



# FLOWLINE™ LINEAR DIFFUSERS

**Nailor**  
Industries Inc.

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**FLOWLINE™ LINEAR DIFFUSERS**



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## 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**

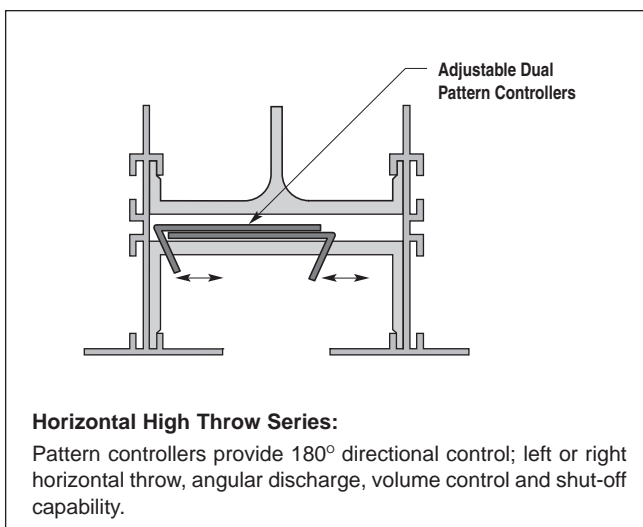


## Key Features:

- 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:

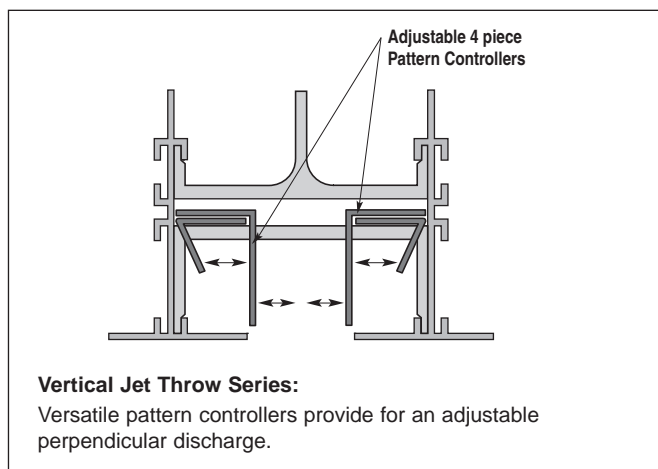
Designed primarily for continuous linear slot ceiling applications requiring horizontal air patterns. Tight, high induction air pattern maximizes coanda effect under a wide range of airflow volumes for maximum occupant comfort. Typical applications would include open office perimeter zones, entrance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

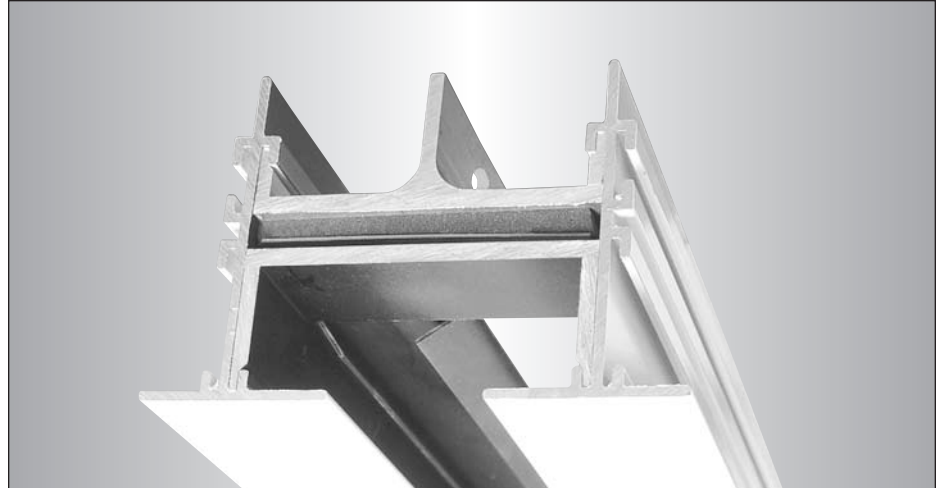
The FM Series is an architecturally pleasing modular square ceiling diffuser primarily for lay-in T-Bar applications. Designed to compliment the FlowLine™ Linear Diffuser System, the FM Series features a single slot at the perimeter of a 2 ft. x 2 ft. (600 x 600) ceiling module and accommodates a center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

## FLH Series

- HORIZONTAL HIGH THROW PATTERN CONTROLLERS
- CONTINUOUS CUSTOM LINEAR DIFFUSER

### Models:

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



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.

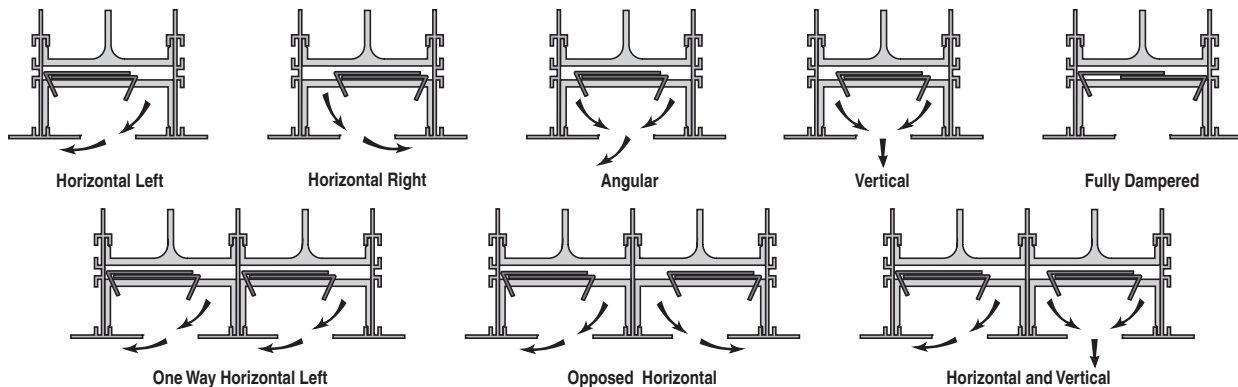
### FINISH:

- 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

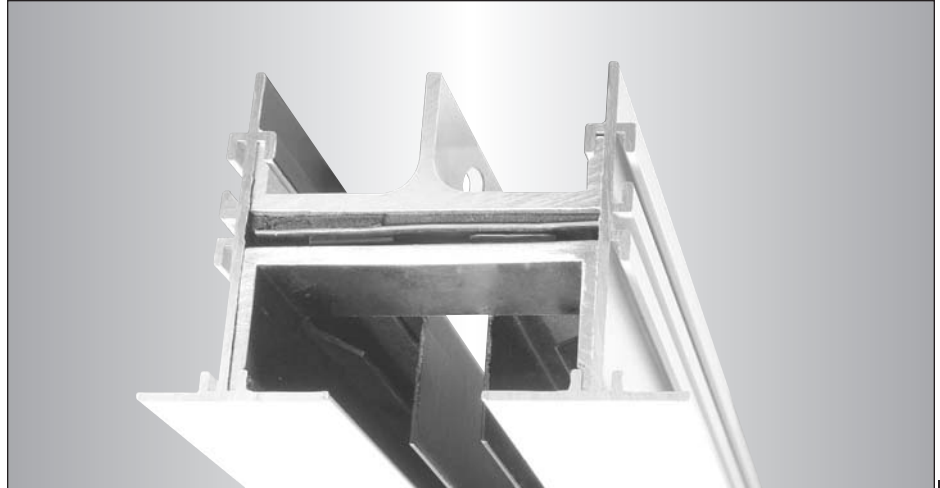


## FLV Series

- 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.

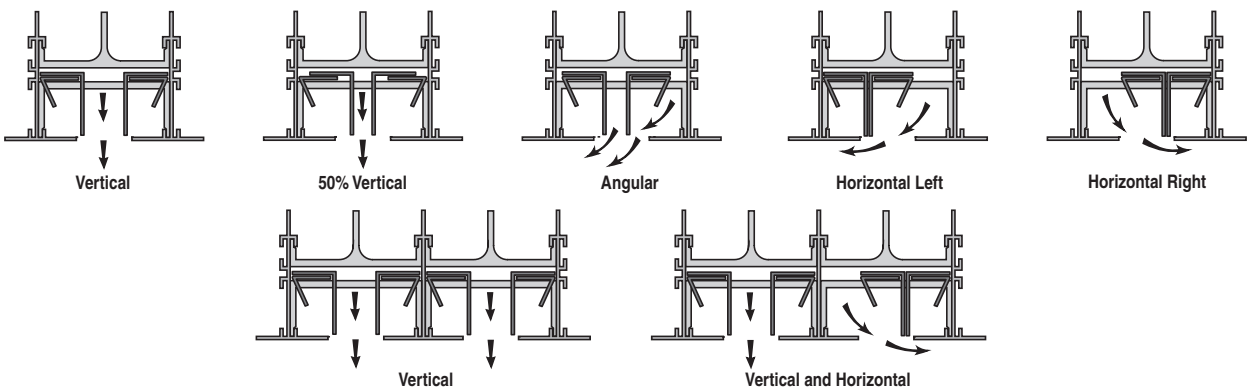
### FINISH:

- 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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### FLV Series Pattern Controller Adjustment



## Standard Frame/Border Styles

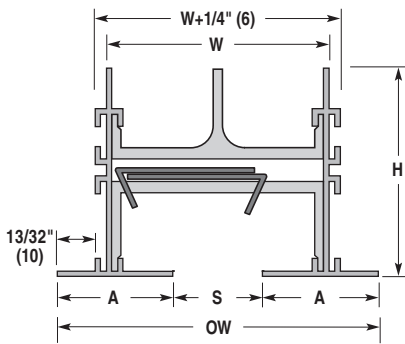
(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

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

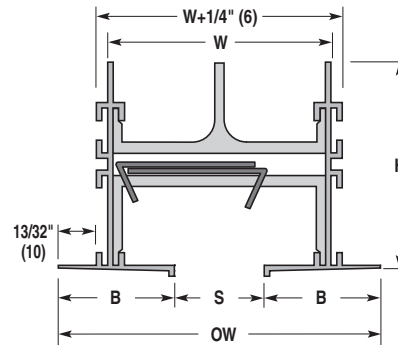
#### Type AA Exposed Flange Frame

- Drywall (ceiling, wall), T-Bar



#### Type BB Concealed Tapered Frame

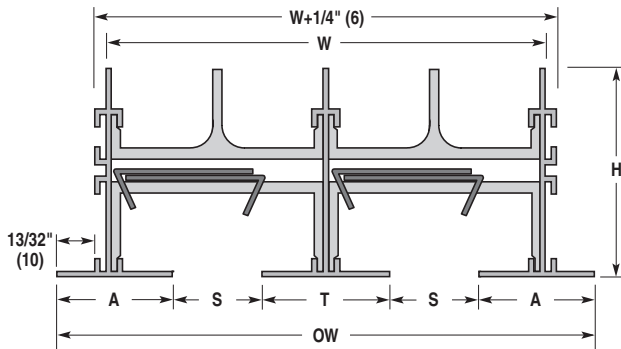
- Drywall (ceiling, wall)
- Tape and Spackle



### Two Slot

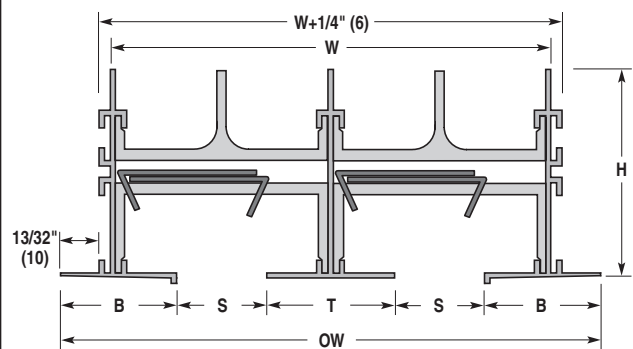
#### Type AA Exposed Flange Frame

- 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 9/32 (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 17/32 (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 1/32 (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 9/32 (58)	3 3/8 (86)	3 7/16 (87)

