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flowbar



wood grains



metric sizes



C

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flowbar



FL-10 / FL-15 / FL-20 / FL-25 / FL-30 / FL-TZ

ARCHITECTURAL LINEAR DIFFUSER

- Single slot, large capacity linear diffuser offers an alternative to multi-slot diffusers
- 2-slot, NT-style and concealed border styles available
- Supports and fully integrates with various ceiling systems
- Five different slot widths
- Custom curving available to meet designer's requirements
- Heavy wall extruded aluminum construction

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geoflow



GFB-10 / GFBI-10 / GFR-10

ARCHITECTURAL MODULAR DIFFUSER

- Modular Shaped Design for use in DesignFLEX™ Ceiling Systems
- Multiple shapes with integral center panel
- Adjustable horizontal or vertical air patterns
- Factory supplied snap-on plenums
- Round top inlets or rectangular side inlets available

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moduflow



MF-10

ARCHITECTURAL LINEAR DIFFUSER

- Modular design for interior spaces compliments FlowBar linear diffusers
- Handles large capacities of air using a single slot
- Designed so ceiling material can be field cut and inserted in face of diffuser
- Adjustable horizontal or vertical directional air patterns
- Includes factory supplied plenum with round inlet connection
- Heavy wall extruded aluminum construction

PAGES: C40-C41

flowtee



FT-10 / FT-15 / FT-20

ARCHITECTURAL LINEAR DIFFUSER

- Lay-in modular slot diffuser that compliments linear FlowBar models
- Designed to fit standard lay-in or narrow tee ceiling grid systems
- Adjustable horizontal or vertical directional air patterns
- Includes factory supplied plenum with round inlet connection
- Heavy wall extruded aluminum construction

Overview

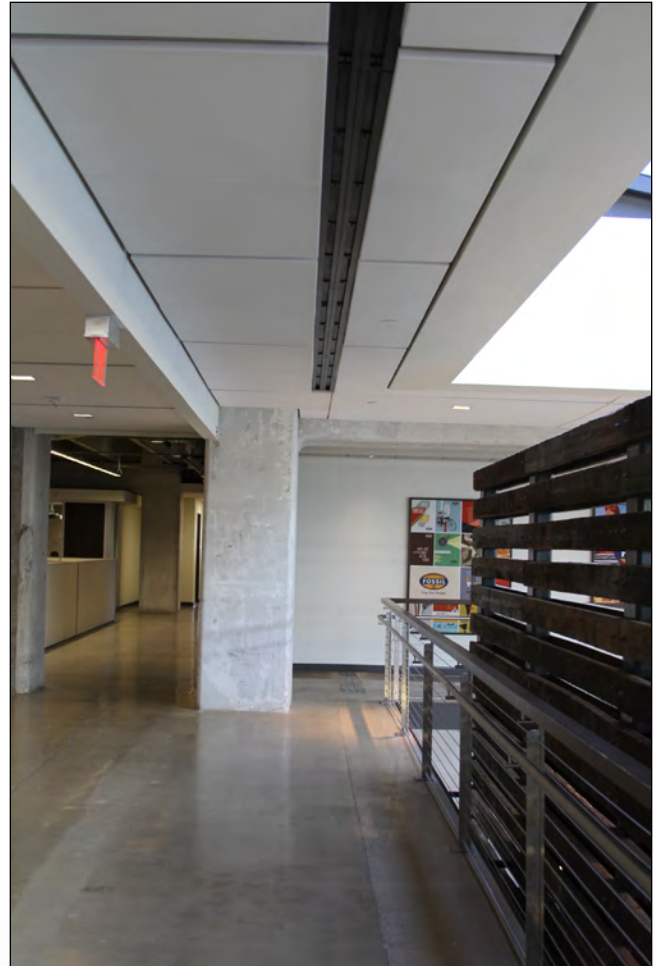
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The FlowBar™ architectural linear diffuser system maximizes engineering performance without sacrificing aesthetic considerations for the designer. FlowBar's outstanding performance allows higher air flows than conventional linear diffusers, with lower noise levels, making it ideal for high profile designs.

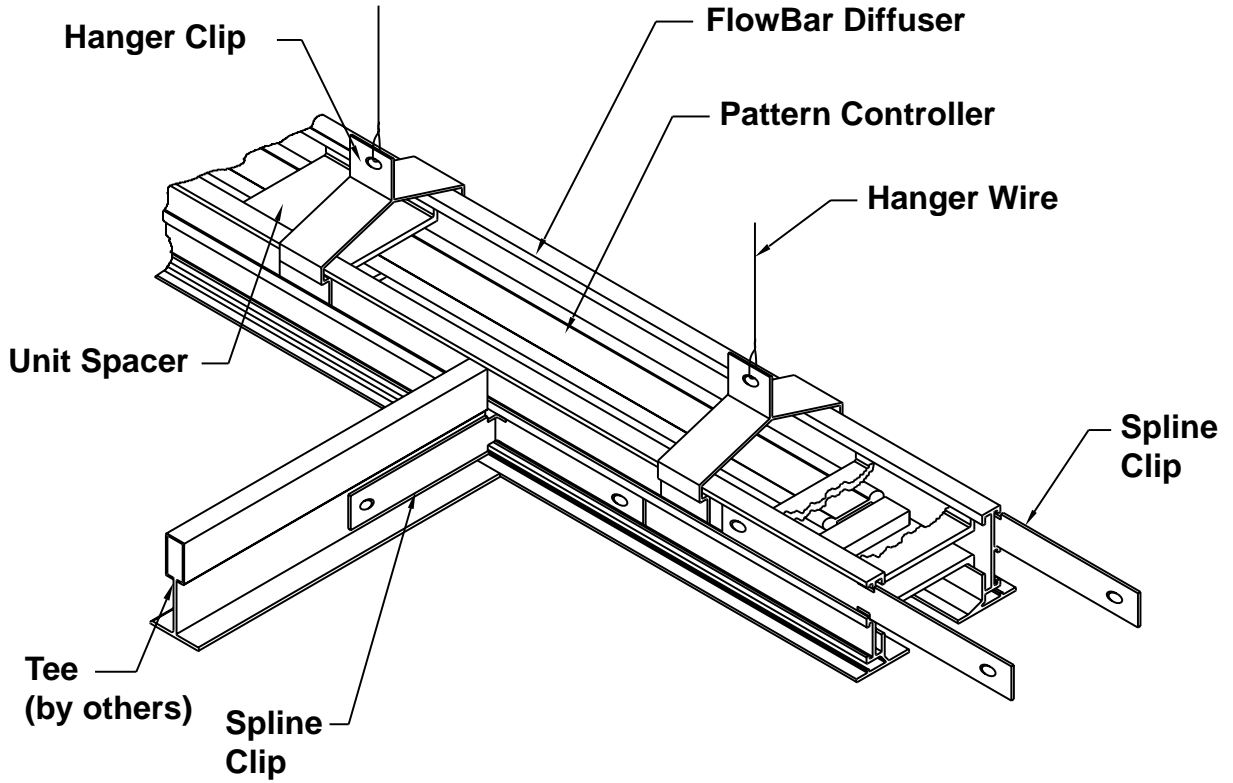
FlowBar also offers an installation alternative to the conventional linear diffuser. Conventional linear diffusers are supported by the duct system and in most cases are installed after the ceiling system is in place. For complete ceiling integration, the FlowBar system is offered with a large selection of flange styles compatible with various ceiling applications. Our unique clip/hanger support system allows for quick and easy installations.

The FlowBar system actually supports and becomes an integral part of the ceiling system and is installed along with the ceiling suspension system.

Titus FlowBar offers a new concept of air distribution that fully integrates with all ceiling systems. The FlowBar system is available in continuous linear, incremental linear and square configurations. This entire series of diffusers is available with two unique pattern controllers.



FlowBar with T-Bar Ceiling



For other applications, see pages C12 & C13

The HighThrow pattern controller allows air to be directed to the left or right as well as downward when installed in a ceiling system. As air is directed in either direction horizontally, a surface effect is maintained, even at reduced volumes, to provide room air motion without drafts. This, along with its high induction characteristics, makes HighThrow an excellent choice for variable volume systems.

The JetThrow pattern controller allows the airstream to be directed to meet required comfort conditions. JetThrow is an excellent choice for high bay applications, perimeter zones requiring vertical projection and for side wall applications requiring extended throw.

Both HighThrow and JetThrow pattern controllers can be combined within a single FlowBar system.

ADDITIONAL FEATURES OF THE TITUS FLOWBAR SYSTEM INCLUDE:

- Single slot, large capacity linear diffuser offers the designer an alternative to other multi-slot linear diffusers
- Supports and fully integrates with various ceiling systems
- Reduces costs and installation difficulties associated with conventional linear diffusers
- Manufactured entirely from heavy wall extruded aluminum
- Available in 6-foot or 12-foot segments
- Standard accessories ensure straight and true installations
- All FlowBar models are available custom curved to meet designer's requirements
- QuickClip® Mounting option allows installation after hard ceiling is installed



FlowBar Linear

FL - HighThrow/FL-TZ

- The Titus FlowBar linear system is a continuous slot system which allows the air distribution to become inconspicuous, while fully integrating and complementing the ceiling system and other ceiling components
- Several frame styles are available to complement various ceiling types. The FlowBar system supports and is directly connected to the ceiling support components, ensuring straight and true installations.
- The FlowBar system is installed during the ceiling installation with unique clip and hanger support systems
- Standard slot sizes are 1, 1½, 2, 2½ and 3 inches. Section lengths up to 12 feet minimize joints in long runs.
- All FlowBar linear systems are available curved
- Mitered corners, mitered tees and butt ends are available
- Standard finish is flat black for interior surfaces exposed to view and white for exposed flanges, with optional anodized finishes and custom colors available



FLOWBAR - HIGHTHROW

- Integral pattern controllers are on standard 24" centers, allowing the airstream to be directed left and right for horizontal and vertical airflow



wood grains



metric sizes

MODELS:

FL-10-HT / 1" Slot / HighThrow Option
 FL-15-HT / 1½" Slot / HighThrow Option
 FL-20-HT / 2" Slot / HighThrow Option
 FL-25-HT / 2½" Slot / HighThrow Option
 FL-30-HT / 3" Slot / HighThrow Option
 FL-TZ / 1" Slot

FINISHES:

Standard Finish - #26 White Border (Black pattern controllers)
 Optional Finish - Optional & anodized finishes available
 Note: Border 22 and 55 are finished in #84 Black

OVERVIEW

Titus FlowBar architectural linear diffuser system maximizes engineering performance without sacrificing aesthetic considerations for the designer. FlowBar's outstanding performance allows higher airflows than conventional linear diffusers. The wide array of slot widths allow for more CFM per linear foot while minimizing noise and pressure loss. The Flowbar system is available in continuous linear, incremental linear and square configurations.

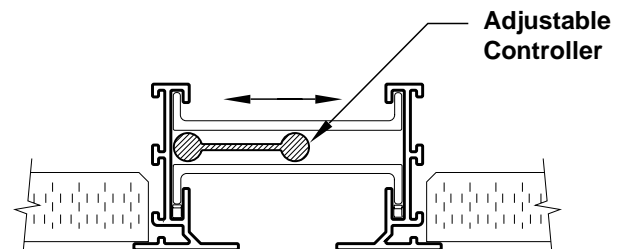
ADVANTAGES

- Integral pattern controllers are on standard 24" centers, allowing the airstream to be directed left and right for horizontal and vertical airflow
- FlowBar system allows supply, return and exhaust air all from one diffuser, reducing ceiling clutter
- FlowBar systems satisfy both the architect's and engineer's requirements for designing an air distribution system that will maintain optimum room air conditions while being inconspicuous to the viewer



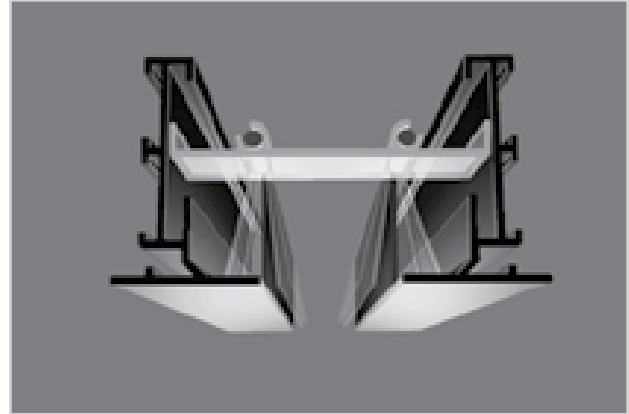
See website for Specifications

HighThrow Series



FL - JetThrow/FL-TZ

- This series is identical to the HighThrow series except for the pattern controllers
- JetThrow with nonadjustable pattern controllers is also available for curved FlowBar applications
- JetThrow pattern controllers are manufactured using only heavy wall extruded aluminum
- Standard finish is a white face with a flat black interior. Anodized finishes and custom colors are available.



FLOWBAR - JETTHROW



wood grains



metric sizes

MODELS:

FL-10-JT / 1" Slot / JetThrow Option
 FL-15-JT / 1½" Slot / JetThrow Option
 FL-20-JT / 2" Slot / JetThrow Option
 FL-25-JT / 2½" Slot / JetThrow Option
 FL-30-JT / 3" Slot / JetThrow Option
 FL-TZ / 1" Slot

FINISHES:

Standard Finish - #26 White Border (Black pattern controllers)

Optional Finish - Optional & anodized finishes available

Note: Border 22 and 55 are finished in #84 Black

OVERVIEW

Titus FlowBar architectural linear diffuser system maximizes engineering performance without sacrificing aesthetic considerations for the designer. FlowBar's outstanding performance allows higher airflows than conventional linear diffusers. The wide array of slot widths allow for more CFM per linear foot while minimizing noise and pressure loss. The Flowbar system is available in continuous linear, incremental linear and square configurations.

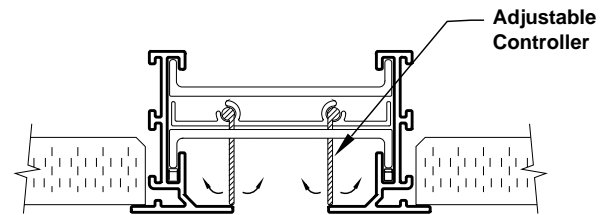
ADVANTAGES

- The optional JetThrow pattern controllers allow the airstream to be jetted in a vertical direction when installed in a ceiling and horizontal when installed in a side wall application. The pattern controllers also allow the airstream to be directed left or right when in a ceiling application, and up or down when in a side wall application.



See website for Specifications

JetThrow Series



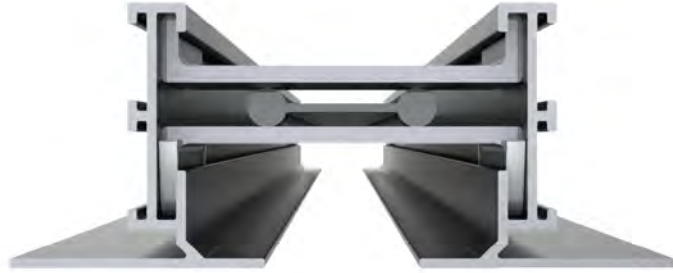
- JetThrow pattern controllers are an excellent choice where extended throw is required as in high bay applications for heated and/or cooled air. This product is also useful along perimeter walls where heated air can be directed downward, terminating at the floor at a comfortable velocity.
- JetThrow pattern controllers can be alternated with the standard HighThrow pattern controllers. For cold climate applications, heated air can be directed to the floor while cooled air is directed horizontally across the ceiling, all from the same FlowBar.

FLOWBAR INSTALLATIONS

FlowBar is designed to fully integrate into the ceiling system.

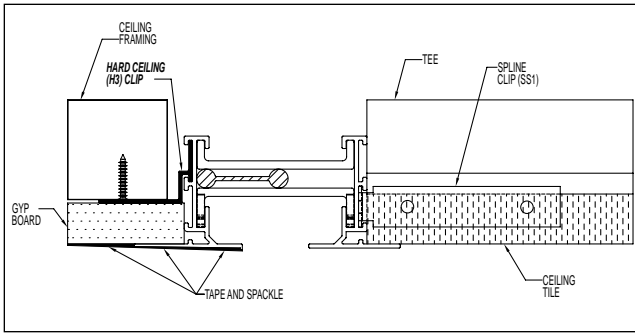
The FlowBar system, with the exception of Border 77, is installed during the ceiling installation with unique mounting clips. Border 77 is installed after the drywall is in place.

Available in up to 12-foot lengths, FlowBar is straighter and often less expensive to install than conventional linear diffusers.

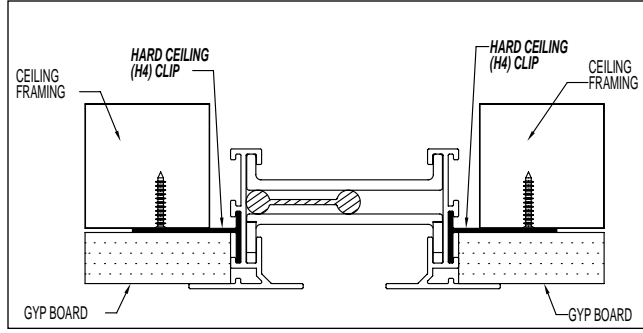


HARD CEILING APPLICATIONS

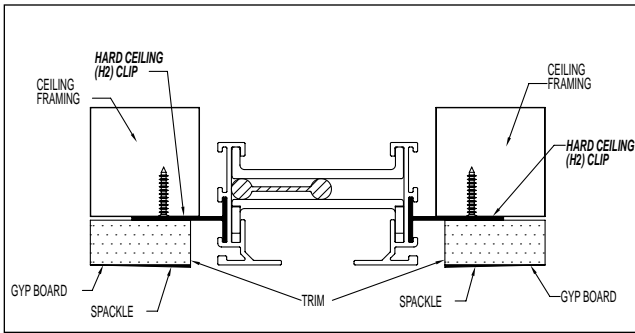
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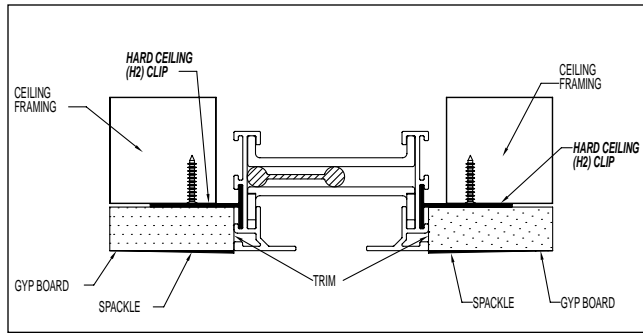
Ceiling / Ceiling - Border 26



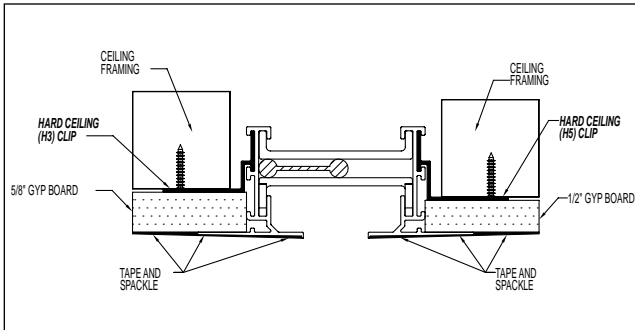
Ceiling / Ceiling - Border 66



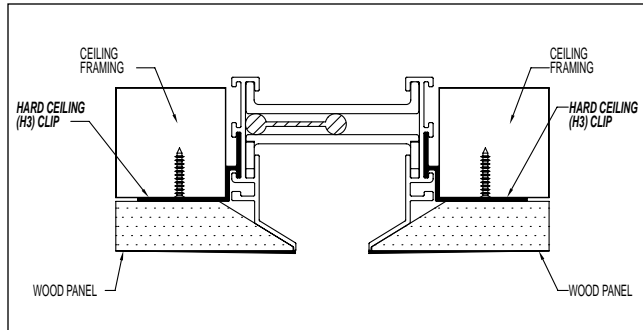
Ceiling / Ceiling Reveal - Border 11



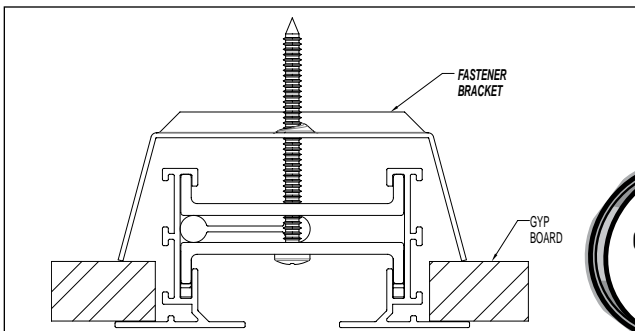
Ceiling / Ceiling - Border 11



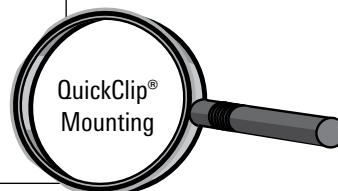
Ceiling / Ceiling - Border 22



Ceiling / Ceiling - Border 55



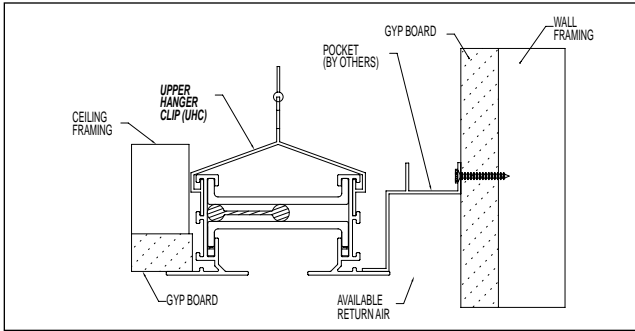
Ceiling / Ceiling - Border 77



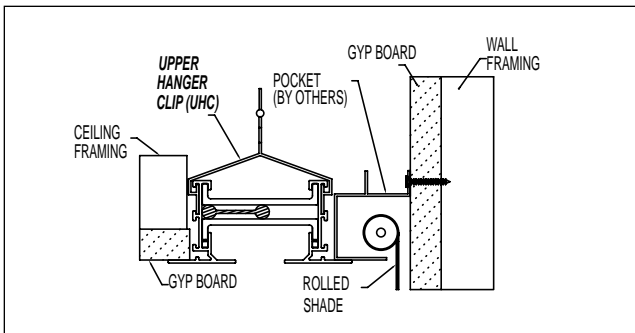
Items in italics are supplied by Titus
Items not italicized are supplied by others

HARD CEILING APPLICATIONS

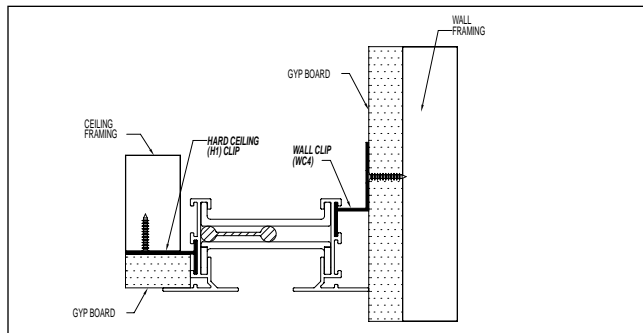
HARD CEILING APPLICATIONS



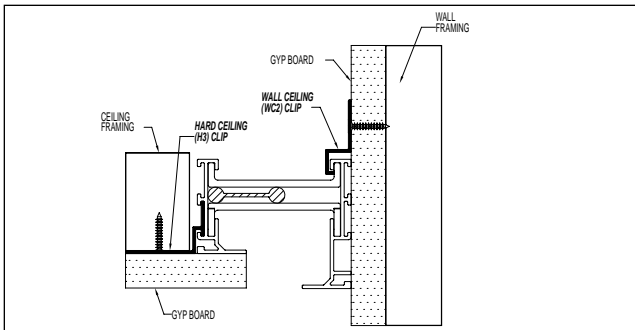
Ceiling / Wall Reveal - Border 66



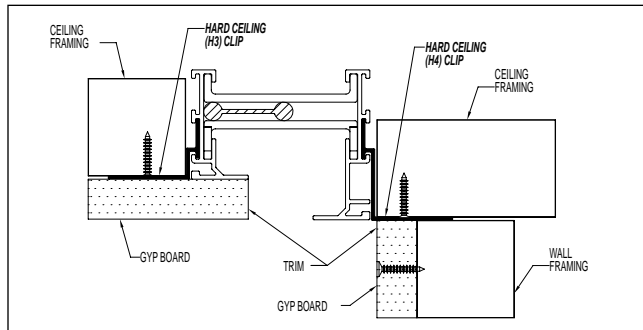
Ceiling / Wall Pocket - Border 66



Ceiling / Wall - Border 66



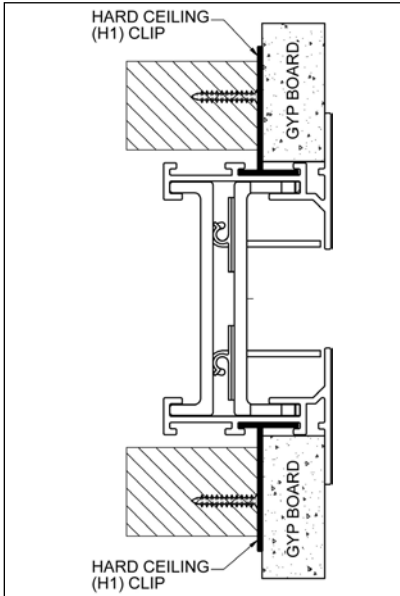
Ceiling / Wall - Border 14



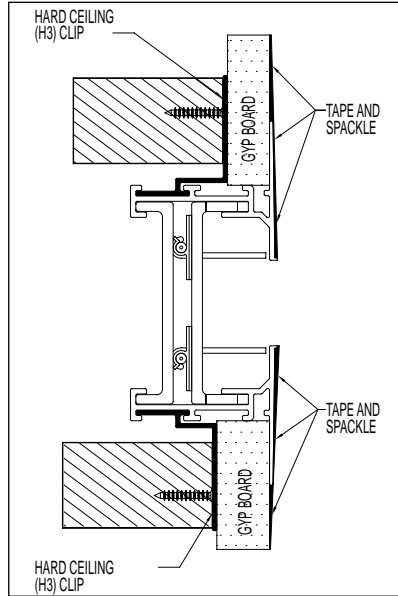
Ceiling / Offset - Border 14

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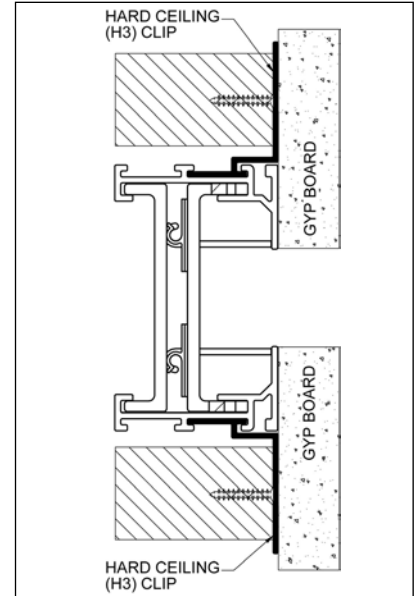




