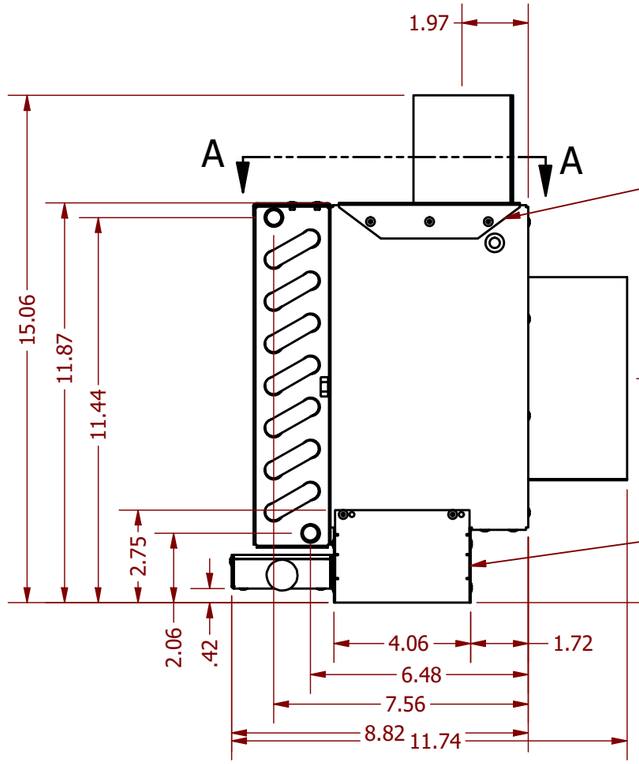
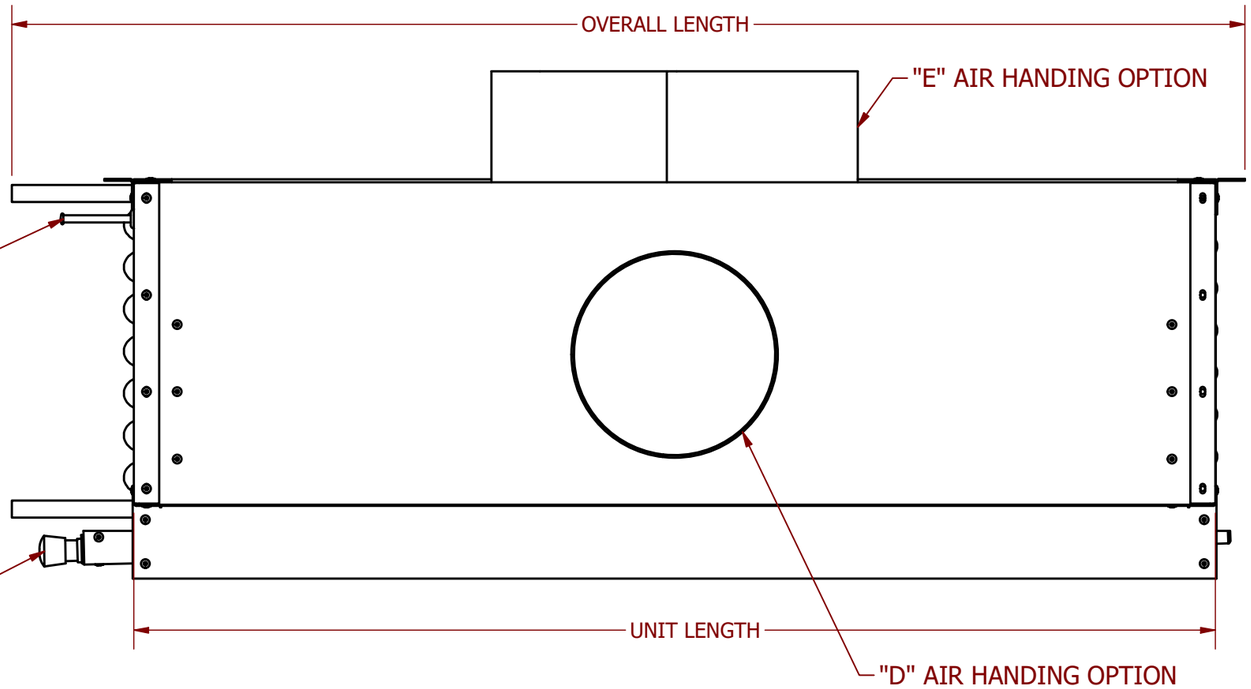
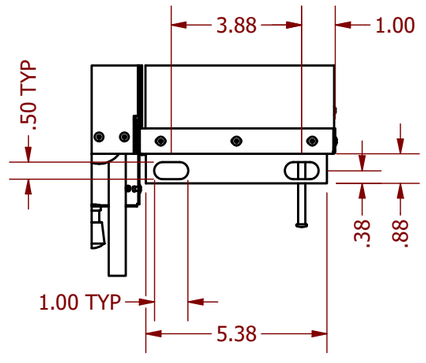
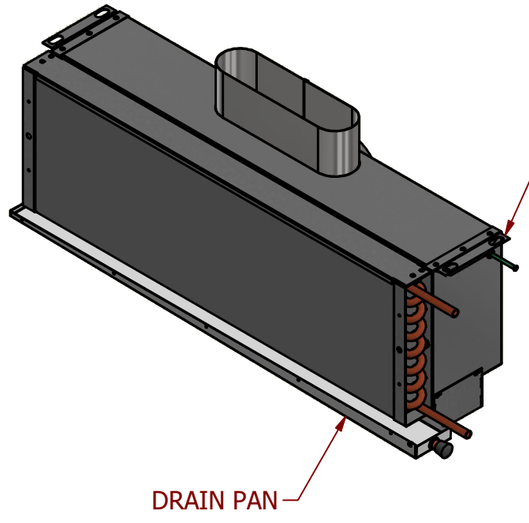






SECTION A-A



NOM. UNIT LENGTH (FT)	UNIT LENGTH (IN)	OVERALL LENGTH (IN)	WEIGHT (LB)
2	24	29	32
3	32	37	42
4	40	45	50
5	52	57	59
6	64	69	70
7	76	81	81
8	88	93	92

NOTES:

ACB30 DRAIN PAN SUBMITTAL DRAWING

STRICTLY CONFIDENTIAL

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47 Westfield Ind. Park Road Westfield, MA 01085
Ph. (413) 568-9571 email: info@dadanco.com
www.dadanco.com

DADANCO - A MESTEK CO.

DRN	TS	10/17/2024
CKD	SL	10/17/2024
APPD	SL	10/17/2024
ISSUED		

TITLE: ACB30

2-PIPE COIL WITH DRAIN PAN

UNLESS NOTED OTHWISE
ALL DIMENSIONS IN INCHES

ANGULAR TOL: 1.0°
LINEAR TOL: ±0.02"

ANSI STANDARD

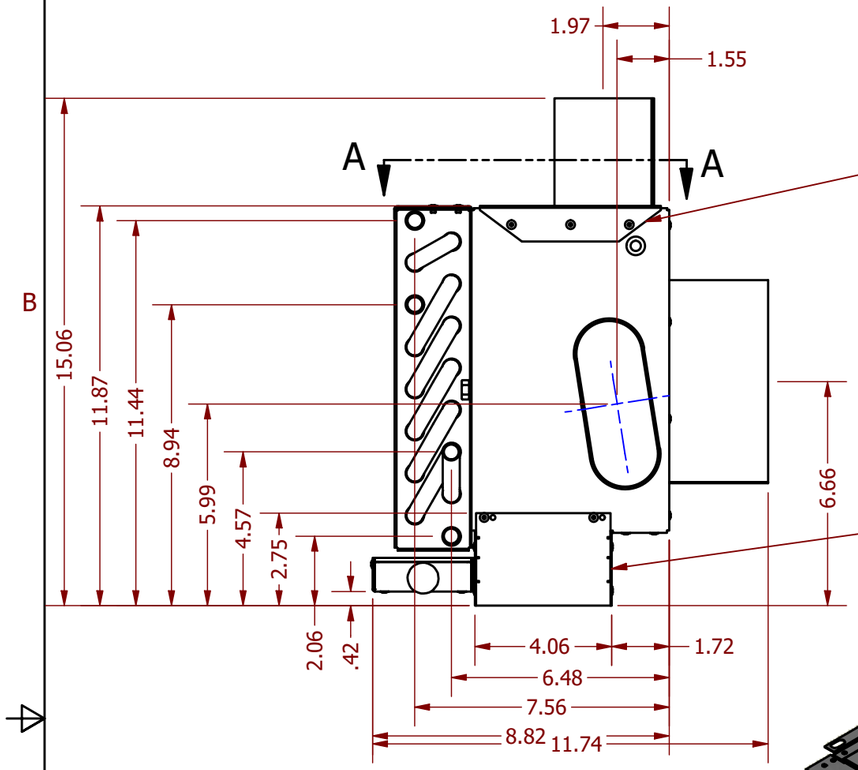
PROJECT NO:

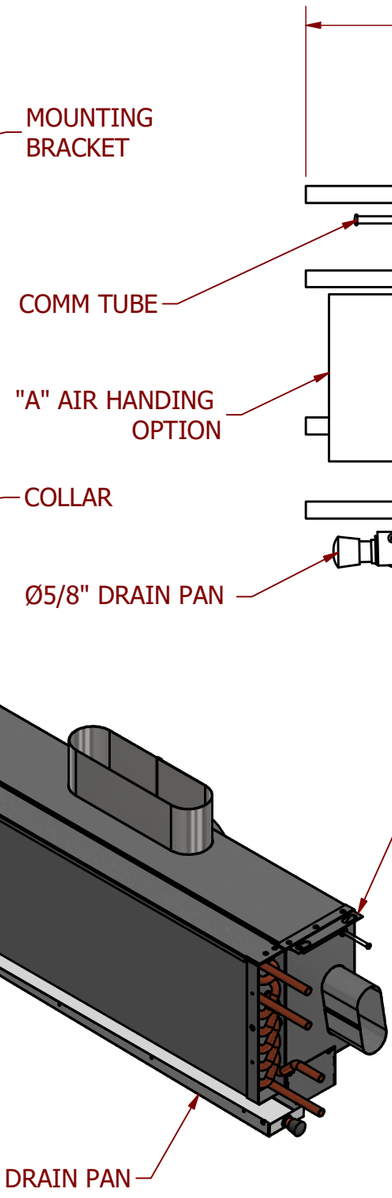
File Name: ACB30_DRAIN_PAN_GENERAL_ASSY_3FT.iam