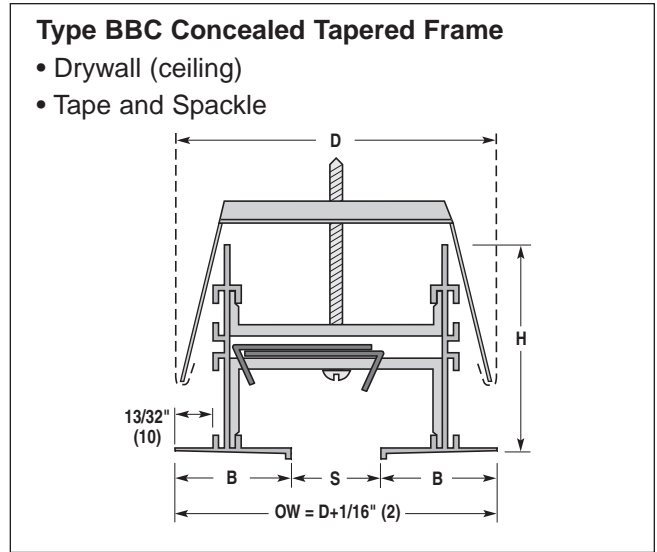
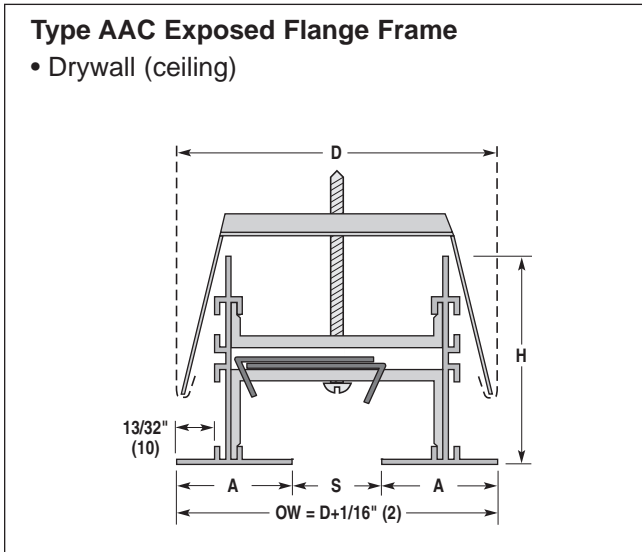
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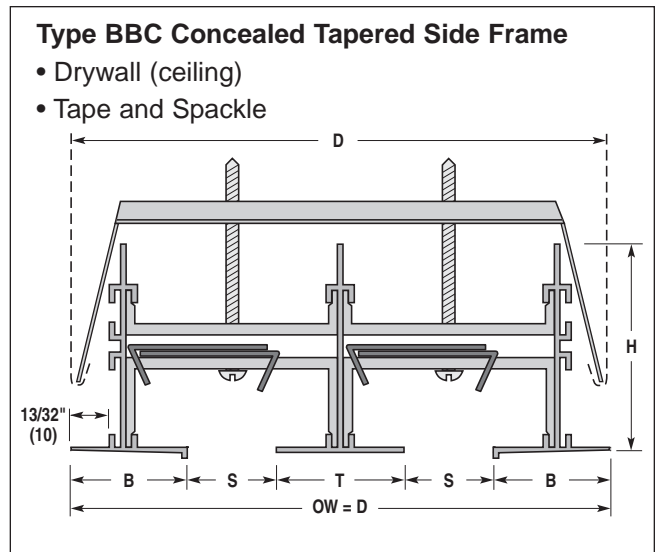
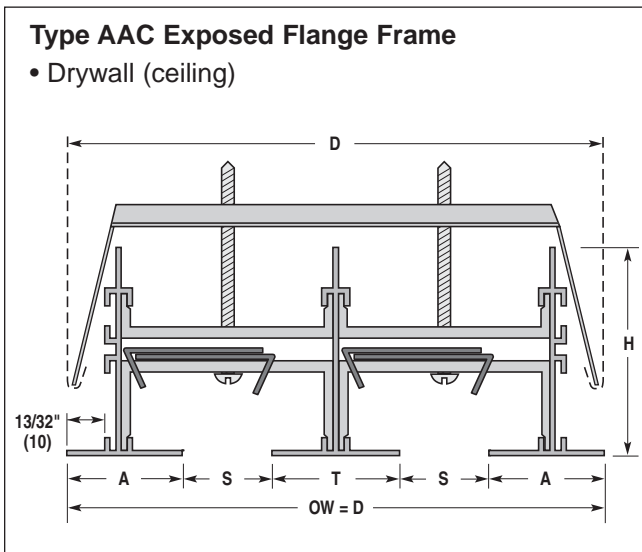
**Standard Frame/Border Styles with Concealed Mounting Bracket**  
 (Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

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

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## Special Frame/Border Styles

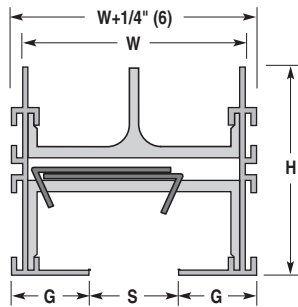
(Type H Horizontal pattern controllers illustrated. Also available with Type V Vertical).

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

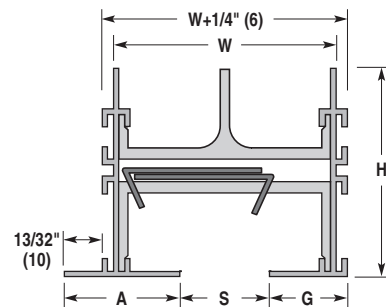
#### Type GG Flangeless Frame

- Drywall (ceiling, wall)



#### Type AG Flange / Flangeless Frame

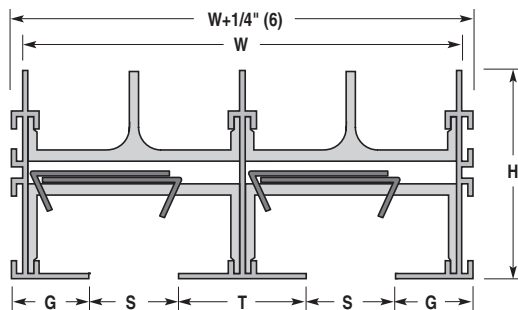
- Drywall (ceiling, wall)



### Two Slot

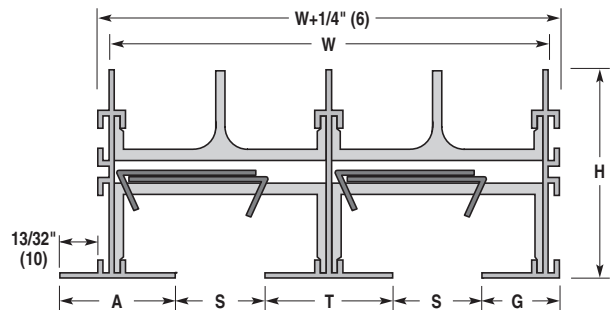
#### Type GG Flangeless Frame

- Drywall (ceiling, wall)



#### Type AG Flange / Flangeless Frame

- Drywall (ceiling, wall)



### Dimensional Data - Imperial (Metric) Units

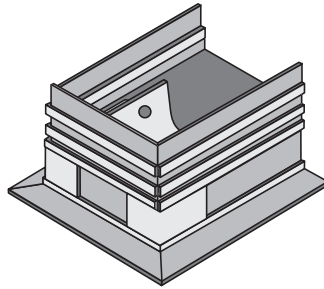
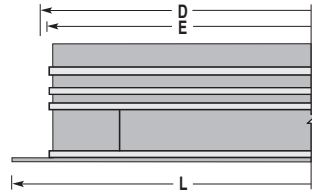
Model	S Slot Width	1 Slot W	2 Slot W	A Border Width	G Border Width	H Height	T 2 Slot
FL(HorV)10	1 (25)	2 1/2 (64)	4 15/16 (125)	1 9/32 (33)	7/8 (22)	2 3/8 (60)	1 7/16 (37)
FL(HorV)15	1 1/2 (38)	3 1/2 (89)	6 15/16 (176)	1 17/32 (39)	1 1/8 (29)	2 5/8 (67)	1 15/16 (49)
FL(HorV)20	2 (51)	4 1/2 (114)	8 15/16 (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

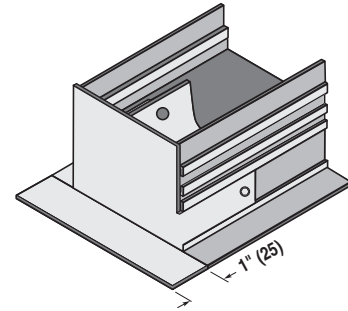
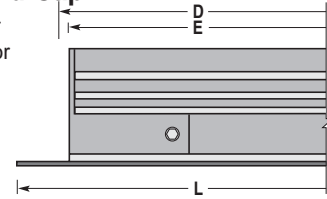
### M Mitered End Border

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

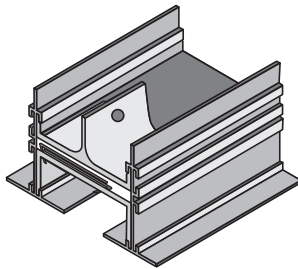
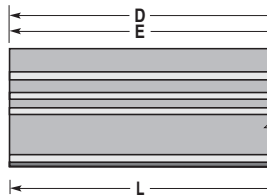


### F Flanged End Cap

- Removable for field end trim or stocking.

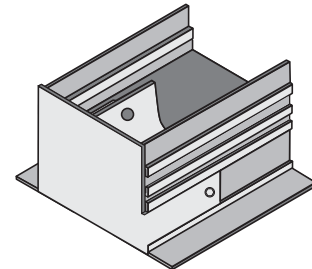
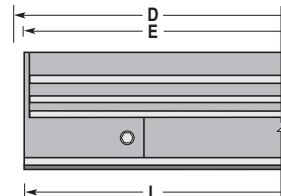


### O Open End



### 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)

## Options and Accessories

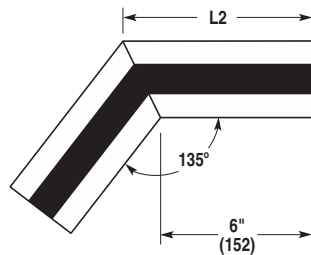
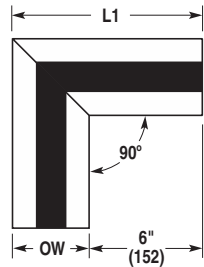
### Mitered Corners

- 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

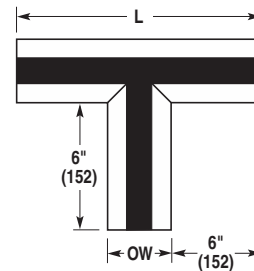
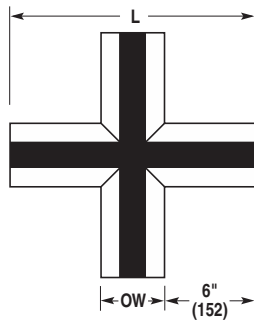
#### Type C Cross

- 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.

