METAL*AIRE®

formations™

TAKE FLIGHT.

Revised: 7-06

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At METALAIRE, we value the working relationships we've developed with some of the world's best known and well run corporations. We're proud to have had the opportunity to work on some great projects with great people. Our experience has taught us that by focusing on our customers' needs and listening to what they want, we're able to respond effectively and provide total solutions to meet their air distribution needs. Our superior quality products, technical expertise and support, and corporate commitment to customer service are reasons why our customers depend on us everyday to help them succeed. Our experience shows and our customers count on it.

METALAIRE

Experience Aire Superiority.

formations

LINEAR AIR DIFFUSERS

Your dream has become reality.

Now you can intergate your imaginative

design concepts into functional

architectual solutions. Style. Performance.

Aesthetics. Brought together utilizing the

elegant lines and graceful curves

of Formations Linear Air Diffusers.

You design with Formations,

not around it.

Create dramatic and functional in Interior

space that is also cost-effective.

◀ BEFORE With conventional diffusers your design options are limited.

The sculptured elegance of Formations

integrates seamlessly into your design

with an ease of installation and a

superior level of performance

Formations enhances your

design concept

by providing optimum air flow patterns

not available with traditional diffusers.

Formations accommodates supply, return and

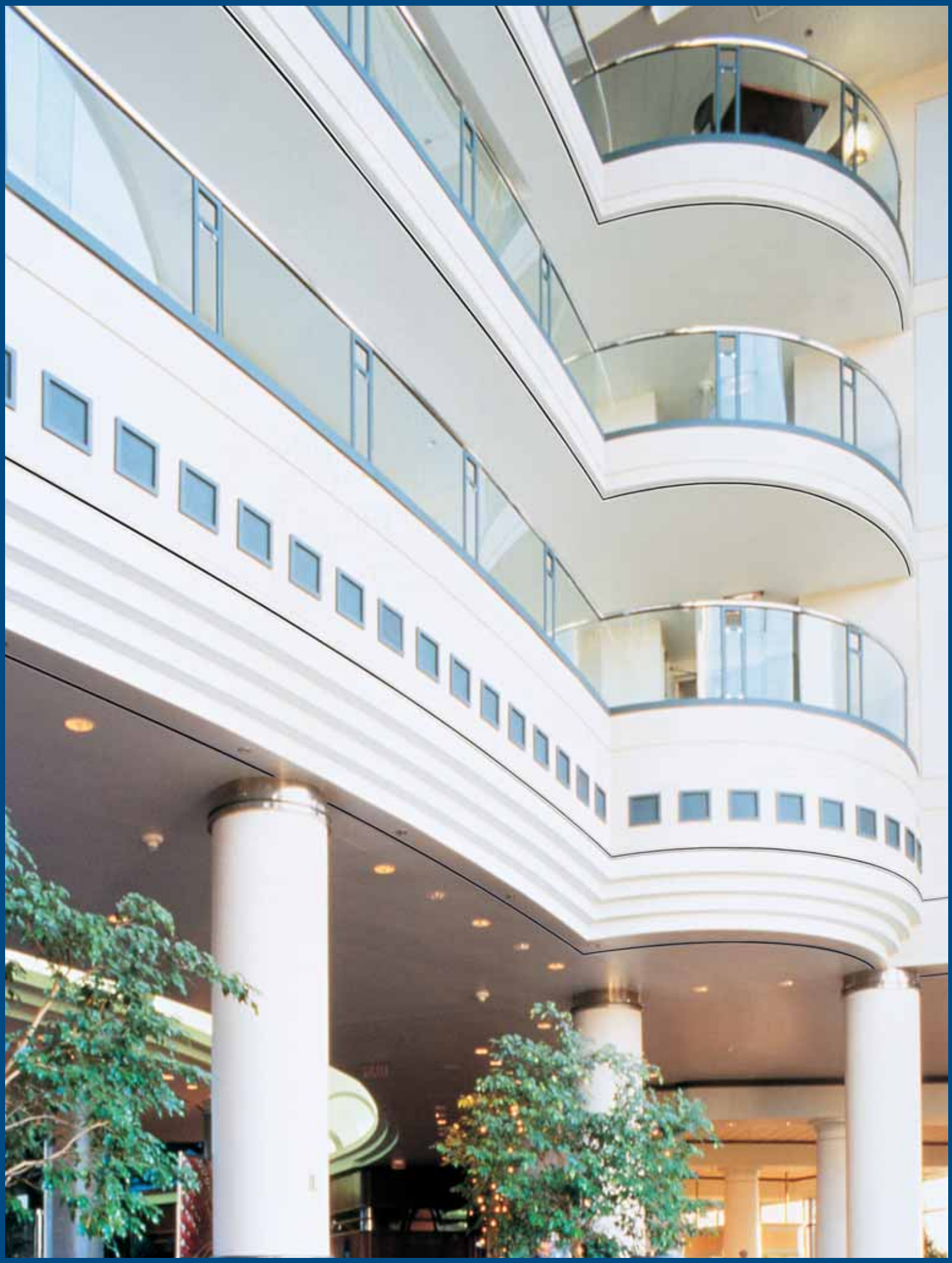
exhaust air all through elegantly

shaped slots. Beautifully smooth

transitions from wall to ceiling provide

visual polish and distinction.

AFTER Formations integrates air distribution into your design. ▶



Straight lines, angles, simple or complex

curves... METALAIRE can custom fabricate

Formations to meet your most demanding visual and

spatial air distribution requirements.

Formations linear air diffusers can be

configured to provide a variety of

vertical, diagonal and horizontal air flow

patterns. Formations unique design conserves energy

while delivering excellent air circulation without

unwelcome drafts or dead zones.

▼ Formations allows you total flexibility.

Formations is fabricated of sturdy,

rigid extruded aluminum for

decades of trouble-free, low maintenance

operation and lasting beauty. They can

be mounted with most building materials, in

any plane and in conjunction with

most structural elements, using standard con-

struction techniques.

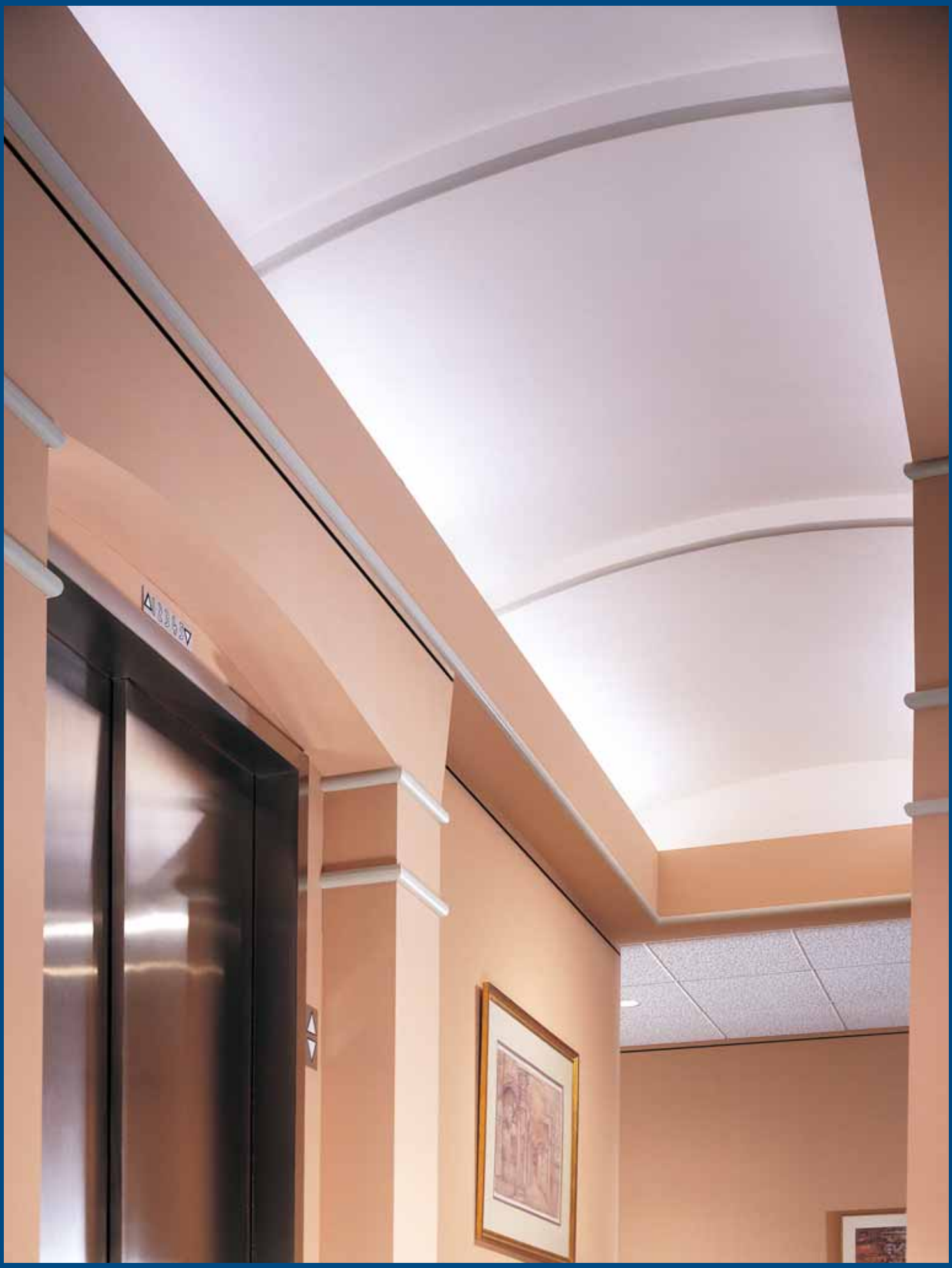
Formations products are designed to

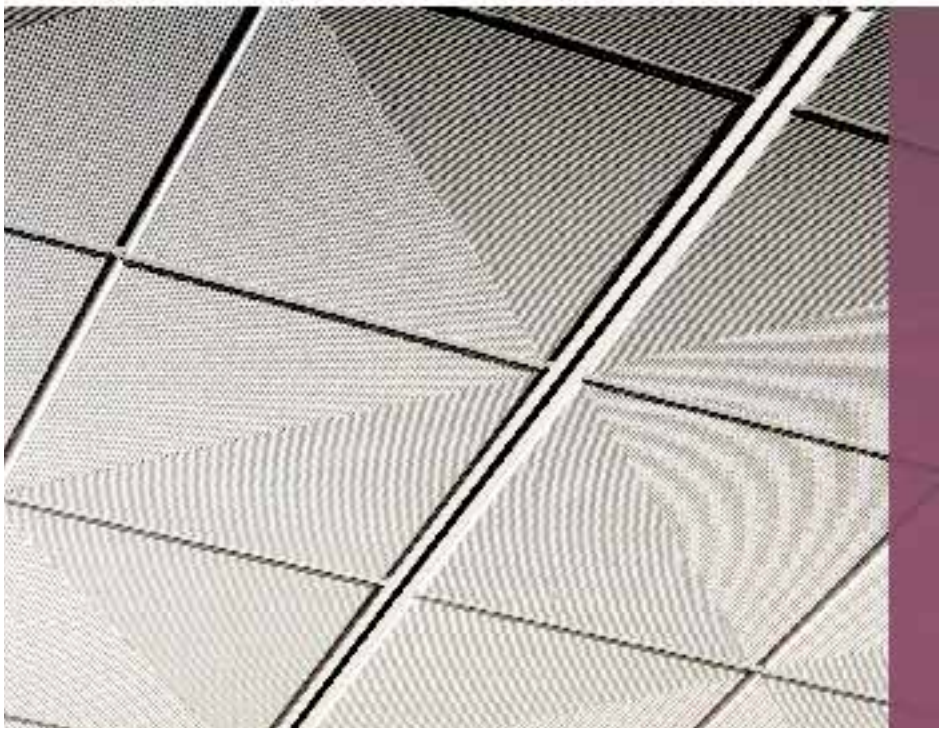
be integrated into the ceiling or wall,

not after-thoughts or add-ons.

Formations helps bring your dream

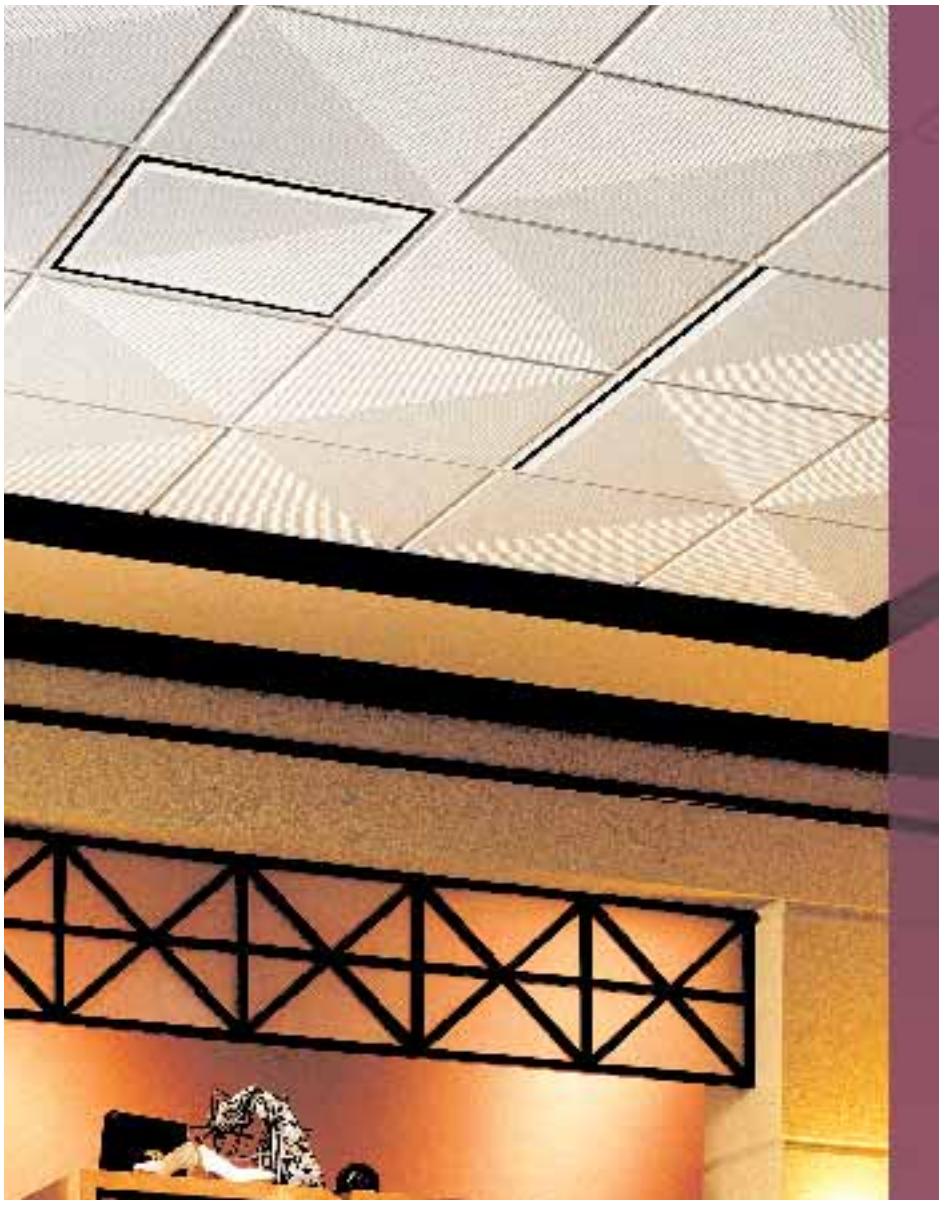
to reality... beautifully.





Formations is available in linear, incremental linear and square configurations. The refined lines and visual architectural appeal of Formations makes it ideal for integration into any ceiling system.

In acoustical applications, Formations actually becomes the Main runner of the suspension system.



As an incremental “lay-in” diffuser, Formations is available in a 2'x 2' configuration or in 2', 3' and 5' linear sections. Formations 2'x 2' is called Integra.

With Integra your specified ceiling material actually becomes the face of the diffuser for a truly integrated appearance.

Incremental linear is called Formations Tee System and is available for 15/16", 9/16" and Bolt-slot tee systems. Unlike conventional linear diffusers which are usually installed after the ceiling system is in place, Formations can become an integral part of the ceiling system.

◀ *Ceiling by Armstrong World Industries*

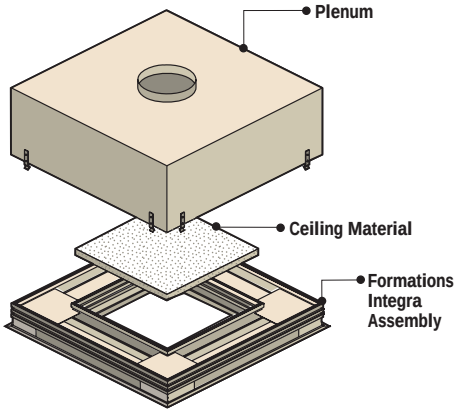
Formations® Linear satisfies the most demanding engineering and architectural criteria, providing both superior air distribution performance and sculptured elegance. Specially designed air pattern controllers are easily adjustable to satisfy a myriad of applications. Available in 24" increments, pattern controllers allow the air flow to be directed horizontally, to the left, right or vertically. Formations Linear is available for straight or curved applications. For both ceiling and wall installations, architecturally seamless effects are achieved with unique 12' sections. Standard slot widths of 1", 1.5", 2", 2.5" and 3" are available. Speedy installation is easy with our state-of-the-art mounting hardware. Our innovative design saves on installed costs and ensures a straight and true installation.

MODELS

- FAL-10 • 1" SLOT
- FAL-15 • 1.5" SLOT
- FAL-20 • 2" SLOT
- FAL-25 • 2.5" SLOT
- FAL-30 • 3" SLOT

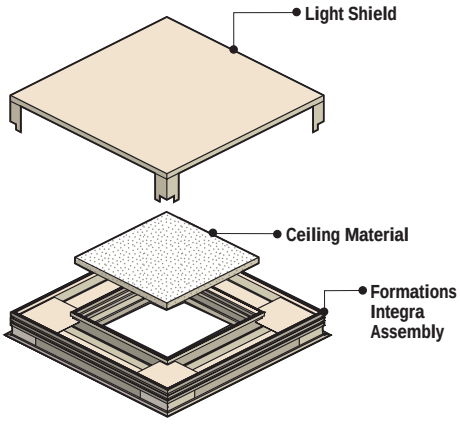
Protected by Patent 6,386,970 and 6,648,752.

The beauty of Formations Integra is in its design. Laying in an acoustical tee bar or hard ceiling, your specified ceiling material actually becomes the face of the Integra diffuser, providing beautiful design integrity. Integra is available in 1", 1.5" and 2" slot widths. Constructed of the same sturdy extruded aluminum as Formations Linear, Integra diffusers are available for either supply or return solutions and can be adjusted for one, two, three or four-way directional air flow. Horizontal or vertical air patterns are available.



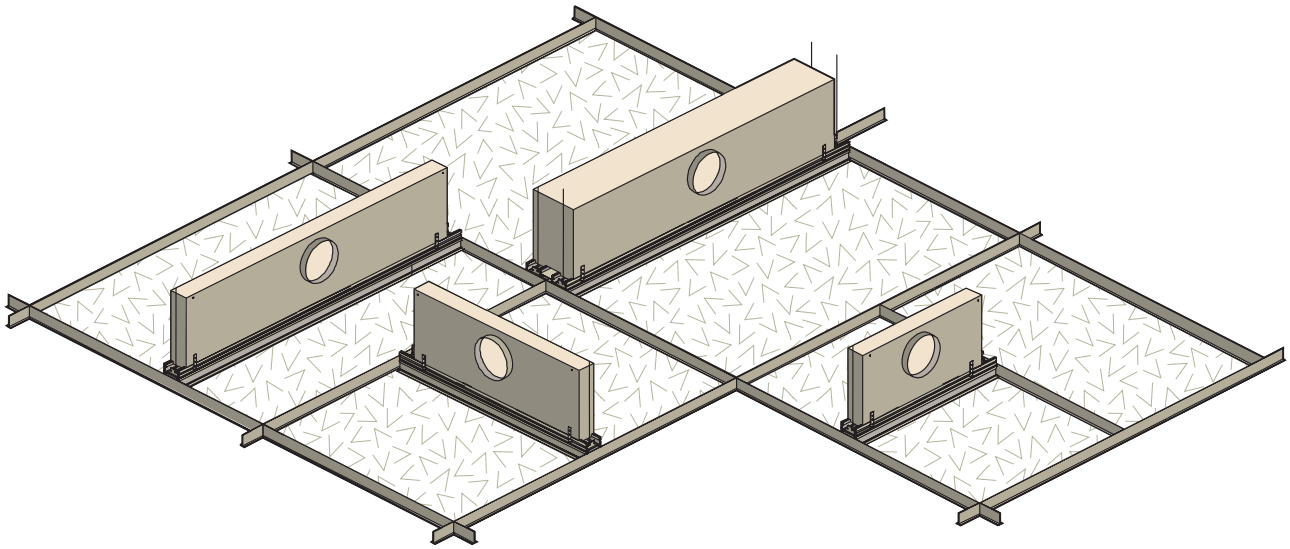
INTEGRA SUPPLY

OPTIONAL SUPPLY AIR PATTERNS



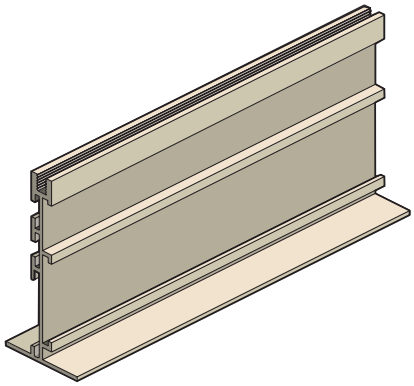
INTEGRA RETURN

The Formations Tee System is an incremental diffuser created from the Formations Linear diffuser. Available in 2', 4' or 5' lengths, with an integral plenum, the Formations Tee System ensures your diffuser fits tightly into your 15/16", 9/16" or Bolt-slot suspension system for a sleek, clean appearance. A perfect choice for installation in an acoustical ceiling, the Formations Tee System is easily repositioned, providing great flexibility. Manufactured in pre-engineered lengths, the Tee System is available in 1", 1.5" and 2" slot widths.



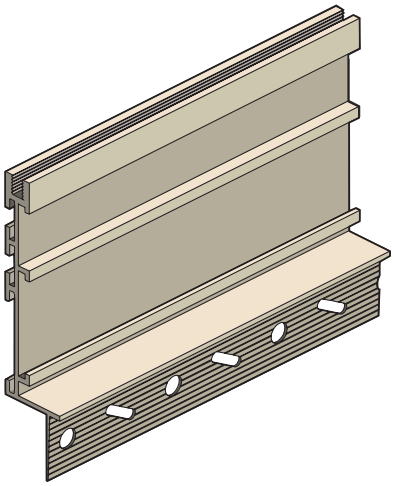
FORMATIONS TEE SYSTEM OPTIONS

BORDER A



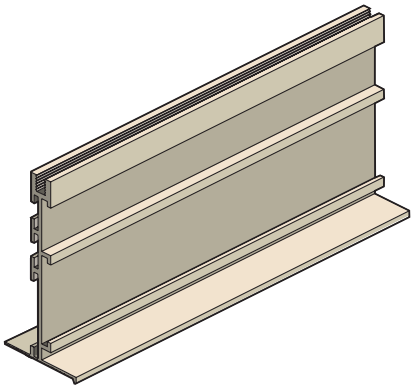
Our most versatile Formations border option, Border A is ideal for either hard or acoustical ceilings, as well as any sidewall application. Border A provides you with total freedom to incorporate bends and curves in any direction, which means you can select any air flow pattern for maximum comfort, and design without restrictions.

BORDER B



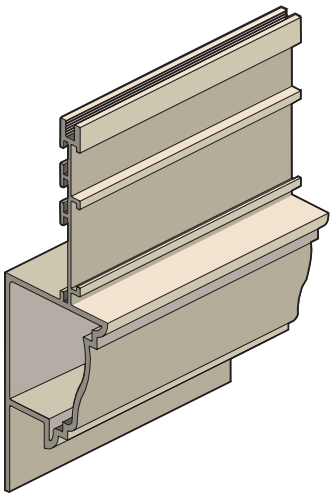
For beautifully smooth transitions, Border B lets you hide Formations where ceilings and walls intersect. Because a speedy installation saves everyone time and money, we've incorporated a specially designed leg, to ensure a quick, professional finish.

BORDER C

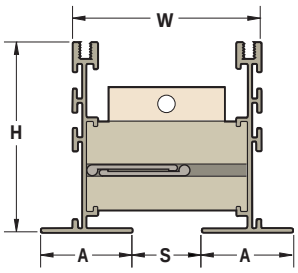


Invisible by design, Border C is a great option when you choose to completely hide your Formations diffuser. Cover the flange of Border C with drywall tape and spackle for a totally concealed installation. All that's visible is a very sleek, beautiful black line.

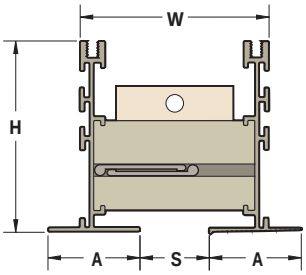
BORDER D



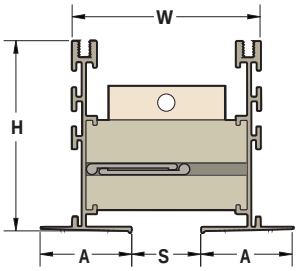
When you want to go beyond concealing to creating a touch of elegance, Border D (patented) provides a fluid integration with wall and ceiling transitions by uniquely disguising the diffuser as a design element. Crown molding, wood trim, marble finish or any of a variety of options... Border D provides a clean, elegant style you'll only find with Formations.