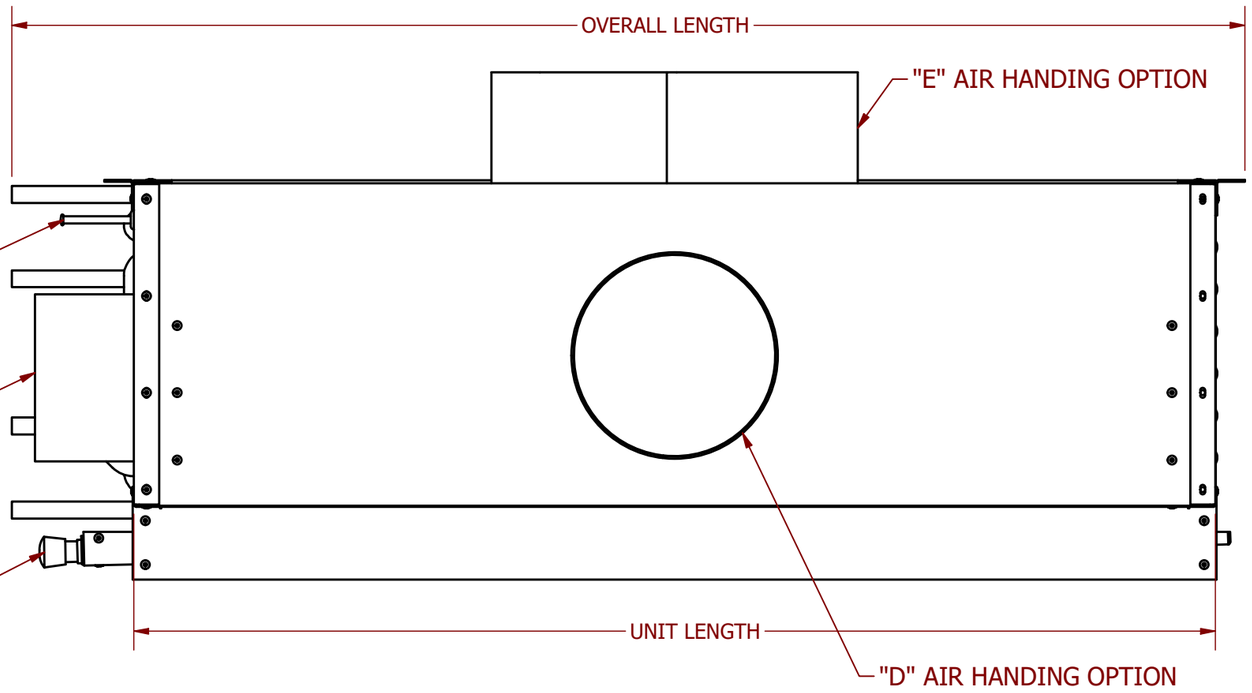
RELEASE: A

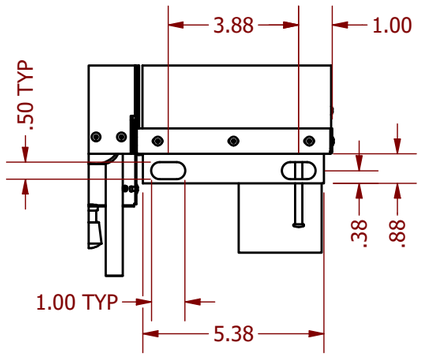
SCALE: NTS

SHEET: 1 / 1









SECTION A-A

NOM. UNIT LENGTH (FT)	UNIT LENGTH (IN)	OVERALL LENGTH (IN)	WEIGHT (LB)
2	24	29	32
3	32	37	42
4	40	45	50
5	52	57	59
6	64	69	70
7	76	81	81
8	88	93	92

NOTES:

1. DRAWING SHOWS ALL AIR CONNECTION LOCATION OPTIONS. UNITS ARE BUILT WITH ONE CONNECTION, SELECTED BY CONTRACTOR. SEE AIR AND COIL CONFIGURATION KEY FOR DETAILS.

ACB30 SUBMITTAL DRAWING

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DRN	TS	10/17/2024
CKD	SL	10/17/2024
APPD	SL	10/17/2024
ISSUED		

TITLE

ACB30

4-PIPE COIL WITH DRAIN PAN

UNLESS NOTED OTHWISE ALL DIMENSIONS IN INCHES

ANGULAR TOL: 1.0°
LINEAR TOL: ±0.02"

ANSI STANDARD

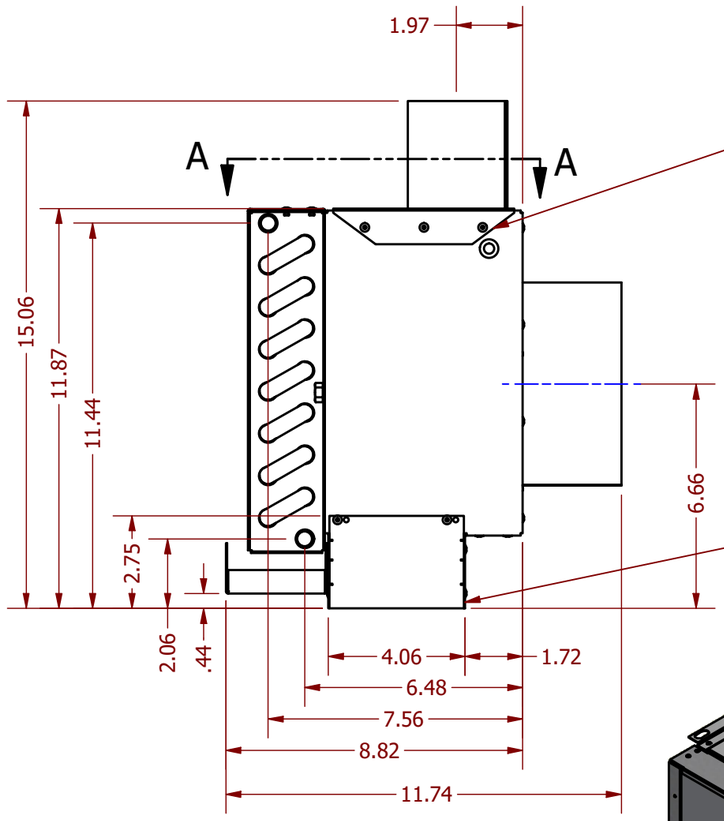
PROJECT NO:

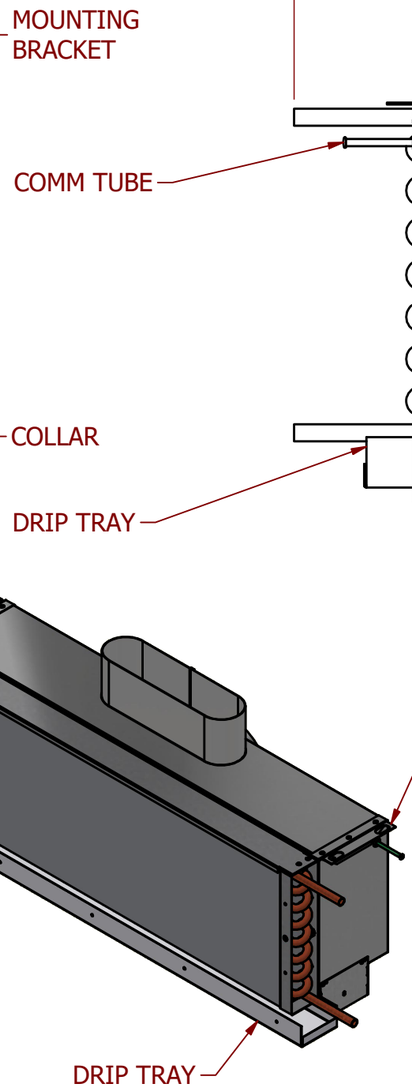
File Name: ACB30_DRAIN_PAN_GENERAL_ASSY_3FT.iam

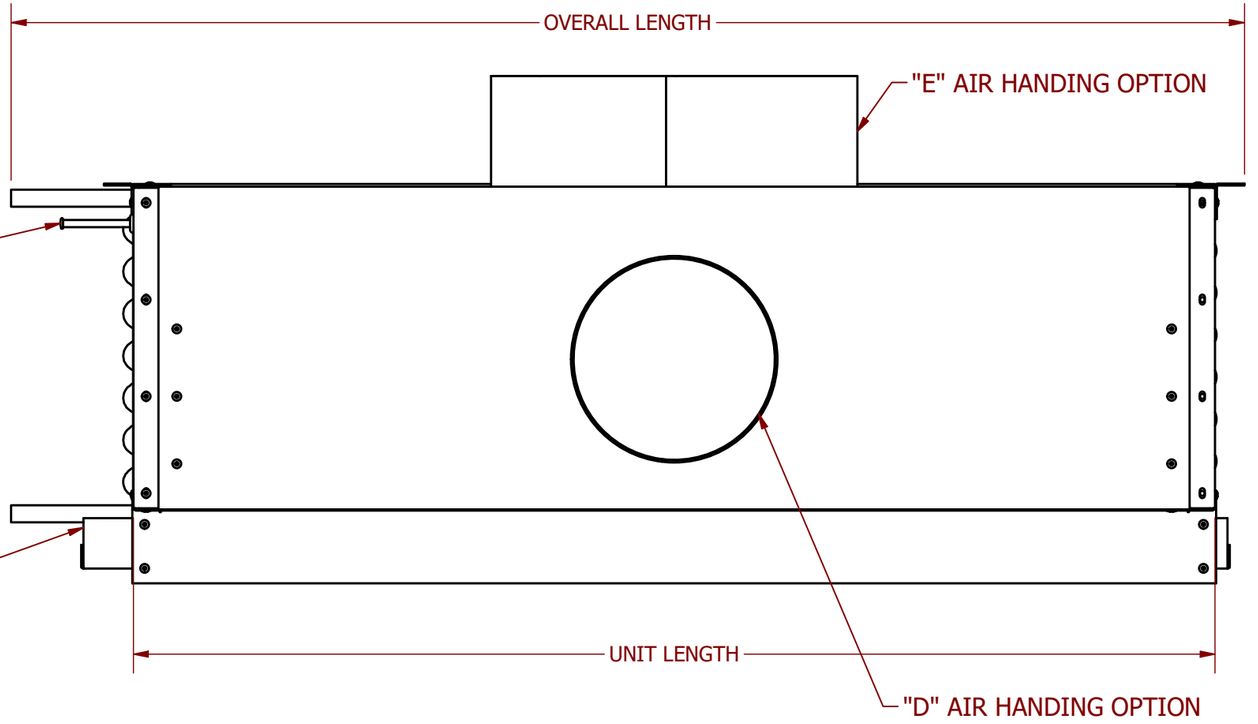
RELEASE A

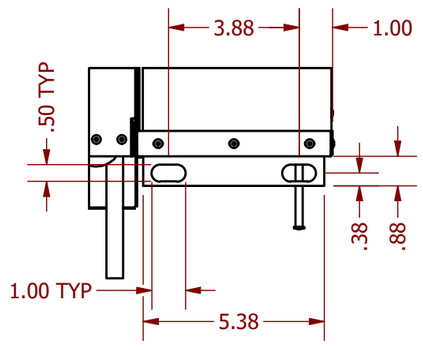
SCALE: NTS

SHEET: 1 / 1

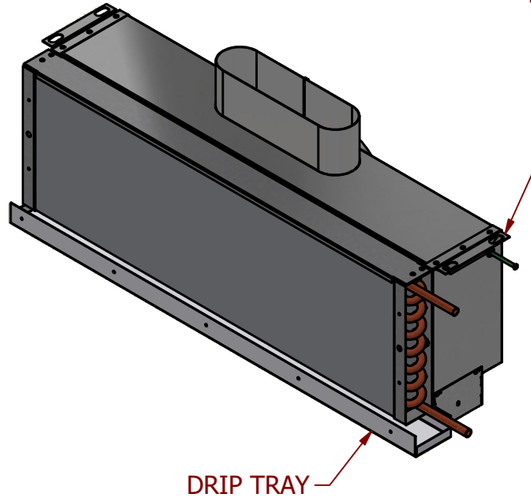








SECTION A-A



NOM. UNIT LENGTH (FT)	UNIT LENGTH (IN)	OVERALL LENGTH (IN)	WEIGHT (LB)
2	24	29	32
3	32	37	42
4	40	45	50
5	52	57	59
6	64	69	70
7	76	81	81
8	88	93	92

NOTES:

ACB30 DRIP TRAY SUBMITTAL DRAWING

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47 Westfield Ind. Park Road Westfield, MA 01085
Ph. (413) 568-9571 email: info@dadanco.com
www.dadanco.com

DADANCO - A MESTEK CO.