Side Wall - Exposed Flange - Border 66



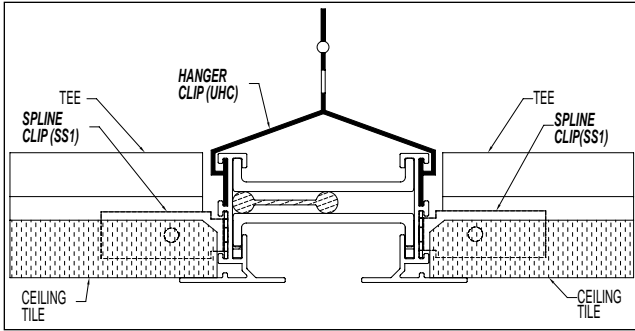
Side Wall - Hidden Flange - Border 22



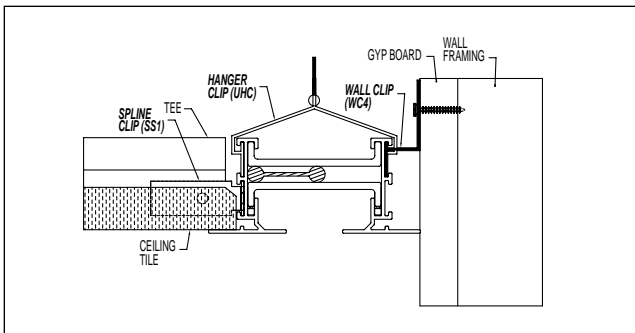
Side Wall - Hidden Flange - Border 11



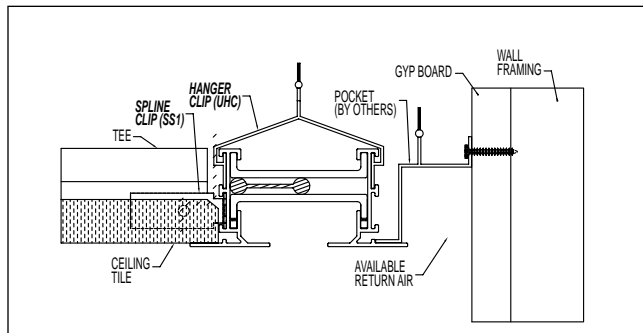
ACOUSTICAL CEILING APPLICATIONS



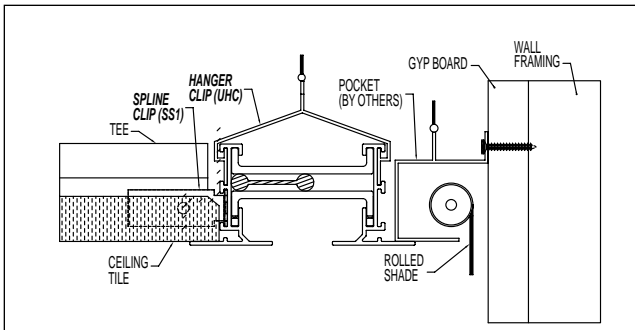
Ceiling / Ceiling - Border 66



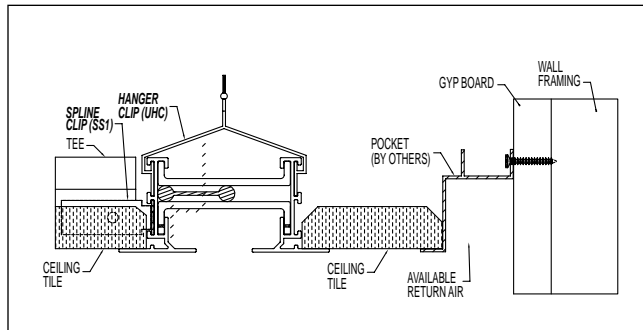
Ceiling / Wall Reveal - Border 66



Ceiling / Wall Pocket - Border 66



Ceiling / Wall Pocket - Border 66



Ceiling / Ceiling / Pocket - Border 66

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INSTALLATION METHODS

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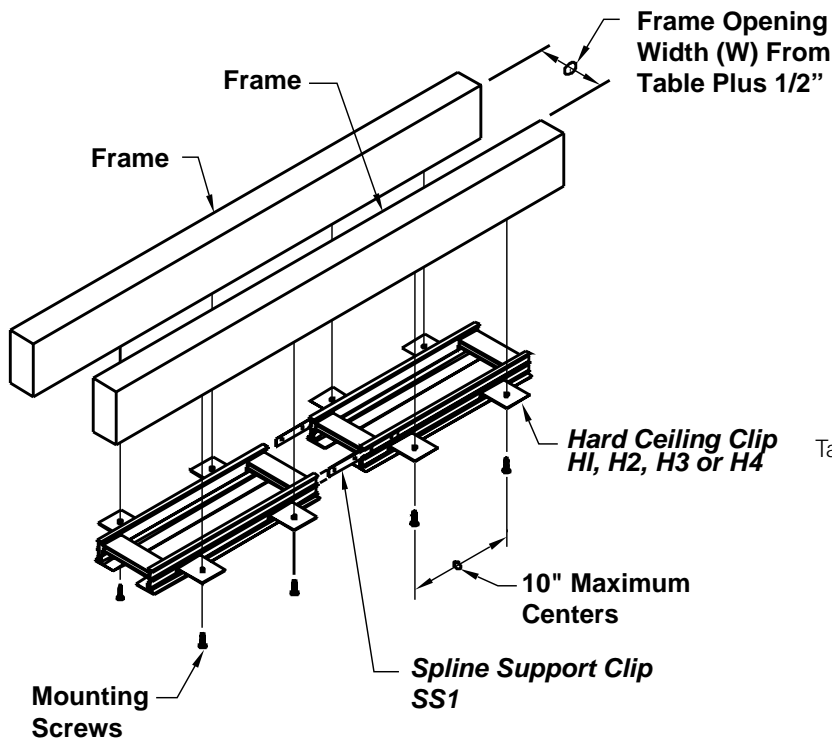
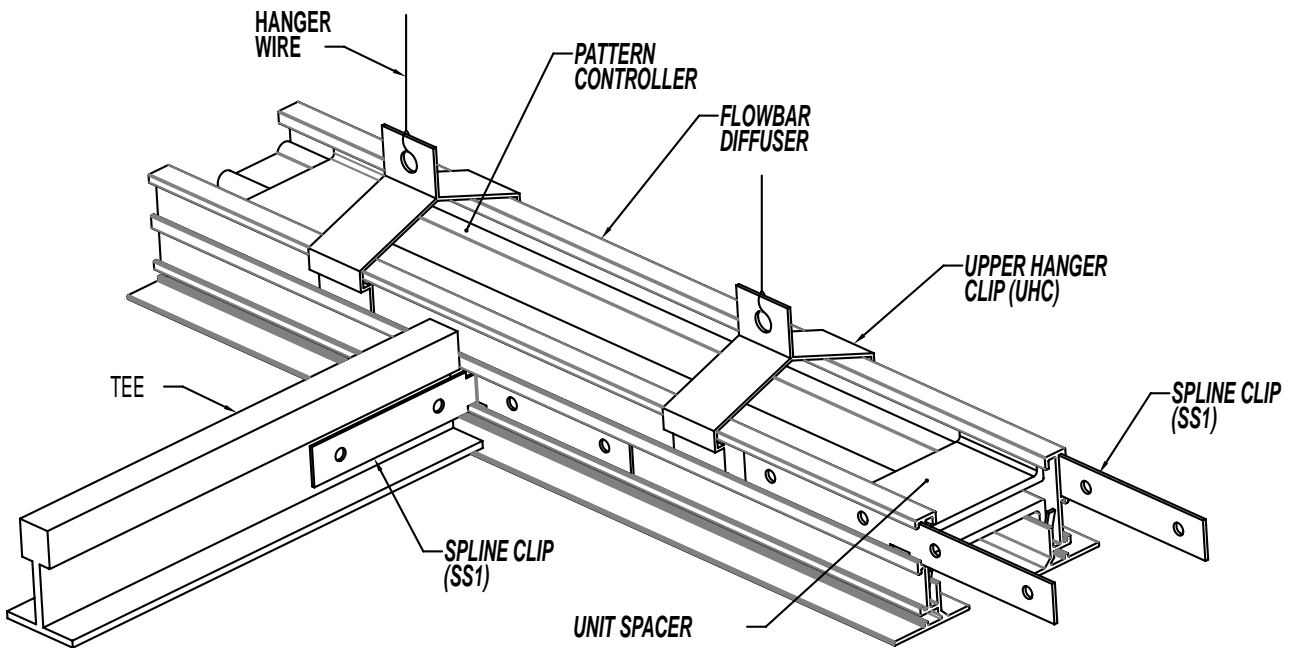


Table 1. Frame Opening Dimensions

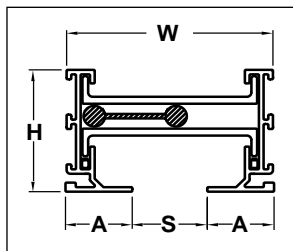
Refer to Titus FlowBar IOM for additional installation details



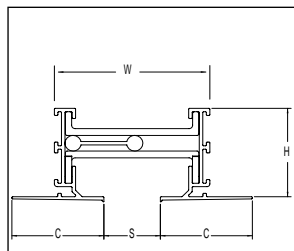
Refer to Titus FlowBar IOM for additional installation details

Items in italics are supplied by Titus
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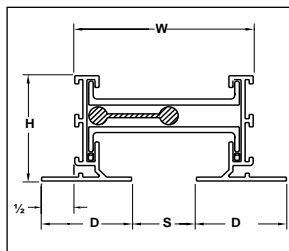
BORDER TYPES



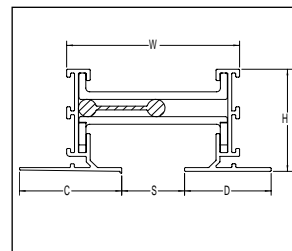
Border Type 11



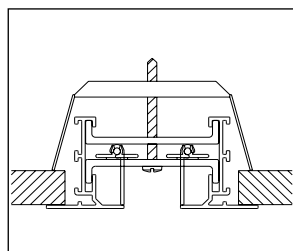
Border Type 22



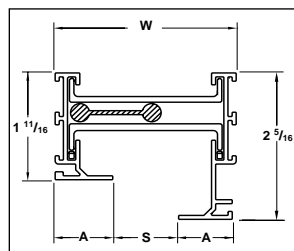
Border Type 66



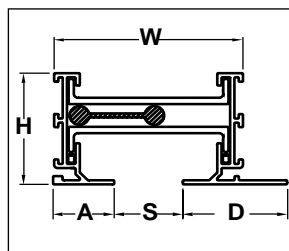
Border Type 26



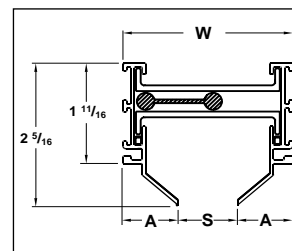
Border Type 77



Border Type 14*



Border Type 16



Border Type 55

Border Type 77 (Concealed Fastening) uses Border Type 66 extrusions and adds a mounting bracket, a #10 x 2½" screw and a hole in the spreader

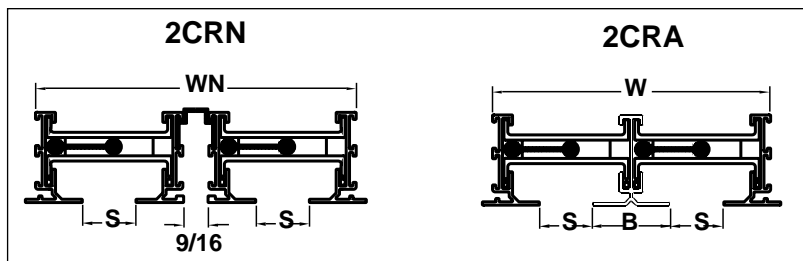
FlowBar Model	Ceiling Opening Width for Border Type 77		
	1-Slot	2-Slot 2CRA	2-Slot 2CRN
FL-10	3	5½	6¾
FL-15	4	7½	8¾
FL-20	5	9½	10¾
FL-25	6	11½	12¾
FL-30	7	13½	14¾

Model	S Slot Width	W Width	A Border Width	C Border Width	D Border Width	H Height
FL-10	1	2¾	7⁄8	1⅝	1⅜	1⅞
FL-15	1½	3¾	1⅜	1⅞	1⅝	1⅞
FL-20	2	4¾	1⅝	2⅞	1⅞	1⅞
FL-25	2½	5¾	1⅝	2⅞	2⅞	2⅝
FL-30	3	6¾	1⅞	2⅞	2⅞	2⅝

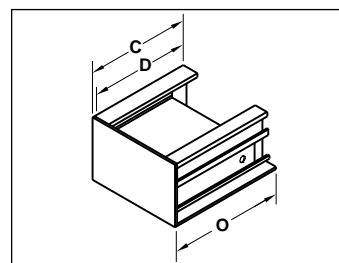
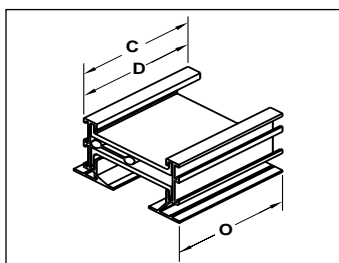
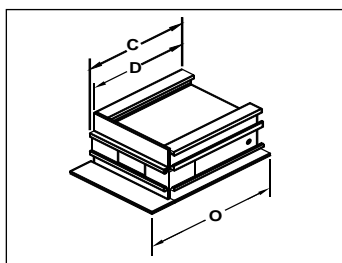
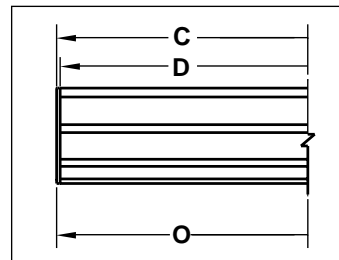
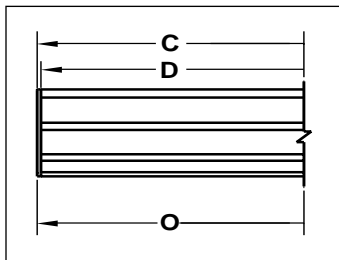
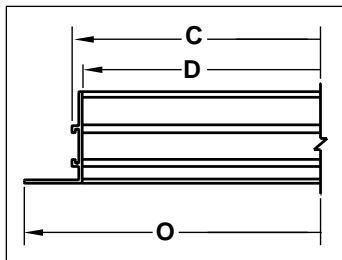
Dimensions are in inches * One-way blow only

Model	S Slot Width	B Border Width	W Width	WN Width
FL-10	1	1⅞	5⅞	6⅞
FL-15	1½	1⅞	7⅞	8⅞
FL-20	2	2⅞	9⅞	10⅞
FL-25	2½	2⅞	11⅞	12⅞
FL-30	3	3⅞	13⅞	14⅞

TWO-SLOT OPTIONS



Note: Not all border options are shown. For other border options, contact your Titus sales representative. For typical border applications see pages C12-C15.



SX Straight

Y Open End

ECX End Cap

Border Type	Slot Width	SXX		SXY		YY		ECXX		ECXY	
		C	O	C	O	C	O	C	O	C	O
11	1	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	1½	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2½	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	3	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
22/55	1	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	1½	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2½	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	3	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
66/77	1	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	1½	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2½	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	3	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
14	1	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	1½	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2½	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	3	NA	NA	NA	NA	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
16	1	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	1½	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	2½	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$
	3	$D+\frac{3}{8}$	$D+2\frac{1}{8}$	$D+\frac{3}{16}$	$D+1\frac{1}{16}$	D	D	$D+\frac{1}{8}$	$D+\frac{1}{8}$	$D+\frac{1}{16}$	$D+\frac{1}{16}$

Note: (NA) indicates not available

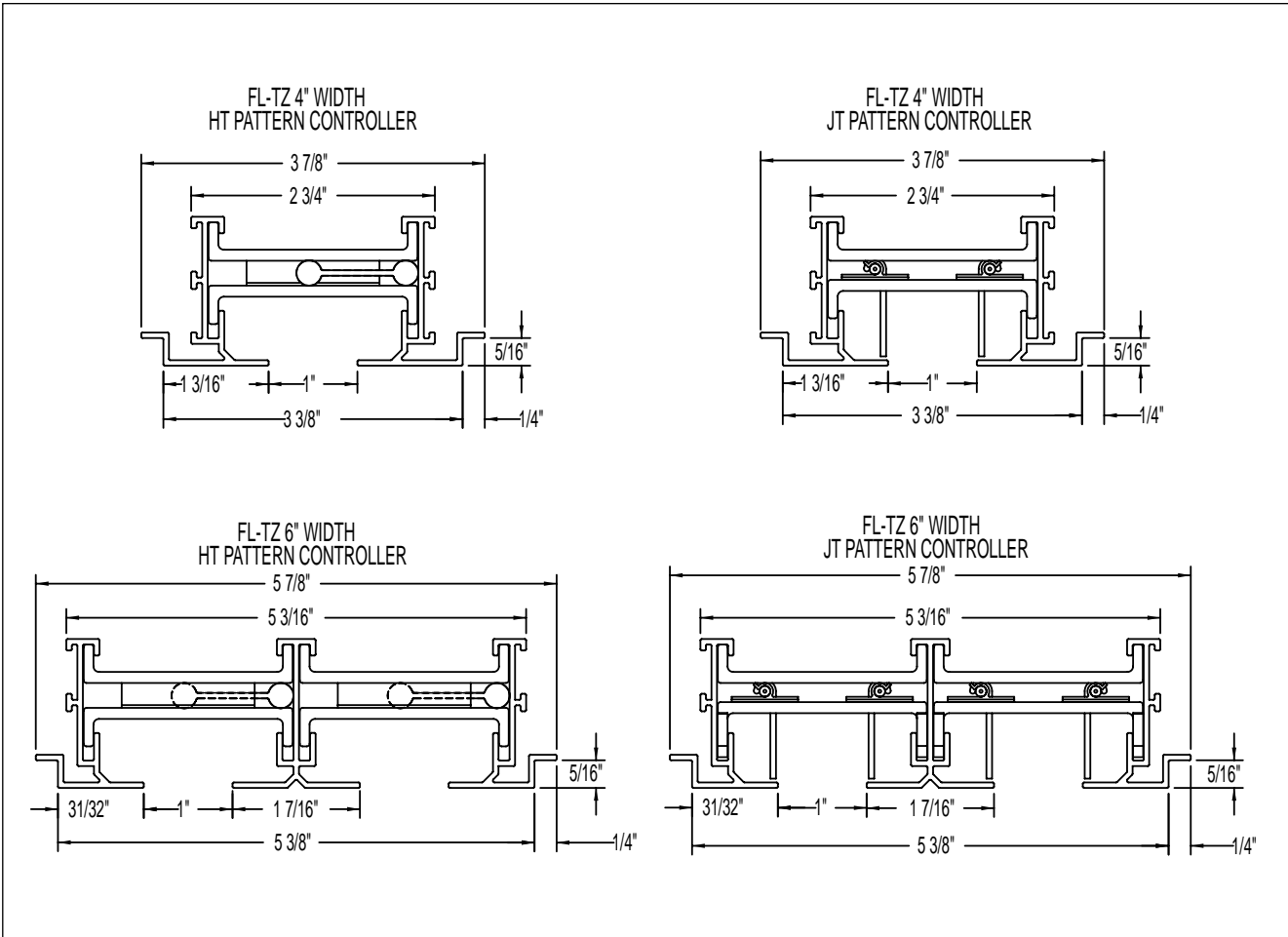
Dimensions in inches

D = ordered or specified length

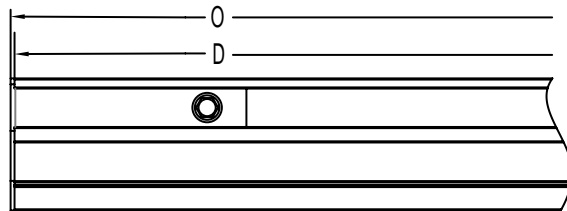
DIMENSIONS



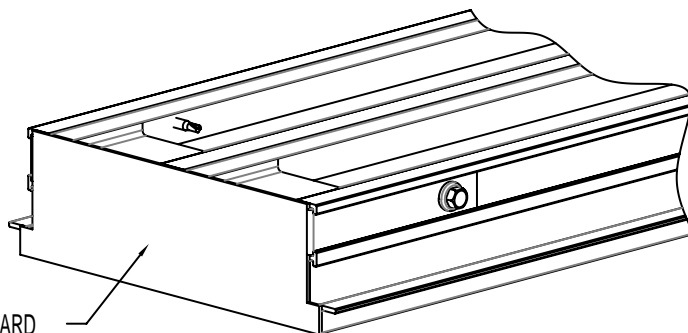
FL-TZ UNIT DIMENSIONS



END FABRICATION AND LENGTH



Nominal Module Length	FL-TZ-LT		FL-TZ-DF / -NT	
	D	O	D	O
24	23 ³ / ₄	23 ⁷ / ₈	23 ¹ / ₄	23 ³ / ₈
30	29 ³ / ₄	29 ⁷ / ₈	29 ¹ / ₄	29 ³ / ₈
36	35 ³ / ₄	35 ⁷ / ₈	35 ¹ / ₄	35 ³ / ₈
48	47 ³ / ₄	47 ⁷ / ₈	47 ¹ / ₄	47 ³ / ₈
60	59 ³ / ₄	59 ⁷ / ₈	59 ¹ / ₄	59 ³ / ₈
72	71 ³ / ₄	71 ⁷ / ₈	71 ¹ / ₄	71 ³ / ₈

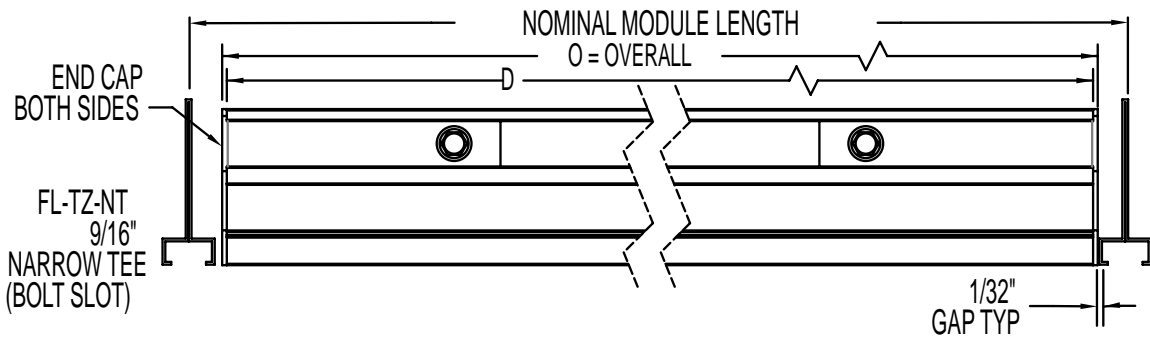
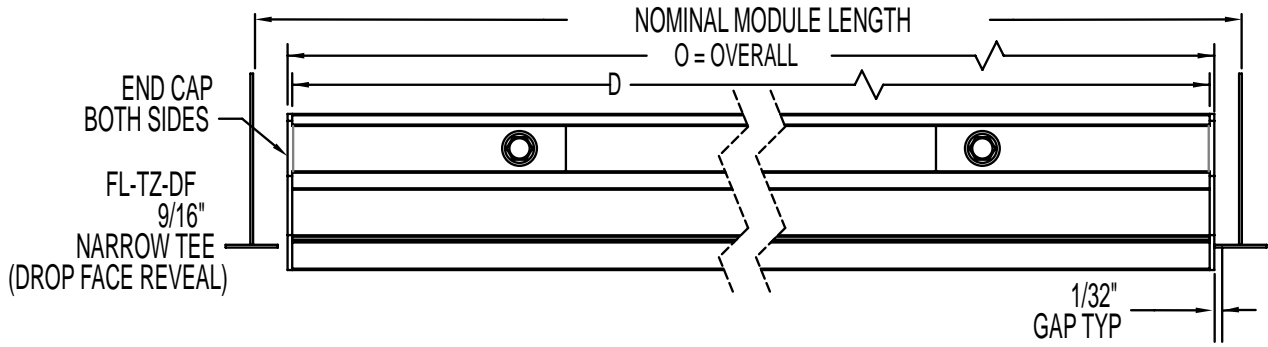
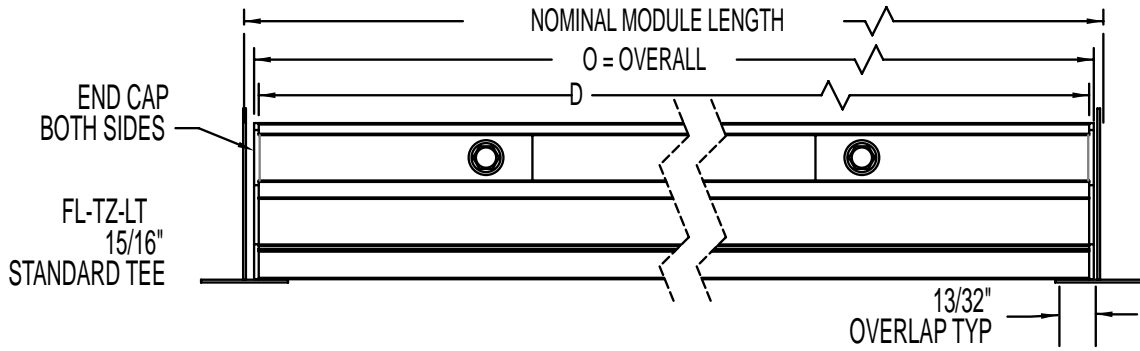