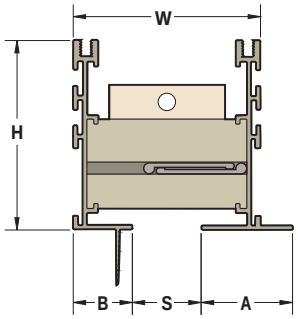
BORDER AA



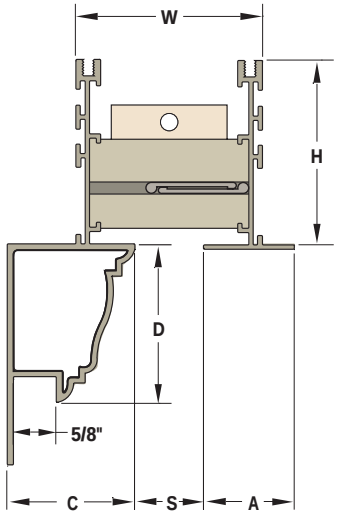
BORDER AC



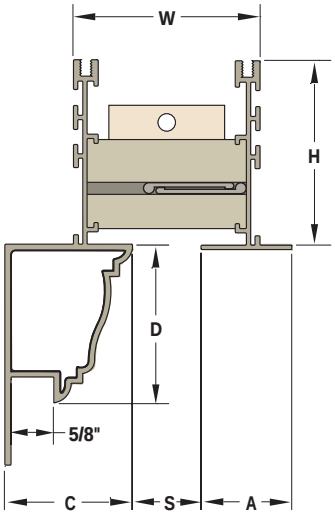
BORDER CC



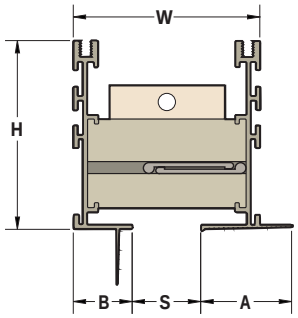
BORDER BA



BORDER DC



BORDER DA

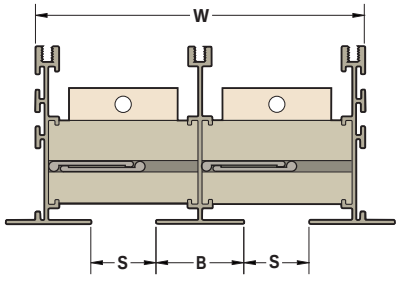


BORDER BC

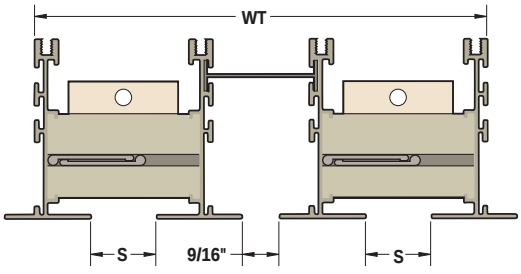
MODEL	S SLOT WIDTH	W WIDTH	A BORDER WIDTH	B BORDER WIDTH	H HEIGHT	C BORDER D WIDTH	D BORDER D HEIGHT
FAL-10	1	2 3/4	1 5/16	7/8	2 3/4	1 7/8	2 5/16
FAL-15	1 1/2	3 3/4	1 9/16	1 1/8	2 3/4	--------	--------
FAL-20	2	4 3/4	1 13/16	1 3/8	2 3/4	2 3/8	3 1/16
FAL-25	2 1/2	5 3/4	2 1/16	1 5/8	3 3/16	--------	--------
FAL-30	3	6 3/4	2 5/16	1 7/8	3 5/8	--------	--------

All dimensions in inches.

TWO SLOT



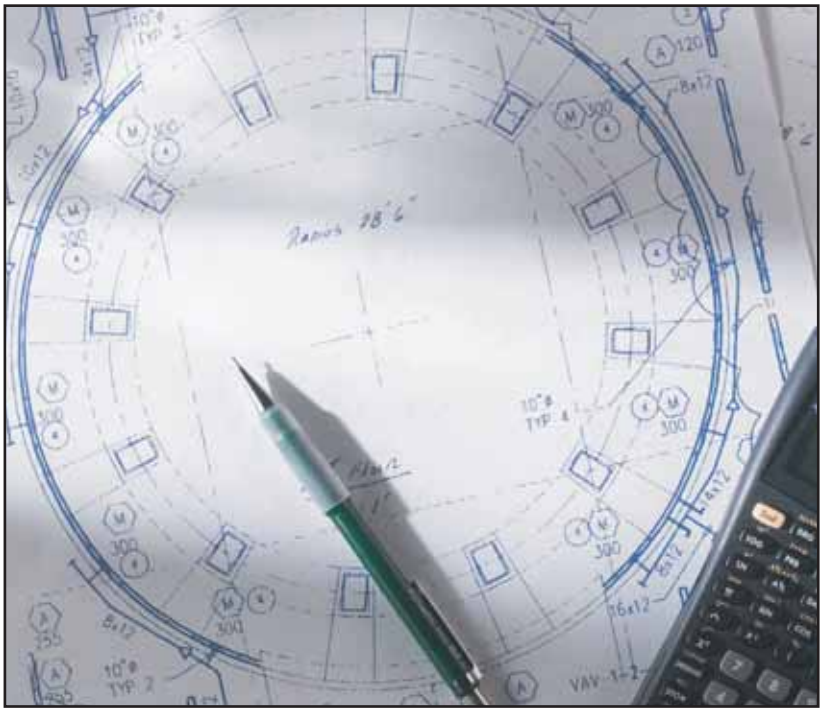
BORDER AA 2 SLOT



BORDER AA 2T SLOT

MODEL	S SLOT WIDTH	B BORDER WIDTH	W WIDTH	WT WIDTH
FAL-10	1	1 3/8	5 1/8	6 15/16
FAL-15	1 1/2	1 7/8	7 1/8	8 15/16
FAL-20	2	2 3/8	9 1/8	9 15/16
FAL-25	2 1/2	2 7/8	11 1/8	11 15/16
FAL-30	3	3 3/8	13 1/8	13 15/16

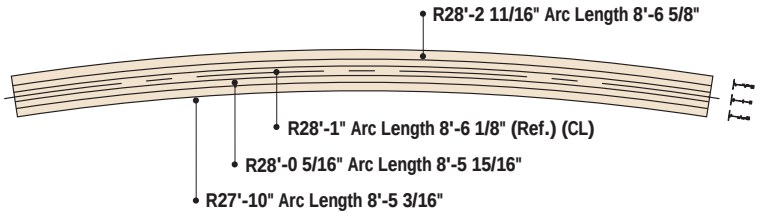
All dimensions in inches.

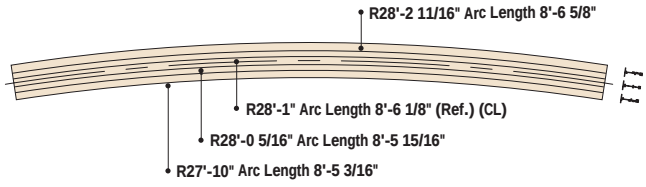


Design with Formations, not around it. The possibilities are endless. We can curve our Formations Linear Diffusers to accent ceilings and walls or complement your custom designs. Using a stretch form process, we individually curve each piece to match the required radius ensuring a uniform curve without ripples or curves on the face of the diffuser. With Formations, you can combine imaginative design with architectural solutions. The only limitation is your imagination.

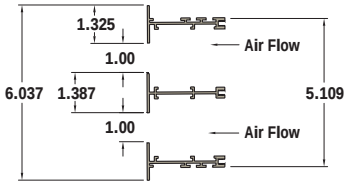
"YOU DREAM IT... METALAIRE WILL MAKE IT REALITY."

Show us an architectural drawing of your concept. We'll engineer it and show you how METALAIRE can fulfill your design dreams.





FACE VIEW

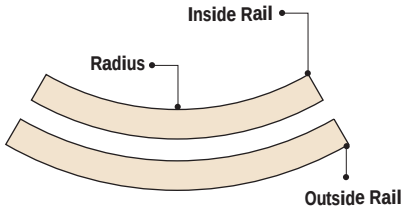


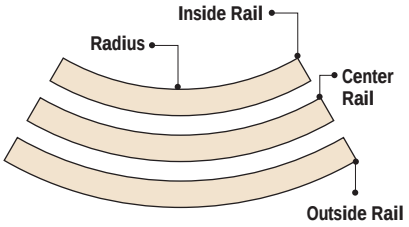
VIEW ENLARGED

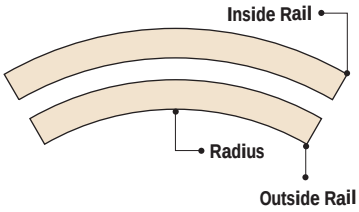
CEILING ORIENTATION

One slot ceiling orientations are available in slot widths of 1", 1 1/2", 2" and 2 1/2" (3" slot width is not available curved). Borders available are: AA, BA, BC, CC.

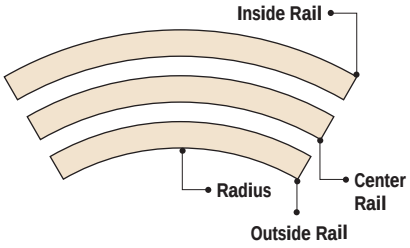
Two slot ceiling orientations are available in slot widths of 1", 1 1/2", 2" and 2 1/2" (3" slot width is not available curved). Border available is: AA.







ONE SLOT

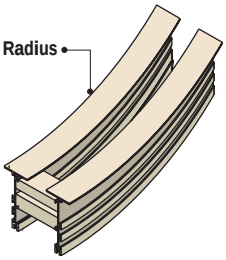


TWO SLOT

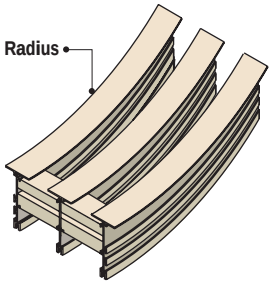
WALL ORIENTATION

One slot concave and convex wall orientations are available in slot widths of 1", 2" and 2 1/2" (3" slot width is not available curved). Borders available are: AA, BA, BC, CC.

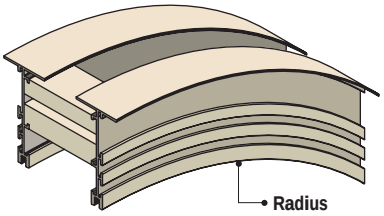
Two slot concave and convex wall orientations are available in slot widths of 1", 1 1/2", 2" and 2 1/2" (3" slot width is not available curved). Border available is: AA.



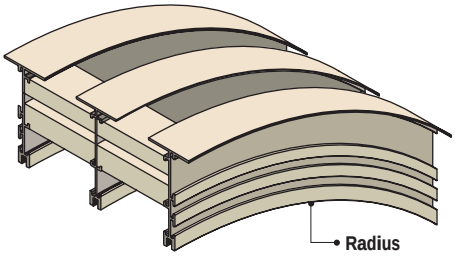
ONE SLOT CONVEX



TWO SLOT CONVEX

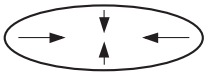


ONE SLOT CONCAVE

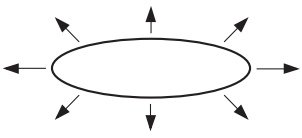


TWO SLOT CONCAVE

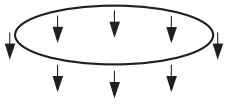
DIRECTION OF AIR FLOW



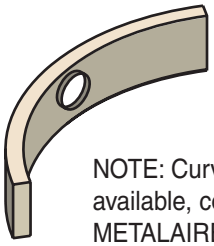
INSIDE



OUTSIDE



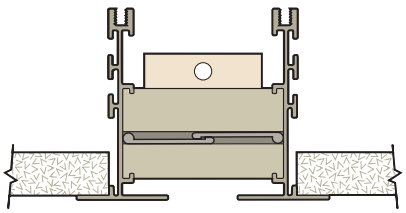
DOWN



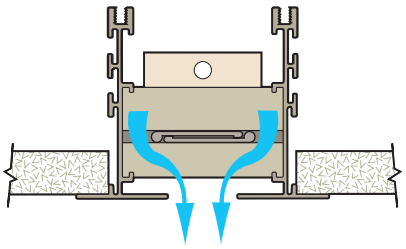
NOTE: Curved plenums are available, contact your METALAIRE representative.


formations™

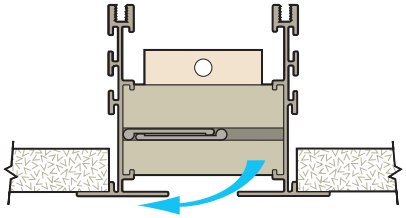
Our Standard Pattern Controller is extremely versatile and fully adjustable, and is available for all Formations diffusers. Providing maximum comfort for every room occupant, this controller is typically used to throw air along the ceiling, out of the occupied zone, providing excellent mixing with the room air, at low and high velocities. The Standard Pattern Controller can be adjusted to meet most applications and can direct supply air to the right, left or vertically in 2' increments. Appropriate to use when the diffuser is being used in a return, supply or exhaust mode, the Standard Pattern Controller can also act as a damper when fully closed.



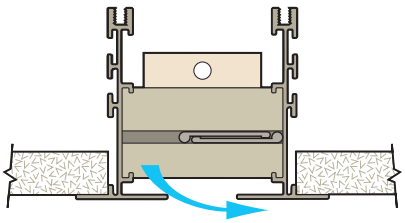
FULLY DAMPERED



VERTICAL

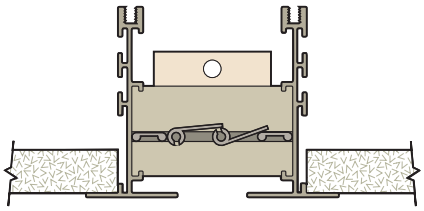


LEFT

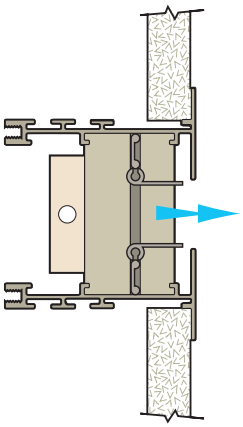


RIGHT

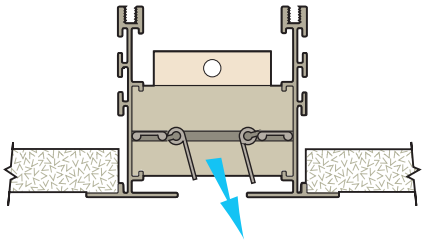
The Formations Combo Pattern Controller, Patent 6,386,970, is a unique state-of-the-art solution offering unequaled flexibility. The Combo Pattern Controller allows adjustment to the air stream in the field, for optimum performance and comfort. Superior performance is obtained both in sidewall and high-bay applications, as well as in any standard ceiling application. With Formations Combo Pattern Controller you always have flexibility to choose, on the job site, the most effective pattern controller adjustment. Combo Pattern Controller is available in straight sections only.



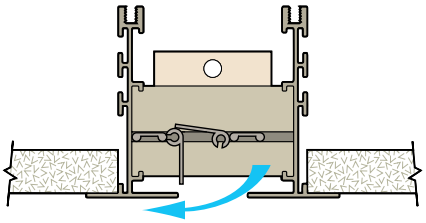
FULLY DAMPERED



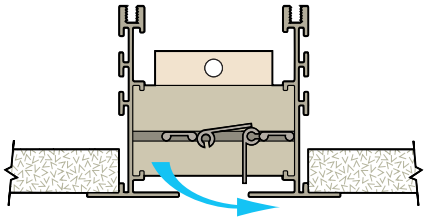
SIDEWALL



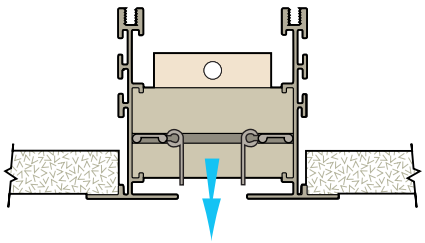
VERTICAL OFFSET



LEFT



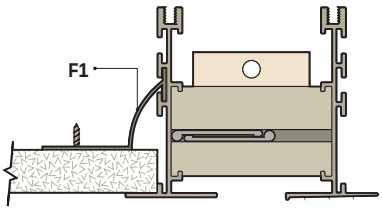
RIGHT

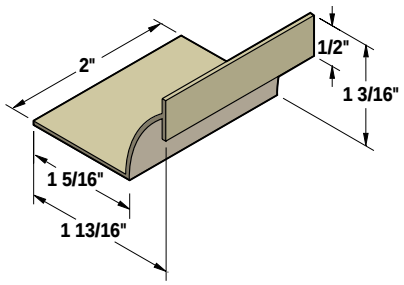


VERTICAL

F1 MOUNTING HARDWARE

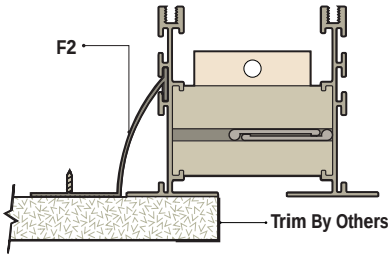
Mounting hardware F1 is typically used with Border A or Border C for hard ceiling installations, when mounting to a standard 5/8" gypsum board ceiling is required.

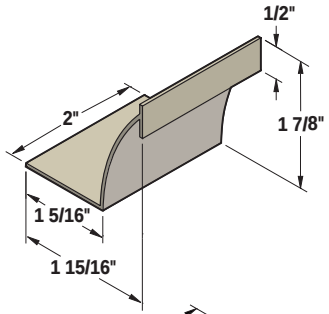




F2 MOUNTING HARDWARE

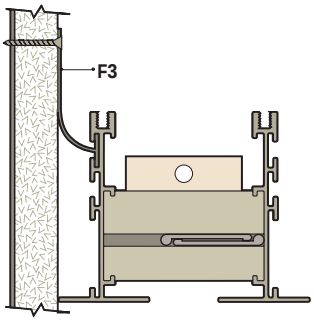
The F2 hardware is used to mount a hard ceiling over the face of Border A.

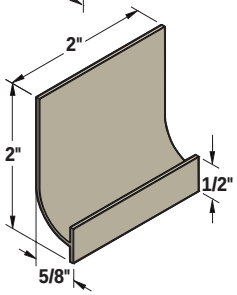




F3 MOUNTING HARDWARE

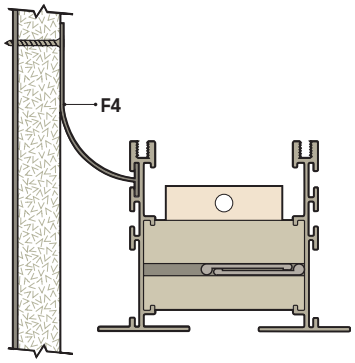
F3 mounting hardware is used to mount Border A for sidewall applications.

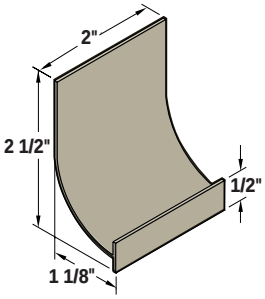




F4 MOUNTING HARDWARE

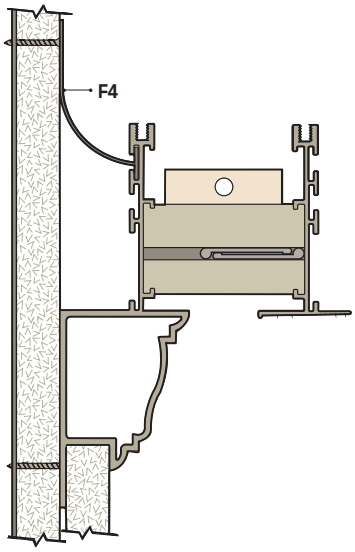
F4 mounting hardware is used to mount Border A along the perimeter of a ceiling with a return air slot.

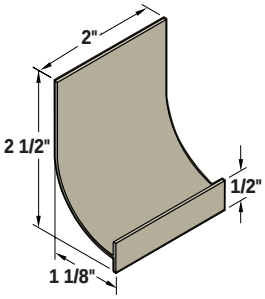


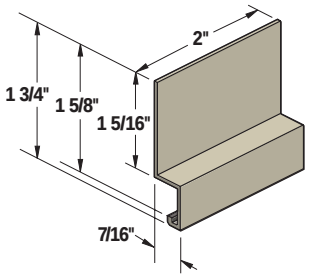


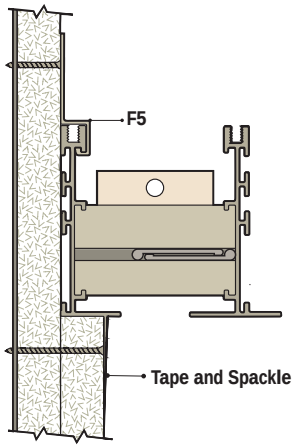
F4 MOUNTING HARDWARE

Mounting hardware F4 is used to flush mount Border D against a sidewall.



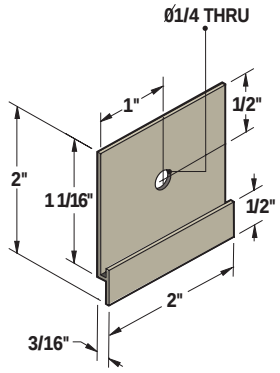


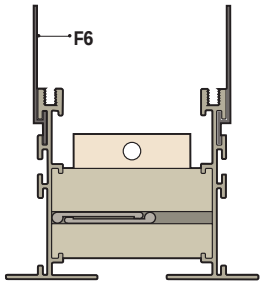




F5 MOUNTING HARDWARE

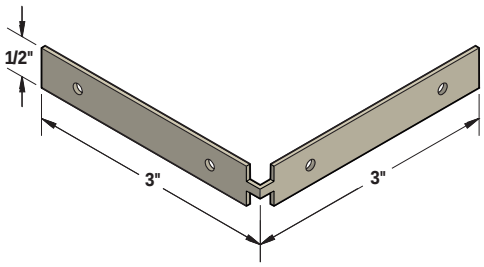
Mounting hardware F5 is used to flush mount Border B against a sidewall.

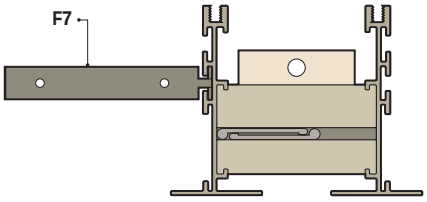




F6 MOUNTING HARDWARE

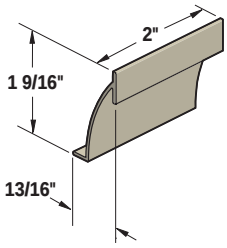
F6 mounting hardware is used for easy suspension of the Formations unit from the structure. The clip is designed to utilize standard hanger wire.

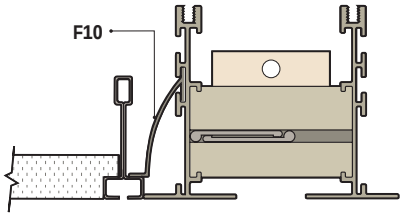




F7 MOUNTING HARDWARE

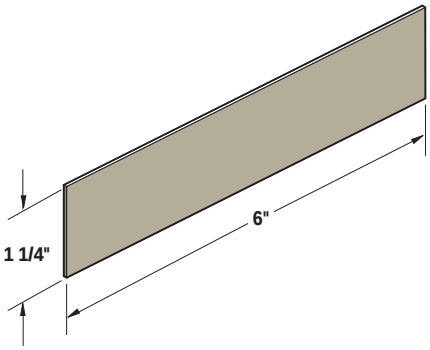
Mounting hardware F7 can be used to integrate the Formations assembly into an acoustical suspension system. The F7 clip is field formed and attached to the cross tees.

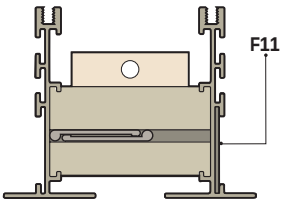




F10 MOUNTING HARDWARE

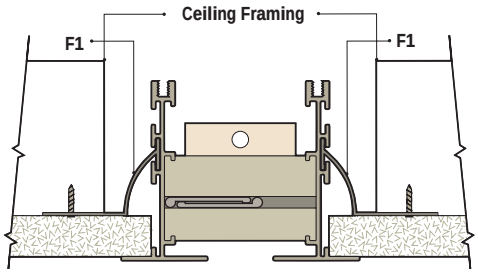
F10 mounting hardware is used to align the Formations diffuser surface in a Bolt-slot tee bar application.



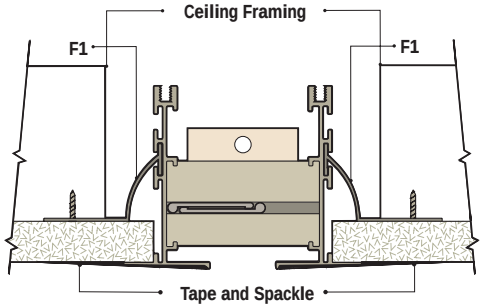


F11 SPLINE CLIP

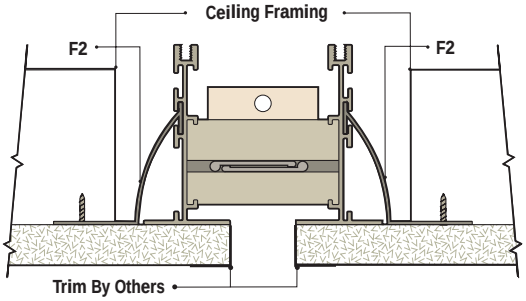
Spline Clips are used to align sections of the Formations diffuser, ensuring a straight and true installation.