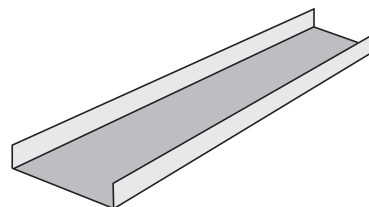


No. of Slots	Slot Width	Border AA, BB		Border GG	
		OW	L	OW	L
1	1 (25)	3 9/16 (90)	15 9/16 (395)	2 3/4 (70)	14 11/16 (373)
	1½ (38)	4 9/16 (116)	16 9/16 (421)	3 3/4 (95)	15 11/16 (398)
	2 (51)	5 9/16 (141)	17 9/16 (446)	4 3/4 (121)	16 11/16 (424)
	2½ (64)	6 9/16 (167)	18 9/16 (471)	5 3/4 (146)	17 11/16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

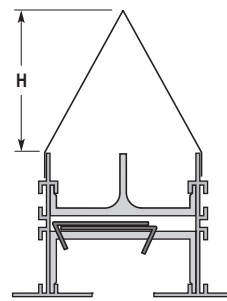
- FLR10 • 1" (25) Slot
- FLR15 • 1½" (38) Slot
- FLR20 • 2" (51) Slot
- FLR25 • 2½" (64) Slot
- FLR30 • 3" (76) Slot

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

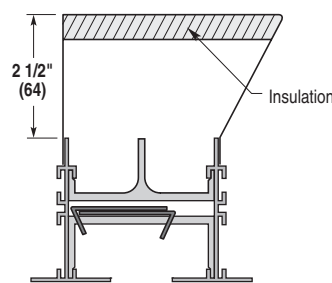
#### Insulated:

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

#### Uninsulated

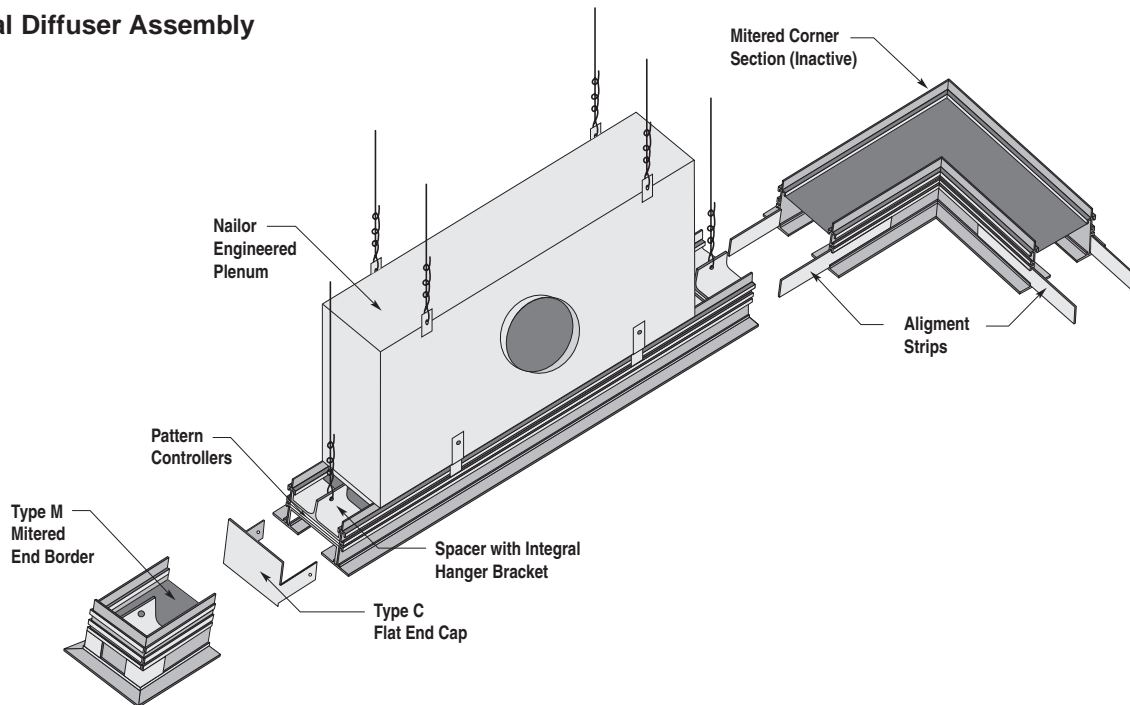


#### Insulated



No. of Slots	Slot Width	H (Height)
1	1 (25)	3 ⅜ (86)
	1½ (38)	3 ⅜ (86)
	2 (51)	3 ⅜ (86)
	2½ (64)	3 ⅜ (86)
	3 (76)	3 ⅜ (86)
2	1 (25)	2 ⅛ (54)
	1½ (38)	3 ⅛ (79)
	2 (51)	4 ⅛ (105)
	2½ (64)	5 ⅛ (130)
	3 (76)	6 ⅛ (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.

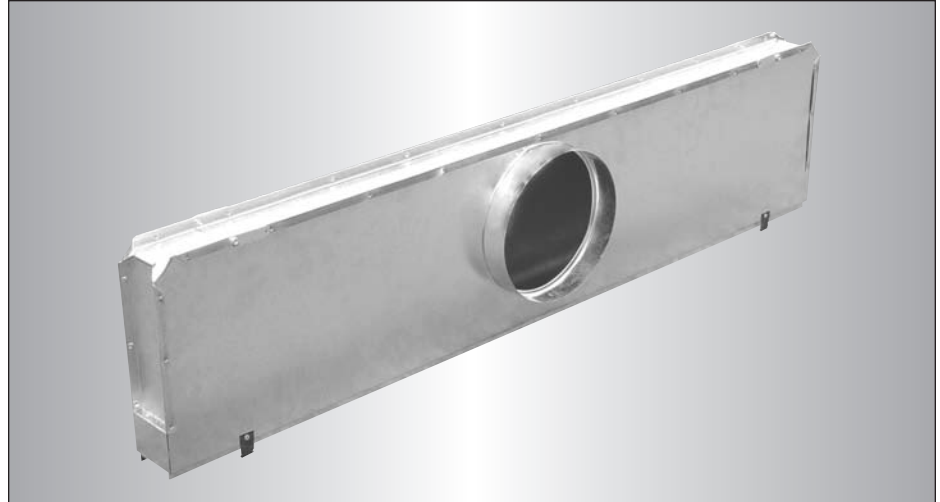
- Nailor's optional engineered plenums ensure catalog performance and a trouble free sure fit installation.
- Unique integral hanger brackets provide independent hanging points and eliminate the need for field add-on hanger clips.

**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

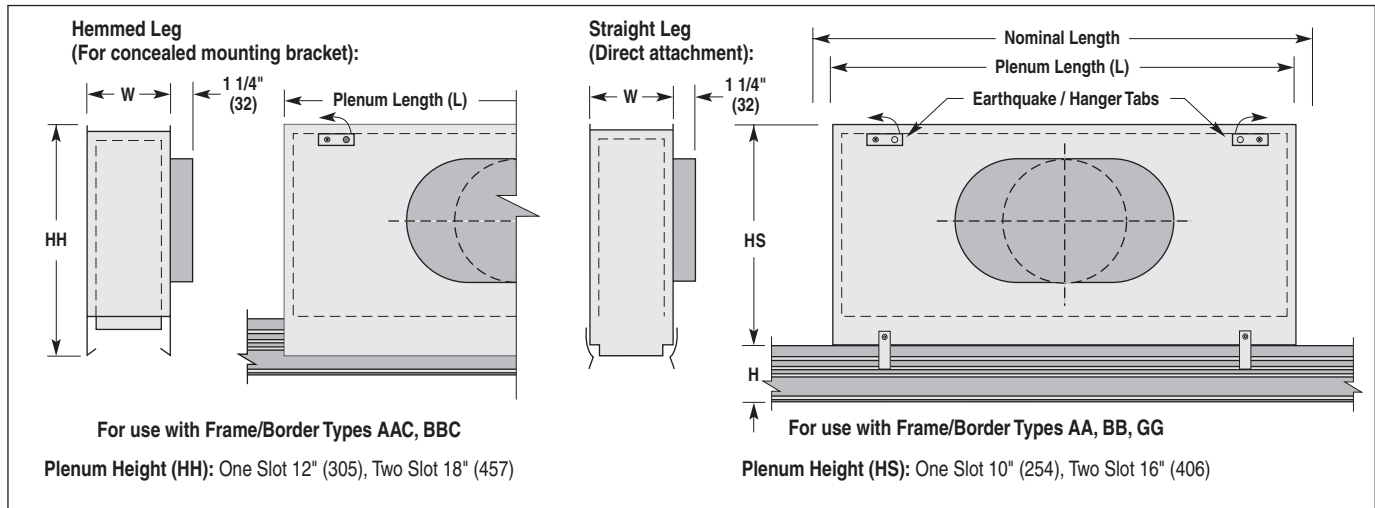
### (I) Adds Internal Insulation.

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

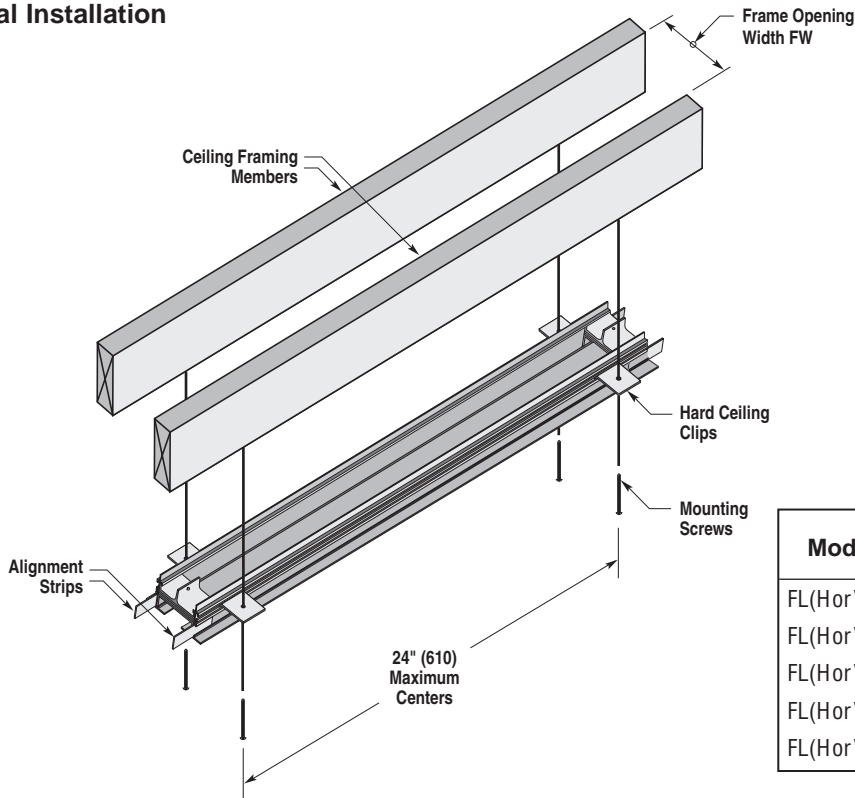
Nominal Length	Actual Plenum Length (L) For Frame / Border Type		Available Inlet Sizes	
	AA, BB, GG	AAC, BBC	1 Slot	2 Slot
24 (610)	20¾ (527)	24 (610)	6(152), 8(203) Round 10(254), 12(305), 14(356) Flat Oval*	6(152), 8(203), 10(254), 12(305), 14(356) Round
30 (762)	26¾ (679)	30 (762)		
36 (914)	32¾ (832)	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)	5³⁄₁₆ (132)	3½ (89)	5¹⁵⁄₁₆ (151)
FLP(I)15	3¾ (95)	7³⁄₁₆ (183)	4½ (114)	7¹⁵⁄₁₆ (202)
FLP(I)20	4¾ (121)	9³⁄₁₆ (233)	5½ (140)	9¹⁵⁄₁₆ (252)
FLP(I)25	5¾ (146)	11³⁄₁₆ (284)	6½ (165)	11¹⁵⁄₁₆ (303)
FLP(I)30	6¾ (171)	13³⁄₁₆ (335)	7½ (191)	13¹⁵⁄₁₆ (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).

