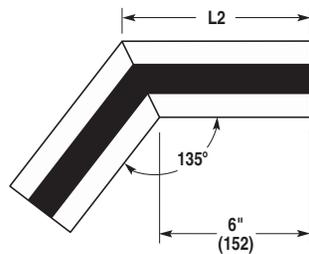
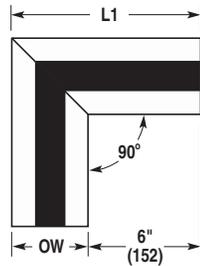
Mitered Corners

- FLMC10 • 1" (25) Slot
- FLMC15 • 1½" (38) Slot
- FLMC20 • 2" (51) Slot
- FLMC25 • 2½" (64) Slot
- FLMC30 • 3" (76) Slot

The standard mitered corners are 90° and 135°. Units are factory welded with precision to match and align with the associated straight leg.

Units are supplied with factory installed blank-offs in the slot (painted black) and are inactive. Other angles are available.

For compound angles, contact your Nailor Representative.



No. of Slots	Slot Width	Border AA, BB		Border GG	
		L1	L2	L1	L2
1	1 (25)	9 9/16 (243)	7 15/32 (190)	8 11/16 (221)	7 1/8 (181)
	1½ (38)	10 9/16 (268)	7 7/8 (200)	9 11/16 (246)	7 17/32 (191)
	2 (51)	11 9/16 (294)	8 5/16 (211)	10 11/16 (272)	7 15/16 (202)
	2½ (64)	12 9/16 (319)	8 23/32 (221)	11 11/16 (297)	8 11/32 (212)
	3 (76)	13 9/16 (344)	9 1/8 (232)	12 11/16 (322)	8 3/4 (222)
2	1 (25)	11 31/32 (304)	8 15/32 (215)	11 3/32 (282)	8 3/32 (206)
	1½ (38)	13 31/32 (355)	9 5/16 (237)	13 3/32 (333)	8 29/32 (226)
	2 (51)	15 31/32 (406)	10 1/8 (257)	15 3/32 (383)	9 3/4 (248)
	2½ (64)	17 31/32 (456)	10 31/32 (279)	17 3/32 (434)	10 9/16 (268)
	3 (76)	19 31/32 (507)	11 25/32 (299)	19 3/32 (485)	11 13/32 (290)

A

FLOWLINE™ LINEAR DIFFUSERS

Transitions

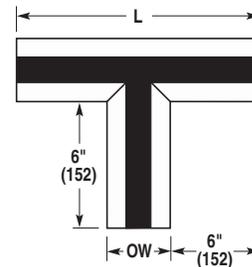
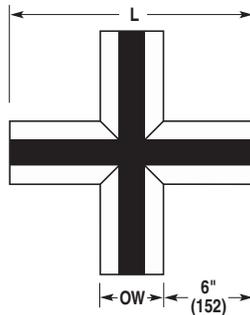
Type C Cross

- FLC10 • 1" (25) Slot
- FLC15 • 1½" (38) Slot
- FLC20 • 2" (51) Slot
- FLC25 • 2½" (64) Slot
- FLC30 • 3" (76) Slot

Type T Tee

- FLT10 • 1" (25) Slot
- FLT15 • 1½" (38) Slot
- FLT20 • 2" (51) Slot
- FLT25 • 2½" (64) Slot
- FLT30 • 3" (76) Slot

Transitions are inactive. Blank-offs installed at factory. Not available in 2 slot version.

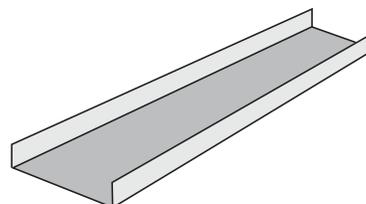


No. of Slots	Slot Width	Border AA, BB		Border GG	
		OW	L	OW	L
1	1 (25)	3 9/16 (90)	15 9/16 (395)	2 3/4 (70)	14 11/16 (373)
	1½ (38)	4 9/16 (116)	16 9/16 (421)	3 3/4 (95)	15 11/16 (398)
	2 (51)	5 9/16 (141)	17 9/16 (446)	4 3/4 (121)	16 11/16 (424)
	2½ (64)	6 9/16 (167)	18 9/16 (471)	5 3/4 (146)	17 11/16 (449)
	3 (76)	7 9/16 (192)	19 9/16 (497)	6 3/4 (171)	18 11/16 (475)

Blank-Offs

- FLBO10 • 1" (25) Slot
- FLBO15 • 1½" (38) Slot
- FLBO20 • 2" (51) Slot
- FLBO25 • 2½" (64) Slot
- FLBO30 • 3" (76) Slot

Corrosion resistant steel, painted flat black. Fit in neck of diffuser. Provided in 48" (1219) lengths. Field cut to length.



Options and Accessories

Return Hood/Sight Shield

Uninsulated:

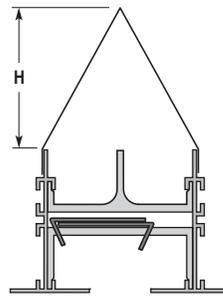
- FLR10 • 1" (25) Slot
- FLR15 • 1½" (38) Slot
- FLR20 • 2" (51) Slot
- FLR25 • 2½" (64) Slot
- FLR30 • 3" (76) Slot

51% free area perforated corrosion resistant steel, painted flat black. Provided in 4 ft. (1219) lengths. Field cut to length.

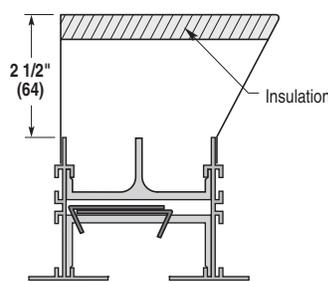
Insulated:

- FLRI10 • 1" (25) Slot
- FLRI15 • 1½" (38) Slot
- FLRI20 • 2" (51) Slot
- FLRI25 • 2½" (64) Slot
- FLRI30 • 3" (76) Slot

Uninsulated

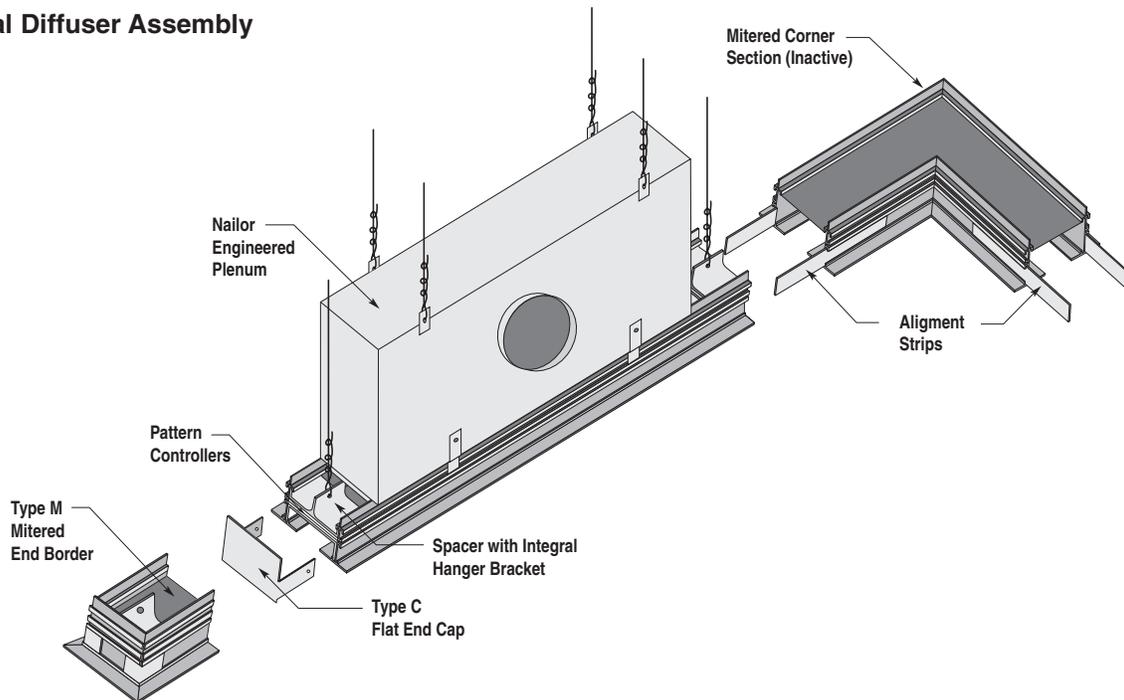


Insulated



No. of Slots	Slot Width	H (Height)
1	1 (25)	3 ¾ (86)
	1½ (38)	3 ¾ (86)
	2 (51)	3 ¾ (86)
	2½ (64)	3 ¾ (86)
	3 (76)	3 ¾ (86)
2	1 (25)	2 ½ (54)
	1½ (38)	3 ½ (79)
	2 (51)	4 ½ (105)
	2½ (64)	5 ½ (130)
	3 (76)	6 ½ (156)

Typical Diffuser Assembly



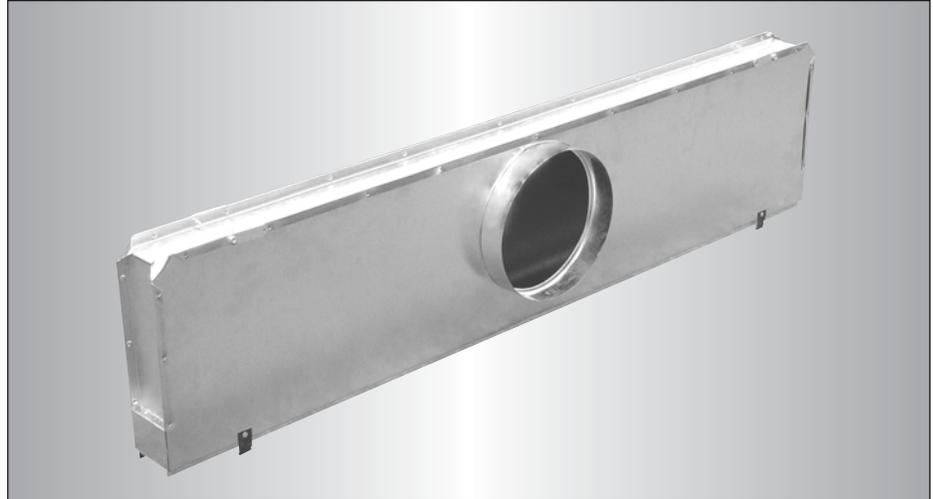
- Diffuser sections can be joined end to end for long continuous runs.
- Type M Mitered End Borders provide a superior architectural finish. Type C End Caps close off the ends of the diffuser when terminating at a wall or other stop. Type C may be field installed.
- Alignment strips are factory supplied as standard on all multiple section assemblies to ensure close and positive alignment between sections.
- Nailor's optional engineered plenums ensure catalog performance and a trouble free sure fit installation.
- Unique integral hanger brackets provide independent hanging points and eliminate the need for field add-on hanger clips.

A

FLOWLINE™ LINEAR DIFFUSERS

FLP Series

- SUPPLY AIR ENGINEERED PLENUMS FOR FLOWLINE™ LINEAR DIFFUSERS



Models:

FLP(I)10	1" (25) Slot
FLP(I)15	1½" (38) Slot
FLP(I)20	2" (51) Slot
FLP(I)25	2½" (64) Slot
FLP(I)30	3" (76) Slot

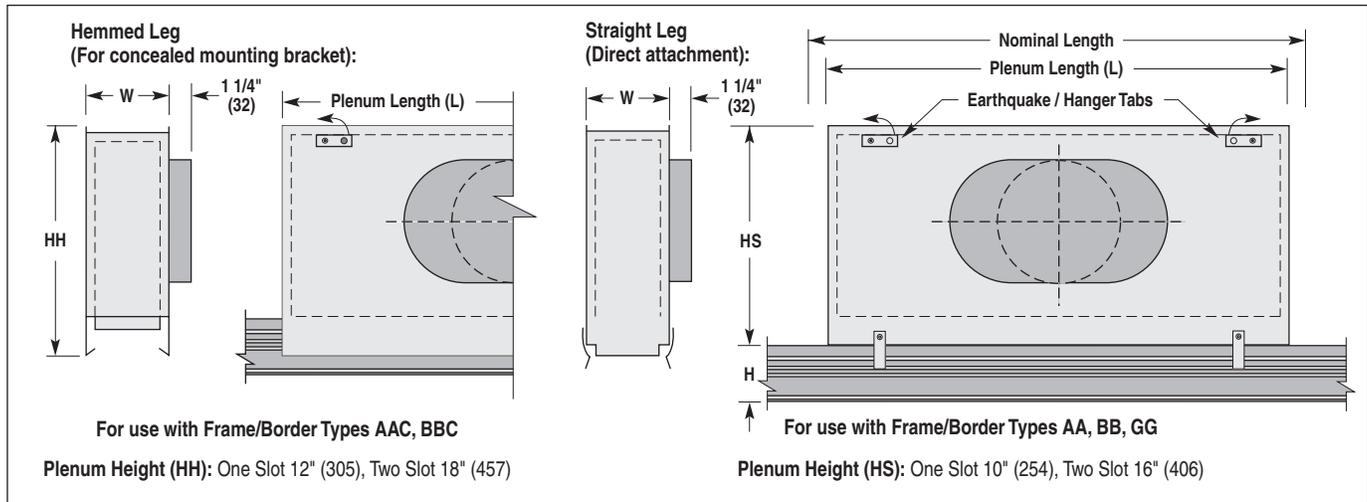
(I) Adds Internal Insulation.

The Nailor FLP Series engineered plenum boots are designed specifically for the FLH and FLV Series FlowLine™ Linear diffuser. These plenums are factory fabricated and tested to provide the engineer with proven catalog performance and the installing contractor with a labor saving, cost effective unit that provides for a fast correct fit and easy field installation. FLP Series plenums are shipped loose from the factory. Uninsulated and insulated versions are available.

FLP Series plenums are available in two basic styles to suit the installation method. A straight leg version with spring clips is provided for direct attachment to the FlowLine™ diffuser neck. The diffuser and plenum are installed and attached directly to the ceiling structure prior to installation of the drywall or acoustic suspension ceiling and tiles. Plenums are provided as standard with hanger tabs. A hemmed leg version is available when it is desired to install the FlowLine™ diffuser after the hard gypsum board/drywall ceiling. The diffuser requires a frame/border style which includes a factory supplied concealed mounting bracket. The diffuser simply slides up through the ceiling opening until the mounting straps locate in the hem and is then secured through the slot face using the fastening screws provided.

A

FLOWLINE™ LINEAR DIFFUSERS



Dimensional Data

Nominal Length	Actual Plenum Length (L) For Frame / Border Type		Available Inlet Sizes	
	AA, BB, GG	AAC, BBC	1 Slot	2 Slot
24 (610)	20¾ (527)	24 (610)	6 (152), 8 (203) Round 10 (254), 12 (305), 14 (356) Flat Oval*	6 (152), 8 (203), 10 (254), 12 (305), 14 (356) Round
30 (762)	26¾ (679)	30 (762)		
36 (914)	32¾ (832)	36 (914)		
48 (1219)	44¾ (1137)	48 (1219)		
60 (1524)	56¾ (1441)	60 (1524)		

Plenum Model	Width (W) for Frame / Border Type Noted			
	AA, BB, GG		AAC, BBC	
	1 Slot	2 Slot	1 Slot	2 Slot
FLP(I)10	2¾ (70)	5⅜ (132)	3½ (89)	5⅜ (151)
FLP(I)15	3¾ (95)	7⅜ (183)	4½ (114)	7⅜ (202)
FLP(I)20	4¾ (121)	9⅜ (233)	5½ (140)	9⅜ (252)
FLP(I)25	5¾ (146)	11⅜ (284)	6½ (165)	11⅜ (303)
FLP(I)30	6¾ (171)	13⅜ (335)	7½ (191)	13⅜ (354)

* Equivalent Oval: 10" (254) = 11" x 7 7/8" (279 x 200); 12" (305) = 14 1/8" x 7 7/8" (378 x 200); 14" (356) = 17 5/16" x 7 7/8" (440 x 200).

Hard Ceiling Application and Installation Methods

Typical Installation

Labels in diagram: Ceiling Framing Members, Alignment Strips, Mounting Screws, Hard Ceiling Clips, Frame Opening Width FW, 24" (610) Maximum Centers.

Model	Frame Opening Width FW	
	1 slot	2 slot
FL(HorV)10	3¼ (83)	5¾ (146)
FL(HorV)15	4¼ (108)	7¾ (197)
FL(HorV)20	5¼ (133)	9¾ (248)
FL(HorV)25	6¼ (159)	11¾ (298)
FL(HorV)30	7¼ (184)	13¾ (349)

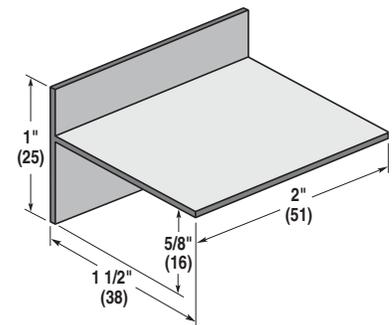
Exposed Flange Frame Type AA

Labels: Framing Member, Flat Head Screw, HC1 Hard Ceiling Clip, 5/8" (16) Drywall.

Concealed Frame Type BB

Labels: Framing Member, Flat Head Screw, HC1 Hard Ceiling Clip, 5/8" (16) Drywall, Tape and Spackle.

HC1 Hard Ceiling Clip



The HC1 Hard Ceiling Clip can be used to mount the FlowLine™ assembly with Frame/Border Types AA or BB, where standard 5/8" (16) gypsum wallboard (drywall) is used.

A

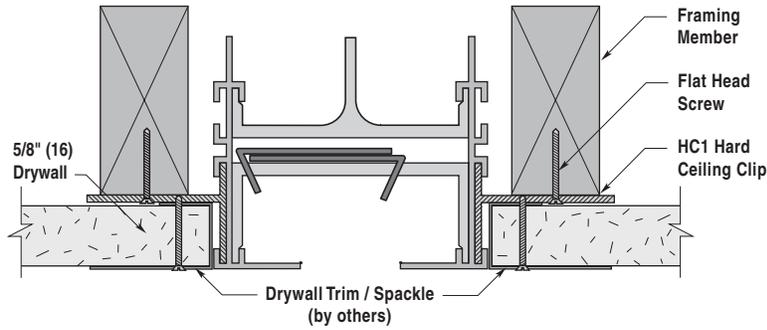
FLOWLINE™ LINEAR DIFFUSERS

Hard Ceiling Application and Installation Methods

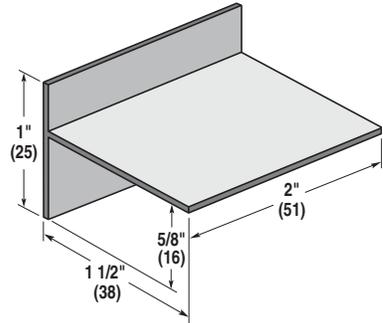
A

FLOWLINE™ LINEAR DIFFUSERS

Flangeless Flush Frame Type GG

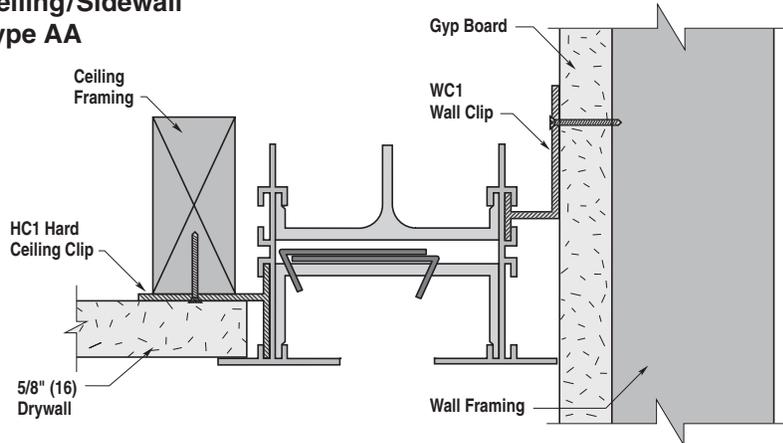


HC1 Hard Ceiling Clip

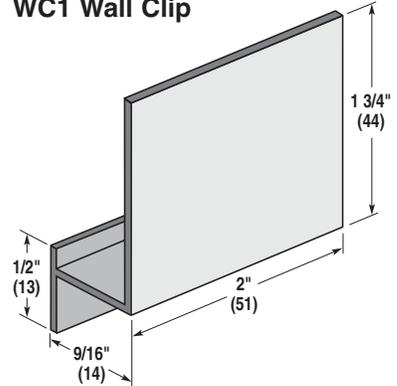


The HC1 Hard Ceiling Clip can be used to mount the FlowLine™ assembly with Frame/Border Type GG, where standard 5/8" (16) gypsum wallboard (drywall) is used.