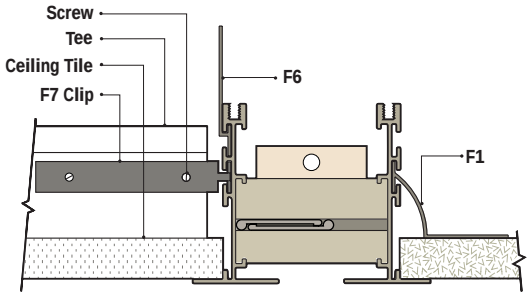
BORDER AA HARD CEILING



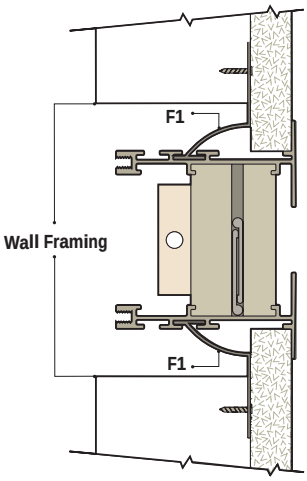
BORDER CC HARD CEILING



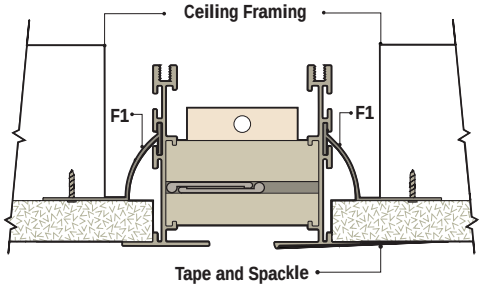
BORDER AA
HARD CEILING / COVERED FLANGE



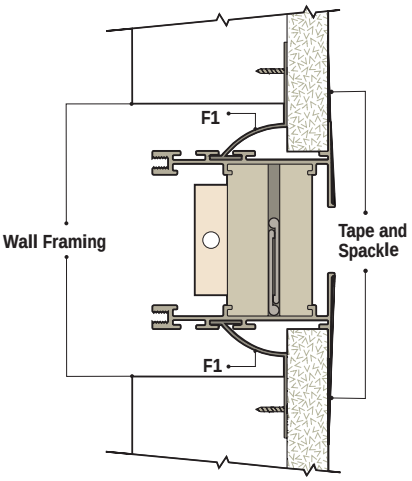
BORDER AA HARD CEILING



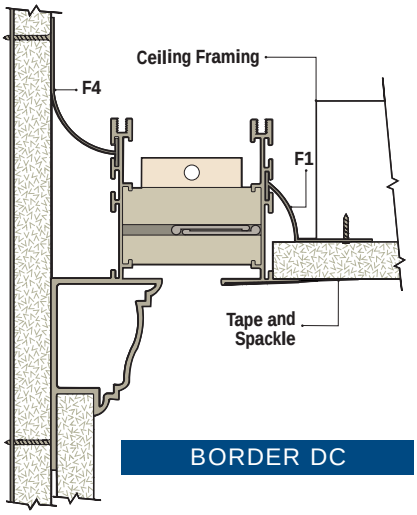
BORDER AA SIDE WALL



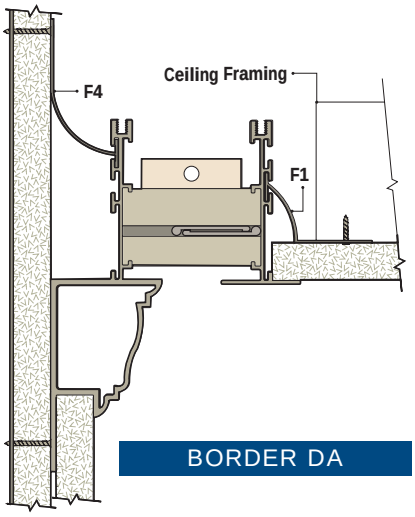
BORDER AC HARD CEILING



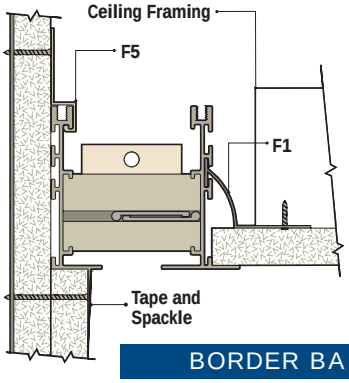
BORDER CC SIDE WALL



BORDER DC



BORDER DA



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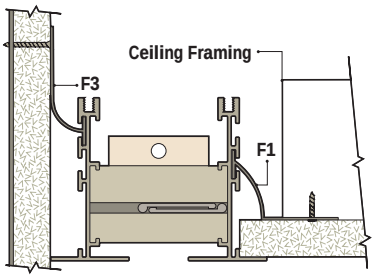

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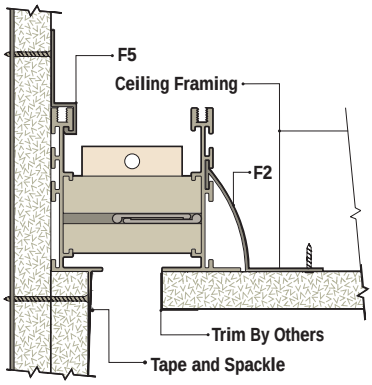
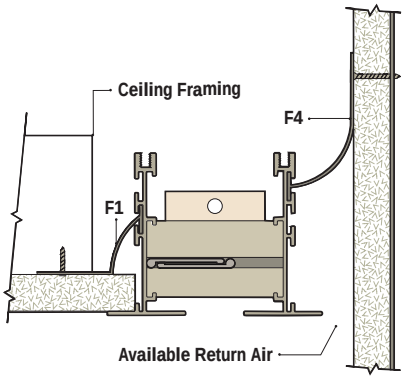
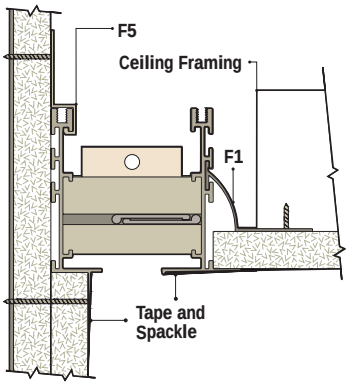


BORDER BA

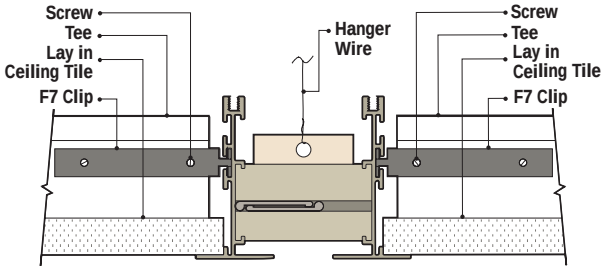


BORDER AA

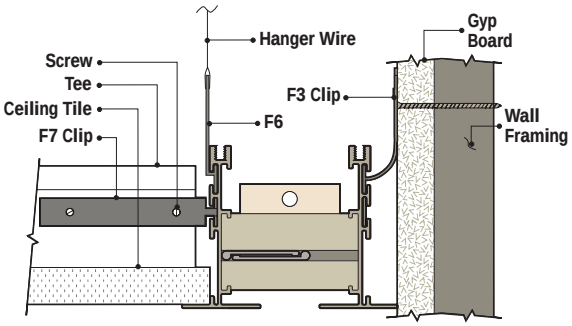


BORDER BC

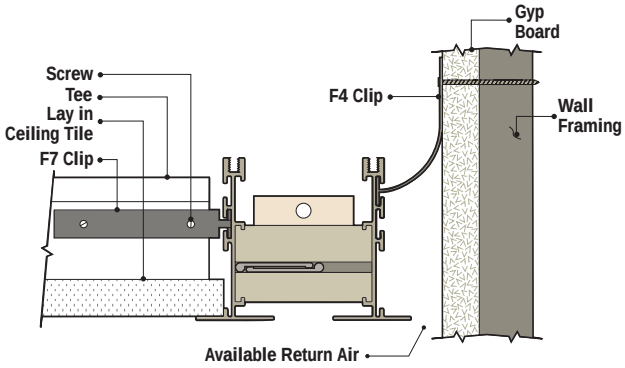
ACOUSTICAL CEILING APPLICATIONS



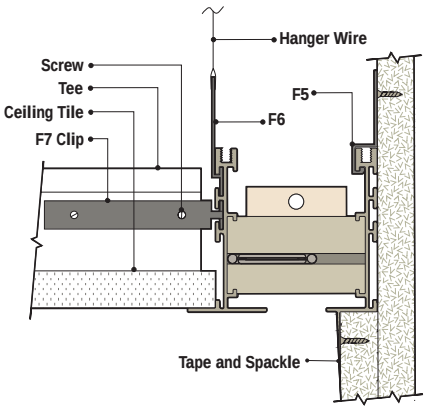
BORDER AA MAIN TEE



BORDER AA PERIMETER

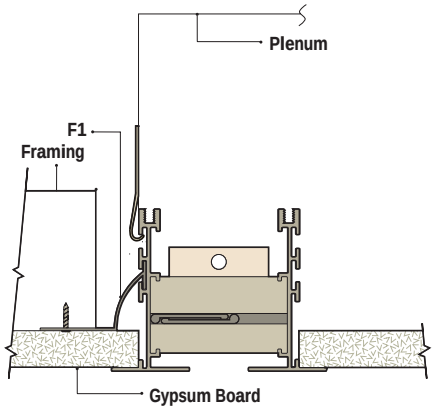


BORDER AA
PERIMETER REVEL

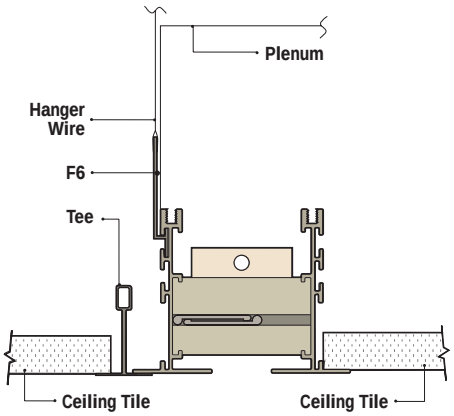


BORDER AB PERIMETER

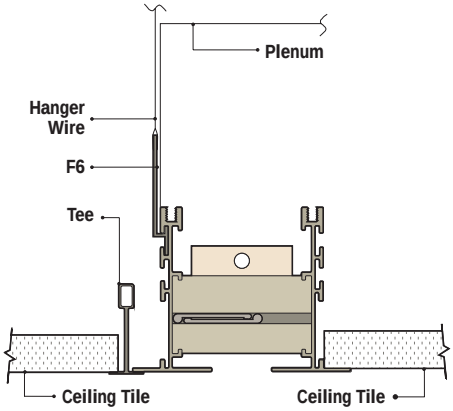
INTEGRA APPLICATIONS



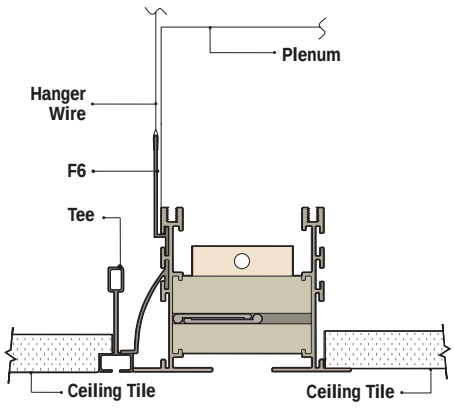
BORDER AA HARD CEILING



BORDER AA
ACOUSTICAL 15/16" TEE

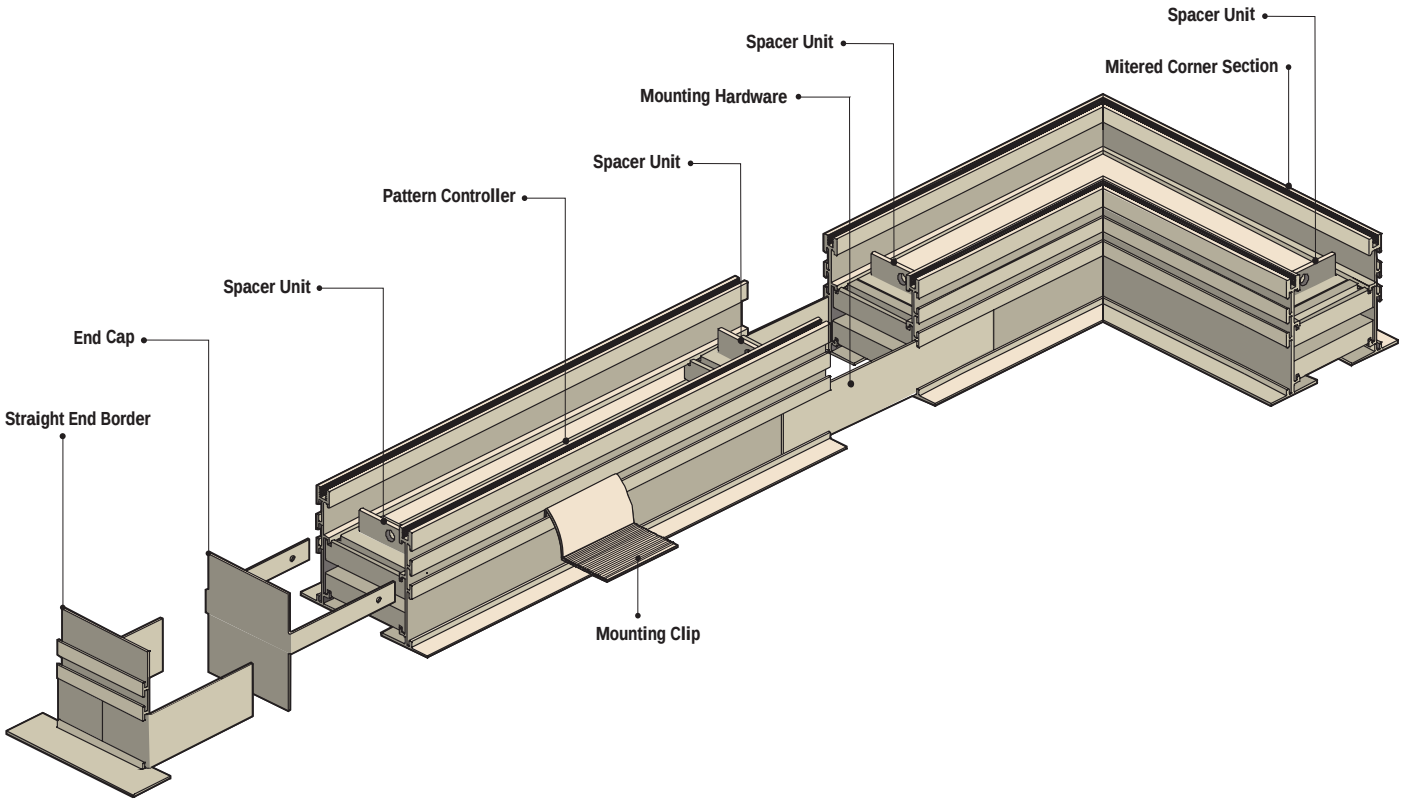


BORDER AA
ACOUSTICAL 9/16" TEE



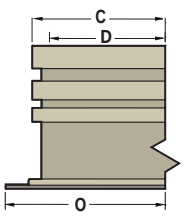
BORDER AA
ACOUSTICAL BOLT SLOT

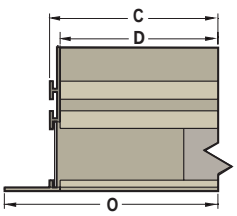
Formations Linear diffusers offer a large selection of features for a variety of applications to enhance your design while providing superior air flow patterns not available from traditional diffusers. Optional end details, including straight ends, mitered ends and end caps, allow for a total finished, customized appearance for your specific requirements. Mitered corners are available in 90° and 135° angles with a variety of custom options available. Unique pre-engineered mounting hardware helps reduce installation costs while ensuring the professional appearance of a straight, seamless installation. Straight lines, angles, simple or complex curves... You dream it and we'll make it fly.

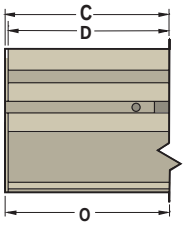


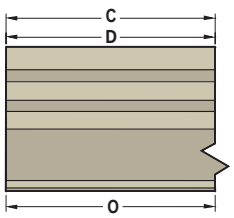
FORMATIONS DIFFUSER

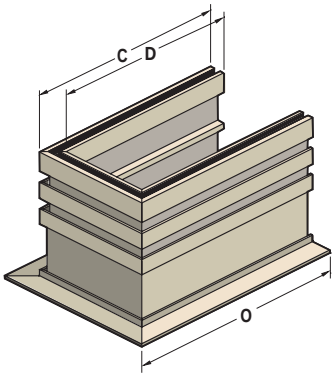
END FABRICATION DIMENSIONS



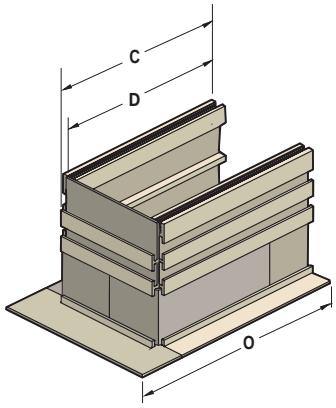




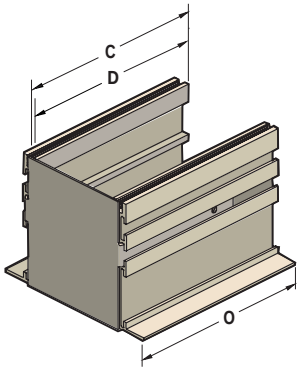




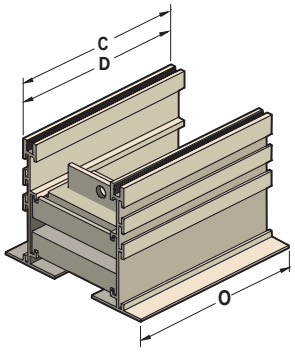
MITERED END



STRAIGHT END



END CAP



OPEN END

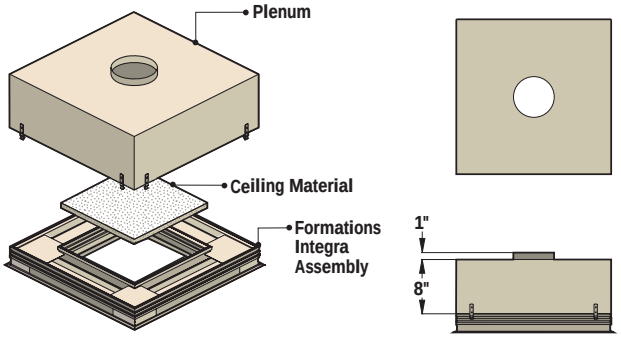
															
		STRAIGHT	STRAIGHT	STRAIGHT	OPEN	OPEN	OPEN	MITERED	MITERED	MITERED	OPEN	END CAP	END CAP	END CAP	OPEN
BORDER TYPE	SLOT WIDTH	C	O	C	O	C	O	C	O	C	O	C	O	C	O
AA	1	D+3/8	D+2 1/8	D+3/16	D+1 1/16	D	D	D+3/4	D+1 5/8	D+3/8	D+13/16	D+1/8	D+1/8	D+1/16	D+1/16
	1.5	D+3/8	D+2 1/8	D+3/16	D+1 1/16	D	D	D+3/4	D+1 5/8	D+3/8	D+13/16	D+1/8	D+1/8	D+1/16	D+1/16
	2	D+3/8	D+2 1/8	D+3/16	D+1 1/16	D	D	D+3/4	D+1 5/8	D+3/8	D+13/16	D+1/8	D+1/8	D+1/16	D+1/16
	2.5	D+3/8	D+2 1/8	D+3/16	D+1 1/16	D	D	D+3/4	D+1 5/8	D+3/8	D+13/16	D+1/8	D+1/8	D+1/16	D+1/16
	3	D+3/8	D+2 1/8	D+3/16	D+1 1/16	D	D	D+3/4	D+1 5/8	D+3/8	D+13/16	D+1/8	D+1/8	D+1/16	D+1/16
BA AC BC CC DA DC	1	N/A	N/A	N/A	N/A	D	D	N/A	N/A	N/A	N/A	D+1/8	D+1/8	D+1/16	D+1/16
	1.5	N/A	N/A	N/A	N/A	D	D	N/A	N/A	N/A	N/A	D+1/8	D+1/8	D+1/16	D+1/16
	2	N/A	N/A	N/A	N/A	D	D	N/A	N/A	N/A	N/A	D+1/8	D+1/8	D+1/16	D+1/16
	2.5	N/A	N/A	N/A	N/A	D	D	N/A	N/A	N/A	N/A	D+1/8	D+1/8	D+1/16	D+1/16
	3	N/A	N/A	N/A	N/A	D	D	N/A	N/A	N/A	N/A	D+1/8	D+1/8	D+1/16	D+1/16

All dimensions are in inches.
D - Order Specified Length

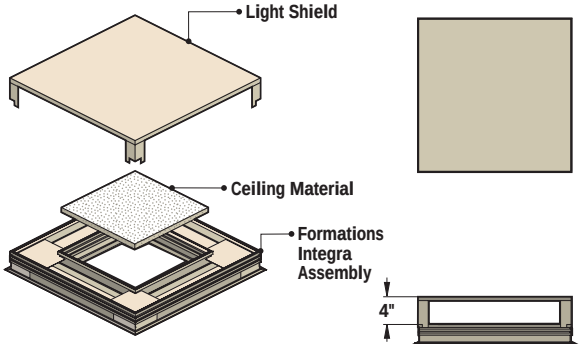
INTEGRA MODELS

FAI-10	• 1" SLOT			FAIB-10	• 1" SLOT	• BOLT SLOT	
FAI-15	• 1.5" SLOT			FAIB-15	• 1.5" SLOT	• BOLT SLOT	
FAI-20	• 2" SLOT			FAIB-20	• 2" SLOT	• BOLT SLOT	
FAII-10	• 1" SLOT	• INSULATED		FAIBI-10	• 1" SLOT	• BOLT SLOT	• INSULATED
FAII-15	• 1.5" SLOT	• INSULATED		FAIBI-15	• 1.5" SLOT	• BOLT SLOT	• INSULATED
FAII-20	• 2" SLOT	• INSULATED		FAIBI-20	• 2" SLOT	• BOLT SLOT	• INSULATED
FAIR-10	• 1" SLOT	• RETURN		FAIBR-10	• 1" SLOT	• BOLT SLOT	• RETURN
FAIR-15	• 1.5" SLOT	• RETURN		FAIBR-15	• 1.5" SLOT	• BOLT SLOT	• RETURN
FAIR-20	• 2" SLOT	• RETURN		FAIBR-20	• 2" SLOT	• BOLT SLOT	• RETURN

INTEGRA SUPPLY

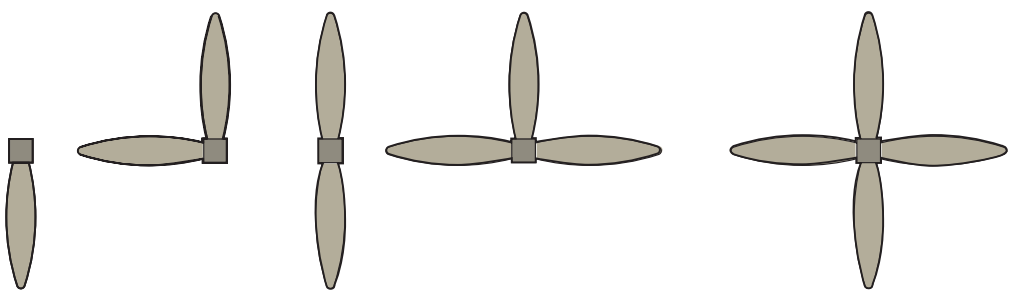


INTEGRA RETURN



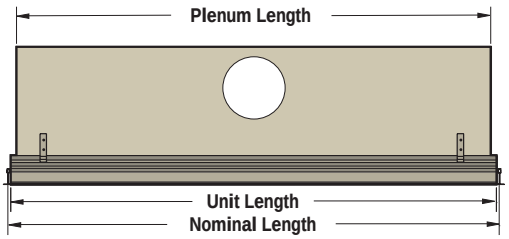
AVAILABLE SIZES	24 X 24 Nominal
INLET SIZES	6", 8", 10", 12"
FINISH	Face is White, Interior is Black
APPLICATIONS	$^{15}/_{16}$" Tee System, $^{9}/_{16}$" Tee System, $^{9}/_{16}$" Bolt Slot Tee System, Hard Ceiling

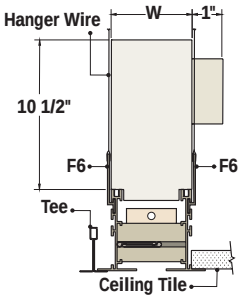
OPTIONAL SUPPLY AIR PATTERNS

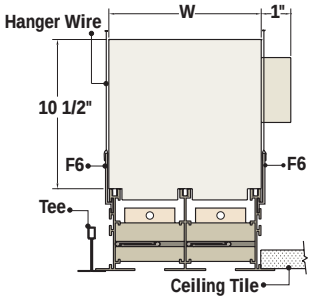


TEE SYSTEM MODELS

FTS-10	• 1" SLOT	
FTS-15	• 1.5" SLOT	
FTS-20	• 2" SLOT	
FTSI-10	• 1" SLOT	• INSULATED
FTSI-15	• 1.5" SLOT	• INSULATED
FTSI-20	• 2" SLOT	• INSULATED



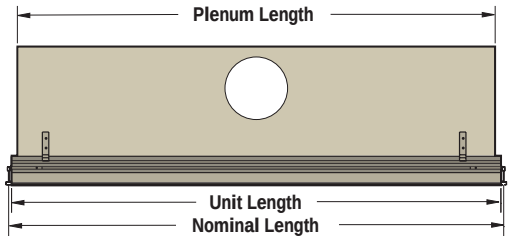


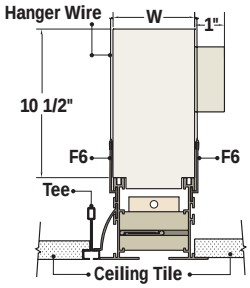


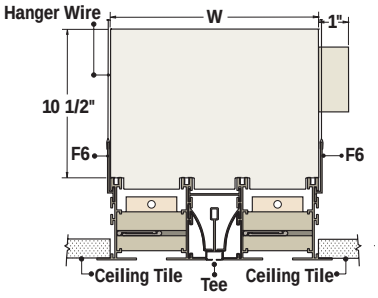
2 SLOT

TEE SYSTEM MODELS - BOLT SLOT

FTSB-10	• 1" SLOT	• BOLT SLOT	
FTSB-15	• 1.5" SLOT	• BOLT SLOT	
FTSB-20	• 2" SLOT	• BOLT SLOT	
FTSBI-10	• 1" SLOT	• BOLT SLOT	• INSULATED
FTSBI-15	• 1.5" SLOT	• BOLT SLOT	• INSULATED
FTSBI-20	• 2" SLOT	• BOLT SLOT	• INSULATED







2 TEE SLOT

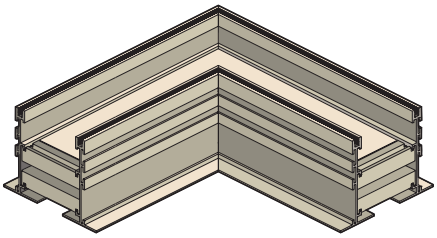
AVAILABLE LENGTHS	2', 4', 5' (FTS, FTSI Only)
INLET SIZES	6", 8", 10", 12"
FINISH	Face is White, Interior is Black
APPLICATIONS	$^{15}/_{16}$" Tee System, $^{9}/_{16}$" Tee System, $^{9}/_{16}$" Bolt Slot Tee System

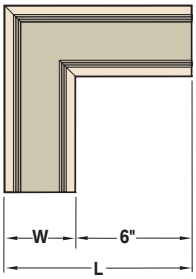
TEE SYSTEM DIMENSIONAL DATA

FORMATIONS TEE SYSTEM	W (WIDTH) SLOTS 1	2T	2	NOMINAL LENGTH	AVAILABLE INLETS (INCHES) RND	OVAL	PLENUM LENGTH (INCHES) STANDARD	BOLT SLOT	UNIT LENGTH (INCHES) STANDARD	BOLT SLOT
FTS, FTSB-10	2 3/4	6 15/16	5 1/8	24, 48, 60	6	8,10,12	21 3/4, 45 3/4, 57 3/4	21 3/8, 45 3/8, 57 3/8	23 21/32, 47 21/32, 59 21/32	23 11/32, 47 11/32, 59 11/32
FTS, FTSB-15	3 3/4	8 15/16	7 1/8	24, 48, 60	6	8,10,12	21 3/4, 45 3/4, 57 3/4	21 3/8, 45 3/8, 57 3/8	23 21/32, 47 21/32, 59 21/32	23 11/32, 47 11/32, 59 11/32
FTS, FTSB-20	4 3/4	10 15/16	9 1/8	24, 48, 60	6	8,10,12	21 3/4, 45 3/4, 57 3/4	21 3/8, 45 3/8, 57 3/8	23 21/32, 47 21/32, 59 21/32	23 11/32, 47 11/32, 59 11/32
FTSI, FTSBI-10	2 3/4	6 15/16	5 1/8	24, 48, 60	6	8,10,12	21 3/4, 45 3/4, 57 3/4	21 3/8, 45 3/8, 57 3/8	23 21/32, 47 21/32, 59 21/32	23 11/32, 47 11/32, 59 11/32
FTSI, FTSBI-15	3 3/4	8 15/16	7 1/8	24, 48, 60	6	8,10,12	21 3/4, 45 3/4, 57 3/4	21 3/8, 45 3/8, 57 3/8	23 21/32, 47 21/32, 59 21/32	23 11/32, 47 11/32, 59 11/32
FTSI, FTSBI-20	4 3/4	10 15/16	9 1/8	24, 48, 60	6	8,10,12	21 3/4, 45 3/4, 57 3/4	21 3/8, 45 3/8, 57 3/8	23 21/32, 47 21/32, 59 21/32	23 11/32, 47 11/32, 59 11/32

All dimensions are in inches.

