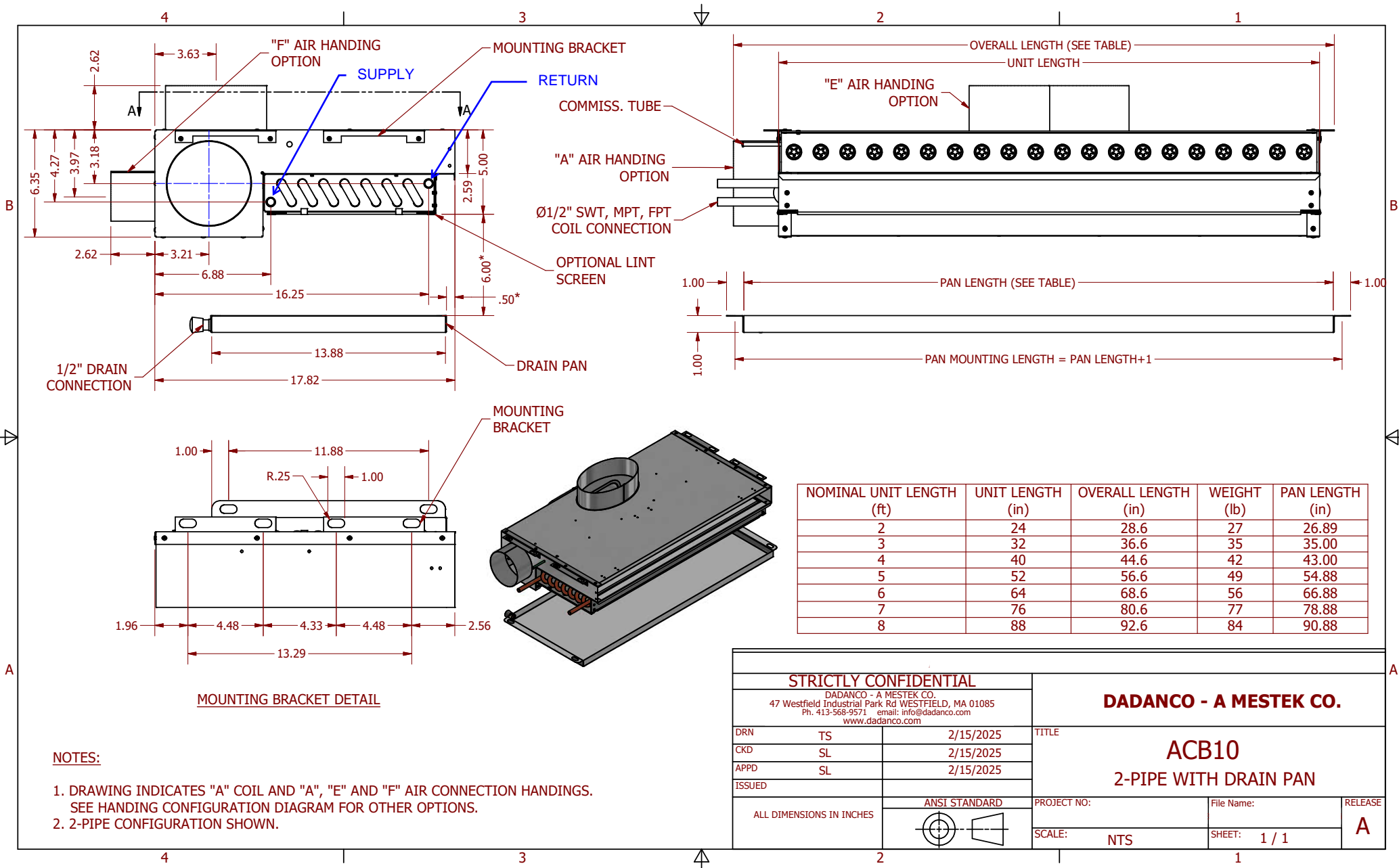