DRN	TS	10/17/2024
CKD	SL	10/17/2024
APPD	SL	10/17/2024
ISSUED		

TITLE

ACB30

2-PIPE COIL WITH DRIP TRAY

UNLESS NOTED OTHWISE
ALL DIMENSIONS IN INCHES

ANGULAR TOL: 1.0°
LINEAR TOL: ±0.02"

ANSI STANDARD

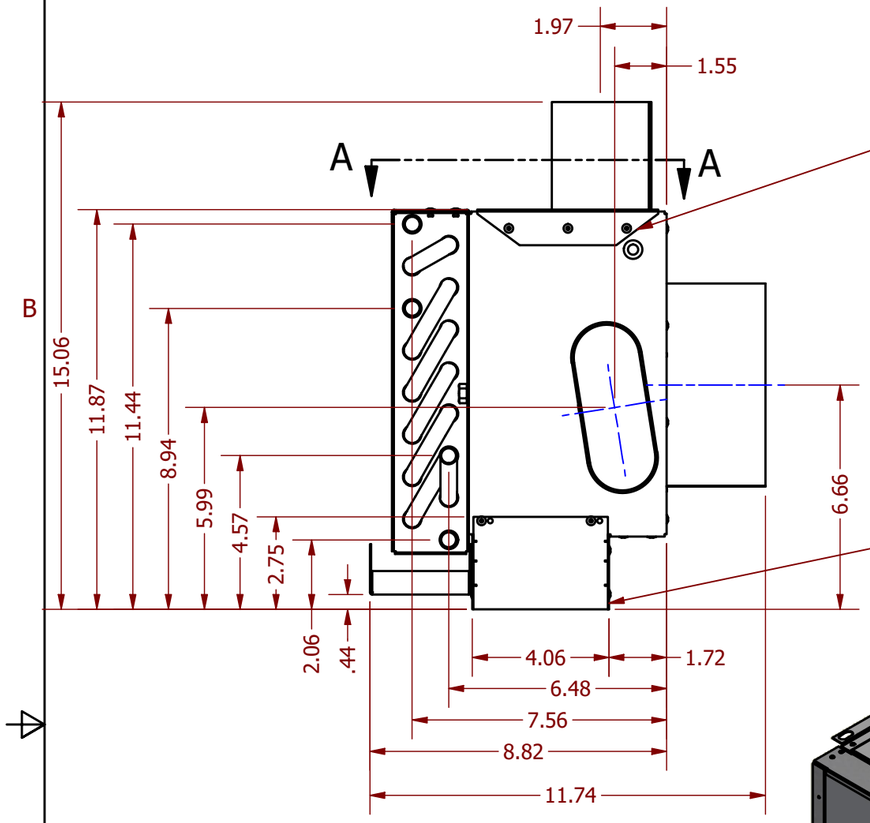
PROJECT NO:

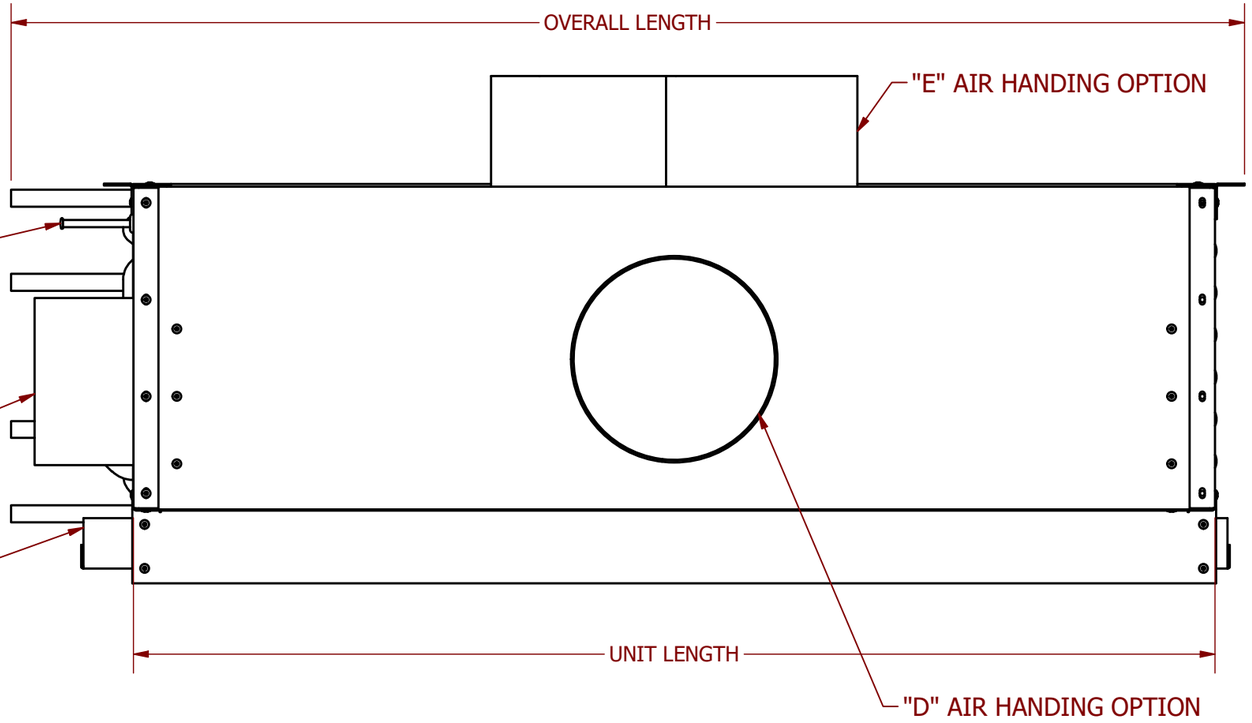
File Name: ACB30_GENERAL_ASSY_DRIP_TRAY_3FT.iam

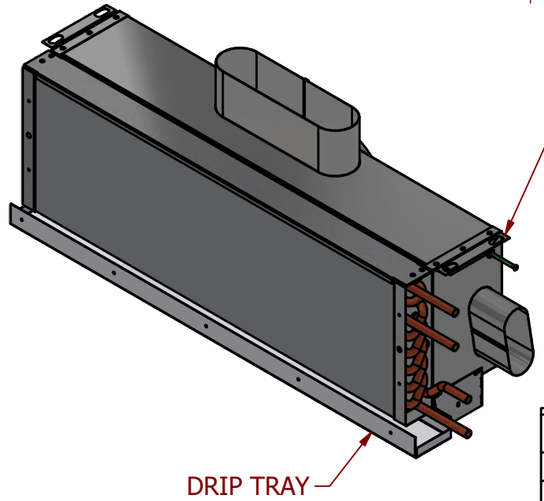
RELEASE A

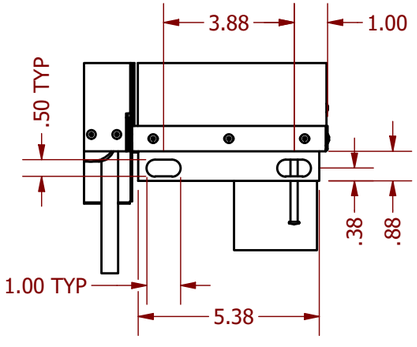
SCALE: NTS

SHEET: 1 / 1









SECTION A-A

NOM. UNIT LENGTH (FT)	UNIT LENGTH (IN)	OVERALL LENGTH (IN)	WEIGHT (LB)
2	24	29	32
3	32	37	42
4	40	45	50
5	52	57	59
6	64	69	70
7	76	81	81
8	88	93	92

NOTES:

1. DRAWING SHOWS ALL AIR CONNECTION LOCATION OPTIONS. UNITS ARE BUILT WITH ONE CONNECTION, SELECTED BY CONTRACTOR. SEE AIR AND COIL CONFIGURATION KEY FOR DETAILS.

ACB30 SUBMITTAL DRAWING

STRICTLY CONFIDENTIAL

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www.dadanco.com

DADANCO - A MESTEK CO.

DRN	TS	10/17/2024
CKD	SL	10/17/2024
APPD	SL	10/17/2024
ISSUED		

TITLE

ACB30

4-PIPE COIL WITH DRIP TRAY

UNLESS NOTED OTHWISE ALL DIMENSIONS IN INCHES
ANGULAR TOL: 1.0°
LINEAR TOL: ±0.02"

ANSI STANDARD

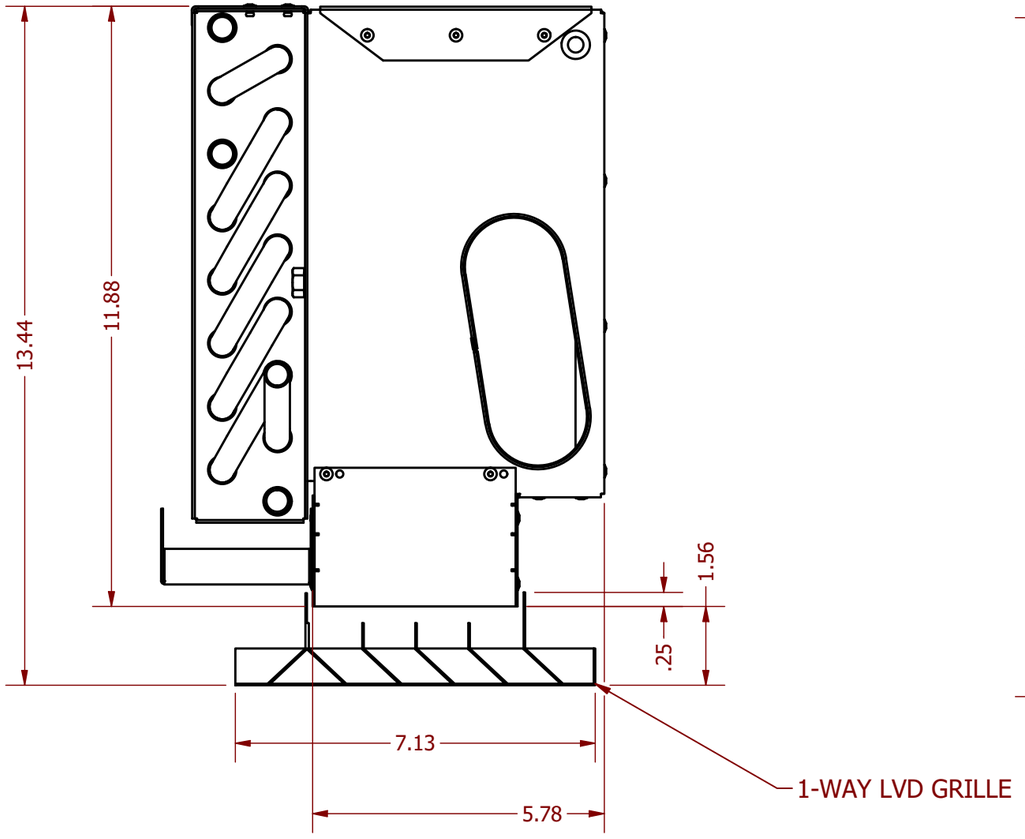
PROJECT NO:

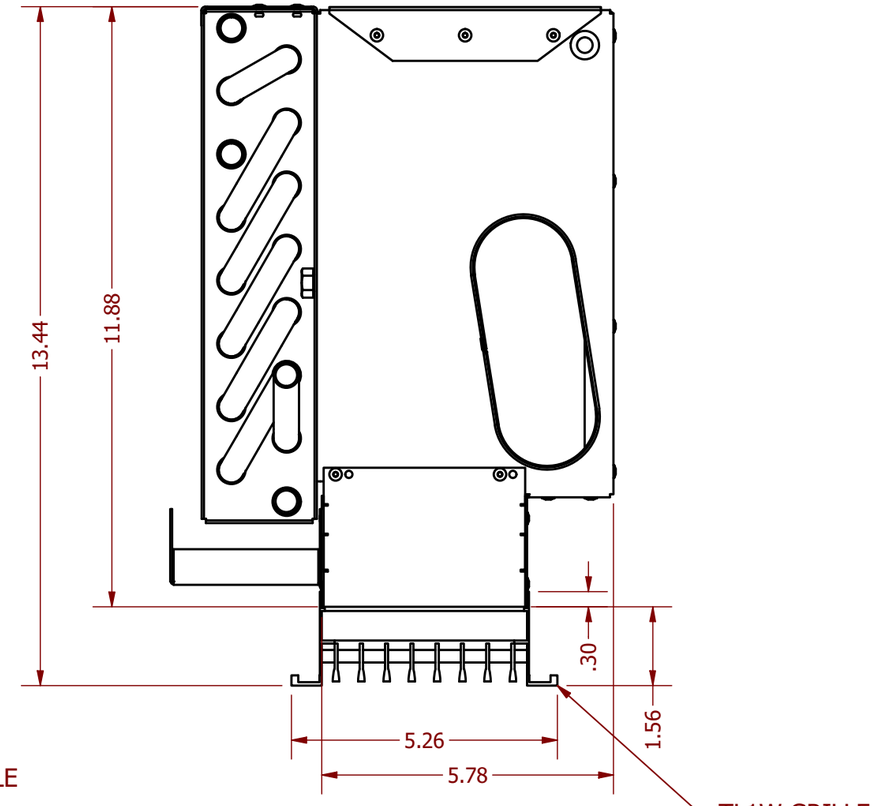
File Name: ACB30_GENERAL_ASSY_DRIP_TRAY_3FT.iam

RELEASE A

SCALE: NTS

SHEET: 1 / 1





ACB30 DRIP TRAY SUBMITTAL DRAWING

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47 Westfield Ind. Park Road Westfield, MA 01085
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www.dadanco.com

DADANCO - A MESTEK CO.

DRN	TS	4/23/2023
CKD	DL	4/23/2023
APPD	SL	4/2/2023
ISSUED		

TITLE: ACB30 DIMENSIONS - INSTALLED WITH GRILLE

UNLESS NOTED OTHWISE
ALL DIMENSIONS IN INCHES

ANGULAR TOL: 1.0°
LINEAR TOL: ±0.02"

ANSI STANDARD

PROJECT NO: FMLBY

File Name: ACB30_Drip_Tray_Submittal Drawing_2_Pipe.dwg

SCALE: NTS

SHEET: 1 / 1

RELEASE: A

MODEL NUMBER & OPTIONS

A	C	B	3	0	-	0	6	-	0	7	1	M	-	8	R	D	-	2	A	S	0	3	-	S	0	0	0	0	-	0	0	6	0	2	0	0	-	0	0
1	2	3	4	5		6	7		8	9	10	11		12	13	14		15	16	17	18	19		20	21	22	23	24		25	26	27	28	29	30	31		32	33

Every Dadanco Active Chilled Beam and Induction Unit is identified, tagged, and built-to-order according to the above 33-digit model number. All options must be confirmed/approved in order to release any project to production. These are "standard" options only, and customization is possible. Contact your Dadanco representative if there are any desired features not shown in this document. Certain unit dimensions can also be customized if needed.

PERFORMANCE VARIATIONS (UNIT SPECIFIC)

All the following are determined by selections done with the Dadanco Active Chilled Beam selection software. Every project submittal includes a "performance submittal" page that contains includes this information for all units on the project.

Model (Digits 1-5)	Description
ACB30	Ceiling Concealed ACB, Low Profile
ACB35	Ceiling Concealed ACB

Nominal Unit Length (Ft): Digits 6-7

Nozzle Configuration: Digits 8-11
Digits 8-10: Nozzle Qty
Digit 11: Nozzle Type (T, U, S, M)

Nozzle configuration determines the primary air flow rate & pressure drop for each unit, as well as the induced/secondary air flow rate.

Duct Connection Diameter* (in): Digit 12

Duct Connection Shape	Digit 13 Code
Round	R
Elliptical	E
Oblong/Oval	V

*Diameter for round connections
*Elliptical & oblong connections have the same circumference as round to fit standard flexible duct of that size.
*Elliptical and oblong only used when round of required size cannot fit in selected location. See handing pages for examples.

Coil Pipe Configuration	Digit 15 Code
2-Pipe	2
4-Pipe	4

2 and 4-pipe coils are both single 2-row finned-tube coils with the same number of tubes. 4-pipe coils split the tubes into two separate water circuits.

Coil Circuiting	Digit 18 Code
Single Circuit	0
Dual Circuit	1

*For 4-pipe coils, the circuiting refers to the cooling circuit only. The heating circuit of 4-pipe coils is always single circuit.

MODEL NUMBER & OPTIONS

A	C	B	3	0	-	0	6	-	0	7	1	M	-	8	R	D	-	2	A	S	0	3	-	S	0	0	0	0	-	0	0	6	0	2	0	0	-	0	0
1	2	3	4	5		6	7		8	9	10	11		12	13	14		15	16	17	18	19		20	21	22	23	24		25	26	27	28	29	30	31		32	33

GLOBAL OPTIONS

These options generally apply to all ACB30 units on a project, and are specified using the check-boxes below. (Std) indicates the standard inclusion, all others are at additional cost.

Coil Connection Type	Digit 17 Code	
1/2" OD SWT (Std)	S	✔
1/2" Male NPT	M	
1/2" Female NPT	F	
1/2" Male Flare (SAE, 45°)	R	

Coil Vent/Drain Fittings	Digit 19 Code	
None (Std)	0	✔
Manual Air Vent Only	1	
Drain Plug Only	2	
Manual Air Vent & Drain Fitting	3	

Drain Pan Type	Digit 27 Code	
Non-Drainable Drip Tray (Std)	6	✔
Drain Pan	1	
None	0	
Drip Tray w/ Float Switch	8	
Insulated Drain Pan	2	
Drain Pan w/ Float Switch	4	
Insulated Drain Pan w/ Float Switch	5	

Drip trays are non-drainable, non-sloped condensate pans used as a safeguard against incidental condensation that may occur due to abnormal conditions or a controls failure. These are the standard inclusion that are quoted/submitted unless specified otherwise. Although ACB systems designed to condense are not recommended, sloped pans with drain connections are available. If no pan/tray is required, ACBs can be provided without them, at reduced cost.

Lint Screen	Digit 25 Code	
Excluded (Std)	0	✔
Included	1	

Lint screens are available, but generally not recommended. Dust and debris can easily be vacuumed off the dry coils directly.

Plenum Insulation	Digit 26 Code	
None (Std)	0	✔
1/2" Fibrous	1	
1/4" Closed Cell	3	
1/2" Closed Cell	2	

Plenum Insulation should be used in any application where the primary air temperature will lower than the dew point of the ambient air around the top of the chilled beams. Strongly recommended whenever primary air temps are below 55°F and/or when units will be located in non-plenum spaces that may experience higher humidity levels than the occupied zone air. Failure to insulate when necessary can lead to condensation forming on the outside of the ACB casing.

1/4" closed cell has sufficient R-value to prevent condensation in typical applications.

Packing Option	Digit 32 Code	
Standard (Std)	0	✔
Low-Tack Adhesive Film	1	

Packing option refers to the covering applied to the face of the coil and duct connection

MODEL NUMBER & OPTIONS

A	C	B	3	0	-	0	6	-	0	7	1	M	-	8	R	D	-	2	A	S	0	3	-	S	0	0	0	0	-	0	0	6	0	2	0	0	-	0	0
1	2	3	4	5		6	7		8	9	10	11		12	13	14		15	16	17	18	19		20	21	22	23	24		25	26	27	28	29	30	31		32	33

UNIT-SPECIFIC OPTIONS

These options are often different between individual units on a project. Use the unit configuration schedule provided with each project submittal to specify which option applies to each unit.

Air Handing: Digit 14
Coil Handing: Digit 16

*These digits specify the location of duct and pipe connections. See pages 5-8 for details.

Factory Mounted Grille Options	Digit 23 Code
None	0
1-Way LVD, Horizontal Throw	2
1-Way LVD, Angled Throw	3
2-Way LVD	4
Linear Bar	V

Unless specified otherwise, all factory mounted grilles come with standard borders for lay-in ceiling grid applications, and lengths will be such that they fit in a grid opening of the nominal unit length. A 4' nominal ACB30 would be provided with a 47-3/4" overall grille that lays into a 4' long grid opening. The grid width needs to be 7-3/8" for all LVDs.

Grilles are typically shipped loose for hard-lid ceiling applications

Grilles come in standard white finish unless specified otherwise. All other colors are at additional cost.

ACB Unit Color: Digit 21

In the vast majority of applications, ACB30/35 units are fully concealed above a ceiling & painted grille. Therefore, they come standard in unpainted galvanized steel. Units can be fully painted if the application (such as a cloud ceiling, or exposed installation) requires it. In that case, digit 21of the model number indicates the color. In the typical application of unpainted units, the color digit is "0", even if the unit has a factory mounted grille that is painted.