Ceiling/Sidewall Type AA



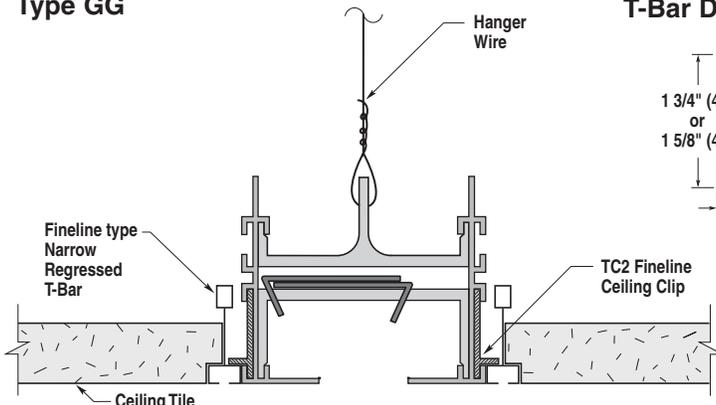
WC1 Wall Clip



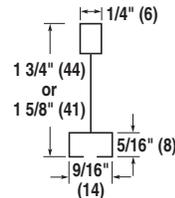
The WC1 Wall Clip is used to mount the FlowLine™ assembly with Frame/Border Type AA flush to a wall.

Narrow Regressed T-Bar Ceiling Suspension System (Commonly referred to as Bolt-Slot or Fineline® T-Bar)

Flangeless Frame Type GG

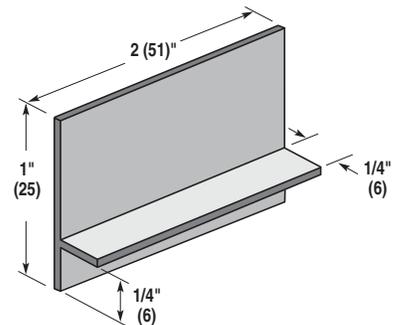


Typical Regressed T-Bar Detail



USG 'Donn Fineline®', Chicago Metallic® 'Ultraline' and Armstrong 'Silhouette' are three common examples of compatibility.

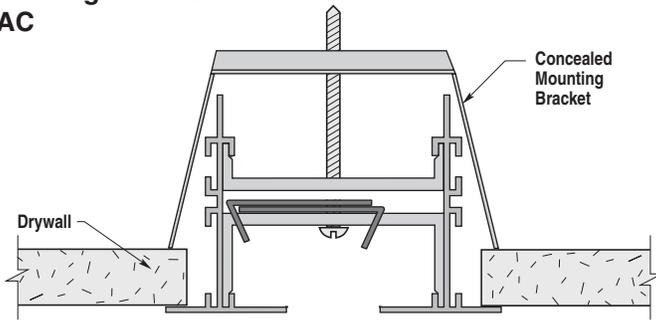
TC2 Fineline® T-Bar Clip



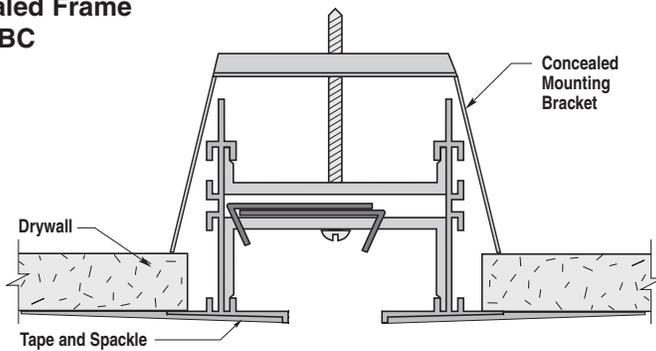
The TC2 Fineline® T-Bar Clips are used to support and level the FlowLine™ assembly in Bolt-Slot (Fineline® Type) suspension systems.

Hard Ceiling Application and Installation Methods

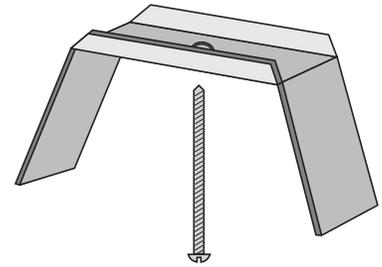
**Exposed Flange Frame
Type AAC**



**Concealed Frame
Type BBC**



FLCMB Concealed Mounting Bracket



Supplied as standard with Frame/
Border Types AAC and BBC.



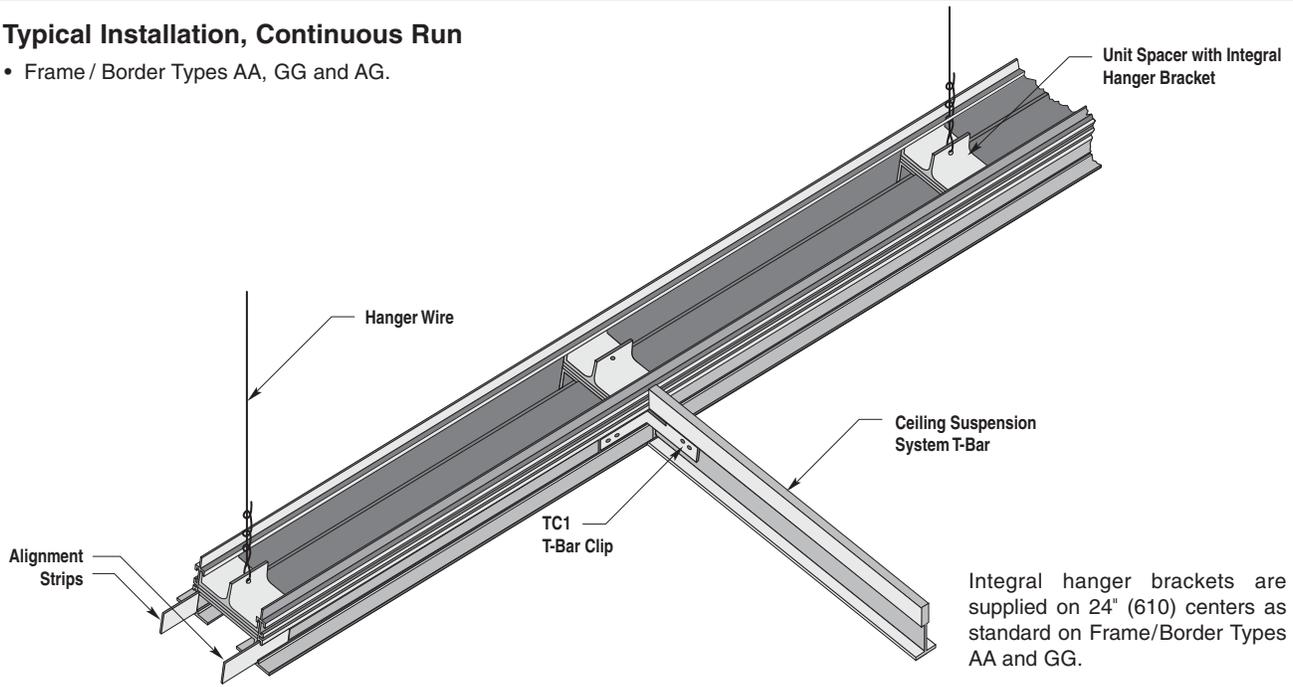
A

FLOWLINE™ LINEAR DIFFUSERS

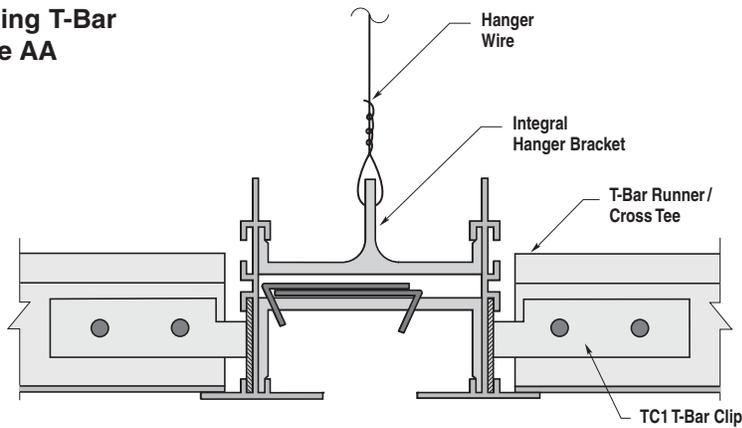
T-Bar Ceiling Suspension System Application and Installation Methods

Typical Installation, Continuous Run

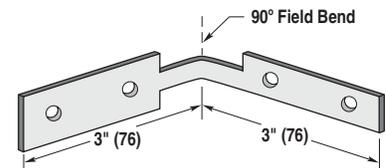
- Frame / Border Types AA, GG and AG.



Ceiling T-Bar Type AA

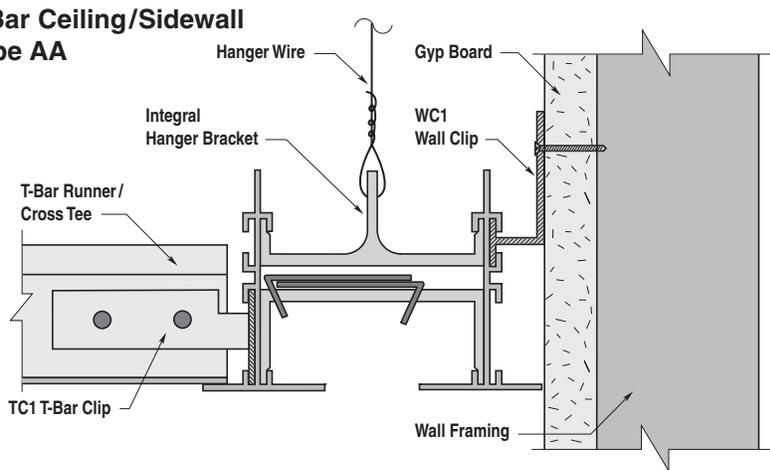


TC1 T-Bar Clip (field formed)



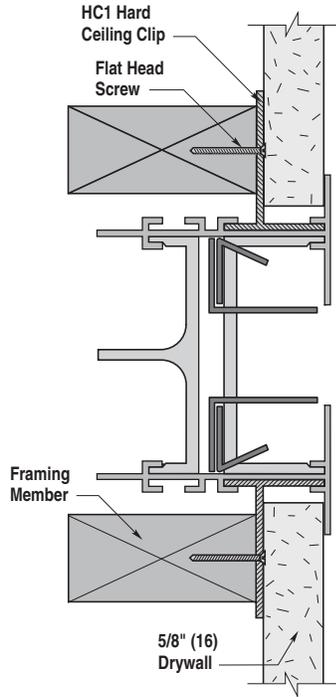
The TC1 T-Bar Clip is used to attach drop tees to the FlowLine™ assembly.

T-Bar Ceiling/Sidewall Type AA

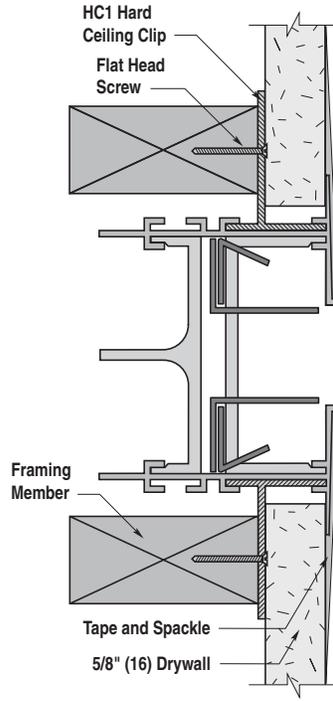


Sidewall Application and Installation Methods

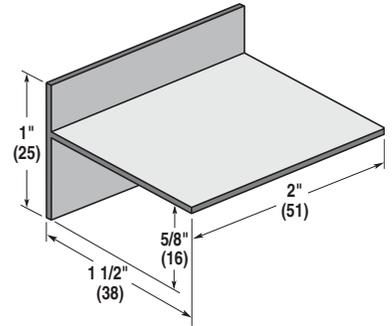
**Exposed Flange Frame
Type AA**



**Concealed Frame
Type BB**



HC1 Hard Ceiling Clip



The HC1 Hard Ceiling Clip can be used to mount the FlowLine™ assembly with Frame/Border Types AA or BB, where standard 5/8" (16) gypsum wallboard (drywall) is used.

A
FLOWLINE™ LINEAR DIFFUSERS



FT Series

- LAY-IN UNITS FOR T-BAR SUSPENSION CEILING SYSTEMS
- COMPLETE WITH ENGINEERED PLENUM
- CHOICE OF HORIZONTAL OR VERTICAL PATTERN CONTROLLERS

Horizontal High Throw Models:

Standard $1\frac{5}{16}$ " (24) or $\frac{9}{16}$ " (14) Flat T-Bar

FTH(I)10 1" (25) Slot

FTH(I)15 1½" (38) Slot

FTH(I)20 2" (51) Slot

Bolt-Slot (Fineline® Type) T-Bar

FTBH(I)10 1" (25) Slot

FTBH(I)15 1½" (38) Slot

FTBH(I)20 2" (51) Slot

Vertical Jet Throw Models:

Standard $1\frac{5}{16}$ " (24) or $\frac{9}{16}$ " (14) Flat T-Bar

FTV(I)10 1" (25) Slot

FTV(I)15 1½" (38) Slot

FTV(I)20 2" (51) Slot

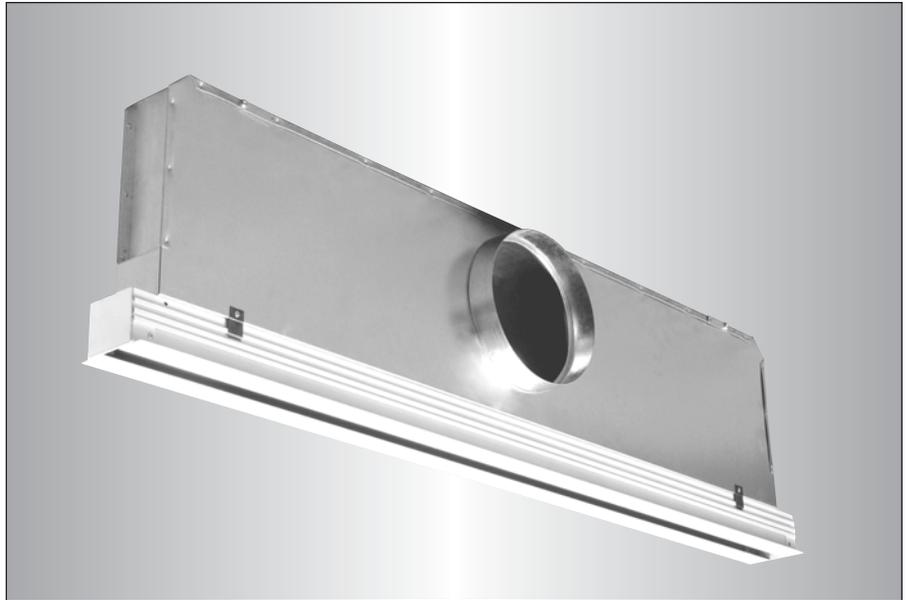
Bolt-Slot (Fineline® Type) T-Bar

FTBV(I)10 1" (25) Slot

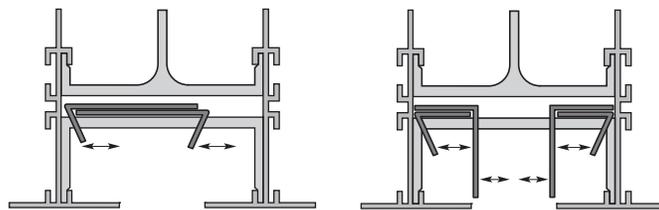
FTBV(I)15 1½" (38) Slot

FTBV(I)20 2" (51) Slot

(I) Adds internal insulation.



Pattern Controller Options



FTH Series
Horizontal High Throw Design

FTV Series
Vertical Jet Throw Design

The FT Series is a modular version of Nailor's FlowLine™ Linear Diffuser System. The FT Series is available in various discrete lengths for installation in lay-in type suspended ceiling grid systems. They are available for both Imperial and Metric ceiling grids. These diffusers are manufactured to fit standard ceiling grid modules and provide quick and easy installation. The units are provided with factory mounted engineered plenums and are normally individually suspended by either integral hanger brackets at each end of the diffuser and/or hanger straps on the plenum. Relocation is easy for office layout and tenant improvement changes.

The high induction characteristics of the FTH Series Horizontal High Throw pattern controller option make it an excellent choice for variable air volume systems. The FTV Series Vertical Jet Throw option is ideally suited to perimeter glass curtain wall applications.

These units are also suitable for return air applications. Return models are available and supplied without plenum (Models FTBR and FTBHR). Supplied with horizontal type dual pattern controllers for system balancing.

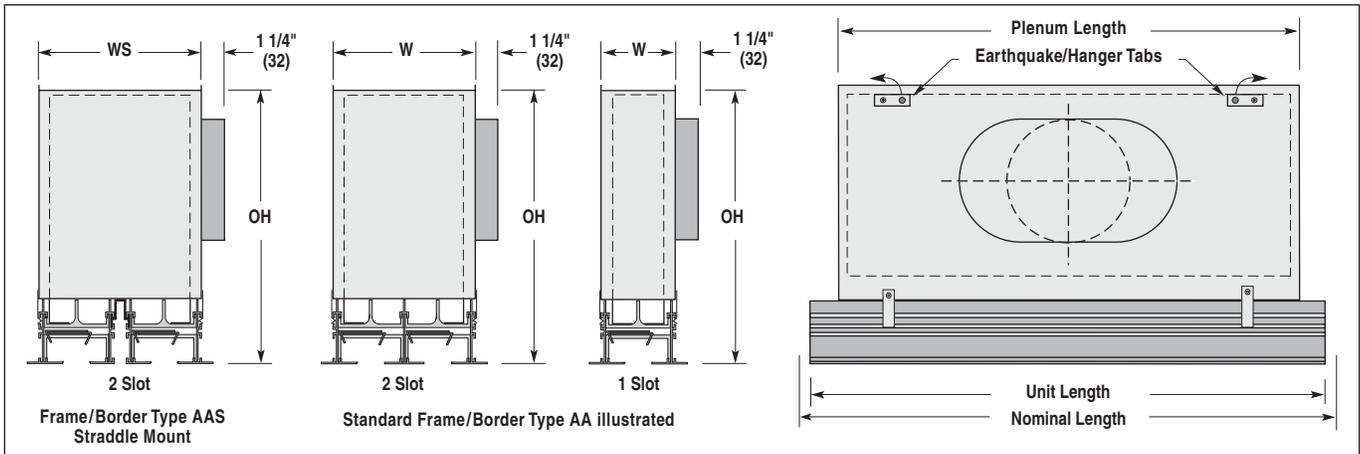
STANDARD FEATURES:

- Available in 24" (610), 48" (1219) and 60" (1524) nominal lengths.
- Available in 600mm, 1200mm and 1500mm nominal lengths for Metric Suspension Ceiling Systems.
- Standard slot widths are 1" (25), 1 1/2" (38) and 2" (51).
- Heavy wall extruded aluminum construction with galvanized steel pattern controllers.
- Horizontal or vertical throw pattern controller options.
- Supply models are complete with an integral engineered plenum. Optional internal insulation is available.
- Various Frame/Border styles are available to integrate with most ceiling systems.
- Standard finish is AW Appliance White baked enamel on exposed frame surfaces. Pattern controllers and interior surfaces are black.

A FLOWLINE™ LINEAR DIFFUSERS

FT Series • 9/16" (14) or 15/16" (24) Flat T-Bar

(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).