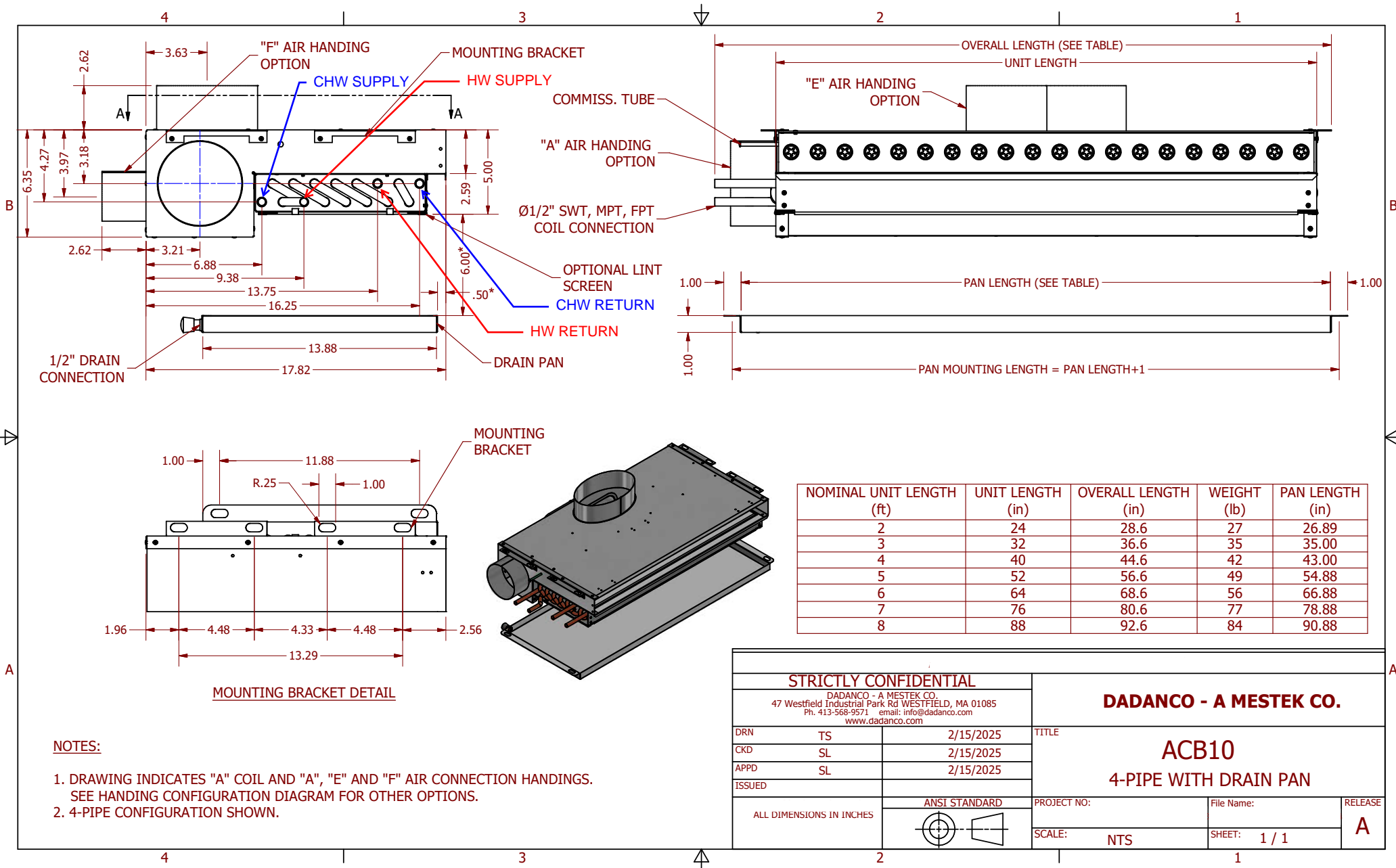