Color	Digit 21 Code	Color	Digit 21 Code
Unpainted (Std)	0	WB2—Almond	H
P1—White	B	DB1—Dark Bronze	J
VP1—Bright White	A	SB6—Prime	K
VP2—EggShell	C	SA1—Silver Aluminum	L
DB5—Flat Black	E	MC2—Champagne	M
SB1—Light Grey	F	MC3—Bronze Mica	N
SB7—Soft Dove	G	CC1—Custom Color 1	1

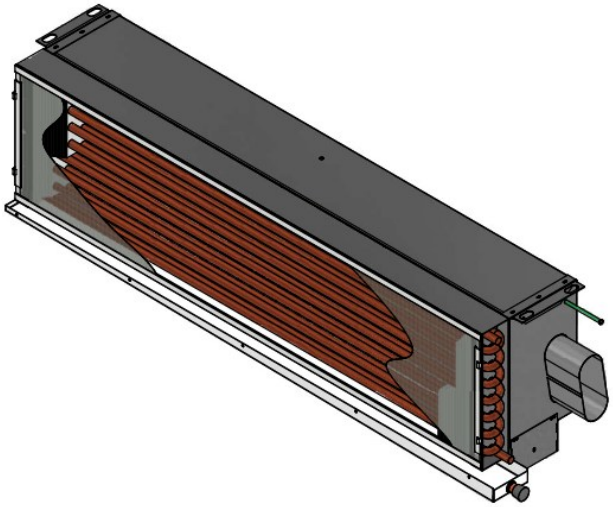
*All (non-custom) colors listed are readily available, and are shown on the Mestek color chart. These colors are a cost-add over unpainted units, but are lower cost than custom colors. Physical samples of any Mestek colors can quickly be mailed out upon request.
*Each custom color on a project is assigned a number, starting with 1. There can be any number of colors (including custom) on a project, each additional color at additional cost.
*Custom colors require additional time to perform a color match and get customer approval of color sample

AIR AND COIL CONFIGURATION KEY

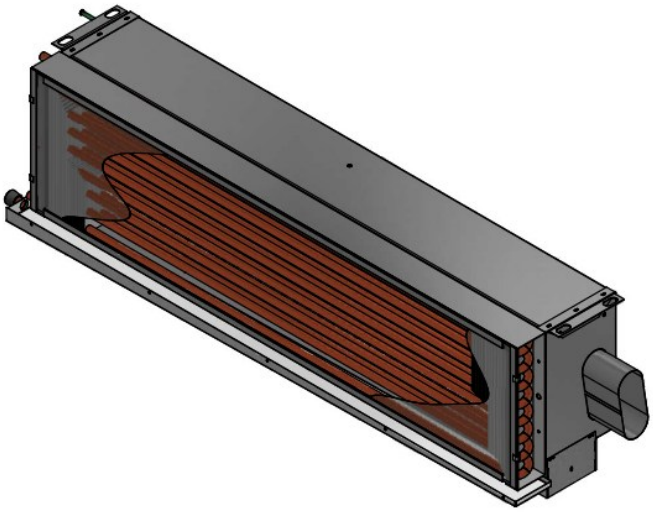
ACB30 MODEL

END DUCT CONNECTION

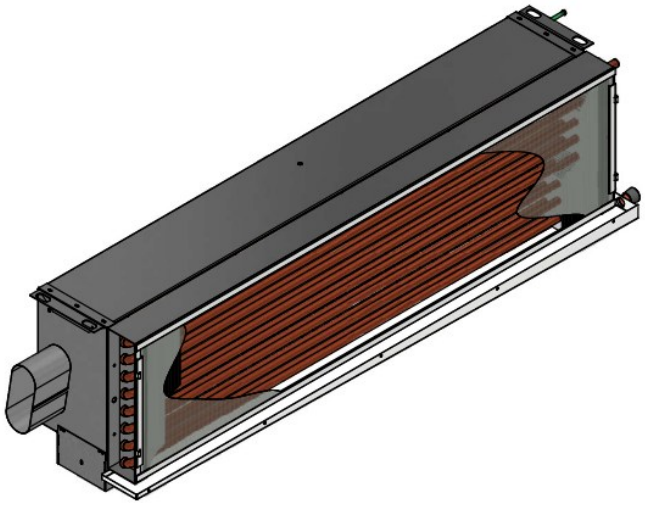
Available Connection Sizes: 4" Oblong Only—MAX Recommended Primary Airflow: 45 CFM



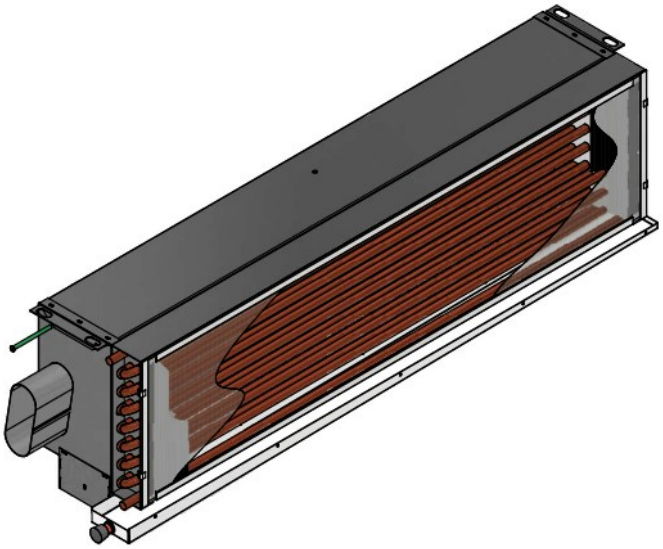
AIR: A
COIL: A



AIR: A
COIL: B



AIR: B
COIL: A



AIR: B
COIL: B

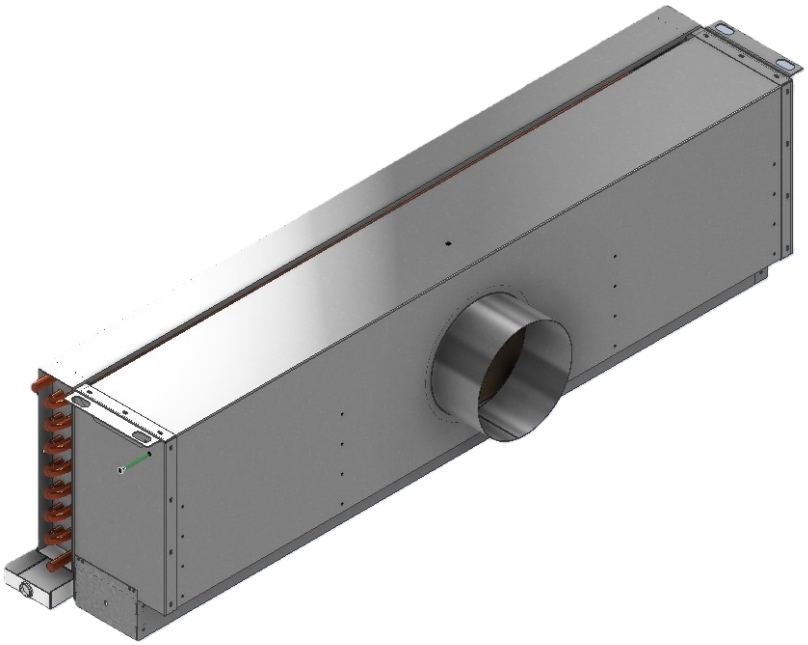
NOTE: Air Handing is represented by digit 14 in the model number
Coil Handing is represented by digit 16 in the model number

AIR AND COIL CONFIGURATION KEY

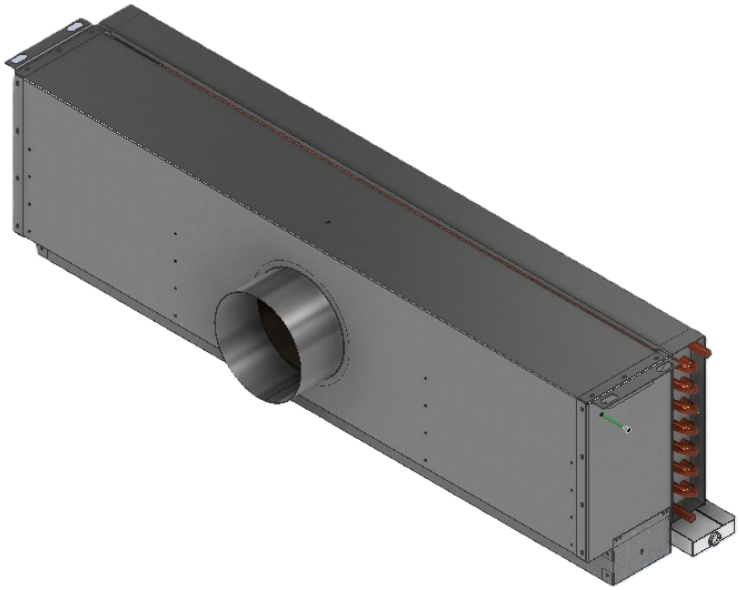
ACB30 MODEL

BACK DUCT CONNECTION

Available Connection Sizes: 4", 5", 6"Round, 8" Elliptical



AIR: D
COIL: A



AIR: D
COIL: B

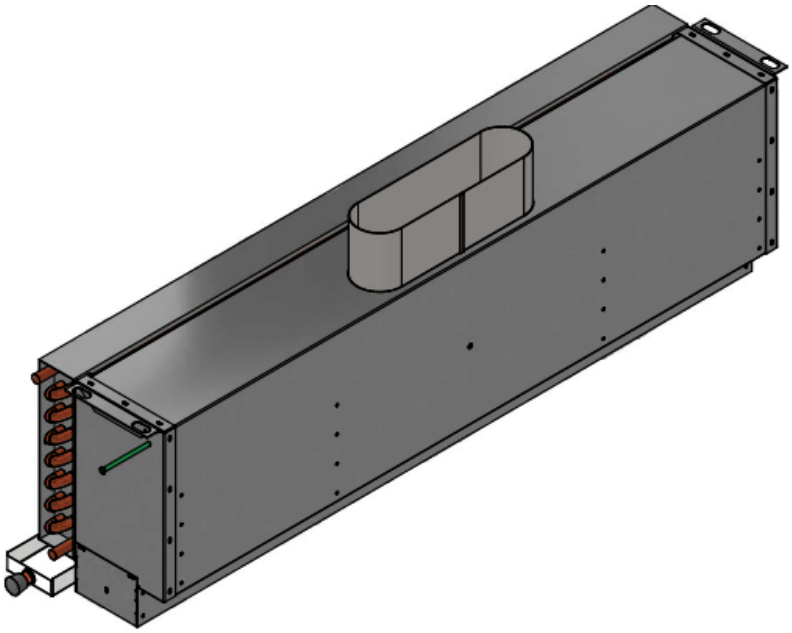
Air Connection	Max Recommended Primary Airflow (CFM)
4" Round	60
5" Round	95
6" Round	135
8" Elliptical	215

AIR AND COIL CONFIGURATION KEY

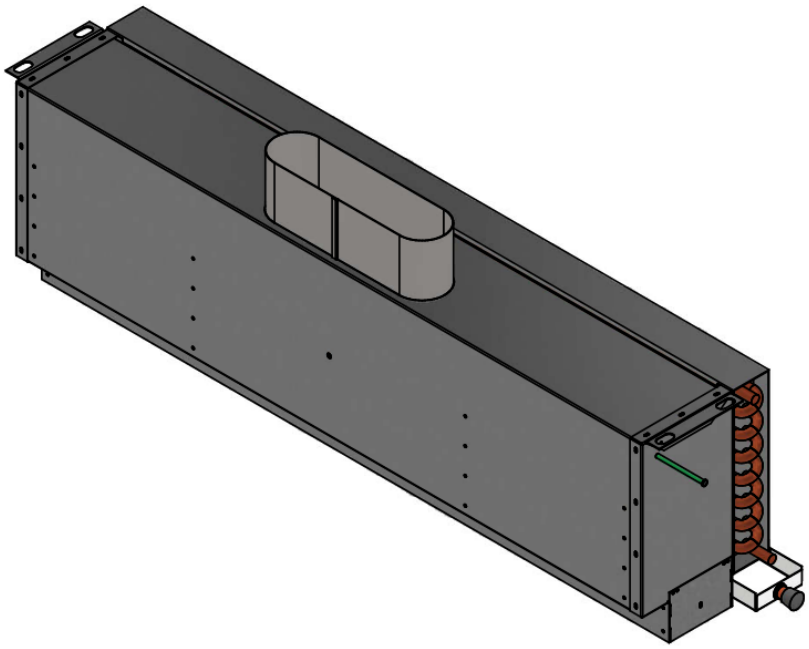
ACB30 MODEL

TOP DUCT CONNECTION

Available Connection Sizes: 4", 6",8" Oblong



AIR: E
COIL: A



AIR: E
COIL: B

Air Connection	Max Recommended Primary Airflow (CFM)
4" Oblong	45
6" Oblong	90
8" Oblong	145