END CAP IS STANDARD

DIMENSIONS

FL-TZ UNIT DIMENSIONS

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C

DIMENSIONS

ACCESSORIES

FBMC

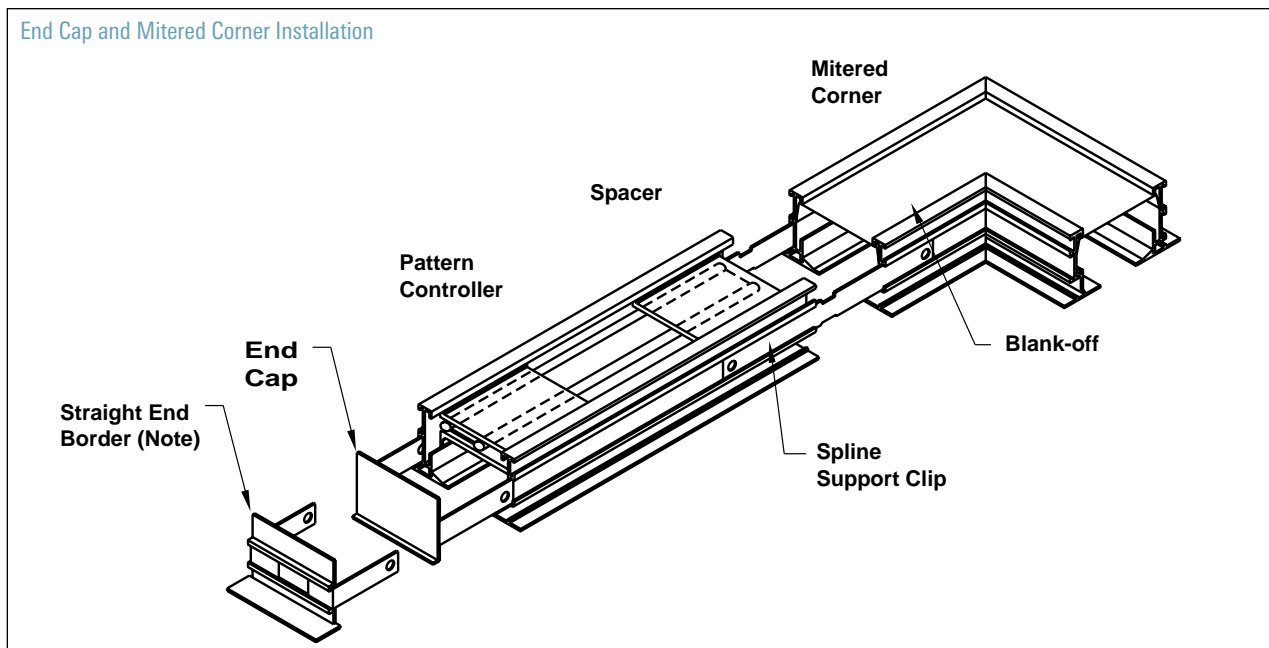
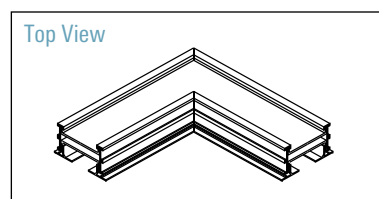
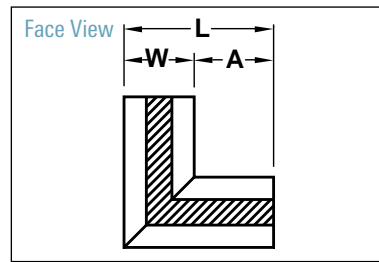
OPTIONAL MITERED CORNER

- FBMC-10 / 1" Slot
- FBMC-15 / 1½" Slot
- FBMC-20 / 2" Slot
- FBMC-25 / 2½" Slot
- FBMC-30 / 3" Slot



- End Caps, End Borders, Mitered Corners and Blank-Offs are optional
- FlowBar Diffusers can be joined together end-to-end to form long continuous runs
- Optional End Borders and End Caps close off the ends of the diffusers and simplify installations ending at walls and other stopping points
- Optional Mitered Corners are rendered inactive with factory installed blank-offs
- Spline Clips (SS1) maintain tight joints between sections

Number of Slots	Slot Width	Border Type 11			Border Type 66			Border Type 22		
		L	W	A	L	W	A	L	W	A
1	1	8¾	2¾	6	9¼	3¾	5½	9½	4¼	5¼
	1½	9¾	3¾	6	10¼	4¾	5½	10½	5¼	5¼
	2	10¾	4¾	6	11¼	5¾	5½	11½	6¼	5¼
	2½	11¾	5¾	6	12¼	6¾	5½	12¼	6¾	5½
	3	12¾	6¾	6	13¼	7¾	5½	13¼	7¾	5½
2	1	11 ¹ / ₁₆	5 ³ / ₁₆	6	11 ¹ / ₁₆	6 ³ / ₁₆	5½	11 ¹⁵ / ₁₆	6 ¹ / ₁₆	5¼
	1½	13 ³ / ₁₆	7 ⁷ / ₁₆	6	13 ¹ / ₁₆	8 ¹ / ₁₆	5½	13 ¹⁵ / ₁₆	8 ¹ / ₁₆	5¼
	2	15 ³ / ₁₆	9 ³ / ₁₆	6	15 ¹ / ₁₆	10 ¹ / ₁₆	5½	15 ¹⁵ / ₁₆	10 ¹ / ₁₆	5¼
	2½	17 ⁷ / ₁₆	11 ³ / ₁₆	6	17 ¹ / ₁₆	12 ¹ / ₁₆	5½	17 ¹ / ₁₆	12 ³ / ₁₆	5½
	3	19 ³ / ₁₆	13 ³ / ₁₆	6	19 ¹ / ₁₆	14 ¹ / ₁₆	5½	19 ¹ / ₁₆	14 ³ / ₁₆	5½



Note: Optional Straight End Borders not available for Border Types 22, 14 and 55

FBC

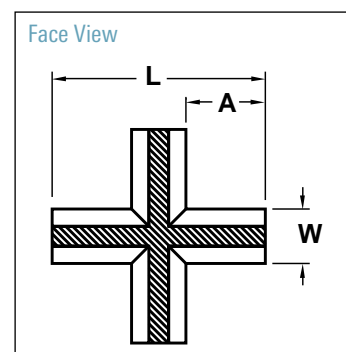
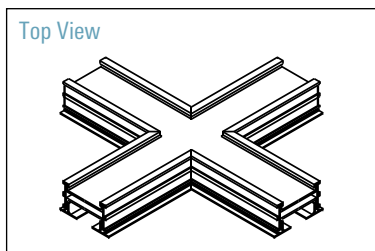
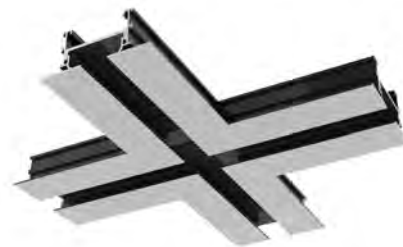
OPTIONAL FLOW CROSS

FBC-10 / 1" Slot
FBC-15 / 1½" Slot
FBC-20 / 2" Slot

FBC-25 / 2½" Slot
FBC-30 / 3" Slot

Number of Slots	Slot Width	L	Border Type 11		Border Type 66	
			W	A	W	A
1	1	14¾	2¾	6	3¾	5½
	1½	15¾	3¾	6	4¾	5½
	2	16¾	4¾	6	5¾	5½
	2½	17¾	5¾	6	6¾	5½
	3	18¾	6¾	6	7¾	5½

All dimensions are in inches
Not available in 2 slots



HTSK/JTSK

OPTIONAL FIELD CUT SPACER KIT

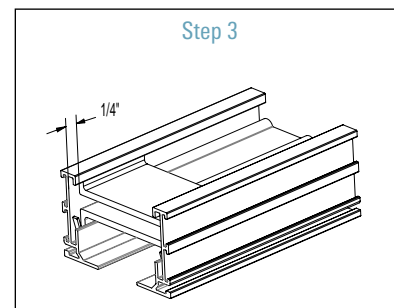
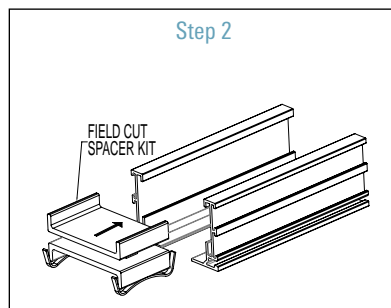
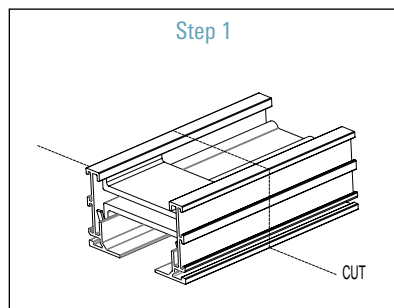
HTSK-10 / 1" Slot
HTSK-15 / 1½" Slot
HTSK-20 / 2" Slot
HTSK-25 / 2½" Slot
HTSK-30 / 3" Slot
JTSK-10 / 1" Slot
JTSK-15 / 1½" Slot
JTSK-20 / 2" Slot
JTSK-25 / 2½" Slot
JTSK-30 / 3" Slot

Sometimes the exact length of a FlowBar diffuser is not known until the diffuser is being installed. Standard FlowBar diffusers can be field trimmed. Use the following information to trim FlowBar in the field.

1. Determine the desired length and cut accordingly
2. Insert the optional field cut spacer kit
3. Place the spacer kit ¼ inch from the newly trimmed end

Note: The pattern controller must be cut ¼ inches shorter than the borders to accommodate the Field Spacer Kit

The following figures illustrate the trimming procedure.



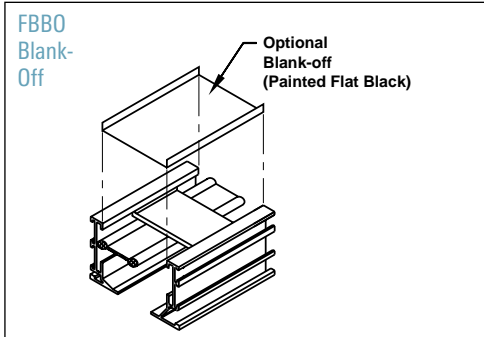
ACCESSORIES

FBBO

OPTIONAL BLANK-OFF

- FBBO-10 / 1" Slot
- FBBO-15 / 1½" Slot
- FBBO-20 / 2" Slot
- FBBO-25 / 2½" Slot
- FBBO-30 / 3" Slot

Note: Units ship in 6 foot increments.
Field cut for shorter length.

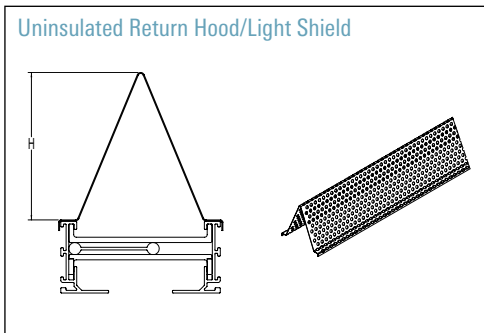


FBR

OPTIONAL RETURN HOOD/LIGHT SHIELD

- FBR-10 / 1" Slot
- FBR-15 / 1½" Slot
- FBR-20 / 2" Slot
- FBR-25 / 2½" Slot
- FBR-30 / 3" Slot

Note: Return Hoods are 51 percent free area perforated galvanized steel, painted flat black



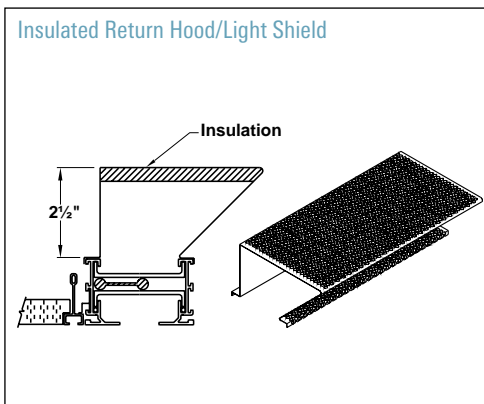
FBRI

- FBRI-10 / 1" Slot
- FBRI-15 / 1½" Slot
- FBRI-20 / 2" Slot
- FBRI-25 / 2½" Slot
- FBRI-30 / 3" Slot

Note: Return Hoods are 51 percent free area perforated galvanized steel, painted flat black

Units ship in 4 foot increments. Field cut for shorter lengths.

Return Hoods not available on curved FlowBar



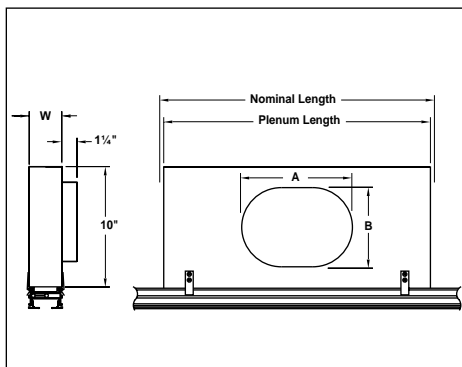
Number of Slots	Slot Width	H (Height)
1	1	3⅞
	1½	3⅞
	2	3⅞
	2½	7⅛
	3	7⅛
2	1	2⅞
	1½	3⅞
	2	4⅞
	2½	5⅞
	3	6⅞

All dimensions are in inches

FBP/FBPI

MODEL FBP OR FBPI PLENUM FOR FLOWBAR LINEAR DIFFUSERS, BORDER TYPES 11, 14, 16, 22, 55, 66

- FBP-10 / 1" Slot
- FBP-15 / 1½" Slot
- FBP-20 / 2" Slot
- FBP-25 / 2½" Slot
- FBP-30 / 3" Slot
- FBPI-10* / 1" Insulated
- FBPI-15* / 1½" Insulated
- FBPI-20* / 2" Insulated
- FBPI-25* / 2½" Insulated
- FBPI-30* / 3" Insulated



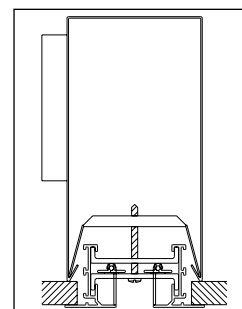
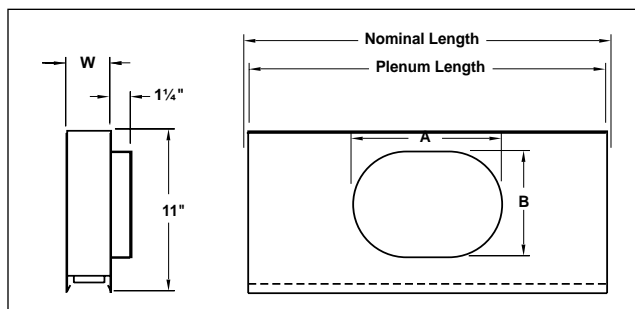
*Note: End Caps are not insulated

FlowBar Unit	Border 11, 14, 16, 22, 55, 66 W (Width)			Nominal Length	Standard Available Inlets	Plenum Length (inches)
	Slots					
	1	2 CRN	2CRA			
FBP & FBPI-10	2¾	6	5¼	24, 36, 48, 60	6, 8, 10, 12	21¾, 33¾, 45¾, 57¾
FBP & FBPI-15	3¾	8	7¼	24, 36, 48, 60	6, 8, 10, 12	21¾, 33¾, 45¾, 57¾
FBP & FBPI-20	4¾	10	9¼	24, 36, 48, 60	6, 8, 10, 12	21¾, 33¾, 45¾, 57¾
FBP & FBPI-25	5¾	12	11¼	24, 36, 48, 60	6, 8, 10, 12	21¾, 33¾, 45¾, 57¾
FBP & FBPI-30	6¾	14	13¼	24, 36, 48, 60	6, 8, 10, 12	21¾, 33¾, 45¾, 57¾

Standard Inlet Size	Dimensions	
	A	B
6 Oval	6¼	5¼
8 Oval	9⅜	5¼
10 Oval	12½	5¼
12 Oval	14⅞	7⅞
No Inlet	-	-

MODEL FBP OR FBPI PLENUM FOR FLOWBAR LINEAR DIFFUSERS, BORDER TYPE 77 ONLY

- FBP-10 / 1" Slot
- FBP-15 / 1½" Slot
- FBP-20 / 2" Slot
- FBP-25 / 2½" Slot
- FBP-30 / 3" Slot
- FBPI-10* / 1" Insulated
- FBPI-15* / 1½" Insulated
- FBPI-20* / 2" Insulated
- FBPI-25* / 2½" Insulated
- FBPI-30* / 3" Insulated



FlowBar Border 77
Installation Detail

*Note: End Caps are not insulated

FlowBar Unit	Border 77 W (Width)			Nominal Length	Standard Available Inlets	Plenum Length (inches)
	Slots					
	1	2 CRN	2CRA			
FBP & FBPI-10	3¾	7 ¹ / ₁₆	6 ³ / ₁₆	24, 36, 48, 60	6, 8, 10, 12	24, 36, 48, 60
FBP & FBPI-15	4¾	9 ¹ / ₁₆	8 ³ / ₁₆	24, 36, 48, 60	6, 8, 10, 12	24, 36, 48, 60
FBP & FBPI-20	5¾	11 ¹ / ₁₆	10 ³ / ₁₆	24, 36, 48, 60	6, 8, 10, 12	24, 36, 48, 60
FBP & FBPI-25	6¾	13 ¹ / ₁₆	12 ³ / ₁₆	24, 36, 48, 60	6, 8, 10, 12	24, 36, 48, 60
FBP & FBPI-30	7¾	15 ¹ / ₁₆	14 ³ / ₁₆	24, 36, 48, 60	6, 8, 10, 12	24, 36, 48, 60

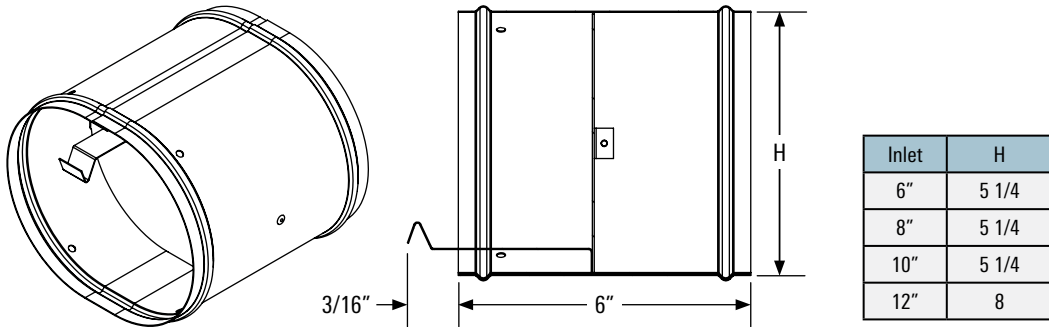
Standard Inlet Size	Dimensions	
	A	B
6 Oval	6¼	5¼
8 Oval	9⅜	5¼
10 Oval	12½	5¼
12 Oval	14⅞	7⅞
No Inlet	-	-



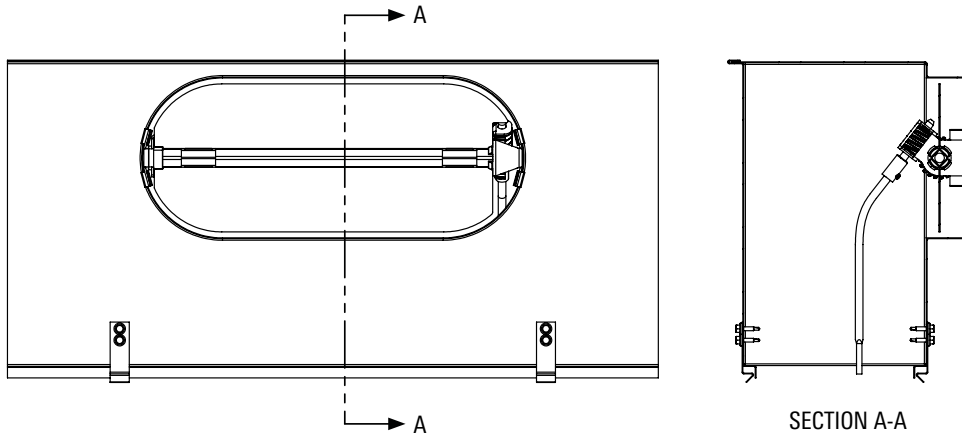
ACCESSORIES

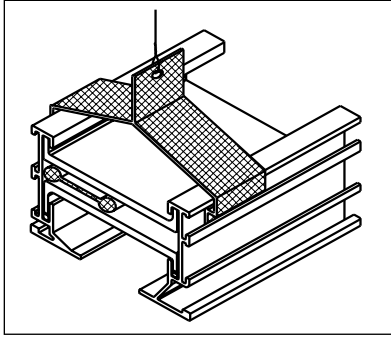
Plenum Damper Options for FBP/FBPI

ID Inlet Damper (field-install)

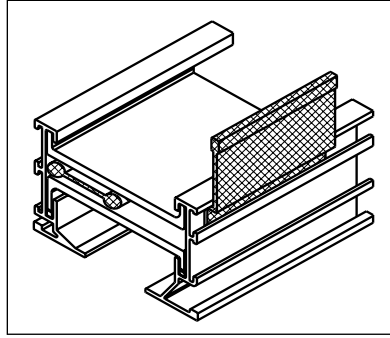


CD Cable-Operated Damper (factory-install)

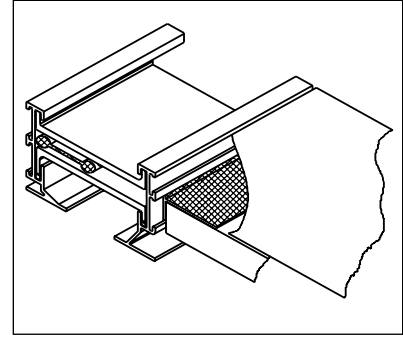




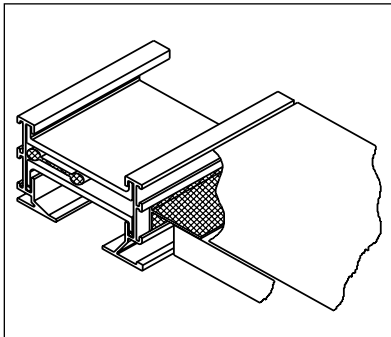
UHC
Upper Hanger Clip



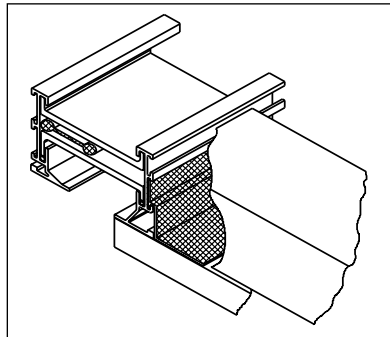
USH
Upper Support Hanger



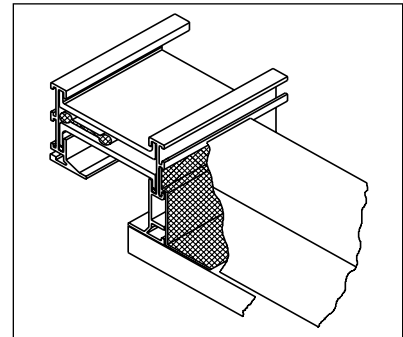
H1
Hard Ceiling Clip



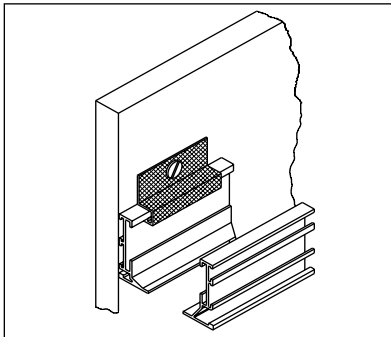
H2
Hard Ceiling Clip



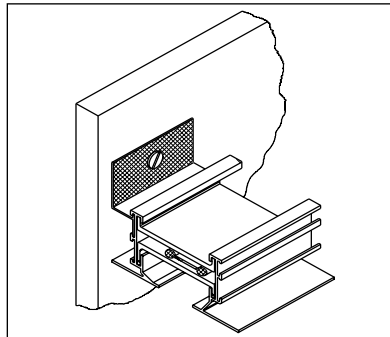
H3
Hard Ceiling Clip



H4
Hard Ceiling Clip



WC3
Wall Clip

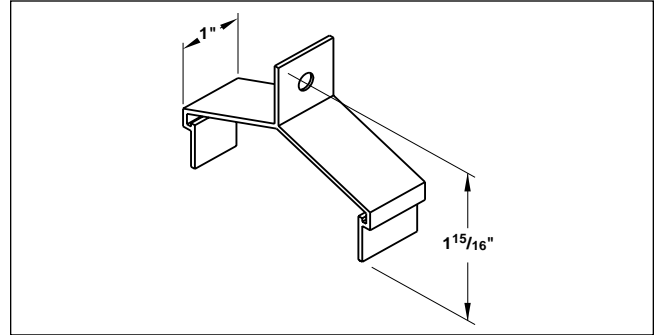
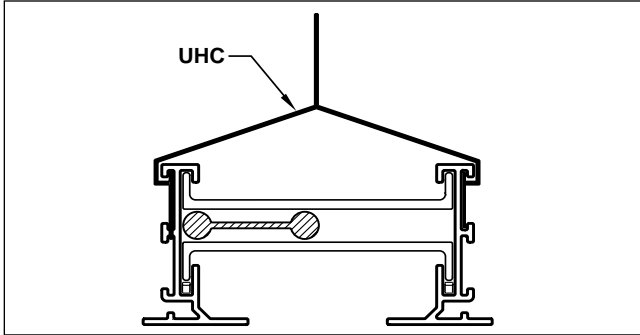


WC4
Wall Clip

MOUNTING HARDWARE

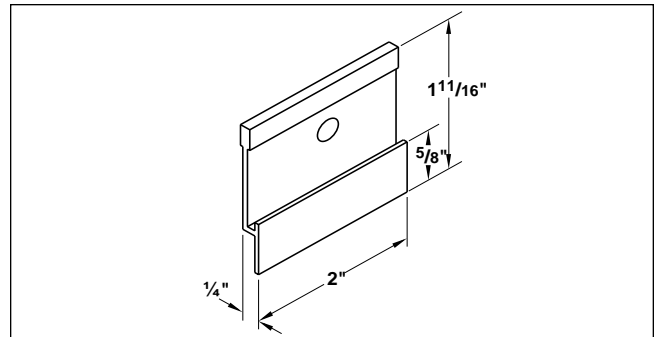
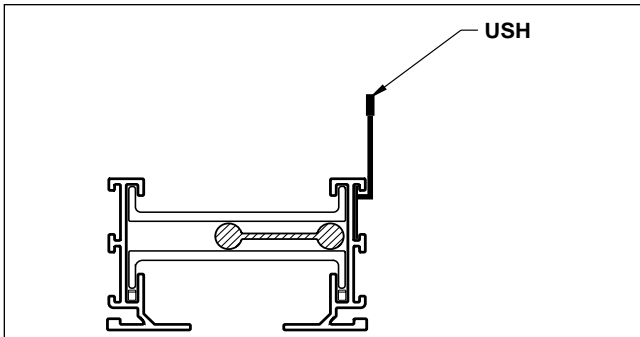
UHC - UPPER HANGER CLIP

The UHC - Hanger Clip is used to suspend the FlowBar assembly from the structure. The clip is designed to utilize standard ceiling hanger wire. UHC is for 1-slot only and FL-10, 15, 20.



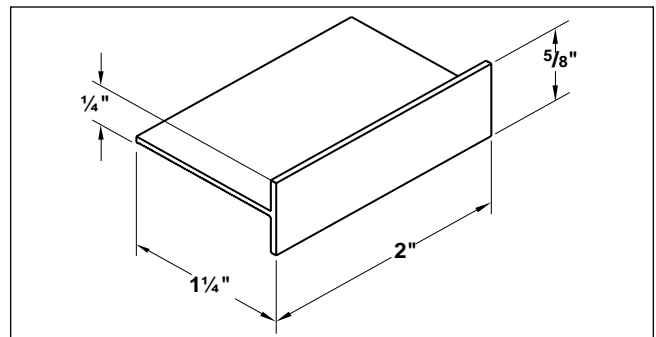
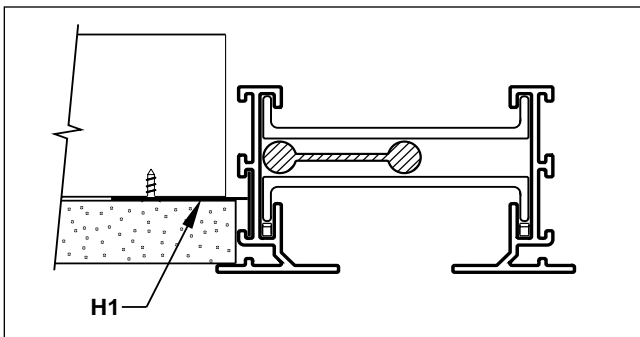
USH - UPPER SUPPORT HANGER

The USH - Support Hanger is used to suspend one side of the FlowBar assembly from the structure. The hanger is designed to utilize standard ceiling hanger wire. Use the USH clip for FL-25 and 30 and all 2-slot units.