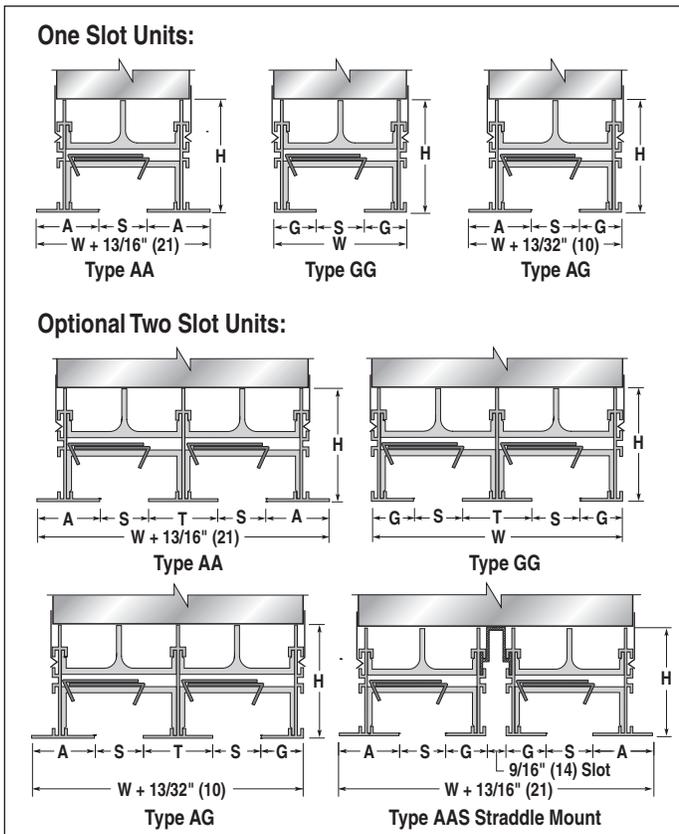
Dimensional Data (Imperial Grids)

Nominal Length	Unit Length	Plenum Length	Available Inlet Sizes	
			1 Slot	2 Slot
24 (610)	23 3/4 (603)	20 3/4 (527)	6 (152), 8 (203) Round	6 (152), 8 (203),
48 (1219)	47 3/4 (1213)	44 3/4 (1137)	10 (254), 12 (305),	10 (254), 12 (305),
60 (1524)	59 3/4 (1518)	56 3/4 (1441)	14 (356) Flat Oval*	14 (356) Round

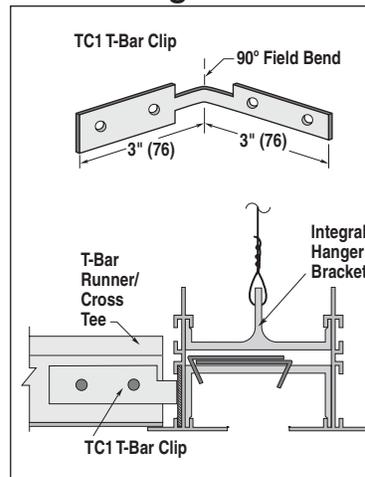
FT Series Model	1 Slot		2 Slot		
	W	OH	W	WS	OH
FT(HorV)(I)10	2 3/4 (70)	12 5/8 (314)	5 5/16 (132)	6 1/16 (154)	18 5/8 (467)
FT(HorV)(I)15	3 3/4 (95)	12 5/8 (321)	7 7/16 (183)	8 1/16 (205)	18 5/8 (473)
FT(HorV)(I)20	4 3/4 (121)	12 7/8 (327)	9 3/16 (233)	10 1/16 (256)	18 7/8 (479)

* Equivalent Oval: 10" (254) = 11" x 7 7/8" (279 x 200); 12" (305) = 14 1/8" x 7 7/8" (378 x 200); 14" (356) = 17 5/16" x 7 7/8" (440 x 200).

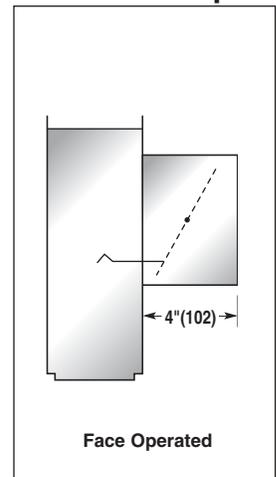
Available FT Series Border Types



Optional Mounting Hardware



Optional ID Inlet Damper



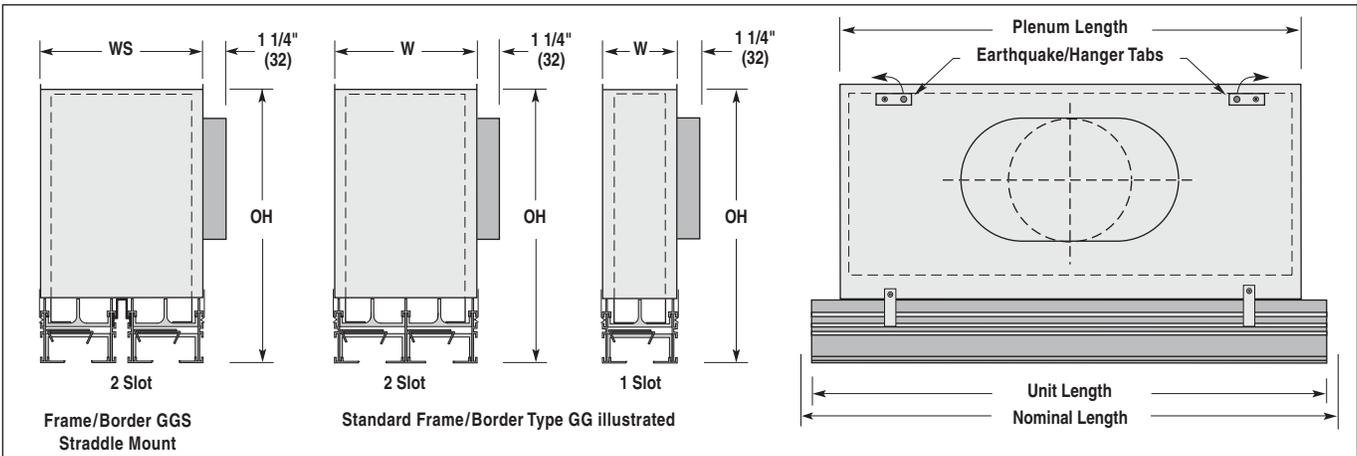
Dimensional Data - Imperial (Metric) Units

FT Series Model	S Slot Width	A Border Width	G Border Width	H Height	T 2 Slot
FT(HorV)(I)10	1 (25)	1 9/32 (33)	7/8 (22)	2 3/8 (60)	1 7/16 (37)
FT(HorV)(I)15	1 1/2 (38)	1 17/32 (39)	1 1/8 (29)	2 5/8 (67)	1 15/16 (49)
FT(HorV)(I)20	2 (51)	1 25/32 (45)	1 3/8 (35)	2 7/8 (73)	2 7/16 (62)

A
FLOWLINE™ LINEAR DIFFUSERS

FTB Series • Bolt-Slot (Fineline® Type) T-Bar

(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

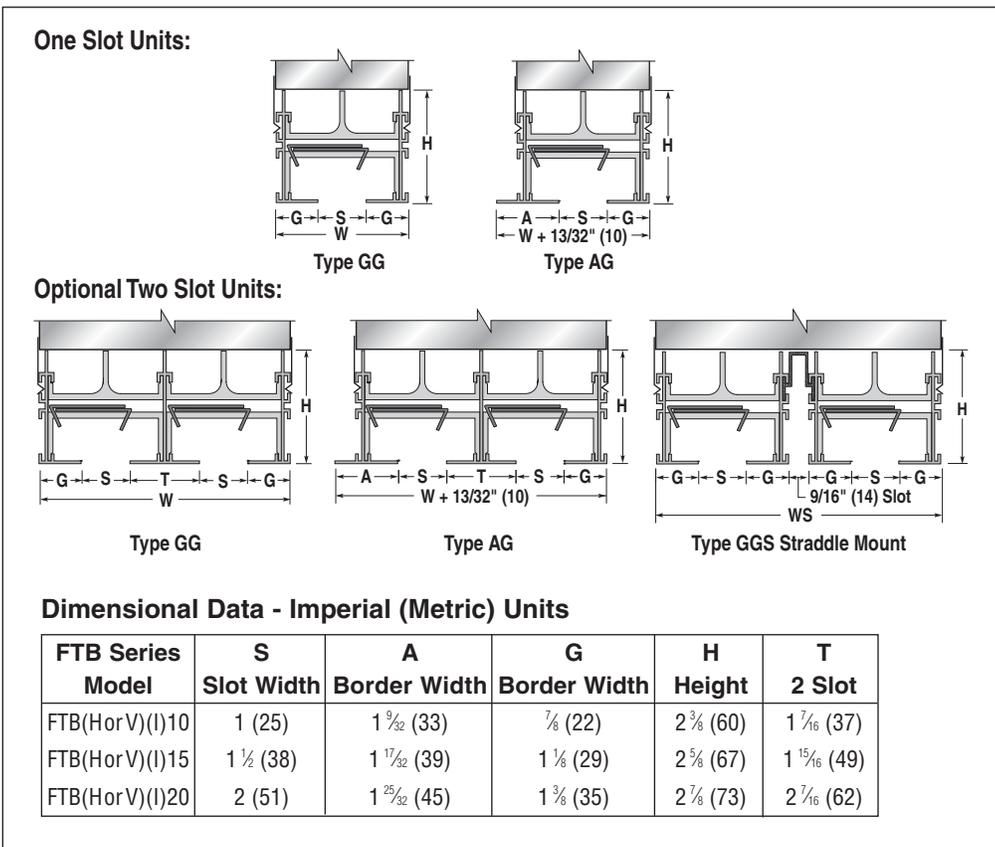


Dimensional Data (Imperial Grids)

Nominal Length	Unit Length	Plenum Length	Available Inlet Sizes		FTB Series Model	1 Slot		2 Slot		
			1 Slot	2 Slot		W	OH	W	WS	OH
24 (610)	23 3/8 (594)	20 3/8 (518)	6 (152), 8 (203) Round	6 (152), 8 (203)	FTB(HorV)(I)10	2 3/4 (70)	12 3/8 (314)	5 3/16 (132)	6 1/16 (154)	18 3/8 (467)
48 (1219)	47 3/8 (1202)	44 3/8 (1127)	10 (254), 12 (305),	10 (254), 12 (305),	FTB(HorV)(I)15	3 3/4 (95)	12 3/8 (321)	7 3/16 (183)	8 7/16 (205)	18 5/8 (473)
			14 (356) Flat Oval*	14 (356) Round	FTB(HorV)(I)20	4 3/4 (121)	12 7/8 (327)	9 3/16 (233)	10 1/16 (256)	18 7/8 (479)

* Equivalent Oval: 10" (254) = 11" x 7 7/8" (279 x 200); 12" (305) = 14 1/8" x 7 7/8" (378 x 200); 14" (356) = 17 5/16" x 7 7/8" (440 x 200).

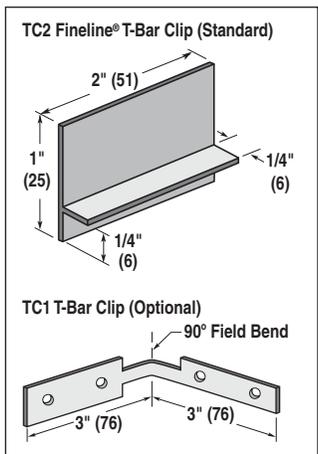
Available FTB Series Border Types



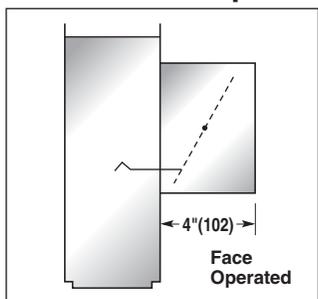
Dimensional Data - Imperial (Metric) Units

FTB Series Model	S Slot Width	A Border Width	G Border Width	H Height	T 2 Slot
FTB(HorV)(I)10	1 (25)	1 9/32 (33)	7/8 (22)	2 3/8 (60)	1 1/16 (37)
FTB(HorV)(I)15	1 1/2 (38)	1 17/32 (39)	1 1/8 (29)	2 5/8 (67)	1 15/16 (49)
FTB(HorV)(I)20	2 (51)	1 25/32 (45)	1 3/8 (35)	2 7/8 (73)	2 1/16 (62)

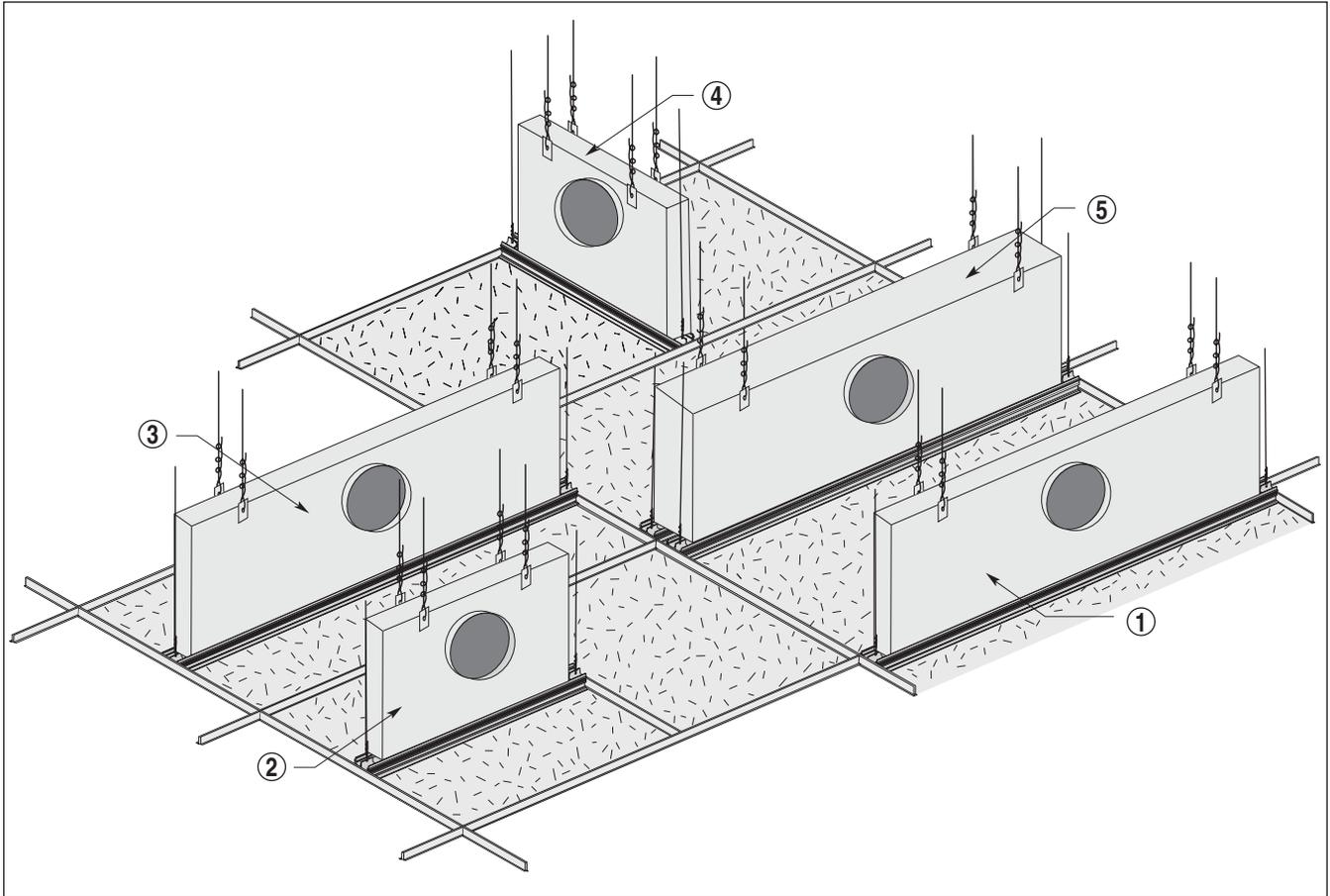
Mounting Hardware



Optional ID Inlet Damper



Typical FT Series Application • T-Bar Ceiling Suspension Systems



DESCRIPTION:

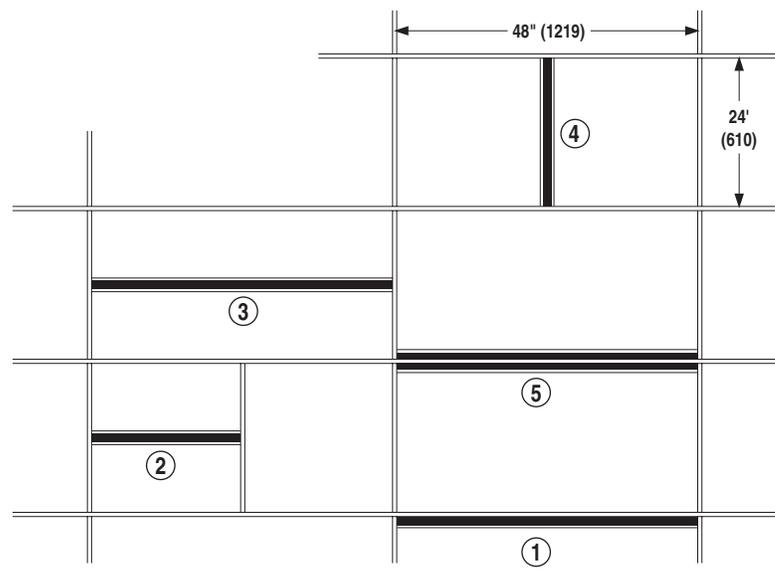
1. Nominal 4 ft. (1219) unit installed alongside a main runner.
2. 2 ft. (610) unit installed parallel to and mid-way between main runners.
3. Nominal 4 ft. (1219) unit installed mid-way between main runners.
4. 2 ft. (610) unit installed perpendicular to main runners.
5. Nominal 4 ft. (1219) two slot unit straddling a main runner.

Notes:

Frame/Border style should be carefully selected to ensure compatibility with specific ceiling grid suspension system and desired visual appearance. Type A Flange Border can lie on flat T-Bar or support cut ceiling tile. Type G Flangeless Border requires a supplementary cross tee for support in 15/16" (24) or 9/16" (14) flat T-Bar applications. In Bolt Slot (Fineline®

Type) applications, utilizing Type G Flangeless Border, optional TC2 Fineline® T-Bar Clips are recommended to support and level the unit. Bolt slot ceiling system grids are usually 2 ft. x 2 ft. (610 x 610) modules. Cross notches on 4 ft. (1219) units are not available. Modification of ceiling grid and field cutting of ceiling tiles will be required.

Reflected Ceiling Plan 2 ft. (610) x 4 ft. (1219) T-Bar Grid

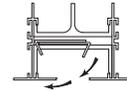


A

FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Horizontal High Throw Series

Models: FLH (10, 15, 20, 25 and 30) • Continuous Pressurized Plenum



A
FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Slot	Airflow, cfm/ft.	20	35	50	65	80	95	110
		Static Pressure	0.013	0.039	0.080	0.135	0.205	0.289	0.387
1"	1 Slot	NC (Noise Criteria)	<15	<15	23	30	36	42	45
		Throw	4-6-12	7-11-16	10-14-20	13-16-22	15-18-25	16-20-27	17-21-30
		Airflow, cfm/ft.	40	70	100	130	160	190	220
		Static Pressure	0.013	0.039	0.080	0.135	0.205	0.289	0.387
2"	2 Slot	NC (Noise Criteria)	<15	<15	25	33	39	45	48
		Throw	5-8-17	10-15-24	15-20-29	17-22-32	19-25-35	20-28-38	22-30-40
		Airflow, cfm/ft.	25	40	55	70	85	100	115
		Static Pressure	0.011	0.029	0.054	0.089	0.130	0.180	0.237
1.5"	1 Slot	NC (Noise Criteria)	<15	<15	17	25	31	36	40
		Throw	5-8-12	9-12-17	12-15-20	14-17-22	15-18-25	16-20-28	17-21-30
		Airflow, cfm/ft.	55	80	105	130	155	180	205
		Static Pressure	0.014	0.029	0.049	0.076	0.108	0.145	0.189
2"	2 Slot	NC (Noise Criteria)	<15	<15	16	26	31	35	39
		Throw	8-12-19	12-17-25	15-20-29	17-22-31	20-26-35	21-27-39	23-30-40
		Airflow, cfm/ft.	25	45	65	85	105	125	145
		Static Pressure	0.007	0.021	0.044	0.075	0.115	0.163	0.219
1"	1 Slot	NC (Noise Criteria)	<15	<15	19	24	32	38	43
		Throw	4-8-13	8-12-18	11-16-22	14-19-26	16-21-30	17-22-31	20-24-34
		Airflow, cfm/ft.	45	85	125	165	205	245	285
		Static Pressure	0.005	0.019	0.042	0.073	0.113	0.161	0.218
2"	2 Slot	NC (Noise Criteria)	<15	<15	19	26	34	40	45
		Throw	4-9-15	11-16-25	16-21-29	21-26-37	23-28-40	26-31-42	27-32-44
		Airflow, cfm/ft.	30	55	80	105	130	155	180
		Static Pressure	0.009	0.031	0.065	0.113	0.173	0.245	0.331
1.5"	1 Slot	NC (Noise Criteria)	<15	<15	18	25	30	34	39
		Throw	3-7-16	9-14-21	13-18-26	15-20-29	18-22-33	20-25-36	21-27-39
		Airflow, cfm/ft.	60	105	150	195	240	285	330
		Static Pressure	0.009	0.028	0.057	0.097	0.147	0.207	0.278
2"	2 Slot	NC (Noise Criteria)	<15	<15	21	27	32	37	41
		Throw	7-12-22	13-19-28	19-24-35	22-27-39	25-31-44	27-33-48	29-36-51
		Airflow, cfm/ft.	30	60	90	120	150	180	210
		Static Pressure	0.008	0.033	0.074	0.131	0.205	0.296	0.403
1"	1 Slot	NC (Noise Criteria)	<15	<15	15	24	30	35	40
		Throw	3-6-15	10-14-22	14-19-27	17-23-32	19-25-35	22-27-39	24-29-42
		Airflow, cfm/ft.	60	120	180	240	300	360	420
		Static Pressure	0.008	0.033	0.074	0.131	0.205	0.296	0.403
2"	2 Slot	NC (Noise Criteria)	<15	<15	18	27	33	38	43
		Throw	4-9-20	12-20-31	19-26-38	24-31-44	27-34-48	30-37-53	32-40-57