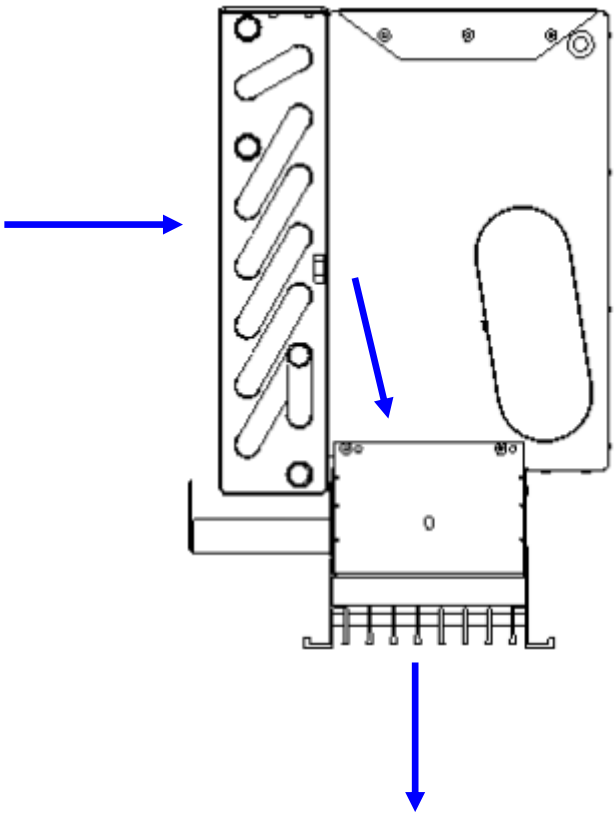
SUPPLY AIR PATTERN AND DIFFUSERS

ACB30/35 units are designed to be used in conjunction with a separately installed supply air diffuser. This diffuser is the only thing visible from the room, the unit is concealed above the above the ceiling. With no diffuser in place, The supply air pattern from the unit is vertically down from the supply air collar/outlet. Depending on the diffuser installation, the throw pattern from the ACB30 can either be vertical, horizontal 1-way, horizontal 2-way, or angled (about 35 degrees down from horizontal).

Not any linear diffuser can used with concealed ACBs. The diffuser effectively becomes part of the ACB, and the geometry of the combined ACB+diffuser has a huge effect on performance of the ACB. Most linear diffusers have unacceptably high performance impacts to performance.

DADANCO's linear vane diffuser is specifically designed for this application and is the ONLY approved means of getting horizontal supply air throw from ACB30/35 units. The standard performance ratings in the Dadanco selection software are based on installation with LVD for horizontal throw. RATED PERFORMANCE IS VALID ONLY FOR INSTALLATION WITH Dadanco LVD. For vertical throw applications, there are other options. The following section details the approved grille configurations for each throw pattern that will yield rated performance.

FOR VERTICAL SUPPLY AIR THROW

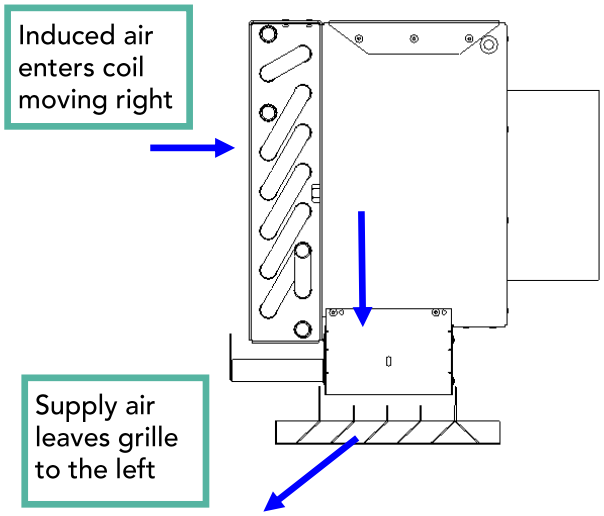


If vertical supply air throw is desired, concealed ACBs can be used with low pressure drop linear bar grilles. Anemostat TL1W/TL15W or equivalent can be used with no adverse performance impact. These are bar grilles with 1/8" Bars on 1/2" centers, with 0° or 15° deflection. Similar bar grilles with closer bar spacing, and/or thicker bars will have some performance impact.

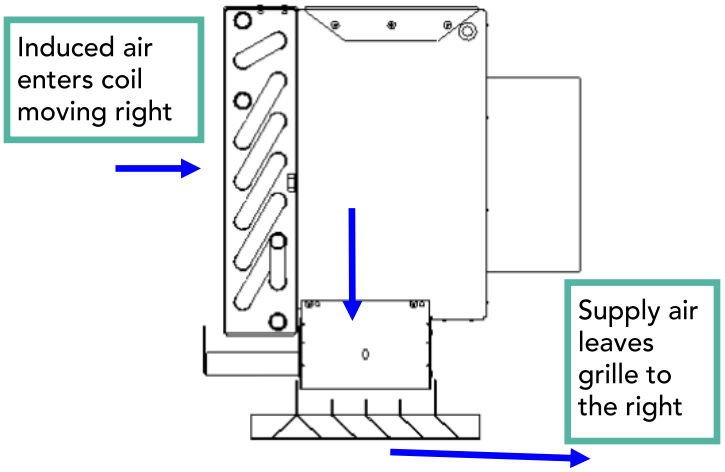
SUPPLY AIR PATTERN AND DIFFUSERS

FOR HORIZONTAL SUPPLY AIR THROW—ONE WAY

The one-way throw variant of the LVD has (4) airflow slots, all pointing in the same direction. The alignment of the diffuser relative to the unit is important. If the diffuser vanes point in the same direction as the induced air entering the coil (RIGHT IMAGE), the supply air jet will be true horizontal and attach to the ceiling. If the diffuser points in the opposite direction, the supply air jet will come out at an angle, about 35° down from horizontal (LEFT IMAGE).



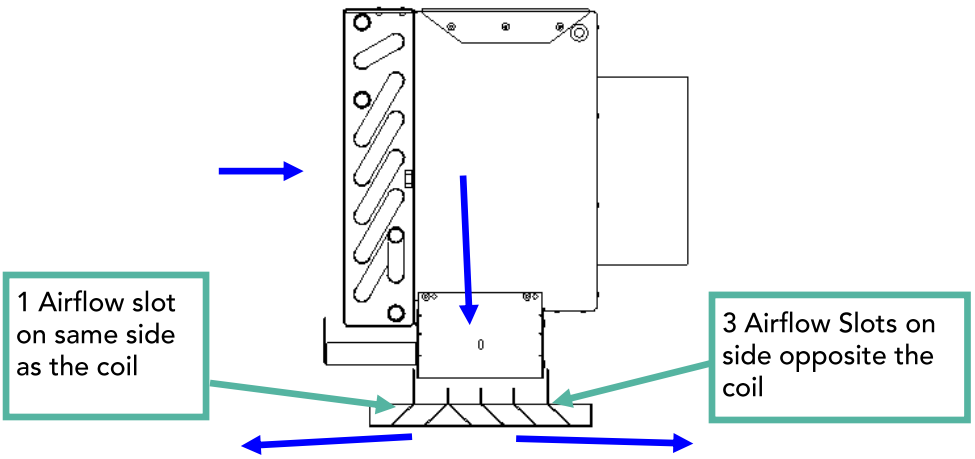
Angled Throw—Suitable for applications with high ceilings and/or perimeter heating. Direct towards exterior to "wash" windows and get heat to the floor more effectively.



Horizontal Throw—Good for general applications. The default arrangement that should be used unless angled throw is specifically desired for the application.

FOR HORIZONTAL SUPPLY AIR THROW—TWO WAY

The LVD is available with 2-way supply air throw. This version has (1) airflow slot pointing in one direction, and (3) in the other. To get proper 2-way throw, the LVD MUST be oriented correctly relative to the ACB. The side of the LVD with one airflow slot MUST be on the side of the ACB with the coil. If the 2-way LVD is installed in the opposite orientation, there will effectively only be 1-way throw.



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Model **LVD-S-13**

LINEAR VANE DIFFUSER

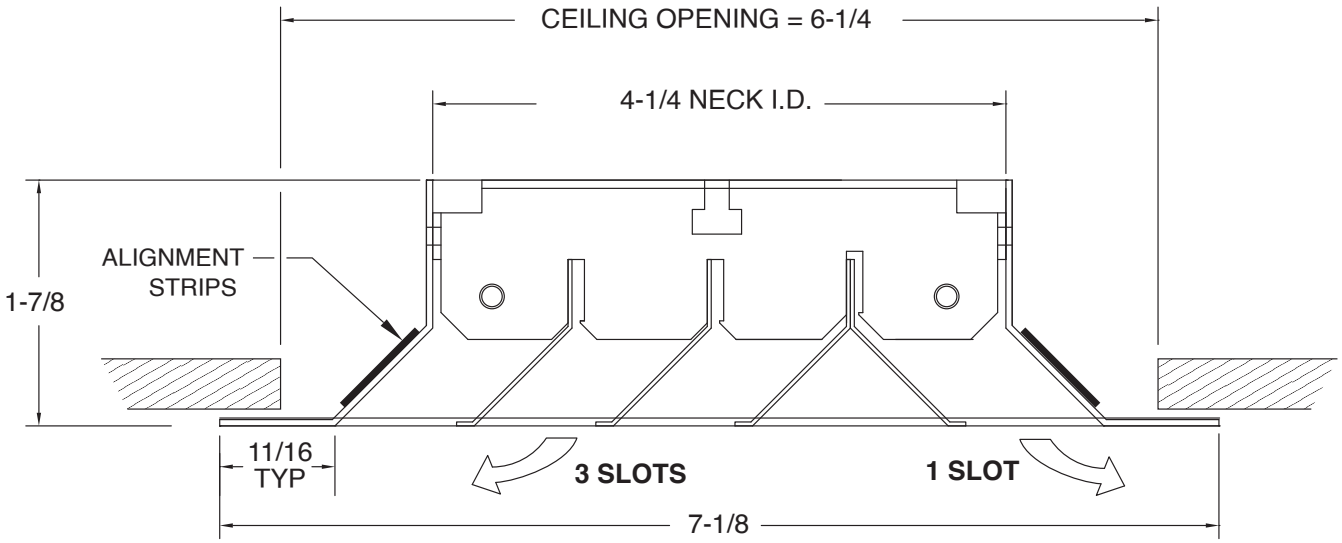
4 SLOT / 2-WAY HORIZONTAL PATTERN

SURFACE MOUNT

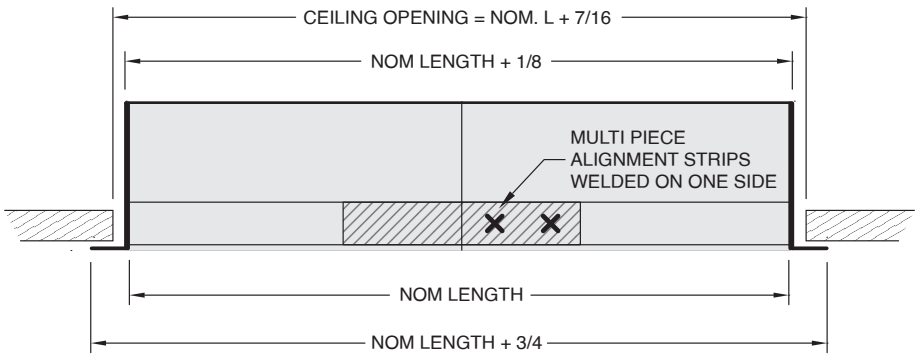
PRODUCT FEATURES

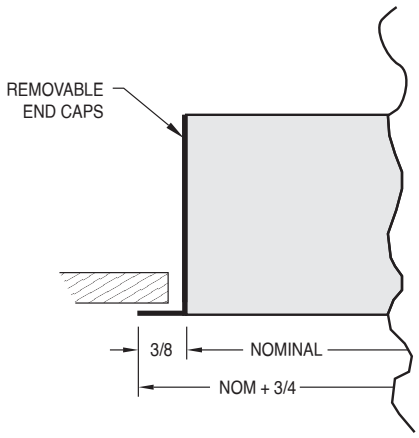
- Linear diffuser for surface mounted applications
- 4 slot, 2-way horizontal blow pattern (3 Slot + 1 Slot)
- 72" maximum single piece construction
- Lengths over 72" use multi-piece construction and alignment strips