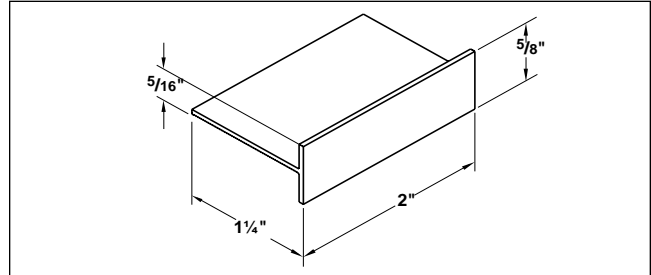
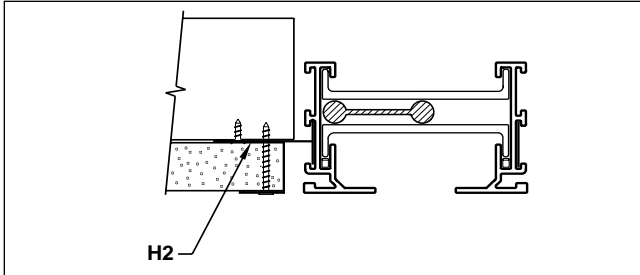
H1 - HARD CEILING CLIP

The H1 - Hard Ceiling Clip is used to mount the FlowBar assembly with border type(s) 66 or 16, when a standard 5/8" gyp board ceiling is required.



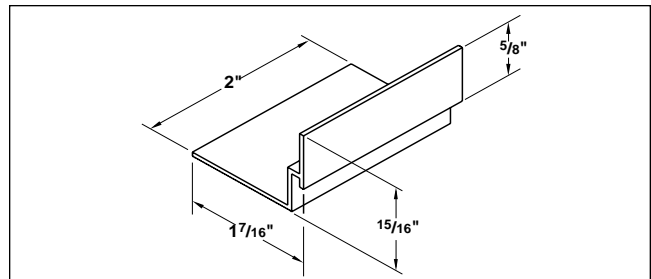
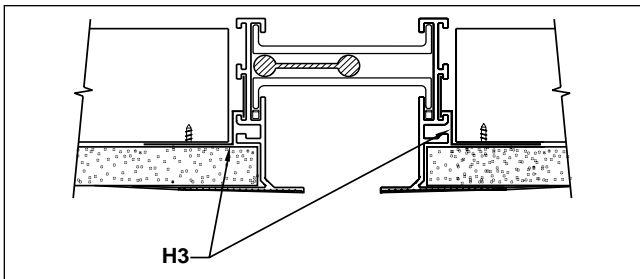
H2 - HARD CEILING CLIP

The H2 - Hard Ceiling Clip is used to mount the FlowBar assembly with border type(s) 11 or 16, when a standard $\frac{5}{8}$ " gyp board ceiling is required.



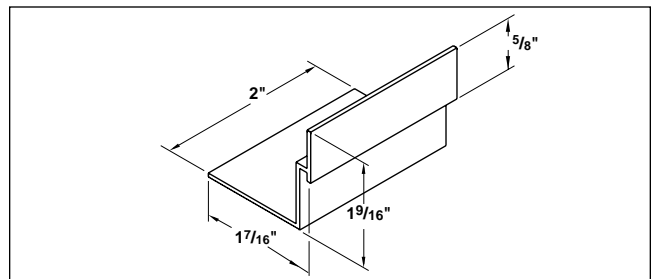
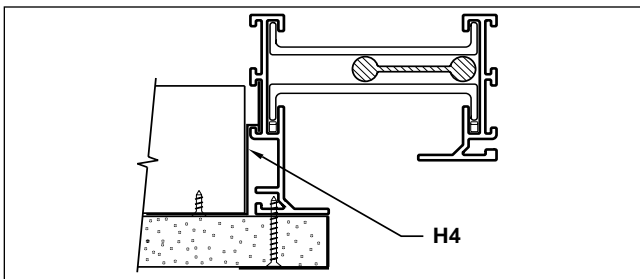
H3 - HARD CEILING CLIP

The H3 - Hard Ceiling Clip can be used to mount the FlowBar assembly with border types 22 and 14 when a standard $\frac{5}{8}$ " gyp board ceiling is required.



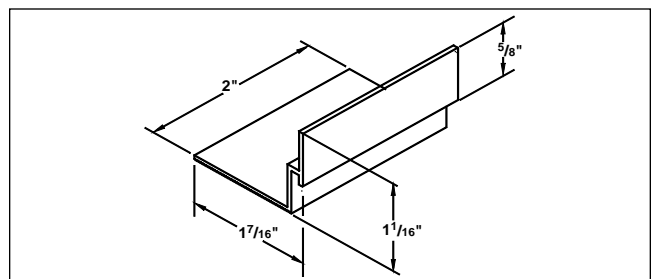
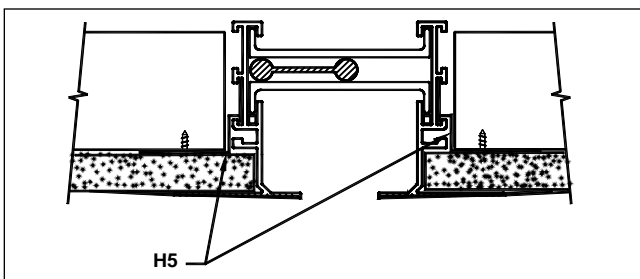
H4 - HARD CEILING CLIP

The H4 - Hard Ceiling Clip is used to mount the FlowBar assembly with border type(s) 66 or 16, when a standard $\frac{5}{8}$ " gyp board ceiling is required.



H5 - HARD CEILING CLIP

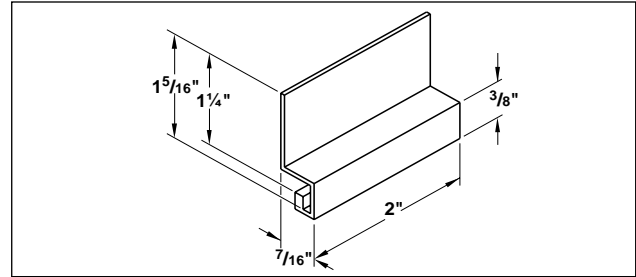
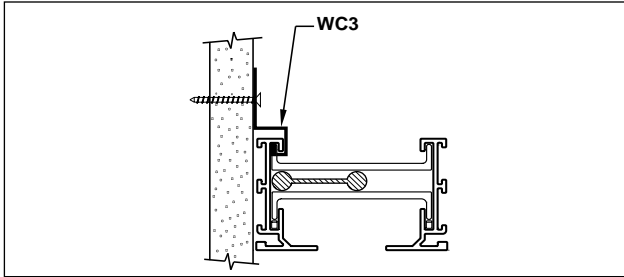
The H5 - Hard Ceiling Clip is used to mount FL10, 15 or 20 border 22 to $\frac{1}{2}$ " gyp board.



MOUNTING HARDWARE

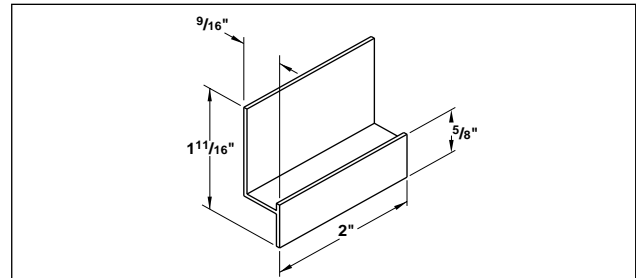
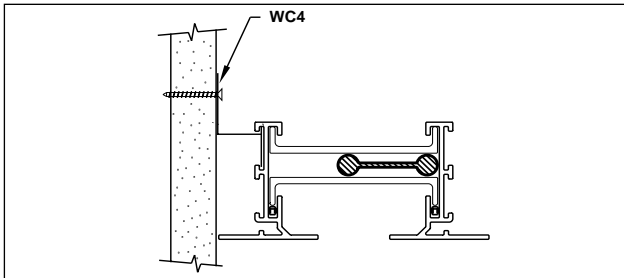
WC3 - WALL CLIP

The WC3 - Wall Clip is used to flush mount the FlowBar assembly, with border type 11 to a wall.



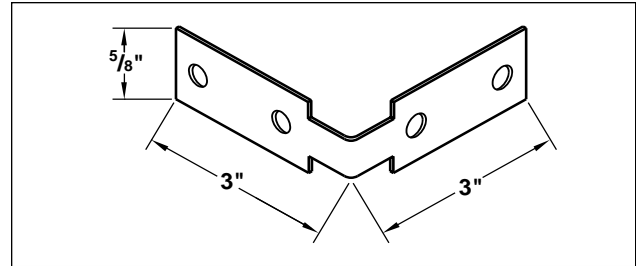
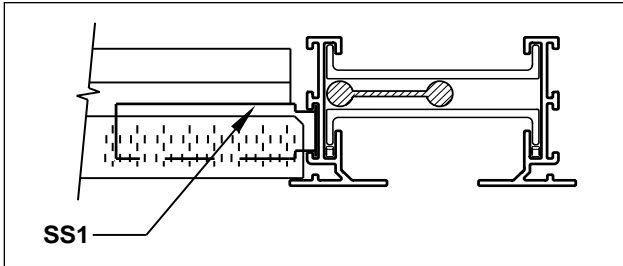
WC4 - WALL CLIP

The WC4 - Wall Clip is used to flush mount the FlowBar assembly, with border types 16 or 66 to a wall.



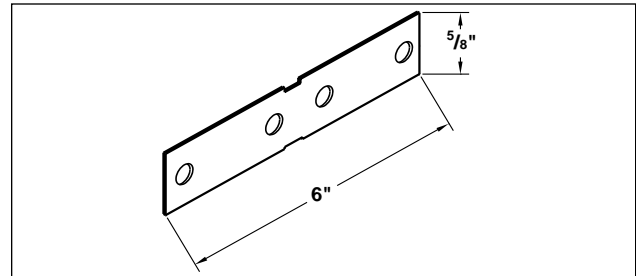
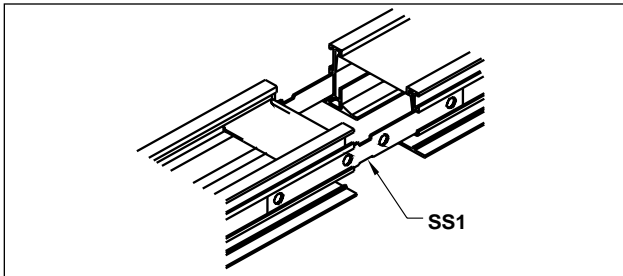
SPLINE SUPPORT CLIP (FIELD FORMED)

The SS1 - Spline Clip is used to attach drop ceiling "tees" to the FlowBar assembly.



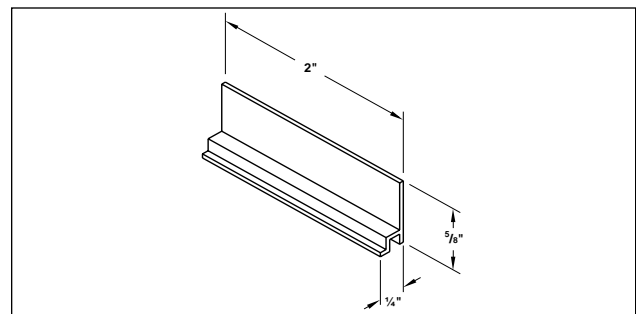
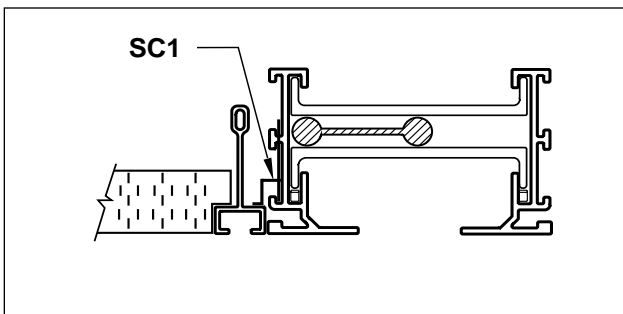
SPLINE SUPPORT CLIP (AS SHIPPED)

The SS1 - Spline Clip is also used to adjoin multiple sections of FlowBar when continuous lengths are desired.



NARROW TEE SUPPORT CLIP

The SC1 - Support Clip is used to support the Narrow Tee assembly with border type 11 suspension systems.



Border Type	1-Slot FlowBar	2-Slot FlowBar
11	H2, WC3, USH, UHC, SC1	H2, WC3, USH, SC1
14	H3, H4, USH, UHC	N/A
22, 55	H3, H4, H5, USH, UHC	H3, H4, H5
66, 77	H1, WC4, UHC	H1, WC4, USH
16	H1, H2, WC4, UHC, USH, SC1	H1, WC4, USH
55	H3, H4, H5, USH, UHC	H3, H5

GeoFlow Series

GFB-10

- The GeoFlow series is designed to integrate with the Armstrong DesignFlex™ System. It is an excellent choice for a single slot, high performance interior applications. The GeoFlow diffusers complement the Titus FlowBar™ linear diffuser system, ideally suited for perimeter applications.
- The time-proven aerodynamic FlowBar™ borders and pattern controllers in the GeoFlow provide superior throw, low pressure-drop and peak airflow throw patterns.
- The GeoFlow diffuser is shipped fully assembled with flush filler panel, snap-on plenum and is ready to install out of the box.
- The GeoFlow diffuser can be easily field adjusted for directional pattern control including blank off options to provide multiple airflow patterns.
- Diffuser is heavy wall, extruded aluminum, Snap-on plenums are galvanized steel and available in top or side inlets.



GFB-10

MODELS:

- GFB-10 / 1" Slot
- GFBI-10 / 1" Slot / Insulated
- GFR-10 / 1" Perforated Return

FINISHES:

- A26 Whitelume
- A01 Silverlume
- A02 Gun Metal Gray
- A84 Tech Black

Border and filler panel: specified finish
Interior components: Black
Non-standard finishes available



See website for Specifications



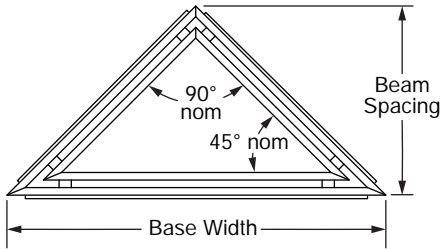
GFB-10



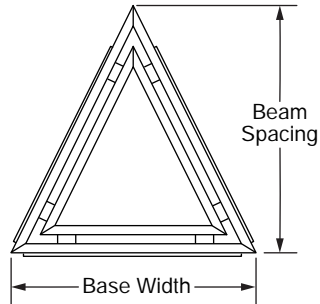
SIZE, SHAPE AND INLET AVAILABILITY

GFB-10 AND GFBI-10

TRI

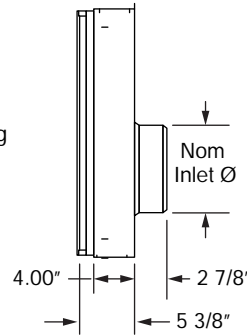


24" Beam x 48" Base

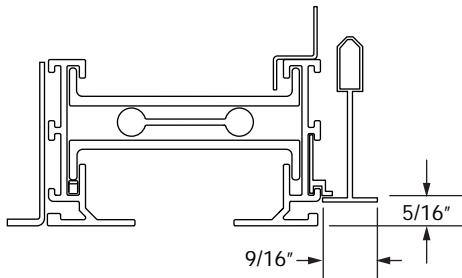
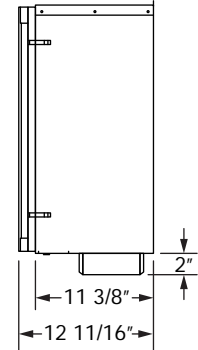


24" Beam x 48" Base
48" Beam x 48" Base

TOP INLET

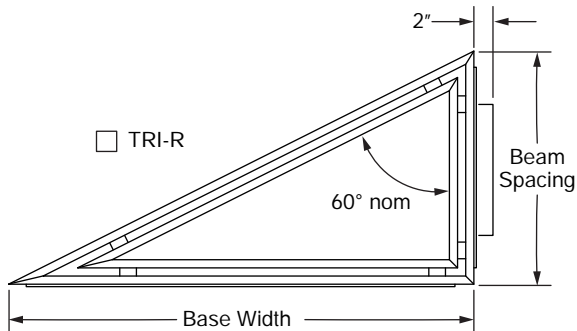


SIDE INLET

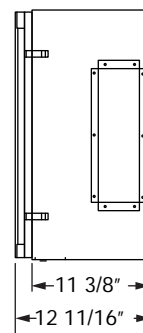


Shape	Beam Spacing	Base Width	Top Inlet				Side Inlet			
			6	8	10	12	4 X 7	4 X 13	6 X 13	6 X 19
TRI	24	24	√	√			√	√		
TRI	48	48			√	√			√	√
TRI	24	48		√	√			√	√	
TRI-R/L	24	24	√	√			√	√		

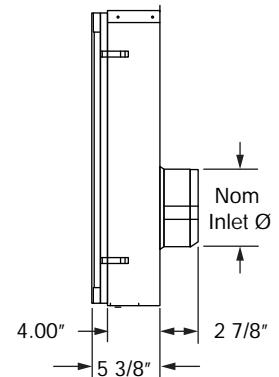
TRI-R



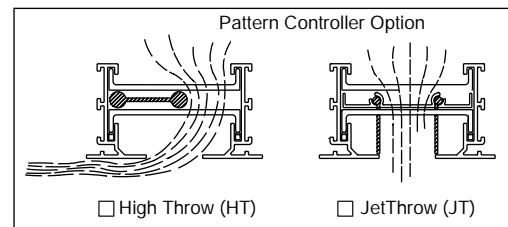
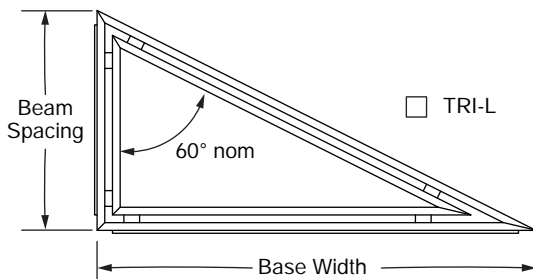
SIDE INLET



TOP INLET

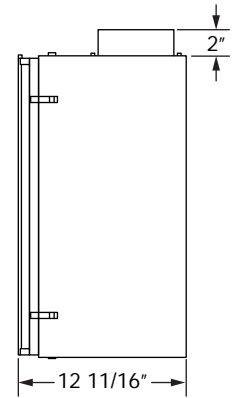
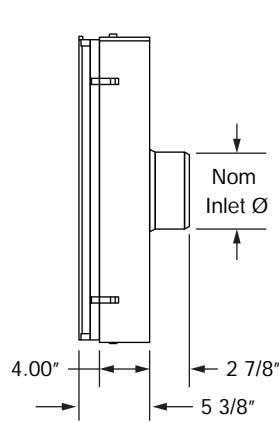
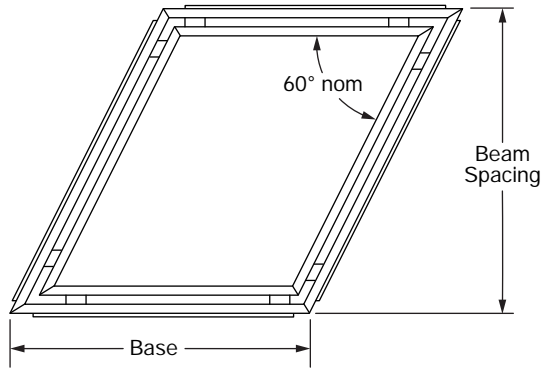


TRI-L

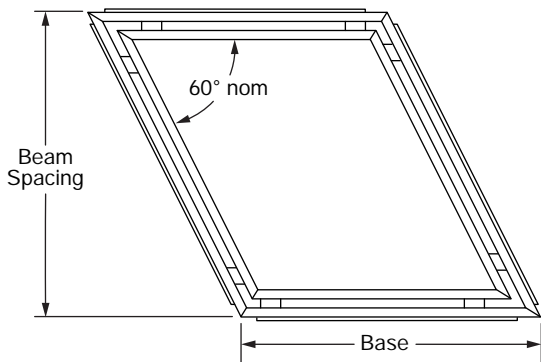


GFB-10 AND GFBI-10

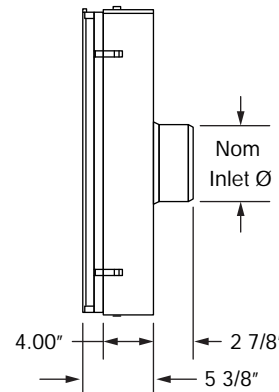
PRL-R



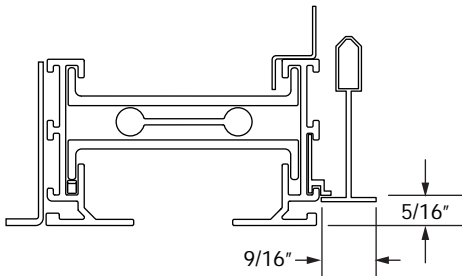
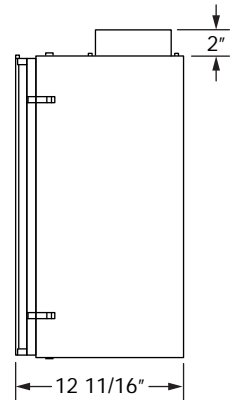
PRL-L



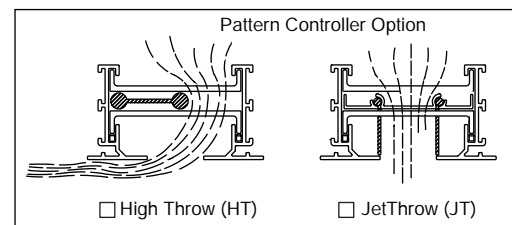
TOP INLET



SIDE INLET



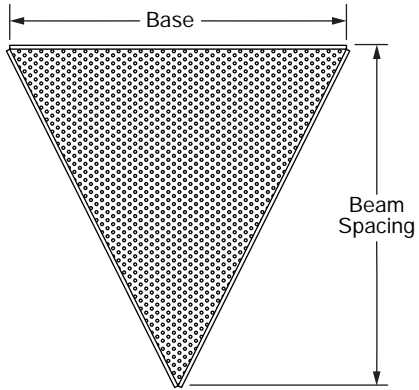
Shape	Beam Spacing	Base Width	Top Inlet		Side Inlet	
			6	8	4 X 7	4 X 13
PRL-R/L	24	24	✓	✓	✓	✓



SIZE, SHAPE AND INLET AVAILABILITY

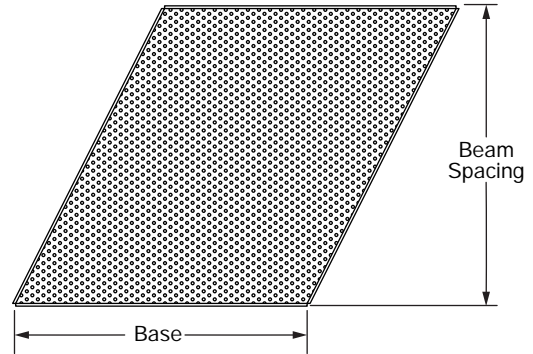
GFBR-10

□ TRI



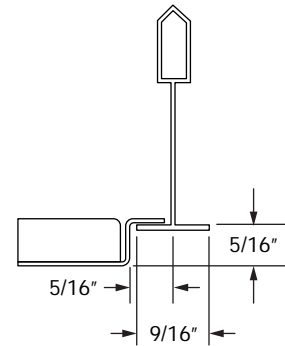
□ PRL-R (SHOWN)

□ PRL-L (OPPOSITE OF SHOWN)



Shape	Beam Spacing	Base Width
TRI	24	24
TRI	48	48
TRI	24	48
TRI-R	24	48
TRI-L	24	48

Shape	Beam Spacing	Base Width
PRL-L	24	24
PRL-R	24	24



PERFORMANCE DATA

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GFB-10 TRI - 24" X 24" - ROUND (TOP INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	6" Dia Inlet	Airflow (cfm)	59	79	98	118	137	147	157	167	177
		Total Pressure	0.020	0.033	0.053	0.072	0.102	0.115	0.132	0.148	0.164
		NC (Noise Criteria)	-	11	17	23	27	29	31	33	34.9
		Throw (ft)	1-2-6	2-4-7	3-5-8	4-6-9	5-7-10	5-7-10	5-7-10	5-8-11	6-8-11
	8" Dia Inlet	Airflow (cfm)	105	140	175	209	244	262	279	297	314
		Total Pressure	0.036	0.061	0.097	0.134	0.189	0.213	0.243	0.274	0.304
		NC (Noise Criteria)	14	23	29	35	39	41	43	45	47
		Throw (ft)	3-5-8	5-7-10	6-8-11	7-8-12	7-9-13	8-9-13	8-10-14	8-10-14	8-10-15

GFB-10 TRI - 24" X 48" - ROUND (TOP INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	8" Dia Inlet	Airflow (cfm)	105	140	175	209	244	262	279	297	314
		Total Pressure	0.019	0.032	0.052	0.071	0.100	0.113	0.129	0.146	0.162
		NC (Noise Criteria)	-	15	22	27	32	34	36	37	39
		Throw (ft)	1-3-8	2-5-10	4-6-11	5-8-12	6-9-13	6-9-13	7-10-14	7-10-14	8-10-15
	10" Dia Inlet	Airflow (cfm)	164	218	273	327	382	409	436	464	491
		Total Pressure	0.042	0.070	0.112	0.154	0.218	0.246	0.281	0.316	0.351
		NC (Noise Criteria)	16	25	31	37	41	43	45	47	49
		Throw (ft)	3-6-11	5-8-12	7-10-14	8-11-15	9-11-16	10-12-17	10-12-17	10-13-18	11-13-18

GFB-10 TRI - 48" X 48" - ROUND (TOP INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	10" Dia Inlet	Airflow (cfm)	164	218	273	327	382	409	436	464	491
		Total Pressure	0.026	0.043	0.069	0.095	0.134	0.152	0.174	0.195	0.217
		NC (Noise Criteria)	12	21	27	33	37	39	41	43	45
		Throw (ft)	2-4-9	3-6-12	5-8-14	6-9-15	7-11-16	8-12-17	8-12-17	9-13-18	9-13-18
	12" Dia Inlet	Airflow (cfm)	236	314	393	471	550	589	628	668	707
		Total Pressure	0.041	0.068	0.108	0.149	0.210	0.237	0.271	0.304	0.338
		NC (Noise Criteria)	20	28	35	40	45	47	49	51	52
		Throw (ft)	3-7-13	6-9-15	8-11-16	9-13-18	11-14-19	11-14-20	12-15-21	12-15-21	13-16-22

PERFORMANCE DATA

GFB-10 PRL - 24" X 24" - ROUND (TOP INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	6" Dia Inlet	Airflow (cfm)	59	79	98	118	137	147	157	167	177
		Total Pressure	0.013	0.021	0.033	0.046	0.065	0.073	0.084	0.094	0.104
		NC (Noise Criteria)	-	-	10	16	20	22	24	26	28
		Throw (ft)	0-1-4	1-2-6	1-3-7	2-4-8	3-5-9	3-5-9	3-6-10	4-6-10	4-6-10
	8" Dia Inlet	Airflow (cfm)	105	140	175	209	244	262	279	297	314
		Total Pressure	0.025	0.042	0.068	0.093	0.131	0.148	0.170	0.191	0.212
		NC (Noise Criteria)	-	16	22	28	32	35	36	38	40
		Throw (ft)	2-3-8	3-5-9	4-6-10	5-7-11	6-8-12	6-9-12	7-9-13	7-9-13	7-10-14

GFB-10 TRI-90 - 24" X 48" - ROUND (TOP INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	8" Dia Inlet	Airflow (cfm)	105	140	175	209	244	262	279	297	314
		Total Pressure	0.019	0.032	0.052	0.071	0.100	0.113	0.129	0.146	0.162
		NC (Noise Criteria)	-	13	20	25	30	32	34	36	37
		Throw - Long Side (ft)	1-3-8	2-5-11	4-7-12	5-8-13	6-9-14	7-10-15	7-11-15	8-11-16	8-11-16
		Throw - Short Side (ft)	0-1-3	0-1-4	1-2-6	1-2-7	2-3-9	2-4-9	2-4-10	2-5-10	2-6-11
	10" Dia Inlet	Airflow (cfm)	164	218	273	327	382	409	436	464	491
		Total Pressure	0.045	0.075	0.120	0.165	0.233	0.263	0.300	0.338	0.375
		NC (Noise Criteria)	14	22	29	35	39	41	43	45	47
		Throw - Long Side (ft)	3-6-12	6-8-13	7-11-15	8-12-16	10-13-18	11-13-18	11-13-19	11-14-20	12-14-20
		Throw - Short Side (ft)	1-2-6	1-3-8	2-4-10	3-6-11	4-7-12	4-7-12	5-8-13	5-8-13	6-9-14

- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Actual performance, with flexible duct inlet, may vary in the field. See the Engineering Guidelines section of this catalog for additional information.
- Throw values are given for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for catalog throw data information.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB.
- Dash (-) in space denotes an NC value of less than 10.
- Each NC value represents the noise criteria curve which will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10 dB, re 10⁻¹² watts.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.