NC Correction Factors for Various Lengths

Length (ft.)	2	4	6	8	9	10	15
Supply	-3	0	+2	+3	+4	+5	+8
Return	0	+3	+5	+6	+7	+8	+11

Throw Correction Factors for Various lengths

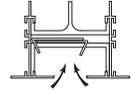
Length (ft.)	2	4	6	8	10	12
Multiplier	0.70	1.00	1.25	1.40	1.55	1.70

Performance Notes:

- Data is based upon pressurized plenum application (non ducted) with no plenum effect for pressure or sound. Plenums should be sized to achieve equal velocity along the slot length. Keep duct inlet velocities below 700 fpm in order to maintain cataloged performance.
- All pressures are in inches w.g..
- Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- Throw data is based on active sections 4 ft. (1219) long. For other lengths, use the correction factor table above.
- NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts, for a 4 ft. section. For other lengths, use the correction factor table above.
- Throw values are based on a 1-way air pattern. For 2-way pattern, throw is determined from the 1 slot data at half the specified air volume.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Performance Data • Return Air Applications

Models: FLH (10, 15, 20, 25 and 30)



Slot Width	Slot Configuration	Airflow, cfm/ft.	20	35	50	65	80	95	110
		Static Pressure	0.014	0.043	0.088	0.149	0.226	0.318	0.426
		NC (Noise Criteria)	<15	<18	26	33	39	45	48
1"	2 Slot	Airflow, cfm/ft.	40	70	100	130	160	190	220
		Static Pressure	0.014	0.043	0.088	0.149	0.226	0.318	0.426
		NC (Noise Criteria)	<15	<19	28	36	42	48	51
1.5"	1 Slot	Airflow, cfm/ft.	25	40	55	70	85	100	115
		Static Pressure	0.012	0.032	0.059	0.098	0.143	0.198	0.261
		NC (Noise Criteria)	<15	<15	20	28	34	39	43
1.5"	2 Slot	Airflow, cfm/ft.	55	80	105	130	155	180	205
		Static Pressure	0.015	0.032	0.054	0.084	0.119	0.160	0.208
		NC (Noise Criteria)	<15	<15	19	29	34	38	42
2"	1 Slot	Airflow, cfm/ft.	25	45	65	85	105	125	145
		Static Pressure	0.008	0.023	0.048	0.083	0.127	0.179	0.241
		NC (Noise Criteria)	<15	<15	22	27	35	41	46
2"	2 Slot	Airflow, cfm/ft.	45	85	125	165	205	245	285
		Static Pressure	0.002	0.006	0.012	0.021	0.033	0.046	0.063
		NC (Noise Criteria)	<15	<15	22	29	37	43	48
2.5"	1 Slot	Airflow, cfm/ft.	30	55	80	105	130	155	180
		Static Pressure	0.010	0.034	0.074	0.124	0.190	0.270	0.364
		NC (Noise Criteria)	<15	<15	21	28	33	37	42
2.5"	2 Slot	Airflow, cfm/ft.	60	105	150	195	240	285	330
		Static Pressure	0.010	0.031	0.063	0.107	0.162	0.228	0.306
		NC (Noise Criteria)	<15	<15	24	30	35	40	44
3"	1 Slot	Airflow, cfm/ft.	30	60	90	120	150	180	210
		Static Pressure	0.009	0.036	0.081	0.144	0.226	0.326	0.443
		NC (Noise Criteria)	<15	<15	18	27	33	38	43
3"	2 Slot	Airflow, cfm/ft.	60	120	180	240	300	360	420
		Static Pressure	0.036	0.144	0.326	0.579	0.903	1.301	1.771
		NC (Noise Criteria)	<15	<15	22	30	36	41	46

NC Correction Factors for Various Lengths

Length (ft.)	2	4	6	8	9	10	15
Return	-3	0	+1	+2	+3	+5	+7

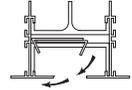
Performance Notes:

1. Data is based upon a ductless return application.
2. All pressures are in inches w.g..
3. NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts, for a 4 ft. (1219) section. For other lengths, use the correction factor table above.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Horizontal High Throw Series
Models: FLH/FTH (10 and 15) • 1 Slot with Nailor Plenum



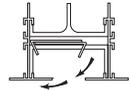
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FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Inlet Dia.	Height	Airflow, cfm							
			25	50	75	100	125	150	175	
1" Slot Width	1 Slot 6" Dia. Inlet	2 Ft.	Airflow, cfm	25	50	75	100	125	150	175
			Total Pressure	0.008	0.034	0.075	0.132	0.206	0.297	0.040
			Static Pressure	0.007	0.030	0.065	0.115	0.180	0.260	0.350
			NC (Noise Criteria)	<15	<15	<15	20	29	36	40
		Throw	1-2-5	3-6-9	5-9-12	7-10-13	8-10-14	9-11-16	10-12-18	
		4 Ft.	Airflow, cfm	40	80	120	160	200	240	280
	Total Pressure		0.009	0.031	0.066	0.117	0.180	0.264	0.352	
	Static Pressure		0.006	0.020	0.042	0.075	0.115	0.170	0.225	
	NC (Noise Criteria)		<15	<15	<15	17	25	32	38	
	Throw		1-2-5	3-6-12	5-9-15	8-12-17	10-12-18	12-15-20	13-16-22	
	5 Ft.		Airflow, cfm	50	100	150	200	250	300	350
		Total Pressure	0.009	0.036	0.079	0.140	0.217	0.316	0.424	
Static Pressure		0.005	0.020	0.042	0.075	0.115	0.170	0.225		
NC (Noise Criteria)		<15	<15	<15	18	26	33	38		
Throw		1-2-7	3-7-13	8-10-17	10-13-19	12-15-20	14-16-22	15-17-24		
1" Slot Width		1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	50	75	100	125	150	175
	Total Pressure			0.029	0.068	0.119	0.188	0.272	0.358	0.471
	Static Pressure			0.028	0.065	0.114	0.180	0.260	0.342	0.450
	NC (Noise Criteria)			<15	<15	20	28	35	41	44
	Throw		2-5-9	5-9-11	7-10-14	8-11-15	9-12-18	10-12-19	11-13-20	
	4 Ft.		Airflow, cfm	70	110	150	190	230	270	310
		Total Pressure	0.016	0.040	0.075	0.120	0.176	0.242	0.319	
		Static Pressure	0.014	0.034	0.063	0.101	0.149	0.205	0.270	
		NC (Noise Criteria)	<15	<15	<15	23	30	36	41	
		Throw	2-4-10	6-8-14	7-11-17	9-13-19	10-15-22	13-16-24	15-18-26	
		5 Ft.	Airflow, cfm	80	130	180	230	280	330	380
	Total Pressure		0.007	0.025	0.056	0.093	0.142	0.206	0.283	
Static Pressure	0.006		0.020	0.044	0.072	0.110	0.160	0.220		
NC (Noise Criteria)	<15		<15	<15	23	29	35	40		
Throw	2-5-11		6-9-15	8-12-18	9-14-20	11-15-22	13-17-24	14-18-26		
1.5" Slot Width	1 Slot 6" Dia. Inlet		2 Ft.	Airflow, cfm	30	60	90	120	150	180
		Total Pressure		0.002	0.038	0.088	0.148	0.246	0.367	0.471
		Static Pressure		0.001	0.032	0.075	0.125	0.210	0.315	0.400
		NC (Noise Criteria)		<15	<15	<15	22	31	39	44
		Throw	1-4-7	4-7-11	6-9-13	8-10-15	10-13-17	11-14-19	12-15-20	
		4 Ft.	Airflow, cfm	70	110	150	190	230	270	310
	Total Pressure		0.021	0.045	0.089	0.148	0.206	0.288	0.376	
	Static Pressure		0.013	0.025	0.052	0.089	0.120	0.170	0.220	
	NC (Noise Criteria)		<15	<15	<15	20	24	30	36	
	Throw		2-5-11	5-8-15	8-12-17	10-13-19	12-15-20	13-16-21	14-17-23	
	5 Ft.		Airflow, cfm	85	135	185	235	285	335	385
		Total Pressure	0.013	0.055	0.101	0.165	0.247	0.342	0.440	
Static Pressure		0.001	0.025	0.045	0.075	0.115	0.160	0.200		
NC (Noise Criteria)		<15	<15	<15	20	26	31	37		
Throw		2-5-11	5-19-15	8-13-18	11-15-21	12-17-23	14-18-25	15-20-27		
1.5" Slot Width		1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	30	60	90	120	150	180
	Total Pressure			0.002	0.032	0.076	0.128	0.222	0.317	0.428
	Static Pressure			0.001	0.030	0.072	0.120	0.210	0.300	0.405
	NC (Noise Criteria)			<15	<15	<15	23	31	40	44
	Throw		1-4-7	4-7-11	7-9-13	8-12-15	10-13-17	11-14-18	12-15-19	
	4 Ft.		Airflow, cfm	70	120	170	220	270	320	370
		Total Pressure	0.015	0.035	0.075	0.125	0.207	0.272	0.380	
		Static Pressure	0.012	0.027	0.060	0.100	0.170	0.220	0.310	
		NC (Noise Criteria)	<15	<15	<15	22	30	36	44	
		Throw	2-5-11	6-9-15	9-13-18	12-15-21	14-17-23	15-19-25	16-20-26	
		5 Ft.	Airflow, cfm	85	145	205	265	325	385	445
	Total Pressure		0.016	0.041	0.084	0.131	0.204	0.276	0.401	
Static Pressure	0.012		0.030	0.062	0.095	0.150	0.200	0.300		
NC (Noise Criteria)	<15		<15	<15	23	30	36	43		
Throw	2-5-11		6-10-16	9-13-20	12-17-23	15-19-25	16-20-27	17-21-29		

For performance table notes, see page A28.

Performance Data • Horizontal High Throw Series
Models: FLH/FTH (20 and 25) • 1 Slot with Nailor Plenum



2" Slot Width	1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	40	80	120	160	200	240	280
			Total Pressure	0.007	0.028	0.065	0.115	0.180	0.259	0.352
			Static Pressure	0.006	0.025	0.057	0.102	0.159	0.229	0.312
			NC (Noise Criteria)	<15	<15	<15	17	26	31	38
		Throw	1-3-8	5-8-13	7-10-15	10-13-17	11-14-19	12-15-22	13-16-23	
		4 Ft.	Airflow, cfm	100	150	200	250	300	350	400
			Total Pressure	0.015	0.034	0.040	0.094	0.136	0.185	0.241
			Static Pressure	0.010	0.022	0.040	0.062	0.089	0.122	0.159
			NC (Noise Criteria)	<15	<15	<15	15	22	30	37
		Throw	3-4-11	6-9-14	8-12-17	9-13-19	12-14-23	14-25-27	15-17-28	
		5 Ft.	Airflow, cfm	125	180	235	290	345	400	455
			Total Pressure	0.180	0.037	0.064	0.097	0.137	0.184	0.238
Static Pressure	0.010		0.021	0.035	0.535	0.076	0.102	0.132		
NC (Noise Criteria)	<15		<15	<15	22	29	34	39		
Throw	3-6-12	8-12-17	9-13-19	12-14-23	14-13-26	16-18-28	17-21-30			
2" Slot Width	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	50	100	150	200	250	300	350
			Total Pressure	0.007	0.028	0.064	0.113	0.177	0.254	0.346
			Static Pressure	0.007	0.027	0.060	0.108	0.168	0.242	0.329
			NC (Noise Criteria)	<15	<15	<15	17	24	29	37
		Throw	2-5-10	5-8-12	6-10-14	8-12-17	9-13-19	10-14-22	13-16-25	
		4 Ft.	Airflow, cfm	100	170	240	310	380	450	520
			Total Pressure	0.008	0.023	0.045	0.076	0.114	0.169	0.213
			Static Pressure	0.065	0.019	0.038	0.063	0.094	0.132	0.176
			NC (Noise Criteria)	<15	<15	<15	20	27	33	39
		Throw	3-6-12	7-11-15	9-13-19	11-15-23	14-17-27	15-19-30	16-21-34	
		5 Ft.	Airflow, cfm	125	205	285	365	445	525	605
			Total Pressure	0.009	0.023	0.045	0.074	0.109	0.152	0.202
Static Pressure	0.007		0.018	0.034	0.056	0.083	0.115	0.153		
NC (Noise Criteria)	<15		<15	<15	23	31	36	41		
Throw	3-7-15	7-11-19	10-14-24	13-16-25	15-19-30	16-21-32	21-25-34			
2.5" Slot Width	1 Slot 10" Oval Inlet	2 Ft.	Airflow, cfm	100	145	190	235	280	325	370
			Total Pressure	0.024	0.050	0.085	0.131	0.186	0.250	0.324
			Static Pressure	0.045	0.045	0.077	0.117	0.167	0.224	0.291
			NC (Noise Criteria)	<15	<15	<15	22	29	35	40
		Throw	4-9-11	6-19-13	8-12-17	10-14-18	12-16-22	13-17-24	14-18-26	
		4 Ft.	Airflow, cfm	140	220	300	380	460	540	620
			Total Pressure	0.015	0.037	0.069	0.111	0.163	0.225	0.296
			Static Pressure	0.010	0.026	0.048	0.077	0.112	0.155	0.204
			NC (Noise Criteria)	<15	<15	<15	25	33	40	45
		Throw	5-8-17	10-14-22	12-16-25	14-17-28	16-19-31	19-22-33	21-24-35	
		5 Ft.	Airflow, cfm	150	240	330	420	510	600	690
			Total Pressure	0.013	0.034	0.063	0.103	0.151	0.209	0.277
Static Pressure	0.002		0.020	0.037	0.060	0.088	0.122	0.162		
NC (Noise Criteria)	<15		<15	<15	23	31	38	43		
Throw	3-8-16	8-12-21	12-15-25	15-18-29	17-21-32	19-23-35	21-27-38			
2.5" Slot Width	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	100	145	190	235	280	325	370
			Total Pressure	0.021	0.043	0.074	0.114	0.161	0.217	0.282
			Static Pressure	0.019	0.041	0.070	0.106	0.151	0.204	0.264
			NC (Noise Criteria)	<15	<15	<15	20	27	33	38
		Throw	4-9-11	6-19-13	8-12-17	10-14-18	12-16-22	13-17-24	14-18-26	
		4 Ft.	Airflow, cfm	140	225	310	395	480	565	650
			Total Pressure	0.012	0.031	0.059	0.096	0.142	0.197	0.261
			Static Pressure	0.009	0.024	0.046	0.075	0.111	0.154	0.204
			NC (Noise Criteria)	<15	<15	15	23	31	38	43
		Throw	5-8-17	10-14-22	12-16-25	14-17-29	17-20-32	20-23-34	22-26-37	
		5 Ft.	Airflow, cfm	150	250	350	450	550	650	750
			Total Pressure	0.010	0.028	0.054	0.090	0.134	0.188	0.250
Static Pressure	0.007		0.019	0.038	0.063	0.094	0.131	0.174		
NC (Noise Criteria)	<15		<15	16	26	34	40	46		
Throw	3-8-16	8-12-21	13-16-26	16-19-31	18-22-33	20-25-37	22-28-39			

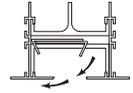
For performance table notes, see page A28.

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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Horizontal High Throw Series

Models: FLH30 and FTH30 • 1 Slot with Nailor Plenum



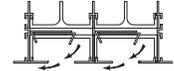
3" Slot Width	1 Slot 10" Oval Inlet	2 Ft.	Airflow, cfm	125	170	215	260	305	350	395
			Total Pressure	0.030	0.056	0.0894	0.131	0.180	0.237	0.302
			Static Pressure	0.027	0.049	0.078	0.115	0.158	0.208	0.265
			NC (Noise Criteria)	<15	<15	<15	24	29	35	40
			Throw	7-11-16	9-13-19	11-15-21	13-17-23	15-18-25	16-19-28	17-20-31
			Airflow, cfm	200	275	350	425	500	575	650
			Total Pressure	0.027	0.050	0.081	0.120	0.166	0.220	0.281
			Static Pressure	0.017	0.032	0.052	0.076	0.106	0.140	0.179
			NC (Noise Criteria)	<15	<15	18	22	28	34	40
			Throw	8-13-20	10-15-24	15-19-27	17-21-30	18-23-32	20-24-35	21-26-37
			Airflow, cfm	220	310	400	490	580	670	760
			Total Pressure	0.025	0.040	0.082	0.123	0.172	0.230	0.296
			Static Pressure	0.013	0.026	0.043	0.065	0.091	0.122	0.157
			NC (Noise Criteria)	<15	<15	16	24	32	39	45
			Throw	8-12-21	12-17-25	15-20-29	18-23-32	20-24-35	21-26-37	23-28-40
3" Slot Width	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	125	170	215	260	305	350	395
			Total Pressure	0.029	0.053	0.085	0.124	0.170	0.224	0.286
			Static Pressure	0.026	0.049	0.078	0.115	0.158	0.208	0.265
			NC (Noise Criteria)	<15	<15	<15	18	25	31	36
			Throw	7-11-16	9-13-19	11-15-21	13-17-23	15-18-25	16-19-28	17-20-31
		4 Ft.	Airflow, cfm	200	290	380	470	560	650	740
			Total Pressure	0.022	0.047	0.081	0.123	0.175	0.236	0.306
			Static Pressure	0.017	0.036	0.061	0.094	0.133	0.179	0.232
			NC (Noise Criteria)	<15	<15	<15	22	29	36	41
			Throw	8-13-20	11-16-24	15-20-28	17-22-31	20-24-34	21-26-37	23-28-40
		5 Ft.	Airflow, cfm	220	330	440	550	660	770	880
			Total Pressure	0.020	0.044	0.079	0.123	0.177	0.241	0.315
			Static Pressure	0.013	0.030	0.053	0.082	0.118	0.161	0.210
			NC (Noise Criteria)	<15	<15	19	26	32	39	43
			Throw	8-12-21	11-14-26	14-16-30	17-20-34	20-25-37	22-27-39	24-29-42

Performance Notes:

1. Data is based upon FlowLine™ with Nailor engineered plenum (uninsulated) as a complete assembly.
2. All pressures are in inches w.g..
3. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
4. NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts.
5. Throw values are based on a 1-way air pattern. For 2-way pattern, throw is determined from the 1 slot data at half the specified air volume.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Horizontal High Throw Series
Models: FLH/FTH (10 and 15) • 2 Slot with Nailor Plenum