NOTES:

- DRAWING INDICATES "A" COIL AND "A", "E" AND "F" AIR CONNECTION HANDINGS. SEE HANDING CONFIGURATION DIAGRAM FOR OTHER OPTIONS.
- 4-PIPE CONFIGURATION SHOWN.





MODEL NUMBER & OPTIONS

A C B 1 0 - 0 6 - 0 7 1 M - 8 V F - 2 A S 0 3 - W 0 0 0 0 - 0 1 6 0 0 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
ACB10	Horizontal Concealed ACB, Bulkhead/Sidewall Application

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 hanging 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 1 0 - 0 6 - 0 7 1 M - 8 V F - 2 A S 0 3 - W 0 0 0 0 - 0 1 6 0 0 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 ACB10 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	
None (Std)	0	
Non-Drainable Drip Tray	6	
Drain Pan	1	
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. Although ACB systems designed to condense are not recommended, sloped pans with drain connections are available.

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.

Grilles Included (Shipped Loose)	
None (Std)	
Supply Only	
Return Only	
Both	
Single Combined	

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 be lower than the dew point of the ambient air around 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

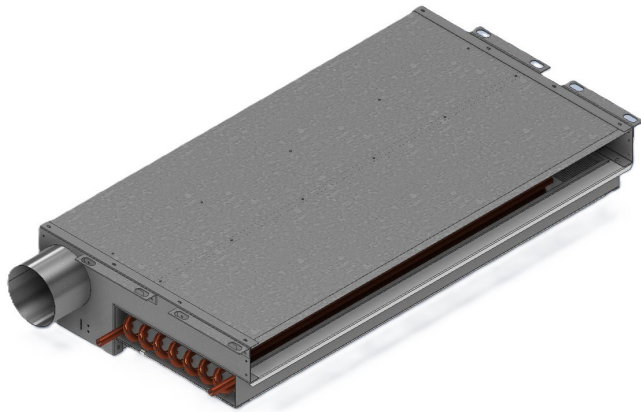
AIR AND COIL CONFIGURATION KEY

ACB10 MODEL

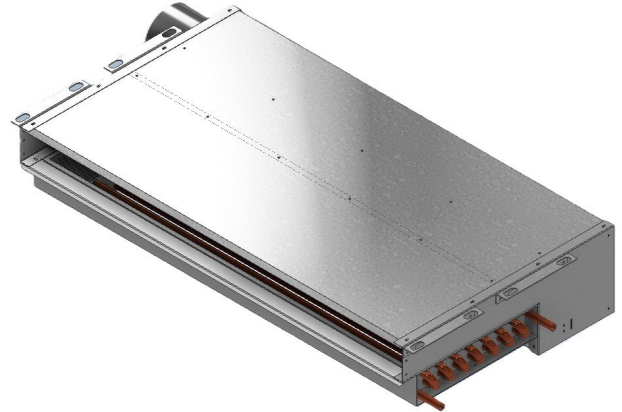
END DUCT CONNECTION

Available Connection Sizes: 3", 4", 5" Round

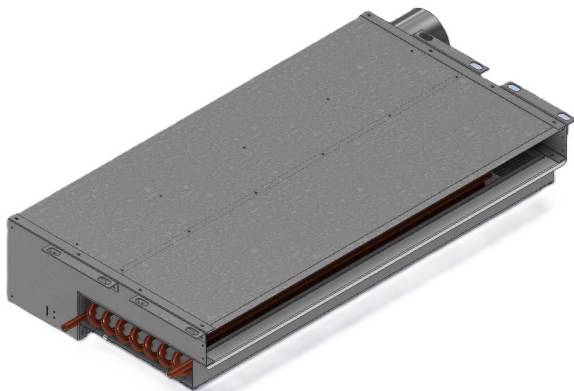
Air Connection	Max Recommended Primary Airflow (CFM)
3" Round	35
4" Round	60
5" Round	95