PERFORMANCE DATA

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GFB-10 TRI - 24" X 24" - RECTANGULAR (SIDE INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	4" x 7" Inlet	Airflow (cfm)	53	70	88	105	123	132	141	149	158
		Total Pressure	0.011	0.018	0.028	0.039	0.054	0.061	0.070	0.079	0.088
		NC (Noise Criteria)	-	-	-	14	19	22	24	26	27
		Throw (ft)	1-2-5	2-3-7	2-4-8	3-5-8	4-6-9	4-7-10	5-7-10	5-7-10	5-7-10
	4" x 13" Inlet	Airflow (cfm)	100	133	166	199	232	249	266	282	299
		Total Pressure	0.024	0.041	0.065	0.089	0.126	0.142	0.162	0.182	0.203
		NC (Noise Criteria)	-	16	23	29	34	36	38	40	42
		Throw (ft)	3-5-8	4-7-10	5-8-11	7-8-12	7-9-13	8-9-13	8-10-13	8-10-14	8-10-14

GFB-10 TRI - 24" X 48" - RECTANGULAR (SIDE INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	4" x 13" Inlet	Airflow (cfm)	100	133	166	199	232	249	266	282	299
		Total Pressure	0.013	0.022	0.035	0.048	0.068	0.077	0.088	0.099	0.110
		NC (Noise Criteria)	-	-	13	19	24	26	28	30	32
		Throw (ft)	1-3-7	2-5-10	3-6-11	5-7-12	6-8-13	6-9-13	6-10-13	7-10-14	7-10-14
	6" x 13" Inlet	Airflow (cfm)	153	204	255	305	356	382	407	433	458
		Total Pressure	0.029	0.049	0.078	0.107	0.151	0.170	0.194	0.219	0.243
		NC (Noise Criteria)	-	16	23	29	33	36	38	40	41
		Throw (ft)	3-6-10	5-7-12	6-9-13	7-10-14	9-11-16	9-11-16	10-12-17	10-12-17	10-13-18

GFB-10 TRI - 48" X 48" - RECTANGULAR (SIDE INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	6" x 13" Inlet	Airflow (cfm)	153	204	255	305	356	382	407	433	458
		Total Pressure	0.016	0.027	0.044	0.060	0.085	0.096	0.109	0.123	0.137
		NC (Noise Criteria)	-	-	16	21	26	28	30	32	34
		Throw (ft)	1-3-9	3-6-12	4-7-13	6-9-14	7-10-16	7-11-16	8-12-17	8-12-17	9-13-18
	6" x 19" Inlet	Airflow (cfm)	225	299	374	449	524	562	599	636	674
		Total Pressure	0.027	0.046	0.073	0.101	0.142	0.160	0.183	0.206	0.229
		NC (Noise Criteria)	-	17	24	30	35	37	39	41	43
		Throw (ft)	3-6-12	5-9-14	7-11-16	9-12-18	10-13-19	11-14-20	11-14-20	12-15-21	12-15-21

PERFORMANCE DATA

GFB-10 TRI-90 - 24" X 48" - RECTANGULAR (SIDE INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	4" x 13" Inlet	Airflow (cfm)	100	133	166	199	232	249	266	282	299
		Total Pressure	0.015	0.025	0.040	0.055	0.078	0.088	0.101	0.113	0.126
		NC (Noise Criteria)	-	-	-	14	19	21	23	25	27
		Throw - Long Side (ft)	1-3-8	2-5-10	3-6-12	5-8-13	6-9-14	6-10-14	7-10-15	7-11-15	8-11-16
		Throw - Short Side (ft)	0-1-2	0-1-4	1-2-6	1-2-7	1-3-8	2-4-9	2-4-9	2-5-10	2-5-10
		Airflow (cfm)	153	204	255	305	356	382	407	433	458
	6" x 13" Inlet	Total Pressure	0.031	0.052	0.083	0.114	0.160	0.181	0.207	0.232	0.258
		NC (Noise Criteria)	-	15	22	28	33	35	37	39	41
		Throw - Long Side (ft)	3-6-11	5-8-13	7-10-14	8-11-16	9-12-17	10-13-18	10-13-18	11-13-19	11-14-19
		Throw - Short Side (ft)	1-1-5	1-2-7	2-4-9	2-5-11	3-6-12	4-7-12	4-7-12	5-8-13	5-8-13

GFB-10 PRL - 24" X 24" - RECTANGULAR (SIDE INLET)

		Neck Velocity (fpm)	300	400	500	600	700	750	800	850	900
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.035	0.040	0.045	0.050
1" Slot Width	4" x 7" Inlet	Airflow (cfm)	53	70	88	105	123	132	141	149	158
		Total Pressure	0.012	0.019	0.031	0.042	0.059	0.067	0.077	0.086	0.096
		NC (Noise Criteria)	-	-	-	-	11	14	16	18	19
		Throw (ft)	0-1-3	1-2-5	1-2-6	2-3-8	2-4-8	2-5-9	3-5-9	3-5-9	3-6-10
	4" x 13" Inlet	Airflow (cfm)	100	133	166	199	232	249	266	282	299
		Total Pressure	0.016	0.027	0.042	0.058	0.082	0.093	0.106	0.119	0.133
		NC (Noise Criteria)	-	-	15	21	26	28	30	32	34
		Throw (ft)	1-3-7	2-5-9	4-6-10	5-7-11	6-8-12	6-9-12	6-9-12	7-9-13	7-9-13

- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Actual performance, with flexible duct inlet, may vary in the field. See the Engineering Guidelines section of this catalog for additional information.
- Throw values are given for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for catalog throw data information.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB.
- Dash (-) in space denotes an NC value of less than 10.
- Each NC value represents the noise criteria curve which will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10 dB, re 10⁻¹² watts.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.

PERFORMANCE DATA

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GFBR-10

Model/Size	Core Velocity, (fpm)	100	150	200	250	300	350	400	450	500
	Velocity Pressure, (In. WG)	0.001	0.001	0.002	0.004	0.006	0.008	0.010	0.013	0.016
	Neg. Static Pressure, (In. WG)	0.023	0.052	0.092	0.143	0.207	0.281	0.367	0.465	0.574
GFBR-10 TRI - 48" x 48"	Airflow, cfm	800	1200	1600	2000	2400	2800	3200	3600	4000
	NC (Noise Criteria)	-	-	-	-	15	22	29	35	40
GFBR-10 TRI - 24" x 24"	Airflow, cfm	200	300	400	500	600	700	800	900	1000
	NC (Noise Criteria)	-	-	-	-	12	19	26	32	37
GFBR-10 TRI - 24" x 48"	Airflow, cfm	400	600	800	1000	1200	1400	1600	1800	2000
	NC (Noise Criteria)	-	-	-	-	13	21	27	33	38
GFBR-10 TRI-90 - 24" x 48"	Airflow, cfm	400	600	800	1000	1200	1400	1600	1800	2000
	NC (Noise Criteria)	-	-	-	-	13	21	27	33	38
GFBR-10 PRL - 24" x 24"	Airflow, cfm	200	300	400	500	600	700	800	900	1000
	NC (Noise Criteria)	-	-	-	-	12	19	26	32	37

- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB.
- Dash (-) in space denotes an NC value of less than 10.
- Each NC value represents the noise criteria curve which will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10 dB, re 10⁻¹² watts.
- All pressures are given in inches of water.



ModuFlow Series

ModuFlow

- The ModuFlow series is an excellent choice for interior spaces requiring a visually pleasing single slot, high performance diffuser. The ModuFlow diffusers are designed to complement the Titus FlowBar linear diffuser system.
- One of the exciting features of the ModuFlow diffuser is that it is engineered to handle large capacities of air using a single slot
- To fully integrate into the ceiling system, the ModuFlow diffuser is designed so the ceiling material can be field cut and inserted in the face of the diffuser. This allows the architect the opportunity to blend the air distribution system into the ceiling design. The ModuFlow diffuser can be field adjusted for one, two, three, or four-way directional air patterns. This adjustability gives the designer the flexibility to use the diffuser in a wide range of space sizes and configurations.
- Material is heavy wall, extruded aluminum
- Standard finish is white face with a flat black interior



MODUFLOW

MODELS:

MF-10 / 1" Slot
 MFI-10 / 1" Slot / Insulated
 MFB-10 / 1" Slot / Bolt-slot
 MFBI-10 / 1" Slot / Bolt-slot / Insulated
 MFR-10 / 1" Slot / Return
 MFRB-10 / 1" Slot / Bolt-slot / Return

FINISHES:

Standard Finish - #26 White Border (Black pattern controllers)
 Optional Finish - Optional & anodized finishes available

OVERVIEW

The Titus ModuFlow series is an excellent choice for interior spaces requiring a visually pleasing single slot, high performance diffuser. The ModuFlow diffusers are designed to complement the FlowBar linear diffuser system.

ADVANTAGES

- ModuFlow diffusers can be field adjusted for vertical or horizontal directional air patterns. Set for horizontal flow, the diffuser generates a tight air pattern along the ceiling. This air pattern maximizes space, comfort and makes the diffuser an excellent selection for variable volume air systems.
- ModuFlow diffusers are designed for lay-in, concealed or hard ceilings. Standard module size is 24 x 24 inches. Standard slot width is 1". Units are shipped with integral plenums and hoods.



See website for Specifications



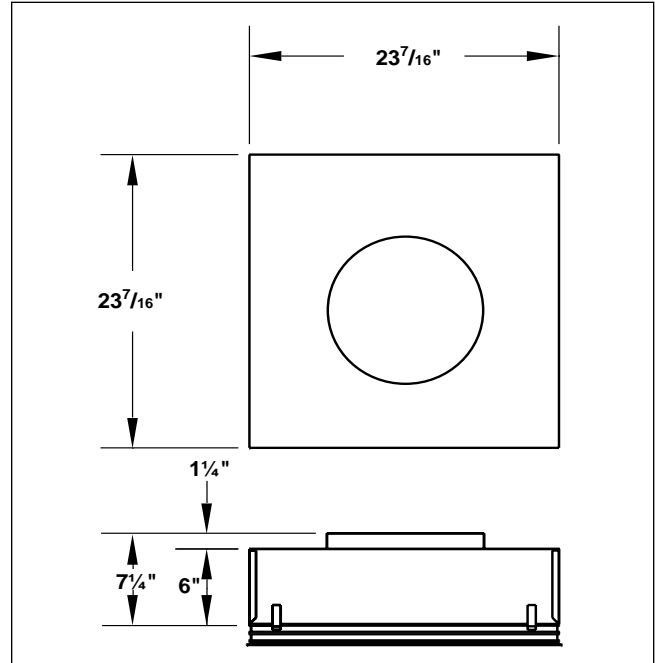
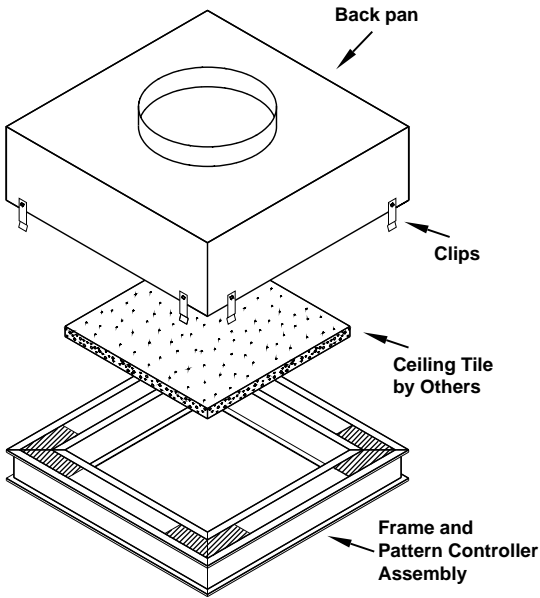
ModuFlow diffuser installed in an office environment

FIELD INSTALLATION OF CENTER TILE FOR MODELS

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MF-10, MFI-10, MFB-10, AND MFBI-10

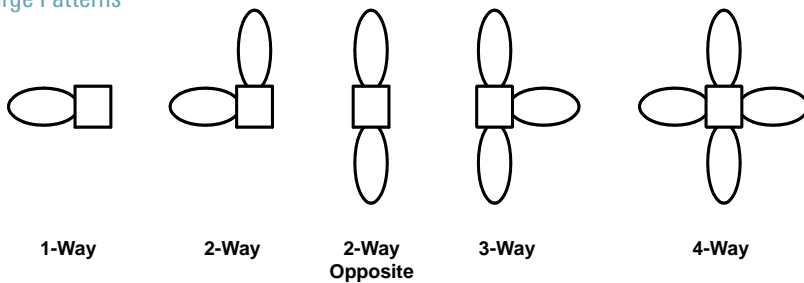
Center Panel Ceiling Tile Cutting Dimensions



Ceiling Tile Cutting Dimensions

No. of Slots	Slot Width
	1"
1	17 ¹⁵ / ₁₆ " x 17 ¹⁵ / ₁₆ "

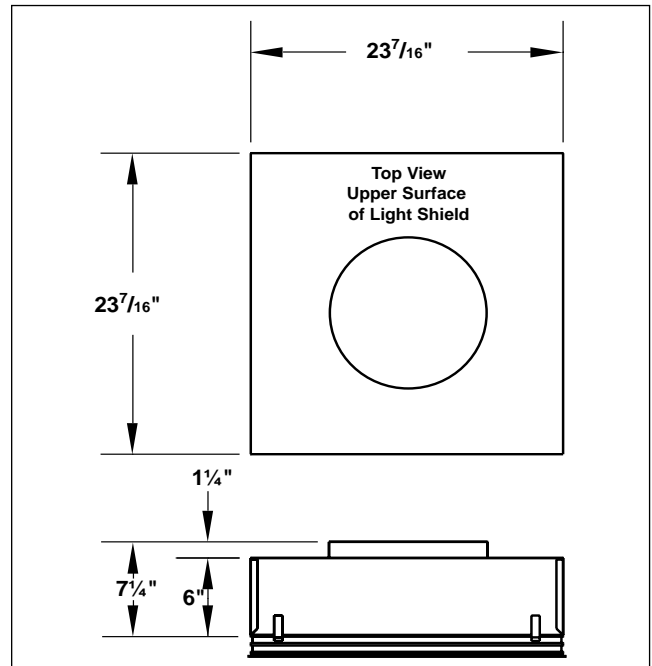
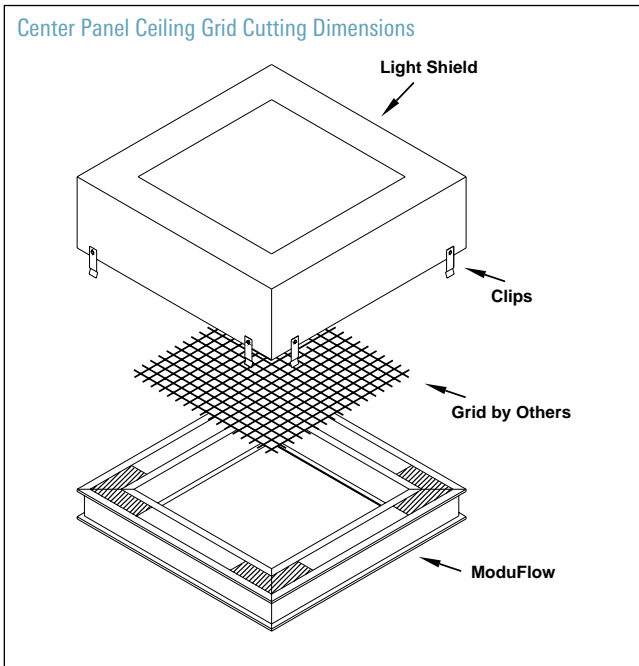
Discharge Patterns



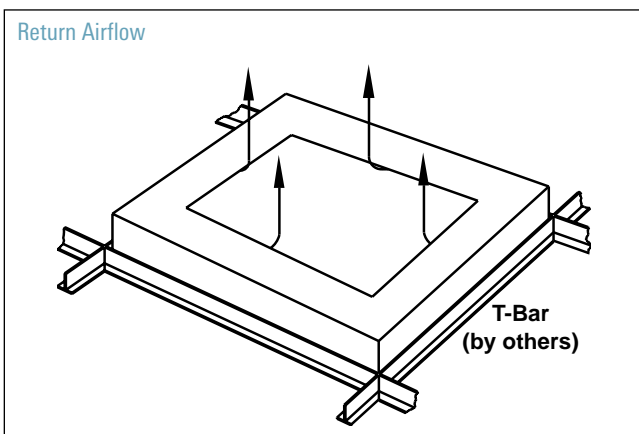
Note: To create adjustable discharge patterns, optional blank off strips (FBB0) must be used

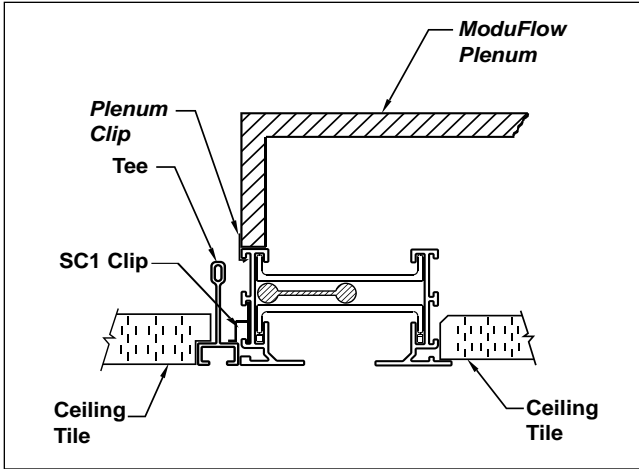
FIELD INSTALLATION OF CENTER TILE FOR MODELS

MODELS MFR-10 AND MFRB

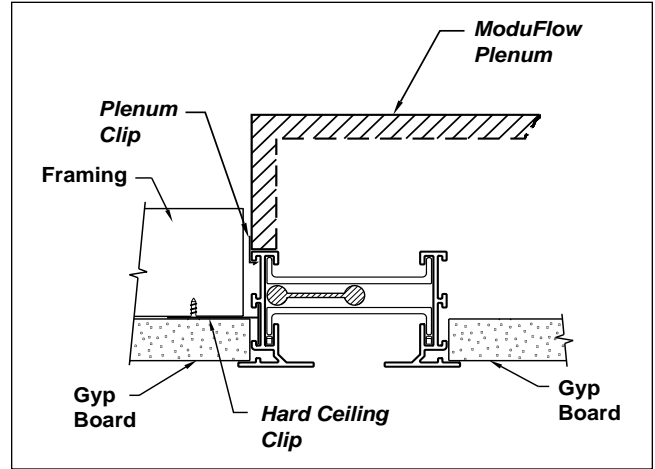


Grid Cutting Dimensions	
No. of Slots	Slot Width
1	1"
	$17\frac{15}{16}$ " x $17\frac{15}{16}$ "





Border Type 16 Narrow Tee



Border Type 66 Hard Ceiling

FlowTee System

FlowTee

- The Titus FlowTee system is a series of lay-in type modular slot diffusers which complement linear FlowBar models. FlowTee diffusers utilize the HighThrow and/or JetThrow pattern controllers.
- The FlowTee diffuser's high induction characteristics make it an excellent choice for interior variable volume system applications where it is important to maintain room air motion when air volumes are reduced
- FlowTee diffusers allow the designer to maintain a linear appearance with a lay-in diffuser
- Standard module lengths are 24, 48 and 60 inches
- Standard slot sizes are 1, 1½ and 2 inches
- FlowTee diffusers are manufactured using only heavy wall extruded aluminum
- Standard finish is flat black for interior surfaces exposed to view and white for exposed flanges



FLOWTEE

MODELS:

FT-10 / 1" Slot
 FT-15 / 1½" Slot
 FT-20 / 2" Slot
 FTI-10 / 1" Slot / Insulated
 FTI-15 / 1½" Slot / Insulated
 FTI-20 / 2" Slot / Insulated
 FTB-10 / 1" Slot / Bolt-slot
 FTB-15 / 1½" Slot / Bolt-slot
 FTB-20 / 2" Slot / Bolt-slot
 FTBI-10 / 1" Slot / Bolt-slot, Insulated
 FTBI-15 / ½" Slot / Bolt-slot, Insulated
 FTBI-20 / 2" Slot / Bolt-slot, Insulated

FINISHES:

Standard Finish - #26 White Border (Black pattern controllers)
 Optional Finish - Optional & anodized finishes available

OVERVIEW

The Titus FlowTee system is a series of lay-in type modular slot diffusers which complement linear FlowBar models. The FlowTee diffuser's high induction characteristics make it an excellent choice for interior variable volume system applications where it is important to maintain room air motion when air volumes are reduced.

ADVANTAGES

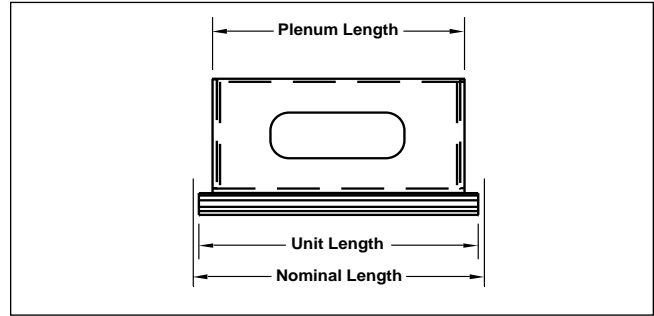
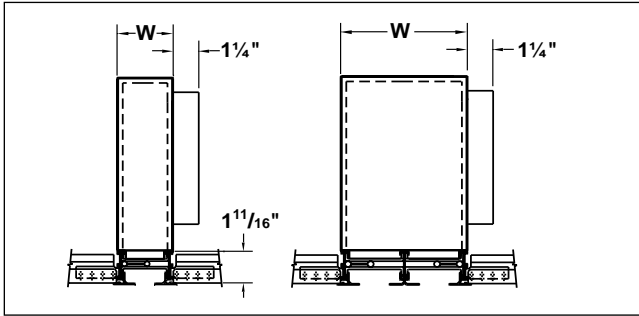
- FlowTee diffusers are available with various frame styles to integrate with most ceiling systems. The FlowTee is designed for standard grid modules. FlowTee bolt-slot is designed to lay flush in the grid. Both are available insulated.