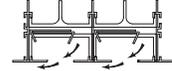


1" Slot Width	2 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	80	120	160	200	240	280	320
			Total Pressure	0.016	0.036	0.064	0.101	0.145	0.198	0.258
			Static Pressure	0.018	0.041	0.072	0.080	0.115	0.157	0.205
			NC (Noise Criteria)	<15	<15	<15	23	29	35	40
			Throw	3-6-12	6-10-16	9-13-18	11-14-20	13-16-22	14-17-23	15-18-25
		4 Ft.	Airflow, cfm	160	230	300	370	440	510	580
			Total Pressure	0.025	0.053	0.091	0.138	0.196	0.263	0.340
			Static Pressure	0.013	0.026	0.045	0.068	0.097	0.130	0.168
			NC (Noise Criteria)	<15	<15	17	24	31	36	41
			Throw	5-8-17	8-12-21	10-16-24	13-18-26	16-20-30	17-22-32	18-24-34
		5 Ft.	Airflow, cfm	200	280	360	440	520	600	680
			Total Pressure	0.033	0.065	0.108	0.161	0.225	0.300	0.385
			Static Pressure	0.013	0.025	0.041	0.062	0.087	0.115	0.148
			NC (Noise Criteria)	<15	<15	19	26	32	37	42
			Throw	5-10-20	9-14-24	12-17-26	15-20-30	17-22-33	19-24-35	22-26-38
1" Slot Width	2 Slot 10" Dia. Inlet	2 Ft.	Airflow, cfm	80	130	180	230	280	330	380
			Total Pressure	0.014	0.038	0.073	0.119	0.176	0.244	0.324
			Static Pressure	0.013	0.034	0.065	0.106	0.157	0.218	0.289
			NC (Noise Criteria)	<15	<15	19	28	35	41	47
			Throw	3-6-13	7-11-16	10-14-19	12-15-22	13-17-24	14-18-26	15-19-28
		4 Ft.	Airflow, cfm	160	240	320	400	480	560	640
			Total Pressure	0.019	0.043	0.076	0.118	0.170	0.232	0.303
			Static Pressure	0.013	0.029	0.051	0.080	0.115	0.157	0.205
			NC (Noise Criteria)	<15	<15	18	26	33	39	44
			Throw	4-9-18	9-14-22	12-28-26	15-20-29	17-22-32	20-24-34	19-25-35
		5 Ft.	Airflow, cfm	200	295	390	485	580	675	770
			Total Pressure	0.022	0.048	0.085	0.132	0.189	0.256	0.333
			Static Pressure	0.013	0.028	0.049	0.075	0.108	0.146	0.190
			NC (Noise Criteria)	<15	<15	20	28	34	40	45
			Throw	5-19-19	10-14-24	13-19-27	17-22-32	20-24-35	21-25-38	22-27-39
1.5" Slot Width	2 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	120	160	200	240	280	320	360
			Total Pressure	0.036	0.064	0.101	0.145	0.198	0.258	0.327
			Static Pressure	0.029	0.051	0.080	0.115	0.157	0.205	0.259
			NC (Noise Criteria)	<15	<15	19	26	32	37	41
			Throw	5-19-16	8-12-18	11-12-18	13-16-21	14-17-24	15-18-26	15-19-27
		4 Ft.	Airflow, cfm	240	310	380	450	520	590	660
			Total Pressure	0.058	0.097	0.146	0.205	0.274	0.352	0.441
			Static Pressure	0.029	0.048	0.072	0.101	0.135	0.174	0.218
			NC (Noise Criteria)	<15	<15	21	27	33	37	42
			Throw	9-14-22	12-17-25	14-20-28	16-22-31	17-23-33	19-25-35	21-26-37
		5 Ft.	Airflow, cfm	300	370	440	510	580	650	720
			Total Pressure	0.075	0.114	0.161	0.217	0.281	0.352	0.432
			Static Pressure	0.029	0.044	0.062	0.083	0.108	0.135	0.166
			NC (Noise Criteria)	<15	<15	22	27	32	36	40
			Throw	10-15-25	13-19-28	15-21-30	16-22-32	18-23-33	19-24-34	21-27-38
1.5" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	Airflow, cfm	120	170	220	270	320	370	420
			Total Pressure	0.031	0.062	0.103	0.156	0.219	0.293	0.377
			Static Pressure	0.029	0.058	0.097	0.146	0.205	0.274	0.353
			NC (Noise Criteria)	<15	<15	21	29	35	40	45
			Throw	5-9-16	9-13-19	12-14-21	14-16-24	15-18-26	15-19-28	17-21-29
		4 Ft.	Airflow, cfm	240	320	400	480	560	640	720
			Total Pressure	0.037	0.065	0.102	0.146	0.199	0.260	0.329
			Static Pressure	0.029	0.051	0.080	0.115	0.157	0.205	0.259
			NC (Noise Criteria)	<15	<15	22	26	32	37	41
			Throw	9-14-22	12-18-26	15-20-29	17-22-32	18-24-33	20-26-36	22-27-39
		5 Ft.	Airflow, cfm	300	400	500	600	700	800	900
			Total Pressure	0.041	0.073	0.114	0.163	0.222	0.291	0.368
			Static Pressure	0.029	0.051	0.080	0.115	0.157	0.205	0.259
			NC (Noise Criteria)	<15	<15	23	30	35	40	45
			Throw	10-15-25	14-20-29	16-22-32	19-24-35	22-27-38	23-28-41	24-30-43

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FLOWLINE™ LINEAR DIFFUSERS

For performance table notes, see page A31.

Performance Data • Horizontal High Throw Series
Models: FLH/FTH (20 and 25) • 2 Slot with Nailor Plenum



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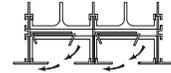
FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Inlet Dia.	Height	Performance Data																
			Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw							
2" Slot Width	2 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	120	165	210	255	300	345	390	Airflow, cfm	240	300	360	420	480	540	600	
			Total Pressure	0.023	0.043	0.069	0.101	0.141	0.186	0.238	Total Pressure	0.051	0.079	0.114	0.156	0.204	0.258	0.318	
			Static Pressure	0.015	0.029	0.047	0.068	0.095	0.125	0.160	Static Pressure	0.021	0.034	0.048	0.066	0.086	0.108	0.134	
			NC (Noise Criteria)	<15	<15	16	24	29	34	38	NC (Noise Criteria)	<15	17	23	29	34	39	43	
			Throw	5-8-14	7-11-16	9-14-19	11-14-21	13-16-23	14-17-24	14-18-25	Throw	6-11-20	9-14-23	11-16-24	13-19-26	14-20-29	16-22-30	18-23-32	
		5 Ft.	Airflow, cfm	260	325	390	455	520	585	650	Airflow, cfm	260	325	390	455	520	585	650	
	Total Pressure	0.053	0.082	0.118	0.161	0.211	0.267	0.329	Total Pressure	0.053	0.082	0.118	0.161	0.211	0.267	0.329			
	Static Pressure	0.018	0.028	0.040	0.055	0.072	0.092	0.113	Static Pressure	0.018	0.028	0.040	0.055	0.072	0.092	0.113			
	NC (Noise Criteria)	<15	16	22	29	34	38	42	NC (Noise Criteria)	<15	16	22	29	34	38	42			
	Throw	5-11-21	8-14-23	11-16-25	13-18-28	14-21-30	16-23-32	17-23-33	Throw	5-11-21	8-14-23	11-16-25	13-18-28	14-21-30	16-23-32	17-23-33			
	2" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	Airflow, cfm	120	195	270	345	420	495	570	Airflow, cfm	240	330	420	510	600	690	780
				Total Pressure	0.009	0.024	0.046	0.075	0.111	0.155	0.205	Total Pressure	0.019	0.037	0.060	0.088	0.122	0.161	0.206
				Static Pressure	0.007	0.020	0.039	0.063	0.094	0.130	0.172	Static Pressure	0.013	0.026	0.042	0.062	0.086	0.113	0.145
				NC (Noise Criteria)	<15	<15	<15	22	28	35	41	NC (Noise Criteria)	<15	<15	17	24	30	35	41
				Throw	5-8-14	8-13-18	12-15-22	14-17-24	15-19-26	16-21-29	18-20-31	Throw	6-11-20	10-15-23	13-19-26	15-21-29	18-23-32	20-24-34	21-25-36
4 Ft.			Airflow, cfm	240	330	420	510	600	690	780	Airflow, cfm	280	380	480	580	680	780	880	
Total Pressure		0.019	0.037	0.060	0.088	0.122	0.161	0.206	Total Pressure	0.022	0.040	0.065	0.094	0.130	0.172	0.218			
Static Pressure		0.013	0.026	0.042	0.062	0.086	0.113	0.145	Static Pressure	0.014	0.026	0.041	0.060	0.083	0.110	0.140			
NC (Noise Criteria)		<15	<15	17	24	30	35	41	NC (Noise Criteria)	<15	<15	18	25	31	36	41			
Throw		6-11-20	10-15-23	13-19-26	15-21-29	18-23-32	20-24-34	21-25-36	Throw	5-12-22	10-15-25	13-20-29	15-22-32	18-24-34	21-25-36	23-27-39			
2.5" Slot Width		2 Slot 10" Dia. Inlet	2 Ft.	Airflow, cfm	80	160	240	320	400	480	560	Airflow, cfm	160	280	400	520	640	760	880
				Total Pressure	0.005	0.019	0.043	0.078	0.122	0.175	0.238	Total Pressure	0.011	0.034	0.070	0.118	0.178	0.251	0.336
				Static Pressure	0.003	0.014	0.032	0.057	0.088	0.127	0.173	Static Pressure	0.005	0.018	0.036	0.061	0.092	0.130	0.174
				NC (Noise Criteria)	<15	<15	<15	18	27	35	41	NC (Noise Criteria)	<15	<15	<15	22	31	38	44
				Throw	2-4-10	6-10-16	10-14-20	13-16-23	15-18-26	16-20-29	18-22-31	Throw	3-15-14	7-12-22	12-17-26	15-21-30	18-23-32	21-25-36	23-27-39
	4 Ft.		Airflow, cfm	160	280	400	520	640	760	880	Airflow, cfm	200	335	470	605	740	875	1010	
	Total Pressure	0.011	0.034	0.070	0.118	0.178	0.251	0.336	Total Pressure	0.014	0.040	0.079	0.130	0.194	0.271	0.361			
	Static Pressure	0.005	0.018	0.036	0.061	0.092	0.130	0.174	Static Pressure	0.005	0.016	0.032	0.054	0.079	0.110	0.147			
	NC (Noise Criteria)	<15	<15	<15	22	31	38	44	NC (Noise Criteria)	<15	<15	<15	23	31	38	44			
	Throw	3-15-14	7-12-22	12-17-26	15-21-30	18-23-32	21-25-36	23-27-39	Throw	3-5-15	7-13-23	12-18-28	15-23-32	19-25-35	23-27-29	23-29-41			
	2.5" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	Airflow, cfm	80	170	260	350	440	530	620	Airflow, cfm	160	295	430	595	700	835	970
				Total Pressure	0.003	0.015	0.034	0.061	0.097	0.140	0.192	Total Pressure	0.007	0.024	0.051	0.088	0.136	0.193	0.260
				Static Pressure	0.002	0.012	0.027	0.049	0.077	0.112	0.153	Static Pressure	0.004	0.016	0.033	0.056	0.086	0.122	0.165
				NC (Noise Criteria)	<15	<15	<15	17	27	34	41	NC (Noise Criteria)	<15	<15	<15	21	29	37	43
				Throw	2-4-10	7-10-17	11-14-21	14-17-24	15-19-27	17-21-31	19-23-32	Throw	3-5-14	8-13-23	13-19-27	16-22-31	20-24-34	22-26-38	23-29-41
4 Ft.			Airflow, cfm	160	295	430	595	700	835	970	Airflow, cfm	200	350	500	650	800	950	1100	
Total Pressure		0.007	0.024	0.051	0.088	0.136	0.193	0.260	Total Pressure	0.010	0.029	0.059	0.100	0.151	0.212	0.284			
Static Pressure		0.004	0.016	0.033	0.056	0.086	0.122	0.165	Static Pressure	0.005	0.017	0.033	0.057	0.086	0.121	0.162			
NC (Noise Criteria)		<15	<15	<15	21	29	37	43	NC (Noise Criteria)	<15	<15	<15	21	29	37	43			
Throw		3-5-14	8-13-23	13-19-27	16-22-31	20-24-34	22-26-38	23-29-41	Throw	3-5-15	8-14-24	13-19-29	17-23-33	21-26-37	23-28-40	25-31-43			

For performance table notes, see page A31.

Performance Data • Horizontal High Throw Series

Models: FLH30 and FTH30 • 2 Slot with Nailor Plenum



3" Slot Width	2 Slot 10" Dia. Inlet	2 Ft.	Airflow, cfm	80	180	280	380	480	580	680
			Total Pressure	0.004	0.022	0.053	0.097	0.155	0.226	0.311
Static Pressure	0.003	0.015	0.036	0.067	0.106	0.156	0.214			
NC (Noise Criteria)	<15	<15	<15	17	28	36	43			
Throw	1-3-9	6-10-17	11-15-22	14-18-25	16-20-29	18-22-32	20-24-34			
3" Slot Width	2 Slot 10" Dia. Inlet	4 Ft.	Airflow, cfm	150	300	450	600	750	900	1050
			Total Pressure	0.009	0.035	0.080	0.143	0.222	0.321	0.436
Static Pressure	0.004	0.016	0.038	0.067	0.104	0.151	0.205			
NC (Noise Criteria)	<15	<15	<15	19	29	38	45			
Throw	2-4-12	6-12-23	12-18-28	16-23-32	20-25-35	23-28-39	24-30-42			
3" Slot Width	2 Slot 10" Dia. Inlet	5 Ft.	Airflow, cfm	180	350	520	690	860	1030	1200
			Total Pressure	0.011	0.042	0.092	0.162	0.251	0.360	0.489
Static Pressure	0.004	0.016	0.035	0.062	0.096	0.138	0.186			
NC (Noise Criteria)	<15	<15	<15	19	29	38	45			
Throw	2-4-13	6-13-24	13-19-30	16-24-34	21-27-38	24-30-41	26-32-45			
3" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	Airflow, cfm	80	180	280	380	480	580	680
			Total Pressure	0.004	0.017	0.042	0.077	0.124	0.180	0.248
Static Pressure	0.003	0.014	0.034	0.063	0.100	0.146	0.201			
NC (Noise Criteria)	<15	<15	<15	<15	23	32	39			
Throw	1-3-9	6-10-17	11-15-22	14-18-25	16-20-29	18-22-32	20-24-34			
3" Slot Width	2 Slot 12" Dia. Inlet	4 Ft.	Airflow, cfm	150	310	470	630	790	950	1110
			Total Pressure	0.006	0.024	0.056	0.100	0.156	0.226	0.309
Static Pressure	0.003	0.014	0.033	0.059	0.093	0.135	0.184			
NC (Noise Criteria)	<15	<15	<15	23	29	35	42			
Throw	2-4-12	7-13-23	13-19-28	17-23-32	21-26-36	23-28-40	25-31-43			
3" Slot Width	2 Slot 12" Dia. Inlet	5 Ft.	Airflow, cfm	180	360	540	720	900	1080	1260
			Total Pressure	0.007	0.027	0.060	0.108	0.169	0.244	0.331
Static Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.170			
NC (Noise Criteria)	<15	<15	16	24	30	35	42			
Throw	2-4-13	6-13-24	13-19-30	17-24-35	22-28-39	24-30-42	26-32-46			

Performance Notes:

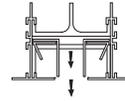
1. Data is based upon FlowLine™ with Nailor engineered plenum (uninsulated) as a complete assembly.
2. All pressures are in inches w.g..
3. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
4. NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts.
5. Throw values are based on a 1-way air pattern. For 2-way pattern, throw is determined from the 1 slot data at half the specified air volume.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Vertical Jet Throw Series

Models: FLV (10, 15, 20, 25 and 30) • Continuous Pressurized Plenum



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FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Slots	Airflow, cfm/ft.	20	40	60	80	100	120	140
		Static Pressure	0.005	0.018	0.041	0.074	0.114	0.164	0.223
1"	1 Slot	NC (Noise Criteria)	-	-	<15	20	24	30	35
		Throw	1-3-10	4-10-21	10-15-29	14-21-33	18-26-37	21-19-41	24-31-44
		Airflow, cfm/ft.	40	85	130	175	220	265	310
2"	2 Slot	Static Pressure	0.005	0.024	0.056	0.102	0.161	0.234	0.320
		NC (Noise Criteria)	-	<15	20	27	32	37	42
		Throw	2-4-17	9-18-32	19-28-40	25-32-45	30-36-51	32-40-56	35-43-61
1.5"	1 Slot	Airflow, cfm/ft.	30	60	90	120	150	180	210
		Static Pressure	0.005	0.020	0.045	0.080	0.125	0.180	0.245
		NC (Noise Criteria)	-	-	<15	20	26	32	37
2"	2 Slot	Throw	1-3-12	6-12-24	12-19-34	17-24-40	21-31-44	24-34-48	29-36-52
		Airflow, cfm/ft.	60	120	180	240	300	360	420
		Static Pressure	0.006	0.023	0.052	0.093	0.145	0.209	0.285
2"	2 Slot	NC (Noise Criteria)	-	<15	16	24	31	37	43
		Throw	2-6-20	9-20-36	20-31-44	28-36-51	33-41-57	36-44-63	39-47-67
		Airflow, cfm/ft.	35	75	115	155	195	235	275
2"	1 Slot	Static Pressure	0.004	0.019	0.044	0.080	0.126	0.183	0.251
		NC (Noise Criteria)	<15	15	21	25	29	34	39
		Throw	1-2-8	4-9-20	9-15-29	14-21-33	18-26-37	21-29-41	25-31-44
2"	2 Slot	Airflow, cfm/ft.	70	150	230	310	390	470	550
		Static Pressure	0.005	0.022	0.051	0.092	0.146	0.212	0.291
		NC (Noise Criteria)	<15	19	25	29	34	39	44
2.5"	1 Slot	Throw	2-3-13	0.7-14-30	15-26-37	23-31-43	28-34-18	31-37-54	33-41-58
		Airflow, cfm/ft.	40	95	150	205	260	315	370
		Static Pressure	0.004	0.020	0.050	0.094	0.151	0.222	0.306
2.5"	2 Slot	NC (Noise Criteria)	<15	<15	16	24	29	35	48
		Throw	1-2-7	4-10-22	11-18-31	16-25-37	20-30-42	25-32-42	29-36-50
		Airflow, cfm/ft.	80	190	300	410	520	630	740
2.5"	2 Slot	Static Pressure	0.004	0.023	0.058	0.108	0.174	0.256	0.353
		NC (Noise Criteria)	<15	<15	20	26	35	41	46
		Throw	1-3-11	7-16-33	18-29-42	26-34-48	31-38-54	35-43-60	37-46-65
3"	1 Slot	Airflow, cfm/ft.	50	115	180	245	310	375	440
		Static Pressure	0.004	0.021	0.052	0.097	0.155	0.226	0.312
		NC (Noise Criteria)	<15	<15	16	26	32	37	42
3"	2 Slot	Throw	1-2-8	5-11-25	12-20-34	17-26-40	22-31-45	26-35-49	31-37-54
		Airflow, cfm/ft.	100	230	360	490	620	750	880
		Static Pressure	0.005	0.025	0.060	0.112	0.179	0.261	0.360
3"	2 Slot	NC (Noise Criteria)	<15	<15	21	29	36	41	45
		Throw	2-3-13	8-17-36	19-31-44	29-37-52	33-41-58	37-45-64	40-49-70

NC Correction Factors for Various Lengths

Length (ft.)	2	4	6	8	9	10	15
Supply	-3	0	+2	+3	+4	+5	+8
Return	0	+3	+5	+6	+7	+8	+11

Throw Correction Factors for Various lengths

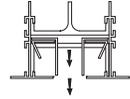
Length (ft.)	2	4	6	8	10	12
Multiplier	0.80	1.00	1.20	1.30	1.40	1.50

Performance Notes:

- Data is based upon pressurized plenum application (non ducted) with no plenum effect for pressure or sound. Plenums should be sized to achieve equal velocity along the slot length. Keep duct inlet velocities below 700 fpm in order to maintain cataloged performance.
- All pressures are in inches w.g..
- Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- Throw data is based on active sections 4 ft. (1219) long. For other lengths, use the correction factor table above.
- Throw values are based on pattern controller set 100% open.
- NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts, for a 4 ft. section. For other lengths, use the correction factor table above.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Performance Data • Vertical Jet Throw Series

Models: FLV/FTV (10 and 15) • 1 Slot with Nailor Plenum



1" Slot Width	1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.010	0.033	0.073	0.127	0.197	0.281	0.381
			Static Pressure	0.007	0.029	0.062	0.109	0.168	0.241	0.325
			NC (Noise Criteria)	<15	<15	17	26	33	39	44
			Throw	2-3-10	7-9-19	9-14-24	12-19-28	15-22-31	18-24-34	21-26-36
		4 Ft.	Airflow, cfm	100	175	250	325	400	475	550
			Total Pressure	0.018	0.056	0.113	0.190	0.289	0.408	0.547
			Static Pressure	0.013	0.039	0.079	0.133	0.201	0.285	0.381
			NC (Noise Criteria)	<15	<15	20	29	35	41	46
			Throw	2-4-13	6-11-23	11-17-30	14-21-34	18-26-37	21-29-41	24-31-44
		5 Ft.	Airflow, cfm	110	195	280	365	450	535	620
			Total Pressure	0.019	0.060	0.124	0.212	0.322	0.455	0.611
			Static Pressure	0.013	0.040	0.081	0.139	0.211	0.297	0.400
			NC (Noise Criteria)	<15	<15	21	30	36	42	47
			Throw	1-3-12	6-11-22	10-17-31	14-21-35	18-25-39	21-30-42	23-32-45
1" Slot Width	1 Slot 10" Oval Inlet	2 Ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.006	0.022	0.049	0.087	0.134	0.192	0.259
			Static Pressure	0.005	0.020	0.045	0.079	0.122	0.174	0.236
			NC (Noise Criteria)	<15	<15	15	23	30	35	40
			Throw	2-3-10	7-9-19	9-14-24	12-19-28	15-22-31	18-24-34	21-26-36
		4 Ft.	Airflow, cfm	100	180	260	340	420	500	580
			Total Pressure	0.011	0.036	0.075	0.128	0.196	0.278	0.373
			Static Pressure	0.009	0.029	0.060	0.103	0.156	0.221	0.299
			NC (Noise Criteria)	<15	<15	17	24	31	37	42
			Throw	2-4-13	7-12-23	11-17-30	14-22-34	18-28-39	22-30-42	25-32-45
		5 Ft.	Airflow, cfm	110	210	310	410	510	610	710
			Total Pressure	0.011	0.040	0.087	0.152	0.235	0.337	0.456
			Static Pressure	0.009	0.030	0.065	0.114	0.177	0.256	0.342
			NC (Noise Criteria)	<15	<15	17	26	33	39	44
			Throw	1-3-12	6-12-24	12-18-32	15-23-37	20-29-41	23-32-45	28-34-48
1" Slot Width	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.004	0.017	0.037	0.064	0.100	0.142	0.194
			Static Pressure	0.004	0.016	0.035	0.061	0.094	0.135	0.182
			NC (Noise Criteria)	<15	<15	<15	20	27	32	37
			Throw	2-3-10	7-9-19	9-14-24	12-19-28	15-22-31	18-24-34	21-26-36
		4 Ft.	Airflow, cfm	100	190	280	370	460	550	640
			Total Pressure	0.009	0.032	0.068	0.120	0.185	0.264	0.358
			Static Pressure	0.007	0.028	0.060	0.105	0.163	0.232	0.315
			NC (Noise Criteria)	<15	<15	18	26	33	38	43
			Throw	2-4-13	7-12-24	12-18-31	17-24-36	20-29-41	24-31-44	28-33-47
		5 Ft.	Airflow, cfm	110	220	330	440	550	660	770
			Total Pressure	0.007	0.016	0.035	0.061	0.094	0.135	0.182
			Static Pressure	0.006	0.026	0.057	0.101	0.157	0.227	0.308
			NC (Noise Criteria)	<15	<15	17	24	31	37	42
			Throw	1-3-12	7-12-25	12-19-33	17-25-39	21-31-43	25-33-47	30-36-51
1.5" Slot Width	1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	60	110	160	210	260	310	360
			Total Pressure	0.009	0.029	0.060	0.104	0.159	0.226	0.305
			Static Pressure	0.006	0.021	0.046	0.079	0.122	0.173	0.234
			NC (Noise Criteria)	<15	<15	<15	20	27	33	38
			Throw	1-2-9	4-9-18	9-12-24	11-17-29	13-20-32	17-24-34	19-26-37
		4 Ft.	Airflow, cfm	120	200	280	360	440	520	600
			Total Pressure	0.020	0.057	0.111	0.184	0.276	0.385	0.513
			Static Pressure	0.013	0.035	0.068	0.113	0.170	0.236	0.316
			NC (Noise Criteria)	<15	<15	19	27	33	39	43
			Throw	1-3-12	3-9-21	8-14-29	12-19-34	15-23-37	18-26-41	21-31-44
		5 Ft.	Airflow, cfm	140	220	300	380	460	540	620
			Total Pressure	0.026	0.062	0.116	0.186	0.272	0.376	0.494
			Static Pressure	0.015	0.035	0.066	0.107	0.156	0.215	0.285
			NC (Noise Criteria)	<15	<15	19	26	32	38	42
			Throw	1-3-12	3-8-20	6-13-28	10-18-34	14-21-37	17-24-41	19-29-43

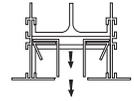
For performance table notes, see page A35.