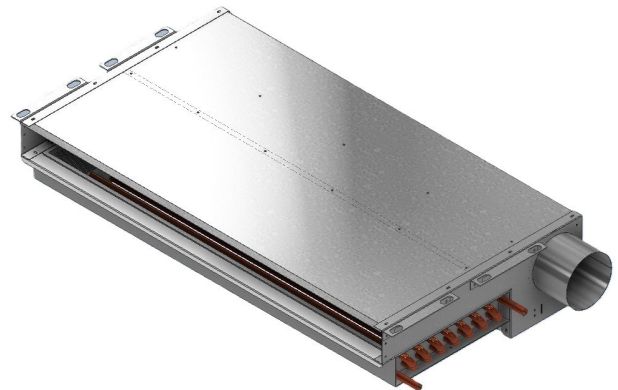
AIR: A
COIL: A



AIR: A
COIL: B



AIR: B
COIL: A



AIR: B
COIL: B

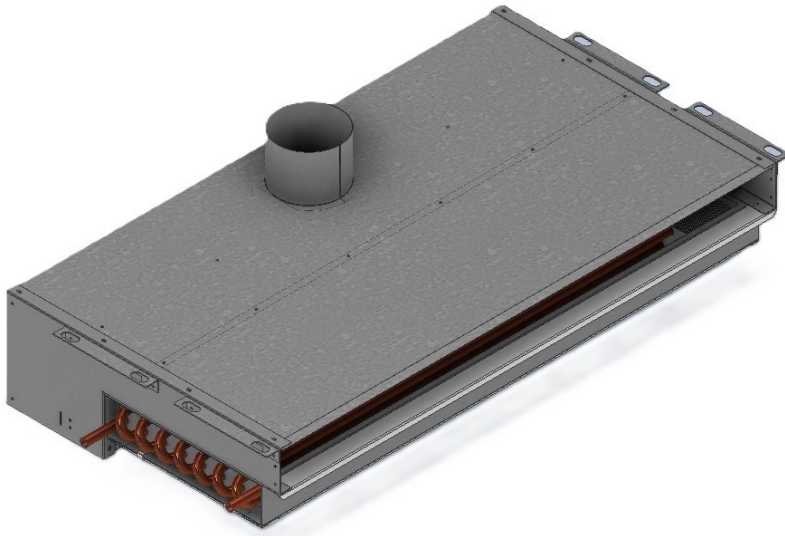
AIR AND COIL CONFIGURATION KEY

ACB10 MODEL

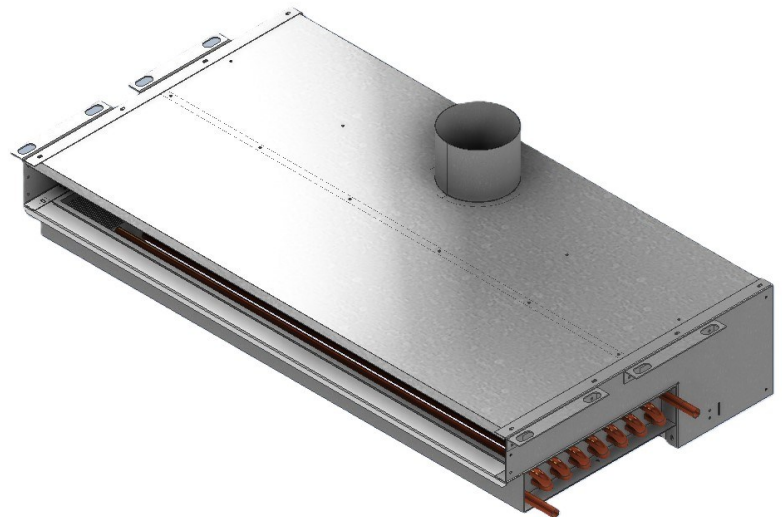
TOP DUCT CONNECTION

Available Connection Sizes: 3", 4", 5", 6" Round, 8" Elliptical

Air Connection	Max Recommended Primary Airflow (CFM)
3" Round	35
4" Round	60
5" Round	95
6" Round	135
8" Elliptical	215