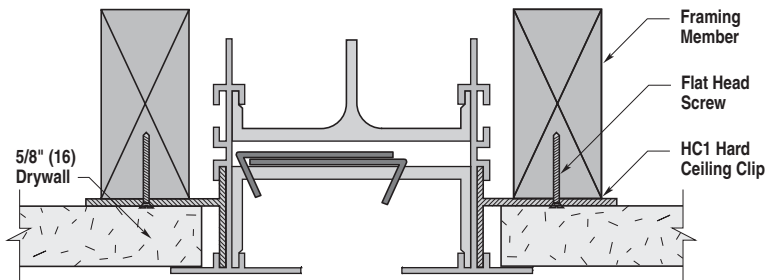
## Hard Ceiling Application and Installation Methods

### Typical Installation

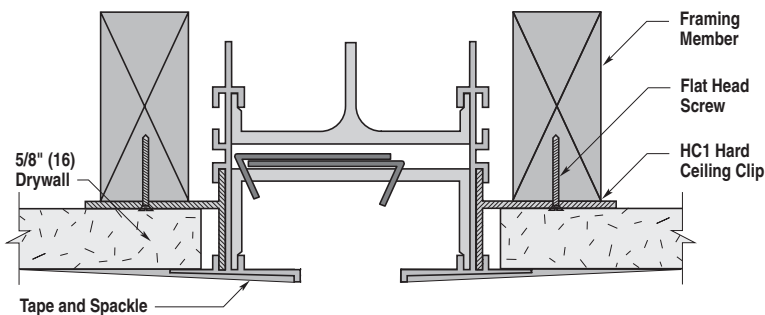


Model	Frame Opening Width FW	
	1 slot	2 slot
FL(HorV)10	3 ¼ (83)	5 ¾ (146)
FL(HorV)15	4 ¼ (108)	7 ¾ (197)
FL(HorV)20	5 ¼ (133)	9 ¾ (248)
FL(HorV)25	6 ¼ (159)	11 ¾ (298)
FL(HorV)30	7 ¼ (184)	13 ¾ (349)

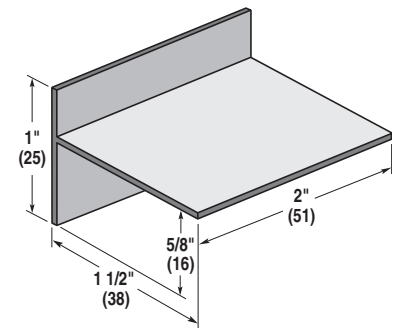
### Exposed Flange Frame Type AA



### 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.

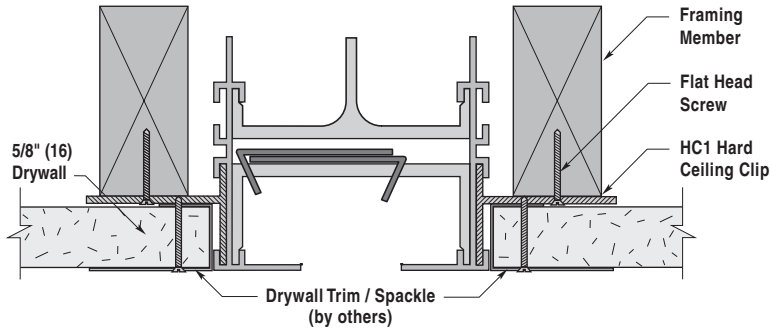
**A**  
FLOWLINE™ LINEAR DIFFUSERS

**Hard Ceiling Application and Installation Methods**

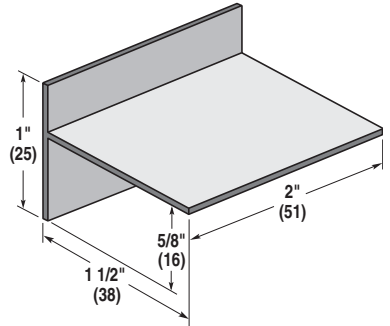
**A**

**FLOWLINE™ LINEAR DIFFUSERS**

**Flangeless Flush Frame  
Type GG**

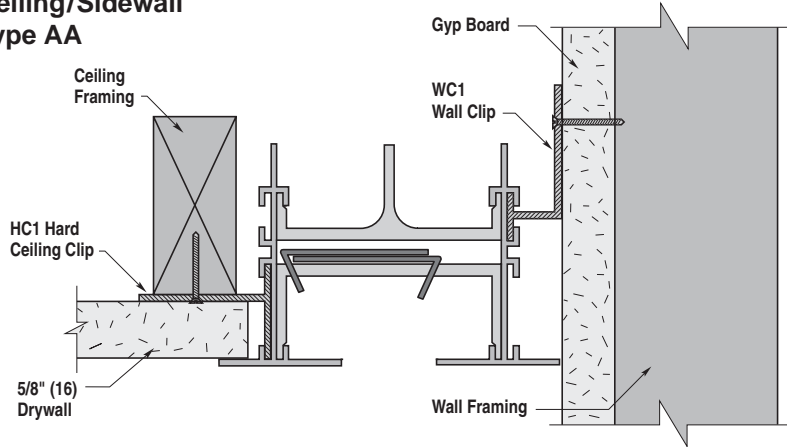


**HC1 Hard Ceiling Clip**

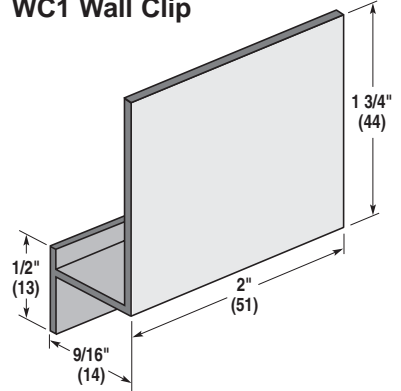


The HC1 Hard Ceiling Clip can be used to mount the FlowLine™ assembly with Frame/Border Type GG, where standard 5/8" (16) gypsum wallboard (drywall) is used.

**Ceiling/Sidewall  
Type AA**



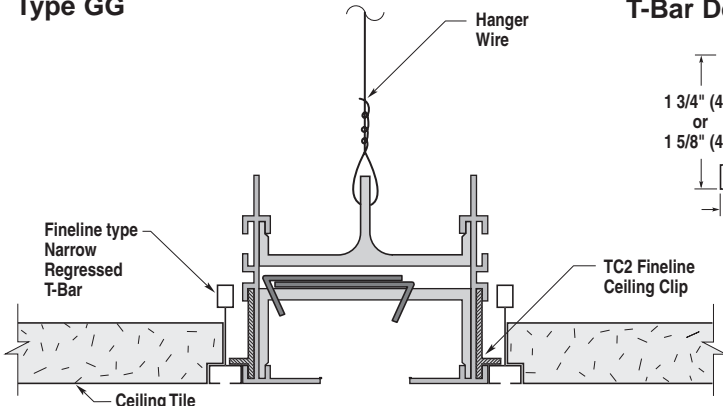
**WC1 Wall Clip**



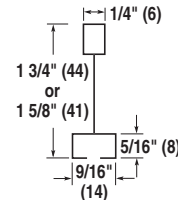
The WC1 Wall Clip is used to mount the FlowLine™ assembly with Frame/Border Type AA flush to a wall.

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

**Flangeless Frame  
Type GG**

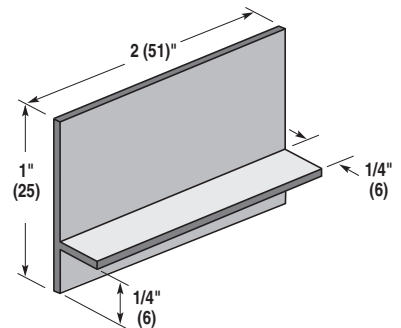


**Typical Regressed  
T-Bar Detail**



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

**TC2 Fineline® T-Bar Clip**

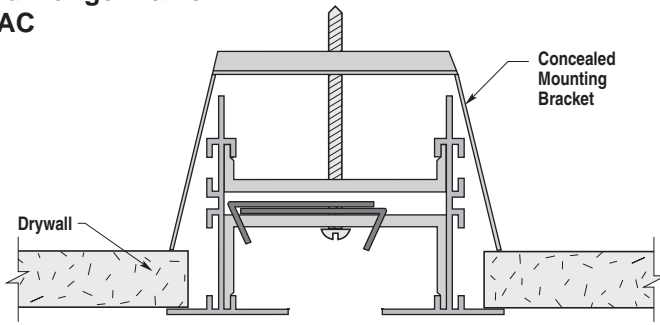


The TC2 Fineline® T-Bar Clips are used to support and level the FlowLine™ assembly in Bolt-Slot (Fineline® Type) suspension systems.

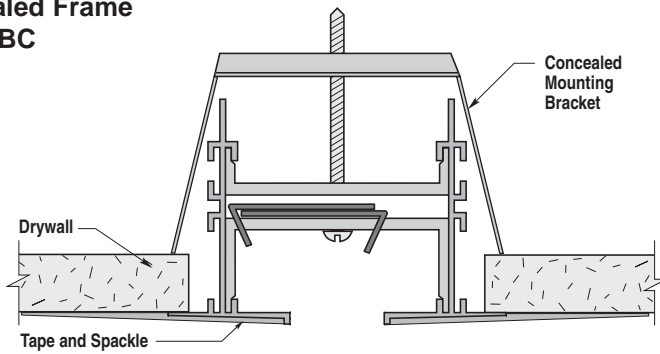


## Hard Ceiling Application and Installation Methods

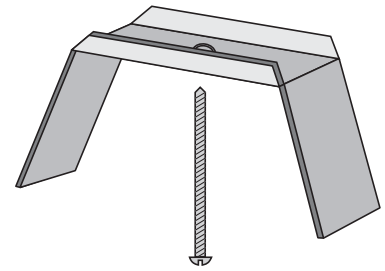
**Exposed Flange Frame  
Type AAC**



**Concealed Frame  
Type BBC**



**FLCMB Concealed Mounting Bracket**



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



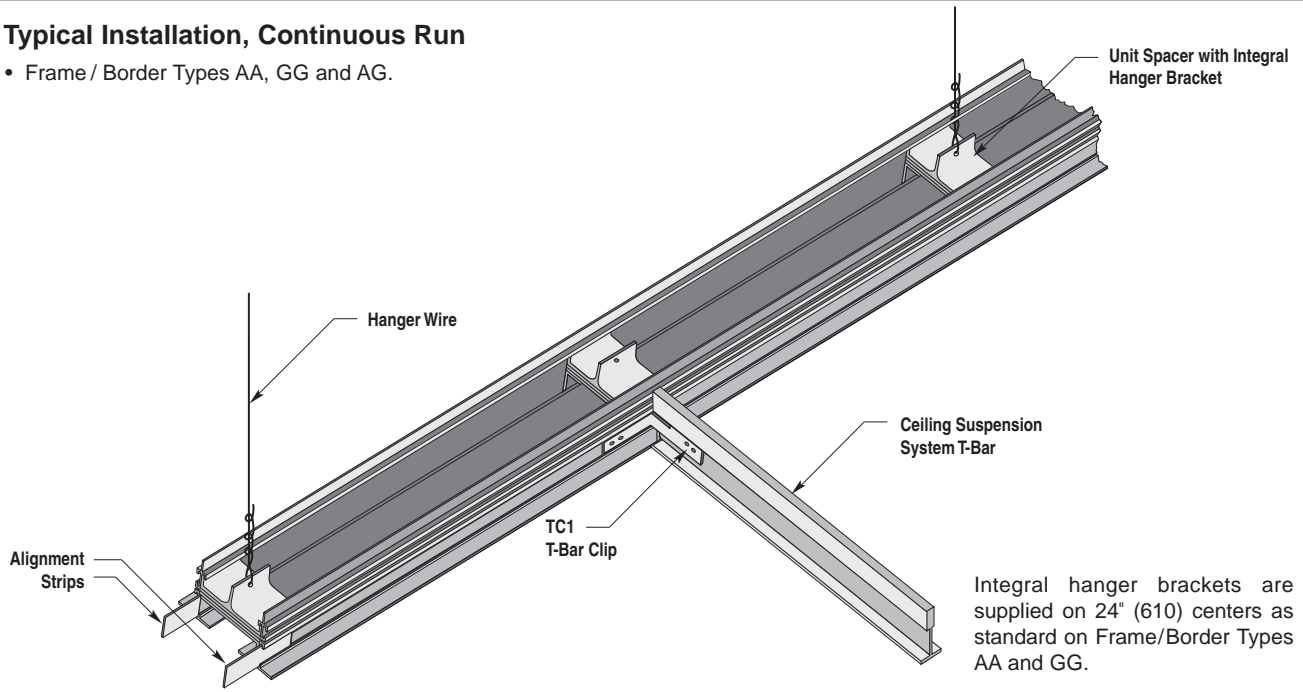
**A**

**FLOWLINE™ LINEAR DIFFUSERS**

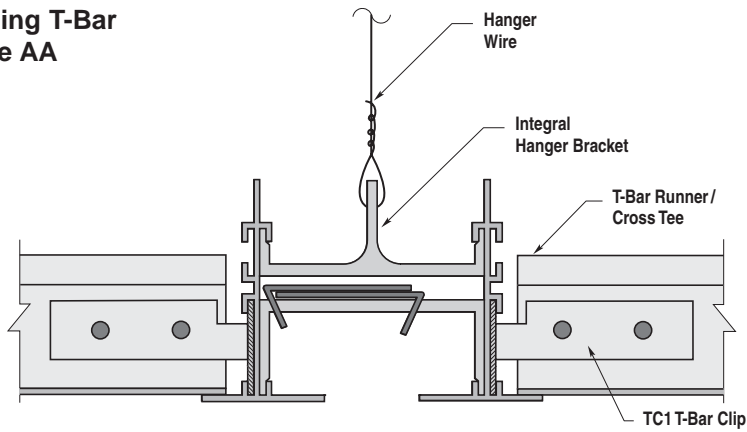
## T-Bar Ceiling Suspension System Application and Installation Methods