See website for Specifications

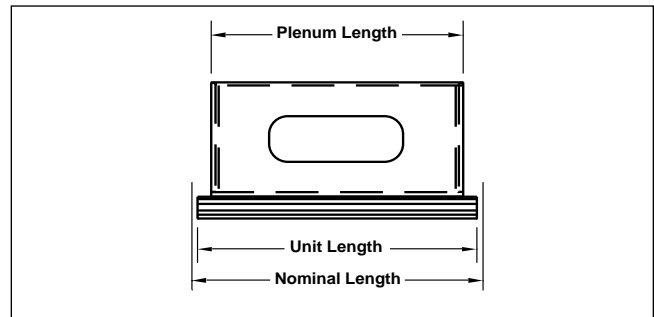
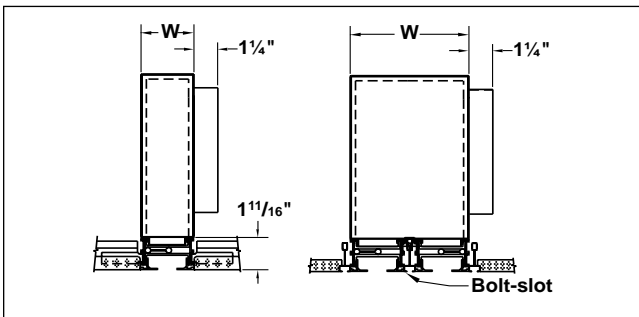
FLOWTEE APPLICATION FOR STANDARD MODELS

Shown below in 1- and 2- slot applications utilizing Border Type 66

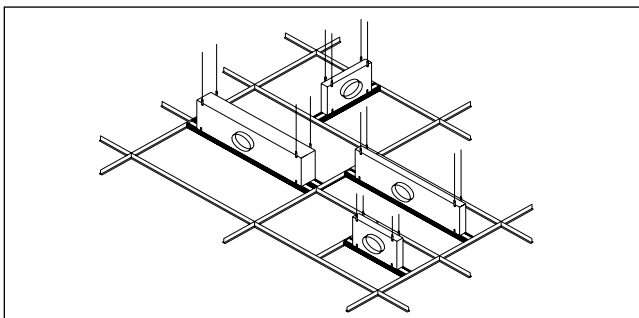


FLOWTEE APPLICATION FOR BOLT-SLOT MODELS

Shown below in 1- and 2- slot applications utilizing Border Type 11

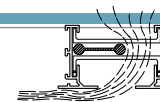


TYPICAL FLOWTEE APPLICATIONS



FLOWTEE DIMENSIONAL DATA

FlowTee Model	W (Width) Slots			Nominal Length	Available Inlets (inches)	Plenum Length (inches)		Unit Length (inches)	
	1	2CRN	2CRA		Oval	Standard	Bolt-Slot	Standard	Bolt-Slot
FT, FTB-10	2 ³ / ₄	6 ¹ / ₁₆	5 ³ / ₁₆	24, 48, 60	6, 8, 10, 12	21 ³ / ₄ , 45 ³ / ₄ , 57 ³ / ₄	21 ³ / ₈ , 45 ³ / ₈	23 ⁵ / ₈ , 47 ⁵ / ₈ , 59 ⁵ / ₈	23 ⁷ / ₁₆ , 47 ⁷ / ₁₆
FT, FTB-15	3 ³ / ₄	8 ¹ / ₁₆	7 ³ / ₁₆	24, 48, 60	6, 8, 10, 12	21 ³ / ₄ , 45 ³ / ₄ , 57 ³ / ₄	21 ³ / ₈ , 45 ³ / ₈	23 ⁵ / ₈ , 47 ⁵ / ₈ , 59 ⁵ / ₈	23 ⁷ / ₁₆ , 47 ⁷ / ₁₆
FT, FTB-20	4 ³ / ₄	10 ¹ / ₁₆	9 ³ / ₁₆	24, 48, 60	6, 8, 10, 12	21 ³ / ₄ , 45 ³ / ₄ , 57 ³ / ₄	21 ³ / ₈ , 45 ³ / ₈	23 ⁵ / ₈ , 47 ⁵ / ₈ , 59 ⁵ / ₈	23 ⁷ / ₁₆ , 47 ⁷ / ₁₆
FTI, FTBI-10	2 ³ / ₄	6 ¹ / ₁₆	5 ³ / ₁₆	24, 48, 60	6, 8, 10, 12	21 ³ / ₄ , 45 ³ / ₄ , 57 ³ / ₄	21 ³ / ₈ , 45 ³ / ₈	23 ⁵ / ₈ , 47 ⁵ / ₈ , 59 ⁵ / ₈	23 ⁷ / ₁₆ , 47 ⁷ / ₁₆
FTI, FTBI-15	3 ³ / ₄	8 ¹ / ₁₆	7 ³ / ₁₆	24, 48, 60	6, 8, 10, 12	21 ³ / ₄ , 45 ³ / ₄ , 57 ³ / ₄	21 ³ / ₈ , 45 ³ / ₈	23 ⁵ / ₈ , 47 ⁵ / ₈ , 59 ⁵ / ₈	23 ⁷ / ₁₆ , 47 ⁷ / ₁₆
FTI, FTBI-20	4 ³ / ₄	10 ¹ / ₁₆	9 ³ / ₁₆	24, 48, 60	6, 8, 10, 12	21 ³ / ₄ , 45 ³ / ₄ , 57 ³ / ₄	21 ³ / ₈ , 45 ³ / ₈	23 ⁵ / ₈ , 47 ⁵ / ₈ , 59 ⁵ / ₈	23 ⁷ / ₁₆ , 47 ⁷ / ₁₆



PERFORMANCE DATA

FL-10 / FL-15 / FL-20 / FL-25 / FL-30 WITH CONTINUOUS SLOT PLENUM & HIGHTHROW PATTERN CONTROLLER

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1.0" Slot Width	1-Slot	Airflow, cfm/ft.	25	40	55	70	85	100	115
		Static Pressure	0.028	0.072	0.136	0.221	0.325	0.450	0.596
		NC (Noise Criteria)	<10	16	26	33	39	44	49
		Throw	5-8-14	9-13-18	12-15-21	14-17-24	15-19-27	17-20-29	18-22-31
	2-Slot	Airflow, cfm/ft.	50	75	100	125	150	175	200
		Static Pressure	0.028	0.063	0.113	0.176	0.253	0.345	0.450
		NC (Noise Criteria)	<10	17	26	33	39	44	48
		Throw	7-11-20	11-17-25	15-20-29	19-23-32	20-25-35	22-27-38	23-29-41
1.5" Slot Width	1-Slot	Airflow, cfm/ft.	30	45	60	75	90	105	120
		Static Pressure	0.032	0.073	0.130	0.203	0.292	0.398	0.520
		NC (Noise Criteria)	<10	14	24	31	37	42	48
		Throw	6-10-16	10-14-19	13-16-22	14-18-25	16-19-27	17-21-29	18-22-32
	2-Slot	Airflow, cfm/ft.	60	85	110	135	160	185	210
		Static Pressure	0.032	0.065	0.109	0.164	0.231	0.309	0.398
		NC (Noise Criteria)	<10	16	24	31	36	41	45
		Throw	9-14-22	13-19-27	17-21-30	19-24-33	21-26-36	23-28-39	24-29-42
2.0" Slot Width	1-Slot	Airflow, cfm/ft.	30	50	70	90	110	130	150
		Static Pressure	0.020	0.057	0.111	0.184	0.274	0.383	0.510
		NC (Noise Criteria)	<10	11	22	30	36	41	46
		Throw	5-9-16	9-14-20	13-17-24	16-19-27	17-21-30	19-23-33	20-25-35
	2-Slot	Airflow, cfm/ft.	60	95	130	165	200	235	270
		Static Pressure	0.020	0.051	0.096	0.154	0.227	0.313	0.413
		NC (Noise Criteria)	<10	12	22	30	36	41	46
		Throw	7-12-22	13-19-28	17-23-33	21-26-37	23-29-41	25-31-44	27-33-47
2.5" Slot Width	1-Slot	Airflow, cfm/ft.	30	55	80	105	130	155	180
		Static Pressure	0.012	0.041	0.088	0.151	0.232	0.329	0.444
		NC (Noise Criteria)	<10	11	23	31	38	43	48
		Throw	4-8-16	10-15-21	14-18-26	17-21-29	19-23-33	21-25-36	22-27-39
	2-Slot	Airflow, cfm/ft.	60	105	150	195	240	285	330
		Static Pressure	0.012	0.038	0.077	0.130	0.197	0.278	0.373
		NC (Noise Criteria)	<10	13	24	32	38	44	48
		Throw	6-11-22	13-20-29	19-25-35	23-28-40	26-32-45	28-34-49	30-37-52
3.0" Slot Width	1-Slot	Airflow, cfm/ft.	30	60	90	120	150	180	210
		Static Pressure	0.011	0.044	0.100	0.177	0.277	0.399	0.543
		NC (Noise Criteria)	<10	<10	18	27	34	40	45
		Throw	3-7-15	10-15-22	15-19-27	18-22-32	20-25-35	22-27-39	24-29-42
	2-Slot	Airflow, cfm/ft.	60	120	180	240	300	360	420
		Static Pressure	0.011	0.044	0.100	0.177	0.277	0.399	0.543
		NC (Noise Criteria)	<10	<10	21	30	37	43	48
		Throw	5-10-21	14-21-32	21-27-39	26-32-45	29-35-50	32-39-55	34-42-59

- All pressures are in inches of water
- Pressure loss data assumes a duct velocity less than 800 fpm in the inlet duct
- Isothermal throw values given are for terminal velocities of 150, 100 and 50 fpm
- Throw data based on active sections 4 feet long. For a 2-foot section, the throw values are 0.72 times those shown. For a 10-foot continuous length, the throw values are 1.7 times those shown, 1.8 for 12-foot units.
- Each NC value represents the noise criteria that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10dB, re 10⁻¹² watts, for a 4-foot section. (See Table A for other lengths). For supply units used as a return, add 3 NC.

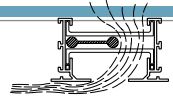
Table A, NC Correction for length

Length, Feet	2	4	6	8	10
Supply	-2	0	+2	+3	+5
Return	0	+3	+5	+6	+8

- Data obtained from tests conducted in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets"
- The tests were conducted with no plenum effect for pressure or sound
- Throw values for HighThrow units are based on a one-way discharge from the slot
- Throws listed are for one-way air pattern. For divided airflow, select the airflow in each direction according to the number of slots aimed in that direction, with the total airflow apportioned between slots. See section, Engineering Guidelines and the topic 'Procedure to Obtain Catalog Throw Data' in this catalog for throw information.
- For continuous lengths it is recommended that maximum active lengths are no longer than 10 feet

Table B, Throw Correction Multiplier for length

Length, Feet	2	4	8	10	12
Throw Correction	0.72	1.0	1.5	1.7	1.8



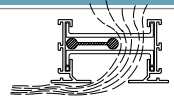
FL-10 / FL-15 / FT-10 / FT-15 - 1-SLOT, HIGHTHROW WITH TITUS PLENUM

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Slot Width	Inlet	Height	Airflow (cfm)							
			25	50	75	100	125	150	175	
1.0" Slot Width	1-Slot 6" Inlet	2 ft.	Airflow, cfm	25	50	75	100	125	150	175
			Total Pressure	0.008	0.032	0.072	0.129	0.201	0.290	0.394
			Static Pressure	0.007	0.028	0.063	0.113	0.176	0.253	0.345
			NC (Noise Criteria)	<10	<10	<10	20	28	35	40
		Throw	1-2-6	3-6-10	6-9-12	8-10-14	9-11-16	10-12-18	11-13-19	
		Airflow, cfm	40	80	120	160	200	240	280	
	4 ft.	Total Pressure	0.007	0.028	0.064	0.114	0.177	0.255	0.348	
		Static Pressure	0.005	0.018	0.041	0.072	0.113	0.162	0.221	
		NC (Noise Criteria)	<10	<10	<10	16	24	31	37	
		Throw	1-2-6	3-6-13	6-10-16	9-13-18	11-14-20	13-16-22	14-17-24	
		Airflow, cfm	50	100	150	200	250	300	350	
		Total Pressure	0.009	0.034	0.077	0.137	0.214	0.308	0.419	
5 ft.	Static Pressure	0.005	0.018	0.041	0.072	0.113	0.162	0.221		
	NC (Noise Criteria)	<10	<10	<10	18	26	33	38		
	Throw	1-2-7	3-7-14	7-11-18	10-14-20	12-16-23	14-18-25	16-19-27		
	Airflow, cfm	50	75	100	125	150	175	200		
	Total Pressure	0.029	0.066	0.118	0.184	0.265	0.361	0.471		
	Static Pressure	0.028	0.063	0.113	0.176	0.253	0.345	0.450		
1.0" Slot Width	1-Slot 8" Inlet	2 ft.	NC (Noise Criteria)	<10	<10	19	27	34	40	44
			Throw	3-6-10	6-9-12	8-10-14	9-11-16	10-12-18	11-13-19	12-14-20
			Airflow, cfm	70	110	150	190	230	270	310
			Total Pressure	0.016	0.040	0.075	0.120	0.176	0.243	0.320
		Static Pressure	0.014	0.034	0.063	0.102	0.149	0.205	0.271	
		NC (Noise Criteria)	<10	<10	13	22	29	35	40	
	4 ft.	Throw	2-5-11	6-9-15	8-12-18	10-14-20	12-15-22	14-17-24	15-18-25	
		Airflow, cfm	80	130	180	230	280	330	380	
		Total Pressure	0.015	0.039	0.075	0.122	0.181	0.252	0.334	
		Static Pressure	0.012	0.030	0.058	0.095	0.141	0.196	0.260	
		NC (Noise Criteria)	<10	<10	13	22	29	35	40	
		Throw	2-5-12	6-9-16	9-13-19	11-15-22	14-17-24	15-18-26	16-20-28	
5 ft.	Airflow, cfm	40	70	100	130	160	190	220		
	Total Pressure	0.017	0.052	0.106	0.180	0.272	0.384	0.515		
	Static Pressure	0.014	0.044	0.090	0.152	0.231	0.326	0.437		
	NC (Noise Criteria)	<10	<10	16	25	33	40	46		
	Throw	2-5-9	5-8-12	8-10-14	9-12-16	11-13-18	11-14-20	12-15-21		
	Airflow, cfm	80	120	160	200	240	280	320		
1.5" Slot Width	1-Slot 6" Inlet	2 ft.	Total Pressure	0.025	0.056	0.099	0.155	0.223	0.304	0.397
			Static Pressure	0.014	0.032	0.058	0.090	0.130	0.177	0.231
			NC (Noise Criteria)	<10	<10	12	20	27	33	38
			Throw	3-6-13	6-10-16	9-13-18	11-14-20	13-16-22	14-17-24	15-18-26
		Airflow, cfm	90	140	190	240	290	340	390	
		Total Pressure	0.025	0.060	0.111	0.176	0.258	0.354	0.466	
	4 ft.	Static Pressure	0.012	0.028	0.052	0.083	0.121	0.167	0.220	
		NC (Noise Criteria)	<10	<10	12	20	27	33	39	
		Throw	3-6-13	6-10-17	9-14-20	11-16-22	14-17-24	15-19-27	16-20-28	
		Airflow, cfm	40	70	100	130	160	190	220	
		Total Pressure	0.015	0.047	0.095	0.161	0.244	0.344	0.461	
		Static Pressure	0.014	0.044	0.090	0.152	0.231	0.326	0.437	
1.5" Slot Width	1-Slot 8" Inlet	2 ft.	NC (Noise Criteria)	<10	<10	14	24	32	38	45
			Throw	2-5-9	5-8-12	8-10-14	9-12-16	11-13-18	11-14-20	12-15-21
			Airflow, cfm	80	130	180	230	280	330	380
			Total Pressure	0.018	0.047	0.090	0.146	0.217	0.301	0.400
		Static Pressure	0.014	0.038	0.073	0.119	0.177	0.246	0.326	
		NC (Noise Criteria)	<10	<10	15	24	32	38	43	
	4 ft.	Throw	3-6-13	7-10-16	10-14-19	12-15-22	14-17-24	15-18-26	16-20-28	
		Airflow, cfm	90	150	210	270	330	390	450	
		Total Pressure	0.016	0.044	0.086	0.143	0.213	0.298	0.396	
		Static Pressure	0.012	0.032	0.064	0.105	0.157	0.220	0.292	
		NC (Noise Criteria)	<10	<10	14	24	31	37	43	
		Throw	3-6-13	7-11-18	10-15-21	13-17-24	15-18-26	16-20-28	18-22-31	

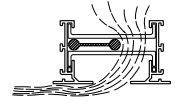


FL-20 / FL-25 / FT-20 - 1-SLOT, HIGHTHROW WITH TITUS PLENUM



2.0" Slot Width	1-Slot 8" Inlet	2 ft.	Airflow, cfm	50	85	120	155	190	225	260
			Total Pressure	0.015	0.045	0.089	0.149	0.223	0.313	0.418
			Static Pressure	0.014	0.041	0.082	0.136	0.205	0.287	0.383
			NC (Noise Criteria)	<10	<10	12	21	28	35	40
		Throw	2-5-10	6-9-13	8-11-16	10-13-18	11-14-20	12-15-22	13-16-23	
		4 ft.	Airflow, CFM	90	150	210	270	330	390	450
	Total Pressure		0.016	0.043	0.085	0.141	0.210	0.294	0.391	
	Static Pressure		0.011	0.032	0.063	0.103	0.154	0.216	0.287	
	NC (Noise Criteria)		<10	<10	20	29	36	42	48	
	5 ft.	Airflow, cfm	100	165	230	295	360	425	490	
		Total Pressure	0.014	0.039	0.075	0.124	0.184	0.256	0.341	
		Static Pressure	0.009	0.025	0.048	0.079	0.118	0.164	0.218	
NC (Noise Criteria)		<10	<10	19	28	36	42	47		
2.0" Slot Width	1-Slot 12" Inlet	2 ft.	Airflow, cfm	50	90	130	170	210	250	290
			Total Pressure	0.014	0.047	0.098	0.167	0.254	0.361	0.485
			Static Pressure	0.014	0.046	0.096	0.164	0.250	0.354	0.477
			NC (Noise Criteria)	<10	<10	<10	13	20	27	32
		Throw	2-5-10	6-9-14	9-12-16	11-13-19	12-15-21	13-16-23	14-17-24	
		4 ft.	Airflow, cfm	90	165	240	315	390	465	540
	Total Pressure		0.012	0.041	0.087	0.151	0.231	0.328	0.443	
	Static Pressure		0.011	0.039	0.082	0.141	0.216	0.306	0.413	
	NC (Noise Criteria)		<10	<10	13	23	31	37	43	
	5 ft.	Airflow, cfm	100	190	280	370	460	550	640	
		Total Pressure	0.010	0.036	0.079	0.138	0.213	0.305	0.413	
		Static Pressure	0.009	0.033	0.071	0.124	0.192	0.274	0.372	
NC (Noise Criteria)		<10	<10	15	25	33	39	45		
2.5" Slot Width	1-Slot 10" Inlet	2 ft.	Airflow, cfm	100	145	190	235	280	325	370
			Total Pressure	0.036	0.076	0.131	0.201	0.285	0.384	0.498
			Static Pressure	0.034	0.072	0.124	0.189	0.269	0.362	0.469
			NC (Noise Criteria)	<10	<10	17	26	33	39	44
		Throw	6-10-14	9-12-17	11-14-20	13-16-22	14-17-24	15-18-26	16-20-28	
		4 ft.	Airflow, cfm	140	220	300	380	460	540	620
	Total Pressure		0.021	0.052	0.096	0.154	0.226	0.311	0.410	
	Static Pressure		0.017	0.041	0.077	0.124	0.181	0.250	0.329	
	NC (Noise Criteria)		<10	<10	20	29	37	44	49	
	5 ft.	Airflow, cfm	150	240	330	420	510	600	690	
		Total Pressure	0.017	0.044	0.083	0.134	0.197	0.273	0.361	
		Static Pressure	0.012	0.032	0.060	0.097	0.143	0.197	0.261	
NC (Noise Criteria)		<10	<10	18	28	36	43	49		
2.5" Slot Width	1-Slot 12" Inlet	2 ft.	Airflow, cfm	100	145	190	235	280	325	370
			Total Pressure	0.035	0.074	0.127	0.195	0.277	0.373	0.483
			Static Pressure	0.034	0.072	0.124	0.189	0.269	0.362	0.469
			NC (Noise Criteria)	<10	<10	12	21	28	34	40
		Throw	6-10-14	9-12-17	11-14-20	13-16-22	14-17-24	15-18-26	16-20-28	
		4 ft.	Airflow, cfm	140	225	310	395	480	565	650
	Total Pressure		0.019	0.049	0.092	0.149	0.221	0.306	0.405	
	Static Pressure		0.017	0.043	0.082	0.134	0.197	0.273	0.362	
	NC (Noise Criteria)		<10	<10	16	26	34	41	46	
	5 ft.	Airflow, cfm	150	250	350	450	550	650	750	
		Total Pressure	0.015	0.041	0.080	0.132	0.196	0.274	0.365	
		Static Pressure	0.012	0.034	0.067	0.111	0.166	0.232	0.308	
NC (Noise Criteria)		<10	<10	16	26	34	41	47		
5 ft.	Throw	4-9-18	10-15-23	14-19-27	18-22-31	19-24-34	21-26-37	23-28-39		

FL-30 - 1-SLOT, HIGHTHROW WITH TITUS PLENUM

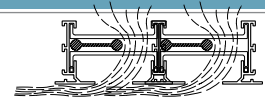


3.0" Slot Width	1-Slot 10" Inlet	2 ft.	Airflow, cfm	125	170	215	260	305	350	395
			Total Pressure	0.051	0.095	0.152	0.222	0.306	0.403	0.513
Static Pressure	0.048	0.089	0.142	0.208	0.286	0.377	0.480			
NC (Noise Criteria)	<10	<10	15	23	30	36	41			
Throw	7-11-16	10-13-19	12-15-21	13-16-23	15-18-25	16-19-27	17-20-29			
3.0" Slot Width	1-Slot 10" Inlet	4 ft.	Airflow, cfm	200	275	350	425	500	575	650
			Total Pressure	0.039	0.074	0.120	0.177	0.245	0.324	0.414
			Static Pressure	0.031	0.058	0.094	0.139	0.192	0.254	0.325
			NC (Noise Criteria)	<10	<10	17	25	32	39	44
			Throw	8-13-20	12-17-24	15-19-27	17-21-30	19-23-32	20-24-34	21-26-37
3.0" Slot Width	1-Slot 10" Inlet	5 ft.	Airflow, cfm	220	310	400	490	580	670	760
			Total Pressure	0.034	0.068	0.112	0.169	0.236	0.315	0.406
			Static Pressure	0.024	0.047	0.079	0.118	0.166	0.221	0.284
			NC (Noise Criteria)	<10	<10	17	25	33	40	46
			Throw	8-12-21	12-17-25	15-20-29	18-23-32	20-24-35	21-26-37	23-28-40
3.0" Slot Width	1-Slot 12" Inlet	2 ft.	Airflow, cfm	125	170	215	260	305	350	395
			Total Pressure	0.050	0.092	0.147	0.215	0.296	0.389	0.496
			Static Pressure	0.048	0.089	0.142	0.208	0.286	0.377	0.480
			NC (Noise Criteria)	<10	<10	11	19	26	32	37
			Throw	7-11-16	10-13-19	12-15-21	13-16-23	15-18-25	16-19-27	17-20-29
		4 ft.	Airflow, cfm	200	290	380	470	560	650	740
			Total Pressure	0.035	0.073	0.126	0.192	0.273	0.368	0.477
			Static Pressure	0.031	0.065	0.111	0.170	0.241	0.325	0.421
			NC (Noise Criteria)	<10	<10	16	26	33	40	45
			Throw	8-13-20	12-17-24	16-20-28	18-22-31	20-24-34	21-26-37	23-28-39
		5 ft.	Airflow, cfm	220	330	440	550	660	770	880
			Total Pressure	0.029	0.065	0.115	0.180	0.259	0.352	0.460
			Static Pressure	0.024	0.054	0.095	0.149	0.215	0.292	0.381
			NC (Noise Criteria)	<10	<10	17	26	34	41	47
			Throw	8-12-21	12-18-26	16-21-30	19-24-34	21-26-37	23-28-40	25-30-43

- All pressures are in inches of water
- Isothermal throw values given are for terminal velocities of 150, 100 and 50 fpm
- Each NC value represents the noise criteria that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10dB, re 10⁻¹² watts
- Data obtained from tests conducted in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets"
- Conducted tests with FlowBar and plenums as a composite assembly
- Plenums not provided by Titus may demonstrate performance variations from data published by Titus. If a factory-engineered plenum is not provided, Titus does not guarantee performance.
- Throw values for HighThrow units are based on a one-way discharge from the slot
- Throws listed are for one-way air pattern. For divided airflow, select the airflow in each direction according to the number of slots aimed in that direction, with the total airflow apportioned between slots. See section, Engineering Guidelines and the topic 'Procedure to Obtain Catalog Throw Data' in this catalog for throw information.
- For continuous lengths it is recommended that maximum active lengths are no longer than 10 feet

PERFORMANCE DATA

FL-10 / FL-15 / FT-10 / FT-15 - 2-SLOT, HIGHTHROW WITH TITUS PLENUM

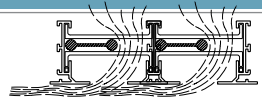


1.0" Slot Width	2-Slot 8" Inlet	2 ft.	Airflow, CFM	80	120	160	200	240	280	320
			Total Pressure	0.021	0.048	0.085	0.133	0.192	0.261	0.341
			Static Pressure	0.018	0.041	0.072	0.113	0.162	0.221	0.288
			NC (Noise Criteria)	<10	<10	15	24	30	36	41
		Throw	3-6-13	6-10-16	9-13-18	11-14-20	13-16-22	14-17-24	15-18-26	
		4 ft.	Airflow, CFM	160	230	300	370	440	510	580
			Total Pressure	0.031	0.064	0.109	0.167	0.235	0.316	0.409
			Static Pressure	0.018	0.037	0.063	0.096	0.136	0.183	0.237
			NC (Noise Criteria)	<10	<10	18	25	32	37	42
		Throw	4-9-18	9-13-22	11-17-25	14-20-28	17-21-30	19-23-32	20-24-35	
		5 ft.	Airflow, CFM	200	280	360	440	520	600	680
			Total Pressure	0.039	0.075	0.125	0.186	0.260	0.347	0.445
Static Pressure	0.018		0.035	0.058	0.087	0.122	0.162	0.208		
NC (Noise Criteria)	<10		<10	18	25	31	36	41		
Throw	5-10-20	9-14-24	12-18-27	15-21-30	18-23-33	20-25-35	22-27-38			
1.0" Slot Width	2-Slot 10" Inlet	2 ft.	Airflow, CFM	80	130	180	230	280	330	380
			Total Pressure	0.019	0.051	0.098	0.160	0.237	0.329	0.437
			Static Pressure	0.018	0.048	0.091	0.149	0.221	0.307	0.407
			NC (Noise Criteria)	<10	<10	19	28	35	41	47
		Throw	3-6-13	7-11-16	10-14-19	12-15-22	14-17-24	15-18-26	16-20-28	
		4 ft.	Airflow, CFM	160	240	320	400	480	560	640
			Total Pressure	0.023	0.053	0.094	0.146	0.211	0.287	0.374
			Static Pressure	0.018	0.041	0.072	0.113	0.162	0.221	0.288
			NC (Noise Criteria)	<10	<10	19	27	34	40	45
		Throw	4-9-18	9-14-22	12-18-26	15-20-29	18-22-32	20-24-34	21-26-36	
		5 ft.	Airflow, CFM	200	295	390	485	580	675	770
			Total Pressure	0.026	0.057	0.100	0.155	0.222	0.301	0.392
Static Pressure	0.018		0.039	0.069	0.106	0.152	0.205	0.267		
NC (Noise Criteria)	<10		<10	20	28	34	40	45		
Throw	5-10-20	10-15-25	13-20-28	17-22-32	20-24-35	22-26-37	23-28-40			
1.5" Slot Width	2-Slot 8" Inlet	2 ft.	Airflow, cfm	120	160	200	240	280	320	360
			Total Pressure	0.040	0.071	0.111	0.159	0.217	0.283	0.359
			Static Pressure	0.032	0.058	0.090	0.130	0.177	0.231	0.292
			NC (Noise Criteria)	<10	11	19	26	32	37	41
		Throw	6-10-16	9-13-18	11-14-20	13-16-22	14-17-24	15-18-26	16-19-27	
		4 ft.	Airflow, cfm	240	310	380	450	520	590	660
			Total Pressure	0.062	0.103	0.155	0.218	0.291	0.375	0.469
			Static Pressure	0.032	0.054	0.081	0.114	0.152	0.196	0.246
			NC (Noise Criteria)	<10	15	22	28	34	38	43
		Throw	9-14-22	12-18-25	14-20-28	17-22-31	19-23-33	20-25-35	21-26-37	
		5 ft.	Airflow, cfm	300	370	440	510	580	650	720
			Total Pressure	0.079	0.120	0.169	0.227	0.294	0.369	0.453
Static Pressure	0.032		0.049	0.070	0.094	0.121	0.152	0.187		
NC (Noise Criteria)	<10		14	21	26	31	35	39		
Throw	10-15-25	13-19-28	15-21-30	17-23-32	20-24-35	21-26-37	22-27-39			
1.5" Slot Width	2-Slot 12" Inlet	2 ft.	Airflow, cfm	120	170	220	270	320	370	420
			Total Pressure	0.034	0.068	0.114	0.172	0.241	0.323	0.416
			Static Pressure	0.032	0.065	0.109	0.164	0.231	0.309	0.398
			NC (Noise Criteria)	<10	11	21	29	35	40	45
		Throw	6-10-16	9-13-19	12-15-21	14-17-24	15-18-26	16-20-28	17-21-29	
		4 ft.	Airflow, cfm	240	320	400	480	560	640	720
			Total Pressure	0.038	0.068	0.106	0.153	0.209	0.272	0.345
			Static Pressure	0.032	0.058	0.090	0.130	0.177	0.231	0.292
			NC (Noise Criteria)	<10	14	22	29	35	40	44
		Throw	9-14-22	12-18-26	15-20-29	18-22-32	20-24-34	21-26-36	22-27-39	
		5 ft.	Airflow, cfm	300	400	500	600	700	800	900
			Total Pressure	0.042	0.074	0.116	0.166	0.226	0.296	0.374
Static Pressure	0.032		0.058	0.090	0.130	0.177	0.231	0.292		
NC (Noise Criteria)	<10		15	24	31	36	41	46		
Throw	10-15-25	14-20-29	17-23-32	20-25-35	22-27-38	23-29-41	25-31-43			