MITERED CORNER 90°

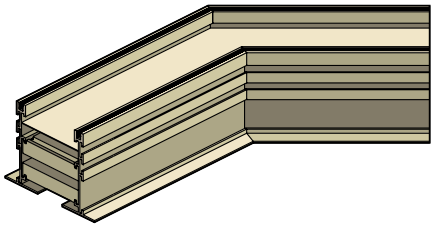


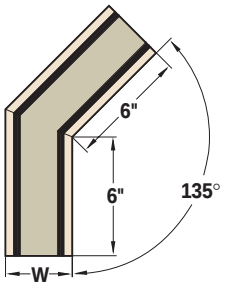


- FAM90-10 • 1" SLOT
- FAM90-15 • 1.5" SLOT
- FAM90-20 • 2" SLOT
- FAM90-25 • 2.5" SLOT
- FAM90-30 • 3" SLOT

NUMBER OF SLOTS	SLOT WIDTH	DIM L	DIM W
1	1	9 11/16	3 11/16
	1 1/2	10 11/16	4 11/16
	2	11 11/16	5 11/16
	2 1/2	12 11/16	6 11/16
	3	13 11/16	7 11/16

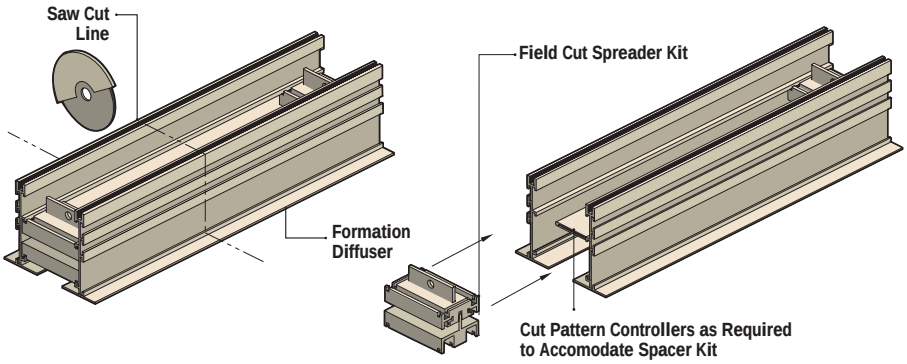
MITERED CORNER 135°





- FAM135-10 • 1" SLOT
- FAM135-15 • 1.5" SLOT
- FAM135-20 • 2" SLOT
- FAM135-25 • 2.5" SLOT
- FAM135-30 • 3" SLOT

NUMBER OF SLOTS	SLOT WIDTH	DIM W
1	1	3 11/16
	1 1/2	4 11/16
	2	5 11/16
	2 1/2	6 11/16
	3	7 11/16

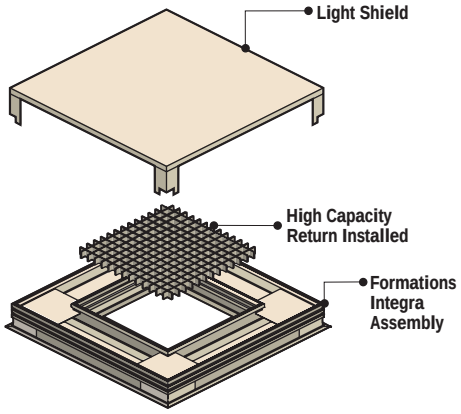


FIELD CUT SPACER KIT

- FAFC-10 • 1" SLOT
- FAFC-15 • 1.5" SLOT
- FAFC-20 • 2" SLOT
- FAFC-25 • 2.5" SLOT
- FAFC-30 • 3" SLOT

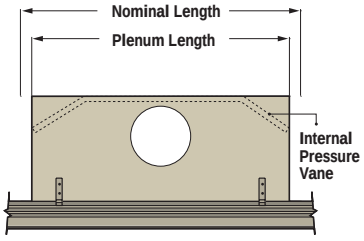
HIGH CAPACITY RETURN

FAIH-10 • 1" SLOT
FAIH-15 • 1.5" SLOT
FAIH-20 • 2" SLOT

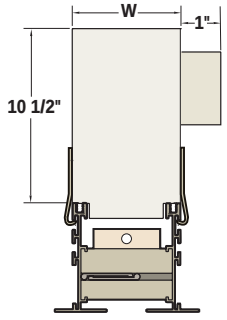


FORMATIONS PLENUMS - STRAIGHT SIDE

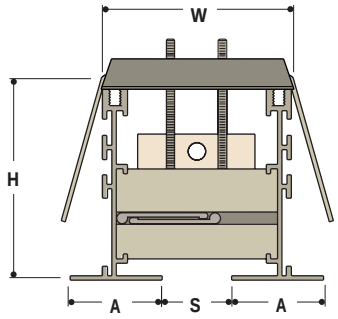
FAP-10	•	1" SLOT		FAPI-10	•	1" SLOT	•	INSULATED
FAP-15	•	1.5" SLOT		FAPI-15	•	1.5" SLOT	•	INSULATED
FAP-20	•	2" SLOT		FAPI-20	•	2" SLOT	•	INSULATED
FAP-25	•	2.5" SLOT		FAPI-25	•	2.5" SLOT	•	INSULATED
FAP-30	•	3" SLOT		FAPI-30	•	3" SLOT	•	INSULATED



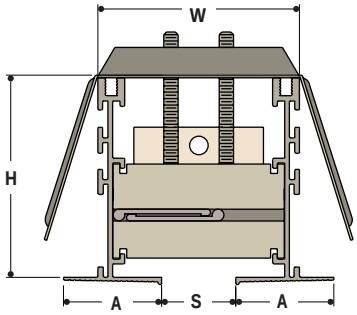
FORMATIONS UNIT SLOT WIDTH	NUMBER OF SLOTS	DIM W (WIDTH)	NOMINAL LENGTH	PLENUM LENGTH	STANDARD AVAILABLE INLETS	
					Round	Oval
1	1	2 3/4	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
1 1/2	1	3 3/4	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
2	1	4 3/4	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
2 1/2	1	5 3/4	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
3	1	6 3/4	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
1	2	5 1/8	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
1 1/2	2	7 1/8	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
2	2	9 1/8	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
2 1/2	2	11 1/8	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12
3	2	13 1/8	24, 36, 48, 60	21 3/4, 33 3/4, 45 3/4, 57 3/4	6	8, 10, 12



All dimensions are in inches.



BORDER AA



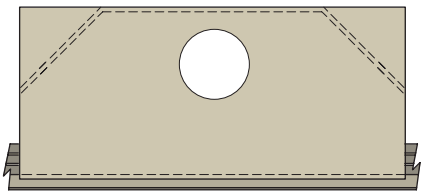
BORDER CC

CONCEALED MOUNTING MODELS

FALC-10 • 1" SLOT
FALC-15 • 1.5" SLOT
FALC-20 • 2" SLOT
FALC-25 • 2.5" SLOT
FALC-30 • 3" SLOT

FORMATIONS UNIT SLOT WIDTH	NUMBER OF SLOTS	DIM W (WIDTH)	DIM H (HEIGHT)	DIM A (BORDER WIDTH)
1	1	2 3/4	2 3/4	1 5/16
1 1/2	1	3 3/4	2 3/4	1 9/16
2	1	4 3/4	2 3/4	1 13/16
2 1/2	1	5 3/4	3 3/16	2 1/16
3	1	6 3/4	3 5/8	2 5/16

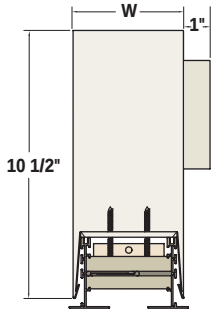
All dimensions are in inches.



FORMATIONS PLENUMS - HEMMED

FAPH-10	•	1" SLOT	FAPHI-10	•	1" SLOT	•INSULATED
FAPH-15	•	1.5" SLOT	FAPHI-15	•	1.5" SLOT	•INSULATED
FAPH-20	•	2" SLOT	FAPHI-20	•	2" SLOT	•INSULATED
FAPH-25	•	2.5" SLOT	FAPHI-25	•	2.5" SLOT	•INSULATED
FAPH-30	•	3" SLOT	FAPHI-30	•	3" SLOT	•INSULATED

For models FALC with concealed mounting



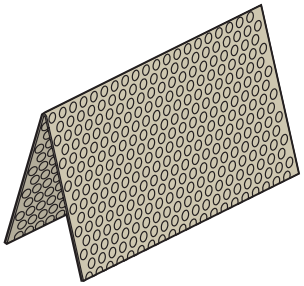
FORMATIONS UNIT SLOT WIDTH	NUMBER OF SLOTS	DIM W (WIDTH)	NOMINAL LENGTH	PLENUM LENGTH	STANDARD AVAILABLE INLETS	
					Round	Oval
1	1	3 1/8	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
1 1/2	1	4 1/8	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
2	1	5 1/8	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
2 1/2	1	6 1/8	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
3	1	7 1/8	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
1	2	6 1/4	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
1 1/2	2	8 1/4	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
2	2	10 1/4	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
2 1/2	2	12 1/4	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12
3	2	14 1/4	24, 36, 48, 60	23 3/4, 35 3/4, 47 3/4, 59 3/4	6	8, 10, 12

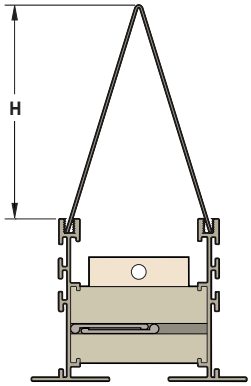
All dimensions are in inches.

HOODS

FAR-10 • 1" SLOT
FAR-15 • 1.5" SLOT
FAR-20 • 2" SLOT
FAR-25 • 2.5" SLOT
FAR-30 • 3" SLOT

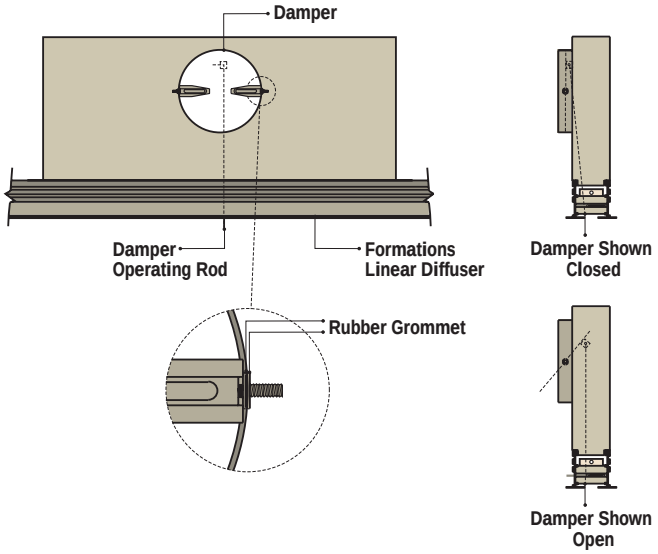
SLOT NUMBER	SLOT WIDTH	DIM H
1	1	3 1/8
	1 1/2	3 1/8
	2	3 1/8
	2 1/2	3 1/8
	3	3 1/8
SLOT NUMBER	**SLOT WIDTH**	**DIM H**
2	1	2 3/4
	1 1/2	3
	2	3 3/4
	2 1/2	5
	3	5 3/4





FACE OPERATED DAMPER

FODR • FACE OPERATED DAMPER



PERFORMANCE DATA

formationS™

1 SLOT STANDARD BLADE HORIZONTAL THROW WITH METALAIRE PLENUM

One Slot - 1.0" Slot Width Horizontal Throw 6" Oval Inlet

2 ft.	**Airflow, cfm**	**55**	**65**	**80**	**95**	**105**	**120**	**130**	**145**
	Static Pressure	0.044	0.067	0.096	0.129	0.168	0.212	0.261	0.315
	Total Pressure	0.049	0.074	0.106	0.144	0.186	0.235	0.288	0.349
	NC (Noise Criteria)	<15	19	24	27	30	33	35	37
	Throw	5 7 11	6 9 12	7 9 13	8 10 14	9 11 15	9 11 16	10 12 17	10 13 18
4 ft.	**Airflow, cfm**	**110**	**135**	**160**	**185**	**210**	**240**	**265**	**290**
	Static Pressure	0.048	0.075	0.106	0.144	0.187	0.235	0.290	0.350
	Total Pressure	0.068	0.104	0.148	0.199	0.258	0.329	0.403	0.486
	NC (Noise Criteria)	17	21	26	29	32	35	37	39
	Throw	6 10 15	8 12 17	10 13 19	11 14 20	12 15 21	13 16 23	14 17 24	14 18 25
5 ft.	**Airflow, cfm**	**135**	**170**	**200**	**235**	**265**	**300**	**330**	**365**
	Static Pressure	0.053	0.082	0.117	0.158	0.205	0.259	0.319	0.384
	Total Pressure	0.083	0.129	0.182	0.247	0.319	0.405	0.495	0.600
	NC (Noise Criteria)	18	23	27	31	34	36	39	41
	Throw	9 13 17	11 16 19	13 18 21	15 19 22	17 20 24	18 22 25	19 23 27	19 24 28

One Slot - 1.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**55**	**65**	**80**	**95**	**105**	**120**	**130**	**145**
	Static Pressure	0.043	0.066	0.094	0.126	0.164	0.207	0.255	0.307
	Total Pressure	0.044	0.068	0.097	0.132	0.171	0.215	0.265	0.320
	NC (Noise Criteria)	<15	17	22	26	30	33	36	39
	Throw	5 7 11	6 9 12	7 9 13	8 10 14	9 11 15	9 11 16	10 12 17	10 13 18
4 ft.	**Airflow, cfm**	**110**	**135**	**160**	**185**	**210**	**240**	**265**	**290**
	Static Pressure	0.047	0.073	0.104	0.141	0.183	0.230	0.283	0.342
	Total Pressure	0.054	0.084	0.119	0.160	0.208	0.264	0.324	0.391
	NC (Noise Criteria)	<15	19	24	28	32	35	38	41
	Throw	6 10 15	8 12 17	10 13 19	11 14 20	12 15 21	13 16 23	14 17 24	14 18 25
5 ft.	**Airflow, cfm**	**135**	**170**	**200**	**235**	**265**	**300**	**330**	**365**
	Static Pressure	0.052	0.080	0.114	0.155	0.201	0.253	0.311	0.376
	Total Pressure	0.063	0.097	0.138	0.187	0.242	0.306	0.375	0.453
	NC (Noise Criteria)	<15	20	25	30	34	37	40	42
	Throw	9 13 17	11 16 19	13 18 21	15 19 22	17 20 24	18 22 25	19 23 27	19 24 28

One Slot - 1.5" Slot Width Horizontal Throw 6" Oval Inlet

2 ft.	**Airflow, cfm**	**55**	**70**	**90**	**110**	**125**	**145**	**160**	**180**
	Static Pressure	0.026	0.047	0.073	0.105	0.143	0.187	0.236	0.292
	Total Pressure	0.031	0.055	0.086	0.125	0.168	0.221	0.278	0.344
	NC (Noise Criteria)	<15	18	23	27	31	34	37	39
	Throw	3 6 11	5 8 12	6 9 14	8 11 15	9 12 17	10 12 18	11 13 19	11 14 20
4 ft.	**Airflow, cfm**	**110**	**145**	**180**	**215**	**250**	**290**	**325**	**360**
	Static Pressure	0.029	0.052	0.081	0.117	0.159	0.207	0.262	0.324
	Total Pressure	0.049	0.086	0.133	0.191	0.260	0.343	0.433	0.534
	NC (Noise Criteria)	<15	20	25	29	33	36	39	41
	Throw	5 8 15	7 11 18	9 13 20	11 15 22	12 17 23	14 18 25	15 19 26	16 20 28
5 ft.	**Airflow, cfm**	**135**	**180**	**225**	**270**	**315**	**360**	**405**	**450**
	Static Pressure	0.032	0.057	0.089	0.128	0.175	0.228	0.289	0.356
	Total Pressure	0.062	0.109	0.171	0.246	0.335	0.438	0.554	0.684
	NC (Noise Criteria)	15	21	27	31	34	37	40	43
	Throw	6 11 17	9 14 20	12 18 22	14 21 24	17 22 26	19 24 28	21 25 30	22 26 31

One Slot - 1.5" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**55**	**70**	**90**	**110**	**125**	**145**	**160**	**180**
	Static Pressure	0.024	0.042	0.066	0.094	0.129	0.168	0.213	0.262
	Total Pressure	0.025	0.045	0.070	0.102	0.138	0.180	0.227	0.281
	NC (Noise Criteria)	-	<15	19	24	29	33	36	39
	Throw	3 6 11	5 8 12	6 9 14	8 11 15	9 12 17	10 12 18	11 13 19	11 14 20
4 ft.	**Airflow, cfm**	**110**	**145**	**180**	**215**	**250**	**290**	**325**	**360**
	Static Pressure	0.026	0.047	0.073	0.105	0.143	0.187	0.236	0.292
	Total Pressure	0.033	0.059	0.092	0.132	0.179	0.236	0.298	0.367
	NC (Noise Criteria)	-	<15	21	26	31	35	38	41
	Throw	5 8 15	7 11 18	9 13 20	11 15 22	12 17 23	14 18 25	15 19 26	16 20 28
5 ft.	**Airflow, cfm**	**135**	**180**	**225**	**270**	**315**	**360**	**405**	**450**
	Static Pressure	0.029	0.051	0.080	0.115	0.157	0.205	0.260	0.321
	Total Pressure	0.039	0.070	0.110	0.158	0.215	0.281	0.355	0.439
	NC (Noise Criteria)	<15	16	22	28	32	36	39	42
	Throw	6 11 17	9 14 20	12 18 22	14 21 24	17 22 26	19 24 28	21 25 30	22 26 31

One Slot - 2.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**
	Static Pressure	0.044	0.063	0.086	0.112	0.142	0.176	0.212	0.253
	Total Pressure	0.050	0.072	0.097	0.127	0.161	0.199	0.241	0.286
	NC (Noise Criteria)	<15	18	23	27	30	33	36	38
	Throw	6 9 15	7 11 16	8 12 17	10 13 19	11 14 20	12 15 21	13 15 22	13 16 23
4 ft.	**Airflow, cfm**	**200**	**240**	**280**	**320**	**360**	**400**	**440**	**480**
	Static Pressure	0.049	0.070	0.096	0.125	0.158	0.195	0.236	0.281
	Total Pressure	0.072	0.104	0.141	0.184	0.233	0.288	0.349	0.415
	NC (Noise Criteria)	15	20	25	29	32	35	38	40
	Throw	9 13 21	10 15 23	12 17 25	14 19 26	15 20 28	17 21 29	18 22 31	19 23 32
5 ft.	**Airflow, cfm**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**
	Static Pressure	0.054	0.077	0.105	0.137	0.174	0.215	0.260	0.309
	Total Pressure	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518
	NC (Noise Criteria)	17	22	26	30	34	37	39	42
	Throw	11 17 23	14 21 25	16 23 28	18 25 29	21 26 31	23 28 33	24 29 34	25 31 36

One Slot - 2.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**
	Static Pressure	0.043	0.062	0.085	0.111	0.140	0.173	0.209	0.249
	Total Pressure	0.045	0.065	0.088	0.115	0.146	0.180	0.218	0.259
	NC (Noise Criteria)	<15	17	22	26	30	33	36	38
	Throw	6 9 15	7 11 16	8 12 17	10 13 19	11 14 20	12 15 21	13 15 22	13 16 23
4 ft.	**Airflow, cfm**	**200**	**240**	**280**	**320**	**360**	**400**	**440**	**480**
	Static Pressure	0.048	0.069	0.094	0.123	0.156	0.192	0.232	0.276
	Total Pressure	0.055	0.079	0.108	0.141	0.179	0.221	0.267	0.318
	NC (Noise Criteria)	<15	19	24	28	32	35	38	40
	Throw	9 13 21	10 15 23	12 17 25	14 19 26	15 20 28	17 21 29	18 22 31	19 23 32
5 ft.	**Airflow, cfm**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**
	Static Pressure	0.053	0.076	0.103	0.135	0.171	0.211	0.256	0.304
	Total Pressure	0.064	0.092	0.125	0.164	0.207	0.256	0.310	0.369
	NC (Noise Criteria)	<15	20	25	29	33	36	39	42
	Throw	11 17 23	14 21 25	16 23 28	18 25 29	21 26 31	23 28 33	24 29 34	25 31 36

1 SLOT STANDARD BLADE HORIZONTAL THROW WITH METALAIRE PLENUM

One Slot - 2.5" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**130**	**160**	**190**	**220**	**250**	**280**	**310**	**340**
	Static Pressure	0.049	0.075	0.106	0.142	0.183	0.229	0.281	0.338
	Total Pressure	0.054	0.082	0.116	0.156	0.201	0.253	0.310	0.372
	NC (Noise Criteria)	<15	16	22	27	31	34	37	39
	Throw	7 10 17	9 13 19	10 14 20	12 15 22	13 16 23	14 17 25	15 18 26	16 19 27
4 ft.	**Airflow, cfm**	**260**	**320**	**380**	**440**	**500**	**560**	**620**	**680**
	Static Pressure	0.055	0.083	0.117	0.157	0.203	0.255	0.312	0.376
	Total Pressure	0.075	0.114	0.160	0.215	0.277	0.348	0.427	0.513
	NC (Noise Criteria)	<15	18	24	29	33	36	39	41
	Throw	10 15 24	12 18 26	14 20 29	17 22 31	19 23 33	20 25 35	21 26 37	22 27 38
5 ft.	**Airflow, cfm**	**325**	**400**	**475**	**550**	**625**	**700**	**775**	**850**
	Static Pressure	0.060	0.092	0.129	0.173	0.223	0.280	0.344	0.413
	Total Pressure	0.092	0.139	0.196	0.263	0.339	0.426	0.522	0.628
	NC (Noise Criteria)	<15	20	25	30	34	37	40	43
	Throw	13 20 27	16 25 29	19 27 32	22 29 34	25 31 37	27 33 39	28 35 41	30 36 43

One Slot - 2.5" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**130**	**160**	**190**	**220**	**250**	**280**	**310**	**340**
	Static Pressure	0.044	0.066	0.093	0.125	0.162	0.203	0.249	0.299
	Total Pressure	0.047	0.071	0.100	0.134	0.173	0.217	0.266	0.320
	NC (Noise Criteria)	<15	16	22	27	31	34	37	39
	Throw	7 10 17	9 13 19	10 14 20	12 15 22	13 16 23	14 17 25	15 18 26	16 19 27
4 ft.	**Airflow, cfm**	**260**	**320**	**380**	**440**	**500**	**560**	**620**	**680**
	Static Pressure	0.049	0.074	0.104	0.139	0.180	0.225	0.276	0.332
	Total Pressure	0.061	0.092	0.130	0.174	0.225	0.282	0.345	0.415
	NC (Noise Criteria)	<15	18	24	29	33	36	39	41
	Throw	10 15 24	12 18 26	14 20 29	17 22 31	19 23 33	20 25 35	21 26 37	22 27 38
5 ft.	**Airflow, cfm**	**325**	**400**	**475**	**550**	**625**	**700**	**775**	**850**
	Static Pressure	0.053	0.081	0.114	0.153	0.198	0.248	0.304	0.366
	Total Pressure	0.072	0.110	0.155	0.207	0.268	0.336	0.412	0.495
	NC (Noise Criteria)	<15	20	25	30	34	37	40	43
	Throw	13 20 27	16 25 29	19 27 32	22 29 34	25 31 37	27 33 39	28 35 41	30 36 43

One Slot - 3.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**140**	**170**	**200**	**230**	**260**	**290**	**320**	**350**
	Static Pressure	0.053	0.078	0.108	0.143	0.183	0.227	0.276	0.331
	Total Pressure	0.059	0.087	0.120	0.159	0.203	0.252	0.307	0.367
	NC (Noise Criteria)	<15	16	21	25	29	33	35	38
	Throw	7 10 17	8 13 19	10 15 21	11 16 22	13 17 24	14 18 25	15 19 26	16 19 28
4 ft.	**Airflow, cfm**	**280**	**340**	**400**	**460**	**520**	**580**	**640**	**700**
	Static Pressure	0.059	0.087	0.120	0.159	0.203	0.252	0.307	0.368
	Total Pressure	0.082	0.121	0.168	0.222	0.283	0.352	0.429	0.513
	NC (Noise Criteria)	<15	18	23	27	31	35	37	40
	Throw	10 15 25	12 18 27	14 21 29	16 22 32	18 24 34	20 25 35	21 26 37	22 28 39
5 ft.	**Airflow, cfm**	**350**	**425**	**500**	**575**	**650**	**725**	**800**	**875**
	Static Pressure	0.065	0.095	0.132	0.175	0.223	0.278	0.338	0.404
	Total Pressure	0.101	0.149	0.206	0.273	0.349	0.434	0.528	0.632
	NC (Noise Criteria)	<15	19	24	29	33	36	39	41
	Throw	13 20 28	16 24 30	19 28 33	21 30 35	24 32 37	27 34 40	29 35 42	30 37 44

One Slot - 3.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**140**	**170**	**200**	**230**	**260**	**290**	**320**	**350**
	Static Pressure	0.051	0.075	0.104	0.137	0.175	0.218	0.265	0.317
	Total Pressure	0.054	0.080	0.111	0.146	0.187	0.233	0.283	0.339
	NC (Noise Criteria)	<15	16	21	25	29	33	35	38
	Throw	7 10 17	8 13 19	10 15 21	11 16 22	13 17 24	14 18 25	15 19 26	16 19 28
4 ft.	**Airflow, cfm**	**280**	**340**	**400**	**460**	**520**	**580**	**640**	**700**
	Static Pressure	0.056	0.083	0.115	0.152	0.194	0.242	0.294	0.352
	Total Pressure	0.070	0.104	0.144	0.190	0.243	0.302	0.368	0.440
	NC (Noise Criteria)	<15	18	23	27	31	35	37	40
	Throw	10 15 25	12 18 27	14 21 29	16 22 32	18 24 34	20 25 35	21 26 37	22 28 39
5 ft.	**Airflow, cfm**	**350**	**425**	**500**	**575**	**650**	**725**	**800**	**875**
	Static Pressure	0.062	0.091	0.127	0.167	0.214	0.266	0.324	0.387
	Total Pressure	0.084	0.124	0.171	0.227	0.290	0.360	0.439	0.525
	NC (Noise Criteria)	<15	19	24	29	33	36	39	41
	Throw	13 20 28	16 24 30	19 28 33	21 30 35	24 32 37	27 34 40	29 35 42	30 37 44