### Typical Installation, Continuous Run

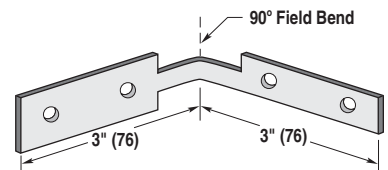
- Frame / Border Types AA, GG and AG.



### Ceiling T-Bar Type AA

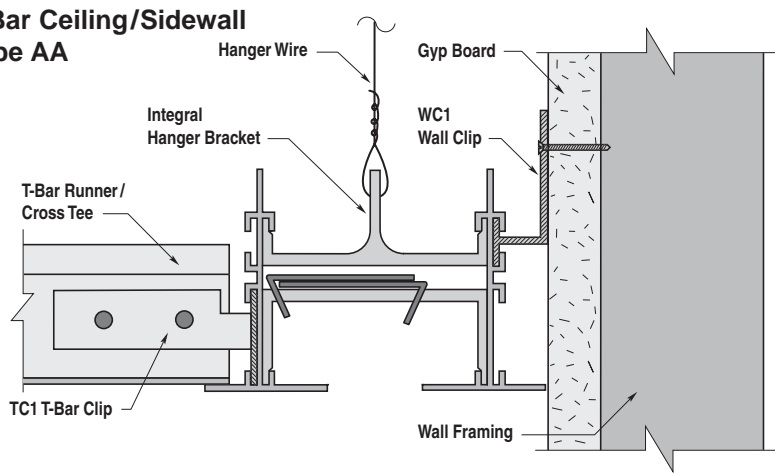


### TC1 T-Bar Clip (field formed)



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

### T-Bar Ceiling/Sidewall Type AA

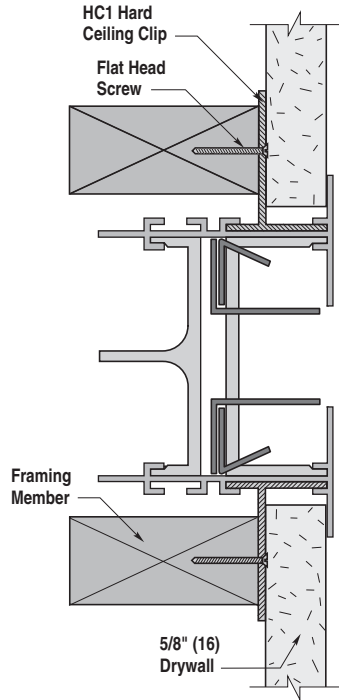


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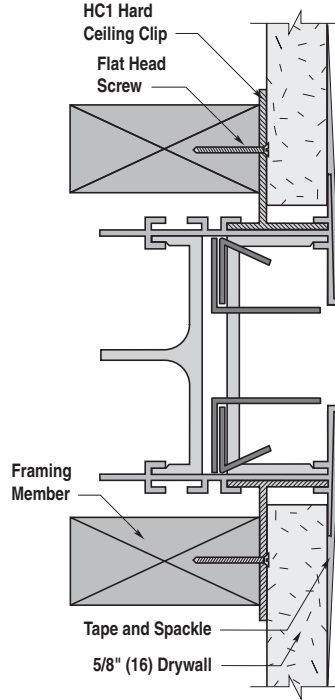
FLOWLINE™ LINEAR DIFFUSERS

**Sidewall Application and Installation Methods**

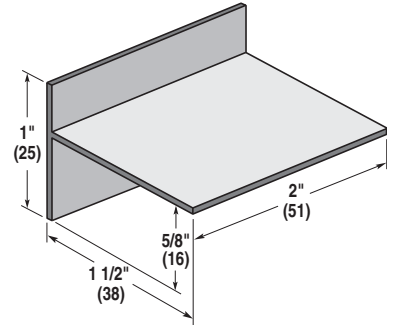
**Exposed Flange Frame  
Type AA**



**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

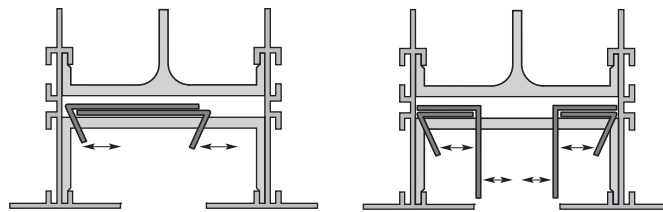
**FTBV(I)15** 1½" (38) Slot

**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 FTHR and FTBHR). Supplied with horizontal type dual pattern controllers for system balancing.

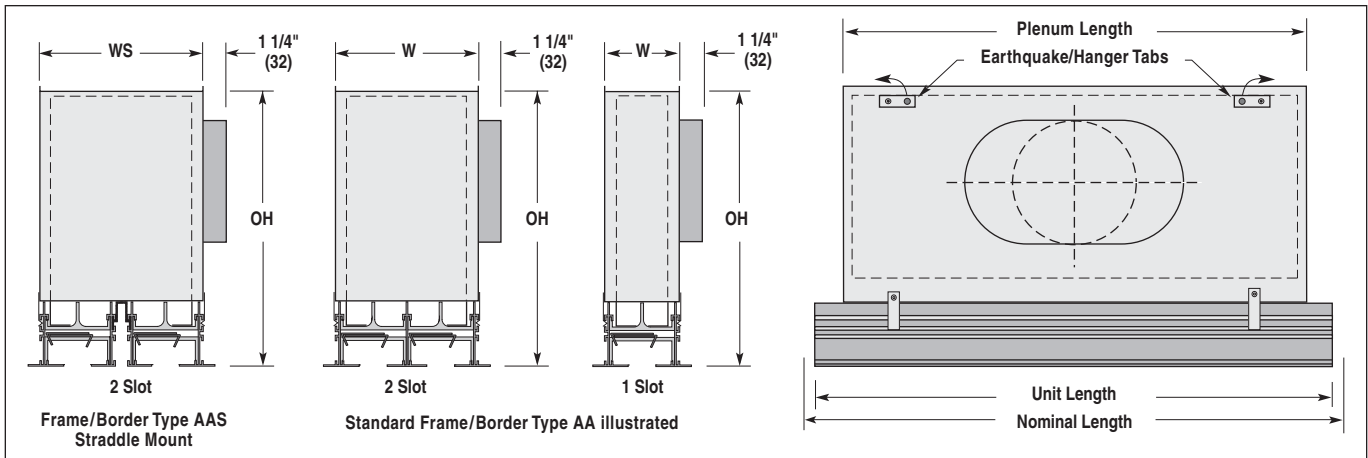
### STANDARD FEATURES:

- 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).



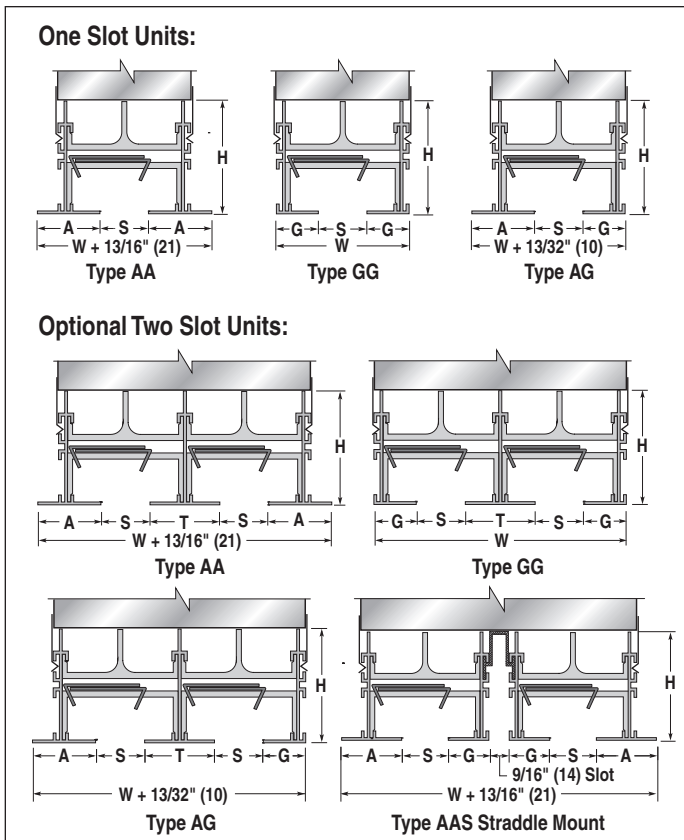
### Dimensional Data (Imperial Grids)

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

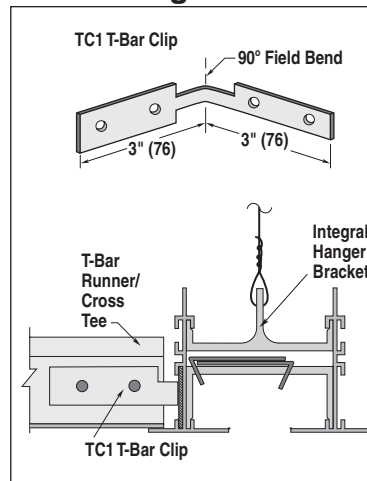
FT Series Model	1 Slot		2 Slot		
	W	OH	W	WS	OH
FT(HorV)(I)10	2 3/4 (70)	12 3/8 (314)	5 3/16 (132)	6 1/16 (154)	18 3/8 (467)
FT(HorV)(I)15	3 3/4 (95)	12 5/8 (321)	7 3/16 (183)	8 1/16 (205)	18 5/8 (473)
FT(HorV)(I)20	4 3/4 (121)	12 7/8 (327)	9 3/16 (233)	10 1/16 (256)	18 7/8 (479)

\* 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).