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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Vertical Jet Throw Series

Models: FLV/FTV (15 and 20) • 1 Slot with Nailor Plenum



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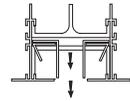
FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Inlet Type	Height	Airflow, cfm							
			60	125	190	255	320	385	450	
1.5" Slot Width	1 Slot 10" Oval Inlet	2 Ft.	Airflow, cfm	60	125	190	255	320	385	450
			Total Pressure	0.005	0.025	0.057	0.103	0.163	0.235	0.321
			Static Pressure	0.005	0.021	0.049	0.089	0.139	0.201	0.275
			NC (Noise Criteria)	<15	<15	<15	23	30	36	41
		Throw	1-2-9	6-10-20	10-14-26	13-20-31	17-24-35	20-28-39	23-30-39	
		4 Ft.	Airflow, cfm	120	240	360	480	600	720	840
	Total Pressure		0.012	0.045	0.102	0.181	0.281	0.406	0.552	
	Static Pressure		0.009	0.032	0.073	0.128	0.201	0.290	0.394	
	NC (Noise Criteria)		<15	<15	19	28	35	41	46	
	5 Ft.	Airflow, cfm	140	280	420	560	700	840	980	
		Total Pressure	0.014	0.054	0.121	0.215	0.336	0.484	0.659	
		Static Pressure	0.009	0.036	0.081	0.144	0.226	0.325	0.443	
NC (Noise Criteria)		<15	<15	21	30	37	43	48		
1.5" Slot Width	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	60	125	190	255	320	385	450
			Total Pressure	0.004	0.019	0.044	0.078	0.123	0.179	0.244
			Static Pressure	0.004	0.017	0.040	0.072	0.112	0.163	0.221
			NC (Noise Criteria)	<15	<15	<15	20	28	34	39
		Throw	1-2-9	6-10-20	10-14-26	13-20-31	17-24-35	20-28-39	23-30-42	
		4 Ft.	Airflow, cfm	120	240	360	480	600	720	840
	Total Pressure		0.007	0.031	0.070	0.123	0.192	0.276	0.376	
	Static Pressure		0.006	0.025	0.055	0.097	0.153	0.220	0.300	
	NC (Noise Criteria)		<15	<15	16	24	31	37	42	
	5 Ft.	Airflow, cfm	140	280	420	560	700	840	980	
		Total Pressure	0.009	0.035	0.079	0.141	0.220	0.318	0.432	
		Static Pressure	0.006	0.027	0.060	0.107	0.168	0.242	0.328	
NC (Noise Criteria)		<15	<15	16	25	32	38	43		
2" Slot Width	1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	70	140	210	280	350	420	490
			Total Pressure	0.010	0.036	0.082	0.146	0.228	0.328	0.447
			Static Pressure	0.006	0.026	0.058	0.103	0.161	0.232	0.316
			NC (Noise Criteria)	<15	<15	16	24	32	38	42
		Throw	1-2-7	3-7-14	7-11-21	9-14-25	12-18-27	14-21-30	17-23-32	
		4 Ft.	Airflow, cfm	140	220	300	380	460	540	620
	Total Pressure		0.025	0.060	0.111	0.178	0.261	0.360	0.474	
	Static Pressure		0.014	0.033	0.062	0.098	0.144	0.200	0.263	
	NC (Noise Criteria)		<15	<15	18	25	31	37	41	
	5 Ft.	Airflow, cfm	150	250	350	450	550	650	750	
		Total Pressure	0.026	0.071	0.138	0.227	0.339	0.474	0.631	
		Static Pressure	0.013	0.036	0.071	0.117	0.174	0.243	0.323	
NC (Noise Criteria)		<15	<15	21	29	35	41	45		
2" Slot Width	1 Slot 10" Oval Inlet	2 Ft.	Airflow, cfm	70	150	230	310	390	470	550
			Total Pressure	0.005	0.027	0.062	0.112	0.179	0.259	0.354
			Static Pressure	0.004	0.021	0.050	0.091	0.144	0.210	0.287
			NC (Noise Criteria)	<15	<15	<15	23	30	36	41
		Throw	1-2-7	3-8-15	8-12-22	10-16-26	14-20-29	16-22-31	19-24-34	
		4 Ft.	Airflow, cfm	140	265	390	515	640	765	890
	Total Pressure		0.013	0.047	0.103	0.179	0.276	0.394	0.534	
	Static Pressure		0.009	0.031	0.068	0.119	0.184	0.263	0.356	
	NC (Noise Criteria)		<15	<15	18	27	34	40	45	
	5 Ft.	Airflow, cfm	150	300	450	600	750	900	1050	
		Total Pressure	0.013	0.054	0.122	0.212	0.331	0.477	0.649	
		Static Pressure	0.009	0.033	0.074	0.132	0.205	0.295	0.401	
NC (Noise Criteria)		<15	<15	20	29	36	42	47		
Throw	1-2-6	3-6-18	6-14-26	11-18-31	14-22-36	18-26-39	20-30-42			

For performance table notes, see page A35.

Performance Data • Vertical Jet Throw Series

Models: FLV/FTV (20, 25 and 30) • 1 Slot with Nailor Plenum



Slot Width	Inlet	Height	Airflow, cfm	70	160	250	340	430	520	610
			2"	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	70	160	250	340
Total Pressure	0.004	0.022				0.055	0.102	0.162	0.236	0.325
Static Pressure	0.004	0.019				0.048	0.089	0.141	0.208	0.286
NC (Noise Criteria)	<15	<15				<15	23	30	37	42
Throw	1-2-7	4-9-16				9-13-23	12-17-27	14-21-30	18-24-33	20-26-36
4 Ft.	Airflow, cfm	140			290	440	590	740	890	1040
	Total Pressure	0.009			0.035	0.082	0.148	0.232	0.335	0.458
	Static Pressure	0.006			0.027	0.061	0.109	0.172	0.249	0.340
	NC (Noise Criteria)	<15			<15	16	26	33	39	44
	Throw	1-2-8		3-9-20	9-14-28	14-20-32	16-25-37	20-28-40	23-31-43	
5 Ft.	Airflow, cfm	150		330	510	690	870	1050	1230	
	Total Pressure	0.009		0.040	0.096	0.175	0.279	0.406	0.557	
	Static Pressure	0.005		0.028	0.067	0.124	0.197	0.289	0.394	
	NC (Noise Criteria)	<15		<15	18	28	35	41	46	
	Throw	1-2-6		3-8-20	8-15-29	14-20-34	17-26-38	20-30-42	25-32-46	
2.5"	1 Slot 12" Oval Inlet	2 Ft.	Airflow, cfm	80	190	300	410	520	630	740
			Total Pressure	0.004	0.025	0.061	0.114	0.185	0.271	0.375
			Static Pressure	0.003	0.020	0.051	0.096	0.155	0.228	0.315
			NC (Noise Criteria)	<15	<15	<15	24	31	38	43
			Throw	1-2-6	4-9-17	9-14-25	12-19-29	15-23-32	19-26-36	22-27-38
		4 Ft.	Airflow, cfm	150	335	520	705	890	1075	1260
			Total Pressure	0.009	0.042	0.100	0.183	0.292	0.426	0.584
			Static Pressure	0.005	0.029	0.071	0.129	0.207	0.301	0.413
			NC (Noise Criteria)	<15	<15	19	28	36	42	47
	Throw		1-2-6	3-8-20	9-15-30	14-21-35	18-26-39	21-30-43	25-32-46	
	5 Ft.	Airflow, cfm	160	370	580	790	1000	1210	1420	
		Total Pressure	0.009	0.044	0.108	0.200	0.320	0.469	0.646	
		Static Pressure	0.005	0.029	0.072	0.133	0.212	0.310	0.428	
		NC (Noise Criteria)	<15	<15	19	29	37	43	48	
		Throw	1-1-5	3-7-20	7-15-31	14-20-36	17-26-40	21-31-44	25-34-48	
3"	1 Slot 14" Oval Inlet	2 Ft.	Airflow, cfm	100	225	350	475	600	725	850
			Total Pressure	0.004	0.022	0.055	0.102	0.162	0.236	0.325
			Static Pressure	0.004	0.020	0.048	0.088	0.141	0.205	0.282
			NC (Noise Criteria)	<15	<15	<15	22	30	36	41
			Throw	1-2-7	4-9-18	9-14-26	13-20-31	16-24-34	20-26-37	23-29-40
		4 Ft.	Airflow, cfm	200	400	600	800	1000	1200	1400
			Total Pressure	0.010	0.036	0.082	0.146	0.228	0.328	0.446
			Static Pressure	0.006	0.027	0.061	0.108	0.169	0.244	0.333
			NC (Noise Criteria)	<15	<15	<15	26	33	39	44
	Throw		1-2-8	3-8-21	8-16-31	14-21-36	18-26-40	21-31-44	25-33-48	
	5 Ft.	Airflow, cfm	240	460	680	900	1120	1340	1560	
		Total Pressure	0.012	0.042	0.091	0.159	0.247	0.354	0.480	
		Static Pressure	0.007	0.030	0.064	0.112	0.174	0.249	0.338	
		NC (Noise Criteria)	<15	<15	18	27	34	49	44	
		Throw	1-2-8	3-8-21	7-16-32	13-21-37	18-26-42	21-31-45	25-35-48	

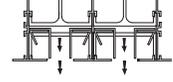
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FLOWLINE™ LINEAR DIFFUSERS

Performance Notes:

- Data is based upon FlowLine™ with Nailor engineered plenum (uninsulated) as a complete assembly.
- All pressures are in inches w.g..
- Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts.
- Throw values are based on pattern controller set 100% open.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

Performance Data • Vertical Jet Throw Series
Models: FLV /FTV (10 and 15) • 2 Slot with Nailor Plenum



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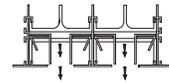
FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Inlet Dia.	Height	Performance Data																																			
			Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw																										
1" Slot Width	2 Slot 8" Dia. Inlet	2 Ft.	80	155	230	305	380	455	530	0.012	0.045	0.098	0.173	0.269	0.385	0.523	0.009	0.032	0.070	0.122	0.189	0.272	0.369	<15	<15	18	27	34	40	45	2-4-13	7-12-23	12-19-29	12-23-33	21-26-36	23-29-40	25-31-43	
			160	260	360	460	560	660	760	0.031	0.083	0.159	0.261	0.386	0.537	0.712	0.017	0.046	0.089	0.144	0.215	0.299	0.396	<15	<15	24	31	38	43	48	2-4-17	6-12-28	10-29-33	17-24-37	20-29-41	23-31-44	26-34-47	
			200	300	400	500	600	700	800	0.045	0.101	0.180	0.280	0.404	0.550	0.718	0.022	0.051	0.092	0.143	0.207	0.281	0.368	<15	<15	25	32	38	43	47	2-4-19	4-11-19	9-19-34	13-23-37	19-29-41	22-32-44	25-34-47	
			80	165	250	335	420	505	590	0.006	0.029	0.067	0.121	0.190	0.275	0.376	0.005	0.024	0.054	0.096	0.151	0.217	0.297	<15	<15	<15	23	31	37	42	2-4-13	8-13-24	13-20-30	18-24-34	22-28-39	24-30-42	26-32-46	
			160	300	440	580	720	860	1000	0.016	0.057	0.122	0.212	0.326	0.464	0.628	0.011	0.036	0.078	0.136	0.210	0.299	0.404	<15	<15	20	29	36	42	47	2-4-17	7-15-30	15-23-36	21-30-42	25-33-46	30-35-51	32-39-55	
		200	350	500	650	800	950	1100	0.022	0.068	0.140	0.238	0.360	0.506	0.679	0.014	0.042	0.085	0.142	0.215	0.304	0.408	<15	<15	22	31	37	43	47	2-4-19	7-14-32	13-23-37	20-31-43	25-43-47	30-36-52	32-40-56		
	1" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	80	170	260	350	440	530	620	0.004	0.021	0.049	0.090	0.142	0.207	0.282	0.004	0.018	0.043	0.077	0.122	0.177	0.242	<15	<15	<15	21	28	34	39	2-4-13	8-13-24	14-21-31	19-25-35	23-28-40	25-31-43	28-33-47
				160	320	480	640	800	960	1120	0.010	0.036	0.082	0.147	0.229	0.330	0.448	0.006	0.026	0.058	0.102	0.159	0.229	0.312	<15	<15	<15	24	32	37	42	2-4-17	8-17-31	17-25-37	23-31-44	29-34-48	31-37-54	33-41-57
				200	375	550	725	900	1075	1250	0.013	0.044	0.095	0.165	0.255	0.363	0.490	0.009	0.029	0.062	0.108	0.167	0.238	0.321	<15	<15	17	26	33	38	43	2-4-19	8-17-33	17-25-40	23-32-45	29-35-51	32-39-55	34-42-59
				120	210	300	390	480	570	660	0.011	0.033	0.068	0.116	0.175	0.248	0.333	0.007	0.024	0.048	0.082	0.124	0.175	0.234	<15	<15	<15	21	27	33	38	2-4-15	6-13-26	12-19-31	17-25-35	21-28-40	24-31-43	26-33-46
			240	340	440	540	640	740	840	0.029	0.059	0.097	0.148	0.207	0.276	0.356	0.016	0.032	0.055	0.082	0.114	0.154	0.198	<15	<15	<15	22	28	32	37	2-6-20	4-10-29	8-17-34	11-23-39	15-26-42	21-31-45	23-34-47	
			260	365	470	575	680	785	890	0.031	0.061	0.102	0.152	0.213	0.284	0.365	0.016	0.031	0.052	0.078	0.109	0.146	0.187	<15	<15	<15	22	28	32	36	2-4-17	3-8-28	6-13-35	9-20-39	12-25-42	17-30-45	21-33-47	

For performance table notes, see page A38.