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

2 SLOT STANDARD BLADE HORIZONTAL THROW WITH METALAIRE PLENUM

Two Slot - 1.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**115**	**145**	**175**	**205**	**235**	**260**	**290**	**320**
	Static Pressure	0.046	0.072	0.103	0.140	0.183	0.232	0.286	0.346
	Total Pressure	0.054	0.084	0.121	0.165	0.215	0.271	0.335	0.405
	NC (Noise Criteria)	<15	16	22	27	31	35	38	40
	Throw	7 11 16	9 13 18	11 14 19	12 15 21	13 16 22	14 17 24	14 18 25	15 19 26
4 ft.	**Airflow, cfm**	**235**	**290**	**350**	**410**	**465**	**525**	**580**	**640**
	Static Pressure	0.051	0.080	0.115	0.156	0.204	0.257	0.318	0.384
	Total Pressure	0.083	0.129	0.186	0.254	0.329	0.418	0.513	0.622
	NC (Noise Criteria)	<15	18	24	29	33	37	40	42
	Throw	10 15 22	12 18 25	15 19 28	17 21 30	18 22 32	19 24 34	20 25 35	21 26 37
5 ft.	**Airflow, cfm**	**295**	**365**	**440**	**510**	**585**	**655**	**730**	**800**
	Static Pressure	0.056	0.088	0.126	0.172	0.224	0.283	0.349	0.422
	Total Pressure	0.107	0.165	0.239	0.323	0.423	0.533	0.660	0.795
	NC (Noise Criteria)	<15	20	26	31	35	38	41	43
	Throw	13 20 25	17 24 28	20 26 31	23 28 33	25 30 35	26 32 38	27 34 40	29 35 42

Two Slot - 1.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**115**	**145**	**175**	**205**	**235**	**260**	**290**	**320**
	Static Pressure	0.037	0.058	0.083	0.112	0.147	0.185	0.229	0.276
	Total Pressure	0.041	0.064	0.092	0.125	0.163	0.205	0.254	0.307
	NC (Noise Criteria)	<15	16	22	27	31	35	38	40
	Throw	7 11 16	9 13 18	11 14 19	12 15 21	13 16 22	14 17 24	14 18 25	15 19 26
4 ft.	**Airflow, cfm**	**235**	**290**	**350**	**410**	**465**	**525**	**580**	**640**
	Static Pressure	0.041	0.064	0.092	0.125	0.163	0.206	0.254	0.307
	Total Pressure	0.057	0.089	0.128	0.175	0.227	0.288	0.354	0.429
	NC (Noise Criteria)	<15	18	24	29	33	37	40	42
	Throw	10 15 22	12 18 25	15 19 28	17 21 30	18 22 32	19 24 34	20 25 35	21 26 37
5 ft.	**Airflow, cfm**	**295**	**365**	**440**	**510**	**585**	**655**	**730**	**800**
	Static Pressure	0.045	0.070	0.101	0.137	0.179	0.227	0.279	0.338
	Total Pressure	0.071	0.110	0.159	0.215	0.281	0.354	0.438	0.528
	NC (Noise Criteria)	<15	20	26	31	35	38	41	43
	Throw	13 20 25	17 24 28	20 26 31	23 28 33	25 30 35	26 32 38	27 34 40	29 35 42

Two Slot - 1.5" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**125**	**160**	**190**	**220**	**255**	**285**	**320**	**350**
	Static Pressure	0.045	0.071	0.102	0.140	0.183	0.232	0.287	0.347
	Total Pressure	0.054	0.086	0.123	0.168	0.221	0.279	0.346	0.419
	NC (Noise Criteria)	<15	17	23	28	32	36	39	41
	Throw	6 9 17	8 12 18	9 14 20	11 15 22	12 17 23	14 18 25	15 19 26	16 19 28
4 ft.	**Airflow, cfm**	**250**	**315**	**380**	**445**	**510**	**570**	**635**	**700**
	Static Pressure	0.050	0.079	0.114	0.155	0.203	0.258	0.319	0.386
	Total Pressure	0.086	0.136	0.198	0.271	0.355	0.447	0.553	0.671
	NC (Noise Criteria)	<15	19	25	30	34	38	41	43
	Throw	9 13 23	11 16 26	13 20 29	15 22 31	18 23 33	20 25 35	21 26 37	22 28 39
5 ft.	**Airflow, cfm**	**315**	**395**	**475**	**555**	**635**	**715**	**795**	**875**
	Static Pressure	0.055	0.087	0.125	0.171	0.224	0.283	0.350	0.424
	Total Pressure	0.113	0.177	0.256	0.350	0.458	0.581	0.718	0.870
	NC (Noise Criteria)	<15	21	27	32	36	39	42	45
	Throw	12 18 26	15 22 29	18 27 32	21 29 35	24 31 37	27 33 39	29 35 41	30 37 44

Two Slot - 1.5" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**125**	**160**	**190**	**220**	**255**	**285**	**320**	**350**
	Static Pressure	0.031	0.049	0.071	0.098	0.128	0.162	0.200	0.243
	Total Pressure	0.034	0.054	0.078	0.106	0.139	0.177	0.219	0.265
	NC (Noise Criteria)	<15	17	22	28	32	35	38	41
	Throw	6 9 17	8 12 18	9 14 20	11 15 22	12 17 23	14 18 25	15 19 26	16 19 28
4 ft.	**Airflow, cfm**	**250**	**315**	**380**	**445**	**510**	**570**	**635**	**700**
	Static Pressure	0.035	0.055	0.079	0.108	0.142	0.180	0.222	0.270
	Total Pressure	0.046	0.073	0.105	0.144	0.189	0.238	0.295	0.358
	NC (Noise Criteria)	<15	19	24	30	34	37	40	43
	Throw	9 13 23	11 16 26	13 20 29	15 22 31	18 23 33	20 25 35	21 26 37	22 28 39
5 ft.	**Airflow, cfm**	**315**	**395**	**475**	**555**	**635**	**715**	**795**	**875**
	Static Pressure	0.038	0.060	0.087	0.119	0.156	0.198	0.245	0.296
	Total Pressure	0.056	0.088	0.128	0.175	0.229	0.290	0.358	0.434
	NC (Noise Criteria)	<15	20	26	31	35	39	42	44
	Throw	12 18 26	15 22 29	18 27 32	21 29 35	24 31 37	27 33 39	29 35 41	30 37 44

Two Slot - 2.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**155**	**190**	**225**	**260**	**295**	**330**	**365**	**400**
	Static Pressure	0.065	0.097	0.137	0.183	0.235	0.294	0.360	0.432
	Total Pressure	0.079	0.118	0.166	0.222	0.286	0.357	0.437	0.525
	NC (Noise Criteria)	<15	16	21	26	30	33	36	38
	Throw	9 13 18	11 14 20	13 16 22	14 17 24	15 18 25	15 19 27	16 20 28	17 21 29
4 ft.	**Airflow, cfm**	**310**	**380**	**450**	**520**	**590**	**660**	**730**	**800**
	Static Pressure	0.072	0.108	0.152	0.203	0.261	0.327	0.400	0.480
	Total Pressure	0.128	0.192	0.270	0.360	0.464	0.580	0.710	0.853
	NC (Noise Criteria)	<15	18	23	28	32	35	38	40
	Throw	9 14 26	11 17 29	14 20 31	16 23 34	18 25 36	20 27 38	22 28 40	24 29 42
5 ft.	**Airflow, cfm**	**390**	**475**	**565**	**650**	**740**	**825**	**915**	**1000**
	Static Pressure	0.079	0.119	0.167	0.223	0.287	0.359	0.440	0.528
	Total Pressure	0.168	0.250	0.353	0.469	0.606	0.756	0.927	1.110
	NC (Noise Criteria)	<15	19	24	29	33	36	39	42
	Throw	12 19 29	15 23 32	18 27 35	21 31 37	24 34 40	27 36 42	29 38 44	32 39 47

Two Slot - 2.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**155**	**190**	**225**	**260**	**295**	**330**	**365**	**400**
	Static Pressure	0.032	0.048	0.067	0.089	0.115	0.143	0.175	0.211
	Total Pressure	0.036	0.054	0.076	0.101	0.130	0.163	0.199	0.239
	NC (Noise Criteria)	<15	16	21	26	30	33	36	38
	Throw	6 10 18	8 12 20	10 14 22	11 17 24	13 18 25	14 19 27	16 20 28	17 21 29
4 ft.	**Airflow, cfm**	**310**	**380**	**450**	**520**	**590**	**660**	**730**	**800**
	Static Pressure	0.035	0.053	0.074	0.099	0.127	0.159	0.195	0.234
	Total Pressure	0.052	0.079	0.110	0.147	0.190	0.238	0.291	0.349
	NC (Noise Criteria)	<15	18	23	28	32	35	38	40
	Throw	9 14 26	11 17 29	14 20 31	16 23 34	18 25 36	20 27 38	22 28 40	24 29 42
5 ft.	**Airflow, cfm**	**390**	**475**	**565**	**650**	**740**	**825**	**915**	**1000**
	Static Pressure	0.039	0.058	0.081	0.109	0.140	0.175	0.214	0.257
	Total Pressure	0.066	0.099	0.139	0.185	0.238	0.297	0.365	0.437
	NC (Noise Criteria)	<15	19	24	29	33	36	39	42
	Throw	12 19 29	15 23 32	18 27 35	21 31 37	24 34 40	27 36 42	29 38 44	32 39 47

2 SLOT STANDARD BLADE HORIZONTAL THROW WITH METALAIRE PLENUM

Two Slot - 2.5" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**210**	**255**	**300**	**345**	**390**	**430**	**475**	**520**
	Static Pressure	0.061	0.088	0.122	0.160	0.203	0.252	0.306	0.365
	Total Pressure	0.074	0.108	0.148	0.195	0.248	0.307	0.373	0.445
	NC (Noise Criteria)	<15	18	23	27	31	34	37	39
	Throw	8 12 21	10 15 24	11 17 25	13 19 27	15 20 29	16 22 31	18 23 32	19 24 34
4 ft.	**Airflow, cfm**	**425**	**510**	**600**	**690**	**775**	**865**	**950**	**1040**
	Static Pressure	0.067	0.098	0.135	0.178	0.226	0.280	0.340	0.406
	Total Pressure	0.121	0.176	0.242	0.319	0.404	0.502	0.608	0.727
	NC (Noise Criteria)	<15	20	25	29	33	36	39	41
	Throw	11 17 30	14 21 33	16 24 36	19 27 39	21 29 41	23 31 43	26 32 45	27 34 47
5 ft.	**Airflow, cfm**	**530**	**640**	**750**	**860**	**970**	**1080**	**1190**	**1300**
	Static Pressure	0.084	0.123	0.169	0.222	0.282	0.350	0.425	0.507
	Total Pressure	0.168	0.245	0.336	0.442	0.562	0.696	0.845	1.009
	NC (Noise Criteria)	16	21	26	31	35	38	41	43
	Throw	15 23 34	18 28 37	22 32 40	25 37 43	28 39 46	31 41 48	34 43 51	37 45 53

Two Slot - 2.5" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**210**	**255**	**300**	**345**	**390**	**430**	**475**	**520**
	Static Pressure	0.038	0.055	0.076	0.100	0.127	0.157	0.191	0.228
	Total Pressure	0.046	0.067	0.092	0.121	0.154	0.191	0.232	0.277
	NC (Noise Criteria)	<15	17	22	26	30	34	36	39
	Throw	8 12 21	10 15 24	11 17 25	13 19 27	15 20 29	16 22 31	18 23 32	19 24 34
4 ft.	**Airflow, cfm**	**425**	**510**	**600**	**690**	**775**	**865**	**950**	**1040**
	Static Pressure	0.042	0.061	0.084	0.111	0.141	0.175	0.212	0.254
	Total Pressure	0.075	0.108	0.149	0.196	0.249	0.309	0.375	0.448
	NC (Noise Criteria)	<15	19	24	28	32	36	38	41
	Throw	11 17 30	14 21 33	16 24 36	19 27 39	21 29 41	23 31 43	26 32 45	27 34 47
5 ft.	**Airflow, cfm**	**530**	**640**	**750**	**860**	**970**	**1080**	**1190**	**1300**
	Static Pressure	0.046	0.068	0.093	0.122	0.155	0.192	0.234	0.279
	Total Pressure	0.097	0.141	0.194	0.255	0.324	0.402	0.488	0.583
	NC (Noise Criteria)	<15	20	26	30	34	37	40	42
	Throw	15 23 34	18 28 37	22 32 40	25 37 43	28 39 46	31 41 48	34 43 51	37 45 53

Two Slot - 3.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**240**	**280**	**320**	**365**	**405**	**450**	**490**
	Static Pressure	0.027	0.039	0.054	0.072	0.092	0.114	0.139	0.166
	Total Pressure	0.038	0.056	0.078	0.102	0.131	0.163	0.199	0.238
	NC (Noise Criteria)	<15	16	21	25	29	33	35	38
	Throw	6 10 20	8 12 23	10 15 25	11 17 26	13 19 28	14 21 30	16 22 31	17 23 33
4 ft.	**Airflow, cfm**	**390**	**475**	**560**	**645**	**730**	**810**	**895**	**980**
	Static Pressure	0.030	0.044	0.060	0.080	0.102	0.127	0.155	0.185
	Total Pressure	0.075	0.111	0.154	0.203	0.260	0.322	0.392	0.470
	NC (Noise Criteria)	<15	18	23	27	31	35	37	40
	Throw	8 14 29	12 18 32	14 21 35	16 24 37	18 27 40	20 30 42	22 31 44	24 33 46
5 ft.	**Airflow, cfm**	**490**	**595**	**700**	**805**	**910**	**1015**	**1120**	**1225**
	Static Pressure	0.041	0.061	0.085	0.112	0.143	0.178	0.216	0.259
	Total Pressure	0.113	0.166	0.230	0.304	0.389	0.484	0.589	0.705
	NC (Noise Criteria)	<15	19	24	29	33	36	39	41
	Throw	11 19 32	15 24 36	18 28 39	21 32 42	24 36 44	27 40 47	30 42 49	32 44 51

Two Slot - 3.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**240**	**280**	**320**	**365**	**405**	**450**	**490**
	Static Pressure	0.022	0.032	0.044	0.058	0.075	0.093	0.113	0.135
	Total Pressure	0.028	0.042	0.058	0.077	0.098	0.122	0.149	0.178
	NC (Noise Criteria)	-	<15	20	24	28	32	35	37
	Throw	6 10 20	8 12 23	10 15 25	11 17 26	13 19 28	14 21 30	16 22 31	17 23 33
4 ft.	**Airflow, cfm**	**390**	**475**	**560**	**645**	**730**	**810**	**895**	**980**
	Static Pressure	0.024	0.035	0.049	0.065	0.083	0.103	0.125	0.150
	Total Pressure	0.051	0.076	0.105	0.140	0.179	0.221	0.269	0.323
	NC (Noise Criteria)	<15	17	22	26	30	34	37	39
	Throw	8 14 29	12 18 32	14 21 35	16 24 37	18 27 40	20 30 42	22 31 44	24 33 46
5 ft.	**Airflow, cfm**	**490**	**595**	**700**	**805**	**910**	**1015**	**1120**	**1225**
	Static Pressure	0.026	0.039	0.054	0.071	0.091	0.113	0.138	0.165
	Total Pressure	0.070	0.103	0.142	0.188	0.240	0.298	0.363	0.435
	NC (Noise Criteria)	<15	18	23	28	32	35	38	41
	Throw	11 19 32	15 24 36	18 28 39	21 32 42	24 36 44	27 40 47	30 42 49	32 44 51

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

PRESSURIZED CEILING PLENUM WITH STANDARD BLADE PATTERN CONTROLLER

1.0" Slot Width

1 Slot	**Airflow, cfm/lf**	**25**	**40**	**65**	**80**	**95**	**110**	**125**	**140**
	Static Pressure	0.026	0.066	0.174	0.264	0.372	0.499	0.644	0.808
	NC (Noise Criteria)	<15	16	31	37	42	45	48	51
	Throw	6 9 15	10 13 19	14 17 24	15 19 26	17 20 29	18 22 31	19 23 33	20 25 35
2 Slots	**Airflow, cfm/lf**	**40**	**60**	**100**	**120**	**145**	**165**	**190**	**210**
	Static Pressure	0.017	0.038	0.105	0.151	0.221	0.286	0.379	0.463
	NC (Noise Criteria)	-	<15	26	32	38	41	45	47
	Throw	7 10 19	10 15 23	17 21 29	19 23 32	20 25 35	22 27 38	23 29 41	25 30 43

1.5" Slot Width

1 Slot	**Airflow, cfm/lf**	**30**	**50**	**80**	**95**	**115**	**130**	**150**	**170**
	Static Pressure	0.026	0.072	0.184	0.259	0.380	0.486	0.647	0.831
	NC (Noise Criteria)	<15	16	31	36	41	44	48	50
	Throw	6 9 16	10 15 21	15 19 26	17 20 29	18 22 32	19 24 34	21 25 36	22 27 38
2 Slots	**Airflow, cfm/lf**	**45**	**75**	**120**	**145**	**175**	**195**	**225**	**255**
	Static Pressure	0.017	0.048	0.123	0.179	0.261	0.324	0.431	0.553
	NC (Noise Criteria)	-	<15	25	31	37	40	44	47
	Throw	5 9 19	11 16 25	17 23 32	20 25 35	22 28 39	24 29 41	25 31 44	27 33 47

2.0" Slot Width

1 Slot	**Airflow, cfm/lf**	**35**	**55**	**90**	**110**	**135**	**155**	**175**	**195**
	Static Pressure	0.025	0.062	0.166	0.248	0.374	0.493	0.628	0.780
	NC (Noise Criteria)	-	<15	27	33	39	42	45	48
	Throw	5 9 17	9 14 22	15 20 28	18 22 31	20 24 34	21 26 37	22 28 39	24 29 41
2 Slots	**Airflow, cfm/lf**	**55**	**85**	**135**	**165**	**205**	**235**	**265**	**295**
	Static Pressure	0.016	0.039	0.099	0.148	0.229	0.301	0.383	0.474
	NC (Noise Criteria)	-	<15	20	27	34	38	41	44
	Throw	5 10 20	10 15 27	16 24 34	20 27 38	24 30 42	26 32 45	28 34 48	29 36 51

2.5" Slot Width

1 Slot	**Airflow, cfm/lf**	**40**	**60**	**100**	**120**	**145**	**165**	**190**	**210**
	Static Pressure	0.020	0.045	0.126	0.181	0.265	0.343	0.455	0.556
	NC (Noise Criteria)	-	<15	23	29	35	38	42	44
	Throw	5 9 18	9 14 23	15 21 29	18 23 32	20 25 35	22 27 38	23 29 41	25 30 43
2 Slots	**Airflow, cfm/lf**	**60**	**90**	**150**	**180**	**220**	**250**	**285**	**315**
	Static Pressure	0.012	0.026	0.073	0.105	0.156	0.202	0.262	0.320
	NC (Noise Criteria)	-	<15	17	22	29	33	37	40
	Throw	4 9 20	9 15 28	16 24 36	20 28 39	24 31 44	27 33 47	29 35 50	30 37 52

3.0" Slot Width

1 Slot	**Airflow, cfm/lf**	**45**	**70**	**115**	**145**	**170**	**200**	**225**	**250**
	Static Pressure	0.021	0.051	0.138	0.219	0.301	0.416	0.527	0.650
	NC (Noise Criteria)	-	<15	21	29	34	38	42	44
	Throw	5 9 19	10 15 25	16 22 32	20 25 35	22 27 38	24 29 42	25 31 44	27 33 47
2 Slots	**Airflow, cfm/lf**	**70**	**105**	**175**	**220**	**255**	**300**	**340**	**420**
	Static Pressure	0.011	0.025	0.070	0.111	0.150	0.207	0.266	0.406
	NC (Noise Criteria)	-	<15	16	23	28	33	37	43
	Throw	4 9 21	9 16 30	17 26 39	22 31 44	25 33 47	29 36 51	31 38 54	35 43 60

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

1 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM - HORIZONTAL DISCHARGE

One Slot - 1.0" Slot Width Horizontal Throw 6" Oval Inlet

2 ft.	**Airflow, cfm**	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**
	Static Pressure	0.004	0.018	0.040	0.071	0.111	0.159	0.217	0.283
	Total Pressure	0.005	0.020	0.046	0.081	0.127	0.182	0.248	0.324
	NC (Noise Criteria)	-	<15	20	26	31	35	38	41
	Throw	1 3 7	4 7 11	7 10 14	9 11 16	10 13 18	11 14 19	12 15 21	13 16 22
4 ft.	**Airflow, cfm**	**40**	**80**	**120**	**160**	**200**	**240**	**280**	**320**
	Static Pressure	0.005	0.020	0.044	0.079	0.123	0.177	0.241	0.314
	Total Pressure	0.008	0.030	0.068	0.120	0.188	0.270	0.368	0.480
	NC (Noise Criteria)	-	<15	22	28	33	37	40	43
	Throw	2 4 9	6 9 16	9 14 19	13 16 22	14 18 25	16 19 27	17 21 30	18 22 32
5 ft.	**Airflow, cfm**	**50**	**100**	**150**	**200**	**250**	**300**	**350**	**400**
	Static Pressure	0.005	0.022	0.049	0.086	0.135	0.195	0.265	0.346
	Total Pressure	0.009	0.038	0.085	0.151	0.236	0.340	0.463	0.605
	NC (Noise Criteria)	<15	16	23	29	34	38	42	45
	Throw	2 5 11	8 13 18	13 18 22	17 21 25	19 24 28	21 26 31	23 28 33	24 30 35

One Slot - 1.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**
	Static Pressure	0.003	0.011	0.025	0.045	0.070	0.101	0.137	0.179
	Total Pressure	0.003	0.012	0.027	0.049	0.076	0.109	0.149	0.194
	NC (Noise Criteria)	-	-	<15	21	26	31	35	39
	Throw	1 3 7	4 7 11	7 10 14	9 11 16	10 13 18	11 14 19	12 15 21	13 16 22
4 ft.	**Airflow, cfm**	**40**	**80**	**120**	**160**	**200**	**240**	**280**	**320**
	Static Pressure	0.003	0.012	0.028	0.050	0.078	0.112	0.152	0.199
	Total Pressure	0.004	0.016	0.036	0.065	0.101	0.146	0.198	0.259
	NC (Noise Criteria)	-	<15	17	23	28	33	37	41
	Throw	2 4 9	6 9 16	9 14 19	13 16 22	14 18 25	16 19 27	17 21 30	18 22 32
5 ft.	**Airflow, cfm**	**50**	**100**	**150**	**200**	**250**	**300**	**350**	**400**
	Static Pressure	0.003	0.014	0.031	0.055	0.086	0.123	0.168	0.219
	Total Pressure	0.005	0.020	0.044	0.078	0.122	0.176	0.239	0.312
	NC (Noise Criteria)	-	<15	18	24	30	35	39	42
	Throw	2 5 11	8 13 18	13 18 22	17 21 25	19 24 28	21 26 31	23 28 33	24 30 35

One Slot - 1.5" Slot Width Horizontal Throw 6" Oval Inlet

2 ft.	**Airflow, cfm**	**30**	**60**	**90**	**120**	**150**	**180**	**210**	**240**
	Static Pressure	0.009	0.035	0.078	0.139	0.217	0.313	0.426	0.557
	Total Pressure	0.010	0.041	0.091	0.162	0.254	0.366	0.498	0.650
	NC (Noise Criteria)	-	<15	21	27	32	36	39	42
	Throw	2 3 8	5 8 14	8 12 17	11 14 19	13 15 22	14 17 24	15 18 26	16 19 27
4 ft.	**Airflow, cfm**	**60**	**120**	**180**	**240**	**300**	**360**	**420**	**480**
	Static Pressure	0.010	0.039	0.087	0.155	0.242	0.348	0.474	0.619
	Total Pressure	0.015	0.062	0.139	0.248	0.387	0.558	0.759	0.991
	NC (Noise Criteria)	<15	16	23	29	34	38	41	44
	Throw	2 5 12	8 12 19	12 17 24	15 19 27	18 22 31	19 24 34	21 26 36	22 27 39
5 ft.	**Airflow, cfm**	**75**	**150**	**225**	**300**	**375**	**450**	**525**	**600**
	Static Pressure	0.011	0.043	0.096	0.170	0.266	0.383	0.521	0.680
	Total Pressure	0.020	0.079	0.178	0.316	0.493	0.710	0.967	1.263
	NC (Noise Criteria)	<15	17	25	30	35	39	43	46
	Throw	3 7 13	10 16 22	16 23 27	21 26 31	24 29 34	26 32 38	28 34 41	30 37 43

One Slot - 1.5" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**30**	**60**	**90**	**120**	**150**	**180**	**210**	**240**
	Static Pressure	0.006	0.022	0.050	0.088	0.138	0.198	0.270	0.353
	Total Pressure	0.006	0.024	0.054	0.097	0.151	0.217	0.296	0.386
	NC (Noise Criteria)	-	<15	16	22	28	32	37	40
	Throw	2 3 8	5 8 14	8 12 17	11 14 19	13 15 22	14 17 24	15 18 26	16 19 27
4 ft.	**Airflow, cfm**	**60**	**120**	**180**	**240**	**300**	**360**	**420**	**480**
	Static Pressure	0.006	0.024	0.055	0.098	0.153	0.220	0.300	0.392
	Total Pressure	0.008	0.033	0.074	0.131	0.205	0.296	0.403	0.526
	NC (Noise Criteria)	-	<15	18	24	30	34	39	42
	Throw	2 5 12	8 12 19	12 17 24	15 19 27	18 22 31	19 24 34	21 26 36	22 27 39
5 ft.	**Airflow, cfm**	**75**	**150**	**225**	**300**	**375**	**450**	**525**	**600**
	Static Pressure	0.007	0.027	0.061	0.108	0.168	0.242	0.330	0.431
	Total Pressure	0.010	0.040	0.090	0.160	0.250	0.360	0.490	0.640
	NC (Noise Criteria)	-	<15	19	26	31	36	40	44
	Throw	3 7 13	10 16 22	16 23 27	21 26 31	24 29 34	26 32 38	28 34 41	30 37 43

One Slot - 2.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**100**	**130**	**160**	**190**	**220**	**250**	**280**
	Static Pressure	0.022	0.044	0.075	0.113	0.159	0.213	0.276	0.346
	Total Pressure	0.023	0.047	0.080	0.121	0.170	0.228	0.294	0.369
	NC (Noise Criteria)	-	<15	20	25	30	33	37	40
	Throw	5 8 15	8 12 18	10 14 20	13 16 22	14 17 24	15 19 26	16 20 28	17 21 30
4 ft.	**Airflow, cfm**	**140**	**200**	**260**	**320**	**380**	**440**	**500**	**560**
	Static Pressure	0.024	0.049	0.083	0.125	0.177	0.237	0.306	0.384
	Total Pressure	0.030	0.061	0.103	0.156	0.220	0.295	0.381	0.477
	NC (Noise Criteria)	<15	17	22	27	32	35	39	42
	Throw	8 12 21	11 17 25	14 20 29	18 22 32	20 24 34	21 26 37	23 28 40	24 30 42
5 ft.	**Airflow, cfm**	**175**	**250**	**325**	**400**	**475**	**550**	**625**	**700**
	Static Pressure	0.026	0.054	0.091	0.138	0.195	0.261	0.337	0.423
	Total Pressure	0.036	0.072	0.122	0.186	0.262	0.351	0.453	0.568
	NC (Noise Criteria)	<15	18	24	29	33	37	40	43
	Throw	10 16 23	15 22 28	19 27 32	24 30 35	27 33 39	29 35 41	31 38 44	32 40 47