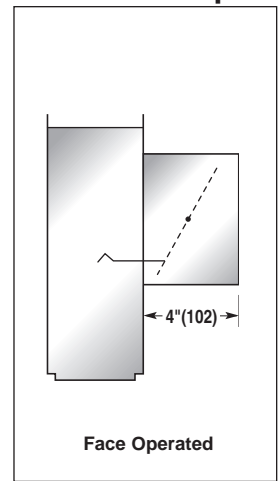
### Available FT Series Border Types



### Optional Mounting Hardware



### Optional ID Inlet Damper



### Dimensional Data - Imperial (Metric) Units

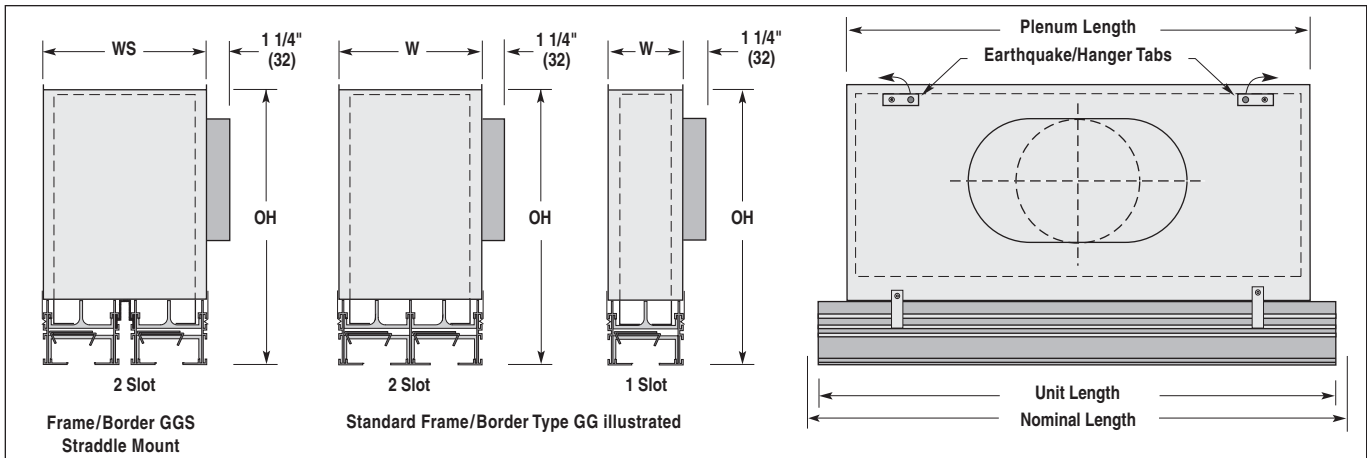
FT Series Model	S Slot Width	A Border Width	G Border Width	H Height	T 2 Slot
FT(HorV)(I)10	1 (25)	1 9/32 (33)	7/8 (22)	2 3/8 (60)	1 7/16 (37)
FT(HorV)(I)15	1 1/2 (38)	1 17/32 (39)	1 1/8 (29)	2 5/8 (67)	1 15/16 (49)
FT(HorV)(I)20	2 (51)	1 25/32 (45)	1 3/8 (35)	2 7/8 (73)	2 7/16 (62)

A

FLOWLINE™ LINEAR DIFFUSERS

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

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



**A**

**FLOWLINE™ LINEAR DIFFUSERS**

### 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 5/8 (321)	7 3/16 (183)	8 1/16 (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

**One Slot Units:**

**Optional Two Slot Units:**

**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)

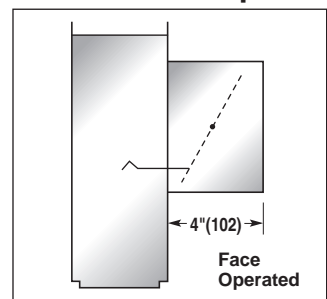
### Mounting Hardware

**TC2 Fineline® T-Bar Clip (Standard)**

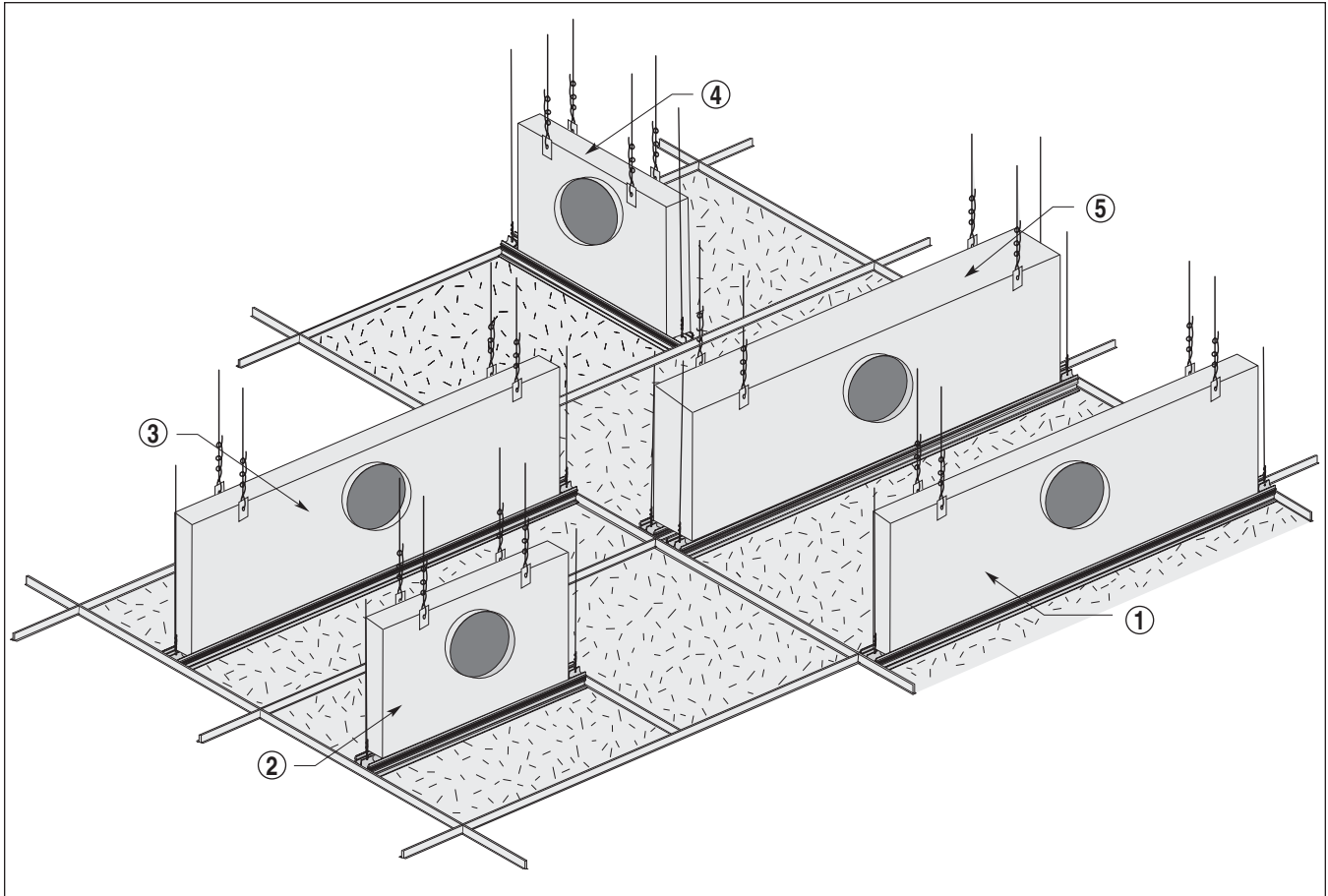
**TC1 T-Bar Clip (Optional)**

90° Field Bend

### Optional ID Inlet Damper



## Typical FT Series Application • T-Bar Ceiling Suspension Systems



### DESCRIPTION:

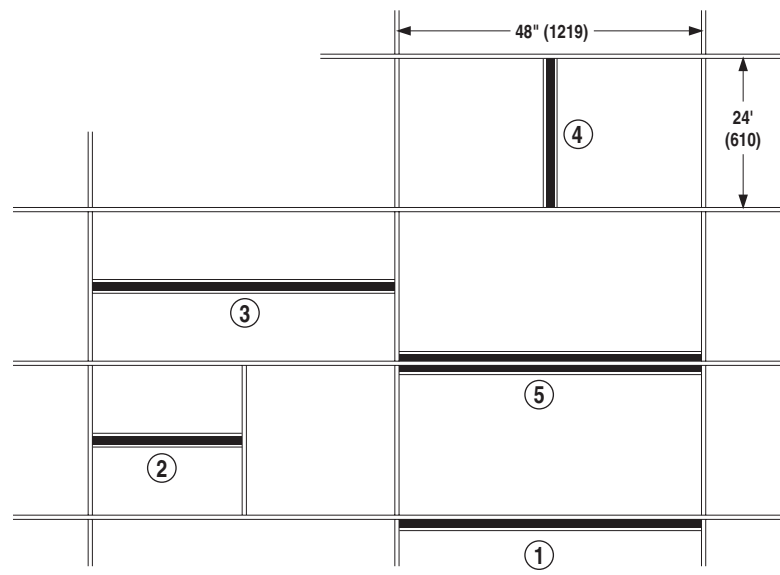
1. Nominal 4 ft. (1219) unit installed alongside a main runner.
2. 2 ft. (610) unit installed parallel to and mid-way between main runners.
3. Nominal 4 ft. (1219) unit installed mid-way between main runners.
4. 2 ft. (610) unit installed perpendicular to main runners.
5. Nominal 4 ft. (1219) two slot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

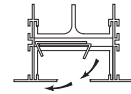


A

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
1"	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
1.5"	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
2"	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
2.5"	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
2.5"	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
3"	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
3"	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
		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

**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**

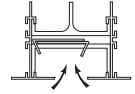
Length (ft.)	2	4	6	8	10	12
Multiplier	0.70	1.00	1.25	1.40	1.55	1.70

**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<sup>-12</sup> 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 70-2006.



**Performance Data • Return Air Applications**  
**Models: FLH (10, 15, 20, 25 and 30)**



Slot Width	Slots	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

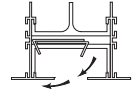
**Performance Notes:**

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<sup>-12</sup> 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 70-2006.

**A**

**FLOWLINE™ LINEAR DIFFUSERS**

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



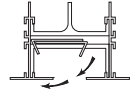
**A**

**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	200
			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	210
			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	210
			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			

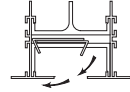
For performance table notes, see page A28.

**A**

**FLOWLINE™ LINEAR DIFFUSERS**

**Performance Data • Horizontal High Throw Series**

**Models: FLH30 and FTH30 • 1 Slot with Nailor Plenum**



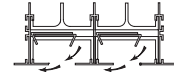
3" Slot Width	1 Slot 10" Oval Inlet	2 Ft.	Airflow, cfm	125	170	215	260	305	350	395
			Total Pressure	0.030	0.056	0.0894	0.131	0.180	0.237	0.302
Static Pressure	0.027	0.049	0.078	0.115	0.158	0.208	0.265			
NC (Noise Criteria)	<15	<15	<15	24	29	35	40			
Throw	7-11-16	9-13-19	11-15-21	13-17-23	15-18-25	16-19-28	17-20-31			
3" Slot Width	1 Slot 10" Oval Inlet	4 Ft.	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			
3" Slot Width	1 Slot 10" Oval Inlet	5 Ft.	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			
3" Slot Width	1 Slot 12" Oval Inlet	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			
3" Slot Width	1 Slot 12" Oval Inlet	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<sup>-12</sup> 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 70-2006.

**A**  
**FLOWLINE™ LINEAR DIFFUSERS**

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

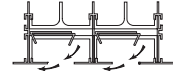


1" Slot Width	2 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	80	120	160	200	240	280	320
			Total Pressure	0.016	0.036	0.064	0.101	0.145	0.198	0.258
			Static Pressure	0.018	0.041	0.072	0.080	0.115	0.157	0.205
			NC (Noise Criteria)	<15	<15	<15	23	29	35	40
			Throw	3-6-12	6-10-16	9-13-18	11-14-20	13-16-22	14-17-23	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

**A**  
**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**



**A**

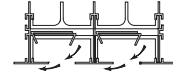
**FLOWLINE™ LINEAR DIFFUSERS**

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

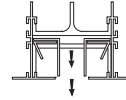
1. Data is based upon FlowLine™ with Nailor engineered plenum (uninsulated) as a complete assembly.
2. All pressures are in inches w.g..
3. Throw values are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
4. NC (Noise criteria) values are based on 10 dB room absorption, re 10<sup>-12</sup> 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 70-2006.