AIR: E
COIL: A



AIR: E
COIL: B

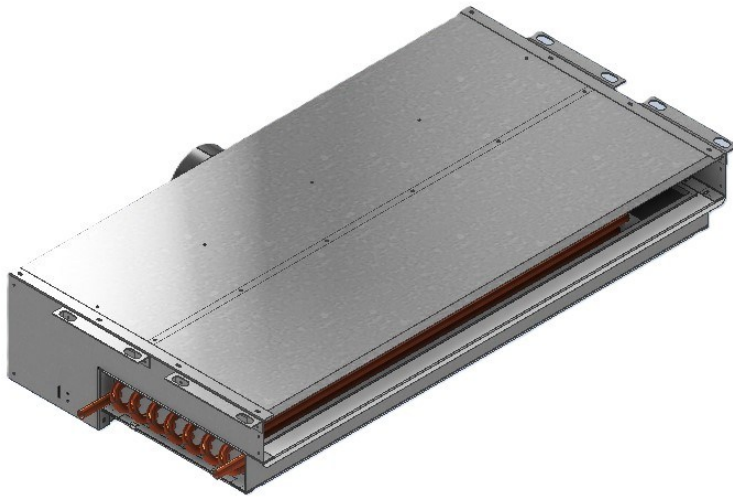
AIR AND COIL CONFIGURATION KEY

ACB10 MODEL

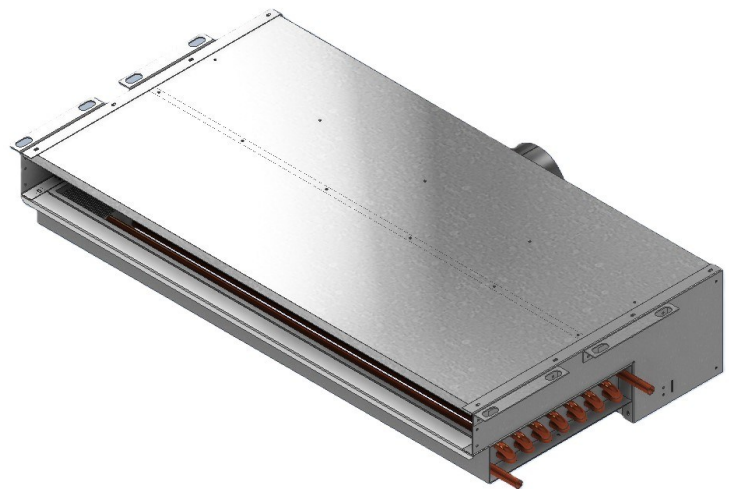
BACK DUCT CONNECTION

Available Connection Sizes: 3" Round, 4", 6", 8" Oblong

Air Connection	Max Recommended Primary Airflow (CFM)
3" Round	35
4" Oblong	45
6" Oblong	90
8" Oblong	145



AIR: F
COIL: A



AIR: F
COIL: B

SUPPLY AIR PATTERN AND GRILLES

ACB10 units are designed for horizontal installation in a wall/bulkhead, with a separately installed supply and return air grilles. The ACBs are concealed in the wall, and only the grilles are visible. The supply air pattern is horizontal out of the wall.

Not any supply grille can be used with concealed ACBs. The grille effectively becomes part of the ACB, and the geometry of the combined ACB+grille has a huge effect on performance of the ACB.

The standard performance ratings in the Dadanco selection software are based on installation with the following Anemostat model grilles on the supply side:

1. TL1W/TL15W Linear Bar grilles: These are linear bar grilles with 1/8" bars on 1/2" centers, single deflection, 0° (TL1W) or 15° (TL15W) core deflection.

2. Model 10/15 Single Deflection Supply Grilles— Individually adjustable thin blade construction

These grilles can be supplied by Dadanco. "Equivalent" and similar grilles can be used, but there may be a performance impact. Contact your Dadanco representative if alternate supply grilles are being considered.

- Never use grilles with any sort of built-in damper, and do not field install any between the supply air outlet of the ACB and the supply grille
- The ACB10 is intended to discharge straight into the supply grille. Significant "ducting" of the ACB10 outlet to a grille is not recommended. Building a straight sheet metal extension of the supply collar is acceptable, provided that:
 - The length of the extension is 3' or less
 - The cross sectional dimensions of the extension matches those of the factory supply outlet
 - There are no bends—it is a straight extension

Factory supply collar extensions are available upon request

RETURN GRILLES

ACB10 installations are typically done with either a single grille on the front face of the bulkhead, that acts as supply and return, or two separate grilles, with supply on the front and return on the bottom. Diagrams of both are shown on the following pages.

In the case of a combined grille, use the types specified for supply air above, and follow the dimensional requirements given on the diagram.