NOM. LENGTH	COLOR	QTY	NOM. LENGTH	COLOR	QTY



END DETAIL





All dimensions are in inches.

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Model **LVD-L-13**

LINEAR VANE DIFFUSER

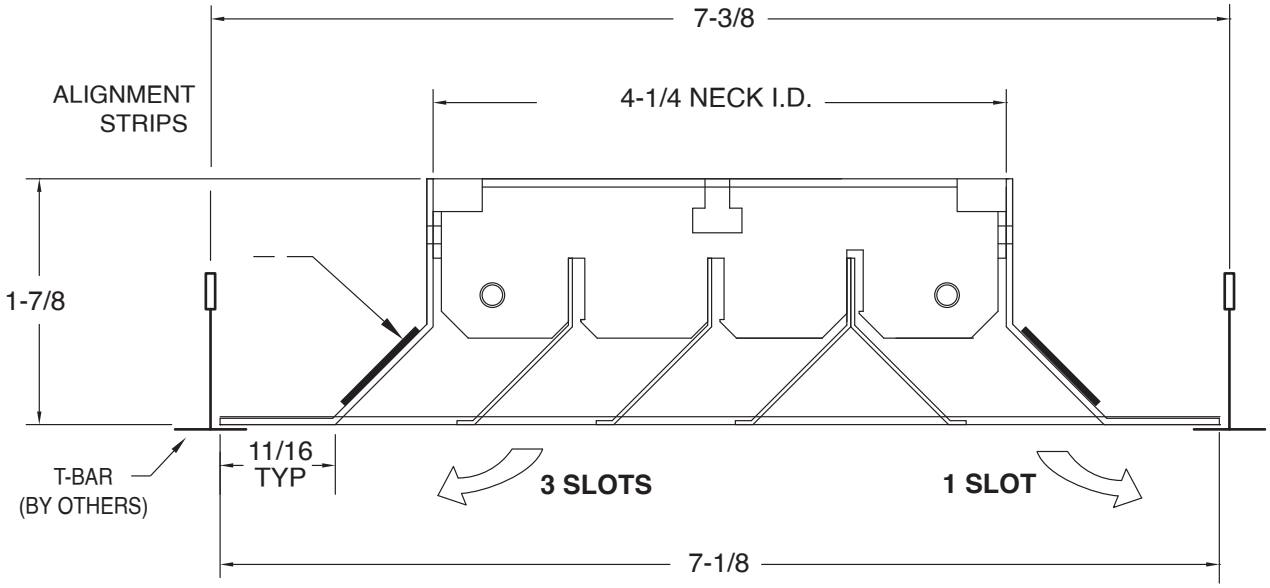
4 SLOT / 2-WAY HORIZONTAL PATTERN

LAY-IN T-BAR

PRODUCT FEATURES

- Linear diffuser for lay-in T-bar grid systems
- 4 slot, 2-way horizontal blow pattern (3 Slot + 1 Slot)
- 72" maximum single piece construction
- Lengths over 72" use multi-piece construction and alignment strips

NOM. LENGTH	COLOR	QTY	NOM. LENGTH	COLOR	QTY



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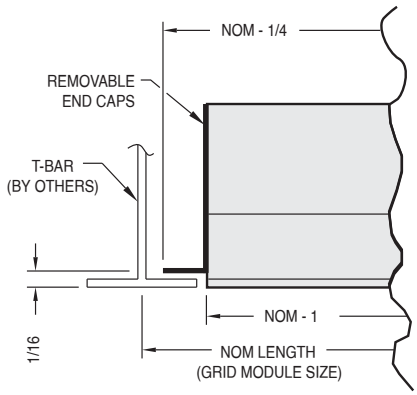

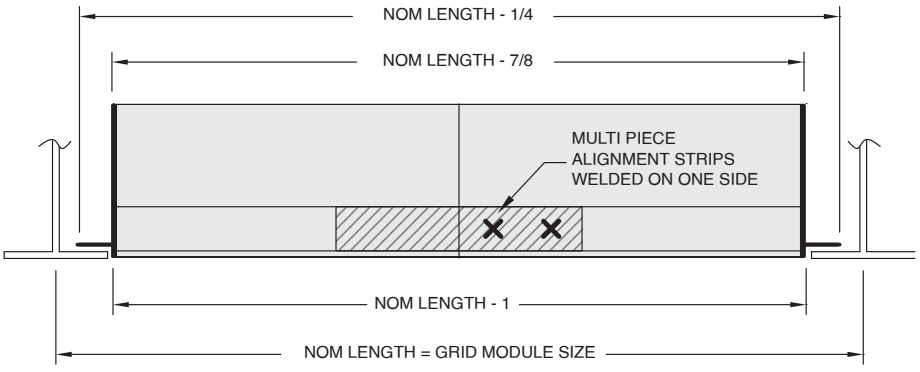

All dimensions are in inches.

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Model **LVD-T9-13**

LINEAR VANE DIFFUSER

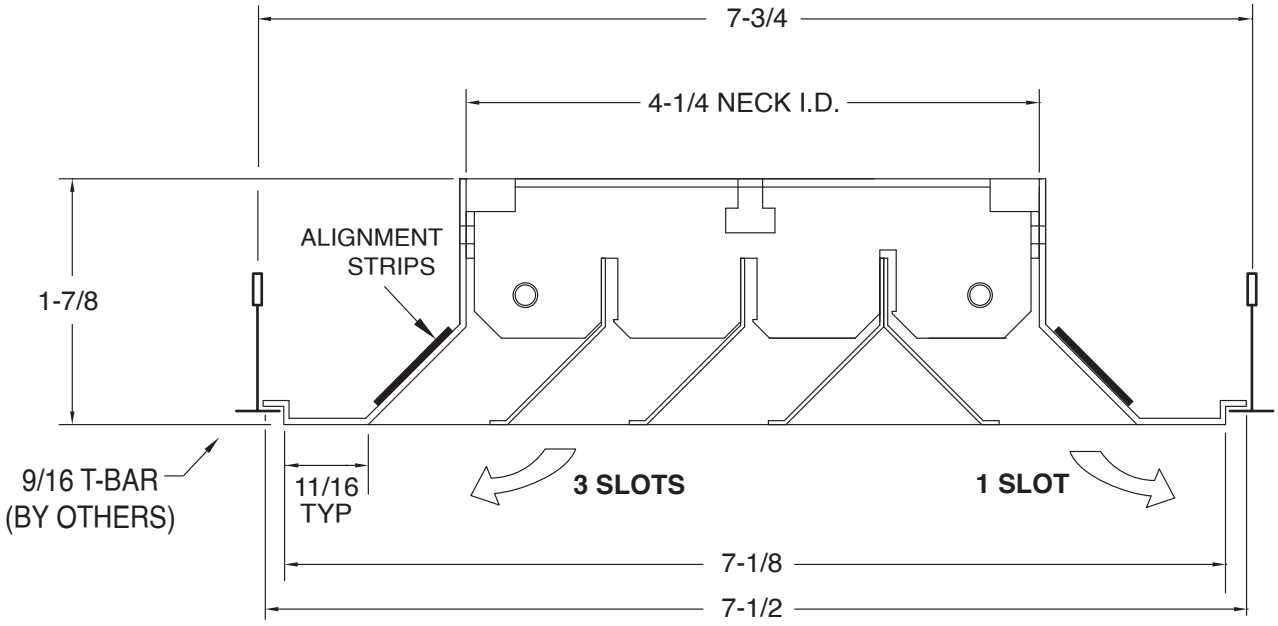
4 SLOT / 2-WAY HORIZONTAL PATTERN

9/16" TEGULAR GRID SYSTEMS

PRODUCT FEATURES

- Linear diffuser for 9/16" Tegular (drop face) grid systems
- 4 slot, 2-way horizontal blow pattern (3 Slot + 1 Slot)
- 72" maximum single piece construction
- Lengths over 72" use multi-piece construction and alignment strips

NOM. LENGTH	COLOR	QTY	NOM. LENGTH	COLOR	QTY



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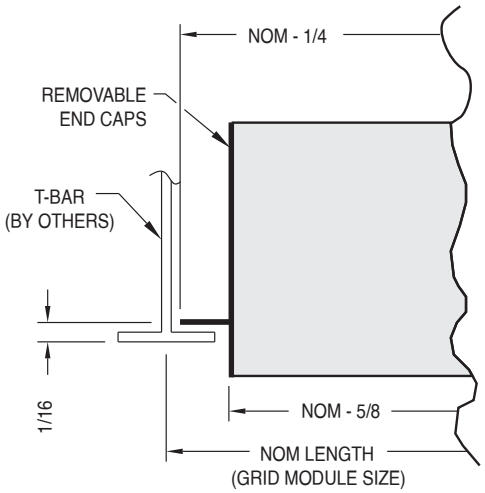

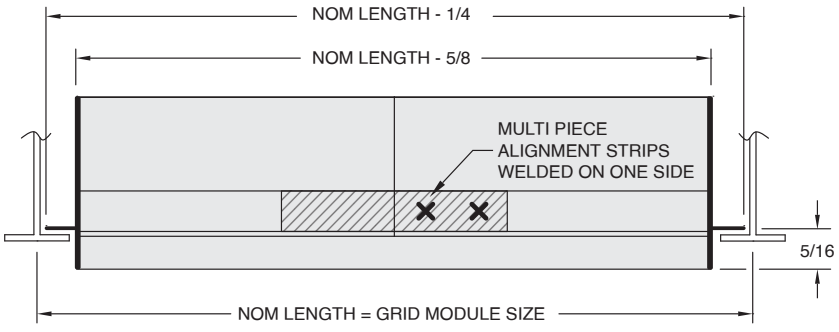

All dimensions are in inches.