**A**

**FLOWLINE™ LINEAR DIFFUSERS**

**Performance Data • Vertical Jet Throw Series**

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



**A**

**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
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		
1.5" Slot Width	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		
Throw	1-3-12	6-12-24	12-19-34	17-24-40	21-31-44	24-34-48	29-36-52		
2" Slot Width	1 Slot	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
NC (Noise Criteria)	-	<15	16	24	31	37	43		
Throw	2-4-17	9-18-32	19-28-40	25-32-45	30-36-51	32-40-56	35-43-61		
2.5" Slot Width	1 Slot	Airflow, cfm/ft.	35	75	115	155	195	235	275
		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		
3" Slot Width	1 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		
Throw	2-3-13	0.7-14-30	15-26-37	23-31-43	28-34-18	31-37-54	33-41-58		
1" Slot Width	2 Slots	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
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		
1.5" Slot Width	2 Slots	Airflow, cfm/ft.	80	190	300	410	520	630	740
		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		
2" Slot Width	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		
Throw	1-2-8	5-11-25	12-20-34	17-26-40	22-31-45	26-35-49	31-37-54		
2.5" Slot Width	2 Slots	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
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

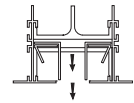
**Performance Notes:**

- 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<sup>-12</sup> 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 70-2006.



**Performance Data • Vertical Jet Throw Series**

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

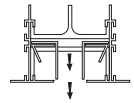


1" Slot Width	1 Slot 8" Dia. Inlet	2 Ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.010	0.033	0.073	0.127	0.197	0.281	0.381
			Static Pressure	0.007	0.029	0.062	0.109	0.168	0.241	0.325
			NC (Noise Criteria)	<15	<15	17	26	33	39	44
			Throw	2-3-10	7-9-19	9-14-24	12-19-28	15-22-31	18-24-34	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	17-24-31	19-29-43

For performance table notes, see page A35.

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**FLOWLINE™ LINEAR DIFFUSERS**



**Performance Data • Vertical Jet Throw Series**

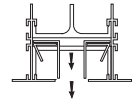
**Models: FLV/FTV (15 and 20) • 1 Slot with Nailor Plenum**

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
			Throw	1-3-12	6-12-24	12-19-34	17-24-40	21-31-44	24-34-48	29-36-52
		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
			Throw	1-3-12	6-12-25	12-19-35	17-25-41	21-32-46	25-35-51	30-39-54
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
			Throw	1-3-12	6-12-24	12-19-34	17-24-40	21-31-44	24-34-48	29-36-52
		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
			Throw	1-3-12	6-12-15	12-19-35	17-25-41	21-32-46	25-35-51	30-39-54
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
			Throw	1-2-8	3-5-14	4-9-20	7-13-26	9-15-29	12-18-31	14-21-33
		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
			Throw	1-2-6	2-4-14	3-9-20	6-14-26	9-16-31	13-20-33	14-22-36
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
			Throw	1-2-8	3-7-18	7-13-26	12-17-31	14-21-34	17-26-37	20-28-40
		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.	Total Pressure	0.004	0.022	0.055	0.102
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
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	
4 Ft.	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
			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
	5 Ft.	Throw	1-2-6	3-8-20	9-15-30	14-21-35	18-26-39	21-30-43	25-32-46	
		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	
	3"	1 Slot 14" Oval Inlet	2 Ft.	Airflow, cfm	100	225	350	475	600	725
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
5 Ft.		Throw	1-2-8	3-8-21	8-16-31	14-21-36	18-26-40	21-31-44	25-33-48	
		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		

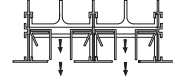
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FLOWLINE™ LINEAR DIFFUSERS

### 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<sup>-12</sup> watts.
- Throw values are based on pattern controller set 100% open.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006.

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



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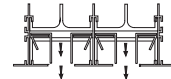
**FLOWLINE™ LINEAR DIFFUSERS**

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

For performance table notes, see page A38.

**Performance Data • Vertical Jet Throw Series**

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



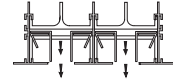
Slot Width	Inlet Dia.	Height	Performance Data																
			Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw							
1.5"	12"	2 Ft.	Airflow, cfm	120	230	340	450	560	670	780	2 Ft.	Airflow, cfm	120	240	360	480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

For performance table notes, see page A38.

**A**  
**FLOWLINE™ LINEAR DIFFUSERS**

**Performance Data • Vertical Jet Throw Series**

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



**A**

**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	4 Ft.	<b>Airflow, cfm</b>	<b>250</b>	<b>450</b>	<b>650</b>	<b>850</b>	<b>1050</b>	<b>1250</b>	<b>1450</b>
			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.	<b>Airflow, cfm</b>	<b>280</b>	<b>480</b>	<b>680</b>	<b>880</b>	<b>1080</b>	<b>1280</b>	<b>1480</b>
			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.	<b>Airflow, cfm</b>	<b>150</b>	<b>335</b>	<b>520</b>	<b>705</b>	<b>890</b>	<b>1075</b>	<b>1260</b>
			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.	<b>Airflow, cfm</b>	<b>300</b>	<b>540</b>	<b>780</b>	<b>1020</b>	<b>1260</b>	<b>1500</b>	<b>1740</b>
			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.	<b>Airflow, cfm</b>	<b>350</b>	<b>600</b>	<b>850</b>	<b>1100</b>	<b>1350</b>	<b>1600</b>	<b>1850</b>
			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.	<b>Airflow, cfm</b>	<b>175</b>	<b>385</b>	<b>595</b>	<b>805</b>	<b>1015</b>	<b>1225</b>	<b>1435</b>
			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.	<b>Airflow, cfm</b>	<b>320</b>	<b>580</b>	<b>840</b>	<b>1100</b>	<b>1360</b>	<b>1620</b>	<b>1880</b>
			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.	<b>Airflow, cfm</b>	<b>380</b>	<b>645</b>	<b>910</b>	<b>1175</b>	<b>1440</b>	<b>1705</b>	<b>1970</b>
			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<sup>-12</sup> watts.
5. Throw values are based on pattern controller set 100% open.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006.

**FM Series**

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

**Models:**

**Supply 1" (25) Slot**

**FM(I)10** Standard 1<sup>5</sup>/<sub>16</sub>" (24) or 9<sup>1</sup>/<sub>16</sub>" (14) Flat T-Bar

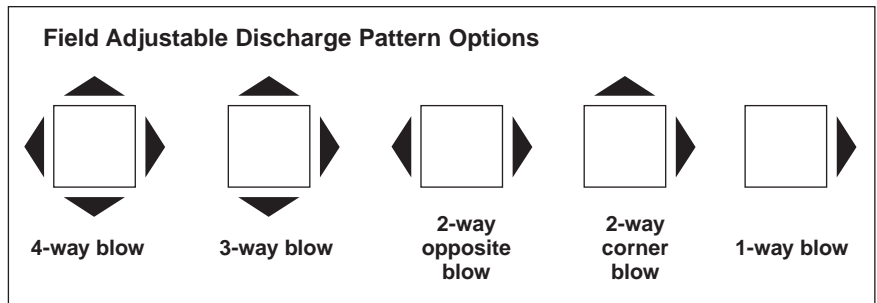
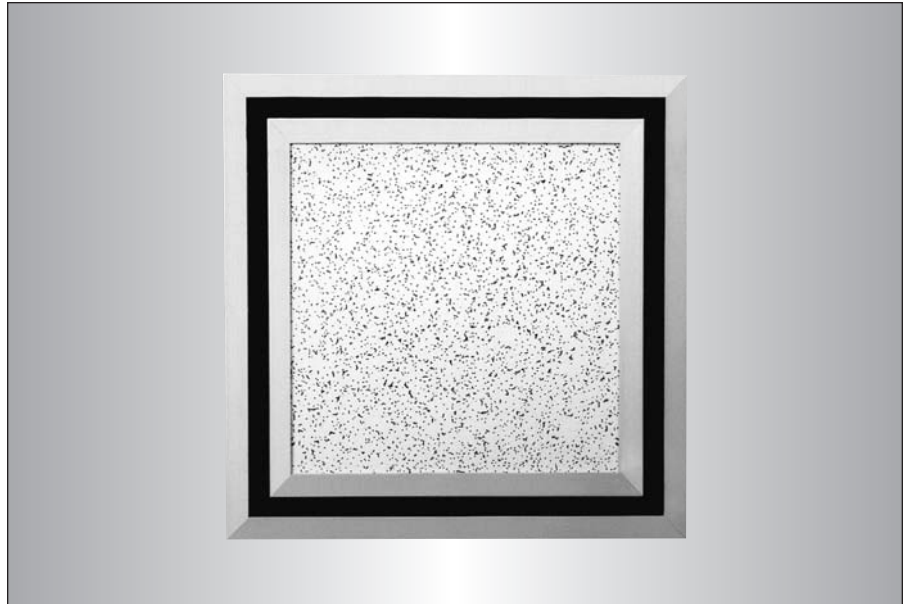
**FMB(I)10** Bolt-Slot (Fineline® Type) T-Bar

**(I) Adds Internal Insulation.**

**Return 1" (25) Slot**

**FMR10** Standard 1<sup>5</sup>/<sub>16</sub>" (24) or 9<sup>1</sup>/<sub>16</sub>" (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:**

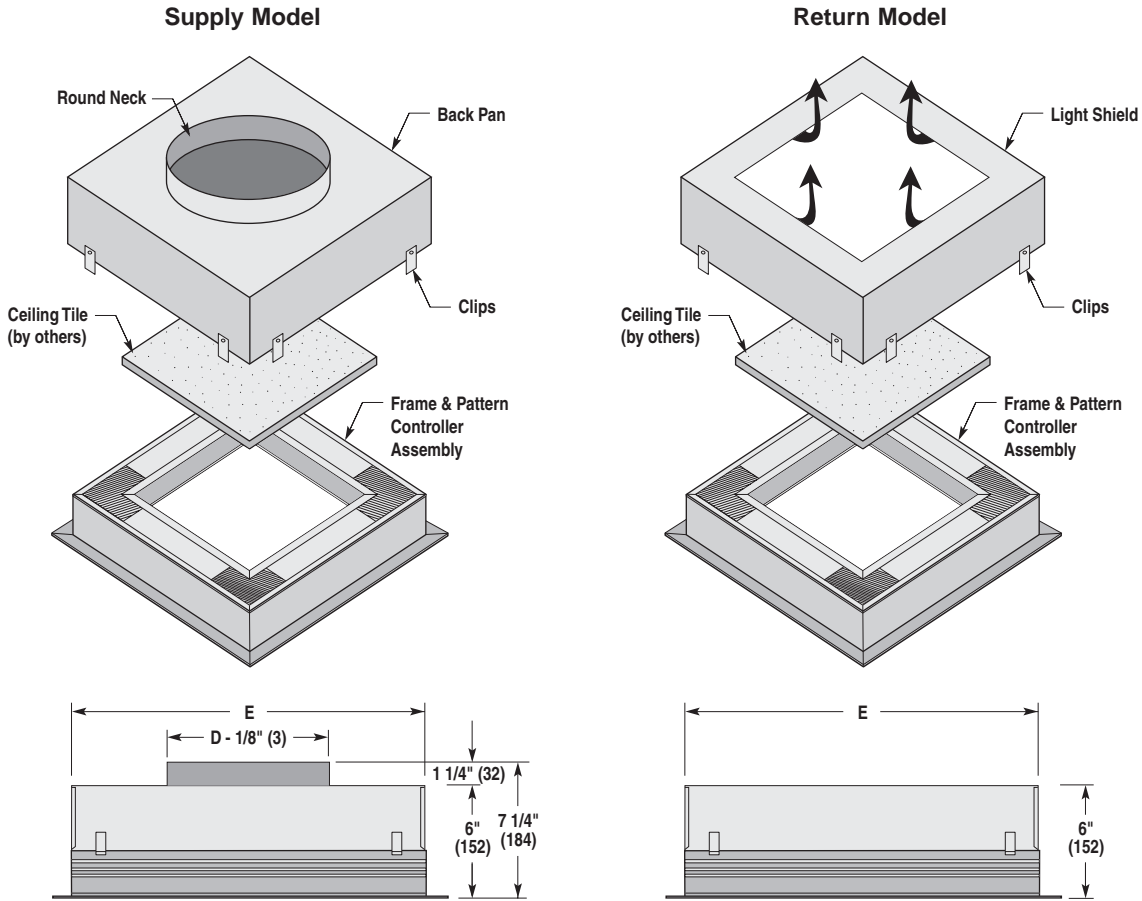
- Extruded aluminum construction with corrosion-resistant steel pattern controllers.
- Factory precision welding on all mitered corners.
- Pattern controllers are individually adjustable for horizontal or vertical discharge air patterns.
- Can be field adjusted for one, two, three or four-way blow directional 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.