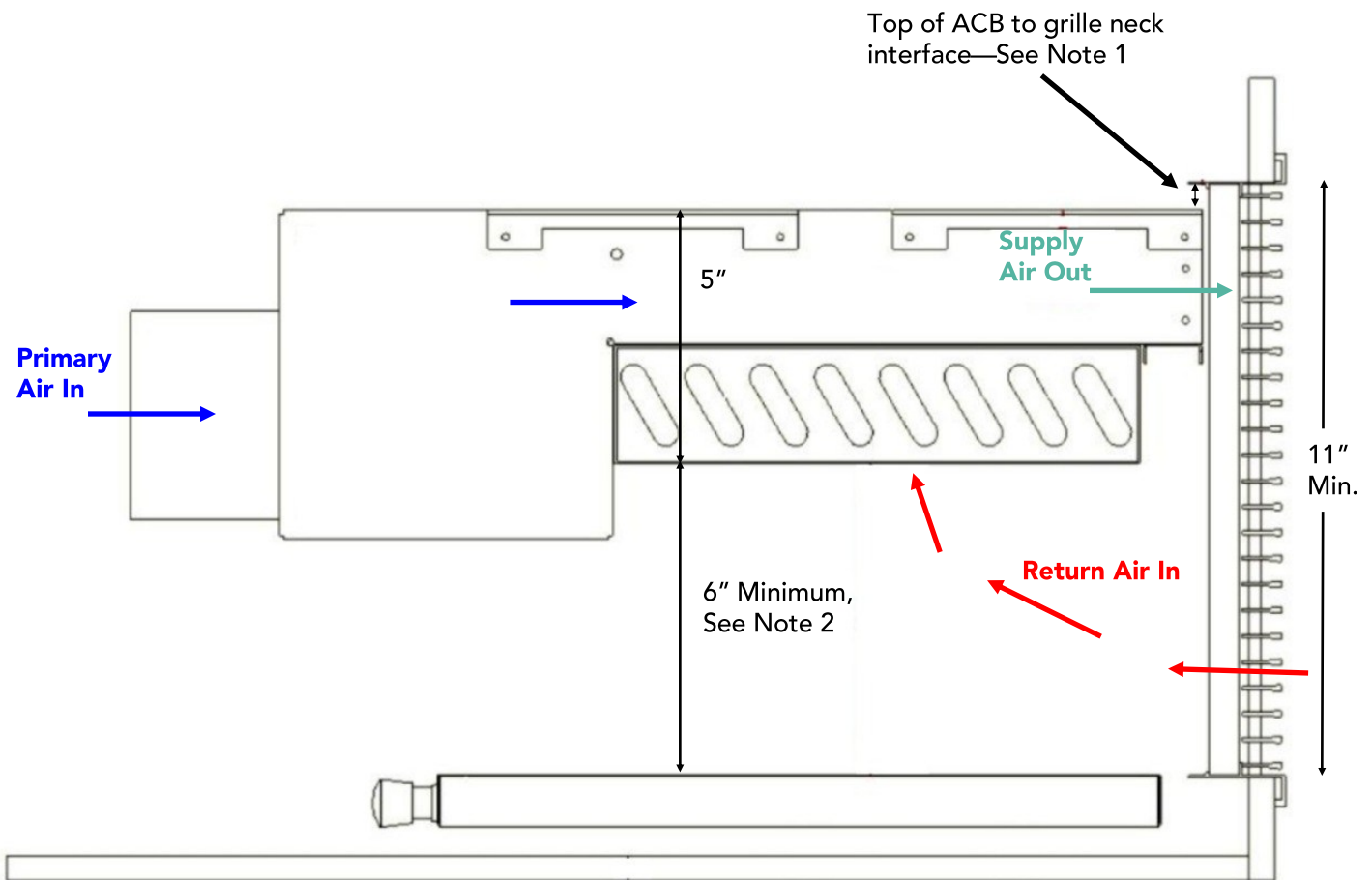
For separate return grilles, any type of grille can be used as long as:

1. There is at least the open area specified in the below table. These are the areas required for the ACBs to perform.
2. The grilles are sized and positioned correctly in order to provide sufficient access to the coil, drain pan (if used), and anything else near the ACB that requires access. See diagrams and notes on next page for more details. If separate access panels are provided, this can be disregarded.