Performance notes appear at end of table



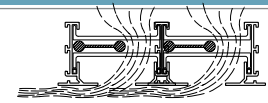
FL-20 / FL-25 / FT-20 - 2-SLOT, HIGHTHROW WITH TITUS PLENUM



2.0" Slot Width	2-Slot 8" Inlet	2 ft.	Airflow, cfm	120	165	210	255	300	345	390
			Total Pressure	0.028	0.053	0.085	0.125	0.174	0.230	0.294
			Static Pressure	0.020	0.039	0.063	0.092	0.128	0.169	0.216
			NC (Noise Criteria)	<10	11	20	27	33	38	42
			Throw	5-9-16	8-12-18	10-15-21	12-16-23	14-18-25	15-19-27	16-20-28
	4 ft.	Airflow, cfm	240	300	360	420	480	540	600	
		Total Pressure	0.050	0.078	0.112	0.153	0.200	0.253	0.312	
		Static Pressure	0.020	0.032	0.046	0.063	0.082	0.103	0.128	
		NC (Noise Criteria)	12	21	27	33	38	43	47	
		Throw	7-12-22	10-15-25	12-18-27	14-21-29	16-22-32	18-24-33	20-25-35	
	5 ft.	Airflow, cfm	260	325	390	455	520	585	650	
		Total Pressure	0.050	0.078	0.112	0.153	0.200	0.253	0.312	
		Static Pressure	0.015	0.024	0.034	0.047	0.061	0.078	0.096	
		NC (Noise Criteria)	11	20	26	32	37	42	46	
		Throw	6-12-23	9-15-26	12-18-28	14-20-31	16-23-33	18-25-35	19-26-37	
2.0" Slot Width	2-Slot 12" Inlet	2 ft.	Airflow, cfm	120	195	270	345	420	495	570
			Total Pressure	0.022	0.058	0.111	0.181	0.268	0.372	0.493
			Static Pressure	0.020	0.054	0.103	0.169	0.250	0.347	0.460
			NC (Noise Criteria)	<10	<10	17	26	33	39	45
			Throw	5-9-16	9-14-20	13-17-24	15-19-27	17-21-29	18-23-32	20-24-34
	4 ft.	Airflow, cfm	240	330	420	510	600	690	780	
		Total Pressure	0.026	0.050	0.080	0.118	0.164	0.217	0.277	
		Static Pressure	0.020	0.039	0.063	0.092	0.128	0.169	0.216	
		NC (Noise Criteria)	<10	12	21	28	34	39	44	
		Throw	7-12-22	11-17-26	14-21-29	17-23-32	20-25-35	22-27-38	23-28-40	
	5 ft.	Airflow, cfm	280	380	480	580	680	780	880	
		Total Pressure	0.026	0.047	0.076	0.110	0.152	0.200	0.254	
		Static Pressure	0.018	0.033	0.052	0.076	0.105	0.138	0.176	
		NC (Noise Criteria)	<10	14	22	29	35	40	45	
		Throw	6-13-24	11-17-28	14-22-32	17-24-35	20-27-38	23-28-40	25-30-43	
2.5" Slot Width	2-Slot 10" Inlet	2 ft.	Airflow, cfm	80	160	240	320	400	480	560
			Total Pressure	0.007	0.027	0.061	0.109	0.171	0.246	0.334
			Static Pressure	0.005	0.022	0.049	0.088	0.137	0.197	0.269
			NC (Noise Criteria)	<10	<10	11	22	31	39	45
			Throw	2-4-11	7-11-18	11-16-22	14-18-26	17-20-29	18-22-32	20-24-34
	4 ft.	Airflow, cfm	160	280	400	520	640	760	880	
		Total Pressure	0.011	0.033	0.068	0.115	0.174	0.245	0.328	
		Static Pressure	0.005	0.017	0.034	0.058	0.088	0.124	0.166	
		NC (Noise Criteria)	<10	<10	15	26	35	42	48	
		Throw	3-6-15	8-13-24	13-19-29	17-23-33	20-26-36	23-28-40	25-30-43	
	5 ft.	Airflow, cfm	200	335	470	605	740	875	1010	
		Total Pressure	0.014	0.039	0.077	0.127	0.190	0.266	0.354	
		Static Pressure	0.005	0.015	0.030	0.050	0.075	0.105	0.140	
		NC (Noise Criteria)	<10	<10	17	27	35	42	48	
		Throw	3-6-17	8-14-26	13-20-31	17-25-35	21-28-39	25-30-43	26-32-46	
2.5" Slot Width	2-Slot 12" Inlet	2 ft.	Airflow, cfm	80	170	260	350	440	530	620
			Total Pressure	0.006	0.028	0.065	0.117	0.185	0.269	0.368
			Static Pressure	0.005	0.025	0.058	0.105	0.166	0.241	0.329
			NC (Noise Criteria)	<10	<10	<10	21	31	38	45
			Throw	2-4-11	8-11-19	12-16-23	16-19-27	17-21-30	19-23-33	21-25-36
	4 ft.	Airflow, cfm	160	295	430	565	700	835	970	
		Total Pressure	0.008	0.027	0.058	0.101	0.155	0.220	0.297	
		Static Pressure	0.005	0.019	0.040	0.068	0.105	0.149	0.202	
		NC (Noise Criteria)	<10	<10	13	25	33	41	47	
		Throw	3-6-15	9-14-25	14-21-30	18-24-34	22-27-38	24-29-42	26-32-45	
	5 ft.	Airflow, cfm	200	350	500	650	800	950	1100	
		Total Pressure	0.010	0.029	0.060	0.101	0.153	0.215	0.288	
		Static Pressure	0.005	0.017	0.034	0.058	0.088	0.124	0.166	
		NC (Noise Criteria)	<10	<10	14	25	34	41	47	
		Throw	3-6-17	9-15-27	14-21-32	19-26-37	23-29-41	26-31-44	28-34-48	



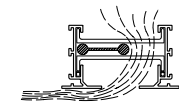
FL-30 - 2-SLOT, HIGHTHROW WITH TITUS PLENUM



Slot Width	Inlet	Height	Performance Data															
			Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC (Noise Criteria)	Throw						
3.0"	2 Slot 10"	2 ft.	Airflow, cfm	80	180	280	380	480	580	680	Airflow, cfm	80	180	280	380	480	580	680
			Total Pressure	0.006	0.032	0.077	0.141	0.226	0.329	0.453	Total Pressure	0.006	0.028	0.068	0.126	0.201	0.293	0.403
			Static Pressure	0.005	0.025	0.060	0.111	0.177	0.259	0.356	Static Pressure	0.005	0.025	0.060	0.111	0.177	0.259	0.356
			NC (Noise Criteria)	<10	<10	<10	20	31	39	46	NC (Noise Criteria)	<10	<10	<10	16	26	35	42
		Throw	1-3-10	7-11-19	12-17-24	16-20-28	18-22-32	20-24-35	22-27-38	Throw	1-3-10	7-11-19	12-17-24	16-20-28	18-22-32	20-24-35	22-27-38	
		4 ft.	Airflow, cfm	150	300	450	600	750	900	1050	Airflow, cfm	150	310	470	630	790	950	1110
	Total Pressure		0.009	0.036	0.081	0.145	0.226	0.326	0.444	Total Pressure	0.007	0.028	0.065	0.117	0.183	0.265	0.362	
	Static Pressure		0.004	0.017	0.039	0.069	0.108	0.156	0.212	Static Pressure	0.004	0.018	0.043	0.076	0.120	0.174	0.237	
	NC (Noise Criteria)		<10	<10	<10	22	32	41	48	NC (Noise Criteria)	<10	<10	<10	19	30	38	45	
	Throw		2-4-13	7-13-25	13-20-31	18-25-35	22-28-39	25-31-43	27-33-47	Throw	2-4-13	8-14-25	14-21-31	19-26-36	23-29-40	26-31-44	28-34-48	
	5 ft.		Airflow, cfm	180	350	520	690	860	1030	1200	Airflow, cfm	180	360	540	720	900	1080	1260
		Total Pressure	0.011	0.041	0.090	0.159	0.246	0.353	0.480	Total Pressure	0.007	0.029	0.065	0.116	0.182	0.262	0.356	
Static Pressure		0.004	0.015	0.033	0.059	0.091	0.131	0.177	Static Pressure	0.004	0.016	0.036	0.064	0.100	0.144	0.195		
NC (Noise Criteria)		<10	<10	10	23	33	41	48	NC (Noise Criteria)	<10	<10	<10	20	30	38	45		
Throw		2-4-14	7-14-27	14-21-33	18-27-38	23-30-42	27-33-46	29-35-50	Throw	2-4-14	7-14-27	14-21-33	19-27-39	24-31-43	27-33-47	29-36-51		

- All pressures are in inches of water
- Isothermal throw values given are for terminal velocities of 150, 100 and 50 fpm
- Each NC value represents the noise criteria that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10dB, re 10⁻¹² watts
- The tests were conducted with the FlowBar and plenums as a composite assembly
- Data obtained from tests conducted in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets"
- Plenums not provided by Titus may demonstrate performance variations from data published by Titus. Titus can not guarantee performance if a factory engineered plenum is not provided.
- Throw values for HighThrow units are based on a one-way discharge from the slot
- Throws listed are for one-way air pattern. For divided airflow, select the airflow in each direction according to the number of slots aimed in that direction, with the total airflow apportioned between slots. See section Engineering Guidelines and the topic 'Procedure to Obtain Catalog Throw Data' for throw information.
- For continuous lengths it is recommended that maximum active lengths are no longer than 10 feet

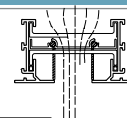
MODUFLOW 24 X 24 INCHES 1-SLOT DATA
(BASED ON MF10 MODEL)



Slot Width	Inlet	Performance Data																																																					
		Neck Velocity, (fpm)	Velocity Pressure, (In. WG)	Airflow, cfm	Total Pressure, (In. WG)	NC (Noise Criteria)	Throw feet	Airflow, cfm	Total Pressure, (In. WG)	NC (Noise Criteria)	Throw feet																																												
1"	6" Dia Inlet	300	0.006	59	0.015	-	0-1-4	400	0.010	79	0.027	-	1-2-6	500	0.016	98	0.043	12	1-3-8	600	0.022	118	0.062	18	2-4-9	700	0.031	137	0.084	22	2-5-10	750	0.035	147	0.096	24	3-6-11	800	0.040	157	0.110	26	3-6-11	850	0.045	167	0.124	28	3-7-12	900	0.051	177	0.139	30	4-7-12
		105	0.027	105	0.048	-	1-3-8	140	0.048	140	0.075	17	2-5-11	175	0.075	175	0.108	24	4-7-12	209	0.108	209	0.148	29	5-8-13	244	0.148	244	0.193	34	6-10-14	262	0.169	262	0.218	36	7-10-14	279	0.193	279	0.244	38	7-11-15	297	0.218	297	0.281	40	8-11-15	314	0.244	314	0.314	42	8-11-16
		164	0.042	164	0.075	18	3-6-11	218	0.075	218	0.116	26	6-9-13	273	0.116	273	0.168	33	7-10-15	327	0.168	327	0.228	39	9-11-16	382	0.228	382	0.298	43	10-12-17	409	0.262	409	0.344	45	10-13-18	436	0.298	436	0.377	47	11-13-19	464	0.336	464	0.414	49	11-14-19	491	0.377	491	0.451	51	11-14-20
		18	0.042	18	0.075	18	3-6-11	26	0.075	26	0.116	26	6-9-13	33	0.116	33	0.168	33	7-10-15	39	0.168	39	0.228	39	9-11-16	43	0.228	43	0.298	43	10-12-17	45	0.262	45	0.344	45	10-13-18	47	0.298	47	0.377	47	11-13-19	49	0.336	49	0.414	49	11-14-19	51	0.377	51	0.451	51	11-14-20

- All data based on tests conducted in accordance with ASHRAE Standard 70-2006
- Throw based on Isothermal air, at 150, 100 and 50 fpm terminal velocities
- NC based on a 10 dB reduction in discharge sound in all octave bands for room absorption

FL-10 / FL-15 / FL-20 / FL-25 / FL-30 WITH CONTINUOUS SLOT
PLENUM AND JETTHROW PATTERN CONTROLLER



Slot Width	Slots	Performance Data							
		Airflow, cfm/ft.	Static Pressure	NC (Noise Criteria)	Throw	Airflow, cfm/ft.	Static Pressure	NC (Noise Criteria)	Throw
1.0"	1-Slot	Airflow, cfm/ft.	20	40	60	80	100	120	140
		Static Pressure	0.007	0.027	0.061	0.109	0.170	0.245	0.334
		NC (Noise Criteria)	<10	<10	17	24	28	32	36
		Throw	2-3-7	4-7-13	7-10-19	9-13-22	11-17-24	13-19-26	15-20-29
	2-Slot	Airflow, cfm/ft.	40	85	130	175	220	265	310
		Static Pressure	0.007	0.031	0.072	0.130	0.206	0.299	0.409
		NC (Noise Criteria)	<10	11	22	29	34	38	42
		Throw	3-5-9	7-10-20	10-15-27	14-20-32	17-25-36	21-28-39	24-30-42
1.5"	1-Slot	Airflow, cfm/ft.	30	60	90	120	150	180	210
		Static Pressure	0.008	0.031	0.070	0.125	0.196	0.282	0.384
		NC (Noise Criteria)	<10	<10	17	22	28	33	37
		Throw	2-4-7	5-7-15	7-11-22	10-15-26	12-18-30	15-22-32	17-25-35
	2-Slot	Airflow, cfm/ft.	60	120	180	240	300	360	420
		Static Pressure	0.008	0.031	0.070	0.125	0.196	0.282	0.384
		NC (Noise Criteria)	<10	<10	19	27	32	37	40
		Throw	2-5-10	7-10-21	10-15-31	14-21-37	17-26-42	21-31-46	24-35-49
2.0"	1-Slot	Airflow, cfm/ft.	35	75	115	155	195	235	275
		Static Pressure	0.006	0.026	0.062	0.112	0.178	0.258	0.353
		NC (Noise Criteria)	<10	<10	17	24	29	33	37
		Throw	1-3-7	5-8-15	8-12-23	10-16-30	13-20-34	16-24-37	18-28-40
	2-Slot	Airflow, cfm/ft.	70	150	230	310	390	470	550
		Static Pressure	0.006	0.026	0.062	0.112	0.178	0.258	0.353
		NC (Noise Criteria)	<10	<10	19	26	32	36	40
		Throw	2-4-10	7-11-21	11-16-33	15-22-42	18-28-48	22-33-52	26-39-57
2.5"	1-Slot	Airflow, cfm/ft.	40	95	150	205	260	315	370
		Static Pressure	0.005	0.027	0.068	0.126	0.203	0.298	0.412
		NC (Noise Criteria)	<10	<10	18	25	30	35	39
		Throw	1-3-7	6-8-17	9-13-26	12-18-35	15-23-39	18-28-43	22-33-46
	2-Slot	Airflow, cfm/ft.	80	190	300	410	520	630	740
		Static Pressure	0.005	0.027	0.068	0.126	0.203	0.298	0.412
		NC (Noise Criteria)	<10	11	22	28	34	38	42
		Throw	2-4-10	8-12-24	12-19-37	17-26-49	22-32-55	26-39-60	31-46-66
3.0"	1-Slot	Airflow, cfm/ft.	50	115	180	245	310	375	440
		Static Pressure	0.005	0.028	0.067	0.125	0.200	0.293	0.403
		NC (Noise Criteria)	<10	<10	17	24	30	34	38
		Throw	1-3-8	6-9-18	9-14-28	13-19-38	16-24-42	20-29-47	23-34-51
	2-Slot	Airflow, cfm/ft.	100	230	360	490	620	750	880
		Static Pressure	0.005	0.028	0.067	0.125	0.200	0.293	0.403
		NC (Noise Criteria)	<10	<10	21	27	34	39	43
		Throw	2-4-11	8-13-25	13-20-40	18-27-53	23-34-60	28-42-66	33-49-71

- All pressures are in inches of water
- Pressure loss data assumes a duct velocity less than 800 fpm in the inlet duct
- Isothermal throw values given are for terminal velocities of 150, 100 and 50 fpm
- Throw data based on active sections 4 feet long. For a 2-foot section, throw values are 0.72 times those shown.
- For a 10-foot continuous length, the throw values are 1.7 times those shown, 1.8 for 12-foot units
- Each NC value represents the noise criteria that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10dB, re 10⁻¹² watts for a 4-foot section (See Table A for other lengths). For supply units used as a return, add 3 NC.

- Data obtained from tests conducted in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets"
- The tests were conducted with no plenum effect for pressure or sound
- Throw values for JetThrow units are based on the pattern controller set at 0° discharge (vertical blow)
- Throws listed are for one-way air pattern. For divided airflow, select the airflow in each direction according to the number of slots aimed in that direction, with the total airflow apportioned between slots. See section, Engineering Guidelines and the topic 'Procedure to Obtain Catalog Throw Data' in this catalog for throw information.
- For continuous lengths it is recommended that maximum active lengths are no longer than 10 feet

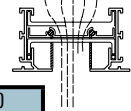
Table A, NC Correction for length

Length, Feet	2	4	6	8	10
Supply	-2	0	+2	+3	+5
Return	0	+3	+5	+6	+8

Table B, Throw Correction Multiplier for length

Length, Feet	2	4	8	10	12
Throw Correction	0.72	1	1.5	1.7	1.8

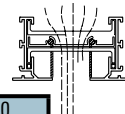
FL-10 / FL-15 / FT-10 / FT-15 - 1-SLOT, JETTHROW WITH TITUS PLENUM



1.0" Slot Width	1-Slot 8" Inlet	2 ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.012	0.043	0.093	0.163	0.252	0.361	0.488
			Static Pressure	0.011	0.038	0.083	0.146	0.225	0.322	0.436
			NC	<10	<10	16	23	29	34	39
			Throw	2-3-6	4-6-11	5-8-14	7-11-16	9-13-18	11-14-20	12-15-22
		4 ft.	Airflow, cfm	100	175	250	325	400	475	550
			Total Pressure	0.016	0.048	0.099	0.166	0.252	0.356	0.477
			Static Pressure	0.011	0.033	0.066	0.112	0.170	0.240	0.322
			NC	<10	<10	18	25	30	34	38
			Throw	3-4-8	5-7-14	7-10-19	9-13-22	11-17-24	13-19-26	15-20-28
		5 ft.	Airflow, cfm	110	195	280	365	450	535	620
			Total Pressure	0.014	0.045	0.094	0.159	0.242	0.342	0.459
			Static Pressure	0.008	0.026	0.053	0.091	0.138	0.195	0.262
			NC	<10	<10	17	24	29	33	37
			Throw	3-4-8	5-7-14	7-10-20	9-13-23	11-17-26	13-20-28	15-21-30
1.0" Slot Width	1-Slot 10" Inlet	2 ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.011	0.040	0.088	0.153	0.236	0.338	0.457
			Static Pressure	0.011	0.038	0.083	0.146	0.225	0.322	0.436
			NC	<10	<10	16	22	28	33	38
			Throw	2-3-6	4-6-11	5-8-14	7-11-16	9-13-18	11-14-20	12-15-22
		4 ft.	Airflow, cfm	100	180	260	340	420	500	580
			Total Pressure	0.013	0.041	0.086	0.147	0.225	0.318	0.428
			Static Pressure	0.011	0.034	0.072	0.123	0.188	0.266	0.358
			NC	<10	<10	18	25	30	35	39
			Throw	3-4-8	5-7-15	7-11-19	9-14-22	12-17-25	14-19-27	16-21-29
		5 ft.	Airflow, cfm	110	210	310	410	510	610	710
			Total Pressure	0.011	0.039	0.086	0.150	0.232	0.331	0.449
			Static Pressure	0.008	0.030	0.065	0.114	0.177	0.253	0.343
			NC	<10	<10	19	26	31	35	40
			Throw	3-4-8	5-8-16	8-11-21	10-15-24	13-19-27	15-21-30	18-23-32
1.0" Slot Width	1-Slot 12" Inlet	2 ft.	Airflow, cfm	50	95	140	185	230	275	320
			Total Pressure	0.011	0.039	0.085	0.149	0.230	0.329	0.446
			Static Pressure	0.011	0.038	0.083	0.146	0.225	0.322	0.436
			NC	<10	<10	15	22	27	32	38
			Throw	2-3-6	4-6-11	5-8-14	7-11-16	9-13-18	11-14-20	12-15-22
		4 ft.	Airflow, cfm	100	190	280	370	460	550	640
			Total Pressure	0.012	0.042	0.091	0.159	0.247	0.352	0.477
			Static Pressure	0.011	0.038	0.083	0.146	0.225	0.322	0.436
			NC	<10	10	19	26	32	37	42
			Throw	3-4-8	5-8-16	8-12-20	10-15-23	13-18-26	15-20-28	18-22-30
		5 ft.	Airflow, cfm	110	220	330	440	550	660	770
			Total Pressure	0.009	0.038	0.085	0.151	0.237	0.341	0.464
			Static Pressure	0.008	0.033	0.074	0.132	0.206	0.297	0.404
			NC	<10	<10	20	27	32	37	42
			Throw	3-4-8	5-8-16	8-12-22	11-16-25	14-20-28	16-22-31	19-24-33
1.5" Slot Width	1-Slot 8" Inlet	2 ft.	Airflow, cfm	60	110	160	210	260	310	360
			Total Pressure	0.014	0.046	0.097	0.167	0.257	0.365	0.492
			Static Pressure	0.008	0.026	0.056	0.096	0.147	0.209	0.282
			NC	<10	<10	<10	16	24	31	37
			Throw	1-3-5	3-5-9	5-7-14	6-9-17	7-11-19	9-13-21	10-15-23
		4 ft.	Airflow, cfm	120	180	240	300	360	420	480
			Total Pressure	0.031	0.070	0.125	0.195	0.280	0.382	0.498
			Static Pressure	0.008	0.018	0.031	0.049	0.070	0.096	0.125
			NC	<10	<10	<10	<10	16	22	27
			Throw	2-4-7	4-5-11	5-7-15	6-9-18	7-11-22	8-13-25	10-15-26
		5 ft.	Airflow, cfm	140	200	260	320	380	440	500
			Total Pressure	0.039	0.079	0.133	0.201	0.284	0.381	0.492
			Static Pressure	0.007	0.014	0.024	0.036	0.050	0.067	0.087
			NC	<10	<10	<10	<10	12	17	22
			Throw	2-4-8	4-5-11	5-7-14	6-9-17	7-10-21	8-12-24	9-14-27