One Slot - 2.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**100**	**130**	**160**	**190**	**220**	**250**	**280**
	Static Pressure	0.020	0.041	0.069	0.104	0.147	0.197	0.255	0.320
	Total Pressure	0.021	0.043	0.072	0.109	0.154	0.206	0.266	0.334
	NC (Noise Criteria)	-	<15	20	25	30	33	37	40
	Throw	5 8 15	8 12 18	10 14 20	13 16 22	14 17 24	15 19 26	16 20 28	17 21 30
4 ft.	**Airflow, cfm**	**140**	**200**	**260**	**320**	**380**	**440**	**500**	**560**
	Static Pressure	0.022	0.045	0.077	0.116	0.164	0.219	0.283	0.355
	Total Pressure	0.026	0.052	0.089	0.134	0.189	0.254	0.328	0.412
	NC (Noise Criteria)	<15	17	22	27	32	35	39	42
	Throw	8 12 21	11 17 25	14 20 29	18 22 32	20 24 34	21 26 37	23 28 40	24 30 42
5 ft.	**Airflow, cfm**	**175**	**250**	**325**	**400**	**475**	**550**	**625**	**700**
	Static Pressure	0.024	0.050	0.084	0.128	0.180	0.241	0.311	0.391
	Total Pressure	0.030	0.061	0.103	0.156	0.220	0.296	0.382	0.479
	NC (Noise Criteria)	<15	18	24	29	33	37	40	43
	Throw	10 16 23	15 22 28	19 27 32	24 30 35	27 33 39	29 35 41	31 38 44	32 40 47

1 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM - HORIZONTAL DISCHARGE

One Slot - 2.5" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**65**	**110**	**150**	**190**	**235**	**275**	**320**	**360**
	Static Pressure	0.016	0.042	0.081	0.133	0.197	0.274	0.364	0.467
	Total Pressure	0.017	0.046	0.088	0.143	0.214	0.297	0.394	0.505
	NC (Noise Criteria)	-	<15	19	24	29	34	37	41
	Throw	3 4 8	4 6 12	6 9 17	7 11 22	9 13 25	11 16 27	12 18 29	14 21 31
4 ft.	**Airflow, cfm**	**130**	**215**	**300**	**385**	**470**	**550**	**635**	**720**
	Static Pressure	0.017	0.047	0.090	0.147	0.219	0.305	0.404	0.518
	Total Pressure	0.022	0.060	0.117	0.191	0.285	0.395	0.524	0.672
	NC (Noise Criteria)	-	<15	21	26	31	36	39	43
	Throw	4 5 11	6 9 18	8 12 24	10 16 31	13 19 35	15 23 38	17 26 41	20 29 44
5 ft.	**Airflow, cfm**	**165**	**270**	**375**	**480**	**585**	**690**	**795**	**900**
	Static Pressure	0.019	0.051	0.099	0.162	0.241	0.335	0.445	0.570
	Total Pressure	0.027	0.073	0.141	0.231	0.343	0.477	0.633	0.811
	NC (Noise Criteria)	<15	15	22	28	33	37	41	44
	Throw	5 7 12	8 12 20	11 16 27	14 21 35	17 26 39	20 30 43	23 35 46	26 39 49

One Slot - 2.5" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**65**	**110**	**150**	**190**	**235**	**275**	**320**	**360**
	Static Pressure	0.015	0.040	0.076	0.125	0.186	0.259	0.344	0.440
	Total Pressure	0.016	0.042	0.080	0.132	0.196	0.272	0.362	0.464
	NC (Noise Criteria)	-	<15	19	24	29	34	37	41
	Throw	3 4 8	4 6 12	6 9 17	7 11 22	9 13 25	11 16 27	12 18 29	14 21 31
4 ft.	**Airflow, cfm**	**130**	**215**	**300**	**385**	**470**	**550**	**635**	**720**
	Static Pressure	0.016	0.044	0.085	0.139	0.207	0.288	0.382	0.489
	Total Pressure	0.019	0.052	0.101	0.166	0.246	0.342	0.454	0.582
	NC (Noise Criteria)	-	<15	21	26	31	36	39	43
	Throw	4 5 11	6 9 18	8 12 24	10 16 31	13 19 35	15 23 38	17 26 41	20 29 44
5 ft.	**Airflow, cfm**	**165**	**270**	**375**	**480**	**585**	**690**	**795**	**900**
	Static Pressure	0.018	0.048	0.093	0.153	0.227	0.316	0.420	0.538
	Total Pressure	0.023	0.062	0.119	0.194	0.289	0.402	0.533	0.684
	NC (Noise Criteria)	<15	15	22	28	33	37	41	44
	Throw	5 7 12	8 12 20	11 16 27	14 21 35	17 26 39	20 30 43	23 35 46	26 39 49

COMBO
1 SLOT HORIZONTAL

One Slot - 3.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**135**	**180**	**220**	**260**	**305**	**345**	**390**	**430**
	Static Pressure	0.032	0.055	0.084	0.119	0.160	0.207	0.260	0.320
	Total Pressure	0.037	0.064	0.098	0.139	0.187	0.242	0.305	0.374
	NC (Noise Criteria)	<15	18	23	28	31	35	38	40
	Throw	5 7 14	6 9 19	8 12 23	9 14 26	11 16 28	12 18 30	14 20 32	15 23 34
4 ft.	**Airflow, cfm**	**270**	**355**	**440**	**525**	**610**	**690**	**775**	**860**
	Static Pressure	0.036	0.061	0.093	0.132	0.177	0.230	0.289	0.355
	Total Pressure	0.057	0.098	0.150	0.214	0.288	0.371	0.467	0.575
	NC (Noise Criteria)	<15	20	25	30	33	37	40	42
	Throw	7 10 20	9 13 26	11 16 33	13 19 37	15 23 40	17 26 43	19 29 45	21 32 48
5 ft.	**Airflow, cfm**	**340**	**445**	**550**	**655**	**760**	**865**	**970**	**1075**
	Static Pressure	0.039	0.067	0.102	0.145	0.195	0.253	0.318	0.391
	Total Pressure	0.073	0.126	0.192	0.272	0.367	0.475	0.597	0.734
	NC (Noise Criteria)	16	22	27	31	35	38	41	44
	Throw	9 14 23	12 18 30	15 22 37	17 26 42	20 30 45	23 35 48	26 39 51	29 43 53

One Slot - 3.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**135**	**180**	**220**	**260**	**305**	**345**	**390**	**430**
	Static Pressure	0.030	0.052	0.079	0.112	0.151	0.195	0.246	0.302
	Total Pressure	0.033	0.057	0.088	0.124	0.167	0.217	0.273	0.335
	NC (Noise Criteria)	<15	18	23	28	31	35	38	40
	Throw	5 7 14	6 9 19	8 12 23	9 14 26	11 16 28	12 18 30	14 20 32	15 23 34
4 ft.	**Airflow, cfm**	**270**	**355**	**440**	**525**	**610**	**690**	**775**	**860**
	Static Pressure	0.034	0.057	0.088	0.124	0.167	0.217	0.273	0.335
	Total Pressure	0.047	0.080	0.122	0.174	0.234	0.302	0.381	0.468
	NC (Noise Criteria)	<15	20	25	30	33	37	40	42
	Throw	7 10 20	9 13 26	11 16 33	13 19 37	15 23 40	17 26 43	19 29 45	21 32 48
5 ft.	**Airflow, cfm**	**340**	**445**	**550**	**655**	**760**	**865**	**970**	**1075**
	Static Pressure	0.037	0.063	0.096	0.137	0.184	0.239	0.300	0.369
	Total Pressure	0.058	0.099	0.151	0.214	0.288	0.373	0.469	0.576
	NC (Noise Criteria)	16	22	27	31	35	38	41	44
	Throw	9 14 23	12 18 30	15 22 37	17 26 42	20 30 45	23 35 48	26 39 51	29 43 53

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

1 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM-VERTICAL DISCHARGE

One Slot - 1.0" Slot Width Vertical Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**110**	**155**	**200**	**240**	**285**	**325**	**370**
	Static Pressure	0.009	0.025	0.048	0.078	0.116	0.161	0.213	0.273
	Total Pressure	0.012	0.032	0.062	0.101	0.149	0.208	0.275	0.353
	NC (Noise Criteria)	<15	20	26	30	34	37	40	43
	Throw	4 5 10	6 9 13	8 11 15	10 12 18	11 14 19	12 15 21	13 16 23	14 17 24
4 ft.	**Airflow, cfm**	**140**	**225**	**310**	**395**	**480**	**570**	**655**	**740**
	Static Pressure	0.014	0.036	0.068	0.112	0.166	0.230	0.305	0.390
	Total Pressure	0.025	0.065	0.124	0.203	0.300	0.419	0.555	0.709
	NC (Noise Criteria)	<15	22	28	32	36	39	42	45
	Throw	5 8 15	8 13 19	12 15 22	14 18 25	16 19 27	17 21 30	18 23 32	20 24 34
5 ft.	**Airflow, cfm**	**175**	**280**	**390**	**495**	**605**	**710**	**820**	**925**
	Static Pressure	0.018	0.046	0.089	0.145	0.215	0.299	0.396	0.507
	Total Pressure	0.035	0.092	0.178	0.288	0.428	0.592	0.788	1.005
	NC (Noise Criteria)	15	23	29	34	38	41	44	46
	Throw	7 10 16	11 17 21	15 21 24	19 23 28	21 26 31	23 28 33	25 30 36	26 32 38

One Slot - 1.0" Slot Width Vertical Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**110**	**155**	**200**	**240**	**285**	**325**	**370**
	Static Pressure	0.012	0.031	0.060	0.097	0.144	0.200	0.266	0.340
	Total Pressure	0.013	0.035	0.067	0.109	0.161	0.225	0.297	0.381
	NC (Noise Criteria)	<15	17	22	26	29	32	34	36
	Throw	4 5 10	6 9 13	8 11 15	10 12 18	11 14 19	12 15 21	13 16 23	14 17 24
4 ft.	**Airflow, cfm**	**140**	**225**	**310**	**395**	**480**	**570**	**655**	**740**
	Static Pressure	0.017	0.045	0.085	0.139	0.206	0.286	0.380	0.486
	Total Pressure	0.023	0.060	0.114	0.186	0.275	0.383	0.507	0.649
	NC (Noise Criteria)	<15	19	24	28	31	34	36	38
	Throw	5 8 15	8 13 19	12 15 22	14 18 25	16 19 27	17 21 30	18 23 32	20 24 34
5 ft.	**Airflow, cfm**	**175**	**280**	**390**	**495**	**605**	**710**	**820**	**925**
	Static Pressure	0.022	0.058	0.111	0.181	0.268	0.372	0.493	0.632
	Total Pressure	0.031	0.081	0.156	0.254	0.377	0.522	0.693	0.886
	NC (Noise Criteria)	<15	20	26	30	33	35	38	40
	Throw	7 10 16	11 17 21	15 21 24	19 23 28	21 26 31	23 28 33	25 30 36	26 32 38

One Slot - 1.0" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**110**	**155**	**200**	**240**	**285**	**325**	**370**
	Static Pressure	0.009	0.024	0.046	0.075	0.111	0.154	0.204	0.261
	Total Pressure	0.010	0.026	0.050	0.082	0.121	0.168	0.223	0.286
	NC (Noise Criteria)	-	<15	18	23	27	30	33	35
	Throw	4 5 10	6 9 13	8 11 15	10 12 18	11 14 19	12 15 21	13 16 23	14 17 24
4 ft.	**Airflow, cfm**	**140**	**225**	**310**	**395**	**480**	**570**	**655**	**740**
	Static Pressure	0.013	0.034	0.065	0.107	0.158	0.220	0.291	0.373
	Total Pressure	0.016	0.043	0.083	0.135	0.200	0.278	0.368	0.471
	NC (Noise Criteria)	-	<15	20	25	29	32	35	37
	Throw	5 8 15	8 13 19	12 15 22	14 18 25	16 19 27	17 21 30	18 23 32	20 24 34
5 ft.	**Airflow, cfm**	**175**	**280**	**390**	**495**	**605**	**710**	**820**	**925**
	Static Pressure	0.017	0.044	0.085	0.139	0.206	0.286	0.379	0.485
	Total Pressure	0.022	0.059	0.112	0.183	0.272	0.376	0.500	0.639
	NC (Noise Criteria)	<15	16	22	27	30	33	36	38
	Throw	7 10 16	11 17 21	15 21 24	19 23 28	21 26 31	23 28 33	25 30 36	26 32 38

One Slot - 1.5" Slot Width Vertical Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**80**	**140**	**200**	**260**	**320**	**380**	**440**	**500**
	Static Pressure	0.012	0.037	0.075	0.127	0.192	0.270	0.363	0.468
	Total Pressure	0.016	0.048	0.098	0.166	0.251	0.354	0.475	0.614
	NC (Noise Criteria)	<15	18	25	30	34	37	40	42
	Throw	3 5 10	6 9 15	9 12 18	11 14 20	13 16 22	14 17 24	15 18 26	16 20 28
4 ft.	**Airflow, cfm**	**160**	**280**	**400**	**520**	**640**	**760**	**880**	**1000**
	Static Pressure	0.017	0.052	0.107	0.181	0.274	0.386	0.518	0.669
	Total Pressure	0.032	0.098	0.200	0.338	0.512	0.723	0.969	1.251
	NC (Noise Criteria)	<15	20	27	32	36	39	42	44
	Throw	5 7 15	9 13 21	12 18 25	16 20 28	18 22 31	20 24 34	21 26 37	23 28 39
5 ft.	**Airflow, cfm**	**200**	**350**	**500**	**650**	**800**	**950**	**1100**	**1250**
	Static Pressure	0.022	0.068	0.139	0.235	0.356	0.502	0.673	0.869
	Total Pressure	0.046	0.139	0.285	0.481	0.729	1.028	1.378	1.779
	NC (Noise Criteria)	<15	22	28	33	37	40	43	46
	Throw	7 10 16	11 17 23	16 24 28	21 27 32	24 30 35	27 33 38	29 35 41	30 37 44

One Slot - 1.5" Slot Width Vertical Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**80**	**140**	**200**	**260**	**320**	**380**	**440**	**500**
	Static Pressure	0.008	0.026	0.052	0.088	0.134	0.189	0.253	0.326
	Total Pressure	0.010	0.031	0.064	0.108	0.164	0.231	0.310	0.401
	NC (Noise Criteria)	-	15	21	26	29	32	34	36
	Throw	3 5 10	6 9 15	9 12 18	11 14 20	13 16 22	14 17 24	15 18 26	16 20 28
4 ft.	**Airflow, cfm**	**160**	**280**	**400**	**520**	**640**	**760**	**880**	**1000**
	Static Pressure	0.012	0.037	0.075	0.126	0.191	0.269	0.361	0.466
	Total Pressure	0.020	0.060	0.122	0.206	0.313	0.441	0.591	0.763
	NC (Noise Criteria)	<15	17	23	28	31	34	36	38
	Throw	5 7 15	9 13 21	12 18 25	16 20 28	18 22 31	20 24 34	21 26 37	23 28 39
5 ft.	**Airflow, cfm**	**200**	**350**	**500**	**650**	**800**	**950**	**1100**	**1250**
	Static Pressure	0.016	0.048	0.097	0.164	0.248	0.350	0.469	0.606
	Total Pressure	0.027	0.084	0.171	0.289	0.438	0.618	0.829	1.070
	NC (Noise Criteria)	<15	19	25	29	32	35	37	40
	Throw	7 10 16	11 17 23	16 24 28	21 27 32	24 30 35	27 33 38	29 35 41	30 37 44

One Slot - 1.5" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**80**	**140**	**200**	**260**	**320**	**380**	**440**	**500**
	Static Pressure	0.006	0.020	0.040	0.068	0.103	0.145	0.194	0.250
	Total Pressure	0.008	0.023	0.047	0.080	0.121	0.170	0.229	0.295
	NC (Noise Criteria)	-	<15	17	22	26	30	32	35
	Throw	3 5 10	6 9 15	9 12 18	11 14 20	13 16 22	14 17 24	15 18 26	16 20 28
4 ft.	**Airflow, cfm**	**160**	**280**	**400**	**520**	**640**	**760**	**880**	**1000**
	Static Pressure	0.009	0.028	0.057	0.097	0.146	0.206	0.277	0.358
	Total Pressure	0.014	0.042	0.086	0.145	0.220	0.310	0.416	0.537
	NC (Noise Criteria)	-	<15	19	24	28	32	34	37
	Throw	5 7 15	9 13 21	12 18 25	16 20 28	18 22 31	20 24 34	21 26 37	23 28 39
5 ft.	**Airflow, cfm**	**200**	**350**	**500**	**650**	**800**	**950**	**1100**	**1250**
	Static Pressure	0.012	0.036	0.074	0.126	0.190	0.268	0.360	0.465
	Total Pressure	0.019	0.058	0.119	0.202	0.305	0.431	0.577	0.746
	NC (Noise Criteria)	-	<15	21	26	30	33	36	38
	Throw	7 10 16	11 17 23	16 24 28	21 27 32	24 30 35	27 33 38	29 35 41	30 37 44

1 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM-VERTICAL DISCHARGE

One Slot - 2.0" Slot Width Vertical Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**125**	**180**	**235**	**290**	**350**	**405**	**460**
	Static Pressure	0.007	0.024	0.051	0.088	0.134	0.191	0.257	0.333
	Total Pressure	0.010	0.033	0.070	0.120	0.183	0.262	0.353	0.456
	NC (Noise Criteria)	<15	19	25	31	35	38	41	44
	Throw	2 3 7	4 6 12	6 9 18	8 12 22	10 15 24	12 17 26	13 20 28	15 21 30
4 ft.	**Airflow, cfm**	**135**	**250**	**360**	**470**	**585**	**695**	**810**	**920**
	Static Pressure	0.010	0.035	0.073	0.125	0.192	0.272	0.367	0.476
	Total Pressure	0.021	0.071	0.148	0.254	0.391	0.554	0.749	0.969
	NC (Noise Criteria)	<15	21	27	33	37	40	43	46
	Throw	3 5 10	6 9 18	8 13 25	11 17 31	14 21 34	16 25 37	19 28 40	22 30 43
5 ft.	**Airflow, cfm**	**170**	**310**	**450**	**590**	**730**	**870**	**1010**	**1150**
	Static Pressure	0.014	0.045	0.095	0.163	0.249	0.354	0.477	0.619
	Total Pressure	0.030	0.101	0.213	0.366	0.560	0.795	1.071	1.389
	NC (Noise Criteria)	<15	22	29	34	38	41	44	47
	Throw	4 6 11	8 12 20	11 17 28	15 22 34	18 28 38	22 33 42	26 38 45	29 41 48

One Slot - 2.0" Slot Width Vertical Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**125**	**180**	**235**	**290**	**350**	**405**	**460**
	Static Pressure	0.006	0.020	0.041	0.071	0.109	0.155	0.209	0.271
	Total Pressure	0.007	0.024	0.051	0.088	0.134	0.191	0.258	0.334
	NC (Noise Criteria)	<15	15	22	26	30	32	35	37
	Throw	2 3 7	4 6 12	6 9 18	8 12 22	10 15 24	12 17 26	13 20 28	15 21 30
4 ft.	**Airflow, cfm**	**135**	**250**	**360**	**470**	**585**	**695**	**810**	**920**
	Static Pressure	0.008	0.028	0.059	0.102	0.156	0.221	0.298	0.387
	Total Pressure	0.014	0.047	0.098	0.167	0.257	0.365	0.493	0.638
	NC (Noise Criteria)	<15	17	24	28	32	34	37	39
	Throw	3 5 10	6 9 18	8 13 25	11 17 31	14 21 34	16 25 37	19 28 40	22 30 43
5 ft.	**Airflow, cfm**	**170**	**310**	**450**	**590**	**730**	**870**	**1010**	**1150**
	Static Pressure	0.011	0.037	0.077	0.132	0.203	0.288	0.388	0.503
	Total Pressure	0.020	0.065	0.137	0.236	0.361	0.513	0.691	0.896
	NC (Noise Criteria)	<15	19	25	30	33	36	38	41
	Throw	4 6 11	8 12 20	11 17 28	15 22 34	18 28 38	22 33 42	26 38 45	29 41 48

One Slot - 2.0" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**70**	**125**	**180**	**235**	**290**	**350**	**405**	**460**
	Static Pressure	0.004	0.012	0.026	0.044	0.067	0.095	0.129	0.167
	Total Pressure	0.005	0.015	0.031	0.054	0.082	0.117	0.158	0.205
	NC (Noise Criteria)	-	<15	18	23	27	31	33	36
	Throw	2 3 7	4 6 12	6 9 18	8 12 22	10 15 24	12 17 26	13 20 28	15 21 30
4 ft.	**Airflow, cfm**	**135**	**250**	**360**	**470**	**585**	**695**	**810**	**920**
	Static Pressure	0.005	0.017	0.036	0.063	0.096	0.136	0.184	0.238
	Total Pressure	0.008	0.029	0.060	0.102	0.157	0.223	0.302	0.390
	NC (Noise Criteria)	-	<15	20	25	29	33	35	38
	Throw	3 5 10	6 9 18	8 13 25	11 17 31	14 21 34	16 25 37	19 28 40	22 30 43
5 ft.	**Airflow, cfm**	**170**	**310**	**450**	**590**	**730**	**870**	**1010**	**1150**
	Static Pressure	0.007	0.022	0.047	0.081	0.125	0.177	0.239	0.309
	Total Pressure	0.012	0.040	0.084	0.144	0.220	0.313	0.422	0.547
	NC (Noise Criteria)	-	<15	22	27	31	34	37	39
	Throw	4 6 11	8 12 20	11 17 28	15 22 34	18 28 38	22 33 42	26 38 45	29 41 48

COMBO
1 SLOT VERTICAL

One Slot - 2.5" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**290**	**385**	**480**	**575**	**670**	**765**	**860**
	Static Pressure	0.017	0.037	0.065	0.101	0.145	0.196	0.256	0.324
	Total Pressure	0.023	0.052	0.091	0.142	0.204	0.277	0.361	0.456
	NC (Noise Criteria)	<15	22	27	32	35	38	40	42
	Throw	6 9 18	9 13 24	12 18 28	15 22 31	17 24 34	20 26 37	23 28 39	24 29 41
4 ft.	**Airflow, cfm**	**390**	**580**	**770**	**960**	**1150**	**1340**	**1530**	**1720**
	Static Pressure	0.024	0.053	0.093	0.144	0.207	0.281	0.366	0.462
	Total Pressure	0.051	0.113	0.199	0.310	0.444	0.603	0.786	0.994
	NC (Noise Criteria)	17	24	29	34	37	40	42	44
	Throw	8 13 25	12 19 34	17 25 39	21 31 44	25 34 48	29 37 52	32 39 55	34 41 59
5 ft.	**Airflow, cfm**	**490**	**725**	**965**	**1200**	**1440**	**1675**	**1915**	**2150**
	Static Pressure	0.031	0.068	0.120	0.187	0.269	0.365	0.475	0.601
	Total Pressure	0.074	0.163	0.288	0.446	0.641	0.869	1.134	1.432
	NC (Noise Criteria)	18	25	31	35	38	41	43	45
	Throw	11 17 28	17 25 38	22 33 44	28 42 49	33 45 54	39 49 58	43 52 62	45 56 66

One Slot - 3.0" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**290**	**385**	**480**	**575**	**670**	**765**	**860**
	Static Pressure	0.015	0.033	0.058	0.090	0.130	0.176	0.229	0.290
	Total Pressure	0.022	0.048	0.085	0.132	0.189	0.257	0.335	0.423
	NC (Noise Criteria)	-	<15	20	24	28	31	33	35
	Throw	6 9 18	9 13 24	12 18 28	15 22 31	17 24 34	20 26 37	23 28 39	24 29 41
4 ft.	**Airflow, cfm**	**390**	**580**	**770**	**960**	**1150**	**1340**	**1530**	**1720**
	Static Pressure	0.021	0.047	0.083	0.129	0.185	0.251	0.328	0.414
	Total Pressure	0.049	0.108	0.190	0.295	0.423	0.574	0.748	0.946
	NC (Noise Criteria)	<15	17	22	26	30	33	35	37
	Throw	8 13 25	12 19 34	17 25 39	21 31 44	25 34 48	29 37 52	32 39 55	34 41 59
5 ft.	**Airflow, cfm**	**490**	**725**	**965**	**1200**	**1440**	**1675**	**1915**	**2150**
	Static Pressure	0.028	0.061	0.108	0.168	0.241	0.327	0.426	0.538
	Total Pressure	0.071	0.156	0.275	0.426	0.613	0.831	1.085	1.369
	NC (Noise Criteria)	<15	18	24	28	31	34	37	39
	Throw	11 17 28	17 25 38	22 33 44	28 42 49	33 45 54	39 49 58	43 52 62	45 56 66

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

2 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM-HORIZONTAL DISCHARGE

Two Slot - 1.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**110**	**145**	**180**	**215**	**250**	**290**	**325**	**360**
	Static Pressure	0.037	0.065	0.102	0.147	0.200	0.261	0.331	0.408
	Total Pressure	0.044	0.078	0.121	0.174	0.236	0.310	0.392	0.484
	NC (Noise Criteria)	<15	17	22	26	30	34	37	40
	Throw	6 10 15	9 13 18	11 14 20	13 15 22	14 17 24	15 18 25	15 19 27	16 20 28
4 ft.	**Airflow, cfm**	**215**	**290**	**360**	**430**	**505**	**575**	**650**	**720**
	Static Pressure	0.041	0.073	0.113	0.163	0.222	0.290	0.367	0.454
	Total Pressure	0.068	0.122	0.189	0.271	0.371	0.483	0.613	0.755
	NC (Noise Criteria)	<15	19	24	28	32	36	39	42
	Throw	9 14 22	12 18 25	15 20 28	18 22 31	19 24 33	21 25 36	22 27 38	23 28 40
5 ft.	**Airflow, cfm**	**270**	**360**	**450**	**540**	**630**	**720**	**810**	**900**
	Static Pressure	0.045	0.080	0.125	0.180	0.244	0.319	0.404	0.499
	Total Pressure	0.087	0.155	0.243	0.349	0.476	0.621	0.786	0.971
	NC (Noise Criteria)	<15	20	25	30	34	37	40	43
	Throw	12 18 24	16 24 28	21 27 32	24 29 35	26 32 37	28 34 40	29 36 42	31 38 45