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

INSTALLATION DETAIL

COMBINED SUPPLY AND RETURN GRILLE

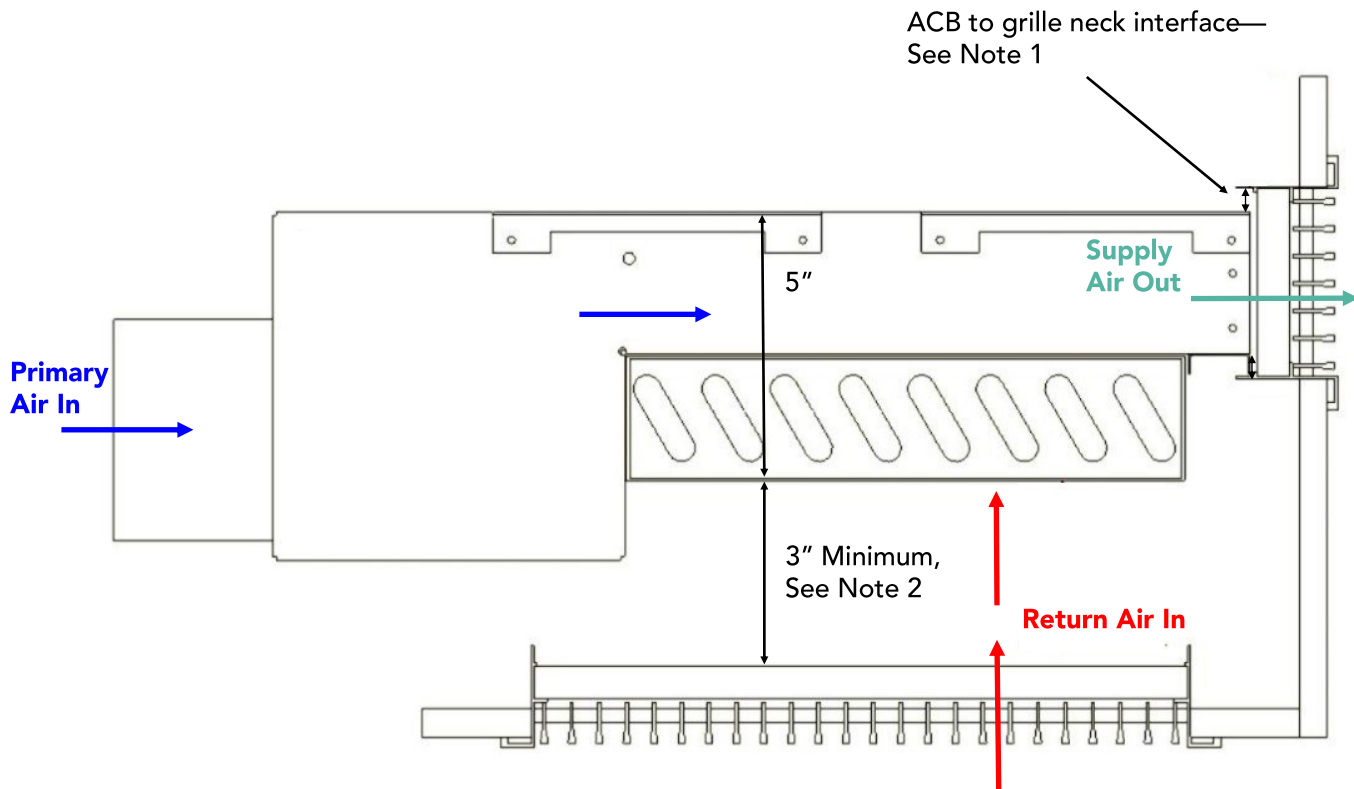


1. The top of the ACB should be sealed to the top of the grille neck. Grilles with removable cores must be used so the joint can be sealed from the front through the grille opening, and the core can be removed for access without breaking the seal.
2. 6" minimum clearance between the coil face and drain pan is recommended for access to clean the coil and drain pan, if used. 3" clearance is the minimum required for proper performance, but that would be insufficient for access through the grille. 11" is the minimum height of the grille core. This 11" goes from the top of the ACB to 6" below the coil face.
3. The single grille is used for airflow, and as means of access. Must be at least the length of the ACB, with the entire length of the ACB supply airflow slot behind the grille. Provide additional grille length as needed to provide access to any piping accessories that require it. A long continuous run of grille can be used for a row of ACB10 units, with the supply of each unit sealed to the top of the grille neck.