**A**

**FLOWLINE™ LINEAR DIFFUSERS**

**FM Series Square Ceiling Diffusers**

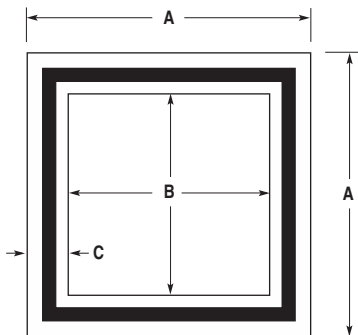
**Standard Ceiling Module (CM) Sizes: Imperial 24" x 24" (610 x 610) • Metric 600 x 600mm**  
(Frame/Border Type AA Illustrated)



**A**

**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):**

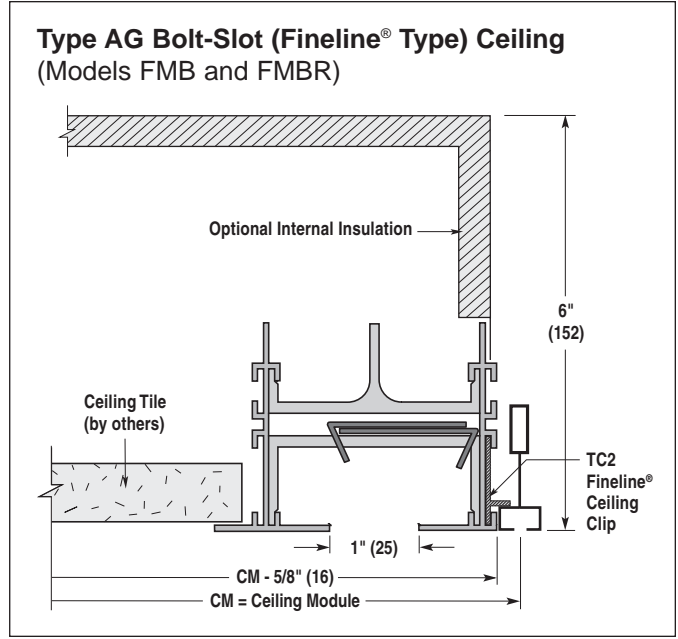
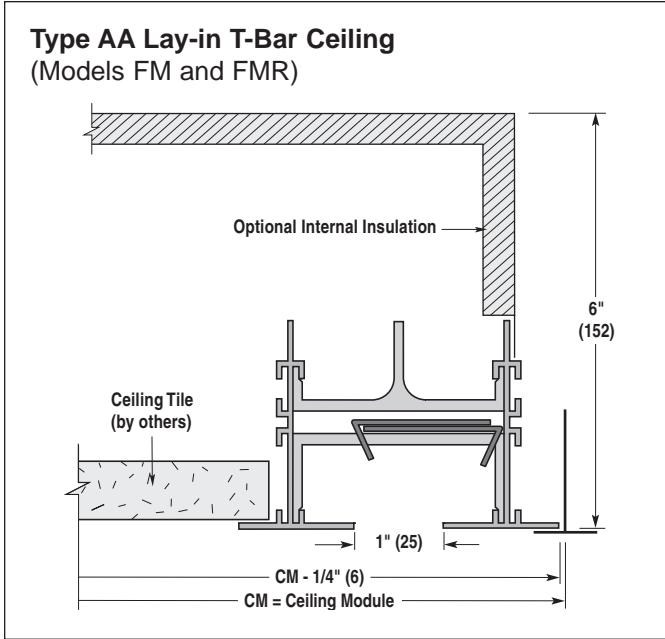
(Nominal D Diameter)  
6" (152), 8" (203), 10" (254).

**Dimensional Data:**

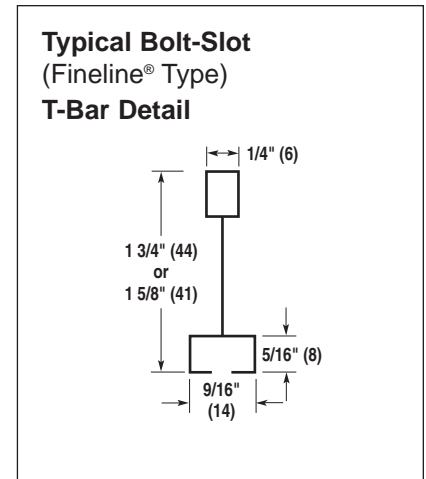
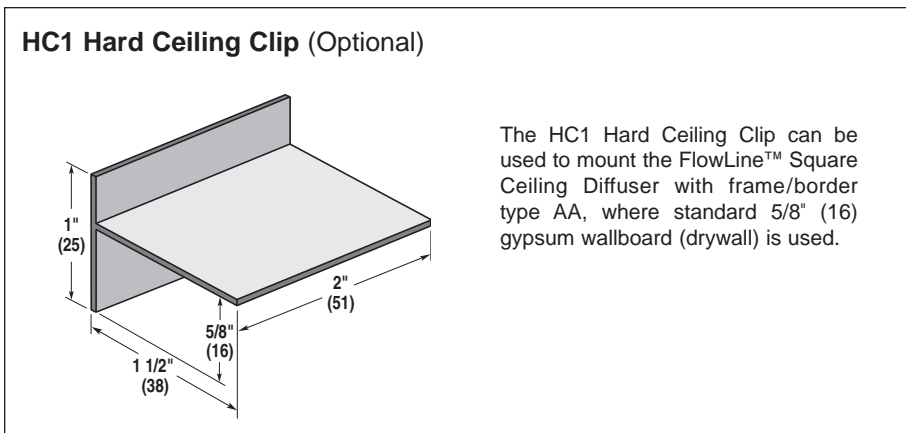
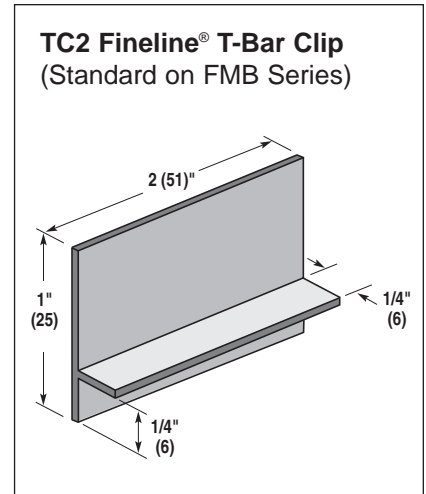
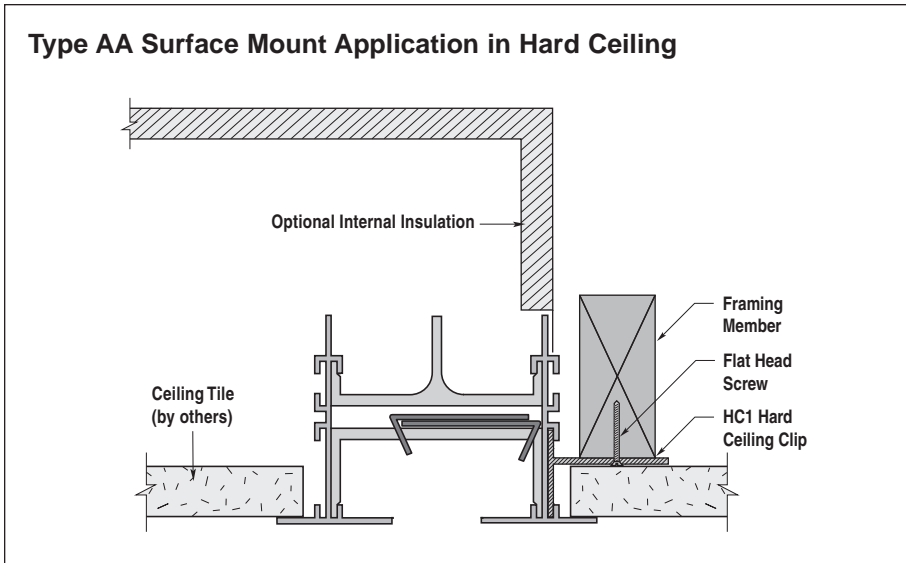
Models	Imperial Module 24" x 24" (610 x 610)				Metric Module 600 x 600mm			
	A	B	C	E	A	B	C	E
FM(I)10, FMR10	23 3/4 (603)	16 5/8 (422)	3 9/16 (90)	22 15/16 (583)	594	413	90	573
FMB(I)10, FMBR10	23 3/8 (594)	17 1/16 (433)	3 5/32 (80)	22 9/16 (573)	584	423	80	584



**FM Series Square Ceiling Diffusers • Frame/Border Types**



**Optional Hanger & Mounting Clips**



**A**

**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. Inlet	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
		NC (Noise Criteria)	<15	<15	<15	16	20	24	28
	8" Dia. Inlet	Throw	0-1-5	1-2-7	2-4-10	2-5-11	3-6-12	4-7-13	5-8-14
		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
10" Dia. 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	
	Airflow, cfm	164	218	273	327	382	436	491	
10" Dia. Inlet	Total Pressure	0.050	0.089	0.139	0.201	0.273	0.357	0.452	
	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<sup>-12</sup> watts.
- Pressure, throw and NC values are based on 4-way air pattern.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006.

**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.

**A**

**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 - —

#### MODELS

Horizontal High Throw	FLH
Vertical Jet Throw	FLV

#### SLOT WIDTH

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

#### NOMINAL LENGTH

inches (mm)

#### NO. OF SLOTS

One	1
Two	2

#### 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

#### FINISH

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

#### ANGLE CUT \*

None (default)	—
One End	AC1
Both Ends	AC2

#### ACCESSORY 2

(Right hand mounting hardware)

None (default)	—
Hard Ceiling Clip	HC1
Wall Clip	WC1
T-Bar Clip	TC1
Fineline® T-Bar Clip	TC2

#### ACCESSORY 1

(Left hand mounting hardware)

None (default)	—
Hard Ceiling Clip	HC1
Wall Clip	WC1
T-Bar Clip	TC1
Fineline® T-Bar Clip	TC2

#### END BORDER CONFIGURATION

Frame/Border Types AA, AAC, BB and BBC only

Mitered Mitered (default)	MM
Mitered Open	MO
Mitered Flat Cap	MC

Frame/Border Types AA, AAC, GG and AG only

Flanged Flanged	FF
Flanged Open	FO
Flanged Flat Cap	FC

#### All Frame/Border Types

Open Open	OO
Open Flat Cap	OC
Flat Cap Flat Cap	CC

**A**

FLOWLINE™ LINEAR DIFFUSERS

#### Notes:

- Maximum single section length is 144" (3658).
- 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.
- All models except Frame/Border Types AAC and BBC (supplied with concealed mounting brackets) include integral hanger brackets on 24" (610) centers as standard.
- 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.
- \*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 - —**

**A**

**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

**A**

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 70-2006. 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 70-2006. 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.

**A**  
**FLOWLINE™ LINEAR DIFFUSERS**