Two Slot - 1.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**110**	**145**	**180**	**215**	**250**	**290**	**325**	**360**
	Static Pressure	0.033	0.058	0.091	0.131	0.179	0.233	0.295	0.365
	Total Pressure	0.036	0.065	0.101	0.145	0.197	0.258	0.327	0.403
	NC (Noise Criteria)	<15	17	22	26	30	34	37	40
	Throw	6 10 15	9 13 18	11 14 20	13 15 22	14 17 24	15 18 25	15 19 27	16 20 28
4 ft.	**Airflow, cfm**	**215**	**290**	**360**	**430**	**505**	**575**	**650**	**720**
	Static Pressure	0.036	0.065	0.101	0.146	0.198	0.259	0.328	0.405
	Total Pressure	0.050	0.090	0.140	0.201	0.274	0.357	0.454	0.559
	NC (Noise Criteria)	<15	19	24	28	32	36	39	42
	Throw	9 14 22	12 18 25	15 20 28	18 22 31	19 24 33	21 25 36	22 27 38	23 28 40
5 ft.	**Airflow, cfm**	**270**	**360**	**450**	**540**	**630**	**720**	**810**	**900**
	Static Pressure	0.040	0.071	0.111	0.160	0.218	0.285	0.361	0.446
	Total Pressure	0.062	0.110	0.172	0.247	0.336	0.439	0.556	0.686
	NC (Noise Criteria)	<15	20	25	30	34	37	40	43
	Throw	12 18 24	16 24 28	21 27 32	24 29 35	26 32 37	28 34 40	29 36 42	31 38 45

Two Slot - 1.5" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**95**	**125**	**155**	**185**	**215**	**250**	**280**	**310**
	Static Pressure	0.018	0.033	0.051	0.073	0.100	0.130	0.165	0.203
	Total Pressure	0.024	0.042	0.065	0.093	0.127	0.166	0.210	0.259
	NC (Noise Criteria)	<15	17	22	27	31	34	37	40
	Throw	4 7 14	6 9 17	8 11 18	9 14 20	11 15 22	12 17 23	14 18 25	15 18 26
4 ft.	**Airflow, cfm**	**185**	**250**	**310**	**370**	**435**	**495**	**560**	**620**
	Static Pressure	0.020	0.036	0.056	0.081	0.111	0.145	0.183	0.226
	Total Pressure	0.040	0.073	0.112	0.161	0.221	0.287	0.366	0.450
	NC (Noise Criteria)	<15	19	24	29	33	36	39	42
	Throw	5 10 19	9 13 23	11 16 26	13 19 29	15 22 31	17 23 33	19 25 35	21 26 37
5 ft.	**Airflow, cfm**	**235**	**310**	**390**	**465**	**545**	**620**	**700**	**775**
	Static Pressure	0.022	0.040	0.062	0.089	0.122	0.159	0.201	0.248
	Total Pressure	0.055	0.096	0.151	0.215	0.295	0.383	0.486	0.598
	NC (Noise Criteria)	15	21	26	30	34	38	41	43
	Throw	7 13 22	12 17 26	14 22 29	17 26 32	20 29 35	23 31 37	26 33 39	29 35 41

Two Slot - 1.5" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**95**	**125**	**155**	**185**	**215**	**250**	**280**	**310**
	Static Pressure	0.017	0.030	0.047	0.068	0.092	0.120	0.152	0.188
	Total Pressure	0.019	0.033	0.051	0.074	0.100	0.132	0.166	0.205
	NC (Noise Criteria)	<15	17	22	26	30	34	37	39
	Throw	4 7 14	6 9 17	8 11 18	9 14 20	11 15 22	12 17 23	14 18 25	15 18 26
4 ft.	**Airflow, cfm**	**185**	**250**	**310**	**370**	**435**	**495**	**560**	**620**
	Static Pressure	0.019	0.033	0.052	0.075	0.102	0.134	0.169	0.209
	Total Pressure	0.025	0.045	0.070	0.100	0.136	0.178	0.226	0.278
	NC (Noise Criteria)	<15	19	24	28	32	36	39	41
	Throw	5 10 19	9 13 23	11 16 26	13 19 29	15 22 31	17 23 33	19 25 35	21 26 37
5 ft.	**Airflow, cfm**	**235**	**310**	**390**	**465**	**545**	**620**	**700**	**775**
	Static Pressure	0.021	0.037	0.057	0.083	0.113	0.147	0.186	0.230
	Total Pressure	0.031	0.054	0.085	0.122	0.166	0.216	0.274	0.338
	NC (Noise Criteria)	<15	20	25	30	34	37	40	43
	Throw	7 13 22	12 17 26	14 22 29	17 26 32	20 29 35	23 31 37	26 33 39	29 35 41

Two Slot - 2.0" Slot Width Horizontal Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**100**	**140**	**175**	**210**	**250**	**285**	**325**	**360**
	Static Pressure	0.015	0.028	0.044	0.065	0.090	0.119	0.151	0.188
	Total Pressure	0.021	0.039	0.062	0.091	0.126	0.166	0.213	0.264
	NC (Noise Criteria)	<15	17	22	27	31	35	38	41
	Throw	6 9 15	8 12 17	11 14 20	12 15 22	14 17 23	14 18 25	15 19 27	16 20 28
4 ft.	**Airflow, cfm**	**200**	**275**	**350**	**425**	**500**	**570**	**645**	**720**
	Static Pressure	0.016	0.031	0.049	0.072	0.100	0.132	0.168	0.209
	Total Pressure	0.040	0.075	0.121	0.178	0.246	0.321	0.410	0.511
	NC (Noise Criteria)	<15	19	24	29	33	37	40	43
	Throw	4 9 18	7 12 25	11 16 28	13 19 31	15 22 33	17 25 36	19 27 38	22 28 40
5 ft.	**Airflow, cfm**	**255**	**345**	**440**	**530**	**625**	**715**	**810**	**900**
	Static Pressure	0.018	0.034	0.054	0.080	0.110	0.145	0.185	0.230
	Total Pressure	0.056	0.103	0.167	0.243	0.337	0.443	0.567	0.701
	NC (Noise Criteria)	<15	20	26	30	34	38	41	44
	Throw	5 12 20	10 17 28	14 21 31	17 26 34	20 30 37	23 34 40	26 36 42	29 38 45

Two Slot - 2.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**100**	**140**	**175**	**210**	**250**	**285**	**325**	**360**
	Static Pressure	0.013	0.024	0.039	0.057	0.079	0.104	0.133	0.165
	Total Pressure	0.015	0.028	0.044	0.065	0.090	0.119	0.152	0.188
	NC (Noise Criteria)	<15	17	22	27	31	35	38	41
	Throw	3 6 13	5 9 17	7 11 20	9 14 22	11 16 23	12 18 25	14 19 27	15 20 28
4 ft.	**Airflow, cfm**	**200**	**275**	**350**	**425**	**500**	**570**	**645**	**720**
	Static Pressure	0.014	0.027	0.043	0.063	0.088	0.116	0.147	0.183
	Total Pressure	0.022	0.040	0.065	0.096	0.132	0.174	0.222	0.276
	NC (Noise Criteria)	<15	19	24	29	33	37	40	43
	Throw	4 9 18	7 12 25	11 16 28	13 19 31	15 22 33	17 25 36	19 27 38	22 28 40
5 ft.	**Airflow, cfm**	**255**	**345**	**440**	**530**	**625**	**715**	**810**	**900**
	Static Pressure	0.016	0.030	0.048	0.070	0.096	0.127	0.162	0.201
	Total Pressure	0.028	0.051	0.082	0.120	0.167	0.219	0.280	0.347
	NC (Noise Criteria)	<15	20	26	30	34	38	41	44
	Throw	5 12 20	10 17 28	14 21 31	17 26 34	20 30 37	23 34 40	26 36 42	29 38 45

2 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM-HORIZONTAL DISCHARGE

Two Slot - 2.5" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**140**	**185**	**230**	**275**	**320**	**370**	**415**	**460**
	Static Pressure	0.015	0.027	0.042	0.061	0.083	0.108	0.137	0.169
	Total Pressure	0.021	0.037	0.058	0.083	0.113	0.149	0.188	0.232
	NC (Noise Criteria)	<15	17	22	26	30	33	37	39
	Throw	4 8 16	6 11 20	9 13 23	11 16 25	12 18 27	14 20 28	16 21 30	18 23 32
4 ft.	**Airflow, cfm**	**275**	**370**	**460**	**550**	**645**	**735**	**830**	**920**
	Static Pressure	0.017	0.030	0.047	0.068	0.092	0.120	0.152	0.188
	Total Pressure	0.039	0.071	0.110	0.157	0.216	0.281	0.357	0.439
	NC (Noise Criteria)	<15	19	24	28	32	35	39	41
	Throw	5 11 22	9 15 28	12 19 32	15 22 35	17 26 38	20 28 40	22 30 43	25 32 45
5 ft.	**Airflow, cfm**	**345**	**460**	**575**	**690**	**805**	**920**	**1035**	**1150**
	Static Pressure	0.019	0.033	0.052	0.074	0.101	0.132	0.167	0.207
	Total Pressure	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.599
	NC (Noise Criteria)	<15	20	25	30	33	37	40	43
	Throw	7 15 25	12 20 32	17 25 36	20 30 39	23 35 42	27 38 45	30 41 48	33 43 50

Two Slot - 2.5" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**140**	**185**	**230**	**275**	**320**	**370**	**415**	**460**
	Static Pressure	0.014	0.025	0.039	0.056	0.076	0.099	0.125	0.155
	Total Pressure	0.017	0.031	0.048	0.069	0.094	0.124	0.156	0.193
	NC (Noise Criteria)	<15	16	21	25	29	32	35	38
	Throw	4 8 16	6 11 20	9 13 23	11 16 25	12 18 27	14 20 28	16 21 30	18 23 32
4 ft.	**Airflow, cfm**	**275**	**370**	**460**	**550**	**645**	**735**	**830**	**920**
	Static Pressure	0.015	0.028	0.043	0.062	0.084	0.110	0.139	0.172
	Total Pressure	0.029	0.052	0.081	0.116	0.159	0.207	0.263	0.324
	NC (Noise Criteria)	<15	18	23	27	31	34	37	40
	Throw	5 11 22	9 15 28	12 19 32	15 22 35	17 26 38	20 28 40	22 30 43	25 32 45
5 ft.	**Airflow, cfm**	**345**	**460**	**575**	**690**	**805**	**920**	**1035**	**1150**
	Static Pressure	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189
	Total Pressure	0.038	0.068	0.107	0.154	0.209	0.273	0.346	0.427
	NC (Noise Criteria)	<15	19	24	28	32	36	39	42
	Throw	7 15 25	12 20 32	17 25 36	20 30 39	23 35 42	27 38 45	30 41 48	33 43 50

Two Slot - 3.0" Slot Width Horizontal Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**
	Static Pressure	0.015	0.027	0.042	0.061	0.083	0.108	0.137	0.169
	Total Pressure	0.022	0.039	0.061	0.087	0.119	0.156	0.197	0.243
	NC (Noise Criteria)	<15	17	22	26	30	34	37	40
	Throw	3 7 16	6 10 21	9 13 23	10 16 26	12 18 28	14 21 30	16 22 32	17 23 33
4 ft.	**Airflow, cfm**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**
	Static Pressure	0.017	0.030	0.047	0.068	0.092	0.120	0.152	0.188
	Total Pressure	0.044	0.078	0.121	0.174	0.237	0.310	0.392	0.485
	NC (Noise Criteria)	<15	19	24	28	32	36	39	42
	Throw	5 10 22	8 15 29	12 18 33	15 22 36	17 26 39	20 29 42	22 32 45	25 33 47
5 ft.	**Airflow, cfm**	**375**	**500**	**625**	**750**	**875**	**1000**	**1125**	**1250**
	Static Pressure	0.019	0.033	0.052	0.074	0.101	0.132	0.167	0.206
	Total Pressure	0.060	0.107	0.168	0.241	0.328	0.429	0.543	0.670
	NC (Noise Criteria)	<15	20	25	30	34	37	40	43
	Throw	6 14 25	11 20 33	16 25 37	20 30 41	23 35 44	26 40 47	30 42 50	33 45 53

Two Slot - 3.0" Slot Width Horizontal Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**
	Static Pressure	0.014	0.026	0.040	0.058	0.079	0.103	0.130	0.160
	Total Pressure	0.018	0.033	0.051	0.074	0.101	0.131	0.166	0.205
	NC (Noise Criteria)	<15	16	21	25	29	32	35	38
	Throw	3 7 16	6 10 21	9 13 23	10 16 26	12 18 28	14 21 30	16 22 32	17 23 33
4 ft.	**Airflow, cfm**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**
	Static Pressure	0.016	0.029	0.045	0.064	0.087	0.114	0.144	0.178
	Total Pressure	0.032	0.057	0.089	0.129	0.175	0.229	0.290	0.358
	NC (Noise Criteria)	<15	18	23	27	31	34	37	40
	Throw	5 10 22	8 15 29	12 18 33	15 22 36	17 26 39	20 29 42	22 32 45	25 33 47
5 ft.	**Airflow, cfm**	**375**	**500**	**625**	**750**	**875**	**1000**	**1125**	**1250**
	Static Pressure	0.018	0.031	0.049	0.071	0.096	0.125	0.159	0.196
	Total Pressure	0.043	0.076	0.119	0.172	0.234	0.305	0.386	0.477
	NC (Noise Criteria)	<15	19	24	29	32	36	39	42
	Throw	6 14 25	11 20 33	16 25 37	20 30 41	23 35 44	26 40 47	30 42 50	33 45 53

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

2 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM-VERTICAL DISCHARGE

Two Slot - 1.0" Slot Width Vertical Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**95**	**150**	**205**	**260**	**315**	**370**	**425**	**480**
	Static Pressure	0.013	0.032	0.059	0.095	0.139	0.192	0.253	0.323
	Total Pressure	0.018	0.045	0.083	0.134	0.197	0.271	0.358	0.457
	NC (Noise Criteria)	<15	20	25	30	33	36	39	42
	Throw	3 4 8	4 6 13	6 9 17	7 11 22	9 13 27	10 16 30	12 18 32	14 20 34
4 ft.	**Airflow, cfm**	**190**	**300**	**410**	**520**	**630**	**740**	**850**	**960**
	Static Pressure	0.018	0.045	0.084	0.135	0.198	0.274	0.361	0.461
	Total Pressure	0.039	0.097	0.182	0.293	0.430	0.593	0.782	0.997
	NC (Noise Criteria)	<15	22	27	32	35	38	41	44
	Throw	4 6 11	6 9 18	8 12 25	10 16 31	13 19 38	15 22 42	17 26 45	19 29 48
5 ft.	**Airflow, cfm**	**240**	**375**	**515**	**650**	**790**	**925**	**1065**	**1200**
	Static Pressure	0.023	0.059	0.109	0.176	0.258	0.356	0.470	0.599
	Total Pressure	0.057	0.140	0.264	0.422	0.621	0.854	1.130	1.437
	NC (Noise Criteria)	15	23	29	33	37	40	43	45
	Throw	5 8 13	8 12 20	11 17 28	14 21 35	17 25 42	20 30 47	23 34 51	26 39 54

Two Slot - 1.0" Slot Width Vertical Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**95**	**150**	**205**	**260**	**315**	**370**	**425**	**480**
	Static Pressure	0.007	0.018	0.034	0.055	0.081	0.111	0.147	0.187
	Total Pressure	0.010	0.025	0.047	0.075	0.110	0.152	0.200	0.256
	NC (Noise Criteria)	<15	16	22	26	29	31	33	35
	Throw	3 4 8	4 6 13	6 9 17	7 11 22	9 13 27	10 16 30	12 18 32	14 20 34
4 ft.	**Airflow, cfm**	**190**	**300**	**410**	**520**	**630**	**740**	**850**	**960**
	Static Pressure	0.010	0.026	0.049	0.078	0.115	0.159	0.210	0.267
	Total Pressure	0.021	0.053	0.099	0.159	0.233	0.321	0.424	0.541
	NC (Noise Criteria)	<15	18	24	28	31	33	35	37
	Throw	4 6 11	6 9 18	8 12 25	10 16 31	13 19 38	15 22 42	17 26 45	19 29 48
5 ft.	**Airflow, cfm**	**240**	**375**	**515**	**650**	**790**	**925**	**1065**	**1200**
	Static Pressure	0.014	0.034	0.063	0.102	0.150	0.206	0.272	0.347
	Total Pressure	0.031	0.076	0.142	0.227	0.335	0.461	0.609	0.775
	NC (Noise Criteria)	<15	20	25	29	32	35	37	39
	Throw	5 8 13	8 12 20	11 17 28	14 21 35	17 25 42	20 30 47	23 34 51	26 39 54

Two Slot - 1.0" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**95**	**150**	**205**	**260**	**315**	**370**	**425**	**480**
	Static Pressure	0.009	0.022	0.041	0.066	0.097	0.134	0.177	0.226
	Total Pressure	0.010	0.026	0.049	0.078	0.115	0.159	0.209	0.267
	NC (Noise Criteria)	-	<15	18	22	26	29	32	34
	Throw	3 4 8	4 6 13	6 9 17	7 11 22	9 13 27	10 16 30	12 18 32	14 20 34
4 ft.	**Airflow, cfm**	**190**	**300**	**410**	**520**	**630**	**740**	**850**	**960**
	Static Pressure	0.013	0.032	0.059	0.095	0.139	0.192	0.253	0.323
	Total Pressure	0.019	0.048	0.089	0.143	0.210	0.290	0.383	0.488
	NC (Noise Criteria)	-	<15	20	24	28	31	34	36
	Throw	4 6 11	6 9 18	8 12 25	10 16 31	13 19 38	15 22 42	17 26 45	19 29 48
5 ft.	**Airflow, cfm**	**240**	**375**	**515**	**650**	**790**	**925**	**1065**	**1200**
	Static Pressure	0.016	0.041	0.076	0.123	0.181	0.249	0.329	0.419
	Total Pressure	0.027	0.066	0.124	0.199	0.293	0.403	0.533	0.678
	NC (Noise Criteria)	<15	16	21	26	29	33	35	37
	Throw	5 8 13	8 12 20	11 17 28	14 21 35	17 25 42	20 30 47	23 34 51	26 39 54

Two Slot - 1.5" Slot Width Vertical Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**310**	**420**	**530**	**645**	**755**	**870**	**980**
	Static Pressure	0.027	0.066	0.123	0.198	0.290	0.400	0.527	0.672
	Total Pressure	0.049	0.122	0.226	0.362	0.533	0.732	0.968	1.231
	NC (Noise Criteria)	<15	20	26	30	34	37	40	42
	Throw	5 7 14	7 11 21	10 15 29	12 18 36	15 22 39	18 26 43	20 30 46	23 34 49
4 ft.	**Airflow, cfm**	**390**	**615**	**840**	**1065**	**1290**	**1510**	**1735**	**1960**
	Static Pressure	0.038	0.095	0.176	0.283	0.415	0.572	0.753	0.960
	Total Pressure	0.127	0.315	0.587	0.943	1.384	1.899	2.506	3.197
	NC (Noise Criteria)	<15	22	28	32	36	39	42	44
	Throw	6 10 19	10 15 30	14 21 41	17 26 51	21 32 56	25 37 60	28 43 65	32 48 69
5 ft.	**Airflow, cfm**	**490**	**770**	**1050**	**1330**	**1610**	**1890**	**2170**	**2450**
	Static Pressure	0.050	0.123	0.229	0.368	0.539	0.743	0.979	1.249
	Total Pressure	0.190	0.469	0.871	1.398	2.048	2.823	3.721	4.743
	NC (Noise Criteria)	16	24	29	34	37	40	43	46
	Throw	9 13 22	14 20 34	18 28 46	23 35 57	28 42 62	33 50 68	38 57 72	43 65 77

Two Slot - 1.5" Slot Width Vertical Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**310**	**420**	**530**	**645**	**755**	**870**	**980**
	Static Pressure	0.018	0.044	0.081	0.131	0.192	0.264	0.348	0.444
	Total Pressure	0.029	0.072	0.134	0.214	0.315	0.433	0.573	0.729
	NC (Noise Criteria)	<15	20	25	29	32	34	37	39
	Throw	5 7 14	7 11 21	10 15 29	12 18 36	15 22 39	18 26 43	20 30 46	23 34 49
4 ft.	**Airflow, cfm**	**390**	**615**	**840**	**1065**	**1290**	**1510**	**1735**	**1960**
	Static Pressure	0.025	0.063	0.116	0.187	0.274	0.377	0.497	0.634
	Total Pressure	0.071	0.175	0.326	0.524	0.768	1.054	1.391	1.775
	NC (Noise Criteria)	<15	22	27	31	34	36	39	41
	Throw	6 10 19	10 15 30	14 21 41	17 26 51	21 32 56	25 37 60	28 43 65	32 48 69
5 ft.	**Airflow, cfm**	**490**	**770**	**1050**	**1330**	**1610**	**1890**	**2170**	**2450**
	Static Pressure	0.033	0.081	0.151	0.243	0.356	0.490	0.646	0.824
	Total Pressure	0.104	0.258	0.479	0.768	1.126	1.551	2.045	2.607
	NC (Noise Criteria)	16	23	29	32	35	38	40	43
	Throw	9 13 22	14 20 34	18 28 46	23 35 57	28 42 62	33 50 68	38 57 72	43 65 77

Two Slot - 1.5" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**195**	**310**	**420**	**530**	**645**	**755**	**870**	**980**
	Static Pressure	0.017	0.042	0.077	0.124	0.181	0.250	0.330	0.420
	Total Pressure	0.024	0.059	0.109	0.174	0.256	0.352	0.466	0.593
	NC (Noise Criteria)	-	<15	18	23	26	29	32	34
	Throw	5 7 14	7 11 21	10 15 29	12 18 36	15 22 39	18 26 43	20 30 46	23 34 49
4 ft.	**Airflow, cfm**	**390**	**615**	**840**	**1065**	**1290**	**1510**	**1735**	**1960**
	Static Pressure	0.024	0.059	0.110	0.177	0.259	0.357	0.471	0.600
	Total Pressure	0.051	0.127	0.237	0.381	0.558	0.767	1.012	1.291
	NC (Noise Criteria)	-	<15	20	25	28	31	34	36
	Throw	6 10 19	10 15 30	14 21 41	17 26 51	21 32 56	25 37 60	28 43 65	32 48 69
5 ft.	**Airflow, cfm**	**490**	**770**	**1050**	**1330**	**1610**	**1890**	**2170**	**2450**
	Static Pressure	0.031	0.077	0.143	0.230	0.337	0.464	0.612	0.780
	Total Pressure	0.074	0.184	0.341	0.548	0.803	1.106	1.458	1.859
	NC (Noise Criteria)	<15	16	22	26	30	33	36	38
	Throw	9 13 22	14 20 34	18 28 46	23 35 57	28 42 62	33 50 68	38 57 72	43 65 77

2 SLOT COMBO BLADE PATTERN CONTROLLER WITH METALAIRE PLENUM-VERTICAL DISCHARGE

Two Slot - 2.0" Slot Width Vertical Throw 8" Oval Inlet

2 ft.	**Airflow, cfm**	**170**	**260**	**350**	**440**	**530**	**620**	**710**	**800**
	Static Pressure	0.044	0.104	0.188	0.296	0.430	0.589	0.772	0.980
	Total Pressure	0.061	0.143	0.259	0.409	0.594	0.812	1.065	1.353
	NC (Noise Criteria)	-	<15	19	23	27	30	32	34
	Throw	3 5 10	5 8 16	7 11 21	9 13 27	11 16 29	13 19 32	14 22 34	16 24 36
4 ft.	**Airflow, cfm**	**340**	**520**	**700**	**880**	**1060**	**1240**	**1420**	**1600**
	Static Pressure	0.063	0.148	0.268	0.424	0.614	0.841	1.103	1.400
	Total Pressure	0.131	0.305	0.553	0.874	1.269	1.736	2.277	2.890
	NC (Noise Criteria)	<15	16	21	25	29	32	34	36
	Throw	5 7 15	7 11 22	10 15 30	13 19 38	15 23 41	18 27 45	20 31 48	23 34 51
5 ft.	**Airflow, cfm**	**425**	**650**	**875**	**1100**	**1325**	**1550**	**1775**	**2000**
	Static Pressure	0.082	0.192	0.348	0.551	0.799	1.093	1.434	1.820
	Total Pressure	0.187	0.438	0.794	1.255	1.821	2.492	3.268	4.149
	NC (Noise Criteria)	<15	18	23	27	30	33	36	38
	Throw	7 10 16	10 15 25	13 20 34	17 25 42	20 31 46	24 36 50	27 41 54	31 46 57

Two Slot - 2.0" Slot Width Vertical Throw 10" Oval Inlet

2 ft.	**Airflow, cfm**	**170**	**260**	**350**	**440**	**530**	**620**	**710**	**800**
	Static Pressure	0.008	0.019	0.035	0.056	0.081	0.110	0.145	0.184
	Total Pressure	0.017	0.039	0.072	0.113	0.164	0.225	0.294	0.374
	NC (Noise Criteria)	<15	21	26	29	32	35	37	40
	Throw	3 5 10	5 8 16	7 11 21	9 13 27	11 16 29	13 19 32	14 22 34	16 24 36
4 ft.	**Airflow, cfm**	**340**	**520**	**700**	**880**	**1060**	**1240**	**1420**	**1600**
	Static Pressure	0.012	0.028	0.050	0.079	0.115	0.158	0.207	0.262
	Total Pressure	0.046	0.108	0.196	0.309	0.449	0.614	0.806	1.023
	NC (Noise Criteria)	15	23	28	31	34	37	39	42
	Throw	5 7 15	7 11 22	10 15 30	13 19 38	15 23 41	18 27 45	20 31 48	23 34 51
5 ft.	**Airflow, cfm**	**425**	**650**	**875**	**1100**	**1325**	**1550**	**1775**	**2000**
	Static Pressure	0.015	0.036	0.065	0.103	0.150	0.205	0.269	0.341
	Total Pressure	0.069	0.162	0.293	0.463	0.671	0.919	1.205	1.529
	NC (Noise Criteria)	17	24	29	33	36	38	41	43
	Throw	7 10 16	10 15 25	13 20 34	17 25 42	20 31 46	24 36 50	27 41 54	31 46 57

Two Slot - 2.0" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**170**	**260**	**350**	**440**	**530**	**620**	**710**	**800**
	Static Pressure	0.008	0.020	0.036	0.057	0.083	0.113	0.148	0.188
	Total Pressure	0.014	0.032	0.058	0.092	0.133	0.182	0.239	0.303
	NC (Noise Criteria)	<15	17	22	27	30	33	36	38
	Throw	3 5 10	5 8 16	7 11 21	9 13 27	11 16 29	13 19 32	14 22 34	16 24 36
4 ft.	**Airflow, cfm**	**340**	**520**	**700**	**880**	**1060**	**1240**	**1420**	**1600**
	Static Pressure	0.012	0.028	0.051	0.081	0.118	0.161	0.212	0.269
	Total Pressure	0.033	0.077	0.139	0.220	0.320	0.438	0.574	0.729
	NC (Noise Criteria)	<15	19	24	29	32	35	38	40
	Throw	5 7 15	7 11 22	10 15 30	13 19 38	15 23 41	18 27 45	20 31 48	23 34 51
5 ft.	**Airflow, cfm**	**425**	**650**	**875**	**1100**	**1325**	**1550**	**1775**	**2000**
	Static Pressure	0.016	0.037	0.067	0.106	0.153	0.210	0.275	0.349
	Total Pressure	0.048	0.113	0.204	0.323	0.469	0.642	0.841	1.068
	NC (Noise Criteria)	<15	20	26	30	34	37	39	41
	Throw	7 10 16	10 15 25	13 20 34	17 25 42	20 31 46	24 36 50	27 41 54	31 46 57

Two Slot - 2.5" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**215**	**330**	**440**	**550**	**665**	**775**	**890**	**1000**
	Static Pressure	0.009	0.021	0.038	0.060	0.086	0.118	0.155	0.196
	Total Pressure	0.017	0.041	0.073	0.114	0.166	0.226	0.297	0.376
	NC (Noise Criteria)	<15	17	23	27	30	33	36	38
	Throw	4 6 12	6 9 18	8 12 24	10 15 30	12 18 33	14 21 35	16 24 38	18 27 40
4 ft.	**Airflow, cfm**	**430**	**655**	**880**	**1105**	**1330**	**1550**	**1775**	**2000**
	Static Pressure	0.013	0.030	0.054	0.085	0.123	0.169	0.221	0.280
	Total Pressure	0.046	0.107	0.193	0.305	0.441	0.600	0.787	0.999
	NC (Noise Criteria)	<15	19	25	29	32	35	38	40
	Throw	6 8 17	8 13 25	11 17 34	14 21 42	17 26 46	20 30 50	23 34 54	26 38 57
5 ft.	**Airflow, cfm**	**540**	**820**	**1100**	**1380**	**1660**	**1940**	**2220**	**2500**
	Static Pressure	0.017	0.039	0.070	0.111	0.160	0.219	0.287	0.364
	Total Pressure	0.069	0.160	0.288	0.453	0.656	0.895	1.173	1.487
	NC (Noise Criteria)	<15	21	26	30	34	37	39	41
	Throw	7 11 19	11 17 28	15 23 38	19 28 47	23 34 52	27 40 56	31 46 60	34 52 64

Two Slot - 3.0" Slot Width Vertical Throw 12" Oval Inlet

2 ft.	**Airflow, cfm**	**430**	**595**	**760**	**925**	**1090**	**1250**	**1415**	**1580**
	Static Pressure	0.022	0.042	0.068	0.101	0.139	0.185	0.236	0.294
	Total Pressure	0.055	0.105	0.172	0.254	0.353	0.465	0.596	0.743
	NC (Noise Criteria)	<15	19	24	28	31	34	36	38
	Throw	7 11 21	10 15 30	13 19 35	15 23 39	18 27 42	21 31 45	23 34 48	26 36 51
4 ft.	**Airflow, cfm**	**865**	**1190**	**1520**	**1850**	**2175**	**2505**	**2830**	**3160**
	Static Pressure	0.031	0.060	0.097	0.144	0.199	0.264	0.337	0.420
	Total Pressure	0.166	0.314	0.512	0.759	1.049	1.391	1.776	2.214
	NC (Noise Criteria)	16	21	26	30	33	36	38	40
	Throw	10 15 30	14 21 42	18 27 50	22 32 55	25 38 59	29 44 64	33 48 68	37 51 72
5 ft.	**Airflow, cfm**	**1080**	**1490**	**1900**	**2310**	**2720**	**3130**	**3540**	**3950**
	Static Pressure	0.041	0.078	0.126	0.187	0.259	0.343	0.439	0.546
	Total Pressure	0.250	0.477	0.775	1.146	1.588	2.103	2.690	3.350
	NC (Noise Criteria)	17	23	28	31	34	37	39	41
	Throw	14 20 34	19 28 47	24 36 55	29 43 61	34 51 66	39 59 71	44 64 76	50 68 80

COMBO 2 SLOT VERTICAL

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Performance data is based on an insulated plenum.