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Model **LVD-S-4**

LINEAR VANE DIFFUSER

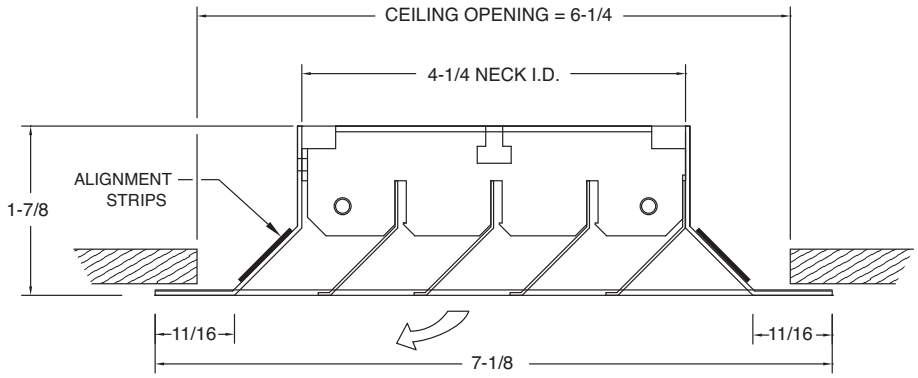
4 SLOT / 1-WAY HORIZONTAL PATTERN

SURFACE MOUNT

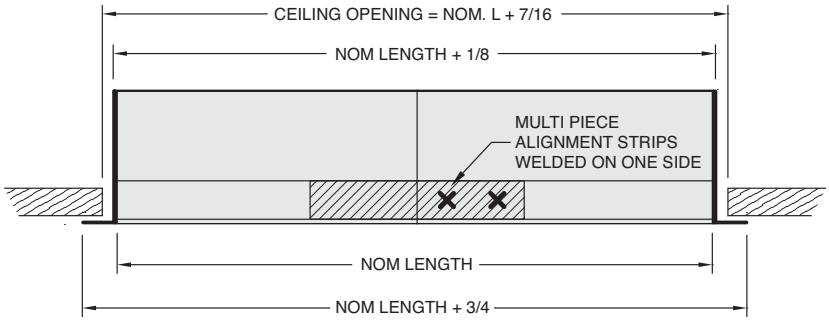
PRODUCT FEATURES

- Linear Diffuser for surface mounted applications
- 1-Way, Horizontal blow pattern
- 72" maximum single piece construction
- Lengths over 72" use multi piece construction and alignment strips

NOM. LENGTH	COLOR	QTY	NOM. LENGTH	COLOR	QTY



4 SLOTS



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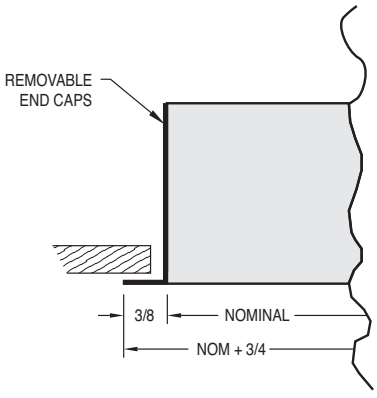

All dimensions are in inches.

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Model **LVD-L-4**

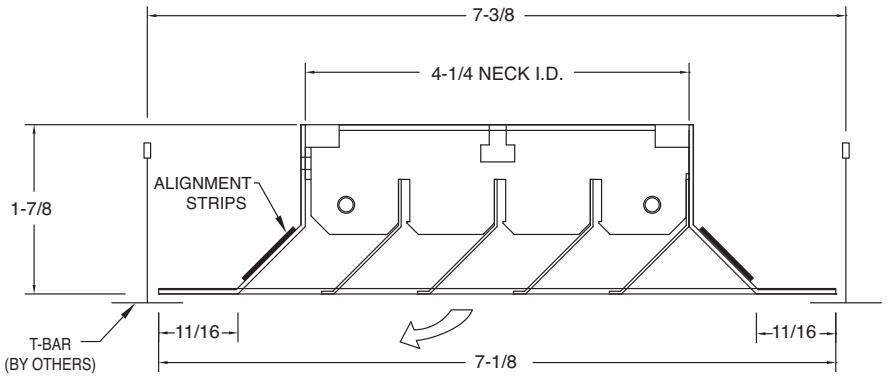
LINEAR VANE DIFFUSER

4 SLOT / 1-WAY HORIZONTAL PATTERN
LAY-IN T-BAR

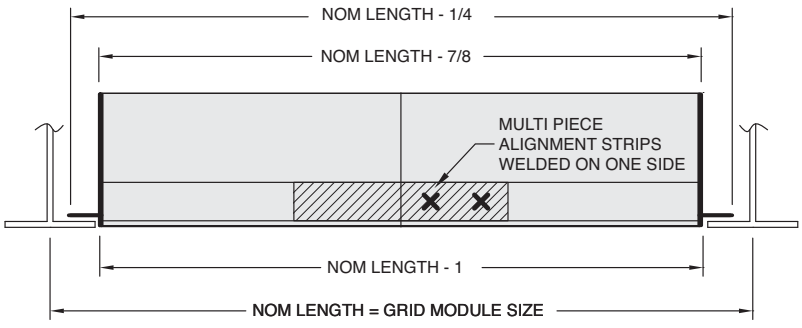
PRODUCT FEATURES

- Linear Diffuser for Lay-In Inverted T-Bar Ceiling Systems (15/16")
- 1-Way, Horizontal blow pattern
- 72" maximum single piece construction
- Lengths over 72" use multi piece construction and alignment strips

NOM. LENGTH	COLOR	QTY	NOM. LENGTH	COLOR	QTY



4 SLOTS



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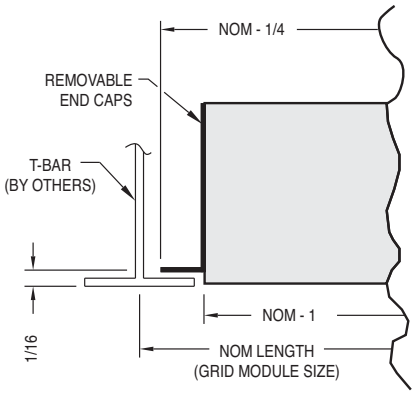

All dimensions are in inches.

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Model **LVD-T9-4**

LINEAR VANE DIFFUSER

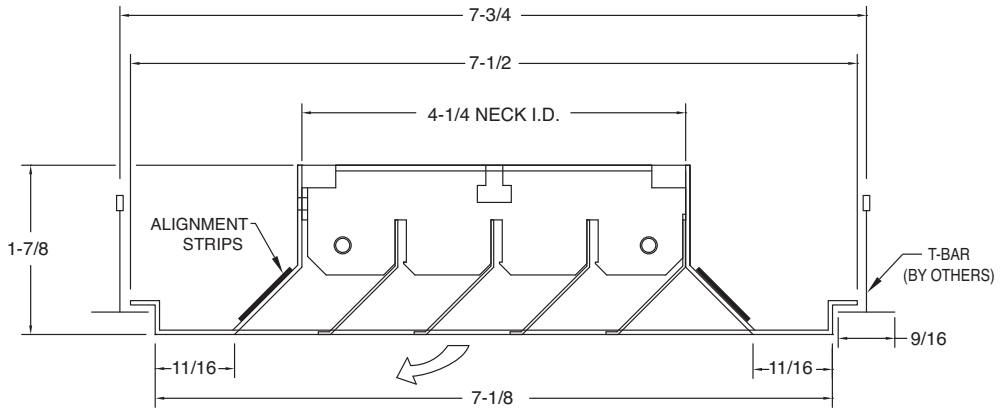
4 SLOT / 1-WAY HORIZONTAL PATTERN

9/16" TEGULAR T-BAR

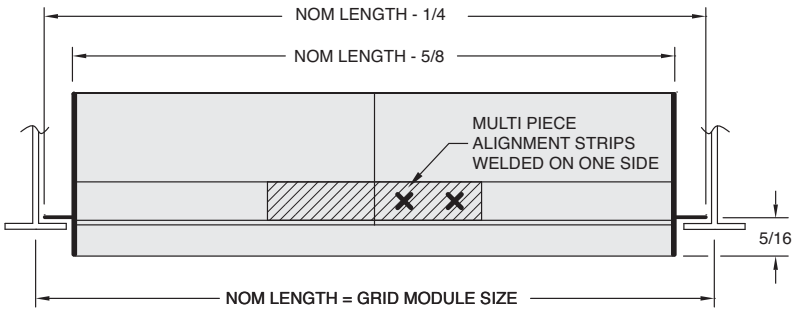
PRODUCT FEATURES

- Linear Diffuser for Lay-In Inverted T-Bar Ceiling Systems (9/16" Tegular)
- 1-Way, Horizontal blow pattern
- 72" maximum single piece construction
- Lengths over 72" use multi piece construction and alignment strips

NOM. LENGTH	COLOR	QTY	NOM. LENGTH	COLOR	QTY



4 SLOTS



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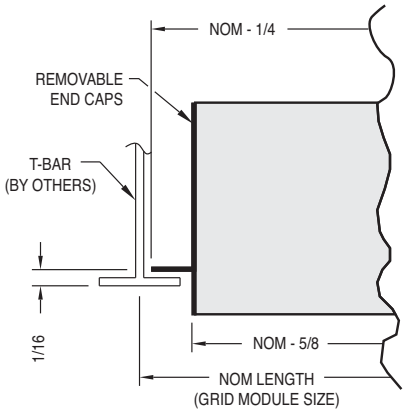

All dimensions are in inches.

RETURN AIR CONSIDERATIONS

1. DESIGNED FOR PLENUM RETURN - The coils of ACB30/35 units are located above the ceiling. Induced/ secondary air is drawn from the space above the ceiling, over the coil, and out through the supply slot & grille. Therefore, the space above the ceiling where the ACB30/35 units are installed needs to be a plenum space. Other ACB models that draw induced air directly from the occupied space are more suitable for applications with ducted return and non-plenum rated ceiling cavities.

2. There must be return air grilles or openings in the ceiling to allow air from the room to enter the ceiling plenum and travel to the coils of the ACB units. Return grilles serving each unit must be located in the same room, and there must be a clear return air pathway in the ceiling plenum from the return grille to the faces of the coil.

3. Induced airflow and secondary air sensible cooling is based on installation with adequate return area. See table below for open area requirements for each nominal unit length. Return grilles can be of any kind as long as total open area in the room meets or exceeds the requirements given in the table. Areas in the table are PER UNIT. For example: If there are (3) 8' units in a room, that room needs 9 Sq ft of open return area. If 50% free area perforated ceiling tiles are used for return air, 18 sq ft of those tiles would be required to get 9 sq ft of open area.

4. The Returns must not be positioned such that supply air from the units blows into them. This can cause poor air distribution in the room and limit effective cooling & heating capacities due to supply air recirculation.

5. The return area requirements discussed here are for the proper function of the ACBs only. General return and exhaust requirements of the room are separate from the return requirements of the ACBs. For example, if a room requires 2 sq ft of return area for the air going back to the AHU, that would be in addition to the return area required for the ACBs in the room.

Nominal Unit Length (Ft)	Open Return Area Required Per Unit (Sq Ft)
2	0.8
3	1.0
4	1.3
5	1.7
6	2.2
7	2.6
8	3.0