Performance notes appear at end of table

FL-15 / FL-20 / FT-15 / FT-20 - 1-SLOT, JETTHROW WITH TITUS PLENUM

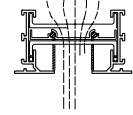


1.5" Slot Width	1-Slot 10" Inlet	2 ft.	Airflow, cfm	60	125	190	255	320	385	450
			Total Pressure	0.009	0.037	0.086	0.155	0.244	0.354	0.483
			Static Pressure	0.008	0.034	0.079	0.141	0.223	0.322	0.441
			NC	<10	<10	<10	19	28	36	44
	Throw	1-3-5	4-5-11	5-8-16	7-11-19	9-14-22	11-17-24	13-18-26		
	4 ft.	Airflow, cfm	120	230	340	450	560	670	780	
		Total Pressure	0.011	0.040	0.087	0.153	0.236	0.338	0.459	
		Static Pressure	0.008	0.029	0.063	0.110	0.171	0.244	0.331	
		NC	<10	<10	10	20	29	36	42	
	Throw	2-4-7	5-7-14	7-10-21	9-14-26	11-17-29	14-20-31	16-24-34		
	5 ft.	Airflow, cfm	140	265	390	515	640	765	890	
		Total Pressure	0.011	0.039	0.085	0.148	0.229	0.327	0.442	
Static Pressure		0.007	0.024	0.053	0.092	0.143	0.204	0.276		
NC		<10	<10	<10	19	27	34	40		
Throw	2-4-8	5-7-14	7-11-21	9-14-27	12-17-30	14-21-33	16-24-36			
1.5" Slot Width	1-Slot 12" Inlet	2 ft.	Airflow, cfm	60	125	190	255	320	385	450
			Total Pressure	0.008	0.036	0.082	0.148	0.233	0.337	0.461
			Static Pressure	0.008	0.034	0.079	0.141	0.223	0.322	0.441
			NC	<10	<10	<10	18	27	35	43
	Throw	1-3-5	4-5-11	5-8-16	7-11-19	9-14-22	11-17-24	13-18-26		
	4 ft.	Airflow, cfm	120	240	360	480	600	720	840	
		Total Pressure	0.009	0.037	0.084	0.149	0.232	0.334	0.455	
		Static Pressure	0.008	0.031	0.070	0.125	0.196	0.282	0.384	
		NC	<10	<10	10	21	30	37	45	
	Throw	2-4-7	5-7-15	7-11-22	10-15-26	12-18-30	15-22-32	17-25-35		
	5 ft.	Airflow, cfm	140	280	420	560	700	840	980	
		Total Pressure	0.009	0.035	0.079	0.141	0.220	0.317	0.432	
Static Pressure		0.007	0.027	0.061	0.109	0.171	0.246	0.334		
NC		<10	<10	10	21	29	36	43		
Throw	2-4-8	5-8-15	8-11-23	10-15-29	13-19-32	15-23-35	18-27-38			
2.0" Slot Width	1-Slot 8" Inlet	2 ft.	Airflow, cfm	70	140	210	280	350	420	490
			Total Pressure	0.008	0.033	0.074	0.132	0.206	0.296	0.403
			Static Pressure	0.006	0.023	0.052	0.092	0.143	0.206	0.280
			NC	<10	<10	14	21	27	33	38
	Throw	1-2-5	3-5-10	5-7-15	7-10-20	8-12-23	10-15-25	12-17-27		
	4 ft.	Airflow, cfm	140	240	340	440	540	640	740	
		Total Pressure	0.016	0.046	0.093	0.156	0.235	0.329	0.440	
		Static Pressure	0.006	0.017	0.034	0.057	0.085	0.120	0.160	
		NC	<10	12	21	27	32	36	40	
	Throw	1-3-7	4-6-12	6-9-17	7-11-22	9-14-27	11-16-30	12-19-33		
	5 ft.	Airflow, cfm	150	260	370	480	590	700	810	
		Total Pressure	0.016	0.047	0.096	0.161	0.243	0.343	0.459	
Static Pressure		0.004	0.013	0.026	0.043	0.065	0.092	0.123		
NC		<10	13	21	27	32	36	40		
Throw	1-3-7	3-6-12	6-8-17	7-11-22	9-13-27	10-16-31	12-18-34			
2.0" Slot Width	1-Slot 10" Inlet	2 ft.	Airflow, cfm	70	150	230	310	390	470	550
			Total Pressure	0.007	0.031	0.073	0.132	0.210	0.304	0.417
			Static Pressure	0.006	0.026	0.062	0.112	0.178	0.258	0.353
			NC	<10	<10	11	18	26	31	36
	Throw	1-2-5	4-5-11	5-8-16	7-11-21	9-14-24	11-17-26	13-20-28		
	4 ft.	Airflow, cfm	140	265	390	515	640	765	890	
		Total Pressure	0.010	0.035	0.076	0.133	0.206	0.294	0.398	
		Static Pressure	0.006	0.021	0.044	0.077	0.120	0.171	0.231	
		NC	<10	10	19	25	30	36	41	
	Throw	1-3-7	4-7-13	7-10-20	9-13-26	11-16-30	13-19-33	15-22-36		
	5 ft.	Airflow, cfm	150	300	450	600	750	900	1050	
		Total Pressure	0.009	0.036	0.080	0.143	0.223	0.321	0.437	
Static Pressure		0.004	0.017	0.038	0.067	0.105	0.151	0.206		
NC		<10	11	21	27	33	37	42		
Throw	1-3-7	4-7-13	7-10-20	9-13-27	11-17-33	13-20-36	16-24-39			

Performance notes appear at end of table



FL-30 / FL-25 / FT-20 - 1-SLOT, JETTHROW WITH TITUS PLENUM

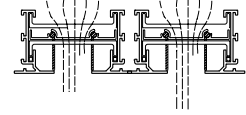


Slot Width	Inlet	Height	Performance Data															
			Airflow, cfm	Total Pressure	Static Pressure	NC	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC	Throw						
2.0"	1-Slot 12" Inlet	2 ft.	Airflow, cfm	70	160	250	340	430	520	610	Airflow, cfm	70	160	250	340	430	520	610
			Total Pressure	0.006	0.032	0.079	0.147	0.235	0.343	0.472	Total Pressure	0.006	0.032	0.079	0.147	0.235	0.343	0.472
			Static Pressure	0.006	0.030	0.073	0.135	0.216	0.316	0.435	Static Pressure	0.006	0.030	0.073	0.135	0.216	0.316	0.435
			NC	<10	<10	<10	17	25	31	36	NC	<10	<10	<10	17	25	31	36
			Throw	1-2-5	4-6-11	6-9-18	8-12-22	10-15-25	12-18-27	14-21-30	Throw	1-2-5	4-6-11	6-9-18	8-12-22	10-15-25	12-18-27	14-21-30
		4 ft.	Airflow, cfm	140	290	440	590	740	890	1040	Airflow, cfm	140	290	440	590	740	890	1040
			Total Pressure	0.008	0.033	0.076	0.137	0.215	0.311	0.425	Total Pressure	0.008	0.033	0.076	0.137	0.215	0.311	0.425
			Static Pressure	0.006	0.025	0.057	0.102	0.160	0.231	0.316	Static Pressure	0.006	0.025	0.057	0.102	0.160	0.231	0.316
			NC	<10	<10	17	24	31	37	41	NC	<10	<10	17	24	31	37	41
			Throw	1-3-7	5-7-15	7-11-22	10-15-29	12-19-33	15-22-36	17-26-39	Throw	1-3-7	5-7-15	7-11-22	10-15-29	12-19-33	15-22-36	17-26-39
		5 ft.	Airflow, cfm	150	330	510	690	870	1050	1230	Airflow, cfm	150	330	510	690	870	1050	1230
			Total Pressure	0.006	0.031	0.075	0.137	0.218	0.318	0.436	Total Pressure	0.006	0.031	0.075	0.137	0.218	0.318	0.436
			Static Pressure	0.004	0.020	0.049	0.089	0.141	0.206	0.283	Static Pressure	0.004	0.020	0.049	0.089	0.141	0.206	0.283
			NC	<10	<10	19	26	32	38	43	NC	<10	<10	19	26	32	38	43
			Throw	1-3-7	5-7-15	8-11-23	10-16-31	13-20-36	16-24-39	18-28-42	Throw	1-3-7	5-7-15	8-11-23	10-16-31	13-20-36	16-24-39	18-28-42
2.5"	1-Slot 12" Inlet	2 ft.	Airflow, cfm	80	190	300	410	520	630	740	Airflow, cfm	80	190	300	410	520	630	740
			Total Pressure	0.005	0.031	0.077	0.143	0.231	0.339	0.467	Total Pressure	0.005	0.031	0.077	0.143	0.231	0.339	0.467
			Static Pressure	0.005	0.027	0.068	0.126	0.203	0.298	0.412	Static Pressure	0.005	0.027	0.068	0.126	0.203	0.298	0.412
			NC	<10	<10	<10	12	20	26	33	NC	<10	<10	<10	12	20	26	33
			Throw	1-2-5	4-6-12	6-9-19	9-13-24	11-16-27	13-20-30	15-23-33	Throw	1-2-5	4-6-12	6-9-19	9-13-24	11-16-27	13-20-30	15-23-33
		4 ft.	Airflow, cfm	150	335	520	705	890	1075	1260	Airflow, cfm	150	335	520	705	890	1075	1260
			Total Pressure	0.007	0.032	0.078	0.144	0.229	0.334	0.459	Total Pressure	0.007	0.032	0.078	0.144	0.229	0.334	0.459
			Static Pressure	0.004	0.021	0.051	0.093	0.149	0.217	0.298	Static Pressure	0.004	0.021	0.051	0.093	0.149	0.217	0.298
			NC	<10	<10	<10	18	26	32	38	NC	<10	<10	<10	18	26	32	38
			Throw	1-2-7	5-7-15	8-11-23	10-16-31	13-20-36	16-24-40	18-28-43	Throw	1-2-7	5-7-15	8-11-23	10-16-31	13-20-36	16-24-40	18-28-43
		5 ft.	Airflow, cfm	160	370	580	790	1000	1210	1420	Airflow, cfm	160	370	580	790	1000	1210	1420
			Total Pressure	0.006	0.030	0.075	0.138	0.222	0.324	0.447	Total Pressure	0.006	0.030	0.075	0.138	0.222	0.324	0.447
			Static Pressure	0.003	0.016	0.040	0.075	0.120	0.176	0.243	Static Pressure	0.003	0.016	0.040	0.075	0.120	0.176	0.243
			NC	<10	<10	<10	18	26	32	38	NC	<10	<10	<10	18	26	32	38
			Throw	1-2-6	5-7-15	8-11-23	10-16-31	13-20-38	16-24-42	19-28-45	Throw	1-2-6	5-7-15	8-11-23	10-16-31	13-20-38	16-24-42	19-28-45
3.0"	1-Slot 12" Inlet	2 ft.	Airflow, cfm	100	225	350	475	600	725	850	Airflow, cfm	100	225	350	475	600	725	850
			Total Pressure	0.006	0.031	0.076	0.140	0.224	0.327	0.449	Total Pressure	0.006	0.031	0.076	0.140	0.224	0.327	0.449
			Static Pressure	0.005	0.026	0.064	0.117	0.187	0.274	0.376	Static Pressure	0.005	0.026	0.064	0.117	0.187	0.274	0.376
			NC	<10	<10	<10	<10	15	24	31	NC	<10	<10	<10	<10	15	24	31
			Throw	1-2-6	4-6-12	6-10-19	9-13-26	11-17-30	13-20-32	16-24-35	Throw	1-2-6	4-6-12	6-10-19	9-13-26	11-17-30	13-20-32	16-24-35
		4 ft.	Airflow, cfm	200	400	600	800	1000	1200	1400	Airflow, cfm	200	400	600	800	1000	1200	1400
			Total Pressure	0.009	0.037	0.083	0.148	0.231	0.333	0.454	Total Pressure	0.009	0.037	0.083	0.148	0.231	0.333	0.454
			Static Pressure	0.005	0.021	0.047	0.083	0.130	0.187	0.255	Static Pressure	0.005	0.021	0.047	0.083	0.130	0.187	0.255
			NC	<10	<10	<10	<10	17	25	32	NC	<10	<10	<10	<10	17	25	32
			Throw	1-3-8	5-8-16	8-12-24	10-16-31	13-20-38	16-24-42	18-27-45	Throw	1-3-8	5-8-16	8-12-24	10-16-31	13-20-38	16-24-42	18-27-45
		5 ft.	Airflow, cfm	240	460	680	900	1120	1340	1560	Airflow, cfm	240	460	680	900	1120	1340	1560
			Total Pressure	0.011	0.039	0.085	0.149	0.231	0.331	0.449	Total Pressure	0.011	0.039	0.085	0.149	0.231	0.331	0.449
			Static Pressure	0.005	0.018	0.039	0.067	0.105	0.150	0.203	Static Pressure	0.005	0.018	0.039	0.067	0.105	0.150	0.203
			NC	<10	<10	<10	<10	15	24	30	NC	<10	<10	<10	<10	15	24	30
			Throw	1-3-8	5-8-16	8-12-24	11-16-32	13-20-39	16-23-44	18-27-48	Throw	1-3-8	5-8-16	8-12-24	11-16-32	13-20-39	16-23-44	18-27-48

- All pressures are in inches of water.
- Isothermal throw values given are for terminal velocities of 150, 100 and 50 fpm
- Each NC value represents the noise criteria that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10dB, re 10⁻¹² watts.
- Data obtained from tests conducted in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
- The tests were conducted with the FlowBar and plenums as a composite assembly.
- Plenums not provided by Titus may demonstrate performance variations from data published by Titus. Titus can not guarantee performance if a factory engineered plenum is not provided.
- Throw values for JetThrow units are based on the pattern controller set at 0° discharge (vertical blow).
- Throws listed are for one-way air pattern. For divided airflow, select the airflow in each direction according to the number of slots aimed in that direction, with the total airflow apportioned between slots. See section, Engineering Guidelines and the topic 'Procedure to Obtain Catalog Throw Data' in this catalog for throw information.
- For continuous lengths it is recommended that maximum active lengths are no longer than 10 feet.



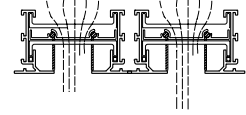
FL-10 / FL-15 / FT-10 / FT-15 - 2-SLOT, JETTHROW WITH TITUS PLENUM



1.0" Slot Width	2-Slot 8" Inlet	2 ft.	Airflow, cfm	80	155	230	305	380	455	530
			Total Pressure	0.010	0.038	0.083	0.147	0.228	0.326	0.443
			Static Pressure	0.007	0.026	0.056	0.099	0.154	0.220	0.299
			NC	<10	<10	16	23	29	33	37
		Throw	2-3-7	4-6-13	6-10-18	8-13-21	10-16-23	13-18-26	15-20-28	
		4 ft.	Airflow, cfm	160	260	360	460	560	660	760
			Total Pressure	0.020	0.053	0.101	0.165	0.244	0.339	0.450
			Static Pressure	0.007	0.018	0.034	0.056	0.083	0.116	0.154
			NC	<10	<10	15	21	26	30	33
		Throw	3-5-9	5-8-15	7-11-21	9-13-26	11-16-29	13-19-31	15-22-33	
		5 ft.	Airflow, cfm	200	300	400	500	600	700	800
			Total Pressure	0.027	0.061	0.109	0.171	0.246	0.334	0.437
Static Pressure	0.007		0.015	0.027	0.043	0.061	0.083	0.109		
NC	<10		<10	13	19	23	27	30		
Throw	3-5-10	5-8-16	7-10-21	9-13-26	10-16-30	12-18-32	14-21-34			
1.0" Slot Width	2-Slot 12" Inlet	2 ft.	Airflow, cfm	80	165	250	335	420	505	590
			Total Pressure	0.008	0.035	0.080	0.143	0.225	0.325	0.443
			Static Pressure	0.007	0.029	0.066	0.119	0.188	0.271	0.370
			NC	<10	<10	17	25	30	35	40
		Throw	2-3-7	5-7-14	7-10-19	9-14-22	12-17-25	14-19-27	16-21-29	
		4 ft.	Airflow, cfm	160	300	440	580	720	860	1000
			Total Pressure	0.012	0.043	0.092	0.160	0.247	0.352	0.476
			Static Pressure	0.007	0.024	0.051	0.089	0.138	0.197	0.266
			NC	<10	<10	19	26	31	35	39
		Throw	3-5-9	6-9-18	9-13-25	11-17-29	14-21-32	17-25-35	19-27-38	
		5 ft.	Airflow, cfm	200	350	500	650	800	950	1100
			Total Pressure	0.015	0.047	0.095	0.161	0.243	0.343	0.460
Static Pressure	0.007		0.021	0.043	0.072	0.109	0.154	0.206		
NC	<10		<10	18	24	30	34	37		
Throw	3-5-10	6-9-18	9-13-26	11-17-31	14-21-34	17-25-37	19-28-40			
1.0" Slot Width	2-Slot 12" Inlet	2 ft.	Airflow, cfm	80	170	260	350	440	530	620
			Total Pressure	0.007	0.034	0.079	0.143	0.226	0.327	0.448
			Static Pressure	0.007	0.031	0.072	0.130	0.206	0.299	0.409
			NC	<10	<10	18	25	31	36	41
		Throw	2-3-7	5-7-14	7-11-19	10-14-23	12-18-25	15-20-28	17-21-30	
		4 ft.	Airflow, cfm	160	320	480	640	800	960	1120
			Total Pressure	0.009	0.038	0.085	0.150	0.235	0.338	0.461
			Static Pressure	0.007	0.027	0.061	0.109	0.170	0.245	0.334
			NC	<10	10	20	27	33	37	42
		Throw	3-5-9	6-9-19	9-14-26	12-19-30	16-23-34	19-26-37	22-29-40	
		5 ft.	Airflow, cfm	200	375	550	725	900	1075	1250
			Total Pressure	0.011	0.038	0.082	0.143	0.220	0.314	0.424
Static Pressure	0.007		0.024	0.051	0.089	0.138	0.197	0.266		
NC	<10		10	20	26	32	36	40		
Throw	3-5-10	7-10-20	10-14-28	13-19-32	16-24-36	19-28-40	22-30-43			
1.5" Slot Width	2-Slot 8" Inlet	2 ft.	Airflow, cfm	120	210	300	390	480	570	660
			Total Pressure	0.015	0.047	0.095	0.161	0.243	0.343	0.460
			Static Pressure	0.008	0.024	0.049	0.083	0.125	0.177	0.237
			NC	<10	<10	<10	17	25	31	37
		Throw	2-4-7	4-6-13	6-9-18	8-12-24	10-15-26	12-17-29	13-20-31	
		4 ft.	Airflow, cfm	240	340	440	540	640	740	840
			Total Pressure	0.037	0.075	0.126	0.189	0.266	0.355	0.458
			Static Pressure	0.008	0.016	0.026	0.040	0.056	0.074	0.096
			NC	<10	<10	<10	<10	15	21	26
		Throw	2-5-10	5-7-15	6-9-19	8-12-23	9-14-27	11-16-32	12-18-35	
		5 ft.	Airflow, cfm	260	365	470	575	680	785	890
			Total Pressure	0.041	0.080	0.132	0.198	0.277	0.369	0.475
Static Pressure	0.006		0.012	0.019	0.029	0.040	0.054	0.069		
NC	<10		<10	<10	<10	11	17	21		
Throw	2-5-10	4-7-14	6-9-18	7-11-22	9-13-26	10-15-30	11-17-34			

Performance notes appear at end of table

FL-15 / FL-20 / FT-15 / FT-20 - 2-SLOT, JETTHROW WITH TITUS PLENUM

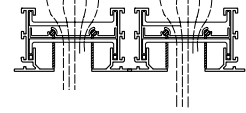


1.5" Slot Width	2-Slot 10" Inlet	2 ft.	Airflow, cfm	120	230	340	450	560	670	780
			Total Pressure	0.011	0.040	0.087	0.153	0.236	0.338	0.459
			Static Pressure	0.008	0.029	0.063	0.110	0.171	0.244	0.331
			NC	<10	<10	10	20	29	36	42
		Throw	2-4-7	5-7-14	7-10-21	9-14-26	11-17-29	14-20-31	16-24-34	
		4 ft.	Airflow, cfm	240	390	540	690	840	990	1140
	Total Pressure		0.020	0.053	0.101	0.165	0.244	0.339	0.449	
	Static Pressure		0.008	0.021	0.040	0.065	0.096	0.133	0.177	
	NC		<10	<10	<10	16	24	30	35	
	5 ft.	Airflow, cfm	260	425	590	755	920	1085	1250	
		Total Pressure	0.020	0.054	0.103	0.169	0.251	0.350	0.464	
		Static Pressure	0.006	0.016	0.030	0.050	0.074	0.102	0.136	
NC		<10	<10	<10	13	21	27	32		
1.5" Slot Width	2-Slot 12" Inlet	2 ft.	Airflow, cfm	120	240	360	480	600	720	840
			Total Pressure	0.009	0.037	0.084	0.149	0.232	0.334	0.455
			Static Pressure	0.008	0.031	0.070	0.125	0.196	0.282	0.384
			NC	<10	<10	10	21	30	37	45
		Throw	2-4-7	5-7-15	7-11-22	10-15-26	12-18-30	15-22-32	17-25-35	
		4 ft.	Airflow, cfm	240	415	590	765	940	1115	1290
	Total Pressure		0.014	0.041	0.083	0.139	0.210	0.295	0.395	
	Static Pressure		0.008	0.023	0.047	0.080	0.120	0.169	0.226	
	NC		<10	<10	<10	19	27	33	39	
	5 ft.	Airflow, cfm	260	440	620	800	980	1160	1340	
		Total Pressure	0.013	0.036	0.072	0.120	0.181	0.253	0.338	
		Static Pressure	0.006	0.017	0.033	0.056	0.084	0.117	0.156	
NC		<10	<10	<10	14	22	28	34		
2.0" Slot Width	2-Slot 8" Inlet	2 ft.	Airflow, cfm	70	140	210	280	350	420	490
			Total Pressure	0.008	0.033	0.074	0.132	0.206	0.296	0.403
			Static Pressure	0.006	0.017	0.034	0.057	0.085	0.120	0.160
			NC	<10	12	21	27	32	36	40
		Throw	1-3-7	4-6-12	6-9-17	7-11-22	9-14-27	11-16-30	12-19-33	
		4 ft.	Airflow, cfm	250	355	460	565	670	775	880
	Total Pressure		0.037	0.074	0.124	0.187	0.263	0.352	0.453	
	Static Pressure		0.005	0.009	0.015	0.023	0.033	0.044	0.057	
	NC		<10	17	23	28	32	35	38	
	5 ft.	Airflow, cfm	280	390	500	610	720	830	940	
		Total Pressure	0.044	0.085	0.140	0.208	0.290	0.385	0.494	
		Static Pressure	0.004	0.007	0.012	0.017	0.024	0.032	0.041	
NC		10	18	24	28	32	36	38		
2.0" Slot Width	2-Slot 10" Inlet	2 ft.	Airflow, cfm	140	275	410	545	680	815	950
			Total Pressure	0.010	0.038	0.084	0.149	0.232	0.333	0.453
			Static Pressure	0.006	0.022	0.049	0.087	0.135	0.194	0.263
			NC	<10	10	20	27	32	38	43
		Throw	1-3-7	5-7-14	7-10-21	9-14-27	11-17-31	14-20-34	16-24-37	
		4 ft.	Airflow, cfm	250	425	600	775	950	1125	1300
	Total Pressure		0.018	0.051	0.102	0.170	0.255	0.358	0.478	
	Static Pressure		0.005	0.013	0.026	0.044	0.066	0.092	0.123	
	NC		<10	16	24	30	35	39	42	
	5 ft.	Airflow, cfm	280	460	640	820	1000	1180	1360	
		Total Pressure	0.020	0.054	0.105	0.173	0.257	0.357	0.475	
		Static Pressure	0.004	0.010	0.019	0.031	0.047	0.065	0.086	
NC		<10	16	24	30	35	39	42		
Throw	1-3-9	4-7-15	7-10-20	9-13-26	11-16-32	12-19-37	14-22-43			

Performance notes appear at end of table



FL-20 / FL-25 / FL-30 - 2-SLOT, JETTHROW WITH TITUS PLENUM



Slot Width	Inlet	Height	Performance Data										
			Airflow, cfm	Total Pressure	Static Pressure	NC	Throw	Airflow, cfm	Total Pressure	Static Pressure	NC	Throw	
2.0"	2-Slot 12" Inlet	2 ft.	Airflow, cfm	140	280	420	560	700	840	980			
			Total Pressure	0.010	0.031	0.069	0.130	0.193	0.277	0.378			
			Static Pressure	0.006	0.023	0.052	0.092	0.143	0.206	0.280			
			NC	<10	<10	16	24	29	35	40			
		Throw	1-3-7	5-7-14	7-11-21	9-14-28	12-18-32	14-21-35	16-25-38				
		Airflow, cfm	250	450	650	850	1050	1250	1450				
	4 ft.	Total Pressure	0.080	0.035	0.074	0.130	0.192	0.272	0.390				
		Static Pressure	0.005	0.015	0.031	0.053	0.080	0.114	0.153				
	5 ft.	2-Slot 12" Inlet	4 ft.	NC	<10	13	22	28	33	37	42		
				Throw	2-3-9	5-8-16	8-12-23	10-15-30	12-19-37	15-22-43	17-26-46		
		5 ft.	Airflow, cfm	280	480	680	880	1080	1280	1480			
			Total Pressure	0.012	0.034	0.070	0.115	0.173	0.242	0.324			
Static Pressure			0.004	0.011	0.022	0.036	0.054	0.077	0.102				
NC			<10	13	21	27	32	36	40				
Throw	1-3-9	4-8-15	7-11-22	9-14-28	11-17-34	14-20-41	16-24-46						
2.5"	2-Slot 12" Inlet	2 ft.	Airflow, cfm	150	335	520	705	890	1075	1260			
			Total Pressure	0.010	0.032	0.078	0.150	0.229	0.334	0.480			
			Static Pressure	0.004	0.021	0.051	0.093	0.149	0.217	0.298			
			NC	<10	<10	<10	18	26	32	39			
		Throw	1-2-7	5-7-15	8-11-23	10-16-31	13-20-36	16-24-40	18-27-43				
		Airflow, cfm	300	540	780	1020	1260	1500	1740				
	4 ft.	Total Pressure	0.010	0.043	0.090	0.160	0.235	0.334	0.449				
		Static Pressure	0.004	0.014	0.029	0.049	0.075	0.106	0.142				
	5 ft.	2-Slot 12" Inlet	4 ft.	NC	<10	<10	<10	18	25	31	36		
				Throw	1-3-9	5-8-17	8-12-24	11-16-32	13-20-39	16-23-47	18-27-50		
		5 ft.	Airflow, cfm	350	600	850	1100	1350	1600	1850			
			Total Pressure	0.020	0.047	0.095	0.170	0.239	0.336	0.480			
Static Pressure			0.004	0.011	0.022	0.036	0.055	0.077	0.103				
NC			<10	<10	<10	16	24	30	35				
Throw	1-3-10	4-8-17	8-12-24	10-15-31	13-19-38	15-22-45	17-26-51						
3.0"	2-Slot 12" Inlet	2 ft.	Airflow, cfm	175	385	595	805	1015	1225	1435			
			Total Pressure	0.010	0.034	0.082	0.160	0.238	0.347	0.477			
			Static Pressure	0.004	0.019	0.046	0.084	0.134	0.195	0.268			
			NC	<10	<10	<10	<12	18	26	33			
		Throw	1-3-7	5-8-15	8-12-23	11-17-32	13-20-38	16-24-42	19-28-46				
		Airflow, cfm	320	580	840	1100	1360	1620	1880				
	4 ft.	Total Pressure	0.080	0.050	0.100	0.170	0.270	0.330	0.510				
		Static Pressure	0.003	0.011	0.023	0.039	0.060	0.085	0.115				
	5 ft.	2-Slot 12" Inlet	4 ft.	NC	<10	<10	<10	<10	16	24	31		
				Throw	1-4-9	4-9-16	8-13-23	10-17-30	13-21-38	15-25-45	17-29-52		
		5 ft.	Airflow, cfm	380	645	910	1175	1440	1705	1970			
			Total Pressure	0.020	0.051	0.101	0.180	0.253	0.355	0.510			
Static Pressure			0.003	0.009	0.017	0.029	0.043	0.061	0.081				
NC			<10	<10	<10	<10	<10	13	26				
Throw	1-4-9	3-8-16	7-11-23	10-16-29	12-18-36	14-21-42	16-27-49						

- All pressures are in inches of water.
- Isothermal throw values given are for terminal velocities of 150, 100 and 50 fpm.
- Each NC value represents the noise criteria that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10dB, re 10⁻¹² watts.
- Data obtained from tests conducted in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
- The tests were conducted with the FlowBar and plenums as a composite assembly.
- Plenums not provided by Titus may demonstrate performance variations from data published by Titus. Titus can not guarantee performance if a factory engineered plenum is not provided.
- Throw values for JetThrow units are based on the pattern controller set at 0° discharge (vertical blow).
- Throws listed are for one-way air pattern. For divided airflow, select the airflow in each direction according to the number of slots aimed in that direction, with the total airflow apportioned between slots. See section, Engineering Guidelines and the topic 'Procedure to Obtain Catalog Throw Data' in this catalog for throw information.
- For continuous lengths it is recommended that maximum active lengths are no longer than 10 feet.

Notes

Icons



Diffuser module sizes are hard metric & inlets are soft. Metric linear and grille products are converted to the nearest 1/4" for ordering. Contact us for more information.

metric sizes



finish options that resemble wood grains, perfect for high-profile architectural applications

wood grains