Performance Data • Vertical Jet Throw Series

Models: FLV/FTV (15 and 20) • 2 Slot with Nailor Plenum



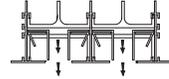
Slot Width	Inlet Dia.	Height	Performance Data																	
			Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw								
1.5" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	Airflow, cfm	120	230	340	450	560	670	780	Airflow, cfm	240	390	540	690	840	990	1140		
			Total Pressure	0.006	0.025	0.054	0.094	0.146	0.209	0.284	Total Pressure	0.016	0.043	0.082	0.134	0.199	0.276	0.366		
			Static Pressure	0.005	0.019	0.042	0.073	0.112	0.161	0.217	Static Pressure	0.010	0.027	0.050	0.082	0.122	0.170	0.225		
			NC (Noise Criteria)	<15	<15	<15	19	26	32	36	NC (Noise Criteria)	<15	<15	<15	22	28	33	38		
			Throw	2-4-15	8-14-28	14-22-33	19-26-39	24-30-43	26-33-46	29-35-40	Throw	2-6-20	6-13-32	17-25-37	23-31-44	29-34-48	31-37-54	33-41-57		
		4 Ft.	Airflow, cfm	260	425	590	755	920	1085	1250	Airflow, cfm	260	440	620	800	980	1160	1340		
			Total Pressure	0.017	0.046	0.089	0.144	0.215	0.300	0.397	Total Pressure	0.011	0.032	0.063	0.105	0.157	0.220	0.293		
			Static Pressure	0.010	0.027	0.051	0.083	0.124	0.172	0.228	Static Pressure	0.007	0.020	0.041	0.067	0.101	0.141	0.188		
			NC (Noise Criteria)	<15	<15	<15	22	29	34	39	NC (Noise Criteria)	<15	<15	<15	18	24	30	35		
			Throw	2-4-17	4-11-32	9-21-39	15-29-44	22-34-48	26-37-53	31-40-56	Throw	2-4-17	6-12-33	10-23-40	17-30-45	24-35-51	29-39-55	33-42-58		
		1.5" Slot Width	2 Slot 14" Dia. Inlet	2 Ft.	Airflow, cfm	120	240	360	480	600	720	840	Airflow, cfm	240	415	590	765	940	1115	1290
					Total Pressure	0.005	0.018	0.042	0.074	0.116	0.167	0.227	Total Pressure	0.010	0.030	0.060	0.101	0.152	0.214	0.287
					Static Pressure	0.004	0.015	0.034	0.061	0.094	0.136	0.185	Static Pressure	0.006	0.019	0.040	0.066	0.101	0.141	0.189
					NC (Noise Criteria)	<15	<15	<15	<15	23	29	34	NC (Noise Criteria)	<15	<15	<15	18	24	30	35
					Throw	2-4-15	8-15-28	15-23-34	21-28-40	25-31-44	28-34-48	30-36-52	Throw	2-6-20	7-15-33	13-25-40	22-32-45	26-35-51	31-39-55	34-42-55
4 Ft.	Airflow, cfm			260	440	620	800	980	1160	1340	Airflow, cfm	280	390	500	610	720	830	940		
	Total Pressure			0.011	0.032	0.063	0.105	0.157	0.220	0.293	Total Pressure	0.032	0.061	0.101	0.150	0.210	0.278	0.357		
	Static Pressure			0.007	0.020	0.041	0.067	0.101	0.141	0.188	Static Pressure	0.014	0.027	0.045	0.067	0.093	0.128	0.158		
	NC (Noise Criteria)			<15	<15	<15	18	24	30	35	NC (Noise Criteria)	<15	<15	<15	21	27	31	35		
	Throw			2-4-17	6-12-33	10-23-40	17-30-45	24-35-51	29-39-55	33-42-58	Throw	1-3-9	2-4-17	3-7-25	4-10-30	7-14-32	9-20-34	11-23-37		
2" Slot Width	2 Slot 10" Dia. Inlet			2 Ft.	Airflow, cfm	70	140	210	280	350	420	490	Airflow, cfm	140	275	410	545	680	815	950
					Total Pressure	0.003	0.013	0.028	0.050	0.078	0.112	0.154	Total Pressure	0.007	0.028	0.062	0.109	0.170	0.244	0.332
					Static Pressure	0.062	0.009	0.018	0.032	0.051	0.073	0.100	Static Pressure	0.005	0.019	0.044	0.077	0.120	0.172	0.234
					NC (Noise Criteria)	<15	<15	<15	<15	<15	19	24	NC (Noise Criteria)	<15	<15	<15	20	27	33	38
					Throw	0-1-3	1-3-11	3-6-18	5-11-22	8-14-25	11-18-27	14-20-30	Throw	1-3-11	5-11-22	11-17-27	15-22-31	19-25-35	22-27-38	24-27-38
		4 Ft.	Airflow, cfm	250	355	460	565	670	775	880	Airflow, cfm	250	425	600	775	950	1125	1300		
			Total Pressure	0.028	0.057	0.095	0.143	0.201	0.270	0.348	Total Pressure	0.015	0.044	0.088	0.147	0.219	0.308	0.412		
			Static Pressure	0.014	0.028	0.047	0.072	0.101	0.135	0.174	Static Pressure	0.008	0.024	0.049	0.081	0.122	0.171	0.229		
			NC (Noise Criteria)	<15	<15	<15	21	27	31	35	NC (Noise Criteria)	<15	<15	<15	22	29	34	39		
			Throw	1-3-10	3-5-20	4-9-26	6-13-29	9-19-31	11-21-34	14-25-37	Throw	1-3-10	3-8-24	7-14-30	11-21-34	16-26-37	20-29-41	24-31-44		
		5 Ft.	Airflow, cfm	280	390	500	610	720	830	940	Airflow, cfm	280	460	640	820	1000	1180	1360		
			Total Pressure	0.032	0.061	0.101	0.150	0.210	0.278	0.357	Total Pressure	0.017	0.047	0.091	0.149	0.221	0.309	0.410		
			Static Pressure	0.014	0.027	0.045	0.067	0.093	0.128	0.158	Static Pressure	0.008	0.024	0.047	0.076	0.113	0.158	0.210		
			NC (Noise Criteria)	<15	<15	<15	21	27	31	35	NC (Noise Criteria)	<15	<15	<15	22	28	34	38		
			Throw	1-3-9	2-4-17	3-7-25	4-10-30	7-14-32	9-20-34	11-23-37	Throw	1-3-9	3-6-22	5-12-31	9-19-34	13-25-37	18-29-41	22-31-44		
2" Slot Width	2 Slot 12" Dia. Inlet	2 Ft.	Airflow, cfm	140	275	410	545	680	815	950	Airflow, cfm	280	460	640	820	1000	1180	1360		
			Total Pressure	0.007	0.028	0.062	0.109	0.170	0.244	0.332	Total Pressure	0.017	0.047	0.091	0.149	0.221	0.309	0.410		
			Static Pressure	0.005	0.019	0.044	0.077	0.120	0.172	0.234	Static Pressure	0.008	0.024	0.047	0.076	0.113	0.158	0.210		
			NC (Noise Criteria)	<15	<15	<15	20	27	33	38	NC (Noise Criteria)	<15	<15	<15	22	28	34	38		
			Throw	1-3-11	5-11-22	11-17-27	15-22-31	19-25-35	22-27-38	24-27-38	Throw	1-3-9	3-6-22	5-12-31	9-19-34	13-25-37	18-29-41	22-31-44		
		4 Ft.	Airflow, cfm	250	425	600	775	950	1125	1300	Airflow, cfm	280	460	640	820	1000	1180	1360		
			Total Pressure	0.015	0.044	0.088	0.147	0.219	0.308	0.412	Total Pressure	0.017	0.047	0.091	0.149	0.221	0.309	0.410		
			Static Pressure	0.008	0.024	0.049	0.081	0.122	0.171	0.229	Static Pressure	0.008	0.024	0.047	0.076	0.113	0.158	0.210		
			NC (Noise Criteria)	<15	<15	<15	22	29	34	39	NC (Noise Criteria)	<15	<15	<15	22	28	34	38		
			Throw	1-3-10	3-8-24	7-14-30	11-21-34	16-26-37	20-29-41	24-31-44	Throw	1-3-9	3-6-22	5-12-31	9-19-34	13-25-37	18-29-41	22-31-44		
		5 Ft.	Airflow, cfm	280	460	640	820	1000	1180	1360	Airflow, cfm	280	460	640	820	1000	1180	1360		
			Total Pressure	0.017	0.047	0.091	0.149	0.221	0.309	0.410	Total Pressure	0.017	0.047	0.091	0.149	0.221	0.309	0.410		
			Static Pressure	0.008	0.024	0.047	0.076	0.113	0.158	0.210	Static Pressure	0.008	0.024	0.047	0.076	0.113	0.158	0.210		
			NC (Noise Criteria)	<15	<15	<15	22	28	34	38	NC (Noise Criteria)	<15	<15	<15	22	28	34	38		
			Throw	1-3-9	3-6-22	5-12-31	9-19-34	13-25-37	18-29-41	22-31-44	Throw	1-3-9	3-6-22	5-12-31	9-19-34	13-25-37	18-29-41	22-31-44		

For performance table notes, see page A38.

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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Vertical Jet Throw Series

Models: FLV/FTV (20, 25 and 30) • 2 Slot with Nailor Plenum



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FLOWLINE™ LINEAR DIFFUSERS

Slot Width	Inlet	Height	Airflow, cfm	140	280	420	560	700	840	980
			Total Pressure	0.004	0.018	0.041	0.073	0.114	0.165	0.225
Static Pressure	0.003	0.014	0.031	0.055	0.086	0.123	0.168			
NC (Noise Criteria)	<15	<15	<15	<15	21	27	32			
Throw	1-3-11	5-11-22	11-18-27	15-22-31	20-25-36	22-27-39	24-30-42			
2"	2 Slot 14" Dia. Inlet	2 Ft.	Airflow, cfm	250	450	650	850	1050	1250	1450
			Total Pressure	0.010	0.030	0.062	0.106	0.161	0.228	0.307
Static Pressure	0.005	0.018	0.037	0.063	0.096	0.137	0.184			
NC (Noise Criteria)	<15	<15	<15	18	24	30	35			
Throw	1-3-10	3-9-25	8-17-31	13-24-36	20-28-40	23-31-43	26-33-47			
5 Ft.	2 Slot 14" Dia. Inlet	5 Ft.	Airflow, cfm	280	480	680	880	1080	1280	1480
			Total Pressure	0.011	0.030	0.061	0.102	0.153	0.215	0.288
Static Pressure	0.005	0.017	0.034	0.057	0.086	0.120	0.159			
NC (Noise Criteria)	<15	<15	<15	16	23	28	33			
Throw	1-3-10	3-8-28	7-15-37	11-25-42	17-31-46	24-26-50	28-38-54			
2.5"	2 Slot 14" Dia. Inlet	2 Ft.	Airflow, cfm	150	335	520	705	890	1075	1260
			Total Pressure	0.004	0.022	0.054	0.098	0.157	0.229	0.315
Static Pressure	0.003	0.016	0.037	0.070	0.111	0.162	0.223			
NC (Noise Criteria)	<15	<15	<15	18	26	32	37			
Throw	1-3-9	5-11-24	12-20-30	17-25-35	22-27-39	25-31-43	26-32-46			
4 Ft.	2 Slot 14" Dia. Inlet	4 Ft.	Airflow, cfm	300	540	780	1020	1260	1500	1740
			Total Pressure	0.012	0.039	0.080	0.137	0.209	0.295	0.398
Static Pressure	0.006	0.021	0.044	0.076	0.116	0.164	0.220			
NC (Noise Criteria)	<15	<15	<15	21	28	33	38			
Throw	1-3-10	3-9-26	8-17-33	13-25-38	20-30-43	25-32-46	28-35-50			
5 Ft.	2 Slot 14" Dia. Inlet	5 Ft.	Airflow, cfm	350	600	850	1100	1350	1600	1850
			Total Pressure	0.015	0.043	0.087	0.144	0.218	0.306	0.410
Static Pressure	0.007	0.022	0.044	0.074	0.111	0.157	0.210			
NC (Noise Criteria)	<15	<15	<15	22	28	34	38			
Throw	1-3-9	3-7-26	6-14-34	10-23-38	15-29-43	22-33-47	26-36-50			
3"	2 Slot 14" Dia. Inlet	2 Ft.	Airflow, cfm	175	385	595	805	1015	1225	1435
			Total Pressure	0.005	0.026	0.062	0.113	0.181	0.263	0.361
Static Pressure	0.003	0.017	0.042	0.076	0.120	0.175	0.241			
NC (Noise Criteria)	<15	<15	<15	20	27	33	38			
Throw	1-3-9	5-10-25	11-20-31	18-26-37	22-29-41	26-31-44	28-34-18			
4 Ft.	2 Slot 14" Dia. Inlet	4 Ft.	Airflow, cfm	320	580	840	1100	1360	1620	1880
			Total Pressure	0.013	0.042	0.087	0.149	0.227	0.322	0.433
Static Pressure	0.006	0.021	0.045	0.078	0.119	0.168	0.227			
NC (Noise Criteria)	<15	<15	<15	22	27	34	39			
Throw	1-2-9	3-7-26	7-14-34	11-24-39	17-30-43	24-33-47	27-36-51			
5 Ft.	2 Slot 14" Dia. Inlet	5 Ft.	Airflow, cfm	380	645	910	1175	1440	1705	1970
			Total Pressure	0.016	0.045	0.090	0.149	0.224	0.314	0.419
Static Pressure	0.007	0.020	0.041	0.068	0.103	0.144	0.193			
NC (Noise Criteria)	<15	<15	<15	21	28	33	38			
Throw	1-2-9	3-6-23	5-12-34	9-20-39	13-28-43	18-33-47	24-36-50			

Performance Notes:

1. Data is based upon FlowLine™ with Nailor engineered plenum (uninsulated) as a complete assembly.
2. All pressures are in inches w.g..
3. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
4. NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts.
5. Throw values are based on pattern controller set 100% open.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

FM Series

- MODULAR SQUARE CEILING DIFFUSER
- COMPLIMENTS FLOWLINE™ LINEAR DIFFUSER SYSTEM
- ROUND NECK (SUPPLY)

Models:

Supply 1" (25) Slot

FM(I)10 Standard 1⁵/₁₆" (24) or 9¹/₁₆" (14) Flat T-Bar

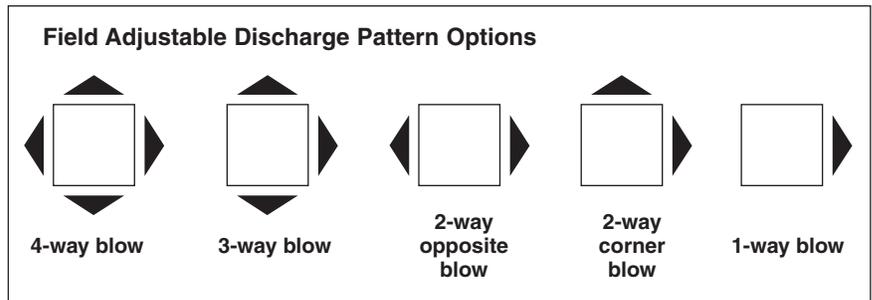
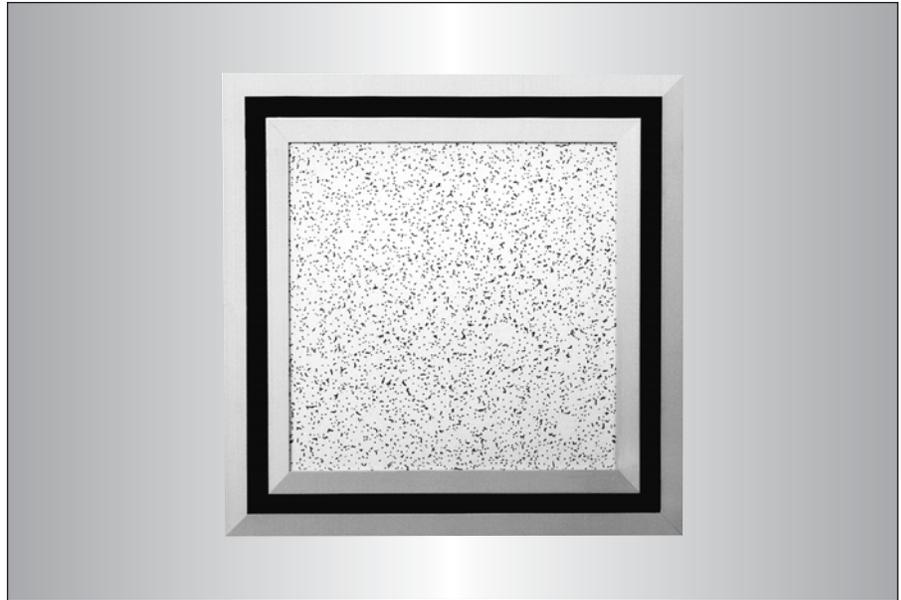
FMB(I)10 Bolt-Slot (Fineline® Type) T-Bar

(I) Adds Internal Insulation.

Return 1" (25) Slot

FMR10 Standard 1⁵/₁₆" (24) or 9¹/₁₆" (14) Flat T-Bar

FMBR10 Bolt-Slot (Fineline® Type) T-Bar



The FM Series modular square ceiling diffusers are ideal for interior spaces and compliment the Nailor FlowLine™ Linear Diffuser system. Designed with the architect in mind, these single slot diffusers provide a high capacity capability with high performance. To fully integrate into the ceiling system, the FM Series diffusers incorporate a field cut center ceiling tile (by others) that matches and blends in with the surrounding ceiling system.

This product is available in a nominal ceiling module size of 24" x 24" (600 x 600) with a 1" (25) slot to suit either imperial or metric exposed grid ceiling systems. The 4-way blow linear slot design utilizes the FlowLine™ Horizontal High Throw adjustable pattern controller, providing a tight air pattern along the ceiling and making it an excellent choice for VAV systems.

STANDARD FEATURES:

- Extruded aluminum construction with corrosion-resistant steel pattern controllers.
- Factory precision welding on all mitered corners.
- Pattern controllers are individually adjustable for horizontal or vertical discharge air patterns.
- Can be field adjusted for one, two, three or four-way blow directional air patterns.
- Adjustable dual pattern controller design permits both dampering and full shut-off without adding blank-offs.
- Supply diffusers have a round neck for flexible or hard duct connection.
- Matching return air units for ductless plenum return applications incorporate a light shield to block out light and prevent see-through.
- Plenum is secured with steel S-clips and is easily removed for installation of a field cut ceiling tile (by others) into the face of the diffuser.
- Standard finish is AW Appliance White baked enamel face with black pattern controllers. Other finishes are available.

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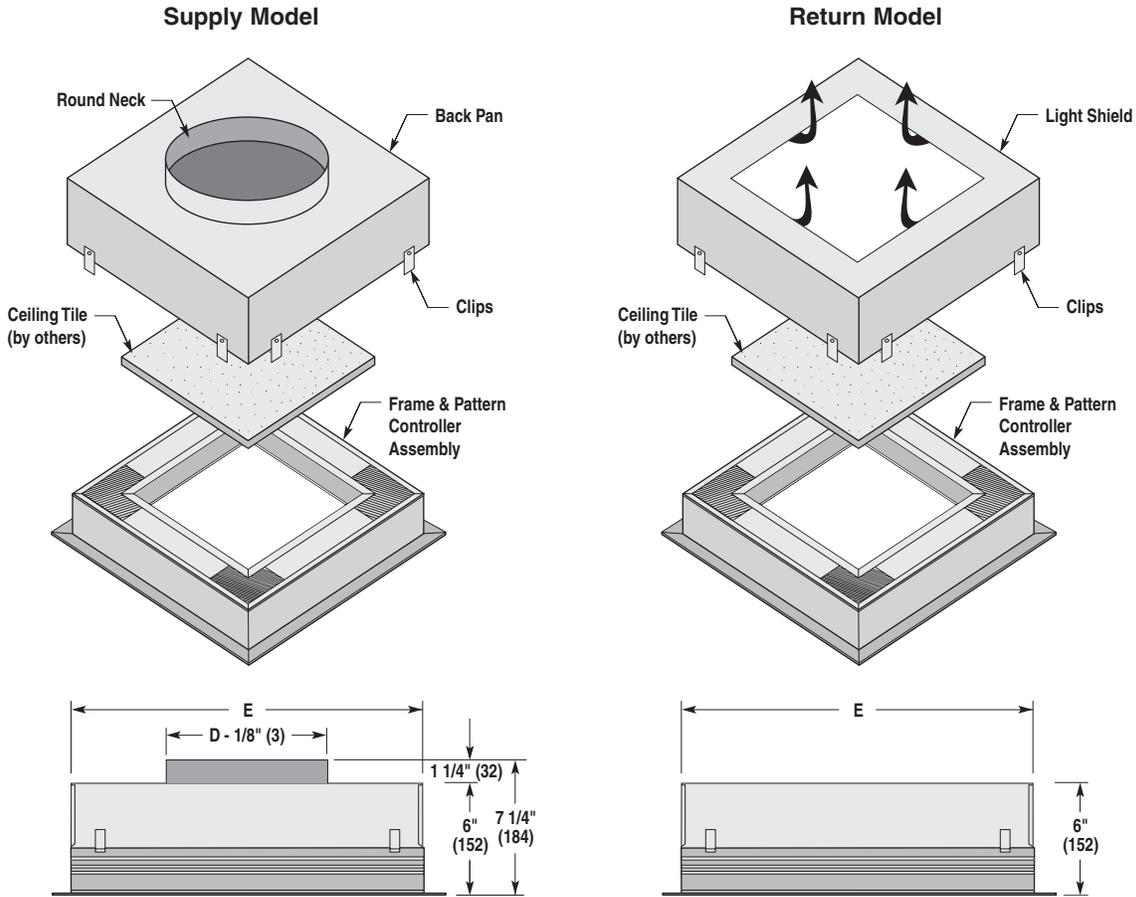
FLOWLINE™ LINEAR DIFFUSERS

FM Series Square Ceiling Diffusers

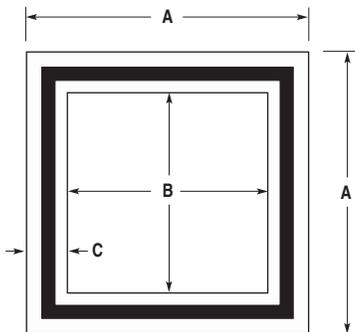
Standard Ceiling Module (CM) Sizes: Imperial 24" x 24" (610 x 610) • Metric 600 x 600mm
(Frame/Border Type AA Illustrated)

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FLOWLINE™ LINEAR DIFFUSERS



Face View



Ceiling Tile Cutting Dimensions

Models	Border Type	Imperial Module 24" x 24" (610 x 610)	Metric Module 600 x 600mm
FM(I)10, FMR10	AA	17 3/16 x 17 3/16 (437 x 437)	427 x 427
FMB(I)10, FMBR10	GA	17 5/8 x 17 5/8 (448 x 448)	438 x 438

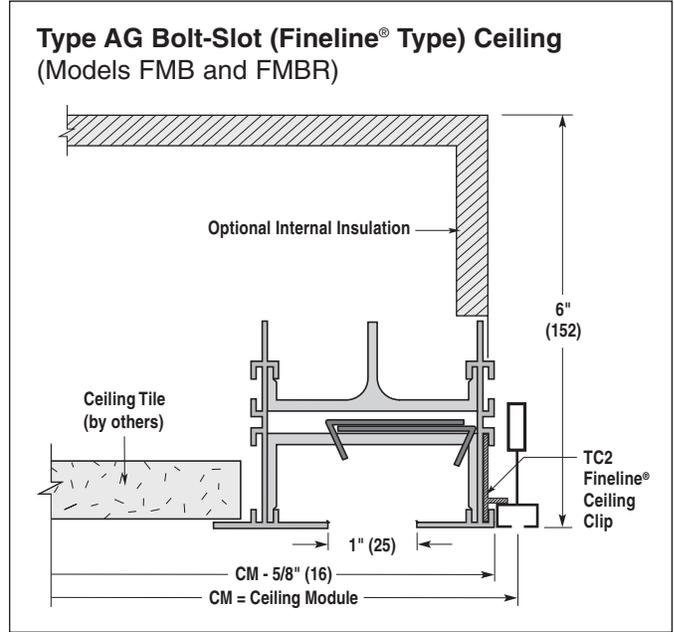
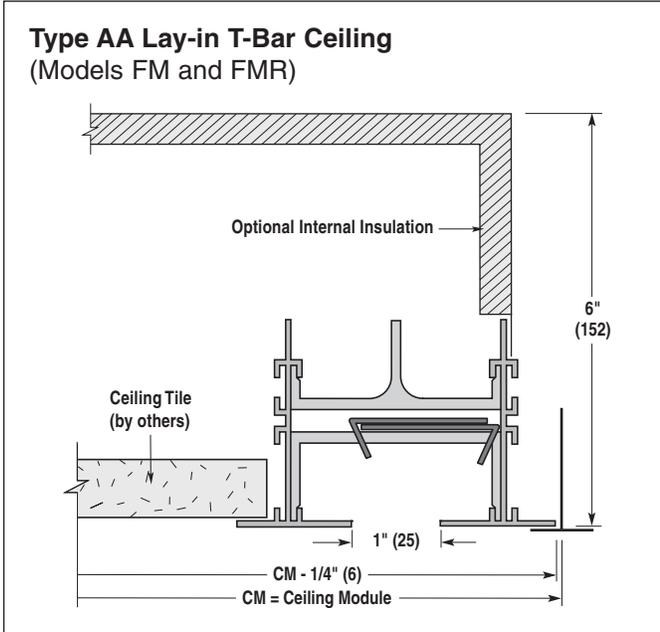
Standard Round Inlet Sizes (Supply Units):

(Nominal D Diameter)
6" (152), 8" (203), 10" (254).