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

PRESSURIZED CEILING PLENUM WITH COMBO BLADE PATTERN CONTROLLER-HORIZONTAL FLOW

1.0" Slot Width	1 Slot	**Airflow, cfm/lf**	**25**	**40**	**65**	**80**	**95**	**110**	**125**	**140**
		Static Pressure	0.023	0.058	0.152	0.230	0.325	0.436	0.563	0.706
		NC (Noise Criteria)	<15	21	35	40	45	49	52	55
		Throw	6 11 15	9 13 19	12 17 24	13 19 27	14 20 29	15 22 31	16 23 33	17 25 35
	2 Slots	**Airflow, cfm/lf**	**40**	**60**	**100**	**120**	**145**	**165**	**190**	**210**
		Static Pressure	0.015	0.033	0.092	0.133	0.194	0.251	0.333	0.406
		NC (Noise Criteria)	<15	18	30	35	41	44	48	51
		Throw	5 13 19	10 16 23	15 21 30	16 23 33	18 25 36	19 27 38	20 29 41	21 30 43
1.5" Slot Width	1 Slot	**Airflow, cfm/lf**	**30**	**50**	**80**	**95**	**115**	**130**	**150**	**170**
		Static Pressure	0.023	0.063	0.160	0.226	0.331	0.423	0.563	0.723
		NC (Noise Criteria)	<15	19	31	36	41	45	48	52
		Throw	5 12 16	9 15 21	13 19 27	14 20 29	16 23 32	17 24 34	18 26 36	19 27 39
	2 Slots	**Airflow, cfm/lf**	**45**	**75**	**120**	**145**	**175**	**195**	**225**	**255**
		Static Pressure	0.013	0.037	0.094	0.137	0.200	0.248	0.330	0.424
		NC (Noise Criteria)	<15	16	26	31	36	39	44	47
		Throw	6 14 20	12 18 26	16 23 33	18 25 36	19 28 39	20 29 41	22 32 45	23 34 47
2.0" Slot Width	1 Slot	**Airflow, cfm/lf**	**35**	**55**	**90**	**110**	**110**	**155**	**175**	**195**
		Static Pressure	0.025	0.061	0.162	0.242	0.242	0.481	0.613	0.761
		NC (Noise Criteria)	<15	15	27	33	33	42	46	48
		Throw	4 12 18	9 16 22	14 20 28	15 22 31	15 22 31	18 26 37	19 28 39	20 29 41
	2 Slots	**Airflow, cfm/lf**	**55**	**85**	**135**	**165**	**165**	**235**	**265**	**295**
		Static Pressure	0.015	0.037	0.093	0.139	0.139	0.283	0.360	0.446
		NC (Noise Criteria)	-	<15	23	28	28	37	41	44
		Throw	4 13 22	9 19 27	16 24 35	19 27 38	19 27 38	22 32 46	24 34 48	25 36 51
2.5" Slot Width	1 Slot	**Airflow, cfm/lf**	**40**	**60**	**100**	**120**	**145**	**165**	**190**	**210**
		Static Pressure	0.025	0.056	0.156	0.225	0.329	0.426	0.564	0.689
		NC (Noise Criteria)	-	<15	24	29	34	38	42	44
		Throw	4 12 19	8 16 23	14 21 30	16 23 33	18 25 36	19 27 38	20 29 41	21 30 43
	2 Slots	**Airflow, cfm/lf**	**60**	**90**	**150**	**180**	**220**	**250**	**285**	**315**
		Static Pressure	0.014	0.033	0.091	0.130	0.195	0.252	0.327	0.400
		NC (Noise Criteria)	-	<15	20	24	29	33	37	39
		Throw	3 13 23	7 19 28	15 26 36	19 28 40	22 31 44	23 33 47	25 35 50	26 37 53
3.0" Slot Width	1 Slot	**Airflow, cfm/lf**	**45**	**70**	**115**	**145**	**170**	**200**	**225**	**250**
		Static Pressure	0.023	0.055	0.149	0.237	0.325	0.450	0.570	0.703
		NC (Noise Criteria)	-	<15	23	29	33	38	41	44
		Throw	4 12 20	9 18 25	15 23 32	18 25 36	19 27 39	21 30 42	22 32 45	23 33 47
	2 Slots	**Airflow, cfm/lf**	**70**	**105**	**175**	**220**	**255**	**300**	**340**	**375**
		Static Pressure	0.014	0.032	0.090	0.142	0.191	0.264	0.339	0.413
		NC (Noise Criteria)	-	<15	19	25	28	33	36	39
		Throw	3 14 25	7 20 30	16 28 39	21 31 44	23 34 47	25 36 51	27 39 55	28 41 58

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

PRESSURIZED CEILING PLENUM WITH COMBO BLADE PATTERN CONTROLLER-VERTICAL FLOW

1.0" Slot Width	1 Slot	**Airflow, cfm/lf**	**50**	**75**	**100**	**120**	**140**	**160**	**180**	**200**
		Static Pressure	0.033	0.074	0.131	0.189	0.257	0.335	0.424	0.524
		NC (Noise Criteria)	<15	20	25	29	32	34	36	38
		Throw	3 11 18	4 15 22	5 18 25	6 19 27	7 21 29	9 22 31	10 24 33	11 25 35
	2 Slots	**Airflow, cfm/lf**	**75**	**115**	**150**	**180**	**210**	**240**	**270**	**300**
		Static Pressure	0.022	0.052	0.089	0.128	0.174	0.227	0.287	0.355
		NC (Noise Criteria)	<15	18	23	26	29	32	34	36
		Throw	3 12 22	4 18 27	6 22 30	7 24 33	8 26 36	9 27 39	10 29 41	11 30 43
1.5" Slot Width	1 Slot	**Airflow, cfm/lf**	**65**	**95**	**125**	**150**	**175**	**200**	**225**	**250**
		Static Pressure	0.027	0.058	0.100	0.145	0.197	0.257	0.326	0.402
		NC (Noise Criteria)	<15	18	24	27	30	33	35	37
		Throw	3 12 20	4 17 24	5 20 28	7 22 30	8 23 33	9 25 35	10 26 37	11 28 39
	2 Slots	**Airflow, cfm/lf**	**110**	**160**	**215**	**255**	**300**	**340**	**385**	**425**
		Static Pressure	0.023	0.049	0.089	0.125	0.174	0.223	0.286	0.349
		NC (Noise Criteria)	<15	18	24	27	30	32	35	37
		Throw	3 14 26	5 21 31	7 26 36	8 28 40	9 30 43	11 32 46	12 35 49	13 36 51
2.0" Slot Width	1 Slot	**Airflow, cfm/lf**	**100**	**150**	**200**	**240**	**280**	**320**	**360**	**400**
		Static Pressure	0.039	0.089	0.158	0.227	0.309	0.403	0.511	0.630
		NC (Noise Criteria)	<15	22	27	31	33	36	38	40
		Throw	4 16 25	6 22 30	8 25 35	9 27 39	11 29 42	12 31 45	14 33 47	15 35 50
	2 Slots	**Airflow, cfm/lf**	**150**	**225**	**300**	**360**	**420**	**480**	**540**	**600**
		Static Pressure	0.027	0.060	0.106	0.153	0.208	0.272	0.344	0.425
		NC (Noise Criteria)	<15	19	25	28	31	34	36	38
		Throw	4 17 30	6 25 37	8 30 43	10 33 47	11 36 51	13 39 55	14 41 58	16 43 61
2.5" Slot Width	1 Slot	**Airflow, cfm/lf**	**125**	**190**	**250**	**300**	**350**	**400**	**450**	**500**
		Static Pressure	0.041	0.095	0.164	0.237	0.322	0.421	0.533	0.658
		NC (Noise Criteria)	<15	22	27	31	33	36	38	40
		Throw	4 18 28	6 24 34	8 28 39	10 30 43	12 33 47	13 35 50	15 37 53	17 39 56
	2 Slots	**Airflow, cfm/lf**	**190**	**285**	**375**	**450**	**525**	**600**	**675**	**750**
		Static Pressure	0.028	0.064	0.111	0.160	0.217	0.284	0.359	0.443
		NC (Noise Criteria)	<15	19	25	28	31	34	36	38
		Throw	5 19 34	7 29 42	9 34 48	11 37 53	13 40 57	14 43 61	16 46 65	18 48 68
3.0" Slot Width	1 Slot	**Airflow, cfm/lf**	**150**	**225**	**300**	**360**	**420**	**480**	**540**	**600**
		Static Pressure	0.047	0.106	0.189	0.272	0.370	0.484	0.612	0.756
		NC (Noise Criteria)	<15	22	27	31	33	36	38	40
		Throw	5 19 30	7 26 37	9 30 43	11 33 47	13 36 51	15 39 55	17 41 58	18 43 61
	2 Slots	**Airflow, cfm/lf**	**225**	**340**	**450**	**540**	**630**	**720**	**810**	**900**
		Static Pressure	0.032	0.073	0.128	0.184	0.250	0.327	0.413	0.510
		NC (Noise Criteria)	<15	19	25	28	31	34	36	38
		Throw	5 21 37	7 31 46	10 37 53	12 41 58	14 44 62	16 47 67	18 50 71	20 53 75

1. All pressures are in inches of water.
2. Isothermal throws are given for velocities of 150, 100 and 50 fpm.
3. Throw values are based on a 1-way discharge from the slot with the controller set at 0 discharge. For 2-way discharges, throw is based upon the number and size of the slots throwing in each direction, with the total supply air flow split equally between all slots in the unit.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

Table 1. NC correction for length

Length (feet)	+2	+4	+6	+8	+10
Supply	-2	+0	+2	+3	+5
Return	+0	+3	+5	+6	+8

Table 2. Throw correction multiplier for length

Length (feet)	2	4	8	10	12
Throw Correction	0.72	0	1.5	1.7	1.8

METALAIRE INTEGRA 24 INCH X 24 INCH

1.5" Slot Width Four Way Throw

6" Inlet	**Airflow, cfm**	**80**	**120**	**155**	**190**	**225**	**260**	**300**
	Static Pressure, in.WG	0.024	0.049	0.084	0.128	0.181	0.244	0.315
	Total Pressure	0.035	0.072	0.123	0.187	0.264	0.355	0.459
	NC (Noise Criteria)	<15	17	23	28	32	36	39
	Throw	3 5 10	5 7 13	6 9 14	7 11 16	9 12 17	10 13 19	12 14 20
8" Inlet	**Airflow, cfm**	**85**	**120**	**160**	**195**	**230**	**265**	**300**
	Static Pressure, in.WG	0.013	0.026	0.043	0.065	0.091	0.122	0.157
	Total Pressure	0.016	0.033	0.056	0.084	0.118	0.158	0.203
	NC (Noise Criteria)	<15	18	24	29	33	36	40
	Throw	3 5 10	5 7 13	6 9 15	8 11 16	9 12 18	10 13 19	12 14 20
10" Inlet	**Airflow, cfm**	**90**	**130**	**165**	**205**	**240**	**275**	**315**
	Static Pressure, in.WG	0.009	0.018	0.030	0.045	0.063	0.084	0.108
	Total Pressure	0.011	0.022	0.036	0.054	0.075	0.100	0.129
	NC (Noise Criteria)	<15	19	25	30	34	37	40
	Throw	4 5 11	5 8 13	7 10 15	8 12 17	9 13 18	11 14 19	12 15 21
12" Inlet	**Airflow, cfm**	**100**	**140**	**175**	**210**	**245**	**280**	**320**
	Static Pressure, in.WG	0.008	0.014	0.023	0.034	0.046	0.061	0.077
	Total Pressure	0.009	0.016	0.026	0.038	0.052	0.069	0.087
	NC (Noise Criteria)	<15	20	26	31	35	38	41
	Throw	4 6 12	5 8 14	7 10 15	8 12 17	10 13 18	11 14 19	12 15 21

1.5" Slot Width Three Way Throw

6" Inlet	**Airflow, cfm**	**70**	**100**	**125**	**155**	**180**	**210**	**235**
	Static Pressure, in.WG	0.021	0.041	0.066	0.099	0.137	0.182	0.233
	Total Pressure	0.029	0.056	0.092	0.137	0.190	0.252	0.323
	NC (Noise Criteria)	<15	17	23	28	32	35	39
	Throw	2 4 7	3 5 10	4 6 13	5 8 14	6 9 16	7 10 17	8 12 18
8" Inlet	**Airflow, cfm**	**75**	**105**	**130**	**160**	**190**	**215**	**245**
	Static Pressure, in.WG	0.012	0.022	0.035	0.052	0.072	0.095	0.121
	Total Pressure	0.015	0.027	0.044	0.065	0.090	0.118	0.151
	NC (Noise Criteria)	<15	18	24	29	33	36	39
	Throw	3 4 8	3 5 10	4 7 13	5 8 15	6 9 16	7 11 17	8 12 18
10" Inlet	**Airflow, cfm**	**75**	**105**	**135**	**165**	**195**	**225**	**255**
	Static Pressure, in.WG	0.007	0.014	0.023	0.035	0.049	0.065	0.084
	Total Pressure	0.008	0.016	0.027	0.041	0.057	0.076	0.097
	NC (Noise Criteria)	<15	18	24	29	34	37	40
	Throw	2 4 7	3 5 10	4 7 13	5 8 15	6 10 16	7 11 17	8 13 18
12" Inlet	**Airflow, cfm**	**70**	**105**	**135**	**165**	**195**	**225**	**260**
	Static Pressure, in.WG	0.005	0.009	0.016	0.024	0.034	0.046	0.060
	Total Pressure	0.005	0.011	0.018	0.027	0.038	0.051	0.066
	NC (Noise Criteria)	<15	18	24	29	34	38	41
	Throw	2 4 7	3 5 10	4 7 13	5 8 15	7 10 16	8 11 17	9 13 19

1.5" Slot Width Two Way Throw

6" Inlet	**Airflow, cfm**	**55**	**75**	**95**	**115**	**140**	**160**	**180**
	Static Pressure, in.WG	0.014	0.027	0.045	0.066	0.092	0.123	0.157
	Total Pressure	0.019	0.036	0.060	0.089	0.123	0.163	0.209
	NC (Noise Criteria)	<15	18	24	29	33	36	39
	Throw	1 3 5	2 4 7	3 5 9	4 6 11	4 7 13	5 8 15	6 9 16
8" Inlet	**Airflow, cfm**	**60**	**80**	**95**	**115**	**135**	**155**	**175**
	Static Pressure, in.WG	0.008	0.014	0.022	0.032	0.043	0.057	0.072
	Total Pressure	0.010	0.017	0.027	0.039	0.053	0.069	0.088
	NC (Noise Criteria)	<15	19	25	29	33	36	39
	Throw	1 3 6	2 4 7	3 5 9	4 6 11	4 7 13	5 8 14	6 8 15
10" Inlet	**Airflow, cfm**	**60**	**80**	**100**	**120**	**140**	**160**	**180**
	Static Pressure, in.WG	0.006	0.010	0.015	0.022	0.029	0.038	0.048
	Total Pressure	0.007	0.011	0.017	0.025	0.034	0.044	0.055
	NC (Noise Criteria)	<15	20	26	30	34	37	39
	Throw	2 3 6	3 4 8	3 5 10	4 6 12	5 7 14	5 8 15	6 9 16
12" Inlet	**Airflow, cfm**	**65**	**85**	**105**	**125**	**145**	**165**	**185**
	Static Pressure, in.WG	0.004	0.007	0.011	0.016	0.022	0.028	0.035
	Total Pressure	0.005	0.008	0.012	0.018	0.024	0.031	0.039
	NC (Noise Criteria)	<15	21	26	31	34	37	40
	Throw	2 3 6	3 4 8	3 5 10	4 6 12	5 7 14	5 8 15	6 9 16

1.5" Slot Width One Way Throw

6" Inlet	**Airflow, cfm**	**15**	**30**	**45**	**65**	**80**	**100**	**115**
	Static Pressure, in.WG	0.001	0.005	0.011	0.021	0.033	0.048	0.067
	Total Pressure	0.001	0.006	0.015	0.027	0.044	0.064	0.088
	NC (Noise Criteria)	<15	14	22	28	32	36	40
	Throw	0 0 0	0 1 2	1 1 4	1 2 5	2 3 7	3 4 8	3 5 10
8" Inlet	**Airflow, cfm**	**30**	**45**	**60**	**75**	**90**	**105**	**120**
	Static Pressure, in.WG"	0.002	0.005	0.008	0.013	0.019	0.026	0.034
	Total Pressure	0.002	0.005	0.010	0.016	0.023	0.031	0.041
	NC (Noise Criteria)	<15	20	26	30	34	37	40
	Throw	0 0 2	0 1 4	1 2 5	1 3 6	2 4 7	3 4 9	3 5 10
10" Inlet	**Airflow, cfm**	**35**	**50**	**65**	**80**	**95**	**110**	**125**
	Static Pressure, in.WG	0.002	0.004	0.006	0.009	0.014	0.018	0.024
	Total Pressure	0.002	0.004	0.007	0.011	0.015	0.021	0.027
	NC (Noise Criteria)	16	22	27	32	35	38	41
	Throw	0 1 3	1 1 4	1 2 5	2 3 7	2 4 8	3 5 9	3 5 10
12" Inlet	**Airflow, cfm**	**40**	**55**	**70**	**85**	**100**	**115**	**130**
	Static Pressure, in.WG	0.002	0.003	0.005	0.007	0.010	0.014	0.018
	Total Pressure	0.002	0.003	0.005	0.008	0.011	0.015	0.019
	NC (Noise Criteria)	18	24	29	33	36	39	42
	Throw	0 1 3	1 2 4	1 3 6	2 3 7	3 4 8	3 5 9	4 5 11

1. All pressures are in inches of water column.
2. Isothermal throws are given for horizontal discharge with velocities of 150, 100 and 50 fpm.
3. NC values are based on a room absorption of 10 dB re 10-12 watts.
4. Data was collected in accordance to ASHRAE Standard 70-1991 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
5. Four way throw is based on all four slots discharging in four directions. Three way throw is based on three slots discharging in different directions. Two way throw is based on two slots discharging in different directions and one way throw is based on only one slot discharging air.

SPEC DATA
This Spec-Data sheet conforms to editorial style prescribed by The Construction Specifications Institute. The manufacturer is responsible for technical accuracy.

1. Product Name

Formations™ Architectural Linear Diffusers, including: • Formations Linear • Formations Integra • Formations Tee System

2. Manufacturer

METALAIRE 1310 North Hercules Avenue Clearwater, FL 33765 (727) 441-2651 Fax: (727) 449-0731 www.metalaire.com

3. Product Description

BASIC USE - Formations™ Architectural Linear Slot Diffusers are engineered for supply, return or exhaust air distribution in heating, cooling and ventilating applications. They are designed for ceiling and sidewall installation, and work equally well in variable-volume or constant-volume air distribution systems. Formations is suitable for both commercial and residential applications. Numerous frame styles allow the specifier to either make an aesthetic statement or to conceal the Formations diffuser. Formations also can be curved for the ceiling or sidewall. The Formations line of architectural diffusers is an excellent choice for offices, libraries, airports, community buildings, restaurants, lobbies and retail spaces.

ADVANTAGES - Features include:

- 8' (2.67 m) sections for seamless appearance
- Curved units for the ceiling and wall
- Heavy wall extruded aluminum
- Fast installation for lower installed costs
- Numerous border options to fit specific requirements
- Meets a wide range of performance requirements

COMPOSITION & MATERIALS - Formations are made of high-grade 6036 aluminum extrusions for maximum strength, corrosion resistance and dimensional stability.

TYPE S - • Formations Linear • Formations Integra • Formations Tee System

SIZES & SHAPES - Formations are available in 1", 1 1/2", 2", 2 1/2" and 3" (25.4, 51, 64 and 76 mm) standard slot widths. One and 2 slot units are available standard. Formations is available in virtually any length but segments are limited to a maximum 8' (2.67 m) sections. Sections longer than 12" (305 mm) are formed by butting multiple diffuser sections together with alignment splines at the ends, resulting in hairline joints for a smooth, unbroken appearance. Formations diffusers are designed for mounting in both gypsum wallboard and lay-in type ceilings and many other ceiling and wall applications. The width of linear slot units varies with the number of slots and the slot width chosen. Formations are available with mitered corners, mitered ends, straight ends and end caps. Formations are also available in curved sections. There are many frame styles within the Formations family of diffusers from which to choose.

FINISHES - Formations are delivered prefinished with the interior painted flat black and the exposed flange painted a standard white. A factory-controlled baked-on polyester coating ensures maximum durability unmatched by field painting. Custom colors are also available.

BORDER STYLES - There are currently 4 standard border styles. Typical configurations are shown on page 20. The published linear performance data is obtained utilizing ANSI/ASHRAE 70 (ISO 5219). See pages 36-51.

4. Technical Data

APPLICABLE STANDARDS - American National Standards Institute (ANSI) - ANSI S1.31 Precision Methods for the Determination of Sound Power Levels of Broad Band Noise Sources and Reverberant Rooms.

American National Standards Institute (ANSI)/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

- ANSI/ASHRAE 113 Method of Testing for Room AIr Diffusion
- ANSI/ASHRAE 70 Method of Testing for Rating the Performance of Air Outlets and Inlets

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

- ASHRAE 41.2 Standard Methods for Laboratory Airflow Measurements
- ASHRAE 41.3 Standard Methods for Pressure Measurement

International Organization for Standardization (ISO) - ISO 5219 Air distribution and air diffusion - Laboratory aerodynamic testing and rating of air terminal devices.

5. Installation

HARD CEILING - Formations unique support method allows for a fast and easy installation. The ceiling framer leaves a framed opening for the Formations. Mounting hardware is slipped into the slots on the sides of the Formations diffuser at 10" (254 mm) intervals. The Formations air diffuser is then lifted into place, under the ceiling framing in a hard ceiling, and mounting hardware is attached to the framing.
ACOUSTICAL CEILING - Depending on project requirements, Formations can be mounted in an acoustical ceiling incrementally or continuously. Formations Tee Bar is a Formations diffuser pre-engineered to fit in a specified ceiling. As a continuous diffuser, Formations can become the main runner of the suspension system. Formations Integra is a 2' x 2' (0.6 x 0.6 m) Formations diffuser with an engineered plenum.

BUILDING CODES - Current data on building code requirements and product compliance can be obtained from METALAIRE's technical support specialists. Installation must comply with the requirements of all applicable local, state and national code jurisdictions.

6. Availability & Cost

AVAILABILITY - METALAIRE Architectural Products are available throughout the world. Contact METALAIRE for more information.
COST - Pricing varies with the series selected and unit size. For specific costs, contact METALAIRE.

7. Warranty

METALAIRE's product warranty on Formations covers a period of 6 months from the date of startup, not to exceed 1 year from the extent that we will furnish a new product to replace that which is proven to be defective by manufacturer.

8. Maintenance

Little maintenance is required. If cleaning is desired, systems can be washed with mild soap and water followed by a clean water rinse.

9. Technical Services

METALAIRE supports a network of representatives and distributors knowledgeable in all aspects of the heating, ventilating and air conditioning (HVAC) industry. This worldwide network can provide detailed information on the entire line of METALAIRE products. For the name and number of a local representative, contact METALAIRE at the above phone number.

10. Filing Systems

- Architects' First Source Products • MANU-SPEC® • Sweet's Catalog Files • Sweet's CD
- Additional product information is available from the manufacturer upon request.
- Additional information available online at www.metalaire.com