INSTALLATION DETAILS

SEPARATE SUPPLY AND RETURN GRILLES

WITHOUT DRIP TRAY OR DRAIN PAN

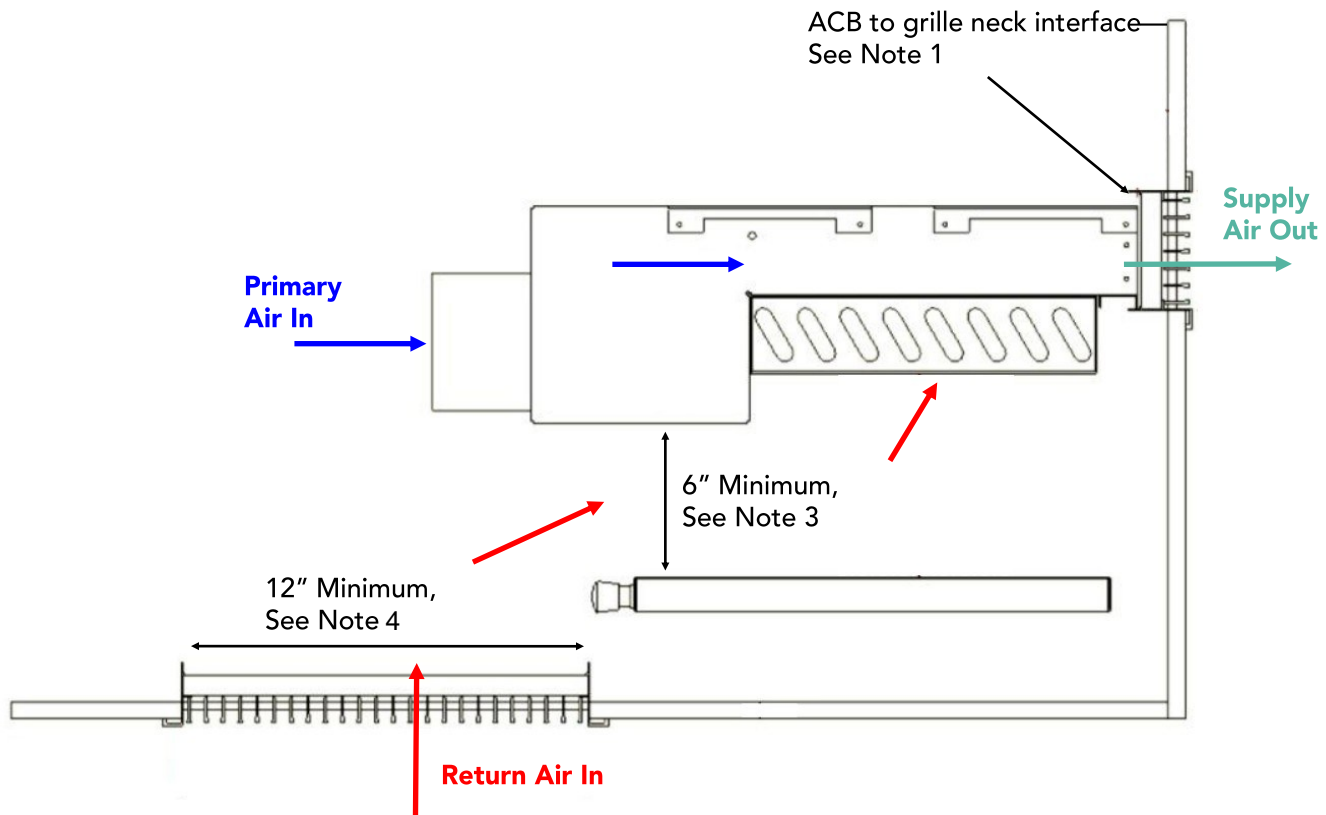


1. The top and bottom of the ACB supply air outlet should be sealed to the grille neck. Grilles with removable cores must be used so the joints can be sealed from the front through the grille opening, and the core can be removed for access without breaking the seal.
2. 3" is the overall height of the supply air outlet of the ACB, and this outlet must go inside the neck of the supply grille. The inside dimension of the grille neck should be slightly over 3" so the joints can easily be sealed while providing some installation tolerance. Larger supply grilles can be used, but will require field sheet metal work to connect to the ACB. Do not use grilles with smaller dimensions (length or height) than the ACB outlet.
3. The supply grille needs to be at least as long as the ACB outlet, and must cover the entire length of the outlet. Grilles longer than the ACB can be used, and in that case, the ends of the supply air outlet(s) do not need to be sealed to the grille. A long continuous run of grille can be used for a row of ACB10 units, with the supply of each unit sealed to the top and bottom of the grille neck.
4. In applications without pans, only 3" of clearance below coil is required for ACB performance. Align return grille underneath coil so entire face of coil is accessible through the grille opening. 10"+ core width is recommended for this configuration. If necessary, provide grilles of extra length to provide access to valves and/or other accessories.

INSTALLATION DETAILS

SEPARATE SUPPLY AND RETURN GRILLES

WITH DRIP TRAY OR DRAIN PAN



1. The top and bottom of the ACB supply air outlet should be sealed to the grille neck. Grilles with removable cores must be used so the joints can be sealed from the front through the grille opening, and the core can be removed for access without breaking the seal.
2. 3" is the overall height of the supply air outlet of the ACB, and this outlet must go inside the neck of the supply grille. The inside dimension of the grille neck should be slightly over 3" so the joints can easily be sealed while providing some installation tolerance. Larger supply grilles can be used, but will require field sheet metal work to connect to the ACB. Do not use grilles with smaller dimensions (length or height) than the ACB outlet.
3. The supply grille needs to be at least as long as the ACB outlet, and must cover the entire length of the outlet. Grilles longer than the ACB can be used, and in that case, the ends of the supply air outlet(s) do not need to be sealed to the grille. A long continuous run of grille can be used for a row of ACB10 units, with the supply of each unit sealed to the top and bottom of the grille neck.
4. In this configuration, the return grille is typically used as the means of access for coil, drain pan, valves, etc. The minimum dimensions in the diagram are subjective recommendations based on providing enough space for someone to clean the coil and/or drain pan. If a separate means of access is provided, the return grille only needs to satisfy the open area requirement for performance.
5. As shown in the diagram, the return grille should be entirely behind the drain pan (so no part of the drain pan is directly above the grille).