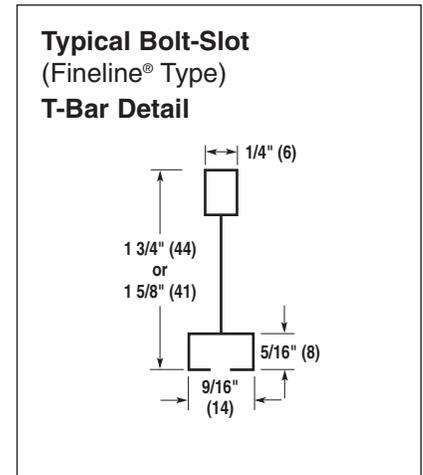
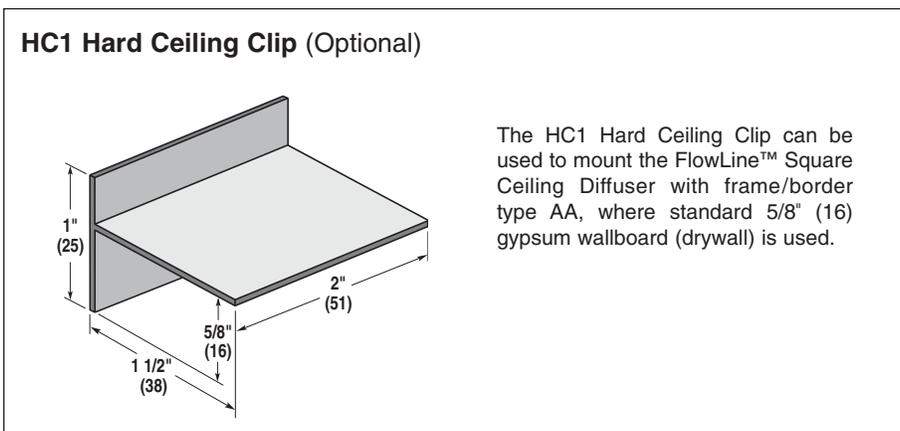
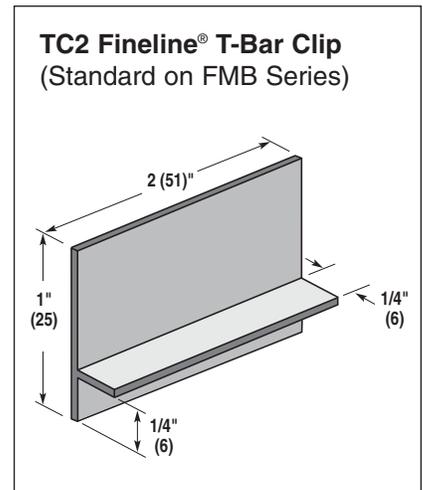
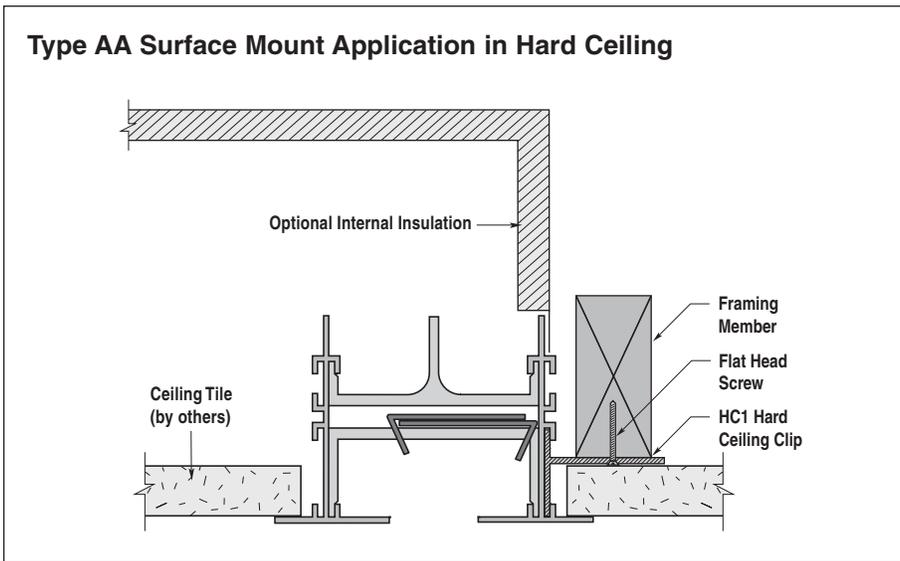
Dimensional Data:

Models	Imperial Module 24" x 24" (610 x 610)				Metric Module 600 x 600mm			
	A	B	C	E	A	B	C	E
FM(I)10, FMR10	23 3/4 (603)	16 5/8 (422)	3 9/16 (90)	22 15/16 (583)	594	413	90	573
FMB(I)10, FMBR10	23 3/8 (594)	17 1/16 (433)	3 5/32 (80)	22 9/16 (573)	584	423	80	584

FM Series Square Ceiling Diffusers • Frame/Border Types



Optional Hanger & Mounting Clips



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FLOWLINE™ LINEAR DIFFUSERS

Performance Data • Modular Square Ceiling Diffusers

Models: FM10 and FMB10

	Inlet Size	Neck Velocity, (fpm)	300	400	500	600	700	800	900	
		Velocity Pressure, (In. w.g.)	0.006	0.010	0.016	0.022	0.031	0.040	0.050	
1" Slot Width	6" Dia.	Airflow, cfm	59	79	98	118	137	157	177	
		Total Pressure	0.015	0.026	0.041	0.059	0.080	0.104	0.132	
		Inlet NC (Noise Criteria)	<15	<15	<15	16	20	24	28	
			Throw	0-1-5	1-2-7	2-4-10	2-5-11	3-6-12	4-7-13	5-8-14
	8" Dia.	Airflow, cfm	105	140	175	209	244	279	314	
		Total Pressure	0.029	0.052	0.081	0.117	0.160	0.209	0.264	
		Inlet NC (Noise Criteria)	<15	18	25	30	35	39	43	
			Throw	1-4-10	2-6-13	5-8-14	6-10-16	7-12-17	8-13-18	10-13-19
	10" Dia.	Airflow, cfm	164	218	273	327	382	436	491	
		Total Pressure	0.050	0.089	0.139	0.201	0.273	0.357	0.452	
		Inlet NC (Noise Criteria)	22	30	37	43	47	51	55	
			Throw	4-7-13	7-11-16	8-12-18	11-13-19	12-14-20	13-16-23	13-17-24

Performance Notes:

- All pressures are in inches w.g..
- Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
- NC (Noise criteria) values are based on 10 dB room absorption, re 10⁻¹² watts.
- Pressure, throw and NC values are based on 4-way air pattern.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

FlowLine™ Modular Square Ceiling Diffusers • FM Series

FM10 - 24 x 24 - 08 - AA - AW - —

MODELS

- Supply - 1" (25) Slot
- Standard T-Bar FM(I)10
- Bolt-Slot T-Bar FMB(I)10

(I) Adds Internal Insulation

- Return - 1" (25) Slot
- Standard T-Bar FMR10
- Bolt-Slot T-Bar FMBR10

CEILING MODULE SIZE

- Imperial (mm) 24 x 24 (610 x 610)
- Metric 600 x 600

PLENUM INLET SIZE

- 6" (152) 06
- 8" (203) 08
- 10" (254) 10

ACCESSORY 1 (Outside mounting hardware)

- None (default) —
- T-Bar Clip * TC1
- Fineline® T-Bar Clip ** TC2

FINISH

- Appliance White AW
- Off-White WH
- Special Custom Color SP

FRAME/BORDER TYPE

- Models FM and FMR (default) AA
- Models FMB and FMBR (default) AG

Notes:

- Mounting clips are not removable once mounted at factory.
- *TC1 T-Bar Clips are optional on FM models, where installation is required in a hard ceiling. Standard FM models are for lay-in flat T-Bar ceilings.
- **TC2 Fineline® T-Bar Clips are supplied as standard on FMB Bolt-Slot models and allow unit to sit flush and level in ceiling grid.

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FLOWLINE™ LINEAR DIFFUSERS

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Continuous FlowLine™ Linear Diffusers • FLH and FLV Series

FLH20 - 96" x 1 Slot - AA - AW - MM - HC1 - HC1 - —			
<p>MODELS</p> <p>Horizontal High Throw FLH Vertical Jet Throw FLV</p> <p>SLOT WIDTH</p> <p>1" (25) 10 1 1/2" (38) 15 2" (51) 20 2 1/2" (64) 25 3" (76) 30</p> <p>NOMINAL LENGTH inches (mm)</p> <p>NO. OF SLOTS</p> <p>One 1 Two 2</p> <p>FRAME/BORDER TYPE</p> <p>Exposed Flange Frame AA Exposed Flange Frame with concealed mtg. brkts. AAC Concealed Tapered Frame BB Concealed Tapered Frame with concealed mtg. brkts. BBC Flangeless Frame GG Flange/Flangeless Frame AG</p> <p>FINISH</p> <p>Appliance White (default) (on frames A and G) AW Off-White WH Aluminum AL Special Custom Color SP Black BK Light Bronze Paint LBP Mill (default on frame B) MI Medium Bronze Paint MBP Prime coat paint PC Dark Bronze Paint DBP</p>	<p>ANGLE CUT *</p> <p>None (default) — One End AC1 Both Ends AC2</p> <p>ACCESSORY 2 (Right hand mounting hardware)</p> <p>None (default) — Hard Ceiling Clip HC1 Wall Clip WC1 T-Bar Clip TC1 Fineline® T-Bar Clip TC2</p> <p>ACCESSORY 1 (Left hand mounting hardware)</p> <p>None (default) — Hard Ceiling Clip HC1 Wall Clip WC1 T-Bar Clip TC1 Fineline® T-Bar Clip TC2</p> <p>END BORDER CONFIGURATION</p> <p>Frame/Border Types AA, AAC, BB and BBC only</p> <p>Mitered Mitered (default) MM Mitered Open MO Mitered Flat Cap MC</p> <p>Frame/Border Types AA, AAC, GG and AG only</p> <p>Flanged Flanged FF Flanged Open FO Flanged Flat Cap FC</p> <p>All Frame/Border Types</p> <p>Open Open OO Open Flat Cap OC Flat Cap Flat Cap CC</p>		

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FLOWLINE™ LINEAR DIFFUSERS

Notes:

1. Maximum single section length is 144" (3658).
2. Border Types BB and BBC (concealed frame) are supplied mill finish (MI). No options on BB(C). Two slot model frame/border BB(C) has AW center tee. All models are supplied with black pattern controllers and interior surfaces.
3. All models except Frame/Border Types AAC and BBC (supplied with concealed mounting brackets) include integral hanger brackets on 24" (610) centers as standard.
4. Hard ceiling clips are shipped in quantities based on 10" (254) spacing, Wall clips on 18" (457) spacing and T-Bar clips on 24" (610) spacing. Left and right hand clips are identical.
5. *Specify AC Angle cut(s) and attach drawing. Angle cuts require an open end border.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

FlowLine™ Linear Diffuser Plenums • FLP Series

FLP10 - 48" x 1 Slot - 08 - AA - —

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FLOWLINE™ LINEAR DIFFUSERS

MODELS

Standard Plenum	FLP
Insulated Plenum	FLPI

SLOT WIDTH

1" (25)	10
1 1/2" (38)	15
2" (51)	20
2 1/2" (64)	25
3" (76)	30

NOMINAL LENGTH

Imperial Sizes

inches (mm)
20, 24, 30, 36, 48, 60
(508, 610, 762, 914, 1219, 1524)

Metric Sizes

mm
500, 600, 750, 900, 1200, 1500

NO. OF SLOTS

One	1
Two	2

ACCESSORIES

None (default)	—
Inlet Damper	ID
External Foil Back Insulation	EX

FLOWLINE™ DIFFUSER FRAME/BORDER TYPE

Exposed Flange Frame	AA
Exposed Flange Frame with concealed mtg. brkts.	AAC
Concealed Tapered Frame	BB
Concealed Tapered Frame with concealed mtg. brkts.	BBC
Flangeless Frame	GG
Flange/Flangeless Frame	AG

PLENUM INLET SIZE

One Slot

6" (152) Round	06
8" (203) Round	08
10" (254) Flat Oval	10
12" (305) Flat Oval	12
14" (356) Flat Oval	14

Two Slot

6" (152) Round	06
8" (203) Round	08
10" (254) Round	10
12" (305) Round	12
14" (356) Round	14

Notes:

1. Plenums are shipped loose as standard for field installation.
2. Plenums for Frame/Border Types AA, BB, GG and AG are for direct attachment to diffuser neck.
3. Plenums for Frame Types AAC and BBC are hemmed for field attachment by use of concealed mounting brackets.

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Lay-in FlowLine™ Linear Diffusers • FT Series

FTH 10 - 48" x 1 Slot - 08 - AA - AW - - - - -

MODELS

Supply:

Horizontal High Throw:

Flat T-Bar FTH(I)

Blot-Slot T-Bar FTBH(I)

Vertical Jet Throw:

Flat T-Bar FTV(I)

Blot-Slot T-Bar FTBV(I)

(I) Adds Internal Insulation

Return:

Flat T-Bar FTHR

Blot-Slot T-Bar FTBHR

SLOT WIDTH

1" (25) 10

1 1/2" (38) 15

2" (51) 20

NOMINAL LENGTH*

Imperial Sizes

inches (mm)

24, 48, 60

(610, 1219, 1524)

Metric Sizes

mm

600, 1200, 1500

NO. OF SLOTS

One 1

Two 2

ACCESSORY 3

None (default) —

Inlet Damper ID

ACCESSORY 2

(Right hand mounting hardware)

None (default) —

T-Bar Clip TC1

Fineline® T-Bar Clip TC2

ACCESSORY 1

(Left hand mounting hardware)

None (default) —

T-Bar Clip TC1

Fineline® T-Bar Clip TC2

FINISH

Appliance White (default) AW

Off-White WH

Special Custom Color SP

FRAME/BORDER TYPE *

One or Two Slot:

Flange Frame AA

Flangeless Frame GG

Flange/Flangeless Frame AG

Two Slot only:

Flange Frame (Straddle mt.) AAS

Flangeless Frame (Straddle mt.) GGS

PLENUM INLET SIZE

One Slot

6" (152) Round 06

8" (203) Round 08

10" (254) Flat Oval 10

12" (305) Flat Oval 12

14" (356) Flat Oval 14

Two Slot

6" (152) Round 06

8" (203) Round 08

10" (254) Round 10

12" (305) Round 12

14" (356) Round 14

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FLOWLINE™ LINEAR DIFFUSERS

Notes:

1. All models include an integral hanger bracket at each end of unit as standard.
2. * Bolt Slot Models (FTB) are available in 24" and 48" imperial (600 and 1200 metric) modules only and only with Frame/Border Types GG, AG and GGS. TC2 Fineline® T-Bar Clips are recommended for support and leveling.
3. FT Series models are supplied with Type CC Flat End Caps.
4. Return models are supplied with horizontal type dual pattern controllers for dampering (system balancing) and without plenum. If plenums are required on return air units, use supply model.

Suggested Specifications

FLH and FLV Series

Furnish and install **Nailor** FlowLine™ linear slot diffusers and accessories of the size and type shown on the architectural and mechanical plans and/or air distribution schedules. Mechanical contractor shall coordinate installation with General Contractor and other sub-contractors as required.

The linear slot diffuser shall utilize heavy wall extruded aluminum frames and be capable of supporting the ceiling system. Material shall be minimum wall thickness 0.06" (1.52). Diffuser frames shall be supplied with integral spacer bars and hanger brackets, spaced approximately on 24" (610) centers. The integral hanger brackets shall allow the linear slot diffusers to be supported from the ceiling structure with hanger wire in lay-in suspension ceiling installations. In hard ceiling installations, provide support clips by the manufacturer that allow the diffusers to be secured to the ceiling diffuser opening framing channels.

The linear slot diffuser shall be complete with factory end border configurations as shown or indicated. Where exposed end caps are required, they shall be factory installed architectural mitered picture frame type. Flanges/butt type end caps are not acceptable.

Provide alignment strips and spline clips by the manufacturer to secure joints and ceiling tees to the linear diffuser as required. Mitered corner sections shall be supplied by the manufacturer in one-piece construction.

The air pattern controller shall be dual type on 24" (610) centers and fully adjustable to permit various air pattern configurations, as well as allow throttling, as required for air volume reduction or complete shut-off without adding any blank-off devices. Pattern controllers shall be minimum 20 ga. (1.01) corrosion-resistant steel. One-piece pattern controllers are not acceptable.

Linear slot diffusers shall incorporate either horizontal high throw or vertical jet throw pattern controllers as shown on mechanical plans and drawings.

All diffusers shall have a single slot, unless shown otherwise, and shall be capable of being used for supply, return or exhaust air. Horizontal high throw diffusers shall maintain a tight ceiling pattern from maximum to minimum cataloged airflows and be suitable for VAV systems.

Where curved linear slot diffusers are indicated, they shall be one slot design and stretch formed by the manufacturer to the exact radii required. Segmented linear slot diffusers are not acceptable. Pattern controller shall be factory installed and fixed in the airflow direction specified on the drawings.

Supply air engineered plenum boots shall be minimum 22 ga. (0.85) coated steel and of the same manufacturer as the linear slot diffuser. Lengths and inlet sizes shall be as indicated on the plans and schedules. Where required, plenums shall be insulated with either internal matt faced fiberglass insulation or external foil back insulation, as specified on drawings or schedules. Return hood/sight baffles shall be provided as shown.

Exposed flange/border frames shall be factory painted

standard white or custom painted to match specified architectural requirements. Provide paint samples if required. Pattern controllers and integral spacers shall be painted flat black.

Performance of the linear slot diffuser shall be based upon cataloged data obtained from tests conducted in accordance with ASHRAE Standard 70-1991. Pattern controllers shall be field adjusted after diffuser installation and set in their normal operating condition. Air test and balancing of linear slot diffusers shall be in accordance with the testing and balancing portion section of the specifications.

Provide manufacturers submittal drawings and published performance data.

FM Series

Furnish and install **Nailor** FlowLine™ modular square ceiling diffusers of the size and type shown on the architectural and mechanical plans and/or air distribution schedules. Diffusers shall be designed as a nominal 24" x 24" (600 x 600mm) module size. Mechanical contractor shall coordinate installation with General Contractor and other sub-contractors as required.

These diffusers shall utilize heavy wall extruded aluminum frames with inside and outside mitered corners. The diffusers shall feature a 1" (25) continuous slot around all four sides with dual pattern controllers that are fully adjustable to permit throttling, as required for air volume reduction or complete shut-off without adding any blank-off devices. Diffusers shall be capable of being adjustable for a 4, 3, 2 or 1-way blow pattern as required after installation. Pattern controllers shall be minimum 20 ga. (1.01) corrosion-resistant steel. One-piece pattern controllers are not acceptable. The pattern controllers shall be horizontal high throw type and shall maintain a tight ceiling air pattern from maximum to minimum cataloged airflows and be suitable for VAV systems.

Supply units shall be complete with a compatible steel back pan that is removable and secured by steel 's' clips. The back pan shall incorporate an integral drawn round neck to permit hard or flexible duct connection. Return units shall be similar in appearance but feature a light shield back pan for ductless return installations. The center acoustical ceiling tile shall be supplied, cut and field installed by the acoustical tile sub-contractor.

Exposed flange/border frames shall be factory painted standard white or custom painted to match specified architectural requirements. Provide paint samples if required. Pattern controllers and integral spacers shall be painted flat black.

Performance of the ceiling diffuser shall be based upon cataloged data obtained from tests conducted in accordance with ASHRAE Standard 70-1991. Pattern controllers shall be field adjusted after diffuser installation and set in their normal operating condition. Air test and balancing of ceiling diffusers shall be in accordance with the testing and balancing portion section of the specifications.

Provide manufacturers submittal drawings and published performance data.